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CEO accountability for corporate fraud: Evidence from the Split Share Structure Reform in China

Jiandong Chen ^a, Douglas Cummings ^b, Wenxuan Hou ^{c*}, and Edward Lee ^d

^a School of Public Finance and Economics, Southwestern University of Finance and Economics, China

^b Schulich School of Business, York University, Canada

^c University of Edinburgh Business School, 29 Buccleuch Place, Edinburgh, EH8 9JS, UK

^d Manchester Business School, University of Manchester, UK.

Abstract: We use institutional-related theories and a unique natural experiment that enables an exogenous test of the influence of controlling shareholders on managerial accountability to corporate fraud. In China, prior to the Split Share Structure Reform (SSSR), state shareholders held restricted shares that could not be traded. This restriction mitigated state-owned enterprise controlling shareholders' incentives to monitor managers. The data examined show the SSSR strengthens incentives of state-owned enterprise controlling shareholders to replace fraudulent management. Our findings support the view that economic incentives are important to promote corporate governance and deter fraud.

Keywords: CEO turnover; corporate fraud; ownership; Split Share Structure Reform; China

Running head: CEO accountability and institutional reform in China

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* Corresponding author: wenxuan.hou@ed.ac.uk; Tel: +44 (0) 131 651 5319

INTRODUCTION

Agency theory, which suggests a need for shareholders to monitor managers against opportunistic behaviors detrimental to firm value (Jensen and Meckling, 1976; Eisenhardt, 1989), has been widely applied to rationalize studies of managerial behavior and corporate governance (Dalton et al., 2007). The primary critique against agency theory is that there is weak empirical evidence regarding the efficacy of policing mechanisms that seek to mitigate agency costs (Tosi et al., 2000; Dalton et al., 2007).¹ For instance, empirical studies highlight the lack of efficient executive contracting (Bertrand and Mullainathan, 2001), the scarcity of relative performance evaluation of CEOs (Abowd and Kaplan, 1999), and the weak power of shareholders in selecting directors (Bebchuk and Fried, 2004). A recognized limitation of the agency theory is that it is too general to account for the diversity of institutional contexts in which empirical studies are based (Bruce et al., 2005). As a result, institutional-related theories may contribute to the development of principal-agency models that incorporate contextual influences and operationalize constructs within agency theory (Gomez-Mejia et al., 2005).

Institutional theory suggests that organizations conform to legitimacy imperatives due to state pressures, expectations of the profession, or collective norms of the environment (Meyer and Rowan, 1977). Such conformity could lead to passive acquiescence that does not contribute to the organizations' interest and efficiency (Tolbert, 1985; Zucker, 1977). There are two offsetting effects that could influence firms' strategic responses to institutional processes. The first is institutional change, which occurs as a result of organizations' responses to contingency shifts following internal or external events (DiMaggio and Powell, 1983; Oliver, 1992). Such changes may arise either through the evolutionary process within an organization, or through a centralized process mandated across organizations (Kingston and Caballero,

¹ As a result, alternative perspectives have been put forward in the literature, including the executive power theory (Finkelstein, 1992), stakeholder theory (Mitchell et al., 1997), and the stewardship theory (Davis et al., 1997).

2009). The second effect is institutional inertia, which causes organizations to resist innovations because they do not perceive a net benefit (Ruttan, 2006), or because of the linkage and complementarities between organizations within the same domain (Aoki, 2006). In other words, firms' corporate governance practices may be determined by conformity to environmental constraints. While centrally mandated governance reforms may invoke institutional changes, the impact may not occur uniformly across all firms due to variations in institutional inertia.

In this paper, we utilize an exogenous reform event in China and draw upon agency- and institutional-related theories to examine what effect controlling shareholders exhibit on the accountability of Chief Executive Officer (CEO) to corporate fraud behavior. Regulatory reforms in China's transition from a centrally planned to market-oriented economy provide a natural experiment setting (Meyer, 1995) for empirically testing academic theories. We exploit the 2005 Split Share Structure Reform (SSSR) in China to observe how institutional change influences principals' motivation in dealing with agency problems. We find evidence that this reform generates the required incentives for controlling shareholders in state-owned enterprises (SOEs) to strengthen CEO accountability against opportunistic behavior detrimental to firm value. We contribute to the strategic management and business ethics literature by demonstrating the importance of economic incentives in promoting corporate fraud deterrence in a prominent transitional economy.

Since China is an increasingly influential emerging country, its development experience offers useful implications for other aspiring economies. Although China's growth is impressive, its rapidly changing economic environment also creates a fertile ground for managerial opportunism underlying corporate fraud. Widespread corporate fraud could hamper China's economic aspirations since such corporate fraud negatively affects the confidence of stakeholders (Davidson and Worrell, 1988), the job security of employees (Zahra et al., 2005),

and the well being of the entire society (Szwajkowski, 1985). Existing studies suggest that top management is important antecedent of corporate fraud (Daboub et al., 1995; Donohue et al., 2007) and is often held accountable (Karpoff et al., 2008; Person, 2006) for such behavior. However, the association between corporate fraud and managerial accountability in China has not been well examined. While existing studies of corporate fraud in China (Chen et al., 2006; Jia et al., 2009) largely focus on the influence of corporate governance, previous studies on Chinese CEO turnover mainly investigate the link with firm performance (Canyon and He, 2012; Firth et al., 2006b; Kato and Long, 2006a, 2006b; Shen and Lin, 2009). A common problem with studying corporate fraud and corporate governance is that they could be endogenously related. Therefore, exogenously induced changes due to regulatory reforms offer better research settings for such research questions. A common limitation of studying the relation between CEO turnover and performance in China is that a large number of firms (i.e., SOEs), have social and political agenda other than profit motives. Therefore, evaluating CEO turnover following corporate fraud provides a better test of managerial accountability.

The Chinese government maintains control of a large proportion of listed firms through ownership. Chinese SOE listed firms have three main features. First, they have access to government financial support and business contracts, which renders them less dependent on external funding provided by the capital market (Chen et al., 2010; Chen et al., 2011). In return, these firms are expected to promote the government's socio-political objectives, which could obligate them to deviate from the pursuit of increasing their value in capital market (Allen et al., 2005). Second, their managerial appointment is also influenced by the government (Hassard et al., 1999), reducing the accountability of managers to outside investors. This dynamic in SOE firms increases the entrenchment effect of controlling shareholders (Schleifer and Vishny, 1997) acting against the interest of minority shareholders (Fan et al., 2007). Third, to strengthen government control of listed firms, China also has imposed a split share structure since the

inception of its stock market in early 1990s, and was only gradually eliminated following the enactment of the SSSR. Under this approach, state shareholders hold restricted shares that cannot be traded freely in the stock market, as can shares held by private shareholders.

The split share structure inevitably creates a misalignment of interest between state and private shareholders, which has negative implications for corporate governance. Unlike the private shareholders that hold tradable shares, state shareholders are deprived of the wealth implication of share price movement in the stock market. As a result, the state shareholders are more interested in pursuing either accounting-based performance targets or political objectives (Firth et al., 2006), which are not necessarily helpful in maximizing the long-run market value of the firms. Thus, the split share structure renders state shareholders reluctant to ensure managers maximize the market value of their firms or to monitor managers against opportunistic behavior detrimental to firm value. The SSSR that began in 2005 gradually abolished the trading restriction of state shareholders, and has the potential to invoke institutional changes to improve corporate governance, particularly among the SOE listed firms controlled by state shareholders.

The aforementioned theoretical rationale and institutional setting suggest that agency problems are expected to be dealt with less effectively among Chinese SOE listed firms and that the SSSR may contribute to the reduction of this problem. We can therefore make the following testable predictions regarding managerial accountability following corporate fraud. First, we can predict that the likelihood of CEO turnover following regulatory enforcement action against corporate fraud is lower among the SOE listed firms than their non-SOE counterparts. This is consistent with the institutional theory in the sense that the governance practice adopted by SOE listed firms may be sub-optimal as a result of conforming to state pressure than market forces. Second, following the SSSR, the likelihood of CEO turnover following enforcement actions should increase more among SOEs than non-SOEs. This is

consistent with institutional changes seeking to improve corporate governance being more effective when stakeholders are provided with greater economic incentive. Third, if the SSSR indeed increases CEO turnover likelihood following enforcement actions among SOEs, this effect should also be more pronounced among SOEs that are more receptive and proactive in implementing the reform process. This is consistent with cross-sectional variations in firm-specific institutional inertia affecting the impact of innovations. Using a sample drawn from Chinese listed firms over the period of 1999 to 2008, we find empirical evidence consistent with our three predictions. The data include 409 cases of regulatory enforcement actions against corporate fraud, each matched with comparable firms by year, industry, and size.

Our findings contribute to the literature on corporate governance and emerging market development by providing the following implications. First, although agency theory predicts that the principal would monitor agents against opportunistic behavior, we show that the economic incentive of the principal is a crucial prerequisite for this relation to hold. While existing corporate governance literature largely focuses on how agents can be incentivized to pursue the interest of the principal, we provide an example from a natural experiment that shows motivating the principal also matters. This may be achieved either by increasing the benefits of monitoring, which we demonstrate in our context, or by reducing the cost of monitoring, which can occur if the enactment of regulations such as the Sarbanes-Oxley Act in the U.S. effectively reduces information asymmetry. Second, we show that as China evolves from a centrally planned to market-oriented economy, there is a need for institutional reforms at a matching pace to strengthen corporate governance. Our findings imply that the split share structure has impeded corporate governance especially among SOE listed firms during the period in which it was imposed. For China to fully realize the potential of its economic growth opportunities, institutional changes, such as those introduced by the SSSR, should be accelerated.

