

# **A Comparison of Shareholder Identity and Governance Mechanisms in the Monitoring of CEOs of Listed Companies in China**

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## **A Comparison of Shareholder Identity and Governance Mechanisms in the Monitoring of CEOs of Listed Companies in China**

### **Abstract**

This paper compares the relative effectiveness of two measures by which the Chinese government attempted to improve the monitoring of listed companies: shifting the ownership of state shares from government agencies (GAs) to the corporate form of state-owned enterprises (SOEs), and strengthening corporate governance through statutory regulations and guidelines. The results show that SOEs are better able than GAs to monitor top executives, as indicated by a higher sensitivity of top executive turnover to firm performance. However, corporate governance mechanisms have no significant impact on the sensitivity of top executive turnover to firm performance. This study suggests that incentives for controlling shareholders are more important than governance mechanisms in replacing executives due to poor performance in a transitional economy such as China's, where institutions that support governance mechanisms are still being developed.

*JEL classification:* G32, G34, J63

*Keywords:* China, Corporate governance, Ownership structure, Shareholder identity, Top executive turnover

## **A Comparison of Shareholder Identity and Governance Mechanisms in the Monitoring of CEOs of Listed Companies in China**

### **1. Introduction**

The process of transition from a socialist economy to a market economy has recently become an important issue. Nellis (1999) argues that the effectiveness of privatization in transitional economies depends on the existence of the institutional underpinnings of capitalism, such as legal and financial systems. In addition, Stiglitz (1999) suggests that using “better management contracts” to make state shareholders act like private owners is a better choice in the absence of those institutional underpinnings—a path which has been followed by the Chinese government in the past two decades. As noted by the World Bank (1997), most other countries in transition have adopted widespread privatization of state-owned enterprises (SOEs), whereas in China the government’s agents carry out shareholder functions that are performed by private owners in market economies.

This approach is also used to govern the SOEs that have been listed on the country’s two stock exchanges in Shanghai and Shenzhen since they opened in the early 1990s. A listed SOE typically issues three types of shares: state shares, legal-person shares, and individual shares (see Sun and Tong, 2003 for a detailed explanation). State shares are either held by government agencies (GAs) or unlisted market-oriented SOEs. Legal-person (LP) shares are held by domestic corporations and other non-individual entities such as collectively owned enterprises, township and village enterprises, non-bank financial institutions, private companies, or joint stock companies. Although those legal entities have a mixed ownership structure with both private and government stakes, most of them are still directly or indirectly controlled

by the government. Both state and legal-person shares are not tradable on the stock exchanges.<sup>1</sup> Individual shares, in contrast, are sold to and held by the diffuse investing public and they are freely tradable on the two stock exchanges. To ensure state control, the government limits individual shares to less than one-third of the total. In other words, the state still controls more than two-thirds of most listed companies, either through the holding of state shares by GAs and SOEs, or indirectly through legal-person shares.

To better monitor listed companies, the Chinese government has adopted two important measures in recent years. One has been to transfer state shares gradually from GAs to market-oriented SOEs. According to my statistics, the percentage of shares of listed companies that were held by GAs declined from above 20% in 1994 to below 10% in 2004. Another measure has been to strengthen the corporate governance mechanisms of listed companies through statutory regulations and guidelines. For example, the government has stipulated that at least one-third of the board of all listed firms must consist of independent directors by June 2003. In this study, I compare the relative effectiveness of these two measures in monitoring China's listed companies.

Whether the two measures can be effective in improving the monitoring of listed companies in China is not clear-cut. The first measure—transferring ownership to SOEs—has been shown to be beneficial to firm performance: firms that are controlled by SOEs significantly out-perform those controlled by GAs (Wang, 2003), and investors react positively to the announcement of block share transfers from GAs to SOEs (Berkman *et al.*, 2002). However, the better performance or positive market

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<sup>1</sup> These two types of non-tradable shares have been gradually allowed to trade on the stock exchanges since June 2006.

reaction related to SOEs could be due to better managerial ability or more operational flexibility; it is not certain whether SOEs are better than GAs in terms of corporate governance. The second measure—strengthening corporate governance mechanisms—has been shown in Western countries to improve the monitoring of corporate executives (e.g., Jensen, 1993 and Huson *et al.*, 2001). Previous studies also show that corporate governance mechanisms enhance firm's market value in China (e.g., Bai *et al.*, 2004). However, it is known that the effectiveness of governance mechanisms depends on established institutions such as accounting profession, investment banks, regulators, and courts (Roe, 2002). As these institutions are still at the early stage of development in China (Clarke, 2003), it is not evident that governance mechanisms can increase the monitoring of listed companies.

In this study, I use the sensitivity of top executive turnover to firm performance as a measure of the monitoring function of China's state shareholders and corporate governance mechanisms. "Top executive" refers to "general manager," which is the statutory title used in China's *Company Law* and is equivalent to "chief executive officer" (CEO) in the West. According to China's *Company Law*, any limited liability company must have a general manager, who is appointed by the board and is in charge of "the management of the company's production and operation, and organizing the implementation of board resolutions," among other authorities and duties. From a sample of 841 changes of general managers from 2000 to 2005, I find that the association between executive turnover and firm performance varies among different types of shareholders: the turnover is less sensitive to poor firm performance in firms controlled by GAs than in those controlled by SOEs as well as LPs. However, the sensitivity is not affected by the presence of corporate governance mechanisms.

These results show that market-oriented SOEs have the incentive to replace top executives due to poor performance than do GAs, which could contribute to better performance of listed firms controlled by SOEs. Thus, the identity of shareholders dominates the governance mechanisms in a country where the supporting institutions are yet to be fully developed.

Previous studies of other transitional economies have focused on the role of different types of private owners such as managers, foreign owners, and investment funds (e.g., Djankov and Murrell, 2002). In addition, studies of China's listed companies, such as those by Xu and Wang (1999), Sun *et al.* (2002), and Sun and Tong (2003) have compared the differences between state shareholders and LP shareholders, but they have not differentiated between the types of state shareholders. This has been done in more recent papers, such as those of Berkman *et al.* (2002), but they do not consider why firms that are controlled by different types of state shareholders show different levels of performance. On governance role of shareholders, studies like Firth *et al.* (2006) and Kato and Long (2006) only examine top executive turnover-performance sensitivity difference between state shareholders and LP shareholders. They also do not decompose state shareholders into GA and SOE. This paper contributes to the literature on transitional economies by distinguishing between the monitoring functions of different types of state shareholders under China's gradual privatization process.

My study also extends the literature on block share transfer and corporate control. Samuelson (1970) states that "take-overs, like bankruptcy, represent one of Nature's methods of eliminating deadwood in the struggle for survival. A more and more efficiently responsive corporate society can result." Agrawal and Jaffe (2003)

provide a detail examination of this monitoring hypothesis for block transfer but they find *little* evidence that target firms were performing poorly before acquisition and conclude that monitoring hypothesis is not supported by their data. The results may be due to similar incentives of incumbent and incoming block shareholders because both of them are private entities. My study indicates that block share transfer could play a monitoring role if the incoming block-holder has stronger incentives to monitor managers than the incumbent block-holder.

The remainder of this paper is organized as follows. Section 2 introduces China's institutional background and develops the hypotheses. Section 3 explains the measurement of variables and the sample construction. Section 4 presents empirical results. The final section concludes the paper.

## **2. Institutional background and hypothesis development**

### *2.1 Nature of state shareholders in China's listed companies, and the monitoring of top executives*

For various reasons — primarily the ideology of maintaining state control of the economy (Sun and Tong, 2003) — the Chinese government retains a large portion of shares in listed companies. State control is ensured by offering only a minority of shares to the general public (“individual shares”). The majority of shares are held by the state (“state shares”) and legal persons (“legal-person shares”). Legal-persons are domestic corporations and other non-individual entities such as collectively owned enterprises, township and village enterprises, non-bank financial institutions, private companies, or other listed companies (Xu and Wang, 1999).

