When a Sinner Does a Good Deed: The Path-dependence of Reputation Repair

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Abstract
This study examines how shareholders will interpret a socially desirable action taken by firms with a damaged corporate reputation status. We first explain theoretically why shareholders’ path-dependent judgments of a tainted firm increase the likelihood of shareholders making less favorable judgments of the firm’s socially desirable actions. We then test the theoretical predictions using a sample of Chinese listed firms that were sanctioned for securities fraud and subsequently made donations to the 2008 Sichuan earthquake relief funds. We find that the shareholders evaluate the donations made by fraud-tainted firms less favorably than those made by firms that have not been sanctioned for fraud. Furthermore, the shareholders’ evaluations of the donations made by fraud-tainted firms is less favorable if the firms have committed more serious fraud and undertaken fewer positive remedial actions in the post-fraud period. Overall, our evidence demonstrates that shareholders’ path-dependent judgments of fraud-tainted firms constitute a major obstacle that constrains the effectiveness of reputation repair.

Keywords: corporate philanthropic disaster response; event study; path dependence; reputation repair.

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INTRODUCTION

It is well known that reputation recovery is neither an easy nor a short-term process. Gaines-Ross (2008) reveals that recovering corporate reputation is six times more difficult than building it, with reputation recovery taking more than three years to complete on average. After analyzing the reputation repair experience of six large corporations including Siemens, Mattel, Toyota, The BBC, BAE Systems and Severn Trent, Dietz and Gillespie (2012) conclude that reputation repair usually “take years to resolve, and can be both debilitating and very costly” (p.36). Furthermore, Farber (2005) finds that even three years after the U.S. Securities and Exchange Commission (SEC) has identified the firms as having fraudulently manipulated their financial statements, institutional investors continue to stay away from those firms. Why does it take so long for corporations to overcome their damaged reputation status? What factors explain the inertia exhibited in the reputation repair process?

The literature on reputation repair mainly focuses on how firms use various impression management and communication strategies to minimize the extent of the reputation damage caused by a negative event (e.g., Carroll, 2009; Coombs, 2007; Lamin and Zaheer, 2012; Sutton and Callahan, 1987). A small but growing body of work has examined the contextual/organizational factors that may influence the effectiveness of reputation repair (Chakravarthy et al., 2014; Rhee and Hadwick, 2011; Rhee and Kim, 2012; Rhee and Valdez, 2009). However, these studies largely focus on determinants that are common to both reputation building and reputation repair. As a result, there has been very little understanding of how reputation repair is distinctively different from reputation building. Rhee and Valdez (2009, p. 162) suggest that “future research could explore the components that are unique to the process of reputation repair.” Our study fills this gap in the extant literature by focusing on the most salient
and defining feature of tainted firms – the firms’ unfavorable corporate reputation status – and demonstrates how this unfavorable reputation status affects the effectiveness of reputation repair. Building on the core assumption that stakeholder members tend to use the existing reputation of a focal firm as a lens through which to interpret the firm’s new actions (Darley and Fazio, 1980; Fiske and Taylor, 1991; Merton, 1968; Devers et al., 2009; Mishina et al., 2012), we examine whether the unfavorable reputation status of tainted firms increases the probability that members of a stakeholder group will form less favorable judgments of the firms’ emergent positive actions, and consequently make the task of building up new reputation capital particularly difficult for these firms.

We follow Mishina et al. (2012, p. 460) in conceptualizing corporate reputation as the “collective, stakeholder group-specific assessment” of an organization’s capabilities and character. Capability reputation represents the “collective evaluation of the quality and performance characteristics of a particular firm,” whereas character reputation denotes the “collective judgments regarding a firm’s incentives and behavioral tendencies” (Mishina et al., 2012, p. 460). Recent works on corporate reputation, such as Love and Kraatz (2009) and Raithel and Schwaiger (2015), have used similar conceptualizations.

The main theoretical foundation of our study is stakeholder members’ path-dependent judgments of organizations. Path dependence is an important theoretical construct in organizational research (Vergne and Durand, 2010; Sydow et al., 2009). Broadly, path dependence refers to the various “imprinting effects” that past events can have on organizational behaviors (Sydow et al., 2009, p. 689). Previous literature has focused primarily on how various self-reinforcing mechanisms (such as coordination effects, complementary effects, learning effects and adaptive expectations) can lead to rigidities and inertia at the organizational level.
Path Dependence of Reputation Repair

(Vergne and Durand, 2010; Sydow et al., 2009). Recently, scholars have used this concept to understand how socio-cognitive biases present in stakeholder members’ evaluations of firms can lead to self-reinforcing and persistent judgments of firms over time (Devers et al., 2009; Mishina et al., 2012). In particular, Mishina et al. (2012) denote stakeholder members’ tendency of using a focal firm’s reputation as a filter for interpreting its new actions as “path-dependent judgments of organizations.” In this study, we examine how stakeholder members’ path-dependent judgments of organizations influence the effectiveness of reputation repair.

We first suggest a simple model to illustrate the dynamics of a reputation repair process in which stakeholder members’ judgments of tainted firms are path-dependent. The model highlights how the path-dependent judgments of stakeholder members allow the unfavorable reputation of a tainted firm to continuously exert unfavorable effects on the stakeholder members’ evaluations of the firm’s subsequent actions during a reputation repair process. As we shall explain in the next section, the path dependence perspective has two implications for stakeholder members’ evaluations of the actions taken by tainted firms. First, due to the lingering influence of a tainted firm’s unfavorable reputation, stakeholder members tend to evaluate the actions of the tainted firm less favorably than the same actions taken by a clean firm. Second, stakeholder members’ evaluations of a tainted firm’s actions are likely to be related to the tainted firm’s previous actions, as these actions are likely to have triggered the stakeholder members to revise their assessments of the firm and thus altered the firm’s reputation status. The resultant changes in the firm’s reputation will, in turn, influence the interpretative framework the stakeholder members use to interpret the firm’s subsequent actions.

We test the preceding two implications using a unique sample of Chinese publicly listed firms that had experienced regulatory enforcement actions for securities fraud and subsequently made...
contributions to the 2008 Sichuan earthquake relief efforts (hereafter referred to as fraud-tainted donors). Being sanctioned for securities fraud is an obvious type of reputation-damaging event for shareholders (e.g., Cowen and Marcel, 2011; Kang, 2008; Semadeni et al., 2008; Wiesenfeld et al., 2008). First, this type of corporate misconduct “clearly violates normative expectations of ethical behavior” (Cowen and Marcel, 2011, p. 510) and is “seen as far more controllable than a mere lack of skill” (Wiesenfeld et al., 2008, p. 239). As a result, shareholders are likely to make negative imputation about the fraud-tainted firms’ incentives and behavioral tendencies, which consequently damage the firms’ character reputation. Second, sanctions for securities fraud are likely to adversely affect the firms’ future earnings due to their adverse effects on the behaviors of different stakeholder groups and consequently weigh on shareholders’ assessments of a fraud-tainted firm’s capabilities. For example, research has shown that customers tend to reduce their purchases of the goods/services provided by firms with an unfavorable reputation (Deshpande and Hitchon, 2002; Ricks, 2005). Furthermore, firms with a less favorable reputation have difficulty attracting high quality workers (Ashforth and Mael, 1989; Dutton et al., 1994) and investors (Hribar and Jenkins, 2004; Kravet and Shevlin, 2010). Consistent with the above-mentioned damages in the fraud-tainted firms’ character and capability reputations, previous research has documented that there is usually a significant decline in the stock prices of fraud-tainted firms when these firms announce their fraud sanctions to the public (see Chen et al., 2005; Janney and Gove, 2011; Karpoff and Lou, 2010).

After experiencing a reputation-damaging event, tainted firms often take positive remedial actions (e.g., by re-examining the standards of conduct for their executives, making substantive leadership and organizational changes, and engaging in corporate social responsibility [CSR] activities) to gain favorable judgments from their stakeholders (Brammer et al., 2009;
of positive remedial actions, our study focuses on one highly socially desirable activity: corporate philanthropy. Corporate philanthropic activities are behavioral cues that are likely to prompt shareholders to evaluate the capabilities and character of the donors. Philanthropic activities are relevant to a donor’s capabilities because the size of the contributions can signal the donor’s financial strength (Lev et al., 2010; Shapira, 2012; McWilliams and Siegel, 2001; Muller and Kräussl, 2011b). Charitable giving can also induce shareholders and other stakeholders (e.g., consumers, employees, and regulators) to make inferences about the donor’s character because corporate philanthropy can be viewed as either “evidence of good character and lack of a bad mind” or “evidence of hypocrisy and a very bad mind” (Godfrey et al., 2009, p. 432). Consistent with shareholders’ inferences about a donor’s capabilities and character, studies have demonstrated that corporate donations can lead to significant increases or decreases in stock prices surrounding the announcements of corporate donations (Godfrey et al., 2009; Janney and Gove, 2011; Muller and Kräussl, 2011a; Patten, 2008).

Following the literature, we use the two-day cumulative abnormal stock returns (CARs) starting from the date of a donation announcement to measure the changes in shareholders’ judgments of a donor in response to the firm’s donation. To examine whether shareholders evaluate the donations made by fraud-tainted donors less favorably than those made by clean donors, we compare the CARs of fraud-tainted donors to those of clean donors. Our results show that the CARs of fraud-tainted donors are significantly lower than those of clean donors, after controlling for a host of firm characteristics and donation sizes. This result is consistent with our prediction. We also examine the relationship between shareholders’ reactions to a donation by a fraud-tainted firm and the severity of the fraud the firm has committed. We find that the CARs of
fraud-tainted donors are higher if they have committed less serious fraud. This relationship between the severity of the fraud and the shareholders’ subsequent judgment of the firm’s donation provides further evidence supporting the persistent ongoing effects of the fraud sanction events on shareholders’ evaluations of the fraud-tainted firms’ donations.

We also examine whether shareholders’ evaluations of a fraud-tainted firm’s donation are related to the firm’s positive actions taken in the post-fraud period. Consistent with our predictions, we find that the CARs of fraud-tainted donors are higher 1) if they replaced their CEO/chair after the fraud sanctions, 2) if they introduced reforms in their internal control systems, and 3) if they had a record of extensive prior philanthropic activities. We also find that shareholder judgments of fraud-tainted donors are more favorable when the donors make larger contributions to the relief funds. This result indicates that although they are path-dependent, shareholders’ judgments of fraud-tainted donors remain sensitive to the characteristics of their behavioral cues.

Overall, our evidence is consistent with the existence of path dependence in shareholders’ judgments of fraud-tainted firms’ donations. As we shall explain in the concluding section, our focus on the path-dependent nature of shareholders’ judgments of fraud-tainted firms provides a particularly crucial perspective for elucidating the unique nature of reputation repair and the general question of how corporate reputation is formed and evolves over time. Furthermore, our results offer important implications for the strategic management of reputation repair.

