

Well Known or Well Liked? The Effects of Corporate Reputation on Firm Value at the Onset of a Corporate Crisis

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Research summary: We study how two dimensions of reputation (i.e., generalized favorability and being known) and attribution of crisis responsibility affect firm value at the onset of a crisis. Analyzing 126 corporate crises befalling publicly listed firms in China from 2008 to 2014, we find that generalized favorability serves as a buffer, while being known can be a burden, in influencing firm value. We also find that the buffering effect of generalized favorability is stronger when the attribution of crisis responsibility is low (vs. high). In addition, there is a negative interaction effect between the two dimensions of reputation such that the buffering effect of generalized favorability weakens when firms are better known. We discuss our contributions to research on corporate reputation and crisis management.

Managerial summary: Corporate reputation is an intangible asset, especially at the onset of a corporate crisis. This research sheds light on the “double-edged sword” of corporate reputation by examining the effects of two reputation dimensions (i.e., being liked and being known) on firm value. Our results suggest that well-liked firms can leverage their generalized favorability among stakeholders to assuage firm value loss, whereas well-known firms may have to better communicate with stakeholders to overcome the burden of stakeholders’ attention that escalates firm value loss. To better cope with the onset of a crisis, firms should therefore enhance their generalized favorability and simultaneously avert stakeholders’ excessive attention. In addition, well-liked firms can further buffer against the loss in firm value by reducing the perceived intentionality of a crisis. Copyright © 2017 John Wiley & Sons, Ltd.

Introduction

The concept of corporate reputation, defined as “a perceptual representation of a company’s past actions and future prospects that describes the firm’s overall appeal to its key constituents,” has received considerable attention in the literature

(Fombrun, 1996, p. 72; Lange, Lee, & Dai, 2011; Rindova, Williamson, Petkova, & Sever, 2005). Corporate reputation is an important quality signal, and influences evaluators’ decision-making process (Frooman, 1999). Particularly at the onset of a crisis when information is scarce and uncertainty is high, the information asymmetry between firms and their external stakeholders creates a context wherein reputation is an important consideration in stakeholders’ evaluation. Therefore, corporate reputation is critical in shaping evaluators’ initial perceptions and responses at the onset of a crisis, and ultimately, influences a firm’s financial performance.

Keywords: corporate reputation; crisis management; shareholder value; attribution of crisis responsibility; investors

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Corporate crises, as negative events that violate stakeholders' collective favorable perceptions of a firm, are likely to trigger negative media coverage (Davies, Chun, & Kamins, 2010; Godfrey, Merrill, & Hansen, 2009; Zavyalova, Pfarrer, & Reger, 2012), generate widespread and negative perceptions among stakeholders (Coombs, 2007), and pose both financial and nonfinancial threats to the firm and to its stakeholders (Dean, 2004; Pearson & Clair, 1998). While corporate reputation has been widely studied, its effect on firm value during a crisis has been debated. On the one hand, corporate reputation is widely recognized as an intangible asset (Pfarrer, Pollock, & Rindova, 2010), and thus, may play a value-preserving role in times of a negative event (Jones, Jones, & Little, 2000; Pfarrer et al., 2010). For example, Tesla's stock went down by about 30% after a video showing its S-model catching fire, but recovered and went on to new highs in just a few months.¹ Similarly, Apple was able to win back its customers in just 2 weeks after a public relations crisis accusing the firm of discriminatory warranty and customer service in China.² On the other hand, a favorable reputation could also be a liability for a firm and aggravate the negative impact of a crisis (Rhee & Haunschild, 2006). Volkswagen is a recent example of a reputable firm that suffered from serious public and media criticism, and a fall in stock price, after the firm was found to cheat on emissions tests.³ Similarly, the "melamine" incident led to the overnight downfall of Sanlu, a household dairy brand in China.⁴ The theoretical tension between the value-preserving and liability effects of corporate reputation highlights the need for a better understanding of the effects of corporate reputation on firm value during a corporate crisis.

