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Banks' Lending Behavior and Firms' Corporate Financing Pattern in the People's Republic of China

Sayuri Shirai

September 2002

This paper examines whether banking sector reforms and equity market development have made any noticeable impact on banks' lending behavior and firms' corporate financing patterns in the People's Republic of China. Based on data on publicly-listed firms, it has been found that banks' lending biases have been present especially toward large, less profitable firms, firms with greater State ownership, and old firms. Since most of these firms have been poorer performers than other firms, the results indicate the presence of a soft budget constraint. Moreover, this paper has also found that less profitable, large, and old firms have faced favorable lending bias after the initial public offerings (IPOs) on A-shares. The fact that these firms prefer bank loans over equity finance despite rising stock prices suggests that banks either provided favorable financing conditions which may be due to collusion, or lack of borrowers' incentive to diversify their financing sources. On the other hand, lending bias towards firms with greater State ownership was also present, but the bias has declined after the IPOs. These firms seem to have increased greater recourse to total equity finance by issuing more non-negotiable shares than A-shares, probably to maintain management controls.

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**Banks' Lending Behavior and
Firms' Corporate Financing Pattern in
Peoples' Republic of China**

Sayuri Shirai

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PREFACE

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Masaru Yoshitomi
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ABSTRACT

This paper examines whether the banking sector reforms and equity market development have made any noticeable impact on banks' lending behavior and firms' corporate financing patterns in the People's Republic of China (PRC). Based on data on 1,098 publicly listed firms, it has been found that banks' lending biases have been present especially toward large and less profitable firms and firms with greater State ownership throughout 1994-2000, and toward old firms during 1998-2000.

Since most of these firms have been poorer performers than other firms, the results indicate the presence of a soft budget constraint. Moreover, this paper has also found that less profitable, large, and old firms have faced favorable lending bias after the initial public offerings (IPOs) on A-shares. The fact that these firms prefer bank loans over equity finance despite rising stock prices (hence lowering equity financing cost) suggests that banks either provided favorable financing conditions which may be due to collusion, or lack of borrowers' incentive to diversify their financing sources. It is concluded that the banking sector reforms need to be strengthened further in order to improve their risk management skills and lower lending biases.

On the other hand, lending bias towards firms with greater State ownership was also present, but the bias has declined after the IPOs. These firms seem to have increased greater recourse to total equity finance by issuing more non-negotiable shares than A-shares, probably to maintain management controls.

TABLE OF CONTENTS

| | |
|---|-----|
| <i>About the Author</i> | II |
| <i>Preface</i> | III |
| <i>Abstract</i> | IV |
| <i>Table of Contents</i> | V |
| Executive Summary | 1 |
| 1. Introduction | 6 |
| 2. Overview of the Banking Sector Reforms | 8 |
| 2.1. Background: 1979-1993 | 8 |
| 2.2. Banking Sector Reforms of the 1990s | 9 |
| 2.3. Performance of the Banking Sector | 13 |
| 3. Equity Market Development | 15 |
| 3.1. Overview of the Equity Market | 15 |
| 3.2. Characteristics of Listed Companies | 20 |
| 4. Stylized Facts on Firms' Financing Patterns | 27 |
| 5. Testing Changes in Firms' Corporate Financing Patterns | 37 |
| 5.1. Basic Regression Analysis for Banks' Lending Bias | 37 |
| 5.2. Impact of the Equity Market on Lending Bias | 42 |
| 6. Conclusions | 46 |
| References | 48 |
| Regression Variables | 50 |
| Acronyms | 51 |
| Tables & Charts | |
| Table 1. Market Capitalization, Bonds and Domestic Credit, 1992-2000 | 13 |
| Table 2. Summary Table of the Equity Market, 1992-2000 | 16 |
| Table 3. Average Shareholding Patterns of Listed Companies, 1992-2000 | 25 |
| Table 4. Distribution of Listed Companies by Sector, 2000 | 26 |
| Table 5. Major Components of Liabilities of Listed Firms, 1992-2000 | 27 |
| Table 6. Estimation Results for LOAN | 40 |
| Table 7. Estimation Results of LEVERAGE | 42 |

| | |
|---|----|
| Table 8a. Estimation Results for LOAN for the A-Share Market | 44 |
| Table 8b. Estimation Results for LOAN for the B-Share Market | 45 |
| Chart 1. Structure of the Financial Sector | 6 |
| Chart 2. Returns on Asset for the Banking Sector, 1994-2000 | 14 |
| Chart 3a. Price-Earnings Ratio in Chinese Stock Markets, 1996-2002 | 18 |
| Chart 3b. Price-Earnings Ratio in Other Stock Markets, 1996-2002 | 18 |
| Chart 4a. Composite Price Index of Shenzhen Stock Exchange, 1990-2001 | 19 |
| Chart 4b. Composite Price Index of Shanghai Stock Exchange, 1992-2002 | 19 |
| Chart 5. Distribution of Listed Companies By Types of Stocks, 2000 | 21 |
| Chart 6. Distribution of Listed Companies by Listing Timing, 1999-2000 | 22 |
| Chart 7. Distribution of Listed Companies by Years of Corporatization or Establishment | 23 |
| Chart 8. Distribution of Listed Companies by Types of Ownership, 2000 | 24 |
| Chart 9a. Loans and State Ownership, 1992-2000 | 28 |
| Chart 9b. Negotiable Equity and State Ownership, 1992-2000 | 28 |
| Chart 9c. Total Equity Finance and State Ownership, 1992-2000 | 29 |
| Chart 10a. Loans and Asset Size, 1992-2000 | 30 |
| Chart 10b. Negotiable Equity and Asset Size, 1992-2000 | 30 |
| Chart 11a. Loans and ROA, 1992-2000 | 31 |
| Chart 11b. Negotiable Equity and ROA, 1992-2000 | 31 |
| Chart 12a. Loans and Variance of ROA, 1992-2000 | 32 |
| Chart 12b. Negotiable Equity and Variance of ROA, 1992-2000 | 32 |
| Chart 13a. Loans for Protected and Unprotected Firms, 1992-2000 | 34 |
| Chart 13b. Negotiable Equity for Protected and Unprotected Firms, 1992-2000 | 34 |
| Chart 14a. Loans for New and Old Firms, 1992-2000 | 35 |
| Chart 14b. Negotiable Equity for New and Old Firms, 1992-2000 | 35 |
| Chart 15a. Loans for Firms Issuing Only A-Shares and Other Shares, 1992-2000 | 36 |
| Chart 15b. Negotiable Equity for Firms Issuing Only A-Shares and Other Shares, 1992-2000 | 36 |

Executive Summary

- Since the People's Republic of China (PRC) has adopted an open economic policy in 1978, the Government has embarked on a series of banking sector reform programs. The programs of 1980s focused on the establishment of a two-tier banking system comprising primarily of a central bank and four specialized banks that are owned fully by the central Government. Once the two-tier banking system was formed, the Government launched the second wave of banking sector reforms, consisting of the commercialization of specialized banks and a separation between policy and commercial lending activities in 1994-1995 and the management of nonperforming loans (NPLs) of wholly State-owned commercial banks (WSCBs). Other reform measures included an attempt to reduce local government intervention, the removal of credit allocation, interest rate and entry deregulation, and a gradual tightening of accounting and prudential regulations.
- Given that PRC's macroeconomic performance has been remarkably favorable in the past, the gradual approach adopted by the Government on the banking sector reforms appears to have been successful on the surface. There are few countries in the world that have been able to achieve high real GDP growth averaging 10% in the past two decades and rapid financial deepening, as shown by the ratio of savings to gross domestic product (GDP) from 26% in 1985 to 120% in 1999 and the ratio of M2 to GDP from 33% in 1980 to 148% in 1999. The financial deepening was driven mainly by the increase in bank deposits by households. The banking sector plays a crucial role in the PRC because it functions as a major financier for nonfinancial firms.
- In spite of this favorable macroeconomic performance and financial deepening, a closer look at this giant economy reveals deep-rooted structural problems—namely, a poor and deteriorating performance from SOEs has coexisted with an equally unfavorable performance from the banking sector. Further, the dominance of WSCBs in the banking sector is one of the most important banking sector reform issues that should be addressed. Even after the banking sector reforms, WSCBs' share has accounted for more than 75% of total claims on nonfinancial sectors by all deposit money banks and about 70% of total deposits held by these deposit money banks during 1994-1999. WSCBs are also major recipients of loans from the PBC, accounting for more than 90% of total borrowing from it.
- Notwithstanding the banking sector reforms, the overall performance of the banking sector has not improved much. Based on the distinction between WSCBs and other commercial banks (OCBs), it has been found that the performance of WSCBs has been unimpressive compared with OCBs. A more worrying sign, on the other hand, is the rapidly deteriorating performance of the OCBs during 1994-2000. Thus, these banking sector reforms appear not to have led to a noticeable improvement in the performance of WSCBs. Nevertheless, WSCBs are not illiquid and they are able to operate in practice, because households have

increasingly deposited their savings at these banks believing that they are protected by the central Government, which retains full ownership. Also, the underdeveloped state of the capital market and other markets has left households no other choice but to save in banks or government bonds. Although explicit policy lending practices have been reduced, lending to SOEs still constitutes a large share of WSCBs' total credit. Credit decisions by WSCBs are often influenced by central Government's indirect guidance.

- A further recent phenomenon is that borrowers find it difficult to obtain loans from WSCBs in the face of tightened lending practices. PBC continues to control official lending and deposit rates, preventing WSCBs from operating according to market principles. While the low lending interest rate policy aims at subsidizing SOEs, it has given rise to collusive behavior among financial institutions despite the penalties faced. For example, WSCBs may legally circumvent interest rate controls by lending to nonbank financial institutions that are subject to looser interest rate controls, which in turn lend the funds at higher rates and share the profits with the banks. The fact that black markets exist and their prevailing lending interest rates are in the range of 100%-200% of regulated lending rates in some cases indicates that banks have strong incentives to lend at higher lending rates. Moreover, tight entry regulations continue to prevail.
- The equity market has been rapidly growing in recent years, as compared with the corporate bond market. The ratio of equity market capitalization to GDP (including A- and B-shares) grew from 3.9% in 1992 to 53.8% in 2000. Also, the number of listed firms (which include firms that issue only A-shares, only B-shares, both A- and B-shares, or A and H-shares) soared from 53 in 1992 to 1,088 in 2000. As of May 2002, there are 1,169 companies listed at domestic stock exchanges in PRC. Both these indicators are comparable to those in advanced countries.
- In general, Chinese listed firms tend to depend more heavily on external sources than internal sources (retained earnings) and, among external sources, more intensively on current liabilities than long-term liabilities. They hardly issue corporate bonds and mostly borrow in short-term, indicating that their maturity mismatch could be substantial. In addition, while the ratio of equity to total liabilities hardly changed over the period, capital reserves (such as loan loss provisions set by the Government) and, to a lesser extent, surplus reserves (such as housing allowances set by the management) rose rapidly.
- Based on data of 1,098 listed firms for 1992-2000, this paper has identified seven features with respect to corporate financing patterns of the average behavior of listed firms. First, negotiable equity finance tends to decline as State ownership increases, as expected. On the other hand, less distinctive trends as compared with equity finance were traced in the case of bank loans. Firms with large State ownership appear to have greater access to bank loans in 1995-1997 and 1998-2000, while firms with small State ownership depend little on bank loans.

- Second, the relationship between firms' asset size and bank loans showed a clear upward trend in 1992-1994, 1995-1997, and 1998-2000 each, while that between firms' asset size and negotiable equity finance exhibited a clear downward trend throughout the same periods. Thus, small firms appear to have substituted equity finance for bank loans, while large firms remain dependent on bank loans without significantly increasing recourse to equity finance. Moreover, small firms depended heavily on negotiable equity finance during 1992-1994, but their dependence declined during 1995-1997 and 1998-2000. Also, no clear intertemporal or dynamic shift from bank loans to equity finance or the other way round was present for both large and small firms during 1992-2000. The decline in the sum of both bank loans and equity finance for both types of firms appears to have been offset by an increase in other sources of funds such as capital and surplus reserves.
- Third, the relationship between returns on asset (ROA) and bank loans showed a clear downward trend during 1992-1994, 1995-1997, and 1998-2000 each, while that between ROA and negotiable equity finance exhibited irregular patterns for the same periods. This indicates the prolonged presence of a soft budget constraint for unprofitable firms. Profitable firms tended to have greater negotiable equity finance during 1995-1997 and 1998-2000 each, while relying less on bank loans during these two periods—the presence of an intertemporal shift from bank loans to negotiable equity finance for profitable firms. Unprofitable firms also increased negotiable equity finance over the period, but have not substantially changed the degree of dependence on bank loans.
- Fourth, a more or less downward trend was observed between the variance of ROA and bank loans during 1992-1994 and 1995-1997, while a more distinct upward trend was traced between the variance of ROA and negotiable equity finance. In other words, firms with stable ROA tended to rely more heavily on bank loans than those with volatile ROA during 1992-1994 and 1995-1997, although firms with volatile ROA significantly increased dependence on bank loans in 1998-2000. Firms with volatile returns increased dependence on both bank loans and negotiable equity finance from 1992-1994 to 1998-2000, while firms with stable returns reduced the dependence on bank loans without increasing negotiable equity finance over the same period. The increased dependence of firms with volatile ROA on bank loans appears to support the view that these firms' soft budget constraint has emerged in recent years.
- Fifth, bank loans were relatively more intensively allocated to firms in unprotected sectors than those in protected sectors (i.e., petrochemicals, utility, and materials) during 1995-1997 and 1998-2000 each, while the former's dependence on negotiable equity finance exceeded that of the latter during 1998-2000. Firms in protected sectors are generally State monopolies and operate under the direct supervision and control of the State Council. As a result, these protected firms often obtain direct subsidies from the central Government's budget. By contrast, firms in unprotected sectors are mostly under the supervision of provincial or local governments, so they do not receive direct support from the

central Government and many of them have to compete in domestic markets. Partly reflecting these differences, there appears a clear intertemporal shift from bank loans to negotiable equity finance for firms in unprotected sectors during 1995-2000.

- Sixth, with respect to bank loans there is a clear divergent trend between firms that were corporatized or established before 1990 (so-called “old” firms) and those after 1990 (so-called “new” firms). An increase in the dependence of old firms on bank loans during 1996-2000 appears to support the view that banks increased credit allocation to old firms. At the same time, old firms depended more heavily on negotiable equity finance than new firms. New firms increased negotiable equity finance while reducing bank loans during 1995-2000, suggesting an intertemporal shift from bank loans to negotiable equity finance. However, such a shift was not observed for old firms.
- Seventh, firms issuing other shares (both A- and B-shares, only B-shares, or both A- and H-shares) increased both bank loans and negotiable equity finance as a percentage of total liabilities in recent years, while firms issuing only A-shares reduced bank loans and increased equity finance over the period. Since firms issuing B- and H-shares are subject to more stringent accounting and listing requirements and thus are generally higher-quality firms, banks may have increased an incentive to extend more credit to such firms in recent years. Firms issuing only A-shares appear to have shifted from bank loans to equity finance during 1996-2000, supporting argument for the presence of the intertemporal shift.
- To summarize, firms with specific features—firms with large State ownership, large firms, unprofitable firms, firms with volatile returns, old firms, and firms issuing other shares—have depended more heavily on bank loans. Since many of these types of firms are generally poor performers (Shirai, 2002b), they can be regarded as facing a soft budget constraint. Moreover, there is a static inverse relationship between negotiable equity finance and bank loans for specific types of firms; negotiable equity finance appears to have been substituted for bank loans for small firms and profitable firms (except 1992-1994). This suggests that the establishment of the equity market has contributed to providing diverse financial sources to small and profitable firms. Further, there is a clear intertemporal or dynamic shift from bank loans to negotiable equity finance for profitable firms, firms in unprotected sectors, new firms, and firms issuing A-shares over the period. Namely, the equity market has becoming important for these types of firms.
- As a next step, regression analysis was performed to assess whether banks’ lending bias has really existed during 1994-2000. The results have shown that banks’ lending biases have been present especially toward large firms, firms with large State ownership, and unprofitable firms throughout 1994-2000. Thus, some of these firms appear to have been facing the soft budget constraint, since they are not necessarily better performers. Moreover, older firms gained greater access to

bank loans in 1998-2000 as compared with 1994-1997. Given that newly corporatized or established firms have generally been better performers than old firms, the results indicate that the lending bias has increased in recent years in favor of old firms. These results suggest that banking sector reforms have not improved banks' risk management to a considerably degree, since banks loans have been allocated more intensively to specific types of firms regardless of their performance. Thus, this paper concludes that banking sector reforms have been ineffective so far.

- In addition, this paper has assessed whether such lending bias has strengthened or declined after the initial public offerings (IPOs). The results suggest that the establishment of the two stock exchanges induced old, large, and unprofitable firms to increase recourse to bank loans after the IPOs on A-shares. The fact that these firms preferred bank loans over equity finance despite rising stock prices (hence lowering equity financing cost) may be due to either banks' providing favorable financing conditions by collusion or connection, or lack of borrowers' incentive to diversify their financing sources.
- On the other hand, these results also suggest that firms facing a hard budget constraint—such as new, small, and profitable firms—were able to lower cost of finance by being able to gain access to equity market. Thus, the equity market helped these firms to diversify their financing sources. This role of the equity market has become more important in recent years, given that banks have been under greater pressures to improve their balance sheets under the accession to the World Trade Organization (WTO) and thus reluctant to increase lending activities.
- As for firms with State ownership, their degree of dependence on bank loans has declined after the IPOs on A-shares. It appears that these firms increased total equity finance relative to bank loans by issuing more non-negotiable shares (or those held by the State) than A-shares in order to prevent their management controls from being diluted. However, such behavior was not traced in the case of B-shares. Shirai (2002b) has reported that firms with very large State ownership have been better performers than those in the intermediate range of State ownership due to the latter's greater opportunities for asset stripping. Therefore, greater control of firms by the State may not be a bad thing in the context of the PRC for the time being. However, the Government should make greater efforts to improve the informational, legal, and judicial infrastructures in order to develop a sound equity market, and at the same time, promote privatization of listed SOEs.

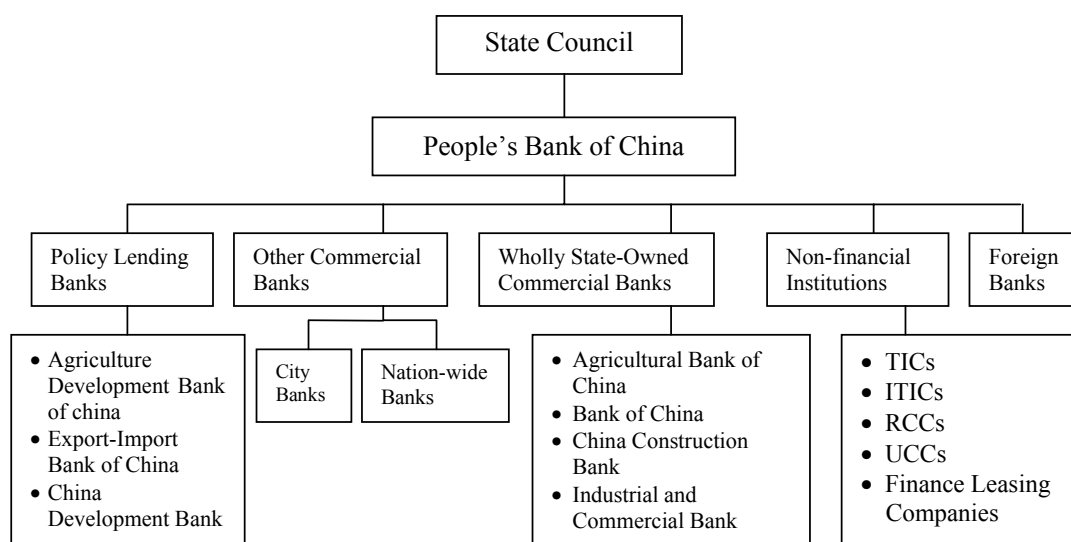
Banks' Lending Behavior and Firms' Corporate Financing Pattern in the Peoples' Republic of China

Sayuri Shirai¹

1. Introduction

Since the People's Republic of China (PRC) launched its open economic policy in 1978, the Government has embarked on a series of banking sector reform programs. The programs of 1980s focused on the establishment of a two-tier banking system comprising primarily of a central bank and four specialized banks that are owned fully by the central Government. Once the two-tier banking system was formed, the Government launched the second wave of banking sector reforms, consisting of the commercialization of specialized banks and a separation between policy and commercial lending activities in 1994-1995 and the management of nonperforming loans (NPLs) of wholly State-owned commercial banks (WSCBs). Other reform measures included an attempt to reduce local government intervention, the removal of credit allocation, interest rate and entry deregulation, and a gradual tightening of accounting and prudential regulations. As of 2002, PRC's banking system consists of the four WSCBs, three policy lending banks, more than 100 commercial banks (most of which are city commercial banks and the rest nationwide commercial banks), about 3,000 urban credit cooperatives (UCCs), some 42,000 rural credit cooperatives (RCCs), and about 190 foreign banks with branches or representative offices (Chart 1).