State shares are technically controlled by the Ministry of Finance through the State Assets Management Bureau (SAMB) and its local agencies.<sup>2</sup> In reality, two types of entity exercise the control rights of state shares: GAs and market-oriented SOEs.<sup>3</sup> Some GAs became state shareholders when the whole enterprise they solely owned was restructured into a listed company; others became state shareholders by investing state-owned assets under their control in listed companies (Wang, 2003). In general, GAs take the following forms: (1) central government ministries and commissions, (2) national industrial companies, (3) local government bureaus, (4) local branches of SAMB, and (5) local state assets operating companies. Appendix A provides a detailed explanation of these five types of GA.

To enhance the competitiveness of listed companies, the Chinese government has turned the control of increasingly more companies from GAs to SOEs (*Shanghai Securities News*, 2001). Figure 1 shows the percentages of these two types of shares together with LP shares from 1994 to 2004.<sup>4</sup> The sample includes all of the companies that are listed on the Shanghai and Shenzhen stock exchanges, excluding those that only issued foreign currency denominated shares. The two types of nontradable shares—state and legal-person shares—account for 60 to 70% of total shares; each of

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<sup>2</sup> The SAMB was elevated to ministerial level in 2003 as the State-owned Assets Supervision and Administration Commission (SASAC).

<sup>3</sup> Berkman *et al.* (2002, Figure 1) further classify SOEs into solely state-owned enterprises and partially state-owned enterprises (with private joint-venture partners). This detailed classification is only possible to derive from block transfer announcements, and is not possible for firms that never made such announcements.

<sup>4</sup> The percentage of state shares data were obtained from the China Corporate Governance Research (CCGR) database published by China Guo Tai An Information Technology Ltd. (GTA). The identity of state shareholders was identified from *Genius*, a database that covers China's listed companies. The database provides the names, numbers, and percentages of shares held by the top ten shareholders in China's listed companies. Each of the top shareholders is identified to see whether it is a GA, according to the definition provided in Appendix A.

them controls between 30% and 40% of the total. Within the state shares, the GA holdings declined in the entire period, from about 20% in 1994 to below 10% in 2004.

[Insert Figure 1 here]

Berkman *et al.* (2002) show that investors react positively to the announcement of the transfer of control rights from a GA to an SOE. There are at least four reasons that make investors favour an SOE rather than a GA. Firstly, although Chinese government ultimately holds all the state shares held by either GAs or SOEs, the Chinese government has been decentralizing decision making rights of SOEs and introducing business autonomy to SOEs since 1986.<sup>5</sup> To further protect SOE's autonomy, government agencies that violate SOE autonomy are subject to disciplinary actions, and anyone who obstructs SOE managers in the execution of their duties shall be penalized by the public security authorities and may be subject to criminal prosecution (World Bank, 1997).

Secondly, GA officials who supervise the management of listed companies typically have little or no industry-specific knowledge. They are promoted according to how well they execute governmental policies and instructions, instead of according to the profitability of the listed companies (Xu and Wang, 1999). SOE managers, in contrast, typically receive monetary rewards based on the performance of the firm. World Bank (1997) provides an example of incentive contracts between Shanghai SAMB and the First Department Store (Group) Company: the reward system for the

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<sup>5</sup> See Chapter 2 of World Bank (1997) for details of the decentralization process.

SOE manager involves a base salary plus incentive pay based on a number of assessment indicators like return on assets.

Thirdly, the dividends paid by the listed companies to the GA shareholders need to be submitted to the Ministry of Finance or to local governments, whereas SOEs usually have the right to retain the dividend income. As Wang and Ye (2007) point out, SOEs need resources to subsidize their non-listed unprofitable subsidiaries or divisions. Thus they have stronger incentive to maximize profit of their listed subsidiaries. Lastly, SOEs typically have better means to monitor listed companies through direct control of the boards of listed companies. According to Zou (2004), in about 70% of cases, the board chairperson of the SOE-controlled listed company is also the chairperson of its parent SOE. In contrast, only 16% of the board chairpersons of GA-controlled listed companies also hold a position in the parent GAs. Thus, SOE managers have stronger incentive to monitor listed companies' managers than do GA managers.

Previous studies have shown an overall negative relationship between top executive turnover and accounting performance measures for Chinese firms.<sup>6</sup> For example, using survey data from non-listed SOEs, Groves *et al.* (1995) show that executive turnover was negatively related to performance from 1980 to 1989. Recently, Chang and Wong (2004) and Firth *et al.* (2006) report a negative association between top management turnover and accounting performance in China's listed companies.<sup>7</sup> Kato and Long (2006) find that turnover-performance link is

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<sup>6</sup> Similar results have been reported worldwide: e.g., the U.S. (Warner *et al.*, 1988), the U.K. (Dahya *et al.*, 2002), Japan (Kaplan, 1994a), Germany (Kaplan, 1994b), Belgium (Renneboog, 2000), Italy (Volpin, 2002), and eight emerging markets (Gibson, 2003).

<sup>7</sup> Many studies cited in the previous note also examine the sensitivity of top executive turnover to stock returns. In China, however, most of majority shareholders hold either state shares or legal-person

weaker for listed firms still controlled by the state. If SOEs play a more effective monitoring role than do GAs, then there should be a difference in the sensitivity of top executive turnover to accounting performance measures. This can be tested by the following hypothesis (in alternative form):

**H1:** The sensitivity of top executive turnover to performance is higher in firms that are controlled by market-oriented SOEs than in firms that are controlled by GAs.

## *2.2 Corporate governance mechanisms of China's listed companies and top executives due to poor performance*

Research has shown that corporate governance mechanisms often enhance the sensitivity of top executive turnover to poor firm performance. For example, Zajac and Westphal (1996) and Goyal and Park (2002) show that the sensitivity is weaker in companies that are run by a chief executive officer who is also the chairperson of the board. Board size (number of directors) may also affect a board's decision to replace poorly performing executives (Hermalin and Weisbach, 2000). In addition, Fama and Jensen (1983) and Weisbach (1988) find that outside directors tend to be more effective monitors of management than do inside directors.

Realizing the importance of corporate governance, the China Securities Regulatory Commission (CSRC) has issued a series of guidelines in recent years to improve corporate governance mechanisms. For example, in conjunction with the State Economic and Trade Commission the CSRC issued the *Code of Corporate Governance for Listed Companies* in 2001. The Code sets forth the basic rules of

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shares, which were not tradable before 2006. Thus, it is not surprising that Chang and Wong (2004) and Firth *et al.* (2006) find no relation between top management turnover and stock returns in China.

conduct and moral standards for directors and executives of listed companies. It also introduces the concept of independent directors and discourages the combination of the positions of chairperson and general manager. Moreover, in the same year the CSRC issued the *Guidelines for Introducing Independent Directors to the Board of Directors of Listed Companies*, stipulating that at least one-third of the board of all listed firms must consist of independent directors by June 2003.

The measures taken by the Chinese government have had significant effects on the structure of the boards of listed companies. As shown in Table 1, the portion of firms with combined titles of board chair and general manager declined from 28.35% in 1999 to 23.47% in 2000 and further to 20.32% in 2004.<sup>8</sup> In addition, the portion of companies that have appointed at least one independent director increased gradually from 3.77% in 1999 to 8.49% and 28.52% in 2000 and 2001, respectively. The number jumped to 97.65% in 2002, six months before the deadline stipulated in the regulation mentioned earlier. Almost all companies (99.5%) have at least one independent director on their boards in 2004.

