

China's Financial System: Past, Present, and Future*

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Abstract

We examine and compare the role of China's financial system in supporting the growth of firms and the economy with that in other countries, and explore directions of future development. First, we find that the current financial system is dominated by a large but inefficient banking sector. Reducing the amount of non-performing loans among the major banks to normal levels is the most important objective for reforming the financial system in the short run. Second, despite the initial fast growth of the stock market, its role of resource allocation in the economy has been both limited and ineffective. Further development of China's financial markets is the most important long-term objective. Third, we find that the most successful part of the financial system, in terms of supporting the growth of the overall economy, is a non-standard sector that consists of alternative financing channels, governance mechanisms, coalitions, and institutions. This sector should co-exist with banking and markets in the future in order to continue to support the growth of the Hybrid Sector (non-state, non-listed firms). Finally, in order to sustain stable economic growth, China should aim to prevent and halt damaging financial crises, including a banking sector crisis, a real estate or stock market crash, and a "twin crisis" in the currency market and banking sector.

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I. Introduction

We examine the role of China's financial system in supporting the growth of its economy and explore the directions of its future development. Almost every functioning financial system includes financial markets and intermediaries (e.g., a banking sector), but how these two sectors contribute to the entire financial system and economy differs significantly across different countries. Although there is no consensus regarding the prospects for China's future economic growth, a prevailing view on China's financial system speculates that it is one of the weakest links in the economy and it will hamper future economic growth.

A comprehensive examination of all aspects of China's financial system, and extensive comparisons with other countries where data is available are provided below. We also discuss what has worked and what remains to be done within the financial system, and examine how further development can better serve the entire economy. Finally, we provide guidelines for future research and policy making on several important unresolved issues, including how China's financial system should integrate into the world's markets and economy.

We draw four main conclusions about China's financial system and its future development. First, when we examine and compare China's banking system and financial markets with those of both developed and emerging countries, we find China's financial system is dominated by a large but under-developed banking system, which is mainly controlled by the four largest state-owned banks with a large amount of non-performing loans (NPLs). The continuing effort of improving the banking system, in particular, reducing the amount of NPLs of the major banks to normal levels, is the most important aspect of reforming China's financial system in the short run.

Our second conclusion concerns China's financial markets. Two domestic stock exchanges, the Shanghai Stock Exchange (SHSE hereafter) and Shenzhen Stock Exchange (SZSE hereafter), were established in 1990. Initially they did well but in recent years they have performed poorly. Their scale and importance are not comparable to the banking sector. Moreover, the financial markets have not been effective in allocating resources in the economy, in that they are highly speculative and driven by insider trading. Going forward, however, financial markets are likely to play an increasingly important role in the economy, and the further development of the financial markets is the most important long-term objective for China's financial system. We propose several measures that can increase the size and scope and help to improve the efficiency of the markets.

Third, in a companion paper, Allen, Qian, and Qian, (2005a, AQQ hereafter), we find that the most successful part of the financial system, in terms of supporting the growth of the overall

economy, is not the banking sector or financial markets, but rather a sector of alternative financing channels, such as internal financing and trade credits, and coalitions of various forms among firms, investors, and local governments. Many of these financing channels rely on alternative governance mechanisms, such as competition in product and input markets, and trust, reputation, and relationships. Together these methods of financing and governance have supported the growth of a “Hybrid Sector” of non-state, non-listed firms with various types of ownership structures. It is important to point out at the outset that our definition of the Hybrid Sector is broader than privately or individually owned firms, which are part of this sector. In particular, firms that are partially owned by *local* governments (e.g., Township Village Enterprises or TVEs) are also included in the Hybrid Sector, because: first, despite the ownership stake of local governments and the sometimes ambiguous ownership structure and property rights, the operation of these firms resembles more closely that of a for-profit, privately-owned firm than that of a state-owned firm; and second, the ownership stake of local governments in many of these firms has been privatized.¹ The growth of the Hybrid Sector has been much higher than that of the State Sector (state-owned enterprises or SOEs, and all firms where the central government has ultimate control) and the Listed Sector (publicly listed and traded firms with most of them converted from the State Sector), and contributes most of the economic growth. We believe these alternative channels and mechanisms should be encouraged going forward. They can co-exist with banks and markets while continuing to fuel the growth of the Hybrid Sector.

Finally, in our view a significant challenge for China’s financial system is to avoid damaging financial crises that can severely disrupt the economy and social stability. China needs to guard against traditional financial crises, including a banking sector crisis stemming from continuing accumulation of NPLs and a sudden drop in banks’ profits; or a crisis/crash resulting from speculative asset bubbles in the real estate market. China also needs to guard against new types of financial crises, such as a “twin crisis” (simultaneous foreign exchange and banking/stock market crises) that was prevalent in many Asian economies in the late 1990s. The entrance of China into the World Trade Organization (WTO) introduces cheap foreign capital and technology,

¹ The Hybrid Sector comprises all the firms that are not state-owned or publicly listed, and more specifically, it includes the following types of firms: 1) privately owned companies (but *not* publicly listed and traded): controlling owners can be Chinese citizens, investors (or companies) from Taiwan or Hong Kong, or foreign investors (or companies); 2) collectively- and jointly-owned companies, where joint ownership among local government, communities, employees, and institutions is forged. See Li (1996) and Che and Qian (1998) for arguments on why an ambiguous ownership structure with local governments is more efficient than well-defined private property rights or state ownership in an environment with underdeveloped markets and institutions.

but large scale and sudden capital flows and foreign speculation increase the likelihood of a twin crisis. At the moment, the rapid increase in China's foreign exchange reserves suggests that there is a large amount of speculative money in China in anticipation of an appreciation of the RMB, China's currency, relative to all other major currencies. Depending on how the government and the central bank handle the process of revaluation, there could be a classic currency crisis as the government and central bank try to defend the partial currency peg, which in turn may trigger a banking crisis if there are large withdrawals from banks.

The remaining sections are organized as follows. In Section II, we briefly review the history of China's financial system development, present aggregate evidence on China's financial system, and compare them to those of developed and other developing countries. In Section III, we examine China's banking system and the problem of NPLs and reforms. In Section IV, we examine the growth and irregularities of financial markets and listed firms. In Section V, we examine the non-standard financial sector, including alternative financial channels and governance mechanisms. We then examine different types of financial crises and how China's financial system can be better prepared for these crises in Section VI. Finally, Section VII concludes the paper.

II. Overview of China's Financial System

In this section we examine China's financial system, focusing on both the banking system and financial markets, as well as firms' financing channels at the aggregate level, including non-bank and non-market channels.

II.1 A Brief Review of the History of China's Financial System

China's financial system was well developed prior to 1949.² After the foundation of the People's Republic of China in 1949, all of the pre-1949 capitalist companies and institutions were nationalized by 1950. Between 1950 and 1978, China's financial system consisted of a single bank - the People's Bank of China (PBOC), a central government owned and controlled bank under the Ministry of Finance, which served as both the central bank and a commercial bank, controlling about 93% of the total financial assets of the country and handling almost all financial transactions. With its main role to finance the physical production plans, PBOC used both a "cash-plan" and a "credit-plan" to control the cash flows in consumer markets and transfer flows between branches.

The first main structural change began in 1978 and ended in 1984. By the end of 1979, the

² For more details on the description of pre-1949 history of China's financial system and the rise of Shanghai as China's financial center, see, for example, Kirby (1995), and Lee (1993).

PBOC departed the Ministry and became a separate entity, while three state-owned banks took over some of its commercial banking businesses: The Bank of China³ (BOC) was given the mandate to specialize in transactions related to foreign trade and investment; the People's Construction Bank of China (PCBC), originally formed in 1954, was set up to handle transactions related to fixed investment (in manufacturing); the Agriculture Bank of China (ABC) was set up (in 1979) to deal with all banking business in rural areas; and, the PBOC was formally established as China's central bank and a two-tier banking system was formed. Finally, the fourth state-owned commercial bank, the Industrial and Commercial Bank of China (ICBC) was formed in 1984, and took over the rest of the commercial transactions of the PBOC.

For most of the 1980s, the development of the financial system can be characterized by the fast growth of financial intermediaries outside of the "Big Four" state-owned banks mentioned above. For example, regional banks (partially owned by local governments) were formed in the Special Economic Zones in the coastal areas; in rural sectors, a network of Rural Credit Cooperatives (RCCs; similar to credit unions in the U.S.) was set up under the supervision of the ABC, while Urban Credit Cooperatives (UCCs), counterparts of the RCCs in the urban areas, were also set up. Non-bank financial intermediaries, such as the Trust and Investment Corporations (TICs; operating in selected banking services and non-banking services with restrictions on both the sources of deposits and loans made), emerged and proliferated in this period.

The most significant event for China's financial system in the 1990s was the inception and growth of China's stock market. Two domestic stock exchanges (SHSE and SZSE) were established in 1990 and grew very fast during most of the 1990s. However, the legal framework and institutions that support the stock market are unimpressive. On a trial basis, China's first bankruptcy law was passed in 1986 (governing SOEs), but the formal Company Law was not effective until the end of 1999. This version of the Company Law governs all corporations with limited liabilities, publicly listed and traded companies, and branches or divisions of foreign companies, as well as their organization structure, securities issuance and trading, accounting, bankruptcy, mergers and acquisitions (for details see the website of China Securities Regulatory Commission, or CSRC, <http://www.csrc.gov.cn/>). We provide a detailed analysis of the status and problems of the stock market in Section IV below.

Following the Asian Financial Crisis in 1997, financial sector reform has focused on state-

³ BOC, the oldest bank that is currently operating, was originally established by Sun, Zhongshan in 1912 as a private bank, and specialized in foreign currency related transactions.

owned banks and especially the problem of NPLs (the China Banking Regulation Committee was also established to oversee the banking industry). We will further discuss this issue in Section III. Finally, China's entry into the WTO in December 2001 marked the beginning of a new era. Since the eventual opening of the capital account and adopting a floating exchange rate are required by the WTO, we should expect to see increasing competition from foreign financial institutions and frequent and large-scale capital flows after December 2006 (the end of the five-year transition period after joining the WTO). Finally, institutional investors began to emerge in the late 1990s although their scale and importance in the financial system was and still is limited. The first two mutual funds (Guo Tai and Nan Fang) were established in 1998. There are 46 fund companies at present, 33 of which are domestic fund companies, and the rest are Qualified Foreign Institutional Investors (QFII) or joint ventures, which were allowed to enter the asset management industry in 2003. There are no pension funds or government pension system in place. Under the old central planning regime, pensions and other social welfare plans were provided and implemented by individual SOEs. With many SOEs privatized or bankrupt in recent years, these services are no longer available for an increasing number of senior employees and workers. Establishing a feasible pension system in the near future is also one of the burning issues for China. Presently there are no hedge funds that implement "long-short" strategies as short selling is prohibited in China.

Insert Figure 1 here.

Figure 1 depicts the current structure of the entire financial system. In what follows we will describe and examine each of the four sectors of the system. In addition to the standard sectors of banking and intermediation and financial markets, we will document the importance of the non-standard financial sector and growth of this "other sector" as China's economy becomes more integrated into the world economy.

II.2 The size and efficiency of the financial system: Banking and markets

For a comparison of countries, we follow the law and finance literature and in particular the sample of countries studied in La Porta, Lopez-de-Silanes, Shleifer, and Vishny (hereafter LLSV, 1997a, 1998). Their sample includes 49 countries, but China is excluded. In Table 1, we compare China's financial system to those of LLSV sample countries, with some measures for financial systems taken from Levine (2002) and Demirgüç-Kunt and Levine (2001).

Insert Table 1 here.

We first compare the *size* of a country's equity markets and banks relative to that country's gross domestic product (GDP) in the first panel of Table 1. China's stock markets are smaller than

most of the other countries, both in terms of market capitalization and the total value traded as fractions of GDP. In order to measure the actual size of the market, “total value traded” is a better measure than “market capitalization,” because the latter includes non-tradable shares while the former measures the fraction of total market capitalization traded in the markets, or the “floating supply” of the market (we further discuss this issue in Section IV below). By contrast, China’s banking system is much more important in terms of size relative to its stock markets, with its ratio of total bank credit to GDP (1.11) higher than even the German-origin countries (with a weighted average of 0.99). However, when we consider bank credit issued (or loans made) to the Hybrid Sector only, China’s ratio drops sharply to 0.24, suggesting that most of the bank credit is issued to companies in the State and Listed Sectors. Moreover, China’s banking system is not efficient: its overhead cost to total assets (0.12) is much higher than the average of French-origin countries (0.05), the next highest group of countries.

The second panel of Table 1 compares the relative importance of financial markets vs. banks (“Structure indices”). China has the lowest scores for both “Structure Activity” (Log of the ratio of Value Traded/Total Bank Credit) and “Structure size” (Log of the ratio of Market Capitalization/Total Bank Credit), suggesting that its banking sector is much larger than its financial markets, and this dominance by the banks over markets is stronger than the average of all LLSV sample countries. In terms of “Structure efficiency” (Log of product (Market capitalization/GDP) \times (bank overhead cost/bank total assets)), which denotes the relative efficiency of markets vs. banks, China has the highest score, suggesting that its stock markets are actually relatively more efficient than banks compared to other countries. This result is mainly driven by the extremely high costs of China’s banking system.

We also compare the development of the entire financial system (“Financial Development”), including both banks and markets in the last panel of Table 1. Given that all other countries’ measures were based on private bank credit, if we only include China’s bank credit made to the *Hybrid Sector*, we find that China’s overall financial market size, in terms of both “Finance Activity” (Log of product of (Total value traded/GDP) \times (Private credit/GDP)) and “Finance Size” (Log of product of (Market capitalization/GDP) \times (Private credit/GDP)), is smaller than the LLSV sample average level, and is only higher than the French-origin average. In terms of “Finance Efficiency” (Log of (Total value traded/GDP)/Overhead cost), China’s measure is below all sub-samples of LLSV countries. Based on the above evidence, we can conclude that China’s financial system is dominated by a large, inefficient *banking sector*. Further, relatively little of the lending is

to the Hybrid Sector, which as we will see in Section V, is the dynamic part of the economy.

II.3 Firms' financing channels: Aggregate evidence

The four most important financing sources for all firms in China, in terms of firms' fixed asset investments, are: (domestic) bank loans, firms' self-fundraising, the state budget, and foreign direct investment (FDI). By far the two most important sources of financing channels are self-fundraising and bank loans. Consistent with previous evidence on China's banking sector, bank loans, including loans from the non-state banks, provide a large amount of funds to firms, and constitute a large fraction of firms' total financing needs.

Self-fundraising includes proceeds from capital raised from *local* governments (beyond the state budget), communities and other investors, internal financing channels such as retained earnings, and all other funds raised domestically by the firms. Since our current data source, the China Statistical Yearbook (2000-02), does not provide the breakdowns of "self-fundraising," we can only present the total figures. The size of total self-fundraising of all firms has been growing at an average annual rate of 14% over the period of 1994-2002. Total self-fundraising (for fixed asset investment) reached US\$275.5 billion at the end of 2002, compared to a total of US\$106.6 billion for domestic bank loans for the same year. It is important to point out that equity and bond issuance, which are included in self-fundraising, apply only to the Listed Sector, and account for a small fraction of this category. Moreover, self-fundraising is the most important source of financing for many types of firms. For example, individually owned companies (of the Hybrid Sector), not surprisingly, rely mostly on self-fundraising (about 90% of total financing). Interestingly, even for state- or quasi-state-owned companies, self-fundraising is also important in that it captures somewhere between 45% and 65% of total financing.

The state budget and FDI are the other two important financing sources. As was the case for all socialist countries, China used to rely on a central planning system to allocate the state budget to most of the companies in the country. But the state budget now only contributes 10% of *state-owned* companies' total funding. On the other hand, FDI is comparable to the state budget, both in terms of aggregate size and in terms of the relative importance in firms' financing. This evidence confirms that China has evolved from a centrally planned, closed economy toward an open market economy. For example, in terms of the ratio of FDI over GDP, China attracted more FDI than both South Korea and Taiwan during the 1990s.

With the knowledge of the four financing channels at the aggregate level, we now focus on different types of firms' financing decisions. The results are presented in Figures 2-A, 2-B, and 2-C.

In all of these figures, each of the four connected lines represents the importance of a particular financing channel over the time period of 1994-2002, measured by the percentage of firms' total financing coming from this channel.

Insert Figures 2-A, 2-B, and 2-C here.