In addition to prior social perceptions such as corporate reputation, situational factors may also play a critical role in affecting how stakeholders make sense of a crisis. A well-studied situational factor in understanding how firm value reacts to a corporate crisis is stakeholders' attribution of crisis responsibility. Attribution theory posits that people are naive

psychologists who try to make sense of their environments and search for causal explanations, especially when the events are negative and unexpected (Weiner, 2006). Responsibility attribution is thus a useful information cue for comprehending a crisis, and research confirms that stakeholders make simplified judgments based on such cues when they try to make sense of a crisis (Bundy & Pfarrer, 2015; Cho & Gower, 2006; Coombs, 2007; Coombs & Holladay, 2004). While it has been postulated that stakeholders' response to a crisis should be a function of responsibility attribution (Coombs, 1995), and possibly also its interaction with corporate reputation (Bundy & Pfarrer, 2015), these effects have received little empirical testing.

In this study, we follow the literature and argue for the critical roles played by prior social perceptions (e.g., corporate reputation) and situational factors (e.g., responsibility attribution) in affecting how key stakeholders respond to a corporate crisis. We contribute to this literature by examining how different dimensions of reputation—being known and generalized favorability—and attribution of crisis responsibility jointly affect firm's financial performance at the onset of a corporate crisis. Our findings extend research on reputation and crisis management in a number of ways.

First, while measurements of corporate reputation often center on a single dimension of corporate reputation, the literature calls for a richer conceptualization and more empirical research on the effects of "multiple reputations" on various stakeholders' perceptions (e.g., Lange et al., 2011; Rhee & Valdez, 2009). Building on distinctions made among the multiple dimensions of corporate reputation (Lange et al., 2011), this study adds to the scant literature that has studied more than one dimension of reputation (e.g., Deephouse & Carter, 2005; Rindova et al., 2005). Especially at the onset of a corporate crisis, stakeholders may have to respond quickly with ambiguous and incomplete information. Corporate reputation is arguably one of the most critical information cues that stakeholders may rely on to make sense of a crisis (Bundy & Pfarrer, 2015; Rhee & Valdez, 2009). Understanding the effect of different dimensions of corporate reputation on firm value at the onset of a crisis is thus of particular theoretical value.

Second, we contribute to the debate concerning the effect of corporate reputation by evidencing opposing effects of its different dimensions on firm value at the onset of a crisis (Pfarrer et al.,

¹ <http://www.bloomberg.com/slideshow/2013-11-15/the-top-10-reputation-crises-of-2013.html#slide2>

² http://usa.chinadaily.com.cn/epaper/2013-04/03/content_16373193.htm

³ <http://www.bloomberg.com/news/articles/2015-09-21/volkswagen-drops-15-after-admitting-u-s-diesel-emissions-cheat>

⁴ http://www.chinadaily.com.cn/china/2008-09/24/content_7053427.htm

2010; Rhee & Haunschild, 2006). In doing so, we contribute to the research on corporate reputation by exploring the differential influence of the evaluative generalized-favorability dimension and the nonevaluative being-known dimension of reputation on firm value. This investigation thus sheds light on the theoretical tension between the value-preserving and liability effects of corporate reputation as well as the relatively unexplored interaction between the two dimensions of corporate reputation (Lange et al., 2011).

Third, responsibility attribution has been proposed as a critical construct in determining stakeholders' reaction to corporate crises. As the extant literature is largely at the conceptual level (Bundy & Pfarrer, 2015; Coombs, 1995), we contribute to this literature by empirically examining the effects of responsibility attribution on firm value at the onset of a crisis. Our results establish the attribution of crisis responsibility as a theoretically meaningful moderator of the effects of corporate reputation. To the best of our knowledge, we are among the first to analyze stock market reactions to more than 100 corporate crises with different attributions. Our research thus adds to the extant literature that has relied mostly on surveys or experiments covering only a few crises (e.g., Coombs, 2004; Moon & Rhee, 2012). Practically, our results offer meaningful insights into how corporations can more effectively manage reputation and responsibility attribution at the onset of a crisis.

