

# Law, Finance, and Economic Growth in China<sup>\*</sup>

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Last Revised: February 3, 2004

## Abstract

China is an important counterexample to the findings in the law, institutions, finance, and growth literature: neither its legal nor financial system is well developed by existing standards, yet it has one of the fastest growing economies. We compare growth in the State Sector (state-owned firms), the Listed Sector (publicly listed firms), and the Private Sector (all other firms with various types of private and local government ownership). With poorer applicable legal and financial mechanisms, the Private Sector grows much faster than the State and Listed Sectors, and provides most of the economy's growth. This suggests that there exist effective alternative financing channels and governance mechanisms, such as those based on reputation and relationships, to support this growth.

**JEL Classifications:** O5, K0, G2.

**Keywords:** Law and finance, economic growth, private sector, corporate governance, reputation and relationships.

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<sup>\*</sup> We appreciate detailed comments from an anonymous referee that significantly improved the paper, and assistance from Qiao Yu and Wuxiang Zhu in conducting the firm survey. We received helpful comments from Dan Bergstresser, Loren Brandt, Dong Chen, Gregory Chow, Julian Du, Jie Gan, Li Jin, Sung Wook Joh, Simon Johnson, Ross Levine, Lijun Lin, Anthony Neoh, Tom Rawski, Yihong Xia, and seminar/conference participants at the American Economic Association meetings, the Asia Corporate Governance Conference in Korea, Boston College, Fudan University (Shanghai, China), Harvard Business School and Law School, IMF/World Bank, New York Fed, MIT, the 1<sup>st</sup> Tsinghua International Finance Conference in Beijing, China, and the Wharton Conference on "The Future of Chinese Management." Financial support from Boston College and The Wharton School of the University of Pennsylvania is acknowledged. The authors are responsible for all remaining errors.

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## I. Introduction

Several related strands of literature on law, institutions, finance, and economic growth have emerged in financial economics in recent years, and their impact on other areas of research has been significant. First, La Porta, Lopez-de-Silanes, Shleifer, Vishny (LLSV hereafter) and others have produced a substantial body of empirical evidence that links the origin of a country's legal system to the country's institutions and financial and economic "outcomes." One of the central results of this literature is that, countries with English common-law origin (French civil law origin) provide the strongest (weakest) legal protections to both shareholders and creditors (LLSV 1998, 2000a). Countries with English origin also seem to have better institutions, including less corrupt governments (LLSV 1999), more efficient courts (Djankov et al., DLLS hereafter, 2003a), and more informative accounting standards (LLSV 1998). Better legal protections and better institutions, in turn, seem to lead to better outcomes for the financial system, both at the aggregate and firm levels.<sup>1</sup> Related to the LLSV results, there is a recent literature attempting to understand why and how a country's legal origin affects the country's institutions, and how legal origin and institutions, both jointly and separately, affect economic and financial outcomes.<sup>2</sup>

The second literature champions the view that the development of the financial system that includes a stock market and intermediation, contributes to a country's overall economic growth (e.g., McKinnon 1973). Recently, researchers have strengthened this view by presenting supporting empirical evidence at the country-level (e.g., King and Levine 1993, Levine and Zervos 1998), as well as at the industry- and firm-levels (e.g., Rajan and Zingales 1998, Jayaratne

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<sup>1</sup> For example, relative to firms in French-origin countries, firms in English-origin countries have more dispersed shareholder ownership (LLS 1999), rely more on external capital markets to raise funds (LLSV 1997), have higher values (LLSV 2002), and can enter a new market or industry more easily (DLLS 2002).

<sup>2</sup> Endeavors by researchers include examining the difference between contracting institutions and property rights institutions (e.g., Acemoglu and Johnson 2003), the endowment of geography and disease environment in former colonial countries (e.g., Acemoglu et al. 2001, 2002, Beck et al. 2003a), the legal system's ability to adapt to evolving

and Strahan 1996). The third literature provides evidence for the link and causality between law, finance, *and* economic growth. For example, Levine (1999) finds that the legal environment contributes to the growth of financial intermediation, which in turn stimulates the overall economic growth of a country.<sup>3</sup>

However, many of the above studies are at country level, and they treat each country in their sample on an equal-weight basis. For example, among the countries in the LLSV (1998) sample, large diverse countries such as Brazil and India receive the same weight as small homogeneous countries like Jordan and Ecuador. We might expect that small homogeneous countries could have more effective legal systems because they can be closely tailored to the countries' needs. Moreover, most of the studies exclude one of the most important developing countries in the world, China.<sup>4</sup> In this paper, we demonstrate that China is a significant counterexample to the findings of the existing literature on law, institutions, finance, and growth. Despite its poor legal and financial systems, China has one of the fastest growing economies in the world.<sup>5</sup> Using Purchasing Power Parity (PPP) formulas, it already has the *second* largest economy, and will overtake the U.S. and become the largest in the world in *ten* years. We examine three sectors of the Chinese economy: 1) the *State Sector* includes all companies where the government has ultimate control (state-owned enterprises, or SOEs); 2) the *Listed Sector* includes all firms that are listed on an exchange and are publicly traded; and 3) the *Private Sector* that includes all the other firms with various types of private and local government ownership.<sup>6</sup> We

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economic conditions (e.g., Hayek 1960, Posner 1973, Beck et al. 2003b), and religion and cultural beliefs (e.g., Greif 1994, Stulz and Williamson 2003).

<sup>3</sup> In addition, Beck and Levine (2002) find evidence for manufacturing industries across 42 countries, while Demirguc-Kunt and Maksimovic (1998) find evidence at firm level.

<sup>4</sup> Some of the papers (e.g., DLS 2002, 2003a, 2003b), do examine certain aspects of the Chinese economy or its legal system, but none of them provides a comprehensive study on China, nor a study on China's Private Sector.

<sup>5</sup> In 2003, despite the impact of the SARS epidemic, the expected growth rate of China's GDP is over 9%, the highest among the largest economies in world. See Wall Street Journal (01/21/2004) and Asian Development Bank for details.

<sup>6</sup> The Private Sector includes the following types of firms: 1) "quasi-state-owned" companies, namely, collectively- and jointly-owned companies, where joint ownership between the government and local communities or institutions is

find that the law-finance-growth nexus established by existing literature works well for the State and Listed Sectors in China: with poor legal protections of minority and outside investors, (standard) external markets are weak, and growth of these firms is slow or negative. However, the size, growth, and importance of these two sectors in the economy are dominated by those of the Private Sector. With poorer applicable legal protections and standard financing channels, the Private Sector has been growing much faster and contributing to most of the economy's growth. Our conclusion for the imbalance among the three sectors is that there exist very effective, alternative financing channels and corporate governance mechanisms to support the growth of the Private Sector. Our evidence suggests that these alternative channels and mechanisms are in part based on reputation and relationships, and they can substitute for and do at least as well as standard channels and mechanisms.

Using measures from the existing literature, we first find that China's law and institutions, including investor protection systems, corporate governance, accounting standards, and quality of government, are significantly less developed than those in most of the countries in the LLSV (1997, 1998) and Levine (2002) samples. We also find China's financial system is dominated by a large but under-developed banking system that is mainly controlled by the four state-owned banks. Its newly established Shanghai Stock Exchange (SHSE hereafter) and ShenZhen Stock Exchange (SZSE hereafter) have been growing very fast since their inception in 1990, but their scale and importance are still not comparable to other channels of financing, in particular the banking sector, for the entire economy. Developing the banking system, in particular alleviating the burden of non-performing loans (NPLs) of state-owned banks on the banking system and the whole economy, is as important as further developing the stock market.

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forged; 2) privately owned companies (excluding publicly traded companies that were privately owned): controlling owners of these firms can be Chinese citizens, investors (or companies) from Taiwan or Hong Kong, or foreign investors (or companies). See Appendix A.4 for more details.

We next examine separately financing channels, corporate governance, and the growth of firms in each of the three sectors. The State Sector has been shrinking with the ongoing privatization process, which include firms going public. Our empirical results on the Listed Sector are based on a sample of more than 1100 firms listed and traded on SHSE and SZSE. First, we find that the equity ownership is concentrated among the State for firms converted from the State Sector, and founders' families for non-state firms.<sup>7</sup> Second, the standard corporate governance mechanisms are weak and ineffective in the Listed Sector. Finally, when we examine listed firms' dividend policy and valuations and compare them to those in the LLSV (2000b, 2002) sample firms, we find both the dividend ratio and firm value of Chinese firms are low compared to similar firms operating in countries with stronger investor protections, consistent with LLSV predictions.

More interesting results are found for the Private Sector. Our evidence is mainly based on surveying 17 entrepreneurs and executives in Zhejiang and Jiangsu Provinces, two of the most developed regions in China. First, the two most important financing channels for these firms during their start-up and subsequent periods are financial intermediaries, including state-owned banks and private credit agencies, and founders' friends and families. Firms have outstanding loans from multiple financial intermediaries, with most of the loans secured by fixed assets or third party guarantees. During a firm's growth period, funds from "ethnic Chinese" investors (from Hong Kong, Taiwan, and other countries) as well as other foreign investors are also important sources. Many firms purchase the "operation rights" of land from the government, with a typical contract that lasts for 20-50 years. When asked about the prospect of going public, founders and executives list "access to large scale of funding" and "reputation increase" as the

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<sup>7</sup> Our result on family ownership is similar to the findings of Claessens, Djankov and Lang (2000) and Claessens et al. (2002) on listed firms in Asia, while different from the findings of LLS (1999).

most important benefits, and “disclosure of valuable information to competitors and outsiders” and “large amount of fees paid” as the most critical disadvantages of going public.

Secondly, despite the almost non-existence of formal governance mechanisms, alternative mechanisms have been remarkably effective in the Private Sector. Perhaps the most important of these is the role of reputation and relationships (Greif 1989, 1993). Another important mechanism that drives good management and corporate governance is competition. Given the environment of low survivorship during early stages of firms’ development, gaining comparative advantage in the region and the industry provides a strong incentive for all firms. Family-run firms also provide effective governance (Burkart et al. 2003), as the founders of many successful Private Sector firms usually have a very high ownership stake. Finally, in anticipating the possible loss of their investment due to the failure of the firm, poor formal investor protections, political risks, and corrupt government officials, why are investors, in particular investors from Taiwan, Hong Kong and other countries, willing to finance and refinance these firms? An important reason is 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.

Our results on the difference between the three sectors in China challenge the law and finance view that it is the legal origin that causes the difference in financial systems, the finance and growth view that it is the development of stock markets and banking system that causes the difference in growth of firms and economies, as well as the view supporting the law-finance-growth nexus. Moreover, the success of the Private Sector in China also challenges the view that

property rights and government corruption are crucial institutions determining financial and economic outcomes. Although our results are based on China, similar “substitutes” based on reputation and relationships may be behind the success of other economies as well, including developed economies. Thus a thorough examination of these substitutes has much more general implications and can provide valuable guidance for many other countries. Finally, some of our results are consistent with existing research on economies in transition (from Socialist, central planning systems to market-based economies), including Eastern European countries, Russia, Vietnam, and China.<sup>8</sup> Unlike existing research, our paper provides both aggregate and firm-level evidence on the finance aspects of the Chinese economy, and examines why China differs from other countries studied in the strands of literature on law, institutions, finance, and economic growth.

The rest of the paper is organized as follows. Section II compares China’s legal and financial systems to other countries, as well as the growth in the State, Listed, and Private Sectors. Section III presents evidence on firms’ financing channels in China and other countries. Section IV examines the Listed Sector, including corporate governance, firms’ financing channels, payout policy, and valuations. In Section V we first provide survey and anecdotal evidence on Private Sector firms, and then discuss the alternative financing channels and governance mechanisms. Finally we conclude in Section VI. Appendix A contains explanations of all the variables that we use in the paper, and Appendix B provides details of our empirical tests on the Listed Sector.

## **II. Evidence on China’s Legal and Financial Systems, and Growth in the Three Sectors**

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<sup>8</sup> See McMillan (1997), McMillan and Woodruff (2002) for reviews of this literature. We discuss the difference between China’s transition toward a market-based economy to that of other countries in Section V.

In this section we first provide evidence on China's entire economy, and then on the status of its legal and financial systems. We next compare China to the countries studied by the existing literature (the LLSV sample and the Levine sample). Finally we compare growth in the State, Listed, and Private Sectors of China.

## II.1 Status of China's Economy

Tables 1-A and 1-B illustrate China's status as one of the most important countries in the world. At the end of 2002 it had a population of 1.28 billion people, the largest of any country. From the column on the left in Table 1-A, China's GDP ranked 6<sup>th</sup> in the world using simple exchange rate calculations.<sup>9</sup> However, if we use PPP formula to recalculate the GDPs, China's economy is the second largest behind only the US, as shown in the middle column of Table 1-A. Moreover, with the same PPP formula and assuming that the US economy continues to grow at 4.69% per year, it will take only 10 years before China overtakes the US to be the largest economy in the world.<sup>10</sup>

### **Insert Tables 1-A and 1-B here.**

It may be more useful to compare China's economic growth with other major emerging economies rather than the most developed countries, since China's rapid growth only started in 1979 when it opened its door to the outside world.<sup>11</sup> In Table 1-B we compare China with the seven largest emerging economies in the world. In terms of PPP-adjusted GDP figures in 2002, China is almost twice the size of Mexico, the second largest emerging economy. While in terms of

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<sup>9</sup> Except otherwise noted, we use the exchange rate of 1 US\$ = 8.28 RMB in all of our currency-related calculations throughout the paper.

<sup>10</sup> All of China's GNP and GNP growth figures exclude Hong Kong. The PPP conversion factor we used is obtained from the World Bank Development Indicator. For details refer to the "Handbook of the International Program," United Nation, New York 1992. The growth rate of the US is calculated using the period 1990-2002.

<sup>11</sup> Measured by simple exchange rates, China's GDP in 1980 was US\$180.6 billion while in 1990 it reached US\$368 billion. Also note that the exchange rate between RMB and US\$ changed from US\$1 = 4.25 yuan to 8.28 yuan in 1992, which introduced a significant downward bias for China's GDP figure in 1992. See [http://www.safe.gov.cn/0430/js\\_tzyg.htm](http://www.safe.gov.cn/0430/js_tzyg.htm) (in Chinese) for more details. This is why using PPP adjusted figures to measure GDP and its growth is more appropriate.



the annual growth rate of PPP-adjusted GDPs during 1990-2002, China has been growing much faster than India, which has the second highest growth rate during the same period. With the recent entrance into the WTO and large potential markets it can provide, China will play an increasingly significant role in the world economy.

## **II.2 Legal System**

We first examine similar measures on the legal system of China and compare them to the average measures of the 49 countries studied in LLSV (1998). See Appendix A.1 for a list of the definitions of the measures used in the paper. From Table 2-A, we can see that in terms of overall creditor rights, China falls in between the English-origin countries that have the highest measures of protection, and French-origin countries that have the poorest protection. Table 2-B shows that China's shareholder protection shows a similar pattern. Because the distribution of these measures may be heavily skewed toward the tails due to a few "outlier" countries with very high and low scores, we also provide the *percentage* of countries in the sub-samples and the entire sample of LLSV countries that have *equal or higher* measures than China's (numbers in brackets in Tables 2-A and 2-B). Almost half of countries in the French-origin sub-sample, to which China compares favorably, have equal or better measures of creditor and shareholder rights. The overall evidence thus suggests that the majority of LLSV sample countries have better creditor and shareholder protections than China.

### **Insert Tables 2-A and 2-B here.**

We obviously cannot draw our conclusions regarding the comparison of legal systems based on Tables 2-A and 2-B alone. First, the scores on creditor and shareholder rights mainly measure the protection of owners of publicly traded companies. As above, the stock market and private ownership of corporations are recent phenomena. More importantly, these scores measure the legal system on paper, not in practice. Even though the Chinese government has adopted

various protection measures into the law, from which we calculated the scores, one can argue that a more important measure for the status of the legal system would be law enforcement. Table 2-C provides some evidence in this regard. It is important to note that all the measures, including those for China, are drawn from independent international rating agencies. For two key categories of law enforcement, the rule of law and corruption, China's measures are significantly below *all* average measures of LLSV sample countries, regardless of their legal origins. This suggests that the relatively high scores of creditor- and shareholder-protections of China in Tables 2-A and 2-B are not reliable.

