What Triggers Top Management Turnovers in China?

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Abstract

Studies on management turnovers of Chinese listed companies typically find that turnover decisions are responsive to companies' accounting performance. What is puzzling is that the performance subsequent to turnovers does not improve much. The contributions of our study using Chinese turnover cases during 2000-2003 build on the novel approach of disaggregating net income into core earnings, recurring non-core earnings, and other non-recurring earnings. Upon going beyond the overall net-income figure, we show that turnover decisions for government firms are related negatively *only* to recurring earnings which consist mainly of operating, administrative and financial expenses. Leverage plays a significant role which leads us to conclude that Chinese government firms are concerned with high debt levels that have plagued the SOE reform in the last decade. As a contrast, *private* firms are indeed responsive to poor core earnings, like profit-maximizing firms in the western world. To the extent that government firms are more concerned on cost control than profit maximization, which may arguable be optimal in the special environment in China, lack of significant performance improvements after management turnovers can be conceivable.

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1. Introduction

Standard economic principle argues that government ownership is less efficient than private ownership. Privatizing state-owned enterprises (SOEs) is believed to be the fundamental way of revitalizing these firms. However, privatization experience all over the world suggests that the economic consequences are more complex (Brown, Earle and Telegdy, 2006). Selling government stakes into private hands does not necessarily uplift the efficiency of the privatized firms. Unsuccessful incidences have been documented, an example of which is the comprehensive study by Sun and Tong (2003) on 634 Chinese SOEs. According to their results, the performance improvements of these privatized Chinese SOEs are minimal. This echoes the point made in Barberis et al. (1996) that the manner private ownership leads to greater efficiency is not exactly clear. China is, by far, the largest socialist country in the world, whose economy is supported by thousands of SOEs many of which are either partially privatized or going to be privatized. The experience of Chinese SOEs provides a rich ground for us to further explore this important issue with respect to senior management turnovers.

Concentrating on the top management turnover decisions of Chinese enterprises, we believe, is a natural starting point to unravel the puzzle as to why transferring ownership title does not necessarily improve firm performances. Arguably, the essence of privatization is for the new, private owners of the firm to institute incentives to induce proper managerial behaviors and to monitor the top management making them accountable for firm performance. Turnover, as an extreme form of penalty, is an integral part of the internal monitoring mechanisms to reduce agency problems. A natural question, hence, would be whether the limited success of vitalizing SOEs through privatization is due to the ineffective turnover mechanism in China.[1]

Perhaps surprising to many, Chinese companies actually have relatively high rate of turnovers in senior management. In our sample period from 2000 to 2003, there are totally 1,123 turnovers among which 689 are forced turnovers based on our definition. The annual turnover rate over this period fluctuates from 21% to 28%, which is quite high comparing to other countries.[2] The average tenure for a general manager is only 3.3 years while that of the chairman of the board is 4.3 years. To put it in perspective, an early study by Kaplan (1994b) shows the turnover rates for top executives in Japan and the U.S. during 1980 – 1988 were 14.49% and 9.73%, respectively. The average tenure was 6.9 years in Japan and 10.28 years in the U.S. According to a survey of top management turnover at the world's 2,500 largest publicly traded corporations by Booz Allen Hamilton, the overall senior

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[1] It is well documented that deteriorating performance in firm earnings and returns are the primary factors leading to top management turnovers in developed economies (Warner, Watts and Wruck (1988), Murphy and Zimmerman (1993), Denis and Denis (1995), Denis, Denis and Sarin (1997), Franks, Mayer and Renneboog (2001) among others on the United States; Abe (1997) and Kang and Shivdasani (1995) on Japanese; Kaplan (1994a) on Germany; and Dahya, Lonie and Power (1998) on the United Kingdom). Studies on top executive turnovers in emerging economies include Claessens and Djankov (1999) on the Czeh Republic and Volpin (2002) and Barucci, Bianchi and Frediani (2005) on Italy.

[2] Kato and Long (2006) also find an average turnover rate for China's executive to be 24% during 1998-2002.

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manager turnover rate is 14.2% in 2004, compared to 9.8% in 2003. The turnover rate in North America is 11.7%, which is slightly higher than that in 1995. However, the rates are 16.8% in Europe and 17.5% in the Asia-Pacific regions (excluding Japan) which are over five and three times the respective rates of nearly a decade ago (New York Times; May 22, 2005).

Some argue that the high turnover rate in China may not mean much because the turnover decision is not based on performance but simply a matter of government policy. Many senior managers in SOEs are party members and government officials. They are typically relocated to different positions in different organizations after a few years and such relocations may not be related to their performance. Indeed, the linkage between turnovers and performance depends on the governance structure and environment. For instance, Volpin (2002) reports that the probability of turnover and its relationship with performance is lower for top executives who belong to the family of the controlling shareholder and the probability is also sensitive to the percentage of the largest shareholding.[3] There are also cross country studies comparing the legal, governance structures of firms in different countries as in Kaplan (1994b), and Defond and Park (1999), among others. When external monitoring devices are weak in these countries, firms will naturally rely more on internal monitoring to discipline managers.

However, another "surprising" fact is that existing China studies do show that forced turnovers are highly correlated with corporate earnings (Firth, Fung and Rui, 2005; Chen, Li, Su and Tsui, 2004; Chang and Wong, 2004; and Kato and Long, 2006). CEO turnovers in China do not look mechanical and are responsive to corporate financial performance. Admittedly, these studies show that the turnover decisions are *not* related to stock returns, unlike their private, foreign counterparts in Japan, Europe, and the U.S. that rely on both financial as well as capital market performances. But it remains important to observe that forced turnovers in China do not look arbitrary and random.

Hence, it becomes puzzling that such seemingly performance-driven turnovers do not look effective in improving the subsequent financial performance of the Chinese companies. The study by Chang and Wong (2004) is especially revealing because they focus on performance changes upon senior manager turnovers. They confirm that negative earnings likely induce forced top management turnover but such turnovers bring only small improvement in post-turnover accounting performance and negligible higher stock price performance.[4] They interpret their results as that the state shareholders have the incentive to penalize senior managers for making losses, but the incoming top executives are not very effective at improving enterprises performance. If this is true, the

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[3] The linkage between family ownership and firm value can be complicated. See Villalonga and Amit (2006) and the related articles discussed in the paper.

[4] Interestingly, in a recent paper, Firth, Fung, and Rui (2006) look at corporate performance and CEO compensation in China and find also low sensitivities between performance and compensation. A notable exception is Kato and Long's (2006) study. Not only do they find turnover decision is related to stock return, accounting performance is also found to improve after the turnover. However, they do not seem to differentiate forced versus voluntary turnovers in their study.

situation will be quite disheartening because it means either the state shareholders systematically pick non-performing top management; or there is a general lack of quality senior managers[5]; or even that the economic environment is such that quality managers cannot achieve significant improvement.

In this paper, we shed light on the issue by penetrating through the gross earnings figures and look into costs and expenditures. SOE reform is a tough and long-term process. An SOE still needs to take up certain social and government obligations. Looking purely on the annual earnings figures to determine the ability of the senior management may be unreasonable or even inappropriate since many things are beyond the control of the senior management. Cost control, however, is far more manageable and within the realm of the senior management. Arguably, part of the inefficiency of SOEs comes from the sheer wastage due to the nature of public ownership. Upon casual conversations with some company executives in China, we have an impression that Chinese SOEs may not all be that inefficient at generating little revenues. Instead, senior management of some SOEs has more incentive to use the generated revenues and company resources on unnecessary travels, lavish banquets, expensive gifts for personal consumption and personal network building than on company growth. As such, an SOE may be running good business without making good profit due to too much wastage in unnecessary expenditures. In fact, a recent survey shows that the amount of public money spent in a year by Chinese civil servants on transportation and entertainment take up a quarter of government's annual revenue. Energy consumption of government organizations is four times that of private organizations.[6]

Another big cost item tarnishing the profit of an SOE is the financing cost. The so-called "triangular debt" problem plagued the China SOE and banking reform in the 90s.[7] When one enterprise cannot pay back the debt, it generates a ripple effect. Note that banks themselves are SOEs and hence a lot of enterprises do not pay off loans borrowed from bank. Some were not able to pay, some just refuse to pay, and some never intend to pay. These partly relate to government officials taking bribes to help enterprises to secure loans or cancel bad debts.[8] Non-performing loans hence are a big issue in China's banking reform which, on the other side, reflects the seriousness of the debt problem of the SOEs. On the other hand, Jian and Wong (2006) find that companies tunnel the resources to their controlling shareholders through related lending. Firms with loan guarantees *from* controlling owners are more likely to provide related lending back to their controlling owners. All in all, effective control of company expenditures and financing costs is important to an SOE and it may be rational to remove the senior management not capable in achieving this.

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[5] A recent report by McKinsey indicates a general shortage of leadership personnel in Chinese enterprises (Grant and Desvaux, 2005).

[6] Hong Kong Economic Journal, July 4, 2005, p.25.

[7] It refers to the fact that a great number of SOEs including the state banks are in debt to one another. Both their account receivables and account payables are very high. In 1994, for instance, 27.6 percent of the SOEs had total debts higher than their total asset values. Another 21.5 percent of the SOEs had total debts equal to total equities. As a result, 50 percent of the bank loans to SOEs were bad loans, which amounted to 45-50 percent of the banks' total assets (Chinese Financial Times, Oct 7, 1995).

[8] Hu Shaojiang, Lack of Credit Is a Cancer in China's Economy, Radio Free Asia, 11/5/2005.

In order to go beyond the earnings figures and to look into costs and expenditures, we exploit the peculiar requirement of the Chinese Generally Accepted Accounting Principles (GAAP) for companies to disaggregate net income before tax into the following three components: (1) income from the principal business operations less related costs (henceforth "core earnings"); (2) profit from other non-core business operations less operating expenses, administration expenses and financial expenses (henceforth "recurring non-core earnings"); (3) other income including investment gains, subsidy income, non-operating income and expenses (henceforth "non-recurrent earnings").[9] These items must be accounted for separately and be presented in the income statement as individual line items. With such data, we construct a regression model with the CEO turnover decision being a function of these three earnings items. If expenditure control is truly an important factor, the second item of "recurring non-core earnings" should enter significantly into the CEO turnover equation and indeed that is what we find.

We find that top management turnover decisions in Chinese firms are not only negatively related to the core earnings (earnings from main operation) but also consistently significantly related negatively with the recurring non-core earnings. This negative relationship does not diminish after controlling for earnings quality and managers' personal as well as firm characteristics. As shown above, the recurrent non-core earnings have large components in operating, administrative, and financing expenses. Also, firm leverage as an independent variable enters significantly in all the turnover models. These results hence indicate that the turnover decision for these government firms hinges on the ability of the top management to control firms' general and financial expenses which support our conjecture that effective control of debts and expenditures is important. It is important to note that when we only look at aggregate earnings, we did get the typical results in other studies that forced turnovers in China are related with poor accounting earnings. Decomposing earnings hence is essential in revealing the complex picture.

