

Institutional Investors, Political Connections, and the Incidence of Regulatory Enforcement Against Corporate Fraud

Wenfeng Wu · Sofia A. Johan · Oliver M. Rui

Published online: 19 September 2014
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Abstract We investigate two under-explored factors in mitigating the risk of corporate fraud and regulatory enforcement against fraud, namely institutional investors and political connections. The role of institutional investors in the effective monitoring of a firm's management is well established in the literature. We further observe that firms that have a large proportion of their shares held by institutional investors have a lower incidence of enforcement actions against corporate fraud. The importance of political connections for enterprises, whether in a developed market such as the United States or an emerging market such as China, has been established by previous studies. However, we find evidence of another positive effect of political connections: they may reduce the incidence of enforcement action against corporate fraud. We also find that political connections play a more significant role in reducing regulatory enforcement incidents against non-state-owned enterprises and firms in weaker legal environments, whereas institutional ownership plays a more important

role in reducing regulatory enforcement incidents against state-owned enterprises.

Keywords Fraud · Political connections · Institutional investor · China

Abbreviations

CEO Chief executive officer
CSRC China securities regulatory commission
SOEs State-owned enterprises

Introduction

On March 17, 2011, Yunnan Green-land Biological Technology Co., Ltd (hereafter Green-land), a Chinese company listed on the Shenzhen stock exchange, announced that the chairman of the board had been arrested for involvement in financial fraud. The firm was found to have inflated its assets and profits by forging documents, certificates, and government receipts from 2007 to 2009. Between March 17 and May 26, 2011, the stock price of Green-land plunged from RMB23.99 to RMB11.38; a decline of 53 %. The Green-land case is of course not an isolated fraud case in China. More than 966 enforcement actions, involving the inflation of profits, the fabrication of assets, false statements, and the violation of fund provisions, were launched by the Chinese regulatory authorities between 2003 and 2011. Fraud cases bring into question the integrity of other firms and executives who have gained the trust of the public and, more significantly, their investors (Karpoff and Lott 1993; Karpoff et al. 2008).

Corporate and financial fraud have been well documented and analyzed in both finance and accounting

W. Wu (✉)
Antai College of Economics and Management, Shanghai Jiao
Tong University, Shanghai 200052, China
e-mail: wfwu@sjtu.edu.cn

S. A. Johan
Schulich School of Business, York University, Ontario, Canada
e-mail: sjohan@schulich.yorku.ca

S. A. Johan
Tilburg Law and Economics Center (TILEC), Tilburg,
The Netherlands

O. M. Rui
China–Europe International Business School, Shanghai, China
e-mail: oliver@ceibs.edu

academic literature as it is important to determine how firms could foster both ethical and sustainable management, and investors might be better protected against such fraud in the future. Previous studies of fraud, which primarily use US data, show that a number of factors are associated with the incidence of fraud. In particular, these include factors related to corporate governance such as the proportion, tenure, and share ownership of outside directors; the composition and professional background of the audit committee; and state ownership (Beasley 1996; Beasley et al. 2000; Dechow et al. 1996; Uzun et al. 2004).

Building on the existing literature, we introduce an investigation into two additional factors that mitigate the incidence of enforcement action against corporate fraud: institutional ownership and political connections. Unlike many of the studies listed above, we focus our analysis on data from Chinese firms for several reasons. Agency theory and empirical evidence suggest that large shareholders such as institutional investors are more effective in monitoring a firm's management (Franks and Mayer 2001; Kang and Shivdasani 1995; Shleifer and Vishny 1986). The Chinese government has made concerted efforts over the last decade to increase the institutional ownership of Chinese firms. This enables us to analyze the effects of such efforts by Chinese government within a specified time-frame. As institutional investors in China have increased their levels of ownership within the last decade, they have a growing incentive to monitor investee firms closely and to curb the incidence of corporate fraud.¹ We argue that firms with a large proportion of institutional investors tend to have a lower incidence of fraud, and thus a lower incidence of enforcement against fraud.

Like other emerging markets, political connections are undoubtedly prevalent in China. Also, we are able to build upon a growing body of research on the influence of political connections that has found that such

¹ There are many examples of institutional investors participating in corporate activities in China, such as nominating new board directors and CEOs. For example, on May 25, 2012, Mr. Feng Jiyong, a candidate for a directorship on the board of Zhuhai Gree Electric Appliances, Inc., was nominated by two institutional investors, the Penghua Fund Company and Yale University Foundation. He was elected to the board of directors of Zhuhai Gree, a company listed on the Shenzhen Stock Exchange (000651.SZ). The candidate who was endorsed by the largest shareholder, the local government of Zhuhai, lost the election (Securities Times 2012).

Another example relates to a proposal to dismiss the CEO of the Zhejiang Huahai Pharmaceutical Company, a firm listed as 600521.SH on the Shanghai Stock Exchange. The company's CEO and its largest shareholder, Mr. Chen Baohua, faced a serious conflict with the second-largest shareholder, Mr. Zhou Minghua. The two held 26.8 and 20.2 % of the shares, respectively. At a general shareholder meeting on August 6, 2012, Zhou Minghua put forward a proposal to dismiss Chen Baohua as CEO. However, this proposal was vetoed by the other shareholders, including the mutual funds that played a key role as institutional investors (Money Week 2012).

connections remain valuable. Ties with the government help firms to gain comparative advantages that enhance firm performance and value (Fan et al. 2008; Fisman 2001; Goldman et al. 2009; Johnson and Mitton 2003; Millar et al. 2005; Wu et al. 2012a, b). We argue that political relations are a personal asset that is based on reputational capital. Therefore, it is in the interests of a politically connected chief executive officer (CEO) or Chairman of Boards (chairman) to maintain his/her reputation through the close monitoring of firm managers. If the CEO or chairman fails to do so, then he/she could lose the political clout that enables him/her to obtain privileges to maintain firm value. As Chen et al. (2005) contend, enforcement actions generally reduce firm value. We thus believe that firms with political connections are more likely to have a lower incidence of enforcement actions against fraud.

To examine how institutional ownership and political connections may or may not mitigate the incidence of enforcement actions against corporate fraud, we analyze 966 enforcement announcements made by the China securities regulatory commission (CSRC 2000), the Shanghai stock exchange, and the Shenzhen stock exchange between 2003 and 2011. We find that firms with a larger proportion of institutional investors and politically connected firms are less likely to face enforcement action in China.

By using data from China, we are also able to investigate how state ownership (the most obvious form of political connection) affects the association between political connections and the incidence of enforcement against fraud. Wu et al. (2012a) argue that compared with politically connected managers in state-owned enterprises (SOEs), politically connected managers in non-SOEs play a more significant role in helping firms to gain privileges or favorable treatment from the government. We believe that a similar inference may be made regarding the treatment of potential regulatory violations. Therefore, we carry out regressions with partitioned samples of SOEs and non-SOEs. We find that political connections play a more important role in reducing the incidence of anti-fraud enforcement actions among non-SOEs. The value of institutional investors in reducing enforcement actions against fraud can also be influenced by state ownership. On the one hand, the commonly held view of inadequate corporate governance of SOEs may incentivize institutional investors to monitor SOEs more closely. On the other hand, the government ownership of SOEs may restrict institutional investors from monitoring SOEs effectively. Overall, we find that the monitoring carried out by institutional investors is more significant in reducing the incidence of anti-fraud enforcement actions in SOEs than in non-SOEs.

