OWNERSHIP STRUCTURE, CORPORATE GOVERNANCE, AND FIRMS' PERFORMANCE:

The Case of Chinese Stock Companies

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Abstract

This study investigates whether ownership structure has significant effects on the performance of publicly-listed companies in China, and in what way if it does. Publicly-listed stock companies allow us to quantify the ownership mix and concentration and thus provide a unique opportunity for studying the above issue. The recent literature on the role of large institutional shareholders in corporate governance provides the theoretical foundation of this study.

A typical listed stock company in China has a mixed ownership structure with the state, legal persons (institutions), and domestic individuals as the three predominant groups of shareholders. Each holds about 30 percent of total outstanding shares. Employees and foreign investors together hold less than 10 percent. The ownership concentration is high with the five largest shareholders accounting for 58 percent of the outstanding shares in 1995, compared to 57.8 percent in Czech Republic, 42 percent in Germany and 33 percent in Japan.

Results from our empirical analysis show that ownership structure (both the mix and concentration) indeed has significant effects on the performance of stock companies. First, there is a positive and significant correlation between ownership concentration and profitability. Second, the effect of ownership concentration is stronger for companies dominated by legal person shareholders than for those dominated by the state. Third, firms' profitability is positively correlated with the fraction of legal person shares, but it is either negatively correlated or uncorrelated with the fraction of state shares and tradable A-shares held mostly by individuals. Last, labor productivity tends to decline as the proportion of state shares increases.

These results suggest the importance of large institutional shareholders in corporate governance and performance, the inefficiency of state ownership, and potential problems in an overly dispersed ownership structure.

I. Introduction and Summary

1.1. Objectives of the Paper

Restructuring the state-owned enterprises (SOEs) has been considered as the key to the success of China's economic reform in the next decade. Two competing approaches have been proposed: the market approach and the ownership approach. The first approach is based upon a believe that if the markets for products, for factors of production, and for corporate control are created and function well, efficiency improvements of SOEs can be achieved without dramatic changes in ownership. Proponents of the second approach argue that private ownership is a necessary condition for enterprise efficiency. Reflecting the two alternative views, China has adopted a reform strategy that gives priorities to fostering markets and nurturing institutional changes, while in Russia and Eastern Europe radical ownership reforms were put in place at the early stage of reforms.

This paper investigates whether ownership structure has significant effects on the performance of publicly-listed companies in China, and in what ways if it does. Publicly-listed stock companies provide a unique opportunity for the study of this issue since they allow us to *quantify* the ownership mix and concentration. Over 500 companies were listed on the two national stock exchanges at the end of 1996. These companies are typically owned by five groups of agents: the state, legal persons (institutions), tradable A-share holders (mostly, individuals), employees, and foreign investors. The first three groups are the main shareholders, controlling roughly 30% of the outstanding shares each. Employees of the companies and foreign investors together hold less than 10%. The ownership concentration is high with the five largest shareholders accounting for 58 percent of the outstanding shares in 1995, compared to 57.8 percent in Czech Republic, 42 percent in Germany and 33 percent in Japan.

Publicly-listed companies, however, represent only a small subset of China's enterprises--a clean and perhaps better performed group of enterprises which were chosen to be listed on the two stock exchanges. These companies started more or less on an equal basis, since they undertook the same restructuring process required by China's Securities Regulatory Commission (CSRC) before their initial public offering (IPO). Accounting systems are converted to international standards, and the information disclosure has to meet CSRC's requirements. These companies enjoy a similar degree of autonomy as to what to produce and what prices to charge. Clearly, they are not representative of all enterprises in China, state or nonstate. (For broader studies see World Bank, 1996 and Broadman 1995.) In other words, our empirical study suffers unavoidably from a sample selection bias. Therefore, the results of our analysis need to be treated with caution and they apply only to large and medium sized corporations. We make no attempt to compare this group with, and to apply these results to, all state-owned enterprises.

We begin with a descriptive analysis of the stock companies, the ownership structure, the internal organization, corporate governance, and the behavior of shareholders. Note that the meaning of ownership structure is two-fold in this paper: ownership concentration and ownership mix. We will then compare the performance of firms with different degree of ownership concentration as well as different types of shareholders. For these purposes, we introduce three accounting ratios, the market-to-book value ratio (MBR), return on equity (ROE), and return on asset (ROA), to measure firms' performance or profitability. The performance variables are then regressed on two concentration ratios and three ownership fractions, respectively. By examining the performance of the listed companies in the period of 1993 to 1995, we expect to find out,

- whether and in what pattern ownership structure affects the performance of stock companies. For example, does the degree of ownership concentration matter? Is the firm's performance negatively correlated with the proportion of state shares? Or, do individual shareholders monitor the management closely? What about legal person owners?

- through what channels do shareholders influence the management and consequently the firm's performance?

1.2 Summary of Results

Results from our empirical analysis show that ownership structure (both the mix and the concentration) indeed has significant effects on the performance of the stock companies. First, there is a positive correlation between performance and ownership concentration. Second, the effect of ownership concentration is stronger for companies dominated by legal person shareholders than for those dominated by the state. Third, firms' performance is positively and significantly correlated with the fraction of legal person shares, but it is either negatively correlated or uncorrelated with the fractions of state shares and tradable A-shares mostly held by individuals. Last, we find that labor productivity tends to decline as the proportion of state shares increases. These findings suggest that small individual shareholders in China do not monitor the management well, probably because of the free-rider problem (Grossman and Hart, 1980). Large legal person (institution) shareholders, on the other hand, appear to have played a positive role in corporate governance, which is consistent with the theory of Shleifer and Vishny (1986). The coefficients for the fraction of state shares are negative and significant, indicating that the state ownership does not help improve firms' performance.

Parallel to the empirical study, we present evidence in the descriptive discussions to show that legal person owners can monitor the management effectively through their control over the board of directors, over the selection of corporate officers and the compensation of chief corporate officers. We argue that an active takeover market, which does not exist in China, is not likely to the mechanism for shareholders to discipline the management. In contrast, in most state-controlled companies, board members and top managers are appointed by the local government and the local organization of the ruling party. In addition, the state has set the goal as "preserving and increasing the value of *state assets*." The goal is unfortunately not quite the same as value maximizing of *the firm*. As will be seen below, the state often takes activities that are value-decreasing for the firm.

These findings, largely consistent with previous studies, suggest the importance of large institutional shareholders in corporate governance and performance, the inefficiency of state ownership, and potential problems in an overly dispersed ownership structure. Comparative studies (in Annex) show that in OECD countries ownership and control rights are increasingly concentrated in the hands of financial and nonfinancial institutions. The driving force behind this trend seems to be related to the benefit of ownership concentration as a direct measure of corporate control, since concentration provides the investors with both the *incentive* and the *power* to monitor and control the management.

The theme of this paper echoes some recent studies on large shareholders' activism in industrial countries, particularly, in the U.S. We survey these studies along with others in the next subsection.

1.3. A Literature Survey

Empirical studies so far have presented mixed results related to the debate on the market versus ownership approaches. For the Chinese economy, Groves et al (1994) survey 800 SOEs for an assessment of China's partial reforms. It is found that profit retention, performance-based bonuses, and management contracts have increased productivity of the SOEs. In a separate study, the authors present evidence from the same sample to show that the forming of the market for managers has contributes to gains in output per work and total factor productivity (TFP) [Groves et al (1995)]. Earlier, Jefferson et al (1992) report an average TFP growth of 2.4% for SOEs over the 1984-1987 period.

In contrast, superior performance of town-and-village enterprises (TVEs) over SOEs and much faster growth of the private sector are frequently cited as in favor of the ownership approach. Svejnar (1990), for example, find that TVEs had an annual TFP growth of 13% in the 1981-1986 period, 5 times as high as that of SOEs in the study of Jefferson et al. Later, Woo et al (1994) raise the question about how successful the partial reform of Chinese SOEs has been. Taking into account changes in prices of inputs and outputs, they find that TFP growth in SOEs is zero at best in the 1984-1988 period, but positive TFP growth in collectively owned enterprises including TVEs.

With respect to the US economy, results are also mixed. Demsetz and Lehn (1985) find no significant correlation between ownership concentration and accounting profit rates for 511 large corporations. Morck et al (1988) report a piecewise linear relationship of Tobin's Q with board member ownership for 371 Fortune 500 firms.[1] Holderness and Sheehan (1988) analyze 114 NYSE- or AMEX-listed corporations in which a majority shareholder owns at least 50.1% of the common stock. Tobin's Q is higher if the majority owners are corporations, while Tobin's Q as well as the accounting profit rates are significantly lower for firms with individual majority owners. McConnell and Servaes (1990) find for a sample of more than 1,000 firms that Tobin's Q is positively correlated with the fraction of shares owned by institutional investors. These studies along with others seem to suggest: (i) There is a positive correlation between share holdings of large investors and firms' performance; and (ii) institutional investors appear to be more effective in monitoring firms' performance than individual shareholders.

Theoretically, both of the schools can find their roots in the literature. Fama (1980), for example, argues that if a firm is viewed as a set of contracts, ownership of the firm is an irrelevant concept. A properly-functioned managerial labor market may discipline managers and solve incentive problems caused by the separation between ownership and control. Hart (1983) points out that competition in the product market reduces managerial slack, and thus provides another disciplinary mechanism. Jensen and Ruback (1983) emphasize the role of the market for corporate control. Martin and McConnell (1991) find that the takeover market has restricted non-value maximizing behavior of top corporate managers. On the other hand, economists argue that ownership matters because it affects at least to some extent the working of the markets. For instance, Grossman and Hart (1980) show that if a firm's ownership is widely dispersed, no shareholder has adequate incentives to monitor the management closely as the gain from a

[1] Tobin's Q is in general defined as the ratio of the market value to the replacement value of the firm, which can be measured as the market value of equity and debts over replacement value of net fixed assets and inventory. In this particular study, Q increases as board ownership rises from zero to 5%, but decreases over the range of 5% to 25%, and increases again for companies with board ownership over 25%.

takeover for any individual shareholder is too small to cover the monitoring cost. Shleifer and Vishny (1986) develops a model to demonstrate that a certain degree of ownership concentration is desired in order for the takeover market to work more effectively. Being able to capture a chunk of the gains from watching the management, large shareholders supply monitoring at levels that would be otherwise impossible to reach in diffusely-held firms.[2] Holmstrom and Tirole (1993) show that under certain conditions, managers' optimal incentive contracts will always include stocks (Proposition 2). Zou (1992) constructs two conceptual firms that are otherwise identical except one with absentee ownership and the other with cooperative ownership. He proves that even if firms are viewed as a nexus of complete contracts, the ownership structure matters as the cooperative firm can achieve first-best production efficiency, while the other cannot.

The studies by Grossman and Hart and by Shleifer and Vishny are particularly important because they provide the theoretical foundation for this paper. In their models, the governance mechanism is outsider takeover, while in China direct control by large stakeholders seems to be the means for shareholders to discipline the management. Despite the difference, the public good nature of shareholders' monitoring remains unchanged, and hence the same arguments apply to the Chinese case.

II. Ownership Structure and Performance: A Descriptive Discussion

2.1. The Emergence of Stock Companies and Stock Market[3]

Stock companies and stock markets did not exist until the late 1980s when the Chinese government decided to restructure the industrial sector then dominated by SOEs. A department store in Beijing was given permission for issuing shares in 1984, the very first time since the founding of the People's Republic in 1949. Shareholders were confined, however, solely to the employees of the store. A more direct cause of this bold step was the heavy losses incurred by SOEs. In the following few years, more SOEs were "incorporated" through selling shares to their own employees or other stock companies and SOEs. New joint stock companies were organized in a similar way. Stock trading was also prohibited and low liquidity of stocks made it difficult for the companies to market their initial offerings. Consequently, curb markets emerged in several large cities. To end the chaotic black-market trading, the State Council decided in 1989 to establish two national stock exchanges. The Shanghai Stock Exchange (SHSE) was inaugurated in December of 1990, and the Shenzhen Stock Exchange (SZSE) opened in April, 1991.

The number of listed companies, trading volume, and total market capitalization has increased drastically since the opening of the two exchanges. The total number of firms listed increased from 183 in 1993 to 323 in 1995 and over 500 in 1996. Total market capitalization reached US$42.1 billion as of December 1995 (IFC 1996 and Table 2.1), or 6 percent of China's GDP (declined from 8 percent in 1994). Readers should not be misled by the figures, however, when estimating the size of the Chinese stock market. Shares are classified as domestic (A-

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[2]Admati et al (1994) show, on the other hand, that while concentrated ownership promotes monitoring, it decreases risk-sharing gains which are usually realized with more dispersed ownership.

[3]See the World Bank (1995) for a more detailed survey.

shares) and foreign (B-, H-, N-, shares) by holders' residency. There are four subcategories of A-shares: the state shares, the legal person shares, the employee shares, and the tradable A-shares mostly held by individuals. Only the A-shares held by individual and B-shares held by foreigners are traded in the open market. We clarify these definitions below.

2.2. Definitions of Different Types of Shares

The state shares are those held by the central government, local governments, or solely-government-owned enterprises. It is recently declared that the ultimate owner of state shares is the State Council of China. State shares are not allowed for trading at the two exchanges, but transferable to domestic institutions, upon approval of CSRC. In many of the publicly-traded corporations, the state is the largest or majority shareholder. The state has a controlling interest in 66 (50) of 189 (168) SHSE-listed firms in 1995 (1994), and in 30 (28) of 137 (116) SZSE-listed firms.

The legal person shares are shares owned by domestic institutions.[4] A legal person in China is defined as a non-individual legal entity or institution. In official documents, domestic institutions include stock companies, non-bank financial institutions,[5] and SOEs that have at least one non-state owners. Securities firms, trust & investment companies, finance companies, and mutual funds are major non-bank financial institutions. There is a sub-category called "state-owned legal person shares." It refers to shares held by institutions in which the state is the majority owner but has less than 100% shareholding.[6] Like state shares, legal person shares are not tradable at the two exchanges, but can be transferred to domestic institutions upon approval from the CSRC. Sales of legal person shares to foreign investors had been allowed until it was suspended in May 1996. In 1995 (1994), 46 (41) SHSE-listed companies had legal person shareholders holding more than 50% of outstanding shares, and the same figure is 34 (37) at the SZSE.

The tradable A-shares are held and traded mostly by individuals and some by domestic institutions. There is no restriction on the number of shares traded, nor on holding periods. It is required, however, tradable A-shares should account for no less than 25% of total outstanding shares when a company makes its IPO. These shares are the only type of equity that are traded among domestic investors at the two exchanges. The volumes reported in Table 2.1 are thus due entirely to trading of tradable A-shares mostly held by individuals.

The employee shares are offered to workers and managers of a listed company, usually at a substantial discount. These share offerings are designed more like a benefit to employees

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[4]The legal person shares studied in this paper should be carefully distinguished from the legal person shares traded on two automated price quotation systems in Beijing: STAQ (Stock Trading Automated Quotation System) and NETS (National Exchange and Trading System). 17 companies are listed on STAQ and NETS. Companies once listed on STAQ and NETS cannot be considered for listing on the SHSE or SZSE, and vise versa. In other words, cross-listing is not permitted.

[5]Taking the Glass-Steagall Act of the US as a model, The Commercial Banking Law of China that came into effect in 1994 prohibits commercial banks from underwriting, holding and trading securities except for government bonds.

[6] CSRC defines these shares as legal person shares, whereas the BSPM interprets them as state shares. We adopt CSRC's definition in this paper.

than as an incentive scheme. Employee shares are registered under the title of the labor union of the company which also represents shareholding employees to exercise their rights. After a holding period of 6 to 12 months, the company may file with CSRC for allowing its employees to sell the shares in the open market. Only 10 (12) SHSE companies have employee owners in 1995 (1994), and the number is 121 (105) companies at the SZSE.

B-shares are available exclusively to foreign investors and some authorized domestic securities firms. The B-share market is separated from the A-share market, with SHSE B-shares denominated in US dollar and SZSE B-shares in Hong Kong dollar. **H-shares** are the same as B-shares except that they are issued and traded at the Hong Kong Stock Exchange. Finally, **N-shares** are listed on the NYSE, either through IPOs or as ADRs. At the SHSE, 46 (37) companies have offered B-share or a combination of the three foreign shares, and 34 (22) at the SZSE in 1995 (1994).

