# Financial reforms in China and India: A comparative analysis

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**Abstract:**

This paper surveys financial reforms in China and India. India's financial system is better developed than China's, yet both have significant weaknesses: under-developed corporate bond markets and extensive government ownership of banks dominating the sectors which are associated with misdirected lending. Incentive frameworks in these sectors are reviewed and empirical evidence assembled showing that, because of historical decisions and insufficient market reforms, performance problems persist. It examines prospects for deeper reforms to enhance efficiency and protect consumer interests and concludes that a crisis may indeed be necessary to encourage further changes since rapid economic growth despite financial weaknesses undermine the political case.

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## 1. Introduction

Much has been written about China's financial system as the Achilles heel in its long-term growth prospects while India's has generated enthusiasm as a source of strength. Although China has more money circulating in its financial system India's financial system is more efficient because of competitive market forces among more-diverse financial institutions.[1] As both economies become more complex and integrated into the world economy, however, the test will be whether their financial systems are robust enough to withstand shocks as well as mobilize and allocate capital more efficiently.

Common to both economies is government ownership of their banking systems. State-owned banks' shares of total bank assets, at between 75 percent (India) and over 90 percent (China), are the world's highest (OECD 2005). Banks also dominate the domestic financial systems: in 2004 banks' shares of financial assets were 72 percent (China) and 43 percent (India) compared to only 19 percent in the United States.[2] As this paper argues, a clear lesson from the international evidence is that over time public sector banks perform poorly by the usual market metrics: returns on equity are low, expenses high and they are dogged by non-performing loans. Governments in both countries are wrestling with the legacies of soft budget constraints introduced in an earlier era of central planning. While governments are committed to financial reforms, both impose political constraints on the pace and depth of these reforms.

This paper compares financial reforms in the two countries and evaluates their potential impacts on growth and development prospects. The finance-growth literature emphasizes that domestic financial systems influence a country's economic development and growth through the roles they play, not just in the accumulation, but also in the allocation of capital.[3] The next section compares the evolution of the two financial systems within their domestic institutional frameworks. Prudential supervision is necessary to promote an efficient financial system, but it is not sufficient. Institutions such as the legal system, ownership and corporate governance, and market monitoring are significant factors in the incentive structures in which managers operate. The third section examines the performance of the banking sectors and capital markets and the fourth discusses prospects for achieving greater efficiency. The final section discusses the implications of these findings and suggests alternative approaches that could increase the positive effects of financial development on economic growth prospects.

The paper concludes that India's financial system has all the "moving parts" required to become a modern financial system, but it continues to be held back by the inertia of state ownership and past regulatory and social practices. Banks' allocation of capital is improving, as evidenced by declines in non-performing advances (NPAs)[4], but government involvement in both directed lending and asset allocation continues to create distortions. The efficiency of China's banking system as measured by non-performing loans (NPLs) has improved as a result of recapitalization and reforms since 1998. High levels of state ownership and evidence of persistent government influence on bank lending practices as well as the absence of efficient capital market alternatives imply, however, that the huge volume of national savings is still not being allocated efficiently. either.

In addressing these challenges, India has the advantage of a well-established institutional framework whereas China has to create its institutions from the ground up. If it chose to do so the Indian government could, by deregulation and legal means, accelerate reforms and competition in the banking system and further develop the capital market. China's dramatic economic growth and poverty reduction demonstrates what can be achieved by market liberalization and openness despite an underdeveloped financial system. But as economic activity becomes more complex and the economies integrate into world markets, the costs of this under-development will rise.

## 2. Financial systems in China and India

For much of the post-war period, China and India were among the world's poorer developing countries, faced with rapid population growth and large numbers of people engaged in subsistence agriculture. Today, China has the world's highest savings rate, at 43 percent of GDP and its investment-GDP ratio is between 45 and 50 percent (IMF 2005). India's savings rate and investment-GDP ratio are around 30 percent (IMF 2006a).

In the late 1940s a key challenge for both governments when they took power was to mobilize domestic savings and channel them into industrial development; government intervention was the means to that end. China's planners abolished private property and institutions after the 1949 revolution and the state took over the entire financial system. Since the late 1970s, recreating financial markets and market-based institutions has been a work in progress.

India's leaders chose a mixed economy after independence from Britain in 1947. Markets and market institutions continued to function alongside those owned by the state, but with ever-increasing bureaucratic oversight and regulation. Capital markets were permitted to meet the needs of private entrepreneurs. Today, India's financial system is still being modernized but it is vibrant, diverse and the most-developed among the emerging market economies.

### 2.1 **Banks**

Both countries' financial systems are bank dominated but with some interesting differences. China's assiduous savers have no alternative to the formal banking system (OECD 2005). Many Indians, on the other hand, mistrust banks and prefer to accumulate gold and real assets instead. Both governments require banks to serve social objectives but the Indian government is more transparent about the social outcomes being worth the price. Banks, whether public or private, must meet targets for rural access to banking services and lending to "priority" sectors and must allocate a required share of their investments to public sector bonds. The Chinese government's political priorities are to ensure gradual controlled liberalization of the previously-state-owned means of production and sufficiently rapid economic growth to absorb millions of labor force entrants, migrants and laid off workers each year. Bank lending is still enlisted to finance much of this growth even as the banks are encouraged to become more competitive by 2007 when commitments made in WTO accession negotiations kick in that require opening domestic currency businesses to foreign entrants.

Historically, governments have frequently owned banks and used them as vehicles to finance industrial development.[5] The underlying rationale was that market failures exist in developing economies because private banks respond only to private returns and fail to finance socially desirable projects or borrowers (usually small borrowers and sometimes very large projects). More recently Caprio and Honohan (2001) note that governments often take ownership positions following banking crises in the belief that private banks are crisis-prone.

State-owned banks dominate the banking sectors in a majority of developing countries despite international evidence that countries with a large state bank presence have slower financial and economic development than countries that do not (Hanson 2004). For example, cross-country empirical studies by La Porta et al (2002) have found that state ownership of banks in a country in 1970 was associated with less financial development and lower growth and productivity through time. These effects were more pronounced in lower-income countries. The positive growth effects of increased private ownership of banks were also found to be statistically significant and economically meaningful.

India's banking system, which dates to the eighteenth century, is a mixture of public (presidency banks), private and foreign ownership.[6] In the early twentieth century, public banks were consolidated, first in 1921 when the presidency banks amalgamated into the Imperial Bank of India, and again in 1935 when public banks were consolidated into the State Bank of India whose assets even today far outweigh those of any other bank. The Reserve Bank of India (RBI) was also created that year, but did not become the bank regulator until after independence. It took control of the Imperial Bank in 1955. This hybrid system existed until 1969 when much of the banking system was nationalized for the political purpose of ensuring through government ownership that banks became better instruments of economic growth since they would be less vulnerable to connected lending, more likely to create rural branches to encourage small savers, and contribute to the needs of planned growth and equitable distribution of credit, particularly to small scale industry and farmers.