**CONTEXT AND LITERATURE**

*China’s stock exchanges and securities fraud*

In 1991, China established two stock exchanges, one in Shanghai and the other in Shenzhen. Several regulatory agencies, including the China Securities Regulatory Commission (CSRC) and
the two stock exchanges, were granted regulatory power to formulate and enforce the laws and regulations governing the newly established stock market. The process the regulatory agencies use to investigate potential violations of the securities laws and regulations is similar to that of the SEC (Chen et al., 2005). The CSRC and stock exchanges can initiate investigations following leads, such as investor complaints, newspaper articles, referrals from a stock exchange, and other forms of corporate disclosure. If evidence of wrongdoing is discovered, the regulatory agencies may prescribe a number of remedies. In line with China’s legal tradition, penalties for violations are restricted to fines and administrative sanctions and do not include civil liabilities. Penalties typically include public criticism, warnings, and monetary fines (Chen et al., 2005).

Chen et al. (2005) examine how the sanctions imposed for fraud affect shareholders’ judgments of fraudulent firms when the fraud sanctions were announced. They find that shareholders in China exhibit significant downward adjustments in their judgments of the capabilities and character of fraud-tainted firms, as evidenced by a significant decrease in the firms’ stock prices when the sanctions for fraud are announced.

Corporate donations to the Sichuan earthquake relief funds

The 2008 Sichuan earthquake occurred at 02:28:01 PM 2008. With a confirmed death toll of over 69,196², the Sichuan earthquake attracted donations from many publicly listed corporations in China (Zhang et al., 2010a). Shortly after the earthquake, several large state-owned firms took the lead in donating large sums of money to support the rescue and relief efforts. The traditional media and social media provided continuous coverage of the earthquake and bestowed praise and even honors upon the donors. Sina.com, a popular Web portal in China, published a list of donors that ranked them by the size of their donations, thus providing significant publicity and visibility
to the donors. Accordingly, the shareholders of the companies are likely to have paid attention to the donations made by the listed firms and subsequently revised their judgments of the donors.

This episode of corporate philanthropy is particularly valuable for our investigation because making donations for disaster relief was uncommon in China before 2008, and the donations to the Sichuan earthquake were the first such experience for many Chinese listed firms (Wang and Qian, 2011). Thus, many of the listed firms possessed little knowledge regarding shareholders’ possible responses to their donations. This, in turn, might have helped to mitigate the self-selection problems (i.e., fraud-tainted firms might have decided not to make contributions to the relief funds due to their anticipation of unfavorable reactions from shareholders) that may introduce biases in our observed data. Moreover, the first experience of such philanthropy reduced the possibility of shareholders anticipating a donation announcement from a specific firm because no track record of the firm’s reactions to similar events is available for shareholders. As McWilliams and Siegel (1997) argue, the unanticipated nature of corporate announcements is a crucial assumption underlying the use of stock prices to capture shareholders’ reactions to those announcements.

Path dependence in organization research

Path dependence can be characterized as “a mechanism that connects the past and the future” (Vergne and Durand, 2010, p. 736) and has been used to explain a variety of “change inhibiting forces” in organizations (Sydow et al., 2009, p. 689). Some studies have used the idea of path dependence to examine how timeworn routines or fixed cognitive maps lead to rigidities in organizational strategies and design (e.g., Beckman and Burton, 2008; Burgelman, 2002; Collinson and Wislon, 2006). Other scholars have used the term to explain how organizations build their dynamic capability or competitive advantage over time based on their past
investments in firm resources (e.g., Eisenhardt and Martin, 2000; Helfat and Peteraf, 2003; Teece, 2007).

Despite the increasing popularity of the notion of path dependence in organizational research, the literature contains diverse conceptualizations of the construct. In their recent reviews of the literature, Vergne and Durand (2010) and Dobusch and Kapeller (2011) suggest that there are two major conceptualizations in the literature. Some scholars use the term “path dependence” to broadly describe a self-reinforcing process that is triggered by specific events. However, other scholars insist that the term should embrace three distinctive phases, namely, “preformation,” “formation,” and “lock in” (Sydow et al., 2009, p. 691). The preformation stage is characterized by a broad scope of actions/outcomes for an organization, such that “a choice of options cannot be predicted” (p. 691). However, at this stage, a small and unintentional event can lead to a “critical junction” that triggers the onset of the formation phase, which is characterized by the existence of self-reinforcing processes that reduce the range of options facing the organization. Finally, the self-reinforcing process leads to a specific end-state called lock-in, in which a particular action/outcome becomes “fixed and gains a deterministic character” (p. 692). The “process” and “three-phase” conceptualizations of path dependence, however, share the common view that the existence of “self-reinforcing processes” is the central component of path-dependent processes (Vergne and Durand, 2010; Sydow et al., 2009).

Scholars have recently used the concept of path dependence to examine how a corporate reputation is formed and evolves over time (e.g., Devers et al., 2009; Mishina et al., 2012; Hudson and Okhuysen, 2009). In particular, Mishina et al. (2012) highlight stakeholder members’ judgments of organizations and demonstrate theoretically how such tendency allows the organization’s existing reputation to generate imprinting effects on the organization’s future.
reputation. Studies of the path dependence of organizational reputation primarily adopt the “process” conceptualization of path dependence. In particular, they focus on the self-reinforcing mechanisms in the formation phase rather than the lock-in phase of a path-dependent process (e.g., Mishina et al., 2012; Dever et al., 2009). While highlighting how stakeholder members’ judgments of organizations can be shaped and influenced by the reputation of those organizations, these studies show that rather than being predetermined by the current reputation of organizations, stakeholders’ judgments of organizations are shaped by various contextual considerations. For example, while emphasizing the role of an organization’s reputation in shaping stakeholder members’ judgments of the behavioral cues from the organization, Mishina et al. (2012) underline that stakeholders’ judgments are not dictated by the organization’s current reputation and can be influenced by the characteristics of the behavioral cues. Even in the case of organizational stigma - an extremely unfavorable characterization of the fundamental nature of an organization, the research emphasizes that organizational stigma “arises in, and remains context specific” (Devers et al., 2009, p. 159). Consistent with the research on the path-dependent judgments of organizations, our study also takes a “process” view of path dependence and focuses on the self-reinforcing nature of stakeholder members’ judgments of tainted firms in relation to reputation repair.

Reputation repair

It is widely recognized that the maintenance of a favorable reputation is of critical strategic importance to modern corporations (Brown and Dacin, 1997; Fombrun, 1996; Roberts and Dowling, 2002). However, even under the best of circumstances, the actions taken by a firm or events beyond its control can damage its reputation (Karoff and Lou, 2010; Rhee and Valdez, 2009). Nevertheless, the research on organizational reputation has mainly focused on how to
build corporate reputation, with the issue of reputation repair receiving relatively limited attention from scholars (Rhee and Valdez, 2009).

Recognizing that reputation building and repair are processes that “operate in distinct ways” (Rhee and Valdez, 2009, p. 148), some researchers have started to examine the unique nature and dynamics of reputation repair. Studies have focused on how organizations can enhance their reputation repair performance through implementing the appropriate impression management strategies during a crisis period (e.g., Carroll, 2009; Coombs, 2007; Sutton and Callahan, 1987; Lamin and Zaheer, 2012). For example, Lamin and Zaheer (2012) investigate how the public and investors react to strategies of denial, defiance, decoupling, and accommodation in relation to 126 distinct accusations of the use of international sweatshops by U.S. firms. They find that the public perceived none of the responses as having a positive effect, and the denial and defiance responses were even viewed negatively. Investors, however, viewed decoupling favorably and were not affected by the other strategies.

In recent years, increasing attention has been paid to other factors that influence the effectiveness of a tainted firm in regaining reputation capital from stakeholder members during the extended post-crisis period. For example, Rhee and Valdez (2009) examine how contextual factors (e.g., reputational multidimensionality, organizational age, diversity of market segments, and third-party affiliations) influence the difficult process of reputation repair. Rhee and Kim (2012) also suggest a behavioral model of reputation repair that explains how substantive reputation repair measures can be introduced as a three-step process of problem recognition, a search for solutions, and the implementation of those solutions.

In addition to analyzing the organizational and behavioral characteristics of tainted firms, researchers have begun to examine how stakeholders react to the remedial actions taken by
tainted firms (e.g., Farber, 2005; Wilson, 2008, Chakravarthy et al., 2014). Chakravarthy et al. (2014) examine how shareholders react to the reputation repair actions of a sample of firms that have experienced serious accounting restatements. They find that remedial actions are greeted by positive reactions from shareholders, which indicates that these actions are value enhancing and effective in generating positive reputation capital for these firms.

Our study adds to reputation repair literature by examining how shareholders react to a socially-desirable philanthropic action by firms sanctioned for securities fraud. Using data obtained from controlled experiments, Deshpande and Hitch (2002) and Ricks (2005) find that CSR/corporate philanthropy by firms loses its beneficial reputation effects when negative news of the firms is released simultaneously to the evaluators. Our study uses real data on firms that had committed securities fraud and subsequently made donations to a natural disaster to examine how the unfavorable effects of a reputation-damaging event linger in stakeholder members’ judgments of the firms’ later actions. Emphasizing the path-dependent nature of stakeholder members’ evaluations of firms we offer insights into the question of why reputation repair is more difficult than reputation building.

THEORETICAL MODEL AND HYPOTHESES DEVELOPMENT

Path-dependent model of reputation repair

In this section, we develop a simple model to illustrate the salient features and dynamics of a reputation repair process. Our model of path-dependent reputation repair consists of two distinctive stages, as shown in Figure 1. The first stage is the pre-damage period, during which firms possess a relatively neutral or slightly favorable reputation status (above point 0 along the Y-axis of Favorability of Reputation). This stage ends with the emergence of a reputation-damaging event that seriously harms the reputation of a tainted firm and significantly reduces its
reputation capital. For illustrative purposes, we assume that two firms, Tainted Firms 1 and 2, have experienced reputation-damaging events. After the occurrence of the reputation-damaging events, the two firms enter the stage of reputation repair, which is defined as the process through which the tainted firms attempt to restore their reputation capital to the level of a clean firm (i.e., above 0 along the Y-axis). As a result, a defining feature of tainted firms is that they have a less favorable reputation status than clean firms.

Under the assumption of the path-dependent judgments of organizations, the unfavorable reputation status of tainted firms has important implications for stakeholder members’ evaluations of the actions taken by these firms in the reputation repair process. If a tainted firm undertakes a positive action that has implications for the firm’s capabilities, this positive capability cue is filtered through the firm’s current unfavorable reputation status. As a positive capability cue is inconsistent with stakeholder members’ prior beliefs about the firm, stakeholder members are likely to experience cognitive dissonance (Festinger, 1957). To reduce their cognitive inconsistency, stakeholder members are likely to give less credit to the tainted firms and attribute the positive outcomes to external or situational factors (Mishina et al., 2012). Furthermore, the well-known “Matthew effect” suggests that the subsequent performance of firms that have gained a reputation for their accomplishments tends to be viewed more positively by evaluators than the performance of firms that have not gained such a reputation (Merton, 1968). As a result, stakeholder members also tend to assume that a firm with an unfavorable capability reputation will continue to perform poorly. These two socio-cognitive processes suggest that a tainted firm is likely to obtain less reputation capital from a given positive capability cue than a clean firm during a reputation repair process. As Mishina et al. (2012, p. 465) suggest in their theoretical analysis of the path-dependent judgments of organizations, “an
organization with a favorable existing reputation is apt to enjoy greater reputational gains from a given positive capability cue than one with a less favorable existing capability reputation.”