In theory, all the shares entitle shareholders the same dividends and voting rights. In practice, it is not uncommon that a company pays its state owner cash dividends, but offers individual and legal person shareholders stock dividends and rights offerings. This is because new shares acquired by the state cannot be traded either in the open market. For liquidity reasons, the state prefers cash dividends to stock dividends or rights offerings, and so do legal person owners. Regarding voting rights, tradable A-shareholders are in a disadvantageous position due to the lack of proxy voting procedures, which we will discuss later.

A typical listed Chinese stock company has a mixed ownership structure with the state, legal persons, and domestic individual investors as the three predominant groups of shareholders. Each of the three holds about 30% of total outstanding shares. Many listed companies do not issue employee and foreign shares. In those that do offer employee and foreign shares, they account less than 10% of total outstanding shares. Table 2.2 shows the average ownership mix of stock companies listed at the two exchanges, in which FST, FLP, FTA, FEM, and FBS represent the fractions of shares owned by the sate, legal persons, tradable A-share holders, employees and B-share holders, respectively. The proportion of state shares appears to have declined slightly from 1993 to 1995, and so does the proportion of legal person shares. The fraction of tradable A-shares seems to be on the rise. Note that all the ownership fractions have large standard deviations, indicating large variations of ownership structure across firms. On average, the state ownership is higher for SHSE-listed companies than those listed on the SZSE, while legal persons and individual shareholders seem to be more important at the SZSE. Employee ownership appears more popular in Shenzhen than in Shanghai.

Table 2.3 reports ownership structure of listed companies in 1995 by sectors, namely, manufacturing, retailing, utility, real estate, and conglomerates as classified by the two stock exchanges. At the SHSE the state holds a large stake in manufacturing and utility companies, while legal persons as a group are the largest shareholder of the conglomerates. Tradable A-share holders are the dominant owner group only in the retailing industry with a average interest of 36.4%. At the SZSE, the state lost its dominant position in all industries to either legal persons as a group or tradable A-share investors as a group. The average proportion of legal person shares is greater in the retailing and utility industries than that of tradable A-shares. A-share holders are the most important group on average in the manufacturing and real estate industries as well as for the conglomerates.

To study the ownership distribution by firm size, we break down the samples according to the book value of the companies' total assets. The first bracket is for small firms with a book value of total assets lower than RMB 500 million. Firms with total assets between RMB 500 million and one billion fall into the second sub-sample, Medium (1). The third, Medium (2), goes from RMB one billion to 1.5 billion of total assets, and finally, those with total assets above RMB 1.5 billion are identified as large firms. For the SHSE-listed companies, the average fraction of state shares rises steadily with firm size, and exceeds 50% for large firms. This probably reflects an official stand that the state should remain in control of key industries and important firms. The pattern is less clear, however, among companies listed on the SZSE.

In sum, there seems to be a tendency for the proportion of state shares to fall over time and the fraction of tradable A-shares to rise. The primary cause of the shift in relative importance of different shareholders may have been that the state prefers cash dividends to stock dividends or rights offerings as dividends. Second, the state has a larger presence, and a stronger influence, in companies listed at the SHSE, than those listed at the SZSE. We now turn to examine the internal organization of the stock companies and the process of incorporatization. We argue that direct control over the management by the board is the main mechanism for shareholders to protect their interests in the Chinese stock companies.

2.3. Organizational Structure and the Process of Incorporatization

The organizational structure of a typical industrial stock company is demonstrated in Figure 2.1. On the top are shareholders. According to China's corporate law, shareholders meet at least once a year at either the annual conference or special shareholder conferences.[7]

At the annual conferences, shareholders

- vote on the company's operating strategy, investment plan, and other important issues such as changes in registered capital, debt issuance, mergers, dissolution and liquidation of the company, and amendments to the company's bylaw.
- elect members of the board and the supervisory committee, and determine the members' compensations.
- review and approve the annual reports by the board and the supervisory committee, dividend policy, and the budget for the next year.

The board of directors is the decision-making body of China's stock companies. The size of the board ranges from 5 to 20, and it is responsible for[8]

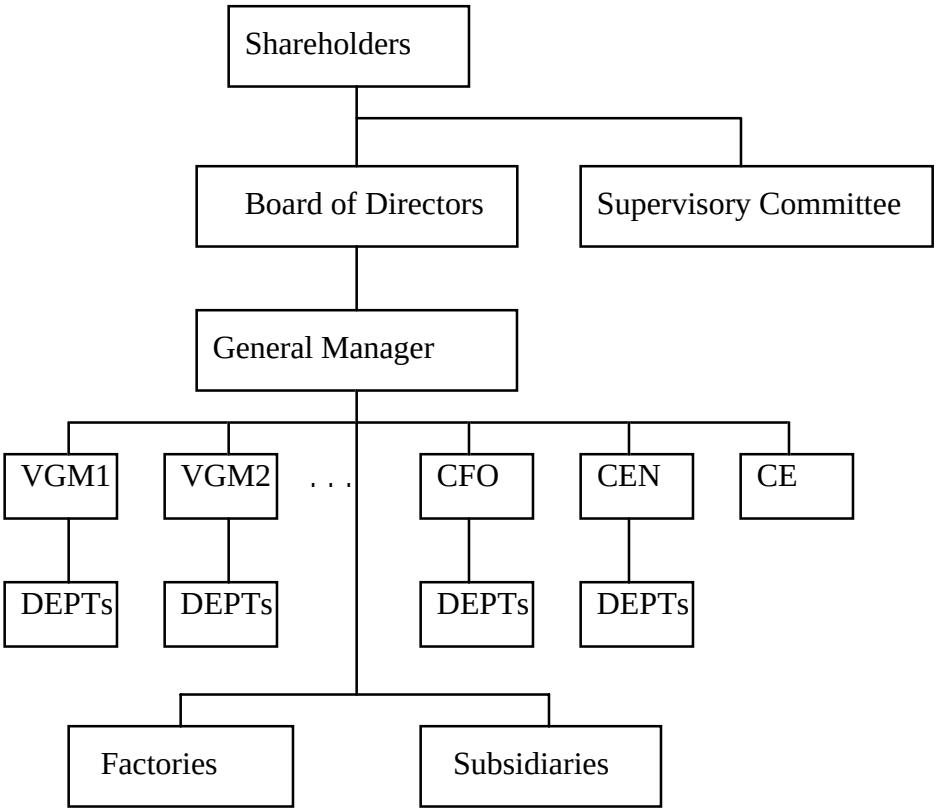
- calling and hosting the annual or special shareholder conferences, and reporting to shareholders.
- executing resolutions passed by shareholders.
- making up the company's operating and investment plans, dividend policies, and debt and equity financing plans.
- making proposals of merge, separation, and dissolution of the company.
- determining the company's internal organizational setup, rules and regulations.

[7]A special shareholder conference may be called when (1) the number of board members attending the annual conference of shareholders is less than what the bylaw requires; (2) the company has a loss exceeding one third of its owners' equity; (3) requested by owners with more than 10% of the company's outstanding shares; (4) requested by the board of directors; and (5) requested by the supervisory committee. The Corporate Law of China, Provision 104.

[8]The Corporate Law of China, Provision 112.

- appointing or replacing top managers; approving nominations of vice general managers and CFO by the general manager; setting their compensations.

Figure 2.1. Organizational Structure of a Typical Industrial Stock Company



VGM: Vice general manager. CEN: Chief engineer. CE: Chief economist.

In comparison, the supervisory committee plays a fairly passive role in corporate governance. It carries out the following duties.[9]

- overseeing financial operations of the company.
- watching board members and managers for violations of the company's bylaw.
- correcting decisions by board members and managers if they hurt the interest of shareholders.
- calling special shareholder meetings.
- supervising board meetings.

The general manager and vice general managers (VGM) are in charge of the company's daily operations. Each vice general manger has a couple of departments in closely-related operations reporting to him. The CFO is always the head of the accounting and financing department. The chief engineer (CEN) is usually the director of the R&D department and the department of quality control. In most of Chinese stock companies, VGMs, CFO, and CEN are board members, but few are on the supervisory committee. Putting general managers of factories and subsidiaries on the board is also a common practice. Chief economist is considered a less important position, as an advisor to the general manager.

[9]The Corporate Law of China, Provision 126.

The board of directors is the most important organization in a firm controlling the selection of top managers and their compensations. Shareholder must control the board in order to protect their interest in the firm. The selection of the board and supervisory committee members becomes critical in the forming of new stock companies, which depends to a great extent upon the founders' administrative affiliation and their ownership before going public. The firm's former affiliation also affects the composition of the board and supervisory committee (see below). China's stock companies are either created by transforming SOEs, or launched by a group of legal persons, and sometimes by individuals. We now explain how these are done.

Incorporatization of a SOE. The State Planning Commission (SPC) and CSRC together determine how many shares in total should be issued each year, e.g., 5 billion for 1995. The 5 billion "total quota" is then broken down and allocated among provinces and mega-cities such as Beijing, Shanghai and Tianjin. If a SOE wants to be listed, it has to obtain an approval from the local government, the State Economic and Trade Commission, the State Commission of Economic Restructuring, and CSRC. Once the SOE has the permission with a quota of total shares to be issued, it begins a reorganization. The first step is to separate non-productive assets such as schools and hospitals from productive ones. Productive assets account for 50 to 75% of total assets of the to-be-listed stock company, while non-productive assets is left with the SOE. All retired workers also remain on the SOE's payroll. An accounting firm is then hired to audit financial statements of the SOE for the last three years and the separated productive assets. In the meantime, managers of the SOE contact other enterprises and institutions to see if they are willing to be legal person co-founders[10] of the stock company. The SOE also talks intensively with the local government and party officials for candidates of managers, the board and supervisory committee members. 80 percent of such firms ends up with the arrangement where the original managers and party officials of the SOEs keep the key positions of the board and supervisory committee in the new stock company. No real restructuring is done, and board members and officers are almost exclusively insiders. The nominations must be confirmed at the first shareholder meeting. The confirmation is nearly guaranteed since the state will have a majority holding of the company.

After the SOE receives an approval of the appointments from its administrative supervisor and the local personnel department of the party, the SOE finds a group of securities firms as underwriters. On the day of IPO, at least 25% of total shares are sold to the public, whereas shares classified as state or legal person owned are kept in vault and cannot be traded. After the IPO, the original SOE either disappear or becomes the majority holder of the stock company. In the former case, the local office of the Bureau of State Property Management (a central government agency, BSPM hereafter) acts as the largest shareholder of the listed company if the SOE was owned by the central government or its agencies before the IPO. Otherwise, the local finance bureau, or a local government-run holding company plays the role of the largest shareholder. The incorporatization of SOEs in China is thus being viewed as "nothing different but the logo" or "new bottles with the old wine."

Founding of a legal person dominated stock company. These stock companies are formed in a different way that is more democratic with less government interference. Even though the founding legal persons have to get a permission for going public and a quota from

[10]These legal person institutions themselves may be controlled by the state. So long as they are not 100% owned by the state, equity they hold in the new stock company is classified as legal person shares.

government agencies, they can, at least in theory, nominate board members and choose corporate officers at their will. It is not required to obtain a government or party approval of their choices. Consequently, the board membership of stock companies founded by legal persons is less concentrated than that of state-controlled corporations transformed from SOEs. More professional managers are hired by stock companies dominated by legal persons, whereas officers of state-controlled companies are hand-picked by the government from a pool of party cadres and former SOE managers, and sometimes on a rotation basis.[11]

Only one listed company was founded by all individuals with no state and legal person owners. From above description, it is clear that the incorporatization of SOEs is unlikely to change the corporate governance of the firms. For legal person founded stock companies, on the other hand, we do see some progress toward a modern corporation. At least, legal person founders have greater autonomy in selecting board members and chief officers.

2.4. Composition of the Board and the Supervisory Committee

To assess the corporate governance of Chinese stock companies, we now examine the composition of the board of directors and the supervisory committee. Here we classify members of the board and supervisory committee as representatives of the state, legal person owners, tradable A-share holders, and non-owners by their present and previous employment. Board and committee members who have a full time job at the BSPM and local finance bureau, for example, are considered as state representatives in the company.[12]

Summary statistics on the composition of the boards of 154 companies in 1995 are given in Table 2.5. A comparison of Table 2.5 with Table 2.2 reveals that the board membership of the sample companies is not proportional to the ownership. It is striking to see that individual shareholders have no more than 0.3% of the seats on average even though they as a group possess approximately one third of total outstanding shares. On the other hand, the state is over-represented on the board as 50% of positions are filled by government officials, substantially higher than its 30% of average stake in the stock companies. Board membership for management is common for both SHSE and SZSE companies, averaged at 50%. The management actually has a greater influence on decision making if we include lower ranking officers such as general managers of subsidiaries in calculating the manager/board member ratio.

[11]During an interview with a state-controlled stock company, we were told that about half of the board members and one third of chief officers are replaced at the end of each term. Government officials are paid better if they work in the stock company. To avoid jealousy, the government let officials take turns to serve in stock companies.

[12] Identifications of the board and committee members are difficult, however, for stock companies transformed from SOEs. Even though a board chairman is a full-time job, he/she could be either appointed by the local government or elected by shareholders. To distinguish between these two possibilities, we look at the members' previous employment. If he/she worked in the founding SOE of the company before its public listing and the SOE remains the largest shareholder afterwards, he/she is likely a government-appointed board or committee member. Hence, we treat him/her as representing the interest of the state. If the founding SOE itself is defined as a legal person rather than solely state-owned, he/she is then considered as legal person board or committee member.

Next, we divide the sample companies into two categories: the state-dominated and legal person-dominated companies.[13] Among the state-dominated firms, the state has more than 70% of board seats on average and legal person owners take 20%. Individual shareholders have no presence at all. For the legal person-dominated companies, the proportion is reversed, with legal persons having 70% and the state 20%. Individual and non-owner board membership is higher for firms dominated by legal persons than for those dominated by the state. It seems clear that both the state and legal persons rely on their control over the board to influence corporate policies and to protect their interests.

The composition of the supervisory committee is also characterized by extremely low presence of individual shareholders, about 0.5% for the SZSE-listed companies and zero for the sample companies listed on SHSE (see Table 2.6). On the other hand, employee membership is very high, 78% for the SHSE-listed companies, and 68% at the SZSE. With so many employees on the supervisory committee, it is doubtful that the committee can carry out its duties independently and act in the best interest of shareholders.

Table 2.7 shows the shareholdings of board members and their cash salaries. It is interesting to note that for the SZSE listed companies in the sample, the average number of shares held by board members is substantially greater for legal person-dominated firms than that for the state-dominated firms. On the other hand, board members of the SHSE-listed companies that are dominated by legal person owners appear to receive a higher cash salary on average than their counterparts do in the state-dominated firms. Roughly the same observation can be drawn from the SZSE sample though the discrepancy in average cash salary is smaller. We should be cautious, however, about the information on cash salaries of board members.[14] Nonetheless, the differences in shareholdings and salaries of the board members between the state-dominated and legal person-dominated firms are suggestive. Many board members in the state-dominated firms are still paid according to their administrative rankings, whereas legal person-dominated companies have greater discretion in determining the compensation of their officers.

2.5. Shareholders' Behavior and Corporate Governance

For listed companies in which the state owns equity, local offices of the BSPM or officials of local finance bureaus exercise owner's rights on behalf of the state.[15] The BSPM collects dividends and submit them to the Ministry of Finance, while the local finance bureau can use them as a revenue of its own. The top priority of the BSPM or whoever representing the

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[13] If a firm with the fraction of state shares in total shares outstanding greater than the fraction of legal person shares, the firm is classified as the state-dominated regardless of the fraction of tradable A-shares. It is legal person-dominated otherwise. In doing so, we assumed implicitly that individual shareholders have virtually no say in corporate affairs.