There is great heterogeneity in the quality of the legal environments in different regions of China. This diversity makes China a natural laboratory for a cross-sectional investigation into the effects of legal environments. This intra-country study enables us to distinguish between the effects of national laws, taxes, regional economic policies, and codes of corporate governance. We also seek to investigate whether the institutional environment plays a role in the incidence of anti-fraud enforcement actions in firms with political connections and in firms with higher levels of institutional ownership. Following previous studies, we use the widely accepted market development index compiled by Fan et al. (2010) to capture the regional differences between institutions in China (Firth et al. 2011). We find that political connections play a more important role in reducing the incidence of anti-fraud enforcement actions in weaker legal environments.

This study contributes to the literature in several ways. First, it extends the research on political connections by investigating how state ownership and the legal environment affect the association between political connections and corporate fraud. Previous research finds that political connections can mitigate the incidence of enforcement against corporate fraud in the US (Correia 2012; Yu and Yu 2012). We show that this effect is stronger in non-SOEs and in firms located in weaker legal environments. Second, our study sheds light on how government ownership and the institutional or legal environment shape the roles of institutional investors in corporate governance. This approach complements the literature on institutional investors (e.g., Ding et al. 2011; Hartzell and Starks 2003; Shleifer and Vishny 1986). We find that institutional investors play a more pronounced role in mitigating the incidence of enforcement against fraud in SOEs than in non-SOEs. Finally, our findings have implications for other countries. As is the case in China, political connectedness and state control are prevalent in many countries (Barontini and Caprio 2006; Faccio 2006; Klapper et al. 2006). Our paper also helps international investors to understand the internal and external governance mechanisms of listed firms in China.

We initially base our investigation on prior research although we believe we further extend the research by our findings in various ways. Hou and Moore (2010) examine the effect of state ownership on the incidence of enforcement against fraud, whereas we consider two new determinants, namely political connections and institutional ownership. Aggarwal et al. (2013) investigate the effect of institutional ownership on the incidence of enforcement fraud, whereas we further consider the difference between SOEs and non-SOEs in terms of the association between institutional ownership and the incidence of enforcement against fraud. Another related paper is by Chen et al. (2011), who investigate and compare the effects of political

connections on the investment efficiency of SOEs and non-SOEs, whereas we focus on how political connections affect the incidence of enforcement against fraud.

We organize the remainder of the paper as follows. The next section briefly reviews the literature and develops the hypotheses. “[Research Design](#)” section discusses the research design and sample characteristics. The empirical results are discussed in “[Empirical Findings](#)” section. The conclusions are presented in the final section.

Literature and Hypotheses

Institutional Shareholders

An increasingly important external control mechanism affecting corporate governance worldwide has emerged with the rise of the influence of institutional investors as equity owners. Gillian and Starks (2003) posit that the influence of professional money managers as large shareholder groups in corporations offers potential for the increased monitoring of company management. Only large shareholders have sufficient incentives to monitor corporate management, but all shareholders can benefit from the actions of a monitoring shareholder without necessarily incurring additional costs. Hartzell and Starks (2003) provide empirical evidence suggesting that institutional investors serve a monitoring role with regard to executive compensation contracts. Institutional investors also have the potential to influence the management’s activities directly through their ownership stake in the company (Admati et al. 1994; Pitelis 2013; Shleifer and Vishny 1986). These investors may also influence management indirectly through the threat of divesting their shares (Gillian and Starks 2003). Agrawal and Mandelker (1990) find that firms with greater institutional ownership have larger stock price reactions in response to announcements that they have adopted anti-takeover amendments.

In the past decade or so, the Chinese government has cultivated institutional investor ownership in firms. For example, the CSRC started to accelerate the development of mutual funds in domestic stock markets in 2000. The qualified foreign institutional investor (QFII) system was introduced to allow foreign investors to invest directly in China’s domestic stock market in 2003. Top international investment banks such as Citigroup, Credit Suisse, First Boston, Goldman Sachs, HSBC, and Nomura Securities promptly applied for, and received, their licenses. The national social security fund and the insurance companies were allowed to invest in domestic listed firms in 2003 and 2004, respectively. The ownership of firms by institutional investors has grown progressively in the past decade, especially ownership by mutual funds. According to CSRC

statistics, as at the end of 2011 there were 70 mutual fund management companies and 919 mutual funds in China. The total net value of these mutual funds was over RMB2,651 billion (about US\$421 billion).² The mean proportion of ownership by mutual funds in our sample firms represents about 7.69 % of the total number of A-shares. By the end of 2011, 176 foreign institutions had obtained QFII licenses, with a combined investment quota of US\$42 billion.

The success of China's regulatory effort to promote institutional investors (such as mutual funds) as a corporate governance mechanism is supported by the existing literature. Yao and Liu (2009) find that China's institutional investors play an active role in controlling insider expropriation through equity financing. Ding et al. (2011) find that mutual fund ownership is positively related to share price informativeness, thus improving the corporate information environment. These findings suggest that in China, institutional shareholders play an important role in monitoring corporate managers. The involvement of institutional investors can range from keeping managers in line through the threat of divesting shares to the active use of corporate voting rights in board elections and proxy contests. Thus, we expect the monitoring role of institutional investors to reduce the incidence of corporate fraud and of enforcement actions against fraud. Our first hypothesis is as follows:

H1 Institutional investor ownership mitigates the incidence of anti-fraud enforcement actions among firms.

Political Connections

The existing literature tells us that politically connected firms (whose board members, top managers, or major stockholders have relationships with high government officials) may garner benefits from the government. Such advantages include access to key resources, including bank loans granted at favorable terms (Dinc 2005; Leuz and Oberholzer-Gee 2006; Khawaja and Mian 2005), favorable tax treatment (Adhikari et al. 2006; Faccio 2006), a higher initial public offering (IPO) price (Francis et al. 2009), and government bailouts in the event of financial distress (Faccio et al. 2006).

Of the world's emerging markets, China is perhaps the market most commonly associated with government interventionism and weak protection of property rights. As Naughton (2007) points out, Chinese regulatory agencies are still not fully independent from the government management bodies from which they were originally "hived off." China's legal institutions are regarded as government driven rather than citizen or litigant driven (Clarke et al.

2008). Gong (2004) also points out that China's judiciary operates as an administrative unit within the political system, with its authority derived from the state rather than from the law. It therefore seems clear that the value of political connections is palpable for Chinese firms.

We define a firm as politically connected if the firm's CEO and/or chairman is currently serving or has formerly served in the government or the military. Politically connected managers can help firms to mitigate the risk of enforcement action for the following reasons. On the one hand, politically connected managers try to act as an external control mechanism to maintain the value of their political connections. They attempt to monitor their companies to ensure that there is no erosion of their personal reputation and goodwill in relation to the government. The firm itself will also seek to maintain the value of its political connections to ensure continuous favorable treatment and to avoid regulatory or governmental censure. On the other hand, political connections can bring firms certain privileges in the regulatory environment, in that enforcement in the form of fines, public criticism, administrative punishment, warnings, and even delisting may be eased or even avoided. Based on this discussion, we frame our second hypothesis as follows:

H2 Firms with political connections are less likely to face enforcement action in China.

State-Owned Enterprises

As previous studies have found, the value of political connections is mainly derived from the advantage of obtaining key resources from the government (Adhikari et al. 2006; Claessens et al. 2008). State-owned enterprises (SOEs) obviously have the most direct political connections. For private firms (which are non-SOEs), it is clear that their more tenuous political connections can put them at a disadvantage compared with SOEs, especially in transitional economies that lack strong protection for property rights or for the market-supporting institutions needed by private firms (McMillan 1995). Retaining politically connected managers is a feasible and effective way for private firms to overcome such financing obstacles and obtain favorable treatment from the government and its agencies.

