

# **CEO Turnover, Firm Performance, and Enterprise Reform in China: Evidence from New Micro Data\***

by

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## **Abstract**

Using comprehensive financial and accounting data on China's listed firms from 1998 to 2002, augmented by unique data on CEO turnover, ownership structure and board characteristics, we estimate Logit models of CEO turnover and find that: (i) even if the firm is listed in Stock Exchanges, there is no significant and negative link between CEO turnover and firm performance unless the listing is accompanied by an ownership change from state to private; (ii) the presence of a large controlling shareholder makes CEO turnover more sensitive to firm performance; (iii) the appointment of independent directors enhances turnover-performance sensitivities; (iv) CEO turnover-performance sensitivities are weaker for listed firms with CEOs who also hold positions in the controlling shareholders; and (v) firm performance will improve significantly after the replacement of the CEO and the improvement will be greater for privately controlled firms than for state controlled firms. These findings have important implications for China's stock market development and SOE reform as well as more generally the "law and finance" approach to corporate governance. Consistent with the "law and finance" approach to corporate governance, the wholesale change of ownership and control from the state to private individuals and firms is found to be the most consistent and significant contributor to stronger CEO turnover-performance link and hence the higher quality of corporate governance. The positive effects of higher independence of board members on turnover-performance link are also consistent with the weak investor protection theory.

**Keywords:** executive turnover, firm performance, enterprise reform, corporate governance, ownership structure, China, and transition economies.

**JEL Categorization:** P34, G30, M52, J33, O16, O53, G30, M12, G15

# **CEO Turnover, Firm Performance, and Enterprise Reform in China: Evidence from New Micro Data**

## **Section 1: Introduction**

Executive turnover has been the focus of a large and growing literature because it provides a crucial measure of how effective a firm solves the two sets of principal-agent problems faced by the firm. Tying the personal fortune of top executives to the performance of the firm aligns the interests of the shareholders and those of the management. It also breaks up the “insider” alliance between the controlling shareholder and the management and therefore helps protect the interests of outside investors (or minority shareholders). As a result, how executive turnover relates to firm performance can serve as an important indicator for how the corporate governance system functions, especially in countries that lack an active market for corporate control.

In this paper, we study executive turnover in Chinese listed firms to explore the corporate governance system in the largest transition economy, where there is essentially no active market for corporate control. Our results demonstrate that the current corporate governance in Chinese listed firms does not sufficiently address either of the two types of agency problems. On the one hand, firms that are controlled by the state and those that do not have an absolute controlling shareholder see no significant relationship between firm performance and CEO turnover, suggesting that the current system does not solve the principal-agent problem between the shareholders and the management of these firms. On the other hand, many listed firms have their CEOs working simultaneously for the controlling shareholder of the listed firm, and most listed firms have very few independent members serving on the board of directors. Furthermore, there is no significant link between firm performance and turnover for the “insider” CEOs, suggesting that the conflict of

interest between the controlling shareholder and minority shareholders of the firm is not well resolved.

The inability to solve the two types of principal-agent problems under the current corporate governance system in China is fundamentally a result of the weak protection of investors provided by the legal system.<sup>1</sup> Like many other developing countries, China does not have a comprehensive set of legal rules that provide protection for outside investors or the ability to effectively implement existing laws governing the operations of corporations or securities market. This implies poor quality of corporate governance in Chinese listed firms.<sup>2</sup> However, compared to other countries with weak protection for investors, China faces an additional problem. The state ownership of the majority of listed company stocks implies that the protection for even the largest investor, the state, is also weak due to the ambiguity of public property rights.

Given such weak protection for investors in general, how do firms solve the types of principal-agent problems in China? And what can be done to improve the situation? We attempt to answer these questions by studying how closely different types of listed firms in China link their top executive turnover to their firm performance. In particular, we will study the effects on CEO turnover-performance sensitivities of two sets of factors in this paper: those reflecting the country's ambiguous property rights due to the socialist legacy (or the prevalence of state ownership) and those reflecting its weak protection of outside investors. As result, our study will help shed light on corporate governance in transition economies as well as in countries with weak investor protection in general.

In so doing, we use comprehensive financial and accounting data on China's listed firms from 1998 to 2002, augmented by unique data on CEO turnover, ownership structure and board

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<sup>1</sup> See for example La Porta, Lopez-de-Silanes, and Shleifer (1999) and La Porta et al. (2000).

<sup>2</sup> See for instance Wu (2003).

characteristics. We find evidence in support of the following five hypotheses: (i) even if the firm is listed in Stock Exchanges, there is no significant and negative link between CEO turnover and firm performance unless the listing is accompanied by an ownership change from state to private; (ii) the presence of a large controlling shareholder makes CEO turnover more sensitive to firm performance; (iii) the appointment of independent directors enhances turnover-performance sensitivities; (iv) CEO turnover-performance sensitivities are weaker for listed firms with CEOs who also hold positions in the controlling shareholders; and (v) Firm performance will improve significantly after the replacement of the CEO and the improvement will be greater for privately controlled firms than for state controlled firms.

These findings have important implications for China's stock market development and SOE reform. Consistent with predictions made in the "law and finance" approach to corporate governance, the wholesale change of ownership and control from the state to private individuals and firms is found to be the most consistent and significant contributor to stronger CEO turnover-performance link and hence the higher quality of corporate governance. The "law and finance" approach predicts that weak protection for investors leads to poor corporate governance, as evidenced by weaker link between firm performance and executive turnover observed in state controlled firms. Weak investor protection implies a larger role of controlling shareholders and thus is supported by the finding that the existence of a controlling shareholder with more than 50% of the company shares leads to stronger performance-turnover ties. The positive effects of higher independence of board members on turnover-performance link are also consistent with the weak investor protection theory, because the introduction of independent directors provides more protection for outside investors. Finally, the findings on management entrenchment highlight the effects of weak investor protection.

The structure of the paper is as follows. In Section 2, we will present background information on the current Chinese corporate governance system and develop testable hypotheses. The data and empirical strategy are discussed in Section 3, followed by Section 4 where econometric specifications are laid out and the estimates are presented. Section 5 concludes.

## **Section 2: Background information and testable hypotheses**

This section provides background information on China's stock market and listed firms, and develops hypotheses to be tested in the paper.

As part of its effort to help SOEs raise capital and reduce debt burden, the Chinese government became interested in the opening of the stock market and listing of some of their SOEs on the market in the late 1980s and early 1990s. Lately the importance of the stock market and listed firms in China has increased further and stock market listing has been heralded as a centerpiece of China's enterprise reform, especially for its largest SOEs.<sup>3</sup>

The institution of the modern stock market in China started in the late 1980s, with stock exchanges established in Shanghai at the end of 1990 and in Shenzhen in early 1991. The first Chinese company went public in 1991. Its rapid development, however, did not commence until the mandate of the Chinese Communist Party's (the CCP) 14<sup>th</sup> Congress. In contrast to the largely gradualist SOE reform measures adopted in the 1970s and 1980s, the CCP's 14<sup>th</sup> Congress in October 1992 opened a new chapter in China's SOE reform by proposing to establish a modern corporation system that is similar to that of the West.<sup>4</sup> Following the 14<sup>th</sup> Congress, the National

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<sup>3</sup> The government's policy stance to emphasize the role of the stock market and listed firms in China's SOE reform can be observed from numerous speeches given by policy makers in charge of enterprise reform. For instance, in a speech given at the "Meeting on How to Establish the Modern Enterprise System in Listed Firms" held in December of 2002, the chairman of the Economic and Trade Commission, Mr. Rongrong Li, stated that China's enterprise reform and modernization in the coming years will be centered on listed firms.