THEORY AND HYPOTHESIS

Theoretical background

Agency theory is predicated on the assumption that shareholders and managers seek to maximize their own welfare in different ways (Fama and Jensen, 1983; Davis et al., 1997). The agency problem occurs when shareholders cannot effectively monitor managers against opportunism and expropriation (Eisenhardt, 1989). The extant literature provides no shortage of evidence to show that managers prioritize their own interests above that of the shareholders. For instance, managers try to report their performance more favorably (Holthausen and Leftwich, 1983), make investment decisions at the expense of shareholders (Jarrell et al., 1988; Morck et al., 1989), and attempt to insulate themselves from internal (Salancik and Pfeffer, 1980; Tosi and Gomez-Mejia, 1989) and external (Dann and DeAngelo, 1983) governance mechanisms. Agency costs borne by the shareholders include expenditures to monitor and align incentives of manager, as well as the residual loss of firm value that arises from conflicts of interest with managers (Jensen and Meckling, 1976). There are three main mechanisms for minimizing this residual loss of firm value: external market for corporate control, incentive alignment through executive remuneration, and monitoring by a board of directors (Dalton et al., 2007). Since shareholders are the legal owner and residual claimants of a firm, the shareholder primacy model of corporate governance (Bebchuk, 2006) stipulates that the board of directors has a responsibility to protect shareholder interests above all other groups of stakeholders. According to this view, the most important duties of the board of directors are to represent shareholders in carrying out corporate governance mechanisms such as reporting, auditing, and policies (Jensen and Meckling, 1976). While empirical studies support a positive relationship between shareholders' influence over the board of directors and firm value (Bebchuk and Cohen, 2005; Campbell et al., 2012), further evidence on the causal nature of this relationship in natural experiment setting is warranted.

CEO dismissal is one of the most important powers that the board of directors, as the representative of shareholders, has to curb the agency problem (Weisbach, 1988; Zald, 1969). The negative relationship between CEO dismissal and firm performance is well established in the literature (Denis and Kruse, 2000; Farrell and Whidbee, 2003). However, the board's decision to dismiss a CEO for poor performance can be affected by many socio-political factors. These include the degree to which the board's allegiance is to shareholders (Allen and Panian, 1982), the power of the board relative to the CEO (Ocasio, 1994; Zhang, 2006), and expectations of board members, such as beliefs of what constitutes good performance, awareness of other firms' performance levels, and attribution regarding managerial ability to change firm performance (Fredrickson et al., 1988). Performance expectations are also complicated by the existence of information asymmetry between the board and CEO (Zajac, 1990), as well as organizational and environmental factors beyond managerial control (Holmstrom, 1982). Positive accounting theory (Holthausen and Leftwich, 1983) suggests that managerial incentives to manipulate financial statements undermine the credibility of accounting-based performance targets. Behavioral finance theory (Hirshleifer, 2002) implies that stock returns may be influenced by investor sentiment and rendered less reliable as a criterion for judging CEO performance. As a result of these uncertainties, it is easier for the board to base CEO dismissal decisions on more observable and legitimate indicators of CEO performance (Wiersema and Zhang, 2011). If this is the case, then we expect explicit cases of CEO wrongdoings such as corporate fraud, which is based on investigations by regulatory authorities, to play an important role in formulating the board's CEO dismissal decision.

Corporate fraud is a leading symptom of agency problems, and its influence on CEO dismissal is well-documented in studies of the U.S. market (e.g., Karpoff et al., 2008; Person, 2006). Corporate fraud reduces investor confidence and shareholder wealth, which in turn leads to misallocation of capital and instability in the financial market (Karpoff, et al., 1999;

Murphy et al., 2009). The literature identifies top management as one of the key antecedents of corporate fraud (Baucus, 1994; Efendi et al., 2007; Khanna et al., 2012).² Black (2005) classifies fraud into reactive and opportunistic types. The former occurs when executives respond to declining firm performance by window dressing financial statements. The latter occurs when executives seize an opportunity for further gain by manipulating disclosures. Over the past decade, high-profile fraud cases such as Enron, WorldCom, AIG, and Lehman Brothers continue to emerge. Schnatterly (2003) suggest that traditional corporate governance mechanisms such as blockholders, boards, and CEO compensation have only a limited effect on reducing corporate fraud. Berenson (2003) suggests that despite decades of continued efforts to reform corporate governance, to align managers' incentives with shareholders' interest, and to impose codes of conduct for managerial ethics, corporate fraud remains prevalent even in the well-developed economy of the U.S. Ferrell and Ferrell (2011) argue that this is at least partly a result of a corporate institutional environment where individuals are justified or even rewarded for carrying out potentially unethical activities in support of personal or organizational gains. This leads to a debate over whether externally legislated business ethics, such as the Sarbanes-Oxley Act of 2002 (Beggs and Dean, 2007), or the internal corporate ethical culture (Maignan and Ferrell, 2004; Sims and Brinkmann, 2003) is more effective in bringing about the institutional changes needed to reduce the underlying incentives of corporate fraud.

An institutional perspective may compliment agency theory in helping to explain empirical evidence of managerial behavior by recognizing contextual influences and identifying key constructs in the principal-agent relationship (Gomez-Mejia et al., 2005). Institutions are defined as a system of rules, beliefs, norms, and organizations that together

² Other factors include industry culture (Baucus and Near, 1991), industry concentration (McKendall and Wanger, 1997), environmental hostility (Baucus and Baucus, 1997), environmental dynamism (Baucus and Near, 1991; Wang et al., 2010), regulatory pressures (Szwajkowski, 1985), board composition (Agrawal and Chadha, 2005), and organization culture (McKendall and Wanger, 1997).

generate a regularity of social behavior (Greif, 2006). Institutional theory traditionally focuses on legitimizing the process and tendency for organizational practices to be taken for granted and imitated by other organizations (Meyer and Rowan, 1977). It suggests that organizational behavior is less driven by market forces or efficiency concerns, and more by conformity to state, societal, and culture pressures, as well as legacy and tradition (Tolbert, 1985; Tolbert and Zucker, 1983). Compliance with institutional norms and requirements generates rewards such as stability, legitimacy, and access to resources (DiMaggio and Powell, 1983). In the context of corporate governance, firms may not necessarily adopt best practices due to the need to conform to external constituents.

Institutional changes, or deinstitutionalization, refer to the weakening or transformation of existing corporate practices, and their substitution by new approaches (Ansari et al., 2010; Chung and Beamish, 2005; Sherer and Lee, 2002). Oliver (1992) suggests three possible reasons for institutional changes: economic, social, and political pressures. Economic pressure stems from changes such as increased competition or reduced rewards for sustaining current practices. Social pressure results from changes in organizational structure and the external environment. Political pressure arises from shifts in the underlying distribution of power, conflicting internal interests, and changes in dependency patterns. In the context of corporate governance, externally mandated reforms may change the governance practices of firms if they alter the economic pressures to which firms or their stakeholders are exposed.

Institutional inertia, or resistance to changes, causes the adoption of new practices to be symbolic or adapted when it is not compatible with the organization (Westphal and Zajac, 1994, 2001). Institutional inertia tends to increase with an organization's age, size, and complexity (Hannan and Freeman, 1984), and can be strengthened by the existence of strategic linkages and complementarities across organizations (Aoki, 2001). The stability of institutions can also be self-reinforcing because it influence and align people's beliefs, behavior, and preferences,

which in turn also legitimizes the norms and practices of institutions (Hodgson, 2004). Ruttan (2006) argues that institutional innovation requires mobilization of political resources and that institutional inertia is likely to persist as long as the expected return does not exceed the marginal cost of mobilizing these resources. In the context of corporate governance, firm-specific institutional inertia could moderate the effectiveness of externally mandated reforms in addressing agency problems.

Institutional settings

Fraudulent corporate behavior common among Chinese listed firms ranges from delaying disclosure, to providing false statement, to embezzlement (Chen et al., 2005). In China, corporate fraud is frequently motivated by two general factors. First, it can be stimulated by regulatory pressure and financial needs. For instance, listing is only allowed after two consecutive years of profit (Aharony et al., 2000). Similarly, issuing more shares is only allowed if a firm's return on equity is above 10% for three continuous years (Chen and Yuan, 2004), while delisting occurs after three consecutive years of losses (Jiang and Wang, 2008). While these rules are intended as a way to guide capital toward well-performing firms, it also generates incentives for listed firms to instigate fraud in order to meet the requirements. Second, corporate fraud may be more common in a dynamic and rapidly evolving environment (Baucus and Near, 1991). For instance, under weak legal enforcement and investor protection (Allen et al., 2005; Morck et al., 2000), managers are more likely to believe that they can exploit changing rules and get away with fraud.