Table 1 also shows that the average percentage of non-executive directors—those who do not receive a salary from the company—has been stable at around 40%. In the U.S., non-executive directors are known to play a larger role in monitoring management than do inside board members (e.g., Weisbach, 1988). However, many non-executive directors in China are appointed by controlling shareholders (Tenev *et al.*, 2002) and their independence from the management is not certain. In contrast, the independent directors who are required by CSRC's 2001 Guideline are supposed to be more "independent" and play a better monitoring role

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<sup>8</sup> The board structure data prior to 1999 is not available because the disclosure requirement did not start until that year.

than do non-executive directors. According to the Guideline, independent directors should “hold no posts in the company other than the position of director” and “maintain no relations with the listed company and its major shareholders that might prevent them from making objective judgment independently.” The independent directors are also required to have such qualifications as “more than five years’ work experience in law, economics or other fields.” In addition, independent directors are granted “special powers” such as the requirement that “major related party transactions should be approved by the independent director before being submitted to the board of directors for discussion.”

[Insert Table 1 here]

It is uncertain whether the reduction of the combined titles of board chair and general manager and the increase of board independence by introducing independent directors will enhance the monitoring of listed companies. As Roe (2002) points out, corporate governance depends not only on law and regulations, but also on other institutions such as law firms, the accounting profession, investment banks, enforcement mechanisms, and the courts. However, in China these institutions are either at the early stage of development or subject to the control of the state. For example, the CSRC’s 2001 Guideline requires that independent directors have a duty of good faith and diligence, but the legal meanings of these terms are so vague that it is far from clear if shareholders could successfully sue for a breach. This has led Clarke (2003) to question the effectiveness of corporate governance mechanisms in China. This suspicion is consistent with recent empirical studies, which show mixed

results about the impact of corporate governance mechanisms on China's firm performance. For example, Bai *et al.* (2004) find a positive relation between governance indicators and firm's market value, but both CLSA (2001) and Tenev *et al.* (2002) fail to find a strong relation between indicators of corporate governance and firm performance. Thus, whether corporate governance mechanisms increase the sensitivity of top executive turnover to performance in China is an empirical issue. The test of this issue can be based on the following hypothesis:

**H2:** The sensitivity of top executive turnover to performance is affected by the difference in internal corporate governance mechanisms.

### 3. Research design

#### 3.1 Logistic regression model and definitions of variables

I measure the monitoring function by the sensitivity of top executive turnover to the performance of the company: a higher sensitivity indicates better monitoring. The sensitivity is reflected from the coefficient ( $b_0$ ) on the performance variable and the impact of other variables on the sensitivity is reflected from the coefficients ( $d_j$ ,  $f_k$ , and  $h_l$ ) on interaction terms in the following logistic regression model:

$$\Pr(\text{TURNOVER}_{it} = 1) = \Phi[a_0 + b_0 \text{Performance}_{it} + \sum_{j=1}^2 (c_j + d_j \text{Performance}_{it}) I_{it}^j + \sum_{k=1}^3 (e_k + f_k \text{Performance}_{it}) G_{it}^k + \sum_{l=1}^7 (g_l + h_l \text{Performance}_{it}) C_{it}^l + \text{yeardummies} + \varepsilon_{it}] \quad (1)$$

where  $\Phi [.]$  is the logit transformation;  $I_{it}^j$  ( $j = 1,2$ ) represents two shareholder identity variables:  $GA$  and  $LP$ ,<sup>9</sup>  $G_{it}^k$  ( $k = 1,3$ ) represents the three corporate governance variables: combined title of board chair and general manger ( $COMB$ ), non-executive directors ( $NEDIR$ ), and independent directors ( $INDIR$ ); and  $C_{it}^l$  ( $l = 1, 7$ ) represents seven control variables: an indicator of ownership concentration ( $HERF$ ), the tenure of the general manager ( $TENURE$ ), the quadratic term in tenure ( $TENURE2$ ), an indicator of foreign investors ( $FOREIGN$ ), the age of the general manager ( $CEOAGE$ ), the size of the board ( $BSIZE$ ) and the nature logarithm of total assets ( $SIZE$ ). Year dummies are also included in the regression model.

### 3.2. Variable definitions

In Eq. (1), the dependent variable ( $TURNOVER$ ) equals one if there is a change in the general manager, and zero otherwise. For the performance variables, I consider three measures: (1) stock returns, (2) industry-adjusted return on asset ( $IAROA$ ), defined as operating income divided by average total assets and adjusted by industry median,<sup>10</sup> and (3) change in  $ROA$ .<sup>11</sup> The  $ROA$  is calculated for the annual periods that best reflect the information available to internal monitors when the turnover decision is made. If it is announced before the middle of the fiscal year, then

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<sup>9</sup> The shareholder identity is an SOE when both  $GA$  and  $LP$  are equal to zero.

<sup>10</sup> We first calculate firm's  $ROA$  using operating income in year  $t$  divided by the average of beginning-of-year and end-of-year total assets. Then we calculate the median  $ROA$  for all the firms in the same industry in year  $t$ . Industry-adjusted return on asset ( $IAROA$ ) in year  $t$  is then calculated as firm's  $ROA$  in year  $t$  minus industry median  $ROA$  in year  $t$ .

<sup>11</sup> Due to the need to compare with a benchmark, previous literature typically uses either industry-adjusted (relative to industry peers) or change in the profit measure (relative to past performance). In unreported results, executive turnovers are not sensitive to the level of  $ROA$  or sales growth rate. In another set of unreported results, I find that the pattern of turnover-performance relationships is qualitatively the same when  $ROA$  is replaced by return on equity ( $ROE$ ) or return on sales ( $ROS$ ) in calculating the industry-adjusted or change measures.

the accounting measure for the previous year is used.<sup>12</sup> If it is announced in the second half of the fiscal year, then the measure for the current year is used.

Both variables that are included in  $I_{it}^j$  are binary; they take a value of one in the following situations, and zero otherwise: for  $GA$ , when the firm's largest shareholder is a government agency; for  $LP$ , when the firm's largest shareholder is a legal person (i.e., neither a GA nor an SOE). Two of the three variables that are included in  $G_{it}^k$  are binary; they take a value of one in the following situations, and zero otherwise: for  $COMB$ , when the firm's chairperson of the board and general manager is the same person; for  $INDIR$ , when the firm has at least one independent director. In their annual reports, Chinese firms report each director's detailed information such as name, age, gender, position, and salary. The position of independent directors is clearly labeled as "independent director". Thus it is feasible to identify independent directors by their position. The third variable ( $NEDIR$ ) included in  $G_{it}^k$  is defined as the proportion of non-executive directors sitting on the board. Non-executive directors are those who do not receive a salary from the company. Similarly, I can identify non-executive directors by checking their salary reported in annual reports.

Seven control variables are included in Eq. (1). The first is ownership concentration. Monitoring top management is a joint decision by all large shareholders. Without the checks and balances of other large shareholders, a firm that is controlled by a single dominant shareholder might have more entrenchment problems and lower turnover-to-performance sensitivity. Following Demsetz and

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<sup>12</sup> The calendar year is the fiscal year for all China's listed companies.

Lehn (1985), I introduce the Herfindhal index (*HERF*) to measure ownership concentration. It is calculated as the average of the sum of squares of percentage of shares held by the top 10 shareholders. It ranges from 0 to 0.1 and the larger the value the higher the degree of ownership concentration. For example, if the largest and only shareholder holds 100% of the company, then *HERF* equals 0.1.

The second control variable is the tenure of the general manager (*TENURE*), defined as the total number of years that the general manager has been in place as of the year of the turnover. Management tenure could affect the turnover either positively or negatively. If long tenure is a clue that a manager is close to retirement, then it should be positively related to top executive turnover. Alternatively, Salancik and Meindl (1984) show that a manager with longer tenure could have established a power base over time, which suggests that top executive turnover is negatively related to tenure. The third variable is a quadratic term in tenure (*TENURE2*). It equals to the square of *TENURE*. We use it to control for possible non-linear effect of tenure on the probability of turnover. The fourth variable is a dichotomous variable representing foreign investors' ownership (*FOREIGN*). It equals one if the company issued foreign currency denominated shares and zero otherwise. Foreign investors who act as outside monitors could improve the monitoring role of corporate boards (Volpin, 2002). The fifth variable is an indicator of the general manger's age (*CEOAGE*): it takes value of one if the general manager is older than 60 and zero otherwise.<sup>13</sup> Goyal and Park (2002), Murphy and Zimmerman (1993), and Weisbach (1988) find a strong relation between CEO turnover and CEO age. Their explanation is that the top executive

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<sup>13</sup> The legal retirement age is 60 for male executives and 55 for female executives in China. Thus, I choose 60 as a cut-off age. Previous studies in the U.S. use different cut-offs. For instance, Huson *et al.* (2001) use a cut-off age of 60, but Goyal and Park (2002) use 65. I also tried the cut-off age of 65 and obtained similar results.

turnover around retirement age is more likely due to normal retirement than to forced departure.