<sup>4</sup> Earlier SOE reform measures were mainly designed to align the interests of SOE management with the interests of the government, and they include the administrative decentralization and profit retention policies (*fangquan rangli*) in the late 1970s to the early 1980s; the changes in the forms of profit sharing and funding sources for SOEs during the mid to late 1980s (*ligaishui* and *bogaidai*); and the incentive contracts for managers and workers during the

Peoples' Congress (NPC) and its Standing Committee passed the Corporate Law in 1993, which laid out the essential rules for corporate governance in modern Chinese corporations and provided blueprints for SOE reform. In 1997, the Chinese Communist Party's 15th Party Congress made the shareholding system a showpiece of China's enterprise reform and public listing a main mechanism to attain the goal for large SOEs, and this led to a rapid increase in the number of firms listed in the two stock exchanges in China.<sup>5</sup> The growth of the stock market was further aided by the passage of the Securities Law in 1998. By early 2004, China's stock market has emerged as the eighth largest in the world with close to 1,300 listed firms and market capitalization of over \$550 billions.<sup>6</sup>

Nevertheless, the government remains the largest shareholder in over 80% of the listed firms in 2003, either directly by owning state shares or indirectly by owning legal person shares, which constitute 67% of the company stock of all listed firms.<sup>7</sup> For the reasons discussed below, the dominance of state ownership will have negative implications for meaningful SOE reforms and the further development of China's stock market. Firstly, state ownership suffers from the separation between ownership by the general public and control by the bureaucrats in charge of the daily operations of the firm. Because the bureaucrats may have very different goals from the general public, there is the inherent conflict of interests between the owners and the management, manifesting as a major principal-agent problem (Shleifer and Vishny 1997). Secondly, even if the state is able to hold the bureaucrats accountable for implementing its goals in operating the state-owned firms, the multiple and oftentimes conflicting social objectives pursued by the state imply

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late 1980s (*chengbaozhi*). For a detailed discussion on China's earlier enterprise reform from a historic perspective, see Naughton (1995) and Yang (1997). For a general discussion on enterprise reform in transition economies, see Megginson and Netter (2001).

<sup>5</sup> See, for instance, Jefferson et. al. (2003).

<sup>6</sup> There were 1,288 firms listed in the Shanghai and Shenzhen Stock Exchanges by the end of April in 2004. Source: Shanghai and Shenzhen Stock Exchanges. One estimate puts the market capitalization in China's stock markets at about 50% of China's GDP, which is comparable to the ratio in Japan (See People's Daily, Feb. 22, 2001). A more conservative estimate discounting values of shares owned by the state and legal persons puts the ratio at 20%.

<sup>7</sup> These numbers are computed from the GTA and Sinofin data bases by the authors. For similar estimates for different types of share percentages, see, for instance, Qu (2003).

that firm's the economic performance often has to be sacrificed to achieve other higher social goals such as full employment. Furthermore, the state and legal person shares of Chinese listed firms held directly or indirectly by the government account for about two thirds of total company stocks. They are non-tradable shares and any transfer of these stocks has to be approved by numerous government agencies including both the CSRC and the Ministry of Finance. This greatly weakens the market's disciplinary function through takeovers since without the government's approval there is virtually no threat of an alternative management offering a better return for the current firm's asset, no matter how unsatisfactory the firm's performance stands.

All these facts lead to weak incentives of state owned firms to aggressively pursue profit or increase the market value of the firm, and the absence of such a drive for profit pursuit implies that China will find it difficult to develop a financial market with the potential to raise large amount of fund in the long run and that weak corporate governance mechanisms will be the norm in Chinese listed firms, including a weak relationship between firm performance and executive turnover. In the context of top personnel decisions, most of the firms controlled by the government still follow the same routine as SOEs. Specifically, depending on the management level of the SOE, the government of the corresponding level has the authority to appoint its top management. For SOEs at the central government level, for example, the central government's CCP (Communist Party of China) Department of Organization has the final say in the selection of its CEO or the General Manager; for SOEs in the charge of provincial government, the Department of Organization at the provincial government calls the shots.<sup>8</sup>

For the listed firms that have the government or SOEs as their largest shareholders, the same procedures tend to apply. According to China's Corporate Law, the personnel decisions are

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<sup>8</sup> Our discussion on the personnel appointment process is largely based on the surveys and interviews conducted in Beijing, Shanghai, and Chengdu, Sichuan in the summer of 2004.

supposed to be made by the board of directors. However, in reality, the candidates for the Chairman of the board of directors and the General Manager are almost always nominated by the largest government shareholders and then rubber-stamped by the board. The multiplicity of the goals of the government thus implies that economic performance of the firm will often become secondary to political pressures and social connections in making personnel decisions.

In sum, being harbingers of the new modern Chinese enterprises, listed firms in China are generally expected to have adopted a more efficient and Western-style corporate governance system with greater accountability. However, our discussion above suggests that listing in Stock Exchanges alone is not sufficient to improve corporate governance. Ownership restructuring away from state ownership needs to accompany the listing. Our first hypothesis, therefore, is:

*Hypothesis I: Even if listed in Stock Exchanges, there is no significant and negative link between CEO turnover and firm performance unless the listing is accompanied by an ownership change from state to private.*

The dominance of state ownership leads to another feature of Chinese listed firms, the high concentration of both ownership and control. Concentration of both control and ownership of listed firms is prevalent in countries with weak protection for investors and is argued to be a rational response by private entrepreneurs to the lack of investor protection (La Porta et al. 2000). Among other reasons for choosing such concentration, a larger stake in the company gives the controlling shareholder more incentives to monitor the management and thus leads to higher performance-turnover sensitivities.

Although the highly concentrated control and ownership of Chinese listed firms are largely a legacy of the planned economy characterized by state ownership rather than a rational response by private entrepreneurs, ownership concentration does give the state represented by a government

agency or an SOE more incentive to monitor the bureaucrat management to ensure the latter does not pursue its own interest. Therefore, to the extent that the state cares about firm performance, a higher concentration of ownership will lead to more effective corporate governance measures such as a stronger link between firm performance and executive turnover.