These political priorities led to government-mandated requirements, which persist to the present, for lending to priority sectors. Domestic banks are required to lend 40 percent of net bank credit to priority sectors, with 18 percent of this total to be directed to agriculture and 10 percent to weaker sections.[7] Targets were also set for bank branching in un-banked locations. When these targets were set in the 1970s, the sector expanded rapidly and a majority of deposits became concentrated in the public sector banks (PSBs). Despite entry restrictions and branch licensing requirements, private banks grew rapidly up to 1980 when a final round of nationalization left only 10 percent of total branches in private and foreign hands. By 1990-91 PSBs accounted for 90 percent of total deposits and advances. The nationalized banks retained their corporate structures but substituted government for independent directors. Specialized state-owned intermediaries that included the National Bank for Rural Development (NABARD), the Small Industries Development Bank of India (SIDBI) and various state finance corporations also promoted the social objectives of finance (Patel 2004).

India’s 1991 balance of payments crisis was a catalyst for the liberalization of bank ownership and regulation. RBI reforms ostensibly aimed to make the banking system more resilient to market shocks and to replace its hands-on approach to banking oversight with arm’s length regulation (something that still over-shadows the banking system). PSBs were permitted to access capital markets for up to 49 percent of their equity. In 1994 six “new private” banks were launched by government-owned financial institutions and three foreign banks entered the market.  Two of the private banks, HDFC and ICICI, have since grown quickly and are noted for sophisticated management and technology and strong customer focus.[8] Limited foreign entry was also permitted.[9] In March 2006, India had 218 scheduled commercial banks, also known as SCBs (Table 1) that included more than one hundred regional rural banks.

In contrast, after the 1949 revolution China’s central bank the People’s Bank of China (PBOC) was a mono-bank. It was responsible for conducting monetary policy and was the sole entity collecting savings at branches throughout the country and allocating them to budgetary priorities. In 1984, PBOC deposit and lending functions were turned over to four state-owned policy banks whose loans supplied the country’s thousands of state-owned enterprises (SOEs) with their working capital requirements. Initially SOE losses were financed with public bonds. As the losses mounted, the central government moved in the mid-1990s to reduce the resource drain by forcing the SOEs to finance their needs with bank loans.

Bank reforms also began in earnest in 1995 when institutions and regulations were changed to transform them into commercial banks. Prudential norms for lending were introduced and regulatory standards tightened. Three policy banks were created to carry on policy lending functions and PBOC created regional heads supposedly with sufficient seniority to force bank lending on creditworthiness criteria.

China’s domestic banking system now consists of a large number of institutions almost all of which are owned by various levels of government. The Big Four state-owned commercial banks dominate the system, accounting for more than half of banking assets, thousands of branches and hundreds of thousands of employees located throughout the country (Table 1). Smaller but more numerous banking institutions are also government owned but are geographically concentrated.

### 2.2 Capital markets

Direct finance through equity and debt markets provides a wider range of debt maturities and lower-cost capital to businesses and more choice for savers than is available from banks.  Capital markets encourage efficient capital allocation through institutions that continuously monitor the performance of issuers through movements in share prices and threats of takeovers.  Non-bank debt markets, however, are under-developed in both countries.

India’s capital markets are better developed than China’s and play a more significant role in the economy. India has two national stock exchanges: the Bombay Stock Exchange (BSE) established in 1875 and the National Stock Exchange established in the 1990s.

Both now have electronic trading platforms with 9400 participants (of which less than 30 are foreigners) and 9600 listed companies (a significant number of which are rarely traded); 70 percent of BSE market capitalization is accounted for by private firms and joint ventures (Farrell and Lund 2005). India also has futures markets and a venture capital market that consists of 34 foreign and 68 domestic firms. In the past decade, capitalization of India's stock markets has increased nearly 3 times while debt market capitalization has increased by six times. Both life insurance and non-life insurance premiums per capita have shown remarkable growth (Table 2). Pension funds are now permitted to invest 5 percent of new inflows in shares and 10 percent in equity-linked mutual funds.

Infrastructure for the bond market exists: the Clearing Corporation of India Limited (CCIL) was established in 1999 to handle clearing and settlement. The government bond market is large because of fiscal funding requirements. But because banks are required to hold government bonds the yield curve fails to play its full role as the market benchmark. The corporate bond market is under-developed, accounting for only one percent of total financial assets (the comparable figure for China is 5 percent) because of stringent regulations on registration and disclosure and high transactions costs for issuers (Farrell and Key 2005). Growth of the market is stagnant.

China's capital markets are among the smallest in the world. China's bond markets are in the early stages of development and serve mainly as a channel for government finance due to a highly restrictive regime facing corporate issuers. Although both the PBOC and CSRC are the regulators, the National Development Research Council, secretariat to the policy making State Council, must approve quota allocations and the issuance of corporate bonds. Banks supply most debt finance. Excluding government-owned shares, equity market capitalization is only 17 percent of GDP compared to a 60 percent average in other emerging markets (Farrell and Lund 2006).

By the end of 2005 corporate bond financing still accounted for only 13 percent of GDP which made it one of the least developed bond markets in East Asia, far behind Korea, Malaysia and Thailand (Asian Development Bank 2006). There are two stock exchanges, established in 1990, in Shenzhen and Shanghai.[10] The exchanges initially provided two classes of shares: local investors using domestic currency were permitted to invest in A shares; foreign investors using foreign currency in B shares. The segregation of local investors was dropped in 2001. Most of the available listings are those of the public shares of China's largest SOEs. Continued government ownership stakes in these companies has caused market liquidity problems and hampered the development of efficient capital market institutions.[11]

### 2.3 Financial oversight

Supervisory structures in China are still quite new and therefore evolving, while India's are well-established, even entrenched. Both have flaws including uncertain and overlapping jurisdictions that affect banks in particular.

In India, RBI carries out a number of roles that reflect its history. Not only is it the central bank, it is also the bank regulator, manager of the public debt and majority owner of the

State Bank of India, India's largest commercial bank. Mor et al (2006) also argue that India's banking oversight focused on "bank processes" rather than on credit quality and risk and that the reforms of the past decade have failed to rectify this problem. A central bank with multiple roles is often found in developing countries, but as an economy becomes more complex and makes more demands on the financial system, conflicts of interest are bound to arise, for example between monetary policy or debt management objectives and bank soundness and efficiency. We return to this issue below.

In addition, India's state, urban and district cooperative banks and nonbank finance companies are subject to multiple overseers including the State Registrar of Cooperative Societies, Ministry and Finance and RBI, which weakens oversight and creates opportunities for regulatory arbitrage. Other government agencies including the comptroller and auditor general, Central Vigilance Commission (CVC) and Central Bureau of Investigation are also involved in bank oversight, particularly audits. Students of India's banking system highlight this pervasive government involvement – beyond what might be justified to prevent systemic risk – as creating disincentives for efficient capital allocation.[12]

Capital market oversight is more efficient. India's stock exchanges are the responsibility of the Securities and Exchange Board of India (SEBI). The insurance sector is regulated since 2000 by the Insurance Regulatory and Development Authority (IRDA) which protects premium holders and ensures orderly growth of the industry. Recent international surveys have given India's disclosure, accounting and board room standards and practices consistently high marks. [13]

China's financial institutions are regulated by three main agents, all created since 2000, the China Banking Regulatory Commission (CBRC), the China Securities Regulatory Commission (CSRC) and the China Insurance Regulatory Commission. The PBOC shares responsibility for oversight and the rationale for the division of labor responsibilities and authority among them remain somewhat unclear.[14] The CBRC is responsible for oversight of retail and wholesale banks but not investment banks which, along with securities houses are the responsibility of the CSRC. The PBOC is responsible for the safety and soundness of the financial system. The decisions of each agency are subject to approval by the State Council which reflects the political concerns of the party leadership.