If a tainted firm undertakes a positive action that has implications for its character, stakeholder members are likely to consider it as having a low level of diagnosticity and give less weight to the information of the positive cue. In this case, the good behavior is likely to be viewed as “merely an indication of conformance with societal expectations and norms” (p. 466). Furthermore, the inconsistency between the stakeholder members’ prior beliefs about the firm’s character and the positive character cue may prime the stakeholder members to view the positive action with “suspicion and distrust” (p. 466). In the worst-case scenario, the stakeholders may distrust the donor’s true motives and interpret the positive character cue as an insincere act to buy favor from stakeholder members (Bae and Cameron, 2006; Fein, 1996; Godfrey, 2005). Similar to the case of a positive capability cue, Mishina et al. (2012, p. 467) suggest that a “positive character cue from a firm with a less favorable reputation for character will have less influence on a firm’s reputation than the same cue from a firm with a more favorable reputation.” As a result, a positive character cue is likely to generate less reputation capital for the tainted firms than for the clean firms.

Thus, the key implication of the path-dependent nature of reputation repair is that a positive behavioral cue (capability or character) will be judged less favorably by stakeholder members and consequently generate less reputation capital for tainted firms than for clean firms. As shown in Figure 1, Action A is expected to generate more reputation capital for the Clean Firm (measured by vertical distance between point H and point E) than for Tainted Firms 1 and 2 (measured by vertical distance between I and F, and J and G, respectively).
A damaged reputation is unlikely to be fully recovered through a signal action. As a result, reputation repair is inherently an adaptive and accumulative process in which stakeholder members continuously update their assessment of the tainted firm in response to the firm’s emergent action (e.g., Action A) and then use the revised reputation status as a new position from which to interpret the subsequent action (Action B). The second implication of the path-dependent nature of reputation repair is that stakeholder members’ judgments of a specific action by a tainted firm are determined by not only the action itself, but also the tainted firm’s actions taken since the reputation-damaging event. Furthermore, reputation repair involves a positive feedback or self-reinforcing process in which the effectiveness of the earlier remedial actions positively contributes to the effectiveness of the later actions. The self-reinforcing nature of reputation repair is illustrated by the different paths of reputation repair experienced by Tainted Firms 1 and 2 in Figure 1. Specifically, the greater amount of reputation capital generated by Tainted Firm 1 compared with Tainted Firm 2 due to Action A subsequently leads to Tainted Firm 1 acquiring a greater amount of reputation capital (measured by vertical distance between point L and point I) than Tainted Firm 2 (measured by vertical distance point M and point J) from Action B.

If the reputation repair is successful, the tainted firm’s level of reputation capital returns to a level above 0, which marks the end of the reputation repair process (point Y at the end of path II in Figure 2). However, if the reputation repair is unsuccessful, the firm’s level of reputation capital fluctuates or even remains at a low level for an extended period (point Z at the end of path III in Figure 1).

Insert Figure 1 about here

Hypotheses regarding shareholders’ evaluations of the donations made by fraud-tainted firms

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In this section, we develop our hypotheses about how the shareholders of Chinese listed firms respond to the donations made by firms that have been sanctioned for securities fraud.

As we have argued in the introduction, being sanctioned for securities fraud tends to damage a firm’s reputation with respect to capability and character. Corporate donations, on the other hand, also have implications for the perceived character and capabilities of firms. Mishina et al. (2012) argue that when a behavioral cue has potential implications for the firm’s reputation with regard to character and capability, stakeholders tend to use only one dimension as a lens for interpreting the cue. The lens used will “depend on the dimension that is most relevant to the evaluator’s goals with respect to the organization” (p. 461). In our context, the objective of the shareholders is to maximize shareholder value, defined as the discounted value of the future cash flows. As mentioned previously, the dimensions of character and capability are both relevant to the objective of maximizing shareholder value. Of these two dimensions, we assume shareholders use the dimension that remains relatively more seriously damaged as the lens with which to interpret the donations made by the fraud-tainted donors. It is because the underlying reason for shareholders’ path dependent tendency of judgments is their need to “deal with the uncertainties they face in their interactions with an organization” (Mishina et al., 2012, p. 461). As the more seriously damaged dimension will nevertheless present a greater amount of uncertainties to shareholders, it is reasonable to expect it to be more salient to shareholders.

It is worthy to note that our prediction on shareholders’ evaluations of the fraud-tainted firms’ donations relative to those made by the clean firms will not be affected by the specific dimension that has been chosen by shareholders. As mentioned previously, as long as the reputation status (whether capability or character) the shareholders use to interpret the donations made by the fraud-tainted firms remains less favorable than the corresponding status of the clean firms, the
less favorable reputation status of the fraud-tainted firms will lead the shareholders to evaluate the donations made by the fraud-tainted firms less favorably than those made by the clean firms.

Nevertheless, shareholders undergo different socio-cognitive processes when different dimensions are used to filter the donation information. For the shareholders who use the firm’s current capability reputation as a filter, the positive capability cue of the donation tends to have a high level of diagnosticity because the accomplishment of a certain outcome or level of performance at least “demonstrates that the individual actually possesses the ability to perform at that level” (Mishina et al., 2012, p. 462). Thus, in our context, the shareholders are likely to consider the firm’s capability of making a donation to the earthquake fund as a meaningful positive cue. However, compared with the donations made by clean firms, the shareholders’ reactions to the donations made by fraud-tainted firms are still likely to be moderated by the firms’ relatively unfavorable capability reputation. As explained in our theoretical model, due to the influence of a fraud-tainted donor’s unfavorable reputation, shareholders are more likely to respond less favorably to the donations made by fraud-tainted donors than to those made by clean donors.

For shareholders who use character reputation as the filter, the positive character cue of making a donation to the relief funds is likely to be viewed by shareholders as having a low level of diagnosticity (Mishina et al., 2012). Furthermore, the shareholders may doubt the donor’s true motives. Jones and Davis (1965) suggest that observers are likely to be suspicious of the motives of highly socially desirable behavior. Consistent with these insights, research on CSR has also found that stakeholders tend to be particularly skeptical about the true motives of CSR activities (Bae and Cameron, 2006; Fein, 1996). In a worst-case scenario, shareholders may even suspect that the donations made by firms with an unfavorable character reputation merely constitute an
ingratiating attempt to shape the shareholders’ perception of the firms (Godfrey, 2005). If the shareholders have an extremely negative view of the motives of a donor, the donation may even serve as another reputation-damaging event that leads to further loss of the donor’s reputation capital.

Thus, no matter which dimension shareholders use as an interpretative lens, they tend to judge the donations made by fraud-tainted firms less favorably than those made by clean firms. As a result, they will respond less favorably to the announcements of donations made by the former group of donors than to those made by the latter group of donors. We thus propose the following hypothesis for empirical testing:

*Hypothesis 1:* The CARs around donation announcements are lower for fraud-tainted donors than for clean donors.

To establish a more direct link between the event of fraud sanction and shareholders’ subsequent evaluations of a fraud-tainted firm’s donation, we further examine the relationship between the severity of the fraud committed by a firm and the shareholders’ reactions to the firm’s donation. A more serious fraud is likely to damage the interests of the shareholders more than a less serious fraud. Thus, shareholders tend to have less favorable perceptions of the former group of donors than the latter group. As Wiesenfeld et al. (2008) argue, a “surprising” or “extraordinary” corporate failure is more likely to “lead arbiters and the public to infer that the organization was ‘bad’” (p. 237). Therefore, we expect firms that have committed more serious fraud to be associated with a less favorable reputation status than firms that have committed less serious fraud when the fraud sanctions were announced. With a less favorable reputation status as the initial condition of reputation repair, the path-dependent perspective suggests that other things being equal, shareholders will evaluate the actions of the firms that have committed less
serious fraud more favorably than those that have committed more serious fraud. As a result, we expect shareholders to judge the donations made by the former group of firms more favorably than those made by the latter group of firms. Our specific hypothesis for the empirical testing is as follows:

Hypothesis 2: The CARs around donation announcements are lower for fraud-tainted donors that have committed more serious fraud than for those that have committed less serious fraud.

As we argued in the Introduction, the path-dependent perspective suggests that shareholders’ judgments of the donations made by fraud-tainted firms depend on the prior actions taken by these firms. To further provide evidence of the path-dependent nature of shareholders’ judgments of fraud-tainted firms, we develop hypotheses regarding three types of prior positive action that are likely to affect the reputation status of fraud-tainted firms and consequently influence shareholders’ subsequent reactions to the firms’ donations.

The first type of prior positive action is whether a fraud-tainted firm changed its CEO and/or board chair in the post-fraud period. CEOs and/or board chairs are “viewed as having the widest span of influence and broadest responsibility” within a firm (Wiesenfeld et al., 2008, p. 239). Research has shown that there are significant connections between the characteristics of a CEO and the capabilities and character of the firm the CEO serves. With respect to firm capabilities, a large number of studies have documented that CEO/chair turnover is associated with a significant improvement in a firm’s profitability in the post-turnover period (e.g., Weisbach, 1998; Huson, Malatesta, and Parrino, 2004; Chang and Wong, 2009). These studies indicate the important role that CEOs/board chairs play in influencing firm’s capability. However, studies also indicate that there is a positive relationship between a CEO’s character at the individual level and the firm’s character at the corporate level. For example, Dyreng et al. (2012) find that
individual executives play a significant role in determining the level of tax avoidance that firms undertake. Liu (2016) also shows that key company insiders from regions with a more corrupt culture are more likely to engage in earnings management, accounting fraud, option backdating, and opportunistic insider trading than their peers from regions with a less corrupt culture.

The connections between a CEO’s characteristics at the individual level and the firm’s capabilities and character at the corporate level suggest that shareholders are likely to revise their judgments of a fraud-tainted firm when the firm changes its CEO/board chair in the post-fraud period (Devers et al., 2009; Wisesenfeld et al., 2008; Gomulya and Boeker, 2014). Removing the tainted CEO/chair not only sends a signal to shareholders about the intent of the tainted firm to “deal seriously with the problem” (Gomulya and Boeker, 2014, p. 1760), but also opens the possibility for the newly appointed CEO/board chair to bring about significant improvements in the firm’s capabilities and character.

Consistent with the desirable effects of CEO/chair turnover on the capabilities of tainted firms, Gomulya and Boeker (2014) find that stock prices increase substantially when tainted firms appoint a more experienced and better-educated CEO. Moreover, Wilson (2008) documents that firms that restate their earnings information are able to recover their reporting credibility more quickly if they dismiss their CEOs compared with firms that do not. These results indicate that CEO turnover also helps improve the character reputation of tainted firms. We therefore expect that shareholders, regardless of whether they use capability or character reputation as a filter, have a more favorable perception of a fraud-tainted firm that has experienced CEO/chair turnover following a fraud sanction than a corresponding fraud-tainted firm that has experienced such a turnover. Consequently, we also anticipate that the judgments about the donations made
by fraud-tainted donors with CEO/chair turnover are more favorable than the judgments about firms without such turnover. We thus construct the following hypothesis:

*Hypothesis 3:* The CARs around donation announcements are higher for fraud-tainted donors that have experienced CEO/chair turnover following a fraud sanction than for donors that have not experienced such a turnover.