The sixth control variable is the size of the board (*BFSIZE*, defined as the number of directors sitting on the board). The size of the board could affect the monitoring of executives because, as Jensen (1993) and Yermack (1996) show, a more streamlined board can operate more efficiently. Finally, I also add firm size (the natural logarithm of total assets, *SIZE*) in the regression. Prior research finds that managers in larger firms are less likely to be replaced (e.g., Denis *et al.*, 1997, Volpin, 2002, and Firth *et al.*, 2006). One possible reason is that larger firms demand more experienced professional managers and these may be in short supply. However, Huson *et al.* (2001) finds that larger firms are more likely to replace managers because managers in larger firms hold lower percentage of ownership and hence are less likely to protect themselves.<sup>14</sup>

### 3.3. Sample construction

To estimate Eq. (1), a sample of firms with general manager turnover from 2000 to 2005 (the turnover sample) was identified, together with a control sample in the same period.<sup>15</sup> The turnover sample was identified from the GTA China Corporate

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<sup>14</sup> Some control variables that were used in previous research are not included. Equity ownership by management (Denis *et al.*, 1997) is not used because Chinese managers typically hold very little equity ownership (average holding by top five executives is as low as 0.02% according to Bai *et al.*, 2004). In addition, the degree of industry competition (Defond and Park, 1999) is not controlled in this study because of the unavailability of the industry market share data in China.

<sup>15</sup> This study focuses on the turnover of general managers, and that of the chairpersons of the boards are not included. The exclusion is due to unreported results that the turnover decisions of board chairpersons are not related to firm performance in my sample. Thus, there is no cross-sectional difference in the performance-turnover sensitivity for further study. I have to leave the turnover decisions of board chairs for further study.

Governance Research (CCGR) database.<sup>16</sup> To ensure there are at least two years' accounting data to calculate the change in accounting performance, managers who were replaced within two years from appointment were also excluded (*tenure less than two years* on Table 2).<sup>17</sup> To focus on the monitoring role of shareholders, changes that were not due to shareholder initiation were excluded. These included *retirements* (including promotion to a government position), *health reasons* (including death), and *illegal operations*. Furthermore, as most of China's listed companies are headed by a holding company, sometimes the chairperson or general manager of a listed company is also the top manager of its holding corporate shareholder. The dual position creates a conflict-of-interest between the holding company and minority shareholders. In 1999, the CSRC required top managers to resign from either position to detach from the holding company. The changes in top management due to this regulation were also excluded from the sample because they are not related to firm performance (*detachment from holding company*). In addition, all executive turnovers due to *change of large shareholders* were excluded because they are not the results of the monitoring function.<sup>18</sup> Finally, all observations were required to have sufficient data to calculate the variables that are used in this paper. This process yielded a sample of 841 general manager changes, representing 723 listed companies from 2000 to 2005. The details of the sample selection process are provided in Table 2. The total

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<sup>16</sup> The CCGR database covers the information regarding senior management changes, board meetings, independent directors, equity structure changes, and the top 10 shareholder from year 1999 onwards. The database can be purchased at <http://www.gtadata.com/products/referential.aspx>. It is also accessible through Wharton Research Data Services (WRDS).

<sup>17</sup> Turnovers within two years in office are excluded also because they are less likely due to poor performance. The exclusion may result in selection bias: it may be that GAs remove managers much more quickly than SOEs and LPs when the company is performing poorly. But I got similar results by not deleting these changes.

<sup>18</sup> This process can also mitigate the causality problem because the changes will not affect firms' ownership structure after the deletions.

number of listed firms in Table 2 includes all of the firms that had listed on China's two stock exchanges, Shanghai and Shenzhen, for at least one year, excluding those that only issued foreign currency denominated shares.

[Insert Table 2 here]

The firms that had no change in both chairperson and general manager from the listing year to the year with the first turnover were included in the control sample. All of the control firms were required to have been listed for at least two years. For example, for year 2000, all firms that were listed in 1998 or before and have no chairperson or general manager changes from listing year to 2000 are included in our control sample. In total, there were 646 firms in the control sample, including 999 firm-year observations from 2000 to 2005. Thus, the turnover and control samples have a total of 1,840 firm-year observations from 2000 to 2005.

## **4. Empirical results**

### *4.1. The relation between executive turnover and performance*

Table 3 shows the proportion of firms with change of general manager, during the 2000-2005 period, by quintiles of three firm performance measures mentioned earlier: industry-adjusted ROA in the year before turnover (*IAROA*) in Panel A,<sup>19</sup>

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<sup>19</sup> I also use two-year average *IAROA* and get qualitatively similar results. I do not use performance measured by more than two years before turnover because longer-term measures result in large number of missing observations.

change in *ROA* in Panel B, and stock returns in Panel C.<sup>20</sup> In the last column, I provide the binomial *z*-statistics that test the difference in the percentages of turnover between the worst and the best performance quintiles. *z*-statistics for the test of difference between GA-controlled firms and SOE-controlled firms are provided in the last row of each panel. The number of observations in each quintile is reported in parentheses. Panel A shows that when all firms in the sample are sorted by *IAROA*, the turnover ratio is the highest in the worst quintile (62.35%) and the lowest in the best quintile (44.23%). In addition, the difference between the lowest and highest quintiles in the turnover ratios is significant at 1% level (with a *z*-statistic of 6.53). The pattern in Panel A, however, is not evident in Panels B: the turnover ratio is *not* the highest in the worst quintile and *not* the lowest in the best quintile. In addition, the difference of turnover ratios between the lowest and highest quintiles is not significant (with a *z*-statistic of 0.51). Panels A and B show that Chinese boards put more weight on *ROA* relative to industry peers than the change in *ROA* (relative to past performance) in turnover decisions. This finding is consistent with the behavior of American boards reported in Huson *et al.* (2001) which also show an insignificant sensitivity between management turnover and changes in accounting performance. The pattern in Panel A also is not evident for stock returns in Panel C. The possible explanation is that the shares held by controlling shareholders cannot be traded on the exchanges, and thus stock performance is not the major concern in deciding upon executive replacements.<sup>21</sup> Thus, it is clear that the level of *ROA* relative to industry

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<sup>20</sup> The stock returns are market-adjusted returns, estimated as the stock return minus the market return that is accumulated over the 24-month period immediately preceding the turnover month, minus the industry median.

<sup>21</sup> The dysfunction of stock prices in monitoring managers may challenge the managerial view of privatizations which says the presence of privately-held but publicly traded shares allows evaluating

(*IAROA*) plays a better role in executive turnover in China whereas change in ROA and stock returns do not, which is consistent with the findings of Huson *et al.* (2001) for change in ROA and Firth *et al.* (2006) for stock returns.