As the government controls limited resources, the resource-based value of political connectivity is likely to be influenced by government ownership. SOEs have direct ties with the government, and their government ownership links are more explicit and stable than a private company's personal or reputation-based links with the government through a politically connected manager. Thus, government ownership tempers the monitoring benefits of politically connected managers. Non-SOEs that have connected

² The amount of assets under management by mutual funds was only US\$10 billion by the end of 2002.

managers will seek to ensure and maintain their favorable treatment from the government, which is not guaranteed, as their firms are not state-owned. Therefore, we predict that the presence of politically connected managers in non-SOEs is more likely to reduce the incidence of fraud than in SOEs. We hypothesize as follows:

H3a Political connections play a more important role in mitigating the incidence of fraud in non-SOEs than in SOEs.

The value of institutional investors in mitigating enforcement against fraud may also be shaped by state ownership. Institutional investors have a clear incentive to monitor SOEs because it is a commonly held belief that SOEs have poor corporate governance (Zhang 1993; Berkman et al. 2012). Private owners usually seek to maximize their personal wealth, whereas SOEs tend to have more strategic or political objectives. These objectives can include maximizing employment and wages, promoting regional development, ensuring national security, providing lower-priced goods and services, or producing unnecessary goods. These political objectives can lead to poor incentives and weak corporate governance for SOEs (Conyon and He 2011). Consequently, non-SOEs should generally have better corporate governance than SOEs. It therefore follows that institutional investors will be incentivized to monitor their investments in SOEs more closely than their investments in non-SOEs. Institutional ownership may play a more pronounced role in reducing the incidence of corporate fraud (and the incidence of enforcement against fraud) in SOEs than in non-SOEs. However, the government ownership of SOEs may also restrict institutional investors from effectively monitoring SOEs, which may reduce the influence of institutional investors on the incidence of enforcement against fraud. Because of these two competing arguments, we provide a hypothesis in its null form:

H3b The effect of institutional ownership on mitigating the incidence of enforcement against fraud in SOEs is not different from its effect in non-SOEs.

Legal Environment

Many studies argue that a country's institutional and legal environment, including its process of enacting and enforcing laws, is crucial for creating sustainable growth and fostering the entrepreneurial spirit (North 1990). The value of political connections can be shaped by the institutional environment. As Faccio (2006) points out, the favorable treatment enjoyed by firms with political connections is more pronounced in countries with interventionist governments and weak protection of property rights, because political connections are more likely to bring

privileges in such environments.³ Thus, we expect the role of political connections in reducing the incidence of regulatory enforcement against fraud to be more pronounced in regions with weaker legal environments. We hypothesize as follows:

H4a The value of political connections in reducing the incidence of regulatory enforcement against fraud should be more pronounced for firms in weaker legal environments.

Institutional and legal environments can exert a profound influence on the behavior and governance of firms. For example, La Porta et al. (1999) argue that corporate governance is stronger where the legal system is based on common law as opposed to civil law. The role that institutional investors play in firm-level corporate governance is also affected by the legal (investor protection) environment. The demand for institutional investors to take on a monitoring role to protect investor interests may be higher in weak legal environments. Therefore, institutional ownership can play a more pronounced role in reducing the incidence of corporate fraud (and thus the incidence of regulatory enforcement against fraud) for firms that operate in weaker legal environments. However, institutional investors may have fewer channels to effectively monitor corporate activities in weaker legal environments. This can lead to a reduced influence on the incidence of corporate fraud or enforcement actions against fraud. As these theories are conflicting, we state the hypothesis in its null form:

H4b The effect of institutional ownership on the incidence of enforcement against fraud in a weak legal environment is not different from its effect in a strong legal environment.

Research Design

Data and Sample

We collected 966 regulatory enforcement announcements made by the CSRC, the Shanghai stock exchange, and the Shenzhen stock exchange between 2003 and 2011. In China, the CSRC is responsible for investigating accusations of corporate fraud against listed and securities firms. The Commission also oversees the enforcement of securities regulation for listed firms, securities firms, and stock exchanges. Violations of securities regulations are published in the media (e.g., *Securities Times* and *Shanghai*

³ We think it is reasonable to generalize the country-level argument of Faccio (2006) to our region-level data, as there is a great heterogeneity of legal environments between the different regions of China, a country with decentralized political, judicial, and economic structures. Moreover, at various times throughout its history, China has been split up into smaller independent countries. This process has shaped the unique characteristics of today's provinces.

Table 1 Descriptive statistics for regulatory enforcement between 2003 and 2011

Year	Panel A: by year and stock exchange ^a					
	Shanghai		Shenzhen		Total	
	# of announcements	% of announcements	# of announcements	% of announcements	# of announcements	% of announcements
2003	20	0.021	19	0.020	39	0.040
2004	22	0.023	22	0.023	44	0.046
2005	65	0.067	65	0.067	130	0.135
2006	46	0.048	62	0.064	108	0.112
2007	47	0.049	78	0.081	125	0.129
2008	29	0.030	68	0.070	97	0.100
2009	55	0.057	109	0.113	164	0.170
2010	47	0.049	88	0.091	135	0.140
2011	33	0.034	91	0.094	124	0.128
Total	364	0.377	602	0.623	966	1.000

Panel B: by industry ^b				
Industry name	Industry code	# of announcements	% of announcements	Ratio of number of firms with cases to total number of firms in the industry
Agriculture	A	42	0.126	0.346
Mining	B	23	0.077	0.200
Food, beverages	C0	44	0.074	0.278
Textile/apparel	C1	43	0.074	0.224
Timber, furniture	C2	2	0.041	0.182
Paper making, printing	C3	21	0.076	0.298
Petroleum, chemistry, plastics	C4	107	0.068	0.237
Electronics	C5	25	0.037	0.130
Metal, non-metal	C6	84	0.067	0.222
Machinery, equipment, instruments	C7	136	0.057	0.168
Medicine, biological products	C8	64	0.069	0.225
Other manufacturing industries	C9	11	0.065	0.161
Power, gas, and water	D	21	0.036	0.203
Construction	E	21	0.066	0.161
Transportation	F	28	0.049	0.179
IT	G	75	0.073	0.172
Retail	H	41	0.048	0.235
Real estate	J	84	0.103	0.432
Social services	K	32	0.070	0.211
Communications	L	12	0.093	0.185
Conglomerates	M	50	0.075	0.338
Total		966	0.066	0.218

Panel C: by province ^c				
Province	MINDEX score	MLEGAL score	# of announcements	% of announcements
Shanghai	10.972	14.774	53	0.039
Zhejiang	10.760	12.054	70	0.060
Guangdong	10.476	11.374	137	0.075
Jiangsu	9.833	9.727	41	0.038
Beijing	9.098	8.159	45	0.042
Fujian	9.073	6.461	46	0.098

Table 1 continuedPanel C: by province^c

Province	MINDEX score	MLEGAL score	# of announcements	% of announcements
Tianjin	9.031	9.059	26	0.099
Shandong	8.360	6.611	56	0.065
Liaoning	8.152	6.629	27	0.059
Chongqing	7.734	5.042	19	0.079
Sichuan	7.203	5.358	56	0.095
Anhui	7.127	5.083	25	0.051
Hubei	6.951	5.154	36	0.063
Henan	6.826	4.509	16	0.043
Hunan	6.758	4.108	56	0.127
Hebei	6.748	4.886	19	0.059
Jiangxi	6.721	4.304	6	0.026
Jilin	6.370	4.911	23	0.081
Hainan	6.313	3.770	18	0.095
Guangxi	6.048	3.891	24	0.108
Neimenggu	5.948	4.324	9	0.055
Heilongjiang	5.830	5.194	25	0.100
Shanxi	5.781	4.400	8	0.031
Yunnan	5.642	4.041	10	0.047
Ningxia	5.367	3.451	11	0.109
Xinjiang	5.138	4.569	16	0.059
Guizhou	5.079	3.249	11	0.068
Shaanxi	5.032	4.283	31	0.121
Gansu	4.821	3.277	27	0.153
Qinghai	4.111	2.320	16	0.186
Xizang	3.236	3.523	3	0.039