Another interesting finding is that when we partition the sample into government and private firms, we find that the negative relationship between core earnings and forced turnover decision persists only for private firms. For turnovers in government firms, core earnings are *not* significant under any conventional levels. Recurring non-core earnings becomes the only earnings component that is negatively significant with top management turnovers. The importance of finding that Chinese private firms behave like foreign private firms regarding their turnover decisions should not be overlooked. This suggests that China is not a completely "irrational" place where private firms behave utterly differently from their foreign counterparts given the differences in the context and environment. With this perspective, our results on government firms become intriguing – Chinese government firms and private firms have different operating objectives and decision variables in forcing out their senior management but both can be equally rational under their different settings.

The paper proceeds as follows. We provide some characteristics of corporate governance and reporting environment in China in section 2. Sample selection and descriptive statistics of the

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[9] See Accounting System for Business Enterprises (2003).

variables are discussed in Section 3. The main statistical analyses are presented in section 4. Controlling governance structures are analyzed in section 5. Sensitivity analyses are reported in section 6. Section 7 concludes the paper.

2. Corporate Governance Structure and Reporting Environment in China

The Chinese capital market shares two characteristics that are common in emerging markets: weak investor protection and high ownership concentration. Allen, Qian and Qian (2005) report that corporate governance, accounting standards, and investor protection systems are significantly under-developed as compared to those countries studied in La Porta et al. (2000) and Levine (1999). According to a July 2001 issue of *China Securities*, the largest shareholder stake in listed companies averages 44.9% and the second largest shareholder typically owns only 8.2%. These holding characteristics are also apparent in the sample we currently study. Hence, the majority shareholder generally has control of the governing policies of the company. Different from other emerging market countries, the majority of listed firms in China are controlled by the government or by government agencies. Such control takes the form of directly holding state-owned shares or indirectly holding legal-person shares of the SOEs. It is not surprising that government policies play key roles in the business operations of Chinese enterprises.

A fundamental principle of China's political and economic organization structure is known as the "Party Controlling Personnel." The (Central) Party exercises its ultimate control over personnel selection and dismissal through its Organization Departments at different levels of federal and local government. Qian (1996) reports that, "the Central Party Organization Department has the control authority of personnel above the level of deputy minister or governor which includes heads of some very large SOEs. The Provincial Party Organization Departments control bureau level appointments which include the heads of most large- and medium-sized SOEs." (p.435) The appointment and dismissal process is generally politicized, secretive and complicated. It represents the most important channel of political influence over enterprises by the Party apparatus.

Under the Party Control Personnel system, members of the board of directors in Chinese companies generally are not voted in by shareholders. They are mostly nominated by Party Officials. It is not surprising that such board structure is ineffective in monitoring the performance of the company's managers. In fact, the objectives of the board of directors may not be congruent with those of the investors. "Some listed corporations do not convene regular board of director meetings, thus there is little check on managerial power. There are also some directors who do not take the board meeting rules seriously. In some corporations, all directors act as managers and executives. The excessive overlap between directors and executives frequently causes problems of insider control and managerial corruption." (Schipani and Liu, 2002, p.27)

With the development of a market economy in China during the 1990s, a large number of SOE's become privatized together with the emergence of private companies. The capital stock market

experiences rapid changes both in liquidity and volume trading. Although these SOEs issue capital stock for outside investors, the Central Government maintains a majority control and remains as the largest shareholder in the privatized companies.[10] We see a definite distinction in the strategic and operational decisions between government-owned enterprises and those in private hands.

A reporting feature unique to Chinese firms is that they are required to report annual earnings from their main line of operations (EARN) excluding operating, administrative, and financial expenses. These expenses, however, are combined with earnings from "other" operating units and reported as a single line item in the income statement. We label this earnings component as "recurring earnings" (REARN). The sum of these two income components is equivalent to the "income before extraordinary, other income and tax expenses" reported under the United States GAAP. A third item in the income statement of Chinese companies includes all other revenues and expenses which are non-routine and non-recurring in nature which we called "other earnings" (OEARN)[11]. This item is generally classified as "other income" if they are not unexpected under normal operating conditions and "extraordinary items" if they are unusual or abnormal in nature under GAAP in the U.S. There have been studies on the value relevance of the decomposition of these three earnings components, commonly labeled as "pro-forma" earnings (Bhattacharya et al, 2003; Lougee and Marquadt, 2004). The major difference in the disclosure of these earnings components is that it is mandatory under Chinese GAAP and voluntary under U.S. requirements.

This study exploits the above unique features of major holdings and reporting requirements of Chinese enterprises to unravel the companies' decisions in disciplining their top management. The results as presented in the following sections show the similarities as well as the differences in the determinants of the turnover decisions between Chinese firms and their Western counterparts.

3. Data and Methodology

The sample used in this study consists of all A-Share listed companies in the Shanghai and Shenzhen Stock Exchanges during the period of 2000–2003 excluding banks, financial institutions insurance companies, and ST/PT companies.[12] Returns and financial data on corporate performance of the sampling period are taken from the CSMAR Database. Financial and stock returns data of the

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[10] The state-owned shares and legal-person shares are not tradable which generates series of problems. To solve the problems, Chinese SOEs have been undergoing the "split-share reform" since 2005. Once a firm has completed such a reform, the non-tradable shares will be allowed to trade in two years time.

[11] Please refer to section 4.3 for detail definitions of recurring non-core earnings (REARN) and other non-recurring earnings (OEARN).

[12] The "ST system" was implemented into the China stock market in 1998. "ST" stands for "special treatment" which is used on companies with such abnormal financial and business situations that the forecast of the future of these companies become difficult and unclear. To alert and protect investors, the stock names of these companies will be prefixed by "ST" and the daily stock price movement will be limited to 5%. Their interim financial reports need to be audited. "PT" stands for "particular transfer" which was a service introduced in 1999 that allows investors to trade on every Friday those stocks being temporarily suspended from listing due to companies running at a loss for three consecutive years. Typically, ST and PT companies are under financial distress.

sample firms were collected for the period 1991–2003. We calculated both daily and annual returns for the sample firms. Top management, ownership stake and control structure data were taken from the firms' annual financial statements, and additional information about senior management changes by searching the *Shanghai Securities News*, *China Securities Journal* and other news releases authorized by the China Securities Regulatory Commission (CSRC) for disclosure of corporate information.

A total of 1,123 firms were identified to have top management changes during the sample period.[13]   A top management change is defined as any change in individuals holding the title of "general manager" or "chairman", which are the highest executives[14] in Chinese listed firms. Changes are identified by comparing firms' management team composition between year *t* and the previous year *t–1*. Of the 1,123 firms that experience top management changes, 447 firms change both chairman and general manager, 265 change only the chairman, and 411 change only the general manager.

(Insert Table 1 here)

Table 1 provides the distribution of reasons for which managers leaving the top management team. It is always difficult to precisely differentiate voluntary from forced turnovers because the exact reasons are generally not announced publicly. When managers resign, firms usually do not disclose whether the resignations are forced or voluntary. We follow the taxonomy used in the previous literature (Warner, Watts and Wruck, 1988), Groves *et al*, 1995 among others) and classify "Resignation", "Assume another position within the firm"[15], "No reason" and "Fired" as forced turnovers. For other reasons such as succession, title change, control change, retirement, health, regulation, study and being elected as mayor, we treat as voluntary turnovers. Control firms are those that we do not find *any* top management changes during the entire sample period of 2000–2003. This results in an initial sample of 689 forced and 434 voluntary turnovers with 883 control (no-turnover) firms totaling 2,006 observations. Sample statistics show that there are more forced turnovers (over 60 percent of the sample) than voluntary turnovers (less than 40 percent). The average tenures in the forced turnover sub-sample for the general manager is 2.42 years and that of the chairman is 3.27 years. Since the performance of senior management would be unlikely to be evaluated for periods beyond two years prior to turnover, we include only one lag of the various variables in the ensuing analyses. Unstipulated results show that almost all lag two variables are insignificant at any conventional levels.

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[13] Multiple turnovers within a year are counted as one turnover.
[14] Without any ambiguity, we use the terms chairman, general manager, top and senior management, and general manager interchangeably in this paper unless otherwise specified.
[15] Since our top management includes only Chairman of the Board and General Manager, any assumption of other positions within the firm will generally means a demotion.   Accordingly, we classify such a change as forced.

Our initial analysis begins with logistic regressions to correlate turnover decisions with the two basic financial variables of earnings and stock returns:

Model 1: $\text{TURNOVER}_t = \beta_0 + \beta_1 \text{Size}_t + \beta_2 \text{NetEARN}_{t-1} + \beta_3 \text{Return}_{t-1} + \varepsilon_t$ (1)

The dependent variable TURNOVER_t takes the value of one for firms with a turnover at year t and the value zero for control firms with no top management turnover. NetEARN_t is the income before tax of a firm at year t normalized by its total assets[16] at the beginning of the year (ROA_t). Return_t denotes the annual returns of a firm for year t.   All regressions reported in this paper are controlled for firm size, which is measured as the natural log of total assets of the firm at the beginning of the year.

As a benchmark, in addition to the basic test variables and firm size in Model 1, we introduce a set of control variables to capture the accounting and financial characteristics of the firm.

Model 2: $\text{TURNOVER}_t = \beta_0 + \beta_1 \text{Size}_t + \beta_2 \text{NetEARN}_{t-1} + \beta_3 \text{Return}_{t-1}$
$\quad\quad\quad\quad\quad + \beta_4 R^2_{t-1} + \beta_5 (\text{NetEARN}*R^2)_{t-1} + \beta_6 \text{Leverage}_t + \beta_7 \text{Leverage}_{t-1}$
$\quad\quad\quad\quad\quad + \beta_8 \text{SalesGrowth}_t + \beta_9 \text{SalesGrowth}_{t-1} + \beta_{10} \text{GM Age}_t + \beta_{11} \text{GM Tenure}_t$
$\quad\quad\quad\quad\quad + \beta_{12} \text{Chairman Age}_t + \beta_{13} \text{Chairman Tenure}_t + \beta_{14} \text{Duality}_t$
$\quad\quad\quad\quad\quad + \beta_{15} \text{Mgtsize}_t + \beta_{16} \text{Holding1}_t + \beta_{17} \text{Holding2}_t + \varepsilon_t$ (2)

The R^2_t is computed from a firm-specific reverse regression of annual earnings on contemporaneous stock returns of the following fashion, which is the measure developed by Basu (1997) to proxy for earnings quality.

$$\text{NetEARN}_t = a_0 + a_1 \text{NEG}_t + b_1 \text{Return}_t + b_2 \text{NEG}_t * \text{Return}_t + \varepsilon_t.$$ (3)

Adapting the arguments of Engel, Hayes and Wang (2003), top management turnover decisions depend on the relative informativeness of earnings.   The R^2_t from equation (3) measures the contemporaneous correlation of earnings with returns.   A high R^2_t implies that the earnings variable is more informative.   Better disclosure quality in turn has a lower impact on the probability of turnover.   We also interact R^2_t with earnings.   The interaction term, holding all other variables constant, is expected to be positive.   Other control variables are defined as follows:

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[16] As the following analyses show that senior management turnover decisions in Chinese firms are significantly correlated with the firms' leverage, the normalization factor cannot include items that are debt-related, for example, common equity or market capitalization.