**Insert Tables 2-C and 2-D here.**

We also compare China's legal system to other emerging countries, similar to the growth comparison in Table 1-B. From Table 2-D, we can see that China's "corruption" index is the worst among the seven developing countries, while its measure of anti-director rights (creditor rights) is only higher than that of India and Mexico (Argentina and Mexico). Hence the development of China's legal system is not ahead of any other major emerging economies, and it is clearly dominated by those that have English common-law origin (India, Pakistan, and South Africa).

In order to have an effective law enforcement system, a country must have a sufficient supply of qualified legal professionals.<sup>12</sup> By one estimate, there are currently 150,000 lawyers in China, roughly the same number of licensed attorneys as in the state of California.<sup>13</sup> Lawyers represent only 10% to 25% of all clients in civil and business cases, and even in criminal

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<sup>12</sup> Djankov et al. (2003a, DLLS hereafter) compare the efficiency and formalism of the justice system across 109 countries. Consistent with other LLSV findings, they find justice systems in common law countries are more efficient than civil law countries and in particular, developing countries. The results are based on how two specific types of disputes, the eviction of a tenant and collection of a bounced check, are resolved in a country's judicial system. China is included in the data, and its justice system actually ranks high relative to other socialist and developing countries. But these rankings are misleading since both types of disputes are rare events in China, as the real estate including the rental market as well as the market for the use of personal checks are under-developed, and limited in only a few large cities.

prosecutions they 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. Needless to say, it will be a long time before China has a strong legal labor force. Another reason that many of the new laws will not be effectively enforced in China is the intrinsic conflict of interests between “fair play” in practicing law and the monopoly power of the single ruling party, especially in cases where government officials or their affiliates are involved. Fortunately for investors and entrepreneurs, some independent judicial authority seems to be evolving in the area of business law.

Finally, we comment on the current status of China’s accounting system.<sup>14</sup> The reform started in 1992, with the enactment of regulations governing the enterprises with foreign investment, which provided the necessary accounting infrastructure to assist companies in attracting foreign direct investment. The ASBE (Accounting Standards for Business Enterprises) of China, together with the 13-industry regulation board, have been trying to move China’s accounting practice in the Listed Sector toward the IAS (International Accounting Standards). However, the most glaring problem in China’s accounting system is the lack of independent, professional auditors, similar to the situation of legal professionals. This implies that the proposed IAS-based standards may be counterproductive within China’s current infrastructure: with few auditors understanding the new standards and enforcing them, and the lack of an effective judicial system, embezzlement of company’s assets and frauds may occur more frequently under IAS-

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<sup>13</sup> Information presented here is from Orts (2001). In addition, from the official website of Ministry of Justice of China (in Chinese: <http://www.legalinfo.gov.cn/gb/moj/introduce.htm>), there are about 110,000 lawyers and 9,000 law firms in China as of 2002.

<sup>14</sup> See Xiang (1998) for more information. We thank Arnold Wright and Mohamed Hussein for pointing out this source to us.

based standards, as compared to an alternative system with a much simpler set of accounting standards.

To summarize, China's legal system is underdeveloped relative to most countries, including other major developing countries. By the arguments of LLSV and Levine, China's poor legal system tends to hinder the development of corporate governance mechanisms of Chinese companies, their fund raising through capital markets, and their growth as well as the growth of the overall economy. What we argue is that this prediction ignores how well alternative mechanisms can replace formal legal system.

### **II.3 Financial System**

We first examine China's financial system at the aggregate level, including both its banking system and financial markets. We then examine its stock exchanges in more detail and also briefly discuss its venture capital markets. Finally, we examine the problems in the banking sector.

**Insert Table 3 here.**

In Table 3 we compare China's financial system to those of LLSV (1997, 1998) sample countries, using measures from Levine (2002). We first compare the *size* of a country's equity markets and banks relative to that country's GDP. China's stock markets, which did not exist until 1990 but have been growing very fast, are smaller than most of the other countries, both in terms of market capitalization and the total value traded as fractions of GDP.<sup>15</sup> 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 Private

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<sup>15</sup> Note that "total value traded" is a better measure than "market capitalization" because the latter includes non-tradable shares, while the former measures the "floating supply" of shares in the markets, or the fraction of total market cap traded in the markets. See Table 4-A of this section and Section IV below for further discussions.

Sector only, China's ratio dropped 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 3 compares the relative importance of financial markets vs. banks ("Structure indices"). China has the lowest scores for both "Structure Activity" and "Structure size" categories, suggesting that China's 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.<sup>16</sup>

We also compare the development of the entire financial system ("Financial Development"), including both banks and markets, in the last panel of Table 3. If we use all bank credit (including to the State and Listed sectors) then China's overall financial market size ("Finance Activity" and "Finance Size") lies in the middle of the pack among those LLSV countries. However, given that all other countries' measures were based on private bank credit only, if we re-calculate China's financial system the same way, we find that it is not as large as the LLSV sample average level, and is only higher than the French-origin countries' average. In terms of the efficiency of the financial system, China's measure is below all sub-samples of LLSV countries.<sup>17</sup> Based on the above evidence, we can conclude that China's financial system is dominated by a large but inefficient *banking sector*.

### ***Financial Markets***

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<sup>16</sup> "Structure activity" and "Structure size" are relative size measures, with a smaller value indicating that the country's financial markets are smaller than its banking system. We also compare "Structure efficiency," in Table 3, which is the relative efficiency of markets vs. banks. Since China has the highest score, it seems that China's stock markets are actually relatively more efficient than banks, compared to other countries. Again this result is mainly driven by the extremely high costs of China's banking system.

<sup>17</sup> We also examine the trend of financial system development in China in the 1990s. It is clear that: 1) the overall size of both markets and banks is growing; 2) banks dominate the markets even though markets are becoming more important relative to banks; 3) efficiency (both in terms of banks and the overall system) remains low.

From Table 4-A, China's domestic stock exchanges, SHSE and SZSE, with their *combined* size or volume, rank the 9<sup>th</sup> among the largest stock exchanges in the world. In addition, the Hong Kong Stock Exchange (HKSE hereafter), where selected firms from Mainland China can now be listed and traded, is ranked 8<sup>th</sup> in the world by itself.<sup>18</sup> If we rank the combined size of all stock exchanges in a country, China would rank the 5<sup>th</sup>, behind only the US, Japan, UK, and France.

As fast as the growth of China's stock markets has been, they are not efficient in that prices and investors' behavior do not reflect fundamental values of listed firms. Again from Table 4, "Concentration" measures the fraction of total turnover of the market within 2000 that is due to the trading and turnover of companies within the largest market cap quintile. Large cap stocks in China are not frequently traded and the concentration ratio, 2.73%, is much lower than any other major stock exchange in the world (Frankfurt has the second lowest concentration ratio -- 45.3%). On the other hand, medium- and small-cap stocks are traded extremely frequently in China, as shown by the extremely high "Turnover Velocity," defined as the total turnover for the year expressed as a percentage of total market cap. China's velocity of 500% is even much higher than that of NASDAQ with the well-known trading patterns of technology stocks in recent years. Consistent with our findings, Morck et al. (2000) find that stock prices are more synchronous in emerging countries, including China, than in developed countries. They contribute this phenomenon to poor minority investor protection and imperfect regulation of markets in emerging markets. In particular, they argue that poor protection of minority investors makes rumors more influential on moving sectors of stock returns, while informed risk arbitrage becomes less

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<sup>18</sup> However, a fraction of all the (equity) shares is non-tradable. See Section IV.1 for details. Nevertheless, total market capitalization using tradable shares reached US\$170 billion in 2001.

profitable. As a result, stock prices are more likely to move away from and do not reflect firm specific information.<sup>19</sup>

**Insert Table 4-A and 4-B here.**

Next, we briefly examine the role of financial markets in helping firms raising funds (LLSV 1997). The evidence is presented in Table 4-B. From the comparison of the external capital markets, it is clear that financing via financial markets in China is different from the LLSV sample countries, in that both the scale and relative importance (compared with other channels of financing) of the external markets is not significant. For example, for the ratio of External Capital and GNP, the LLSV sample average is 40%, compared to China's 10%; for the ratio of total debt (including bank loans and bonds) over GNP, the LLSV sample average is 59%, compared to China's 22%.<sup>20</sup> We provide firm-level evidence on financing in Section IV below.

In summary, the overall evidence on the comparison of China and other countries' external markets is consistent with LLSV (1997, 1998) predictions: with an under-developed legal system, the fact that China has small external markets comes as no surprise. Figure 1 compares China's legal system and external financial markets to those of LLSV countries. The horizontal axis measures overall investor protection in each country, while the vertical axis measures the (relative) size and efficiency of that country's external markets.<sup>21</sup> Countries with English common-law systems (e.g., US, UK) lie in the top-right region of the graph, while those with French civil-law systems (e.g., France, Argentina) lie in the bottom-left region. Consistent with LLSV predictions

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<sup>19</sup> One example of the imperfect regulations is the restriction on short sales. Bris et al. (2003) find that limiting short sales contributes to the high co-movement of stock prices, but does not tend to increase the probability of a market crash, as commonly feared by governments in emerging countries.

<sup>20</sup> However, if we include debt issued to all sectors including State and Listed Sectors, this ratio increases to 79%, suggesting that the majority of "debt" does not go through the capital markets but rather through a centralized system, and consistent with evidence on bank credit.

<sup>21</sup> Following LLSV (1997, 1998, 2000), the score on the horizontal axis is the sum of (overall) creditor rights, shareholder rights (anti-director rights and one-share, one-vote), rule of law, and finally, the corruption index of the government, while the score of the vertical axis indicates the distance of a country's overall external markets score

on the relation between legal system and external markets, China is placed close to the bottom left corner of the graph.

**Insert Figure 1 here.**

Finally, we briefly discuss China's venture capital markets. It is often argued that one of the reasons the US has been so successful in recent years in developing new industries is the existence of a strong venture capital sector.<sup>22</sup> Allen and Gale (2000a) suggest that venture capital should be thought of as closer to market finance rather than intermediated finance, because venture capitalists can easily cash out by selling firms in the IPO market, which makes them willing to provide seed capital initially. Since its inception in the 1980s, China's venture capital industry has enjoyed fast growth, in particular since 1992. Consistent with our previous findings, China's venture capital industry, measured by US standards, is under-developed and its role in supporting the growth of young firms is very limited. For example, based on interviews conducted with 36 venture capitalists in 24 venture companies, Bruton and Ahlstrom (2002) find that the limited formal rules and regulations are often ineffective, while alternative mechanisms based on reputation and relationship are the norm in all stages and phases of the industry.

***Banking Sector***

China's banking sector is dominated by four large and inefficient, state-owned banks. As reported in LLS (2002), the government owns an average of 99.45% of the 10 largest commercial banks in China as of 1995 (it was 100% in 1970), and this ownership level is one of the highest in their sample of 92 countries. Moreover, the LLS (2002) results on the negative relationship of government ownership of banks and the growth of a country's economy seems to apply to China's

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(external cap/GNP, domestic firms/Pop, IPOs/Pop, Debt/GNP, and Log GNP) to the mean of all countries, with a positive (negative) figure indicating that this country's overall score is higher (lower) than the mean.

<sup>22</sup> For example, Kortum and Lerner (2000) have documented a strong relationship in the US between the extent to which venture capital is used in an industry and the rate of patenting.



State Sector, and the status quo of its banking sector. However, the high government ownership has not slowed down the growth of the most important sector of the economy, the Private Sector.

The most glaring problem for China's banking sector is the amount of NPLs within the four largest state-owned banks. A large fraction of these bad loans results from poor lending decisions made for SOEs, some of which were due to political or other non-economic reasons, and these loans accumulated over the years without ever being resolved. The additional problem is that data availability on NPLs is limited, which can be viewed as a strategic disclosure decision of the government. But this lack of disclosure of NPLs only fuels speculations that the problem must be severe. As Lardy (1995) argues, if using international standards on NPLs, the existing NPLs within the state-owned banks as of mid-1990s can make these banks' total net worth to be negative so that they are in effect insolvent.

**Insert Tables 5-A and 5-B here.**

Tables 5-A and 5-B compare NPLs and banking system profitability in China and other major Asian economies in more recent years. First, as Table 5-A indicates, NPLs, either as a fraction of total new loans made by all banks or as a fraction of GDP in a given year, are the highest in China from 2000-2002.<sup>23</sup> This 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 bad loan problem. Second, as Table 5-B indicates, the profitability of China's banking system, measured by the return to equity or assets, is also among the lowest in the group of countries.

In recent years the Chinese government has taken active measures to solve this problem. First, four state-owned asset management companies were formed with the goal of assuming these

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<sup>23</sup> Information on NPLs first became available in 1998. However, the figures in 1998 and 1999 probably significantly underestimate the actual size of NPLs, and are ignored in our discussions.

NPLs and liquidating them.<sup>24</sup> Second, state-owned banks have 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.<sup>25</sup> Third, there has been a boom in the entry and growth of non-state financial intermediaries within the banking system. For example, in 1997, total new loans made by the four largest state-owned banks accounted for more than 75% of all new loans, while new loans made by “shareholding” banks accounted for less than 7%.<sup>26</sup> 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%. This trend is expected to continue with more foreign banks entering the domestic credit markets in the near future as a result of China’s entrance into the WTO. All the above facts taken together can explain why NPLs have been falling in recent years, as shown in Table 5-A.

To summarize, the continuing effort of reforming and improving the banking system is one of the most important tasks for China in the near future. In fact, China recently announced that its central bank will inject foreign currency reserves, in the amount of US\$85 billion, into 2 of the big 4 state-owned banks, to improve their balance sheets and enhance the likelihood that these banks can go public by the end of 2004. Similar fund injection plans for the other 2 state-owned banks are also in the works.<sup>27</sup> Given that China’s total foreign exchange reserve is US\$400 billion while the total amount of NPLs as of 2002 is 15% of GDP, or US\$188 billion using the US\$1 = 8.26 RMB exchange rate, the foreign reserve itself should be more than enough to rid the NPLs off the

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<sup>24</sup> Information from auction data shows that the cash recovery on some of the loans ranges from 8% to 60%. Details on these Asset Management companies (including the auctions of NPLs), are available from the authors upon request.

<sup>25</sup> 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. Moreover, mortgage lending by the Industrial and Commercial Bank of China, the largest bank in China, had grown by 32 times during the 1998-2002 period. The source for the above data is *The Almanac of Finance and Banking in China* (2001 and 2002), and *The Economist*, January 2003 (pp. 68).

<sup>26</sup> Owners for these shareholding banks include local government, foreign banks, and individuals. Most of these banks are not publicly listed and traded.

books of all the banks in China.<sup>28</sup> Whether the government will do exactly this remains to be seen, but it is clear that the ultimate source of eliminating NPLs lies in the overall economic growth. As long as the economy maintains its strong growth momentum so that the government's taxable income also increases, the government can always assume the remainder of the NPLs without significantly affecting the economy.

#### **II.4 Growth in the State, Listed, and Private Sectors**

Table 6-A compares the growth of *industrial output* produced in the State and Listed Sectors vs. that of the Private Sector from 1996 to 2002. It is clear that the Private Sector dominates the State and Listed Sectors in terms of either the size of the output,<sup>29</sup> or in terms of the growth trend. From Panel A of Table 6-A, the Private Sector grew at an annual rate of 14.3% between 1996 and 2002, while the State and Listed Sectors combined grew at only 5.4% during the same period.<sup>30</sup> In addition, the growth rates for investment in fixed assets of these two sectors are comparable (Panel B of Table 6-A), which imply that the Private Sector is actually more productive than the State and Listed Sectors. Finally, there has been a fundamental change among the State, Listed, and Private Sectors in terms of their contribution to the entire economy: the State Sector contributed 76% of China's total industrial output in 1980, but in 1996 it only contributed 28.5%; in 1980 individually owned firms, a type of Private Sector firms, are negligible, but in

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<sup>27</sup> China's RMB has been pegged to US dollar (only) at 8.28 to 1. The foreign exchange reserves are in the form of US dollars (in cash), T-bills, and other dollar denominated debt securities. See for example, Financial Times (01/09/2004) and Asia Wall Street Journal (01/13/2004) for more details.

<sup>28</sup> One potential risk for using foreign reserve to boost the banking system is the pressure of significant RMB appreciation relative to US\$ and other major foreign currencies. Necessary hedging strategies should be planned by the banks, in addition to tighten the currency flow as it has been the case.