First, Figure 2-A (2-B) illustrates how firms in the Listed Sector (State Sector) finance their investment for fixed assets. While the Listed Sector has been growing fast, SOEs are on a downward trend, as privatization of these firms is still in progress. Around 30% of publicly traded companies' funding comes from bank loans, and this ratio has been very stable (Figure 2-A). Around 45% of the Listed Sector's total funding comes from self-fundraising, including internal financing and proceeds from equity and bond issuance. Moreover, equity and bond sales, which rely on the use of external markets, only constitute a small fraction of total funds raised in comparison to internal financing and other forms of fundraising. Combined with the fact that self-fundraising is also the most important source of financing for the State Sector (Figure 2-B), we can conclude that alternative channels of financing are important even for the State and Listed Sectors.

Next, we consider how firms in the Hybrid Sector raise funds (Figure 2-C). Self-fundraising here includes all forms of internal finance, capital raised from family and friends of the founders and managers, and funds raised in the form of private equity and loans. Clearly, this category is by far the most important source of financing, accounting for close to 60% of total funds raised. Moreover, since firms in this sector operate in an environment with legal and financial mechanisms and regulations that are probably poorer than those available for firms in the State and Listed Sectors, financing sources may work differently from how they work in the State and Listed Sectors, and those in developed countries.

III. The Banking and Intermediation Sector

In this section we examine the status of China's banking and intermediation sector. After reviewing aggregate evidence on bank deposits and loans, we analyze the problem of NPLs in the banking sector as well as assess solutions to this problem. Finally we review evidence on the growth of non-state banks and financial intermediaries.

III.1 Aggregate Evidence on Bank Deposits and Loans

Similarly to other Asian countries, household savings rates have always been high in China. Given the growth of the economy, the sharp increase in personal income and limited investment opportunities, it is not surprising that total bank deposits from individuals have been growing very

fast since the mid-1980s, with the 2001 figure approaching RMB 7000 billion (or US\$800 billion). From Figure 3-A, residents in metropolitan areas contribute the most to total deposits beginning in the late 1980s (roughly 50%), while deposits from enterprises (including firms from all three sectors) provide the second most important source. The role of deposits from government agencies and organizations (including non-profit and for-profit organizations) has steadily decreased over time, while the increasing gap between urban and rural deposits indicates the imbalance of wealth and living standards in these areas.⁴ Moreover, ownership of bank deposits is highly concentrated, in that 60% of all bank deposits are held by less than 10% of the population (*China Daily*, and *Washington Post Foreign Service*, Nov. 2001).

Insert Tables 2-A, 2-B, and Figures 3-A and 3-B here.

Table 2-A compares total savings and bank deposits across China, Japan, South Korea, and India during the period 1997-2002. In terms of the ratio of Gross Domestic Savings/GDP (the term “Gross Domestic Savings” comes from national accounts and includes more categories than bank deposits), China maintains the highest level (around 40%), while Japan leads the group in terms of total amount. Looking at the breakdown of bank deposits, interest-bearing “savings deposits” are by far the most important form of deposits in China, providing a good source for bank loans and assets. Figure 3-B compares total bank credit extended to Hybrid Sector firms in China, and privately owned firms (including those publicly listed and traded) in Taiwan and South Korea during their respective high economic growth periods: China in the 1990s and Taiwan and South Korea in the 1970s (each year appearing on the horizontal axis indicates the time period for China, while a particular year *minus* 20 indicates the time period for Taiwan and South Korea). We can see that the growth of China’s (bank) ‘hybrid’ credit has been faster than the growth of private credit that Taiwan and South Korea experienced in the 1970s: with less than 5% of GNP in 1995, the ratio of total outstanding bank credit to the Hybrid Sector of China reached 25% of GNP at the end of 1999. Consistent with the aggregate evidence from Section II above and our firm-level evidence below, we find that bank loans are one of the most important financing sources for Hybrid Sector firms.

Table 2-B breaks down China’s bank loans by borrower types and loan purposes. The overwhelming amount of bank loans goes to manufacturing industries with many SOEs, while the amount of loans made to TVEs, privately- and collectively-owned firms, and joint ventures (the last

⁴ However, depositors in cities include the large population of immigrant workers who are rural residents by birth and registration (*hukou*) but are currently working in cities.

3 columns of Table 2-B), which all belong to the Hybrid Sector, is much less.⁵ According to an IFC/World Bank report (Gregory et al. 2000), which incorporates data published by the PBOC, loans made to privately owned firms (part of the Hybrid sector) from all banks is less than 1% of total loans made in 1998 with half of these loans from state-owned banks.

Researchers have argued that the imbalance between loans made to the State Sector and the Hybrid Sector reflects the government's policies of wealth transfer from the Hybrid Sector to the State Sector via state-owned banks, among other channels (Brandt and Zhu 2000). Despite this policy we find, in Section V.1 below, that the dominance of the Hybrid Sector over the State Sector in terms of employment and investment continued in the late 1990s and into the 2000s. We conclude that alternative financing channels and governance mechanisms support the growth of the Hybrid Sector.

III.2 The Problem of NPLs and Possible Solutions

China's banking sector is dominated by four large and inefficient, state-owned banks (the "Big Four" banks of ICBC, BOC, PCBC, ABC). La Porta, Lopez-de-Silanes, and Shleifer (LLS hereafter, 2002) show that the government owns 99.45% of the 10 largest commercial banks in China in 1995 (it was 100% in 1970), and this ownership level is one of the highest in their sample of 92 countries.⁶ The dominance of the Big Four banks also implies the degree of competition within the banking sector is extremely low. Demirgüç-Kunt and Levine (2001) compare the five-bank concentration (share of the assets of the five largest banks in total banking assets) in China, Japan, South Korea, and Taiwan. At the end of 1997 (and for much of 1990s), they find China's concentration ratio of 91% is by far the highest among the group of Asian countries. However, China's concentration ratio has been falling sharply since 1997 with the entrance of many non-state banks and intermediaries.

The most glaring problem for China's banking sector, and for the entire financial system in the near future, is the amount of NPLs within state-owned banks, and in particular, among the Big Four banks. Reducing the amount of NPLs to normal levels is the most important task for China's financial system in the short term. The main obstacle when we analyze the severity and possible solutions of the NPLs is the lack of comprehensive and objective data on banks' profitability

⁵ Without detailed breakdowns of different types of loans made to different sectors, we cannot estimate the exact share of total loans made to the three sectors.

⁶ Moreover, the LLS result on the negative relationship between government ownership of banks and the growth of a country's economy seems to apply to China's State Sector and the status quo of its banking sector. However, in Section V, we show that the high government ownership of banks has not slowed down the growth of the Hybrid Sector.

(aggregate and bank-level) and NPLs. The scarcity and deficiency in bank data can be viewed as a strategic disclosure decision of the government, which fuels speculation that the problem of NPLs must be severe. Our main data source is the Asian Banker database on banking systems (including state-owned and non-state owned banks) in major Asian economies, which is based on government and official records. We also include data from non-government sources, including case studies from a particular region or bank. Some of this data paints a much gloomier picture of the NPLs and China's state-owned banks than the official data suggests. Since without objective and accurate bank-level data we cannot determine the exact amount of NPLs or evaluate the feasibility and effectiveness of different solutions, we present both an optimistic view and a pessimistic view when discussing these issues.

Insert Tables 3-A, 3-B, and 3-C here.

Tables 3-A and 3-B, based on the Asian Banker database, compare NPLs and banking system profitability in China and other major Asian economies in recent years. First, NPLs, either as a fraction of total new loans made by *all banks* (including all non-state banks) or as a fraction of GDP in a given year, are the highest in China from 2000-02 (Table 3-A). Notice that the official information on China's NPLs first became available in 1998, but the figures in 1998 and 1999 in Table 3-A probably significantly under-estimate the actual size of NPLs in those years. The comparison includes the period during which Asian countries recovered from the 1997 financial crisis, and the period during which the Japanese banking system was disturbed by the prolonged NPL problem. Second, the profitability of China's banking system, measured by the return to equity or assets, is also among the lowest in the same group of countries (Table 3-B).

As bad as the numbers in Tables 3-A and 3-B appear, they may still significantly underestimate the amount of NPLs according to the pessimistic view. For example, Qiu et al. (2000) estimate that the ratio of loan interest paid to *state-owned* banks over loan interest owed is on average less than 50% in 1999, suggesting that the actual ratio of NPLs over total loans made can be higher than 50% in 1999. The December 1998 issue of *Guoyou zichan guanli* (Management of State Assets, p. 38) states that, "as of year-end 1997, bad loans within the *entire* banking organizations (including non-state banks) of Hubei Province amounted to RMB84.5 billion, or 43.69% of all bank loans." These two pieces of evidence suggest that the amount of NPLs (in terms of fraction of GDP or total new loans made) could be twice as large as the figures in the period 1999-2002 reported in Table 3-A. Consistent with this view, Lardy (1998) argues that, if using international standards on bad loans, the existing NPLs within China's state-owned banks as of the

mid-1990s would make these banks' total net worth negative, so that the entire network of state banks would be insolvent.⁷

In recent years, the Chinese government has taken active measures to reduce the NPLs and improve the efficiency of the banking sector. First, four state-owned asset management companies (AMCs) were formed with the goal of assuming the NPLs (and offering debt-for-equity swaps to the banks) accumulated in each of the Big Four banks and liquidating them. The liquidation process includes asset sales, tranching, securitization, and resale of loans to investors.⁸ Table 3-C shows that *cash* recovery on the bad loans processed of these companies ranges from 7% to 35% in 2001 and 2002, while the asset recovery rate ranges from 12% to 75%. A critical issue that affects the effectiveness of the liquidation process is the relationship among AMCs, banks, and distressed or bankrupt firms: Since both the AMCs and the banks are state-owned, it is not likely that the AMCs would force the banks to cut off (credit) ties with defaulted borrowers (SOEs or former SOEs) as a privately owned bank would do (e.g., Bonin and Huang 2001). Thus, as the old NPLs are liquidated, new NPLs from the same borrowers continue to surface.

Second, state-owned banks have diversified and improved their loan structure by increasing loans made to individual lenders while being more active in risk management and monitoring of loans made to SOEs. For example, the ratio of consumer lending to total loans made for the four state-owned banks increased from 1% in 1998 to 10% in 2002; by the end of 2004, 10% of all outstanding bank loans (RMB 2 trillion or \$242 billion) was extended to consumers. Mortgages, which account for 90% of consumer credit, grew at an annual rate of 115% between 1998 and 2004 (*Economist*, 04/21/2005). One problem with the massive expansion of consumer credit is that China lacks a national consumer-credit database to spot overstretching debtors, although a pilot system linking seven cities was set up in late 2004. The deficiency in the knowledge and training of credit risk and diligence of loan officers from state-owned banks is another significant factor in credit expansion, which can lead to high default rates and a large amount of new NPLs if the growth of the economy and personal income slows down. Accompanying the rapidly expanding automobile industry, the other fast growing category of individual-based loans is car loans, most of which are

⁷ For example, the Basle Committee for Bank Supervision classifies a loan as “doubtful” or bad when any *interest* payment is overdue by 180 days or more (in the U.S. it is 90 days); whereas in China, this step is not taken until *principal* payment is delayed beyond the loan maturity date or the extended due date, and in many cases, until the borrower has declared bankruptcy and/or has gone through liquidation.

⁸ One of the four AMCs, Huarong Asset Management Co., sold tranches of securitized NPLs to a consortium of US investment banks led by Morgan Stanley (and including Lehman Brothers and Salomon Smith Barney) and to a joint venture forged between Goldman Sachs and Rongsheng Asset Management Co. in 2002. These deals were approved by the Chinese government in early 2003 (*Financial Times*, 05/2003).

made by state-owned banks.⁹ The total balance of all China's individual car loans rocketed from RMB 400 million (US\$48.4 million) in 1998 to RMB 200 billion (US\$24.2 billion) at end of 2003 and as much as 30% of all car sales were financed by car loans during this period (*Financial Times*, 05/25/2005). However, the growth in both car sales and loans has slowed down significantly since 2004 in part due to the high default rates. Shanghai and Beijing are where the largest number of cars is sold and loans are made. As many as 50% of debtors defaulted on their car loans in these cities. There are examples in which loan applications were approved based solely on applicants' description of their personal income without any auditing (*Barron's*, 12/06/2004).

The above examples on car loans and consumer credit illustrate the importance of reforming state-owned banks in solving the problems of NPLs and improving the entire banking sector. A central question in reforming the state-owned banks is the ongoing privatization process. There are two imminent issues. First, more competition in the banking and intermediation sector, including the entrance of more non-state (domestic and foreign) banks and intermediaries, is good for improving the efficiency of both the Big Four banks and the entire banking sector. For example, Park et al. (2003) find that competition among banks and intermediaries leads to better effort of the banks (especially state-owned banks) and better loan decisions in China's rural areas. Another issue is the government's dual role as regulator and as majority owner. These potentially conflicting roles diminish the effectiveness in each of the two roles that the government intends to carry out. In Section IV below, we argue that the non-tradable government shares in all listed companies should be gradually sold off to ensure that the privatization process is complete. The same procedure should be applied to the privatization process of state-owned banks. Only after these banks are (majority) owned by non-government entities and individuals can they unconditionally implement all profit- and efficiency-enhancing measures.

Third, there has been a boom in the entry and growth of non-state financial intermediaries, and this trend is expected to continue with more foreign banks entering the domestic credit markets as a result of China's entrance into the WTO. In Section III.3 below, we provide more evidence on the growth of both non-bank and non-state financial institutions. Fourth, the government has been directly involved in reducing NPLs among state-owned banks by injecting cash into these banks. A large fraction of the NPLs among state-owned banks resulted from poor lending decisions made for SOEs, some of which were due to political or other non-economic reasons; thus, it makes sense for

⁹ A few foreign lenders (e.g., GM and Ford) were recently approved to enter the car loan market by forming joint ventures with Chinese automakers (*Financial Times*, 05/27/2005).

the government to bear the burden.

At the end of 2003, China announced that the PBOC would inject foreign currency reserves, in the amount of US\$45 billion into two of the Big Four banks (BOC and PCBC) to improve their balance sheets in preparation for going public (e.g., *Financial Times*, 01/09/2004; *Asia Wall Street Journal*, 01/13/2004). Most of the foreign exchange reserves are in the form of US dollars, T-bills, and other dollar denominated debt securities. Before becoming publicly listed corporations, PCBC (listed in Hong Kong in October, 2005) and BOC (expected to be listed in 2006) were recently rated by the Standard and Poor's (*S&P report "China's Banking Outlook 2005"*) with the same grade "BBB-," the *lowest* grade among all "investment grades." In issuing their ratings, S&P emphasized this rating is "based on public information, ..." and pointed out that the most significant risk in these two banks is the high level of NPLs.¹⁰ Similar fund injection plans for ICBC (the largest commercial bank in China and one of the largest in the world in terms of book assets), in the amount of US\$15 billion, began in the first half of 2005 (*Financial Times*, 04/21/2005).

Given that as of the end of the first quarter of 2005, China's total foreign exchange reserve was US\$650 billion while the total amount of NPLs was 15% of GDP at the end of 2004, or around US\$200 billion using the then US\$1 = 8.28 RMB exchange rate, the foreign reserve itself should be more than enough to remove the NPLs off the books of all the banks in China. There are potential problems for the injection plan, with the possibility of creating perverse incentives for the banks being the most serious one. If the state-owned banks that have received or will receive the cash/assets injection believe that there will be a 'bailout' during future financial distress, then the moral hazard problem can worsen the current status of NPLs. This is because, in anticipation of a bailout from financial distress, banks lose the incentive to improve efficiency while an incentive to take on risky, negative-NPV projects surfaces. Similar problems occurred during and after the government bailout of the S&L crisis in the US in 1980s (e.g., Kane 1989, 2003). Hence, it is important for the government to credibly commit that the injection plan is a one-time measure to boost the capital adequacy of these banks, and that there will be no bailout plans in the future, especially after they become listed companies. The second problem lies in the fact that the significant increase in foreign reserves is in part due to the presence of large amounts of speculative foreign currencies in anticipation of an RMB appreciation relative to major international currencies.

¹⁰ Bank of America has recently pledged to purchase a 5% block of PCBC's equity for US\$1.5 billion to \$2 billion, while the Royal Bank of Scotland is said to be ready to pay up to \$4 billion for up to one fifth of BOC (*The Economist*, 05/19/2005).

Depending on how the government and the central bank allow the flexible RMB exchange rate mechanism introduced in July 2005 to operate, large movements of the speculative currencies may cause a twin crisis in the currency market and the banking sector. We further discuss this issue in Section VI below.

Insert Table 3-D here.