^a This table displays statistics for regulatory enforcement in China. We collected 966 regulatory enforcement announcements made by the CSRC, the Shanghai stock exchange, and the Shenzhen stock exchange between 2003 and 2011. The column “# of announcements” represents the number of regulatory enforcement announcements in the year by the stock exchange, while the column “% of announcements” represents the percentage of the number of announcements in the year to the total number of announcements during sample period

^b We use the CSRC industry classification standard. Because most of the firms belong to the manufacturing industry, the code for which begins with “C,” we use the first two codes to classify these samples. Our sample does not include the financial industry, the code for which begins with “I.” The column “# of announcements” represents the number of enforcement announcement in the industry, while the column “% of announcements” represents the ratio of the number of announcement to the total number of firm-year observations in the industry. The last column represents the ratio of number of firms involved in at least one enforcement announcement to the total number of firms in the industry

^c The MINDEX and MLEGAL scores are the average scores for the period between 1999 and 2009. The column “# of announcements” represents the number of enforcement announcements of firms in the province, while the column “% of announcements” represents the ratio of the number of announcements of firms in the province to the total number of firm-year observations in the province

Securities Daily) as designated by the CSRC. The types of violation investigated include illegal share buybacks, inflated profits, the fabrication of assets, unauthorized changes in fund use, violations in capital contributions, shareholder embezzlement, price manipulation, the granting of illegal guarantees, and speculation. Such violations may involve the firm, its management, or its shareholders. Potential sanctions include fines, public criticism, administrative punishments, warnings, and delisting. If an infraction is deemed to be very minor, the CSRC may simply give the company or securities firm an internal

warning. In such cases there is no public disclosure of either the investigation or its outcome.

We excluded enforcement actions against firms in the finance industry, as we use several control variables in our analyses such as financial leverage and growth that are significantly different for financial firms. As there were very few incidences of fraud committed by financial firms, our results are not affected by this omission. We believe that our data include all of the cases in which fraud was detected, although, as noted in the introduction, cases of minor infractions are not publicly disclosed. Our sample

Table 2 Breakdown of enforcement actions by type of violation

Panel A: by type of violation	# of occurrences	% of occurrences
Illegal share buybacks	146	0.101
Inflated profits	82	0.057
Fabrication of assets	19	0.013
Unauthorized change in use of funds	25	0.017
Postponement/delay in disclosure	366	0.253
False statements	162	0.112
Violations of fund provisions	4	0.003
Major information omission	234	0.161
Assets of listed firms occupied by the largest shareholders	74	0.051
Stock price manipulation	12	0.008
Illegal loan guarantee	43	0.030
Speculation	14	0.010
Others	268	0.185
Total	1,449	1.000
Panel B: by type of enforcement action	# of occurrences	% of occurrences
Public criticism	186	0.147
Public condemnation	244	0.192
Administrative penalty	44	0.035
Initiation of investigation	135	0.106
Warning	184	0.145
Fine	233	0.184
Others	242	0.191
Total	1,268	1.000

The column “# of occurrences” represents the number of occurrences of violations or enforcements actions of fraud firms, while the column “% of occurrences” represents the ratio of number of occurrences to the total number of all occurrences

period begins in 2003, when listed firms started to disclose the percentages of their shares held by institutional investors such as mutual funds. The original data were collected from WIND and CSMAR data. The yearly and industry distribution of firms is shown in Panels A and B of Table 1. The industry distribution of anti-fraud enforcement actions is representative of the number of listed firms in each industry sector, except for the property (real estate) sector, which has a higher incidence of such enforcement actions.

In Panel C of Table 1, we show the distribution of anti-fraud cases across different provinces. Column 1 lists the province, Columns 2 and 3 provide the development score and legal score for the province (MINDEX and MLEGAL), Column 4 shows the number of fraud cases, and Column 5 gives the number of cases as a proportion of the total number of listed firms in the province. As Panel C shows, Shanghai has the highest development score of 10.972. During the period of our study, 53 enforcement actions were made against firms located in Shanghai. This

represents about 4 % of the listed firms in the city. There is no obvious pattern in Panel C. Enforcement against fraud does not appear to be confined to provinces with higher development scores, or to provinces with lower scores. To formally test whether institutional and legal environments shape the behavior of firms and institutional investors, we use the index of market development (MINDEX) in our multivariate analyses. We provide the data construction of MINDEX and MLEGAL in the next section.

Panel A of Table 2 provides a breakdown of the various types of violation, using the categories supplied by the CSRC. The most common violations are postponement or delay in disclosure, major information omission, and false statements (or the fabrication of facts in statements other than accounting reports). The 966 enforcement announcements describe 1,449 violations, so some firms had multiple violations. Panel B shows a breakdown of the various types of enforcement action. Some firms had multiple enforcement actions, with 1,268 such actions described in the 966 announcements. About 20 % of the penalties consist of public condemnations. Monetary fines, the most serious penalty, account for about 18 % of the sanctions.

Model Specification

To empirically test the predictions in our hypotheses, we analyze the full sample of enforcement announcements with the following probit model:

$$\begin{aligned}
 \text{FRAUD} = & \beta_0 + \beta_1 \text{POLCON} + \beta_2 \text{INSTI} + \beta_3 \text{TOP} \\
 & + \beta_4 \text{TOP10} + \beta_5 \text{AUDITOR} + \beta_6 \text{BOARDSIZE} \\
 & + \beta_7 \text{INDEP} + \beta_8 \text{SIZE} + \beta_9 \text{LEV} + \beta_{10} \text{GROWTH} \\
 & + \beta_{11} \text{LOSS} + \beta_{12} \text{MINDEX} \\
 & + \text{Industry and Year dummies}, \quad (1)
 \end{aligned}$$

where FRAUD is an indicator variable that takes the value of 1 if the firm is subject to an enforcement action, and otherwise 0. Institutional investor shareholdings and political connections are the main experimental variables in our study. INSTI, the proportion of institutional investors, is the total percentage of a firm’s shares held by mutual funds, insurance companies, national social security funds, QFIIs, trust companies, or securities companies. If hypothesis H1 holds, then we would expect the coefficient for INSTI to be negative. POLCON is an indicator variable that takes the value 1 if the firm has retained a politically connected CEO and/or chairman, and otherwise 0. Following Fan et al. (2008), we define a CEO as politically connected if he or she is currently serving or has formerly served in the government or the military. In addition, we extend these authors’ exploration of the political connectedness of CEOs to include chairmen, as both CEOs and chairmen are important in China. If our hypothesis H2 holds, we would expect the coefficient for POLCON to be negative.