Leverage $_t$ = Total Debt $_t$ / Total Common Equity $_t$,

SalesGrowth $_t$ = (Sales$_t$ – Sales $_{t-1}$) / Sales $_{t-1}$,

GM/Chairman Age $_t$ = Age of the general manager or chairman when turnover occurs,

GM/Chairman Tenure $_t$ = Years general manager or chairman has serves the position before turnover,

Duality $_t$ = 1 if the manager holds both the title of general manager and chairman, and 0 otherwise,

Mgtsize $_t$ = Number of the top management team,

Holding1/2 $_t$ = Percentage share holding of the largest/second largest shareholder.

These financial and governance variables are the typical control variables used in other studies of top management turnover.   Leverage and sales growth are the measures for firm risks and growth potential.   We expect that the riskier the company is, the higher will be the probability of turnover.   Age, tenure and shareholding of the manager measure her personal characteristics and her tie to the company.   The closer the tie, the more influence she has in company's executive decisions. Hence, this leads to lower probability of turnover.   However, age may be an indicator that the manager is close to retirement age and hence higher the probability she will leave the firm.

The size of the management measures the complexity of operations in the company.   It may also reflect the seriousness of an agency problem.   When the intensity of management is high, it becomes more difficult and costly to replace a senior manager.   It is expected the larger the size of management, the less likely a turnover will occur.   We do not have any expectations on the impact of major shareholdings on turnover decisions as we are unable to identify the personal relationship of Chinese top management and the major shareholder, which is similar to the scenario described in the Volpin (2002) study.

4.   Analysis

4.1.   Descriptive statistics and univariate tests

We begin our analyses with the sample descriptive statistics of the variables.   To avoid outliers, we delete the top and bottom 1% of each of the four main experimental variables, net earnings (NetEARN$_{t-1}$), earnings from main operations (EARN$_{t-1}$), recurring earnings (REARN$_{t-1}$), other earnings (OEARN$_{t-1}$), and returns.   The results are presented in Table 2.

(Insert Table 2 here)

Panel A shows the statistics for the full sample.   The average one-year lag net earnings (NetEARN $_{t-1}$), core earnings (EARN $_{t-1}$), returns (Return $_{t-1}$), recurrent earnings (REARN $_{t-1}$), and other

earnings (OEARN$_{t-1}$) are 4.5%, 12.16%, –0.28%, –8.66%, and 0.77%, respectively.[17]   Of particular interest is that the mean REARN$_{t-1}$ is negative because recurring earnings consist of income from "other" operations less operating, administrative and financial expenses.   These three expenses comprise a dominating component of REARN$_{t-1}$.

The average age of the general manager (GM Age$_t$) is 45.85 while that of the chairman (Chairman Age$_t$) is 50.06.   The average length a chairman stays in the same company (Chairman Tenure$_t$) is 4.26 years while that of a general manager (GM Tenure $_t$) is 3.31 years.   This implies that the turnover rate in Chinese firms is relatively high.   About 21.40% of our sample firms have the chairman also serving as the general manager of the company (Duality$_t$).   As a proxy for operation complexity, the average size of the management team (Mgtsize$_t$) is 16.53 (managers).   The mean shareholding of the largest shareholder[18] (Holding1$_t$) in percentage is 43.23% while that of the second largest shareholder (Holding2$_t$) is only 8.42%.   This confirms the stylized fact that ownership of Chinese enterprises is concentrated on one major shareholder which is consistent with the survey reported in *China Securities*.

In Panel B of Table 2, we construct univariate tests on the difference between the mean values of the variables of interest across the forced turnover group, the voluntary turnover group, and the control group.   The average firm size appears to be comparable across the three groups but the pair-wise t-statistics show that firms with forced turnovers are significantly smaller than firms with voluntary turnovers which, in turn, are significantly smaller than the control group.

The mean net earnings NetEARN$_{t-1}$ of the forced-turnover, voluntary-turnover, and the control subgroups are 2.27%, 4.37%, and 6.29%, respectively.   They are all significantly different at 0.01% between the three subgroups.   The core earnings EARN$_{t-1}$ of firms with forced turnovers at 10.15% is significantly lower than that of firms with voluntary turnovers at 11.78%.   Again, the mean core earnings are significant different between the three subgroups.   Moreover, the forced turnover firms have significantly lower other earnings (OEARN$_{t-1}$) compared both to the voluntary turnover firms (p-value of 4.13%) and to the control group (p-values of 0.03%).   For recurring earnings (REARN$_{t-1}$) and stock return (Return$_{t-1}$), the p-values of the pair-wise t-values are not significant between the forced and voluntary and between the forced and control sub-groups.

The mean R^2_{t-1} of the turnover firms is 54% for the forced group and 52.77% for the voluntary group while that for the control firms is 63.88%.   The differences between the two turnover groups and the control group are both statistically significant at less than the 0.1% level.   A casual inference is that the control firms are timelier in disclosing their financial information than the turnover firms, although the R^2_{t-1} also serves as proxy for basic firm characteristics.

Of special interest is that firms with forced turnovers are higher levered than firms in the control group with p-value of 0.01%.   Mean leverage of the forced-turnover firms is 1.5391 but that

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[17] We present lag variables because mostly lag variables are used in the subsequent analyses.
[18] We include all tradable and non-tradable shares to calculate the largest shareholdings.

of the voluntary-turnover firms and of the control firms are 1.8294 and 0.8875, respectively. On the personal characteristics of the chairmen and the general managers of the forced-turnover firms, they tend to be younger and, on average, depart after being appointed as senior management for only 2 to 3 years. On the issue of duality, there are less than 12% of the forced-turnover firms having their general managers serving concurrently as the Chairman of the Board. In contrast, over 25% of the control firms and over 28% of the voluntary-turnover firms have such duality arrangement. The difference among the forced, voluntary, and control groups is both significant at the 0.01% level. This is consistent with the general intuition that forced turnovers are more difficult for firms with the chairman and the general manager served by the same person.

Firms with no turnovers in our sample period tend to have a smaller management team with an average size of 16.29. Compared with turnover firms, they have more concentrated share-ownership with average shareholdings of 45.09% for the largest shareholder and only 8.08% for the second largest shareholder. For the turnover group, there is not much difference in holdings between the forced and voluntary sub-group. The management team size is 16.62 for the forced-turnover firms and 16.85 for the voluntary-turnover companies. Similarly, the difference in major shareholdings is similar between the two turnover sub-samples.

Finally, we partition our sample by whether the firms' largest shareholder is the state government or a private individual[19]. In general, Panel C of Table 2 shows that private firms have fewer total assets than government companies. Consistent with the results in Panel B, the forced-turnover government firms tend to have lower net earnings (2.19% versus 4.5%), core earnings (10.13% versus 11.62%) and lower other earnings (0.12% versus 1.12%) when compared to their voluntary-turnover counterparts. The significance levels for the differences are 0.01%, 1.38% and 0.76% for the net earnings, core earnings and other earnings, respectively.

Surprisingly, there are no significant differences between forced and voluntary turnovers in privately owned firms across all three types of earnings. Nonetheless, there are significant differences in firm characteristics when we contrast government and private firms among the forced-turnover groups and among the voluntary-turnover groups. With the taxonomy of private versus government and forced versus voluntary partitioning of the sample, the large variations in the firm size of each sub-group may mitigate inferences on the univariate test. However, Panels B and C of Table 2 show that there are substantial differences in both test variables and firm characteristics among the four groups. This suggests that our grouping of forced and voluntary turnovers has a clear demarcation and hence provides a reasonable basis for analyzing the possible determinants of the turnover decision of a Chinese enterprise.

Panel D presents the Pearson and Spearman correlation coefficients of the main variables.

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[19] We label firms as "government" if the largest shareholder is the local or state government. "Private" firms are those whose largest shareholder is a private individual. The largest shareholder as defined in this paper does not necessary control a majority voting or cash rights.

Turnover $_t$ is significantly negatively correlated with Size $_t$, NetEARN$_{t-1}$, EARN$_{t-1}$, and R^2_{t-1}, all with p-values less than 0.01%.   It is, however, positively correlated with Leverage$_{t-1}$ at 0.01%. Leverage$_{t-1}$ is correlated with REARN$_{t-1}$ with correlation coefficient equals –6.22% and significant at 0.64% which suggests that a large portion of REARN$_{t-1}$ is financial charges related to the firms' debts level.

4.2.   Earnings on Turnover Decision

To provide a benchmark for comparison with the existing literature, we begin our analysis with the two commonly used variables, return on assets (ROA) and firm returns, as defined in Models 1 and 2.   Logistic regressions were run using the forced and voluntary sub-samples.

Unstipulated results for Model 1 show highly negatively significant coefficient estimates for NetEARN$_{t-1}$ with p-values equal 0.01% for both the forced and voluntary groups.   This implies that low earnings from the previous year increase the probability of turnover of senior management.   The estimated coefficient for firm size is significantly negative for both the forced and the voluntary samples at any conventional acceptable statistical level, implying that large firms tend to have less frequent turnovers in senior management, whether forced or voluntary.   The estimates on Return$_{t-1}$, however, are both positively significant for the forced and voluntary turnovers, with p-values at 2.63% and 0.28%, respectively.   Higher stock returns associated with higher turnovers seem counter-intuitive.   This may be due to the existence of omitted variables that are correlated with our test variables.

Indeed, after a full set of control variables being introduced in Model 2, lag returns are no longer significant in either the forced or the voluntary group at any conventional levels, as the regression estimates shown in the first column of Table 3.

(Insert Table 3 here)

Lagged earnings remain highly significant (p-value at 0.01%) in the forced group but insignificant (p-value at 98.67%) for the voluntary group.   Earnings quality, as proxied by R^2_{t-1} of equation (3), is significant at 1.34%.

For the forced turnovers, the other driving factors in Model 2 are the firm's leverage, senior management's age and tenure, the duality of the General Manager and Chairman Positions, and management size.   The lagged leverage term, which is significantly positive at the 4.39% level, suggest that the firm's debt level can be a determining factor in its turnover decision.   Both the General Manager and Chairman's tenure is negatively significant at 0.01% level.   Duality is also significantly negative at the 0.01% level.   When the top manager serves as both the general manager and the chairman of the board for a long period of time, she is unlikely to be forced out of the company.   The General Manager's Age is positively significant at the 0.01% level.   The pseudo R^2

for the forced turnover is 34.98% and the Nagelkerke R^2 is 46.78%. Model 2 can predict 84.8% correctly for forced turnovers.