It is clear that the ultimate source of eliminating NPLs lies in China's overall economic growth. As long as the economy maintains its strong growth momentum so that the government's tax receipts also increase, the government can always assume the remainder of the NPLs without significantly affecting the economy.¹¹ In this regard, Table 3-D presents a comparison of the ratio (NPLs + Government Debt)/GDP among China, Japan, South Korea, and the U.S. for the period 1997-2002, where NPLs (government debt) denotes the total outstanding NPLs in the banking system (government debt) in a given year. The lower the ratio, resulting from low NPLs, low government debt, or both, the more feasible it becomes for the government to assume the NPLs. We present two sets of ratios for China: the first set of ratios are based on NPLs numbers presented in Table 3-A (based on official data), while the second set (presented in brackets) is based on doubling the size of NPLs (as a fraction of GDP) reported in Table 3-A. Despite its high NPLs, China has the second lowest ratio among the four countries using official data on NPLs; these ratios are much higher if NPLs double but they are still comparable with those of the U.S. (low NPLs but high government debt). Based on this crude comparison, it seems that the NPLs will not be a particularly arduous burden for the Chinese government due to the small size of its debt, while the same cannot be said for Japan. Caution is again needed for this conclusion: first, new NPLs in China may grow much faster than the rest of the countries; and second, the small amount of government debt may experience a sharp increase given the need for higher fiscal spending in areas such as pension plans and related social welfare programs.

Overall, the optimistic view on NPLs believes that, despite the large amount of existing NPLs, the current reform of state-owned banks and development of the banking sector have already been effective in reducing NPLs, which is why NPLs have been falling in recent years (2000-2002) in Table 3-A. Given that the economy will probably maintain its current pace of growth, the government can always write off a large fraction of the rest of the NPLs to avert any serious problems for China. On the other hand, the pessimistic view believes that NPLs are much bigger

¹¹ See, for example, Sachs and Woo (1997 review article), and Rawski (2002), for different views on the prospects of long-run economic growth and statistics on growth in China.

than the official statistics suggest to begin with, and that a substantial amount of new NPLs will continue to arise within state-owned banks. Moreover, the reform of the banking sector will not be effective because it will take a long time before the government relinquishes majority control of state-owned banks. During this period, if the growth of the economy significantly slows down, while the accumulation of NPLs continues, the banking sector problems could lead to a financial crisis. This could spill over into other sectors of the economy and cause a slowdown in growth or a recession. In this view, the NPL problem poses the most serious problem to China's continued prosperity.

III.3 Growth of Non-state Financial Intermediaries

The development of both non-state banks and other (state and non-state) financial institutions is crucial for China to have a stable and functioning banking system in the future. In addition to boost the overall efficiency of the banking system and alleviate the problems of NPLs, these financial institutions provide funding to support the growth of the Hybrid Sector.

First, we examine and compare China's insurance market to other Asian economies (South Korea, Taiwan, and Singapore). In terms of the ratio of total assets managed by insurance companies over GDP (Figure 3-C), China's insurance market is significantly smaller than that of other economies. At the end of 2004 total assets managed were still less than 10% of GDP (while this ratio for the other three economies is over 30%). It is clear that the insurance industry is also significantly undersized compared to China's banking industry, and property insurance is particularly underdeveloped due to the fact that the private real estate market was only recently established (in the past most housing was allocated by employers or the government). Despite the fast growth of insurance coverage and premium income, at the end of 2000 only 1.8% of the total population was covered by life insurance (resulting in a per capita premium of only RMB 127 per year); coverage for property insurance is even lower (Almanac of China's Finance and Banking 2000).

Insert Tables 4-A and 4-B, and Figure 3-C here.

Table 4-A provides a (partial) breakdown of the different types of banks. In both 2001 and 2002, although the Big Four banks dominate in every aspect of the banking sector, the role of the non-Big Four banks in the entire banking sector cannot be ignored: These banks' total assets compose 40% of the Big Four (the actual fraction is likely to be higher due to incomplete information on all types of non-bank intermediaries). A similar comparison can be made for outstanding loans; these banks have less NPLs than the Big Four banks. Moreover, total *new* loans

made by the Big Four banks accounted for more than 75% of all new loans in 1997, while new loans made by “shareholding” banks accounted for less than 7%. In 2001, the share of new loans made by state-owned banks dropped to 49%, while the fraction of new loans made by shareholding banks rose to 23.5%.

Table 4-B provides evidence on the growth of non-bank intermediaries. Overall, the growth of these non-banks intermediaries has been impressive since the late 1990s. In terms of combined total assets held or managed, the size of all the banks and intermediaries outside of the Big Four banks (first column in Table 4-B) is about 58.7% of the Big Four banks at the end of 2002. Among them, “other commercial banks” (many of them are state-owned), RCCs, and TICs hold the largest amount of assets; the size of foreign banks and mutual funds (not listed in the table) is minuscule, and these are likely to be the focus of development in the near future.¹² Finally, our coverage of non-bank financial institutions excludes various forms of informal financial intermediaries, some of which are deemed illegal but overall provide important financing to firms in the Hybrid Sector. We will discuss these informal intermediaries in Section V below.

IV. Financial Markets and Publicly Traded Firms

In this section, we examine China’s financial markets, including both the stock and bond markets, and the recent addition of venture capital and private equity markets. We also compare, at the aggregate level, how firms raise funds in China and in other emerging economies through external markets in order to determine if China’s experience in terms of a firm’s fundraising is unique. We then focus on publicly traded companies and examine their financing and investment decisions. Finally, we discuss how to further develop financial markets as well as improve corporate governance and the performance of listed firms.

IV.1 Stock Exchanges and Market Inefficiencies

After the inception of China’s domestic stock exchanges, the SHSE and SZSE, in 1990, they initially grew quickly. In recent years they have done quite poorly. Figure 4 compares the performance of some of the major stock exchanges around the world, with performance measured by the buy-and-hold return in the period 1992-2005 (gross return at the end of 2005 with \$1 invested in each of the valued-weighted stock indexes in the beginning of 1992). The performance

¹² Postal savings (deposit-taking institutions affiliated with local post offices) is another form of non-bank intermediation that is not reported in Table 4-B due to lack of time series data. However, at the end of 1999, total deposits within the postal savings system exceeded RMB 380 billion, or 6.4% of all deposits in China.

of the value-weighted SHSE index (the calculation for the SZSE is very similar) is only better than that of the Nikkei Index, whose poor performance was caused by the prolonged recession of the Japanese economy in the 1990s, while underperforming the indexes of the S&P 500, FTSE (London), the SBE (India) and NASDAQ and Hang Seng (not shown in figure). Since China's economy was growing at much higher rates than the U.S. during the period (over 11% per annum for China vs. 4.5% for the U.S. in PPP terms), the fact that the SHSE index underperformed the S&P index by about 125% suggests that listed firms are among the low-quality firms in China.

Insert Figure 4 here.

At the end of 2005, the *combined* total market capitalization of the SHSE and SZSE ranked 15th among the largest stock exchanges in the world. However, a significant fraction of all the (equity) shares is nontradable (see Section IV.4 below for more details). The Hong Kong Stock Exchange (HKSE), where selected firms from Mainland China can now be listed and traded, is ranked 10th in the world by itself.

China's stock markets are not efficient in that prices and investors' behavior are not driven by fundamental values of listed firms. Morck et al. (2000) find that stock prices are more 'synchronous' (stock prices move up and down together) in emerging countries including China than in developed countries. They attribute this phenomenon to poor minority investor protection and imperfect regulation of markets in emerging markets. With a large data set of individual trading, Feng and Seasholes (2004) find that buy and sell trades are highly correlated (occur at the same time period, such as in the same day) in China, especially among investors who conduct their trades near one of the two stock exchanges or near firms' headquarters.

Moreover, there have been numerous lawsuits against insider manipulation and trading. A good example is the rise and fall of Guangxia Industry Co., Ltd., dubbed as 'China's Enron.' Located in Ningxia Province, one of the poorest areas of China, Guangxia was listed on the SZSE in 1994 as a manufacturer of floppy disks and related products. After reporting poor and deteriorating performance in its original line of business and other diversifying new lines of businesses for the first five years, the company released unprecedented high EPS (earnings per share) at the end of 1999, and claimed that they had mastered the techniques of CO₂ fluid extraction and signed a multiple-year sales contract with a German company. Subsequently, the company's stock price shot up from RMB 14 to RMB 76 in one year and realized an annual return of 440%, highest among all listed companies in either stock exchange in 2000. After an article in *Caijing Magazine* ('Finance and Economics Magazine,' August 3, 2001) blowing the whistle on the 'star' company was

published, the CSRC launched an investigation and found that the reported earnings along with many sales records and contracts, including the one with the German company, were fabricated, and the company was in fact losing money. The most damaging piece of evidence from this case is that, unlike Enron, Guangxia's managers did not use any sophisticated accounting and finance maneuvers to mask their losses (even by China's standards). The company's top executives were criminally charged and its auditors lost their licenses, while shareholders' lawsuits were eventually processed for the first time by courts around the country.

The above example also reveals that the inefficiencies in the Chinese stock markets can be attributed to poor and ineffective regulation. The current process of listing companies fosters both a problem of adverse selection among firms seeking an initial public offering (IPO), and a moral hazard problem among listed firms. First, even though there has never been any explicit regulation or law against the listing of non-state owned firms, the going public process strongly favors former SOEs with connections with government officials. For example, each candidate firm must obtain listing quota/permission, disclose financial and accounting information, and is subject to a lengthy evaluation process; the whole process is inefficient due to bureaucracy, fraudulent disclosure, and lack of independent auditing. As a result, most of the listed firms are indeed former SOEs (more evidence to follow in Section IV.4). Second, once listed, managers in firms with severe agency problems do not have an incentive to manage assets to grow, but rather to rely on the external capital market to raise funds (mainly through mergers and acquisitions, and seasoned offerings of securities) to pursue private benefits. (For more case studies to illustrate the above problems, see AQQ (2005b) and <http://finance.sina.com.cn>.)

In Section IV.6 below, we propose specific measures that can be implemented to improve the efficiency of the stock markets as well as the corporate governance of listed firms.

IV.2 Overview of Bond Markets

Table 5-A provides information on the growth of China's bond markets from 1990 to 2002. The government bond market had an annual growth rate of 32.8% during the time period in terms of newly issued bonds, while total outstanding bonds reached RMB 1,933.61 billion (or US\$233 billion).¹³ The second largest component of the bond market is called "policy financial bonds" (total outstanding amount RMB 1,005 billion at the end of 2002). These bonds are issued by "policy

¹³ During most of the period 1988-2003, Moody's rated China's government bonds (foreign currency) "A2" or "A3" (highest rating is Aaa) with a "positive" or "stable" outlook, while the rating on bank deposits (foreign currency ceilings) was "Baa." These ratings are better or comparable than those in most emerging economies.

banks,” which belong to the Treasury Department, and the proceeds of bond issuance are invested in certain industries (e.g., infrastructure, similar to municipal bonds in the U.S.). Compared to government-issued bonds, the size of the corporate bond market is minuscule: In terms of the amount of outstanding bonds at the end of 2001, the corporate bond market is less than one-fifteenth of the size of the government bond market.

Insert Table 5-A and Figure 5 here.

In fact, the under-development of the bond market, especially the corporate bond market, relative to the stock markets, is not uncommon among Asian countries. In Figure 5 we compare different components (bank loans to private sectors or the Hybrid Sector of China; stock market capitalization; public/government and private/corporate bond markets) of the financial markets around the world at the end of 2003. First, compared to Europe and the U.S., the size of both the government (public) and corporate (private) bond markets is smaller in Non-Japan Asia (Hong Kong, South Korea, Malaysia, Taiwan, Singapore, Indonesia, Philippines, and Thailand); even in Japan, the size of the corporate bond market is small compared with its government bond market. Second, consistent with previous evidence, the size of all four components of China’s financial markets are small relative to other regions and countries, including bank loans made to the Hybrid Sector (private sector) in China (other countries). Moreover, the most under-developed component of China’s financial markets is the corporate bond market (labeled “private” bond market).

There are a number of reasons for the lack of bond markets in China and other parts of Asia (see, e.g., Herring and Chatusripitak 2000). These include sound accounting/auditing system and high-quality bond-rating agencies. Given low creditor protection and court inefficiency the recovery rate for bondholders during default will likely be low. Another serious problem in China is the lack of a yield curve. Given the small size of the publicly traded Treasury bond market and lack of historical prices, we can only plot “snapshots” of a partial yield curve (maturities range from one month to 1 year only) based on pricing data of Treasury bonds in the national interbank market. This is far from the standard yield curve covering interest rates on bond maturities ranging from one month to 10 years. The deficiencies in the term structure of interest rates hamper the development of derivatives markets that enable firms and investors to manage risk, as well as the effectiveness of the government’s macroeconomic policies. Therefore, it is important that China develop its bond markets in the near future along with its legal system and related institutions.

IV.3 Fundraising through Financial Markets and International Comparison

First, we briefly examine the role of financial markets in helping firms raise funds (Table 5-

B). Both the scale and relative importance (compared with other channels of financing) of China's markets for finance from outside the firm, or External Capital as it is called in the literature, are not significant. For example, for the ratio of External Capital and GNP, the LLSV (1997a) sample average is 40%, compared to China's 16% (using only the floating supply or value traded part of the stock market, rather than the total market capitalization). For the ratio of total debt (including bank loans and bonds) over GNP, the LLSV sample average is 59%, compared to China's 35%. However, if we include all debt, including bank loans, issued to all sectors including the State Sector, this ratio increases to 79%, suggesting that the majority of debt does not go through the capital markets, and is consistent with evidence on bank credit.

Insert Table 5-B here.

Next, we compare, at the aggregate level, external financing (i.e. financing from outside the firm), in China and other major emerging economies. We also relate the aggregate financing channels with the growth of the economy during different growth periods, in order to determine whether the Chinese experience in financing is unique. First, Figure 6-A compares the development of stock markets at the aggregate level, while Figure 6-B compares the growth rates of (PPP-adjusted) GDP. Both Taiwan and South Korea experienced high GDP growth in the 1970s and early 1980s, while the total market capitalization of their respective stock markets accounted for less than 20% of their GNPs during the same period, and the growth of stock markets did not take off until the mid- to late-1980s. Figure 6-C compares the growth of corporate bond markets: South Korea having the fastest growth path, while in Taiwan and China the corporate bond markets seem to lag the development of stock markets. Finally, Figure 6-D compares total equity issuance including IPOs and SEOs (seasoned equity offerings). With the exception of South Korea, China seems to be on similar pace in terms of size of equity issuance (as fraction of GNP in a given year) with Taiwan, India, and Brazil.

Insert Figures 6-A through 6-D here.

From the above comparisons it is clear that the development of China's external markets relative to its overall economic growth is not dramatically different from other emerging countries. One of the common patterns is that the development of external markets trails that of the growth of the overall economy. During the early stages of economic growth, alternative institutions and mechanisms can support the growth of firms and the overall economy, as is the case for China based on our evidence. Perhaps similar institutions have worked well in other emerging and developed economies as well.

IV.4 Evidence on the Listed Sector

In this section, we focus on publicly traded companies and examine their financing and investment decisions. We start by looking at the unique ownership structure and corporate governance mechanisms in Chinese firms.

It is worthwhile to first clarify whether firms from the Hybrid Sector can become listed and publicly traded. Regulations and laws (the 1986 trial version of the bankruptcy law and the 1999 version of the Company Law) never prohibited the listing of Hybrid Sector firms; and selected firms from the Hybrid Sector entered the Listed Sector through an IPO or acquiring a listed firm from the inception of SHSE and SZSE. However, the accessibility of equity markets for these firms has been much lower than that of former SOEs in practice due to the enforcement of the listing standards and process. As a result, AQQ (2005a) find that 80% of their sample of more than 1,100 listed firms are converted from former SOEs. In recent years, the government has attempted to change the composition of listed firms by relaxing regulations toward Hybrid Sector firms.

Listed firms in China issue both tradable and nontradable shares (Table 6-A). The nontradable shares are either held by the state/government or by other legal entities (i.e., other listed or non-listed firms or organizations). Among the tradable shares, Classes A and B shares are listed and traded in either the SHSE or SZSE, while Class A (B) shares are issued to Chinese investors (foreign investors including those from Taiwan and Hong Kong). Finally, Class H shares can be listed and traded on the HKSE and are issued by selected “Red Chip” Chinese companies. Table 6-B demonstrates that nontradable shares constitute a majority of all shares and most of these shares are held by the state, while the majority of tradable shares are A shares. Table 6-C provides some evidence on the relation between ownership and control of the Board of Directors.¹⁴ Consistent with Tables 6-A and 6-B and the “one-share, one-vote” scheme adopted by firms in the Listed Sector, state and legal person shareholders appoint most of the board members, while the other directors are appointed by the government.

Insert Tables 6-A, 6-B, and 6-C here.