Table 3 Summary statistics for the main variables

	N	Mean	Std	Min	P25	Median	P75	Max
POLCON (Political connections)	11,396	0.257	0.437	0.000	0.000	0.000	1.000	1.000
INSTI (% shares held by institutional investors)	11,396	8.879	14.499	0.00	0.020	1.555	11.434	76.204
% shares held by MUTUAL FUND	11,396	7.687	13.368	0.000	0.001	0.909	9.131	61.553
% shares held by INSURANCE COMPANY	11,396	0.335	1.206	0.000	0.000	0.000	0.000	20.828
% shares held by SOCIAL SECURITY FUND	11,396	0.315	1.191	0.000	0.000	0.000	0.000	19.501
% shares held by QFII	11,396	0.241	1.149	0.000	0.000	0.000	0.000	27.297
% shares held by TRUST COMPANY	11,396	0.170	1.289	0.000	0.000	0.000	0.000	44.935
% shares held by SECURITIES COMPANY	11,396	0.131	0.583	0.000	0.000	0.000	0.000	18.229
% shares held by LARGEST SHAREHOLDER	11,396	37.670	16.091	0.82	25.00	35.53	50.03	89.41
TOP10	11,396	0.017	0.025	0.000	0.001	0.006	0.024	0.194
AUDITOR	11,396	0.161	0.368	0.000	0.000	0.000	0.000	1.000
BOARD	11,396	2.234	0.216	1.099	2.197	2.197	2.398	3.219
INDEP	11,396	0.352	0.067	0.000	0.333	0.333	0.375	0.714
SIZE	11,396	21.588	1.233	10.842	20.795	21.486	22.257	28.282
LEV	11,396	0.529	0.267	0.052	0.373	0.519	0.650	2.224
GROWTH	11,396	0.282	0.656	-0.609	0.044	0.168	0.331	5.134
LOSS	11,396	0.038	0.192	0.000	0.000	0.000	0.000	1.000
MINDEX	11,396	8.456	2.132	0.79	6.88	8.63	10.55	11.71

This table reports the summary statistics for the main variables used in the following regression analysis. The variables are as defined in Table 7 in Appendix 1

We include the following control variables identified from previous studies (Chen et al. 2006; Bell et al. 2000). TOP is the percentage of ownership in a firm held by its largest shareholder. TOP10 is a Herfindahl index that measures the concentration of shares held by the top 10 stockholders, excluding the controlling shareholder.

$TOP10 = \sum_{n=2}^{10} \left(\frac{S_n}{S}\right)^2$, where S_n is the number of shares held by the n th largest stockholder, and S is the number of total outstanding shares. These variables are included in the model to proxy for ownership structure characteristics. AUDITOR is an indicator variable that takes the value of 1 if the auditor of the firm is one of the 10 largest auditors by market share, and 0 otherwise. The auditing profession is relatively new in China, so there is as yet no clearly defined set of “well-known” or “prestigious” auditors. Nevertheless, we attempt to distinguish between auditors on the basis of market share by ranking Chinese certified public accounting (CPA) firms by the market share of their clients’ assets, and then identifying the 10 largest. Using market share to measure audit quality is very common (DeAngelo 1981). Chen et al. (2006) also use a “Big 10” classification (auditors with the 10 largest market shares) as a proxy for high audit quality in China. To measure board characteristics, we use BOARDSIZE, which is the log of the number of board members, and INDEP, which is the percentage of independent directors on the board.

The following financial variables are also used in the model to explain the incidence of enforcement against fraud. SIZE is the natural log of total assets at the beginning of the year, which is used to capture size effects. We include LEV, the ratio of debt to total assets, to measure financial risk, as we believe that companies with high levels of leverage are more likely to be investigated by the CSRC. We base this belief on the findings of Loebbecke et al. (1989) and Bell et al. (2000). These authors contend that firms in financial trouble are more likely to be examined for financial statement fraud. They further argue that a high growth rate is regarded as a possible indicator of fraud in the US. To control for this growth effect, we include GROWTH, which is the value of annual average sales growth in the 3 years before a reported fraud. In China, if a firm records losses over two consecutive years, it will be specially treated (“ST”). If a third year of losses is reported, then trading in the firm’s shares will be suspended on the stock exchange. Firms usually try to avoid being specially treated, as this involves extra regulatory oversight. LOSS is therefore included as an indicator variable that takes the value of 1 if the firm has recorded a loss in each of the prior 2 years, and 0 otherwise.

A significant characteristic of China’s reform process is the uneven distribution of wealth, growth, and legal development between the different provinces (Demurger et al. 2002). Because the institutional environment shapes corporate governance (La Porta et al. 1999), this diversity

Table 4 Main regression results

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
POLCON (Political Connections)		-0.282** (0.014)			-0.278** (0.015)	-0.278** (0.015)
INSTI (Institutional Investors)			-1.717*** (0.001)		-1.708*** (0.001)	
MFUND (Mutual Fund)				-1.623*** (0.005)		-1.613*** (0.005)
Insurance Company				-4.548 (0.363)		-4.578 (0.360)
Social Security Fund				-1.452 (0.786)		-1.562 (0.770)
QFII				-3.262 (0.576)		-3.155 (0.587)
TRUST Company				-3.050 (0.459)		-2.908 (0.482)
Securities Company				-0.089 (0.991)		-0.053 (0.995)
TOP (Largest Shareholder)	-1.281*** (0.001)	-1.266*** (0.001)	-1.303*** (0.001)	-1.304*** (0.001)	-1.287*** (0.001)	-1.289*** (0.001)
TOP10	3.486* (0.074)	3.339* (0.087)	3.581* (0.065)	3.588* (0.064)	3.431* (0.077)	3.436* (0.077)
AUDITOR	-0.042 (0.846)	-0.039 (0.857)	-0.028 (0.895)	-0.026 (0.902)	-0.026 (0.901)	-0.025 (0.907)
BOARD	1.358* (0.062)	1.368* (0.060)	1.374* (0.058)	1.390* (0.055)	1.382* (0.057)	1.398* (0.054)
INDEP	-0.368** (0.018)	-0.369** (0.018)	-0.341** (0.029)	-0.336** (0.032)	-0.341** (0.029)	-0.337** (0.032)
SIZE	-0.270*** (0.001)	-0.264*** (0.001)	-0.233*** (0.001)	-0.232*** (0.001)	-0.228*** (0.001)	-0.227*** (0.001)
LEV	0.542*** (0.001)	0.546*** (0.001)	0.525*** (0.001)	0.525*** (0.001)	0.529*** (0.001)	0.529*** (0.001)
GROWTH	-0.031 (0.635)	-0.031 (0.638)	-0.021 (0.738)	-0.022 (0.736)	-0.021 (0.744)	-0.021 (0.743)
LOSS	1.325*** (0.001)	1.316*** (0.001)	1.304*** (0.001)	1.304*** (0.001)	1.294*** (0.001)	1.295*** (0.001)
MINDEX	-0.036 (0.103)	-0.037* (0.093)	-0.037* (0.086)	-0.037* (0.089)	-0.039* (0.077)	-0.038* (0.079)
Sample size	11,396	11,396	11,396	11,396	11,396	11,396
Adj-R ²	0.043	0.044	0.045	0.045	0.045	0.045

This table reports the results of the probit regression model. The constant term, industry dummies, and year dummies are included in the regression but are not reported. The p -values, which are adjusted for clustering at the firm level, are presented in parentheses below the estimates, where *, **, and *** indicate significance at the 10, 5, and 1 % levels, respectively. The definitions of the variables are given in Table 7 in Appendix 1

could have an effect on the propensity to commit corporate fraud. We therefore use the comprehensive development index (MINDEX) compiled by Fan et al. (2010) as a proxy for the institutional environment of each province. This index allows us to examine the effect of the heterogeneous institutional environments in different

provinces on the incidence of enforcement against fraud. The index captures the characteristics of each regional institutional environment through analysis of the following aspects: (1) the relationship between the government and the markets, shown by factors such as the role of markets in allocating resources and the enterprise burden