For the voluntary turnover firms, only the Age, Tenure and management size enter significantly into the regression with a pseudo R^2 of only 12.8%.

Results for the basic Model 2 are generally consistent with the previous findings (Firth, Fung and Rui, 2005; Chen, Li, Su and Tsui, 2004; and Chang and Wong, 2004) that forced turnovers in China are correlated with the firms' past earnings but not their returns. Seemingly, firms in China are quick to discipline their managers, as only lag-one earnings are significant in all the models. A firm with poor earnings is likely due to, or at least accompanied with, high debt levels. In addition, if the senior manager is less powerful, that is, not holding the two key positions of General Manager and Chairman in the company or with short tenure, she is likely to be out.

4.3. Non-core Earnings on Turnover Decision

Like most existing turnover studies on management turnover in China, our investigations so far concentrate on net earnings or ROA. As discussed in Section 2, Chinese GAAP requires companies to disclose, in addition to earnings from main operations, earnings from other business operations less operating expenses, administration expenses and financial expenses including loss on inventory price declines, and other income including investment gains and other miscellaneous items. To buttress our understanding of the turnover decision, we decompose the firm's net earnings into $EARN_t$, $REARN_t$ and $OEARN_t$ which are defined as follows[20]:

$EARN_t$ = income from main operation $_t$ / total assets $_{t-1}$

$REARN_t$ = (recurring income $_t$ – income of main operation $_t$) / total assets $_{t-1}$

$\qquad$ = (income from other operation $_t$ – operating expenses $_t$ – administrative expenses $_t$

$\qquad\qquad$ – financial expenses $_t$ – loss on inventory price decline $_t$) / total assets $_{t-1}$

$OEARN_t$ = (investment income $_t$ + future gain or losses $_t$ + non-operating revenue $_t$ –

$\qquad\qquad$ non-operating expenses $_t$ + adjustment to prior year profit or loss $_t$ – profit

$\qquad\qquad$ distributed to external units $_t$ + susidies $_t$) / total assets $_{t-1}$[21]

They are introduced into Model 2 labeled as Model 3A.

Model 3A: $\quad TURNOVER_t = \beta_0 + \beta_1 \, Size_t + \beta_2 \, EARN_{t-1} + \beta_3 \, Return_{t-1} + \beta_4 \, REARN_{t-1}$

$\qquad\qquad\qquad + \beta_5 \, OEARN_{t-1} + \beta_6 \, Control\ Variables + \varepsilon_t \qquad\qquad (4)$

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[20] Name of variables are taken from the CSMAR database. Please refer to the database for their exact definitions.
[21] See the Appendix in which we use the consolidated income statement of Shandong Dacheng Pesticide as an example to show how EARN, REARN, and OEARN are computed.

For Model 3A, as shown in the second column of Table 3, all three earnings components are significantly negative. Specifically, the coefficient estimates for $EARN_{t-1}$, $REARN_{t-1}$ and $OEARN_{t-1}$ are -7.32, -4.45 and -13.71 with p-values of 0.1%, 1.43% and 0.01%, respectively. Like Model 2, the $Return_{t-1}$ estimate is not significant at 54.85%. For the sample of voluntary turnovers, only $EARN_{t-1}$ and $REARN_{t-1}$ are significant at 0.12% and 2.62%, respectively but their correlation with the turnover decision is positive. In addition, the control variables of firm size, leverage, age, tenure and duality all have significant levels similar to those reported under Model 2.

Since many variables in Model 3A are highly correlated, as shown in Table 2 Panel D, the regression results in Table 4 may have a multicollinearity problem. For instance, the Pearson Correlation coefficient between $EARN_{t-1}$ and $REARN_{t-1}$ is -0.5665 with a p-value of 0.01% and between $EARN_{t-1}$ and $OEARN_{t-1}$ is 0.0525 with a p-value of 2.23%. Likewise, $REARN_{t-1}$ is also highly correlated with $Leverage_{t-1}$ with a correlation coefficient of -6.22% with a p-value less than 0.64%. This highlights the fact that $REARN_{t-1}$ has a significant component of financial expenses which correlates with the level of debts outstanding. In the example of Shandong Dacheng Pesticide in the Appendix, "income from other operation" of $REARN_{t-1}$ is merely RMB 0.29 million but "financial expenses" takes in RMB 14.50 million, which is quite typical in our sample firms. To mitigate the multicollinearity problem, we orthogonalize the variables $EARN_{t-1}$, $REARN_{t-1}$, $OEARN_{t-1}$, and $Leverage_{t-1}$ as follows.

$$REARN_{t-1} = \alpha_1 EARN_{t-1} + \alpha_2 Leverage_{t-1} + u_1 \qquad (5)$$

$$OEARN_{t-1} = \alpha_3 EARN_{t-1} + \alpha_4 Leverage_{t-1} + u_2 \qquad (6)$$

We denote the orthogonalized residual terms, u_1 and u_2 in equations (5) and (6) as $RREARN_{t-1}$ and $ROEARN_{t-1}$, respectively and re-run Model 3A by replacing $REARN_{t-1}$ with $RREARN_{t-1}$ and $OEARN_{t-1}$ with $ROEARN_{t-1}$, respectively as Model 3B. The results are presented in the third column of Table 3.

Essentially, the results in Model 3B are very similar to those in Model 3A. For the forced sample, $EARN_{t-1}$ is significant with a p-value of 1.66% while $RREARN_{t-1}$ has an estimated coefficient of -16.53 which is significant at 0.01%. $Leverage_{t-1}$ continues to be highly significant at 0.04%. As for other control variables, senior management tenure and Duality remain to contribute non-negligible incremental impact in the turnover decision with p-values all at the 0.01% level. The pseudo and Nagelkerke R^2s are 34.32% and 45.93%, respectively while the Model 4B can predict 84.7% correctly forced turnovers.

The results in this section consistently indicate that forced top management turnover decisions in Chinese firms are driven by recurrent non-core earnings and leverage in addition to the core earnings from main operations. Firm returns do not play any significant role in any of the models

that we have analyzed. To understand the implication behind, we need to note that other than "financial expenses", REARN $_{t-1}$ contains also heavy components in "operating expense" and "administrative expense". Again, in the Shandong Dacheng Pesticide case, the operating and administrative expenses take in values as large as RMB 17.19 million and RMB 33.38 million, respectively. Hence, our result suggests that large expenses might also trigger senior management turnovers. Furthermore, as we have already orthogonalized REARN $_{t-1}$ in Model 3B against core earnings and leverage, RREARN $_{t-1}$ captures the expenses effects on turnover decisions *in additional to* these two variables.

Altogether, the significance of these results suggests that if senior management cannot control effectively the overall expenses in general and the financing costs in particular, there will be a high probability that they will be forced out. This further implies that Chinese companies hold the senior management responsible for the controllability of the companies' leverage level. A recent paper by Faccio, Masulis, and McConnell (forthcoming) using a cross-country study finds that politically-connected firms are significantly more likely to be bailed out than similar non-connected firms, which they view as a possible explanation for prior findings that politically-connected firms borrow more than their non-connected peers. If the Chinese government is serious about revitalizing its SOEs to ensure no moral hazard problem of excessive borrowing of the SOEs, looking hard at the leverage level may indeed make economic sense.

5. Private versus Government Holdings

As China moves away from a central planned economy towards the so-called "Socialist market economy", one observes the emergence of Chinese firms owned by private individuals in addition to the "privatized" SOEs. The governance structure and incentive system of SOEs are conceivably different from those of privately owned companies. A natural expectation is that privately owned Chinese companies resemble more closely those in developed economies like the U.S. Recall that sample statistics in the previous section show that the average largest shareholding is 43.23% while the second largest shareholder owns only an average of 8.42%. Immediate comparisons may not be as imminent. It is, therefore, of interest to investigate how the top management turnover decision differs between these two types of companies.

Based on whether the largest ultimate shareholder is the government or a private individual, we partition our sample into government and private sub-samples. Our sample consists of 435 private firms and 1,571 SOEs.

(Insert Table 4 here)

Our focus is to investigate if there is any fundamental difference in the determinants of turnover decisions between government and private companies. The results are reported in Table 4.

15

An important result for the forced sample is that coefficient estimates on the core earnings are significant *only* for the private firms but not for the government companies. Specifically, the coefficient of core earnings from main operations, EARN $_{t-1}$ has a p-value of 0.72% for the private firms but a p-value of 42.43% for the government enterprises. For private firms, earnings quality as proxied by R^2_{t-1} is negatively significant at 0.7%, with the interactive variable "EARN $_{t-1} \times R^2_{t-1}$" also significant positively at the 0.56% statistical level. This result does not hold for government companies with the R^2_{t-1} at only 89.64% and the interactive earnings and R^2_{t-1} at 18.47%. Private companies evaluate the performance of their senior manager by earnings from the main operation. Consistent with the findings of Engel, Hayes and Wang (2003), and where these earnings figures are more reliable and informative, the board of private firms will be more likely to discipline their senior manager upon poor earnings performance. For the government firms, the earnings proxy is not significant at any conventional levels – suggesting that government companies do not use core earnings to evaluate management performance.

On the other hand, the estimated coefficient of recurring non-core earnings is insignificant for the private firms with the p-value equaling 36.41%, but highly significant for government enterprises with a p-value of 0.01%. As recurrent non-core earnings are highly correlated with financial expenses, it is not surprising that Leverage $_{t-1}$ is significant to the government companies with a coefficient estimate of 0.3052 and a p-value of 3.57%. Leverage also plays an important role in disciplining top management for the private companies. The coefficient estimate for them is 0.805 with a p-value of 3.13%. The pseudo R^2 for private firms is 53.24% while it remains at 29.19% for government firms, which are similar to those in our main analysis. This posits a very interesting hypothesis – private and government firms have distinctly different considerations on forced turnover decisions.

If the core earnings from main operations on the previous year fall below expectations, private firms on average tend to force the senior management out. This result is consistent with studies in developed countries, like the U.S. and the U.K., documented in the literature. However, government enterprises apparently are more concerned with their overall expenses and debt levels. If expenses and leverage exceed beyond reasonable bounds, government firms are likely to make their senior management accountable thereby increasing the likelihood of turnovers. This appears to be consistent with the "triangular debt" problem we mentioned before. It is also consistent with a recent survey showing that the amount of public money spent in a year by Chinese civil servants on transportation and entertainment take up a quarter of government's annual revenue. Energy consumption of government organizations is four times that of private organizations.[22] Our sample indicates that government firms scrutinize this issue more seriously in the sample period of 2000 through 2003.[23]

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[22] Hong Kong Economic Journal, July 4, 2005, p.25.
[23] We have also split the private and government firms based on major shareholder holding less than or more than 30% of the firm's shares to see if ownership concentration affects turnover decisions. We found no

6. General Manager versus Chairman Turnovers

As a sensitivity analysis, we dichotomize the full sample into General Manager and Chairman sub-samples. Since over 21% of our sample firms have top managers serving both as the General Manager and the Chairman of the Board, we include these firms in both the General Manager and the Chairman sub-samples. Consequently, the two sub-samples overlap to a certain extent and Table 5 tabulates the results.