The China Securities Regulatory Commission (CSRC) serves as the main regulator of securities markets in China and is modeled after the Securities and Exchange Commission (SEC) in the U.S. Part of the responsibility of CSRC is to oversee the securities markets, investigating and disciplining fraudulent corporate behavior. The basic regulations against corporate fraud include: *Provisional Regulations Against Securities Frauds*, *Temporary Rules*

for Stock Issuance and Stock Exchanges Regulation, Solutions for Prohibiting Securities Fraud and Solutions for Listed Firm Checks. The CSRC carries out this duty through regular reviews and regular inspections of firms (Hou and Moore, 2010). It also responds to information and complaints of fraud allegations from investors, employees, and media. If misconduct is confirmed, the CSRC's enforcement actions could range from internal and public criticism to criminal prosecution. The CSRC has been criticized for being ineffective in identifying and prosecuting fraud (Anderson, 2000). Political pressures may affect the power of the CSRC, since it is a ministry-level commission that answers to the state (Chen et al., 2005; Liebman and Milhaupt, 2008).

Chinese-style capitalism is characterized by a high degree of state control of listed firms (Bai et al., 2000; Szamosszegi and Kyle, 2011) and this distinguishes China from other ex-communist transitional economies. Despite three decades of transition from a centrally planned to market-oriented economy, the Chinese government (at both the central and local level) still maintains control of a majority of the listed firms through state shareholders represented by government agencies and other SOEs. This reflects the prevailing socio-political ideology of China. On the one hand, the government wants to transform listed firms into modern enterprises that are capable of raising their own capital in the market. On the other hand, the government wishes to retain influence over listed firms to forward a political and social agenda, such as regional development and maintenance of job security. The government not only controls SOE listed firms through ownership, but also influences managerial appointment (Hassard et al., 1999). In return, the government provides the listed firms it controls with financial support through subsidies (Allen et al., 2005) and favorable loans (Chen et al., 2011a).

Since the establishment of its stock exchanges in early 1990s, China has also imposed what is known as the split share structure to maintain government control of listed firms. Under

this approach, state shareholders held restricted shares while outside private shareholders held tradable shares. Restricted shares are not freely tradable on the stock exchange and can only be transferred privately or auctioned, usually at a discounted value relative to the firm's freely tradable shares (Chen and Xiong, 2001; Huang and Xu, 2009). The central and local governments hold restricted shares through their asset management agencies or affiliated SOEs. However, existing studies suggests that the maintenance of Chinese state ownership through the split share structure may contribute to a reduction in the corporate governance quality and performance efficiency of SOE listed firms (Sun and Tong, 2003; Wei et al., 2005). Since controlling state shareholders hold restricted shares that are not tradable, their wealth is less directly linked to stock returns. Thus, controlling shareholders of such firms have less pronounced incentive to monitor managers and ensure that they maximize firms' market value. For instance, existing studies show that CEO compensation (Firth et al., 2006a, 2007) and turnover (Conyon and He, 2012) in Chinese SOE listed firms are less sensitive to stock return performance relative to non-SOE listed firms.

Aware of the drawback of the split share structure, the CSRC announced on April 29th, 2005 its decisions to gradually abolish the trading restriction on state shareholders. Official guidelines containing formal operational procedures were issued on September 12th, 2005. An initial pilot of two batches of firms were selected on May 9th and June 19th, 2005. All remaining listed firms began the reform process in later batches. To prevent an adverse market response, which had occurred in the previous reform attempt (Kim et al., 2003), the reform process began with negotiations between restricted and tradable shareholders to determine satisfactory level of consideration to be paid out to the latter group (Firth et al., 2010). Upon the completion of the negotiation process, the portion of restricted shares paid out as a consideration to the private investors became immediately tradable. Twelve months later, shareholders who possess less than 5% of the firm's total share value can trade any of their restricted shares in the stock

market. Larger shareholders are allowed to trade up to 5% and 10% of their restricted shares 12 and 24 months after this date, respectively. Finally, 36 months after the negotiation is completed, all restricted shares become fully tradable in the stock market. Since all Chinese listed firms complete their negotiations by the end of 2008, all restricted shares became fully tradable by the end of 2011. The SSSR gave state shareholders the previously unavailable option to trade their shares on the stock market. Apart from the shares paid out as consideration to private shareholders as a result of the negotiation, this reform does not force state shareholders to sell their shares in the secondary market.

The SSSR is a significant step in China's evolution from centrally-planned to market-oriented economy. There is increasing interest in the academic literature to explore this topic. For instance, Liao et al. (2014) provide evidence of increased output, profits, and employment among SOEs following the reform, especially if there are greater incentives of increasing state-owned share value. Chen et al. (2012) find evidence consistent with less free cash flow problem among firms after the reform, and the effect is more pronounced for those with weaker governance. Hou et al. (2012) analyze price synchronicity and show evidence consistent with increased firm-specific disclosure among SOEs subsequent to the reform. In terms of the reform negotiation process, existing studies show that risk sharing incentives (Li et al., 2011) and mutual fund ownership (Firth et al., 2010).

Hypotheses development

The Chinese institutional setting affords a unique natural experiment to test our theoretical hypotheses in an exogenous context. Agency theory stipulates that residual loss of firm value arises due to conflicts of interest between managers and shareholders (Jensen and Meckling, 1976). The board of directors is one of the main governance mechanisms to address agency problems (Dalton et al., 2007), and CEO dismissal is one of the main tools at their disposal (Weisbach, 1988). Dismissal decisions can be complicated by factors such as

information asymmetry between the board and CEO (Zajac, 1990), and corporate fraud identified by external regulatory authorities provides board of directors with a more legitimate cause to discipline their CEO. Nevertheless, institutional theory (Meyer and Rowan, 1977) suggests that conformity to external pressures, which helps generate stability and access to resources (DiMaggio, 1988), could cause firms to adopt practices that do not contribute to firm efficiency (Tolbert, 1985). Although institutional change could be invoked centrally across organizations (Kingston and Caballero, 2009), and by creating economic incentives (Oliver, 1993), resistance to innovation due to institutional inertia could also occur if the perceived benefit does not exceed the cost of adopting new practices (Ruttan, 2006). These institutional effects could influence managerial accountability for corporate fraud in China.

In the context of Chinese SOE listed firms, state financial support and political influence over managerial appointment are expected to affect the way in which such firms address agency problems. Financial assistance from the government decreases SOE listed firms' dependence on the capital market for external funding (Chen et al., 2011), which in turn reduces the concern of such firms over how their behavior affects the market value. Therefore, when corporate fraud is uncovered by the regulatory authority, the market value decline that ensues may not affect SOE listed firms as much as their non-SOE counterparts. Government involvement in managerial appointment increases the likelihood of an entrenchment effect (Fan et al., 2007), which in turn reduces the effectiveness of corporate governance mechanisms. As a result of both effects, the board of directors in SOE listed firms might be more reluctant to hold their CEOs accountable after corporate fraud behavior has been identified. Consistent with institutional theory, Chinese SOE listed firms' willingness to conform to state pressure is motivated by financial assistance and political support, and this compliance could determine their corporate governance practices more than market forces. This institutional perspective contextualizes the effect that state control has on the way Chinese listed firms address agency

problems. Therefore, the intersection of agency- and institutional-related theories leads us to formulate the first testable hypothesis:

H1: The likelihood of CEO turnover following corporate fraud enforcement actions is lower among SOE than among non-SOE listed firms.

To maintain state ownership and control of listed firms, China also imposed the split share structure until it was gradually abolished by the SSSR beginning in 2005. The split share structure gave Chinese state shareholders no ability to trade their shares, insulating them from the wealth implications of their firm's stock market performance. This renders residual loss of firm value due to agency problems less costly to state shareholders than to private shareholders. Because they bear lower agency costs, state shareholders also have less incentive than private shareholders to monitor managers and ensure that they maximize or maintain the firm's value in the stock market. Following the SSSR, state shareholders have the option to trade their shares, and their wealth becomes more sensitive to the stock market value of their firms. This exposes state shareholders to greater agency costs incurred by residual loss of firm value, thereby giving state shareholders an economic motive to monitor and ensure managers maximize and maintain firm value in the stock market. To adapt to the new demand of controlling state shareholders, the board of directors of SOE listed firms must now step up managerial disciplinary actions against value-destroying activities such as fraud. Consistent with theories of institutional change, corporate governance innovations could be triggered by mandating regulation across firms and by creating economic incentives. Therefore, the intersection of agency- and institutional change-related theories leads us to establish the second testable hypothesis:

H2: Following the SSSR, there is an increase in the likelihood of CEO turnover following corporate fraud enforcement actions against SOE listed firms.