Table 5 Regression results for SOEs and non-SOEs

	SOEs		Non-SOEs		Full sample		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Political Connections	-0.041 (0.777)	-0.036 (0.805)	-0.570*** (0.007)	-0.564*** (0.007)	-0.578*** (0.005)	-0.236** (0.041)	-0.580*** (0.005)
Institutional Investors		-2.287*** (0.001)		-1.157 (0.118)		-1.269* (0.058)	-1.258* (0.060)
Political Connections * STATE					0.514** (0.038)		0.525** (0.034)
Institutional investors * STATE						-0.855** (0.043)	-0.886** (0.035)
STATE					-0.453*** (0.001)	-0.332*** (0.001)	-0.416*** (0.001)
Largest Shareholder	-1.110** (0.013)	-1.176*** (0.009)	-0.838 (0.114)	-0.817 (0.123)	-1.044*** (0.002)	-1.047*** (0.002)	-1.068*** (0.001)
TOP10	-0.324 (0.912)	-0.414 (0.887)	7.214** (0.013)	7.480** (0.010)	2.723 (0.169)	3.031 (0.123)	2.802 (0.155)
AUDITOR	-0.115 (0.709)	-0.092 (0.765)	0.287 (0.362)	0.284 (0.365)	0.076 (0.724)	0.078 (0.716)	0.093 (0.664)
BOARD	1.380 (0.175)	1.379 (0.172)	1.117 (0.343)	1.114 (0.345)	1.266* (0.086)	1.293* (0.077)	1.290* (0.079)
INDEP	-0.657*** (0.005)	-0.624*** (0.008)	0.111 (0.611)	0.132 (0.542)	-0.351** (0.025)	-0.325** (0.038)	-0.320** (0.041)
SIZE	-0.219*** (0.001)	-0.158** (0.012)	-0.250*** (0.001)	-0.229*** (0.001)	-0.235*** (0.001)	-0.197*** (0.001)	-0.197*** (0.001)
LEV	0.694*** (0.002)	0.663*** (0.003)	0.469*** (0.001)	0.456*** (0.002)	0.536*** (0.001)	0.530*** (0.001)	0.527*** (0.001)
GROWTH	0.068 (0.454)	0.081 (0.362)	-0.149 (0.127)	-0.140 (0.146)	-0.038 (0.560)	-0.029 (0.649)	-0.028 (0.666)
LOSS	1.463*** (0.001)	1.440*** (0.001)	1.140*** (0.001)	1.126*** (0.001)	1.317*** (0.001)	1.296*** (0.001)	1.294*** (0.001)
MINDEX	-0.108*** (0.001)	-0.112*** (0.001)	0.000 (0.993)	0.000 (0.992)	-0.051** (0.021)	-0.049** (0.026)	-0.053** (0.016)
Sample size	7,553	7,553	3,843	3,843	11,396	11,396	11,396
Adj-R ²	0.037	0.038	0.060	0.061	0.046	0.046	0.047

This table examines the association between political connections, institutional investors, and incidence of enforcement against fraud for firms under different types of ownership. We investigate the ownership of listed firms in China based on the identity of the largest shareholder, that is, the ultimate owner, following the recent literature. We classify our sample based on whether the firm is government-controlled (SOEs) or not (non-SOEs). STATE is a dummy that takes the value of 1 if a firm is ultimately controlled by the government, and otherwise 0. The constant term, industry dummies, and year dummies are included in the regression, but are not reported. The *p*-values, which are adjusted for clustering at the firm level, are presented in parentheses below the estimates, where *, **, and *** indicate significance at the 10, 5, and 1 % levels, respectively. The definitions of the variables are given in Table 7 in Appendix 1

in addition to normal taxes; (2) the development of non-state business, as measured partly by the ratio of industrial output from the private sector to total industrial output; (3) the development of product markets, indicated by features such as regional trade barriers; (4) the development of factor markets, measured by indicators such as foreign direct investment (FDI) and mobility of labor; and (5) the development of market intermediaries

and the legal environment, captured through measures such as the protection of property rights. Higher scores mean greater market development. We also use MLEGAL, the fifth sub-index of MINDEX, as a robustness check. This variable represents the development of market intermediaries and the legal environment. The regional rankings based on MINDEX and MLEGAL are highly correlated.

Table 6 Regression results for the sample partitioned according to level of legal environment

	Strong legal environment		Weak legal environment		Full sample		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Political Connections	-0.213 (0.219)	-0.212 (0.222)	-0.331** (0.033)	-0.329** (0.034)	-0.205 (0.148)	-0.278** (0.015)	-0.245 (0.148)
Institutional Investors		-1.425* (0.055)		-2.007*** (0.004)		-1.546** (0.020)	-1.548** (0.020)
Political Connections * DMLEGAL					-0.106** (0.037)		-0.101** (0.038)
Institutional investors * DMLEGAL						-0.301 (0.730)	-0.296 (0.734)
DMLEGAL					0.119 (0.231)	0.130 (0.196)	0.141 (0.193)
Largest Shareholder	-1.481*** (0.003)	-1.498*** (0.003)	-1.079** (0.017)	-1.099** (0.015)	-1.272*** (0.001)	-1.289*** (0.001)	-1.293*** (0.001)
TOP10	5.490** (0.045)	5.570** (0.041)	1.476 (0.604)	1.673 (0.554)	3.317* (0.089)	3.415* (0.079)	3.419* (0.078)
AUDITOR	-0.178 (0.576)	-0.162 (0.612)	0.158 (0.592)	0.157 (0.592)	-0.031 (0.883)	-0.017 (0.938)	-0.017 (0.935)
BOARD	2.000* (0.057)	2.061** (0.049)	0.779 (0.458)	0.727 (0.488)	1.372* (0.060)	1.387* (0.056)	1.387* (0.056)
INDEP	-0.467** (0.036)	-0.447** (0.045)	-0.207 (0.361)	-0.169 (0.455)	-0.374** (0.017)	-0.346** (0.027)	-0.346** (0.027)
SIZE	-0.258*** (0.001)	-0.229*** (0.001)	-0.290*** (0.001)	-0.244*** (0.001)	-0.265*** (0.001)	-0.229*** (0.001)	-0.229*** (0.001)
LEV	0.381** (0.031)	0.369** (0.037)	0.674*** (0.001)	0.647*** (0.001)	0.545*** (0.001)	0.528*** (0.001)	0.529*** (0.001)
GROWTH	-0.020 (0.825)	-0.011 (0.902)	-0.041 (0.674)	-0.035 (0.715)	-0.029 (0.652)	-0.020 (0.760)	-0.019 (0.764)
LOSS	1.426*** (0.001)	1.417*** (0.001)	1.243*** (0.001)	1.209*** (0.001)	1.324*** (0.001)	1.302*** (0.001)	1.301*** (0.001)
Sample size	5,650	5,650	5,746	5,746	11,396	11,396	11,396
Adj-R ²	0.044	0.044	0.050	0.052	0.044	0.045	0.045

This table investigates whether the role of political connections and institutional investors could be conditional on institutional environment. We partition our sample based on an index, MLEGAL, that captures aspects of development in the legal environment, such as the extent of protection for property rights. The observations in which MLEGAL values are above the median for the total sample are treated as a subsample with a strong legal environment, whereas the values below the median are treated as a subsample with a weak legal environment. DMLEGAL is a dummy that takes the value of 1 if a firm is located in a weak legal environment, and otherwise 0. The constant term, industry dummies, and year dummies are included in the regression, but are not reported. The *p*-values, which are adjusted for clustering at the firm level, are presented in parentheses below the estimates, where *, **, and *** indicate significance at the 10, 5, and 1 % levels, respectively. The definitions of the variables are given in Table 7 in Appendix 1

Empirical Findings

Descriptive Statistics

The details of the variable construction can be found in Table 7 in Appendix 1. A list of these variables and their summary statistics is provided in Table 3. Approximately 26 % of firms are politically connected in China, and institutional investors hold more than 8 % of the shares

outstanding. As mentioned in an earlier section, the proportion of institutional investors is the total percentage of shares held by mutual funds, insurance companies, social security funds, QFIIs, trust companies, and securities companies. Of these types of investors, mutual funds have the highest proportion of ownership. On average, the largest shareholder holds 37.7 % of the total outstanding shares. The Big 10 auditors in China account for 16 % of the market share. The proportion of independent directors

is 35.2 %. Some 3.8 % of all firms have suffered losses over two consecutive years.