(Insert Table 5 here)

Like the main results in Model 3B, for the overall sample, RREARN$_{-1}$ is still statistically negatively significant at the 0.01% level in both forced Chairman and forced General Manager turnover. EARN $_{t-1}$, however, is marginally significant at 6.94% for General Manager but highly significant at 0.13% for Chairman. For voluntary turnovers, the results are mixed. Some components of earnings are significant. There are not clear patterns of the importance of these earnings components on the determination of the turnovers. The pseudo R^2s for General Manager and Chairman forced turnovers are 30.88% and 26.85%, respectively and the models predict correctly 83.6% for General Manager and 82.1% for Chairman departures.

When the General Manager and Chairman departures are classified according to majority ownership, we obtain almost identical results as in the main analyses. For private firms, both the General Manager and Chairman forced turnovers have very significant estimates for EARN $_{t-1}$ (with p-values of 0.97% and 0.1% for the two groups respectively), but insignificant for government firms. The corresponding earnings quality proxy, R^2 $_{t-1}$, is significant at 1.25% for General Manager and 0.03% for Chairman. For the RREARN $_{t-1}$, the estimates are not significant for private companies at any conventional levels, but significant for government firms, both of which are significant at 0.01% for the two types of senior management. Likewise, the earnings quality proxy is not significant.

Age, Leverage and Tenure are all significant for both General Manager and Chairman regardless of either ownership types.

6. Conclusion

Studies on management turnovers in China typically show that the turnover decisions are triggered by poor accounting performance though not by poor market performance. Yet, Chinese companies do not seem to improve much in their performance subsequent to turnovers. This study attempts to shed light on this puzzling phenomenon by going beyond the gross earnings figures. We exploit the Chinese accounting disclosure requirement of disaggregating net income before tax into

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substantial differences. Specifically, the forced turnover decisions for private firms and government firms are still significantly negatively correlated respectively with EARN$_{-1}$ and RREARN$_{-1}$, no matter the major shareholder owns more than or less than 30% of all outstanding shares. Results are available upon request.

core earnings from main operation, recurring non-core earnings, and other non-recurring non-core earnings and get intriguing results. For the 1,123 turnover incidences of Chinese firms over the sample period of 2000–2003, we show that although forced turnovers are related with poor accounting earnings, as documented in other studies, the turnover decision variables are actually different for different groups of firms. For private firms, the "usual" relationship between forced turnovers and poor core earnings is recorded. For government firms, however, forced turnovers are *not* driven by the core earnings. Instead, forced turnover decisions are consistently, significantly, negatively related with recurrent non-core earnings that are significantly correlated with overall expenses and the firms' outstanding debt level. These negative relationships do not diminish after being controlled for firm and senior management's personal characteristics.

Apparently, Chinese government firms and private firms use different decision variables when forcing out their top management. Chinese private firms respond to poor financial performance in terms of the core earnings by firing the top management in a manner similar to their western counterparts; while for government firms, senior management people face turnover penalty if they fail to control the leverage level and the overall expenses. As argued before, such turnover decision basis may be rational under the scenario that serious debt, related lending and guaranteed loans, and reckless spending problems are commonly observed in government firms. To the extent that controlling expenses and debt level do not automatically lead to earnings improvements, we partly explain why turnovers in Chinese firms, though frequent, do not necessarily result in performance improvements.

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Table 1

Stated Reasons for Top Management Turnovers in Chinese Listed Companies

(2000 – 2003)

This table summarizes the reasons for top management leaving their companies as stated in the financial statements. Top management is defined as the set of individuals holding the title "general manager" or "chairman of the board". If a company involves top management change of two or more individuals within a year, it is treated as one change.

	Reason of Changes	2000	2001	2002	2003	Total	Ratio of total turnover
Forced	Resignation	53	82	85	97	317	0.281
	Assume another position within firm	49	50	76	67	242	0.215
	No reason	40	15	13	38	106	0.094
	Fired	4	3	8	9	24	0.021
	Sub-total	146	150	182	211	689	0.611
Voluntary	Succession	44	32	42	31	149	0.132
	Title change	32	30	33	9	104	0.092
	Control change	8	17	45	28	98	0.087
	Retirement	6	10	26	13	55	0.049
	Health/Death	2	1	2	6	11	0.011
	Regulation		5	6		11	0.011
	Study/Being a mayor	2	1	2	1	6	0.006
	Sub-total	94	96	156	88	434	0.388
	Total turnover of the year	240	246	338	299	1123	1
	Control sample	183	199	249	252	883	
Total		423	445	587	551	2006	

Table 2

Descriptive Statistics

This table presents simple descriptive statistics on the variables of interests. TURNOVER $_t$ takes the value of one for firms with a turnover at year t and the value zero for control firms with no top management turnover. Size $_t$ is measured as the natural log of total assets of the firm at the beginning of the year. NetEARN $_t$ is the income before tax in year t. EARN $_t$ is the annual income from main operations (excluding of operating, administrative, and financial expenses). Return $_t$ denotes the annual stock returns. REARN $_t$ is the annual earnings from "other" operating units minus operating, administrative, and financial expenses. OEARN $_t$ includes all other revenues and expenses which are non-routine and non-recurring in nature. All earnings variables are normalized by total assets at the beginning of the year. Control variables include R^2_t which is the R-squared value of the regression: NetEARN $_t$ = a_0 + a_1 NEG $_t$ + b_1 Return $_t$ + b_2 NEG $_t$*Return $_t$ + ε_t. Leverage $_t$ is total debt over total common equity. SalesGrowth $_t$ = (Sales $_t$ − Sales $_{t-1}$) / Sales $_{t-1}$. GM/Chairman Age $_t$ is the age of the general manager or chairman when turnover occurs. GM/Chairman Tenure $_t$ is the years general manager or chairman has served in the position before turnover. Duality $_t$ takes the value of 1 if the manager holds both the title of general manager and chairman, and 0 otherwise. Mgtsize $_t$ is the number of the top management team. Holding1/2 $_t$ is the percentage shareholding of the largest/second largest shareholder.

Panel A. Full Sample

	N	Mean	Std Dev	Median	Minimum	Maximum
Turnover	2006	0.5598	0.4965	1	0	1
Size	1986	20.9269	0.8566	20.8782	17.5534	26.6324
NetEarn $_{t-1}$	1922	0.0450	0.0676	0.0499	-0.2731	0.2412
EARN $_{t-1}$	1922	0.1216	0.0864	0.1095	-0.1159	0.8585
Return $_{t-1}$	1839	-0.0028	0.0223	-0.0021	-0.0865	0.0689
REARN $_{t-1}$	1922	-0.0866	0.0690	-0.0724	-0.8197	0.0376
OEARN $_{t-1}$	1926	0.0077	0.0450	0.0043	-1.1448	0.4075
R^2_{t-1}	1987	0.5808	0.3268	0.5879	0.0003	1
Leverage $_{t-1}$	1984	1.3148	3.7814	0.8173	-12.2464	87.6428
SalesGrowth $_{t-1}$	1957	0.3650	3.7622	0.1148	-1.4545	144.7235
GM_Age	1995	45.8511	7.4940	46	27	83
GM_Tenure	1616	3.3082	2.0363	3	1	15
Chairman Age	2000	50.0590	7.8780	50	26	85
Chairman Tenure	2006	4.2565	2.8493	3.5	1	19
Duality	2000	0.2140	0.4102	0	0	1
Mgtsize	2005	16.5292	3.7124	16	8	32
Holding1	2006	43.2272	17.6992	41.6300	0.4090	90
Holding2	2006	8.4240	8.1706	5.3500	0.0600	37.3900

Table 2 (Cont'd)

Panel B. Sub-samples

	Forced		Voluntary		Control		Forced/ Voluntary**	Forced/ Control*	Control/ Voluntary
	N	Mean	N	Mean	N	Mean			
Size	683	20.7375	429	20.8580	874	21.1088	**0.0269**	**0.0001**	**0.0001**
NetEarn $_{t-1}$	657	0.0227	416	0.04366	849	0.0629	**0.0001**	**0.0001**	**0.0001**
EARN $_{t-1}$	660	0.1015	416	0.1178	846	0.1391	**0.0030**	**0.0001**	**0.0001**
Return $_{t-1}$	629	-0.0029	397	-0.0008	813	-0.0037	0.1427	0.4906	**0.0251**
REARN $_{t-1}$	659	-0.0887	415	-0.0859	848	-0.0854	0.5422	0.3361	0.9121
OEARN $_{t-1}$	661	0.0021	417	0.0084	848	0.0117	**0.0413**	**0.0003**	0.1153
R^2_{t-1}	680	0.5400	432	0.5277	875	0.6388	0.5435	**0.0001**	**0.0001**
Leverage $_{t-1}$	681	1.5391	429	1.8294	874	0.8875	0.3938	**0.0001**	**0.0022**
SalesGrowth $_{t-1}$	673	0.5029	427	0.4298	857	0.2245	0.7906	0.2179	0.1970
GM Age	681	45.1733	433	47.0023	881	45.8093	**0.0002**	0.0856	**0.0104**
GM Tenure	662	2.4215	199	3.3769	755	4.0675	**0.0001**	**0.0001**	**0.0001**
Chairman Age	685	48.8818	432	51.3611	883	50.3352	**0.0001**	**0.0002**	**0.0372**
Chairman	689	3.2700	434	3.6521	883	5.3233	**0.0120**	**0.0001**	**0.0001**
Duality	686	0.1195	432	0.2824	882	0.2540	**0.0001**	**0.0001**	0.2719
Mgtsize	689	16.6255	434	16.8594	882	16.2914	0.2814	0.0748	**0.0111**
Holding1	689	41.7766	434	41.7331	883	45.0936	0.9674	**0.0002**	**0.0013**
Holding2	689	8.8817	434	8.3942	883	8.0815	0.3293	0.0548	0.5129

*p-values for the differences in means between categories

23

Table 2 (Cont'd)

Panel C. Sub-samples (Private and Government Ownership*)