Since institutional inertia against corporate governance innovations most likely varies across firms, we would not expect the increase in managerial accountability for corporate fraud following SSSR to be uniform across all SOE listed firms. Although SSSR generates economic incentives for controlling state shareholders to address agency problems more effectively, it does not change the fact that SOE listed firms are propped up financially by the government and that politically connected managers are still likely to be appointed. Some firms may be more reliant on state financial assistance and/or more sensitive to political influence. In such firms, it may be less possible for the board of directors to step up the use of dismissal as tool to deter managerial wrongdoings, such as corporate fraud, that could reduce firm market value. However, institutional inertia can be difficult to capture empirically as it is affected by complex interactions between a wide range of factors relating to wealth distribution, resource ownership, and knowledge (Greif and Laitin, 2004). In the context of the SSSR, we argue that institutional inertia can be measured by the amount of consideration that restricted shareholders agree to pay tradable shareholders, and by the length of the negotiation period required to decide this amount. As explained earlier, the gradual elimination of trading restrictions does not commence until the negotiation process is completed, and an agreement is reached over the amount of consideration to be paid out. We expect that controlling state shareholders of Chinese SOE listed firms with less institutional inertia to governance improvements will be more willing to offer higher consideration to tradable shareholders, and will shorten the length of the negotiation period. Controlling state shareholders are expected to be willing to bear higher initial costs and accelerate the negotiation process only if they perceive higher personal economic benefits from trading shares afterward. Therefore, based on the intersection of agency- and institutional inertia-related theories, we formulate the following testable hypothesis:

H3: Following the SSSR in China, the increase in likelihood of CEO turnover following corporate fraud enforcement actions is more pronounced among SOE listed firms with less institutional inertia indicated by higher consideration payouts or shorter negotiation periods.

SAMPLE AND METHODOLOGY

Sample description

The data for regulatory enforcement actions against corporate fraud, firm ownership status, firm characteristics and performance, and firm corporate governance variables are obtained either from the China Centre for Economic Research (CCER/Sinofin) or China Stock Market and Accounting Research (CSMAR). Over the ten-year sample period of 1999 to 2008, we identify 409 fraud enforcement cases where valid data are available for all variables used in the analysis. These variables include firm size, market-to-book ratio, return-on-asset, stock returns, special treatment status, ownership concentration, foreign ownership, proportion of restricted shares, CEO duality, board of directors activeness, supervisory board activeness, board of directors size, supervisory board size, and proportion of independent directors. Our data sample begins in 1999 because our control variables are lagged relative to the dependent variable, and among them the corporate governance variables used have only been available since 1998. For each firm that committed fraud, we identify a comparable firm that did not commit fraud by matching year, industry, and size following Jia et al. (2009).³ If there are multiple firms in the same year and industry that can be matched with the firm committing fraud, we select the one with closest size as matched firm. Thus our full sample contains 818 observations (i.e., 409×2).

Table 1 presents the yearly (Panel A) and industry (Panel B) distributions of corporate fraudulent activities and the firms that committed them. In each panel, we report the number of fraud cases (*Fraud Cases*), the number of firms involved (*Fraud Firms*), the proportion of fraud-committing firms among all listed firms in the stock market (*Fraud/Total Firms*), the

³ Kothari et al. (2005) suggest that matching is superior since does not impose a specific functional form on the relationship between the variable of interest and the control variables.

proportion of fraud-committing firms that are state-controlled (*State/Fraud Firms*), the proportion of fraud-committing state-controlled firms among all state-controlled listed firms in the stock market (*Fraud/Total State Firms*), and the proportion of state-controlled firms among all listed firms in the stock market (*State/Total Firms*). Panel A reveals that *Fraud Cases* and *Fraud Firms* increased substantially from 2001 onward.⁴ The *State/Fraud Firm* ratio peaks in 2002 even though the *State/Total Firm* ratio is highest in 1999. Thus, we control for year effects in our analysis. Panel B suggest that Materials and Consumer Discretionary are the two sectors with the highest *Fraud Cases* and *Fraud Firms* and the Telecommunication sector has the highest *Fraud/Total State Firms* ratio. We thus control for industry effects in our analysis.

[insert Table 1 here]

Hypotheses tests

To test hypothesis H1, which predicts that the relation between CEO turnover and corporate fraud differs between SOE and non-SOE listed firms, we apply the logistic regression analyses based on Equation 1 below to our full sample:

$$\begin{aligned}
CTO_{i,t} = & \alpha_0 + \alpha_1 FRAUD_{i,t-1} + \alpha_2 SOE_{i,t-1} + \alpha_3 FRAUD_{i,t-1} \times SOE_{i,t-1} \\
& + \alpha_4 MV_{i,t-1} + \alpha_5 PB_{i,t-1} + \alpha_6 ROA_{i,t-1} + \alpha_7 RET_{i,t-1} + \alpha_8 ST_{i,t-1} \\
& + \alpha_9 DIFF_{i,t-1} + a_{10} FOWN_{i,t-1} + a_{11} RESH_{i,t-1} + a_{12} DUAL_{i,t-1} \\
& + \alpha_{13} BDMEET_{i,t-1} + a_{14} SBMEET_{i,t-1} + a_{15} BDSIZE_{i,t-1} \\
& + a_{16} SBSIZE_{i,t-1} + a_{16} BDIND_{i,t-1} + Industry + Year + \varepsilon_{i,t}
\end{aligned} \tag{1}$$

The dependent variable *CTO* equals 1 if CEO turnover occurred in current year *t* and 0 otherwise. All explanatory variables are lagged 1 year (i.e., *t-1*) to deal with possible causality issues. *FRAUD* equals 1 if the firm experienced regulatory enforcement actions against corporate fraud in the fiscal year and 0 otherwise. *SOE* equals 1 if the firm is state-controlled and 0 otherwise. *MV* is firm size measured as log market capitalization. *PB* is firm growth measured as price-to-book ratio. *ROA* is firm profitability measured as industry-adjusted

⁴ Hou and Moore (2010) suggest that this increase is due to the enactment of a new regulation in 2001 entitled: *Solution for Listed Firm Checks*. The guidelines gave regulators greater authority and replaces selective checks with regular and special checks, and enhances that endows the regulatory commission.

return-on-asset. *RET* is stock market performance measured as annual stock return over the risk-free rate. *ST* equals 1 for firms on the verge of special treatment (i.e., those with two consecutive years of losses) and 0 otherwise. *DIFF* is ownership concentration measured by the difference in percentage shareholding between the largest and the second- and third-largest shareholders.⁵ *FOWN* is the proportion of shares held by foreign shareholders. *RESH* is the ratio of restricted shares to total shares. *DUAL* equals 1 for firms with a CEO who also serves as board chairman and 0 otherwise.⁶ *BDMEET* and *SBMEET* are the activeness of board of directors and supervisory board, respectively, each measured by the number meetings held during the year. *BDSIZE* and *SBSIZE* are the size of the board of directors and supervisory board, respectively, each measured as the number of members. *BIND* is the degree of independence of the board of directors, measured as the ratio of independent directors to total directors. We also incorporate a set of dummy variables to control for fixed effects associated with sector (*Industry*) and time (*Year*). In this analysis, coefficient α_1 indicates whether current-year CEO turnover is related to past-year regulatory enforcement action for corporate fraud among non-SOE listed firms. Coefficient α_3 indicates whether this relationship is different between non-SOE and SOE listed firm groups. If coefficient $\alpha_3 < 0$, it suggests that CEO turnover to corporate fraud relationship is significantly lower among SOE listed firms relative to their non-SOE counterparts, consistent with our prediction in hypothesis H1.

To test hypothesis H2, which predicts that the relationship between CEO turnover and corporate fraud increases among SOE listed firms after the SSSR, we apply the logistic regression analyses based on Equation 2 below in the SOE and non-SOE listed firm subsamples separately:

⁵ We follow the approach of Gul et al. (2010).

⁶ We also have carried out analyses controlling for CEO-specific variables such as tenure and gender and our main inference remained unchanged. However, due to limitations in data availability of these variables in GTA CSMAR, including these CEO-specific variables results in a substantial reduction of sample size.

$$\begin{aligned}
CTO_{i,t} = & \beta_0 + \beta_1 FRAUD_{i,t-1} + \beta_2 SSSR_{i,t-1} + \beta_3 FRAUD_{i,t-1} \times SSSR_{i,t-1} \\
& + \beta_4 MV_{i,t-1} + \beta_5 PB_{i,t-1} + \beta_6 ROA_{i,t-1} + \beta_7 RET_{i,t-1} + \beta_8 ST_{i,t-1} \\
& + \beta_9 DIFF_{i,t-1} + \beta_{10} FOWN_{i,t-1} + \beta_{11} RESH_{i,t-1} + \beta_{12} RESH_{i,t-1} \times SSSR_{i,t-1} \\
& + \beta_{13} DUAL_{i,t-1} + \beta_{14} BDMEET_{i,t-1} + \beta_{15} SBMEET_{i,t-1} + \beta_{16} BDSIZE_{i,t-1} \\
& + \beta_{17} SBSIZE_{i,t-1} + \beta_{18} BDIND_{i,t-1} + Industry + Year + \varepsilon_{i,t}
\end{aligned} \tag{2}$$

SSSR equals 1 for years after the firm has been selected to carry out the negotiation process and 0 otherwise. All other variables are defined the same as in Equation 1. In this analysis, coefficient β_1 indicates the relationship between current-year CEO turnover is related to past-year regulatory enforcement action against corporate fraud before the *SSSR*. Coefficient β_3 indicates the incremental effect of the *SSSR* on this relationship. If $\beta_3 > 0$ for the SOE listed firm subsample but not the non-SOE listed firm subsample, this suggests that the reform triggers increased CEO accountability for fraud among firms in which the elimination of restricted shares is likely to create the most economic incentives to improve governance. In other words, we have evidence that is consistent with hypothesis H2.

