

CORPORATE GOVERNANCE AND FRAUD: EVIDENCE FROM CHINA

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Abstract

This study investigates the relationship between corporate governance and corporate fraud by utilizing logit regression and by employing a sample of 176 firms listed in Chinese stock markets during the period from 2001 to 2005. The results reveal that: (1) the proportion of independent members in board of directors is lower for firms experiencing corporate fraud than for no-fraud firms; (2) the firms with CEOs being the chairmen of board of directors are more likely to commit corporate fraud than the other firms; (3) the financial incentives to executives are greater for firms experiencing corporate fraud than for no-fraud firms; (4) capital structure has significant and positive effect on corporate fraud in China.

Keywords: corporate governance; corporate fraud; state owned enterprises

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1. Introduction

Literatures on the relationship between corporate governance and corporate fraud generally agree that strong governance will reduce the opportunity to commit fraud, and suggest various proxies to corporate governance. Fama (1980), Fama and Jensen (1983), and Beasley (1996) investigate the theoretical relationship between composition of board of directors and financial statement fraud. Lipton and Lorsch (1992) and Jensen (1993), Yermack (1996) and Eisenberg et al (1998) argue that larger boards are less effective. Rosenstein and Wyatt (1990, 1997) find a positive stock price reaction to election of outside directors, and a negative (positive) reaction to election of inside directors when their ownership is low (high).

Other literatures focus on the role of CEO. Weisbach (1988) finds a positive relationship between CEO turnover following poor performance and fraction of outside directors. Brickley, Coles, and Jarrell (1997) find that dual CEO-board chairs hold significantly more stock than non-chair-CEOs. Dahya, McConnell, and Travlos (2002) find higher CEO turnover following poor performance for firms with separate CEOs and board chairs.

Several literatures concentrate on whether executives who choose to commit fraud face greater financial incentives. Goldman and Slezak (2003), Robison and Santore (2004), and Chesney and Gibson-Asner (2004) connect financial incentives to corporate fraud. Johnson and Tian (2005) find that executives committed to fraud face greater financial incentives than executives at industry- and size-matched control firms.

Vafeas (1999) finds that numbers of board meeting are indicators of governance strength. Deli and Gillan (2000) support the evidence on role of independent audit committee and numbers of audit committee meetings.

However, there is considerable lack of literatures on whether and how corporate governance influence corporate fraud tendency in China. This study intends to fill gap in literatures by investigating the relationship between corporate governance and corporate fraud in China.

Section 2 develops several hypotheses on corporate governance and corporate fraud in China. Section 3 describes the sample data and model. Section 4 analyzes the empirical results. Section 5 concludes the major findings.

2. Corporate Governance and Fraud in China: Hypotheses

There are two types of corporate governance to help resolve two sets of conflict due to separation of ownership and control (Allen and Gale, 2001, Bai et al, 2002). One is internal governance (e.g. ownership structure, executive compensations, and board of directors, etc.) for conflicts of interest between owners and managers. The other is external governance (e.g. the market for corporate control, legal infrastructure, and protection of minority shareholders, etc.) for conflicts of interest between controlling shareholders and minority shareholders.

2.1. Internal Governance and Fraud

Internal governances are represented by: board of directors, executive compensations, and ownership structure.

(1) Board of directors

An important function of board of directors is to minimize costs that arise from separation of ownership and control (Fama and Jensen, 1983). It is the first instrument through which shareholders can exert considerable influence on managers' behavior in order to protect their interests. The composition of individuals who serve on board of directors is an important factor for effective management actions. Fama (1980), Fama and Jensen (1983) and Beasley (1996) suggest that having a higher percentage of outside directors and independent directors increase board's effectiveness on monitoring the management who have incentive to fraud. Furthermore, when top manager (e.g., CEO) controls or partially controls board, it is hard for board to play an independent and active monitoring role. As many studies have shown, the best practice is that board should be dominated by outsiders (Dahya, McConnell and Travlos, 2002).

Therefore, the following three hypotheses are proposed:

H1: Proportion of outside members on board of director is lower for firms experiencing corporate fraud than for no-fraud firms.

H2: Proportion of independent members on board of directors is lower for firms experiencing corporate fraud than for no-fraud firms.