The correlations between the variables are not strong. We report the correlation matrix of the variables in Table 8 in Appendix 2. In addition, we check the variance inflation factor (VIF) of the variables. The VIF values of the variables in the regressions are less than 10, which suggest that multicollinearity is not a serious concern.

Regression Results

We report the results of the main regression models in Table 4. The constant term and industry and year dummies are included in the regressions, but for brevity the results are not reported in the table. The p-values in the panel regressions are based on the standard errors corrected for firm clustering (Petersen 2009).⁴ We include only those control variables used in Model 1. We find that an increasing degree of ownership by the largest shareholders reduces the likelihood of enforcement action against fraud. Model 1 shows that there is a negative association between the proportion of independent directors and the incidence of enforcement against fraud. These results suggest that the largest shareholder and the independent directors play a monitoring role in reducing the likelihood of fraud. Larger firms and more profitable firms are less likely to commit fraud. We find that financial leverage (LEV) and financial distress (LOSS) have a positive association with the incidence of enforcement action against fraud. The coefficients for TOP10 and BOARD are marginally significant, and those for AUDITOR and other variables are not significant. All of these results are consistent with the previous literature on corporate fraud, which argues that firms in financial trouble are more likely to be examined for fraud (Chen et al. 2006; Loebbecke et al. 1989).

We include our main variable for political connections in Model 2. The coefficient for political connections is negative and statistically significant. This finding is consistent with our hypothesis H2 that political connections decrease the incidence of regulatory enforcement against fraud. The finding also indicates that retaining politically connected CEOs and/or chairmen can bring certain privileges in terms of the regulatory environment in that the risk of enforcement measures, such as fines, public criticism, administrative punishment, warnings, and even delisting, may be eased. We add the aggregate of institutional investor ownership in Model 3. The coefficient for institutional investors is negative and statistically significant. This finding supports our hypothesis H1 that monitoring by institutional investors

mitigates the incidence of regulatory enforcement against fraud. The finding also implies that institutional investors potentially play an increasingly important role in external control mechanisms. These investors are effective in monitoring the management of firms and reducing the likelihood of corporate fraud and anti-fraud enforcement actions.

In Model 4, we separate institutional investors into different types: mutual funds, insurance companies, social insurance funds, QFIIs, trust companies, and securities companies. We find that the coefficient for mutual funds is significant, whereas the coefficient for the other types of institutional investors is not significant. This finding is reasonable because, as shown in Table 3, the majority of institutional ownership is held by mutual funds. This finding implies that larger mutual fund ownership in firms incentivizes effective monitoring. Models 5 and 6, which include both political connections and institutional investors, show similar results. The coefficients for both political connections and mutual fund ownership are significant.

To enhance the robustness of our results, we also run regressions to test how changes in the status of political connections or institutional investor ownership affect changes in the level of enforcement action. Because the variable for change in enforcement action has three values (0, -1, and 1), we use a multi-level logit model to estimate the effects. We use no change in fraud action ($\Delta\text{Fraud} = 0$) as the reference category for the dependent variable, and we use no change in the status of political connections ($\Delta\text{Political connections} = 0$) as the reference category for the independent variables. Due to limitations on space, we do not report the results. We find that the coefficient for $\Delta\text{Political connections} = 1$ is significantly negative, which suggests that when a firm has established political connections, its likelihood of being exposed to fraud enforcement action decreases. Similarly, the coefficient for change in institutional investor ownership is also significantly negative, which suggests that the probability of enforcement action decreases as the level of institutional investor ownership increases. These results support our hypotheses.

In Table 5, we examine the association between political connections, institutional investors, and the incidence of enforcement against fraud under different forms of ownership. Following La Porta et al. (1999) and Bortolotti and Faccio (2009), we trace the identity of the largest shareholders to the ultimate owner. We classify our sample based on whether a firm is ultimately controlled by the government. Models 1 and 2 of Table 5 present the results for the SOE subsample, and Models 3 and 4 for the non-SOE subsample. Additionally, in Models 5–7, we include interaction terms between an SOE dummy and the factors of political connection and institutional ownership to test whether the coefficients for political connections and institutional ownership in SOEs are different from the coefficients for non-SOEs.

⁴ The conclusions still hold when we use the two-dimension clustered standard errors at firm and year level by the approach suggested by Petersen (2009). We thank an anonymous referee for this suggestion.

As shown in Models 1–4 of Table 5, the coefficients for political connections are negative and statistically significant for the non-SOE subsample, but not for SOEs. The result of Model 5 shows that the coefficient for the interaction term between political connections and the SOE dummy is significantly positive. This finding is consistent with our hypothesis H3a that political connections play a more important role in mitigating the incidence of regulatory enforcement against fraud for non-SOEs. This is consistent with the findings of Wu et al. (2012a) that politically connected managers have more value in private firms.

In addition, Table 5 shows that the coefficient for the shareholdings of institutional investors is negative and statistically significant for SOEs, but is statistically insignificant for non-SOEs. The coefficient for the interaction term between institutional ownership and the SOE dummy is statistically negative, which indicates that institutional ownership plays a more important role in reducing the incidence of regulatory enforcement against fraud in SOEs. This finding suggests that institutional investors may make greater efforts to ensure more effective action in monitoring SOEs, because they expect that SOEs will have weaker corporate governance. We also include both Political Connection*STATE and Institutional Investors*STATE in Model 7 of Table 5. Our conclusions still hold.

Table 6 reports the results of our enquiry on whether the roles of political connections and institutional investors are conditional on the institutional and legal environments. We partition our sample based on the legal environment as measured by MLEGAL (an index capturing development in the protection of property rights). The observations for which the MLEGAL values are above the median of total samples are treated as a subsample indicating a strong legal environment, and observations falling below the median are treated as a subsample indicating a weak legal environment. We find that the coefficient for political connections is negative and statistically significant for firms operating in weaker legal environments. The coefficient for the interaction term between political connections and DMLEGAL (a dummy that equals 1 if a firm is located in a weaker legal environment) is statistically negative. This finding is consistent with our hypothesis H4a that political connections play a more important role in reducing the incidence of enforcement against fraud in weaker legal environments. The finding also shows that the government's favorable treatment of firms with political connections is more pronounced in weaker legal environments. Furthermore, Table 6 shows that the coefficient for the shareholdings of institutional investors is negative and statistically significant for firms in weaker legal environments, but is only marginally significant for firms in stronger legal environments. The interaction term between institutional ownership and DMLEGAL is not significant, which suggests that the role

played by institutional investors in reducing the incidence of enforcement against fraud is basically the same in both kinds of legal environment. We also include both Connections*DMLEGAL and Institutional Investors*DMLEGAL in Model 7 of Table 6. Our conclusions still hold.

Conclusion

Our study analyzes two under-investigated factors for mitigating the risk of anti-fraud regulatory enforcement in Chinese firms: the role of institutional investors and political connections. For the purposes of this investigation, we measure the incidence of enforcement against fraud by analyzing the number of enforcement announcements made by the CSRC, the Shanghai stock exchange, and the Shenzhen stock exchange between 2003 and 2011. We find that firms with a larger proportion of institutional investors, especially mutual fund investors, tend to have a lower incidence of enforcement actions against fraud. Additionally, we find that firms with political connections have a lower incidence of fraud, or are less likely to face enforcement action. We suggest that institutional ownership and political connections both lead to the more effective monitoring of firms.