Chart 1. Structure of the Financial Sector



¹ The author acknowledges the Excellent Research Assistance of Mr. Prithipal Rajasekaran.

With respect to private business activities, the Government recognized their role and enabled the protection of their lawful interests in the 1982 Constitution. This led to an increase in the number of nonstate firms, such as town and village enterprises and joint ventures with foreign capital. In 1988, moreover, the State Council provided a basis for authorization and control of private businesses (defined as those employing more than eight persons) by issuing the Preliminary Regulations for Private Business. Further, the State Enterprise Law of 1988 recognized State-owned enterprises (SOEs) as legal persons separating from the State and defined the operational spheres of autonomy of SOEs, while a contract responsibility system was introduced to enhance the accountability of SOE management. In 1992, moreover, the 14th National Congress of the Communist Party established a socialist market system and gave priority to reforming SOEs by distancing them from government bureaucracy so that they could be allowed to operate independently. The introduction of 14 autonomous rights for SOEs was intended to enhance the autonomy of their managements. In 1994, Supervision Regulations were introduced to provide the legal basis for the system under which the State owns and supervises companies. In July that year, the Company Law—containing provisions with respect to issuing, transacting, and listing of public securities—became effective. By this time, many nonstate firms had already been established, while large numbers of SOEs were corporatized. Given that the dominant financial institutions were WSCBs, which allocated financial resources predominantly to SOEs, most of newly-emerged nonstate firms had no choice but to become self-financed. Meanwhile, the gradual decline in cheap funding from the Government or WSCBs encouraged SOEs to sell their stocks directly to the public in 1984, giving rise to unofficial, independent, local secondary trading markets for stocks (Gordon and Li, 1999).

Against this background, the Government legalized the trading of stocks by establishing the Shanghai stock exchange in December 1990 followed by the Shenzhen stock exchange in July 1991. In 1992, B-shares were issued for the first time to foreign investors, providing them with a legal channel to invest in PRC stocks. The Government established the State Council Securities Commission (SCSC), the highest regulatory body in the country, and China Securities Regulatory Commission (CSRC), the executive branch of SCSC, in October 1992. In 1993, SCSC issued its first Interim Regulations on Share Issuing and Trading. In the same year, CSRC signed the Chinese Hong Kong Memorandum of Regulatory Cooperation with Hong Kong, China with respect to the issuance of H-shares on the Hong Kong stock exchange. In 1994, it signed another Memorandum of Understanding with the New York Stock Exchange (NYSE) and US Securities and Exchange Commission on the issuance of N-shares on the NYSE. In 1999, the Securities Law became active, whose aim was to standardize the issuing and trading of securities, protect investors, and promote the development of the socialist market economy. Moreover, in 1998, SCSC and CSRC merged to form one ministry-rank unit directly under the State Council in a move intended to strengthen the functions of CSRC as a centralized securities supervisory authority.

This paper examines whether the banking sector and capital market reforms have affected banks' lending behavior and firms' corporate financing patterns in the reform period. In particular, this paper examines the following three categories of questions. First, has banks' lending bias been present even during the reform period? If

so, what are the features of firms that have been facing such bias? Has the tightening of prudential norms from 1998 onward affected banks' lending behavior? Second, has the lending bias equivalent to the soft budget constraint? In other words, have firms facing lending bias been better performers? Third, has the equity market affected such bias? Has the IPOs lowered lending bias or strengthened it? The paper consists of 6 sections. Section 2 conducts an overview of the banking sector reform, while Section 3 identifies some features related to the equity market development. Section 4 shows stylized facts on financing patterns of publicly listed firms. Section 5 conducts empirical analysis to examine whether the lending bias has been present and if so, what features those firms facing favorable lending bias hold. Also, this section tests the impact of the equity market on the lending bias. Section 6 contains the concluding remarks.

2. Overview of the Banking Sector Reforms

2.1. Background: 1979-1993

Prior to 1979, the PRC's banking system was not modern and played only a limited role in promoting economic growth. This reflects the limited role of banks in a highly centralized planning system whose primary functions were collecting revenue from SOEs and allocating investment through budgetary grants (Ma, 1997). In this circumstance, banks simply provided credit needed by SOEs for their production plans and provided/monitored cash used principally to cover labor costs and purchases of agricultural products.

In the process of establishing the banking system, the Government first removed the monopolistic position of the People's Bank of China (PBC) in 1979 by establishing three specialized banks: the Agricultural Bank of China (ABC), Bank of China (BOC), and China Construction Bank (CCB). ABC was established to take over PBC's rural banking business and supervisory authority of a network of 60,000 RCCs that had been providing small-scale rural banking (IMF, 1996). BOC was delegated to take over foreign currency transactions, while CCB focused on the construction sector. The China Investment Bank was set up under the control of CCB. In 1994, the Government completed the two-tier banking system by removing commercial banking activities from PBC and transferring them to the Industrial and Commercial Bank of China (ICBC), the fourth specialized bank, established in 1984. In addition, other banks were established in the 1980s, including the State-owned China Investment Bank (1981), joint-stock Bank of Communications (1986), and CITIC Industrial Bank (1987) owned by China Investment and Trust Corporation.

Further, the reforms replaced direct grants with interest-bearing loans in an attempt to solve the SOEs' soft budget problems. From 1986, PBC was explicitly made responsible for monetary policy and the supervision of the financial system, including the money and capital markets (Schueller, 2001). With the objective of containing inflation, moreover, PBC took responsibility for formulating a credit plan that set an aggregate credit ceiling on each PBC branch according to the national economic plan and

authorized each branch to allocate credit under the ceiling. Thus, autonomy was given to every PBC branch, leaving room for them to collude with local governments, which intervened with respect to credit allocation. Moreover, PBC was not an independent regulatory body, functioning as a line ministry under the State Council and thus its monetary policy decisions were subject to the approval of the Council. In addition, PBC lost control over monetary policy as new regional banks and nonbank financial institutions—such as UCCs, international trust and investment companies, trust and investment companies—that operated outside the credit plan emerged.

2.2. Banking Sector Reforms of the 1990s

The major banking sector reforms from 1994 were centered on separating commercial lending and policy lending by transforming the four specialized banks and establishing three policy lending banks and new commercial banks. Other reforms included removing credit plans, reducing government intervention in credit allocation, (partial) entry deregulation, (partial) interest rate deregulation, tightening of accounting and prudential norms, and financial sector restructuring. These reforms were motivated by the central Government's recognition that an organizational restructuring of PBC was necessary along with increased autonomy to contain the economic overheating experienced in 1992-1993 (Schueller, 2001). PBC's lack of control over credit allocation and nonbank financial institutions led to a shift of funds from the banking system to unregulated sectors, giving rise to bubbles in the real estate and stock market and causing a decline in bank deposits and a liquidity squeeze. The banking sector reforms contain the following measures:

Separation between Commercial and Policy Lending Activities

The separation between commercial and policy lending activities aimed to promote liquidity management by PBC at the banking system level, rather than at the level of individual banks (IMF, 1996). This reflects the view that it is difficult to monitor the performance of bank managements and require them to take responsibility for losses unless policy lending activities are removed from commercial banks. The Commercial Bank Law of 1995 gave rise to a de facto two-tier commercial banking system that consists of (1) commercial banks that are subject to prudential regulations and are supervised by PBC, and (2) three policy lending banks, which are not subject to this law and whose operations are guided by individual charters (IMF, 1996).

Removal of the Credit Plan and Reduction of Direct Lending

As a part of the comprehensive monetary reforms launched since 1994,² the WSCBs have become gradually more prudent in terms of credit allocation in the face of

² Other monetary reforms included (1) PBC reforms (clarifying PBC's primary objective as maintaining price stability, enforcing strict supervision over financial institutions, conducting clearance and issuing bank notes, increasing the authority of PBC's headquarters in issuing effective monetary policy, rationalizing regional branches of PBC, etc.), (2) a gradual shift to indirect monetary policy using open market operations, reserve requirements, and the foreign exchange market, (3) a termination of PBC's

deteriorating performance of SOEs. By 1997, only 80% of the credit quota was fulfilled. PBC removed the credit plan for both working capital loans and fixed investment loans in 1998, replacing it with an indicative nonbinding target. Under this, the target serves only as a reference for commercial banks to plan their business and the aim is for a shift to indirect or market-based monetary policy.

In the past, local governments intervened heavily in allocating WSCB credit to support the operations of loss-making SOEs. However, such interference has recently declined since WSCBs are now required to appoint bank managers of branches at a provincial level according to the autonomous decisions at their headquarters. This means that local governments, which used to appoint managers of WSCBs' branches jointly with the headquarters, can no longer exert a major influence on such appointments.

On the other hand, central Government's intervention in allocating credit has continued even to this day, although explicit interference has declined. This practice can be justified, nevertheless, because a provision of Article 41 of the Commercial Bank Law stipulates that WSCBs shall provide loans for projects approved by the State Council. In recent years, however, WSCBs have gradually become more prudent and are given the freedom to determine their lending allocations according to commercial considerations (provided that their total lending is in line with asset/liability ratios and monetary policy target set by PBC). In 1998, WSCBs introduced a "lifetime responsibility system," which penalizes bank managers responsible for bad lending practices even after their retirement. Since banks are now to extend loans based on the repayment ability of borrowers, some loss-making SOEs have found it more difficult to obtain bank credit. However, WSCBs continue to extend credit to many SOEs. This is in part because of the latter's high demand for credit due to their heavy involvement in a large number of infrastructure-related projects (i.e., construction) and in part under central Government's indirect guidance. Together with a tightening of accounting standards, however, some banks have reduced lending—particularly to small and medium enterprises (SMEs) and new borrowers—causing a credit crunch.

Limited Approval with Respect to the Entry of New Banks

Following the establishment of three banks in the 1980s, the Government allowed the entry of more banks in the 1990s. The China Merchant Bank, Hua Xia Bank, and Everbright Bank were set up in the first half of the 1990s. In 1995, Minsheng Bank was established by a tycoon, Mr. Yonghao Liu, and other wealthy businesspeople as the first domestic private bank. Other banks established include the Guangdong Development Bank, Shanghai Development Bank, Shenzhen Development Bank, Fujian Industrial Bank, Yantai Housing Saving Bank, and Bengbu Housing Saving Bank. Local governments played an active role in establishing these local banks, reflecting that the

automatic monetization of fiscal deficits through the issue of bonds, and (4) a shortening of the maximum length of maturity allowed for interbank loans from three months to three days. Many of these reforms were formalized by the passage of a law governing PBC in 1995. During 1995-1996, PBC issued a number of short-term bonds to promote open market operations. Moreover, PBC's lending to commercial and policy lending banks has increasingly played an important role in liquidity management.

move to centralize WSCBs' credit allocation decisions from branch level to headquarters made it difficult for local governments to raise funds for local projects from WSCBs.

Interest Rate Deregulation

Banks in the late 1980s were allowed to adjust lending interest rates within a certain margin below and above the administered rate, although such flexibility on deposit interest rates was not granted. However, the austerity program of 1989 reversed this liberalization process. In 1993, PBC reimposed a lending rate ceiling at 20% of the basic rate and floor at 10% on commercial banks, ceiling at 30% and floor at 10% on UCCs, and ceiling at 60% and floor at 10% on RCCs. In 1996, PBC set the ceiling and floor both at 10% with respect to commercial banks, and the ceiling at 40% and floor at 10% with respect to RCCs. In 1998, the ceiling was set at 20% for loans to SMEs and at 50% for UCCs. In 1999, the ceiling for SMEs was raised to 30%. PBC fully liberalized interest rates on foreign currency loans and interest rates on foreign currency deposits of \$3 million or more—a major step forward in the liberalization of its tight interest rate system. Interest rates on deposits of less than \$3 million are now fixed by the China Association of Banks, a national-level nongovernment organization launched in May 2000 to promote self-discipline and cooperation in the domestic banking sector.

The interbank markets were unified into a national market through a computer network system in January 1996, contributing to a modest reduction in banks' excess reserves, which were held partly due to inefficiencies in liquidity management. Prior to 1996, the interbank market had emerged on an experimental basis among branches and sub-branches of ABC in the 1980s in Wenzhou and then spread to Beijing, Shanghai, and Guangzhou in the mid-decade (Schueller, 2001). Since interest rates were fixed and financial markets were segmented, these markets could not balance the interregional liquidity flow. With most of the transactions unsecured, the maturity mismatch (borrowing short and lending long) caused serious problems. As a result, PBC began to set a reference rate for the interbank market and introduced provisional regulations. In June 1996, the ceiling on interbank rates (China Interbank Offer Rate) was lifted. The next year, the interbank bond market mainly based on repo arrangements was introduced in addition to the already existing call markets (that do not take any collateral). The main purpose of this policy was to promote indirect monetary policy while developing liquid secondary bond markets through the active use of open market operations. Further, in 1993 the Government introduced a policy to subsidize the difference between the inflation rate and an administered deposit rate to protect depositors. However, this "indexation" policy was terminated since inflation declined sharply in 1997.

Strengthening of Accounting and Prudential Norms

PBC introduced capital adequacy requirements first in Shenzhen, later applying them to all commercial banks in line with the Commercial Bank Law promulgated in 1995. Other prudential norms, such as a loan-deposit ratio, liquid asset-liquid liability ratio, etc., followed. The loan classification system was reformed in 1998 by introducing an internationally accepted five-tier classification of loans based on recognition that

banks' poor management was the fundamental cause of the East Asian crisis.³ Nevertheless, only a few banks have adopted the new classification system, since many continue to use conventional practices in which loans are classified based on the length of arrears. Also, prudential norms were rarely taken up, despite guidelines announced by PBC. In 2001, however, prudential regulations and accounting standards were tightened in the face of the increasing challenges from globalization and PRC's accession to the World Trade Organization (WTO). As a result, CCB has introduced a credit risk reporting system.

Management of NPLs

To promote recapitalization and foreign ownership, the Government in 1998 injected Y270 billion in capital to WSCBs through the issuance of bonds.⁴ For the disposal of NPLs, the central Government established four asset management companies (AMCs) in 1999 capitalized at Y10 billion each in order to acquire WSCBs' NPLs: Cinda with CCB, Great Wall with ABC, Oriental with BOC, and Huarong with ICBC. In addition, a further six licenses have been issued to other companies to allow them to become involved in asset management business. These AMCs remain under the supervision of PBC, with guidance from the State Securities Supervisory Committee of China and MOF. So far, their major activities have been restricted primarily to transferring debts contracted before 1995, when the current Commercial Bank Law was passed, at face value. This suggests that Y1.4 trillion of assets (about 20% of combined outstanding loans) has been transferred from the four WSCBs to AMCs, which financed this transfer by issuing bonds of Y850 billion and borrowing Y550 billion from PBC. This operation, however, did not increase reserves, since WSCBs' total borrowings of Y550 billion from PBC were deducted from their liability (and the total amount of Y850 billion in bonds issued by AMCs appeared on the asset side of the WSCBs in exchange for a reduction of transferred NPLs of Y1.4 trillion). This enabled the four WSCBs to reduce NPLs by 10 percentage points from 35%. Of the Y1.4 trillion, AMCs plan to conduct, and have already conducted in some cases, a debt-equity swap of Y460 billion with respect to 601 SOEs that are relatively better performing and thus can be regarded as candidates for becoming public companies. These SOEs, however, have been selected by the State Economic and Trade Commission, not by AMCs themselves.

Even though Y1.4 trillion in NPLs was transferred to AMCs, the four WSCBs still held 25% of NPLs as of today, according to official estimates. The average

³ The system before 1998 had the following problems (Lardy, 1999). First, the loan classification system was based on payment status, rather than risk. Thus, in the case of multiple loans extended to a single borrower, individual loans were classified as NPLs only when the contractual terms of each loan were violated. Second, classifying loans as NPLs was often delayed since they were tied only to repayment of principal and many loans were bullet loans (such that no repayment of principal was required until the end of the loan term). Third, the most impaired category of NPLs was dead loans.

⁴ In 1998, PBC lowered the reserve requirement imposed on customers deposits from 13% to 8% and removed an excess reserve requirement of 7% introduced in 1992. This reduction has enabled WSCBs to invest in government bonds issued for recapitalization. This recapitalization procedure is equivalent to two swap transactions resulting in doubling the capital of the WSCBs: (1) asset swap of bonds for reserve deposits between the WSCBs and the MOF, and (2) a liability swap of equity for PBC borrowing between the WSCBs and PBC (Mo, 1999).

risk-weighted capital adequacy ratio of WSCBs is estimated to reach only about 5.7% (1.44% for ABC, 8.31% for BOC, 3.79% for CCB, and 4.57% for ICBC) as of the end of 2000. If proper accounting methods were applied, however, it is believed all WSCBs would have a negative net worth and thus would have been categorized as insolvent.

2.3. Performance of the Banking Sector

Given that PRC's macroeconomic performance has been remarkably favorable in the past, the gradual approach adopted by the Government on the banking sector reforms appears to have been successful on the surface. There are few countries in the world that have been able to achieve high real GDP growth averaging 10% in the past two decades and rapid financial deepening, as shown by the ratio of savings to GDP from 26% in 1985 to 120% in 1999 and the ratio of M2 to GDP from 33% in 1980 to 148% in 1999. The financial deepening was driven mainly by the increase in bank deposits by households. The banking sector plays a crucial role in PRC because it functions as a major financier for nonfinancial firms (Table 1).

Table 1. Market Capitalization, Bonds and Domestic Credit, 1992-2000
(% of GDP)

| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|----------------------------------|------|-------|------|------|------|-------|-------|-------|-------|
| Market Capitalization | | | | | | | | | |
| Total | 3.9 | 10.2 | 7.9 | 5.9 | 14.5 | 23.4 | 24.5 | 32.3 | 53.8 |
| A-Shares | | 9.6 | 7.5 | 5.7 | 13.9 | 22.9 | 24.3 | 31.9 | 53.1 |
| B-Shares | | 0.6 | 0.4 | 0.3 | 0.6 | 0.5 | 0.3 | 0.4 | 0.7 |
| Negotiable Market Capitalization | | | | | | | | | |
| Total | | 2.5 | 2.1 | 1.6 | 4.2 | 7.0 | 7.2 | 10.0 | 18.0 |
| A-Shares | | 2.0 | 1.7 | 1.4 | 3.7 | 6.5 | 7.0 | 9.7 | 17.4 |
| B-Shares | | 0.5 | 0.3 | 0.3 | 0.5 | 0.5 | 0.3 | 0.3 | 0.6 |
| Corporate Bonds ^{1/} | 3.6 | 2.6 | 1.7 | 4.0 | 4.6 | 5.6 | 7.3 | 8.8 | 9.2 |
| Domestic Credit | 94.7 | 103.6 | 92.3 | 91.1 | 97.2 | 106.2 | 119.5 | 130.4 | 132.7 |
| Government Bonds | 4.8 | 4.6 | 4.9 | 5.6 | 6.4 | 7.4 | 9.9 | 12.9 | 15.3 |

Note: 1/ Corporate Bonds include bonds issued by financial institutions and enterprises.