We next describe standard corporate governance mechanisms in the Listed Sector. First, according to the (1999) Company Law, listed firms in China have a two-tier board structure: the Board of Directors (five to nineteen members) and the Board of Supervisors (at least three

¹⁴ Information provided in Table 6-C and on corporate governance is based on a survey of 257 SHSE-listed firms conducted in 2000 by Integrity Management Consulting and the Research Center of SHSE, “Corporate Governance and Enterprise Reform in China: Building the institutions of Modern Market” (Tenev et al. 2002, the World Bank) and Schipani and Liu (2002).

members), with supervisors ranking above directors. The main duty of the Board of Supervisors is to monitor firms' operations as well as top managers and directors; it consists of representatives of shareholders and employees, while the rest are either officials chosen from government branches or executives from the parent companies; directors and top managers of the firms cannot hold positions as supervisors. The Board of Directors serves similar duties as their counterparts in the U.S., including appointing and firing CEOs. The Chairman (one person) and Vice Chairman (one or two) of the Board are elected by all directors (majority votes); at the approval of the Board, the CEO and other top managers can become members of the Board. Since the Law does not specify that every member of the Board must be elected by shareholders during general shareholder meetings, in practice some directors are nominated and appointed by the firms' parent companies and the nomination process is usually kept secret (Table 6-C, in particular for former SOEs). Since not all members of either board are elected by shareholders, a major problem with the board structure is the appointment of and contracting with the CEOs. Fan and Wong (2004) find that almost one-third of their sample of 625 listed companies' CEOs are either current or former government bureaucrats; the performance of these firms is significantly worse than other firms without politically connected CEOs. Based on firm-level compensation data (available since 1998 due to disclosure requirements), Fung et al. (2003) and Kato and Long (2004) find that no listed firms grant stock options to CEOs or board members, while the cash-based compensation level for CEOs is much lower than their counterparts in developed countries, and the consumption of perks, such as company cars, is prevalent.

Second, the existing ownership structure, characterized by the large amount of non-tradable shares including cross-holdings of shares among listed companies and institutions, makes it difficult to carry out value-increasing M&As. According to the China Mergers and Acquisitions Yearbook (2004), there were 925 M&A's involving listed firms in 2003 totaling US\$9.35 billion, which is about 1.8% of the total market capitalization. In many deals, a Hybrid Sector firm (non-listed) acquires a listed firm that is converted from an SOE, but the large amount of non-tradable shares held by the state remain intact after the transaction.¹⁵ Such an acquisition can be the means through which low-quality, non-listed companies bypass listing standards and access financial markets.

¹⁵ If we include the *multinational* M&As and transactions between parent companies and subsidiaries, the total amount increases to US \$47 billion in 2000, \$14 billion in 2001, \$29 billion in 2002, and \$24 billion in the first three quarters of 2003. 68% of all M&A deals (66% in terms of dollar deal amount) are initiated by Hybrid Sector firms, while former SOEs and foreign firms initiate 29% and 3% of the rest, respectively (27% and 7% in deal amount). M&As are most active in coastal regions, and in industries such as machinery, information technology, retail, and gas and oil.

Third, an important factor contributing to the occurrence of the scandals is the lack of institutional investors (including non-depository financial intermediaries) as they are a very recent addition to the set of financial institutions in China. Professional investors would perhaps not be so easily taken in by these simple deceptions. Another factor is that the enforcement of laws is questionable due to the lack of legal professionals and institutions. For example, ineffective bankruptcy implementation makes the threat and penalty for bad firm performance non-credible.¹⁶

Fourth, the government plays the dual roles of regulator and blockholder for many listed firms, including banks and financial services companies. The main role of the CSRC (counterpart of the SEC in the US) is to monitor and regulate stock exchanges and listed companies. The government exercises its shareholder control rights in listed firms mainly through state-owned asset management companies, which hold large fractions of the state shares. However, since the top officials of these asset management companies are selected by the government, it is doubtful that they will pursue their fiduciary role as control shareholders diligently.¹⁷ Moreover, the government's dual roles can lead to conflicting goals (maximizing profits as shareholder vs. maximizing social welfare as regulator/social planner) in dealing with listed firms, which in turn weaken the effectiveness of both of its roles.

Overall, internal and external governance for the Listed Sector is weak, and further development of governance mechanisms is one of the main objectives for this sector going forward. In Section IV.6 below we provide some general suggestions. Finally, AQQ (2005b) show that the dividend ratio, valuation (Tobin's Q) and post-IPO performance of listed firms in China are much lower or worse compared to similar firms operating in countries with stronger investor protections. In summary, the overall evidence on the comparison of China and other countries' external markets and listed firms is consistent with LLSV (1997a, 1998) predictions: With an underdeveloped legal system and weak investor (both shareholder and creditor) protection, the fact that China has small markets for finance from outside the firm and low-quality listed firms comes as no surprise.

IV.5 Private Equity/Venture Capital and the Funding of New Industries

Allen and Gale (1999, 2000a) have suggested that stock market-based economies, such as the U.K. in the 19th century and the U.S. in the 20th century, have been more successful in

¹⁶ Cross-country information on the efficiency of bankruptcy procedures, based on surveys of lawyers and bankruptcy judges around the world, is available from World Bank (<http://rru.worldbank.org/Doingbusiness>). Among 108 countries, China's "goals of insolvency" index is equal to the median of the sample.

¹⁷ Gordon and Li (2003) show that the ownership structure and the price differences between A and B shares can be attributed to government collecting monopoly rents from investors and subsidizing listed firms that were formerly SOEs. However, this behavior is not as efficient as explicit taxes on investors.

developing new industries than intermediary-based economies such as Germany and Japan. They argue that markets are better than banks for funding new industries, because evaluation of these industries based on experience is difficult, and there is wide diversity of opinion. Stock market-based economies such as the U.S. and U.K. also tend to have well-developed systems for the acquisition and distribution of information, so the cost of information to investors is low. Markets then work well because investors can gather information at low cost and those that anticipate high profits can provide the finance to the new firms.

An important part of this process is the private equity/venture capital sector (see, e.g., Kortum and Lerner, 2000). Venture capitalists are able to raise large amounts of funds in the US because of the prospect that successful firms will be able to undertake an IPO. With data from 21 countries during 1986-1995, Jeng and Wells (2000) find that venture capital is less important in other countries, while the existence of an active IPO market is the critical determinant of the importance of venture capital in a country. This is consistent with the finding of Black and Gilson (1998) in a comparison of the US and Germany, that the primary reason venture capital is relatively successful in the US is the active IPO market that exists there. AQQ (2005b) provide detailed information on the fast-growing private equity/venture capital sector in China.

The reason that China should develop active venture capital and private equity markets is to provide financing for *new* industries. What is unusual about China is that it currently has the ability to develop both traditional industries, such as manufacturing, and in the near future new, high-tech industries, such as aerospace, computer softwares, semiconductors, and bio-genetics. This is different from the experience of South Korea and Taiwan in the 1970s and that of most other emerging economies in the 1990s, as all these other countries focused on or have been focusing on developing manufacturing industries. In terms of developing traditional industries (e.g., Korea and Taiwan in 1970s), China has already followed suit in first introducing advanced (relative to domestic companies) but not the most advanced technologies from developed countries; and “nationalizing” these technologies within designated companies, before moving toward the more advanced technologies. Allen and Gale (1999, 2000a) argue that banks are better than financial markets for funding *mature* industries because there is wide agreement on how they should be managed so the delegation of the investment decision to a bank works well. This, and the economies of scale in information acquisition through delegation, makes bank-based systems more efficient in terms of financing the growth in these industries. Given this, the banking system can contribute more in supporting the growth and development of these industries than markets.

IV.6 Further Development of Financial Markets

As we have documented, the financial markets in China do not currently play nearly as important a role as banks. Going forward, if China wishes to develop high-technology industries as discussed in Section IV.5 then it is important that it develop better financial markets than it currently has. In addition, if it is to improve risk management possibilities for its financial institutions and firms it needs to develop new financial products and markets. Finally, if there is to be an alternative to banks for raising large amounts of capital, then China needs deep and efficient markets.

In recent years the stock markets, in particular, have performed poorly. This is somewhat surprising given the robust performance of the real economy and the fact that China has been growing so fast. We attribute this poor performance to a number of factors including the following.

- (i) Poor self-regulation and formal regulation.
- (ii) The large overhang of shares owned by government entities.
- (iii) The lack of listed firms originating in the Hybrid Sector.
- (iv) The lack of trained professionals.
- (v) The lack of institutional investors.
- (vi) Limited financial markets and products.

It is important that these weaknesses be overcome. However, these are problems that will need to be tackled over the long run. They cannot be solved in a few years. We discuss each in turn.

Improve Regulations

There are two ways in which markets are regulated in practice and each has advantages and disadvantages: First, market forces and self-regulation, and second, government regulation.

A good example of regulation through market forces and self-regulation is provided by the capital markets in the UK in the nineteenth and early twentieth century (Michie, 1987). The role of government regulation and intervention was minimal. Despite this the markets did extremely well and London became the financial capital of the world. Many firms and countries from all over the world raised large amounts of funds. Reputation and trust were an important factor in the smooth operation of these markets. For example, in an important paper Franks et al. (2003) compare the early twentieth century capital markets with those in the mid-twentieth century. Despite extensive changes in the laws protecting minority shareholders there was very little change in the ways in which the market operated. The authors attribute this to the importance of trust.

We argue below that China's Hybrid sector is another example of a situation where market forces are effective. Formal regulation and legal protections do not play much role and yet financing and governance mechanisms are quite effective. In this case, as we shall see, it appears that competition as well as reputation and trust work well.

In contrast, the examples of fraud and other problems of manipulation and the inefficiency of markets pointed to in Section IV.1 suggest that in China's formal financial markets these alternative mechanisms do not work well. Although such mechanisms may develop in the very long run as in the nineteenth and early twentieth century UK, it seems that in the short run at least it is likely to be necessary to have formal government regulation of the type developed in the US in the 1930s and subsequently as a response to the stock market collapse that started in 1929 and the Great Depression. There is evidence from many countries that this type of formal regulation is effective. Based on a study of securities laws with the focus on the public issuance of new equity in 49 countries (China is not included), LLS (2003) find that disclosure and liability rules help to promote stock market development.

Sell Government Shares in Listed Firms

One of the major problems Chinese stock markets face is caused by the large amount of shares in listed companies owned by the government and government entities shown in Table 6-B. This overhang creates great uncertainty about the quantity of shares that will be tradable going forward. Investors fear that if prices go up then the government will sell their holdings and this will prevent further price rises or even depress them. This uncertainty has caused share prices to stagnate despite the very high levels of growth in the economy. In order to remove this uncertainty, the government should announce a plan for selling these shares slowly over time. Each year a small amount (i.e. small relative to the usual amount traded) would be sold so that the market could easily absorb the shares. Such a plan might take several decades to complete. Once announced, the plan should be carried out without any deviation even if prices rise significantly.

The Chinese government attempted sales of state shares in 1999 and 2001, but halted the process both times after share prices plunged and investors grew panicky about the value of the entire market. Despite unsatisfactory outcomes in previous trials, the central government seems to be determined to carry out the sales of state shares, in part because it plans to extract money from selling these shares to build up pension reserves, arguably one of the most urgent tasks at present (as mentioned before there is no pension system in place). In fact, it has recently announced to resume sales of nontradable shares in *selected* companies (e.g., *South China Morning Post*,

05/22/2005). Two remarks are in order. First, the government's *commitment* in implementing a *gradual* sales plan is superior to a series of (partially) unanticipated, large-scale trials that are subject to termination if a significantly negative market reaction is observed, because the former plan reduces the aggregate uncertainty of the market going forward.

Second, there is the issue is whether small amounts of shares of *all* firms in which government entities own blocks or large amounts of a few firms should be sold. The difference is that if small amounts in every firm are sold then the government will cease to be the majority owner quite some time from now. On the other hand, if they sell large blocks in a few firms then they will cease to be the majority owner quickly. Responsibility for governance will instead shift to private owners and experience of this will be gained sooner. We believe a combination of these methods should be used. Selling shares in a large number of firms will minimize the price impacts. On the other hand, it is important to develop experience of private control as soon as possible.

Encourage Listing of Firms from the Hybrid Sector

One of the major problems of the stock exchanges is that most of the firms listed are former SOEs. Relatively few are firms from the more dynamic Hybrid Sector. A high priority for reform for the markets is changing of listing requirements to make it advantageous for dynamic and successful companies to become listed on the exchanges.

Train More Professionals

This is the most important factor in terms of improving the enforcement of laws and contracts. First, an independent and efficient judicial system requires a sufficient supply of qualified legal professionals. The Ministry of Justice of China states that there are 110,000 lawyers and 9,000 law firms as of 2002, while Orts (2001) estimates that there are 150,000 lawyers in China, roughly the same number of licensed attorneys as in the state of California. Lawyers represent only 10% to 25% of all clients in civil and business cases, and even in criminal prosecutions, lawyers represent defendants in only half of the cases. Among the approximately five million business enterprises in China, only 4% of them currently have regular legal advisers. Moreover, only one-fifth of all lawyers in China have law degrees, and even a lower fraction of judges have formally studied law at a university or college. As mentioned before, a similar situation exists for auditors and accounting professionals.

Encourage the Development of Institutional Investors

In most developed stock markets institutional investors, such as insurance companies, pension funds, mutual funds, and hedge funds, play an important role. They employ well-trained

professionals who are able to evaluate companies well. This causes markets to have a higher degree of efficiency than if they are dominated by individual investors. In addition, there can be advantages in terms of corporate governance if institutional investors actively participate in the monitoring of firms' managers and are directly involved in firms' decision-making process as blockholders of stocks. For example, in the U.S., pension funds such as Calpers have become the symbol of shareholder activism that strengthens corporate governance, while in Japan and Germany, financial intermediaries serve similar purposes. For China, an effective way to improve the efficiency of China's stock markets as well as corporate governance of listed firms is to encourage further development of domestic financial intermediaries that can act as institutional investors. With their large-scale capital and expertise in all relevant areas of business, financial intermediaries can provide a level of stability and professionalism that is sorely lacking in China's financial markets.

Currently institutional investors such as insurance companies and mutual funds are very small in terms of assets held. One way to encourage the development of such intermediaries is to give tax advantages to various types of product such as life insurance.

Develop More Financial Products and Markets

Another issue is to develop more financial products so that investors can form diversified portfolios with more than just stocks. First and foremost, corporate bond markets should be developed, along with better enforcement of bankruptcy laws and bond rating agencies. Second, more derivative securities such as forwards, futures, and options on commodities (already in place and trading) as well as on other securities should be introduced to the market, so that investors and firms have more tools for risk management. Third, insurance companies should offer more products related to property insurance and auto insurance, while other financial services companies should develop the market for asset-backed securities.

V. The Non-standard Financial Sector and Evidence on Hybrid Sector Firms

In this section we study how the non-standard financial sector supports firms in the Hybrid Sector to raise funds and to grow from start-ups to successful industry leaders. We also examine the alternative governance mechanisms employed by investors and firms that can substitute for formal corporate governance mechanisms.¹⁸ Due to data limitations, much of this evidence is by necessity

¹⁸ Some of our evidence coincides with the anecdotal evidence in Naughton (1995). McMillan and Naughton (1992) also make similar arguments regarding the role of alternative mechanisms in supporting the growth of non-state firms in China. Unlike their work, we provide survey evidence in AQQ (2005a).

anecdotal or by survey.¹⁹

We first compare the Hybrid Sector with the State and Listed Sectors to highlight the importance of its status in the entire economy in Section V.1. Second, we consider survey evidence in Section V.2. Finally, Section V.3 provides discussions of alternative financing channels and governance mechanisms that support the growth of the Hybrid Sector.

V.1 Comparison of Hybrid Sector vs. State and Listed Sectors

Before we present survey evidence on how the non-standard financial sector supports the growth of the Hybrid Sector, it is important to point out the status of the Hybrid Sector in the overall economy. Figure 7-A compares the level and growth of *industrial output* produced in the State and Listed Sectors combined vs. that of the Hybrid Sector from 1990 to 2004.²⁰ The output from the Hybrid Sector has been steadily increasing during this period and exceeded that of the other two sectors in 1998. The total output in 2004 is close to US\$1500 billion for the Hybrid Sector, while it is around US\$800 billion in the State and Listed Sectors combined. The Hybrid Sector grew at an annual rate of over 14% between 1990 and 2004, while the State and Listed Sectors combined grew at around 5% during the same period.²¹ In addition, the growth rates for investment in fixed assets of these sectors are comparable (China Statistics Yearbooks; not reported), which implies that the Hybrid Sector is more productive than the State and Listed Sectors. In terms of capital-industrial output ratios, collectively-owned and privately owned firms are on average more than twice as productive (for every \$1 invested) as SOEs (Gregory et al. 2000). Moreover, many Hybrid Sector firms do not have easy access to the standard form of financing, namely, bank loans, like SOEs do. As mentioned above, loans made to privately owned firms consist of 1% of all loans made in 1997-98. All of these facts make the growth of the Hybrid Sector even more impressive.