H3: Firm with CEO being the chairman of board of director has more possibility to commit corporate fraud than for other firms.

Proportion of outside members, or *out_member* is defined as a ratio of board directors without pays to total board directors. Paid directors are often members of management team who are delegated by controlling shareholders. Proportion of independent members or *indep_member*, is defined as a ratio of numbers of independent directors to total numbers of directors. *CEO_chair*, a dummy variable, is equal to 1 when CEO is chairman of board of directors, and equal to 0 otherwise.

(2) Executive compensations

Based on William (1984), board of directors can easily become an instrument of management to sacrifice stockholders' interest because managers have huge informational advantage due to their full-time status and insider knowledge. Shareholders cannot observe and monitor an executive's effort perfectly so that they provide compensation contracts on observable outcomes such as accounting earnings or stock prices. Although such compensation contracts provide incentives for managers to take stockholders' interest into consideration, they create

incentive to misrepresent performance measures by producing fraudulent financial statements or other information. Goldman and Slezak (2003), Robison and Santore (2004), and Chesney and Gibson-Asner (2004) develop theoretical models linking financial incentives to corporate fraud. Johnson and Tian (2005) find that the likelihood of fraud is positively related to incentives from unrestricted stock holdings and is unrelated to incentives from restricted stock.

Thus, the following hypothesis is proposed:

H4: Financial incentives facing executives are greater for firms experiencing corporate fraud than for no-fraud firms.

As an executive compensation contract, stock option commonly employed in other countries is rarely used in China. Also, information on executive pay is not complete and always inaccessible. Fortunately, Bai et al (2002) come up with an alternative variable to capture executives' alignment of interest with other shareholders. The variable *executives_share* is defined as proportion of shareholdings held by executives with respect to total shareholdings.

(3) Ownership structure

Concentrated ownership is always regarded as poor corporate governance since it gives the largest shareholders more discretionary powers to use firm's resources to serve their benefits. Such ownership structure will allow controlling shareholders to obtain more control power at minimal capital expense, which makes "tunneling" much easier (Classens, Djankov and Lang, 2000). Furthermore, controlling shareholders are easily subject to financial statement or information disclosure fraud. Several recently disclosed corporate scandals in Chinese capital market are all about unconstrained large shareholders' misuse of firm's resources.

Ownership structure is complicated in China. A listed firm's ownership in China can be classified into three parts: state ownership, legal ownership (including foreign ownership), and public ownership. State ownership and legal ownership is not freely traded in capital market. If state ownership accounts for more than 50% in a listed firm, it is classified as state majority control (or state-owned enterprises, SOE). Otherwise, it is classified as non-state majority control, which means virtually dispersed ownership in most cases. SOEs acquire and use large amount of capital from either banking systems or capital market under soft budget constraints. In this study, we introduce two variables to measure the ownership structure of listed firms in China. One is proportion of shareholding of the largest shareholder (named *Top1*). When the largest shareholder increases his holding, the constraints from other shareholders become weaker and thus the largest shareholder is better able to be engaged in tunneling activities. The other is proportion of state ownership, which also has "tunneling" effect. Xu and Wang

(1999), Sun and Tong (2003) investigate the relationship between firm's performance and ownership structure, especially the state ownership. Few scholars have investigated the relationship between ownership structure and corporate fraud in China in literature. Thus, the following two hypotheses are proposed:

H5: Proportion of shareholding of the largest shareholder is higher for firms experiencing corporate fraud than for no-fraud firms.

H6: Proportion of state ownership is higher for firms experiencing corporate fraud than for no-fraud firms.

2.2. External Governance and Fraud

There are two kinds of external governances: market for corporate control, legal infrastructure and protection of minority shareholders.

(1) Market for corporate control

When there is an active market for corporate control, inefficient managers will be removed and replaced by qualified managers. Specially, if the managers commit corporate fraud and are punished, they are easily fired and forbidden from obtaining any new positions. The market for corporate control is not active in China. However, we employ a proxy variable (named Top2-10) as percentage of shareholdings by the second to the tenth largest shareholders, which can measure other large shareholders' power for monitoring managers. On one hand, other large shareholders are the obstacles to the tunneling activities by the largest shareholder. On the other hand, they can enhance the efficiency for corporate control. When managers tend to commit fraud, these large shareholders will either initiate a fight for corporate control or help outsider's fight for control. Therefore, the hypothesis is proposed:

H7: Proportion of shareholding of the Top2-10 shareholders is lower for firms experiencing corporate fraud than for no-fraud firms.