It is worth pointing out that the same argument applies for listed firms controlled by other types of shareholders. A larger share stake in the company increases the incentive to monitor and thus we expect to see a more sensitive relationship between firm performance and CEO turnover. Thus, our second hypothesis is:

*Hypothesis II: The presence of a large controlling shareholder makes CEO turnover more sensitive to firm performance.*

The second set of issues we now turn to study concerns how well the corporate governance system in China handles the conflict of interests between the controlling shareholder and the minority shareholders of the firm. La Porta, Lopez-de-Silanes, and Shleifer (1999) argue that in countries with poor protection of outside investors, the ownership of firms tends to be more concentrated. Although the concentration of ownership helps reduce the principal-agent problem between owners and the management, it also aggravates the conflict of interests between the controlling shareholder and the minority shareholders.

In particular, we will examine the relevance of this type of agency problem by studying two related hypotheses. The first hypothesis relates to the role of independent directors. According to China's Corporate Law, the board of directors represents the interests of all the shareholders. But in reality, the board of directors in Chinese listed firms is often staffed with "insiders" that are directly or indirectly affiliated with the controlling shareholder, leaving the small individual investors with

no representation.<sup>9</sup> Under such circumstances, one way to protect the interests of minority shareholders is to guarantee a minimum number of independent directors on the board who are not affiliated with either the controlling shareholder or the listed firm, but rather serve on behalf of the outside investors.

The recent effort to improve the quality of corporate governance in China has followed this logic and the regulatory agency has introduced certain standard corporate governance measures borrowed from the West.<sup>10</sup> Notably, according to the “Guidelines for Establishing Independent Director System in Listed Firms” issued by the CSRC on August, 16<sup>th</sup>, 2001, each listed firm in China was required to have at least two “independent directors” on its board of directors by June 30<sup>th</sup>, 2002, and by June 30<sup>th</sup>, 2003, at least one third of the board members were required to be “independent directors.”<sup>11</sup> The CSRC also states in the “Guidelines” and the “Corporate Governance Model Codes” that the board of directors should establish committees in charge of compensation, auditing, and nomination. In addition, at least half of the members serving on these committees should be “independent directors” and “independent directors” should also serve as the chairs of these committees.<sup>12</sup>

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<sup>9</sup> See Qu (2003) and Wu (2003) for discussions on “insider control” in Chinese listed firms.

<sup>10</sup> Following the Asian Crisis, a number of corporate governance reform measures were imposed on many crisis-hit Asian countries, such as South Korea, Indonesia, Thailand and Malaysia. All these countries now require a minimum percentage of independent outside directors on the board. See Nam and Nam (2004) for more detailed description of these corporate governance reform measures.

<sup>11</sup> According to the Guidelines, an individual need to meet the following conditions to be considered “independent”: (i) Neither the individual nor his or her relatives (including spouses, parents, children, siblings, parents in law, sons and daughters in law, spouses of siblings, and siblings of spouses) work for the listed firm or its subsidiaries; (ii) the individual does not directly or indirectly own more than 1% of the stock of the listed firm; (iii) neither the individual nor his or her close relatives (including spouses, parents and children) are among the largest 10 shareholders of the listed firm; (iv) neither the individual or his or her close relatives work for a company that owns more than 5% of the stock of the listed firm; and (v) neither the individual nor his or her close relatives work for one of the largest 5 shareholder companies.

<sup>12</sup> Another example of the reform measure is the separation of the CEO position from the board chairmanship. Though there is no clear stipulation in the Company Law or other laws in China, many Chinese scholars and policy makers have recommended the separation as a good corporate governance practice. See, for instance, He (2004). Mr. Jiancheng He is the chair of SASAC’s (State Asset Supervision and Administration Commission) supervisory board in charge of the largest SOEs. Since the majority of board members and management are both appointed by the largest shareholders, however, the board of directors is not truly independent of management in most listed firms in China, and

Given the prevalence of “insider control” in Chinese listed firms, independent directors who are truly independent of influence from the controlling shareholders have the potential to substantially improve the quality of corporate governance. According to recent newspaper coverage, some independent directors have hired independent auditors to audit the books for the listed firm, while others have refused to acquiesce to decisions made by the management and the controlling shareholders of the listed firm.<sup>13</sup> As a result, we expect to see a significant effect of independent directors on how firm performance affects CEO turnover, which will suggest the existence of “insider control” in Chinese listed firms. Our next hypothesis to be tested is, therefore:

*Hypothesis III: The appointment of independent directors enhances turnover-performance sensitivities.*

The second hypothesis concerning the agency problem between controlling shareholder and minority shareholders relates to “insider” CEOs. In addition to staffing the board of directors with “insiders”, a more direct way for the controlling shareholder to exert its control over the listed firm is to appoint one of its own executives to be the listed firm’s CEO. In 2003, CEOs of 41% of China’s listed firms simultaneously hold executive positions in the controlling shareholders, which leads to the Chinese version of “management entrenchment.”<sup>14</sup> When the controlling shareholder sends one of its own executives to be the listed firm’s CEO, the CEO is probably expected to serve the interests of the controller more than that of the listed firm.

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the artificial separation of CEO and chairman may not be sufficient to achieve the real independence of the board. As expected, we find no discernable effect on turnover-performance sensitivities of the separation of the CEO position from the board chairmanship. These and other unreported results are available from the corresponding author at [tkato@mail.colgate.edu](mailto:tkato@mail.colgate.edu) upon request.

<sup>13</sup> See, for instance, “Are Independent Directors Useful?” the *Economic Observer* (Jingji Guancha), June 26, 2004 edition and “How can Independent Directors Become Truly Independent?” the *Liberation Daily* (Jiefang Ribao), December 20, 2004 edition.

<sup>14</sup> See Table 1 in the appendix.

Since the controlling shareholder may have different goals from those of the listed firm, the criteria for measuring the CEO's success may thus be linked more to his or her effectiveness in transferring wealth from the listed firm to the controlling shareholder rather than to his or her ability to improve the performance of the listed firm. To the extent that the wealth transferring, i.e., "tunneling" activities are more prevalent in firms whose CEOs pledge loyalty to the controlling shareholder and that the amount of "tunneling" is reflected in the listed firm's performance, the link of CEO turnover to stock return is expected to be weaker for these listed firms.<sup>15</sup> Our next hypothesis is therefore:

*Hypothesis IV: CEO turnover-performance sensitivities are weaker for listed firms with CEOs who also hold positions in the controlling shareholders.*

Finally, there may be doubts about the validity of using executive turnover as a measure for the quality of corporate governance in China. Although China's labor market for executives is still in its early stage of development, the increased executive turnover rate since the beginning of the reform era suggests that executive turnover is an effective mechanism to infuse new blood into the firm's management and turn a company's poor performance around. But the intrinsic difficulty state ownership faces in improving firm performance and the slow progress in updating its personnel decision mechanism also suggest that executive turnovers may not be as effective in government controlled firms as the privately controlled firms. We therefore test the following hypothesis to substantiate our implicit assumption so far:

*Hypothesis V: Firm performance will improve significantly after the replacement of the CEO and the improvement will be greater for privately controlled firms than for state controlled firms.*

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<sup>15</sup> Several high-profile cases investigated by the CSRC since 2001 suggest that the most commonly used method of "tunneling" adopted by controlling shareholders of Chinese listed firms is to borrow or secure loan guarantees from their controlled listed firms. (See various issues of *Shanghai Securities* (Shanghai Zhengquanbao).)