¹⁹ All firms including Hybrid Sector firms must disclose accounting and financial information to the local Bureau of Commerce and Industry, and most of the reports are audited. However, these data are then aggregated into the Statistical Yearbook without any firm-level publications.

²⁰ Due to data limitations (of the Statistical Yearbooks), our calculations underestimate the output of the State and Listed Sectors. We use the output produced by SOEs and listed firms in which the state has at least a 50% ownership stake as the total output for these sectors, but this calculation excludes output from listed firms that are *not* majority owned by the state; the output for the Hybrid Sector is the difference between the total output of China and the above figure for the other two sectors. However, as mentioned above only around 20% of all listed firms do not have the state as the largest owner, hence the total output of these firms is not likely to change our overall conclusion on the dominance of the Hybrid Sector over the other two sectors.

²¹ There is an ongoing process of privatizing SOEs. Potentially this may bias the growth rate of the Hybrid Sector higher, as there are firms shifting from the State Sector to the Hybrid Sector. However, the overwhelming majority of SOEs are transformed into the Listed Sector (China Statistical Yearbooks, 1998-2002). Thus this process is unlikely to change the validity of the results above.

Finally, there has been a fundamental change among the State, Listed, and Hybrid Sectors in terms of their contribution to the entire economy: the State Sector contributed more than two thirds of China's GDP in 1980, but in 2004 it contributed less than one-third of the GDP; in 1980, (non-agricultural) privately owned firms, a type of Hybrid Sector firm, were negligible, but in 2001 they contributed 33% of GDP after growing at an average rate of 20% during this period [China Statistical Yearbooks, 1998-2000]. The above trend of the Hybrid Sector replacing the State Sector will continue in the near future.

Insert Figures 7-A and 7-B here.

Figure 7-B presents the number and growth of non-agricultural employees in the three sectors.²² The Hybrid Sector is a much more important source for employment opportunities than the State and Listed Sectors. Over the period from 1990 to 2002, the Hybrid Sector employs an average of over 70% of all non-agricultural workers; the TVEs (part of the Hybrid Sector) have been the most important employers providing (non-agricultural) jobs for residents in the rural areas, while (non-agricultural) privately owned firms employ more than 40% of the workforce in the urban areas. Moreover, the number of employees working in the Hybrid Sector has been growing at 1.5% over this period, while the labor force in the State and Listed Sectors has been shrinking. These patterns are particularly important for China, given its vast population and potential problem of unemployment.

V.2 Survey Evidence

Much of the information concerning the Hybrid Sector comes from surveys. We focus on evidence in Gregory et al. (2000), AQQ (2005a), and Cull and Xu (2005). The most important findings of these surveys regarding financing channels are the following. First, during the startup stage, funds from founders' family and friends are an important source of financing. Banks can also play an important role. Second, internal financing, in the form of retained earnings, is also important. During their *growth* period financing from private credit agencies (PCAs), instead of banks, is the most important channel for firms in AQQ's sample. As documented by Tsai (2002), PCAs take on many forms, from shareholding cooperative enterprises run by professional money brokers, lenders and middlemen, to credit associations operated by a group of entrepreneurs (raising

²² Our calculations of the total number of workers employed by the Hybrid Sector actually underestimate the actual work force in the sector, because the Statistics Yearbooks do not provide employment data for all types of firms (by ownership structure) in the Hybrid Sector.

money from group members and from outsiders to fund firms; *zijin huzushe*), from pawnshops to underground private money houses.

As far as corporate governance is concerned, when asked about what type of losses concern them the most if the firm failed, every firm's founders/executives (100%) included in the AQQ study said reputation loss is a major concern, while only 60% of them said economic losses are of major concern. Competition also appears to be an important factor ensuring firms are well run.

Cull and Xu (2005) find that firms in most regions and cities rely on courts to resolve less than 10% of business-related disputes (the highest percentage is 20%), with a higher reliance on courts in coastal and more developed areas. One reason that firms go to courts to resolve a dispute is because the courts are authoritative so that the dispute will be resolved even though the resolution may not be fair (e.g., Clarke et al. 2005).

V.3 Discussion on How the Non-standard Financial Sector Works

In this subsection we discuss mechanisms within the non-standard financial sector in supporting the growth of the Hybrid Sector. There are two important aspects to alternative financing channels in the Hybrid Sector. The first is the way in which investment is financed. The second is corporate governance. We consider each in turn.

Once a firm is established and doing well, internal finance can provide the funds necessary for growth. AQQ find that about 60 percent of the funds raised by the Hybrid Sector are generated internally. Of course, internal finance is fine once a firm is established but this raises the issue of how firms in the Hybrid Sector acquire their "seed" capital, perhaps the most crucial financing during a firm's life cycle. AQQ present evidence on the importance of alternative and informal channels, including funds from family and friends and loans from private (unofficial) credit agencies. There is also evidence that financing through illegal channels, such as smuggling, bribery, and other underground or unofficial businesses also play an important role in the accumulation of seed capital. Though a controversial issue for the government, our view, based on similar episodes in the history of other developing countries, is that depending on the precise nature of the activity and as long as the purpose of money making is to invest in a legitimate company, it may be more productive for the government to provide incentives for investment rather than to expend costs discovering and punishing these activities.

Perhaps the most important corporate governance mechanism is *competition* in product and input markets, which has worked well in both developed and developing countries (e.g., McMillan 1995, 1997; Allen and Gale 2000b). What we see from the success of Hybrid Sector firms in

WenZhou and other surveyed firms recounted in AQQ, suggest that it is only those firms that have the strongest comparative advantage in an industry (of the area) that survived and thrived. A relevant factor for competition in an industry is entry barriers for new firms, as lower entry barriers foster competition. Djankov, La Porta, Lopez-de-Silanes, and Shleifer (DLS hereafter, 2002) examine entry barriers across 85 countries, and find that countries with heavier (lighter) regulation of entry have higher government corruption (more democratic and limited governments) and larger unofficial economies. With much lower barriers to entry compared to other countries with similar (low) per capita GDP, China is once again an “outlier” in the DLS sample given that China is one of the least democratic countries, and such countries tend to have high barriers to entry. Survey evidence from AQQ (2005a) reveals that there exist non-standard methods to remove entry barriers in China, which can reconcile these seemingly contradictory facts.

Another important mechanism is reputation and relationships. Greif (1989, 1993) argues that certain traders’ organizations in the 11th century were able to overcome problems of asymmetric information and the lack of legal and contract enforcement mechanisms, because they had developed institutions based on reputation, implicit contractual relations, and coalitions. Certain aspects of the growth of these institutions resemble what works in China’s non-standard financial sector today, in terms of how firms raise funds and contract with investors and business partners. In addition, Greif (1993) and Stulz and Williamson (2003) point out the importance of cultural and religious beliefs for the development of institutions, legal origins, and investor protections.

The above factors are of particular relevance and importance to China’s development of institutions. Without a dominant religion, one can argue that the most important force in shaping China’s social values and institutions is the set of beliefs first developed and formalized by *Kong Zi* (Confucius). This set of beliefs clearly defines family and social orders, which are very different from western beliefs on how legal codes should be formulated. Using the World Values Survey conducted in the early 1990s, LLSV (1997b) find that China has one of the highest levels of social trust among a group of 40 developed and developing countries.²³ We interpret high social trust in China as being influenced by Confucian beliefs. Throughout the chapter and AQQ (2005a) we have presented evidence that reputation and relationships make many financing channels and governance

²³ Interestingly, the same survey, used in LLSV (1997b), finds that Chinese citizens have a low tendency to participate in civil activities. However, our evidence shows that, with effective alternative mechanisms in place citizens in the developed regions of China have a strong incentive to participate in business/economic activities.

mechanisms work in China's Hybrid Sector.²⁴

There are other effective corporate governance mechanisms. First, Burkart et al. (2003) link the degree of separation of ownership and control to different legal environments, and show that *family-run firms* will emerge as the dominant form of ownership structure in countries with weak minority shareholder protections, whereas professionally managed firms are the optimal form in countries with strong investor protection. Survey evidence on the Hybrid Sector in AQQ and empirical results on the Listed Sector, along with evidence in Claessens et al. (2000, 2002), suggests that family firms are a norm in China and other Asian countries, and these firms have performed well. Second, the common goal of sharing high prospective profits can tie local and foreign investors with entrepreneurs and managers to overcome numerous obstacles and achieve just that. Under this common goal in a multi-period setting, implicit contractual agreements and reputation can act as enforcement mechanisms to ensure that all parties fulfill their roles to make the firm successful. Profit sharing also makes it incentive compatible for officials at various levels to support the growth of the firm.

Finally, there is a strand of literature studying transitional economies, such as Russia, China, Vietnam, and Eastern European countries, from Socialist systems to market systems. It is important to point out why China differs from other transitional economies. First, with the exception of Russia, China's economy is much larger and more diversified than other transitional economies. With a small and homogenous economy, a country can adjust its legal and financial systems to the strengths of its economy much more easily than a large country can. The success of China's Hybrid Sector demonstrates that alternative mechanisms can work wonders even in large and diversified economies.

Second, it is probably easier for other countries to adopt drastic reform measures in the short run. China, under the influence of Confucius' views, is different, in that people traditionally hold the belief that fundamental changes in society should be gradual and be fully implemented only after they are proven correct; this view was reinforced after the destructive Cultural Revolution; however, this view does not prevent regional experiments conducted at a smaller scale. Accordingly, China adopted a gradual, "dual track" path in its economic reform, in that the continued enforcement of the existing planning system goes alongside with the fast-paced development of financial markets, as compared to the "big bang" approach taken by some other

²⁴ Moreover, Gomes (2000) demonstrates that a *managerial reputation* effect can replace formal governance in an IPO firm. Evidence from the Chinese venture capital industry (Bruton and Ahlstrom 2002) also supports this view.

countries (e.g., Lau et al. 2000).

Third, the role played by the government during the reform process is very different in China than in most other transition economies, in particular, Russia.²⁵ While the Chinese Communist Party largely remains autocratic, government officials, especially those in the most developed areas (e.g., Jiangsu and Zhejiang Provinces), played an active supporting role in promoting the growth of the Hybrid Sector. This is different from the “grabbing hand” role played by government officials in other countries (Frye and Shleifer 1997). The reason for this supporting role is three fold. First, as Li (1998) points out, starting in the early 1980s, the central government of China implemented a mandatory retirement age for almost all bureaucrats at various levels, which made the officials younger and more familiar with capitalist ideas. In Russia, officials from the old regime were entrenched and able to extract rents from the new economy without any contribution. Next, during the early stages of China’s reform, TVEs, in which local governments were partial owners, provided the most important source of growth in the Hybrid Sector. The enormous success of TVEs and the promotion of the associated officials provided examples and incentives to other officials to follow suit. Finally, as discussed above, profit sharing with firms in a multi-period setting also makes it incentive compatible for officials at various levels to support the growth of the firm.

VI. Financial Crises

Financial crises often accompany the development of a financial system. Conventional wisdom says that financial crises are bad. Often they are very bad, as they disrupt production and lower social welfare as in the Great Depression in the US. Hoggarth et al. (2002) carefully measure the costs of a wide range of recent financial crises and find that these costs are on average roughly 15-20 percent of GDP. It is these large costs that make policymakers so averse to financial crises.

It is important to point out, however, that financial crises may be welfare improving for an economy. One possible example is the late nineteenth century US, which experienced many crises but at the same time had a high long run growth rate. In fact, Ranciere et al. (2003) report an empirical observation that countries which have experienced occasional crises have grown on average faster than countries without crises. They develop an endogenous growth model and show

²⁵ In a broader context, LLSV (1999) find that governments in countries with French or socialist origins have lower quality (in terms of supporting economic growth) than those with English common laws and richer countries. But clearly China is a counterexample to LLSV’s argument on government.

theoretically that an economy may be able to attain higher growth when firms are encouraged by a limited bailout policy to take more credit risk in the form of currency mismatch, even though the country may experience occasional crises (see Allen and Oura (2004) for a review of the growth and crises literature and Allen and Gale (2004a) who show that crises can be optimal).

In this section, we consider financial crises in China. Given China's current situation with limited currency mismatches any crisis that occurs is likely to be a classic banking, currency or twin crisis. It is perhaps more likely to be of the damaging type that disrupts the economy and social stability than of the more benign type that aids growth. The desirability of preventing crises thus needs to be taken into account when considering reforms of China's financial system. First, we examine how China can prevent traditional financial crises, including a banking sector crisis and a stock market or real estate crisis/crash. We then discuss how China should be better prepared for new types of financial crises, such as the "twin crises" (simultaneous foreign exchange and banking/stock market crises) that occurred in many Asian economies in the late 1990s.

VI.1 Banking Crises and Market Crashes

Among traditional financial crises, banking panics, caused by the fact that banks do not have sufficient liquid assets to meet total withdrawal demands (anticipated and unanticipated), were often particularly disruptive. Over time one of the most important roles of central banks came to be to eliminate banking panics and ensure financial stability. To a large degree central banks in different countries performed well in this regard in the period following the Second World War. However, in recent years, banking crises are often preceded by a substantial rise in market prices ("bubbles") in the real estate or stock markets to levels that are much higher than during normal times. At some point the bubble bursts and assets markets collapse. In many cases banks and other intermediaries are overexposed to the equity and real estate markets, and following the collapse of asset markets a banking crisis ensues. Allen and Gale (2000c) provide a theory of bubbles and crises based on the existence of an agency problem. Many investors in real estate and stock markets obtain their investment funds from external sources. If the providers of the funds are unable to observe the characteristics of the investment, and because of limited liability on the investors, there is a classic risk-shifting problem (Jensen and Meckling 1976). Risk shifting increases the return to risky assets and causes investors to bid up asset prices above their fundamental values. A crucial determinant for asset prices is the amount of credit that is provided for speculative investment. Financial liberalization, by expanding the volume of credit, can interact with the agency problem and lead to a bubble in asset prices.

As discussed above in Section III, if NPLs continue to accumulate and/or if growth slows significantly then there may be a banking crisis in China. This may well involve withdrawal of funds from banks. However, given the government's strong position regarding the low level of debt pointed out in Table 3-D, it should be possible for the government to prevent this situation getting out of control. On the other hand, given that the real estate market in Shanghai and in other major cities (largest volume and most developed) has already gone through a few episodes of bubbles and crashes (see China Industry Report, [Http://www.cei.gov.cn](http://www.cei.gov.cn), and <http://house.focus.cn> for more details), it is quite possible that similar episodes in the future could cause a banking crisis that will be more damaging to the real economy. With booming real estate markets, there will be more speculative money poured into properties with a large amount coming from bank loans. The agency problem in real estate lending and investment mentioned above worsens this problem. If the real estate market falls significantly within a short period of time, there could be large defaults on bank loans that can trigger a banking panic and crisis. This perhaps represents the most serious risk of a financial crisis in China.

VI.2 Capital Account Liberalization, Currency Float, and Twin Crises

After the collapse of the Bretton Woods system in early 1970s, a new breed of financial crisis emerged. Lindgren, Garcia, and Saal (1996) find that about three quarters of the IMF's member countries suffered some form of banking crisis between 1980 and 1996, and their study did not include the subsequent Asian financial crisis in 1997. In many of these crises, banking panics in the traditional sense were avoided either by central bank intervention or by explicit or implicit government guarantees. But as Kaminsky and Reinhart (1999) find, the advent of financial liberalization in many economies in the 1980s, in which free capital in- and out-flows and the entrance and competition from foreign investors and financial institutions follow in the home country, has often led to "twin" banking and currency crises. A common precursor to these crises was financial liberalization and significant credit expansion and subsequent stock market crashes and banking crises. In emerging markets this is often then accompanied by an exchange rate crisis as governments choose between lowering interest rates to ease the banking crises or raising them to defend the home currency. Finally, a significant fall in output occurs and the economies enter recessions.

Liberalization of the Capital Account and Financial Sector

The entrance of China to the WTO (World Trade Organization) potentially introduces cheap foreign capital and technology, but large scale and sudden capital flows and foreign speculation

significantly increase the likelihood of a twin crisis. The first key question is, when and to what extent should a country open its capital account and financial sector to foreign capital and foreign financial institutions? The prevailing view, expressed by McKinnon (1991) and Dornbusch (1998), is that success or failure of this policy hinges on the efficiency of domestic financial institutions, while Fischer (1998) and Calvo (1998) have promoted reforming the financial sector as a pre-condition to liberalizing. This latter view assumes that financial liberalization does not alter the efficiency of domestic financial institutions. But this policy change affects both the supply and price of capital, two important determinants of lending contracts. With a model of endogenous financial intermediation, Alessandria and Qian (2005) demonstrate that an efficient financial sector prior to liberalization is neither necessary nor sufficient for a successful financial liberalization.