To test hypothesis H3, which predicts that the increase in the relationship between CEO turnover and corporate fraud among SOE listed firms is greater among firms with less institutional inertia, we apply logistic regression analyses based on Equation 2 above in higher and lower institutional inertia SOE listed firms separately. Within the SOE subsample, we classify firms as higher (lower) institutional inertia groups if the reform consideration payout ratio agreed upon by restricted and tradable shareholders is below (above) median, or if the length of the solicitation period of the reform negotiation process is longer (shorter) than the median. If coefficient $\beta_3 > 0$ only among SOE listed firms with higher consideration payouts and shorter negotiation periods, this suggests that the increase in CEO accountability for fraud following *SSSR* mainly among such firms with less institutional inertia that would impede the perceived economic benefit of this reform to controlling state shareholders. This would indicate the existence of empirical evidence consistent with hypothesis H3.

EMPIRICAL FINDINGS

Descriptive statistics and correlations

Table 2 presents the summary statistics of the variables used in our analysis. Panels A, B, and C report the full sample, fraud-committing firm subsample, and the matched firm subsample, respectively. Table 2 reveals that the fraud firms have significantly higher CEO turnover relative to comparable firms. This suggests that, on average, there is CEO accountability for corporate fraud in China. Fraud firms also have significantly higher growth, lower profitability, and are more likely to be in distress. This finding implies that weak performing and distressed firms that are overpriced by the market may experience greater pressure to commit corporate fraud. The likelihood that fraud firms are SOE listed firms is not significantly different from matched firms. This reduces the possibility that our subsequent empirical analysis could be biased in favor of finding a less pronounced relationship between CEO turnover and fraud among SOE listed firms.

[insert Table 2 here]

Table 3 presents the correlation analysis between our variables. CEO turnover exhibits a significantly positive relationship with corporate fraud and distress, and has a significantly negative relationship with firm size and profitability. This suggests that, on average, CEOs are held accountable for corporate fraud and poor performance. SOE listed firms tend to be larger, more profitable, and less distressed. One possible explanation is that SOE listed firms tend to receive financial support and business contracts from the government. However, such firms also have higher ownership concentration, more restricted shares, and a less independent board, indicating weaker governance mechanisms. Notice that the correlation between *State* and both *Turnover* and *Fraud* are statistically insignificant. This insignificance suggests that the likelihood of CEO turnover and corporate fraud are not necessarily higher among SOE listed firms than their non-SOE counterparts. In other words, these two groups of firms are on a level

playing field in terms of these two variables. Thus, our subsequent analysis of the relationship between CEO turnover and fraud is unlikely to be biased in favor of any particular group.

[insert Table 3 here]

Test of hypothesis H1

Table 4 presents results from the test of hypothesis H1 using a logistic regression analysis based on Equation 1. We regress the indicator of current year CEO turnover on a lagged indicator of corporate fraud conditional on SOE indicator, and apply a wide range of control variables. In Regressions 1 to 3, the marginal effect of *Fraud* is consistently and significantly positive. This suggests a significant relation between CEO turnover and fraud among non-SOE listed firms. For instance, Regression 3, where all control variables are applied, suggests a 20.90% (t -statistic = 3.76) increase in the probability of current year CEO turnover associated with past year corporate fraud among non-SOEs. However, the marginal effect of the interaction term *Fraud*×*State* is significantly negative throughout. For instance, it is –16.56% (t -statistic = –2.58) in Regression 3, when all control variables are applied. This indicates that CEOs of SOE listed firms are relatively less accountable to corporate fraud than their counterparts in non-SOE listed firms. The sum of the estimates for *Fraud* and *Fraud*×*State* is statistically insignificant, indicating that in SOE listed firms there is no relationship between current year turnover and lagged fraud. In other words, we observe empirical evidence that is consistent with hypothesis H1, which predicts that state control of listed firms moderates CEO turnover following corporate fraud regulatory enforcement actions. Our results are robust to controls for firm characteristics, performance, governance, and industry and year effects.

[insert Table 4 here]

Test of hypothesis H2

Table 5 presents results from the test of hypothesis H2 using a logistic regression analysis based on Equation 2 separately for non-SOE (Panel A) and SOE (Panel B) listed firm

subsamples. We regress the indicator of current year CEO turnover on a lagged indicator of corporate fraud conditional on the SSSR indicator, and apply a wide range of control variables. The marginal effect of *Fraud*, which indicates the relation between current turnover and lagged fraud prior to the reform, is positive and statistically significant only among non-SOE listed firms (e.g., 27.02% with *t*-statistic = 3.54 in Panel A of Regression 2) and not the SOE listed firms in Panel B (e.g., -2.20% with *t*-statistic = -0.46 in Panel B of Regression 2). Thus, prior to the SSSR, CEOs were more likely to retain their job after committing fraud if they worked for SOE listed firms. The marginal effect of the interaction term *Fraud*×*SSSR*, which indicates the incremental relation between current turnover and lagged fraud following the reform, is positive and statistically significant only for SOE listed firms (e.g., 29.40% with *t*-statistic = 1.78 in Panel B of Regression 2) and not non-SOE listed firms (e.g., -4.01% with *t*-statistic = -0.33 in Panel A of Regression 2). This indicates a significant increase in the accountability of CEOs for corporate fraud among SOE listed firms after SSSR, consistent with hypothesis H3. The fact that the interaction term *Fraud*×*SSSR* is significantly positive only in SOE listed firms but not among non-SOE listed firms also strengthens our inference that this effect is attributed to the SSSR because restricted shares are more prevalent in SOEs.

[insert Table 5 here]

Test of hypothesis H3

Table 6 presents results from the test of hypothesis H3 using a logistic regression analysis based on Equation 2 separately for high and low institutional inertia SOE listed firms. We regress the indicator of current year CEO turnover on a lagged indicator of corporate fraud conditional on SSSR indicator, and apply a wide array of control variables. In Panel A, we define firms with higher (lower) institutional inertia as those with below (above) median reform consideration payout. In Panel B, we define firms with higher (lower) institutional inertia as those with longer (shorter) than median solicitation period for the reform negotiation

process.⁷ Throughout Table 6, the marginal effect pertaining to *Fraud* is statistically insignificant. In other words, there is no accountability of CEO for fraud in SOE listed firms prior to the reform in both high and low institutional inertia groups identified using either proxy. In both Panels A and B, the marginal effect of the interaction term *Fraud*×*SSSR* is positive and statistically significant only for the lower institutional inertia firms and not the higher institutional inertia firms. For instance, in Panel A this interaction term is 24.81% (t-statistic = 2.32) in the higher payout group but only 14.02% (t-statistic = 0.66) in the lower payout group. In Panel B this interaction term is 46.53% (t-statistic = 2.39) in the shorter negotiation period group but only 30.20% (t-statistic = 1.03) in the longer negotiation period group. This suggests that the increased CEO accountability for fraud among SOE listed firms that we observe in Table 5 is mainly concentrated among those with controlling state shareholders that are willing to pay more consideration and speed up the negotiation process, which we assume to have less institutional inertia against governance changes after the reform. In other words, we have evidence that is consistent with our prediction in hypothesis H3. The observation that two variables specifically associated with the implementation of the reform have a significant effect in determining the increase in CEO turnover after fraud further strengthens our inference that this effect is brought about by the SSSR.

[insert Table 6]

Additional tests

Although we expect CEOs of state-controlled Chinese listed firms to be less accountable to their fraudulent behavior, it may be difficult for state controlling shareholders to justify more serious cases such as those that invoke public outrage and severe regulatory enforcement actions. To reduce damages to the firms' reputation and political capital, even state-controlled listed firms are likely to distance itself from CEOs under such circumstances. Defending CEOs

⁷ In the SOE listed firms sub-sample used to test hypothesis H3, the median consideration payout ratio is 19.13% of restricted shares, and the median solicitation period for the reform negotiation process is 10 days.

that deliberately seek to mislead the public or are judged by regulatory authority to require severe prosecution are more likely to provoke adverse public opinion against the firm. To perform the tests, we partition our sample by fraud type into those that deliberately seek to mislead investors through information disclosure misconduct (as more serious frauds) and other types of fraud (as less serious frauds), and again partition the full sample by regulatory enforcement type into those that involves actual material penalty (as more serious enforcement actions) and those that only invoke verbal warning (as less serious enforcement actions). The untabulated results show that the marginal effect of *Fraud*×*State* is economically and statistically significantly negative only among less serious corporate frauds or regulatory enforcement cases. It shows that the lack of CEO accountability to corporate fraud in state-controlled Chinese listed firms is indeed mainly concentrated in minor fraud cases and light penalty that are less likely to provoke adverse public opinion.

Finally, as China is a vast country with unequal regional development, it would also be interesting to explore whether regional development disparity associated with variations in investor protection and market pressures affects CEO accountability⁸. To perform our analysis, we partition the sample based on the regional dummies constructed in Firth et al. (2006a). Developed regions are defined as Shanghai, Shenzhen as well as the open cities and provinces along the coast; while less developed regions are the inland provinces. Untabulated results show that the marginal effect of *Fraud*×*State* is economically and statistically significantly negative only among firms located in less developed regions. It shows that institutional development helps to improve the CEO accountability to corporate fraud in state-controlled firms.

⁸ We thank an anonymous reviewer for the suggestion.