(2) Legal infrastructure and protection of minority shareholders

Legal framework plays an important role in disciplining managers and controlling shareholders' opportunistic behavior, such as financial statement fraud. La Porta et al (1998, 2002) find that in countries with common law tradition, governance standards are generally higher and minority shareholders are relatively better protected. In contrast, the domestically listed firms in China are regulated by uniform legal system which is classified into continental law systems. However, many domestically listed firms in China also have shares listed and traded on foreign stock markets with different legal system, such as H shares in Hong Kong and ADRs in USA that belong to common law

system. Those firms who have shares listed and traded abroad are regulated by high level governance standards, and the incentives to commit fraud are low. We employ a dummy variable (named *h_share*), which is 1 when a listed firm has cross-listing in Hong Kong or New York, and 0 otherwise.

The following hypothesis is proposed:

H8: Possibility committed to corporate fraud is lower for cross listed firms than for other firms.

3. Data and Model

3.1. Data

In order to reduce the incentives to corporate fraud listed firms are required to disclose the information related to their corporate governance in annual reports from 2001 as indicated in China Securities Regulatory Commission (CSRC). The sample used to test eight hypotheses in this study consists of 176 listed firms. All data is obtained from the Chinese stock markets and Accounting Research Database (CSMAR) from China Accounting and Finance Research Centre, Hong Kong Polytechnic University and the Shenzhen GTA Information Technology Company. 88 out of 176 firms represent the "fraud firms" since each of them had an occurrence of fraud behavior during 2001~2005. Each fraud firm is matched with a no-fraud firm with similar firm size, industry and time period. Detailed standards for no-fraud firms' selection see some literatures (Beasley, 1996).

Thus, we create a choice-based sample of 88 fraud and 88 no-fraud firms.

Based on the discussion above, we test whether the medians difference between fraud and no-fraud firms is significantly different from zero for each of those variables measuring governance. The Wilcoxon signed rank test is utilized and the results are shown in Table 1. We find no significant differences in governance measures between fraud and matched firms except for two variables -- CEO_chair and executives_share, which represent CEO being the chairman of board of director and executive compensations respectively.

In addition to measures of governance, we utilize two control variables (leverage and price earning ratio) to represent the effect of capital structure and corporate performance. As mentioned above, the optimal capital structure will be a constraint to managers who have incentives to commit fraud.

The managers will reduce their incentives to commit fraud when leverage ratio is high since they are under more constraints from creditors. Price earning ratio (P/E) represents the performance of managers. Higher P/E means that the firm has a good perspective in the future and managers will obtain more salary or bonus, which will reduce the incentives to commit fraud. There is significant

difference in capital structure across fraud and matched firms. [See appendices, Table 1].

3.2. Model

Maddala (1991) states that logit regression analysis is an appropriate methodology for disproportionate among two populations. Beasley (1996) employs logit regression method to investigate the hypothesized relation between composition for board of director and occurrences of financial statement fraud. Johnson et al (2005) use the logit regression method to study the relation between executive compensations and corporate fraud. In this study, we also employ logit cross-sectional regression method to examine the relationship between corporate governance and corporate fraud since the dependent variable ($Fraud_i$) is discrete.

The difference between this study and existing literatures (Beasley, 1996; Johnson et al, 2005) is that we include integrated measures of governance to observe the corporate fraud in China.