Theoretical Background

A corporate crisis is a situation in which "stakeholders believe that the default social codes of the stricken organization are violated" (Yu, Sengul, & Lester, 2008, p. 454). Stakeholders therefore actively seek information about the focal firm to deal with the cognitive dissonance engendered by the crisis and may subsequently adjust their appraisal of the focal corporation (Floyd, Ramirez, & Burgoon, 1999). Prior research has shown that stakeholders rely on their prior social perceptions in their interactions with an organization (Mishina, Block, & Mannor, 2012; Pfarrer et al., 2010). For instance, consumers' reaction to a product-harm crisis is shown to be influenced by their prior expectation of the firm (Klein & Dawar, 2004). Following this line of research, we argue that stakeholders' reaction to a crisis should be influenced by their

awareness, perceptions, and knowledge of a firm. Therefore, we postulate that corporate reputation, as a critical component of stakeholders' collective social perceptions of an organization (Bundy & Pfarrer, 2015; Lange et al., 2011), should play a critical role in affecting stakeholders' reaction to a crisis.

Two Dimensions of Corporate Reputation: Generalized Favorability and Being Known

Reputation has attracted academic attention for decades (Bundy & Pfarrer, 2015; Deephouse & Carter, 2005; Fombrun, 1996; Jensen, Kim, & Kim, 2012; Lange et al., 2011; Rhee & Valdez, 2009). While multiple conceptualizations and operationalizations have been proposed, recently Lange et al. (2011, p. 153) identified three dimensions of reputation, including familiarity with an organization ("being known"), perceptions of the organization's overall favorability ("generalized favorability"), and expectations of the organization relevant to a specific audience ("being known for something"). In the current research, we focus on the first two dimensions of organizational reputation—as we elucidate below, these are two important dimensions of corporate reputation that should influence stakeholders' reaction at the onset of a corporate crisis.

The generalized-favorability view of organizational reputation reflects the overall, evaluative assessment of an organization by multiple audiences (Deephouse, 2000; Fischer & Reuber, 2007; Fombrun, 1996; Lange et al., 2011). Generalized favorability reflects multiple constituents' approach-avoidance judgment about a firm (Highhouse, Brooks, & Gregarus, 2009). The desirable traits of well-liked firms are likely to create positive perceptions and judgment among stakeholders. Such characteristics of firms serve as signals that enable stakeholders to assess whether a firm is good and attractive based on generalized perceptions of the firm instead of particular firm attributes or outcomes. Thus, generalized favorability is frequently characterized as "a global impression of the organization" with judgment (Lange et al., 2011, p. 160).

In contrast to the generalized-favorability conceptualization of corporate reputation, the being-known dimension has been developed to capture stakeholders' "awareness of the firm without judgment," emphasizing the visibility of, and public attention to, information about the firm

(Lange et al., 2011, p. 155; Rindova & Martins, 2012; Rindova, Pollock, & Hayward, 2006). Being known reflects the extent to which stakeholders possess information about a firm and their consequent nonevaluative recognition of the firm. The more a firm occupies a place in the “cognitive and interpretative space of an organizational field,” the more it can be said to be known (Rindova & Martins, 2012, p. 21). In other words, the more a firm is mentioned during the information exchange process among its stakeholders, the more visible and better known is the firm (Gupta & Lord, 1998; Rindova et al., 2006).

Therefore, while the being-known and generalized-favorability dimensions of corporate reputation are both based on global perceptions of a firm, generalized favorability reflects stakeholders’ evaluative judgments, and being known reflects their nonevaluative recognition of the firm. These two dimensions are conceptually distinct, as well-known firms could be well liked or well hated (Lange et al., 2011). For example, Gardberg and Fombrun (2002) found through a large-scale interview of the general public that the best-known firms could have the best reputation, the worst reputation, or even both. Therefore, we follow the extant literature and argue that the generalized-favorability and being-known dimensions of corporate reputation are orthogonal constructs.