## 3. Performance of banks and capital markets: are weaknesses being addressed?

### 3.1 Banks

Since the 1980s both governments have moved to reform and modernize the banking sectors but social objectives have retained their importance. China has retained near-universal government ownership at the same time that the central government has tightened prudential standards and oversight and modernized the incentive structures for bank managers. India also has tightened prudential standards and oversight but permitted more diverse ownership.

The relationship between the state-owned banks and enterprises differs in the two countries. In China, governments initially owned both the banks and the capital-intensive industrial SOEs who were their major borrowers. Since the mid-1990s SOEs have been forced to obtain their financing from banks rather than from public revenues. As the SOEs were restructured a key government priority was to maintain sufficiently rapid economic growth to absorb these layoffs; banks provide much of the financing for that growth. India's banks, in contrast, have not been used to fund the SOEs directly; the SOEs are financed by the public treasury. In turn, RBI directs the banks to invest a proportion of their assets in public sector bonds.

Enterprise ownership is becoming less transparent in China as corporate entities evolve into a mix of state and non-state forms.[15] Bank managers "take the heat" for the bad loans to loss-making firms. In contrast, Indian banks' bad loans are concentrated in government-mandated priority sectors. The "cost" of SOE financing is more transparent to the taxpayer since such subsidies or other financial support appear in the public sector fiscal accounts. Little is known about the quality of the projects that are subsidized or funded by government revenues; the implicit assumption is that government will not default on the large stocks of its bonds in banks' portfolios. But the impact of these large public sector bond portfolios falls on individual and corporate borrowers; as interest rates fell in recent years, bond prices rose attracting banks to the potential profits from those investments and crowding out lending and private investment (Farrell and Lund 2005). More recently, interest rates have begun to rise in the face of buoyant credit growth. Both factors have led to the sale of bonds which has become a windfall source of funding that could be used, among other things, to remove bad loans as they appear on bank balance sheets.

*Indian reforms have improved bank efficiency*

India's banking reforms in the early 1990s re-introduced market forces into the sector and began to reduce government ownership. While bank efficiency as measured by declining NPA ratios has improved the PSBs are less well managed than non-PSBs and are less innovative as this section argues. Directed lending penalizes more productive borrowers; but it has motivated innovation by non-PSBs to create profitable business models in priority lending, models that have yet to be tested by an economic downturn.

India's bank efficiency has improved. Weak banks have not been recapitalized since the late 1990s.[16]At the end of 2006 NPAs were 3.3 percent of total advances (Table 3), down from nearly 13 percent at the end of 2000. Since 2002 legislation has been passed that creates a framework to speed up the liquidation of defaulted loans.[17] Creditor rights have been strengthened. Lenders are allowed to settle with borrowers out of court and to sell blocks of bad loans to investors. However, NPAs are highly concentrated in the PSBs whose lending is still directed to priority sectors which account for between 40 and 50 percent of PSB NPAs (RBI website). Commercial banks are required to have a heavy presence in the rural areas, and indeed 71 percent of their branches are located there; these produce 33 percent of their deposits and account for 21 percent of their total loans (Patel 2004). On the positive side, small and medium-sized private companies account for 45 percent of all corporate loans and generate 23 percent of bank revenues (Farrell and Lund 2005).

The relationship between ownership and bank efficiency is a subject of considerable enquiry and debate in India. Several macro studies using aggregate data generally confirm the superior efficiency of non-state-owned banks, while the findings from micro studies of specific banks clearly reinforce the findings. Among the macro studies, Sarkar, Sarkar and Bhaumik (SSB 1998), found only weak differences in ownership effects between private over public sector banks with little evidence of a differential in operating efficiency. A later study of cost efficiency found private banks superior to PSBs, but the impact of deregulation in the early 1990s showed no significant differences between the two groups (Kumbhakar and Sarkar 2003). Further, the time trend in cost efficiency shows both groups making progress. But SSB found that public sector banks show evidence of moral hazard, taking less care in managing risk than private or foreign banks.

An indepth study of a single PSB concludes that India's financial system under-lends and many potentially profitable firms are denied access to credit. Relative to investment in government bonds, priority lending can be quite risky. Loan officers fear being exposed to charges of corruption if loans go bad; they also lack expertise to evaluate potential profitability of such customers (Banerjee, Cole and Duflo 2006). Another analysis evaluates the role of bank ownership in under-lending and finds that private banks are "no less responsive" to government-mandated lending priorities than the public banks, with the exception of agricultural lending. A comparison of the intermediary roles of public and private banks shows the former are less aggressive than private banks as lenders, attractors of deposits and in setting up new branches. Again, one of the reasons for the difference seems to be the risks perceived by loan officers in public banks of being investigated for corruption if borrowers default (Banerjee, Cole and Duflo 2005).

Two other significant costs of public sector ownership that have not been as intensively documented in the literature relate to skills and technology. The PSBs are subject to public sector rules and regulations on salaries and personnel that make personnel restructuring difficult despite a willingness to pay the costs. At the same time, they face difficulties attracting new staff with modern skills, essential to the introduction of the latest risk management and credit evaluation systems because they are not permitted to compete with the higher financial rewards offered in the private sector. Lacking the necessary skills and technology, PSBs have been slow to introduce nation-wide automated banking services and new products; they are therefore losing market share to private and foreign banks.[18]

Continued high levels of state ownership and conservative regulation have the effect of making banks operate much like a narrow banking system: they take deposits but channel a significant proportion of their investments into low risk government bonds. In 2005 government securities still accounted for 31 percent of bank assets and corporate loans for around 50 percent (IMF 2006b).

But the picture is changing. Real sector growth is changing both demand for and returns to bank lending. Banks' stocks of government securities dropped in 2006 to the mandatory 25 percent level as banks responded to robust credit demand in retail products like mortgages (rising interest rates will also have had an impact). In addition, some banks' experiments with models designed to turn priority sector lending into profitable businesses, have begun to show success. One of the main reasons rural branches have largely failed to deliver finance to the poor for the obvious reason that such lending is high risk and high cost business (Basu 2006). Borrowers lack collateral and credit histories while bank branches are distant, their procedures rigid and their staff ill-trained. Government intervention through public sector institutions also creates distortions for commercial banks.

Nevertheless, efforts by NGOs and micro-finance institutions to form groups of borrowers (mainly women) to pool their savings and make small loans to members have attracted some banks to create linkages through which the groups' savings are deposited and borrowing is possible using group guarantees as collateral. ICICI Bank is pioneering the securitization of micro loan portfolios using the local entities as the administrators.[20] These efforts are in their early stages, but show some promise in addressing the transactions cost and risk problems inherent in the business. Of course, the test of such approaches will be whether credit quality is maintained in the next economic downturn.