<sup>29</sup> Total output in 1999 is US\$1200 billion for the Private Sector, while it is around US\$400 billion in the State and Listed Sectors combined.

<sup>30</sup> There is an ongoing process of privatizing SOEs. Potentially this may bias the growth rate of the Private Sector higher, as there are firms shifting from the State Sector to the Private Sector. However, the overwhelming majority of SOEs are transformed into publicly traded firms (the Listed Sector). Thus this process is unlikely to change the validity of the results above.

1996 they contributed 15.5% of total industrial output, and the above trend of the Private Sector replacing the State Sector will continue in the near future.

**Insert Tables 6-A and 6-B here.**

Table 6-B presents the number of non-agricultural employees in the three sectors. The Private Sector is a much more important source for employment opportunities than the other sectors. Over the period from 1995 to 2002, the Private Sector employs an average of over 70% of all non-agricultural workers, while the TVEs (a type of Private Sector firm) are by far the most important employer for workers from the rural areas. Moreover, the number of employees working in the Private Sector has been growing at 1.5% over this seven-year period, while the labor force in the State Sector has been shrinking. These patterns are particularly important for China, given its vast population and potential problem of unemployment.

### **III. Firms' Financing Sources: Aggregate Evidence and Cross-country Comparisons**

In this section we compare, at the aggregate level, how firms raise funds in China and in LLSV sample countries with the emphasis on emerging economies. It is worthwhile then to study what other channels of financing are playing the role of substituting for external capital markets and standard, textbook financing channels.

#### **III.1 China's Most Important Financing Channels**

The four most important financing sources for all firms in China, in terms of fixed assets investments, are: (domestic) bank loans, firms' self-fundraising (or fundraising for short), state budget, and foreign direct investment.<sup>31</sup> By far the two most important sources of financing channels are self-fundraising and bank loans. Consistent with previous evidence on China's

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<sup>31</sup> Detailed information on all the financing channels is available from the "Almanac of China's finance and banking" (2000-2003), and from the authors upon request.

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. For example, firms in the State Sector rely on bank loans to raise more than 25% of their total financing needs. A similar pattern holds for jointly- and collectively-owned companies, both of which belong to the Private Sector. Our survey evidence, to be presented in Section V, also indicates that bank loans are important financing sources, especially during the start-up period of Private Sector firms.

Self-fundraising includes proceeds from capital raised from *local* governments (beyond state budget) and communities and other investors, internal financing channels such as retained earnings, and all other funds raised domestically by the firms.<sup>32</sup> First, the size of total self-fundraising of all firms has been growing very fast over the period of 1994-2002, at an average annual rate of 14%. At the end of 2002, total self-fundraising (for the purpose of fixed assets investment) reached US\$275.5 billion, compared to a total of US\$106.6 billion 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. Second, self-fundraising is the most important source of financing for many types of firms. For example, individually owned companies (of the Private 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.

Finally, state budget and foreign (direct) investments 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 state budget now only

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<sup>32</sup> Our current data source, the China Statistical Yearbook (2000), does not provide the breakdowns of "fundraising," thus we only have the total figures.

contributes 10% of *state-owned* companies' total funding. On the other hand, as a financing source foreign investment is comparable to 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 central planning, closed economy toward an open market economy.

With the knowledge on 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.

First, Figure 2-A (2-B) illustrates how firms in the Listed Sector (State Sector) finance their investment. From Figure 2-A, we can see that just below 30% of publicly traded companies' funding comes from bank loans, and this ratio has been very stable, despite the fast growth of the stock markets. Around 45% of Listed Sector's total funding comes from (self-) fundraising, including internal financing and proceeds from equity and bond issuance.<sup>33</sup> The growth of publicly traded firms has been impressive, with total market capitalization including non-tradable shares reaching US\$330 billion at the end of 1999. On the contrary, SOEs are on a downward trend, as privatization of these firms is still in progress. From the information on equity and bond sales, we know that these sources of (self-) fundraising that rely on the use of external markets only constitute a small fraction of total funds raised, compared to internal financing and other forms of fundraising. Combined with the fact that self-fundraising (bank loans being the second most important source) is also the most important source of financing for the State Sector (Figure

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<sup>33</sup> Publicly traded firms also receive funds from the state budget, because some of the firms in this category used to be state-owned, and the funding relationship has not been completely severed. But the state budget is not as important as foreign direct investment, which as of 1997 accounts for 9.5% of total financing.

2-B), we can conclude that alternative channels of financing are important even for the State and Listed Sectors.

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

Next, we consider how firms in the Private Sector raise funds (Figure 2-C). Self-fundraising here includes all kinds 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, with close to 60% of total funds raised coming from this channel. The other fact that we want to stress here is that because firms in this sector operate in an environment with poorer legal and financial mechanisms and regulations than those firms in the State and Listed Sectors, all financing sources probably work differently from how they work in the State and Listed Sectors, and those in developed countries. In Section V below we present detailed evidence on how different types of self-fundraising help Private Sector firms at various stages.

### **III.2 Comparing Financing Channels in Emerging Economies**

We briefly compare financing channels at the aggregate level in China and other major emerging economies in Asia. In particular, we 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 special. First, Figure 3-A compares the development of stock markets at the aggregate level, while Figure 3-D compares the growth rates in GDP. Both Taiwan and South Korea experienced high GDP growth in much of the 1970s, while the total market cap 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 mid- to late-1980s. Figure 3-B 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 3-C compares total equity issuance, including IPO and SEO. 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 and India.

**Insert Figures 3-A, 3-B, 3-C, and 3-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 in Asia. One of the common patterns emerged from these comparisons is that the development of external markets trails that of the growth of overall economy. This is not surprising given that the development of these markets require minimum efficiency of a country's institutions including legal system, accounting standards, and the development of associated professionals. By contrast, during early stages of the economic growth, alternative institutions and mechanisms alone can support the growth of firms and 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, and future research can determine whether the Chinese experience also occurs in other countries.

#### **IV. Evidence on the Listed Sector**

In this section, we focus on publicly traded companies and examine their financing and investment decisions. As stated in the introduction, we want to draw general conclusions on whether there are fundamental differences between the Chinese firms and firms studied in previous papers (LLS 1999, LLSV 1997, 2000b, 2002). Before doing that, let us look at the unique ownership structure and corporate governance mechanisms in the Chinese firms.

##### **IV.1 Types of Stock**

Table 7-A introduces the types of stock issued by listed Chinese firms. First, there are tradable and nontradable shares. The nontradable shares are either held by the state/government or



by other legal entities, namely other firms (listed or non-listed) or organizations. Through nontradable shares, in particular state-owned shares, the government retains (partial) control of firms that used to belong to the State Sector. 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). Class H shares can be listed and traded on the HKSE and are issued by selected “Red Chip” Chinese companies.

**Insert Tables 7-A, 7-B, and 7-C here.**

From Tables 7-B and 7-C, we can see that the ownership structure of a listed company’s equity in China is different from that observed in many other countries. First, from Table 7-B, “non-tradable” shares constitute a majority of all shares, while most of non-tradable shares are held by the “state”. On the other hand, the majority of tradable shares are A shares, or the shares held and traded by Chinese citizens. Second, Tables 7-C provides some evidence on the relation between ownership and control of the Board of Directors. Information provided here is based on a survey of corporate governance practices among 257 companies listed on the SHSE conducted in the year 2000 by Integrity Management Consulting and the Research Center of SHSE.<sup>34</sup> Consistent with Tables 7-A and 7-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 as shown in Table 7-C. While selecting 48% of all directors on the board, and taking into account that shareholders selected only 76% of all directors in the 257 surveyed companies (the other directors were appointed by the government), state and legal person shareholders, owning 44% of all the shares, selected 70% (or 48 out of 76) of those directors that took office through the voting process.

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<sup>34</sup> The survey is based on over 10,000 questionnaires sent to directors, supervisors, and other senior managers in listed companies. Also see “Corporate Governance and Enterprise Reform in China: Building the institutions of Modern

## IV.2 Corporate Governance<sup>35</sup>

Listed firms in China have a two-tier board structure: the Board of Directors and the Board of Supervisors. The Board of Supervisors is a mixture of the German-style supervisory committee and China's socialist regime in which employees are also "owners" of the enterprises. In recent years there is a trend of modeling listed firms' board structure after that of US corporations. The supervisors of a listed firm are usually either officials chosen from government branches, or executives from the parent companies. Though they are at the top of the firm's hierarchy, they are, most of the time, supervisors by name only. For example, they are usually paid less than the firm's directors, who rank below them. The Board of Directors is controlled by the firm's parent companies. As shown in Table 7-B above, not all directors are elected by the shareholders. The rest of them are nominated and appointed by the firms' parent companies and the nomination process is usually kept secret. Most of the directors are well educated, with 60% of them holding graduate or equivalent degrees. However, incentive pay is rarely explicitly specified in the directors' compensation packages, but a large fraction of non-pecuniary payments, including perks such as company cars and subsidized housing, can be linked to firm performance. Since the two-tier board system consists of members who are not voted in by the shareholders, it is unlikely that this board structure can effectively monitor firms' managers, because the goals of board and supervisory members are not congruent with each other or with those of the shareholders. Some listed firms do not convene regular board meetings, and some directors do not take the meeting rules and their fiduciary duties seriously. In some corporations, directors act as managers or executives, and the excessive overlap in these positions causes corruption.

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Market," published by the World Bank in 2002, which provides more detailed information on the ownership and control structure.

<sup>35</sup> Information presented in this section is based on "Corporate Governance and Enterprise Reform in China: Building the institutions of Modern Market" (World Bank, 2002), and Schipani and Liu (2002).

The external corporate governance mechanisms are also limited and weak. First, the existing ownership structure, characterized by cross-holdings of shares among listed companies and institutions, makes hostile takeovers virtually impossible. Secondly, institutional investors do not have a strong influence on management or on the stock market. Open-end funds are a very recent addition to the set of financial institutions in China. As for information disclosure, there is a lack of qualified accounting and auditing professionals as pointed out earlier. Moreover, ineffective bankruptcy implementation makes the threat and penalty for bad firm performance non-credible.<sup>36</sup>

Finally, the government plays the dual roles of regulator and blockholder of many listed firms. The China Securities Regulation Committee (CSRC) is the counterpart of the SEC in the US, and its main role is to monitor and regulate stock exchanges and listed companies. While the government exercises their 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 elected by the government, it is doubtful that they will pursue their fiduciary role as control shareholders diligently. Moreover, the government's dual roles can lead to conflicting goals in dealing with listed firms, which in turn weakens the effectiveness of both of its roles.

### **IV.3 Evidence on Ownership, Financing, Dividend and Valuation**

In this section, we examine and compare various characteristics of listed firms in China with those of other countries. Our results on China's Listed Sector are based a sample (panel data) of more than 1100 listed firms that we collected from SHSE and SZSE, for the period of 1992-

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<sup>36</sup> Cross-country information on the efficiency in bankruptcy procedure, based on survey 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.

2000.<sup>37</sup> Table 8-A presents the summary statistics of a “snapshot” of the sample firms at the end of 2000: the average market cap is US\$ 448 million (median is US\$ 355 million), the average leverage ratio, measured by the ratio of long-term debt and common equity, is 32% (median is 9%). In short, these are large firms operating in virtually all industries.

Table 8-B compares the ownership structure of these firms to those from LLS (1999) sample, which includes over 1000 listed companies from 33 countries. The main result of LLS (1999) is that countries that protect minority shareholders poorly (strongly) tend to have more concentrated (dispersed) ownership, as shown in the first two panels of Table 8-B. Consistent with the prediction from Burkart et al. (2003), Claessens et al. (2000) show that family firm is the dominant form of ownership structure in Asia, where the protections of minority shareholders are in general weak. In the last row of Table 8-B, the ownership structure of listed firms in China is closer to that of other Asian firms documented in Claessens et al. (2000), than to LLS (1999) results. First, consistent with our previous evidence on ownership structure, the dominant owner of 60% of our sample firms is the (central) government. Second, for 13.6% of firms the dominant owner is founders’ families, while only 0.44% of all firms are widely held, so that no shareholder owns more than 10% of stocks. Third, for 24.17% (1.83%) of firms, the dominant shareholder is a financial company (another listed firm).<sup>38</sup>

Table 8-C provides some evidence on financing sources at the firm level. The ratios for all the countries (except for China) in the table are taken from LLSV (1997). In LLSV (1997), a ratio (e.g., market cap/sales) for a country is obtained by first finding the median of this ratio (market cap/sales) across firms within various industries of that country, and then by taking the average of

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<sup>37</sup> These data sets are available from “Asia Emerging Market Data Base” of the Taiwan Economic Journal (<http://www.tei.com.tw/main.html>).

<sup>38</sup> Since we do not have ownership data for this financial company (listed firm), we do not know whether this company (listed firm) is widely held or not. But given the fact that state-ownership is prevalent in listed firms and banks, it is reasonable to assume that they are not widely held.

the medians across industries to obtain the ratio for the country. A similar procedure is taken to find the ratios for China using our panel data set of listed firms. Finally, we take the average (median) ratios across groups of countries according to their legal origins, and compare them to those of China. The evidence in Table 8-C is consistent with previous evidence at the aggregate level: in terms of total equity, the listed Chinese companies do not rely on the external markets as much as their counterparts in LLSV countries, but they rely heavily on debt, in particular bank debt, more so than other LLSV countries.

Finally, we examine dividend policy and valuations of listed firms in China, and compare them to firms studied by LLSV (2000b, 2002). Making the most out of the available data,<sup>39</sup> we performed three different sets of empirical tests and find similar results. Detailed descriptions of these tests are presented in Appendix B. First, LLSV (2000b) find that firms in countries with poorer protection of outside shareholders tend to have lower dividends due to more severe agency problems. Using dividend/earnings ratio as a proxy for dividend policy, we find that on average Chinese firms tend to under-pay dividends to their shareholders compared to firms in countries studied in LLSV (2000b). Second, LLSV (2002) find that firms in countries poorer protection of outside shareholders tend to have lower Tobin's Q, measured by the market-to-book assets ratios. When we examine Tobin's Q of listed firms in China, we cannot reject the hypothesis that on average their Tobin's Q is lower compared to countries with better shareholder protections (LLSV 2002).

Overall, because investor protections are weak (and agency problem is severe) in the Listed Sector in China, both dividend ratio and Tobin's Q are low compared to similar firms operating in countries with stronger investor protections. These results confirm that LLSV

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<sup>39</sup> The data sets that we employ include: 1) accounting and financial information for 1100+ listed firms from China (1990-2000); 2) LLSV (2000b, 2002) results are based on information for over 4100 firms from 33 countries (1989-

predictions work well for China's Listed Sector that includes many firms converted from the State Sector, and is also consistent with evidence presented in Figure 1.

## **V. Evidence on the Private Sector**

In this section we study how firms in the Private Sector raise funds, their various growth paths, and the alternative mechanisms employed by owners that can substitute for formal corporate governance mechanisms. Due to data limitations, much of this evidence is by necessity anecdotal or by survey.<sup>40</sup> We first present evidence based on a survey of 17 firms in Jiangsu and Zhejiang provinces in Section V.1, and then we expand our evidence to two highly successful regions of Private Sector firms in Section V.2. Finally, Section V.3 provides discussions of our evidence.

### **V.1 Survey Evidence<sup>41</sup>**

As Table 9 shows, among the 17 firms that we surveyed, one firm is from Shanghai, three are from Jiangsu Province, and the rest 13 are from Zhejiang Province. These firms operate in a wide range of industries. The average age of the firm is over 11 years, and they employ an average of over 1600 employees. The average size of (book) assets is US\$55 million, with average return on assets being 10%. Finally, on average firms are highly levered, with average debt/ (private) equity ratio reaching 2.1. Figure 4-A presents more background information about the firms. First, there exist significant variations in both firms' past performance, in terms of average annual returns to assets in the past 5 years, and their expected future annual returns in the next 3 years (top two histograms of Figure 4-A). Second, in terms of ownership structure, both at the time of

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1994), while detailed firm-level data for LLSV sample are not available to us; but we do have their cross-sectional summary statistics by country, as well as the regression results across countries.

<sup>40</sup> To our knowledge, with the exception of some well-known firms who voluntarily provide information to the public, firm-level information (financial, accounting, or operational) is non-existent for most Private Sector firms.