[Insert Table 3 here]

Table 3 also presents turnover percentages across the types of controlling shareholders. All observations are classified according to the identity of controlling shareholders: GA, SOE, and LP. Panel A shows that when the performance is measured by *IAROA*, there is an inverse relation between turnover and performance in both SOE-controlled and LP-controlled firms, but not in GA-controlled firms, indicating the shareholder identity does affect the sensitivity of executive turnover to performance in China. However, when performance is measured by the change in *ROA* (Panel B), the inverse relation is much weaker in all three categories and none of the difference of turnover ratios between the lowest and highest quintiles is significant. Panel C also shows that the relation between turnover and stock performance is much weaker in all three types of shareholders. The comparison between GA-controlled firms and SOE-controlled firms indicates that, under all three performance measures, SOE-controlled firms experience much higher management turnover frequency than do GA-controlled firms. Because Table 3 indicates that executive turnover in China is more related to the industry-adjusted ROA (*IAROA*) than to the change in *ROA* and stock returns, the analysis that follows will focus on *IAROA*.

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managers actions based on public share prices (see, e.g., Gupta, 2005). Chang and Wong (2004) and Firth *et al.* (2006) also fail to find any significant association between stock returns and the likelihood of top executive changes in China (Kato and Long 2006's result is only at a significance level of 10% for stock returns).

Table 4 shows the relation between top executive turnover and firm performance, controlling for different governance mechanisms, during the 2000-2005 period. The observations are sorted into quintiles according to the firm's past *IAROA*. The turnover proportions of the firms with the lowest performance and those with the highest performance are compared using a two-tailed binomial *z*-test (reported in the last column). The comparison of turnover proportions of various governance groups are also provided (in the last row of each panel). The number of observations in each quintile is reported in parentheses. In Panel A, when the firms with the separation of board chairs and general managers are sorted into *IAROA* quintiles, the worst quintile has a significantly higher turnover ratio (64.33%) than the best quintile (44.59%). There is also a significant difference in the turnover ratios between the worst (53.18%) and best (31.65%) quintiles when the firms with combined board chairs and general managers are sorted. Both Panel B and Panel C show the similar pattern to that in Panel A: there is a significant difference in the turnover ratios between the two extreme quintiles when firms with a certain governance characteristic (e.g., more or less non-executive directors, with or without independent directors). For example, in Panel C, when firms with independent directors are sorted into *IAROA* quintiles, there is a significant difference in the turnover ratios between the worst (64.37%) and best (40.34%). The same pattern is found when firms without independent directors are sorted into *IAROA* quintiles. Table 4 also provides the statistics for test of turnover frequency difference between various governance groups. Panel A indicates that firms with separate chairperson and general managers experience higher turnover frequency in all performance quintiles. Panel B indicates that firms with more non-executive directors usually replace their general managers more frequently than do firms with

less non-executive directors. In contrast, there is no consistent difference between firms with and without independent directors. These comparisons indicate that separation of chairperson and general managers and non-executive directors do affect the frequency of management turnover. But, Table 4 shows no evidence that three governance mechanisms affect the sensitivity of turnover to performance.

[Insert Table 4 here]

#### *4.2. Univariate comparisons between turnover and control samples*

Table 5 presents the mean, median, and standard deviation for continuous variables (Panel A) as well as the percentages of dummy variables (Panel B) that take a value of one for each variable used in the logistic regression, for the turnover and the control samples during the 2000-2005 period. The variables are defined in Appendix B. The last column in Panel A and the last row in Panel B report the results of the *z*-test for differences in medians or percentages of observation with a value equal to one. The *z*-statistics are from a two-tailed binomial test for binary variables and a Wilcoxon rank sum test for continuous variables. As to the industry-adjusted *ROA* (*IAROA*) reported in Panel A, firms with executive turnover perform significantly worse than those without any turnover. On examining the shareholder identity in Panel B, significantly fewer firms (20.29%) have a government agency (*GA*) as the largest shareholder in the turnover sample than in the control sample (27.31%) according to a binomial test. There are also significantly less firms (25.65%) have a legal person (*LP*) as the largest shareholder in the turnover sample than in the control sample (31.23%). In contrast, significantly more firms (53.45%) have an *SOE*

as the largest shareholder in the turnover sample than in the control sample (40.19%).<sup>22</sup>

In terms of the variables that represent governance mechanisms, the turnover sample has significantly less joint appointments (*COMB*) of chair and general manager and more non-executive directors (*NEDIR*). However, the percentage of firms with independent directors (*INDIR*) in the turnover sample is not significantly different from that in the control sample. Finally, the univariate comparisons of the control variables reveal that the turnover sample has significantly shorter top management tenure (*TENURE*) and larger size (*SIZE*) but there is no significant difference between the turnover and control samples among the other four control variables (*HERF*, *BFSIZE*, *FOREIGN*, and *CEOAGE*).

[Insert Table 5 here]

#### 4.3. *The relation between shareholder identity and governance mechanisms*

Table 6 further compares the three governance mechanisms among companies controlled by the three types of shareholder. The first row shows that firms controlled by GAs are more likely to have combined titles of board chair and general manager (36.5%) than firms controlled by SOEs (20.7%) or LPs (25.5%). Regarding non-executive directors (*NEDIR*), firms controlled by GAs have fewer non-executive directors sitting on the board (33.6%) than firms controlled by SOEs (43.5%) or LPs (43.9%). The last row shows that firms controlled by SOEs are more likely (60.9%) to have independent directors than firms controlled by LPs (50.2%, the difference is

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<sup>22</sup> Among the GAs that are the largest shareholders of their listed companies, the average ownership is 44.1%; the average is 41.7% for the SOEs that are the largest shareholders.

significant). They are also more likely to do so than those controlled by GAs (55.3%), although the difference is not significant. The results indicate that shareholder identity does affect the duality of management titles and the presence of non-executive and independent directors on the board. Thus, it is necessary to include both shareholder identity and governance mechanism variables in testing the effects on turnover-to-performance sensitivity.

[Insert Table 6 here]

#### 4.4. Logistic regression results

Table 7 presents empirical results of the logistic regressions based on Eq. (1). Asymptotic *t*-statistics for two-tailed tests are reported in parentheses. All the three regression models include *IAROA*, the seven control variables and their interactions with *IAROA*, and yearly dummies as common variables. In addition, each model includes different subsets of explanatory variables: Model 1 includes the two shareholder identity variables (*GA* and *LP*) and their interactions with *IAROA*; Model 2 includes the three governance variables (*COMB*, *NEDIR*, and *INDIR*) and their interactions with *IAROA*; Model 3 includes all of the variables in Models 1 and 2.

In all three models, the estimated coefficients on the performance variable (*IAROA*) are negative and statistically significant, indicating that the likelihood of turnover for firms controlled by SOEs increases as prior operating performance declines. In Model 1, the coefficient on the variable (*IAROA\*GA*) that interacts performance with *GA* is positive and statistically significant at a level of 5%. This interactive variable represents the incremental effect of *GA* relative to *SOE* (when *GA*

= 0 and  $LP = 0$ ) on the sensitivity of turnover to  $IAROA$ . Hence, the positive coefficient on  $IAROA*GA$  means that the presence of a GA as a controlling shareholder reduces the turnover sensitivity to industry-adjusted  $ROA$ , i.e., the governance function of GAs is poorer than that of SOEs.<sup>23</sup> In contrast, the coefficient on  $IAROA*LP$  is not significant, thus indicating that the governance functions of legal persons ( $LP = 1$ ) and SOEs ( $LP = 0$  and  $GA = 0$ ) are largely the same. Model 1 also shows that both the  $GA$  and  $LP$  variables are not significant, thus indicating that the shareholder identity itself does not affect executive turnover frequency.

[Insert Table 7 here]

In Model 2, none of the three interactive terms between the governance variables and  $IAROA$  is significant. However, two governance variables,  $COMB$  and  $NEDIR$ , are significant in the regression. This indicates that firms which combine the titles of board chair and general manager have less top executive turnover, and that firms which have more non-executive directors on the board have a higher turnover. The other governance variable, the presence of an independent director ( $INDIR$ ), has no significant effect on executive turnover.<sup>24</sup> These results are consistent with the results reported in Table 4. In summary, the governance mechanisms used in this study have some impact on the management turnover frequency but have no impact on the sensitivity of turnover to performance. Since the sensitivity between turnover and performance, rather than the turnover frequency, is a measure of effective

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<sup>23</sup> I also run the regression on a reduced sample by including only firms controlled by GAs and SOEs. The results are qualitatively the same as what we report in all three models in Table 7.