## Section 3: Data and Measurement

### 3.1 Defining CEOs and CEO turnover in Chinese Firms

Many studies on executive turnover in the U.S. and other developed countries have focused on CEOs.<sup>16</sup> In China, however, CEO is a relatively new concept and only very recently some companies started to use the title. Since Chinese firms have historically used “General Manager (*zongjinli*)” as the title for their top executives, one is tempted to focus on these General Managers. However, a few facts complicate the matter and suggest that the designation of “General Manager” as the top executive in China may not be always correct. First, the Corporate Law in China stipulates that the Chairman of the board of directors is the legal person representative of a listed firm (Corporate Law §3, 1993). Second, the Chairman of the board of directors is appointed by the largest shareholder in the majority of listed firms in China.<sup>17</sup> Given the highly concentrated ownership structure of Chinese listed firms, the Chairman appointed by the largest shareholder tends to be powerful and is often involved in the company’s daily decision-making even without holding the position of “General Manager” simultaneously.

According to a survey of firms listed on Shanghai Stock Exchange in 2001, about 80% of listed firms have the Chairmanship held by someone different from the General Manager and among these Chairmen, more than half receive salaries from the listed firm, work for the firm full time, and are generally involved in the company’s daily decision making. Furthermore, it is commonly believed that when both the Chairman and the General Manager are responsible for a company’s daily operations, the Chairman is more powerful than the General Manager.<sup>18</sup>

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<sup>16</sup> See for example Murphy (1999) for a review of the literature on executive turnover.

<sup>17</sup> See for instance Wu (1999: p. 149).

<sup>18</sup> See, for instance, “Chairman of the board or general manager: Who’s the CEO in a Chinese company?” *China Securities*, Jan. 31, 2002. This was also confirmed during our interviews with Chinese executives in Beijing,

Therefore, we adopt the following procedures to determine the top executive of the firm, referred to as CEO hereafter. When the same individual serves as both the Chairman and the General Manager, he or she is considered the CEO of the firm. When two separate individuals hold the Chairman and General Management positions, we consider the Chairman as the CEO insofar as he/she is paid by the listed firm. As discussed before, generally the Chairman is involved and has a final say in day to day management decision except when he or she is not paid by the listed firm but rather paid by the party whose interest the chairman represents in the listed firm, most often the largest shareholder of the listed firm.<sup>19</sup>

Information on the General Manager and Chairman as well as accounting and financial data are obtained from the China Stock Market and Accounting Research Database (CSMAR) developed by Shenzhen GTA Information Technology Company, while data on ownership structure and corporate governance are assembled from the database developed by Sinofin Information Services. The CSMAR data set has been used in previous studies,<sup>20</sup> yet on our reading of the literature, we are the first to use the Sinofin dataset in academic research. Data are available annually for 1998 through 2002.<sup>21</sup>

Using the GTA database, we first identify for each listed firm in each year whether the General Manager position and the Chairmanship are served by the same individual. For those firms with the same individual serving the General Manager position as well as the Chairmanship, we consider him/her the CEO. For the remainder, we use the GTA database to find out whether the

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Shanghai, and Chengdu in the summer of 2004.

<sup>19</sup> One may argue that it is plausible that the Chairman is involved in day to day business decision and still more powerful than the General Manager even if he is not paid by the listed firm, and that including those firms with CEOs identified somewhat ambiguously contaminate the results. Reassuringly our key results do not change qualitatively even if we limit our analysis to only those firms with CEOs defined clearly with little controversy (or firms with the same individuals serving both the Chairmanship and the General Manager position and with the Chairmen on the listed firm's payroll).

<sup>20</sup> See, for instance, Sun and Tong (2003), Bai, et. al (2003), and Bai, Liu, and Song (2003).

<sup>21</sup> There is a companion paper in which we use the Sinofin dataset to examine executive compensation in Chinese listed firms (Kato and Long, 2004).

Chairman is on the firm's payroll. If that is the case, we determine him/her the CEO. Otherwise we consider the General Manager (who is almost always on the firm's payroll) the CEO. In the few cases where payroll information is not available in the database, we search online sources for information on who is in charge of the company's daily operations (for instance, who is cited as the most powerful figure by the major newspapers). When everything else fails, we rely on information from the previous and the following years to determine what position corresponds to CEO in a company.

The GTA database provides data on the starting year of each CEO's *current* term, with a typical term for CEOs being three years in China, but fails to supply the year in which he or she is first appointed to the CEO position. As a result, we are unable to obtain data on total tenure as CEO for those CEOs who are serving more than a term from the GTA database. Fortunately we are able to supplement the GTA database by obtaining such data from the online data source:

<http://finance.sina.com.cn/stock/>, which provide all the annual reports of all listed firms.

We exclude from our analysis of CEO turnover: (i) firms that have been listed for less than a year; (ii) firms that have been run by their CEOs for less than a year; and (iii) firms with missing data on CEO turnover and firm performance. Firms that have been listed for less than a year are excluded since stock market and accounting data are incomplete (in particular no lagged data are available). In addition, firms with recent IPOs look very different from other listed firms and they have both lower turnover rate and lower stock rate of return than more established firms. We have to drop firms with CEOs with less one year's tenure, because the annual firm performance data and our inability to identify the exact month of the CEO's appointment imply that the lagged performance measure may be an indicator of the success of the preceding CEO rather than that of the current one for these new CEOs.

Finally, to focus on CEO departures from the firm that are related to firm performance, we follow the standard approach used in the literature, i.e., exclude CEO departures due to death, illness or company control changes.<sup>22</sup> Unfortunately, the data do not allow us to identify CEO departures due to normal retirement. Again as done in the literature, we include CEO's age to control for the impact on CEO departures due to normal retirement.

After applying the above exclusion criteria to the data, we end up with 634 firms and a total of 2167 observations over the period of 1999-2002. The summary statistics are given in Part A of Table 1. As shown in the table, 17 % of total observations are firms with the Chairmanship and the General Manager position held by the same individuals; 45% are firms with the Chairmen who are paid by the listed firms (and thus the Chairmen are CEOs); and the remaining 38% are firms with the General Managers as CEOs (or the Chairmen are not on the firms' payroll). On average, the CEOs working in Chinese listed firms look very similar to Chinese CEOs in general. CEOs in Chinese listed firms are on average 50 years old, and only 4% of them are females, very similar to findings on Chinese CEOs in general.<sup>23</sup> Their average tenure length is 2.3 years, much shorter than the average tenure of Chinese CEOs in general.<sup>24</sup> This is, however, hardly surprising, considering the short history of Chinese listed firms.<sup>25</sup> Compared to CEOs of listed firms in the U.S. and Japan,

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<sup>22</sup> See, for instance, Kaplan (1994) and Denis, Denis and Sarin (1997). One might argue that company control changes such as takeover may be caused by poor performance and thus should be considered. As in the case of prior studies, the data are not rich enough to distinguish such company control changes caused by poor firm performance from other changes.