*China's banks: improving but weaknesses persist*

China's challenge differs from that in India in that the banks to be transformed into commercial banks were originally policy banks, lending according to government priorities. Since 1998 China has followed a three-step strategy to introduce market-based incentive structures into the four largest state owned "commercial" banks (SOCBs). The test of these reforms lies in banks' ability to allocate credit efficiently and manage risks successfully. This section explains why, by these criteria, the reforms are still insufficient. Indeed some evidence implies that these banks have destroyed rather than created value.

The first step in the three-step strategy was to inject capital in 1998, 2004 and 2005 to strengthen the capital bases of the banks to meet BIS standards. Since 1999, the banks have both written off NPLs and transferred them to four state-owned asset management companies (AMCs) which issued government-guaranteed bonds in return. The second step was to attract strategic foreign investors willing to purchase equity stakes in the banks (restricted to 20 percent for any single investor and 25 percent total), to contribute directors to the boards and assign foreign managers to the banks. The third step was to offer small amounts of equity to institutional and other investors through IPOs on the Hong Kong and Shanghai Stock Exchanges. The purpose of this step was primarily to force bank managers to increase the transparency of their reporting and to expose them to market evaluations by bank analysts.[21]

These steps, near completion in three of the four SOCBs at the end of 2006, have cleared their balance sheets of legacy bad loans dating back to pre-1980 liberalization days and generated optimism that the banks have put their problems behind them. NPL ratios for three of the largest banks had declined to single digit levels in 2005 (Table 4). Estimates of the cost of removing the bad loans vary, depending on assumptions, but the government has found the necessary funds, from the treasury and foreign exchange reserves, to meet these costs.

Going forward, the central issue is whether China's misdirected lending (mainly to SOEs) will persist. Will further injections of public funds be necessary or are the banks on the desired road to efficiency and profitability? There are reasons to argue that bank incentive structures are still inadequate and that there will be another bailout.

First, evidence persists of pervasive government influence and concern to maintain sufficiently rapid economic growth to create jobs to maintain social stability. Economic growth is being driven primarily by rapid rates of investment which grew at unsustainable rates of 34 percent in 2004, 16 percent in 2005 and continues into 2006. The banks' mainstay borrowers are firms, many of them government-owned or -controlled. By the large banks' own published financial statements corporate customers still account for between 70 and 80 percent of their loans.[22] Brandt and Zhou (forthcoming) find that the state sector, defined to include shareholding companies in which governments have significant ownership shares, absorbed between a half and two-thirds of new bank lending in the 1998-2003 period.

Second, in 2005, more than 40 percent of the industrial SOEs were losing money and current data indicate the losses at government-controlled firms continue to mount.[23] While the largest SOEs are reporting burgeoning profits and financing new investments themselves, revenues and profits are concentrated among the large: in 2005 the ten largest accounted for over 53 percent of total revenues and the 165 SOEs owned by the central government accounted for more than 70 percent of SOE profits.[24] Yet China still has 120,000 SOEs. The implication is that banks' exposures are likely to be greater to the tens of thousands government owned or controlled firms whose profits appear to be much less certain.

Third, the government's approach to unsustainable growth is to try to slow it by administrative guidance to the banks on the sectoral allocation of loans; but such guidance is a very blunt instrument that distorts credit decisions by restricting credit by sector rather than by risk and productivity indicators of borrowers and projects. For example, a productive and profitable borrower in a restricted sector will be denied credit while a less productive borrower in a permitted sector will have access – just the opposite outcome from that predicted by market forces. Small (and often innovative and entrepreneurial) borrowers, who might grow fast and create jobs, have difficulties accessing bank credit because of regulations requiring the banks to demand high levels of collateral (OECD 2005).

Micro level and anecdotal evidence adds to concerns about bank inefficiency and inability to price their loans to reflect credit risk. Podpiera (2006) analyzed the determinants of the growth rates of loans for different types of banks during the 1997-2004 period. He found that corporate profitability of the banks' commercial customers had no effect on the growth of their loans and that the large state owned banks were losing market share to other financial institutions more quickly in the provinces with more profitable customers. Data on loan pricing patterns at the banks since 2004 show that interest rates charged borrowers are very compressed around the benchmark rate, suggesting little ability or preference to price for risk.

Another reason to doubt that better credit decisions are being made relates to bank structures and governance which reflect the ambiguities of continued government ownership. Lessons from many banking crises in both developed and developing countries point to the importance of a governance framework that creates senior management accountability to a board of directors made up largely of knowledgeable people from the private sector who are not associated with the bank as customers or suppliers and whose primary responsibility is to hire, evaluate (and fire) the CEO. The Chair has been separated from the CEO position but the involvement of Communist party officials, while declining, continues to be pervasive throughout the organizations. Bank heads are members of the Central Committee (Naughton 2003); the CEO is often also the party secretary; bank performance is discussed at party meetings.[26]

Further, widespread evidence of attitudes among investors, depositors and customers that China's government-owned banks are "too big to fail" indicates that moral hazard is a pervasive problem. The Big Four are more subject to external monitoring than they were, but capital injections and continued government involvement in their governance undermine bank independence. Depositors believe they have blanket protection of their deposits even if the rate of return is low. Some reports indicate the central government intends to introduce deposit insurance, suggesting that the days of blanket protection maybe numbered, but no date has been set. Moreover, even if the formal rules change it remains to be seen whether depositors would actually be forced to bear losses should a bank fail.

Finally, the initial public offerings (IPOs) of three of the four largest SOCBs in 2005-06 provide data that suggest the banks have actually destroyed value in the past. The Industrial and Commercial Bank of China was valued by investors in the IPO at $41 billion less than the $172 billion that the government and strategic investors pumped into it since 1998 (China Economic Quarterly 2006).

### 3.2 Capital market development

The corporate bond market in China is a work-in-progress for several reasons. Issuers face numerous regulatory restrictions; bankruptcy laws have only recently been adopted; default procedures are not yet based on market principles; investors lack the transparency afforded by a credit rating system, modern accounting standards and transparency by issuers; market discipline has not been established and investor education is insufficient (Zhou 2005). Nevertheless, the list of investors is growing beyond domestic institutions to include Qualified Foreign Institutional Investors (QFIIs) who are mainly portfolio investors allowed to invest despite capital account restrictions.

The similarly small Indian corporate bond market is also explained by stringent government regulations that make it costly and difficult to issue domestic bonds. Most investors are institutions; transparency in both primary and secondary markets is limited. Infrastructure is inadequate: legal recourse is complicated and bankruptcy laws are ineffectual (Jadhav 2006). At the same time, the willingness of banks to issue 5-year credits reduces the incentives for corporations to disintermediate the banks. An appetite for long term finance is evident in the size of the international bond issuance and private placements that avoid the costs and obstacles facing issuers of domestic instruments. Indian corporations issue debt and equity-linked instruments through foreign currency convertible bonds (FCCBs).

Further capital market development is clearly needed in both countries. China has the larger task of developing the institutions and instruments of direct finance by creating appropriate institutional and regulatory frameworks that facilitate the working of market forces and promote market discipline.