<sup>24</sup> The percentage of firms with at least one independent director is much higher in 2002 to 2005 than in the three previous years (see Table 1). Thus  $INDIR$  might reflect the yearly effects. This concern is alleviated by including the yearly dummies in the regressions.

monitoring, I conclude that the three governance mechanisms do not play a monitoring role in our sample.

Model 3 in Table 7 shows that the coefficient on *IAROA\*GA* remains significantly positive after adding the governance variables. Moreover, none of the interactive terms between governance variables and *IAROA* are significant. This indicates that shareholder identity (GA vs. SOE) dominates the governance mechanisms in influencing the sensitivity of turnover to performance.<sup>25</sup> The last row reports the pseudo R-squares calculated using Cox and Snell's (1989, pp. 208-209) approach. The R-square for Model 3 is 18.22%, the highest among the three models in Table 7.

In Table 7, the coefficients of the logit model have been transformed to represent the change in probability for an infinitesimal change in each independent variable evaluated at the mean values of the regressors.<sup>26</sup> For example, the coefficient on *IAROA* in Model 3 indicates that a decrease in industry-adjusted operating earnings over assets by ten percentage points increases the probability of turnover in an average firm by 7.25 percentage points. The coefficient on *IAROA\*GA* then indicates that the sensitivity of turnover to performance is weaker by 6.07 percentage points on average for firms controlled by GAs. The Wald Chi-Square for the test of the significance of the sum of coefficients on *IAROA* and on *IAROA\*GA* is 7.90 (with *p*-

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<sup>25</sup> A possible alternative explanation for the results is that GAs are less able to recruit outside talent as their general managers, and hence there is more executive retrenchment. However, this is not supported by these statistics: 10.7% of observations (firm-year) controlled by GAs in my sample (including turnover and control samples) replaced their outgoing general managers with outsiders, whereas the percentages are only 7.0% and 9.7% for observations that were controlled by SOEs and legal persons, respectively.

<sup>26</sup> More specifically, the marginal effects of the regressors on the probabilities are calculated as  $(\partial/\partial x_i)L(x\beta) = \exp(x\beta)*\beta_i/(1 + \exp(x\beta))^2$ , where  $x_i$  is the  $i$ th independent variable;  $x$  is the vector of independent variable;  $L$  is the logistic distribution and equals  $1/(1+\exp(-x\beta))$ ;  $\beta$  is the vector of coefficients estimates;  $\beta_i$  is the coefficient estimate for  $x_i$ . The marginal probability is calculated at the means of the regressors.

value of 0.005), indicating that the presence of GA does not cancel out the negative sensitivity of turnover to performance in China which is consistent with Firth *et al.* (2006).

Table 7 also reports that the estimated marginal turnover probabilities on the control variables. An increase in ownership concentration index (*HERF*) by ten percentage points decreases the probability of turnover by more than two percentage points and weakens the turnover-performance sensitivity by more than three percentage points in all the three models, indicating that controlling shareholders in China do have more entrenchment problems.<sup>27</sup> Regarding executive tenure, the negative coefficient of linear term (*TENTURE*) and positive coefficient of quadratic term (*TENTURE2*) indicate a U-shaped relationship between executive tenure and the probability of management turnover. The coefficients in all three models are statistically significant. To find out the turning point, I calculate the predicted turnover probability at each tenure value using Model 3 and find that the turning point is at the eighth year of tenure. In my sample, the tenure ranges from two years to 11 years. The result then indicates that the probability of management turnover decreases with tenure when it is shorter than eight years but increases with tenure when it is longer than eight years. Note, however, the executive tenure has no significant impact on the turnover-performance sensitivity. At last, firms with foreign investors (*FOREIGN*), with older general managers (*CEOAGE*), with fewer directors sitting on the board (*BFSIZE*), and with smaller assets (*SIZE*) have insignificant impacts on management turnover.

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<sup>27</sup> We also test the hypotheses that sum of the coefficients on *IAROA* and on interactions with *IAROA* is equal to zero. Untabulated Wald Chi-Square statistics indicate that none of the interactions effectively cancel out the significant negative turnover-performance sensitivity.

## **5. Conclusions**

In this study, I compare the relative effectiveness of two measures that have been used by the Chinese government to improve the monitoring of the top management of listed companies: shifting the ownership of state shares in listed companies from GAs to newly organized state-owned enterprises (SOEs), and strengthening corporate governance mechanisms such as requiring the appointment of independent directors and discouraging the combination of the positions of chairperson of the board and general manager. The monitoring function is measured by the sensitivity of general manager turnover to the performance of the company: a higher sensitivity indicates better monitoring. I find that shareholder identity, rather than governance mechanisms, is the key determinant of the sensitivity of executive turnover to firm performance. This study suggests that the incentives of shareholders are more important than governance mechanisms in monitoring the management of listed companies in transitional economies where there are no supporting institutions to enforce governance mechanisms.

This study has an important implication for the Chinese government's ongoing SOE reform. According to my statistics, the percentage of listed firms that are owned by government agencies declined gradually to a single digit by 2004. The room of further improvement from this measure seems to be very limited. Moreover, the typical governance mechanisms that are known to enhance the monitoring of top management in the West are not found to be effective in China so far. This presents a significant challenge to Chinese government's goal of further improving the efficiency of SOEs. One way to improve could be allowing the trading of non-tradable shares and introducing more equity-based incentives to general managers.

Chinese government has already been gradually allowing non-tradable shares held by GAs, SOEs, and LPs to trade on its stock exchanges since 2006.

This study also has implications for China's future sale of state shares in listed companies. The Chinese government has been looking for the best way to dispose of the large number of shares (state and legal-person shares) under its control (*Asian Wall Street Journal*, 2001). The findings suggest that the already declining shareholdings of government agencies should be released first in future sell-down activities. In addition, shares held by GAs are tradable after 2006 and hence it is easier for Chinese government to sell this type of shares to potential investors.

The interpretation of these results is subject to several limitations. First, the classification of state shareholders based on their names might not be sufficiently precise to distinguish GAs and SOEs. For example, most state assets operating companies are obvious from their name, such as "Jiangshu State Assets Operating Company". However, some operating companies, which should be classified as GAs, use other names and thus could have been classified as SOEs in this study. Second, I use the sensitivity of general manager's turnover to the performance of the company to measure the monitoring function. Other measures, such as executive compensation, are not considered. It is possible that the conclusions could be different when other measures of monitoring are used. Third, I presume that it is optimal for management turnover to increase when firm performance deteriorates. Although this assumption is reasonable for companies in more developed economies such as the US, its validity in China remains an empirical question. Fourth, some of the reported results may change after 2006 when the Chinese government allowed state shares and LP shares to trade on the stock exchanges. For example, management turnover may be sensitive to stock

price movement because shares held by GAs, SOEs, and LPs are tradable. The last limitation in this study is that China's experience with mandatory independent directors is quite short; the requirement was issued in 2001 and effective for all firms in 2003. It might take time to observe any real effects.

## **Appendix A: Classification of holders of state shares**

Each of the large shareholders of the listed companies in my sample was identified to see whether it is a government agency (GA). The following five types of state shareholders are classified as GAs, and all other types of state shareholders are classified as SOEs.

1. *Central government ministries and commissions.* This type of state shareholder is rare because most central government ministries or commissions have been restructured into national industrial companies. However, some still exist. For example, the Ministry of Water Resources is the second largest shareholder in Chongqing Three Gorges Water Conservancy and Electric Power Corporation.
2. *National industrial companies.* These companies were established by the state to develop major industries or were restructured from former government industry management institutions: for example, the China State Shipbuilding Corporation was restructured from the former sixth branch of the Ministry of Mechanical Industry in 1982. In virtually all cases, they retain governmental as well as business ownership functions (Broadman, 2001). In fact, there have only been name changes, and many of the underlying SOEs are little different than the old industrial bureaus. Thus, they are still treated as GAs.
3. *Local government bureaus.* Provincial or municipal bureaus of finance are very typical state shareholders of many of China's listed companies. For example, the Shanghai Bureau of Finance holds two listed companies: Shanghai Pudong Development Bank and Shanghai Jinqiao Export Processing Zone Development Corporation.