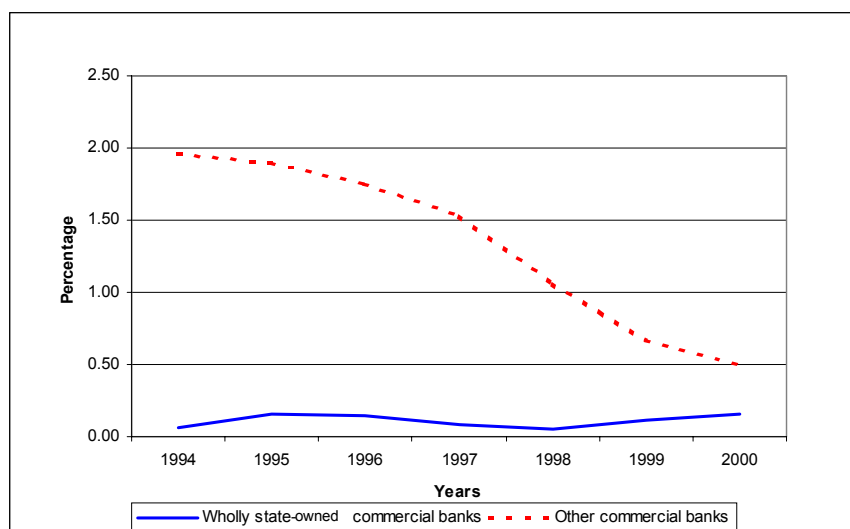
Source: China Securities and Futures Statistical Yearbook, 2001; International Financial Statistics Database, IMF; DRI Asia Database, CEIC Data Company.

In spite of this favorable macroeconomic performance and financial deepening, however, a closer look at this giant economy reveals deep-rooted structural problems—namely, a poor and deteriorating performance from SOEs has coexisted with an equally unfavorable performance from the banking sector (see Shirai [2002a] for details). Further, the dominance of WSCBs in the banking sector is one of the most important banking sector reform issues that should be taken into account. Even after the banking sector reforms, WSCBs' share has accounted for more than 75% of total claims

on nonfinancial sectors by all deposit money banks and about 70% of total deposits held by these deposit money banks during 1994-1999. WSCBs are also major recipients of loans from PBC, accounting for more than 90% of total borrowing from it.

In spite of the banking sector reforms, the overall performance of the banking sector has not improved much. Based on the distinction between WSCBs and other commercial banks (OCBs), it has been found that the performance of WSCBs has been unimpressive compared with OCBs, as shown in Chart 2 (see Shirai [2002a]). A more worrying sign, on the other hand, is the rapidly deteriorating performance of the OCBs (Chart 2) during 1994-2000. Thus, these banking sector reforms appear not to have led to a noticeable improvement in the performance of WSCBs. Nevertheless, WSCBs are not illiquid and they are able to operate in practice, because households have increasingly deposited their savings at these banks believing that they are protected by the central Government, which retains full ownership. Also, the underdeveloped state of the capital market and other markets has left households no other choice but to save in banks or government bonds. Moreover, WSCBs continue to be agents of the central Government. Although explicit policy lending practices have been reduced, lending to SOEs still constitutes a large share of WSCBs' total credit. Credit decisions by WSCBs are often influenced by central Government indirect guidance.

Chart 2. Returns on Asset for the Banking Sector, 1994-2000



Source: PROWESS Database, Center for Monitoring Indian Economy Pvt. Ltd.

A further recent phenomenon has been an upsurge in illegal lending and corruption scandals involving WSCBs. In some cases, borrowers find it difficult to obtain loans from WSCBs in the face of lending practices based on personal connections, bribery, and pressure from local governments. PBC continues to control official lending and deposit rates, preventing WSCBs from operating according to market principles. While the low lending interest rate policy aims at subsidizing SOEs, it has given rise to

collusive behavior among financial institutions despite the penalties faced. For example, WSCBs may legally circumvent interest rate controls by lending to nonbank financial institutions that are subject to looser interest rate controls, which in turn lend the funds at higher rates and share the profits with the banks. The fact that black markets exist and their prevailing lending interest rates are in the range of 100%-200% of regulated lending rates in some cases indicates that banks have strong incentives to lend at higher lending rates. Moreover, tight entry regulations continue to prevail.

3. Equity Market Development

3.1. Overview of the Equity Market

The equity market has been growing rapidly in recent years, compared with the corporate bond market (Table 1). The ratio of market equity capitalization to GDP (including A- and B-shares) grew from 3.9% or Y104 billion in 1992 to 53.8% or Y4.8 trillion in 2000. The number of listed firms (which include firms that issue only A-shares, only B-shares, both A- and B-shares, or A- and H-shares) rose from 53 in 1992 to 1,088 in 2000 (Table 2). As of May 2002, there are 1,169 companies listed at the PRC's domestic stock exchanges. Both these indicators are comparable to those in advanced countries. The ratio of market capitalization to GDP as of 2000 was below that of the United States (about 350%), but was comparable to that of Japan (about 70%) and Germany (about 50%). The number of listed firms was smaller than in India (about 10,000), United States (about 2,500) and Japan (about 2,000), but was greater than in Republic of Korea (Korea, about 800), Thailand (about 500), and Singapore (about 500).

Table 2. Summary Table of the Equity Market, 1992-2000

| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|--|-----------------------|----------|-----------|----------|-----------|-----------|-----------|------------|------------|
| | (in Units) | | | | | | | | |
| Number of Listed Companies (A-, B- and H-Shares) ^{1/} | 53 | 182 | 291 | 323 | 530 | 745 | 851 | 949 | 1,088 |
| Number of Listed Companies (B-Shares) ^{2/} | 18 | 41 | 58 | 70 | 85 | 101 | 106 | 108 | 114 |
| Number of Listed Companies (H-Shares) ^{3/} | | 6 | 15 | 18 | 25 | 42 | 43 | 46 | 52 |
| Turnover | (in 100 Million Yuan) | | | | | | | | |
| Total | 681.3 | 3,667.0 | 8,127.6 | 4,036.5 | 21,332.2 | 30,721.8 | 23,544.3 | 31,319.60 | 60,826.65 |
| A-Shares | | 3,522.6 | 8,003.1 | 3,958.6 | 21,052.3 | 30,295.2 | 23,417.7 | 31,049.55 | 60,278.67 |
| B-Shares | | 104.7 | 124.6 | 77.9 | 279.9 | 426.6 | 126.5 | 270.04 | 547.97 |
| Trading Volume | (in Millions) | | | | | | | | |
| Total | 3,795.4 | 23,422.2 | 201,333.9 | 70,547.1 | 253,314.1 | 256,079.1 | 215,411.0 | 293,238.88 | 475,840.00 |
| A-Shares | | 20,916.5 | 98,802.4 | 68,106.6 | 246,492.9 | 247,129.9 | 209,250.1 | 280,974.70 | 455,802.07 |
| B-Shares | | 1,739.9 | 2,531.5 | 2,424.2 | 6,821.5 | 8,872.0 | 6,160.5 | 12,264.18 | 20,036.13 |
| Turnover Rate | (Percent) | | | | | | | | |
| Shanghai | | 341.0 | 787.0 | 519.4 | 760.1 | 535.0 | 355.3 | 421.6 | |
| Shenzhen | 265.5 | 324.4 | 691.8 | 309.6 | 949.7 | 662.3 | 411.1 | 371.6 | |
| New York | 47.0 | 53.0 | 53.0 | 59.0 | 52.0 | 65.7 | 69.9 | 74.6 | |
| Tokyo | 20.0 | 26.0 | 25.0 | 26.8 | 26.9 | 32.9 | 34.1 | 49.4 | |
| Hong Kong, China | 53.0 | 61.0 | 40.0 | 37.1 | 43.9 | 90.9 | 61.9 | 50.6 | |
| Republic of Korea | 133.0 | 187.0 | 174.0 | 105.1 | 90.7 | 145.5 | 207.0 | 344.9 | |
| | (in 10,000s) | | | | | | | | |
| Number of Investor Brokerage Accounts (10,000) | 216.7 | 777.7 | 1,059.0 | 1,242.5 | 2,307.2 | 3,333.3 | 3,911.1 | 4,481.19 | 5,801.14 |
| Stock Price Index | (Index) | | | | | | | | |
| Shanghai Stock Exchange Composite Index | 780.4 | 833.8 | 647.9 | 555.3 | 917.0 | 1,194.1 | 1,146.7 | 1,366.58 | 2,073.48 |
| Shenzhen Stock Exchange Composite Index | 241.2 | 238.3 | 140.6 | 113.2 | 327.5 | 381.3 | 343.9 | 402.18 | 635.73 |
| Price-Earnings Ratio | (Ratio) | | | | | | | | |
| Shanghai | | 42.5 | 23.5 | 15.7 | 31.3 | 39.9 | 34.4 | 38.13 | 58.22 |
| Shenzhen | | 42.7 | 10.3 | 9.5 | 35.4 | 41.2 | 32.3 | 37.56 | 56.03 |

Note: 1/ Includes firms that issue only A-shares, both A- and B-shares, and both A- and H-shares.

2/ Includes firms that issue only B-shares and both A- and B-shares.

3/ Includes firms that issue H-shares.

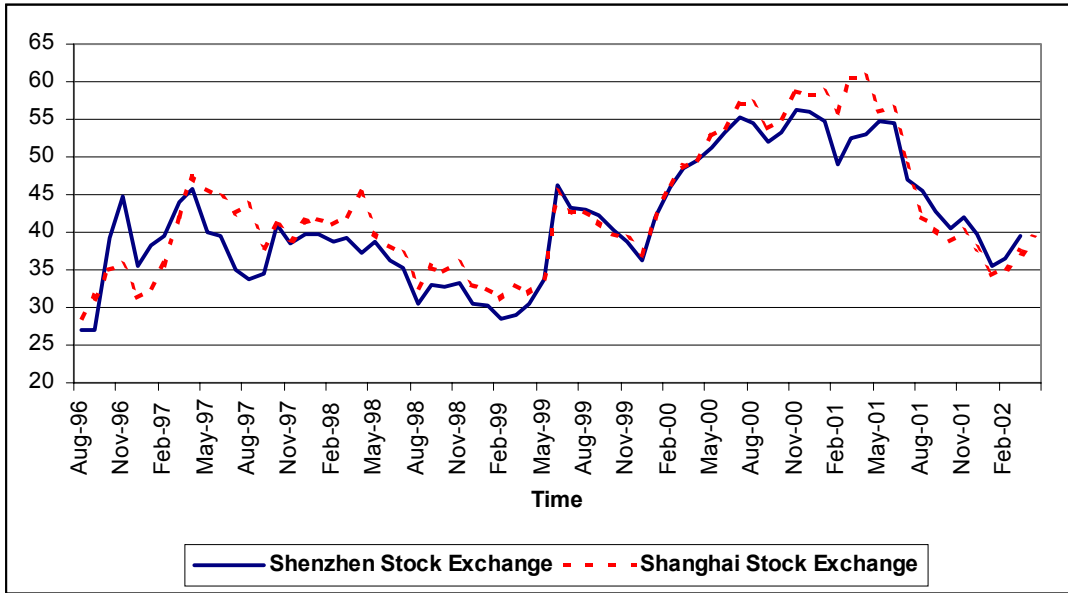
Source: China Securities and Futures Statistical Yearbook, 2001

However, one needs to be careful in using market capitalization as an indicator of equity market size. This is because in the PRC about 60% of shares are non-tradable and related to State-owned and legal person shares. State-owned shares refer to shareholdings of the central and local government, or institutions (including other SOEs) and departments designated by the State Council or by local governments. Legal person shares refer to those owned by domestic enterprises or other economic entities enjoying legal person status—generally promoters of the invested company. If the legal person is an SOE or institution where the State has a majority but less than 100% ownership, these shares are also called State-owned legal person shares (Lin, 2000). The ratio of market capitalization to GDP exaggerates the true status of the PRC's equity market development. For this reason, it is important to use the ratio of negotiable market capitalization to GDP (including only staff shares, ordinary domestic shares, foreign individual shares, etc.) as a supplementary indicator. If this is used, the ratio of negotiable market capitalization to GDP increased more modestly—from 2.5% in 1993 to 18% in 2000.

A unique feature of PRC's equity market is that the same company can issue A- and B-shares but aimed at different types of investors. Domestic investors have been allowed to trade only A-shares, while foreign investors are restricted to trading B-shares, even though the two shares are identical with respect to shareholder rights (i.e., voting and profit sharing rights). Thus, these two domestic markets are highly segmented owing to the de facto non-transferability of shares between them. Reflecting a rapid increase in the number of investors (whose brokerage accounts rose from 2.2 million in 1992 to 58 million in 2000) and the consequent high demand for shares, A-shares have been traded at a substantial premium over identical B- (also H-) shares. Thus, the price-earnings ratio (PER) has remained high—in the 30-50% range in 1996-2000. This PER ratio seems high even by international standards—greater, for instance, than in the United States, Japan, Hong Kong, China, United Kingdom, and Thailand (Charts 3a and 3b).

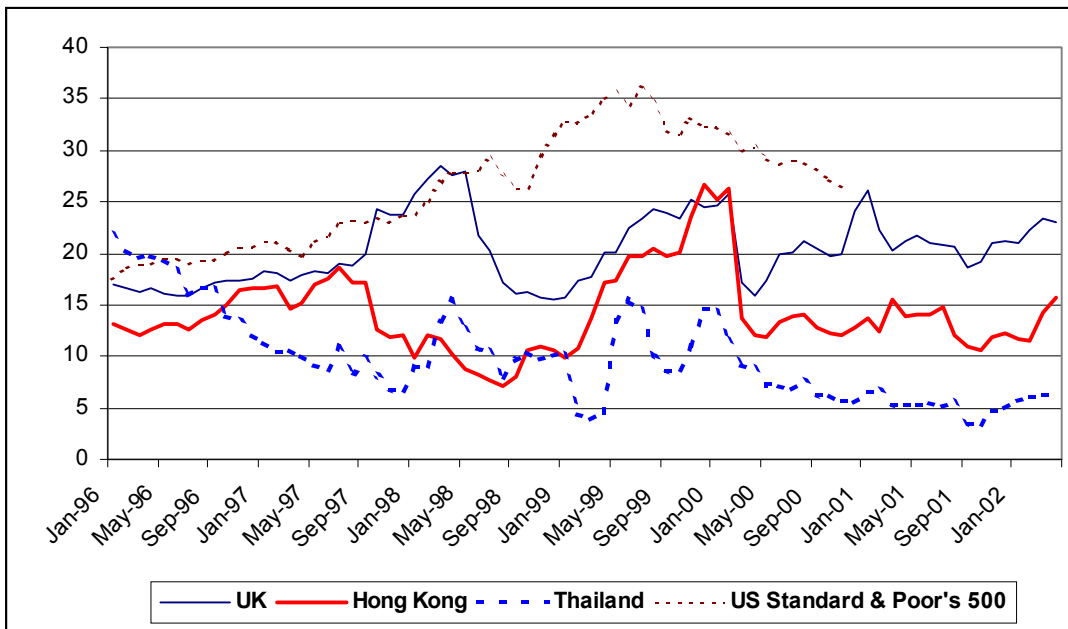
The price differentials between A- and B-shares (and H-shares) have also remained high (Charts 4a and 4b), fueling a great deal of investor speculation. B-shares are supposed to be offered only to foreign investors. But PRC nationals with access to foreign exchanges have been purchasing them, in anticipation of capital gains to be earned from cheaper B-shares in the event of an eventual merger between A- and B-shares. Similarly, even though foreign investors are not permitted to hold A-shares, some seem to have been offered to them, probably under proxy names of PRC nationals (Asian Development Bank, 1999). Since A-shares have been heavily oversubscribed, they account for most of the differentials. B-shares are generally regarded as representing better value, even though the A-share market has the higher trading volume and turnover value (Table 2). However, the Government started allowing individual domestic investors legally holding foreign currency accounts to purchase B-shares in February 2001 and liberalized the B-share market to all domestic investors in June 2001, helping to narrow down the price differentials from a factor of more than five to two. Investors widely interpreted this move as a sign that B-shares would soon be abolished and that the A- and B-share markets would be integrated; consequently, the prices of B-shares shot up.

Chart 3a. Price-Earnings Ratio in Chinese Stock Markets, 1996-2002



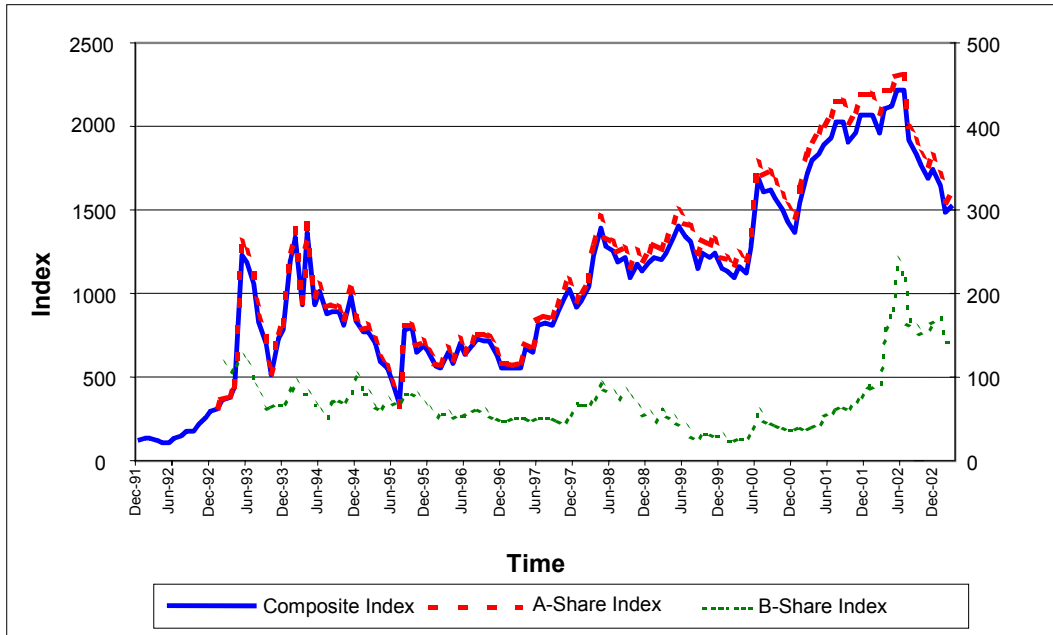
Source: DRI Asia Database, CEIC Data Company.