[14] Data on salaries are limited and inaccurate. Only 33 out of the 71 sample companies listed on the SZSE provided such information and 52 of the 83 SHSE companies did so, even though the disclosure is required by CSRC. As indicated by interviews with a few stock companies, the salary figures in annual reports are not reliable. There are several reasons for the reluctance in reporting board members' compensation. One is the concern of possible protest by shareholders, especially when the company's performance is poor. Covering-up violations of salary ceilings set by the state could be another.

[15] In a few cities such as Shanghai and Shenzhen, government investment companies are established and perform all the functions of BSPM. Little information is available on how these investment companies are organized and operate.

state has been stated as "preserving and increasing the value of state properties."[16] The BSPM has two ways to ensure the implementation of the policy. It can select board members and chief officers, jointly with local party organizations, and it has veto power over business and investment plans proposed by the management. Officials of the BSPM may also simply choose to sit on the board of directors or the supervisory committee. It is unknown whether the BSPM signs a contract with the management, and how popular such managerial contracts are among the state-controlled companies. For firms which the state is a minority shareholder, the BSPM plays a rather passive role, just acquiring one seat on the board or the supervisory committee.

A series of principal-agent problems may arise from this institutional setting in the state-controlled stock companies. First, officials the local BSPM may not have sufficient incentives to preserve and increase the value of state properties. They are civil servants and draw income from the government payroll which has nothing to do with the performance of the stock companies they oversee. Moreover, these BSPM officials are appointed and paid by the local government. Priorities of the local government do not necessarily coincide with those of BSPM. For instance, the local government may care more about unemployment than the value of state assets. Knowing the local government's preference, the BSPM officials may forgo their efforts of increasing the value of state assets, but align themselves with their local boss. Since corporate officers of state-controlled companies are also appointed, they are more likely to responsible only to their party supervisors. The promotion of the officers depends largely on how well they execute the instructions from the top rather than the satisfaction of the BSPM or shareholders. Firm's performance is secondary in importance, so long as it is not disastrous.

Second, it is difficult for the BSPM to verify what decisions made by the management are (state assets) value-increasing and what are value-decreasing. The BSPM bureaucrats are not industry experts, and they have to overlook hundreds of companies and enterprises in which the state has an interest. Even worse, the value of state assets is not easy to determine. Since stock prices have been extremely volatile and contain a large noise component [see Xu (1996)],[17] it is thought of as unfair and inaccurate to evaluate state assets based on stock prices. Reflecting this view, the value of state properties is in fact defined as the *book* value of the fraction of a firm's net assets owned by the state. The book value, however, may have nothing to do with a company's profitability and hence the company's net present value. Under this criteria, distortions in managerial incentives are almost inevitable.

Third, increasing the value of state assets in a firm may lead to conflict of interests with other shareholders. For instance, managers of state-controlled stock companies are all aware of a special form of value decreasing: dilution of state shares. When a proposal of rights offering is under consideration for raising more capital, backed up by the BSPM, the managers and board members will do whatever needed to block it. The BSPM has no budget to exercise the rights (to purchase the offered shares) as all dividend revenues are submitted to the Ministry of Finance or local governments. Since rights are usually offered at a large discount of 25 to 50%, state shares will be diluted if the BSPM does not exercise the rights. There are other circumstances in which the state promotes its interest at the expense of other shareholders. The BSPM appoints party

[16]See, for example, State Property Management, Vol. 2, p100, the Bureau of State Property Management, 1994, The Economics Press, Beijing.

[17]French and Roll (1986) show that 88% of price return volatility of NYSE stocks can be attributed to arrival of new information. For the SHSE, the information content of stock prices in the period of 1993 to 1995 is lower than 40%.

cadres board members to ensure its control of the stock companies. The appointment may well be value-decreasing for legal person and individual shareholders as the party cadres lack experience of managing a modern corporation.

The vast majority of China's individual investors are small shareholders and few are in the list of the ten largest shareholders. For those individuals in the top ten, their holdings are so small, normally less than 0.5%, so that the companies do not even have to disclose their names. 0.5% may be a significant figure by American standard. Consider the state, and legal persons as a group. Each owns approximately a 30% stake on average (Table 2.2), 0.5% by a single individual is negligible. Almost no individual shareholders are on the board of directors or the supervisory committee. There are a few exceptions (about five) where individual shareholders have a board seat. Most of them are the business founders and Hong Kong residents. It is conceivable that the dispersed individual ownership may give rise to the classic free-rider problem [Grossman and Hart (1980)]. Small investors do not have the incentive or the capability to monitor managerial performance. The small shareholders' inactivism has also been further worsened by block holdings of the state and legal persons.

Anecdotal evidence is available to support the hypothesis of free rider problems. The turnover ratios of the Chinese stock exchanges, for example, are extremely high, over 200% at both exchanges in 1994 (Table 2.1), as compared to 67% of the US. Since tradable A-shares account for 20% to 30% of total outstanding shares, the effective turnover ratio may range from 700% to 1000%! In other words, the average holding period in China is about 1 to 2 months while it is 18 months in the US. Apparently, Chinese individual investors are seeking short term trading profits rather than dividend income or long term growth. With such a short investment time horizon, it is unlikely that small shareholders are willing and able to monitor the management closely. The rate of small shareholders' participation in the annual shareholder conference is also very low. According to an estimate of CSRC, the average number of shareholders attending annual conference is around 100, while the number of shareholders of listed companies ranges from 3,000 to 100,000. The state and legal person owners always sent their representatives to the conference with all the expenses covered by employers. Individual investors can go only at their own expense. Very often, shares represented by conference attendants are too low to meet the requirement, and the board has to call for an emergency shareholder meeting.

Legal person shareholders in China are not only better motivated, but also better equipped with power to control and monitor the management.[18] Unlike individual investors, representatives of legal person shareholders are elected to the board of directors and the supervisory committee. Besides their voting power on important issues such as the selection of the management team and dividend policies, they have access to corporate inside information, and the right to question chief officers at any time about operations of the firm. The board also has the privilege of calling for an emergency shareholder meeting, while individual shareholders will have to assemble a coalition that represents at least 10% of the firm's equity to do the same.

It emerges from the above discussion that the different forms of ownership may have implications for corporate governance and the performance of firms. It is natural to ask: How does firm's performance vary with equity ownership of the state, legal persons, and individual

[18] As argued by Shleifer and Vishny (1986, 1996), large shareholders provide at least a partial solution to the free-rider problem of small investors. They have the incentive to monitor the management even though doing so will also benefit other shareholders.

investors, respectively? For example, as the proportion of state shares in total shares outstanding rises from zero to 80% across the sample, do we expect performance to decline? These issues are to be address in the next section.

III. Ownership Structure and Firms' Performance: Empirical Evidence

Using pooled data for the listed companies, three years for each stock exchange, we first run regressions of performance variables on concentration ratios without distinguishing different types of shares. This regression analysis is conducted to investigate the free-rider problem of small investors and the role of large shareholders. Second, we examine effects of state ownership, legal person ownership and individual private ownership on firms' performance, respectively. Employee and foreign ownership are not dealt with in this paper.[19] We find that the market value and profitability of firms increase with ownership concentration. The effect of ownership concentration is greater for companies dominated by legal persons than for state-dominated firms. Regarding the ownership mix, firms' performance is found to be positively correlated with the fraction of legal person share, but either negatively correlated or uncorrelated with the proportions of state shares and tradable A-shares.

3.1. Data Description and Definitions of Variables

The data set includes all SHSE and SZSE listed companies for 1993, 1994 and 1995. Major sources of information are listed as follows

(1) Publications by CSRC, the SHSE and SZSE, and China's Securities Association such as China Securities Annual Report, 1994, 1995 and 1996; SHSE Securities Yearbook, 1993, 1994, and 1995; and SZSE Fact Book, 1993, 1994, and 1995. Most of the figures on ownership mix and accounting ratios used in the regressions are gathered and calculated from these publications.

(2) The Information and Statistic Department of the two exchanges. They kindly provided us daily trading data including open and closing prices, volume, and value.

(3) 1995 annual reports of listed companies. We collected annual reports of more than 100 SHSE companies and for about 60 SZSE companies. We rely on these reports for information on the board and the supervisory committee, and the top 10 shareholders. Using the information, we are able to study the composition of the board and the committee, and to compute ownership concentration ratios.

(4) On-site study of 6 stock companies.

We employ three accounting ratios to measure the firm’s performance, the market-to-book value ratio (MBR), ROE, and ROA. In the empirical literature, Tobin's Q, the market value of debt plus the market value of equity divided by the replacement cost of all assets, has been used as a major indicator of firms' performance. Since few of the Chinese stock companies issue debt securities, it is almost impossible to estimate the market value of the companies' debt. At the end of 1993, for example, only 8 of the SZSE-listed companies have their corporate bonds

[19]Interested readers may refer to Kruse and Blasi (1995) for a survey on employee ownership, and Bailey and Jagtiani (1994), for example, on foreign ownership in the Thai capital market.

listed on the exchange, and the number decreases to one at the end of 1994 (SZSE Fact Book, 1994, p9-10). Information needed for calculating the replacement cost is not available either. Smith (1996) reports that institutional investors in the US uses the market-to-book ratio to assess performance when selecting target firms. Similarly, we take the MBR as a measure of the market performance of firms, while realizing that the ratio, though closely related to, is not quite the same as Tobin's Q. Even Tobin's, as agreed by many researchers, is a noisy signal. Because of the limitations of MBR, the profit rates, ROE and ROA, are employed as supplementary measures. Definitions of the performance variables, ownership fractions, and concentration ratios are given below.

MBR: the market-to-book value ratio, share prices on the last trading day of each year time the number of total outstanding shares divided by the book value of equity.

ROE: return on equity, after tax profits divided by the book value of equity.

ROA: return on assets, after tax profits divided by the book value of total assets.

FST: the fraction of equity owned by the state. FST equals the number of shares held by the state divided by the number of total outstanding shares. FLP, FTA, FEM, and FBS are calculated similarly for the fraction of equity owned by legal persons, tradable A-share investors, employees, and B-share holders, respectively. See Table 2.2 for summary statistics.

A10: a concentration ratio, percentage of shares controlled by top 10 shareholders.

HERF: Herfindahl index of ownership concentration, the sum of squared percentage of shares controlled by each top 10 shareholder.

Table 3.1 shows that the ownership of Chin's stock companies is highly concentrated, and more so in companies listed at the SHSE than those at the SZSE. On average, the first two shareholders control more than 50% for the SHSE companies, and close to 50% for those listed on the SZSE.

Factors other than ownership structure may also affect performance. To take them, not all of them, of course, into account, we introduce a set of control variables.

DUM_i, i=1, 2, ..., 5, for manufacturing, trade, utility, real estate industries, and conglomerates, respectively. These industry dummies are set according to the classification of listed corporations by the two stock exchanges. Let d_{ij} be the element of DUM_i, d_{ij}=1 if firm j is in industry i and d_{ij}=0 otherwise.

SALE, operating sales in billion Ren Min Bi (RMB in short, the unit of Chinese currency). It measures the size effect of firms.[20]

[20]In the literature, the value of total assets or the replacement cost of assets is used to control for the size effect, e.g., see Morck et al (1988) and McConnell and Servaes (1990). The value of total assets is tried in this paper. It has lower explanatory power than SALE, and its inclusion in regressions of ROE and ROA some times makes the results sensitive to different combinations independent variables.

DAR, the debt/asset ratio, which equals the book value of debt divided by the book value of assets. In the US, debt financing has a tax advantage over equity financing, and hence the market value of a firm with a greater leverage is expected to be higher. The direction of DAR's effect on the Chinese stock companies is unknown at this point.

GROW, growth of net income. Stocks of companies with high growth should be priced higher in an efficient market.[21]

3.2. *Ownership Concentration and Firms' Performance*

Let P represent performance variables, P=MBR, ROE, and ROA, and CR be ownership concentration ratios, CR=A10 and HERF. If ownership structure does not matter, we would find no correlation between P and CR. The null hypothesis is thus stated as

Hypothesis 1: (The irrelevance of ownership concentration) In any regression of P, the coefficient of CR equals zero.

We estimate equation (1) to test the hypothesis for the two 1995 samples.[22]

$$P = \sum_{i=1}^{5}\alpha_i DUM_i + \phi_1 SALE + \phi_2 DAR + \phi_3 GROW + \phi_4 CR + e \quad (1),$$

where all Greek letters represent coefficients. e is an error term with a covariance matrix $Cov(e_j, e_k)=0$ for $j\neq k$, and $Var(e_j)\neq Var(e_k)$. Since the variance of e_j differs across firms, only heteroskedasticity-consistent statistics are reported in this paper. Estimation results of equation (1) are given in Table 3.1. Note that GROW is not included in the regressions of ROE.

Hypothesis 1 is rejected decisively as A10 and HERF are significantly different from zero in regressions of MBR.[23] The correlation of accounting profit rates with the ownership concentration ratios is much weaker. HERF is significant at the 5% level in the ROE equation for the SZSE companies. Neither HERF nor A10 has any explanatory power for ROE of the SHSE companies. Estimation of equation (1) with ROA yields qualitatively identical results (not reported here) to those with ROE.

The significant impact of concentration ratios on MBR is in support of the Shleifer and Vishny hypothesis (1986) that large shareholders may help reduce the free-rider problem of small investors, and hence are value-increasing. This explanation should be taken with extra caution,

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[21]In the studies of Morck et al (1988) and McConnell and Servaes, R&D expenditures and advertising expenditures as ratios to the replacement cost are incorporated into regressions. These variables can also be viewed as indicators of future growth. Unfortunately, data on R&D and advertising expenditures are not available for Chinese stock companies.

[22]We do not have data on top 10 shareholders for the 1993 and 1994 samples.

[23]Following Demsetz and Lyhn (1985), we experimented with logarithm transformation of A10 and HERF in estimating equation (1). The results are virtually the same.

however. Notice that the majority of top 10 shareholders of the Chinese stock companies are state government agencies and legal persons. For example, in the 1995 SZSE sample, only 7 out of 127 companies have individual shareholders in the top 5. There are more individual investors in the top 10, but the number is fairly small, 1.6 on average. The percentage of shares controlled by individuals in the top 10 is even smaller, with an average of 3.4% of total outstanding shares for the 127 companies. A10 and HERF therefore measure mostly the degree of ownership concentration by the state and legal persons. Accordingly, the results in Table 3.1 should be interpreted as a positive correlation of MBR with the *state and legal person* ownership concentration, rather than ownership concentration in general.

The positive effect of ownership concentration on MBR suggests that an overly dispersed ownership structure may not be the best way to improve economic efficiency of the public sector. It is premature, however, to conclude that the transition to a market economy can be completed while maintaining control of the state over the firms. From the above statistical analysis, we cannot tell whether the effect is due to the state or legal person owners. To distinguish between these two groups, we divide each of the 1995 samples into two sub-samples, the state-dominated as defined in Section II and the legal person-dominated. Regressions of equation (1) are implemented for each sub-sample so that we can see the effect of ownership concentration by the state and by legal persons separately. The results from the sub-samples are reported in Tables 3.2 (a) and 3.2 (b).

For the state-dominated firms, HERF and A10 are significant in the MBR equations only, but insignificant in other equations. In contrast, for the SZSE listed companies that are dominated by legal persons, the concentration ratios are significant at the 1% or 5% level with all the measures of performance. For legal person dominated SHSE companies, HERF is correlated with ROE and ROA, but not with MBR. Interestingly, there is a strong positive correlation between MBR and the proportion of shares held by *all* legal persons, FLP. It appears that the market recognizes the role of legal persons only as *a group*. On the other hand, HERF seems to explain the accounting profit rates better than A10 does. The correlation between A10 and the profit rates is weaker for the legal-person dominated SZSE companies, and A10 is insignificant for the SHSE firms. Since HERF weights more toward larger shareholders, it may be the case that the largest legal person owner alone can exert sufficient influence on the management without having to form a coalition with other shareholders. In fact, if we replace HERF with A1, the percentage of shares controlled by the most important shareholder, in the ROE and ROA equations, the results are essentially identical to those presented in Table 3.2 (a) and (b). Thus, the market value of a firm rises as ownership concentration rises for legal persons as a group. Whereas for the profit rates, the largest legal person shareholder is most relevant. The disagreement between the market and actual profitability of the firm seems to suggest imperfect information of A-share investors or their lack of experience.