<sup>41</sup> The survey questions, as well as the tabulation of answers, are available at <http://www2.bc.edu/~qianju/research.html>. In designing our survey forms, we follow Graham and Harvey (2001, survey of US CFOs), Johnson, McMillan, and Woodruff (2002, survey of 5 former Communist countries in Eastern

startup and current status, the two dominant forms are “founder and family,” and “shareholding” (resembles a private equity structure), while partnership is not a widely used ownership structure. Third, about 35% of the founders of our sample firms worked in TVEs prior to starting up their own firms, while 23% (18%) of the founders worked in SOEs (government agencies). The experience from the State Sector or other Private Sector firms is valuable for these entrepreneurs, as they gained knowledge on how to run a private firm and/or deal with government officials.

### ***Financing Channels***

Figure 4-B presents evidence of financing channels of the firms. First, it is not surprising that during the startup stage, funds from founders’ family and friends are important source of financing. Moreover, funds from friends, in the form of private loans and equity, are also very important during the firm’s subsequent growth period (top right histogram in Figure 4-B). Second, funding from financial intermediaries is probably the most important source for the surveyed firms: over 40% of firms surveyed regard banks as either a “very important” (25-50% of funding) or an “extremely important” (more than 50% of total funding) financing source. This evidence again highlights the importance of the banking sector in China. Among financial intermediaries, the four largest state-owned banks are ranked the highest in terms of providing funds, while other state-owned banks are ranked second. However, it is not clear that state-owned banks provide the cheapest, most convenient start-up financing channel for all Private Sector firms. The important caveat here is that for almost all the surveyed firms that received start-up financing from state-owned banks had already established close relationship with those banks before the inception of the firms. This is possible because these firms originated by “spinning off” from state-owned or

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Europe), and McMillan and Woodruff (1999a, 1999b, survey done in Vietnam on trade credits and resolution of disputes).

collectively-owned firms (or purchasing assets from the latter), while the latter firms typically have good relationship with state-owned banks.

During the firms' subsequent growth period, financing from private credit agencies is the most important channel. These non-state lenders usually charge very high interest rates and/or require large amount of collateral on loans, can force liquidation should the entrepreneurs default, and the associated loan contracts resemble junk bonds to a certain degree. Interestingly, loans from state-owned banks are no longer the dominant source of funding during the growth period. On average, each surveyed firm currently has loan relationship with 4.3 banks/financial institutions, with the maximum (minimum) being 12 (1). Collateral value counts an average of 82.6% of the loan value on average (among the 11 firms which answered this question), with maximum 120% and minimum 20%. Fixed asset is the most popular form of collateral, and third party guarantee being the second most popular form. These facts imply that financial institutions, state or private, seem to understand the risk of a start-up firm and "price" this risk accordingly in their loan contracts.

During firms' growth period (Figure 4-B), there are a few other channels that are important sources of financing, in particular, investment from "ethnic Chinese" investors (from Hong Kong, Taiwan, and overseas Chinese). This financing source, as compared to investment from non-Chinese foreign investment (FDI), relies on relationship between the investors and the entrepreneurs, as well as the reputation of the entrepreneurs. Other sources include trade credits among business partners, state and local budget, and foreign direct investment (FDI) from non-Chinese investors, while investment from venture capitalists (VC) is not widely used during either the start-up stage or the growth period.

For start-up firms, securing land and other fixed assets is important for their survival. While not reported in the figures, more than half of surveyed firms purchase the "operation-rights"



of the land from the government, who has the ultimate control. The operation-rights contract is long-term, between 20-50 years.<sup>42</sup> In terms of fixed assets, 16 out of the 17 firms purchased and own all of their fixed assets. Among them, 9 firms purchased their fixed assets from the State Sector, and 7 out of the 9 firms considered the price they paid to be the same as market value of the assets. There is one firm's executive indicated that for the rental portion of fixed assets from SOE, there is no formal contracts between the firm and the SOE.

Next, when asked about the prospects of going public, founders and executives list "access to large scale of funding" and "reputation increase" as the most important benefits, and the "disclosure of valuable information to competitors and outsiders" and "large amount of fees paid to the government, investment banks, and consulting firms" as the most critical disadvantages of going public. We also asked the founders and executives about the degree of difficulty in receiving funding through a certain channel. 80% of the firms regard *short-term* bank loans as "easy" to have access to and are "low costs," while around 55% of firms regard long-term bank loans as "easy and low cost." Around 50% of firms also believe trade credits among firms and funds from family and friends as "easy and low cost." These forms of financing channels reduce the cost of capital for firms because reputation and relationships help resolve the potential problems of asymmetric information and agency costs.

### ***Corporate Governance***

Figure 4-C provides some information on governance mechanisms. First, over 60% (30%) of firms believe that if their own firm is not run efficiently, it is "possible" ("very likely") to have its assets purchased (or "taken over") by another firm or investor, while no one answered it is "not possible" for this to occur. Not reported in the figure, we also asked firms about product market

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<sup>42</sup> With operation rights, a firm has more control over the land than under a "land rental" contract. For example, firms can rent the land to another party once obtaining the operation rights from the government. Land rental contracts have shorter terms on average (5-10 years).

competition. Forty percent of surveyed firms' founders/executives believe that if their firm is not operating efficiently, within 3-6 months, 20% of its market share will be taken away, while 80% of firms' founders/executives believe the entire market share of the firm will be taken away in two years. When asked about what type of losses concern them the most if the firm failed (top right histogram in Figure 4-C), every firm's founders/executives (100%) said reputation loss is a major concern, while only 60% of them said economic losses are of major concern.

The success of a firm in the Private Sector depends crucially on whether the local government supports the firm or not. In the bottom histogram of Figure 4-C, we asked firms about their relationship with the government officials. Over 40% of survey firms state the local government "support" the growth of the firm without demanding profit sharing, while for some other firms, the government is either a partial owner or demand profit sharing without investing in the firm. The supportive attitude of the government toward firms in the Private Sector is remarkable considering the fact that the Chinese government is widely regarded as corrupt and not respecting property rights of private citizens.

## **V.2 Further Evidence for Firms in Two Successful Regions**

### *WenZhou -- Village Chambers*

Wenzhou, a city in the Zhejiang Province, is the home of some of the earliest and most successful firms of the Private Sector. Entrepreneurs in the region are known for their keen business sense and sharp management skills, and they often lead the Private Sector in terms of innovation.<sup>43</sup> They usually start their family-run businesses in townships with a similar product emphasis, in order to have the easy access to the necessary technology, management skills, and potential clients and partners. Thus we observe specialization by regions (e.g., Town A produces

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<sup>43</sup> McMillan and Naughton (1992), McMillan and Woodruff (2002) point out entrepreneurs facilitate the transition from planning economy to market-based economy by, for example, starting up firms and entering industries dominated by state-owned enterprises.

shoes, Town B shirts, Town C umbrellas, etc.). This specialization can be a result of firms' attempt to signal to potential customers that they are competitive in an industry by locating the firm in the region filled with other firms producing and selling similar products. During recent years certain developed areas have shifted product emphasis from labor-intensive products such as clothes to more high-tech products, for example, parts of radios, TVs, and computers.

The failure rate for start-ups in most industries is high. New product strategies often start with mimicking successful or popular products. Some of these products are labor intensive while others require skillful labors and craftsmen. Patent laws are difficult to implement so often disputes are settled among the entrepreneurs themselves. To overcome this problem, some entrepreneurs expend effort and money to ensure that the key parts of their new products are difficult to disassemble and to copy. Another product strategy for many entrepreneurs is that they often aim at "exporting" their products to other regions, including to foreign countries, instead of selling them locally.

#### *KUNSHAN --- Foreign Direct Investment and the Separation of Ownership and Control*

Kunshan County, which is in Jiangsu province and close to Shanghai, is famous for attracting foreign direct investment, especially from Taiwanese investors. Some of the most effective government policies have included setting up special development zones with favorable land and tax policies. For example, in 1997, Kunshan set up a high-tech development zone, to attract foreign investment for building factories within the zone. Enterprises, in the ownership form of joint ventures, cooperatives, and solely owned by foreign investors, can take full advantage of a tax waiver and tax reduction for the initial periods. Moreover, firms whose high-tech products are export-oriented can enjoy even more tax advantages. There is a center in the

special zone established by the local government.<sup>44</sup> It acts as the liaison between the local government, entrepreneurs, and foreign investors, and the regulator as well as service provider for enterprises operating in the zone.

Enterprises in the zone are required to report their operating and financial information to, and are regulated by the center. But they understand that the center will almost never interfere with their internal decisions. The center's officials are mainly from the local government. The high-tech development zone grew very fast since its inception. From 1997 to 2001, the size of the zone increased eight fold, and currently there are 250 firms, with a total of US\$ 200 million foreign direct investment coming from more than 20 countries and regions, including those from Taiwan. Firms are operating in a wide range of industries, from high-tech to clothing, and export their products to all major markets around the world.

During the early stage of the special zone, investors from Taiwan were willing to commit their capital to these start-ups and refinance them whenever necessary. Actually the reason that many investors are from Taiwan is no coincidence. Many people in Kunshan have relatives in Taiwan and through them the investors obtained the information on the investment opportunities. The Taiwanese investors also came to understand that although there were almost no formal investor protections, local government officials have an incentive to cooperate with the development of the special zone and creating an economic boom in the local economy. This is the case because a booming economy can greatly enhance the chance of an official being promoted, in addition to participating in profit sharing. Another interesting phenomenon during the early stage of development was that these investors from Taiwan did not stay in the area as they often do now. As a result, there was virtually no monitoring of the entrepreneurs, and complete separation of ownership and control.

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<sup>44</sup> For more information, refer to this website: <http://www.china-hitech.org/hitech/chinese/qiye.asp>.

## V.4 Discussion

In this section we discuss mechanisms supporting the growth of the Private Sector. We believe the most important reason for the growth is the work of alternative financing and governance mechanisms. How can these be understood? First, Greif (1989, 1993) argues that certain traders' organizations in the 11<sup>th</sup> 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 Private Sector today, in terms of how firms raise funds and contract with investors and business partners. In addition, Greif (1994) and Stulz and Williamson (2002) point out the importance of cultural and religious beliefs on the development of institutions, legal origins, and investor protections. These 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 the western beliefs on how legal codes should be formulated.<sup>45</sup> Throughout the paper we have presented evidence that reputation and relationships make many financing channels and governance mechanisms work in China's Private Sector.

Second, there are alternative corporate governance mechanisms that have worked well in both developed and developing countries. First, Allen and Gale (2000b) argue that *competition* in product and input markets may be more effective than either the US and UK system based on the threat of takeover, or the Japanese, French, and Germany system based on monitoring, while McMillan (1995, 1997) argues that competition and the entry of non-state firms can facilitate the

transition to market-based economies for emerging economies. What we see from the success and life cycles of Private Sector firms in WenZhou and other surveyed firms suggest that it is only those firms that have the strongest comparative advantage in an industry (of the area) that survived and thrived. Second, 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) supports this view. Third, Burkart, Panunzi, and Shleifer (2002) 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 must be the optimal form in countries with strong investor protection. Evidence in Claessens, Djankov and Lang (2000) and Claessens et al. (2002) suggests that family-owned firms with very high concentration of ownership is the norm in many Asian countries outside China and these firms have performed well. Based on our survey evidence, as well as empirical results on the Listed Sector, family firms are a norm in both the Listed and Private Sectors in China, consistent with findings in listed firms in other Asian countries. Fourth, Allen and Gale (2000a) show that if cooperation among different suppliers of inputs is necessary and all suppliers benefit from the firm doing well then a good equilibrium with no external governance is possible, as internal, mutual monitoring can ensure the optimal outcome.<sup>45</sup> We have shown trade credits to be an important form of financing source for firms during their growth period. Finally, 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

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<sup>45</sup> Also see Orts (2001) and Chapters 1, 19, and 20 in Chow (2002).

<sup>46</sup> Allen and Gale (2000b) point out that the success and growth of the non-profit organizations in developed countries such as the US is a good example of how alternative corporate governance systems can work well.

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.

There are other mechanisms supporting the growth of China's Private Sector, as well as growth of other emerging economies. First, in a series of papers, Djankov et al. (2002, 2003a, 2003b; DLLS hereafter) examine various aspects of institutions, including regulations of entry and labor, and efficiency of judicial systems across countries. Among the DLLS papers, the entry barrier is probably the most relevant factor for China. DLLS (2002) find that countries with heavier (lighter) regulation of entry have higher corruption (more democratic and limited governments) and larger unofficial economies (counter the regulation which can reduce overall efficiency). Thus the regulation of entry benefits politicians/bureaucrats instead of public interests. China is included in the data that includes 85 countries, with much lower barriers to entry compared to countries with similar per capita GDP. The low entry barriers contribute to the growth of China's Private Sector, as they imply higher competition in the product and input markets, which we view as one of the most effective governance mechanisms within the Private Sector. Moreover, in terms of entry barriers, China is once again an "outlier" in the DLLS sample, considering that China is one of least democratic countries, which tend to have high barriers to entry.

There exist non-standard methods to remove entry barriers that can reconcile the seemingly contradictory facts, based on our survey. First, 16 out of the 17 firms applied license (required) before the business started, with 50% of them indicating that it takes 2 weeks to 1 month to go through the procedure and 37.5% say it takes 1-2 months. The main problem for the application of license seems to be dealing with government bureaucracy. To ease this problem, most of the firms' founders/executives ask the friends of government officials to negotiate on their behalf, or the firms can offer profit sharing to government officials. But these methods are consistent with

our results that alternative mechanisms based on reputation and relationships provide the most important support for the growth of the Private Sector.

Finally, there is a strand of literature studying transitional economies, such as Russia, China, 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 than other transitional economies. With a small economy, a country can adjust its legal and financial systems to the strengths of its economy much easier than what a large country can do. The recent economic struggle in Russia proves this point (e.g., Shleifer and Treisman 2000). The success of China's Private Sector demonstrates that alternative mechanisms can work wonders in large economies.

Second, it is probably easier for other countries to adopt drastic reform measures in the short run, as the people are more risk tolerant toward regime shifts. China, under the influence of the Confucius views, is different, in that people hold the belief that fundamental changes in society should be gradual and only after they are proven correct or sensible. Moreover, any such change should not shake the foundations of the society based on existing beliefs. 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 other countries. The dual track system is equivalent to lump-sum transfers from the market sector to the planning sector to achieve a Pareto improvement of the entire society, while its non-standard institutions suit this transition period because they provide incentives for economic agents to innovate and to compete and provide enough benefits to those in power so that they do not preclude the reform process (e.g., Lau et al. 2000, Qian 1999).



Third, the role played by the government during reform process is very different in China than in most other transition economies, in particular, Russia (e.g., Blanchard and Shleifer 2001). In a broader context, LLSV (1999) find that governments in countries with French laws or socialist laws have lower quality (in terms of supporting economic growth) than those with common laws and richer countries. But clearly China is a counterexample to LLSV's argument on government: 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 Private Sector. This is different from the "grabbing hand" role played by government officials in some other countries. The reason for this supporting role is three fold. First, as Li (1998) points out, starting in the early 1980s, the central government 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. Secondly, during early stages of China's reform, TVEs, in which local governments are partial owners, provided the most important source of growth in the Private Sector. The enormous success of TVEs and the promotion of the associated officials provided examples and incentives to other officials to follow suit. Thirdly, 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. Concluding Remarks**

In this paper we examine and compare China's formal systems of law and finance and the co-existing, alternative system of institutions and mechanisms, and the relation between the development of these systems and China's overall economic growth. With one of the largest and

fastest growing economies in the world, China differs from most of the countries studied in the law, institutions, finance, and growth literature, and is an important counterexample to the findings in the existing literature. Its legal and financial systems as well as institutions are all underdeveloped, but its economy has been growing at a very fast rate. More importantly, the growth in the Private Sector, where applicable legal and financial mechanisms are much poorer than those in the State and Listed Sectors, is much faster than that of the other sectors. We believe that the system of alternative mechanisms and institutions plays an important role in supporting the growth in the Private Sector, and they are excellent substitutes for standard corporate governance mechanisms and financing channels.

Going forward, our results pose an important question for both researchers and policy makers: should China also transform the Private Sector toward the “standard form” like it has been doing for the State Sector? Given the success of the Private Sector and the deficiency in the State and Listed Sectors, we believe that much more research is required, in order to better understand how alternative mechanisms work where standard mechanisms are not available or not suitable. Our work also has general implications for the literature on law, institutions, finance, and growth: there are important factors that are not well understood. Adopting results obtained from studying developed countries to the development of emerging countries can be misleading and counterproductive. We find that these substitutes have worked well in China, and similar substitutes based on relationship and reputation may have also worked well in other economies including developed economies. Therefore, a better understanding of how these non-standard mechanisms work to promote growth can shed light on alternative development paths that can benefit many other countries.