4. *Local state assets management bureaus.* To protect state assets from expropriation during economic transition, the Chinese government set up the SAMB under the Ministry of Finance in 1988 to administer all the state-owned assets, including state shares in listed companies. The SAMB directs local agencies throughout the country to act as state shareholders in many listed companies.
5. *Local state assets operating companies.* To separate the government from the operation of state assets, many local governments and local SAMB branches set up special investment companies to manage state-owned assets. To some extent, state asset operating companies act more like entrepreneurs than GAs, but are still under the full control of the Chinese government and thus are considered GAs.

## Appendix B: Definitions of variables

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### *Management turnover*

TURNOVER      It equals one if there is a general manager change and zero otherwise.

### *Performance measures*

IAROA            Operating income over average of total assets minus industry median.

### *Type of shareholders*

GA                It equals one if the firm's controlling shareholder is a government agency and zero otherwise.

SOE              It equals one if the firm's controlling shareholder is a corporatized state-owned enterprise and zero otherwise.

LP                It equals one if there are no GA or SOE and zero otherwise.

### *Internal governance mechanisms*

COMB            It equals one if the firm's chairperson of the board and general manager is the same person and zero otherwise.

NEDIR           It is the proportion of non-executive directors sitting on the board. Non-executive directors are those who do not receive a salary from the company.

INDIR            It equals one if the firm has at least one independent director and zero otherwise.

### *Control variables*

HERF            Herfindhal index. It is an indicator of ownership concentration calculated as  $\Sigma(S_i^2)/10$ , where  $S_i$  is percentage of shares held by the  $i$ th large shareholder,  $i$  is from 1 to 10.

TENURE         The total number of years a top manager has held the position.

TENURE2        The square of TENURE.

FOREIGN        It equals one if the firm issued foreign currency denominated shares and zero otherwise.

CEOAGE         It equals one if the general manager is older than 60 and zero otherwise.

BFSIZE         Total number of directors sitting on the board.

SIZE             The natural logarithm of book value of total assets.

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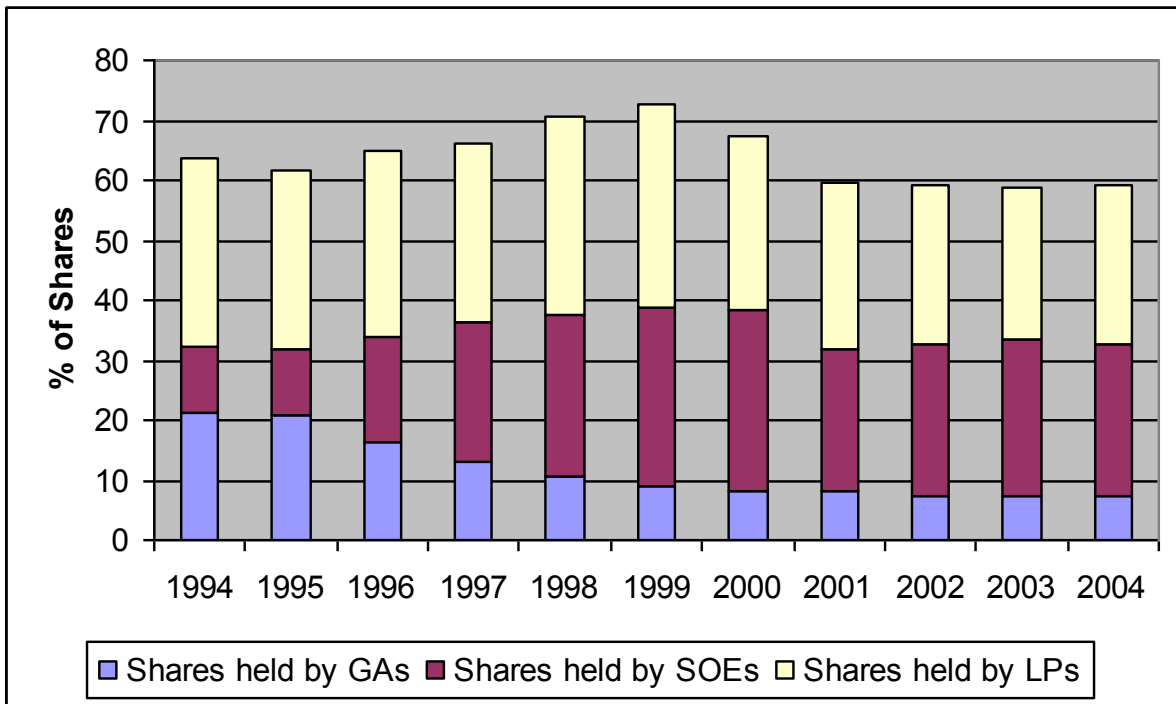
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**Figure 1 Summary of ownership structure in China's listed companies**



**Table 1 Internal governance mechanisms of China's listed companies**

	1999	2000	2001	2002	2003	2004
The portion of companies with a chairperson who is also the general manager.	28.35%	23.47%	19.90%	20.16%	21.35%	20.32%
The portion of companies that have at least one independent director.	3.77%	8.49%	28.52%	97.65%	99.05%	99.50%
The average portion of directors who do not receive salaries from listed companies.	47.15%	48.90%	47.42%	38.12%	38.91%	37.05%

**Table 2 Selection of sample of changes of general managers from 2000 to 2005**

	2000	2001	2002	2003	2004	2005	Total
Total number of listed firms	923	1,060	1,130	1,211	1,263	1,353	--
Total number of changes	332	314	310	322	330	338	1,946
Deletions due to:							
<i>tenure less than two years</i>	149	180	157	165	166	170	987
<i>retirements and health reasons</i>	11	6	2	7	9	6	41
<i>illegal operations</i>	2	0	0	0	0	0	2
<i>detachment from holding company</i>	33	11	2	4	3	5	58
<i>change of largest shareholder</i>	7	0	0	2	3	1	13
Total number after deletion	130	117	149	144	149	156	845
Missing data observations	0	1	1	0	1	1	4
Total changes in the sample	130	116	148	144	148	155	<b>841</b>

**Table 3 Top executive turnover, firm performance, and shareholder identity**

Proportion of firms with manager replaced	1 = Low performance	2	3	4	5 = High performance	Test: Low = High
<i>Panel A: Observations are sorted according to industry-adjusted ROA (IAROA)</i>						
All firms	62.35 (368)	48.41 (368)	45.21 (368)	49.67 (368)	44.23 (368)	6.53***
GA-controlled firms	56.13 (125)	35.32 (108)	35.59 (68)	46.76 (58)	54.19 (55)	1.44
SOE-controlled firms	65.58 (153)	55.11 (150)	53.13 (189)	52.07 (195)	45.05 (213)	5.19***
LP-controlled firms	65.56 (90)	51.82 (110)	37.84 (111)	47.83 (115)	37.00 (100)	5.96***
Test: GA firms = SOE firms	-6.37***	-5.35***	-6.10***	-2.35**	1.58	
<i>Panel B: Observations are sorted according to change in ROA</i>						
All firms	37.77 (368)	39.67 (368)	36.41 (368)	33.15 (368)	37.22 (368)	0.51
GA-controlled firms	33.36 (98)	34.16 (102)	31.61 (110)	29.71 (82)	32.57 (72)	0.35
SOE-controlled firms	43.57 (159)	45.32 (158)	42.58 (166)	39.50 (173)	42.86 (168)	0.34
LP-controlled firms	33.65 (111)	36.36 (108)	30.19 (92)	26.54 (113)	32.84 (127)	0.31
Test: GA firms = SOE firms	-4.29***	-4.37***	-4.56***	-5.37***	-4.35***	
<i>Panel C: Observations are sorted according to stock return</i>						
All firms	39.67 (368)	37.77 (368)	38.32 (368)	38.04 (368)	37.51 (368)	1.25
GA-controlled firms	32.53 (76)	33.25 (94)	33.18 (95)	31.59 (101)	31.69 (91)	1.06
SOE-controlled firms	44.25 (185)	42.43 (169)	45.11 (175)	42.35 (160)	43.53 (152)	0.62
LP-controlled firms	36.02 (107)	34.17 (105)	30.82 (98)	37.34 (107)	34.32 (125)	1.23
Test: GA firms = SOE firms	-5.98***	-4.56***	-6.78***	-5.76***	-5.68***	

\*\* and \*\*\* denote significance at levels of 5% and 1%, respectively.