The second type of positive action is whether a fraud-tainted firm introduced important reforms in the firm’s internal control system in the post-fraud period. Research has shown that the quality of a firm’s internal control system is significantly related to its reputation with respect to capability and character. For example, Ashbaugh-Skaife et al. (2009) find that effective internal control lowers the information risk, which in turn reduces a firm’s cost of capital. Cheng et al. (2013) and Feng et al. (2014) show that effective internal control can reduce inefficient investments and inventory mismanagement, respectively. These studies suggest that introducing reforms in a firm’s internal control system can help improve a firm’s financial performance and therefore its capability reputation. Furthermore, Cheng et al. (2013) argue that effective internal control systems can improve the quality of information for internal control, which lowers the possibility for management and employees to engage in opportunistic activities. The increased reliability and trustworthiness of a fraud-tainted firm is thus likely to improve the firm’s character reputation.

In their study of shareholders’ reactions to the actions firms take to repair their damaged reputation after serious financial restatements, Chakravarthy et al. (2014) find that shareholders react positively to the announcements of substantive reforms in the firms’ internal control systems. We therefore expect the reform of a fraud-tainted firm’s internal control system to help
improve the reputation status of the firm and, in turn, lead to more favorable shareholder judgments of the donations made by the firm. We thus propose the following hypothesis:

**Hypothesis 4:** The CARs around donation announcements are higher for the fraud-tainted donors that have introduced internal control reforms following fraud sanctions than those of fraud-tainted donors that have not introduced such reforms.

The third type of prior action we expect to influence shareholders’ evaluations of firms’ reputation status is a fraud-tainted donor’s record of CSR activities before and after the fraud sanction. Before the fraud sanction, these CSR activities may help to build a reservoir of public goodwill that shields the fraud-tainted firms from the reputation damage created by the fraud sanctions (Godfrey, 2005). As a result, the fraud-tainted firms with a record of prior engagement in CSR in the pre-fraud period may suffer less reputation damage than those without such a record (Godfrey et al., 2009). Furthermore, these activities may generate perceptual spillover effects in relation to the shareholders’ evaluations of the donations made by the fraud-tainted firms because a long history of engagement in CSR activities may provide a stronger and more credible signal of a donor’s financial strength (Shapira, 2012). The motives of the donor are also more likely to be considered sincere than those of firms without such a record (Vanhamme and Grobben, 2009).

However, opposite arguments exist in relation to the insurance-like effect of CSR activities. The expectancy-violation effect suggests that people tend to react more strongly to actions that violate their expectations of how the actor is likely to behave (Burgoon and LePoirre, 1993; Heath and Chatterjee, 1995). Thus, shareholders may be more disappointed about the securities fraud committed by firms that have previously engaged more extensively in CSR activities. Consistent with this argument, Rhee and Haunschild (2006) find that shareholders react more
unfavorably to the product recall announcements made by firms with a more favorable reputation status than firms with a less favorable reputation status. Furthermore, the sanctions imposed for fraud may have discrediting effects on the fraud-tainted firms’ prior record of CSR activities. As a result, these records can no longer serve as a credible signal of the firms’ capabilities and character. In the worst case, the shareholders may even view the records as solid evidence that a firm’s CSR activities are merely an ingratiating attempt to buy favors from the stakeholders (Webb and Mohr, 1998).

Similar to the record of CSR activities conducted in the pre-fraud period, there are opposing views on the effects of CSR activities conducted in the post-sanction period. The positive view suggests that a consistent record of engaging in CSR activities in the post-fraud period may allow fraud-tainted firms to gradually build up new reputation capital and consequently improve their capability and character reputation status. Furthermore, a track record of consistent engagements may help to reduce the likelihood that shareholders will view the donations made by a fraud-tainted firm as a “quick fix” attempt to restore the firm’s damaged reputation (Vanhamme and Grobben, 2009, p. 276). Nevertheless, skeptics may argue that it would be very difficult for a fraud-tainted firm to overcome the shareholders’ mistrust and suspicion over their CSR activities, because these organizations are perceived by stakeholder members as having “a fundamental, deep-seated flaw” in their nature (Dever et al., 2009, p.155). As a result, the firm’s record of engaging in CSR activities in the post-fraud period will not help improve the shareholders’ perceptions of the donations made by the firm.

The preceding discussion suggests that the effects of fraud-tainted firms’ record of prior engagement in CSR activities on shareholders’ evaluations of the donations made by these firms are uncertain. Nevertheless, to examine this important question empirically, we hypothesize that
engagement in CSR activities in both the pre- and post-fraud periods helps improve the reputation status of fraud-tainted firms. As a result, shareholders respond more favorably to the donations made by donors with a record of consistently engaging in philanthropic activities than those without such a record. Our hypothesis is as follows:

*Hypothesis 5:* The CARs around donation announcements are higher for fraud-tainted donors who have a record of prior engagements in corporate philanthropy in pre- and post-fraud periods than for those without such a record.

Although the research on stakeholders’ path-dependent judgments of organizations places a strong emphasis on the effects that stakeholders’ prior beliefs have on their judgments of the behavioral cues of organizations, this line of research stresses that stakeholders’ judgments of organizations are not completely predetermined and are also influenced by the characteristics of specific behavioral cues. In particular, Mishina et al. (2012) argue that the effect of a discrepant behavioral cue on stakeholders’ perceptions of an organization is influenced by the magnitude of the cue, in that more discrepant cues are more likely to alter the perceptions of the stakeholders.

To elucidate how the magnitude of a behavioral cue influences shareholders’ judgments of the donor, we focus on the size of the donation. Specifically, we contend that donation size is diagnostic of a donor’s capability and character. Regarding the donor’s capability, Lev et al. (2010) suggest that financially more healthy firms tend to make larger contributions. Shapira (2012) also argues that “an increase in the level of donations could convey messages about financial strength to potential investors” (p. 1892). Regarding the donor’s character, Patten (2008) asserts that shareholders tend to view donors who make larger contributions as having genuine motives. Consistent with his prediction, the author finds that donation size is positively related to shareholders’ evaluations of corporate donors who contributed to the 2004 tsunami
relief effort. We therefore expect that a larger contribution is more likely to overcome the unfavorable cognitive biases originating from shareholders’ negative beliefs regarding the fraud-tainted donor, and thus result in the donor receiving more favorable reactions from shareholders. Our specific hypothesis is as follows:

**Hypothesis 6:** The CARs around donation announcements are positively related to the size of the donation.

**METHOD**

**Data**

We manually collected our donation data shortly after the Sichuan earthquake from Web portals (e.g., sina.com and baidu.com) and the homepage of each listed company. Overall, 637 listed firms made contributions to the earthquake relief funds between May 12 and July 10, 2008. We eliminate 35 donors listed in 2008 due to a lack of sufficient data regarding their financial performance, which are required for our empirical testing. In addition, 24 donors in the financial industry are excluded because their financial reports are prepared under different accounting standards.

Our data on regulatory enforcement cases were obtained from the China Stock Market and Accounting Research (CSMAR) database, which has been widely used in academic research related to China’s listed firms (e.g., Wang and Qian, 2011). We included enforcement actions from January 1, 2001 to May 1, 2008. We restricted our fraud cases to those announced before May 1, 2008 to avoid confounding effects due to overlapping announcements of fraud sanctions and donations. We also excluded seven fraud-tainted donors that had been sanctioned before 2001. These seven cases were scattered over a long period of six years: 1994 (1), 1995 (1), 1996
The CSRC paid limited attention to securities fraud before 2001. As a result, only a few firms were sanctioned for securities fraud. However, the CSRC significantly expended greater efforts to investigate securities fraud in 2001, in order to restore investors’ confidence in the nascent Chinese stock market (Lin et al., 2009). As a result, the fraud sanctions before and after 2001 may be fundamentally different due to the change in the regulatory environment.

The average post-sanction time of our donors (i.e., the length of time between a firm’s sanction for fraud and its donation to the earthquake relief fund) is 3.26 years. We believe this length of time is reasonable for our investigation of the self-reinforcing process of reputation repair. Research suggests that reputation repair on average takes more than three years to complete (Farber, 2005; Gaines-Ross, 2008). Thus, our fraud-tainted firms are likely to still be engaged in the reputation repair process. Moreover, the notion of path dependence usually refers to an enduring self-reinforcing process that is triggered by an event, rather than the immediate and short-term reactions to an event. We believe our observation period is long enough to demonstrate the ongoing effects of a fraud sanction event on shareholders’ judgments of fraud-tainted firms’ subsequent actions. In particular, previous studies have shown that tainted firms tend to introduce substantive reforms actions, such as CEO/chair turnover and internal control system reforms, in the three years following a negative event (Farber, 2005; Chakravarthy et al., 2014). As a result, our observation period is sufficiently long for us to observe those reforms and offer evidence on how shareholders’ judgments of the fraud-tainted donors are related to them.

Combining the data on donations and sanctions for fraud, our sample comprises 72 fraud-tainted donors. We drop three fraud donors that had negative total equity at the end of 2007. It is because firms that made charitable donations while technically bankrupt might have aroused
particular skepticism from shareholders regarding their donation motives, which might have confounded the judgmental effects associated with the event of fraud sanctions. Fraud-tainted donors account for about 15-30% of the total fraud-tainted firms for each year and each industry at the two-digit level, indicating that fraud-tainted donors are largely representative of the fraud-tainted firms.

Regarding the clean donors, we eliminate 21 such donors with confounding events (such as operating facilities affected by the earthquake, making earnings announcements) during the 20-day period around their donation announcement dates. We also exclude five donors with missing values in our key variables. Our final sample consists of 69 fraud-tainted donors and 473 clean donors. Other data used in this study are also obtained from the CSMAR.

*Measurement of CAR*

Following Godfrey et al. (2009), we regress the daily stock returns for donors on the market returns for a period of 128 to eight trading days before the firm’s donation announcement to calculate the abnormal stock return:

\[ R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_i \]  

where \( R_{it} \) is the stock return of firm \( i \) on day \( t \); \( R_{mt} \) is the market return on day \( t \); the intercept term captures the average return of firm \( i \)'s stock; \( \beta_i \) is the systematic risk of firm \( i \); and \( \varepsilon_i \) is the error term. Using the estimated coefficients \( \hat{\alpha}_i \) and \( \hat{\beta}_i \), we calculate firm \( i \)'s abnormal return on day \( t \) as:

\[ e_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt}) \]  

The event date is set at \( t = 0 \). The cumulative abnormal return around the event window \([T_1, T_2]\) is then defined as:

\[ CAR_i = \sum_{t=T_1}^{T_2} e_{it} \]  

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The validity of the event study methodology relies on whether the “abnormal” stock price effect associated with an event can truly be identified. This in turn depends on three crucial assumptions: (1) the market is efficient, (2) the event is unanticipated, and (3) no confounding events took place during the event window. The first assumption requires that the stock market can rapidly incorporate new information into the stock prices. Although the Chinese stock market has a less than 30-year history, its efficiency has been well documented in numerous studies (e.g., Liu, Shu, and Wei, 2016). The last two assumptions mandate that the information about an event can be uniquely captured by the stock prices surrounding the announcement date. As aforementioned, donation announcements were largely unanticipated by shareholders. Furthermore, we have excluded cases with confounding corporate announcements within a 20-day window. As a result, we believe that our testing venue has satisfied the three assumptions for a valid event studies.