## Appendix A: Brief Descriptions of All the Variables and Their Sources

### A.1. Creditor/Shareholder Rights Variables (Tables 2a and 2b)

Variables	Description	Sources
Legal Origin	Identifies the legal origin of the company law or commercial code of each country	Reynolds and Flores (1989), LLSV (1997)
One share-one vote	1) Equals 1 if ordinary shares carry one vote per share, and 0 otherwise; 2) equals 1 when the law prohibits the existence of both multiple-voting and non-voting ordinary shares and does not allow firms to set a maximum number of votes per shareholder irrespective of the number of shares owned, and 0 otherwise	Company law or commercial code
Proxy by mail allowed	Equals 1 if shareholders can mail their proxy vote to the firm, and 0 otherwise	Company law or commercial code
Shares not blocked before meeting	Equals 1 if firms cannot require shareholders to deposit their shares prior to a general shareholders meeting (to prevent selling shares), and 0 otherwise	Company law or commercial code
Cumulative voting or proportional representation	Equals 1 if shareholders can cast all their votes for one candidate to the board of directors (cumulative voting) or a mechanism of proportional representation in the board by which minority interests may name a proportional number of directors to the board is allowed, and 0 otherwise	Company law or commercial code
Oppressed minorities mechanism	Equals 1 if minority shareholders have either a judicial venue to challenge the decisions of management or of the assembly or the right to step out of the company by requiring the company to purchase their shares when they object to certain fundamental changes (e.g., mergers, and asset dispositions); and equals 0 otherwise. Minority shareholders are defined as those shareholders who own 10% of shares or less	Company law or commercial code
Preemptive rights	Equals 1 when grants shareholders the first opportunity to buy new issues of stock, and this right can be waived only by a shareholders' vote; equals 0 otherwise	Company law or commercial code
Percentage of share capital to call an extraordinary shareholders' meeting	The minimum percentage of ownership of share capital that entitles a share - holder to call for an extraordinary shareholders' meeting; it ranges from 1% to 33%	Company law or commercial code
Anti-director rights	The index is formed by adding 1 when (1) the country allows shareholders to mail their proxy vote to the firm, (2) shareholders are not required to deposit their shares prior to the general shareholders' meeting, (3) cumulative voting or proportional representation of minorities in the board of directors is allowed, (4) an oppressed minorities mechanism is in place, (5) the minimum percentage of share capital that entitles a share- holder to call for an extraordinary shareholders' meeting is less than or equal to 10% (the sample median), or (6) shareholders have preemptive rights that can be waived only by a shareholders' vote. The index ranges from 0 to 6	Company law or commercial code
Mandatory dividend	Equals the percentage of net income that the company law or commercial code requires firms to distribute as dividends among ordinary stockholders. It equals 0 for countries without such a restriction	Company law or commercial code
Restrictions for going into reorganization	Equals 1 if the reorganization procedure imposes restrictions, such as creditors consent; it equals 0 otherwise	Bankruptcy and reorganization laws
No automatic stay on secured assets	Equals 1 if the reorganization procedure does not impose an automatic stay on the assets of the firm on filing the reorganization	Bankruptcy and reorganization laws

	petition. Automatic stay prevents secured creditors from gaining possession of their security. It equals zero if such a restriction does exist in the law	
Secured creditors first	Equals 1 if secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm. Equals zero if nonsecured creditors, such as the government and workers, are given absolute priority	Bankruptcy and reorganization laws
Management does not stay	Equals 1 when an official appointed by the court, or by the creditors, is responsible for the operation of the business during reorganization. Equivalently, this variable equals one if the debtor does not keep the administration of its property pending the resolution of the reorganization process. Equals zero otherwise	Bankruptcy and reorganization laws
Creditor rights	An index aggregating different creditor rights. The index is formed by adding "1" when: (1) the country imposes restrictions, such as creditors' consent or minimum dividends to file for reorganization; (2) secured creditors are able to gain possession of their security once the reorganization petition has been approved (no automatic stay); (3) secured creditors are ranked <i>first</i> in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm; and (4) the debtor does not retain the administration of its property pending the resolution of the reorganization. The index ranges from zero to four	Bankruptcy and reorganization laws
Legal reserve requirement	The minimum percentage of total share capital mandated by corporate law to avoid the dissolution of an existing firm. It takes a value of zero for countries without such a restriction	Company law or commercial code
Efficiency of judicial system	Assessment of the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms" produced by the country risk rating agency Business International Corp. It "may be taken to represent investors' assessments of conditions in the country in question." Average between 1980 and 1983. Scale from zero to 10; with lower scores, lower efficiency levels.	Business International Corp.
Rule of law	Assessment of the law and order tradition in the country produced by the International Country risk rating agency International Country Risk (ICR). Average of the months of April and October of the monthly index between 1982 and 1995. Scale from zero to 10, with lower scores for less tradition for law and order (we changed the scale from its original range going from zero to six)	International Country Risk Guide
Corruption	ICR's assessment of the corruption in government. Lower scores indicate that "high government officials are likely to demand special payments" and "illegal payments are generally expected throughout lower levels of government" in the form of "bribes connected with import and export licenses, tax assessment, policy protection, etc." Average of the months of April and October of the monthly index between 1982 and 1995. Scale from 0 to 10, with lower scores for higher levels of corruption (we changed the scale from its original" range going from zero to six)	International Country Risk Guide
Risk of expropriation	ICR's assessment of the risk of "outright confiscation " or "forced nationalization." Average of the months of April and October of the monthly index between 1982 and 1995. Scale from zero to 10, with lower scores for higher risks	International Country Risk Guide
Repudiation of contracts by government	ICR's assessment of the "risk of a modification in a contract taking the form of a repudiation, postponement, or scaling down" due to "budget cut backs, indigenization pressure, a change in government,	International Country Risk Guide

	or a change in government economic and social priorities." Average of the months of April and October of the monthly index between 1982 and 1995. Scale from zero to 10, with lower scores for higher risks	
Accounting standards	Index created by examining and rating companies' 1990 annual reports on their inclusion or omission of 90 items. These items fall into seven categories (general information, income statements, balance sheets, funds flow statement, accounting standards, stock data, and special items). A minimum of three companies in each country was studied. The companies represent a cross section of various industry groups; industrial companies represented 70%, and financial companies represented the remaining 30%	International accounting and auditing trends, Center for International Financial Analysis and Research

Secondary source: LLSV(1997)

### A.2. Financial System Variables (Levine 2002), used in Tables 3a and 3b

<b>Variables</b>	<b>Definition</b>	<b>Original Source</b>
Bank Credit	Ratio of Total Credit deposited into banks from private sectors /GDP	IFS, WDI and country specific publications
(Total) Value Traded	Ratio of domestic equity traded on domestic exchanges /GDP	IFS, WDI, EMFB, and country specific publications
Market Capitalization	Ratio of domestic equities listed on domestic exchanges/GDP	Int'l Financial Statistics (IFS), World Development Indicators (WDI), Emerging Markets Factbook (EMFB), and country specific publications
Overhead cost	Overhead cost divided by Total Bank system assets	Levine's calculations (2002)
Structure- Size	Log(Market Capitalization/Bank Credit); measure size of markets and banks	Levine (2002)
Structure-Activity	Log(Value Traded/Bank Credit); measure size/trading volume of markets and banks	Levine (2002)
Structure-efficiency	Log(Market capitalization ratio*overhead cost ratio); measures relative efficiency of markets vs. banks	Levine (2002)
Structure Regulation	Sum of the four categories in regulatory restriction.	National regulatory authorities
Regulatory Restriction	The degree that commercial banks are allowed to engage in security, firm operation, insurance, and real estate. 1-unrestricted; 2-permit to conduct through subsidiary; 3-full range not permitted in subsidiaries; 4-strictly prohibited	National regulatory authorities
Finance size	Log (market capitalization ratio * private credit ratio)	Levine (2002)
Finance-Activity	Log (total value traded ratio* private credit ratio)	Levine (2002)
Finance-Efficiency	Log (total value traded ratio/overhead cost)	Levine (2002)

Secondary source: Beck, Demircuc-Kunt and Levine (1999), and Levine (2002).

### A.3. External Financing Variables (LLSV 1998), used in Tables 4a, 4b, and 4c

Variable	Description	Sources
External <i>cap</i> / GNP	The ratio of the stock market capitalization held by minorities to GNP in 1994. The first variable is computed as the product of the aggregate stock market capitalization and the average percentage of common shares not owned by the TOP 3 shareholders in the TEN largest non-financial, privately- owned domestic firms in a given country. A firm is considered privately owned if the State is not a known shareholder.	<i>Moodys International, CIFAR, EXTEL, WorldScope, 20-Fs, PriceWaterhouse, and various country sources</i>
Domestic firms / Pop	Ratio of the number of domestic firms listed in a given country to its population (in millions) in 1994.	<i>Emerging Market Factbook and World Development Report (WDR) 1996.</i>
IPOs/Pop	Ratio of the number of initial public offerings of equity in a given country to its population (in millions) for the period 1995:7-1996:6.	<i>SDC, AsiaMoney, LatinFinance, GT Guide to World Equity Markets, and WDR 1996.</i>
Debt/GNP	Ratio of the sum of bank debt of the private sector and outstanding non-financial bonds to GNP in 1994, or last available	<i>International Financial Statistics, World Bondmarket Factbook.</i>
GDP growth	Average annual percent growth of per capita gross domestic product for the period 1970-1993.	WDR 1995
Market cap/ sales	The median ratio of the stock market capitalization held by minorities to sales in 1994 for all nonfinancial firms in a given country on the <i>WorldScope</i> database. Firm's stock market capitalization held by minorities is computed as the product of the stock market capitalization of firm and the average percentage of common shares not owned by the top three shareholders in the ten largest nonfinancial, privately owned domestic firms in a given country. A firm is considered privately owned if the State is not a known shareholder in it.	<i>WorldScope</i>
Market cap/ cash-flow	The median ratio of the stock market capitalization held by minorities to cash flow in 1994 for all nonfinancial firms in a given country on the <i>WorldScope</i> database. Firm's stock market capitalization held by minorities is computed as the product of the stock market capitalization of the firm and the average percentage of common shares not owned by the top three shareholders in the ten largest nonfinancial, privately owned domestic firms in a given country. A firm is considered privately owned if the State is not a known shareholder in it.	<i>WorldScope.</i>
Debt/sales	Median of the total-debt-to-sales ratio in 1994 for all firms in a given country on the <i>WorldScope</i> database.	<i>WorldScope.</i>
Debt/cash flow	Median of the total-debt-to-cash-flow ratio for all firms in a given country on the <i>WorldScope</i> database.	<i>WorldScope.</i>

Secondary source LLSV(1998), China details from Shanghai, Shen Zhen Stock exchange, Firm annual report.

#### A.4. Definitions on different types of firms in China (used in Tables 5b and Figures 1-3)

1. **State-owned Enterprises:** Non-corporation economic units where the entire assets are owned by the state and which have registered in accordance with the "regulation of the People's Republic of China on the Management of Registration of Corporate Enterprises." Excluded from this category are the sole state funded corporations in the limited liability corporation.

*Note:* The government is the de facto owner, and they choose managers to run the firm. Even though these firms do enter the credit plan, but this process is constructed and enforced by state banks, which are also under the control of the government.
2. **Collective-Owned Enterprises:** Economic units where the assets are owned collectively and which have registered in accordance with the "Regulation of the People's Republic of China on the management of registration of corporate Enterprise.

*Note:* Local government can be regarded as the agent of central government. Therefore, any firm owned by local government is also owned by central government. Collective ownership here means the community in the city or rural area joins the ownership.
3. **Township-village Enterprises (TVEs):** Enterprises and economic units located in rural areas, collectively-owned or with most of investment from residents in these rural areas. An enterprise in a rural area is legally registered as a TVE where rural communities or residents invest more than 50% of the firm's total assets or act as the control owners in the operation of enterprise.

*Note:* There can be firms that are both collectively-owned and TVEs, as long as they are in the rural areas and have more than 50% of total assets coming from residents from the same rural area/county. The difference is that TVEs are all located in rural areas while collectively-owned firms can be in cities; while TVEs can be solely owned by residents of that rural area and the local government has no ownership nor control over the firm.
4. **Jointly-owned firms:** Economic Units established by two or more corporate enterprises or institutions of the same or different ownership, through joint investment on the basis of equality, voluntary participation and mutual benefits. They include state joint ownership enterprises, collective joint ownership enterprises, joint state-collective enterprise, and other joint ownership.

*Note:* Enterprise involved with foreign investment/ownership is not in this category. They are in the Category of "Enterprise with Foreign investment, which has 3 different types.
5. **Share-holding Corporations Ltd:** Economic units registered in accordance with the "Regulation of the People's Republic of China on the management of Corporations", with total registered capitals divided into equal shares and raised through issuing stocks. Each investor bears limited liability to the corporation depending on the holding of shares, and the corporation bears liability to its debt to the maximum of its total assets.

*Note:* The above is essentially the same definition of US public companies, but these Chinese companies have non-tradable shares that are the by-product of the reforming process.

## Appendix B Empirical Tests on Listed Firms in China and Other Countries

**Data:** We have firm level accounting and security market data for all the listed firms in China (panel data set of 1174 firms, 1992-2000 period, total of 7377 observations). We compare these Chinese firms with those studied in LLSV (2000, 2002; 4103 firms from 33 countries, 1989-1994 period). We do not have detailed firm level data for LLSV samples, but we do have: 1) the cross-sectional summary statistics by country; 2) the regression results across countries. We examine dividend policy and firm valuations, and our empirical models and results are presented below.

### Method 1: “Synthetic firm” approach:

*Step1:* Using the summary statistics from LLSV samples, we create a “synthetic firm” for each of the 33 countries. For this synthetic firm, each firm characteristic is equal to the *median* of the same variable across all the firms in that country. Following the same procedure, a synthetic firm is also created for China based on the information of 1100+ firms.

*Step2:* Three OLS regressions are run on the 33 (LLSV countries) “synthetic” observations. The dependent variables in these tests are: 1) dividend/earnings ratio, 2) dividend/sales ratio, and 3) Tobin’s q (measured by market to book assets ratio). The independent variables are the same ones used in LLSV (2000, 2002). Based on the results from each of the 3 regressions, we then conduct an out-of-sample prediction for China using the estimated coefficients and variances.

*Step3:* Compare the “true” (observed) firm characteristics of the Chinese “synthetic” firm to those predicted values from Step 2, and see whether the true value falls in the boundaries of predicted values.

The following table presents the coefficients estimates, t ratios, prediction, and boundaries from the regression on 33 synthetic firms, and empirical value from Chinese firms in sample.

	y: Div/Earn	y: Div/Sales		y: Tobin's q
intercept	42.44 (3.79*)	1.30 (0.64)	intercept	-0.58 (-0.58)
Civil law dummy	3.42 (0.33)	-1.06 (-0.56)	Growth in sales	0.00 (0.17)
Low protection	-9.09 (-0.91)	1.57 (0.86)	Common law	0.30 (0.30)
GS	0.47 (0.72)	0.16 (1.36)	Anti-director rights	0.65 (1.81*)
GS*civil law	-1.12 (-1.18)	0.00 (0.00)	CF rights	5.87 (1.89*)
GS*Low Protection	0.86 (0.89)	-0.20 (-1.13)	CF rights*common Law	-0.52 (-0.15)
Div tax advantage	-10.54 (-0.85)	0.25 (0.11)	CF rights*anti-director	-2.12 (-1.78*)
R square	0.16	0.09	R square	0.39
# of observations	33	33	# of observations	27
Predicted values for China (lower and upper bounds)	57.14 ~161.07	- 8.82 ~10.19	Predicted values for China (lower and upper bounds)	0.57 ~ 1.86
Observed ratio from China	30.23	2.35	Observed ratio for China	1.22

### Method 2: “Alpha” approach

Utilizing the alpha notation from assets pricing models, we want to see how much of the variations in the dependent variables are NOT explained by the independent variables. There are two versions of this model: restricted and unrestricted, depending on whether we restrict the coefficients on each independent variable to be the same for Chinese firms and for firms in other countries.