Chart 3b. Price-Earnings Ratio in Other Stock Markets, 1996-2002



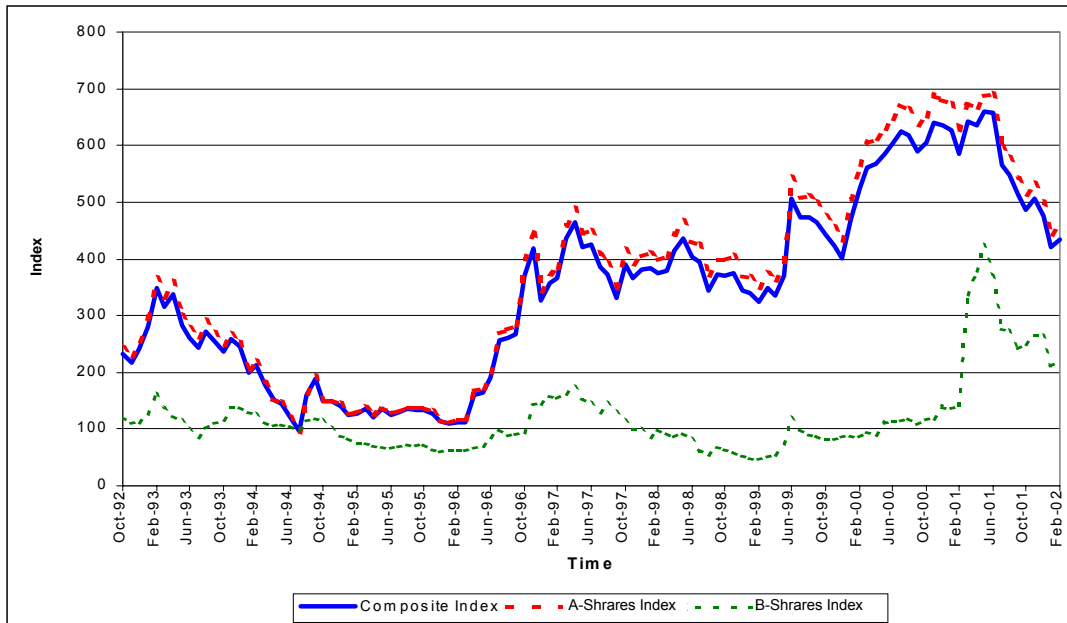
Source: DRI Asia Database, CEIC Data Company.

Chart 4a. Composite Price Index of Shenzhen Stock Exchange, 1990-2001



Source: DRI Asia Database, CEIC Data Company.

Chart 4b. Composite Price Index of Shanghai Stock Exchange, 1992-2002



Source: DRI Asia Database, CEIC Data Company.

The Government's greatest difficulty with the equity market is that it faces a tradeoff. On the one hand, there is the desire to sell off its shares of listed companies in order to finance the forecast shortfall in the national social security fund. And on the other, it fears the wrath of the millions of individual investors, some of whom will have invested well above their income levels. In June 2001, the Government announced that companies selling domestic and foreign shares on public markets should sell additional shares equivalent to 10 percent of the original offer size and that the proceeds from this would be transferred to the national social security fund. In response, the prices of A-shares plunged 30% up to October 2001, when the Government backed down. In January 2002, however, CSRC announced new proposals to unload State-owned shares, which immediately led to a 6-9% drop in stock prices in the space of a day, again forcing the Government to back down.

In June 2002, CSRC responded to growing calls to slow down the pace of public offers of additional shares held by the State. Under the provisional regulations, a company can launch additional share offers only if the weighted average net returns on assets over the past three years are not lower than 10%; its asset-liabilities ratio is no less than the average level of industry; and projects funded by their previous share issues are at least 70% complete. Moreover, the provisional regulations state that if a company plans to make an additional offer and the number of new shares exceeds 20% of the total, it must gain at the general meeting the approval of more than half of the votes of shareholders holding tradable shares. Further, if a company's earnings drop by 50% or more after an additional offer, the main underwriter would have its underwriting business curtailed or suspended. Last, if a company has already gained approval to launch an additional offer, but does not qualify under the new rules, it may switch to a rights issue as long as it meets the relevant requirements.

The tradeoff explains why the Government has been slow to privatize listed SOEs and bring in the necessary capital market reforms. The Government wants to generate money for the national security funds, so it is reluctant to sell its shares at a discount, which would also attract political opposition.

3.2. Characteristics of Listed Companies

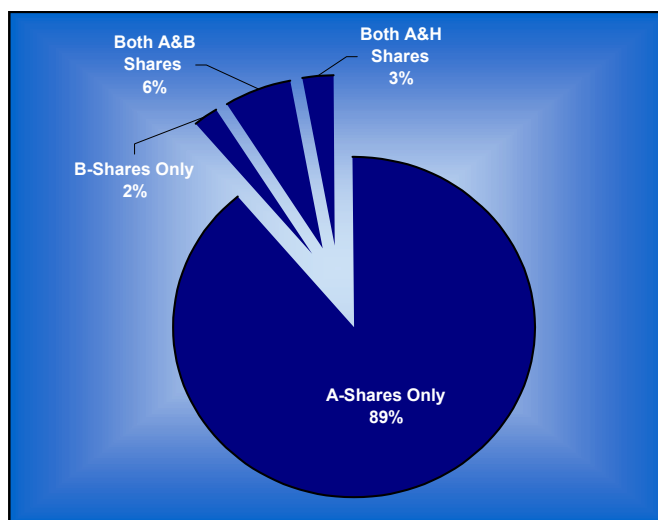
This subsection analyzes the main characteristics of the 1,098 firms that have been listed in the Shanghai and Shenzhen stock exchanges during 1992-2000. The data is from public source provided with assistance of some staff of PBC and excludes firms that issue only at foreign exchanges and thus covers firms that issue (a) A-shares only, (b) B-shares only, (c) both A- and B-shares, or (d) both A- and H-shares. Based on this database, the following five features with respect to the equity market can be seen (for details, see Shirai [2002b]):

Dominance of A-Shares

Since A-shares are equivalent to the ordinary common shares that are generally accepted in other market economies, they dominate the PRC's equity market, dwarfing

the amount of B- and H-shares. Listed firms are quite evenly distributed between the two stock exchanges, with about 52% listed in the Shanghai stock exchange and the rest in Shenzhen. Although no cross-listings between the two markets are permitted, a firm is allowed to be dual listed in domestic and foreign markets (B- and H-share and other foreign markets). Firms that issue only A-shares account for about 90% of total listed firms (Chart 5). Firms that issue both A- and B-shares are the next most numerous type of company, but these account for only 6.3% of the total listed firms. There are no firms that issue both B- and H-shares. It is generally regarded as being more prestigious to issue H-shares than B-shares (Asian Development Bank, 1999). Also, foreign investors often feel more comfortable investing in shares offered in the stock exchange of Hong Kong, China than the two stock exchanges of the PRC, due to the former's reputation for a modern and transparent corporate governance system.

Chart 5. Distribution of Listed Companies By Types of Stocks, 2000



Source: People's Bank of China.

Another factor in the dominance of A-shares is the legal requirement that they should account for not less than 25% of total shares issued when a company goes for listing (Lin, 2000). Also, new quotas for A-shares are determined by SCSC, PBC, and the State Planning Commission in accordance with the national investment and credit plan.

Moreover, a more stringent accounting system— such as International Accounting Standards for B-shares and the Hong Kong Statement of Standard Accounting Practice for H-shares—is applied to firms that issue B- and H-shares. However, there have been some concessions to accommodate the lack of a conventional legal infrastructure (Asian Development Bank, 1999). To increase the confidence of foreign investors in the quality of the financial reports, international auditing firms are hired during the corporatization process (Aharony, Lee, and Wong, 2000). Financial reports of the to-be-listed firms must be converted from a cash basis to an accrual basis in

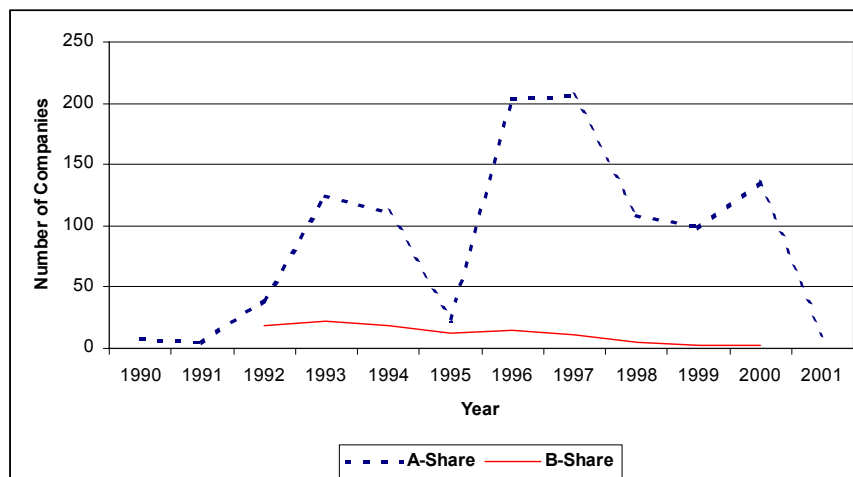
accordance with international accounting standards.⁵ Owing to the lack of expertise and knowledge, managers of SOEs often hire foreign underwriters, accounting firms, and lawyers to adopt the new accounting standards.

Another factor in the dominance of A-shares is that less stringent IPO requirements are applied to firms that issue only A-shares. For example, a firm wishing to be listed in the A-share market must achieve at least three consecutive years of operating profits, while firms that want to issues B- or H-shares must additionally be able to generate sufficient foreign exchange incomes to pay dividends in foreign currencies (Aharony, Lee, and Wong, 2000). Moreover, the State Council often sets a strict quota annually for new issues in each category. Aharony, Lee, and Wong have provided 1993 as an example, when there was a quota of 800 million B-shares; thus only 24 B-share IPOs were approved despite hundreds of SOE applicants.

Concentrated Timing of IPOs

Second, the number of listed firms issuing A-shares peaked in 1996-1997, contributing to a sharp rise in market capitalization as a percentage of GDP. The rapid increase in the number of listed firms reflects a rapid rise in investors during this period. In contrast, the number of listed firms issuing B-shares peaked earlier—in 1992-1994—when B-shares were permitted for the first time (Chart 6).

Chart 6. Distribution of Listed Companies by Listing Timing, 1999-2000



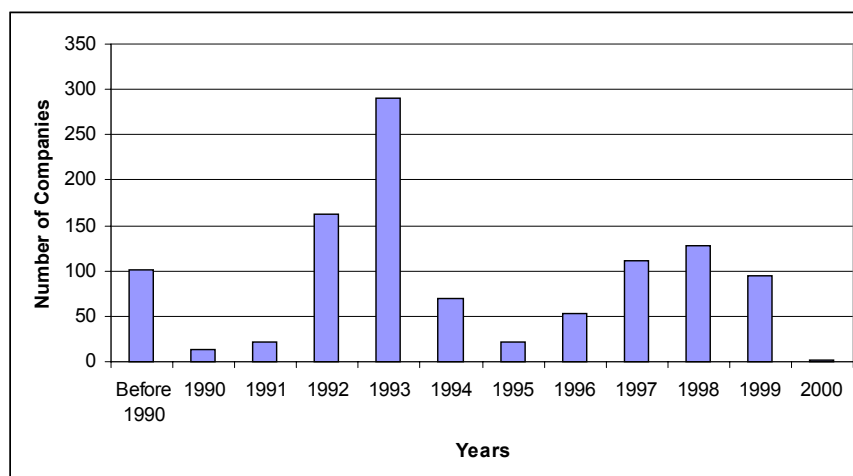
Source: People’s Bank of China.

⁵ MacNeil (2002) explains that limited liability companies are required to have shareholders of between 2 and 50 and are prohibited to offer their shares to public investors. Since these shareholders have preemption rights over any sale of shares by another shareholder, this form of companies give rise to a closed shareholding structure. By contrast, joint stock companies are permitted to raise capital through public share issues mainly through the public subscription method (requiring no less than 35% of the capital to be subscribed by the promoters and the remaining to public investors.)

Dominance of Recently Corporatized or Established Listed Firms

Third, most listed firms have been corporatized or established in recent years, especially since 1992, when the Government changed its stance on improving the performance of SOEs (Chart 7). From 1978 to 1991, the Government attempted to improve the corporate governance of SOEs without reforming property rights—mainly through reducing government intervention, providing management with greater autonomy (e.g., contract system), and inducing SOEs to operate on a more commercial basis (Lin, 2000). Moreover, the Government launched State-owned enterprise groups (connecting firms vertically and horizontally) in order to realize scale economies, promote technological advancement, and facilitate intra-group financing. When these measures failed to improve SOE performance, the Government in 1992 moved to clarify property rights of SOEs through corporatization—a conversion of SOEs into limited liability companies and joint-stock companies. Corporatization involves not only the clarification of property rights, financial independence, and accountability, but also a separation of government from management and promotion of commercially-oriented management and responsibilities. Moreover, the measures to provide SOEs with greater operational autonomy have been strengthened in 14 defined areas of decision-making (such as the right to set prices, the right to hire and fire workers, etc.). In recent years, corporatization has become the generic solution not only in improving the performance of SOEs, but also in obtaining external funding for them through the equity market. A company wishing to be listed first needs to obtain from CSRC an approval for corporatizing itself, followed by permission from the relevant local and national authorities.

Chart 7. Distribution of Listed Companies by Years of Corporatization or Establishment

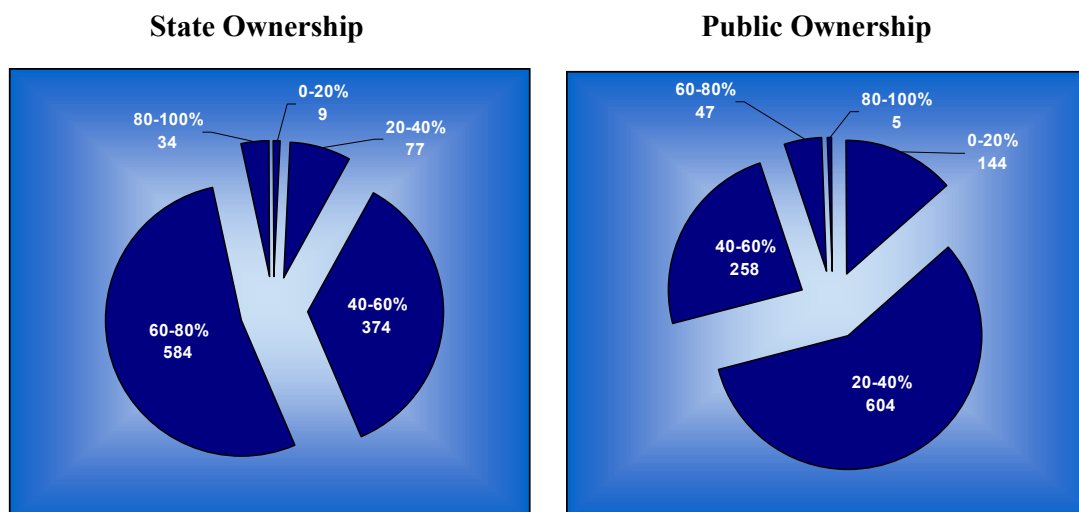


Source: People's Bank of China.

Concentration of State Ownership

Fourth, listed firms have remained to be largely State-owned. The proportion of shares under State ownership (the sum of State-owned and legal person shares) is in the 40-80% range in about 90% of listed firms (Chart 8). This indicates that the majority of listed firms remain SOEs, which are generally defined as firms whose State ownership exceeds 50%. In recent years, the ownership of a large number of SOEs has been transferred from the central Government to local authorities or local government-owned enterprises. Nevertheless, the ultimate owner of these shares remains the State Council. State-owned and legal person shares are both non-tradable and subject to the same restrictions. Sales of legal person shares to foreign investors were allowed until May 1996 when they were suspended (Lin, 2000).

Chart 8. Distribution of Listed Companies by Types of Ownership, 2000



Source: People's Bank of China.

A-shares refer to the sum of public shares, staff shares, and reserves shares and/or rights issues. Public shares are those held and traded by the general public—individual investors, staff and employees of companies who have not acted as promoters, and institutional investors (Lin, 2000). The number of investor brokerage accounts amounted to 57 million in 2000 and individual investors, staff and employees accounted for more than 99% of total investors (Table 2). Employee shares are those offered to employees (staff and management) of listed firms to provide a benefit or incentive to workers rather than raise capital for firms. These shares are registered under the title of the labor union (workers' council) of the company. In general, after the initial holding period of six to 12 months, the company may file an application with CSRC if it wishes to get an approval for its employees to sell their shares in stock exchanges. A-shares are issued in a registered form with nominal values in yuan and traded only in

this currency. Only PRC nationals or residents of the country are qualified to purchase, own, and trade such shares. By contrast, B-shares are issued in registered form with nominal values in yuan, but traded in foreign currencies: US dollars in the Shanghai stock exchange and Hong Kong dollars in the Shenzhen stock exchange. B-shares have been offered only to foreign individuals and firms, those in Hong Kong, China; Macau, China; and Taipei, China; and PRC citizens living abroad. Meanwhile H-shares are issued in Hong Kong, China. Other shares include N-, L-, and S-shares, which are listed and traded in New York, London, and Singapore, respectively.

Table 3 shows that the degree of State ownership declined slightly from 68% in 1992 to 60.5% in 2000. Meanwhile, the percentage of public shares has risen from 21% in 1992 to 34% in 2000. Nevertheless, the predominance of State ownership indicates that there remain intrinsic and fundamental problems of corporate governance in listed SOEs because public shareholders are not in a position to exercise voting power with any prospect of control (Asian Development Bank, 1999). Moreover, there is the ambiguity of property rights associated with State ownership (Lin, 2000). Under State ownership, property rights of firms belong to the people, so that the State (central and local governments and institutions delegated by them) manages the SOEs on behalf of the people. It does this, in practice, without bearing any residual risks or profits over the control and use of their assets, while SOEs continue to obtain a large amount of bank loans and subsidies. Thus, there are few incentives for the State to perform better. The people bear the ultimate residual risks, with these risks transferred through the budget. This, then, is the classic problem of who monitors the monitor (Lin, 2000)?

Table 3. Average Shareholding Patterns of Listed Companies, 1992-2000
(% of Total Shares)

| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|--|------|------|------|------|------|------|------|------|------|
| State-owned Shares | 32.6 | 34.3 | 34.1 | 33.6 | 35.6 | 31.6 | 30.7 | 28.8 | 29.3 |
| Legal Person Shares | 35.5 | 35.9 | 35.3 | 38.2 | 36.0 | 36.0 | 32.5 | 31.4 | 31.2 |
| Domestics Legal Person Share | 9.8 | 14.2 | 17.9 | 25.1 | 25.5 | 27.0 | 23.3 | 22.7 | 22.2 |
| Foreign Legal Person Share | 1.3 | 1.8 | 1.7 | 2.2 | 1.8 | 1.6 | 1.4 | 1.4 | 0.7 |
| Private Placement of Legal Person Shares | 5.1 | 6.5 | 10.5 | 10.9 | 8.5 | 7.4 | 7.9 | 7.0 | 7.5 |
| Total of Negotiable Shares | 21.6 | 22.2 | 23.5 | 20.2 | 23.7 | 28.0 | 32.2 | 34.9 | 37.1 |
| Public Shares | 20.6 | 19.5 | 20.5 | 18.1 | 20.0 | 24.2 | 28.3 | 31.2 | 33.7 |
| Staff Shares | 5.0 | 6.6 | 5.9 | 5.9 | 4.0 | 3.4 | 3.2 | 2.3 | 1.2 |
| Reserves Shares & Rights Issue | 0.0 | 0.0 | 0.1 | 0.6 | 0.6 | 0.9 | 1.0 | 1.0 | 0.5 |
| B-Shares | 2.7 | 2.6 | 3.2 | 3.0 | 3.0 | 3.2 | 3.2 | 1.8 | 2.7 |
| H-Shares | 0.0 | 0.4 | 0.6 | 0.6 | 0.7 | 0.6 | 0.7 | 1.9 | 0.8 |
| Preference Stock | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 |
| Other Shares | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.7 | 0.3 |

Source: People's Bank of China.