DISCUSSION AND CONCLUSION

The SSSR is essentially a “natural experiment” that enables us to examine how changes in the economic incentives of controlling shareholders influence managerial accountability for corporate fraud. From corporate scandals to financial crises, the experiences in developed countries over the past decade have demonstrated the importance of corporate transparency and investor confidence in the efficient allocation of financial resources in the capital market, which in turn affects the wider economy. Therefore, the strengthening of corporate governance and managerial accountability is essential to the economic aspirations of China as well as other developing countries. Our empirical study of the relationship between CEO turnover and corporate fraud among Chinese listed firm reveals three main findings, which we contextualize and explain by drawing on agency- and institutional-related theories. First, there is less CEO accountability for corporate fraud among SOE listed firms relative to their non-SOE counterparts. Second, there is an increase in CEO turnover following fraud among SOE listed firms after the institution of SSSR. Third, we show that after SSSR, the increase in CEO accountability for fraud among SOE listed firms is more pronounced among firms that are more willing to implement the reform process.

Our first finding implies that state control of listed firms in China impedes the efficacy of governance mechanisms to address agency costs. The existing corporate governance literature suggests that ownership concentration exerts two counteracting effects. One is the incentive alignment effect (Shleifer and Vishny, 1986), when the interests and wealth of large shareholders are associated with the value of the firm that they control. Another is the entrenchment effect (Claessens et al., 2002), when large shareholders collude with the management to expropriate minority outside investors. Unlike evidence from developed Western economies, existing studies of China often suggest that ownership concentration by state shareholders leads to an entrenchment effect that impedes corporate governance from the

point of view of minority equity investors (Fan et al., 2007; Tihanyi and Hegarty, 2007).⁹ For instance, empirical studies provide evidence that Chinese SOE listed firms are more likely to collude with auditors (Wang et al., 2008), have less corporate transparency (Gul et al., 2010), less financial reporting conservatism (Chen et al., 2010). However, performance improves after controls are transferred from state to private shareholders (Chen et al., 2008). Unlike previous studies in China, we examine managerial accountability for corporate fraud, and argue that we provide more direct evidence consistent with an entrenchment effect in SOE listed firms.

Our second and third findings imply that the SSSR reduces the moderating effect of state control on the efficacy of governance mechanism in Chinese listed firms. Empirical studies of the economic consequences of the SSSR in other contexts have also drawn broadly similar conclusions. Chen et al. (2012) document a decrease in the average cash holdings by Chinese listed firms after the reform, especially among firms with weaker corporate governance. They interpret this as evidence of increased incentive alignment between controlling and minority shareholders, since corporate finance literature (e.g., Jensen, 1986) suggests that excess cash holdings indicates misaligned incentives between corporate insiders and outsiders. Hou et al. (2012) document an increase in stock price informativeness among Chinese SOE listed firms following the reform. This evidence is consistent with a reduction in information asymmetry as corporate governance improves, since previous studies (e.g., Morck et al., 2000; Gul et al., 2010) attribute low stock price informativeness in China to weak investor protection. Hou and Lee (2012) show a decrease in foreign share discount among Chinese SOE listed firms following the reform. This finding is also consistent with reduced agency problems under state control, as existing studies (e.g., Leuz et al., 2009) suggest that information disadvantage renders foreign investors more concerned about insider expropriation than domestic investors.

⁹ Studies of Western developed economies often associate large shareholders with the incentive alignment effect and better monitoring of executives (Jensen and Meckling, 1976; Shleifer and Vishny, 1986). For instance, empirical studies reveal that large shareholders are associated with increased managerial turnover (Kaplan and Minton, 1994) and tighter control over executive compensation (Bertrand and Mullainathan, 2001).

However, these previous studies of SSSR draw inference of governance improvements indirectly from changes in firm characteristics. We argue that managerial accountability provides a more direct setting to evaluate changes in corporate governance, and we also infer that SSSR contributes to the reduction of agency problems.

Our study contributes the corporate governance literature in three ways. First, we provide evidence that governance can be affected by the incentives of the principal, while existing studies in this literature largely focus on the incentives of the agent. Second, we provide evidence through a natural experiment setting that cross-sectional variations in the consequences of corporate fraud can be influenced exogenously by regulatory reforms. Third, we provide further evidence suggesting that state ownership could impede corporate governance by reducing managerial accountability. Our evidence also contributes to the literature on emerging market development in three ways. First, for emerging economies where ownership concentrations can be high, we show that strengthening the incentive alignment between controlling and minority shareholders could be beneficial. Second, as SOEs are relatively more common in emerging than developed economies, we show that such firms can respond positively to regulatory reforms. Third, in the particular context of China's further transition to market-oriented economy, we provide further empirical evidence that the SSSR yields positive outcome.

Our analysis carries two caveats. First, despite the end of trading restrictions, there could be government pressure to discourage state shareholders from trading their stock, which in turn limits any increase in their incentives to monitor and ensure managers maximize firms' market value. However, this argument neglects an established Chinese government policy known as *Zhua Da Fang Xiao*, which seeks to sustain state ownership only in strategic enterprises (for example, energy, transportation, aerospace, defense, etc.) and to reduce state control over less

essential businesses.¹⁰ Anecdotal evidence from the media also confirm that previously restricted shares held by state shareholders have been actively traded in the stock market following this reform.¹¹ Second, no incentive alignment effect is possible until all restricted shares of a firm have become fully tradable (36 months after the ratification of the firm's compensation plan). Based on this argument, the systematic effect of the SSSR across all firms in the Chinese stock market can only be examined after 2011. However, this argument assumes that restricted shareholders are myopic and do not seek to weed out opportunistic managers until the trading restriction on all shares is lifted. Furthermore, as discussed earlier, restricted shareholders can sell at least a portion of their holdings within the 36 months following ratification of the compensation plan, depending on the proportion of ownership. Thus, this argument also ignores the wealth implication of a rising share price for the restricted shareholders over this transition period.

The evidence from our study does not necessarily deny the value of the political connections of managers and controlling shareholders in a transitional economy, but rather implies the need for better corporate governance mechanisms to reduce the potential negative effects of such connections. Some studies suggest that political connection is a managerial resource beneficial to Chinese firms. For instance, Xin and Pearce (1996) argue that political connections are a substitute for insufficient institutional infrastructure, Lou (2003) suggests they provide flexible resource allocation in a factor mobility constrained environment, and Atuahene-Gima and Li (2002) argue that they facilitate business in an uncertain environment. There is also evidence that political connection influences market benefit (Davies et al., 1995),

¹⁰ For instance, this policy has been laid out in the *Ninth Five-Year Plan for National Economic and Social Development and the Outline for the Long-Range Objective Through the Year 2010*.

¹¹ We list a few recent financial news articles here by translating their Chinese language headlines into English language and provide their web link for reference: "29 firms this year experienced local government stock ownership reduction" <http://finance.ifeng.com/stock/zqyw/20110827/4474686.shtml>, "Selling shares – July wave of government stock ownership reduction wave" <http://stock.hexun.com/2011-07-29/131890710.html>, "Local government July stock ownership reduction in 25 listed firms to cash in 3.3 billion RMB" <http://www.beelink.com/20110808/2808514.shtml>

competitive advantages (Tsang, 1998), and improves firm performance (Nee, 1992; Peng and Luo, 2000). Our study also confirms the benefit of on-going reform of Chinese SOEs. Existing studies in China have revealed a sustained reform process that seeks to evolve and adapt SOEs toward market (Ralston et al., 2006). For instance, at the early stage of this evolution, bonuses to reward performance have been reintroduced to motivate employees (Chen, 1995), and short-term renewable contracts have replaced life-long positions (Tenev et al., 2002). Subsequently, the government has also introduced regulations to punish business failures (Steinfeld, 1998) and has deregulated some protected sectors (Panitchpakdi and Clifford, 2002). Finally, and more generally, our results highlight the importance of an evolving role for understanding the interplay between legal institutions, finance, management, and governance in emerging markets that is sensitive to the time series changes in regulatory reforms and evolving institutional structures, as highlighted by Allen et al. (2005), and not static comparisons at a particular point in time.

Future research could also examine whether the SSSR affects other aspects of corporate behavior after fraud.¹² For example, to restore investor confidence after committing fraud, are SOEs more likely to dismiss auditors in the post-reform period? Furthermore, would investors find reported earnings more informative in the post-reform period among firms that replace the CEO or auditors after fraud detection?

¹² We thank an anonymous reviewer for suggesting these interesting ideas.