<sup>23</sup> According to "Report on Chinese Entrepreneurs: Emergence and Development"(*Zhongguo qiyejia chengzhang yu fazhan baogao*), p27, by the Survey System for Chinese Entrepreneurs 2004, the average age of Chinese CEOs is 48 and the percentage of female CEOs is 4% in 2002.

<sup>24</sup> The Survey on Chinese entrepreneurs reports that in 1998 the percentages of CEOs with tenure length between 1 and 5 years, between 6 and 10 years, between 11 and 15 years, between 16 and 20 years, and more than 20 years, to be 36%, 28.3%, 26.7%, 6.4%, and 2.6%, respectively. In the same survey conducted in 2000, the entrepreneurs reported an average of 1.6 turnovers for the top executives working in their firms during the previous 10 year period.

<sup>25</sup> Data on educational attainment are unfortunately extremely limited and available only for a very small subsample of 89 observations. For the small subsample, we find that 71% of firms with CEOs having at least a bachelor's degree, a substantially higher percentage than that reported for Chinese CEOs in general (40%). Nevertheless, we ought to interpret this with much caution due to the very small sample.

Chinese CEOs are much younger and have shorter tenure, although the tenure for Chinese CEOs in general is similar to, if not longer than, that in the U.S. and Japan.<sup>26</sup>

The average annual CEO turnover rate is 24%, substantially higher than the average CEO turnover rate reported for the U.S. and Japan (Kaplan 1994). Beginning in 2001, the CSRC requires the listed firms to disclose whether the CEO of the listed firm also holds executive positions in the controlling shareholder. For 2001 and 2002, over 41% of them simultaneously hold positions in the controlling shareholders, suggesting close relationship between the listed firm and its controlling shareholder.

### **3.2 Ownership Structure and Board Structure of Chinese Listed Firms**

For ownership structure, we will separate the listed firms into state controlled firms and non-state controlled firms, using data on whether the “ultimate controller” of the listed firm is the state.

The data are collected by Sinofin and the definition of the “ultimate controller” is comparable to that used in the literature at 10% threshold level with one exception.<sup>27</sup> The definition of the “ultimate controller” used in prior studies requires the largest shareholder of the listed firm in the middle layer also be listed. According to Liu, Sun, and Liu (2003), the main mechanism of indirect control for Chinese listed firms is through a pyramid scheme where the largest shareholder of the listed firm is an unlisted firm or organization controlled by the state. Sinofin considers such pyramiding shareholdings, includes both direct and indirect share ownership and control, and identifies whether the “ultimate controller” is the state such as an SOE or a government agency. Unfortunately, the Sinofin database only provides information on the ownership type of the ultimate controller (state or others) but no further data are available on the

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<sup>26</sup> See for instance Kato and Rockel (1992) and Kaplan (1994) and Footnote 10 above.

<sup>27</sup> See La Porta, Lopez-de-Silanes, and Shleifer (1999), Claessens, Djankov, and Lang (2000), and Faccio and Lang (2002).

ultimate controller, such as the actual percentage of shares owned by the ultimate shareholder directly and indirectly.<sup>28</sup>

Part B in Table 1 reports descriptive statistics on key firm characteristics, where all the value variables are adjusted for inflation using CPI (FY1995=100) and are thus expressed in 1995-constant RMBs. As shown in the table, a typical listed firm is much smaller than a typical firm listed on NYSE, with an average market value about 1/20 of the NYSE firms. Among all the listed firms, 83% have the government as the ultimate controller, 10% have a private individual or a private firm as the ultimate controller, while only about 1% are ultimately controlled by firms with foreign investment<sup>29</sup> Furthermore, only less than 40% of all company shares are freely tradable on the secondary market. Finally, the largest shareholder of the listed firm owns over 44% of total company stock on average, suggesting a highly concentrated ownership structure in Chinese listed firms.

According to the Corporate Law passed in 1993, all listed firms are required to have a board of directors, and the average size of the board of directors has remained around 10 between 1999 and 2002. But it was not until late 2001 did the CSRC issue the guidelines for the use of independent directors in listed firms, stipulating that there should be at least two independent members on each listed firm's board of directors by June 30, 2002, and independent directors should further constitute at least one third of the total number of directors by June 20, 2003. The guidelines proved very effective, rapidly raising the percentage of listed firms with independent directors from 2.5% at the end of 2000, to 6% in late 2001, and further to 31% by the end of 2002.

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<sup>28</sup> To the best of our knowledge, this is the only publicly available data on the "ultimate controller" of Chinese listed firms. Liu and Sun (2005) traced the chain of control for 1105 listed firms and calculated the shareholdings for their ultimate controllers and thus have the best data on ownership structure. However, their ownership structure information goes only till 2001 and their data are yet to be made available publicly.

<sup>29</sup> The remaining 16 percent are mostly owned by private individuals or firms (with a small percentage of them owned by collective enterprises, non-profit organizations, and unions or employee stock holding committees).

The medium number of independent directors reached above 2 by the end of 2002. Because the introduction of independent directors is largely an exogenous event imposed by the CSRC, our estimates on the impact of the introduction of independent directors on the quality of corporate governance will be less subject to endogeneity bias.

#### **Section 4: Econometric Specifications and Results**

As is often done in the literature, we estimate CEO turnover-performance sensitivities by estimating a logit model. We begin with the following baseline model to test the first two hypotheses:

$$\begin{aligned}
 (1) \ln[\text{Pr}(\text{TURNOVER})/1-\text{Pr}(\text{TURNOVER})] = & \alpha + \beta_1 \text{PERFORMANCE} \\
 & + \beta_2 \text{PRIVATE} + \beta_3 \text{MAJORITY} \\
 & + \beta_{12} \text{PERFORMANCE} * \text{PRIVATE} \\
 & + \beta_{13} \text{PERFORMANCE} * \text{MAJORITY} \\
 & + Z\gamma + u
 \end{aligned}$$

where TURNOVER=1 if the firm replaces its CEO during the year, 0 otherwise; PERFORMANCE=firm performance in the previous year; PRIVATE=1 if the firm’s “ultimate controller” is a private individual or firm, 0 otherwise; MAJORITY=1 if the firm’s direct largest shareholder owns more than 50 percent of the firm, 0 otherwise; Z is a vector of control variables;  $\alpha$ ,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_{12}$ , and  $\beta_{13}$  are the coefficients to be estimated;  $\gamma$  is a vector of coefficients on the control variables; and u is the disturbance term. For PERFORMANCE, as is done often in the literature, we use stock market performance measure (industry adjusted stock return or RETURN) as well as accounting measures (i.e., industry adjusted changes in ROA or  $\Delta\text{ROA}$ ).<sup>30</sup>

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<sup>30</sup> See for example Kang and Shivdasani (1995), Denis, Denis, and Sarin (1997), Murphy (1999), Campbell and Keys (2002), and Anderson and Campbell (2004).