	Private* (major shareholder)					Government* (major shareholder)					Private/ Government*	
	Forced		Voluntary		Forced/	Forced		Voluntary		Forced/	Forced/	Voluntary/
	N	Mean	N	Mean	Voluntary**	N	Mean	N	Mean	Voluntary**	Forced**	Voluntary**
Size	169	20.3985	108	20.5555	0.1186	514	20.8490	321	20.9597	0.0766	**0.0001**	**0.0001**
NetEARN $_{t-1}$	163	0.0249	104	0.0398	0.1162	494	0.0219	312	0.0450	**0.0001**	0.6784	0.5310
EARN $_{t-1}$	163	0.1019	103	0.1226	0.1325	497	0.1013	313	0.1162	**0.0138**	0.9504	0.5426
Return $_{t-1}$	159	-0.0044	101	0.0010	0.0569	470	-0.0024	296	-0.0014	0.5448	0.3506	0.3506
REARN $_{t-1}$	161	-0.0884	104	-0.0838	0.6346	498	-0.0888	311	-0.0865	0.6723	0.9534	0.7625
OEARN $_{t-1}$	163	0.0048	104	0.0001	0.3448	498	0.0012	313	0.0112	**0.0076**	0.3958	**0.0198**
R^2 $_{t-1}$	169	0.5290	104	0.5263	0.9490	511	0.5436	324	0.5281	0.5066	0.6142	0.9603
Leverage $_{t-1}$	168	1.3244	108	1.7829	0.3903	513	1.6094	321	1.8450	0.5730	0.2205	0.9221
SalesGrowth $_{t-1}$	168	0.4427	108	0.4279	0.9521	505	0.5229	319	0.4305	0.7962	0.8184	0.9921
GM Age	164	43.3476	108	45.3796	0.0522	517	45.7524	325	47.5415	**0.0008**	**0.0002**	**0.0309**
GM Tenure	160	2.1875	108	3.2558	**0.0003**	502	2.4960	156	3.4103	**0.0001**	**0.0132**	0.6409
Chairman Age	166	44.5060	43	48.8426	**0.0003**	519	50.2813	324	52.2006	**0.0004**	**0.0001**	**0.0027**
Chairman Tenure	169	2.5000	108	3.5463	**0.0007**	520	3.5202	326	3.6871	0.3430	**0.0001**	0.6189
Duality	166	0.1807	108	0.3241	**0.0089**	520	0.1000	324	0.2685	**0.0001**	**0.0144**	0.2677
Mgtsize	169	15.6982	108	15.6852	0.9740	520	16.9269	326	17.2485	0.2030	**0.0001**	**0.0001**
Holding1	169	33.7270	108	31.2426	0.1559	520	44.3927	326	45.2085	0.5043	**0.0001**	**0.0001**
Holding2	169	11.5278	108	11.5821	0.9533	520	8.0218	326	7.3381	0.2348	**0.0001**	**0.0001**

*Demarcation of privately owned and government-owned enterprises is based on whether the largest ultimate shareholder is a private individual or the state government or a government agent.

**p-values for the differences in means between categories

Table 2 (Cont'd)

Panel D Pearson and Spearman Correlation Coefficients

	Turnover	Size	NetEARN$_{t-1}$	EARN$_{t-1}$	REARN$_{t-1}$	OEARN$_{t-1}$	Return$_{t-1}$	$R^2{}_{t-1}$	Leverage$_{t-1}$
Turnover		-0.1883	-0.2359	-0.1801	-0.0162	-0.0793	0.0370	-0.1574	0.1003
		(0.0001)	**(0.0001)**	**(0.0001)**	(0.4777)	**(0.0005)**	(0.1131)	**(0.0001)**	**(0.0001)**
Size	-0.2004		0.1391	0.1432	0.0274	0.0842	0.0025	0.0716	0.0031
	(0.0001)		**(0.0001)**	**(0.0001)**	(0.2297)	**(0.0002)**	(0.3373)	**(0.0015)**	(0.8919)
NetEARN$_{t-1}$	-0.2314	0.0952		0.6015	0.0985	0.0525	0.0298	0.0767	-0.0344
	(0.0001)	**(0.0001)**		**(0.0001)**	**(0.0001)**	**(0.0223)**	(0.2075)	**(0.0008)**	(0.1315)
EARN$_{t-1}$	-0.2118	0.1239	0.7031		-0.5665	0.0525	0.0298	0.0767	-0.0344
	(0.0001)	**(0.0001)**	**(0.0001)**		**(0.0001)**	**(0.0223)**	(0.2075)	**(0.0008)**	(0.1315)
REARN$_{t-1}$	-0.0147	0.0616	0.0862	-0.4584		0.2555	0.0710	0.0377	-0.0622
	(0.5193)	**(0.0069)**	**(0.0002)**	**(0.0001)**		**(0.0001)**	**(0.0026)**	==(0.0994)==	**(0.0064)**
OEARN$_{t-1}$	-0.0461	-0.0159	0.3053	0.0330	0.1117		0.0953	0.0011	0.0004
	(0.0432)	(0.4859)	**(0.0001)**	(0.1514)	**(0.0001)**		**(0.0001)**	(0.9632)	(0.9878)
Return$_{t-1}$	0.0512	0.0004	0.0982	0.0284	0.0602	0.0958		-0.0169	0.0252
	(0.0281)	(0.9870)	**(0.0001)**	(0.2294)	**(0.0107)**	**(0.0001)**		(0.4715)	(0.2814)
$R^2{}_{t-1}$	-0.1617	0.0661	0.0951	0.0849	0.0501	-0.0243	-0.0296		-0.0914
	(0.0001)	**(0.0033)**	**(0.0001)**	**(0.0002)**	**(0.0285)**	(0.2884)	(0.2058)		**(0.0001)**
Leverage$_{t-1}$	0.1507	0.1564	-0.3479	-0.1171	-0.2592	-0.0523	-0.0131	-0.1384	
	(0.0001)	**(0.0001)**	**(0.0001)**	**(0.0001)**	**(0.0001)**	**(0.0219)**	(0.5765)	**(0.0001)**	

* Parentheses are p-values against the null hypothesis of no correlation between variables. Pearson correlations are presented on the upper triangle while Spearman correlations are on the lower.

Table 3

Logit Regression Estimates of the Probabilities of CEO Turnovers (Basic Models)

This table presents the logit regression results of the following models:

Model 2: $\text{TURNOVER}_t = \beta_0 + \beta_1 \text{Size}_t + \beta_2 \text{NetEARN}_{t-1} + \beta_3 \text{Return}_{t-1} + \beta_4 R^2_{t-1} + \beta_5 \text{NetEARN}_{t-1} * R^2_{t-1}$
$+ \beta_6 \text{Leverage}_t + \beta_7 \text{Leverage}_{t-1} + \beta_8 \text{SalesGrowth}_t + \beta_9 \text{SalesGrowth}_{t-1}$
$+ \beta_{10} \text{GM Age}_t + \beta_{11} \text{GM Tenure}_t + \beta_{12} \text{Chairman Age}_t + \beta_{13} \text{Chairman Tenure}_t$
$+ \beta_{14} \text{Duality}_t + \beta_{15} \text{Mgtsize}_t + \beta_{16} \text{Holding1}_t + \beta_{17} \text{Holding2}_t + \varepsilon_t$

Model 3A: $\text{TURNOVER}_t = \beta_0 + \beta_1 \text{Size}_t + \beta_2 \text{EARN}_{t-1} + \beta_3 \text{Return}_{t-1} + \beta_4 \text{REARN}_{t-1} + \beta_5 \text{OEARN}_{t-1}$
$+ \text{Control Variables} + \varepsilon_t$

Model 3B: $\text{TURNOVER}_t = \beta_0 + \beta_1 \text{Size}_t + \beta_2 \text{EARN}_{t-1} + \beta_3 \text{Return}_{t-1} + \beta_4 \text{RREARN}_{t-1} + \beta_5 \text{ROEARN}_{t-1}$
$+ \text{Control Variables} + \varepsilon_t$

TURNOVER_t is binary that takes the value of 1 for firms with a turnover at year t and 0 otherwise. Size_t is the natural log of total assets of the firm at the beginning of the year. EARN_t, REARN_t, and OEARN_t are, respectively, the annual income from main operations (excluding operating, administrative, and financial expenses), the annual earnings from "other" operating units minus operating, administrative, and financial expenses, and all other revenues and expenses which are non-routine and non-recurring in nature. EARN_t, REARN_t, and OEARN_t are all normalized by total assets at the beginning of the year. Return_t is the annual stock return. RREARN_t and ROEARN_t are the orthogonalized residuals of REARN_t and OEARN_t, respectively. Control variables include R^2_t is the R-squared value of the regression: $\text{NetEARN}_t = a_0 + a_1 \text{NEG}_t + b_1 \text{Return}_t + b_2 \text{NEG}_t * \text{Return}_t + \varepsilon_t$. Leverage_t is total debt over total common equity. $\text{SalesGrowth}_t = (\text{Sales}_t - \text{Sales}_{t-1}) / \text{Sales}_{t-1}$. GM/Chairman Age_t is the age of the general manager or chairman when turnover occurs. GM/Chairman Tenure_t is the number of years the general manager or chairman has served the position before turnover. Duality_t takes the value of 1 if the manager holds both the title of general manager and chairman, and 0 otherwise. Mgtsize_t is the number of the top management team. Holding1/2_t is the percentage shareholding of the largest/second largest shareholder. Our demarcation of privately owned and government-owned enterprises is based on whether the largest ultimate shareholder is a private individual or the state government or a government agent. Figures inside the parentheses are the p-values.