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Table 1. Sample description

	<i>Fraud Cases</i>	<i>Fraud Firms</i>	<i>Fraud/Total Firms (%)</i>	<i>SOE/Fraud Firms (%)</i>	<i>Fraud/Total SOE (%)</i>	<i>SOE/Total Firms (%)</i>
Panel A: Year distribution						
1999	13	13	1.43	53.85	0.91	84.30
2000	17	17	1.62	64.71	1.27	82.92
2001	73	67	5.96	73.13	5.30	82.22
2002	60	50	4.19	80.00	4.31	77.87
2003	56	45	3.58	68.89	3.36	73.43
2004	70	60	4.44	55.00	3.53	69.08
2005	100	69	5.11	49.28	3.64	69.13
2006	97	71	5.04	45.07	3.49	64.96
2007	79	61	4.00	44.26	2.93	60.35
2008	39	35	2.19	51.43	1.89	59.66
Panel B: Industry distribution						
Energy	17	14	4.13	50.00	2.47	83.48
Materials	100	81	3.24	64.20	2.65	78.48
Industrials	88	72	2.79	56.94	2.19	72.56
Consumer Discretionary	113	94	3.51	69.15	3.48	69.70
Consumer Staples	76	61	6.41	63.93	5.60	73.29
Health Care	41	32	3.62	40.63	2.47	59.50
Financials	45	38	3.77	55.26	3.65	57.09
Information Technology	87	66	5.47	45.45	4.00	62.14
Telecommunication	7	4	16.00	50.00	11.11	72.00
Utilities	20	16	2.88	75.00	2.40	90.11
Others	10	10	51.82	0.00	0.00	50.00

This table presents the yearly (Panel A) and industry (Panel B) distribution of our corporate fraud sample. Our sample period is 1999 to 2008. *Fraud Cases* is the number of disclosed cases of fraud committed by listed firms. *Fraud Firms* is the number of listed firms that committed fraud. *Fraud/Total Firms* is the ratio of the number of cases of fraud committed by listed firms to total number of listed firms in the stock market. *State/Fraud Firms* is the proportion of fraud-committing listed firms that are state controlled. *Fraud/Total State Firms* is the proportion of fraud-committing state-controlled listed firms relative to the total number of state-controlled listed firms in the stock market. *State/Total Firms* is the proportion of all listed firms in the stock market that are state controlled.

Table 2. Summary statistics

	Panel A: Whole sample			Panel B: Fraud firms			Panel C: Matched firms			Panels C – B mean difference
	Median	Mean	Std dev	Median	Mean	Std dev	Median	Mean	Std dev	
<i>CTO</i>	0	0.300	0.458	0	0.364	0.482	0	0.235	0.424	-0.130 ***
<i>SOE</i>	1	0.619	0.486	1	0.601	0.490	1	0.636	0.482	0.034
<i>SSSR</i>	0	0.267	0.442	0	0.222	0.416	0	0.311	0.463	0.088 ***
<i>MV</i>	20.104	20.124	0.947	20.124	20.145	0.938	20.072	20.103	0.956	-0.042
<i>PB</i>	3.191	4.557	5.445	3.362	4.936	5.884	2.922	4.178	4.946	-0.758 **
<i>ROA</i>	-0.003	-0.013	0.030	-0.006	-0.019	0.032	-0.001	-0.007	0.028	0.011 ***
<i>RET</i>	-0.112	-0.010	1.041	-0.147	-0.022	0.860	-0.077	0.001	1.195	0.023
<i>ST</i>	0	0.257	0.437	0	0.325	0.469	0	0.188	0.391	-0.137 ***
<i>DIFF</i>	17.765	23.007	22.910	14.260	20.998	22.402	19.190	25.016	23.262	4.017 **
<i>FOWN</i>	0	0.010	0.058	0	0.008	0.047	0	0.013	0.067	0.005
<i>RESH</i>	0.584	0.550	0.141	0.576	0.547	0.143	0.587	0.553	0.139	0.006
<i>DUAL</i>	0	0.075	0.263	0	0.073	0.261	0	0.076	0.265	0.002
<i>BDMEET</i>	8	8.271	3.194	8	8.878	3.382	7	7.665	2.873	-1.213 ***
<i>SBMEET</i>	4	3.842	1.664	4	3.939	1.697	4	3.746	1.627	-0.193 *
<i>BDSIZE</i>	6	6.806	2.243	6	6.824	2.226	6	6.787	2.262	-0.037
<i>SBSIZE</i>	1	1.152	0.751	1	1.159	0.765	1	1.144	0.738	-0.015
<i>BDIND</i>	0.5	0.443	0.243	0.5	0.448	0.246	0.5	0.439	0.239	-0.009
Obs.	818			409			409			

This table presents the summary statistics of the variables used in our analysis. *CTO* equals 1 if CEO turnover occurred in current year t and 0 otherwise. *SOE* equals 1 if the firm is state-controlled and 0 otherwise. *SSSR* equals 1 for years after the firm has been selected to carry out the negotiation process and 0 otherwise. *MV* is firm size measured as log market capitalization. *PB* is firm growth measured as price-to-book ratio. *ROA* is firm profitability measured as industry-adjusted return-on-asset. *RET* is stock market performance measured as annual stock return over the risk-free rate. *ST* equals 1 for firms on the verge of special treatment (i.e., those with two consecutive years of losses) and 0 otherwise. *DIFF* is ownership concentration measured by the difference in percentage shareholding between the largest and the second- and third-largest shareholders. *FOWN* is the proportion of shares held by foreign shareholders. *RESH* is the ratio of restricted shares to total shares. *DUAL* equals 1 for firms with a CEO who also serves as board chairman and 0 otherwise. *BDMEET* and *SBMEET* are the activeness of board of directors and supervisory board, respectively, each measured by the number meetings held during the year. *BDSIZE* and *SBSIZE* are the size of the board of directors and supervisory board, respectively, each measured as the number of members. *BIND* is the degree of independence of the board of directors, measured as the ratio of independent directors to total directors. Panels A, B, and C report the whole sample, fraud firms sample, and matched firm sample (i.e., non-fraud committing firms), respectively. Our sample period is 1999 to 2008. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 3. Correlation analysis

		1	2	3	4	5	6	7	8	9	10
1	<i>CTO</i>	1									
2	<i>FRAUD</i>	0.14*	1								
3	<i>SOE</i>	-0.04	-0.04	1							
4	<i>SSSR</i>	-0.09	-0.10*	-0.20*	1						
5	<i>MV</i>	-0.11*	0.02	0.12*	0.28*	1					
6	<i>PB</i>	0.03	0.07	0.02	0.14*	0.27*	1				
7	<i>ROA</i>	-0.16*	-0.19*	0.15*	0.12*	0.32*	-0.05	1			
8	<i>RET</i>	0.01	-0.01	-0.04	0.25*	0.38*	0.26*	0.18*	1		
9	<i>ST</i>	0.09*	0.16*	-0.14*	-0.08	-0.26*	0.12*	-0.15*	-0.02	1	
10	<i>DIFF</i>	-0.11*	-0.09	0.38*	-0.05	0.16*	-0.05	0.17*	0.07	-0.08	1
11	<i>FOWN</i>	-0.01	-0.04	-0.06	0.10*	0.03	-0.02	0.02	-0.03	-0.04	-0.02
12	<i>RESH</i>	0.02	-0.02	0.14*	-0.44*	-0.30*	0.01	0.08	-0.08	0.03	0.22*
13	<i>DUAL</i>	0.02	0.00	-0.03	0.01	-0.04	-0.03	0.02	-0.01	-0.02	0.01
14	<i>BDMEET</i>	0.03	0.19*	-0.07	0.17*	0.08	0.09	-0.05	0.06	0.08	-0.07
15	<i>SBMEET</i>	-0.02	0.06	-0.06	0.16*	0.15*	0.07	0.07	0.07	0.04	0.01
16	<i>BDSIZE</i>	-0.01	0.01	0.21*	-0.18*	0.22*	0.12*	0.03	0.03	-0.16*	0.02
17	<i>SBSIZE</i>	-0.06	0.01	-0.07	0.03	-0.05	0.07	-0.06	0.05	0.02	0.01
18	<i>BDIND</i>	-0.06	0.02	-0.24*	0.35*	-0.20*	-0.15*	-0.07	-0.02	0.17*	-0.11*
		11	12	13	14	15	16	17	18		
11	<i>FOWN</i>	1									
12	<i>RESH</i>	0.05	1								
13	<i>DUAL</i>	-0.01	-0.04	1							
14	<i>BDMEET</i>	0.05	-0.12*	0.02	1						
15	<i>SBMEET</i>	0.01	-0.07	0.05	0.37*	1					
16	<i>BDSIZE</i>	-0.03	0.15*	-0.05	-0.16*	-0.13*	1				
17	<i>SBSIZE</i>	-0.01	0.05	0.04	0.03	-0.03	0.06	1			
18	<i>BDIND</i>	0.01	-0.25*	0.03	0.28*	0.15*	-0.69*	0.00	1		

This table presents the correlation analysis of the variables used in our analyses. *FRAUD* equals 1 if the firm experienced regulatory enforcement actions against corporate fraud in the fiscal year and 0 otherwise. All other variables are defined in Table 2. Our sample includes 818 firm-year observations and covers the period from 1999 to 2008. * indicates significance at the 1% level.