### Method 2 - Restricted Model

*Step1:* For Chinese firms, we run regressions according to:  $y = \alpha(\text{China}) + \gamma * Z + e$ , where y is the actual value of Tobin’s q, or dividend payout ratio. Z is a vector of firm characteristics.



Step2: Adjusted alpha (China) = Alpha (China from regression) - beta(LLSV) $\cdot$ X(China). Then compare the adjusted Alpha (China) with Alpha (LLSV samples).

**Method 2: Unrestricted Model**

Step1: Alpha (China) = mean (yi-gamma(LLSV) $\cdot$ Z(China))

Step2: The same as the step 2 in Restricted Model above.

The following table presents the alpha for LLSV sample firms, Alpha for Chinese firms, and the discrepancy.

	Dividend/Earnings	Dividend/Sales	Tobin'q
Alpha in LLSV	44.9493	1.8907	1.1559
Alphas for Chinese firms: Unrestricted Model			
Restricted Model	11.5033	2.5876	0.5151*
Unrestricted Model	11.8270	1.1490	0.5831
Adjusted alphas for Chinese Firms: Restricted Model			
Restricted Model	14.5388	0.8131	0.2946
Unrestricted Model	14.8626	-0.6255	0.2582
Discrepancy			
Restricted Model	30.4105	1.0776	0.8613
Unrestricted Model	30.0804	2.5162	0.6898

Note: \* denote the significance at 1% level. The other two alphas in the restricted model for China are not significant.

**Method 3: Firm level Out-of-sample predictions:**

We also perform firm level out-of-sample predictions, based on the regression results from LLSV (2000, 2002). The results are similar to the above two methods. Method 3 can actually be proven to be mathematically identical to the unrestricted model in Method 2, and thus the details are omitted here.

**Summary of Results:**

- 1) The out-of-sample prediction for Dividend / Earning is dramatically different from empirical observed value (lower than the low boundary).
  - 2) The observed Dividend /sales, and Tobin’s q ratios locate between predicted boundaries.
  - 3) The discrepancy of unexplained portion of the dependent variables is big for Dividend/Earnings, but small for dividend/Sales, and Tobin’s q.
- (The average ratios themselves are not dramatically different between China and other countries. 30.23(China, dividend/earnings) vs. 32.61, 2.35 vs. 1.99, and 1.21 vs. 1.38.)

**Conclusion:** We can conclude that the independent variables proposed in previous studies, do not explain the firm behaviors exactly the same for Chinese firms as for firms in other countries. However, we can not specify which variables, hence what mechanism is different, and how much difference exactly is there.

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**Table 1-A Comparison of China and LLSV Countries: GDP and Growth\***

<b>China vs. LLSV Sample Countries*</b>						
<i>GDP in 2002</i>			<i>GDP in 2002 using PPP**</i>		<b>Average Annual Growth Rate of GDP using PPP (1990-2002)</b>	
<b>Rank</b>	<i>Country</i>	<b>GDP (US\$ Bil.)</b>	<i>Country</i>	<b>GDP (Int'l \$ Billion)</b>	<b>Country/group of countries</b>	<b>Weighted Ave. (%)</b>
1	US (E) <sup>a</sup>	10,416	US (E)	10,138	China	<b>11.3</b>
2	Japan (G) <sup>a</sup>	3,978	<b>China</b>	5,732	English Origin <sup>b</sup>	5.0
3	Germany (G)	1,978	Japan (G)	3,261	French Origin <sup>b</sup>	3.9
4	UK (E)	1,552	India (E)	2,694	German Origin <sup>b</sup>	3.1
5	France (F) <sup>a</sup>	1,409	Germany (G)	2,171	Scandinavian Origin <sup>b</sup>	4.0
6	<b>China</b>	1,237	France (F)	1,554		
7	Italy(F)	1,180	UK (E)	1,510		
8	Canada (E)	715	Italy (F)	1,481		
9	Spain (F)	649	Brazil (F)	1,311		
10	Mexico(F)	637	Russia	1,141		

Notes: \*: Legal origin follows LLSV category; <sup>a</sup>: E, F, G denotes the English-, French-, and German-origin of the country's legal system; <sup>b</sup>: size-weighted average for countries in LLSV sample. Direct Source for all countries GDP: World Bank.

\*\* : The GDP of each country in 2002 is converted from local currency to international Dollars, use Purchasing Power Parity (PPP) conversion factor. The PPP conversion factor is obtained from The World Bank Development Indicator (Table 5.6, World Bank. For details on how to calculate the indicator, see "Handbook of the International Program," United Nation, New York 1992.

**Table 1-B Comparison of China and Other Major Emerging Economies: GDP and Growth**

<b>GDP in 2002*</b>			<b>GDP in 2002 on PPP basis**</b>		<b>Annual growth rate of GDP using PPP (1990 - 2002)</b>	
<b>Rank</b>	<b>Country</b>	<b>GDP (US \$ bil.)</b>	<b>Country</b>	<b>GDP (Int'l \$ bil.)</b>	<b>Country</b>	<b>Growth rate (%)</b>
<b>1</b>	<b>China</b>	<b>1237</b>	<b>China</b>	<b>5732</b>	<b>China</b>	<b>11.3</b>
2	Mexico (F)	637	India (E)	2694	India (E)	7.1
3	India (E)	515	Brazil (F)	1311	Pakistan (E)	5.7
4	Brazil (F)	452	Russia	1141	Mexico (F)	4.3
5	Russia	346	Mexico (F)	878	Argentina (F)	4.0
6	South Africa (E)	104	South Africa (E)	441	Brazil (F)	4.0
7	Argentina (F)	102	Argentina (F)	401	South Africa (E)	3.5
8	Pakistan (E)	60	Pakistan (E)	291	Russia	-2.2

Notes: \*: GDP figures are World Bank; "E" ("F") denotes the legal origin of the country is the English common-law system (French civil-law system).

\*\* : Similar to Table 1-A, the PPP conversion factor is obtained from The World Bank Development Indicator (Table 5.6, World Bank. For details on how to calculate the indicator, see "Handbook of the International Program," United Nation, New York 1992.

**Table 2-A A Comparison of Creditor Rights: China and LLSV Countries**

Country	English-origin average	French-origin average	German-origin average	Scandinavian-LLSV origin average	LLSV sample average	China
No automatic stay on assets	0.72	0.26	0.67	0.25	<b>0.49</b>	<b>0</b>
Secured creditors first paid	0.89	0.65	1	1	<b>0.81</b>	<b>0</b>
Restrictions for going into reorganization	0.72	0.42	0.33	0.75	<b>0.55</b>	<b>1</b>
Management does not stay in reorganization	0.78	0.26	0.33	0	<b>0.45</b>	<b>1</b>
(Overall) Creditor rights*	3.11	1.58	2.33	2	<b>2.3</b>	<b>2</b>
	(78%) <sup>#</sup>	(53%) <sup>#</sup>	(83%) <sup>#</sup>	(75%) <sup>#</sup>	<b>(68%)<sup>#</sup></b>	
Legal reserve required as a % of capital	0.01	0.21	0.41	0.16	<b>0.15</b>	<b>0</b>

Notes: \*: equals the sum of the scores of the four categories above, where 1 = Creditor Protection is in the Law, and 0 otherwise; #: numbers in the bracket indicate percentage of countries in the sub-sample whose measure is higher or equal to 2 (China's overall measure).

Source: China – Bankruptcy Law of China (2000); LLSV countries – LLSV JPE paper

**Table 2-B A Comparison of Shareholder Rights**

Country	English-origin average	French-origin Average	German-origin Average	Scandinavian-LLSV origin Average	LLSV sample average	China
One share – one vote	0.17	0.29	0.33	0	<b>0.22</b>	<b>1</b>
Proxy by mail Allowed	0.39	0.05	0	0.25	<b>0.18</b>	<b>0</b>
Shares Not Blocked before meeting	1	0.57	0.17	1	<b>0.71</b>	<b>0</b>
Cumulative Voting/ Proportional Representation	0.28	0.29	0.3	0	<b>0.27</b>	<b>0</b>
Oppressed Minority	0.94	0.29	0.5	0	<b>0.53</b>	<b>1</b>
Preemptive Right to New Issue	0.44	0.62	0.33	0.75	<b>0.53</b>	<b>1</b>
Percentage of Share Capital to call an Extraordinary Shareholder Meeting	0.09	0.15	0.05	0.1	<b>0.11</b>	<b>0.1</b>
Antidirector Rights*	4	2.33	2.33	3	<b>3</b>	<b>3</b>
	(94%) <sup>#</sup>	(45%) <sup>#</sup>	(33%) <sup>#</sup>	(75%) <sup>#</sup>	<b>(65%)<sup>#</sup></b>	
Mandatory Dividend	0	0.11	0	0	<b>0.05</b>	<b>0</b>

Notes: \* is the sum of the scores on Rows (2), (3), (4), (5), and (7), where, score =1, when the protection is in the law; 0 otherwise. #: Numbers in the bracket indicate percentage of countries in the sub-sample whose measure is higher or equal to 3 (China's overall measure).

Source: China – Company Law and Commercial Codes of China (2000); LLSV countries – JPE paper

**Table 2-C A Comparison of Law Enforcement**

Country	English Origin average	French- Origin average	German origin average	ScandinavianLLSV origin average	LLSV sample average	China
Efficiency of Judicial System	8.15	6.56	8.54	10	7.67	N/a
Rule of law	6.46	6.05	8.68	10	6.85	<b>5</b>
Corruption	7.06	5.84	8.03	10	6.9	<b>2</b>
Risk of Expropriation	7.91	7.46	9.45	9.66	8.05	N/a
Risk of contract Repudiation	7.41	6.84	9.47	9.44	7.58	N/a
Accounting rating on Accounting Standards	69.62	51.17	62.67	74	60.93	N/a

Source: China – International country risk (rating agency); LLSV countries – same as above

**Table 2-D A Comparison of Legal Systems: China and other Major Emerging Economies**

	Efficiency of Judicial System	Rule of law	Corruption	Anti-director Rights	One share one vote	Creditor rights	Accounting Standards
<b>China</b>	na	5	2	3	1	2	na
<b>India (E)</b>	8	4.17	4.58	2	0	4	57
<b>Pakistan (E)</b>	5	3.03	2.98	4	1	4	na
<b>S. Africa (E)</b>	6	4.42	8.92	4	0	4	70
<b>Argentina (F)</b>	6	5.35	6.02	4	0	1	45
<b>Brazil (F)</b>	5.75	6.32	6.32	3	1	2	54
<b>Mexico (F)</b>	6	5.35	4.77	0	0	0	60

Source: China – International country risk (rating agency); all other countries – from LLSV sources; “E” (“F”) denotes the legal origin of the country is the English common-law system (French civil-law system).

**Table 3 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
<b>Bank and Market size</b>	Bank credit/GDP	0.62	0.55	0.99	0.49	0.73	<b>1.11</b> <b>(0.24)<sup>a</sup></b>
	Overhead Cost/Bank Total Assets	0.04	0.05	0.02	0.03	0.03	<b>0.12</b>
	Total value traded/GDP	0.31	0.07	0.37	0.08	0.27	<b>0.11</b>
	Market Capitalization/GDP	0.58	0.18	0.55	0.25	0.47	<b>0.32</b>
<b>Structure Indices: Markets vs. banks **</b>	Structure Activity	-0.76	-2.03	-1.14	-1.83	-1.19	<b>-1.07</b> <b>(0.46)<sup>a</sup></b>
	Structure Size	-0.10	-1.05	-0.77	-0.69	-0.55	<b>-1.24</b> <b>(0.29)<sup>a</sup></b>
	Structure Efficiency	-4.69	-6.00	-5.17	-6.17	-5.17	<b>-1.48</b> <b>(-3.07)</b>
	Structure aggregate	1.21	-0.05	0.66	0.13	0.72	<b>N/A</b>
	Structure regulatory	7.02	8.21	10.15	7.72	8.95	<b>16</b>
<b>Financial Development (Banking and market sectors)</b>	Finance activity	-1.18	-3.38	-0.84	-2.86	-1.58	<b>-0.85</b> <b>(-2.38)</b>
	Finance size	5.10	4.29	5.22	4.60	4.95	<b>-1.02</b> <b>(-2.55)<sup>a</sup></b>
	Finance efficiency	2.18	0.44	2.85	1.04	2.01	<b>-0.60</b> <b>(1.14)</b>
	Finance aggregate	1.23	0.13	1.47	0.48	1.05	<b>N/A</b>

Notes: All the measures for countries other than China are taken from Levine (2002); measures on China (in Tables 3a and 3b) are calculated using definitions from Levine (2002) (see Appendix for list of definitions)

\*: 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; <sup>a</sup>: numbers in bracket indicate bank credit issued to only private sectors (instead of total bank credit);

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



**Table 4-A A Comparison of the Largest Stock Markets in the World**

Rank	Stock Market	Total Market Cap (US\$ billion)	Concentration	Turnover Velocity
1.	NYSE	11,535	57.1%	87.7%
2.	Nasdaq	3,597	75.9%	383.9%
3.	Tokyo	2,962	70.5%	58.8%
4.	London	2,475	78.3%	69.3%
5.	Paris	1350	86.2%	268.8%
6.	Frankfurt	1186	45.3%	128.6%
7.	Toronto	756	75.5%	75.0%
8.	China (HongKong)	624	65.4%	60.9%
9.	<b>China (domestic)</b>	<b>622</b>	<b>2.73%</b>	<b>500%</b>
10	Taiwan	237	52.9%%	259.3%

Notes:

1. All figures (except the figures relating to China's domestic exchanges) are taken from <http://www.fibv.com>, the web site of the international organization of stock exchanges. The figures relating to China's domestic exchanges are taken from CSRC's own database.
2. All figures relate to the period 1 January to 31 December 2000.
3. Concentration means the total turnover of the companies making up 5% of the total market capitalization expressed as a percentage of the total turnover of the whole market for the year. If liquid market capitalization is taken into account, concentration is about 5% in China's domestic markets.
4. Turnover velocity is the total turnover for the year expressed as a percentage of the total market capitalization. Turnover velocity has in fact climbed down from the 1996 high of 913% in Shanghai and 1350.3% in Shenzhen.

**Table 4-B A Comparison of External 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	<b>0.4</b>	<b>0.49</b> <b>(0.16)</b>
Domestic Firms/Pop	35.45	10	16.79	27.26	<b>21.59</b>	<b>0.93</b>
IPOs/Population	2.23	0.19	0.12	2.14	<b>1.02</b>	<b>0.05</b>
Total Debt/GNP	0.68	0.45	0.97	0.57	<b>0.59</b>	<b>0.35</b>
GDP growth (one-year)	4.3	3.18	5.29	2.42	<b>3.79</b>	<b>6.77</b>
Rule of Law	6.46	6.05	8.68	10	<b>6.85</b>	<b>5</b>
Anti-director Rights	3.39	1.76	2	2.5	<b>2.44</b>	<b>3</b>
One share = one vote	0.22	0.24	0.33	0	<b>0.22</b>	<b>1</b>
Creditor rights	3.11	1.58	2.33	2	<b>2.3</b>	<b>2</b>

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

**Table 5-A A Comparison of Non-performing Loans of Banking Systems**

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

**Table 5-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.

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

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

**Table 6-A Growth Rates of the State and Listed Sectors and Sundry Sector**

In this table, Panel A displays the growth rate of “industrial output” for the two sectors in China. The state and Listed Sectors includes state-owned and publicly traded companies where the government holds controlling shares. The Sundry Sector consists of firms with all other types of ownership structures. Data source for this table is the Chinese Statistical Yearbook 2000, 2001, 2002, and 2003. For each sector, we also calculated the weighted average growth rate across the selected ownership types. Panel B displays the average growth rate of “investment in fixed assets” for the two sectors.