The literature often considers firm performance from both the current period as well as the previous period.<sup>31</sup> Since 57% of the CEO departures in our sample occur in the first six months of the year, firm performance in the current year is likely to reflect the replacing CEO's job performance as much as it does the departing CEO's. Thus we use firm performance in the previous year.<sup>32</sup>

The control variables include various dummy variables capturing the possible influences on CEO turnover of the CEO's age, gender, tenure as CEO, job title (general manager or chair/GM dual position), as well as firm size (measured by the logarithm of the firm's market value) and time effects.<sup>33</sup> To control for CEO's age and tenure is particularly important since we are unable to separate CEO turnover due to normal retirement from disciplinary turnovers.<sup>34</sup>

Table 2 shows the maximum likelihood estimates of Eq. (1). When firm performance is measured by industry adjusted stock return, the estimated coefficient on PERFORMANCE has the right sign yet highly insignificant, suggesting that there is no link between CEO turnover and firm performance for listed firms with the state as the ultimate controller and the largest shareholders owning less than the majority of the stock (or PRIVATE=0 and MAJORITY=0). In other words, even if the firm is listed in Stock Exchanges, insofar as the firm is still controlled ultimately by the state and the state has a relatively weak stake in the firm, the fate of its CEO is not tied to stock market performance.

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<sup>31</sup> See for instance, Kaplan (1994)

<sup>32</sup> We also consider firm performance in the previous two years in the regressions, which unfortunately leads to a substantial reduction in the sample size. Reassuringly we find no discernable differences in our key results.

<sup>33</sup> Specifically we created 11 dummy variables capturing the impact on CEO turnover of his/her age; and 10 dummy variables gauging the effects on CEO turnover of his/her tenure as CEO. In addition, we also include dummy variables controlling for the possible impact on CEO turnover of our definitional differences in CEOs (i.e., whether the firm's CEO is identified as an individual serving both the General Manager position and the Chairmanship of the board; as an individual serving only the Chairmanship and on the firm's payroll; or as an individual serving only the General Manager position and on the firm's payroll while the Chairman of the board is not on the firm's payroll. We also use the number of employees as an alternative measure for firm size with similar results.

<sup>34</sup> In addition, we also consider board size as an additional control and find no discernable differences.

On the other hand, the estimated coefficient on PERFORMANCE\*PRIVATE is negative (right sign) and statistically significant at the 5 percent level, confirming our hypothesis that there is significant CEO turnover-performance sensitivity for listed firms with private individuals or firms as their ultimate controllers. Moreover, the estimated coefficient on PERFORMANCE\*MAJORITY is negative (right sign) and statistically significant at the 5 percent level. This implies that when the largest shareholder of the listed firm has more stake in the firm by owning the majority of the stock, it will monitor the CEO more carefully and make his/her fate more tied to firm performance. Again, our hypothesis is confirmed. Interestingly, even for listed firms with the state as the ultimate controller, there is smaller yet statistically significant turnover-performance sensitivity if the largest shareholder of the listed firm owns the majority of its stock has a significant stake in the listed firm. It seems to suggest that SOEs have a multitude of objectives, one of which is economic efficiency and that the economic objective will weigh more relative to other objectives as SOEs have more stake in the listed firms.

Finally, the estimated coefficient on PRIVATE is positive and statistically significant at the 1 percent level. All things equal, CEO will enjoy less job security in listed firms with private individuals or firms as the ultimate controllers.

When the accounting measure (industry adjusted change in ROA) is used, the results are more mixed. It is still the case that listed firms with the largest shareholders holding the majority of company stocks make the link of CEO turnover to accounting firm performance stronger whereas we find no statistically significant impact on turnover-performance sensitivities of PRIVATE. It appears that listed firms with private individuals or firms as the ultimate controllers

rely more on stock market performance than accounting performance which tends to be more subject to management manipulation, especially in China.<sup>35</sup>

To test Hypotheses III and IV, we augment our baseline model, Eq. (1), with INDEPENDENT (the proportion of independent directors) and ENTRENCH (=1 if the firm with CEO working for the largest shareholder as well, 0 otherwise) individually and jointly. That is,

$$\begin{aligned}
 (2) \ln[\Pr(\text{TURNOVER})/1-\Pr(\text{TURNOVER})] = & \alpha + \beta_1 \text{PERFORMANCE} \\
 & + \gamma_1 \text{INDEPENDENT} \\
 & + \gamma_2 \text{PERFORMANCE} * \text{INDEPENDENT} \\
 & + \beta_2 \text{PRIVATE} + \beta_3 \text{MAJORITY} \\
 & + \beta_{12} \text{PERFORMANCE} * \text{PRIVATE} \\
 & + \beta_{13} \text{PERFORMANCE} * \text{MAJORITY} \\
 & + Z\gamma + u
 \end{aligned}$$

$$\begin{aligned}
 (3) \ln[\Pr(\text{TURNOVER})/1-\Pr(\text{TURNOVER})] = & \alpha + \beta_1 \text{PERFORMANCE} \\
 & + \gamma_1 \text{ENTRENCH} \\
 & + \gamma_2 \text{PERFORMANCE} * \text{ENTRENCH} \\
 & + \beta_2 \text{PRIVATE} + \beta_3 \text{MAJORITY} \\
 & + \beta_{12} \text{PERFORMANCE} * \text{PRIVATE} \\
 & + \beta_{13} \text{PERFORMANCE} * \text{MAJORITY} \\
 & + Z\gamma + u
 \end{aligned}$$

$$\begin{aligned}
 (4) \ln[\Pr(\text{TURNOVER})/1-\Pr(\text{TURNOVER})] = & \alpha + \beta_1 \text{PERFORMANCE} \\
 & + \gamma_1 \text{INDEPENDENT} \\
 & + \gamma_2 \text{PERFORMANCE} * \text{INDEPENDENT} \\
 & + \gamma_1 \text{ENTRENCH}
 \end{aligned}$$

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<sup>35</sup> See Guangyuan Wang, "Problems of the listed firms caused by defects in the listing system," *China Economic Times* (Zhongguo Jingji Shibao), March 13, 2002 edition.

$$\begin{aligned}
& + \gamma_2 \text{PERFORMANCE*ENTRENCH} \\
& + \beta_2 \text{PRIVATE} + \beta_3 \text{MAJORITY} \\
& + \beta_{12} \text{PERFORMANCE*PRIVATE} \\
& + \beta_{13} \text{PERFORMANCE*MAJORITY} \\
& + Z\gamma + u
\end{aligned}$$

The maximum likelihood estimates of Eqs. (2), (3) and (4) are presented in Tables 3 and 4. As table 3 shows, the estimated coefficient on PERFORMANCE\*INDEPENDENT is negative and statistically significant at the 10 percent level when stock return is used and at the 5 percent level when ROA is used, supporting Hypothesis III that independent directors will be conducive to strengthening CEO turnover-performance link. As Table 4 demonstrates, we find a positive and statistically significant (at the 5 percent level) coefficient on PERFORMANCE\*ENTRENCH when we consider stock performance. As such, Hypothesis IV is supported insofar as stock performance is concerned, i.e., turnover-performance link is weaker when CEOs work for the largest shareholders. However, we fail to find no such result when change in ROA is used to measure firm performance. Table 4 further confirms that considering both INDEPENDENT and ENTRENCH simultaneously will not change the results with each variable considered separately.