Table 4. CEO turnover following fraud conditional on state control (tests H1)

	Regression 1		Regression 2		Regression 3	
<i>FRAUD</i>	0.2292	(4.33) ***	0.2135	(3.83) ***	0.2090	(3.76) ***
<i>SOE</i>	0.0612	(1.20)	0.1086	(1.95) *	0.0983	(1.80) *
<i>FRAUD</i> × <i>SOE</i>	-0.1554	(-2.48) **	-0.1650	(-2.58) **	-0.1656	(-2.58) **
<i>MV</i>			-0.0579	(-2.48) **	-0.0430	(-1.77) *
<i>PB</i>			0.0002	(0.05)	0.0003	(0.09)
<i>ROA</i>			-1.5599	(-2.77) ***	-1.8246	(-3.08) ***
<i>RET</i>			0.0384	(2.39) **	0.0418	(2.77) ***
<i>ST</i>			0.0464	(1.18)	0.0594	(1.47)
<i>DIFF</i>			-0.0018	(-2.21) **	-0.0019	(-2.31) **
<i>FOWN</i>			-0.0550	(-0.19)	-0.1105	(-0.40)
<i>RESH</i>			-0.0154	(-0.11)	0.0199	(0.14)
<i>DUAL</i>			0.0328	(0.53)	0.0110	(0.17)
<i>BDMEET</i>			0.0066	(1.25)	0.0062	(1.14)
<i>SBMEET</i>			-0.0033	(-0.29)	-0.0029	(-0.25)
<i>BDSIZE</i>			-0.0205	(-1.97) **	-0.0194	(-1.82) *
<i>SBSIZE</i>			-0.0535	(-2.02) **	-0.0532	(-2.01) **
<i>BDIND</i>			-0.3703	(-3.71) ***	-0.3425	(-3.29) ***
Industry effect	No		No		Yes	
Year effect	No		No		Yes	
Pseudo R ²	0.0239		0.0719		0.0872	
Obs.	818		818		818	

This table presents the logistic regression analysis of the relationship between CEO turnover and corporate fraud enforcement actions conditional on state control for the full sample period, as well as pre- and post-Split Share Structure Reform (SSSR) periods. Our sample period is 1999 to 2008. All variables are defined in Tables 2 and 3. Marginal effects are reported. The *t*-statistics in parentheses are adjusted for heteroskedasticity. The *t*-statistics in brackets are tests of differences between pre- and post-SSSR subsamples. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 5. CEO turnover after fraud conditional on SSSR separately in non-SOE and SOE listed firms (test of H2)

	Panel A: Non-SOE listed firms				Panel B: SOE listed firms			
	Regression 1		Regression 2		Regression 1		Regression 2	
<i>FRAUD</i>	0.2569	(3.45) ***	0.2702	(3.54) ***	-0.0220	(-0.49)	-0.0220	(-0.46)
<i>SSSR</i>	0.6164	(2.30) **	0.5982	(2.11) **	-0.1031	(-0.51)	-0.1486	(-0.78)
<i>FRAUD</i> × <i>SSSR</i>	-0.0235	(-0.20)	-0.0401	(-0.33)	0.3356	(2.09) **	0.2940	(1.78) *
<i>MV</i>	-0.0751	(-1.72) *	-0.0930	(-1.86) *	-0.0646	(-2.14) **	-0.0282	(-0.82)
<i>PB</i>	-0.0026	(-0.54)	-0.0031	(-0.61)	0.0022	(0.48)	0.0023	(0.46)
<i>ROA</i>	0.0164	(0.02)	0.4549	(0.51)	-3.6338	(-4.42) ***	-3.7638	(-4.14) ***
<i>RET</i>	0.0188	(1.06)	0.0163	(0.90)	0.1119	(3.05) ***	0.0984	(2.43) **
<i>ST</i>	0.0514	(0.83)	0.0491	(0.78)	0.0289	(0.52)	0.0417	(0.73)
<i>DIFF</i>	0.0000	(-0.02)	-0.0002	(-0.07)	-0.0015	(-1.55)	-0.0016	(-1.52)
<i>FOWN</i>	0.5218	(1.08)	0.6474	(1.21)	-0.8585	(-0.95)	-1.0707	(-0.98)
<i>RESH</i>	0.7267	(1.97) **	0.6673	(1.78) *	-0.0329	(-0.17)	-0.0794	(-0.39)
<i>RESH</i> × <i>SSSR</i>	-1.1178	(-2.46) **	-1.1971	(-2.43) **	-0.3153	(-0.69)	-0.2641	(-0.58)
<i>DUAL</i>	0.0636	(0.65)	0.1237	(1.18)	-0.0290	(-0.33)	-0.0497	(-0.55)
<i>BDMEET</i>	0.0084	(0.84)	0.0080	(0.75)	0.0092	(1.33)	0.0121	(1.66)
<i>SBMEET</i>	0.0097	(0.55)	0.0140	(0.75)	-0.0099	(-0.70)	-0.0115	(-0.77)
<i>BDSIZE</i>	-0.0095	(-0.51)	-0.0086	(-0.43)	-0.0191	(-1.57)	-0.0249	(-1.76) *
<i>SBSIZE</i>	-0.0958	(-2.39) **	-0.1134	(-2.64) *	-0.0042	(-0.12)	-0.0054	(-0.16)
<i>BDIND</i>	-0.2132	(-1.14)	-0.2018	(-0.94)	-0.3567	(-2.69) ***	-0.3935	(-2.62) ***
Industry effect	No		Yes		No		Yes	
Year effect	No		Yes		No		Yes	
Pseudo R ²	0.117		0.1449		0.1163		0.1457	
Obs.	312		312		506		506	

This table presents the logistic regression analysis of the relationship between CEO turnover and corporate fraud enforcement actions conditional on the Split Share Structure Reform (SSSR). Panel A (B) is based on non-SOE (SOE) listed firms. Our sample period is 1999 to 2008. All variables are defined in Tables 2 and 3. Marginal effects are reported. The *t*-statistics in parentheses are adjusted for heteroskedasticity. The *t*-statistics in brackets are tests of differences between non-SOE and SOE subsamples. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 6. CEO turnover after fraud conditional on SSSR separately in low and high institutional inertia SOE listed firms (test of H3)

	Panel A: Reform consideration payout ratio				Panel B: Solicitation period of reform negotiation process			
	Higher inertia (Lower payout)		Lower inertia (Higher payout)		Higher inertia (Longer period)		Lower inertia (Shorter period)	
<i>FRAUD</i>	-0.0749	(-0.83)	0.0087	(0.55)	0.1030	(1.21)	-0.0930	(-1.41)
<i>SSSR</i>	-0.3717	(-0.79)	-0.0042	(-0.07)	0.1147	(0.24)	-0.2866	(-1.37)
<i>FRAUD</i> × <i>SSSR</i>	0.1402	(0.66)	0.2481	(2.32) **	0.3020	(1.03)	0.4653	(2.39) **
<i>MV</i>	-0.0805	(-1.12)	-0.0015	(-0.14)	0.0372	(0.51)	-0.0402	(-0.74)
<i>PB</i>	-0.0083	(-0.67)	0.0014	(0.84)	-0.0011	(-0.10)	0.0050	(0.68)
<i>ROA</i>	-4.2866	(-2.72) ***	-0.9571	(-2.90) ***	-9.0761	(-5.04) ***	-0.2637	(-0.18)
<i>RET</i>	0.0983	(0.93)	0.0255	(1.73) *	0.2914	(2.08) **	0.0182	(0.39)
<i>ST</i>	0.3350	(2.36) **	-0.0373	(-2.39) **	-0.0785	(-0.84)	0.1044	(1.12)
<i>DIFF</i>	-0.0008	(-0.43)	-0.0006	(-1.57)	-0.0049	(-2.56) **	-0.0006	(-0.38)
<i>FOWN</i>	-0.2671	(-0.43)	-14.0193	(-0.33)	-8.3028	(-2.11) **	-0.5439	(-0.76)
<i>RESH</i>	-1.2341	(-2.17) **	0.0537	(0.78)	0.6922	(1.85) *	-0.5070	(-1.48)
<i>RESH</i> × <i>SSSR</i>	0.5524	(0.42)	-0.2172	(-1.48)	-0.7035	(-0.96)	0.1399	(0.24)
<i>DUAL</i>	-0.0325	(-0.15)	-0.0128	(-0.59)	-0.0928	(-0.70)	0.0056	(0.04)
<i>BDMEET</i>	0.0150	(1.16)	0.0037	(1.27)	0.0117	(0.86)	0.0075	(0.75)
<i>SBMEET</i>	0.0094	(0.41)	-0.0089	(-1.49)	-0.0544	(-1.87) *	-0.0081	(-0.42)
<i>BDSIZE</i>	0.0089	(0.33)	-0.0077	(-1.65) *	-0.0302	(-1.34)	-0.0275	(-1.30)
<i>SBSIZE</i>	-0.0696	(-1.11)	0.0028	(0.26)	-0.0268	(-0.41)	-0.0126	(-0.25)
<i>BDIND</i>	-0.3060	(-1.10)	-0.0998	(-1.89) *	-0.6326	(-2.36) **	-0.3616	(-1.87) *
Industry effect	Yes		Yes		Yes		Yes	
Year effect	Yes		Yes		Yes		Yes	
Pseudo R ²	0.2671		0.1985		0.3186		0.1334	
Obs.	182		324		240		266	

This table presents the logistic regression analysis of the relationship between CEO turnover and corporate fraud enforcement actions conditional on the Split Share Structure Reform (SSSR) within SOE listed firms. Panel A classifies firms with higher (lower) inertia as those with below (above) median level of reform consideration payout ratios. Panel B classifies firms with higher (lower) inertia as those with longer (shorter) than median solicitation period for reform negotiation process. Our sample period is 1999 to 2008. All variables are defined in Tables 2 and 3. Marginal effects are reported. The *t*-statistics in parentheses are adjusted for heteroskedasticity. The *t*-statistics in brackets are tests of differences between high and low consideration payout subsamples. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.