A characteristic of the capital markets in China is that the central or local governments and SOEs are the major stockholders in many listed firms. In addition to concentrated ownership by government, there are disparities in the extent of market development and legal protection between provincial jurisdictions in China. Government ownership and different institutional environments could temper the benefits of monitoring by institutional investors and politically connected CEOs or chairmen. We find that political connections play a more important role in reducing the incidence of regulatory enforcement for non-SOEs, and that the monitoring role of institutional investors in mitigating the incidence of anti-fraud enforcement actions is more pronounced for SOEs. Our results also show that political connections play a more important role in reducing the incidence of enforcement actions in weaker legal environments in China.

An alternative interpretation of the role of institutional investors is that instead of preventing firms from committing corporate fraud, such investors may use their connections and influence to prevent firms from being exposed to enforcement action. Mutual funds, as the major institutional investors in the Chinese stock markets, are also regulated by the CSRC. Compared with institutional investors' power over the listed firms in which they are invested, the connections and influence that mutual funds have over the regulatory authorities (i.e., the CSRC) are very limited. We believe that it is more likely that mutual funds influence the behavior of their investee firms than that they influence the behavior of the CSRC. To put the argument differently, institutional investors tend to prevent

firms from committing fraud rather than using their connections and influence to prevent fraud from being exposed to the regulatory authorities. However, there may be some hidden layers of connections between institutional investors and government officers. We cannot rule out the possibility that institutional investors use their connections and power to prevent fraud from being exposed to the regulators.

This study has policy implications for business ethics in China and other transitional countries. Our results indicate that both politically connected managers and institutional investors can decrease the incidence of enforcement action against fraud. However, politically connected managers and institutional investors achieve this in different ways. Politically connected managers tend to prevent firms from being exposed to enforcement action, whereas institutional investors are more likely to prevent firms from committing fraud. This evidence implies that the government should continue to cultivate institutional investors but may seek to discourage government officials from being employed by firms.

Acknowledgements We thank Edward Lee, Douglas Cumming and Wenxuan Hou (the editors), referees, Yick Ho Yin and participants in “2013 Journal of Business Ethics Special Issue Conference Sustainable and Ethical Entrepreneurship, Corporate Finance and Governance, and Institutional Reform in China” for the helpful comments and suggestions. Wenfeng Wu acknowledges financial support from the National Science Fund Committee of China (No. 71222203). Oliver Rui acknowledges financial support from the National Science Fund Committee of China (71372203) grant and the research grant from CEIBS.

Appendix 1

See Table 7.

Appendix 2

See Table 8.

Table 7 Definition of the Variables

Variable	Description
FRAUD	A dummy variable that takes the value of 1 if the firm is subject to an enforcement action
POLCON	A dummy variable that takes the value of 1 if the firm is politically connected
INSTI (Institutional investor)	The percentage of ownership held by institutional investors. The proportion of institutional investors is the total percentage of shares held by mutual funds, insurance companies, social security funds, qualified foreign institutional investors (QFIIs), trust companies, and securities companies
MFUND (Mutual fund)	The percentage of ownership held by a mutual fund as an institutional investor
INSURANCE COMPANY	The percentage of ownership held by an insurance company as an institutional investor
SOCIAL SECURITY FUND	The percentage of ownership held by the national social security fund as an institutional investor
TRUST COMPANY	The percentage of ownership held by a trust company as an institutional investor
SECURITIES COMPANY	The percentage of ownership held by a securities company as an institutional investor
TOP	The percentage of ownership held by the largest shareholder
TOP10	A Herfindahl index that measures the concentration of shares held by the top 10 stockholders, excluding the controlling shareholder
AUDITOR	A dummy variable taking the value 1 if the auditor is one of the 10 biggest auditors by market share
BOARD	The log of the number of board members
INDEP	The percentage of independent directors
SIZE	The log of total assets
LEV	The ratio of debt to total assets
GROWTH	The annual average sales growth over the 3 years prior to the date of a reported fraud
LOSS	A dummy variable that takes the value of 1 if the firm recorded a loss in each of the previous 2 years, and otherwise 0
MINDEX	A market development score derived from a comprehensive index that captures the level of regional market development through analysis of the following factors: (1) the relation between the government and the markets, as measured by factors such as the role of markets in allocating resources and the burden on enterprises in addition to normal taxes; (2) the development of non-state business, as measured by factors such as the ratio of industrial output from the private sector to total industrial output; (3) the development of product markets, as measured by factors such as regional trade barriers; (4) the development of factor markets, as measured by factors such as FDI and the mobility of labor; and (5) the development of market intermediaries and the legal environment, as measured by factors such as the protection of property rights
MLEGAL	The fifth sub-index of MINDEX, which represents the development of market intermediaries and the legal environment

This table defines the variables considered in this study. The summary statistics and regression results are presented in Tables 3, 4, 5, and 6

Table 8 Correlation matrix of the main variables

Variable	FRAUD	POLCON	INSTI	MFUND	TOP	TOP10	AUDITOR	BOARD	INDEP	SIZE	LEV	GROWTH	LOSS
POLCON	-0.045*** (0.001)												
INSTI	-0.073*** (0.001)	0.014 (0.131)											
MFUND	-0.070*** (0.001)	0.014 (0.136)	0.989*** (0.001)										
TOP	-0.088*** (0.001)	0.060*** (0.001)	0.079*** (0.001)	0.076*** (0.001)									
TOP10	0.008 (0.411)	-0.004 (0.684)	0.033*** (0.001)	0.027*** (0.004)	-0.212*** (0.001)								
AUDITOR	-0.052*** (0.001)	0.021** (0.027)	0.126*** (0.001)	0.117*** (0.001)	0.129*** (0.001)	0.120*** (0.001)							
BOARD	-0.040*** (0.001)	0.034*** (0.001)	0.091*** (0.001)	0.091*** (0.001)	0.031*** (0.001)	0.110*** (0.001)	0.106*** (0.001)						
INDEP	0.035*** (0.001)	-0.016* (0.094)	-0.006 (0.532)	-0.006 (0.550)	-0.061*** (0.001)	-0.185*** (0.001)	-0.094*** (0.001)	-0.216*** (0.001)					
SIZE	-0.116*** (0.001)	0.068*** (0.001)	0.313*** (0.001)	0.305*** (0.001)	0.268*** (0.001)	0.024** (0.011)	0.245*** (0.001)	0.232*** (0.001)	-0.093*** (0.001)				
LEV	0.121*** (0.001)	-0.020** (0.037)	-0.097*** (0.001)	-0.092*** (0.001)	-0.090*** (0.001)	-0.045*** (0.001)	-0.034*** (0.001)	0.010 (0.308)	0.023** (0.015)	0.006 (0.515)			
GROWTH	-0.032*** (0.001)	0.019** (0.037)	0.082*** (0.001)	0.080*** (0.001)	0.099*** (0.001)	0.012 (0.202)	-0.022** (0.018)	-0.030*** (0.001)	0.029*** (0.001)	0.075*** (0.001)	0.035*** (0.001)		
LOSS	0.167*** (0.001)	-0.026*** (0.005)	-0.107*** (0.001)	-0.103*** (0.001)	-0.064*** (0.001)	0.002 (0.837)	-0.040*** (0.001)	-0.044*** (0.001)	-0.008 (0.364)	-0.160*** (0.001)	0.272*** (0.001)	-0.115*** (0.001)	
MINDEX	-0.018* (0.059)	-0.016* (0.086)	0.054*** (0.001)	0.049*** (0.001)	-0.048*** (0.001)	0.001 (0.872)	0.100*** (0.001)	-0.056*** (0.001)	0.050*** (0.001)	0.105*** (0.001)	-0.048*** (0.001)	-0.023** (0.013)	-0.075*** (0.001)

All of the variables are as defined in Table 7 in Appendix 1. ***, **, and * denote statistical significance at the 1, 5, and 10 % levels, respectively

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