## 4. Prospects for further reforms

### 4.1 The ownership issues

While little in this paper contradicts the negative relationship found in the literature between government ownership and bank efficiency, there is evidence that governments are serious about reducing the negative impacts. In India, the RBI has tightened loan classifications and NPA ratios have declined following the Sarfaesi Act 2002 legislation. The Indian banking market is also becoming more competitive as the share of total loans and deposits held by private and foreign banks reaches 25 percent (Table 1). Increased competition has also encouraged greater efficiency in the PSBs (Economist 2006) but not consolidation of the many smaller PSBs to achieve scale economies

Public sector fiscal requirements are gradually being reined in (Table 5). China has also made progress: its banking regulator requires best practice prudential standards; three of the Big Four state owned banks have relatively clean balance sheets. But China's booming economy since 2003 has complicated matters, as bank loans soared (reducing NPL ratios) in response to robust demand in expanding industries. Excess capacity in some industries such as steel is a growing problem; most indicators of loan growth and quality suggest large new NPLs when the economy slows to a more sustainable growth rate discussed below.

Much also remains to be done to create the institutional framework for banking and capital markets that India already has. China's heavily directed approach to fixing up its banks is necessary, but not sufficient. Significant moral hazard remains and the reluctance of the SOCBs to lend to the productive small non-state borrowers in favor of old inefficient SOEs implies those banks have been obstacles rather than sources of growth.

### 4.2 Enhancing competition

Performance comparisons are difficult, but current market and performance indicators are available for some of the largest banks in both countries (Tables 6 and 7). China's banks are much larger than India's on market cap, assets and loan measures. China Construction Bank, which listed on HKSE in 2005, is not China's largest bank (rather it is the Industrial and Commercial Bank of China which listed in Hong Kong and Shanghai in late 2006) but its deposit share is much larger than those of the next two largest banks for which public information is available. Indian banks lead the Chinese on profitability indicators, especially India's private banks. Indian net interest margins are much higher, but in both countries state banks tend to cover their costs by maintaining large spreads between lending and deposit rates reflecting lack of competition and low productivity, the costs of which are borne by borrowers and savers.

**4.3 Foreign Entrants**

Theoretical and empirical analysis suggests that foreign participants in domestic banking markets improve financial sector efficiency by stimulating more competition.[28] What has been each country's rationale and road map for foreign entry? Here we find that China has made more progress, using pre-commitment in the WTO accession talks concluded in 2001 to bind its banks into a five-year timetable for opening domestic currency businesses to foreign banks in 2007. India's 2005 Road Map on foreign entry is very cautious in comparison.

The philosophical approach in China is that foreign entry should be used strategically to introduce modern standards, practices and new products into the domestic market so that domestic competitors can learn. Foreign strategic investors in the large banks that dominate the financial sector are restricted to 25 percent total equity stakes. But the equity is not the objective; rather they are valued more for the new ideas, products, skills and technology that they are expected to contribute. Similarly, allowing banks to offer themselves to foreign investors through IPOs on the Hong Kong Stock Exchange is primarily intended to encourage awareness and responsiveness to modern market evaluations of their profitability and efficiency.[29]

RBI's road map for foreign entry[30] laid out in its 2005 Annual Report limits foreign investors to the small number of private banks; their aggregate investment is further limited to 24 percent of a bank's equity, with a possible increase to 49 percent if a bank's board and shareholders approve. Wholly owned subsidiaries of foreign banks are accorded national treatment. But until 2009, possibilities for domestic acquisitions are limited to weak private sector banks that RBI wants restructured. At that time permitted activities will extend to other private sector banks but stakes in such banks will be limited to 74 percent. There is no explicit plan to reduce the government's share of the PSBs or to allow non-state stakes in those entities.

**4.4 Future loan losses**

Looking ahead, the big issue in China is the size of future loan losses and uncertainty about the necessity of yet more bailouts. Future loan losses are not perceived to be a problem in India, although some analysts have noted persistent regulatory forebearance and non-transparent subsidies of some troubled state-owned financial institutions (Patel 2004). But India's buoyant growth since 2003 has fueled rapid credit growth which suggests there is little room for complacency.

In China there are at least two possible triggers of future problems. One is stiffer competition from foreign entrants beginning in 2007; the other is slower growth. Foreign competition is the less likely source. Foreign banks generally view China as attractive because they see customers as being underserved and many standard products absent. They will target new products that domestic banks later learn to produce. Some customers might migrate to foreign banks but as in most other countries, domestic customers tend to stay with the brands they know – unless things go wrong.

The more likely trigger for problems will be slower growth. High rates of growth have been fueled by rising investment funded partly by bank loans. At the same time, state companies have not been required to pay dividends, allowing them funds to fuel even more investment much of which does not have a positive real rate of return. This leads to misallocated capital that as the Bank for International Settlements has noted "…will eventually manifest itself as falling profits and this will feed back on the banking system, the fiscal authorities and the prospects for growth more generally."[31]

Another bailout will be required, but by most calculations it will be affordable. One way to estimate future loan losses is to "age" the Special Mention loans publicly reported by three of the Big Four into loan losses in 2007 or 2008. Assuming the Special Mention loans become non-performing in 2007, an estimated RMB 1.5 trillion new bad loans would appear from lending during the current boom (around US$ 200 billion) and about 7.2 percent of 2007 GDP (Dobson and Kashyap forthcoming). Lardy (2004) uses an alternative method. He examines the impact on fiscal sustainability of the implied added burden of interest obligations of AMCs to the banks and the increase in NPLs resulting from loans made in the 2002-04 period. In the event of growth slowdown, what would be the impact of these liabilities on fiscal sustainability? In two alternative scenarios, where 20 percent or 40 percent of the new loans become non-performing, he finds that the debt-to-GDP ratio rises at first, but then declines through the period to 2013. In other words, fiscal sustainability is preserved during this period.

India's buoyant growth has brought a credit boom which causes similar concerns about the consequences of a future growth slowdown. Since 2004 credit has grown by 30 percent (IMF 2006b), partly because bank credit is being more widely used (financial deepening) and partly because of signs of the misdirection of credit. The sectoral breakdown of credit growth in Table 8 suggests other reasons to be concerned. Overall credit growth was nearly 28 percent, far in excess of the government's 23 percent target. The priority sectors accounted for 40 percent of this growth (IMF 2006b:57).

Often the sudden rapid growth of credit foreshadows deteriorating loan quality and indicates problems with risk management at the banks and raises questions about weaknesses in prudential standards and supervision. RBI data show that the PSBs had a higher NPA ratio in 2006 (3.7 percent) than the private banks (2.4 percent) and foreign banks (2.1 percent). The same data also show that the priority sector share of PSB non-performing advances had risen to 54.1 percent of total PSB NPAs from 48.1 percent the previous year. The PSBs dominate the surge in lending to priority sectors. IMF (2006b) performed three stress tests to assess the vulnerability of the banking system to loan quality deterioration. In the most stringent case they assess the effect of all new loans becoming non-performing at the same NPL rate as old loans have done. The resulting bad loans have the largest impact of the three scenarios on banks' capital bases but most banks are able to maintain their capital adequacy ratios close to 9 percent and are therefore unlikely to cause systemic risk. One exception is four "old private" banks accounting for 12 percent of bank assets whose capital bases would erode to dangerous levels.