Growth rate (%)	Panel A: Industrial Output		Panel B: Investment in Fixed Assets	
	State & Listed Sectors	Private Sector	State & Listed Sectors	Private Sector*
1996	15.9	17.4	10.2	17.3
1997	-0.6	18.9	9.0	6.1
1998	-6.5	10.2	17.4	9.0
1999	5.8	6.8	3.8	7.5
2000	14.0	24.2	3.5	11.4
2001	4.6	9.9	6.7	12.6
2002	6.5	12.5	7.2	16.8
Ave. Annual rate (95- 02)	5.4	14.3	8.2	11.5

Notes: \* - includes foreign-owned companies, companies owned by investors from Taiwan and Hong Kong, and TVEs; **Sources: China Statistic Yearbooks 2000 - 2003.**

**Table 6-B Employment in the Formal and Sundry Sectors**

Year	1995	1996	1997	1998	1999	2000	2001	2002	95-02 annual growth rate
<b>Panel A: Number of Employees (million)*</b>									
<b>State &amp; Listed Sectors</b>	115	116	115	94	89	85	81	77	-5.7%
<b>Private Sector</b>	221	233	233	235	240	233	245	246	1.5%
<b>Panel B: Percentage of total employees belonging to each sector (%)</b>									
<b>State &amp; Listed Sectors</b>	34.3	33.3	33.0	28.7	27.2	26.8	24.9	23.8	
<b>Private Sector</b>	65.7	66.7	67.0	71.3	72.8	73.2	75.1	76.2	

Note: \* - indicate non-agricultural employees; source: China Statistic Yearbooks 2000 - 2003.

**Table 7-A Types of Common Stock Issued in China**

Tradable on the Exchanges?		Definition
No (private Block Transfer Possible)	<b>State-owned shares**</b>	Shares that are controlled by the central government during the process in which firms are converted into a limited liability incorporation 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.
	<b>Entrepreneur's shares</b>	Shares reserved for firms' founders during the same process described above; different from shares that founders can purchase and sell in the markets
	<b>Foreign owners</b>	Shares owned by foreign industrial investors during the same process
	<b>Legal entity holders</b>	Shares sold to legal identities (such as other companies, listed or non-listed) during the same process
	<b>Employee shares</b>	Shares sold to firm's employees during the same process
Yes (New issued shares)	<b>A Shares</b>	Chinese companies listed in Shanghai or Shenzhen Stock Exchanges, and shares sold to Chinese (citizen) investors
	<b>B Shares</b>	Chinese Company listed in SHSZ or SZSE, but shares are sold to foreign investors
	<b>H Shares</b>	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 7-B Tradable vs. Non-tradable Shares for China's Listed Companies**

Year	State/total shares	Non-tradable <sup>^</sup> /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

<sup>^</sup>: 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 7-C Ownership and Control in Listed Firms of China**

Company Ownership and Control (%)		
Shareholder type	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 8-A Summary Statistics of Listed Firms (in US\$ millions)**

Data source for Tables 8-A, 8-B, and 8-C (also empirical tests in Appendix B): Firms are listed in SHSE and SZSE (as of December 2000), data downloaded from Taiwan Economic Journal's "Asia Emerging Market Database" (<http://www.tei.com.tw/>).

<b>Key financial items and ratios</b>						
	Mean	Median	Min	Max	Std. Dev	Number of obs
Market Capitalization	448.2	354.9	0.0	8190.2	513.9	1174
LT Debt / Common Equity	0.3	0.1	0.0	6.9	0.6	981
Net Income	99.6	502.0	-1,215.9	21,718.6	721.0	979
EPS	0.2	0.2	-3.2	1.6	0.4	979
Proceeds from Stock Sales	163.6	0.0	-290.8	29,379.2	987.0	975 (272)
Dividend	50.8	18.4	0.0	8,106.0	270.2	979 (617)
Retained Earnings	26.4	33.2	-2,125.7	2,210.18	234.4	979 (951)
Bonds Issue	0.8	0.0	0.0	521.0	17.3	975 (6)
Long Term Borrowing	634.9	233.1	0.0	157,053.1	5,073.7	974 (895)

Note: the numbers in the bracket are the statistics of nonzero observations.

**Table 8-B Comparing Ownership Structure of Listed Firms**

Panels A and B are taken from LLSV (JF1999). The first row is the average of Asia countries included in Claessen et al. (2000), excluding Japan. The last row for China includes our sample of 1147 listed firms.

<b>Country</b>	<b>Widely Held</b>	<b>State</b>	<b>Family</b>	<b>Widely Held Financial</b>	<b>Widely Held Corporation</b>
<i>Panel A: LLS (1999) Sample with Large Firms</i>					
High anti-director average	34.17	15.83	30.42	5	5.83
Low anti-dir. average	16	23.67	38.33	11	2
Sample average	24	20.19	34.81	8.3	3.7
<i>Panel B: LLS (1999) Sample with Medium Firm Size</i>					
High anti-dir. average	16.67	10.33	50.92	5.83	1.67
Low anti-dir. average	6	20.87	53.8	6.67	2.67
Sample average	10.74	16.19	52.52	6.3	2.22
<i>Panel C: Asian firms</i>					
Asia (no Japan, from Claessens et al. 2000)	3.09	9.36	59.36	9.66	18.55
<b>China (our calculations)</b>	<b>0.44</b>	<b>60</b>	<b>13.56</b>	<b>1.83*</b>	<b>24.17**</b>

Notes: 1) "Widely held" firms are defined as no large shareholder holding more than 10% of shares; "State" ("family") firms are those with controlling shareholder being the state (a family); "Widely held financial" ("widely held corporation") are those with controlling shareholder being a widely-held financial company (widely-held corporation).

\*: For these Chinese firms, we identify the dominant shareholder to be a financial company, but we are not sure whether the financial company is widely held or not;

\*\* : For these Chinese firms, we identify the dominant shareholder to be another listed and traded corporation, but we are not sure whether this corporation is widely held or not.

**Table 8-C External Funding at Firm Level**

Country	English origin average	French origin average	German Origin average	Scandinavian origin average	LLSV sample average	<b>China</b>
Market cap / sales	0.69	0.51	0.63	0.37	0.58	<b>0.06</b>
Market cap / cash flow	5.16	3.85	7.48	3.25	4.77	<b>0.52</b>
Debt / sales	0.26	0.27	0.3	0.28	0.27	<b>0.67</b>
Debt / cash flow	2.01	2.06	3.18	2.42	2.24	<b>5.34</b>

Sources: LLSV countries – WorldScope, and LLSV (1997); data for China is based on a panel of 7377 firm-year (1174 listed firms, 1992-2000) observations, with each ratio being the mean of the pooled panel of firms during the same time period.

**Table 9 Summary Statistics for Survey Firms**

The sample includes 17 firms, with one from Shanghai, 3 from Jiangsu Province, and 13 from Zhejiang Province. The Sample covers firms in the industry of Chemical product (3), Fabric making and printing (3), Metal Product (2), medical and health products (2), Realty management (2), Auto repairing (1), Food processing (1), agriculture product processing (1), and Electronic products (1), handcraft and art products (1). (Note: some firms are in multiple business lines). The following table presents summary statistics for sample firms with information ended as of Dec. 2002.

	mean	min	max	Std.dev
Age of the firm	11.4	3	27	6.7
# of employees	1634.3	90	5552	2107.8
Size (Total Assets in mil. US\$)	55.3	0.6	337.3	82.7
D/E ratio	2.1	0.38	14.95	3.4
Net income (in mil. US\$)	2.5	0.2	9.0	2.8
Return on Assets	0.1	0.00	0.34	0.1

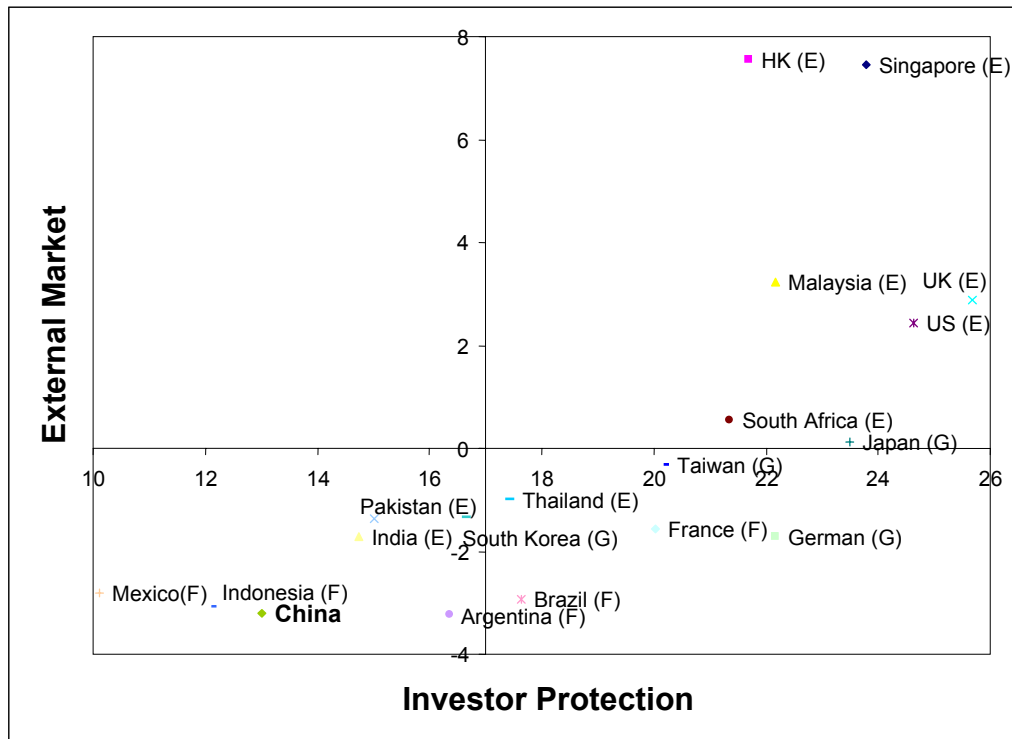


Figure 1 Comparison of Legal and Financial Systems

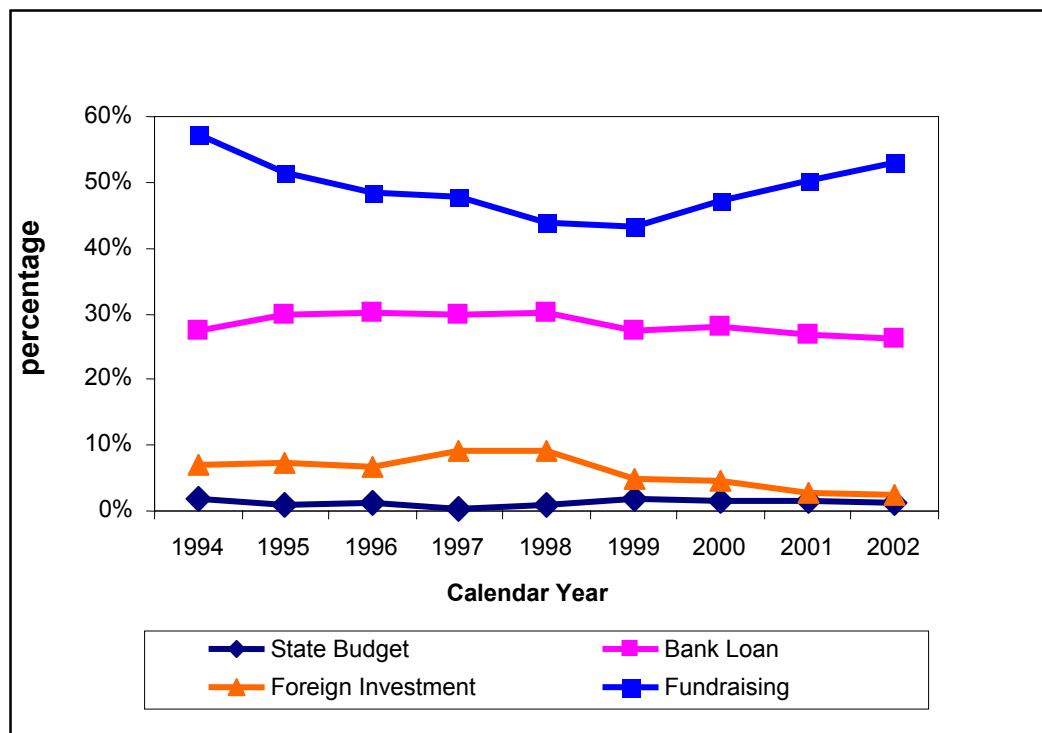
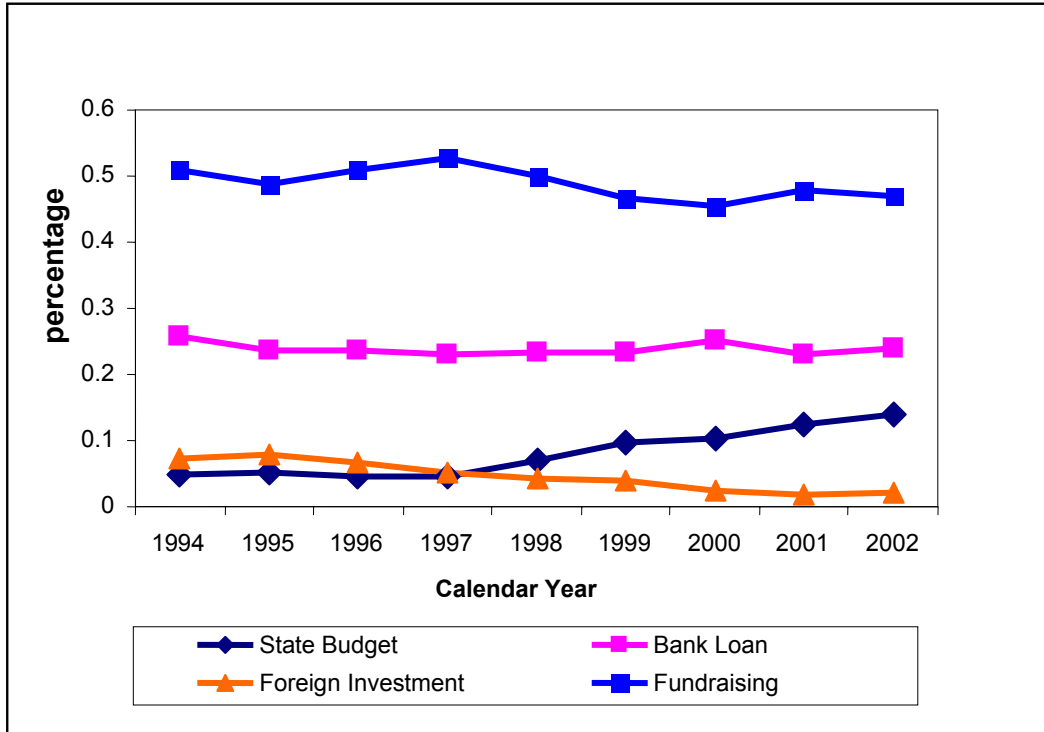
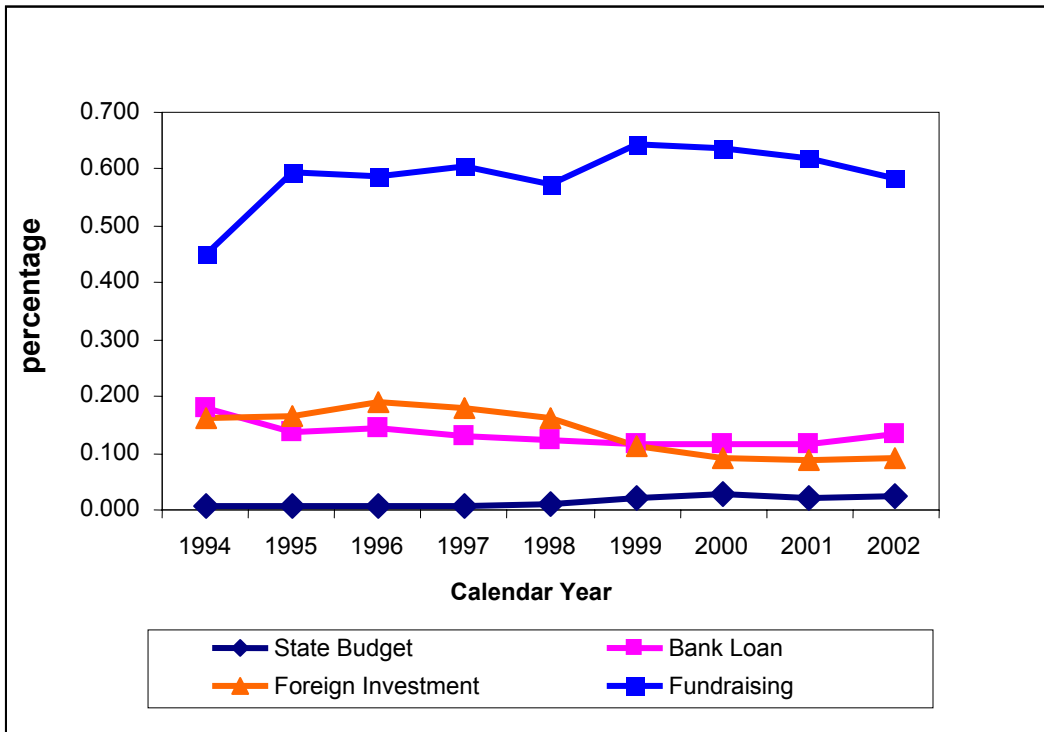