Presence of the Protected Sector

Fifth, many listed firms operate in protected sectors (such as petrochemicals, energy, and raw materials), which are largely monopolistic. Table 4 shows that listed firms in the protected industries account for about 40% of total listed firms, implying that there might be some arbitrariness in the selection of listed firms. Since each IPO remains small and competition among SOEs to be listed is intense, State and regional authorities are subject to lobbying and political pressure (Aharony, Lee, and Wong, 2000). This suggests that firms selected for public listings are not necessarily better performers than those rejected. Aharony, Lee, and Wong point out that the State Council and CSRC seem to favor SOEs in the protected sectors in their selection decisions, because these firms are State monopolies and operate under the direct supervision and control of the State Council. Protected firms often obtain direct subsidies from the central Government's budget, and some chief executive officers (CEOs) of these firms have previously held Cabinet-level positions. Also, most Cabinet ministers who regulate the protected sectors have worked in the same sectors as the managers. By contrast, firms in unprotected sectors are mostly under the supervision of provincial or local governments. Thus, they do not receive direct support from the central Government and many of them have to compete in domestic markets. Also, managers in unprotected sectors have greater freedom to set prices and to act more as businesspeople rather than politicians or bureaucrats.

Table 4. Distribution of Listed Companies by Sector, 2000

| | A-Share Only | A-and B-Share | A-and H-Share | B-Share Only |
|----------------------------------|--------------|---------------|---------------|--------------|
| Protected Sectors | 381 | 18 | 14 | 15 |
| Petrochemicals | 53 | 3 | 2 | 0 |
| Utility | 65 | 5 | 1 | 3 |
| Raw Materials | 138 | 4 | 5 | 4 |
| Other Sectors | 595 | 53 | 15 | 8 |
| Agriculture | 13 | 2 | 0 | 0 |
| Automobiles, Motorcycles, Planes | 51 | 6 | 1 | 2 |
| Conglomerate | 44 | 2 | 2 | 0 |
| Consumer Products | 101 | 12 | 2 | 0 |
| Commerce | 128 | 7 | 2 | 2 |
| Electronics | 73 | 10 | 3 | 2 |
| Finance | 7 | 0 | 0 | 0 |
| Glass and Glass Products | 5 | 2 | 1 | 0 |
| High-technology | 15 | 0 | 0 | 0 |
| Information | 17 | 0 | 1 | 0 |
| Machinery | 58 | 1 | 4 | 5 |
| Medical Equipment | 4 | 0 | 0 | 0 |
| Medicine | 46 | 1 | 1 | 0 |
| Others | 0 | 1 | 0 | 1 |
| Properties, Real Estate | 61 | 8 | 1 | 0 |
| Telecommunications | 12 | 0 | 1 | 1 |
| Textiles, Clothes | 67 | 5 | 2 | 3 |
| Transportation | 18 | 2 | 0 | 0 |

Source: People's Bank of China.

4. Stylized Facts on Firms' Financing Patterns

This paper has shown that the banking sector reforms have not improved banks' performance of banks. This may be related to the fact that banks have been engaging in lending to firms without carefully taking into account risks and returns. To highlight this issue, it is important to look at borrowers' data and examine whether firms whose performance has been unimpressive have gained greater access to bank loans as compared with other firms. For this purpose, this section attempts to investigate stylized facts with respect to average listed firms' financial patterns based on the same data used in Section 3. In general, PRC's listed firms tend to depend more heavily on external sources than internal sources (retained earnings) and, among external sources, more intensively on current liabilities than long-term liabilities (Table 5). They hardly issue corporate bonds and mostly borrow in short-term, indicating that their maturity mismatch could be substantial. In addition, while the ratio of equity to total liabilities, despite its importance, hardly changed over the period, capital reserves (such as loan and loss provisions set by the Government) and, to a lesser extent, surplus reserves (such as housing allowances set by the management) rose rapidly.

Table 5. Major Components of Liabilities of Listed Firms, 1992-2000

| Liabilities | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total Current Liabilities | 43.7 | 38.4 | 41.4 | 41.6 | 40.5 | 37.8 | 39.4 | 39.2 | 36.4 |
| <i>Short-term Loan</i> | 12.7 | 16.3 | 16.4 | 17.8 | 18.0 | 16.8 | 19.3 | 19.4 | 14.3 |
| <i>Advance from Customers</i> | 2.0 | 2.2 | 2.8 | 3.3 | 2.4 | 2.0 | 2.0 | 2.0 | 2.4 |
| <i>Long-term Liabilities Due within One Year</i> | 0.5 | 2.9 | 1.2 | 1.8 | 1.6 | 1.7 | 1.7 | 1.8 | 2.1 |
| <i>Accounts Payable</i> | 4.2 | 6.6 | 7.1 | 6.9 | 6.9 | 6.6 | 6.2 | 6.1 | 6.3 |
| <i>Others</i> | 5.7 | 5.7 | 5.9 | 11.5 | 10.5 | 10.8 | 10.3 | 10.0 | 11.3 |
| Total Long-term Liabilities | 13.6 | 11.4 | 14.1 | 14.4 | 14.1 | 11.9 | 11.4 | 11.2 | 8.6 |
| <i>Long-term Loans</i> | 7.3 | 7.3 | 8.8 | 10.1 | 9.4 | 8.2 | 8.6 | 8.9 | 6.8 |
| <i>Securities Payable</i> | 1.0 | 0.5 | 0.3 | 0.3 | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 |
| <i>Long-term Payable</i> | 0.8 | 1.3 | 11.2 | 3.1 | 2.8 | 2.7 | 1.9 | 1.6 | 1.3 |
| <i>Other Long-term Liabilities</i> | 0.1 | 0.3 | 0.3 | 0.8 | 1.1 | 0.9 | 0.8 | 0.4 | 0.3 |
| Total Shares of interest | 41.8 | 49.1 | 43.2 | 42.2 | 43.6 | 48.5 | 47.2 | 47.5 | 52.4 |
| <i>Equity</i> | 20.4 | 21.0 | 20.5 | 20.8 | 20.7 | 21.1 | 19.8 | 19.4 | 19.8 |
| <i>Capital Reserves</i> | 7.1 | 17.9 | 10.5 | 13.9 | 14.9 | 19.2 | 19.5 | 20.5 | 24.8 |
| <i>Surplus Reserves</i> | 1.4 | 2.1 | 3.1 | 5.0 | 5.0 | 5.0 | 4.9 | 4.7 | 5.2 |
| <i>Retained Earnings</i> | 1.2 | 4.2 | 2.0 | 1.7 | 2.5 | 2.9 | 2.8 | 2.2 | 2.6 |
| <i>Others</i> | 41.8 | 49.1 | 43.2 | 42.2 | 43.7 | 48.5 | 47.3 | 47.5 | 52.4 |
| Total Liabilities(Estimated) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| N | 286 | 576 | 755 | 863 | 919 | 953 | 978 | 1,131 | 1,134 |

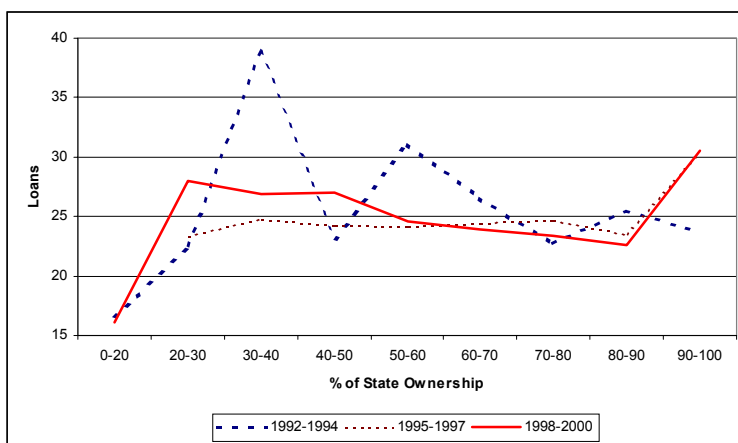
Source: People's Bank of China.

This section focuses on two important external financial sources: bank loans (defined as the sum of short- and long-term loans and long-term liabilities due within one year as a percentage of total liabilities [Loans]) and equity finance (defined as negotiable equity as a percentage of total liabilities [Nequity]). Most of the listed firms were

formerly owned fully by the governments or SOEs, so corporatization enabled other investors to become their shareholders. Since new equity finance mainly comes from the issuance of negotiable equity, this paper focuses on negotiable equity than total equity including non-negotiable equity. To examine changes in corporate financing patterns, the data is divided into three periods: 1992-1994, 1995-1997, and 1998-2000. There are the following seven features:

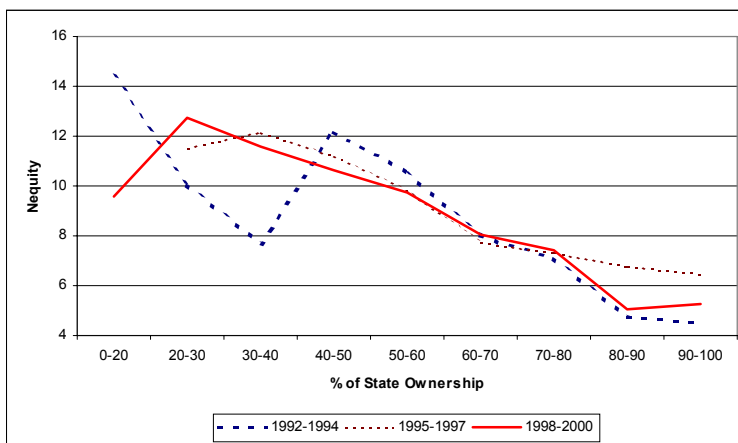
First, negotiable equity finance tends to decline as State ownership (defined as the ratio of State-owned and legal person shares to total equity) increases, as expected. On the other hand, less distinctive trends as compared with equity finance were traced in the case of bank loans (Charts 9a and 9b). Firms in the 90-100 range of State ownership appear to have greater access to bank loans in 1995-1997 and 1998-2000, while those in the 0-20 range of State ownership depend little on bank loans.

Chart 9a. Loans and State Ownership, 1992-2000



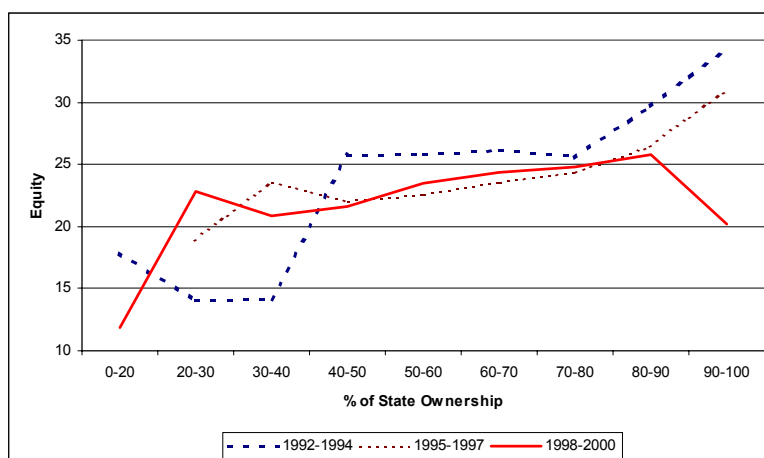
Source: People's Bank of China.

Chart 9b. Negotiable Equity and State Ownership, 1992-2000



Source: People's Bank of China.

Chart 9c. Total Equity Finance and State Ownership, 1992-2000



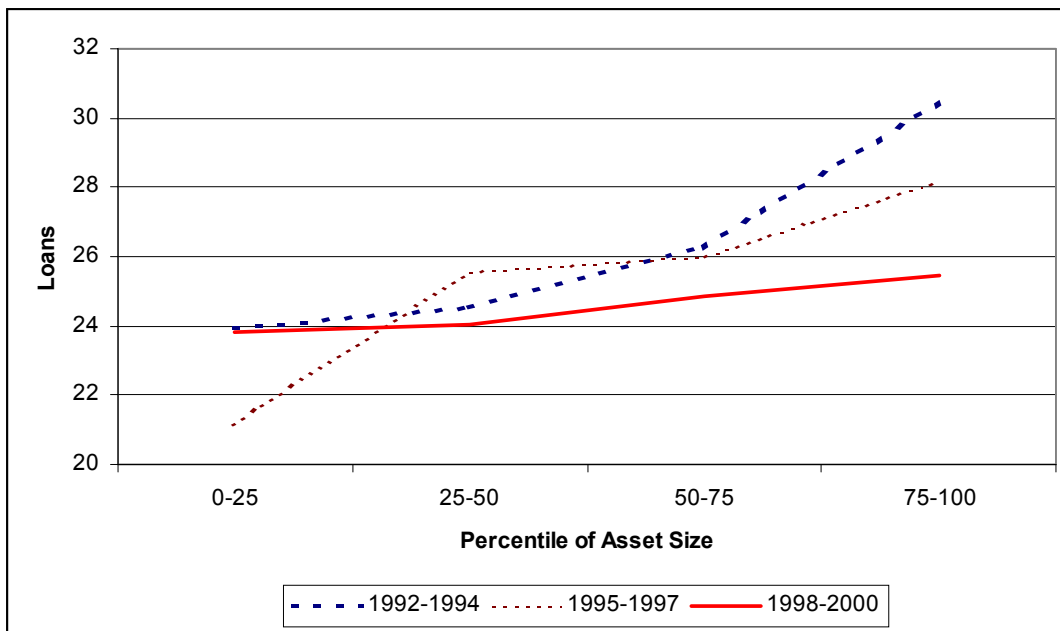
Source: People's Bank of China.

Second, the relationship between firms' asset size and bank loans showed a clear upward trend in 1992-1994, 1995-1997, and 1998-2000 each (although less pronounced in 1998-2000), while that between firms' asset size and negotiable equity finance exhibited a clear downward trend throughout the same periods (Charts 10a and 10b). Thus, small firms (firms whose asset sizes belong to the 0-25 percentile of the average value of three years) appear to have substituted equity finance for bank loans, while large firms (firms whose asset sizes belong to the 75-100 percentile) remain dependent on bank loans without significantly increasing recourse to equity finance. In other words, some lending bias toward large firms with respect to bank loan allocation was present for each period, but the bias weakened over the three periods. Moreover, small firms depended heavily on negotiable equity finance accounting for about 13% of total liabilities during 1992-1994, but their dependence declined during 1995-1997 and 1998-2000. These charts indicate that large firms lowered dependence intertemporarily on bank loans without substantially increasing negotiable equity finance, while small firms lowered dependence on equity finance without increasing loans between 1992-1994 and 1999-2000. In other words, no clear intertemporal or dynamic shift from bank loans to equity finance or the other way round was present for both large and small firms during 1992-2000. The decline in the sum of both bank loans and equity finance for both types of firms appears to have been offset by an increase in other sources of funds such as capital and surplus reserves.

Third, the relationship between returns on asset (ROA) and bank loans showed a clear downward trend during 1992-1994, 1995-1997, and 1998-2000 each, while that between ROA and negotiable equity finance exhibited irregular patterns for the same periods (Charts 11a and 11b). This indicates the prolonged presence of the soft budget constraint for unprofitable firms. Profitable firms tended to have greater negotiable equity finance during 1995-1997 and 1998-2000 each, while reducing bank loans for these two periods—the presence of an intertemporal shift from bank loans to negotiable equity finance for profitable firms. Unprofitable firms also increased negotiable equity

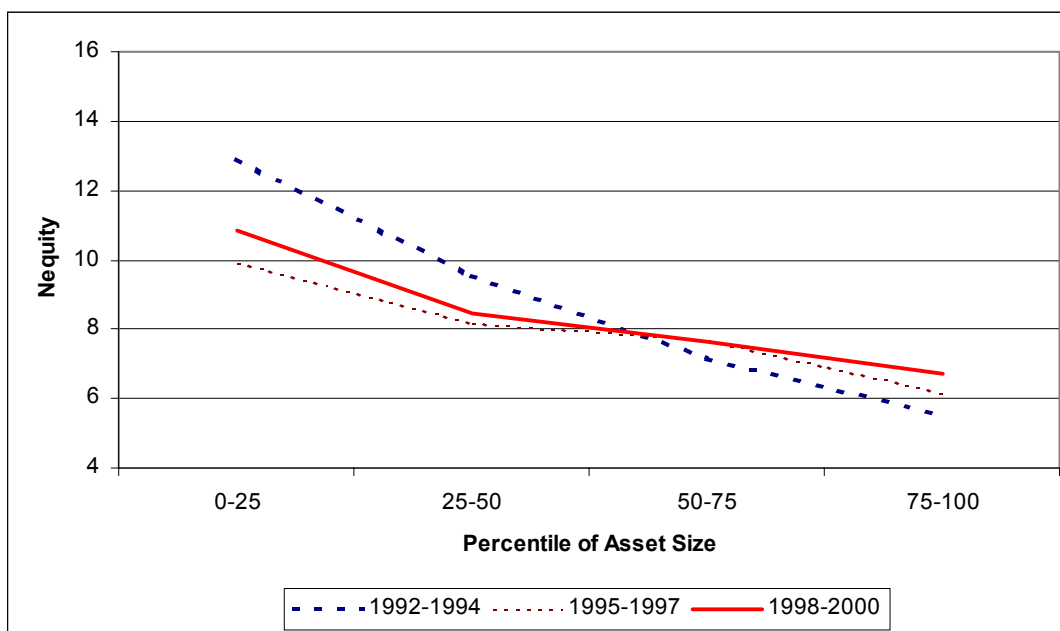
finance over the period, but did not substantially change the degree of dependence on bank loans.

Chart 10a. Loans and Asset Size, 1992-2000



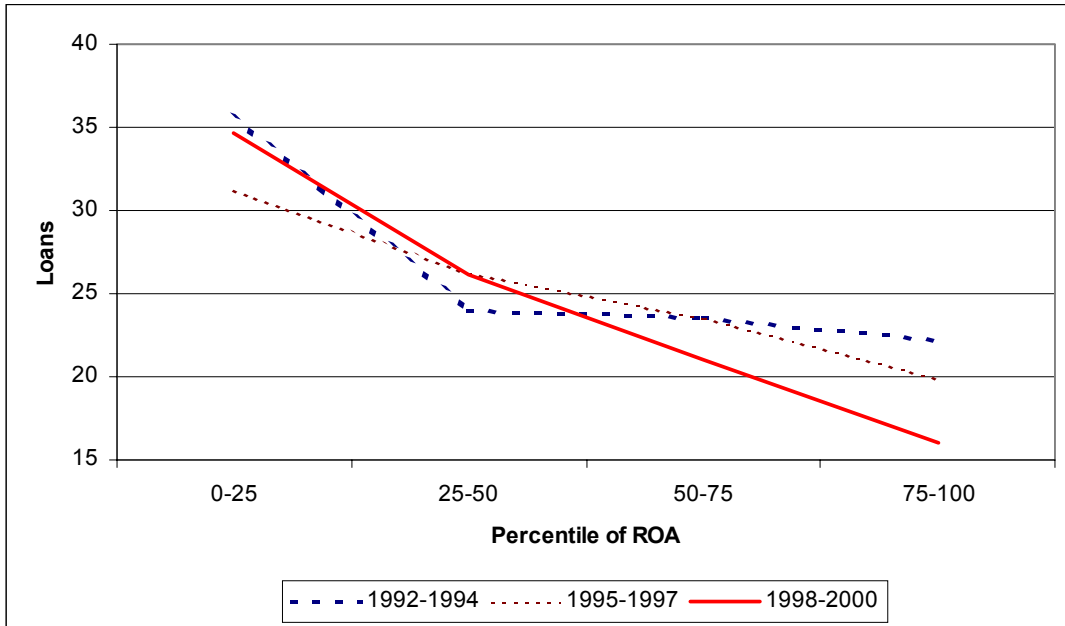
Source: People's Bank of China.