As CSR events are usually less financially relevant than other corporate announcements, such as earnings announcements and merger and acquisition announcements, McWilliams and Siegel (1997) strongly recommend using a short event window of two days to capture shareholders’ reactions to those events. Following their advice, we use a two-day event window (0, +1) to capture the effect of a donation announcement. We include one day after the announcements because some donations were announced after trading hours and thus the shareholders were unable to respond to the announcement until the next day. Nevertheless, our results are similar if we use a three-day event window (-1, +1) to measure CAR, where one day before an announcement is used to mitigate the possibility of information leakage. To make the empirical results more readable, we convert the CAR into a percentage.

Measurements of key explanatory variables
**Fraud.** A dummy variable, Fraud, denotes whether a firm had been sanctioned for securities fraud. It is set at one if a firm had been punished by regulatory authorities, and zero otherwise.

**Severity.** Typically, the announcements of security fraud include some description of the fraudulent activity, such as when and how the firm committed the fraud and the value of the fine that the firm was required to pay. We construct two proxies to measure the severity of fraud on the basis of the information contained in the announcements. The main measure is the duration of the fraudulent activity (Severity-span), measured by the natural logarithm of the number of years a fraud was perpetrated. We expect shareholders to perceive a fraud that had lasted for a longer time to be more serious than a shorter one. In our robustness checks, we use the size of the fine imposed on a fraud-tainted firm as an alternative measure.

**Leader turnover.** Firms usually do not explicitly state whether the turnover of a CEO or a board chair is due to fraud sanctions. Nevertheless, we assume the shareholders attribute turnovers that occur in the immediate aftermath of fraud sanctions to be a consequence of the fraud. Specifically, we code CEO/chair turnover as one if a firm’s CEO or board chair is removed within 100 days after the occurrence of fraud, and zero otherwise.  

**Internal control reforms.** Following Chakravarthy et al. (2014), we identify whether a firm had introduced internal control reforms by reading its public announcements. Specifically, Internal control reforms is set at one if a fraud-tainted firm had announced any plan to improve its internal control system, such as setting up an audit committee or enhancing the information disclosure system, within 12 months after its fraud sanction, and zero otherwise. We restrict the timeframe for such reforms to up to 12 months after the sanctions because we anticipate that reforms instituted outside this timeframe are substantially less likely to be perceived by...
shareholders as remedial actions initiated by firms to address the vulnerabilities revealed by the fraud sanctions.

**Pre-fraud/Post-fraud philanthropy.** We define *Pre-fraud philanthropy* records as the natural logarithm of one plus the average charitable donations made in the five years before the sanctions for fraud. *Post-fraud philanthropy* is the corresponding amount donated by the fraud-tainted firms after the fraud sanction and before the donation announcement.

**Donation.** We use two variables to measure donation size. The first is defined as the natural logarithm of the donation amount (*Absolute donation size*), as this variable is widely used in published lists of donors in the media, such as sina.com, which is the largest news portal in China. We therefore expect that this variable will be relevant to shareholders’ inferences about the donors. However, large firms tend to possess a greater capacity to make larger contributions. To control for this size effect, we use a scaled donation size variable, defined as the donation amount divided by total sales in the preceding year, as an alternative measure of donation size (*Relative donation size*). To make the empirical results more readable, we convert the CAR into a percentage.

**Measurements of control variables**

To mitigate confounding effects, we introduce a group of control variables to capture various firm characteristics. All of the variables are defined as of the end of 2007. We first include two standard firm risk characteristics that may affect the cross-sectional variations in stock prices (e.g., Fama and French, 1993). *Firm size* is defined as the natural logarithm of a firm’s total market value, which captures the size effect in stock returns and serves as a further control variable for capturing a firm’s resources. *Book-to-market* is measured as the natural logarithm of
the ratio of each firm’s book value to its market value, which captures the expected growth of future firm performance.

Shareholders might have expected more profitable firms to make larger contributions to the relief funds (Crampton and Patten, 2008; Useem, 1998). We thus use ROA, calculated as the ratio of net profit to total assets, to control for firm profitability. In addition, we follow Zhang et al. (2010b) and use the ratio of sales expenses to total sales (Advertising) to capture the possible influences of advertising intensity on a firm’s donation incentives.

Investors may hold relatively unfavorable judgments of firms with a weak corporate structure, and fraud-tainted firms tend to have a weaker corporate governance structure (Chen et al., 2005). Therefore, the difference in CARs between fraud-tainted donors and clean donors may also be driven by shareholders’ judgments of the firms’ corporate governance structures rather than the fraud sanction itself. We thus include six governance indicators to control for possible confounding effects. The first three variables are used to capture the structure of a firm’s board committee: Board size, defined as the natural logarithm of the number of board directors; Duality, a dummy variable that is set to one if a firm’s CEO and board chair were the same person, and zero otherwise; and Ratio of unpaid directors, defined as the proportion of board members who were unpaid directors. The next two variables are employed to capture the ownership structure of the firms: SOE, a dummy variable that is set to one if the ultimate owner of a firm is a government agency or a government-controlled entity, and zero otherwise; and Foreign, a dummy variable that is set to one if a firm is also listed on an overseas stock exchange, and zero otherwise. The last variable is Leverage, defined as the ratio of total bank loans to total assets, which captures the monitoring by a firm’s creditors. Studies have shown that these variables are
important determinants of the corporate governance of China’s listed firms (e.g., Chang and Wong, 2009).

Model specifications

Hypothesis 1 states that the CARs around donation announcements are lower for fraud-tainted donors than for clean donors. To test this, we use the following model specification:

\[ CAR_i = \alpha + \beta_1 \text{Fraud}_i + \beta_2 \text{Donation}_i + \beta_3 \text{Prior philanthropy}_i + \delta \text{Control}_i + \epsilon_i \]  

(4)

where \( \text{Control} \) represents the set of control variables that we defined previously, and \( \text{Donation size} \) refers to one of our two measures. All of the other variables are defined previously. A significantly negative estimate of \( \beta_1 \) in equation (4) would support Hypothesis 1. We cannot define Pre- and Post-fraud philanthropy for clean firms because these firms have not been sanctioned for fraud. To capture the possible confounding effects of prior engagements in philanthropic activities, we include the variable Prior philanthropy, which is defined as one plus the average donations made by a firm in the past five years.

Hypotheses 2-6 are related to shareholders’ judgments of the donations made by fraud-tainted firms. We thus estimate the following regression model using only fraud-tainted donors as our testing sample:

\[ CAR_i = \alpha + \gamma_1 \text{Severity}_i + \gamma_2 \text{Leader turnover}_i + \gamma_3 \text{Internal control reforms}_i + \gamma_4 \text{Pre-fraud philanthropy}_i + \gamma_5 \text{Post-fraud philanthropy}_i + \gamma_6 \text{Donation}_i + \gamma_7 \text{Time interval}_i + \delta \text{Control}_i + \phi \text{Year dummies} + \epsilon_i \]  

(5)

where \( \text{Control} \) represents the set of control variables defined previously. In addition to the control variables specified, we include a set of year dummies to indicate the year in which a particular fraud was sanctioned to control for the potential year-specific effects. We also introduce a new variable, Time interval, defined as the number of years between a firm’s fraud sanction and its donation announcement. The sign of the coefficient on this variable is
theoretically uncertain because it crucially depends on whether the reputation status of a fraud-tainted firm has improved or further deteriorated over time after the sanctions for fraud were imposed. The coefficient is significantly positive if the reputation status has improved over time, such that shareholders use an increasingly favorable interpretative framework to interpret the donations made by the donors who have committed fraud. However, the sign will be negative if the reputation status has further deteriorated. All of the other variables are defined previously. A significantly negative estimate of $\gamma_1$ would support Hypothesis 2, while significantly positive estimates of $\gamma_2$ through $\gamma_6$ in equation (5) would substantiate Hypotheses 3-6.

**EMPIRICAL RESULTS**

*Summary statistics*

Before we present and discuss our main results, we report the means, standard deviations, and correlations of the main variables we use to test Hypothesis 1 in Panel A and Hypotheses 2-6 in Panel B in Table I. All of the statistical tests in this study are two-tailed.

Insert Table I about here

*Validation analyses for the explanatory variables*

Hypotheses 2-6 are based on the assumption that our explanatory variables (Severity, Leader turnover, and Internal control reforms) had shaped a fraud-tainted firm’s reputation in a particular direction. Specifically, we assume that shareholders had reacted favorably to the fraud-tainted firms that have committed less serious fraud, experienced leader turnover, and introduced internal control reforms. As a result, these firms tend to have a more favorable reputation status before they make donations. Before discussing our main empirical results, we validate these
assumptions by examining whether shareholders had indeed reacted to the announcements of these events in the manner that we have predicted.

Following Chen et al. (2005), we use a five-day window surrounding the announcement day to measure the market reactions around fraud announcements. Similar to the results in Chen et al. (2005), we find that the fraud-tainted donors experienced -2.994% CARs during the five-day window \( p < 0.001 \), which indicates that the fraud sanctions seriously damaged the firms’ reputation status. We further sort the firms into high vs. low severity subsamples by the median value of Severity-span. As expected, the CARs are more significantly negative \( p < 0.05 \) in the high severity subsample \( \text{CAR}=-3.969\%, p < 0.001 \) than in the low severity subsample \( \text{CAR}=-1.838\%, p < 0.05 \). When we separate the firms into high vs. low pre-fraud CSR subsamples by the median value of the donated amount, consistent with the insurance-like effects of CSR as suggested by Godfrey (2005), we find that the CARs in the high CSR subsample \( \text{CAR}=-2.358\%, p < 0.05 \) are less negative than those in the low CSR subsample \( \text{CAR}=-3.763\%, p < 0.001 \). However, the difference between the two subsamples is statistically insignificant.

For the announcements of top leader changes and internal control reforms, we use a three-day event window centered on the announcement day to capture the market reaction. As expected, these two types of events are associated with significantly positive announcement effects (for top leader changes, \( \text{CAR}=1.879\%, p < 0.05 \); for internal reforms, \( \text{CAR} = 1.710\%, p < 0.05 \)), which imply that these events improved the shareholders’ judgments of the focal fraud-tainted firms.

**Results for Hypothesis 1**

Table II displays our main results. Models 1 and 2 report the estimates for testing Hypothesis 1 using two different measures of donation size, respectively. The coefficients of *Fraud* are all significantly negative in both models \( p < 0.05 \). Therefore, Hypothesis 1 is supported. These
results are both statistically and economically significant. Taking a median donor with a market value of RMB4.643 billion as an example, the difference in market reaction to the donation announcements of fraud-tainted and clean firms is around RMB50.38-58.32 million, respectively, for the two models. These differences are about 50 times the median donation amount (RMB1.1 million), which indicates the existence of a substantial difference in the reputation effects of donations made by fraud-tainted and clean donors.

Insert Table II about here

Results for Hypotheses 2-6

Models 3 and 4 in Table II report the results for testing Hypotheses 2-6. As can be seen, the results for the variables of interest in both models are qualitatively the same and statistically significant with the expected signs. Specifically, the coefficients on Severity-span are significantly negative in both columns. These results are consistent with Hypothesis 2, which states that the CARs around donation announcements are lower for firms that have committed more serious fraud.