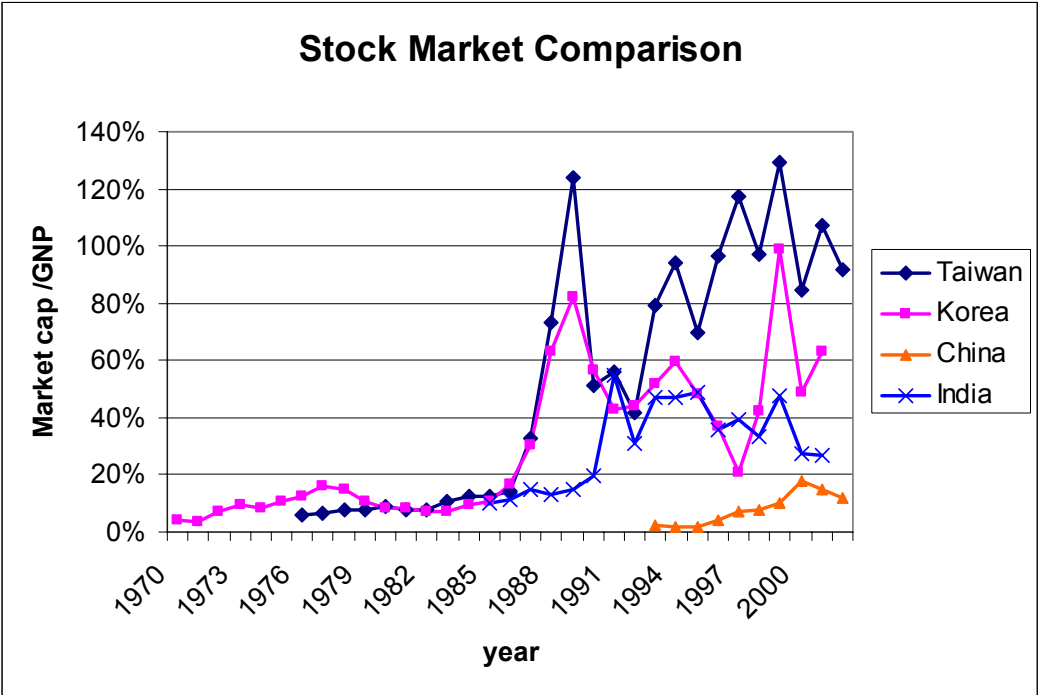
Figure 2-A Financing Sources for the Listed Sector



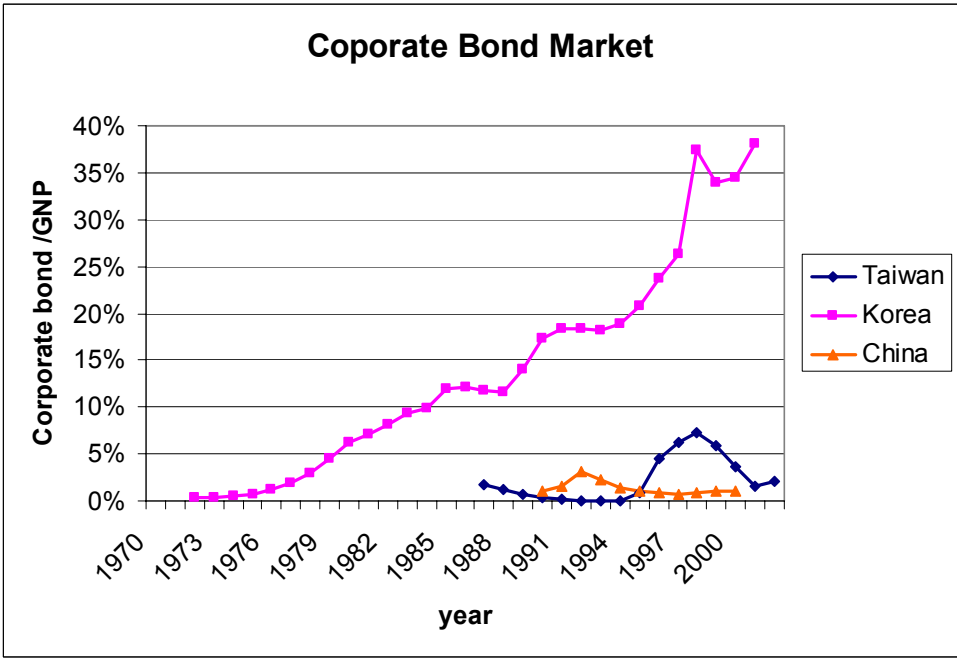
**Figure 2-B Financing Sources for the State Sector**



**Figure 2-C Financing Sources for the Private Sector**

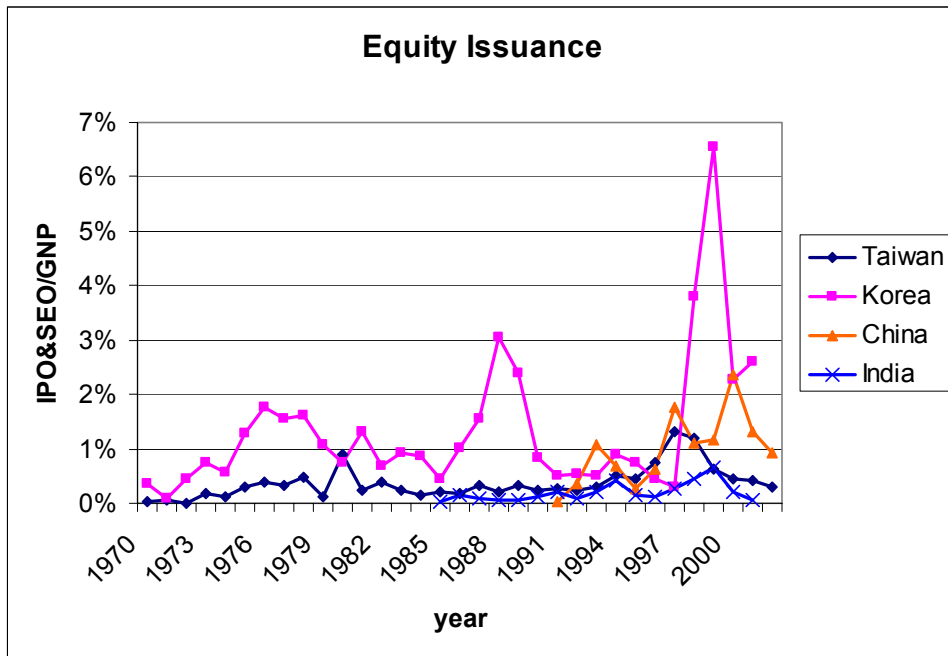


**Figure 3-A: Market cap/GNP ratios**

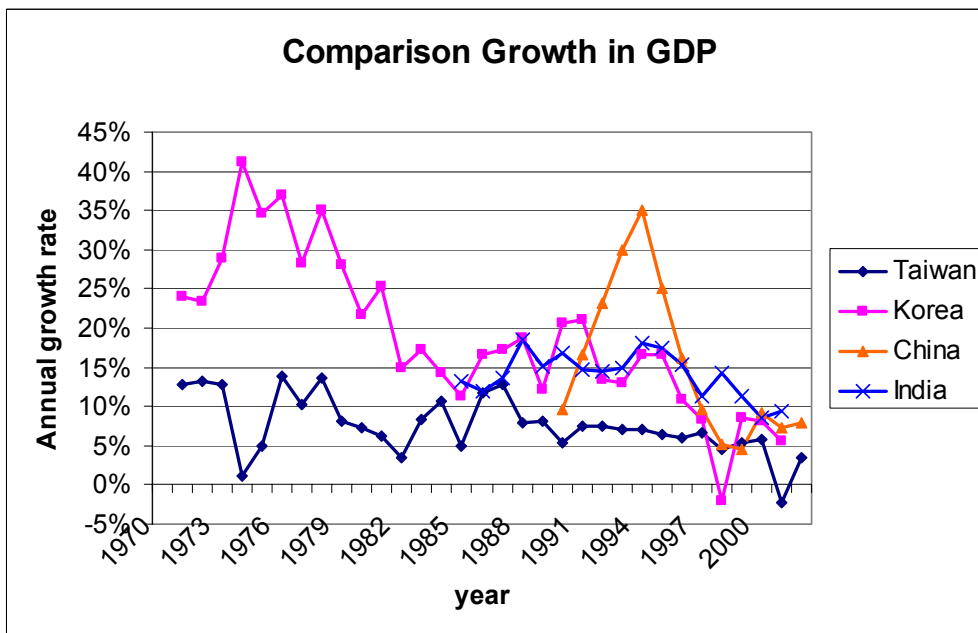


**Figure 3-B: Comparison of Corporate bond market**



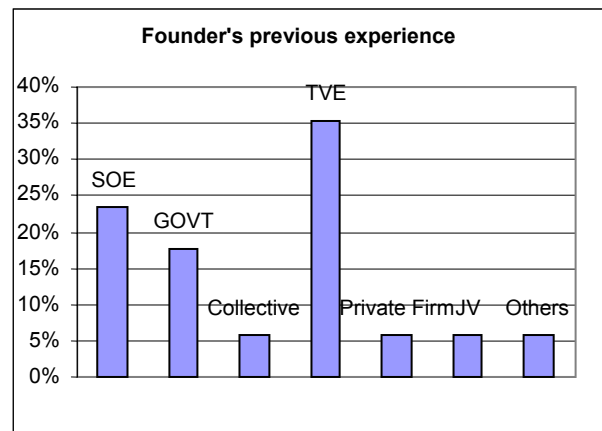
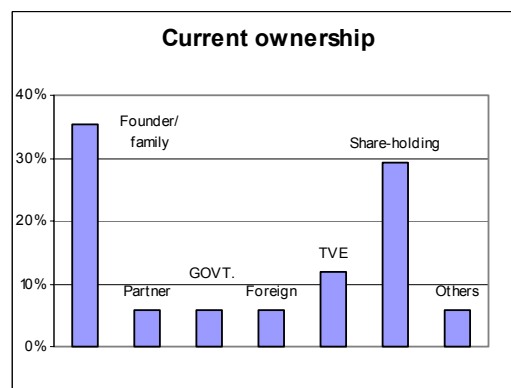
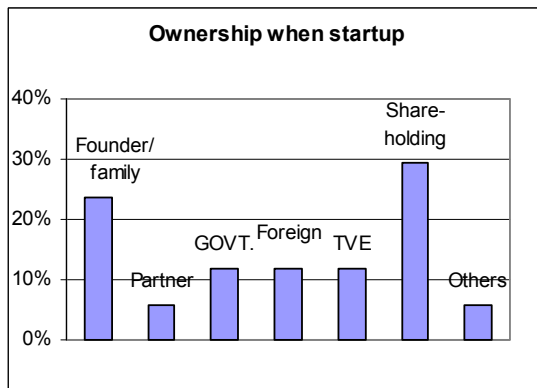
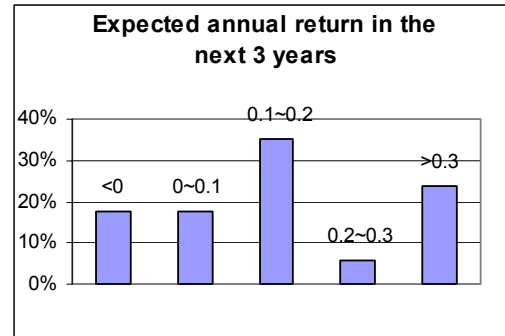
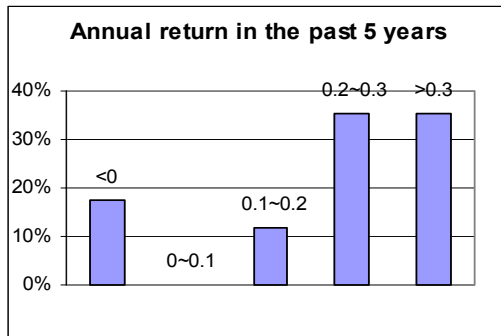


**Figure 3-C: Comparison of Equity Issuance**



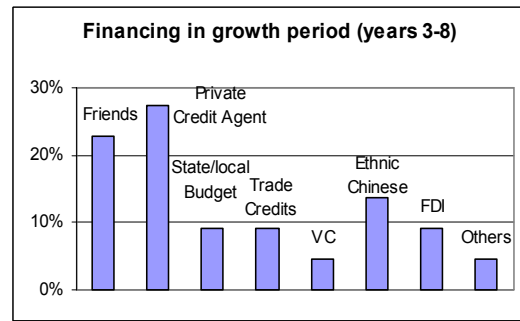
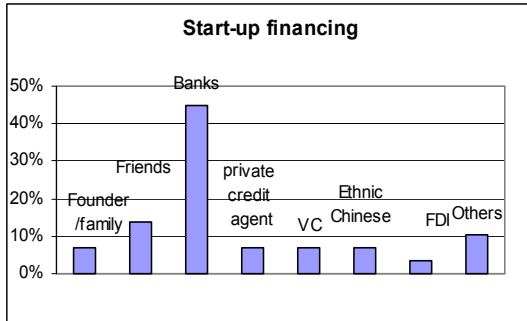
**Figure 3-D: Comparison of GNP growth rates**

(In all of the following graphs, the vertical axis represents the percentage of firms' managers/founders who provide the same answer for a particular question in the survey.)

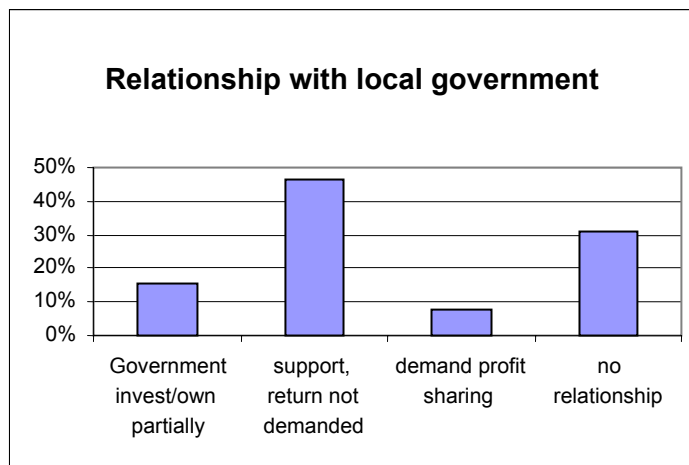
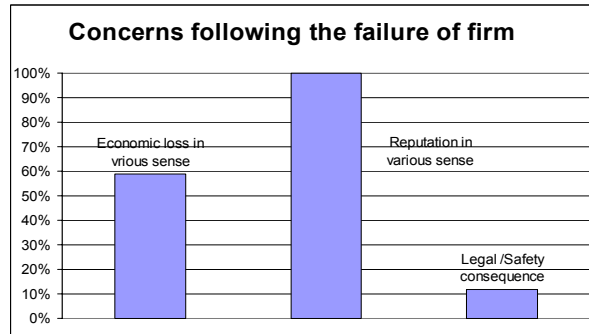
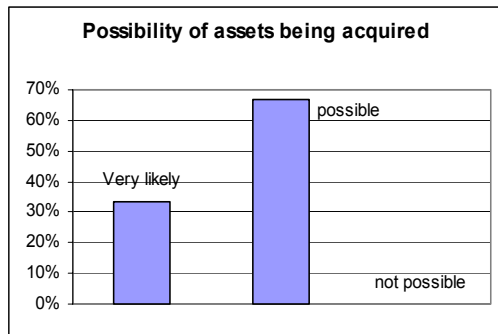


**Figure 4-A Background Information of Survey Firms**

(The following two graphs present percentage of firms, who regard the corresponding financing sources as very important (25-50%) or extremely important (>50%) for their starting up and growth.)



**Figure 4-B Financing Channels of Survey Firms**



**Figure 4-C Governance Mechanisms of Survey Firms**