Lastly, to test the last hypothesis that firm performance will improve significantly after the replacement of the CEO and the improvement will be greater for privately controlled firms than for state controlled firms, we estimate:

$$(5) \text{PERFORMANCE}_t = \alpha + \beta_1 \text{TURNOVER} + \beta_{12} \text{TURNOVER*PRIVATE} + u$$

where  $\text{PERFORMANCE}_t$  is firm performance  $t$  years after CEO turnover and  $t = -3, -2, -1, 0, +1, +2, \text{ and } +3$  (negative numbers means firm performance  $t$  years before CEO turnover. Tables 5 and 6 present the OLS estimates of Eq. (5) with PERFORMANCE measured by industry adjusted RETURN and  $\Delta\text{ROA}$ . As shown in both tables, past firm performance tends to be negatively and

significantly related to CEO turnover whereas subsequent firm performance is no longer negatively related to CEO performance and even positively and significantly related to CEO turnover in some instances. Especially for listed firms with private individuals or firms as the ultimate controllers, performance improvement following CEO turnover is more pronounced and significant. As such we find evidence consistent with Hypothesis V.

### **Section 5: Concluding Remarks**

This paper has used comprehensive financial and accounting data on China's listed firms from 1998 to 2002, augmented by unique data on CEO turnover, ownership structure and board characteristics, and has provided evidence in support of the "law and finance" approach to corporate governance. Specifically, we find in China (characterized by the ambiguous property rights due to the socialist legacy and the weak protection of outside investors and minority shareholders) that: (i) even if the firm is listed in Stock Exchanges, there is no significant and negative link between CEO turnover and firm performance unless the listing is accompanied by an ownership change from state to private; (ii) the presence of a large controlling shareholder makes CEO turnover more sensitive to firm performance; (iii) the appointment of independent directors enhances turnover-performance sensitivities; (iv) CEO turnover-performance sensitivities are weaker for listed firms with CEOs who also hold positions in the controlling shareholders; and (v) Firm performance will improve significantly after the replacement of the CEO and the improvement will be greater for privately controlled firms than for state controlled firms.

These findings have important implications for China's stock market development and SOE reform. Consistent with predictions made in the "law and finance" approach to corporate governance, the wholesale change of ownership and control from the state to private individuals

and firms is found to be the most consistent and significant contributor to stronger CEO turnover-performance link and hence the higher quality of corporate governance. The “law and finance” approach predicts that weak protection for investors leads to poor corporate governance, as evidenced by weaker link between firm performance and executive turnover observed in state controlled firms. Weak investor protection implies a larger role of controlling shareholders and thus is supported by the finding that the existence of a controlling shareholder with more than 50% of the company shares leads to stronger performance-turnover ties. The positive effects of higher independence of board members on turnover-performance link are also consistent with the weak investor protection theory, because the introduction of independent directors provides more protection for outside investors. Finally, the findings on management entrenchment highlight the effects of weak investor protection.

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Table 1 Summary Statistics

Variable	Mean	s.d.	Medium	N	
<b>Part A: CEO characteristics</b>					
TURNOVER (=1 if CEO departs; 0 otherwise)	0.24	0.43	0	2167	
Dummy for General Manager	0.38	0.49	0	2167	
Dummy for Chairman/GM dual position	0.17	0.37	0	2167	
Age	49.62	7.81	50	2167	
Female dummy	0.04	0.19	0	2167	
Tenure as CEO	2.34	1.39	2	2167	
ENTRENCH (=1 if CEO also works for the controlling shareholder, 0 otherwise)	0.41	0.49	0	1039	
<b>Part B: Firm Characteristics</b>					
RETURN (industry-adjusted stock return)	0.06	0.43	-0.09	2167	
Total asset	1.78E+09	2.45E+09	1.13E+09	2167	
Total market value of company stocks	1.58E+09	1.41E+09	1.21E+09	2167	
Number of employees	2852.88	3843.24	1758	2123	
Sales	1.02E+09	1.88E+09	4.79E+08	2167	
Sales growth rate	0.16	0.44	0.11	2167	
ROA (industry-adjusted return on asset)	0.02	0.22	0.04	2167	
$\Delta$ ROA (industry-adjusted change in return on asset)	-0.02	0.22	-0.01	2167	
Proportion of firms controlled by the state ultimately	0.83	0.37	1	2167	
Proportion of firms controlled by private individuals or firms	0.10	0.31	0	2167	
Proportion of firms controlled by foreign individuals or firms	0.01	0.11	0	2167	
Percentage of tradable shares	38.77	13.14	37.16	2167	
Controlling shareholder share in percent	44.37	17.44	43.82	2167	
Absolute control (=1 if controlling shareholder shares exceeds 50%, 0 otherwise)	0.42	0.49	0	2167	
Size of board of directors	9.70	2.57	9	2163	
Number of independent directors (1999-2002)	0.83	1.18	0	2165	
	1999	0.20	0.40	0	2167
	2000	0.22	0.42	0	2167
	2001	0.28	0.45	0	2167
	2002	0.29	0.46	0	2167

*Sources:* Data on CEOs as well as accounting and financial data are from the China Stock Market and Accounting Research Database (CSMAR) developed by Shenzhen GTA Information Technology Company. Data on ownership structure and corporate governance are from the database developed by Sinofin Information Services.

*Note:* The data are based on a pooled cross-sectional time series dataset of 634 listed firms over the time period of 1998-2002. All value variables are measured in RMB and adjusted for inflation using CPI (1995=100).

Table 2: CEO turnover and firm performance: Logit estimates

	(1) PERFORMANCE=RETURN	(2) PERFORMANCE= $\Delta$ ROA
PERFORMANCE	-0.033	-1.446
	(0.13)	(1.63)
PRIVATE	0.717	0.542
	(3.64)**	(2.83)**
MAJORITY	0.122	0.022
	(1.07)	(0.19)
PERFORMANCE*PRIVATE	-1.368	1.248
	(2.11)*	(0.91)
PERFORMANCE*MAJORITY	-0.887	-5.177
	(2.24)*	(2.79)**
Observations	2167	2137

*Sources:* Data on CEOs as well as accounting and financial data are from the China Stock Market and Accounting Research Database (CSMAR) developed by Shenzhen GTA Information Technology Company. Data on ownership structure and corporate governance are from the database developed by Sinofin Information Services.

*Note:* The data are based on a pooled cross-sectional time series dataset of 634 listed firms over the time period of 1998-2002. All value variables are measured in RMB and adjusted for inflation using CPI (1995=100). All models include various dummy variables capturing the possible influences on CEO turnover of the CEO's age, gender, tenure as CEO, job title (general manager, or chair/GM dual position), as well as firm size (measured by the logarithm of the firm's market value) and time effects. Absolute value of t statistics in parentheses.