These analyses underline the costs of distortions associated with high levels of government ownership. In China, there is a widely held assumption that government will not allow severe banking problems and, if necessary, will inject public resources again. In India, the PSBs dominate the concerns about a new concentration of bad loans in the priority sectors, suggesting concern that they are responding to public sector economic development priorities rather than risk-based lending practices. When growth slows, the allocation of public resources to fixing the problems might be affordable, but further bailouts will only exacerbate moral hazard and continue to distort incentives. They also divert public funds from other priorities -- such as China's current 5-year Program that aims to enhance public services in rural areas and accelerate urbanization. Perhaps it will take another crisis to focus on alternative strategies for the banking sectors. These are discussed in the next section.

**5. Implications for future growth prospects**

What are some of the priorities for rectifying the weaknesses and improving those prospects? In this section I address each in turn, noting that in some areas, decision makers in each country could learn from experience in the other.

First, both banking systems are behaving like agents of capital accumulation (even capital destruction in China) rather than as agents of innovation and technical change, the main source of sustained long-term growth. Government intervention distorts incentives and reduces bank efficiency in allocating credit to the most productive and creditworthy borrowers. The Indian government directs banks to finance social projects at the expense of non-priority borrowers; China's huge bank-dominated state owned financial system persists in lending to entities associated with the state whether or not they are productive.

Second, banks in both countries are under-lending to the agents of economic change and job creation: small, entrepreneurial entities that lack political connections, government ownership, or government contracts and guarantees. Formal finance, despite official efforts in India, reaches a small proportion of entrepreneurs – but a larger share than in China. Instead these entities must rely on retained earnings and informal finance at much higher cost of capital. Tsai (2005:127) notes: "Informal finance remains a major source of credit for (Chinese) farmers who obtain four times more credit from the curb market…. In small businesses the curb accounted for up to three-quarters of private sector financing during the first two decades of reform. In both countries, private transactions with high interest rates violate banking regulations. In practice, however, the curb market in both China and India has adapted and flourishes."

Tsai (2005) argues that "…the popularity of informal finance in rural China and rural India can be attributed to a failure of the state…to develop microfinance programs that meet local needs…. Credit officers and other officials face local pressures and incentives for credit distribution….the curb at the grassroots has a comparative advantage in knowledge about credit worthiness….In both countries, local state agents often subvert central state objectives. Despite vastly different political systems, the challenge of directing credit to poor rural dwellers remains pressing in both countries."

Basu (2006) examines what might need to change to increase the scale of group-based lending in rural areas. One obvious factor is the quality and sustainability of the community-based groups whose great advantage over the banks is that they know the customer (a primary requirement for successful consumer finance). Further innovation and facilitation by regulators is required to facilitate the transition of such groups into one of the smaller regulated entities such as non-bank finance companies; clear targeting of the low-end, small rural client is required (to avoid temptation to pursue wealthier clients); use of other intermediaries who know their customers such as distributors of household appliances and agricultural equipment. Another obvious factor is the willingness of governments to introduce more imagination and flexibility into the priority lending requirements by, for example, making the obligations tradable.[32]

Third, foreign participation is under-utilized in India and private ownership is under-utilized in China. Research has established that foreign entrants bring modern skills and products and new technologies; they require greater transparency in regulations to ensure compliance; and they fan the winds of domestic competition. Managers of India's state owned or controlled institutions tend to pay more attention to the regulators than to making their businesses productive. The positive growth and performance of India's "new private" banks also suggests lessons to be learned.

Government insistence on continued bank ownership in both economies reflects the estimation that growth rates are adequate to support the continued "cost" of using banks to pursue political objectives. While it has yet to be established that both countries could have grown even faster up to this point if they had more efficient financial sectors, it is clear that banking systems that are unable to evaluate credit and manage risk will prevail upon the public purse when growth slows and as the economies outgrow their financial systems. In more complex market economies the distortions of government ownership exacerbate vulnerabilities to shocks and industrial setbacks.

*Changes to improve growth prospects*

India's smaller volume of financial assets is allocated more efficiently than China's where economic growth has been driven by a wave of domestic investments that suggest the cost of capital is too low. Both countries could improve capital allocation by increasing competition and spurring the development of their capital markets. Chinese bankers acknowledge that the most realistic way to stimulate competition in the banking sector would be to create efficient capital markets that provide lower-cost speedier finance to corporations. Farrell and Lund (2006) estimate that if Chinese companies could obtain 60 percent of their funding from bond markets and 40 percent from banks as companies in other countries do, they would reduce their funding costs by $14 billion a year.

Several changes in the banking systems are desirable, beginning with the upgrading of skills and information systems. China's largest state owned banks need to be freed from the heavy influence that governments still bring to bear on their operations and loan collections. This will require better risk management techniques (an essential part of which is better management information systems), greater independence of boards of directors and more accountability of management to boards. These changes are more likely to occur as competition intensifies. Consideration should also be given to increasing competition among banks by allowing private banks and larger ownership shares for foreign banks. Liberalizing the rules on local private investment would also increase market monitoring.[33]

India could improve capital allocation by further reducing public sector borrowing. Competition in the banking system could be increased by permitting consolidation of the smaller PSBs. Market forces should also be allowed to influence how banks meet priority lending targets by making obligations tradable as Basu (2006) suggests. Increased competition for the banks from a better developed corporate bond market would also stimulate more efficiency if the regulatory over-burden were removed. More competition for capital will also raise interest rates and the cost of servicing the public debt. In turn, governments and public enterprises would have to reduce their dependence on bond finance by cutting their fiscal deficits.

China should remove the rules that saddle SME borrowers with heavy collateral requirements. These rules are motivated by the realization that most banks still lack the skills to evaluate and serve small high risk borrowers – a problem that some of India's best banks are beginning to address in innovative ways . Lending rates have been deregulated allowing banks to price for risk but weak analytical systems and relationships with their weak borrowers make them reluctant to do so.[34]

Second, each country has experimented with changes from which the other can learn. India could learn from China's approach to foreign ownership which recognizes the value of learning from strategic foreign investors who are permitted to acquire up to 25 percent of a bank's equity. The Road Map schedule should be accelerated and extended for both private banks and PSBs. For its part, China could learn from the growth and performance of India's "new private" banks and experiment with privatization of some of its smaller banks.

Third, greater clarity is needed about the future role of China's largest state owned banks. If majority government ownership continues, serious consideration should be given to changing the banks' structures to segregate risk on the lending side or to align lending mandates with the inadequate incentives and capacity of these banks to evaluate credit risk accurately. There are at least two ways to segregate risk. One would be to divide the banks into "good" and "bad" banks, with the bad assets and deadbeat customers moved into the bad banks and the good banks freed to operate strictly on market criteria. Another alternative is to sever the SOE customers and create a government agency that finances those that governments wish to retain.[36] Government bonds to support such an agency would have to be attractive to the banks on market – not political – criteria. Any further bank borrowing by SOEs would have to be on commercial criteria.

Fourth, both countries should consider regulatory changes that are more in line with modernizing the banks. In China, the introduction of more private investors into the state-owned banks, experiments with private banks and the introduction of capital market instruments such as subordinated debt would encourage market monitoring of the banks. Best practice deposit insurance would also create incentives for monitoring by depositors. India's deposit insurance system, however, may not be a model as it is considered to be overly liberal and contribute to, rather than reduce, moral hazard (Patel 2004).