In summary, we find empirical evidence for the positive effects of ownership concentration on firms' performance. The positive effect of concentration is stronger among legal person-dominated companies than with firms dominated by the state. For the latter, ownership concentration does not affect the profit rates at all. These findings have certain policy implications for China's SOE reform. They challenge the popular thinking of Anglo-American model with dispersed private ownership as the most efficient way to transform a socialist economy, but in favor of the Germany-Japanese model. In the Germany-Japanese corporate system, large institutional shareholders, including banks and corporations play a crucial role.

3.3. Ownership Mix and Firms' Performance

As discussed briefly in the introductory section, some economists argue that well-functioning markets, the product market, the managerial labor market, and the takeover market, are the key in establishing corporate governance, and ownership is secondary in importance at most if not irrelevant. We have already seen that ownership concentration affects the performance of firms. We further address this issue by studying the effects of ownership mix on the performance of firms. If ownership mix is irrelevant concept, we would expect ownership fractions to be insignificant in regressions of performance. We first test the irrelevance hypothesis of ownership mix in this subsection, and then investigate how firms' performance changes with ownership mix if the hypothesis is rejected.

Let F be ownership fraction variables, F=FST, FLP, and FTA. We test

Hypothesis 2: (The Irrelevance of Ownership Mix) In any regressions of P, F is insignificant.

by estimating the following equation,

$$P = \sum_{i=1}^{5} \alpha_i DUM_i + \phi_1 SALE + \phi_2 DAR + \phi_3 GROW + \phi_4 F + e \qquad (2).$$

We use pooled data from six samples, three for each stock exchange for 1993, 1994, and 1995, respectively. The samples include all listed companies except a few outliers. Outliers are identified in the following way. If an observation falls outside the range of the sample mean plus and minus two times standard deviation, the observation is dropped. We start with simple regressions for the six samples, one year at a time separately, and then run pooled regressions using the three-year data as a panel.[24] Results for the pooled regressions are presented in Table 3.4.1 for both Shanghai and Shenzhen. The conventional least-square-dummy-variable approach is used in this paper in the pooled regressions, due to the characteristics of our data.[25] This approach is widely used in the literature of ownership structure and corporate governance, and allows us to improve the efficiency of estimation without incurring heavy cost of technical complexity.

The hypothesis 2 is rejected immediately as the coefficients of three ownership variables differ significantly from zero for the pooled regression in Table 3.4.1. In all the regressions, five industry dummies are included as control variables and their coefficients are positive and significant at 1% level. Other controlling variables including SALE and DAR. Dummies for

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[24] We are grateful to Stjin Claessens for his suggestion of using pooled regressions.

[25] The fixed-effect and random-effect models are not used since first, the former is essentially a dummy-variable classical regression model. The use of the model would reduce the gain in the degree of freedom from panel data if the panel is short. A more serious problem could arise if there is little variation over time in the independent variables. Recall that state and legal person shares are not allowed to be traded at the two exchanges, and transfer of these shares among institutions are subject to strict rules. Consequently, the ownership fractions, FST, FLP and FTA are fairly stable over time with little variations. Using fixed effect model here would mean many zeros for the explanatory variables in such a situation. Even for the random-effect model, special treatment is needed when some of the independent variables do not change over time [see Greene 1993, Hsiao 1986 and Hausman and Taylor 1981 for details].

year 1994 and 1993 are included with 1995 as the left-out category. In all regressions, FST, the fraction of equity held by the state, has a ***negative*** coefficient, and it is significant in two out of four regressions in the table. Firms performance is ***positively*** correlated with legal persons' holdings as FLP is significant at the 1% or 5% level in all four regressions, whether the performance is measured by MBR or ROE or ROA. In contrast, the fraction of equity owned by individual shareholders, FTA, has a significant ***negative*** effect on the market-to-book ratios for the two stock exchanges. Individual shareholders do not seem to have any significant impact on the profitability of firms as measured by ROE and ROA. The explanatory power of these regression is fairly high with adjusted R-squared ranging from 14 to 40 percent. We obtain similar results in simple regressions using data one year at a time, with somewhat lower t-statistics and R-squares.

We then explore the effects of both ownership concentration and mix on performance in Table 3.4.2. Indicators of concentration, A5, A10 and HERF are included and they show strong positive effects. The impacts of ownership mix did not go away. Instead, they become stronger. The fraction of state shares has negative coefficients in all regressions and they are significant in all ROE and ROA regressions. Legal person shares have positive and significant effects on performance, although the t-ratios are lower than those in Table 3.4.1. Individual tradable A shares have negative and significant impact in all MBR regressions but it is insignificant in ROE and ROA regressions.

The 1993 Shanghai sample stands out as an anomaly when running simple regressions and thus it is excluded in the pooled regressions. Little correlation between ownership structure and firm performance were found in this particular year for Shanghai listed companies. It is conjectured that the insignificance of the ownership variables might have something to do with, among many others, the efficiency of the secondary market. A simple linear regression of share prices on EPS and a constant yields a significant coefficient and an adjusted R^2 of 0.80 for the SZ 1993 sample. The coefficient is insignificant for the 1993 SH sample, and the R^2 is merely 0.015. It could be the case that stock prices at the SHSE in 1993 contain so much noise[26] that they cannot reflect the values of firms accurately, and hence the correlation between performance and ownership structure breaks down.[27]

It is possible that the market performance of firms is a *nonlinear* function of ownership structure. Stulz (1988) develops a model to show that the probability for a hostile takeover to succeed decreases as managerial equity ownership increases. At 50% of managerial ownership, the probability of a hostile takeover is zero. The model thus predicts a hump-shaped nonlinear relation between the value of the firm and the fraction of shares held by insiders. Following this line of thinking, we will examine in the next subsection some of the existing hypothesis about

[26]As mentioned before, the turnover ratio of the SHSE is more than twice as high as that of the SZSE, indicating tremendous short-term speculation in the Shanghai market. Xu (1996) shows that the variance of daily stock price returns at the SHSE is significantly larger than that of the SZSE. Also see DeLong et al (1990) for a theoretical treatment of noise trading.

[27]As argued by Kyle and Vila (1992), noise trading may distort the takeover market, namely, noise trading could possibly make firms with good performance takeover targets, and on the other hand, camouflage firms with poor performance. Holmstrom and Tirole (1993) show that optimal incentive contracts should always include managers' holding of stocks. It is conceivable that if a company's stock is mispriced because of trading noise, the contracts can be misleading. In these two examples, trading noise blurs the "true" relation between stock prices and firms' performance.

how ownership structure affects the value of firms. Our discussion will be focused on two issues: (1) In what manner do legal person owners affect corporate governance? and (2) Why is the state ownership inefficient?

3.4. More on The Role of Legal Person Shareholders

Most legal person shareholders have a stake considerably larger than any individual's holding in the sample firms. Large legal person shareholders almost for sure possess seats on the board of directors and on the supervisory committee as well. What are their relations with the management--insiders, controllers or collaborators? McConnell and Servaes (1990) find, by imposing a quadratic functional form, that Tobin's Q increases with insider ownership until it reaches approximately 40% to 50%, and declines slowly thereafter. Their finding is consistent with the prediction of the Stulz's model. On the other hand, Morck et al (1988) point out that managers respond to two opposing forces. Managers naturally tend to allocate a firm's resources in their own best interests at the expense of outsider shareholders. As management's equity ownership rises, however, their interests become more aligned with those of outside shareholders. The curve that shows the relationship between firms' value and inside ownership can be downward or upward sloping, depending on which of the forces dominates the other. Morch et al report that Tobin's Q rises over the 0 to 5% range of inside ownership, and falls when inside ownership goes from 5% to 25%. Q increases again for board ownership greater than 25%.

Following McConnell and Servaes, we run pooled regressions of the market-to-book value ratio on fractional ownership variables and their squared terms plus a constant intercept. The results are given in Table 3.5. There appears to be a quadratic relation between the market-to-book value ratio and legal person ownership for both stock exchanges in 1993-95. It is worth noting, however, that the signs of estimated coefficients with FLP and FLP^2 indicate a U- shaped rather than hump-shaped curve. The value of firms decreases with FLP when FLP is low, but increases when it is high. But this effect does not exist for ROE and ROA regressions. When running separate regressions, the relation between firm's value (MBR) and legal person ownership remains U-shaped for the SHSE sample companies, with a minimum occurring at FLP=0.33 in 1994 and at 0.32 for 1995. For the SZ 1994 sample, the squared term is significant, but the linear term is not. The U-shaped function seems to be consistent with the hypothesis of Morck et al about how inside ownership affects firms' value. When legal persons own a small stake in a company, they may try to exert their influence on or collude with the management for undertaking business operations or investments that will benefit themselves but harm the firm's value in the long run. When their equity holding in the firm increases, their goal coincides with that of outside shareholders, i.e., maximizing the firm's value. The market value of the firm decreases first with legal person ownership as investors see the conflict of interests, and then increases when outside shareholders anticipate the convergence of interests at high level of legal person holdings.

Note that this explanation does not imply a turning point of 50% at which legal persons shareholders change their behavior. The mechanism the legal persons rely on for disciplining the management in China is not the threat of a takeover as assumed in the Stulz's (1988) model, which underlies the empirical work of McConnell and Servaes (1990). Instead, being fired by the board of directors seems to be a far more serious threat to the Chinese managers than an outsider takeover. In fact, active takeover markets do not exist in China since state shares and legal person shares, which together consist of more than 60% of total outstanding shares, are not allowed for trading at the two exchanges. Even though state and legal person shares are

transferable, parties involved need to go through a tedious procedure and get their deals approved by the BSPM, CSRC, and the local government. In 1994 and 1995, there are 32 state or legal person share transactions registered with the two stock exchanges.[28] Most of the transactions appear to have been conducted for reasons other than reorganization.[29] In only two out of the 32 cases, shares transferred exceed 50% of total outstanding shares of the company. It is doubtful that outsider takeovers have served as an important means for legal person shareholders to discipline the management.

It is conjectured that legal person owners ensure managers to work in the interest of shareholder through direct control. Sitting on the board with a substantial portion of shares, large legal person shareholders are able to change the management team. It is worth pointing out that legal person owners do not have to have 50% of shareholders to vote with them in order to replace the incumbent management. The number of shareholders of the publicly-traded Chinese corporations ranges approximately from 3,000 to 100,000. The number of shareholders who actually attend the annual shareholder meetings rarely exceeds 200. Suppose the 200 shareholders represent 60% of total outstanding shares. What the board needs to remove the management is 50% or 2/3 of the 60%, i.e., 40% of total outstanding shares at most. Proxy votes are not available in China. If a single legal person shareholder owns 30% of a firm, it should not be difficult for the legal person to gain the needed 10% from other legal person shareholders who attend the conference. Thus the inactivism of small shareholders makes legal persons more powerful a shareholder group in corporate affairs than their equity stake indicates.

Legal person shareholders have played a positive role in monitoring the management and improving firms' performance, so long as they have a large enough interest in the firms. They depend on direct control from the board rather than a takeover market to enforce the management into value maximization. Their positions in the stock companies are probably weaker than those of German [see, e.g., Gorton and Schmid (1996)] and Japanese banks [Prowse (1992)], but very likely stronger than that of American institutional investors. In the German case, Gorton and Schmid present evidence that the performance of German corporations rises with banks' equity holdings in the corporations. Smith (1996) shows that even without board seats, American institutional investors monitor firms in which they have an investment, and their contribution to the firms' market performance is positive and significant.

We have noticed that the state is a large shareholder, yet, has negative or insignificant effects on firms' value. Why does the state behave differently from the legal persons? Boycko et al (1995) suggest that the government may pursue political objectives such as excess employment rather than profit maximization. Focusing on managerial incentive schemes, Laffont and Tirole (1991) also point out that conflicts between the government's and shareholders' goals are a source of inefficiency. Unfortunately, we are unable, constrained by limited data, to test the hypothesis of conflict-of-interest, but address the issue indirectly in the next subsection and provide further evidence.

3.5. The Inefficiency of State Ownership

[28] Securities Market Herald, October, 1995.

[29] It seems that the transfers were motivated mainly by cashing-out, gaining an access to the capital market, and diversification or consolidation.

If employment is one of the government's objectives, the more are the stock companies dominated by the state, the more workers should they hire, ceteris paribus, and the lower the labor productivity. Since the CSRC does not require listed companies to report the number of workers hired, it is difficult to collect employment data. The data set used in this study is obtained from the SHSE, but observations are available only for 100 SHSE companies as of the end of 1993. Using the data set, we estimate the following equation for the 100 firms

$$\log(\frac{Y_j}{L_j}) = \alpha_i + \beta_i \log(\frac{K_j}{L_j}) + \gamma F_j + u_j \qquad (3),$$

where i=1, 2, ..., 5 for the five industries as classified by the SHSE. Y_j is the before tax profits of firm j. K_j stands for capital stock of firm j, equal to the book value of total assets. L_j represents the number of employees. α_i is the dummy variable included to reflect differences in the labor productivity across industries. K_j/L_j is the capital-labor ratio. The equation looks like but cannot be interpreted as a production function, because the dependent variable is not value-added per worker but the average profits created by each employee. We argue that profit per work is a better indicator for the purpose of testing whether the state pursues excess employment. If Y_j were value added, higher employment would increase Y_j and L_j simultaneously, and hence the variations of the dependent variable would be smaller. It would be more difficult to detect the correlation, if it exists, between labor productivity and the state ownership. F, an equity fraction variable, enters equation (3) to capture the effect of certain type of ownership on the labor productivity. Estimation results of are given in Table 3.6.

The first two lines of Table 3.6 report estimates of the coefficients in equation (3) for F=FST. $\hat{\gamma}_i$ is negative and differs significantly from zero at the 5% level. The negative correlation of the labor productivity with the state ownership does not contradict the hypothesis that employment is one of the state's objectives. It also reinforces the results obtained earlier, i.e., the state ownership has an adverse effect on the performance of firms. Lines 3 and 4 in Table 3.6 show the estimation of equation (3) when F=FLP. Not surprisingly, the coefficient is positive and significant at the 5% level. The labor productivity is higher, the greater the stake of legal person owners have in the stock companies. Assuming the level of employment does not change, we estimate equation (3) for the same 100 firms in 1994, and report the estimated coefficients in the second half of Table 5. The results are virtually identical to those of 1993: the labor productivity falls with state ownership, but rises with legal person equity holdings.

The inefficiency of state ownership can arise from conflict interests between the central government agency, BSPM, and other shareholders. When a company needs to raise new capital through rights offerings, the BSPM and its representatives on the board will vote against it as the offerings will likely dilute state shares. The blockage by the state may cost the firm investment opportunities and hurt its long term growth. If this is true, we expect to see that the debt/asset ratio, DAR, tends to be higher in state-dominated companies, but lower for those under strong influence of legal person shareholders. To see if this is the case, we regress DAR on five industry dummies and ownership fraction variables, mainly, FST and FLP. Table 3.7 summarizes the testing results. For the SH samples, the coefficients associated with FST are all positive and significant at the 1% level, and those of FLP are significant and have an negative sign as expected. The correlation between the debt/asset ratio and ownership structure at the SZSE is weaker, indicating, perhaps, a relatively weaker influence of the state on corporate policies. The evidence is consistent with the hypothesis that companies in which the state has a

large stake may have to rely more heavily on debt financing as the state in general opposes rights offerings.[30]

IV. Conclusions

Empirical evidence presented in this paper points to the inefficiencies related to the state ownership, and to the importance of relative ownership concentration and the role of large and institutional shareholders (blockholders). First, market-oriented reform measures China has adopted seem to have improved the economic efficiency of the state sector. However, optimal resource allocation is unlikely to be achieved simply by creating markets for products, workers and managers, without changing the ownership structure of SOEs. The internal incentive structure of SOEs must be reformed by diversifying the state ownership, by introducing other forms of large stakeholders including institution investors. It would be a Pareto improvement if the government reduces or sells off the shares it holds in the stock companies.