Applying these ideas to China, even though the overall efficiency of China's banking sector (especially state-owned banks) is low compared to international standards, banks can have a stronger incentive to limit the moral hazard concerning borrowers' choices of investment projects through monitoring and loan contracts, following capital account liberalization. Therefore, even absent any advancement in banks' monitoring technology, the efficiency of the banking sector improves and the liberalization can generate a large welfare increase, since it leads to both a larger scale of investment *and* a better composition of investment projects. This is more likely to occur with low interest rates in international markets (so that cost of capital for domestic banks is also low). A financial sector liberalization, which allows foreign financial institutions to enter China's lending markets, can further improve welfare as more competition in the banking sector further discourages moral hazard in investment. As long as the adverse selection problem is not severe (entrance of borrowers with negative-NPV projects in the markets), financial sector liberalization will further improve welfare. Overall, liberalization of the capital account is likely to be beneficial for China.

Currency Crisis and Banking Crisis (A Twin Crisis)

A currency crisis that may trigger a banking crisis is a possibility. The rapid increase in foreign exchange reserves in recent years suggests there is a lot of speculative money in China in anticipation of an RMB revaluation. If there is a significant revaluation in addition to the 2.1 percent enacted in 2005 or if after some time it becomes clear there will not be one then much of this money may be withdrawn. What happens will depend on how the government and central bank deal with this situation. If they allow the currency to float so they do not use up the exchange reserves then any falls in the value of the RMB may occur quickly and this may limit further

outflows. If they try to limit the exchange rate movement then there may be a classic currency crisis. This in turn may trigger a banking crisis if there are large withdrawals from banks as a result. Quickly adopting a full float and avoiding a twin crisis would be much preferable.²⁶

Financial Contagion

Another phenomenon that has been important in many recent crises (e.g., the 1997 Asian crisis) is that financial crises are contagious. A small shock that initially affects only a particular region or sector can spread by contagion within the banking system or asset markets to the rest of the financial sector, then to the entire economy and possibly other economies. Contagion can occur in a number of ways. In the Chinese context where financial markets are relatively unimportant it is most likely they will occur either from contractually interconnected financial institutions or large asset price movements that cause spillovers to financial institutions.

Allen and Gale (2000d) focus on the channel of contagion that arises from the overlapping claims that different regions or sectors of the banking system have on one another through interbank markets. When one region suffers a banking crisis, the other regions suffer a loss because their claims on the troubled region fall in value. If this spillover effect is strong enough, it can cause a crisis in the adjacent regions, and a contagion can occur which brings down the entire financial system. Allen and Gale (2004b) show how large price falls can come about as a result of forced liquidations when there is a limited supply of liquidity in the market. Cifuentes et al. (2005) show that contagion is likely to be particularly severe when these two factors interact.

Insert Table 7 here.

Given China's current financial system, what is the likelihood of financial contagion caused by contractual interlinkages as in the interbank market or because of a meltdown in asset prices if there are forced sales? China's interbank market grew very quickly since its inception in 1981; in fact, the growth of this market was so fast, with the participation of many unregulated financial institutions and with large amount of flows of funds through this market to fixed asset investment, that it exacerbated high inflation in the late 1980s. Since then the government and PBOC increased their regulation by limiting participation of non-bank financial institutions and by imposing restrictions on interest rate movements. In 1996 a nation-wide, uniform system of interbank markets

²⁶ Chang and Velasco (2000, 2001) develop a model of twin crises based on the Diamond and Dybvig (1983) model of bank runs. Money enters agents' utility function, and the central bank controls the ratio of currency to consumption: In some regimes, there exists both a "good" equilibrium in which early (late) consumers receive the proceeds from short-term (long-term) assets, and a "bad" equilibrium in which everybody believes a crisis will occur and these beliefs are self-fulfilling. If the bad equilibrium occurs, there is a twin crisis.

was set up. It contains two connected levels: the primary network, which includes the largest PBOC branches, large commercial banks, and a few large non-bank financial institutions, and the secondary network that includes many banks and non-bank institutions and their local branches (see China Interbank Market Annual Reports for more details). Table 7 documents the growth of the interbank market in recent years: the growth of trading volume of instruments with short maturities (overnight and one week) has been fast, while trading of securities with longer maturities has been low and steady. It can be seen that interlinkages are significant and potentially create a possibility for contagion.

With regard to a meltdown of asset prices, this can happen because of a limited supply of liquidity if there is a rapid liquidation of assets. It seems unlikely that this can occur and cause a serious problem in China's securities markets. A more serious threat is real estate markets if there are bankruptcies and forced selling. This could potentially interact with bank interlinkages and cause a systemic problem. As mentioned above, a crash in real estate markets is probably the most likely cause of a financial crisis in China.

VII. Summary and Concluding Remarks

One of the most frequently asked questions about China's financial system is whether it will stimulate or hamper its economic growth. Our answer to this question, based on examining the history and current status of the financial system and comparing them to those of other countries, is in four parts. First, the large but inefficient banking sector has been the dominant force in the financial system, and has played a central role in funding the growth of all types of firms. It is currently plagued by the problem of NPLs, which, if not corrected properly, may cause major economic difficulties. Second, the stock market has been growing fast since 1990 until a few years ago, but has played a limited role in supporting the growth of the economy. However, the role of the financial markets is likely to change in the near future and they will play an increasingly important role in the economy.

If we can summarize that the role of the banking sector and financial markets has been that they have done enough *not* to slow down the growth of the economy, our third conclusion is that alternative financing channels have had great success in supporting the growth of the Hybrid Sector, which contributes most of the economic growth compared to the State and Listed Sectors. The non-standard financial sector relies on alternative financing channels including internal finance, and on alternative governance mechanisms, such as those based on trust, reputation and relationships, and

competition to support the growth of the Hybrid Sector. Going forward, we believe that these alternative financing channels and governance mechanisms should be encouraged rather than replaced. They should be allowed to co-exist with the banks and markets and continue to fuel the growth of the Hybrid Sector.

We conclude by pointing out the most significant challenge for improving China's financial system: Economic stability is crucial for the continuing development of the Chinese economy, and the stability of the financial system relates to economic stability in three dimensions. The continuing effort to reduce and eventually bring down NPLs to normal levels is important in avoiding a banking crisis, while the effort to improve the regulatory environment surrounding the financial markets (including governance and accounting standards) can certainly help prevent a stock market crash/crisis. The entrance of China to the WTO introduces cheap foreign capital and technology, but free capital inflow and foreign competition and speculation also bring the risk of a twin crisis (foreign exchange and banking/stock market crisis), which severely damaged emerging economies in Asia in 1997. In order to guard against such a crisis, policies toward improving the financial system must be made along with supportive fiscal and trade policies.

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**Table 1 A Comparison of Financial Systems: Bank- vs. Market-based Measures
(Value-weighted approach)**

	Measures	English Origin*	French Origin*	German Origin*	Scandinavian origin*	Sample average	China
Bank and Market size	Bank credit/GDP	0.62	0.55	0.99	0.49	0.73	1.11 (0.24)^a
	Overhead Cost/Bank Total Assets	0.04	0.05	0.02	0.03	0.03	0.12
	Total value traded/GDP	0.31	0.07	0.37	0.08	0.27	0.11
	Market Cap/GDP	0.58	0.18	0.55	0.25	0.47	0.32
Structure Indices: Markets vs. banks**	Structure Activity	-0.76	-2.03	-1.14	-1.83	-1.19	-1.07 (0.46)^a
	Structure Size	-0.10	-1.05	-0.77	-0.69	-0.55	-1.24 (0.29)^a
	Structure Efficiency	-4.69	-6.00	-5.17	-6.17	-5.17	-1.48 (-3.07)
	Structure aggregate	1.21	-0.05	0.66	0.13	0.72	N/A
	Structure regulatory	7.02	8.21	10.15	7.72	8.95	16
Financial Development (Banking and market sectors)	Finance activity	-1.18	-3.38	-0.84	-2.86	-1.58	-0.85 (-2.38)
	Finance size	5.10	4.29	5.22	4.60	4.95	-1.02 (-2.55)^a
	Finance efficiency	2.18	0.44	2.85	1.04	2.01	-0.60 (1.14)
	Finance aggregate	1.23	0.13	1.47	0.48	1.05	N/A

Notes: All the measures for countries other than China are from Levine (2002); measures on China are calculated using definitions from Levine (2002)

*: The numerical results for countries of each legal origin group is calculated based on a value- (GDP of each country) weighted approach; **: Measuring whether a country's financial system is market- or bank-dominated, the higher the measure, the more the system is dominated by markets; ^a: numbers in brackets indicate bank credit issued to the Hybrid Sector of China (instead of total bank credit);

Sources: Almanac of China's Finance and Banking (2000); China Statistical Yearbook (2000)

Table 2-A Comparison of Total Savings and Deposits (in US\$ billions)

	1997	1998	1999	2000	2001	2002
<i>China</i>						
Gross domestic saving*	373	386	391	421	447	487
Gross domestic saving/GDP (%)	41.5%	40.8%	39.5%	39.0%	38.5%	39.4%
Demand deposits ^a	--	--	60	71	127	109
Savings deposits ^b	--	--	720	777	891	1,050
Time deposits ^c	--	--	114	136	171	199
<i>Japan</i>						
Gross domestic saving*	--	--	742	641	577	603
Gross domestic saving/GDP (%)	--	--	14.8%	14.3%	13.8%	13.3%
Demand deposits ^a	152	181	220	227	211	259
Savings deposits ^b	105	127	138	117	91	--
Time deposits ^c	2,161	2,540	2,724	2,392	1,821	1,934
<i>South Korea</i>						
Gross domestic saving*	108	126	141	135	127	147
Gross domestic saving/GDP (%)	33.7%	34.4%	33.5%	32.6%	30.9%	29.3%
Demand deposits ^a	25	31	37	35	38	47
Savings deposits ^b	48	81	117	123	144	173
Time deposits ^c	33	96	128	163	162	212
<i>India</i>						
Gross domestic saving*	90	88	107	105	114	120
Gross domestic saving/GDP (%)	23.1%	21.5%	24.1%	23.4%	24.0%	24.0%
Demand deposits ^a	26	28	29	30	31	35
Time deposits ^c	126	140	158	175	197	231

Source: The Asian Banker data center 2003, <http://www.thesianbanker.com>.

Notes: *: Gross Domestic savings, from the national accounts, and includes more categories than the sum of the three types of deposits in banks; ^a: Demand deposits, balance of the accounts can be withdrawn on demand of customers; ^b: Savings deposits, interest-bearing accounts that can be withdrawn on demand; ^c: Time deposits, savings accounts or CD with a fixed term, withdrawal requires advance notice.

Table 2-B Breakdown of Bank Loans (end-of-year figures in RMB 100 Millions)

Year	Total Loans	Short-term Loans	Industrial Loans	Commercial Loans	Infrastructure Construction	Agricultural Loans	Loans to TVEs	Private/Individually-owned	JVs & Cooperative firms
1994	39,976.0	26,948.7	9,948.3	10,509.8	617.2	1,143.9	2,002.4	155.9	792.3
1995	50,544.1	33,372.0	11,774.7	12,837.1	799.3	1,544.8	2,514.9	196.2	999.1
1996	61,156.6	40,210.0	14,213.3	15,332.6	973.8	1,919.1	2,821.9	279.8	1,346.3
1997	74,914.1	55,418.3	16,526.6	18,356.6	1,591.1	3,314.6	5,035.8	386.7	1,891.0
1998	86,524.1	60,613.2	17,821.5	19,752.4	1,628.7	4,444.2	5,580.0	471.6	2,487.5
1999	--	63,887.6	17,948.9	19,890.9	1,476.9	4,792.4	6,161.3	579.1	2,985.8
2000	99,371.1	65,748.1	17,019.3	17,868.5	1,617.1	4,889.0	6,060.8	654.6	3,049.8
2001	112,314.7	67,327.2	18,636.7	18,563.4	2,099.6	5,711.5	6,413.0	918.0	3,263.5
2002	131,293.9	74,247.9	20,190.5	17,973.1	2,748.0	6,884.6	6,812.3	1,058.8	2,697.4

Source: Statistical Yearbooks of China, (1985 – 2003).

Table 3-A A Comparison of Non-performing Loans of Banking Systems

	1997	1998	1999	2000	2001	2002
China	n/a	2.0 (2.2)	9.5 (10.6)	18.9 (24.9)	16.9 (22.7)	12.6 (15.2)
Hong Kong	1.3 (3)	4.3 (10.2)	6.3 (13.9)	5.2 (12.6)	4.9 (12.9)	3.7 (9.6)
India	n/a	7.8 (1.6)	7.0 (1.6)	6.6 (1.6)	4.6 (1.7)	2.2 (0.8)
Indonesia	0.3 (0.2)	11.8 (4.6)	8.1 (2.0)	13.6 (3.2)	9.9 (2.2)	4.5 (0.9)
Japan	2.7 (5.4)	5.1 (10.8)	5.3 (10.9)	5.8 (11.5)	9.2 (15.3)	7.4 (12.8)
South Korea	2.9 (5.1)	4.8 (6.3)	12.9 (12.9)	8.0 (8.6)	3.4 (3.4)	2.5 (2.6)
Taiwan	2.4 (3.2)	3.0 (3.9)	4.0 (5.7)	5.2 (7.6)	6.2 (9.4)	4.1 (5.2)

Notes: NPL is measured as % of total loans made, and as % of GDP (numbers in brackets). Both the loan and NPL are the aggregate of all banks in a country. Source: The Asian Banker data center 2003, <http://www.theasianbanker.com>.

Table 3-B A Cross-Country Comparison of Banking System Profitability

The profitability is measure as the return on average Equity (ROAE), and return on average Assets (ROAA). The latter is presented in the brackets. Source: The Asian Banker data center 2003, <http://www.theasianbanker.com>.

	1997	1998	1999	2000	2001	2002
China	6.6 (0.21)	4.0 (0.2)	3.2 (0.18)	3.9 (0.21)	3.5 (0.21)	4.16(0.21)
Hong Kong	18.7 (1.8)	11.0 (1.0)	18.2 (1.6)	18.8 (1.6)	15.7 (1.4)	15.6(1.4)
India	17.0 (0.9)	9.7 (0.5)	14.2 (0.7)	10.9 (0.5)	19.2 (0.9)	19.6(1)
Indonesia	-3.8 (-0.3)	n/a	n/a	15.9 (0.3)	9.7 (0.6)	21.1(1.4)
Japan	-18.6 (-0.6)	-19.2 (-0.7)	2.7 (0.1)	-0.7 (0)	-10.4 (-0.5)	-14.5(-0.6)
South Korea	-12.5 (-0.6)	-80.4 (-3.0)	-34 (-1.5)	-7 (-0.3)	15.8 (0.7)	13.1(0.6)
Taiwan	11.2 (0.9)	9.5 (0.8)	6.9 (0.6)	5.1 (0.4)	4.0 (0.3)	-5.2(-0.4)

Table 3-C Liquidation of NPLs by Four Asset Management Companies (RMB 100 million yuan)

	Book value of Assets	Assets Recovered	Cash Recovered	Asset Recovery Rate	Cash Recovery Rate
2001					
Dong Fang	182.9	85.1	44.2	46.5	24.2
Hua Rong	232.1	125.4	75.5	54.0	32.5
Great Wall	531.1	63.0	36.9	11.9	6.9
Xin Da	299.0	225.0	104.9	75.3	35.1
Total	1,245.1	498.6	261.5	40.0	21.0
2002					
Hua Rong	320.4	114.3	102.0	35.7	31.8
Great Wall	454.8	79.4	54.7	17.5	12.0
Dong Fang	221.0	106.0	55.7	47.9	25.2
Xin Da	331.0	174.6	105.1	52.7	31.8
Total	1327.3	474.3	317.5	35.7	23.9

Source: Almanac of China's Finance and Banking 2003, 2002.

Table 3-D A Comparison of NPLs and Government Debt (%)

The following table compares the ratio of (NPLs + Outstanding Government Debt)/GDP, in percentage, among China, Japan, the U.S., and South Korea for the time period 1997-2002, where the NPLs are the total outstanding non-performing loans in a country's banking system, and Outstanding Government Debt is the figure at the end of each year. The figure in brackets for China is the value of the official number for NPLs is doubled. The lower the ratio, which results from low NPLs, low government deficits, or both, the less severe the problem of the NPLs becomes.