Finally, serious consideration should be given to freeing financial regulators from the central banks to give them the freedom to focus primarily on financial institution soundness and efficiency. China's CBRC must satisfy both PBOC and the State Council before it can implement regulations. India's plethora of oversight agencies includes RBI, the National Housing Bureau, as well as overseers of cooperatives, insurance and securities. RBI's multiple roles can conflict with bank soundness and efficiency. For example, its ownership position in the State Bank of India ensures that its views dominate those of minority shareholders in commercial decisions. RBI responsibilities for debt management will influence its views on commercial banks' investment requirements and its concerns with bank soundness may conflict with monetary policy decisions. Balasubramanian et al (2005) has put forward a thoughtful proposal that a single Financial Services Agency- type regulator be created, with RBI playing a coordinating role among the existing regulators during a phased transition to the single agency. In the end, RBI would focus only on monetary policy.

Are such alternatives receiving serious consideration?

The answer is ambiguous because of the politics of reform. Key questions about changes in foreign participation, competition and bank ownership have been delayed in India until at least 2009. China's 2007 commitment to foreign entry is being met, but no commitments have been made to reduce the contradictions between continued majority government ownership and bank efficiency. Strong interests have vested in the status quo in both countries and as a result the banking sectors are viewed as utilities rather than as potential drivers of sustained long term growth. If governments accorded more priority to efficient capital allocation they would reduce government ownership and moral hazard, upgrade skills and systems, increase the independence of bank managers and boards of directors – at the same time that they impose requirements to safeguard consumers and promote priority lending. This could happen sooner in India with its much better developed institutional framework.

## 7. Conclusions

This paper has surveyed financial reform in China and India. It has concluded that reforms are sufficient to reduce risks of systemic banking crises. But government-owned banks continue to misallocate capital and corporate bond markets are still underdeveloped. Both systems are still vulnerable to future growth downturns and greater openness to world financial markets and both are likely to under-serve the increasingly complex economies. Ironically, without a crisis India, which has all the components of a modern financial system, seems unlikely to remove the political constraints on its full development. Similarly, China is unlikely to resolve more fully the tensions between political control of change and an efficient commercial banking sector.

**Table 1. Structure of the Banking Industry, China (2005) and India (2003-04)**

**A. The Chinese Banking Industry, 2005**

(CNY billion)

| | Number of institutions | Assets (CNY) | Market share,% | Liabilities (CNY) | Market share,% |
|---|---|---|---|---|---|
| All banks | 34,045 | 374.697 | 100 | 358.070 | 100 |
| Big Four commercial banks | 4 | 196.580 | 52.5 | 187.729 | 52.4 |
| Joint stock banks | 12 | 58.125 | 15.5 | 56.044 | 15.7 |
| City commercial banks | 112 | 20.367 | 5.4 | 19.540 | 5.5 |
| Other | 33,917 | 99.625 | 26.6 | 94.757 | 26.5 |

Source: CBRC website, accessed June 2006.

Notes: 1) All banks include policy banks, state-owned commercial banks, joint stock commercial banks, city commercial banks, rural commercial banks, urban credit cooperatives, rural credit cooperatives, postal savings, foreign banks and non-bank financial institutions.

2) Big Four commercial banks include the Industrial and Commercial Bank of China (ICBC), Agricultural Bank of China (ABC), Bank of China (BOC), and the China Construction Bank (CCB).

3) Joint stock banks include Bank of Communications, CITIC Industrial Bank, Everbright Bank of China, Huaxia Bank, Guangdong Development Bank, Shenzhen Development Bank, China Merchants Bank, Shanghai Pudong Development Bank, Industrial Bank, China Minsheng banking Co. and Evergreen Bank.

4) Other consists of rural commercial banks and rural credit cooperatives, policy banks, the postal savings bureau, finance companies, trust and investment companies and financial leasing companies.

**B. The Indian Banking Industry, 2006***

(Rupees billion)

| | **Number of institutions** | **Deposits (Rupees)** | **Market share, %** | **Loans*(Rupees)** | **Market share, %** |
|---|---|---|---|---|---|
| Public Sector Banks (PSBs) | 28 | 16,225 | 75 | 11,347 | 73.2 |
| Private banks | 28 | 4,282 | 19.7 | 3,168 | 20.2 |
| Foreign banks | 28 | 1,137 | 5.3 | 989 | 6.4 |
| Total | 218 | 21,644 | 100 | 15,504 | 100 |

Source: RBI "A Profile of Banks, 2005-06"; "Statistical Tables Relating to Banks in India", Tables 3.1, 7.1 and 7.2. Available at www.rbi.org.

Notes: * This date refers to 2005 fiscal year which ended on March 31, 2006.

These aggregate statistics refer to India's Scheduled Commercial Banks (SCBs). They do not include regional rural banks, a number of cooperatives and development finance institutions.

**Table 2. Indicators of India's Capital Markets**

| Indicator | 1994-95 | 2005-06 |
|---|---|---|
| Capital Market capitalization (USD millions) | 138,732 | 531,088 |
| Debt Market (capitalization USD millions) | 50,392 | 339,590 |
| Life Insurance (premiums per capita) | 1.56 | 548 |
| Non Life Insurance (Premium per capita) | 5.6 | 43 |

Source: Bajpai (2006)

**Table 3. NPAs in Indian banks, 2000-05**

(Rupees billion)

| | NPAs | Total Advances | NPAs / Total Advances,% |
|---|---|---|---|
| 2000 | 608 | 4,758 | 12.8 |
| 2001 | 640 | 5,587 | 11.4 |
| 2002 | 710 | 6,809 | 10.4 |
| 2003 | 703 | 7,765 | 9.1 |
| 2004 | 649 | 9,020 | 7.2 |
| 2005 | 575 | 11,712 | 4.9 |
| 2006 | 519 | 15,504 | 3.3 |

Source: RBI. "Statistical Tables Relating to Banks of India", Table 7.1 "Bank Group-wise Classification of Loan Assets of SCBs, 2000-05". Accessed at www.rbi.org.in.

**Table 4. Reported NPLs in China's Big Four banks, 2000 and 2005**

(RMB billions; NPL% = % total loans)

| | **Loans (2000)** | **NPL%** | | **Loans (2005)** | **NPL%** |
|---|---|---|---|---|---|
| Agricultural Bank of China (ABC) | 1484.3 | na | ABC | 2829.3 | 26.2 |
| China Construction Bank (CCB) | 1386.4 | 28.1 | CCB | 2458.4 | 3.8 |
| Industrial and Commercial Bank of China (ICBC) | 2413.6 | 34.4 | ICBC | 3289.6 | 4.7 |
| Bank of China (BOC)* | 1505.8 | 27.2 | BOC | 1800.1 | 5.5 |
| Total | 6,790.1 | 28.6** | | 10377.4 | 10.5 |
| Loans/GDP | | 76.0 | | | 55.9 |

- * reported for domestic loans only;   **loans and NPLs for only 3 reporting banks
- The ratio of NPLs is based on the BIS five-category loan classifications

Sources: Bank annual reports; BOC 2006 IPO Memorandum; CEIC data

**Table 5. Fiscal Balance, China and India (2001-05), percent of GDP**

| **China** | **2001** | **2002** | **2003** | **2004** | **2005** |
|---|---|---|---|---|---|
| Overall budget balance | -3.1 | -3.4 | -2.8 | -1.7 | -2.1 |
| **India** | **2001/02** | **2002/03** | **2003/04** | **2004/05** | **2005/06** |
| Central gov. balance | -6.4 | -6.0 | -5.1 | -4.3 | -4.3 |
| General gov balance | -10.1 | -9.7 | -9.0 | -7.4 | -7.7 |

Sources: IMF (2005); IMF (2006).