Chart 10b. Negotiable Equity and Asset Size, 1992-2000



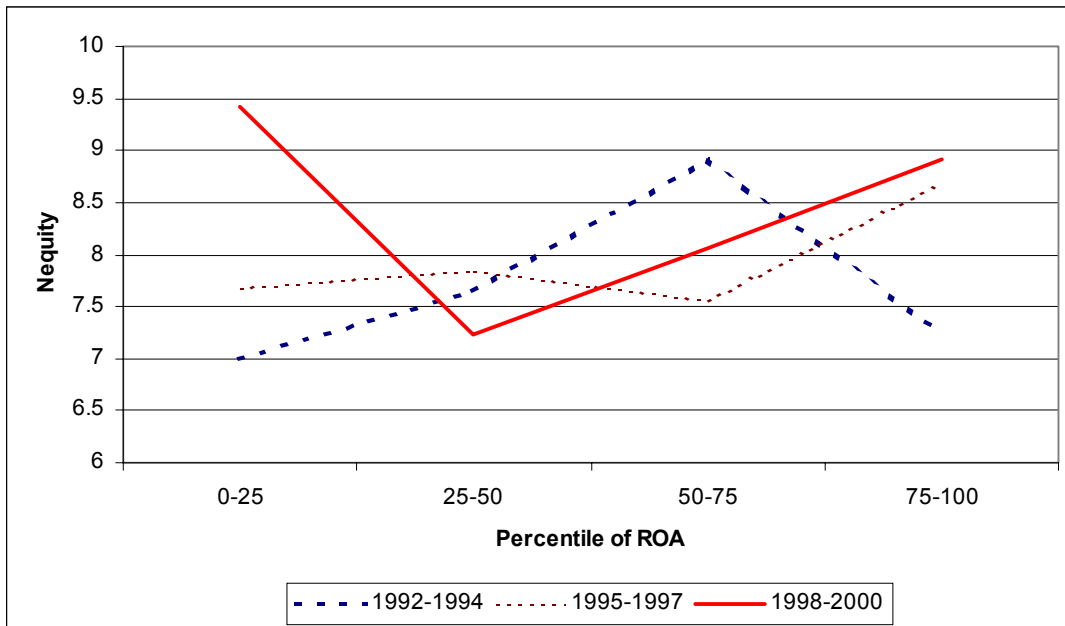
Source: People's Bank of China.

Chart 11a. Loans and ROA, 1992-2000



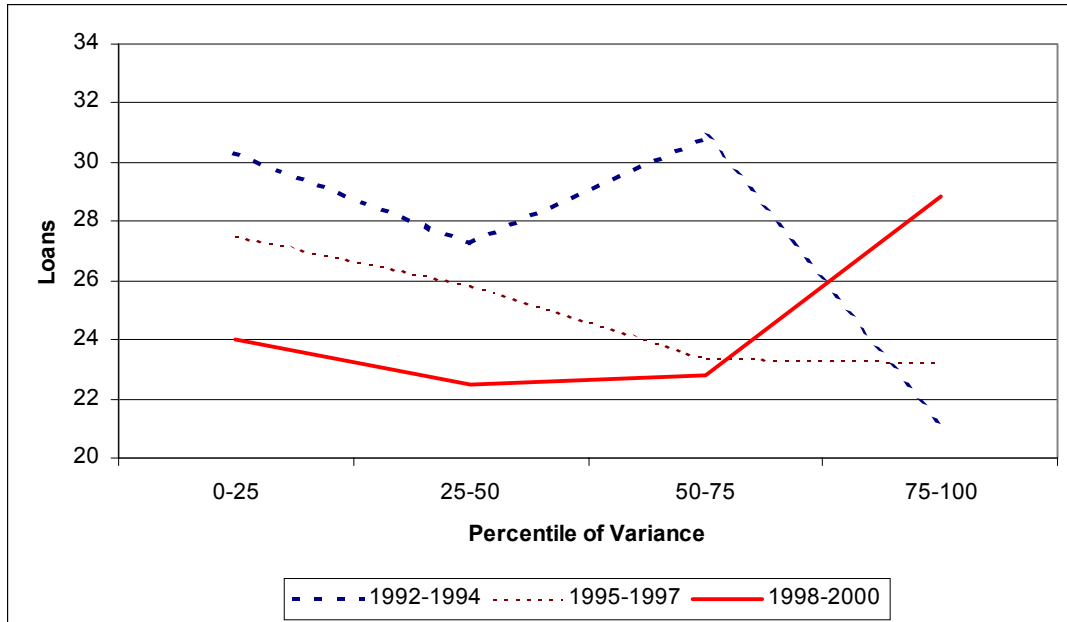
Source: People's Bank of China.

Chart 11b. Negotiable Equity and ROA, 1992-2000



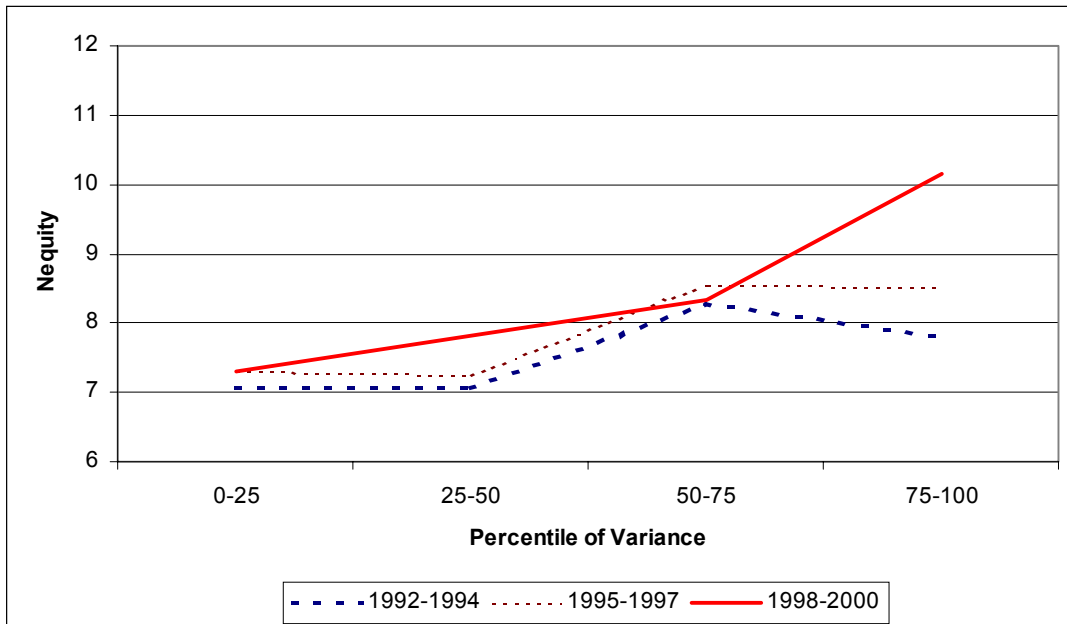
Source: People's Bank of China.

Chart 12a. Loans and Variance of ROA, 1992-2000



Source: People's Bank of China.

Chart 12b. Negotiable Equity and Variance of ROA, 1992-2000



Source: People's Bank of China.

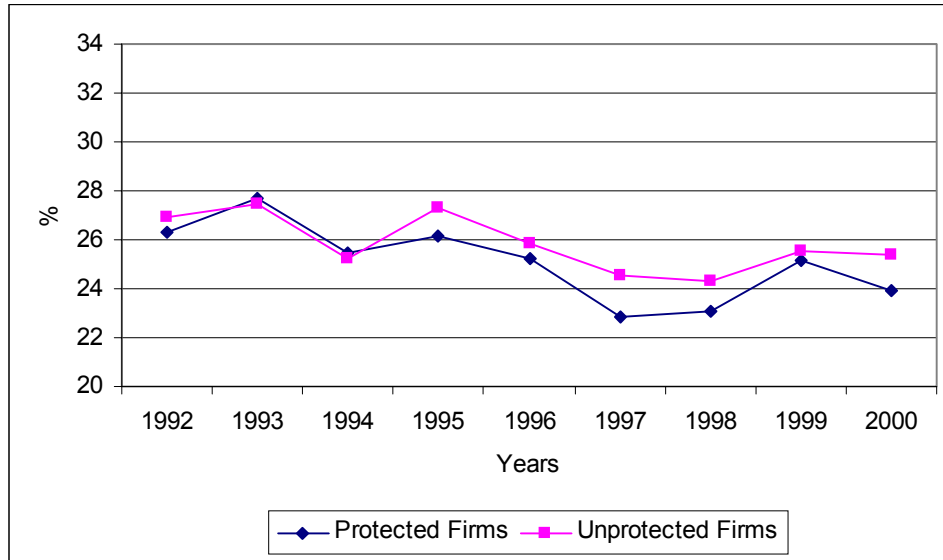
Fourth, a more or less downward trend was observed between the variance of ROA and bank loans during 1992-1994 and 1995-1997, while a more distinct upward trend was traced between the variance of ROA and negotiable equity finance (Charts 12a and 12b). In other words, firms with stable ROA (firms whose variance belongs to the 0-25 percentile of the average variance of three years) tended to rely more heavily on bank loans than those with volatile ROA (firms whose variance belongs to the 75-100 percentile) during 1992-1994 and 1995-1997, although firms with volatile ROA significantly increased dependence on bank loans in 1998-2000. These charts exhibit that firms with volatile returns increased dependence on both bank loans and negotiable equity finance from 1992-1994 to 1998-2000, while firms with stable returns reduced the dependence on bank loans without increasing negotiable equity finance over the same period. The increased dependence of firms with volatile ROA on bank loans appears to support the view that these firms' soft budget constraint emerged in recent years.

Fifth, bank loans were relatively more intensively allocated to firms in unprotected sectors than those in protected sectors (i.e., petrochemicals, utility, and materials) during 1995-1997 and 1998-2000 each, while the former's dependence on negotiable equity finance exceeded that of the latter during 1998-2000 (Charts 13a and 13b). Firms in protected sectors are generally State monopolies and operate under the direct supervision and control of the State Council. As a result, these protected firms often obtain direct subsidies from the central Government's budget (Aharony, Lee, and Wong, 2000). By contrast, firms in unprotected sectors are mostly under the supervision of provincial or local governments, so they do not receive direct support from the central Government and many of them have to compete in domestic markets. Partly reflecting these differences, there appears a clear intertemporal shift from bank loans to negotiable equity finance as for firms in unprotected sectors during 1995-2000.

Sixth, there is a clear divergent trend with respect to bank loans between firms that were corporatized or established before 1990 (so-called "old" firms) and those after 1990 (so-called "new" firms). An increase in the dependence of old firms on bank loans rose sharply from about 26% in 1996 to 33% in 1999-2000, as shown in Charts 14a, appears to support the view that banks increased credit allocation to old firms. At the same time, old firms depended more heavily on negotiable equity finance than new firms. Charts 14a and 14b indicate that new firms increased negotiable equity finance while reducing bank loans during 1995-2000, suggesting an intertemporal shift from bank loans to negotiable equity finance. However, such a shift was not traced for old firms.

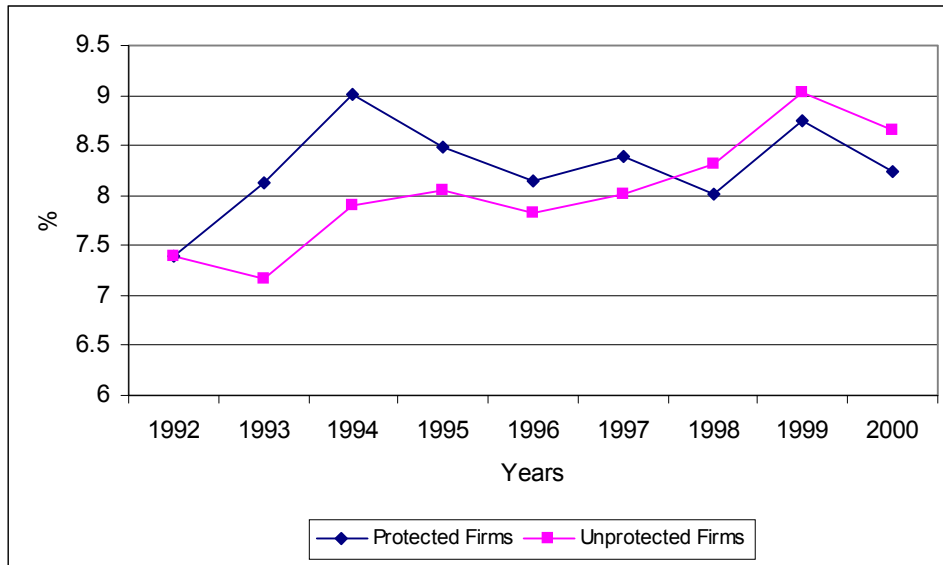
Seventh, firms issuing other shares (both A- and B-shares, only B-shares, or both A- and H-shares) increased both bank loans and negotiable equity finance as a percentage of total liabilities in recent years, while firms issuing only A-shares reduced bank loans and increased equity finance over the period (Charts 15a and 15b). Since firms issuing B- and H-shares are supposed to be subject to more stringent accounting and listing requirements and thus higher-quality firms, banks may have increased an incentive to extend more credit to such firms in recent years. Firms issuing only A-shares appear to have shifted from bank loans to equity finance during 1996-2000, supporting argument for the presence of the intertemporal shift.

Chart 13a. Loans for Protected and Unprotected Firms, 1992-2000



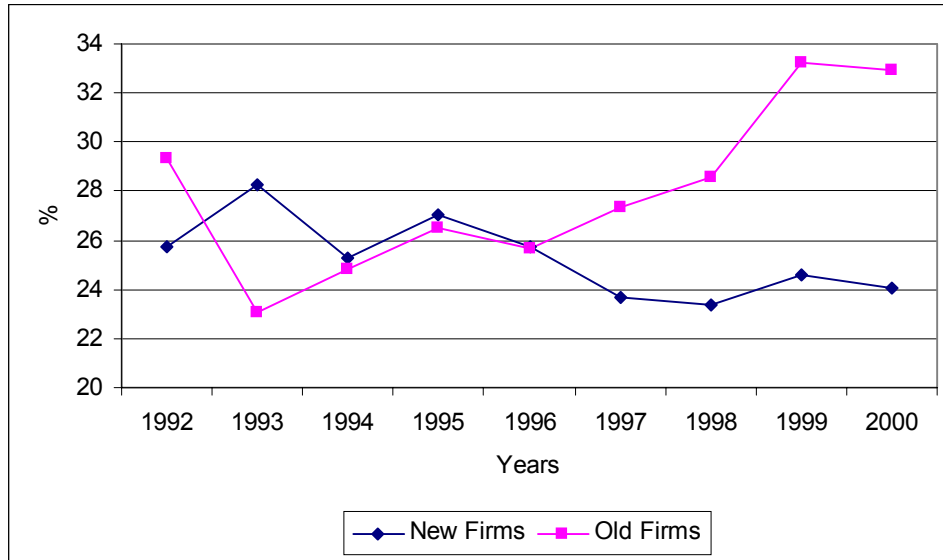
Source: People's Bank of China.

Chart 13b. Negotiable Equity for Protected and Unprotected Firms, 1992-2000



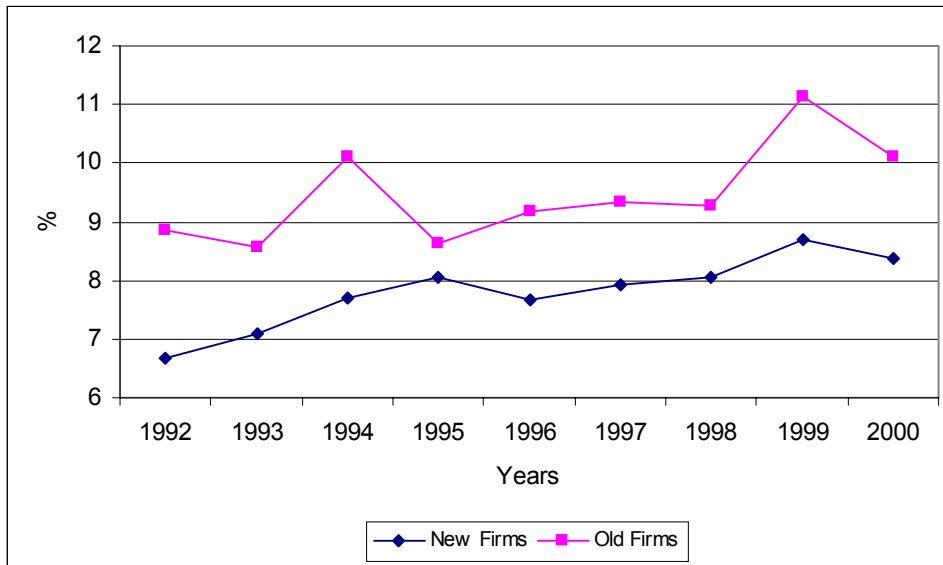
Source: People's Bank of China.

Chart 14a. Loans for New and Old Firms, 1992-2000



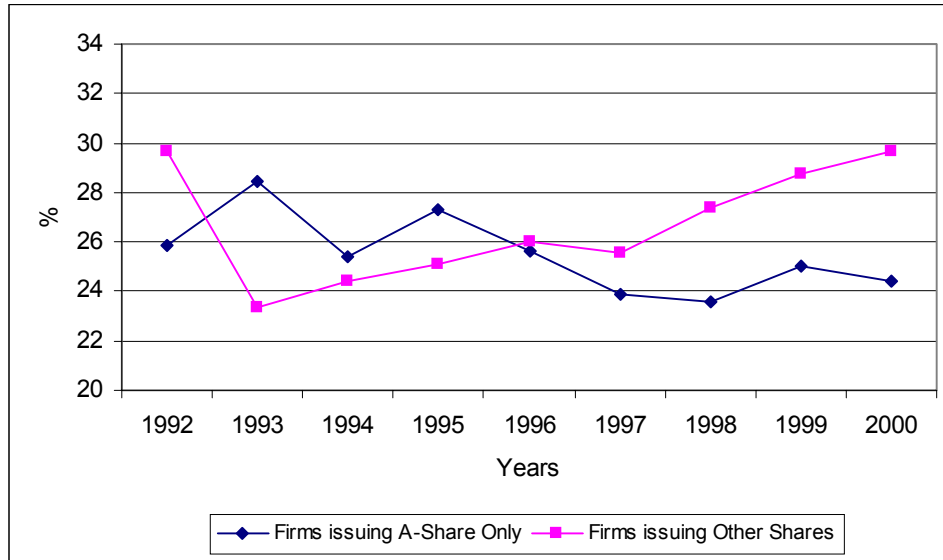
Source: People's Bank of China.

Chart 14b. Negotiable Equity for New and Old Firms, 1992-2000



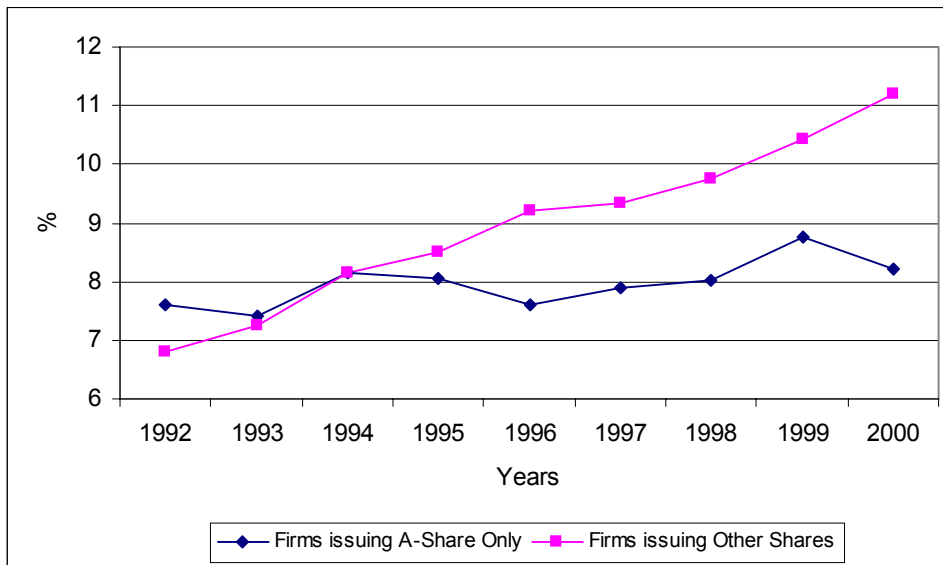
Source: People's Bank of China.