Hypotheses 3-6 predict that the CARs around donation announcements are higher for fraud-tainted firms that have experienced leader turnover, and/or internal control reforms, and/or showed more consistent philanthropic behavior in the pre-fraud and post-fraud period, and/or donated more to the earthquake relief funds. As can be seen in Models 3 and 4, the coefficients on these variables are all significantly positive at the 5% significance level at least, except for Pre-fraud philanthropy. Thus, Hypotheses 3-6 are substantiated, except for the effects of pre-fraud philanthropy, as specified by Hypothesis 5. The coefficient on Pre-fraud philanthropy is positive but not statistically significant. These results suggest that the record of philanthropic engagement in pre-fraud period might have been discredited by the fraud sanction event.
However, record of engagement in post-fraud period has a positive effect on shareholders’ evaluation, as indicated by the coefficient on *Post-fraud philanthropy*. Although shareholders tend to evaluate the donations made by fraud-tainted firms less favorably than those made by clean firms, a record of consistent engagement by a fraud-tainted firm in the post-fraud period seems to help overcome shareholders’ suspicion of a firm’s motives.

Based on our estimates in Model 4, what is the minimum amount that a median fraud-tainted firm has to donate in order for a donation to generate a positive reputation effect (as reflected by the existence of a positive CAR)? How is this amount related to the prior actions taken by the fraud-tainted donors in the post-fraud period? If we assume that shareholders will not adjust their judgments of the fraud-tainted firms that did not make a contribution to the relief funds (as there is no behavioral cue to trigger shareholders to reexamine these firms), the answers to these two questions allow us to determine whether a fraud-tainted firm should have made a donation or not. To achieve this, we use the estimates in Model 4 and set all of the control variables at their median level. We then determine how the minimum amount varies in relation to whether fraud-tainted firms introduced leader turnover and/or reforms in their internal control systems in the post-fraud period. According to the estimates in Model 4, a fraud-tainted donor with no leader turnover and internal control reforms after the occurrence of fraud must donate more than 1.225% of its sales. Among our fraud-tainted donors, 28 firms did not experience leader turnover or internal control reforms. Only four of these donors donated more than 1.225% of their sales. In other words, with respect to gaining reputation capital from shareholders, 24 donors should not have made a donation. However, a median fraud-tainted donor with leader turnover (internal control reform) only needed to donate 0.761% (0.635%) of its sales. Among our fraud-tainted donors, 23 (27) firms experienced leader turnover (internal control). Only four (four) donated
more than 0.761% (0.635%) of their sales. For a median fraud-tainted donor experiencing both
leader turnover and internal control reforms, a donation of any amount would generate a positive
reputation effect. Among our fraud-tainted donors, nine experienced both leader turnover and
internal control reforms. These donors donated 0.276% of their sales on average and reaped a
positive benefit of 0.866% of CARs (equivalent to RMB32.824 million for a median fraud-
tainted donor). The preceding results clearly show the self-enforcing and path-dependent nature
of the reputation repair process, in that firms that possess a better reputation status due to the
introduction of more reputation-enhancing actions in the early period tend to benefit more from
making a donation.

ROBUSTNESS CHECKS AND ADDITIONAL ANALYSES

Alternative measurements

To ensure our findings are not driven by our specific variable measurements, we construct an
alternative measure for each of our main explanatory variables as robustness checks. For our
alternative measure of fraud severity, we use the natural logarithm of one plus the amount of the
fine imposed by the regulators on the fraud-tainted firm (Severity-fine). It is reasonable to expect
the amount of the fine to reflect the severity of the fraud. Replacing both the CEO and board
chair of a firm should result in a more complete break from the incidence of fraud. We therefore
construct an alternative proxy for leader turnover, CEO & chair turnover, defined as one if a
firm’s CEO and board chair were both replaced during our investigation period, and zero
otherwise. As an alternative cut-off point for the variable of Internal control reforms, we use 15
months instead of 12 months. For the CSR engagement records, we use the natural logarithm of
one plus the number of years a firm made charitable contributions during our defined observation
periods.
We first repeat our previous analyses by sequentially replacing each explanatory variable with its new measure and replacing all of the variables simultaneously. As we qualitatively obtained the same results in all of the regressions, Table III reports the results only when all of the alternative variables are included at the same time. As can be seen from the table, the coefficients on all of the variables of interest are statistically significant with the expected signs, thus indicating that our previous findings are robust in terms of variable measurement. In Models 3 and 4, the coefficients on CEO & chair turnover are expectedly larger and more statistically significant, which is consistent with the contention that replacing both the CEO and board chair of a firm can lead to a greater improvement in a firm’s reputation status.

Insert Table III about here

*Further validation of the reputation effects of fraud severity and prior actions*

In the previous section, we verify that shareholders’ judgments of doors are related to our contextual variables (Severity, Leader turnover, and Internal control reforms) in the predicted direction. To further demonstrate the path-dependent nature of shareholders’ judgments (i.e., the connection between shareholders’ judgments of actions over time taken by fraud-tainted firms), we attempt to directly capture shareholders’ judgments of those prior actions and then examine how the resultant judgments (rather than the actions themselves) are related to shareholders’ judgments of the firms’ donations. We first use the five-day-window CARs surrounding fraud announcements (which capture shareholders’ reactions to the fraud announcements) as our measure of fraud severity and retest Hypothesis 2. We find that the CARs around donation announcements are positively related to the CARs surrounding fraud announcements at the 5% significance level. We also conduct similar tests for the firms that experienced leader turnover and undertaken internal control reforms. Of our 69 fraud-tainted donors, 23 experienced leader
turnover and 27 undertook internal control reforms. We calculate the CARs surrounding these two types of events (which capture shareholders’ respective reactions to those types of events) and use the CARs to replace the Leader turnover and Internal control reforms variables in equation (5). We retest Hypotheses 3 and 4. As the sample size is much smaller, we modify equation (5) by excluding all control variables to avoid the risk of overstretching the data. Furthermore, we use bootstrapping method to adjust the standard errors of the estimates (McWilliams and Siegel, 1997). Consistent with our predictions, we find that the coefficients of these two variables are positively related to the CARs around donation announcements. The coefficient of Internal control reforms is statistically significant at the 5% level (Coef. = 0.301, p-value = 0.04 when we re-estimate Model 3 in Table II) but the variable of Leader turnover is not significant at the conventional level (Coef. = 0.394, p-value = 0.23 when we re-estimate Model 3 in Table II). These results provide relatively more direct evidence on the linkage of shareholders’ judgments of the fraud-tainted firms’ actions over time. For brevity, we do not report the results here, but they are available upon request.

**Self-selection bias**

Given that the firms self-selected as donors, the estimates in Tables II and III may be biased if a significant self-selection bias exists. Following prior studies (e.g., Wang and Qian, 2011), we use the Heckman two-stage method to evaluate whether there is a significant self-selection bias. The results indicate that there is no significant self-selection bias. Thus, our results are unlikely to be affected by self-selection bias. For brevity, we report our estimation procedures and results in Appendix B in the online supplement.

**Robustness of our results to the event study method**
To further mitigate the possible existence of noise associated with the use of the two-day event window (0, +1), we alternatively use a three-day event window (-1, +1) to capture the possibility of information leakage of a donation announcement. We re-perform all of the analyses conducted in this study and qualitatively find the same results. For brevity, we report the results in Appendix C in the online supplement.

Another concern with the robustness of our results is that the OLS regression results may be driven by outliers, especially when the sample size for testing Hypotheses 2-6 is relatively small. We use three methods to alleviate this concern. First, we conduct a non-parametric test to verify the existence of outliers. Among the 69 fraud-tainted donors with an average CAR of -0.88% (t-value = -1.51), 42 firms experienced negative CAR (p-value = 0.11 for the binomial Z test). The consistency between the t-test and non-parametric test suggest that the likelihood for the existence of outliers is low (McWilliams and Siegel, 1997). Second, we alleviate this concern by winsorizing all continuous variables at the 5% and 95% levels. We re-conduct all analyses and find essentially the same results. Third, we mitigate the influence of outliers by compressing all of the positive CARs to 1 and negative CARs to 0 and then run an OLS model. We re-perform all the analyses and find qualitatively similar results. Therefore, none of the results of this study is likely to be driven by the existence of outliers. For brevity, we report estimates for above two robustness tests in Appendices D and E in the online supplement.

DISCUSSION AND CONCLUSION

Theoretical and practical implications

In this section, we explain and discuss the theoretical and practical implications of our study. First, our study sheds light on the unique nature of and difficulties involved in reputation repair. As the unfavorable reputation of tainted firms is a defining feature of reputation repair, we
believe our focus on the influences of this unfavorable reputation status provides a more nuanced approach to understand the difference between reputation repair and reputation building. Under reputation building, a firm tends to possess a relatively favorable or neutral reputation status, and the firm’s actions will tend to be filtered through a relatively positive or neutral lens. Under reputation repair, however, a tainted firm tends to possess an unfavorable reputation status, and the actions of the firm will be interpreted via a relatively unfavorable framework. Viewed from this perspective, our study suggests that the “technology” of corporate reputation production under reputation repair is less efficient than that is for reputation building. This helps to explain why corporate reputation is generally more difficult to repair than to build.

Second, our study offers a dynamic perspective for elucidating the mechanisms of the reputation repair process, a topic largely overlooked in the theoretical and empirical literature on reputation repair (e.g., Rhee and Kim, 2012; Rhee and Valdez, 2009). Our analyses of the influences of the prior actions taken by the fraud-tainted firms indicate that reputation repair is an inherently evolving and cumulative process, with stakeholders continuously updating their assessments of tainted firms in light of the actions taken by those firms. Accordingly, to understand reputation repair, we must go beyond investigating the static relationship between stakeholders’ judgments and firms’ actions at a particular point, and examine the evolving and cumulative interaction between stakeholders’ assessments and firms’ actions that function in parallel after a firm’s reputation has been damaged. For example, our results reveal that shareholders’ judgments of the donations made by fraud-tainted firms have to be explained by not only the donations themselves, but also the previous actions taken by the firms (e.g., top management turnover and reforms of internal control systems). Furthermore, our work indicates that the reputation repair process is likely to exhibit the characteristics of self-reinforcement,
according to which success probably breeds success but failure probably breeds failure (Podolny, 1993). This self-reinforcing process allows us to illuminate the regularities and dynamics of the reputation repair processes of different firms. For example, our findings suggest that the success or failure of a firm’s reputation repair process can be traced to the effectiveness of the remedial actions undertaken by the firm at an earlier stage of the repair process, as the effectiveness of the later actions are strongly influenced by the previous actions. As we explain later in this section, our dynamic perspective also offers important implications for managers in relation to formulating effective reputation repair strategies.