The following regression is utilized:

$$\begin{aligned} \text{Fraud}_i &= \alpha + \beta_1 \text{out_member}_i + \beta_2 \text{indep_member}_i + \beta_3 \text{CEO_chair}_i + \beta_4 \text{executives_share}_i \\ &+ \beta_5 \text{Top1}_i + \beta_6 \text{State_share}_i + \beta_7 \text{Top2-10}_i + \beta_8 \text{h_share}_i + \beta_9 \text{leverage}_i + \beta_{10} P/E_i + \varepsilon_i \end{aligned}$$

where dependent variable $Fraud_i$ is a dummy variable with a value of 1 when a firm is alleged to have experienced corporate fraud and a value of 0 otherwise; out_member_i is defined as ratio of numbers of directors without pays to total numbers of directors; $indep_member_i$ is defined as ratio of numbers of independent directors to total numbers of directors; CEO_chair_i is a dummy variable and is equal to 1 when the CEO is chairman of board of directors and equal to 0 otherwise; $executives_share_i$ is defined as proportion of shareholding by executives with respect to total shareholdings; $Top1_i$ represents proportion of shareholding for the largest shareholder; $State_share_i$ is proportion of state ownership; $Top2-10_i$ is defined as percentage of shareholdings for the second to the tenth largest shareholders, and presents other large shareholders' power on monitoring managers; h_share_i is a dummy variable with a value of 1 when a firm cross-listed in Hong Kong or New York stock exchanges, and a value of 0 otherwise; $leverage_i$ is short and long-term debt divided by total assets and represents the firm's capital structure; P/E_i is price earnings ratio denoting firm's performance.

4. Empirical Results

4.1. Internal governance and corporate fraud

Table 2 reports the results from logit regression. First of all, we focus on the relationship between board of directors and corporate fraud. The composition of board of directors affects the probability of corporate fraud significantly except for proportion of outside members on board of directors. The proportion of independent members to total members on board of directors, and CEOs being chairman of board of directors have significantly negative and positive relationship with the probability of corporate fraud respectively. The results are consistent with Dechow, Sloan and Sweeney (1996) that fraud firms are more likely to be dominated by CEOs as chairmen of the board, and less likely to be affected by audit committees and outside block holders, but are contrast with Agrawal and Chadha (2004) that having several key governance mechanisms in place does not reduce the likelihood of restatements. Partially consistent with Beasley (1996), our findings do not support H1, but support H2 and H3 significantly.

Secondly, we examine the relationship between executive compensations and corporate fraud. The proportion of shareholding by executives with respect to total shareholdings is positively related to the likelihood of fraud. In China, management with more executive compensation, such as shareholdings or stock options, has more tendencies to use their power to commit fraud for illegal benefit. The finding of this study for H4 is consistent with Johnson and Tian's (2005) that executives at fraud firms face greater financial incentives to commit fraud than executives at industry- and size- matched control firms.

Finally, we investigate the disadvantage of concentrated ownership. The proportion of shareholding for the largest shareholder is not higher for firms experiencing corporate fraud than for no-fraud firms as assumed above. The proportion of state ownership has statistically and significantly negative relationship with corporate fraud. However, the coefficient of ownership proportion is very small. We could not make any robust judgment about the relationship between ownership structure and fraud.

4.2. External governance and corporate fraud

The empirical results represented in table 2 show that the external governance is not statistically and significantly related to the probability of corporate fraud. These results may owe to less active market for corporate control in China. It might take long time for government and stock market participants to construct an active market for corporate control.

Alternative explanation for the poor empirical results is the inaccuracy of proxy variables. This study just borrows the variables measuring external governance from Bai et al (2002).

4.3. Control variables and fraud

We only select two control variables: leverage and P/E. Since leverage has significant and positive effect on corporate fraud in China, higher leverage induce managers' incentive to commit fraud. Chinese listed firms (especially SOEs) can borrow from bank with less constraint. The managers in fraud firm always have tendency for debt financing since they need to disclose more information with equity financing.

However, P/E that represents corporate performance does not exhibit significant effect on corporate fraud. The reasons may be that many fraud firms are controlled by state ownership which is not traded publicly, and is not evaluated through stock price performance. Thus, the managers in fraud firm pay little attentions to the stock performance (such as P/E). [See appendices, Table 2].

5. Conclusions

We investigate the relationship between corporate governance and corporate fraud based on a sample of 176 listed firms in China during the period from 2001 to 2005.

We consider two types of corporate governance that may influence the probability of management committed to fraud. One is internal governance (e.g. ownership structure, executive compensations, board of directors, etc.) for conflicts of interest between owners and managers.