Chart 15a. Loans for Firms Issuing Only A-Shares and Other Shares, 1992-2000



Source: People's Bank of China.

Chart 15b. Negotiable Equity for Firms Issuing Only A-Shares and Other Shares, 1992-2000



Source: People's Bank of China.

To summarize, three types of firms—firms with large State ownership (except in 1992-1994), large firms (although declining), unprofitable firms, firms with volatile returns (especially in 1998-2000), old firms (in 1992-2000), and firms issuing other shares—have depended more heavily on bank loans. Moreover, there is a static inverse relationship between negotiable equity finance and bank loans for specific types of firms; negotiable equity finance appears to have been substituted for bank loans for small firms and profitable firms (except 1992-1994). This suggests that the establishment of the equity market has contributed to providing diverse financial sources to small and profitable firms. Further, there is a clear intertemporal or dynamic shift from bank loans to negotiable equity finance for profitable firms, firms in unprotected sectors, new firms, and firms issuing A-shares over the period. Namely, the equity market has become important for these types of firms.

5. Testing Changes in Firms' Corporate Financing Patterns

Before the second wave of the banking sector reform took place in 1994, the Government heavily intervened in banks' financial allocation in order to achieve a targeted economic growth rate. Thus, policy loans—rather than commercial loans—took a large portion of credit by banks. Even after policy loan activities were transferred from WSCBs to policy lending institutions in 1994-1995, government intervention in banks' lending decisions has continued. Based on data covering 268 listed companies during 1994-1999, Lu, Thangavelu, and Hu (2001) have tested banks' lending bias toward SOEs by looking at borrowers' data. Namely, they have examined the relationship between the loan ratios of firms and the key variables including default risk, collateral level, State-ownership, firm size and industrial policy. They have found that banks lent more intensively to SOEs than non-SOEs after controlling for the same default risk and collateral provision. This indicates systematic bias in banks' lending decisions and the presence of a soft budget constraint—major cause of NPL problems. As another cause of lending bias toward SOEs, Lu, Thangavelu, and Hu have pointed out that banks often find it difficult to enforce the loan contracts in the event of loan default of non-SOEs, which has increased their preference toward SOEs as customers. Also, low transaction costs with SOEs as a result of long-term relationships have given rise to the lending bias toward SOEs. This section first revisits this issue based on more comprehensive data and examines whether banks' lending bias has been present until this day and if so, what features those firms facing the soft budget constraint hold. Then, this section focuses on the issue of how changes in the equity market have affected such bias.

5.1. Basic Regression Analysis for Banks' Lending Bias

In order to test factors affecting firms' loan financing patterns or equivalently bank' lending behavior, a regression analysis was performed using two dependent variables: loans (defined as bank loans in Section 5 [LOAN]) and leverage (defined as the ratio of long-term liability to total shares of interest including equity, retained earnings, and reserves [LEVERAGE]). Various explanatory variables are considered to reflect firms' specific features (such as size, years of corporatization or establishment, State

ownerships, types of shares, sector classification, profitability, variance). The size of a firm is measured by the natural logarithm of a firm's asset (ASSET). AGE reflects the number of years between the year of corporatization and 2000 and thus, the greater the AGE is, the older the firm is or the earlier the corporatization process took place. To assess the impact of State ownership, the ratio of State ownership to total shares (STATE) is used. As for the types of shares, BSHARE and HSHARE are adopted. BSHARE equals one if a firm issues both A- and B-shares or only B-shares, and zero otherwise. HSHARE equals one if a firm issues both A- and H-shares, and zero otherwise. To take into account riskiness of listed firms, the model adopts the variance of ROA of the past two and current years (VARIANCE). Moreover, the ratio of outstanding fixed assets to total asset [FIXED] is adopted as a proxy for collateral. Furthermore, firms' asset growth [GASSET] and real GDP growth [RGDP] are used to take into account trends of individual activities or business cycles. The time dummy variables [TIME] are also adopted.

Moreover, the model includes two types of sector dummy variables: one based on the six classifications adopted by CSRC (PROPERTY, INDUSTRY, FINANCE, COMMERCE, UTILITY, CONGLOMERATE) and the other based on protected sectors (petrochemicals, utilities, and materials) identified by Aharony, Lee, and Wong [PROTECTED]). PROPERTY equals one if a firm belongs to the property and real estate and zero otherwise. INDUSTRY equals 1 if a firm belongs to the manufacturing and other industry sectors and 0 otherwise. FINANCE equals 1 if a firm belongs to the finance sector and 0 otherwise. COMMERCE equals 1 if a firm belongs to the wholesale, retail, and distribution sectors and 0 otherwise. UTILITY equals 1 if a firm belongs to utility sectors and 0 otherwise. CONGLOMERATE equals 1 if a firm engages in a wide range of sectors and 0 otherwise. PROTECTED equals 1 if a firm belongs to protected sectors and 0 otherwise. Profitability is proxied by ROA. Moreover, this section adopts two more variables as proxies for protected firms: SALETAX and INTEREST. SALETAX refers to the ratio of business tax payments to income from main businesses, following Lu, Thangavelu, and Hu (2001). Lu, Thangavelu, and Hu have used the ratio of sales tax payment to sales as a proxy for the industrial policy given that favorable sales-related tax rate has been one of the major means adopted by the Government to support the priority industries designated by industrial policy. In addition, the Government has been supporting SOEs in the form of interest payment of bank loans for technology upgrading especially in the area of textile, petrochemical, machinery, and nonferrous metals sectors. Thus, this section uses INTEREST defined as the ratio of interest payment to total liabilities as a proxy for subsidized interest (or implicit interest).

The signs of the coefficients of ASSET, AGE, STATE, and PROTECTED are expected to be positive if there are banks' lending biases toward large firms, old firms, firms with greater State ownership, and protected firms. The signs of the coefficients of SALETAX and INTEREST are expected to be negative if firms with lower business tax or subsidized interest payments (thus regarded to be protected firms) have greater access to bank loans. Moreover, the sign of the coefficient of ROA is expected to be negative, if banks tend to lend more intensively to unprofitable firms as compared with profitable firms. Further, the sign of the coefficient of VARIANCE is expected to be positive, if bank credit has been allocated more intensively to firms with greater variance of ROA or

firms with volatile returns as compared with firms with smaller variance of ROA or firms with stable returns. All these variables could be used to test whether firms have been facing the soft budget constraint. If banks are seriously concerned about improving their balance sheets, they are expected to become more cautious about their lending decisions and thus lend more willingly to promising or favorable firms—such as relatively small firms (proxied for firms not engaging in monopolistic sectors in PRC), newly corporatized/established firms (due to lack of a legacy from past poor management), unprotected firms, largely public-owned firms, profitable firms, and firms with stable returns. Thus, the evidence against these expectations could be regarded as supporting the argument for the continued presence of the soft budget constraint for relatively unpromising or low-quality firms.

Based on the same data used earlier, regression analysis is performed using the Ordinary Least Squares (OLS) method. Since VARIANCE uses 1992-1993 data, the observation period covers 1994-2000. The regression estimation is conducted for the whole sample period (1994–2000) and two separate periods (1994–1997 and 1998–2000). Regression analysis for two separate periods is performed in order to assess whether banks changed their lending behavior after the 1998 reform on loan classification system. The variables were tested for the presence of a high degree of multicollinearity among them using simple correlation matrix. The test rejected the presence of a high degree of multicollinearity. This paper used White's heteroscedasticity-corrected standard errors in the entire analysis in order to correct for the presence of heteroscedasticity. The estimation results using LOAN as a dependent variable are reported in Table 6 and summarized as follows:

Table 6. Estimation Results for LOAN

| Variable | 1994-2000 | | | | | | | | 1994-1997 | | 1998-2000 | |
|--------------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|
| | Regression 1 | | Regression 2 | | Regression 3 | | Regression 4 | | Regression 5 | | Regression 6 | |
| | Coef. | t-Stat. | Coef. | t-Stat. | Coef. | t-Stat. | Coef. | t-Stat. | Coef. | t-Stat. | Coef. | t-Stat. |
| C | -7.10** | -2.09 | -6.24* | -1.84 | -4.53 | -1.33 | 4.42 | 0.98 | -18.39*** | -3.96 | 3.15 | 0.63 |
| TIME95 | 2.00** | 2.29 | 1.98** | 2.35 | 1.30 | 1.29 | | | 1.42 | 1.62 | | |
| TIME96 | 2.56*** | 3.05 | 2.58*** | 3.16 | 1.71* | 1.75 | | | 1.56* | 1.84 | | |
| TIME97 | 0.59 | 0.71 | 0.72 | 0.90 | -0.13 | -0.14 | | | -0.56 | -0.66 | | |
| TIME98 | -0.91 | -1.05 | -0.64 | -0.77 | -1.57 | -1.58 | | | | | | |
| TIME99 | -0.42 | -0.46 | -0.12 | -0.14 | -0.93 | -0.91 | 1.11* | 1.77 | | | 0.04 | 0.07 |
| TIME00 | -1.27 | -1.35 | -0.81 | -0.89 | -1.70 | -1.59 | 0.35 | 0.55 | | | -0.85 | -1.25 |
| AGE | 0.56*** | 6.92 | 0.57*** | 7.09 | 0.56*** | 6.87 | 0.81*** | 8.35 | 0.09 | 0.84 | 0.80*** | 6.95 |
| ASSET | 1.92*** | 6.77 | 1.68*** | 6.76 | 1.80*** | 6.39 | 1.60*** | 4.28 | 2.92*** | 7.41 | 1.56*** | 3.76 |
| STATE | 0.15*** | 10.54 | 0.15*** | 10.85 | 0.15*** | 10.27 | 0.00 | -0.12 | 0.18*** | 10.35 | 0.04** | 2.01 |
| ROA | -0.74*** | -16.31 | -0.73*** | -16.23 | -0.72*** | -15.83 | -0.87*** | -14.89 | -0.63*** | -10.68 | -0.87*** | -13.55 |
| VARIANCE | 0.00 | 0.45 | 0.00 | 0.43 | 0.00 | 0.38 | 0.01 | 0.94 | -0.01 | -1.19 | 0.00 | -0.21 |
| HSHARE | -3.62*** | -3.05 | -3.48*** | -3.02 | -2.15* | -1.66 | -3.68* | -1.88 | -5.34*** | -3.70 | -3.54* | -1.85 |
| BSHARE | 0.44 | 0.66 | 1.09* | 1.69 | 0.64 | 0.94 | 0.15 | 0.15 | -1.16 | -1.27 | 0.61 | 0.62 |
| GASSET | -0.01*** | -2.52 | -0.01** | -2.43 | -0.01** | -2.32 | 0.00 | -0.86 | -0.02*** | -2.52 | -0.01 | -1.05 |
| FIXED | 0.06*** | 4.08 | 0.07*** | 5.09 | 0.04*** | 3.19 | 0.01 | 0.61 | 0.11*** | 6.12 | 0.00 | 0.24 |
| SALETAX | | | | | -0.28 | -1.45 | | | | | | |
| INTEREST | | | | | | | -0.05*** | -3.69 | | | | |
| PROTECTED | -1.36*** | -2.87 | | | -1.60*** | -3.33 | -0.19 | -0.29 | -2.32*** | -3.56 | -0.09 | -0.13 |
| INDUSTRY | | | 0.24 | 0.30 | | | | | | | | |
| FINANCE | | | 27.84*** | 4.71 | | | | | | | | |
| COMMERCE | | | -0.09 | -0.10 | | | | | | | | |
| UTILITY | | | -2.99*** | -2.81 | | | | | | | | |
| CONGLOMERATE | | | 3.67** | 2.34 | | | | | | | | |
| R-Squared | 0.22 | | 0.24 | | 0.21 | | 0.33 | | 0.18 | | 0.28 | |
| F-Statistic | 92.33 | | 81.22 | | 80.73 | | 96.15 | | 42.71 | | 90.49 | |
| N | 5,304 | | 5,304 | | 5,047 | | 2,566 | | 2,530 | | 2,774 | |

Note: ***, **, * indicate significance at 1%, 5%, and 10% respectively.

First, the coefficients of ASSET were statistically significant and positive for the full sample and two separate periods, suggesting that banks lent intensively to larger firms (in line with patterns observed in Chart 10a). Second, the coefficients of ROA were statistically significant but negative for the full and two separate periods. This indicates that less profitable firms depended more heavily on bank loans than more profitable firms (consistent with trends in Chart 11a). Third, the coefficient of AGE was statistically significant and positive during 1994-2000, suggesting that banks provided more loans to older firms than newly corporatized or established firms. The results based on the two separate periods show that the coefficient of AGE was positive but statistically insignificant during 1994-1997, but turned to positive with a statistically significance level of 1% (in line with Chart 14a). Since many firms were incorporated or established not only in 1992-1993 but also 1997-1998 (Chart 7), banks' lending bias toward older firms appears to have become more pronounced in recent years. Fourth, the coefficient of STATE was statistically significant and positive during 1994-2000, in line with the view that firms with greater State ownership faced the soft budget constraint. However, the size of the coefficient became smaller in 1998-2000 compared with 1994-1997, so the

soft budget constraint appears to have weakened in recent years. Fifth, the coefficients of VARIANCE were statistically insignificant for all periods.

Sixth, the coefficients of PROTECTED were statistically significant and negative in 1994-2000 and 1994-1997, but turned out to be statistically insignificant during 1998-2000. The fact that protected firms depended less intensively on bank loans in early years may reflect that these firms could obtain funds directly from the budget or through subsidiaries in line with the observation derived in Section 4. As such budgetary funds or subsidiaries have declined in recent years, however, differences in banks' financial resource allocation between protected and unprotected firms have been disappearing. Further, the coefficients of FINANCE and CONGLOMERATE were statistically significant and positive, while that of UTILITY was statistically significant but negative. These results indicate that firms belonging to the finance sector and conglomerates gained greater access to bank loans compared with firms in the property and real estate sector, while those in the utility sector depended less intensively on bank loans than firms in the property and real estate sector. Seventh, the coefficient of SALETAX was statistically insignificant, while that of INTEREST was statistically significant and negative. This suggests that firms that obtain subsidized interest rates had greater access to bank loans as compared with unprotected firms. Overall, the sixth and seventh results suggest that the impact on protected firms is mixed. Eighth, the coefficients of HSHARE were statistically significant and negative for the full sample and two separate periods, while those of BSHARE were statistically insignificant for the same periods. These results indicate that firms issuing both A- and H-shares depended less heavily on bank loans than firms issuing only A-shares, probably because of the greater possibility for diversifying financial sources abroad. Finally, the coefficients of FIXED turned out to be statistically significant and positive in line with the expectation. The coefficients of GASSET were statistically significant but negative in most cases. The coefficient of RGDP was statistically insignificant and thus the variable was omitted from the regression analysis.

The above regression results suggest that lending bias exist toward old, large, unprofitable firms, and firms with greater State ownership. Regression analysis performed by Shirai [2002b] has shown that old and large firms were poor performers (based on ROA, returns on Equity, and earnings per share) as compared with new and small firms. On the other hand, the relationship between State ownership and performance has been V-shaped. Thus, firms with very large State ownership performed better than those in the medium range of State ownership. The fact that banks heavily lend to old, large, and unprofitable firms—even though their performance is relatively poor—indicates the presence of soft budget constraint.

Further, the regression results for LEVERAGE reported in Table 7 show that the results are more or less consistent with those of LOAN. To summarize based on Tables 6 and 7, banks' lending biases were present especially toward large firms, firms with greater State ownership, and unprofitable firms throughout 1994-2000. Thus, at least large and unprofitable firms appear to have been facing the soft budget constraint even during the reform period. Moreover, old firms gained greater access to bank loans in 1998-2000 as compared with 1994-1997. Since newly corporatized/established firms

have generally been better performers than old firms, the results indicate that old firms' budget constraint has been strengthened in recent years. These results suggest that the banking sector reforms described in Section 2 have not improved banks' risk management skills since more credit has been allocated to large firms, largely State-owned firms (only partially privatized SOEs), protected firms, unprofitable firms, and old firms, whose performance has not been necessarily superior. Thus, it is concluded that the banking sector reforms have been ineffective so far.

Table 7. Estimation Results of LEVERAGE

| Variable | 1994-2000 | | | | 1994-1997 | | 1998-2000 | |
|--------------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|
| | Regression 1 | | Regression 2 | | Regression 3 | | Regression 4 | |
| | Coef. | t-Stat. | Coef. | t-Stat. | Coef. | t-Stat. | Coef. | t-Stat. |
| C | -96.97*** | -7.92 | -82.55*** | -7.81 | -109.60*** | -7.15 | -93.70*** | -4.79 |
| TIME95 | 3.02 | 1.39 | 3.13 | 1.49 | 1.88 | | | |
| TIME96 | -0.16 | -0.08 | 0.10 | 0.05 | -1.84 | -0.90 | | |
| TIME97 | -5.79*** | -2.98 | -5.07*** | -2.65 | -7.50*** | -3.66 | | |
| TIME98 | -10.10*** | -4.58 | -9.21*** | -4.28 | | | | |
| TIME99 | -10.79*** | -4.87 | -9.74*** | -4.42 | | | -1.55 | -0.82 |
| TIME00 | -12.97*** | -5.96 | -11.18*** | -5.38 | | | -3.74** | -2.02 |
| AGE | 0.50*** | 2.91 | 0.52*** | 3.15 | 0.07 | 0.25 | 0.64*** | 2.88 |
| ASSET | 7.63*** | 7.34 | 6.38*** | 8.36 | 8.11*** | 6.24 | 8.05*** | 4.80 |
| STATE | 0.28*** | 7.58 | 0.28*** | 7.81 | 0.40*** | 8.91 | 0.05 | 0.80 |
| ROA | -0.55*** | -4.66 | -0.54*** | -4.51 | -0.71*** | -4.68 | -0.54*** | -3.08 |
| VARIANCE | -0.02*** | -2.60 | -0.02*** | -2.59 | -0.01 | -0.79 | -0.02** | -2.37 |
| HSHARE | -3.47 | -0.90 | -1.68 | -0.44 | -8.90* | -1.72 | 0.74 | 0.13 |
| BSHARE | -3.10 | -1.61 | -1.79 | -1.01 | -7.55*** | -3.34 | -0.12 | -0.04 |
| GASSET | 0.04*** | 3.39 | 0.04*** | 3.54 | 0.04*** | 2.65 | 0.03** | 2.11 |
| FIXED | 0.53*** | 13.66 | 0.60*** | 15.67 | 0.67*** | 12.02 | 0.40*** | 7.43 |
| PROTECTED | 0.67 | 0.56 | | | 2.13 | 1.14 | 0.20 | 0.13 |
| INDUSTRY | | | -3.77* | -1.86 | | | | |
| FINANCE | | | 82.94*** | 3.43 | | | | |
| COMMERCE | | | -8.49*** | -3.60 | | | | |
| UTILITY | | | -5.38** | -1.97 | | | | |
| CONGLOMERATE | | | -2.64 | -0.96 | | | | |
| R-Squared | 0.15 | | 0.18 | | 0.22 | | 0.10 | |
| F-Statistic | 51.66 | | 51.34 | | 51.22 | | 21.86 | |
| N | 4,798 | | 4,798 | | 2,309 | | 2,489 | |

Note: ***, **, * indicate significance at 1%, 5%, and 10% respectively.