**Table 6. Market indicators, Chinese and India banks, 2004-2005 (US$ million)**

| | **Market cap.** | **Total assets** | **Loans** | **Deposits** | **Shareholders' equity** | **Deposit market share,%** |
|---|---|---|---|---|---|---|
| China (2005) | | | | | | |
| Bank of Communications | 25,988 | 170,130 | 95,204 | 148,955 | 9,611 | 4.0 |
| China Construction Bank (CCB) | 86,921 | 554,679 | 305,036 | 482,578 | 35,926 | 13.1 |
| China Merchants Bank | 9,786 | 89,519 | 57,281 | 78,345 | 3,180 | 2.1 |
| India (2004) | | | | | | |
| State Bank of India (SBI) | 10,770 | 100,302 | 44,138 | 80,054 | 5,250 | 21.5 |
| HDFC Bank | 5,271 | 11,217 | 5,576 | 7,929 | 986 | 2.1 |
| Punjab National Bank | 3,259 | 27,534 | 13,176 | 22,501 | 1,712 | 6.0 |

Source: Ramos et al (2006)

**Table 7. Indicators of Bank Performance, China and India, 2005**

| | **Net interest margin, %** | **Price – earning ratio** | **Net profit (% average assets)** | **ROA,%** | **ROE, %** |
|---|---|---|---|---|---|
| **China (2005)** | **2.8** | **18.96** | **0.6** | **0.6** | **15.3** |
| Bank of Communications | 2.7 | 22.6 | 0.7 | 0.7 | 13.3 |
| CCB | 2.9 | 13.8 | 1.1 | 1.1 | 19.0 |
| China Merchants Bank | 3.0 | 21.0 | 0.6 | 0.6 | 17.2 |
| **India (2005)** | **3.2** | **11.1** | **1.5** | **1.6** | **17.1** |
| State Bank of India | 3.2 | 11.2 | 0.9 | 1.0 | 16.1 |
| HDFC Bank | 4.4 | 25.6 | 1.5 | 1.4 | 18.1 |
| Punjab National Bank | 3.6 | 9.0 | 1.2 | 1.2 | 17.7 |
| **Hong Kong** | **2.4** | **13.9** | **1.2** | **na** | **13.7** |

Source: Ramos et al (2006)

**Table 8. Credit growth by sector, 2003-04 and 2004-05**

(yoy, percentage change)

| **Sector** | **2003-04** | **2004-05** |
|---|---|---|
| Priority sectors | 24.7 | 31.0 |
| Agriculture | 23.2 | 35.2 |
| Small-scale industry | 9.0 | 15.6 |
| Others | 38.3 | 37.0 |
| Industry (medium and large) | 5.1 | 17.4 |
| Petroleum | -16.8 | 19.2 |
| Infrastructure | 41.6 | 52.3 |
| Autos | -5.8 | 20.9 |
| Cement | -11.5 | 7.4 |
| Housing | 42.1 | 44.6 |
| Nonbank financial companies | 18.9 | 10.8 |
| Wholesale trade | 10.1 | 36.0 |
| Export credit | 17.2 | 14.3 |
| Gross (nonfood) bank credit | 17.5 | 27.9 |

Source: IMF 2006b, Table V3.

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[1] In 2004 China's financial assets were 200 percent of GDP while India's were 160 percent according to Farrell et al (2006).
[2] Corporate debt accounted for 35 percent and equity for 34 percent of total financial assets in the United States that year (Farrell 2006).
[3] See for example, Levine (1997); Allen and Gale (2001); Beck (2006).
[4] India uses the term NPA (non performing advances) while the term is NPL (non performing loans) in China.
[5] Gerschenkron (1962) was one of the first to make the case that in a weak institutional environment, private banks are unable to overcome deficiencies in information and contracting. Lewis (1950) advocated government ownership of banks to develop strategic industries.
[6] This section draws on Banerjee, Cole and Duflo (2005) and Sarkar, Sarkar and Bhaumik (1998).
[7] Priority sector lending is monitored by the Ministry of Finance and reported regularly at www.indiabudget.nic.in.
[8] ICICI was founded as a state development bank in 1955; it formed a commercial banking subsidiary in 1994 which merged with the parent in 2002 as a single publicly-listed company. HDFC Bank was also created in 1994 by a state-owned mortgage company.
[9] For example, ING bought 20 percent of Vysya Bank and Chase Capital acquired 15 percent of HDFC Bank (Madgavkar et al 2001).
[10] The Shanghai Stock Exchange was founded in the middle of the nineteenth century, but ceased operations in 1941.
[11] The Hong Kong Stock Exchange is also a significant equity market for Chinese entities but it operates quite separately from the domestic exchanges.
[12] See Battacharya and Patel (2003); Patel (2004); and Banerjee et al (2006).
[13]See LaPorta et al (2003).
[14] The single regulatory model typified by the Financial Supervisory Agency in the UK has been studied; a regulatory merger is a future possibility.
[15] For example, reported corporate entities in bank annual reports include state, collective and shareholding forms of ownership as well as private, foreign and "other".
[16] By 2002 capital injections had cumulated to Rs. 225 billion (Patel 2004), or roughly 10 percent of nominal 2002-03 GDP, a number that does not include a number of indirect bailouts of troubled public sector financial institutions, such as temporary tax exemptions and government guarantees.
[17] This legislation is known as the Securitization and Reconstruction of financial Assets and Enforcement of Security Interest (Sarfaesi) Act of 2002.
[18] Author's interviews, Mumbai, November 2006.
[20] See, for example, Nachiket Mor et al (2006).
[21] Dobson and Kashyap (2007) make a conservative estimate at 10.8 percent of 2005 GDP for the big four banks, while Ma (2006) estimates 19.4 percent as the cost for the entire banking system.
[22] The China Construction Bank, which breaks out its loans by the legal form of borrower, reports that loans to SOEs grew by nearly 9 percent in the first six months of

2006. Another large bank reports that among its ten largest borrowers, half are SOEs. 9).
[23] See Dobson and Kashyap (2007).
[24] See Embassy of PRC (2006).
[26] It is worth noting that the pervasive role of the party does not appear in the IPO memorandums of any of the three banks that went public in 2005-06.
[28] See Dobson and Jacquet (1998) for a review of the literature and evidence on market entry by foreign banks.
[29] Even so, this part of the modernization strategy has drawn criticism that banking assets should not be sold to foreigners and that the price on what has been sold has been too low.
[30] RBI (2005:137) Box V.2 "Road Map for Presence of Foreign Banks".
[31] Bank for International Settlements (2006).
[32] Under the current regime, banks circumvent required lending quotas by subscribing to NABARD and SIDBI bonds.
[33] Recent listings by Bank of China and Industrial and Commercial Bank of China on both the Hong Kong and Shanghai Stock Exchanges are moves in this direction.
[34] This is a conclusion based on the work of Podpiera (2006).
[36] Goodfriend and Prasad (2006).