**Table 4 Top executive turnover, firm performance, and governance mechanisms**

Proportion of firms with manager replaced	1 = Low IAROA	2	3	4	5 = High IAROA	Test: Low = High
<i>Panel A: Combined titles of chairperson and general manager (GM)</i>						
Firms with separate chairpersons and GMs	64.33 (287)	51.39 (282)	49.77 (272)	56.39 (281)	44.59 (264)	4.46***
Firms with combined chairpersons and GMs	53.18 (81)	39.52 (86)	35.91 (96)	28.82 (87)	31.65 (104)	2.90***
Test of difference	3.59***	6.24***	3.69***	8.19***	6.37***	
<i>Panel B: Proportion of non-executive directors (NEDIR)</i>						
Firms with NEDIR ≤ 50%	55.00 (202)	45.21 (223)	37.01 (213)	42.75 (232)	35.61 (222)	4.57***
Firms with NEDIR > 50%	69.70 (166)	53.49 (145)	57.11 (155)	61.37 (136)	48.84 (146)	4.42***
Test of difference	-1.76	-2.79***	-6.74***	-3.65***	-2.48**	
<i>Panel C: Introduction of independent directors</i>						
Firms without independent directors	60.14 (240)	50.53 (254)	47.45 (260)	46.36 (234)	41.23 (249)	4.62***
Firms with independent directors	64.37 (128)	44.32 (114)	43.46 (108)	55.23 (134)	40.34 (119)	4.46***
Test of difference	-1.16	1.78	1.36	-2.16**	0.58	

\*\* and \*\*\* denote significance at a level of 5% and 1%, respectively.

**Table 5 Descriptive statistics for firms with top executive change and for a control sample without change**

*Panel A: Continuous variables*

Variable	Sample	Mean	Median	S.D.	z-stat.
<i>IAROA</i>	Turnover	0.38%	-0.23%	7.91%	
	Control	1.34%	0.18%	8.12%	-2.35**
<i>NEDIR</i>	Turnover	48.15%	46.31%	18.95%	
	Control	31.21%	37.59%	19.31%	5.68***
<i>HERF</i>	Turnover	0.024	0.021	0.016	
	Control	0.025	0.022	0.016	-1.39
<i>TENURE</i>	Turnover	2.75	3.000	0.98	
	Control	3.22	3.000	1.52	-5.89***
<i>BSIZE</i>	Turnover	9.64	9.00	2.97	
	Control	9.36	9.00	2.98	0.39
<i>SIZE</i>	Turnover	20.57	20.76	0.82	
	Control	20.46	20.15	0.83	2.29**

*Panel B Dummy variables: % of value = 1*

Variable	<i>GA</i>	<i>SOE</i>	<i>LP</i>	<i>COMB</i>	<i>INDIR</i>	<i>FOREIGN</i>	<i>CEOAGE</i>
Turnover	20.29%	53.45%	25.65%	18.45%	56.12%	3.93%	9.94%
Control	27.31%	40.19%	31.23%	30.45%	55.32%	3.86%	10.15%
z-test	-3.05***	5.32***	-3.14***	-4.62***	0.27	0.19	-0.35

\*\* and \*\*\* denote significance at levels of 5% and 1%, respectively.

**Table 6 Type of shareholders and corporate governance mechanisms**

Corporate governance mechanism variables	Means for firms controlled by GAS (Group A)	Means for firms controlled by SOEs (Group B)	Means for firms controlled by LPs (Group C)	Difference between A and B (z-stat)	Difference between B and C (z-stat)
<i>COMB</i>	0.365	0.207	0.255	4.34***	-1.76*
<i>NEDIR</i>	0.336	0.435	0.439	-2.69**	-0.86
<i>INDIR</i>	0.553	0.609	0.502	-1.12	2.35**

\*, \*\*, and \*\*\* denote significance at levels of 10%, 5%, and 1%, respectively.

**Table 7 Type of shareholders, governance mechanism, and top executive change**

	(1)	(2)	(3)
Intercept	4.352*** (2.67)	4.913*** (2.57)	4.616** (2.36)
<i>IAROA</i>	-0.726*** (-2.89)	-0.608** (-2.46)	-0.725** (-2.31)
<i>IAROA * GA</i>	0.466** (2.36)		0.607** (2.26)
<i>IAROA * LP</i>	0.052 (0.11)		-0.007 (-0.03)
<i>IAROA * COMB</i>		-0.061 (-0.13)	-0.179 (-0.40)
<i>IAROA * NEDIR</i>		-0.181 (-0.48)	-0.015 (-0.02)
<i>IAROA * INDIR</i>		0.356 (0.92)	0.346 (1.00)
<i>IAROA*HERF</i>	0.336** (2.21)	0.357** (2.33)	0.305** (2.13)
<i>IAROA*TENURE</i>	0.011 (0.37)	0.012 (0.42)	0.012 (0.41)
<i>IAROA*TENURE2</i>	0.001 (0.13)	0.002 (0.15)	0.001 (0.17)
<i>IAROA*FOREIGN</i>	-0.001 (-0.24)	-0.001 (-0.26)	-0.001 (-0.29)
<i>IAROA*CEOAGE</i>	0.002 (0.37)	0.003 (0.49)	0.003 (0.47)
<i>IAROA*BSIZE</i>	0.001 (0.27)	0.002 (0.37)	0.002 (0.36)
<i>IAROA*SIZE</i>	0.001 (0.16)	0.001 (0.17)	0.002 (0.24)

<i>GA</i>	0.010 (0.27)		0.031 (0.71)
<i>LP</i>	-0.032 (-0.99)		-0.036 (-1.00)
<i>COMB</i>		-0.096*** (-2.68)	-0.110*** (-2.79)
<i>NEDIR</i>		0.112*** (4.03)	0.124*** (4.28)
<i>INDIR</i>		-0.050 (-1.01)	-0.048 (-0.90)
<i>HERF</i>	-0.220*** (-8.80)	-0.300*** (-13.20)	-0.294*** (-12.36)
<i>TENURE</i>	-0.125*** (-9.46)	-0.116*** (-8.69)	-0.101*** (-8.18)
<i>TENURE2</i>	0.035*** (6.89)	0.031*** (6.59)	0.029*** (6.31)
<i>FOREIGN</i>	0.012 (0.36)	0.015 (0.45)	0.015 (0.44)
<i>CEOAGE</i>	0.026 (0.53)	0.030 (0.67)	0.031 (0.79)
<i>BSIZE</i>	-0.002 (-0.87)	-0.008 (-1.46)	-0.007 (-1.41)
<i>SIZE</i>	-0.002 (-1.10)	-0.030 (-1.42)	-0.022 (-1.31)
Year Dummies	YES	YES	YES
No. of Turnovers	841	841	841
No. of Observations	1,840	1,840	1,840
Pseudo R-Square	15.33%	17.21%	18.22%

\*\* and \*\*\* denote significance at levels of 5% and 1%, respectively.