Second, if ownership diversification is needed, is dispersed private ownership then the answer for large and medium sized enterprises in China? Our results seem to suggest a negative answer. Evidence show that the influence of individual shareholders to firm's profitability is insignificant, if not completely irrelevant. In many cases, the coefficients for the fraction of equity held by individual investors are significant but *negative*, indicating that the market values individual private ownership downward. Apparently, these publicly-traded corporations in China suffer from the traditional free-ride problem. Individual shareholders have no incentive and no capability to monitor and influence the behavior of the management. Therefore, a certain degree of ownership concentration is needed.

Third, we found a positive correlation between ownership concentration and firms' performance. In particular firms' profitability is positively and significantly correlated with the fraction of legal person shares, suggesting that large legal person shareholders (institutional investors) have the incentive as well as the power to monitor and control the behavior of the management, and have played a significant role in corporate governance. The result is robust when indicators of both concentration and ownership mix are included in the regressions. The results are largely consistent with those of Claessens (1995) and Claessens, Djankov and Pohl (1996).

Comparative studies show that in OECD countries ownership and control rights are increasingly concentrated in the hands of financial and nonfinancial institutions (Annex) The driving force behind this trend seems to be related to the benefit of ownership concentration as a direct measure of corporate control and other factors. Looking at the determinants of corporate control mechanisms, many studies argue convincingly that the role of large institutions in corporate governance is particularly important in countries where legal protection of shareholders' interest is weak for historical and institutional reasons-- a situation exists in many transition economies.

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[30] In the literature, the effects of financial leverage on firms' value can be offsetting. It is positive with a higher debt/asset ratio if taking into account the value of corporate tax shields, and negative according to the pecking order theory. The hypothesis proposed here about the conflict interests of the state and other shareholders implies that the value of firms is inversely related with financial leverage. The overall effect of the debt/asset ratio depends upon which of the factors dominate the opposing ones.

Cautions are needed in interpreting the results. First, this study uses a subsample of Chinese enterprises--a clean and perhaps better performed group of enterprises which were chosen to be listed on the two stock exchanges. Our empirical study suffers unavoidably from a sample selection bias. Therefore, the results need to be treated with caution and they apply only to large and medium sized corporations. Second, it is suggested that there could be endogenuity of ownership in transition economies -- it could be the case that institution owners can choose to buy shares in better performing firms, and leave all poorly performing ones in the hands of the state. We argue that this is not likely in China where the state has the control over which company to be listed and how many shares to be kept in the hands of the state. Unlike the case in Eastern and Central Europe, legal person owners have less power in China but the state has the power to select. If there is endogenuity of ownership, it is inconceivable that the state would select to keep the shares in poorly performing firms (as implies by our results). Nonetheless, this issue and many others need to be tested in future studies. This study could also be complemented by more general studies using random samples of Chinese enterprises as well as quantifiable indicators of ownership mix, which is the intention of several ongoing research efforts that we know of.

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Table 2.1. Selected Market Statistics (as of the end of year, million RMB*)

	No. of Firms	Market Cap.	% of GDP	Trading Value	Turnover
1992					
SHSE	30	52,055		23,273	44.7%
SZSE	29	45,475		41,817	92.0%
Total	59	97,530	4.0		
1993					
SHSE	101	206,766		230,150	110.3%
SZSE	76	124,246		126,087	101.5%
Total	177	331,012	10.5		
1994					
SHSE	171	248,354		562,673	226.6%
SZSE	120	103,250		237,635	230.2%
Total	291	351,604	8.0		

Market Cap.=Total market capitalization
=Market price x the number of total outstanding shares.
% of GDP = Total market capitalization as percentage of nominal GDP.
Turnover = Trading value/Total market capitalization.
Sources: For 1992: Shanghai Securities Yearbook, 1993, p400; China Securities Market Annual Report, 1993, p161.
For 1993: Securities Market Yearbook of China, 1994, p809.
For 1994: China Securities Yearbook, 1995, p72, 73, p82.
*The exchange rate varies in the 3 years from US$ 1.0=BMB 8.1 to RMB 8.7.

Table 2.2. Ownership Structure of SHSE- and SZSE-Listed Companies*
As of the end of year (%)

		FST	FLP	FTA	FEM	FBS
SHSE	1993	35.3	31.0	25.5	0.9	7.1
		(28.6)	(28.7)	(19.3)	(2.6)	(13.2)
	1994	34.6	29.7	28.0	0.8	6.9
		(27.5)	(28.8)	(19.8)	(3.0)	(13.7)
	1995	34.2	27.4	28.5	0.4	6.3
		(26.9)	(27.1)	(19.5)	(1.9)	(13.5)
SZSE	1993	32.1	27.7	28.8	4.3	7.2
		(27.3)	(23.4)	(14.7)	(5.4)	(16.8)
	1994	28.2	33.5	32.9	2.0	3.4
		(26.5)	(26.0)	(13.9)	(4.4)	(7.8)
	1995	27.7	29.9	34.5	0.4	6.0
		(25.3)	(23.7)	(14.2)	(2.1)	(12.9)

*Cross-firm averages with standard deviations in parentheses.

Table 2.3. Ownership Structure by Sector (1995)*

	No. of Firms	FST	FLP	FTA	FEM	FBS
SHSE						
Manufacturing	107	37.1	24.8	26.8	0.3	7.4
		(27.5)	(27.3)	(18.9)	(1.7)	(14.1)
Retailing	33	32.2	25.0	36.4	0.7	2.3
		(20.5)	(18.8)	(14.1)	(2.7)	(9.5)
Utility	12	36.3	34.8	21.9	0.0	4.0
		(29.0)	(27.4)	(14.7)	(0.0)	(13.7)
Real Estate	9	30.5	29.3	26.1	0.0	9.3
		(28.5)	(31.3)	(29.0)	(0.0)	(13.9)
Conglomerate	23	20.0	42.4	34.3	0.5	1.5
		(28.4)	(31.7)	(22.2)	(2.3)	(5.7)
SZSE						
Manufacturing	69	30.9	25.5	33.5	0.5	7.5
		(24.9)	(23.0)	(13.9)	(2.5)	(14.8)
Retailing	11	18.0	40.0	38.4	0.1	3.0
		(16.0)	(15.6)	(13.6)	(0.1)	(9.8)
Utility	13	24.6	36.7	28.4	0.1	8.7
		(28.7)	(23.3)	(14.7)	(0.1)	(15.1)
Real Estate	20	27.9	33.7	35.7	0.7	1.9
		(29.4)	(27.1)	(13.4)	(2.5)	(4.7)
Conglomerate	14	22.5	32.5	39.6	0.1	4.2
		(24.3)	(25.1)	(15.5)	(0.1)	(8.9)

*Cross-firm averages with standard deviations in parentheses. Calculated from Shanghai Stock Exchange Statistics Annual, 1995, and Fact Book of Shenzhen Stock Exchange, 1995.

Table 2.4. Ownership Structure by Firm Size (1995)*

	No. of Firms	FST	FLP	FTA	FEM	FBS
SHSE						
Small (<500 mn)	77	28.11	31.4	36.1	0.2	2.2
		(24.1)	(26.0)	(17.7)	(1.4)	(8.7)
Medium 1(500mn-1bn)	43	31.9	26.3	32.1	0.4	6.7
		(28.4)	(27.6)	(22.6)	(1.9)	(14.6)
Medium 2 (1-1.5bn)	38	35.0	31.7	21.4	0.7	9.3
		(28.0)	(28.7)	(13.9)	(3.1)	(15.2)
Large (1.5bn and over)	26	51.7	14.5	14.7	0.2	8.4
		(24.3)	(24.4)	(12.1)	(0.7)	(13.5)
SZSE						
Small (<500 mn)	31	32.3	28.7	32.8	0.1	4.5
		(24.0)	(23.6)	(12.2)	(0.1)	(11.3)
Medium 1 (500mn-1bn)	46	24.1	33.4	38.7	0.1	2.4
		(23.7)	(24.9)	(13.4)	(0.1)	(8.1)
Medium 2(1bn-1.5bn)	32	24.3	32.8	32.7	0.4	7.5
		(26.4)	(23.9)	(13.1)	(1.9)	(14.5)
Large (1.5bn and over)	18	35.4	18.2	29.7	1.6	15.0
		(28.8)	(16.9)	(18.7)	(4.8)	(17.8)

*Firm size is classified by the book value of their total assets. Cross-firm averages with standard deviations in parentheses. Calculated from Shanghai Stock Exchange Statistics Annual, 1995, and Fact Book of Shenzhen Stock Exchange, 1995.

Table 2.5. Composition of the Board (%)

	No. of Firms	State	Legal Person	Public Individual	Non-Owner	Manage-ment	Largest Shareholder
SHSE	83	51.0	39.6	0.2	9.3	48.7	
		(40.0)	(37.5)	(1.2)	(15.6)	(18.1)	
State-dominated	48	74.4	19.5	0.0	6.1		74.3
		(26.2)	(23.7)	(0.0)	(11.6)		(24.0)
Legal person dominated	35	19.2	68.4	0.2	12.2		54.4
		(32.6)	(32.3)	(1.2)	(14.3)		(26.3)
SZSE	71	50.9	39.1	0.3	9.7	50.5	60.5
		(38.3)	(33.1)	(1.8)	(17.4)	(26.4)	(34.2)
State-dominated	46	71.7	23.9	0.0	4.4	55.1	69.1
		(25.7)	(23.9)	(0.0)	(10.9)	(24.0)	(27.7)
Legal person dominated	25	12.5	67.1	0.8	19.6	45.5	45.8
		(25.8)	(29.4)	(2.9)	(22.6)	(28.9)	(39.5)

*Cross-firm averages with standard deviations in parentheses. Calculated form 1995 annual reports of listed companies.

Table 2.6. Composition of the Supervisory Committee (%)*

	No. of Firms	State	Legal Person	Public Individual	Non-Owner	Employee
SHSE	83	56.9 (44.3)	32.7 (41.4)	0.0 (0.0)	10.4 (19.8)	77.7 (27.0)
State-dominated	48	82.1 (30.5)	11.1 (24.2)	0.0 (0.0)	6.8 (14.3)	84.8 (22.1)
Legal Person dominated	35	19.8 (33.8)	64.9 (41.1)	0.0 (0.0)	15.3 (24.6)	65.8 (31.1)
SZSE	71	50.9 (38.3)	39.1 (33.1)	0.3 (1.8)	9.7 (17.4)	50.5 (26.4)
State-dominated	46	71.7 (25.7)	23.9 (23.9)	0.0 (0.0)	4.4 (10.9)	55.1 (24.0)
Legal Person dominated	25	12.5 (25.8)	67.1 (29.4)	0.8 (2.9)	19.6 (22.6)	45.5 (28.9)

*Cross-firm averages with standard deviations in parentheses. Calculated form 1995 annual reports of listed companies. Sources: Annual reports of listed companies.

Table 2.7. Average Shareholding and Cash Salary of Board Members*

	Members of the Board of Directors		Member of the Supervisory Committee	
	Shareholding	Salary (RMB)	Shareholding	Salary (RMB)
SHSE				
State-dominated	4,971 (3,622) [48]	24,242 (14,669) [36]	3,080 (1,985) [48]	17,942 (9,373) [35]
Legal person-dominated	5,704 (5,998) [35]	40,612 (16,647) [16]	2,519 (3,478) [35]	26,754 (14,200) [13]
SZSE				
State-dominated	11,446 (10,568) [46]	38,680 (65,350) [20]	5,726 (5,605) [46]	
Legal person-dominated	18,745 (15,562) [25]	41,446 (29,033) [13]	7,265 (8,092) [25]	

*Cross-firm averages with standard deviations in parentheses and the number of firms in brackets. Calculated form 1995 annual reports of listed companies.

Table 3.1. Ownership Concentration:
Percentage of Shares Controlled by the Top 10 Share Holders (1995)*

	1	2	3	4	5	6	7	8	9	10
SHSE	46.09	6.83	2.88	1.61	1.15	0.84	0.66	0.54	0.47	0.36
	(18.4)	(7.95)	(3.86)	(1.98)	(1.34)	(1.01)	(0.80)	(0.66)	(0.60)	(0.50)
SZSE	40.11	8.93	4.08	2.60	1.85	1.32	1.07	0.88	0.78	0.65
	(17.4)	(8.22)	(3.71)	(2.37)	(1.69)	(1.03)	(0.84)	(0.68)	(0.65)	(0.68)

*Cross-firm averages with standard deviation in parentheses.
Sources: Annual reports of listed companies.

Table 3.2. Ownership Concentration and Firms' Performance (1995)*

	DUM**	SALE	DAR	GROW	A10	HERF	Adj. R^2	F-Stat.
SHSE								
MBR	Yes	-0.00[a]	1.18[b]	0.02[a]	2.11[a]		0.29	10.4
		(-3.92)	(2.49)	(2.85)	(3.10)			
MBR	Yes	-0.00[a]	1.11[b]	0.02[b]		1.48[b]	0.27	9.41
		(-4.11)	(2.38)	(2.13)		(2.05)		
ROE	Yes	0.00[b]	-0.45		0.49		0.05	2.49
		(2.37)	(-0.10)		(0.13)			
ROE	Yes	0.00[b]	-0.62			1.41	0.05	2.51
		(2.37)	(-0.13)			(0.33)		
SZSE								
MBR	Yes	-0.33[a]	0.92[a]	0.33[a]	0.02[a]		0.38	10.5
		(-3.64)	(-3.54)	(3.99)	(5.86)			
MBR	Yes	-0.30[a]	0.76[b]	0.35[a]		1.16[b]	0.26	6.66
		(-2.98)	(2.49)	(4.11)		(2.56)		
ROE	Yes	0.09[a]	-0.10[b]		0.00		0.25	7.07
		(5.22)	(-2.59)		(1.63)			
ROE	Yes	0.09[a]	-0.12[a]			0.13[b]	0.27	7.62
		(5.09)	(-2.94)			(1.98)		

*t-statistics are in parentheses.
**Most industry dummies are significant at the 1% level, but not reported here.

Table 3.3.1 Ownership Concentration and Firms' Performance
for the State- and Legal Person-Dominated Subsamples (**SHSE** 1995)*

	DUM**	SALE	DAR	GROW	A10	HERF	FST	Adj. R^2	F-Stat.
State-dominated (No. of Firms=110)									
MBR	Yes	-0.00[a]	0.59	0.00	2.22[a]			0.41	10.5
		(-3.00)	(0.87)	(0.94)	(2.89)				
MBR	Yes	-0.00[a]	0.46	0.00		1.44[b]		0.39	9.89
		(-3.20)	(0.66)	(0.92)		(2.27)			
MBR	Yes	-0.00[b]	0.43	0.15			1.92[b]	0.41	10.4
		(-2.06)	(0.59)	(0.74)			(2.57)		
ROE	Yes	0.00[b]	7.33		-5.53			0.10	2.73
		(2.09)	(1.19)		(-1.12)				
ROE	Yes	0.00[b]	7.77			-4.87		0.10	2.75
		(2.28)	(1.24)			(-1.19)			
Legal Person-dominated (No. of Firms=70)									
	DUM**	SALE	DAR	GROW	A10	HERF	FLP	Adj. R^2	F-Stat.
MBR	Yes	-0.00[a]	1.53[c]	0.02[a]	3.24[c]			0.21	3.24
		(-4.09)	(1.91)	(2.77)	(1.91)				
MBR	Yes	-0.00[a]	1.77[b]	0.02[a]		2.32		0.15	2.56
		(-3.05)	(2.06)	(2.23)		(1.02)			
MBR	Yes	-0.00[a]	1.02	0.02[b]			3.59[a]	0.31	4.80
		(-3.65)	(1.48)	(2.31)			(3.51)		
ROE	Yes	0.02	0.82		3.91			0.10	2.05
		(1.35)	(0.17)		(0.63)				
ROE	Yes	0.02	1.71			19.7[b]		0.24	4.05
		(1.25)	(0.34)			(2.24)			
ROA	Yes	0.00	-0.11[a]		0.02			0.20	3.35
		(1.40)	(-3.53)		(0.54)				
ROA	Yes	0.00	-0.10[a]			0.10[b]		0.24	4.60
		(1.30)	(-3.19)			(2.18)			

*t-statistics are in parentheses.
**Most industry dummies are significant at the 1% level, but not reported here.