In addition to the literature on reputation repair, our study contributes to the recent literature on how corporate reputation evolves over time. Studies of corporate reputation have long documented that differences in corporate reputation across firms tend to be stable or persistent over time (e.g., Ang and Wight, 2009; Carter and Ruefli, 2006; Roberts and Dowling, 2002; Schultz et al., 2001). Some scholars attribute the inertia in the evolution of corporate reputation to the intangible nature of reputation, which makes competing firms difficult to imitate (Dowling, 2001; Roberts and Dowling, 2002). Other scholars argue that the positive interaction between a superior reputation status and other favorable firm outcomes (e.g., lower production costs, stronger customer loyalty) creates a beneficial cycle in which firm performance and a strong reputation reinforce each other over time (Ang and Wight, 2009; Choi and Wang, 2009; Podolny, 1993). Our study traces the roots of the persistence of corporate reputation to the socio-cognitive processes through which stakeholder members may revise their judgments of organizations (e.g., Devers et al., 2009; Hudson and Okhuysen, 2009; Mishina et al., 2012). In doing so, our study provides a useful complement to the literature and facilitates a more thorough understanding of how corporate reputation evolves over time.
Our findings on the path-dependent nature of reputation repair have the potential to enrich the research on the signaling theory of reputation (Ross, 1977; Fombrun, 1996; Connelly et al., 2011). Our work is particularly relevant to research focusing on the use of CSR as a device for signaling corporate reputation (e.g., Godfrey, 2005; Lys et al., 2013, Su et al., 2016). Existing works have examined how the effectiveness of CSR signaling is related to the signalers’ characteristics (Godfrey et al., 2009), the institutional environment in which signaling takes place (Su et al., 2016), and the adoption of standards and certifications to enhance the credibility of signals (Moratis, 2016; Terlaak, 2007). Our study highlights the influence of receivers’ path-dependent judgments on signaling effectiveness. As a signal’s effectiveness ultimately depends on how the signal is perceived and interpreted by receivers, future research could explore the influence of other socio-cognitive factors such as receivers’ limited attention and collective social beliefs about a signal.

Furthermore, existing studies on signaling theory of reputation tend to focus on a single episode of signaling but a firm’s signaling strategy often involves multiple sequential signals. As suggested by Connelly et al. (2011), there is a significant opportunity to examine how receivers interpret a series of signals and how different signal types may interact with one another. Building on the notion of receivers’ path dependent judgments of firms, future research could investigate whether a signaling process involving multiple signals also exhibits path dependence. Furthermore, future work could also directly examine how the self-reinforcing nature of a signal might affect a firm’s signaling strategy over time. Would a firm abandon a given signal type if the signal’s effectiveness had weakened over time due to receivers’ path dependent judgment? After a given signal type has been withdrawn, would it be better for the firm to stop signaling its
reputation for some time or to continue its signaling effort by introducing another type of signal? Would the abandoning of a signal type by a peer firm increase or decrease the effectiveness of that signal type for other firms in the same industry? These questions are important not only for understanding the signaling theory of reputation, but also have implications for the design of a firm’s signaling strategy.

Our work also has implications for research on competitive dynamics. As suggested by Smith et al. (2001), competitive dynamics research has focused primarily on the actions and reactions among competing firms and emphasized how their interdependence affects the competitive context and consequently rival firm performance. Our study highlights the influences of socio-cognitive biases in stakeholder members’ evaluations of a firm’s actions and reactions. This opens the possibility for a broader and richer theory of competitive dynamics. In particular, path dependence in stakeholders’ judgments of firms suggests that a firm’s initial reputation is likely an important source of first-mover advantage. When the actions of a firm with a more (less) favorable reputation are evaluated more (less) favorably by stakeholder members relative to actions taken by other firms and such evaluations are self-reinforcing, it is possible that differences in initial reputation can lead to persistent cross-firms differences in reputation and firm performance over time. Exploring the socio-cognitive mechanisms of stakeholder members in influencing the competitive context is a potential direction for future research.

Lastly, our study contributes to the general literature on path dependence in organizational research. In their recent review of this growing body of literature, Vergne and Durand (2010) suggest that there is an important gap between the theoretical and empirical literature. In particular, there are very few “undisputable empirical findings” available that “verify or falsify path dependence” (p. 745). Dobusch and Kapeller (2011) suggest that the lack of empirical
research on path dependence is due to the use of “a single research method” to test the different phases of a path dependence process. These authors therefore call for the use of different methodological approaches to test different components of the process. Among the three phases of path dependence, they suggest that the investigation of the self-reinforcing mechanism is an empirical task for which “concise testing” is possible (p. 13). Our study answers this call by using statistical analyses to provide systematic evidence of the self-reinforcing and path-dependent nature of stakeholders’ judgments of tainted firms.

In addition to its theoretical contributions, our study has important managerial implications for reputation repair. The most direct implication is that the strategic planning for reputation repair must consider a tainted firm’s evolving reputation status. This is because the reputation status of tainted firms defines the efficiency of reputation production method for the firms, and thus provides an essential foundation for designing and implementing effective remedial strategies and actions.

However, our results regarding shareholders’ relatively unfavorable judgments of the donations made by fraud-tainted firms relative to clean firms suggest that tainted firms must also have a realistic perception of the efficacy of corporate philanthropic activities in generating positive reputation capital. Even contributions to disaster relief funds, a philanthropy with a high degree of social desirability and an obviously humanitarian cause, produce less favorable judgments from shareholders than the corresponding donations made by clean firms. In addition, our results regarding the possible loss of reputation experienced by fraud-tainted firms with a highly unfavorable reputation (firms that commit more serious fraud, firms without CEO/chair turnovers and/or reforms in their internal control systems while only making small donations) further suggest that tainted firms should be extremely cautious about engaging in this type of
activity, unless they are confident that their remedial actions are strong enough to overcome the judgmental biases associated with their unfavorable reputation (e.g., making a sufficiently large contribution).

Another implication of our study is that tainted firms may enhance the effectiveness of reputation repair by properly sequencing various remedial actions. Our evidence regarding shareholders’ positive evaluative effects associated with the various prior actions of fraud-tainted firms suggests that a fraud-tainted firm may be able to accumulate a greater amount of reputation capital over time by conducting remedial actions that can generate greater amounts of reputation capital (e.g., removing the incumbent CEO/chair) earlier in the reputation repair process. This strategy may potentially lead to a greater improvement in the firm’s reputation status at the beginning of a reputation repair process and thus create a more favorable interpretative framework for shareholders to evaluate the firm’s subsequent activities. Furthermore, to the extent that uncertainties exist regarding shareholders’ responses to different remedial actions, tainted firms should attempt to implement actions that are highly likely to produce favorable reactions in the early stage of a repair process, and defer the less certain actions to the later stage because the cost of early failure is greater than that of later failure.

Our results on the prior action variables and donation size also provide several specific implications for firms’ reputation repair strategies. Our evidence regarding CEO/chair turnover and internal control system reform confirms that these two strategies are effective in improving shareholders’ perceptions of fraud-tainted firms. Our results on the track record of CSR activities in the post-fraud period confirm the beneficial effect of establishing a consistent track record for tainted firms in the post-fraud period, even under the existence of unfavorable path-dependent judgments of firms. Finally, our results regarding donation size indicate that making a large
corporate donation to a natural disaster relief fund can be an effective way to build up the reputation capital of tainted firms.

Limitations and future research

This study has a number of inherent limitations that provide several future research directions. First, we focus on the adjustments to shareholders’ judgments of a highly socially desirable philanthropic behavior. As previous research has shown that stakeholders’ evaluations of CSR activities are influenced by their identification with the cause (Lichtenstein et al., 2004; Vanhamme et al., 2012), caution should therefore be exercised when applying our findings to other CSR initiatives, such as donations to educational and environmental causes and the provision of volunteer services. Further research is warranted to examine how shareholders respond to other forms of CSR activities undertaken by tainted firms.

Second, our analysis focuses on shareholders. Research has shown that different stakeholders tend to possess different evaluative schemes and respond differently to the same behavioral cues (e.g., Lamin and Zaheer, 2012; Love and Kraatz, 2009). Therefore, care should also be taken when generalizing our results to other stakeholder groups. It is important to further explore how different stakeholder groups, such as consumers and employees, respond to the philanthropic activities of tainted firms.

Third, our study focuses on securities fraud. Prior studies have demonstrated that different types of reputation-damaging events (e.g., scandals, misconduct, accidents, and layoffs) require different types of reputation repair strategies (Dowling, 2001; Love and Kraatz, 2009; Marcus and Goodman, 1991). To further understand the nature of reputation repair, additional studies could prove crucial in determining how different stakeholders respond to firms that have experienced different types of reputation-damaging events.
Fourth, considering the three stages of a path-dependent process, our study focuses on the existence of a self-reinforcing mechanism in the formation phase. Although this focus is consistent with the literature on the path dependence of corporate reputation, our study nevertheless constitutes only a starting point for this line of research. To further understand the path-dependent nature of reputation repair, further research is needed to examine the two other phases of path dependence: pre-formation and lock-in. For example, it would be interesting to examine how the communication strategies that firms adopt immediately following negative events (Carroll, 2009; Coombs, 1998) and media coverage of those negative events (Konar and Cohen, 1997; Rhee and Kim, 2012) affect the initial reputation damage and consequently shape the possibility of firms reaching the “critical junction” that triggers the onset of the self-reinforcing formation phase. Furthermore, additional research must examine the conditions under which a tainted firm is eventually straitjacketed by its unfavorable reputation status (i.e., enters the lock-in phase). As a firm with a highly unfavorable reputation status is unlikely to survive in a competitive business environment in the long run, such analysis may offer potentially valuable insights into the dynamics of how a firm with an unfavorable reputation may eventually fail and exit the market.

Fifth, the securities fraud sanctions imposed on our sample firms and their charitable donations have implications for firms’ character and capability reputations. We discuss the specific socio-cognitive processes underlying shareholders’ judgments when they use a specific dimension of reputation as a filter. Our discussion indicates that these two filters tend to have the same directional predictions on our hypothesized outcomes (such as the relative judgments of fraud-tainted donors and clean donors, and the effects of CEO/chair turnover and internal reform controls on fraud-tainted donors’ reputation status). As a result, we have not attempted to
decompose these two components of corporate reputation and identify the specific component that has been used by shareholders. As is the case in most studies that focus on individuals’ perceptual and cognitive processes (e.g., Kang, 2008; Godfrey et al., 2009; Love and Kraatz, 2009), it is very difficult to directly examine the actual cognitive processes of stakeholder members and identify the specific component they use. Even the stakeholders themselves may not be able to describe their own cognitive process (Fiske and Taylor, 1991). However, future works should attempt to develop methods (e.g., using experimental designs and surveys) that provide more detailed information about shareholders’ actual perceptual processes and offer more direct evidence of how a specific component of corporate reputation may be invoked by stakeholder members. This analysis would be particularly important in cases where the different dimensions of reputation invoked by stakeholder members could have opposing effects on the hypothesized outcomes.

Sixth, we measure the adjustment of shareholders’ judgments using short-term stock price changes, as this method can provide a relatively cleaner measure of the shareholders’ reactions to the donation announcements. Nevertheless, the use of short-term stock price changes prevents us from obtaining evidence on longer-term changes in the shareholders’ perceptions of tainted firms. Such an analysis would enhance our understanding of reputation repair if a clean testing ground for capturing the longer-term effects were available.

Finally, our results are obtained from a specific transitional and emerging economy: China. Caution should be exercised when generalizing our findings to countries with different cultural and social environments. Cultural and environmental influences are particularly relevant to studies of the reputation effects of CSR, as reputation is an inherently perception-based construct.
and the legitimacy of CSR is defined by the values of the community of interest (Godfrey, 2005). It is therefore crucial that future research confirm our findings using data from other countries.
NOTES
1. It is based on a survey of 950 business executives in eleven countries. The survey was conducted by Weber Shandwick with KRC Research in 2006.