Year	China	U.S.	Japan	S. Korea
1997	--	65.6	80.0	6.5
1998	12.3 (14.4)	63.4	96.2	10.5
1999	23.7 (34.3)	61.4	107.3	20.0
2000	40.4 (65.4)	58.3	115.9	16.7
2001	39.2 (62.1)	58.4	136.5	12.7
2002	33.8 (49.1)	60.5	--	12.0

Table 4-A State- and Non-state Banks in China (RMB billion)

Types of Banks	Total Assets	Total Deposits	Outstanding Loans	Profit	NPL rate (%)
2002					
4 State-owned Banks	14,450.0	11,840.0	8,460.0	71.0	26.1
Other Commercial Banks	4,160.0	3,390.0	2,290.0	--	--
1) Joint Equity	2,990.0	--	--	--	9.5
2) City Commercial Banks	1,170.0	--	--	--	17.7
Foreign Banks	324.2	--	154.0	15.2	--
Urban Credit Cooperatives	119.0	101.0	664.0	--	--
Rural Credit Cooperatives	--	1,987.0	1,393.0	--	--
2001					
4 State-owned Banks	13,000.0	10,770.0	7,400.0	23.0	25.37
Other Commercial Banks	3,259.0	2,530.7	1,649.8	12.9	--
1) Joint Equity	2,386.0	1,849.0	1,224.0	10.5	12.94
2) City Commercial Banks	873.0	681.7	425.8	2.4	--
Foreign Banks	373.4	--	153.2	1.7	--
Urban Credit Cooperatives	128.7	107.1	72.5	2.6	--
Rural Credit Cooperatives	--	1,729.8	1,197.0	--	--

Source: Almanac of China's Finance and Banking 2000-2003.

Table 4-B Comparison of Assets Held by China's Non-Bank Intermediaries (RMB 100 million)

This table compares *total assets* held by banks and non-bank intermediaries during the period 1995-2003.

Year	State-owned Banks	RCCs	UCCs	Insurance Companies	TICs	Non-deposit Intermediaries	Other Commercial Banks	Foreign Banks (branches)
1995	53,733.4	6,791.0	3,039.2	--	4,586.0	489.7	5,369.1	42.9
1996	65,827.4	8,706.6	3,747.8	--	5,637.0	820.2	7,699.8	55.3
1997	79,144.1	10,122.0	4,989.4	--	6,364.0	1,004.2	9,486.1	75.8
1998	88,609.3	11,431.1	5,606.3	--	8,025.0	1,209.7	11,281.8	118.4
1999	99,706.3	12,392.4	6,301.5	2,604.1	9,075.0	1,370.8	13,768.9	191.4
2000	107,937.3	13,930.6	6,784.9	3,373.9	9,759.0	1,608.2	18,282.6	379.2
2001	111,882.2	16,108.0	7,800.2	4,591.3	10,883.0	2,236.7	22,557.0	341.8
2002	135,496.0	22,052.1	1,192.3	6,494.1	15,441.0	4,081.0	29,977.2	317.9
2003	--	26,746.2	1,487.2	9,122.8	--	4,955.8	--	--

Source: Almanac of China's Finance and Banking 2000-2003.

Table 5-A China's Bond Markets: 1990 – 2002
(Amount in RMB100 million)

Year	Treasury Bonds			Policy Financial Bonds			Corporate Bonds		
	Amount Issued	Redemption Amount	Balance	Amount Issued	Amounts Redemption	Balance	Amounts issued	Amounts Redemption	Balance
1990	197.23	76.22	890.34	64.40	50.07	84.88	126.37	77.29	195.44
1991	281.25	111.60	1,059.99	66.91	33.67	118.12	249.94	114.31	331.09
1992	460.78	238.05	1,282.72	55.00	30.00	143.12	683.71	192.76	822.04
1993	381.31	123.29	1,540.74	--	34.29	108.83	235.84	255.48	802.40
1994	1,137.55	391.89	2,286.40	--	13.54	95.29	161.75	282.04	682.11
1995	1,510.86	496.96	3,300.30	--	--	1,708.49	300.80	336.30	646.61
1996	1,847.77	786.64	4,361.43	1,055.60	254.50	2,509.59	268.92	317.80	597.73
1997	2,411.79	1,264.29	5,508.93	1,431.50	312.30	3,628.80	255.23	219.81	521.02
1998	3,808.77	2,060.86	7,765.70	1,950.23	320.40	5,121.13	149.89	105.25	676.93
1999	4,015.00	1,238.70	10,542.00	1,800.89	473.20	6,447.48	158.20	56.50	778.63
2000	4,657.00	1,525.00	13,674.00	1,645.00	709.20	7,383.28	83.00	0	861.63
2001	4,884.00	2,286.00	15,618.00	2,590.00	1,438.80	8,534.48	147.00	--	1,008.63
2002	5,934.30	2,261.20	19,336.00	3,075.00	1,555.70	10,054.10	325.00	--	
Annual growth rate	32.8%	32.6%	29.2%	38.0%	33.2%	48.9%	8.2%	N/A	16.1%

Source: Aggregate Statistics from the People's Bank of China (China's Central Bank), 2000 - 2003.

Table 5-B A Comparison of External (Outside the Firm) Capital Markets (Mean)

Country	English-origin Average	French-origin Average	German-origin Average	Scandinavian-origin Average	LLSV Sample Average	China (2002)
External capital/GNP	0.6	0.21	0.46	0.3	0.4	0.49 (0.16)
Domestic Firms/Pop	35.45	10	16.79	27.26	21.59	0.93
IPOs/Population	2.23	0.19	0.12	2.14	1.02	0.05
Total Debt/GNP	0.68	0.45	0.97	0.57	0.59	0.35
GDP growth (one-year)	4.3	3.18	5.29	2.42	3.79	6.77
Rule of Law	6.46	6.05	8.68	10	6.85	5
Anti-director Rights	3.39	1.76	2	2.5	2.44	3
One share = one vote	0.22	0.24	0.33	0	0.22	1
Creditor rights	3.11	1.58	2.33	2	2.3	2

Sources: LLSV (1997a) paper; Almanac of China's Finance and Banking (2003).

Table 6-A Types of Common Stock Issued in China

Tradable?		Definition
No	State-owned shares**	Shares that are controlled by the central government during the process in which firms are converted into a limited liability corporation but before they are listed. All these shares are managed and represented by the Bureau of National Assets Management, which also appoints board members on firms' boards.
(Private block transfer possible)	Entrepreneur's shares	Shares reserved for firms' founders during the same process described above; different from shares that founders can purchase and sell in the markets
	Foreign owners	Shares owned by foreign industrial investors during the same process
	Legal entity holders	Shares sold to legal identities (such as other companies, listed or non-listed) during the same process
	Employee shares	Shares sold to firm's employees during the same process

Yes (New issued shares)	A Shares	Chinese companies listed in Shanghai or Shenzhen Stock Exchanges, and shares sold to Chinese (citizen) investors
	B Shares	Chinese Company listed in SHSZ or SZSE, but shares are sold to foreign investors
	H Shares	Chinese Company listed in Hong Kong (shares can only be traded on the HK Exchange but can be held by anyone)

** : There are sub-categories under this definition

Table 6-B Tradable vs. Non-tradable Shares for China's Listed Companies

Year	State/total shares	Non-tradable [^] /total shares	Tradable/total shares	A/total shares	A/Tradable shares [*]
1992	0.41	0.69	0.31	0.16	0.52
1993	0.49	0.72	0.28	0.16	0.57
1994	0.43	0.67	0.33	0.21	0.64
1995	0.39	0.64	0.36	0.21	0.60
1996	0.35	0.65	0.35	0.22	0.62
1997	0.32	0.65	0.35	0.23	0.66
1998	0.34	0.66	0.34	0.24	0.71
1999	0.36	0.65	0.35	0.26	0.75
2000	0.39	0.64	0.36	0.28	0.80
2001	0.39	0.64	0.36	0.29	0.80
2002	N/a	0.65	0.35	0.26	0.74
2003	N/a	0.64	0.35	0.27	0.76

[^]: Non-tradable shares include "state-owned" and "shares owned by legal entities"; ^{*}: tradable shares include A, B, and H shares; Source: China Security Regulation Committee Reports (2000) and <http://www.csrc.gov.cn>

Table 6-C Ownership and Control in the Listed Firms of China

Shareholder type	Company Ownership and Control (%)	
	Ownership	Control (board seats)
State	24	21
Legal person	44	48
Employees	2	3
Tradable Shares	30	4
Total	100	76

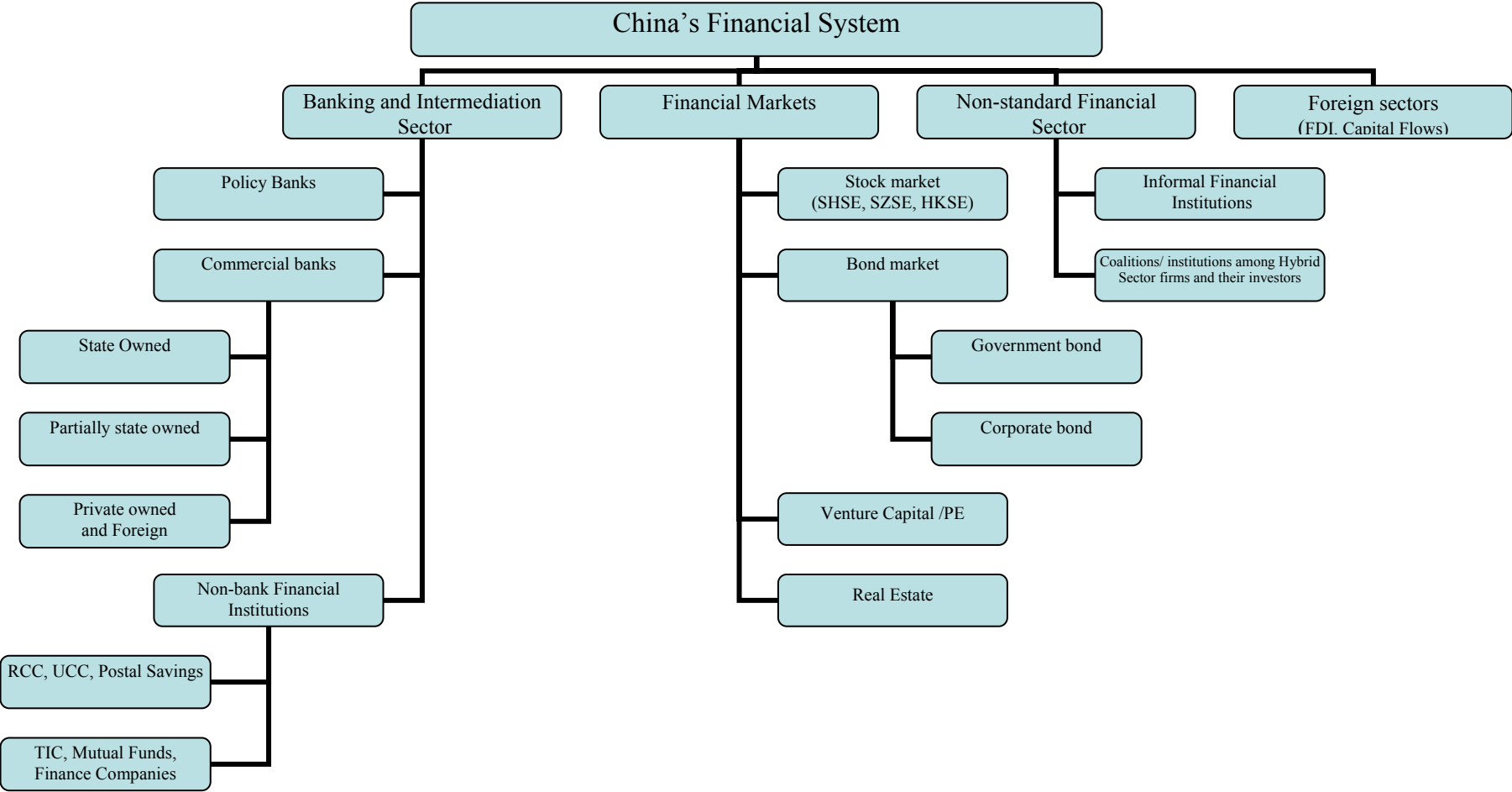
Source: Table 4.6 p.83, "Corporate Governance and Enterprise Reform in China, Building the institutions of Modern Market," 2002, World Bank publication.

Table 7 Trading Volume of National Interbank Market
(RMB 100 Million)

Maturity	Over	7 days	20 days	30 days	60 days	90 days	120
	night						days
2001	1,038.81	5,606.93	933.53	352.84	94.00	47.26	8.67
2002	10,593.31	20,864.67	776.87	562.88	132.76	154.45	39.35
2003	6,418.86	14,563.13	565.97	441.05	101.38	101.84	28.10

Source: China Interbank Market Annual Reports (1999-2003).

Figure 1 Overview of China's Financial System



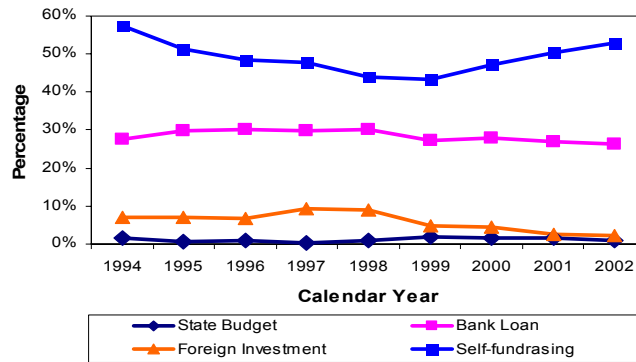


Figure 2-A. Financing sources for the Listed Sector

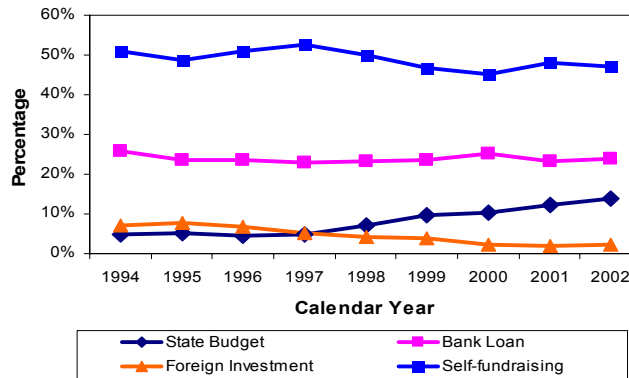


Figure 2-B. Financing sources for the State Sector

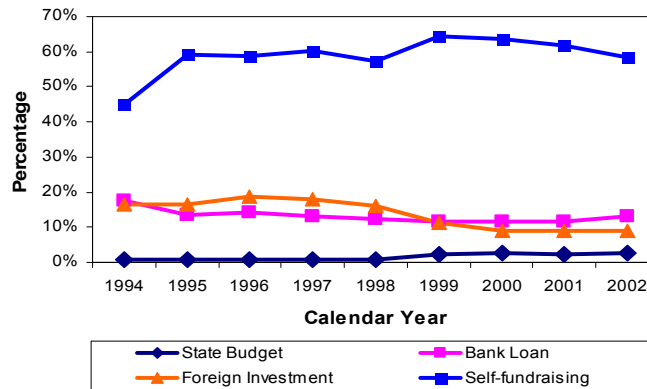


Figure 2-C. Financing sources for the Hybrid Sector

Figures 2-A, 2-B, and 2-C examine financing sources (for the investment of fixed assets) of different types of firms in China. In all three figures, each of the four connected lines represents the importance of a particular financing channel over the time period 1994 to 2002, measured by the percentage of firms' total financing coming from this channel. Figure 2-A presents financing sources for firms in the Listed Sector, Figure 2-B presents results for firms in the State Sector, while Figure 2-C presents results for firms in the Hybrid Sector.