Table 3.3.2. Ownership Concentration and Firms' Performance
for the State- and Legal Person-Dominated Subsamples (**SZSE** 1995)*

	DUM**	SALE	DAR	GROW	A10	HERF	FST	Adj. R^2	F-Stat.
State-dominated (No. of Firms=67)									
MBR	Yes	-0.36[a]	0.72[c]	0.30[b]	2.00[a]			0.30	4.52
		(-3.60)	(1.79)	(2.41)	(3.67)				
MBR	Yes	-0.29[b]	0.47	0.30[b]		1.45[c]		0.21	3.24
		(-2.52)	(0.90)	(2.27)		(1.82)			
MBR	Yes	-0.30[b]	0.51	0.30[b]			1.28[c]	0.20	3.07
		(-2.49)	(1.00)	(2.22)			(1.89)		
ROE	Yes	0.10[a]	-0.17[a]		0.04			0.21	3.54
		(2.91)	(-2.80)		(0.49)				
ROE	Yes	0.10[a]	-0.18			0.13		0.24	3.91
		(2.68)	(-2.81)			(1.16)			
Legal Person-dominated (No. of Firms=60)									
	DUM**	SALE	DAR	GROW	A10	HERF	FLP	Adj. R^2	F-Stat.
MBR	Yes	-0.28[b]	0.94[a]	0.38[a]	1.98[a]			0.50	8.50
		(-2.56)	(2.97)	(3.66)	(5.03)				
MBR	Yes	-0.29[b]	0.83[b]	0.38[a]		1.71[a]		0.38	5.60
		(-2.38)	(2.31)	(3.66)		(3.35)			
MBR	Yes	-0.23	0.81[b]	0.44[a]			0.89[c]	0.31	4.80
		(-1.57)	(2.23)	(4.36)			(1.85)		
ROE	Yes	0.08[a]	-0.04		0.15[b]			0.28	4.30
		(5.79)	(-0.62)		(2.49)				
ROE	Yes	0.08[a]	-0.05			0.27[a]		0.35	5.61
		(5.84)	(-0.84)			(3.27)			
ROA	Yes	0.03[a]	-0.07[b]		0.08[b]			0.12	2.24
		(4.16)	(-2.37)		(2.39)				
ROA	Yes	0.03[a]	-0.08[a]			0.14[a]		0.22	3.33
		(4.04)	(-2.77)			(3.21)			

*t-statistics are in parentheses.
**Most industry dummies are significant at the 1% level, but not reported here.

Table 3.4.1. Pooled Regressions: Ownership Mix and Firms' Performance, Shanghai and Shenzhen, 1993-95

	Const.	Ind. DUM	D93	D94	SZ DUM.	SALE	DAR	FST	FLP	FTA	Adj. R^2	F
Dependent variable=Market to Book Value Ratio (N=673)												
MBR	2.89	No	2.15 [a]	0.56 [a]	-1.27 [a]			-0.22			0.23	50.56
	(27.7)		(17.98)	(4.77)	(-12.74)			(-1.07)				
MBR	2.57	No	2.16 [a]	0.54 [a]	-1.27 [a]				0.86 [a]		0.25	56.39
	(24.92)		(18.24)	(4.70)	(-12.71)				(3.89)			
MBR	3.36	No	2.05 [a]	0.53 [a]	-1.16 [a]					-1.87 [a]	0.27	63.19
	(22.62)		(16.71)	(4.72)	(-12.45)					(-5.65)		
MBR	No	Yes	2.25 [a]	0.60 [a]	-1.46 [a]	-0.00 [a]	1.00 [a]	-0.13			0.31	30.88
			(17.58)	(5.58)	(-13.89)	(-5.48)	(3.07)	(-0.62)				
MBR	No	Yes	2.27 [a]	0.59 [a]	-1.47 [a]	-0.00 [a]	1.11 [a]		0.72 [a]		0.32	32.87
			(18.26)	(5.57)	(-13.77)	(-5.37)	(3.51)		(3.32)			
MBR	No	Yes	2.12 [a]	0.56 [a]	-1.32 [a]	-0.00 [a]	0.94 [a]			-2.30 [a]	0.37	39.95
			(16.65)	(5.48)	(-13.77)	(-5.96)	(3.07)			(-6.82)		
Dependent variable=Return to Equity (N=668)												
ROE	No	Yes	0.06 [a]	0.03 [a]	-0.003	0.00 [a]	0.01	-0.03 [a]			0.16	13.42
			(6.75)	(5.36)	(-0.50)	(3.81)	(0.87)	(-2.73)				
ROE	No	Yes	0.06 [a]	0.03 [a]	-0.001	0.00 [a]	0.01		0.03 [a]		0.16	13.28
			(6.63)	(5.22)	(-0.23)	(3.80)	(0.73)		(2.63)			
ROE	No	Yes	0.06 [a]	0.03 [a]	-0.001	0.00 [a]	0.01			0.002	0.14	12.25
			(6.47)	(5.21)	(-0.14)	(3.63)	(0.35)			(0.18)		
Dependent variable=Return to Asset (N=668)												
ROA	No	Yes	0.03 [a]	0.02 [a]	-0.002	0.00 [a]	-0.11 [a]	-0.02 [a]			0.32	32.55
			(6.26)	(5.16)	(-0.54)	(3.99)	(-12.91)	(-2.71)				
ROA	No	Yes	0.04 [a]	0.02 [a]	-0.001	0.00 [a]	-0.11 [a]		0.02 [a]		0.32	33.09
			(6.21)	(5.03)	(-0.32)	(4.02)	(-13.11)		(3.17)			
ROA	No	Yes	0.03[a]	0.02 [a]	-0.00	0.00 [a]	-0.12 [a]			-0.01	0.31	31.28
			(5.99)	(4.98)	(-0.07)	(3.69)	(-13.62)			(-0.90)		

Note: Heteroskedasticity-consistent t statistics are in the parentheses. Five industrial dummies are included in most regressions and their coefficients are all positive and significant at 1% level.
a,b, c: indicate significant at 1%, 5%, and 10% level, respectively.

Table 3.4.2. Pooled Regressions:
Ownership Concentration and Mix and Firms' Performance
Shanghai and Shenzhen, 1995

	Ind. DUM	SZ DUM.	SALE	DAR	GROW	A5	FST	FLP	FTA	Adj. R^2	F
Dependent variable=Market to Book Value Ratio (N=311)											
MBR	Yes	-1.47	-0.00	1.18	0.00	2.24	-0.34			0.36	18.11
		(-10.89)	(-4.52)	(3.60)	(2.80)	(4.47)	(-1.27)				
MBR	Yes	-1.45	-0.00	1.18	0.00	1.97		0.45		0.36	18.41
		(-10.80)	(-4.49)	(3.65)	(2.86)	(4.29)		(1.79)			
MBR	Yes	-1.32	-0.00	1.07	0.00	0.86			-1.61	0.37	19.80
		(-10.29)	(-5.0)	(3.41)	(2.37)	(1.57)			(-3.54)		
	Ind. DUM	SZ DUM.	SALE	DAR	GROW	A10	FST	FLP	FTA	Adj. R^2	F
MBR	Yes	-1.30	-0.00	1.12	0.00	2.18	-0.31			0.35	17.84
		(-10.39)	(-4.49)	(3.34)	(2.72)	(4.40)	(-1.16)				
MBR	Yes	-1.29	-0.00	1.13	0.00	1.93		0.44		0.36	18.15
		(-10.35)	(-4.46)	(3.50)	(2.79)	(4.30)		(1.76)			
MBR	Yes	-1.25	-0.00	1.05	0.00	0.72			-1.68	0.38	19.64
		(-10.33)	(-5.01)	(3.33)	(2.32)	(1.28)			(-3.47)		
	Ind. DUM	SZ DUM.	SALE	DAR	GROW	HERF	FST	FLP	FTA	Adj. R^2	F
MBR	Yes	-1.31	-0.00	1.09	0.00	1.82	-0.53			0.32	15.87
		(-10.10)	(-4.69)	(3.31)	(2.28)	(2.40)	(-1.36)				
MBR	Yes	-1.30	-0.00	1.10	0.00	1.62		0.79		0.34	17.01
		(-10.04)	(-4.62)	(3.40)	(2.49)	(2.86)		(2.73)			
MBR	Yes	-1.25	-0.00	1.04	0.00	0.36			-1.97	0.37	19.45
		(-10.27)	(-5.01)	(3.23)	(2.18)	(0.71)			(-5.06)		

To be continued on the next page.

Note: Heteroskedasticity-consistent t statistics are in the parentheses. Five industrial dummies are included in most regressions and their coefficients are all positive and significant at 1% level.

Table 3.4.2 continued

	Ind. DUM	SZ DUM.	SALE	DAR	A5	FST	FLP	FTA	Adj. R^2	F
Dependent variable=Return to Equity (N=300)										
ROE	Yes	-0.02	0.00	0.02	0.04	-0.05			0.09	4.38
		(-2.60)	(2.75)	(0.71)	(1.53)	(-2.56)				
ROE	Yes	-0.02	0.00	0.01	0.01		0.03		0.08	3.97
		(-1.87)	(2.76)	(0.65)	(1.42)		(1.75)			
ROE	Yes	-0.02	0.00	0.01	0.03			0.03	0.07	3.45
		(-2.13)	(2.77)	(0.26)	(1.05)			(0.91)		
	Ind. DUM	SZ DUM.	SALE	DAR	A10	FST	FLP	FTA	Adj. R^2	F
ROE	Yes	-0.02	0.00	0.02	0.04	-0.05			0.09	4.43
		(-2.17)	(2.76)	(0.67)	(1.65)	(-2.59)				
ROE	Yes	-0.02	0.00	0.01	0.01		0.03		0.08	3.84
		(-1.95)	(2.79)	(0.44)	(0.51)		(1.83)			
ROE	Yes	-0.02	0.00	0.01	0.04			0.03	0.07	3.52
		(-1.86)	(2.78)	(0.21)	(1.29)			(1.10)		
	Ind. DUM	SZ DUM.	SALE	DAR	HERF	FST	FLP	FTA	Adj. R^2	F
ROE	Yes	-0.02	0.00	0.02	0.07	-0.06			0.10	4.83
		(-2.03)	(2.73)	(0.60)	2.50)	(-3.25)				
ROE	Yes	-0.02	0.00	0.01	0.02		0.03		0.08	3.91
		(-1.86)	(2.77)	(0.37)	(0.96)		(2.06)			
ROE	Yes	-0.02	0.00	0.01	0.02			0.01	0.07	3.39
		(-1.86)	(2.77)	(0.20)	(0.59)			(0.56)		
	Ind. DUM	SZ DUM.	SALE	DAR	A5	FST	FLP	FTA	Adj. R^2	F
Dependent variable=Return to Asset (N=300)										
ROA	Yes	-0.01	0.00	-0.08	0.02	-0.02			0.22	10.11
		(-2.62)	(2.98)	(-6.03)	(1.84)	(-2.65)				
ROA	Yes	-0.01	0.00	-0.09	0.01		0.02		0.21	9.68
		(-2.23)	(3.08)	(-6.30)	(0.67)		(2.07)			
ROA	Yes	0.01	0.00	-0.09	0.02			0.01	0.20	9.05
		(-2.21)	(3.02)	(-6.46)	(1.10)			(0.57)		
	Ind. DUM	SZ DUM.	SALE	DAR	A10	FST	FLP	FTA	Adj. R^2	F
ROA	Yes	-0.01	0.00	-0.08	0.03	-0.02			0.22	10.18
		(-2.21)	(2.99)	(-6.11)	(1.94)	(-2.70)				
ROA	Yes	-0.01	0.00	-0.09	0.01		0.02		0.21	9.71
		(-2.06)	(3.07)	(-6.35)	(0.83)		(2.05)			
ROA	Yes	-0.01	0.00	-0.09	0.02			0.01	0.20	9.13
		(-1.94)	(3.05)	(-6.54)	(1.35)			(0.81)		
	Ind. DUM	SZ DUM.	SALE	DAR	HERF	FST	FLP	FTA	Adj. R^2	F
ROA	Yes	-0.01	0.00	-0.08	0.04	-0.03			0.22	10.73
		(-2.07)	(2.96)	(-6.19)	(2.88)	(-3.32)				
ROA	Yes	-0.01	0.00	-0.09	0.02		0.02		0.21	9.89
		(-1.92)	(3.03)	(-6.39)	(1.52)		(2.37)			
ROA	Yes	-0.01	0.00	-0.09	0.01			0.02	0.19	9.00
		(-1.90)	(3.02)	(-6.54)	0.83			(0.20)		

Table 3.5 Pooled regressions:
Ownership Structure and Firms' Performance:
Nonlinear Specifications for FLP

	Ind. DUM	D93	D94	SZ DUM.	SALE	DAR	FLP2	FLP	Adj. R^2	F
MBR	Yes	2.25 (17.94)	0.56 (5.44)	-1.34 (-12.44)	-0.00 (-5.58)	0.99 (3.20)	4.29 (3.75)	-2.46 (-3.21)	0.35	33.18
ROE	Yes	0.06 (6.63)	0.03 (5.18)	-0.00 (-0.04)	0.00 (3.79)	0.01 (0.65)	0.04 (2.77)		0.16	13.36
ROA	Yes	0.03 (6.23)	0.02 (4.99)	-0.00 (-0.07)	0.00 (4.01)	-0.11 (-13.24)	0.03 (3.45)		0.33	33.44

Note: Including both Shanghai and Shenzhen samples, 1993-95. Number of observation=673.

Table 3.6. Ownership Structure and Labor productivity

Dependent variable: $\log(Y_j/L_j)$

	$\hat{\alpha}_1$	$\hat{\alpha}_2$	$\hat{\alpha}_3$	$\hat{\alpha}_4$	$\hat{\alpha}_5$	$\hat{\beta}_1$	$\hat{\beta}_2$	$\hat{\beta}_3$	$\hat{\beta}_4$	$\hat{\beta}_5$	$\hat{\gamma}$	R^2
1993												
FST	-2.55 (-17)	-2.93 (-10)	-2.00 (-20)	-2.31 (-11)	-2.36 (-26)	0.94 (11)	0.72 (4.3)	0.99 (39)	1.13 (9.3)	0.94 (27)	-0.37[b] (-2.1)	0.91
FLP	-2.78 (-18)	-3.14 (-10)	-2.27 (-25)	-2.53 (-11)	-2.53 (-26)	0.95 (11)	0.72 (4.0)	0.97 (47)	1.11 (8.9)	0.97 (36)	0.34[b] (2.0)	0.91
1994												
FST	-2.64 (-21)	-2.71 (-11)	-2.28 (-13)	-2.17 (-8.1)	-2.78 (-14)	1.06 (9.9)	0.97 (3.5)	1.02 (37)	0.97 (7.6)	1.07 (7.2)	-0.61[b] (-2.2)	0.82
FLP	-2.92 (-22)	-2.93 (-8.9)	-2.65 (-21)	-2.37 (-8.2)	-3.04 (-15)	1.11 (10)	1.04 (3.5)	1.00 (37)	0.90 (7.2)	1.13 (6.8)	0.42[b] (2.1)	0.82

a, b, and c: Significant at the 1%, 5%, and 10% level.

Table 3.7. Ownership Structure and Debt/Asset Ratio

Dependent Variable: DAR

	D_1*	D_2	D_3	D_4	D_5	FST	FLP	R^2
1993								
SHSE	0.33	0.24	0.10	0.41	0.30	0.22[a]		0.28
	(11.1)	(7.76)	(2.63)	(8.49)	(5.44)	(4.28)		
	0.47	0.36	0.24	0.56	0.39		-0.16[a]	0.22
	(18.5)	(9.75)	(5.57)	(9.77)	6.73)		(-2.81)	
SZSE	0.38	0.35	0.36	0.48	0.39	0.05		0.00
	(9.52)	(4.98)	(2.65)	(6.67)	(5.18)	(0.56)		
	0.44	0.43	0.42	0.55	0.45		-0.15[c]	0.00
	(14.0)	(5.15)	(3.05)	(8.45)	(5.96)		(-1.68)	
1994								
SHSE	0.33	0.26	0.19	0.47	0.43	0.21[a]		0.20
	(14.0)	(9.41)	(4.74)	(8.05)	(12.5)	(4.41)		
	0.42	0.36	0.30	0.57	0.51		-0.10[b]	0.12
	(21.8)	(11.6)	(7.31)	(8.85)	(10.1)		(-2.16)	
SZSE	0.39	0.44	0.44	0.52	0.46	0.08		0.02
	(12.4)	(7.77)	(4.74)	(11.7)	(7.20)	(1.18)		
	0.45	0.51	0.51	0.58	0.51		-0.12[c]	0.04
	(15.3)	(7.93)	(4.85)	(11.8)	(8.60)		(-1.74)	

a, b, and c: Significant at the 1%, 5%, and 10% level.