	Model 2		Model 3A		Model 3B	
	Forced	Voluntary	Forced	Voluntary	Forced	Voluntary
Intercept	9.6623	-5.2433	10.0128	-6.0700	10.7654	-6.7132
	(0.0001)	**(0.0389)**	**(0.0001)**	**(0.0267)**	**(0.0001)**	**(0.0118)**
Size	-0.4503	0.0134	-0.4641	-0.0029	-0.4991	0.0658
	(0.0001)	(0.9128)	**(0.0001)**	(0.9825)	**(0.0001)**	(0.6041)
$NetEARN_{t-1}$	-11.2062	0.0624				
	(0.0001)	(0.9867)				
$EARN_{t-1}$			-7.3157	10.1586	-5.3575	3.9820
			(0.0010)	**(0.0012)**	**(0.0166)**	**(0.0442)**
$Return_{t-1}$	3.0043	3.3644	2.0573	3.3866	1.6289	5.1122
	(0.3773)	(0.4615)	(0.5485)	(0.4683)	(0.6371)	(0.2691)
$REARN_{t-1}$			-4.4481	6.7943		
			(0.0143)	**(0.0262)**		
$OEARN_{t-1}$			-13.7131	-3.3068		
			(0.0001)	(0.4780)		
$RREARN_{t-1}$					-16.5263	-0.1234
					(0.0001)	(0.9830)
$ROEARN_{t-1}$					-6.3779	0.5030
					(0.2153)	(0.9438)
R^2_{t-1}	-0.7352	-0.5222	-0.6408	0.7947	-0.7723	0.5905
	(0.0134)	(0.2527)	(0.1556)	(0.1526)	(0.0896)	(0.2670)
$NetEARN_{t-1} \times R^2_{t-1}$	2.3921	0.5901				
	(0.5464)	(0.9204)				
$EARN_{t-1} \times R^2_{t-1}$			-0.9829	-9.3289	2.1039	-7.7250
			(0.7631)	**(0.0073)**	(0.5058)	**(0.0168)**
Leverage	0.1328	-0.1582	0.1533	-0.1991	0.1200	-0.1304
	(0.1404)	(0.3997)	(0.0789)	(0.3217)	(0.2322)	(0.5244)
$Leverage_{t-1}$	0.2482	0.3089	0.2300	0.5180	0.4868	0.3087
	(0.0439)	(0.1568)	**(0.0343)**	**(0.0341)**	**(0.0004)**	(0.2010)
SalesGrowth	-0.0079	-0.0822	-0.0118	-0.1912	-0.0113	-0.3013
	(0.7695)	(0.6175)	(0.6237)	(0.3795)	(0.6195)	(0.1949)
$SalesGrowth_{t-1}$	0.0088	0.0762	-0.0068	-0.6118	-0.2323	0.0965
	(0.8517)	(0.5035)	(0.9441)	**(0.0341)**	(0.1064)	(0.4597)
GM Age	0.0478	0.0284	0.0411	0.0289	0.0427	0.0297
	(0.0001)	(0.0515)	**(0.0003)**	(0.0584)	**(0.0002)**	**(0.0446)**
GM Tenure	-0.4764	-0.1471	-0.4664	-0.1570	-0.4657	-0.1550
	(0.0001)	**(0.0075)**	**(0.0001)**	**(0.0059)**	**(0.0001)**	**(0.0056)**
Chairman Age	0.0022	0.0721	0.0015	0.0723	-0.0014	0.0664
	(0.8385)	**(0.0001)**	(0.8880)	**(0.0001)**	(0.8978)	**(0.0001)**
Chairman Tenure	-0.2498	-0.2326	-0.2382	-0.2225	-0.2485	-0.2293
	(0.0001)	**(0.0001)**	**(0.0001)**	**(0.0001)**	**(0.0001)**	**(0.0001)**
Duality	-0.9066	0.6973	-0.8257	0.6989	-0.8766	0.7020
	(0.0001)	**(0.0020)**	**(0.0001)**	**(0.0028)**	**(0.0001)**	**(0.0024)**
Mgtsize	0.0661	0.0512	0.0869	0.0684	0.0717	0.0549
	(0.0012)	**(0.0364)**	**(0.0001)**	**(0.0086)**	**(0.0005)**	**(0.0296)**
Holding1	-0.0092	-0.0089	-0.0076	-0.0088	-0.0087	-0.0089
	(0.0566)	(0.1485)	(0.1120)	(0.1659)	(0.0739)	(0.1559)
Holding2	-0.0194	-0.0298	0.0222	-0.0269	-0.0251	0.0276
	(0.0500)	**(0.0178)**	**(0.0260)**	**(0.0392)**	**(0.0140)**	**(0.0336)**
N	1255	870	1229	870	1216	850
Pseudo R2	0.3498	0.1280	0.3444	0.1280	0.3432	0.1297
Nagelkerke R2	0.4678	0.1992	0.4608	0.1992	0.4593	0.2024
% Concordant	84.8	74.1	84.7	75.7	84.7	74.3

Table 4
Logit Regression Estimates of the Probabilities of Senior Management Turnovers
(Private versus Government)

This table presents the logit regression results of the following model:

$$\text{TURNOVER}_t = \beta_0 + \beta_1 \text{ Size}_t + \beta_2 \text{ EARN}_{t-1} + \beta_3 \text{ Return}_{t-1} + \beta_4 \text{ RREARN}_{t-1} + \beta_5 \text{ ROEARN}_{t-1} + \beta_6 \text{ Control Variables} + \varepsilon_t$$

TURNOVER_t is binary that takes the value of 1 for firms with a turnover at year t and 0 otherwise. Size_t is the natural log of total assets of the firm at the beginning of the year. EARN_t, REARN_t, and OEARN_t are, respectively, the annual income from main operations (excluding of operating, administrative, and financial expenses), the annual earnings from "other" operating units minus operating, administrative, and financial expenses, and all other revenues and expenses which are non-routine and non-recurring in nature. EARN_t, REARN_t, and OEARN_t are all normalized by total assets at the beginning of the year. Return_t is the annual stock return. RREARN_t and ROEARN_t are the orthogonalized residuals of REARN_t and OEARN_t, respectively. Control variables include R^2_t is the R-squared value of the regression: $\text{NetEARN}_t = a_0 + a_1 \text{ NEG}_t + b_1 \text{ Return}_t + b_2 \text{ NEG}_t*\text{Return}_t + \varepsilon_t$. Leverage_t is total debt over total common equity. $\text{SalesGrowth}_t = (\text{Sales}_t - \text{Sales}_{t-1}) / \text{Sales}_{t-1}$. GM/Chairman Age$_t$ is the age of the general manager or chairman when turnover occurs. GM/Chairman Tenure$_t$ is the number of years the general manager or chairman has served the position before turnover. Duality$_t$ takes the value of 1 if the manager holds both the title of general manager and chairman, and 0 otherwise. Mgtsize$_t$ is the number of the top management team. Holding1/2$_t$ is the percentage shareholding of the largest/second largest shareholder. Our demarcation of privately owned and government-owned enterprises is based on whether the largest ultimate shareholder is a private individual or the state government or a government agent. Figures inside the parentheses are the p-values.

	Private (major shareholder)		Government (major shareholder)	
	Forced	Voluntary	Forced	Voluntary
Intercept	17.3389	5.4592	8.3862	-11.2001
	(0.0051)	(0.4858)	**(0.0004)**	**(0.0003)**
Firm Size	-0.7493	-0.4993	-0.4322	0.1356
	(0.0061)	(0.1584)	**(0.0002)**	(0.3850)
EARN_{t-1}	-21.4535	3.3252	-1.8499	5.2853
	(0.0072)	(0.4829)	(0.4243)	**(0.0276)**
Return_{t-1}	0.1617	0.8596	-1.7266	-4.3351
	(0.9826)	(0.9158)	(0.5714)	(0.3148)
RREARN_{t-1}	-10.5215	-9.4862	-17.7688	-3.6389
	(0.3641)	(0.5454)	**(0.0001)**	(0.5683)
ROEARN_{t-1}	-22.5274	-6.1766	-4.9522	8.1172
	(0.1427)	(0.6920)	(0.3763)	(0.3375)
R^2_{t-1}	-3.6005	0.2818	-0.0639	0.6890
	(0.0070)	(0.8265)	(0.8964)	(0.2752)
$\text{EARN}_{t-1} \times R^2_{t-1}$	27.0320	1.7202	-4.6057	-11.9795
	(0.0056)	(0.8068)	(0.1847)	**(0.0032)**
Leverage	0.3095	0.0581	0.1476	0.1526
	(0.2543)	(0.9112)	(0.1687)	(0.3401)
Leverage_{t-1}	0.8050	0.4824	0.3052	-0.0636
	(0.0313)	(0.3918)	**(0.0357)**	(0.6448)
Sales Growth	-0.1417	-1.2093	-0.0063	-0.1081
	(0.6028)	(0.0843)	(0.7973)	(0.6585)
Sales Growth $_{t-1}$	0.2549	0.3662	-0.1985	-0.2902
	(0.6115)	(0.1015)	(0.1853)	(0.1914)
GM age	0.0880	0.1340	0.0363	0.0329
	(0.0145)	**(0.0053)**	**(0.0024)**	(0.0508)
GM tenure	-0.7724	-0.3885	-0.3999	-0.0836
	(0.0001)	**(0.0152)**	**(0.0001)**	(0.1902)
Chairman age	-0.0037	-0.0278	0.0044	0.1093
	(0.9055)	(0.4685)	(0.7230)	**(0.0001)**
Chairman tenure	-0.4131	-0.1869	-0.2187	-0.2664
	(0.0001)	(0.0518)	**(0.0001)**	**(0.0001)**
Duality	-1.1518	0.6482	-0.8386	0.5900
	(0.0254)	(0.2048)	**(0.0007)**	**(0.0327)**
Mgtsize	0.0769	0.1270	0.0699	0.0582
	(0.2279)	(0.0673)	**(0.0017)**	**(0.0448)**
Holding1	-0.0042	-0.0359	-0.0024	0.0012
	(0.8006)	(0.0596)	(0.6560)	(0.8665)
Holding2	-0.1012	-0.0788	-0.0139	-0.0363
	(0.0020)	(0.0583)	(0.2167)	**(0.0193)**
N	267	176	983	698
Pseudo R^2 Concordant	0.5324	0.2833	0.2919	0.1492
Nagelkerke R^2	0.7099	0.4307	0.3916	0.2357
% Concordant	93.9	84.7	81.5	76.3

Table 5
Logit Regression Estimates of the Probabilities of General Manager (GM) Turnovers
(Three Earnings Components)

This table presents the logit regression results of the following model:

$$\text{TURNOVER}_t = \beta_0 + \beta_1 \text{ Size}_t + \beta_2 \text{ EARN}_{t-1} + \beta_3 \text{ Return}_{t-1} + \beta_4 \text{ RREARN}_{t-1} + \beta_5 \text{ ROEARN}_{t-1} + \beta_6 \text{ Control Variables} + \varepsilon_t$$

TURNOVER_t takes the value of one for firms with a turnover at year t and the value zero for control firms with no top management turnover. Size_t is measured as the natural log of total assets of the firm at the beginning of the year. EARN_t is the annual income from main operations (excluding of operating, administrative, and financial expenses) normalized by its total assets at the beginning of the year. Return_t denotes the annual stock returns. RREARN_t and ROEARN_t are the orthogonalized residuals of REARN_t against EARN_t and Leverage_t, and OEARN_t against EARN_t and Leverage_t respectively. REARN_t is the annual earnings from "other" operating units minus operating, administrative, and financial expenses, and OEARN_t includes all other revenues and expenses which are non-routine and non-recurring in nature. REARN_t and OEARN_t are normalized by its total assets at the beginning of the year. Control variables include R^2_t is the R-squared value of the regression: $\text{NetEARN}_t = a_0 + a_1 \text{ NEG}_t + b_1 \text{ Return}_t + b_2 \text{ NEG}_t*\text{Return}_t + \varepsilon_t$. Leverage_t is total debt over total common equity. $\text{SalesGrowth}_t = (\text{Sales}_t - \text{Sales}_{t-1}) / \text{Sales}_{t-1}$. GM/Chairman Age_t is the age of the general manager or chairman when turnover occurs. GM/Chairman Tenure_t is the number of years general manager or chairman has served the position before turnover. Duality_t takes the value of 1 if the manager holds both the title of general manager and chairman, and 0 otherwise. Mgtsize_t is the number of the top management team. Holding1/2_t is the percentage shareholding of the largest/second largest shareholder. Figures inside the parentheses are the p-values.