Components of Bank Deposits

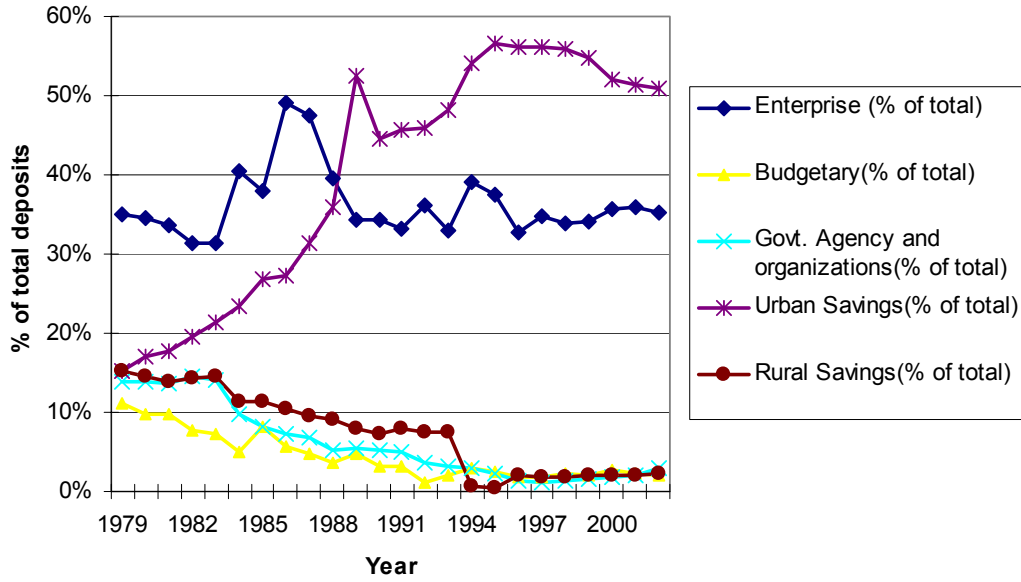


Figure 3-A Sources for Bank Deposits in China

Bank Credit /GNP

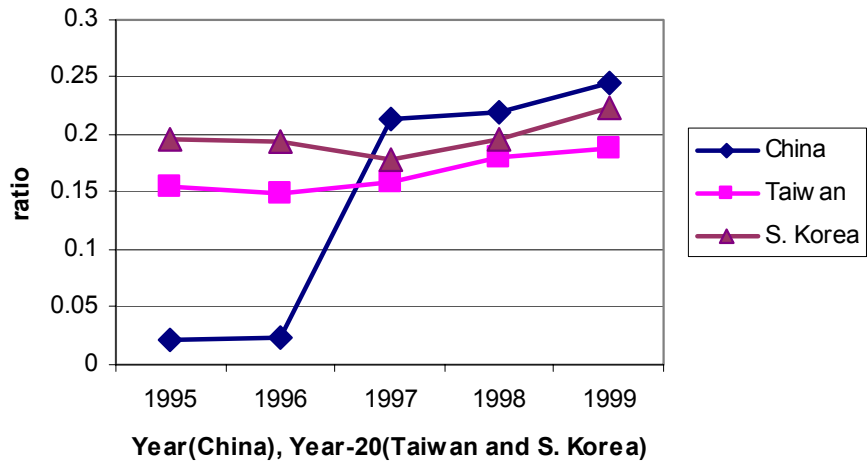


Figure 3-B Comparing Bank (Private) Credit

Assets Managed by Insurance Companies

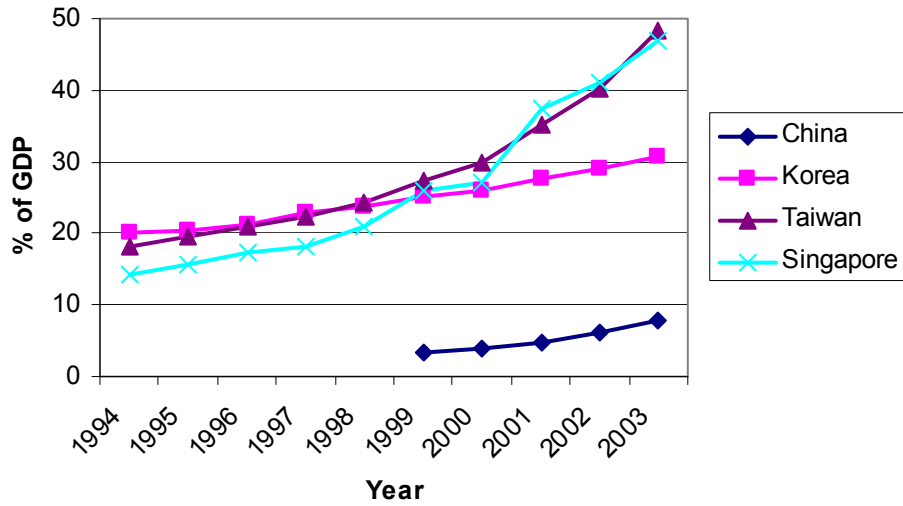


Figure 3-C A Comparison of Assets Under Management of Insurance Companies

Return on Stock Indexes around the World

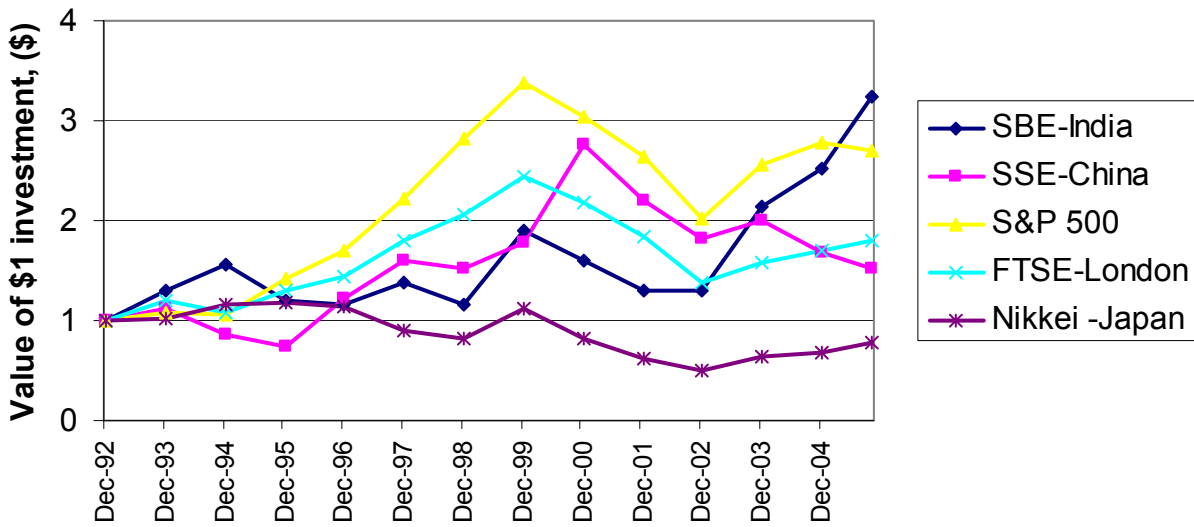


Figure 4 A Comparison of Performance of Stock Indexes (1992-2005)

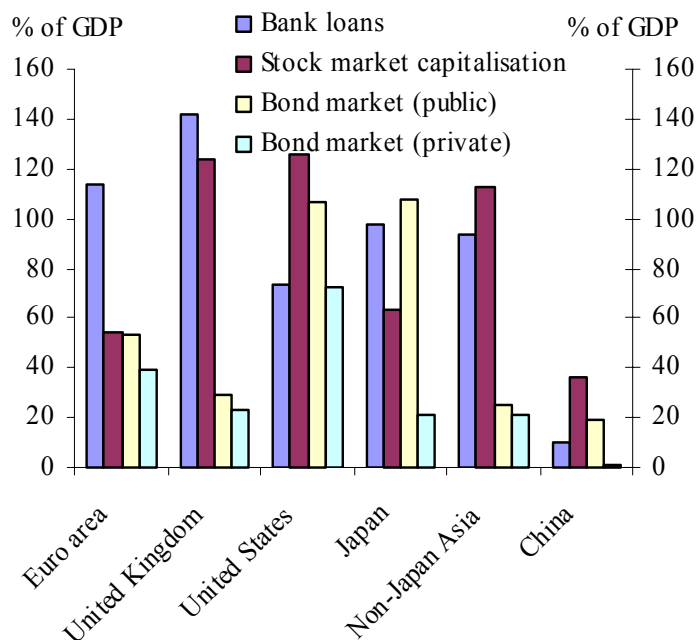


Figure 5 A Comparison of Financial Markets in 2003

Sources: Based on figures in Allen et al. (2004). Direct sources include International Financial Statistics, International Federation of Stock Exchanges, Japan Securities Dealers Association, IFC Bond Database, Thai Bond Dealing Centre, Thomson Financial, CEIC and various central banks, ECB. Statistical Year Book of China 2003, 2004.

- Notes:
- a). Bank loans are domestic credit extended to the Hybrid Sector in China and to the private sector in all other countries. All bank loan data, except Taiwan, are reported in line 32d in the International Financial Statistics (September 2003);
 - b) All outstanding bond data are as of end-2003, except for Japan and Singapore (end-2002 for 2003), Indonesia (end-2000 for 2003) and the Philippines (end-1999 for 2003).
 - c) Bond figures for Hong Kong, Korea, Malaysia, Taiwan, the United States, the United Kingdom and Japan are from central banks. Figures for Indonesia and the Philippines are from IFC Emerging Markets Information Centre Bond Database. Figures for Thailand are from Thai Bond Dealing Centre. Figures for Singapore are estimates based on data from MAS and Thomson Financial;
 - d) Public sector refers to government bodies and quasi-government entities; Private sector refers to non-public sector and includes financial institutions, corporations and overseas institutions;
 - e) Bank loans (total amount and percentage of GDP) in the euro area refer to end-2002 for 2003;
 - f) Euro Area includes: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, and Spain; Non-Japan Asia includes: Hong Kong, Korea, Malaysia, Taiwan, Singapore, Indonesia, Philippines, and Thailand.

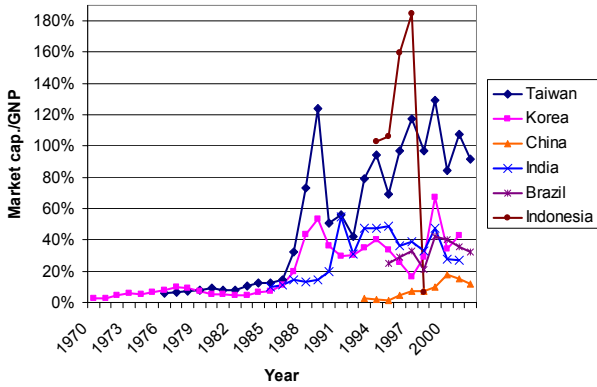


Figure 6-A: Market cap./GNP ratios

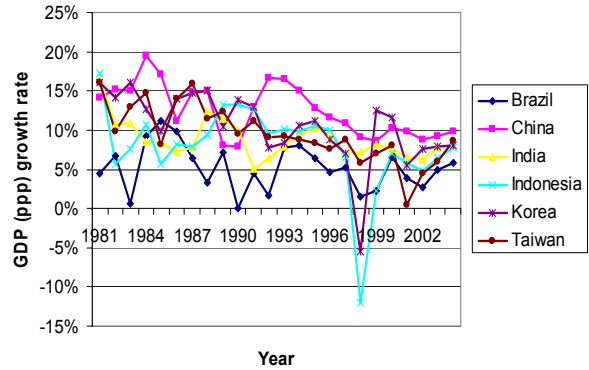


Figure 6-B: GDP growth rates

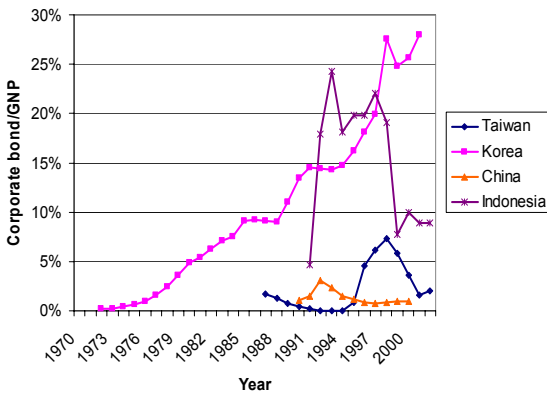


Figure 6-C: Corporate bond market

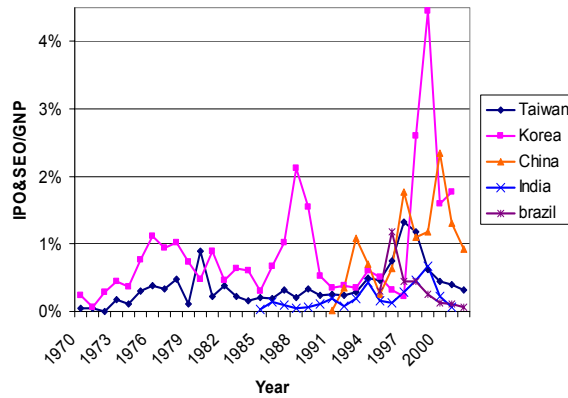


Figure 6-D: Equity Issuance

Figure 6-A compares the time series of stock market capitalization/GNP ratios across six emerging economies. Figure 6-B compares time series of the growth rates of GDP, and the growth rates are calculated using PPP-adjusted GDP figures in order to avoid biases caused by different currency policies. Figure 6-C presents the time series of the ratios of the amount of corporate bonds outstanding /GNP, while Figure 6-D presents the time series of IPO and SEO (in a given year)/GNP. The calculations for all the ratios in Figures 6-A, 6-C, and 6-D are based on local currencies of a country in a given year.

Industrial Output by Sectors

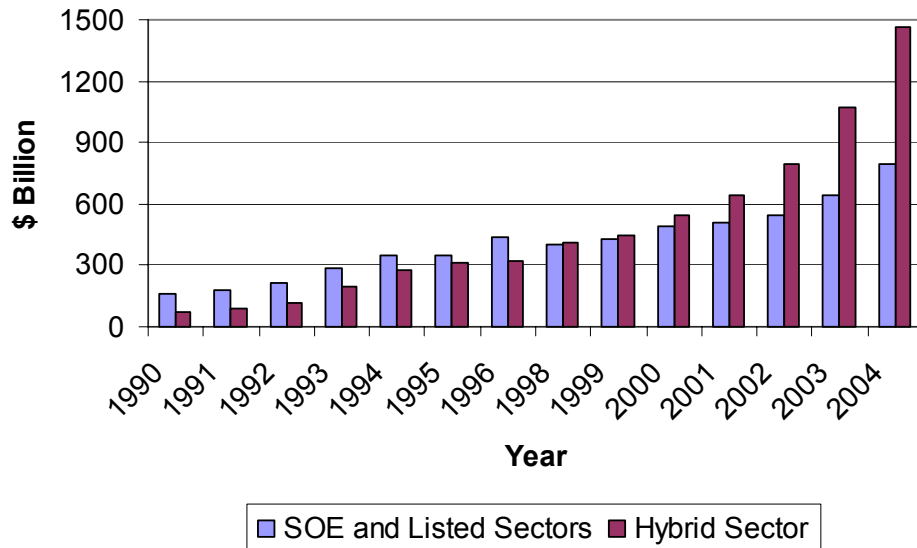


Figure 7-A Comparing the Sectors – Industrial Output

In this figure we plot total “industrial output” for State (SOEs) and Listed (publicly listed and traded firms) Sectors combined and for the Hybrid Sector (all the rest of the firms) during 1990 to 2004. Data source for this table is the Chinese Statistical Yearbook 1998 - 2004.

Employment by Sectors

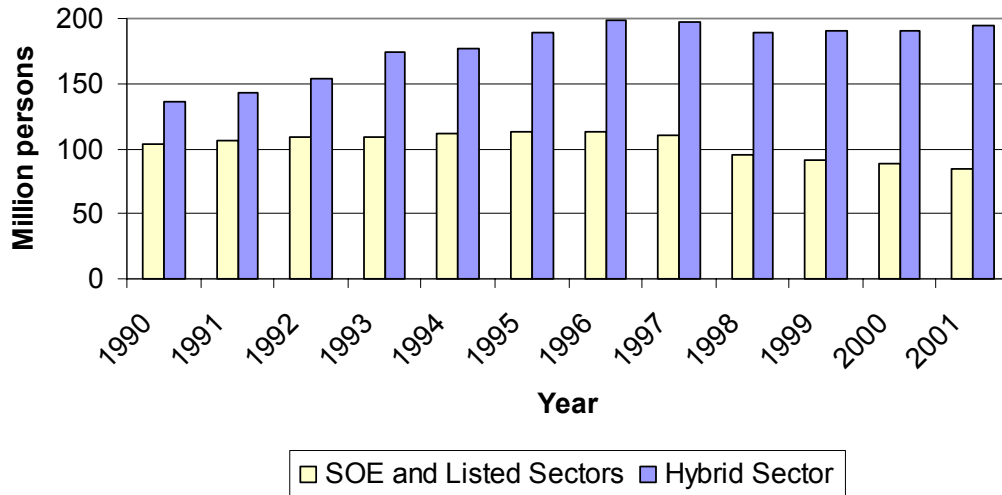


Figure 7-B Comparing the Sectors – Employment

In this figure we plot total number of workers employed by the State (SOEs) and Listed (publicly listed and traded firms) Sectors combined and by the Hybrid Sector (all the rest of the firms) during 1990 to 2004. Data source for this table is the Chinese Statistical Yearbook 1998 - 2004.