3. We qualitatively find the same results when using 150 and 200 days as the threshold. However, the coefficients become progressively less significant, suggesting that CEO/chair turnovers that occurred soon after a fraud sanction were relatively more effective in fostering favorable reactions from shareholders than those that occurred later.


5. In addition, directly using the logarithm of the donation amount can mitigate possible bias caused by the use of a ratio in the regression analysis because the association between the dependent and explanatory variables may be driven by the denominator rather than the donation size itself.

6. $= 4.643 \times 1,000 \times 1.085^2 (1.256)\%$.

7. If we assume shareholders also revise their judgments of fraud-tainted non-donors for their non-donating decisions, we need to capture and compare shareholders’ changes in their perceptions of both fraud-tainted donors and non-donors. A major challenge involved in this analysis is how to measure shareholders’ changes in their perceptions of the non-donors. For fraud-tainted donors, shareholders’ assessments are triggered by the donation announcements and can be captured by the CARs surrounding the announcements. Nevertheless, we do not know when the shareholders actually revise their judgments about the non-donors because there are no announcements of their non-donating decisions. By adopting the assumption that a donation announcement by a fraud-tainted donor will trigger shareholders to judge not only the donor but
also the non-donor(s) with similar attributes, we use matching methods to find a matched non-donor for each donor and use the CARs of the non-donor around the same event window as the donor as a measure of the shareholders’ judgments of the non-donor’s non-donating decisions. Our results show that only 16 of the 69 fraud-tainted donors should have made a donation. As the main objective of our study is to demonstrate the path-dependent nature of reputation repair rather than answer the question of whether fraud-tainted firms should make a donation, we explain our matching strategy and report our detailed results in Appendix A in the online supplement.

8. \[ 1.225 = \frac{10.049}{8.205}; \quad 0.761 = \frac{6.240}{8.205}; \quad 0.635 = \frac{5.208}{8.205}. \]

9. We estimate the parameters by using an ordinary least squares rather than Tobit estimator. The Tobit estimator relies on the distributional assumptions of normality and will be inconsistent when this assumption is violated (Arabmazar and Schmidt, 1982). However, the ordinary least square estimator is unbiased and consistent even when the assumption of normality of the disturbances is violated.

REFERENCES


Table I
Means, Standard Deviations, and Correlations

| Variable                                      | Mean  | S.D.  | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  |
|-----------------------------------------------|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Panel A. All fraud donors and non-fraud donors (sample to test Hypothesis 1) |
| 1. CAR                                         | -0.31 | 4.49  |
| 2. Severity_span                               | 1.02  | 0.47  |-0.29|
| 3. Severity_fin                                | 4.03  | 6.16  |-0.23| 0.57|
| 4. CEO/Chair turnover                          | 0.33  | 0.47  | 0.13| 0.21| 0.07|
| 5. Internal control reforms                    | 0.39  | 0.49  | 0.28| -0.09| 0.07| 0.00|
| 6. Pre-fraud philanthropy (amount)             | 5.32  | 6.05  | 0.08| 0.20| 0.28| 0.20| 0.25|
| 7. Post-fraud philanthropy (amount)            | 5.85  | 5.94  | -0.02| -0.01| 0.02| -0.11| -0.14| -0.33|
| 8. Absolute donation size                      | 14.04 | 1.21  | 0.17| -0.06| -0.05| -0.14| -0.14| -0.19| 0.11|
| 9. Relative donation size                      | 0.27  | 0.40  | 0.11| -0.08| -0.14| 0.15| -0.12| -0.12| -0.16| 0.30|
| 10. Firm size                                  | 22.14 | 0.97  | -0.03| -0.06| -0.04| -0.05| -0.18| -0.03| 0.17| 0.35| -0.30|
| 11. Book-to-market                             | -1.58 | 0.57  | -0.02| 0.02| 0.02| -0.17| 0.12| 0.18| -0.01| -0.26| -0.31| -0.25|
| 12. ROA                                        | 0.04  | 0.11  | -0.04| -0.07| 0.05| -0.15| 0.02| 0.05| -0.02| 0.17| -0.30| 0.42| 0.06|
| 13. Advertising                                | 0.07  | 0.08  | 0.01| -0.21| -0.02| -0.09| 0.11| 0.25| 0.08| 0.06| 0.30| 0.13| -0.09| 0.09|
| 14. Board size                                | 2.19  | 0.22  | -0.02| 0.08| -0.05| -0.13| 0.05| 0.11| -0.11| -0.07| -0.26| -0.02| 0.18| -0.16| -0.17|
| 15. Duality                                    | 0.17  | 0.38  | -0.02| 0.05| -0.05| 0.00| 0.02| 0.08| -0.06| 0.11| 0.05| 0.18| -0.01| 0.08| 0.12| -0.31|
| 16. Ratio of unpaid directors                  | 0.62  | 0.19  | 0.04| 0.09| -0.06| 0.01| 0.03| -0.08| 0.12| 0.22| 0.01| 0.11| 0.01| 0.07| 0.05| 0.15| -0.03|
| 17. SOE                                        | 0.45  | 0.50  | -0.24| 0.20| 0.10| -0.02| -0.01| 0.04| 0.09| 0.01| -0.35| 0.19| 0.05| 0.03| -0.10| 0.17| -0.18| 0.22|
| 18. Foreign                                    | 0.07  | 0.26  | 0.03| 0.36| 0.17| -0.08| -0.11| -0.13| 0.27| 0.03| -0.14| 0.00| 0.15| -0.08| -0.10| -0.06| 0.02| 0.06| 0.08|
| 19. Leverage                                   | 0.54  | 0.20  | -0.03| 0.38| 0.23| -0.06| -0.21| 0.04| 0.27| 0.13| -0.33| -0.05| -0.12| -0.06| -0.41| 0.24| -0.12| 0.25| 0.20| 0.24|
| 20. Time interval                              | 3.26  | 2.47  | -0.15| -0.11| -0.20| -0.26| -0.27| -0.68| 0.67| 0.17| -0.08| 0.25| -0.16| 0.06| -0.11| 0.12| -0.09| 0.05| 0.13| 0.19| 0.16|

For Panel A, N=542, correlation Coefficients with absolute value greater than 0.072, 0.089, and 0.124 are significant at the 10%, 5%, and 1%

For Panel B, N=69, correlation Coefficients with absolute value greater than 0.201, 0.240, and 0.351 are significant at the 10%, 5%, and 1%

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Table II
Estimates to Test Hypotheses 1 to 6

<table>
<thead>
<tr>
<th>Variables</th>
<th>Hypothesis 1</th>
<th>Hypotheses 2 through 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraud</td>
<td>-1.085*</td>
<td>(-2.467)</td>
</tr>
<tr>
<td>Severity span</td>
<td>-4.313*</td>
<td>(-2.218)</td>
</tr>
<tr>
<td>CEO/Chair turnover</td>
<td>4.269**</td>
<td>(2.584)</td>
</tr>
<tr>
<td>Internal control reforms</td>
<td>3.458**</td>
<td>(2.876)</td>
</tr>
<tr>
<td>Prior philanthropy (amount)</td>
<td>0.069*</td>
<td>(2.329)</td>
</tr>
<tr>
<td>Pre-fraud philanthropy (amount)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-fraud philanthropy (amount)</td>
<td>0.234*</td>
<td>(2.357)</td>
</tr>
<tr>
<td>Absolute donation size</td>
<td>0.136*</td>
<td>(2.403)</td>
</tr>
<tr>
<td>Relative donation size</td>
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<td></td>
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<tr>
<td>Firm Size</td>
<td>-0.296</td>
<td>(-1.413)</td>
</tr>
<tr>
<td>Book-to-market</td>
<td>0.641**</td>
<td>(2.662)</td>
</tr>
<tr>
<td>ROA</td>
<td>-3.653**</td>
<td>(-2.735)</td>
</tr>
<tr>
<td>Advertising</td>
<td>-3.128</td>
<td>(-1.663)</td>
</tr>
<tr>
<td>Board size</td>
<td>0.673</td>
<td>(0.718)</td>
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<td>Duality</td>
<td>-0.456*</td>
<td>(-2.095)</td>
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<td>Ratio of unpaid directors</td>
<td>-0.912</td>
<td>(-0.982)</td>
</tr>
<tr>
<td>SOE</td>
<td>-0.214</td>
<td>(-0.737)</td>
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<td>Foreign</td>
<td>1.163</td>
<td>(1.129)</td>
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<tr>
<td>Leverage</td>
<td>0.705</td>
<td>(0.969)</td>
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<tr>
<td>Time interval</td>
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<tr>
<td>Constant</td>
<td>3.852</td>
<td>(1.296)</td>
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<tr>
<td>Fraud year fixed effect</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>Number of observations</td>
<td>542</td>
<td>542</td>
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<tr>
<td>Adjusted R2</td>
<td>0.019</td>
<td>0.026</td>
</tr>
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Note: The t tests are two-tailed for all variables.

* P < .05  
** P < .01  
*** P < .001
Table III
Robustness Checks

<table>
<thead>
<tr>
<th>Variables</th>
<th>Hypothesis 1</th>
<th>Hypotheses 2 through 6</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>Model 1</td>
<td>Model 2</td>
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<tr>
<td>Fraud</td>
<td>-1.101*</td>
<td>-1.271*</td>
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<tr>
<td>Severity_fine</td>
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<tr>
<td>CEO&amp;Chair turnover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal control reforms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior philanthropy (span)</td>
<td>0.237*</td>
<td>0.310*</td>
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<tr>
<td>Pre-fraud philanthropy (span)</td>
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</tr>
<tr>
<td>Post-fraud philanthropy (span)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absolute donation size</td>
<td>0.127*</td>
<td>1.529**</td>
</tr>
<tr>
<td>Firm Size</td>
<td>-0.250</td>
<td>-0.140</td>
</tr>
<tr>
<td>Book-to-market</td>
<td>0.707**</td>
<td>0.933***</td>
</tr>
<tr>
<td>ROA</td>
<td>-3.462**</td>
<td>-2.017</td>
</tr>
<tr>
<td>Advertising</td>
<td>-2.904</td>
<td>-3.781*</td>
</tr>
<tr>
<td>Board size</td>
<td>0.737</td>
<td>0.696</td>
</tr>
<tr>
<td>Duality</td>
<td>-0.408*</td>
<td>-0.458*</td>
</tr>
<tr>
<td>Ratio of unpaid directors</td>
<td>-0.960</td>
<td>-1.056</td>
</tr>
<tr>
<td>SOE</td>
<td>-0.229</td>
<td>-0.126</td>
</tr>
<tr>
<td>Foreign</td>
<td>1.190</td>
<td>1.176</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.924</td>
<td>1.639**</td>
</tr>
<tr>
<td>Time interval</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>3.204</td>
<td>2.237</td>
</tr>
<tr>
<td>Fraud year fixed effect</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>Number of observations</td>
<td>542</td>
<td>542</td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.015</td>
<td>0.021</td>
</tr>
</tbody>
</table>

Note: The t tests are two-tailed for all variables.

* P < .05
** P < .01
*** P < .001
Figure 1

A Path-dependent Model of Reputation Repair

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