*D_1 through D_5 are the five industry dummies.

Annex A. A Comparative Study of Corporate Governance[31]

A.1. The Anglo-American Model vs the German-Japanese Model

Many recent studies have compared two different models in corporate governance, the Anglo-American model versus the German-Japanese model (e.g. Prowse 1994, Aoki and Kim, 1995). Corporate governance refers to the institutions and mechanisms in which suppliers of finance to corporations (owners) control managers to ensure returns on their investment. These institutions and mechanisms are much different in the economies of continental Europe and Japan, as compared to the systems of United Kingdom and the United States.

Some authors have made an interesting classification to distinguish the above mentioned models as "*control-oriented*" and "*arm's-length*" financing. In "control-oriented" financing, corporations have core investors who own significant stakes or shares, management will be under more scrutiny by the core investors, be it a bank, a nonbank financial institution, or other corporations. Concentration of ownership provides the investors with both the *incentive* and the *ability* to monitor and control the management. The three largest banks in Germany own a large share of the stocks of publicly traded corporations. They also vote on behalf of individual shareholders. In Japan, there is a higher degree of corporate cross share-holding, and banks are among the largest shareholders of publicly listed corporations. (See Table A.1.1)

In the "arm's-length" financing, share ownership is widely dispersed, and shareholder influence on management is weak. Unsatisfactory performance is often sanctioned by shareholders selling shares("voting by feet") and by subsequent hostile takeovers. In the United States, government regulations prohibit banks, mutual funds, pension funds and insurance companies to take controlling stakes in the corporations for the purpose of ensuring asset diversification. Shareholders' interests, in this model, is protected largely by a liquid equity market, by regulations on information disclosure, on insider-trading and minority shareholder rights.

Table A.1.1 shows some aggregate statistics on the ownership structure of listed companies in the U.S., Japan and Germany. It reveals a much higher degree of institutional cross share-holding in Japan (73 percent), and heavier bank involvement (19 percent) in corporate governance, as compared to the United States. Germany seems to lie in between Japan and the United States in terms of both corporate cross share-holding (64 percent) and bank ownership of equity (10 percent). However, German banks have more power to exercise the voting rights since they can vote on behalf of individual shareholders whose shares are held in trust.

Table A.1.2 shows the ownership concentration in a sample of large, listed U.S. Japanese and German nonfinancial firms. A column on China is added for a rough comparison. The table shows that first, ownership concentration varies widely across countries. In the United States, the largest five shareholders hold on average about 25 percent of the outstanding share of the corporation. Ownership concentration is higher in Japan where the five largest shareholders hold about 33 percent of the outstanding shares. The concentration ratio is the highest in Germany (42 percent) where the voting power is more concentrated than the data suggested due to the above mentioned voting rights by the banks. Proxy votes exercised by the banks on behalf of shareholders are very important in the large German corporations.[32] Moreover, many large German firms have a pyramid holding company structure, where ownership is concentrated in successive layers of holding companies, many of which are ultimately controlled by either a

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[31] This part is for the purpose of cross-country comparison as explicitly required by the RAD and Research Committee. It is also useful for Chinese audience.

[32] For example, of the 100 largest joint stock companies (AGs) in Germany in 1978, banks had a combined voting power (from their direct holdings and proxies) of greater than 25% in 41 of them. In the 56 AGs in which banks had a combined voting power of greater than 5%, their average share of the vote was almost 57%. (Dittus and Prowse 1996, p.24)

wealthy family or a bank (Dittus and Prowse 1996, and Baums and Randow 1995). In continental European countries, a majority stake in listed joint stock corporations is a fairly common feature. A single large owner who holds more than 50 percent of a corporation's stock is present in over 50 percent of domestic stocks quoted in Germany, France and Italy, compared to only about 5 percent in the United States and the United Kingdom (OECD 1995 and Prowse 1994).

Corporate control mechanisms are remarkably different in the Anglo-American and German-Japanese models. In general, a number of mechanisms can be used to prevent the firm from deviating too far from value-maximizing behavior, including direct and indirect monitor and control measures. Stiglitz (1985) emphasized that the *most important of these mechanisms involves the concentration with which the financial claims of the firm are held.* If the equity is concentrated in the hands of a few investors, each investor will have sufficient incentive to invest in information acquisition and monitoring of management. In addition, their large shareholdings also give them the ability to control over management. If concentration of ownership is an impossibility, indirect monitor and control measures must be used, which include an active takeover market, a well-functioning, competitive market for managers, and a concentration of lenders.

Table A.1.3 and A.1.4 show the different corporate mechanisms in the two models. In the Anglo-American model, indirect corporate control measures are often used, including hostile takeovers and leveraged buyouts, "voting by feet", proxy contests, performance-based incentive contracts, and legal protections of minority shareholder rights. Whereas, in the German-Japanese model, direct control is preferred including, control of the board, appointment and/or replacement of chief officers, and monitoring by large stakeholders (be it financial institutions, nonfinancial institutions, or individuals). Hostile takeovers are virtually non-existent in Japan and Germany. (Table A.1.4). Since the World War II, for example, there have only been four successful hostile takeovers in Germany (Franks and Mayer 1993). The use of takeovers for replacing inefficient management in Japan is very infrequent. In the United States, however, almost 10 percent of Fortune 500 firms in 1980 have since been acquired in a hostile transaction (Prowse 1994).

What are the determinants of these differences in ownership concentration and corporate control mechanisms? We turn to this question in section A.3.

A.2 Increased Ownership Concentration Over Time

Ownership concentration has been increasing over time in all OECD countries. There has been a marked shift from shareholding by individuals to shareholding by the financial sector, i.e. banks, securities firms and institutional investors (mutual funds, insurance companies, and pension funds) since the 1960s (OECD 1995). In Britain, the financial sector now holds over 60 percent of all equity.[33] The proportion of shareholding by private households, which has declined to about 50 percent in the United States, ranges between 16 and 24 percent in other large OECD countries (Table A.2.1). In the United States, and United Kingdom, pension funds and mutual funds have gained the most from the shift away from households. Whereas, in Germany and Japan, banks and insurance companies have enlarged their role as shareholders. It is noteworthy that the nonfinancial enterprises sector is a major holder in most major OECD countries, except for the United States and United Kingdom. In particular, French non-financial enterprises now hold the major part of all equity outstanding in France (59 percent), due mainly to the privatization of public enterprises. In Italy and Sweden, nonfinancial enterprises hold 32 to 34 percent of all outstanding shares respectively (OECD 1995, p.16-17).

[33] However, majority of the shareholding by financial sector is held in the trust accounts. Shareholding under the banks' own accounts is minimal in Britain, compared to those in Japan and Germany.

In Germany, the ownership and control rights of corporations have been increasingly concentrated in the hands of financial and nonfinancial institutions over time (Table A.2.2). In other words, the institutional cross-shareholding has becoming more significant. From 1984 to 1993, the proportion of outstanding shares owned by all financial and nonfinancial corporations increased from 50 percent to 68 percent, in which the proportion held by banks rose from 7.6 percent to 14 percent. Whereas, the proportion of outstanding shares held by individuals, government and foreign investors have decreased in the same period. In Japan, the proportion of equity shares owned by banks increased from around 8 percent in the 1960s to 18 percent in 1990 and 22 percent in 1993. The proportion of shares owned by individuals declined from 46 percent in the 1960s to 24 percent in 1993 (Miyajima 1995, p.380, and OECD 1995)

In addition to increased ownership concentration, there has also been a trend of an increased shareholder activism since the 1980s and 1990s. Institutions, whether its financial institutions or nonfinancial corporations, are playing more important roles in the monitoring and control of management. Even in the United States, where the "arm's length financing" is most rigorously pursued, institutional investors have become more active in exercising control. Two examples include the State of Wisconsin Investment Board and the California Public Employees Retirement system (Calpers).[34]

The increased concentration of ownership in the hands of financial and nonfinancial institutions does not happen by accident. What are the driving forces behind the trend? First and foremost, the benefits of concentrated ownership are theoretically clear: it provides the investors with both sufficient private incentive, as well as the power to monitor and control management, and to achieve profit maximization (Shleifer and Vishny 1996). Thus, concentration may in general be the most efficient way of resolving agency problems in firms-- a view expressed in Prowse 1994 (p.9). Second, the economy of scale and the economy of scope are evident for banks and financial institutions to engage in corporate monitor and control. Information collected when making loans can well be used to evaluate managerial performance. Third, the rapid growth of institution investors and deregulation have contributed to the rise of investor activism. Until 1992, SEC severely restricted investors ability to cooperate with one another. Since the scrapping of these restrictions, fund managers have the desire, the mandate, as well as the means to exercising active monitor and control. And hence, investor activism has become a trend, thanks to deregulation.

Looking into the future, rather than market-based or bank-based systems, we might see that a broader and ***institution-centered ownership and governance*** structure will appear in the horizon. What might be the causes for ownership concentration in the hands of institutions? See next section.

A.3 The Needs and Causes for Ownership Concentration

What is the legal, regulatory and institutional underpinning for Anglo-American model and German-Japanese models? What determines the ownership structure and corporate governance in a particular country? Why is there a need for ownership concentration in various countries including transition economies? We try to assess these questions in this section.

Prowse (1994) argued that differences in the two models are a result of striking differences in the firm's legal and regulatory environment which affects the degree to which the concentration holding of the firm's financial claims is achieved. Regulatory restrictions on investors' (particularly financial institutions')

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[34] It is reported that institutional investors have been able to alert fellow shareholders to troublesome issues and gang up against recalcitrant managers. The State of Wisconsin Investment Board was able to arrange cooperation with other shareholders and removed Joseph Antonini, the chief executive of Kmart; and of much of the board of WR Grace, a chemicals company. The California Public employees Retirement System (Calpers) is using a similar approach to force changes at Oryx Energy and Boise Cascade, a paper company. (Source: The Economist, April 29, 1995)

holding o large debt and equity stakes in individual firms in the Anglo-American countries has led to relatively dispersed holdings. Table A.3.1 documented the legal and regulatory constraints on corporate control. The U.S. and U.K. laws are in general much more hostile to investors taking large, influential stakes in firms. Whereas, financial institutions in Japan and Germany are generally given much more latitude to own shares and exert control over large firms.

In the U.S., for example, banks are simply prohibited from owning any stock on their own account by the Glass-Steagall Act of 1933 (which has been recently phased out, see a footnote in section 5.2). Bank holding companies cannot own more than 5% of any one firm and their holdings must be passive. Other financial institutions such as insurance companies also face strict rules governing their equity investment. There are also impediments to non-financial firms taking large stakes in firms. U.S. antitrust laws have been hostile to the inter-corporate ties that would be implied by large inter-corporate shareholdings. For instance, Du Pont held a 25% stake in General Motors, until forced by a Supreme Court ruling in the late 1950s to sever all ties with GM. The U.S. security laws in general discourage concentrated active shareholding by any one investor. In the United Kingdom, there are fewer formal restrictions on concentrated shareholdings in firms, but those that exist still appear substantial. Banks' links with nonfinancial firms have been subject to strict prudential rules. Exposure in excess of 10% of a bank's capital must be approved by the Bank of England. Pension funds and insurance companies have self-imposed limits on shareholding, and do not invest more than 2-5% of their assets in any one company. Mutual funds have similar rules.

In Japan, however, financial institutions are subject to few regulations regarding shareholdings. Japanese commercial banks are not prohibited from owning corporate stock, except that they are subject to anti-monopoly regulations which until 1987 limited a single bank's holdings of a single firm's shares to 10% (the limit has since been lowered to 5%). On paper, Japanese antitrust laws and insider trading regulations look similar to those in the United States. It is however widely recognized that they are not enforced by the government. In Germany, relationship between banks and industry is not burdened at all by regulations. German financial system is based on the principle of universal banking. Universal banks can hold whatever share of equity they like in any non-financial firm. Antitrust laws have not been used to discourage inter-corporate shareholdings as they have in the U.S. There is no explicit legislation against insider trading. (Prowse 1994, p.21)

Other authors have pointed to legal and institutional factors that determine the degree of concentration and corporate control mechanisms in a particular country. Shleifer and Vishny 1995 analyzes the cost and benefit of ownership concentration, and argue that weak legal protection of minority shareholders' interests in continental European countries may explain why ownership is more concentrated there. They conclude that,

> "The principal advantage of concentrated ownership is that it relies on relatively simple judicial interventions, which are suitable for even poorly informed and motivated courts. Concentrated ownership puts a much smaller burden on the legal enforcement system than does the protection of minority investors or the adjudication of multiple creditor disputes. For this reason, perhaps, concentrated ownership is so prevalent in most countries in the world, where courts are much less equipped to meddle in corporate affairs than they are, for example, in the United States. (p.32)"

Demsetz and Lyhn (1984) view ownership concentration as a consequence of volatile economic environment in which firms operates. One example is that Japanese banks have equity holdings in firms to which they make loans, which could be considered as additional insurance for loan repayment in a volatile environment. Gorton and Schmid (1996) consider the less developed stock market and noisy stock prices as causes of ownership concentration in the hands of financial institutions. Universal banking in Germany has been an alternative mechanism to stock market for corporate governance because stock market has historically been small and less developed.

Some implications can be derived for the transition economies, based on the above surveys of analysis on the determinants of ownership and governance mechanisms. Why is there a need for ownership concentration, especially in the transition economies? These economies usually have

- a weak and less sophisticated legal system and enforcement mechanism, where courts are less equipped to meddle with corporate affairs, and the interests of minority shareholders might not be well protected.
- a weak and less developed regulatory system. Regulations on antitrust, on insider trading, on nonbank financial institutions may not be in place, or may not be rigorously enforced.
- a less developed equity market and noisy stock prices. The market capitalization of the emerging equity market is usually is small and trading is noisy --there are many speculators and few long term investors. The information content of the stock prices is limited. Equity markets in these countries are usually illiquid, making hostile takeovers almost impossible.
- a more volatile economic environment and imperfect product/factor markets. The market systems are newly established and may not function very well. The indirect measures of monitor and control, such as the market for managers, and the bankruptcy mechanism in the product market (not to mention takeover market), may not be functioning. Thus, direct measures of monitor and control, such as majority ownership and control of the board, are much needed.

We now turn to the experience of Czech Republic and Russia to see whether or not concentrated ownership indeed results in better corporate performance.

A.4. The Experience of East European Transition Economies

After an extensive literature survey on East European transition economies, only three papers are found to have closely related and comparable statistical analysis with the present one. Claessens (1996) and Claessens, Djankov and Pohl (1996) investigate the ownership and corporate governance in Czech Republic, Blasi and Shleifer (1996) looks at the same issue in Russia using enterprise survey data. We draw heavily from these papers for the purpose of comparison in this section.

In the Czech Republic, it is found that the more concentrated ownership is, the higher the market valuation of a firm and the higher its profitability, for a cross-section of 706 firms over the 1991-95 period (Claessens et al 1996). Tobin's Q was used for firm valuation, which is the ratio of the market value to the accounting (i.e., replacement) value of the firm. It is measured as the market value of equity plus the face value of debt relative to the book value of net fixed assets and inventory. After controlling for some firm specific-variables, it is found that several measures of ownership concentration are positively related to Tobin's Q and profitability. Tobin's Qs and profitability are also higher when bank-sponsored funds have large ownership.