The other is external governance (e.g. market for corporate control, legal infrastructure, protection of minority shareholders, etc.) for conflicts of interest between controlling shareholders and minority shareholders.

We first compare the governances between fraud and no-fraud firms. There is no significant difference in governance measures across fraud and no-fraud firms, with the exception of CEOs being chairman of board and proportion of shareholdings by executives.

We then employ logit regression method to examine how the governances affect the probability of corporate fraud. Results from logit regression analysis for 88 fraud and 88 no-fraud firms indicate that the internal governances are found to support our hypotheses. Detailed results are as follows:

(1) The proportion of independent members on board of directors is lower for firms experiencing corporate fraud than for no-fraud firms.

(2) Firm with CEO being the chairman of board of director has more possibility to commit corporate fraud than for other firms..

(3) The financial incentives facing executives are greater for firms experiencing corporate fraud than for no-fraud firms.

(4) The capital structure has significant and positive effect on corporate fraud in China.

However, external governance do not play important role and are contrast with our hypotheses. These results may owe to the less active market for corporate control in China. It takes long for government and market participants to construct an active market for corporate control.

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Appendices

Table 1. Governance Measures for Fraud Firms and Control Firms

Note: Wilcoxon matched-pair sign rank tests for medians are conducted to determine whether fraud and no-fraud firms differ significantly based on the governance mechanisms. * and ** denote significant level at 1% and 0.1% respectively.

Variables	Median for Fraud Firms	Median for Matched Firms	p-value of H0: Median paired difference=0
Internal Governance			
Board of Directors			
Proportion of outside members of board	0.4444	0.4545	0.9540
Proportion of independent members of board	0.0000	0.0000	0.4640
CEO holds the chairman of board position	1.0000	1.0000	0.0063*
Executive Compensation			
Proportion of shareholding by executives	0.0089	0.0000	0.0000**
Ownership Structure			
Proportion of shareholding of the largest	0.3955	0.4162	0.5861
Proportion of state ownership	0.2521	0.3200	0.1612
External Governance			
Market for corporate control			
Proportion of shareholding of 2nd to 10th largest	0.1493	0.1615	0.4685
Legal infrastructure			
Possibility of cross-listing abroad	0.0000	0.0000	0.5160
Control Variables			
Leverage	0.5394	0.3799	0.0001**
Price per Earning	53.1300	54.6079	0.2678

Table 2. Logit Regression Results for Governance: 88 Fraud Firms vs 88 No-fraud Firms. This table presents the results of logit regression analysis on the relationship between corporate governance and fraud based on the following model:

$$\text{Fraud}_i = \alpha + \beta_1 \text{out_member}_i + \beta_2 \text{indep_member}_i + \beta_3 \text{CEO_chair}_i + \beta_4 \text{executives_share}_i + \beta_5 \text{Top1}_i + \beta_6 \text{State_share}_i + \beta_7 \text{Top2-10}_i + \beta_8 \text{h_share}_i + \beta_9 \text{leverage}_i + \beta_{10} P/E_i + \varepsilon_i$$

Where **Fraud_i** is the dependent variable which is discrete. Others are independent variables measure the corporate governance. *, ** and *** denote significant level at 5%, 1% and 0.1% respectively

Variables	Coefficients	Standard Errors	T-statistics	p-value
Constant	-10.0579	2.7898	-3.6053	0.0003***
Internal Governance				
Out_member	0.8034	1.0057	0.4244	0.4244
Indep_member	-0.0003	3.47E-05	-7.3249	0.0000***
CEO_chair	5.3477	1.4091	3.7951	0.0001***
Executives_share	2208.844	1025.640	2.1536	0.0313*
Top1	1.2838	2.0737	0.6191	0.5359
State_share	-0.0003	8.58E-05	-2.9885	0.0028**
External Governance				
Top2-10	3.8411	3.2435	1.1845	0.2363
H_share	-0.6582	0.9913	-0.72223	0.4701
Control Variables				
Leverage	4.6636	1.2651	3.6863	0.0002***
P/E	0.0019	0.0010	1.8049	0.0711
McFadden R-squared	0.6126			