Panel A. GM Turnovers

	Overall		Private		Government	
	Forced	Voluntary	Forced	Voluntary	Forced	Voluntary
Intercept	10.6129	-1.8017	24.5208	10.8468	8.2811	-3.5101
	(0.0001)	(0.5380)	**(0.0003)**	(0.2544)	**(0.0009)**	(0.2993)
Firm Size	-0.5933	-0.1729	-1.0808	-0.7664	-0.5254	-0.1535
	(0.0001)	(0.2291)	**(0.0002)**	(0.0731)	**(0.0001)**	(0.3566)
EARN $_{t-1}$	-4.3073	5.7563	-22.8290	6.6654	-0.8696	6.9402
	(0.0694)	**(0.0032)**	**(0.0097)**	(0.1680)	(0.7273)	**(0.0030)**
Return $_{t-1}$	-1.6921	-5.7513	-3.0656	-1.3857	-2.7086	-5.8033
	(0.5543)	(0.1647)	(0.6924)	(0.8679)	(0.3965)	(0.2381)
RREARN $_{t-1}$	-17.1290	-0.6057	-16.2560	-17.1950	-17.8017	-0.6047
	(0.0001)	(0.9222)	(0.1843)	(0.2688)	**(0.0001)**	(0.9317)
ROEARN $_{t-1}$	-8.5493	-4.3988	-28.5832	-6.4648	-6.4702	0.7242
	(0.1116)	(0.5570)	(0.0701)	(0.6991)	(0.2793)	(0.9343)
R^2_{t-1}	-0.4566	0.8412	-3.5109	1.1802	0.0634	1.2369
	(0.3322)	(0.1408)	**(0.0125)**	(0.3979)	(0.9032)	**(0.0626)**
EARN $_{t-1} \times R^2_{t-1}$	-0.2261	-10.6564	28.1948	-2.2446	-6.3447	-15.6501
	(0.9465)	**(0.0020)**	**(0.0077)**	(0.7619)	(0.0929)	**(0.0003)**
Leverage	0.1384	0.2087	0.3207	0.1593	0.1509	0.1804
	(0.1809)	(0.1818)	(0.1891)	(0.7449)	(0.2017)	(0.3081)
Leverage $_{t-1}$	0.4298	-0.0370	0.9054	0.3256	0.2787	0.0119
	(0.0021)	(0.7814)	**(0.0126)**	(0.5302)	(0.0632)	(0.9328)
Sales Growth	-0.0026	-0.2069	-0.3790	-1.5653	0.0009	0.0532
	(0.9115)	(0.3576)	(0.2407)	**(0.0267)**	(0.9745)	(0.8184)
Sales Growth $_{t-1}$	-0.1154	0.1832	0.3427	0.4654	-0.1979	-0.0151
	(0.4394)	(0.0966)	(0.4951)	(0.1019)	(0.2239)	(0.9428)
GM age	0.0525	0.0722	0.0686	0.1007	0.0509	0.0842
	(0.0001)	**(0.0001)**	**(0.0409)**	**(0.0068)**	**(0.0001)**	**(0.0001)**
GM tenure	-0.6522	-0.2936	-1.0903	-0.4475	-0.5807	-0.2552
	(0.0001)	**(0.0001)**	**(0.0001)**	**(0.0037)**	**(0.0001)**	**(0.0001)**
Duality	-0.4922	0.9016	-0.8424	0.8266	-0.5359	0.7813
	(0.0254)	**(0.0001)**	(0.0898)	(0.1185)	**(0.0451)**	**(0.0036)**
Mgtsize	0.0511	0.0391	0.0276	0.0685	0.0608	0.0408
	(0.0153)	(0.1491)	(0.6825)	(0.3459)	**(0.0098)**	(0.2008)
Holding1	0.0060	-0.0024	-0.0022	-0.0431	0.0122	0.0092
	(0.2301)	(0.7245)	(0.8974)	**(0.0446)**	**(0.0299)**	(0.2357)
Holding2	-0.0014	-0.0091	-0.0930	-0.0980	0.0114	-0.0080
	(0.8949)	(0.5193)	**(0.0069)**	**(0.0411)**	(0.3320)	(0.6205)
N	1108	832	241	171	867	661
Pseudo R^2	0.3088	0.0999	0.5078	0.2633	0.2763	0.0935
Nagelkerke R^2	0.4211	0.1685	0.6808	0.4133	0.3794	0.1614
% Concordant	83.6	71.5	92.9	84.6	81.8	72.1

Table 5

Logit Regression Estimates of the Probabilities of General Manager (GM) Turnovers

(Cont'd)

Panel B. Chairman Turnovers

	Overall		Private		Government	
	Forced	Voluntary	Forced	Voluntary	Forced	Voluntary
Intercept	10.2827	1.0869	21.4774	12.6872	7.4754	-3.4616
	(0.0001)	(0.6318)	**(0.0016)**	**(0.0393)**	**(0.0032)**	(0.2070)
Firm Size	-0.4682	-0.1874	-0.8880	-0.6457	-0.3806	-0.0657
	(0.0001)	**(0.0921)**	**(0.0035)**	**(0.0224)**	**(0.0020)**	(0.6216)
$EARN_{t-1}$	-8.1763	-6.0124	-28.7801	-4.2650	-3.0091	-5.5242
	(0.0013)	**(0.0099)**	**(0.0010)**	(0.3281)	(0.2679)	(0.0643)
$Return_{t-1}$	0.6232	-4.2717	4.0030	-5.4767	-0.2483	-2.6056
	(0.8228)	(0.1722)	(0.5923)	(0.3930)	(0.9364)	(0.4838)
$RREARN_{t-1}$	-17.6376	-7.3066	-3.1362	-6.5478	-19.4665	-8.9810
	(0.0001)	(0.1098)	(0.7951)	(0.5507)	**(0.0001)**	(0.0928)
$ROEARN_{t-1}$	-3.9017	-2.9026	-17.0196	1.8697	-3.6037	-4.5087
	(0.4662)	(0.6366)	(0.2340)	(0.8871)	(0.5470)	(0.5402)
R^2_{t-1}	-1.1990	-1.6344	-5.0648	-1.6402	0.0044	-1.6299
	(0.0133)	**(0.0014)**	**(0.0003)**	(0.1198)	(0.9937)	**(0.0078)**
$EARN_{t-1} \times R^2_{t-1}$	4.8130	2.8438	35.0335	5.4933	-6.3259	0.8132
	(0.1882)	(0.4440)	**(0.0006)**	(0.3862)	(0.1488)	(0.8626)
Leverage	0.1258	0.0584	0.3824	0.2736	0.1309	0.0089
	(0.1820)	(0.6106)	(0.1355)	(0.3820)	(0.2198)	(0.9481)
$Leverage_{t-1}$	0.3964	0.2303	0.7573	0.3685	0.2866	0.2122
	(0.0034)	(0.0834)	**(0.0389)**	(0.3407)	(0.0599)	(0.1760)
Sales Growth	-0.0085	-0.0308	-0.0987	-0.2545	-0.0021	0.0765
	(0.6765)	(0.8062)	(0.7002)	(0.4127)	(0.9234)	(0.6096)
Sales Growth $_{t-1}$	-0.1017	0.0680	-0.2469	0.5143	-0.1019	-0.4139
	(0.5016)	(0.5336)	(0.6344)	(0.2421)	(0.5356)	(0.1320)
Chairman age	0.0242	0.0820	0.0224	0.0472	0.0283	0.1096
	(0.0237)	**(0.0001)**	(0.4532)	(0.0571)	**(0.0237)**	**(0.0001)**
Chairman tenure	-0.3721	-0.3093	-0.6524	-0.2895	-0.3251	-0.3307
	(0.0001)	**(0.0001)**	**(0.0001)**	**(0.0002)**	**(0.0001)**	**(0.0001)**
Duality	-0.6501	-0.4746	-0.5251	0.0239	-0.7958	-0.6833
	(0.0012)	**(0.0410)**	(0.2770)	(0.9562)	**(0.0007)**	**(0.0189)**
Mgtsize	0.0403	0.0373	0.1203	0.0627	0.0349	0.0651
	(0.0492)	(0.0977)	(0.0670)	(0.2804)	(0.1229)	**(0.0132)**
Holding1	-0.0155	-0.0141	-0.0075	-0.0378	-0.0130	-0.0085
	(0.0029)	**(0.0171)**	(0.6767)	**(0.0175)**	**(0.0258)**	(0.2220)
Holding2	-0.0131	-0.0047	-0.0799	-0.0418	-0.0056	-0.0111
	(0.2100)	(0.6768)	**(0.0187)**	(0.1909)	(0.6318)	(0.4042)
N	1163	1030	234	206	929	824
Pseudo R^2	0.2685	0.1871	0.4924	0.2864	0.2333	0.1944
Nagelkerke R^2	0.3774	0.2856	0.6719	0.4103	0.3313	0.3033
% Concordant	82.1	78.5	92.8	83.7	79.8	79.8

ITEMs	RMB
Consolidated Income Statement of Shandong Dacheng Pesticide Co. Ltd. (stock code 600882) for the year ended 31 December 2002	
1. **Revenue of core operation**	446,487,521.37
Less: Cost of core operation	379,098,083.13
Tax and additional of core operation	314,970.39
2. **Income of core operation**	67,074,467.85
Add: Income of other operation	295,757.56
Less: Operating expense	17,195,790.94
Administrative expense	33,384,228.66
Financial expense	14,507,487.78
3. **Income from operations**	2,282,718.03
Add: Investment income	3,455,474.97
Subsidy	925,575.78
Non-operating revenue	135,511.72
Less: Non-operating expense	1,781,680.97
4. **Total Income**	5,017,599.53
Less: Income tax	591,259.15
Minority interest	21,627.61
5. **Net Income**	4,404,712.77

Total Assets on December 31, 2001 = RMB 933,878,951.08.

$EARN_t$ = Income of core operation $_t$ / total assets $_{t-1}$ = RMB 67.07 m / RMB 933.88 m
     = 0.07.

$REARN_t$ = (recurring income $_t$ – income of main operation $_t$) / total assets $_{t-1}$
     = (income from other operation $_t$ – operating expenses $_t$ – administrative expenses $_t$
       – financial expenses $_t$ – loss on inventory price decline $_t$) / total assets $_{t-1}$
     = RMB (0.29m – 17.19m – 33.38m -14.50m - 0)/ RMB 933.88 m = -0.07.

$OEARN_t$ = (Inv. Income $_t$ + subsidy $_t$ + Non-operating revenue $_t$ - Non-operating exp $_t$)/ total assets $_{t-1}$
     = RMB (3.45m + 0.92m + 0.13m – 1.78m) / RMB 933.88 m = 0.003.