Table A.4.1, Panel A, shows the summary statistics on the ownership structure of the firms in the Czech Republic. Six investor classes are distinguished: the state (by the National Property Fund), individuals, bank and non-bank sponsored investment privatization funds, domestic direct and foreign direct investors. Several banks have sponsored more than one investment fund making it possible to exceed the 20% individual fund ownership threshold. Altogether, 263 non-bank sponsored funds were listed at least once as owners in their data. The concentration among investment funds is quite high. The top five investment funds, for example, owned on average 48.8 % (40.7 %) of a first (second) wave firm at the end of 1995, only slightly less than the average fraction owned by all funds combined, with bank-sponsored funds owning 21.2 % (9.8 %) and non-bank sponsored funds 27.6 % (30.9%).

Ownership concentration significantly increased for the average firm over time. The authors used two measures for the degree of ownership concentration: the share of equity held by the five most important investors combined, *A5,* and the Herfindahl index (the sum of squared ownership shares), *H*. Table A.3.1, Panel B, shows that ownership concentration increased by both measures: shares held by the top 5 investors (excluding the state) rose from 47.2 percent in 1991 to 59.4 percent in 1995. And Herfindahl index increased from 0.076 in 1991 to 0.134 in 1995.

Table A.4.1, Panel C reports summary statistics for firm performance indicators. There is a decline in the average Tobin's Q over the years as the aggregate stock market went down after the initial surge in 1992. Profitability is defined as gross (operating) profit over net fixed assets plus inventory. It increases over time, varying between 12 % in 1992 and 17% in 1995 on average. The correlation between Tobin's Q and profitability goes up over time, which suggests that the market valuation becomes a better indicator of relative profitability as accounting data start to reflect the changes in the firms' performance.

The regression results for the concentration variable is that the lower the dispersion of ownership (the higher *H*), the higher Tobin's Q and profitability (Table A.4.2, regression i). Ownership by the top five investors, *A5*, has similarly a significantly positive influence on Tobin's Q and profitability (not reported). These results are quite strong and show that more concentrated ownership has a positive association with firm value and profitability.

The authors then investigate the role of different type of shareholders through running regressions where they include the equity share for bank sponsored investment fund, non-bank sponsored investment fund, state, local and foreign strategic investors. The coefficients for *H* is no longer significant for either the Tobin's Q or the profitability regression in regression ii. It indicates that there is value to having large blockholder ownership, since the coefficient for state ownership is significantly positive for the Q regression and the coefficients are positive for local strategic ownership (significant) and foreign strategic ownership (marginally significant) for the profitability regression. The coefficient for non-bank sponsored investment fund ownership is positive, but not significant. Most importantly, the coefficient for bank-sponsored investment fund ownership is positive and significant for the Tobin's Q regression.

The authors then conclude that,

> "the Czech voucher scheme led to relatively concentrated ownership. Of the shares offered through the voucher scheme, two-thirds ended up with investment funds and one-third with private individuals. Analysis of market valuation and profitability provides strong evidence that more concentrated ownership is associated with higher valuation and profitability. Ownership by bank-sponsored funds is associated with even higher valuation and profitability and thus appears to be especially useful to change the way firms are managed. Firms with state owners and local and foreign strategic owners also do have higher valuation and profitability, suggesting that ownership by these investors entails some benefits too (Claessens et al 1996, p.11)."

Results from regression analysis in this present paper, though used a slightly different method and data from China, are largely consistent with those of Claessens et al 1996.

Blasi and Shleifer (1996) investigates corporate governance in Russia using a survey of 170 enterprises conducted between 1992 and 1993, and two surveys of smaller samples of enterprises conducted in 1994. It is found that immediately after the mass privatization program, all insiders owned on average 65 percent of equity shares in privatized enterprises in December 1993, in which top management held about 9 percent. Among the 142 enterprises, 91 percent were majority employee owned, and 9 percent minority employee owned. Insider control of firms is a fairly common feature of Russian privatization.

Comparing ownership structure in privatized enterprises in 1993 and 1994, the authors found that, first, average outsider ownership has increased from 21.5 percent to 29 percent, but the average sized of blockholder stakes has gone down. And second, the main outsiders, including voucher investment funds, individual citizens, and commercial firms, have a small average ownership share (4-5 percent) across all companies. Other shareholders such as banks, insurance companies and foreign firms are playing a minor role in the overall structure of outside ownership.

The paper could not investigate the linkage between ownership structure and performance due to data limitations. There is some weak evidence that restructuring has occurred to some extent in privatized enterprises since employment has been declining since 1991 but the declines have slowed over time. There

is, however, no linkage between ownership structure and presence or absence of outsiders on boards of directors.

In conclusion, Russian privatization, in sharp contrast with the Czech case, has been dominated by insider-control of firms, and the role of outside shareholders is minimal in corporate control. There is little incentive for insiders to restructure the firms and improve the financial performance. Thus, the authors argued strongly that "the creation of blockholder stakes must be accelerated"; that "management manipulation of the investor-company relationship must be addressed directly..."; and that "the 'worker control' bogeyman must be put to rest..." (Blasi and Shleifer, 1996, p.104)

Table A.1.1 Ownership of Common Stock, 1990
(Percentage of outstanding shares owned)

Shareholders	United States	Japan	Germany	Czech Rep. 1995	China (listed companies, 1995)
All corporations	44.5	72.9	64.0	45.5	28.7
Financial institutions	30.4	48.0	22.0		
Banks	0	18.9	10.0	15.5 [1]	
Insurance companies	4.6	19.6	-		
Pension funds	20.1	9.5	12.0		
Other	5.7	-	-	30 [2]	
Nonfinancial corporations	14.1	24.9	42.0		
Individuals	50.2	22.4	17.0	49 [3]	31.5
Foreign investors	5.4	4.0	14.0	3.4	6.1
Government	0	0.7	5.0	3.2	30.9

Source: U.S. Federal Reserve Flow of Funds, Japanese Flow of Funds, Deutsche Bundesbank Monthly Report. Also in Dittus and Prowse (1996). The column on Czech Republic is based on Claessens et al 1996. And the column on China is calculated by the authors based on information on listed companies in 1995. The last two columns are not directly comparable with the other three. Note: 1. Bank sponsored investment funds. 2. Nonbank sponsored investment funds. 3. Include both individuals and local strategic investors.

Table A.1.2 Summary Statistics of Ownership Concentration of Large Nonfinancial Corporations
(percentage of outstanding shares owned by the five largest shareholders)

	United States	Japan	Germany	Czech Rep. 1995	China (listed companies, n=316) 1995
Mean (%)	25.4	33.1	41.5	57.8	58.1
Median (%)	20.9	29.7	37.0		58.3
Standard Deviation	16.0	13.8	14.5	17.5	15.8
Minimum (%)	1.3	10.9	15.0		3.1
Maximum (%)	87.1	85.0	89.6		94.4
Mean firm size: total assets (millions of $, 1980)	3,505	1,835	3,483		162.4 [1]
Mean firm size: market value of equity (millions of $: 1980)	1,287	811	1,497		148.9 [1]

Source: Dittus and Prowse 1996, p.24. The column on Czech Republic is based on Claessens et al 1996, Table 1. The column on China is calculated by the authors and is not directly comparable with the other three columns. Note:1. These values are in million of 1995 dollars, obtained by dividing the current RMB value by the exchange rate of $1=8.3 yuan.

Table A.1.3. Importance of different corporate control mechanisms in large non-financial firms

Mechanism	United States	United Kingdom	Japan	Germany
Board independence/ Power over management	Little	Little	Little formally. More influence informally via President's Club meetings	Greatest
Importance of pay/performance relationship in top management compensation package	Small	Unknown, probably small	Less	Important for those firms that are owner-managed.
Monitoring by financial institution stakeholders	Little	Little	Substantial	Some
Monitoring by non-financial firm stakeholders	Little	Little	Some	Substantial
Monitoring by individual stakeholders	Little	Little	Little	Important for those firms that are owner-managed.
Frequency of hostile takeovers	Frequent	Frequent	Virtually non-existent	Virtually non-existent

Source: Prowse 1994, p. 52.

Table A.1.4. Hostile takeovers and leveraged buyouts as a percentage of all attempted transactions, 1985-89
(percent)

	United States	United Kingdom	Rest of Europe
Hostile takeovers	17.8	37.1	9.6
Leveraged buyouts	20.0	5.9	2.7

Note: Hostile offers are defined as those transactions in which the acquiring company proceeds with its offer against the wishes of the target company's management. Data include both completed and withdrawn transactions.
Sources: Securities Data Corporation, Mergers and Corporate Transaction Database. Also in Prowse 1994, p.49.

Table A.2.1 Distribution of Outstanding Corporate Equity Among Different Types of Shareholders
(Percent at year-end 1993)

Types of Shareholders	United States	Japan	Germany	France	United Kingdom	Italy	Sweden
All Corporations	46	69	68	67	64	51	58
Financial Sector	46	45	29	8	62	19	24
Banks		22	14	3	1	10	1
Insurance Companies	5	17	7	1	17	2	8
Pension/Investment funds	26	1			34		8
Mutual funds	11	3	8	2	7	6	6
Other financial inst.	4	1		2	3	1	
Non-financial enterprises		24	39	59	2	32	34
Individuals	49	24	17	19	18	17	16
Foreign	5	7	12	11	16	5	9
Public Authorities		1	4	4	1	28	7
Other					2		10
Total	100	100	100	100	100	100	100

Source: OECD 1995, p.17.

Table A.2.2 German enterprises: Ownership structure over time, 1984-1993
(Percentage of outstanding shares owned)

Types of Shareholders	1984	1988	1990	1993
All corporations	49.5	53.4	64.0	68.0
Financial institutions	13.4	14.3	22.0	29.0
Banks	7.6	8.1	10.0	14.0
Insurance companies	3.1	2.7	-	7.0
Pension/investment funds	2.7	3.5	12.0	-
Mutual funds				8.0
Nonfinancial corporations	36.1	39.1	42.0	39.0
Individuals	18.8	19.7	17.0	17.0
Foreign investors	21.4	20.0	14.0	12.0
Government	10.2	7.0	5.0	4.0

Source: Monthly Report of the Deutsche Bundesbank. Also in Edwards and Fischer 1994, p.180, Dittus and Prowse (1996, for 1990 data), and OECD (1995 for 1993 data) .

Table A.3.1 Legal and Regulatory Constraints on Corporate Control

Institution	United States	United Kingdom	Japan	Germany
Banks	Stock ownership prohibited or requires prior approval of FRB and must be "passive". Source: Glass-Steagall and BHC Act.	Bank of England may discourage ownership on prudential grounds. Capital adequacy rules discourage large stakes.	Prior to 1987 banks could hold up to 10% of a firm's stock. After 1987 can hold up to 5%. Source: Anti-monopoly Act.	No restrictions, apart from some generous prudential rules.
Life Insurance companies	Can hold up to 2% of assets in a single firm's securities. Can hold up to 20% of assets in equities. Source: NY Insurance Law	Self-imposed limits on fund assets invested in any one company stemming from fiduciary requirement of liquidity.	Can hold up to 10% of a firm's stock. Source: Anti-monopoly Act.	Can hold up to 20% of total assets in equities. Source: Insurance Law.
Other Insurers	Control of non insurance company prohibited by NY Insurance Law.	Same as above.	Same as above.	No restrictions.
Mutual Funds	Tax penalties and regulatory restrictions if ownership exceeds 10% of a firm's stock. Source: Investment Company Act, IRS.	Cannot take large stakes in firms. Source: Financial Services Act, 1986.	No restrictions.	No restrictions.
Pension Funds	Must diversify. Source: ERISA.	Self-imposed limits on fund assets invested in one company stemming from fiduciary requirement.	No restrictions.	No restrictions.
General	SEC notification required for 5% ownership. Antitrust laws prohibit vertical restraints. Insider trading laws discouraging active shareholding. Creditor in control of firm liable to subordination of its loans. Source: Bankruptcy case law.	Insider trading laws discourage large stakeholders from exerting control. Source: Insider Dealing Act.	-	Regulatory notification required for 25% ownership.

Source: Prowse 1994, p. 17-18.

Table A.4.1: Czech Republic: Ownership and Firm Performance Statistics

(all in percentages)

	First Wave				*Second Wave*		
Category	***1992***	***1993***	***1994***	***1995***	***1993***	***1994***	***1995***
A. Average Firm Ownership Share by Sponsor*							
Bank Sponsored Investment Funds	23.1 (15.4)	23.8 (15.5)	19.8 (17.2)	21.2 (18.4)	5.8 (8.6)	7.8 (11.2)	9.8 (13.6)
Non-Bank Sponsored Investment Funds	23.8 (14.1)	24.6 (13.9)	26.1 (17.4)	27.6 (19.5)	31.0 (14.1)	30.3 (15.4)	30.9 (16.4)
Local Strategic Investors	0.1 (0.2)	0.1 (0.2)	5.1 (11.1)	6.2 (13.3)	2.1 (8.1)	6.3 (14.9)	7.6 (17.0)
Foreign Strategic Investors	0.0 (0.0)	0.0 (0.0)	2.9 (10.6)	4.3 (13.3)	1.0 (2.6)	1.2 (6.4)	2.4 (10.2)
National Property Fund	2.4 (7.4)	2.1 (7.1)	1.2 (5.7)	0.9 (0.4)	7.6 (17.5)	6.7 (16.6)	5.4 (15.6)
Total	49.5 (15.0)	50.9 (14.2)	53.9 (14.7)	60.2 (16.1)	46.9 (19.9)	45.8 (17.4)	55.9 (21.1)

B. Concentration indicators*

	1992	**1993**	**1994**	**1995**	**Panel**
Share of top 5 investors	49.5 (15.0)	48.9 (12.7)	49.6 (15.8)	57.8 (17.5)	52.1 (14.9)
Herfindahl Index	0.076 (0.057)	0.085 (0.081)	0.109 (0.104)	0.134 (0.125)	0.106 (0.104)

C. Firm performance indicators*

	1992	**1993**	**1994**	**1995**	**Panel**
Tobin's Q	96.7 (52.4)	80.3 (50.1)	78.2 (44.1)	76.9 (46.3)	81.2 (48.2)
Profitability	12.1 (11.4)	13.7 (11.6)	15.1 (11.3)	17.1 (12.6)	14.8 (11.9)
Correlation (Tobin's Q: Profitability)	15.1	23.1	26.9	27.2	21.8

* Standard Deviation in Parentheses. Residual ownership is by individuals and smaller investment funds.

Source: Claessens, Djankov and Pohl 1996.

Table A.4.2: Czech Republic: Ownership and Governance, Estimation Results*
(random effects estimates)

Explanatory Variable	*Regression i*		*Regression ii*		*Regression iii*	
	Tobin's Q	Profit	Tobin's Q	Profit	Tobin's Q	Profit
Leverage	0.073 (15.588)**	-0.002 (1.367)	0.072 (15.536)**	-0.002 (1.267)	0.074 (15.564)**	-0.002 (1.288)
Dummy for First Wave	0.418 (1.026)	0.059 (0.568)	0.457 (1.148)	0.054 (0.528)	0.498 (1.247)	0.051 (0.495)
Concentration (Herfindahl Index)	0.067 (1.741)***	0.038 (1.668)***	0.135 (0.878)	0.031 (0.752)	0.121 (0.795)	0.032 (0.781)
Bank Sponsored IPFs			0.221 (2.735)**	0.009 (0.384)	0.182 (2.189)**	0.012 (0.542)
Non-Bank Sponosred IPFs			0.025 (0.296)	0.028 (1.207)	0.024 (0.274)	0.029 (1.215)
National Property Fund			0.377 (3.041)**	0.037 (1.119)	0.377 (3.051)**	0.037 (1.124)
Local Strategic Investors			-0.045 (0.395)	0.067 (2.145)**	-0.051 (0.445)	0.067 (2.167)**
Foreign Strategic Investors			-0.074 (0.542)	0.059 (1.659)***	-0.082 (0.612)	0.061 (1.678)***
Conflict-of-interest Dummy					0.058 (2.142)**	-0.005 (0.741)
Sector Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squares	0.138	0.088	0.149	0.092	0.153	0.094

* All regressions are based on an unbalanced panel of 2490 observations. t-statistics in parentheses.
** Significant at the 99% level.
*** Significant at the 90% level.

Source: Claessens, Djankov and Pohl 1996.