5.2. Impact of the Equity Market on Lending Bias

This section examines whether IPOs have strengthened or lowered the degree of lending bias. This paper adopts the same regression model used earlier, but adds dummy variables related to IPOs.

To assess this impact, the data is divided into two groups of firms: one on those that issue A-shares (including firms that issue only A-shares, both A- and B-shares, or both A- and H-shares) and the other on those that issue B-shares (including firms that issue only B-shares or both A-and B-shares). Since the data on timing of H-share IPOs is not available, the analysis is conducted only on these two groups of firms. To assess the impact of IPOs and continued listing on firms' performance, new dummy variables (AIPO and BIPO) are introduced. AIPO (BIPO) equals one when and after a firm placed

IPOs on A-shares (B-shares) and zero otherwise. To examine whether lending bias has been affected most by IPOs, moreover, the cross variable between AIPO/BIPO and features of firms facing lending bias from banks are used. Namely, this subsection adopts the cross variables between AIPO/BIPO and HASSET, LROA, HSTATE, LVARIANCE, and AGE and UPROTECTED, respectively, in the case of IPOs on A- and B-shares. Other variables are the same as those used in the previous section. It is expected that listings contributed to lowering bank loans. The variables were tested for the presence of a high degree of multicollinearity among them using simple correlation matrix. The test rejected the presence of a high degree of multicollinearity. This paper used White's heteroscedasticity-corrected variances and standard errors in the entire analysis in order to correct for the presence of heteroscedasticity.

Estimation results for 1994-2000 are reported in Table 8a for A-share IPOs and Table 8b for B-share IPOs and summarized as follows: First, the coefficients of both $AIPO \times AGE$ and $AIPO \times ASSET$ were statistically significant and positive in most regressions, suggesting that lending bias toward old and large firms has strengthened after the IPO on A-shares. Second, the coefficient of $AIPO \times ROA$ was statistically significant and negative, indicating that lending bias toward unprofitable firms has strengthened after the A-share IPOs. And this trend is traced particularly during 1994-1997. The first and second results suggest that large, old, and unprofitable firms increased recourse to bank loans and maintained new equity finance at a low level, even though overall stock prices were rising (thus equity financing cost was declining). This may be because banks provided preferential financing conditions reflecting collusion or connection, or managers of borrowers did not have an incentive to properly manage financial sources through diversification. On the other firms, small, new, and profitable firms face hard budget constraint compared to large, old, and unprofitable firms, but they could lower their financing cost by being able to raise funds from the equity market.

Table 8a. Estimation Results for LOAN for the A-Share Market

| Variable | 1994-2000 | | | | | | 1994-1997 | | 1998-2000 | | | |
|----------------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|
| | Regression 1 | | Regression 2 | | Regression 3 | | Regression 4 | | Regression 5 | | Regression 6 | |
| | Coef. | t-Stat. | Coef. | t-Stat. | Coef. | t-Stat. | Coef. | t-Stat. | Coef. | t-Stat. | Coef. | t-Stat. |
| C | 1.25 | 0.14 | 0.66 | 0.08 | 1.77 | 0.20 | 69.48 | 1.46 | -3.34 | -0.36 | 53.28** | 2.03 |
| TIME95 | -0.57 | -0.64 | -0.54 | -0.63 | -1.12 | -1.13 | | | -0.58 | -0.66 | | |
| TIME96 | 0.63 | 0.75 | 0.64 | 0.78 | 0.06 | 0.07 | | | 0.42 | 0.50 | | |
| TIME97 | -0.44 | -0.53 | -0.40 | -0.49 | -0.95 | -1.00 | | | -0.95 | -1.12 | | |
| TIME98 | -1.30 | -1.52 | -1.19 | -1.42 | -1.65* | -1.71 | | | | | | |
| TIME99 | -0.40 | -0.45 | -0.30 | -0.34 | -0.68 | -0.68 | 1.00 | 1.55 | | | 0.94 | 1.40 |
| TIME00 | -1.57* | -1.68 | -1.30 | -1.43 | -1.77* | -1.70 | 0.12 | 0.18 | | | -0.08 | -0.11 |
| AGE | -0.12 | -0.65 | -0.11 | -0.61 | -0.06 | -0.34 | 1.88*** | 2.65 | -0.19 | -0.81 | -0.12 | -0.25 |
| ASSET | 1.68*** | 2.61 | 1.62*** | 2.49 | 1.61** | 2.43 | -5.69* | -1.88 | 2.26*** | 3.33 | -3.12 | -1.40 |
| STATE | 0.14*** | 4.48 | 0.14*** | 4.47 | 0.16*** | 4.96 | 0.32** | 2.02 | 0.12*** | 3.16 | 0.21*** | 3.14 |
| ROA | -0.59*** | -4.98 | -0.60*** | -5.16 | -0.56*** | -4.74 | -1.89*** | -4.11 | -0.57*** | -4.53 | -0.89*** | -4.25 |
| VARIANCE | 0.00 | 0.10 | -0.00 | -0.07 | -0.00 | -0.04 | -0.05 | -0.76 | 0.00 | 0.03 | -0.14** | -2.18 |
| GASSET | -0.04*** | -3.79 | -0.05*** | -4.01 | -0.04*** | -3.69 | -0.01 | -0.25 | -0.03*** | -2.57 | -0.06** | -1.95 |
| FIXED | 0.17*** | 6.20 | 0.17*** | 6.30 | 0.17*** | 5.98 | 0.24** | 2.22 | 0.18*** | 6.15 | 0.13* | 1.63 |
| AIPO | -14.30 | -1.54 | -13.79 | -1.50 | -12.75 | -1.36 | -67.52 | -1.41 | -24.62** | -2.35 | -55.43** | -2.07 |
| SALETAX | | | | | -0.65* | -1.81 | | | | | | |
| INTEREST | | | | | | | -0.25*** | -5.26 | | | | |
| PROTECTED | -2.26** | -2.21 | | | -2.46** | -2.33 | 0.00 | 0.00 | -2.87*** | -2.65 | 2.91 | 1.08 |
| INDUSTRY | | | 1.07 | 1.34 | | | | | | | | |
| FINANCE | | | 25.30*** | 4.71 | | | | | | | | |
| COMMERCE | | | 0.98 | 1.05 | | | | | | | | |
| UTILITY | | | -2.03* | -1.91 | | | | | | | | |
| CONGLOMERATE | | | 2.16 | 1.39 | | | | | | | | |
| AGE*AIPO | 0.89*** | 4.37 | 0.89*** | 4.38 | 0.81*** | 4.08 | -1.14 | -1.60 | 0.62** | 2.40 | 0.98** | 2.02 |
| ASSET*AIPO | 1.44** | 2.03 | 1.33* | 1.90 | 1.46** | 2.03 | 7.63*** | 2.50 | 2.11*** | 2.65 | 5.36** | 2.37 |
| STATE*AIPO | -0.12*** | -3.44 | -0.12*** | -3.30 | -0.14*** | -3.91 | -0.34** | -2.14 | -0.06 | -1.32 | -0.23** | -3.20 |
| ROA*AIPO | -0.37*** | -2.86 | -0.35*** | -2.77 | -0.37*** | -2.87 | 0.99** | 2.14 | -0.39*** | -2.75 | -0.07 | -0.31 |
| VARIANCE*AIPO | -0.00 | -0.34 | -0.00 | -0.18 | -0.00 | -0.25 | 0.06 | 0.92 | -0.02 | -1.22 | 0.14** | 2.14 |
| PROTECTED*AIPO | 1.42 | 1.24 | | | 1.40 | 1.18 | -0.22 | -0.07 | 1.33 | 1.00 | -3.04 | -1.09 |
| SALETAX*AIPO | | | | | 0.35 | 0.83 | | | | | | |
| INTEREST*AIPO | | | | | | | 0.20*** | 4.02 | | | | |
| GASSET*AIPO | 0.05*** | 3.64 | 0.05*** | 3.86 | 0.05*** | 3.60 | 0.00 | 0.05 | 0.04*** | 2.86 | 0.06* | 1.87 |
| FIXED*AIPO | -0.15*** | -4.65 | -0.13*** | -4.36 | -0.16*** | -5.04 | -0.23** | -2.05 | -0.12*** | -3.24 | -0.13 | -1.55 |
| R-Squared | 0.28 | | 0.29 | | 0.28 | | 0.34 | | 0.26 | | 0.31 | |
| F-Statistic | 84.53 | | 79.61 | | 73.22 | | 59.36 | | 42.30 | | 61.10 | |
| N | 5,033 | | 5,033 | | 4,813 | | 2,439 | | 2,395 | | 2,638 | |

Note: ***, **, * indicate significance at 1%, 5%, and 10% respectively.

Table 8b. Estimation Results for LOAN for the B-Share Market

| Variable | Regression 1 | | Regression 2 | |
|----------------|--------------|---------|--------------|---------|
| | Coef. | t-Stat. | Coef. | t-Stat. |
| C | 25.22 | 0.41 | 28.68 | 0.53 |
| TIME95 | 0.92 | 0.49 | 0.44 | 0.21 |
| TIME96 | 1.11 | 0.59 | 0.60 | 0.28 |
| TIME97 | 0.32 | 0.16 | 0.36 | 0.16 |
| TIME98 | -0.18 | -0.09 | -0.86 | -0.37 |
| TIME99 | 2.25 | 1.03 | 1.71 | 0.69 |
| TIME00 | 2.58 | 1.13 | 1.38 | 0.56 |
| AGE | 1.06 | 0.80 | 0.37 | 0.20 |
| ASSET | 3.38 | 0.69 | 4.67 | 0.97 |
| STATE | -0.35 | -1.27 | -0.60** | -2.02 |
| ROA | 0.13 | 0.27 | 0.88* | 1.69 |
| VARIANCE | -0.21 | -1.45 | -0.34** | -1.95 |
| GASSET | -0.13 | -0.79 | -0.19 | -1.07 |
| FIXED | -0.04 | -0.27 | 0.07 | 0.34 |
| BIPO | -35.08 | -0.57 | -42.08 | -0.77 |
| SALETAX | | | -3.59 | -1.03 |
| PROTECTED | -3.96 | -0.57 | -4.62 | -0.69 |
| AGE*BIPO | 0.69 | 0.52 | 1.54 | 0.83 |
| ASSET*BIPO | -1.91 | -0.39 | -2.92 | -0.60 |
| STATE*BIPO | 0.51* | 1.80 | 0.76*** | 2.54 |
| ROA*BIPO | -1.11** | -2.22 | -1.93*** | -3.63 |
| VARIANCE*BIPO | 0.20 | 1.38 | 0.32* | 1.84 |
| PROTECTED*BIPO | 9.51 | 1.34 | 10.17 | 1.47 |
| SALETAX*BIPO | | | 3.16 | 0.90 |
| GASSET*BIPO | 0.20 | 1.16 | 0.26 | 1.45 |
| FIXED*BIPO | 0.03 | 0.19 | -0.07 | -0.35 |
| | | | | |
| R-Squared | 0.33 | | 0.36 | |
| F-Statistic | 10.81 | | 10.69 | |
| N | 533 | | 494 | |

Note: ***, **, * indicate significance at 1%, 5%, and 10% respectively.

Third, the coefficient of $AIPO \times STATE$ was statistically significant and negative, suggesting that lending bias to firms with greater State ownership declined after the A-share IPOs. Charts 9b and 9c indicate that firms with greater State ownership have increased recourse to total equity finance by issuing more non-negotiable equity than A-shares. This may be the consequence of management's decision not to dilute their controls. Shirai (2002b) has reported that firms with very large State ownership have performed better than those in the intermediate range of State ownership, because the latter have greater opportunities to perform asset stripping as a result of declined monitoring by the State. Thus, the efforts by the management to maintain their controls

by holding more non-negotiable equity may not be a bad thing in the current state of the PRC.

Fourth, on the other hand, such behavior was not observed in the case of B-shares. The coefficients of $BIOP \times STATE$ were statistically significant and positive, suggesting that firms with greater State ownership increased dependence on bank loans after the IPOs on B-shares. There are more firms issuing both A- and B-shares (about 6.3% of total) than firms issuing only B-shares (about 2.1% of total) and the former issue greater amount of A-shares than B-shares. Thus, for firms issuing A- and B-shares, the impact of the issuance of B-shares on dilution of management control is minimum. In addition, firms issuing B-shares increases reputation because they are subject to more stringent accounting and disclosure requirements, so they may gain greater access to bank loans.

6. Conclusions

This paper has examined whether the banking sector reforms and equity market development have made any noticeable impact on banks' lending behavior as well as firms' corporate financing patterns. Based on data of 1,098 listed firms for 1992-2000, this paper first observed the average behavior of listed firms. To summarize the observations, six types of firms—firms with large State ownership (except in 1992-1994), large firms (although declining), unprofitable firms, firms with volatile returns (especially in 1998-2000), old firms (in 1992-2000), and firms issuing other shares—have depended more heavily on bank loans, as compared with firms with small State ownership, small firms, profitable firms, firms with stable returns, new firms, and firms issuing only A-shares, respectively. Since many of these types of firms are generally poor performers (Shirai, 2002b), they can be regarded as facing the soft budget constraint.

Moreover, there is a static inverse relationship between negotiable equity finance and bank loans for specific types of firms; negotiable equity finance appears to have been substituted for bank loans for small firms and profitable firms (except 1992-1994). This suggests that the establishment of the equity market has contributed to providing diverse financial sources to small and profitable firms. Further, there is a clear intertemporal or dynamic shift from bank loans to negotiable equity finance for profitable firms, firms in unprotected sectors, new firms, and firms issuing A-shares over the period, which are increasingly relying on the equity market.

As a next step, regression analysis was performed to assess whether banks' lending bias has really existed during 1994-2000. The results have shown that banks' lending biases have been present especially toward large firms, firms with large State ownership, and unprofitable firms throughout 1994-2000. Thus, some of these firms appear to have been facing the soft budget constraint even during the reform period, since they are not necessarily better performers. Moreover, older firms gained greater access to bank loans in 1998-2000 as compared with 1994-1997. Given that newly corporatized or established firms have generally been better performers than old firms, the results

indicate that the soft budget constraint has been even strengthened in recent years for old firms. These results suggest banking sector reforms have not improved banks' risk management to a considerable degree, since banks loans have been allocated more intensively to specific types of firms regardless of their performance. Thus, this paper concludes that banking sector reforms have been ineffective so far.

This paper has also assessed whether such a favorable lending bias has increased or declined after the IPOs. The results suggest that the establishment of the two stock exchanges induced old, large, and unprofitable firms to increase recourse to bank loans after the IPOs on A-shares. The fact that these firms prefer bank loans over equity finance despite rising stock prices (hence lowering equity financing cost) suggests that banks either provided favorable financing conditions which may be due to collusion or connection, or lack of borrowers' incentive to diversify their financing sources. These results also suggest that firms facing a hard budget constraint—such as new, small, and profitable firms—were able to lower cost of finance by being able to gain access to equity market. Thus, the equity market helped these firms to diversify their financing sources. This role of the equity market has become more important in recent years, given that banks have been under greater pressures to improve their balance sheets under the accession to WTO and thus reluctant to increase lending activities.

On the other hand, firms with larger State ownership lowered the degree of dependence on bank loans after the IPOs on A-shares. It appears that these firms increased total equity finance relative to bank loans by issuing more non-negotiable shares (or those held by the State) than A-shares, probably to prevent their management controls from being diluted. However, such behavior was not observed in the case of B-shares. Shirai (2002b) has reported that firms with very large State ownership have been better performers than those in the intermediate range of State ownership due to the latter's greater opportunities for asset stripping. Therefore, greater control of firms by the State may not be a bad thing in the context of the PRC for the time being. However, the Government should make greater efforts to improve the informational, legal, and judicial infrastructures in order to develop a sound equity market, and at the same time, promote privatization of listed SOEs.

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Regression Variables

| | |
|--------------|---|
| AGE | : Number of years since corporatization of the company. |
| AIPO | : Equals 1 when and after a firm has placed an IPO on A-shares and 0 otherwise. |
| ASSET | : Natural logarithm of a firm's asset. |
| BIPO | : Equals 1 after a firm has placed an IPO on B-shares and 0 otherwise. |
| BSHARE | : Equals 1 if a firm issues both A and B shares and only B shares and 0 otherwise. |
| COMMERCE | : Equals 1 if a firm belongs to the wholesale, retail, and distribution sectors and 0 otherwise. |
| CONGLOMERATE | : Equals 1 if a firm engages in a wide range of sectors and 0 otherwise. |
| EQUITY | : Changes in outstanding equity capital divided by fixed and intangible assets of the previous year. |
| FINANCE | : Equals 1 if a firm belongs to the finance sector and 0 otherwise. |
| FIXED | : Ratio of outstanding fixed assets to total asset. |
| GASSET | : Percentage change of assets. |
| HASSET | : Equals 1 if the asset size of a firm is above the average of all firms and 0 otherwise. |
| HROA | : Equals 1 if a firm's ROA is above the average and zero otherwise. |
| HSHARE | : Equals 1 if a firm issues both A- and H-shares and 0 otherwise. |
| HSTATE | : Equal to one if the ratio of State ownership to total equity is above the average of all firms and zero otherwise. |
| INDUSTRY | : Equals 1 if a firm belongs to the manufacturing and other industry sectors and 0 otherwise. |
| INTEREST | : Ratio of interest payment to total liabilities. |
| LEVERAGE | : Ratio of long-term liabilities to total shares. |
| LOAN | : Changes in outstanding short- and long-term liabilities plus long-term liabilities due within one year or less than a year divided by fixed and intangible assets of the previous year. |
| LVARIANCE | : Equals 1 if a firm's VARIANCE is above the average and 0 otherwise. |
| NEQUITY | : Changes in outstanding negotiable equity capital divided by fixed and intangible assets of the previous year. |
| PROPERTY | : Equals 1 if a firm belongs to the real estate and property sectors and 0 otherwise. |
| PROTECTED | : Equals 1 if a firm belongs to protected industries (petrochemicals, utilities, and materials) and 0 otherwise. |
| ROA | : Returns on assets. |
| SALETAX | : Ratio of business tax payments to income from main business |
| STATE | : Shares owned by the Government divided by the total shares. |
| TIME | : Dummy variable for time. |
| UTILITY | : Equals 1 if a firm belongs to utility sectors and zero otherwise. |
| VARIANCE | : Variance of ROA of the past two and current years. |

Acronyms

| | |
|------|---|
| ABC | Agricultural Bank of China |
| AMC | Asset Management Company |
| BOC | Bank of China |
| CCB | China Construction Bank |
| CEO | Chief Executive Officer |
| CSRC | China Securities Regulatory Commission |
| GDP | Gross Domestic Product |
| ICBC | Industrial and Commercial Bank of China |
| IPO | Initial Public Offering |
| NYSE | New York Stock Exchange |
| NPL | Non Performing Loan |
| OLS | Ordinary Least Square |
| OCB | Other Commercial Bank |
| PBC | People's Bank of China |
| PER | Price-Earning Ratio |
| PRC | People's Republic of China |
| RCC | Regional Credit Cooperative |
| SCSC | State Council Securities Commission |
| SMEs | Small and Medium Enterprises |
| SOEs | State-Owned Enterprises |
| UCC | Urban Credit Cooperative |
| WSCB | Wholly State-owned Commercial Bank |
| WTO | World Trade Organization |

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