+ significant at 10%; \* significant at 5%; \*\* significant at 1%

Table 3: Effects on turnover-performance sensitivities of independent directors: Logit estimates

	(1) PERFORMANCE=RETURN	(2) PERFORMANCE= $\Delta$ ROA
PERFORMANCE	0.024 (0.09)	-0.666 (0.76)
INDEPENDENT	-0.140 (0.44)	-0.122 (0.39)
PERFORMANCE*INDEPENDENT	-7.704 (1.87)+	-17.520 (2.09)*
PRIVATE	0.712 (3.62)**	0.562 (2.92)**
MAJORITY	0.116 (1.02)	0.028 (0.24)
PERFORMANCE*PRIVATE	-1.335 (2.08)*	1.565 (1.09)
PERFORMANCE*MAJORITY	-0.844 (2.15)*	-5.655 (3.07)**
Observations	2167	2137

*Sources:* Data on CEOs as well as accounting and financial data are from the China Stock Market and Accounting Research Database (CSMAR) developed by Shenzhen GTA Information Technology Company. Data on ownership structure and corporate governance are from the database developed by Sinofin Information Services.

*Note:* The data are based on a pooled cross-sectional time series dataset of 634 listed firms over the time period of 1998-2002. All value variables are measured in RMB and adjusted for inflation using CPI (1995=100). All models include various dummy variables capturing the possible influences on CEO turnover of the CEO's age, gender, tenure as CEO, job title (general manager, or chair/GM dual position), as well as firm size (measured by the logarithm of the firm's market value) and time effects. Absolute value of t statistics in parentheses.

+ significant at 10%; \* significant at 5%; \*\* significant at 1%

Table 4: Effects on turnover-performance sensitivities of managerial entrenchment: Logit estimates

	(1) PERFORMANCE =RETURN	(2) PERFORMANCE =ΔROA	(3) PERFORMANCE =RETURN	(4) PERFORMANCE =ΔROA
PERFORMANCE	-0.403	-0.257	-0.033	0.607
	(0.57)	(0.23)	(0.05)	(0.52)
ENTRENCH	0.178	0.237	0.182	0.263
	(0.89)	(1.21)	(0.90)	(1.33)
PERFORMANCE*ENTRENCH	2.134	-2.489	1.889	-2.063
	(2.41)*	(1.04)	(2.12)*	(0.87)
INDEPENDENT			-1.811	-2.027
			(1.63)	(1.81)
PERFORMANCE*INDEPENDENT			-10.104	-27.473
			(1.53)	(2.30)*
PRIVATE	0.876	0.594	0.903	0.665
	(2.94)**	(2.11)*	(2.98)**	(2.32)*
MAJORITY	0.107	-0.026	0.082	-0.026
	(0.53)	(0.13)	(0.41)	(0.13)
PERFORMANCE*PRIVATE	-1.731	1.817	-1.661	3.073
	(1.16)	(0.73)	(1.12)	(1.23)
PERFORMANCE*MAJORITY	-2.762	-4.607	-2.759	-4.466
	(2.94)**	(1.45)	(2.92)**	(1.38)
Observations	1011	1019	1011	1019

*Sources:* Data on CEOs as well as accounting and financial data are from the China Stock Market and Accounting Research Database (CSMAR) developed by Shenzhen GTA Information Technology Company. Data on ownership structure and corporate governance are from the database developed by Sinofin Information Services.

*Note:* The data are based on a pooled cross-sectional time series dataset of 634 listed firms over the time period of 1998-2002. All value variables are measured in RMB and adjusted for inflation using CPI (1995=100). All models include various dummy variables capturing the possible influences on CEO turnover of the CEO's age, gender, tenure as CEO, job title (general manager, or chair/GM dual position), as well as firm size (measured by the logarithm of the firm's market value) and time effects. Absolute value of t statistics in parentheses.

+ significant at 10%; \* significant at 5%; \*\* significant at 1%

Table 5 The OLS estimates on the effects on net-of-industry stock return of CEO turnover

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	RETURN <sub>-3</sub>	RETURN <sub>-2</sub>	RETURN <sub>-1</sub>	RETURN	RETURN <sub>+1</sub>	RETURN <sub>+2</sub>	RETURN <sub>+3</sub>
TURNOVER	-0.028	0.061	-0.067	-0.010	0.025	-0.019	0.033
	(0.27)	(1.33)	(3.33)**	(0.75)	(1.32)	(1.31)	(1.30)
PRIVATE	-0.453	0.162	0.077	0.056	0.016	0.017	0.001
	(1.35)	(1.34)	(1.93)	(2.93)**	(0.53)	(0.76)	(0.03)
PRIVATE* TURNOVER	1.268	-0.101	-0.038	-0.053	0.144	-0.013	0.201
	(3.06)**	(0.67)	(0.60)	(1.41)	(2.45)*	(0.29)	(2.13)*
Observations	90	231	1354	2995	1570	754	274
R-squared	0.16	0.02	0.03	0.02	0.04	0.01	0.04

*Sources:* Data on CEOs as well as accounting and financial data are from the China Stock Market and Accounting Research Database (CSMAR) developed by Shenzhen GTA Information Technology Company. Data on ownership structure and corporate governance are from the database developed by Sinofin Information Services.

*Note:* The data are based on a pooled cross-sectional time series dataset of 634 listed firms over the time period of 1998-2002. All value variables are measured in RMB and adjusted for inflation using CPI (1995=100). Absolute value of t statistics in parentheses.

+ significant at 10%; \* significant at 5%; \*\* significant at 1%

Table 6 The OLS estimates on the effects on  $\Delta ROA$  of CEO turnover

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	$\Delta ROA_{-3}$	$\Delta ROA_{-2}$	$\Delta ROA_{-1}$	$\Delta ROA$	$\Delta ROA_{+1}$	$\Delta ROA_{+2}$	$\Delta ROA_{+3}$
TURNOVER	-0.009	-0.023	-0.016	0.002	0.013	0.005	0.022
	(0.76)	(2.15)*	(2.79)**	(0.36)	(2.39)*	(0.35)	(0.77)
PRIVATE	-0.097	0.025	-0.001	0.020	-0.004	0.038	-0.042
	(2.73)**	(0.91)	(0.05)	(2.64)**	(0.44)	(1.67)+	(0.85)
PRIVATE* TURNOVER	0.115	-0.024	-0.002	-0.045	0.015	-0.034	0.747
	(2.48)*	(0.74)	(0.13)	(3.03)**	(0.87)	(0.73)	(7.19)**
Observations	75	182	1302	2939	1528	733	263
R-squared	0.18	0.04	0.01	0.01	0.01	0.00	0.21

*Sources:* Data on CEOs as well as accounting and financial data are from the China Stock Market and Accounting Research Database (CSMAR) developed by Shenzhen GTA Information Technology Company. Data on ownership structure and corporate governance are from the database developed by Sinofin Information Services.

*Note:* The data are based on a pooled cross-sectional time series dataset of 634 listed firms over the time period of 1998-2002. All value variables are measured in RMB and adjusted for inflation using CPI (1995=100). Absolute value of t statistics in parentheses.

+ significant at 10%; \* significant at 5%; \*\* significant at 1%