In the current research, we focus on how these two dimensions of corporate reputation influence investors’ perceptions and reactions at the onset of a crisis, a critical stage in investors’ initial attempts to make sense of the crisis (Bundy & Pfarrer, 2015; Veil, 2011). The characteristics of the onset of a crisis make the roles of both dimensions of corporate reputation important. The onset of a crisis is characterized by high levels of uncertainty about a firm among its stakeholders. Corporate crises often have “multiple explanations [and] ambiguity regarding responsibility and potential damages” (Bundy & Pfarrer, 2015, p. 351). Under conditions of high uncertainty, stakeholders may rely on past judgment to evaluate and interpret the situation of a crisis (Bundy & Pfarrer, 2015; Lindell & Perry, 2012). In this case, their response will be affected by the overall evaluation inherent in generalized favorability.

Another way for stakeholders to reduce uncertainty at the onset of a crisis is through the exchange of information (Rindova et al., 2005). Firms attracting stakeholders’ collective attention oftentimes find themselves under great levels of

scrutiny (Zyglidopoulos, Georgiadis, & Carroll, 2012). Consequently, their response will be affected by the information about the focal firms, especially those that are well known. Thus, we posit that both generalized favorability and being known are important dimensions of corporate reputation that influence stakeholders’ reaction at the onset of a corporate crisis.

The Role of Crisis Attribution

Research has suggested that the initial assessment is a key factor for organizational blame and responsibility assignment in crisis situations (Cho & Gower, 2006). At the onset of a crisis, stakeholders rely on the characteristics of a crisis—including its perceived intentionality, controllability, and severity—to formulate initial attribution of responsibility when causes and effects of the crisis are unknown (Bundy & Pfarrer, 2015). For example, stakeholders will attribute less responsibility to a firm for a product tampering event or a rumor. In contrast, stakeholders will attribute more responsibility to a firm for an organizational misdeed. In turn, these causal attributions influence stakeholders’ perceptions of the focal firms (Coombs, 2007). The more responsibility stakeholders attribute to a firm for a crisis, the more firm value suffers (Coombs, 1995; Folkes, 1988).

In addition to this possible direct effect, responsibility attribution may also interact with corporate reputation to affect firm value at the onset of a crisis. Responsibility attribution of a crisis is *individuating* in the sense that “determining crisis responsibility assigns individuality to the event” (Bundy & Pfarrer, 2015, p. 351), effectively associating a crisis with the identity of a firm (e.g., the Volkswagen emissions scandal; the ExxonMobil oil spill). Similarly, “organizational reputation is often viewed as an *individuating* assessment conveying distinct aspects of an organization” (Bundy & Pfarrer, 2015, p. 350, emphasis added). Due to their shared, individuating nature, responsibility attribution and corporate reputation should interact to affect stakeholder reaction at the onset of a crisis. Specifically, we argue that strong attribution of crisis responsibility as “firm intentional” alleviates information ambiguity surrounding a crisis; under such circumstances, stakeholders may rely less on their prior perceptions of a firm to interpret the crisis. Instead, their response will be affected more by the negative information engendered by the attribution.

Hypothesis Development

The Effect of Generalized Favorability

The conceptualization of generalized favorability implies that stakeholders form positive impressions of a firm based on its past actions and attributes. These impressions influence stakeholders' beliefs and allow them to estimate probabilities of firm's future behavior (Pfarrer et al., 2010). Accordingly, a firm's generalized favorable reputation can influence its stakeholders' perceptions and decision-making following a negative event (Frooman, 1999).

In responding to a corporate crisis, stakeholders rely on information that goes beyond the event itself, including firms' favorable reputation, to form the basis of their evaluation (Godfrey et al., 2009). Having a generalized favorable reputation, firms may enjoy the "benefit of the doubt" when the cause of an event is ambiguous (Fombrun, 1996; Godfrey et al., 2009; Uzzi, 1997). For example, Pfarrer et al. (2010) found that reputable firms experienced smaller losses in market value for negative earnings surprises. Since corporate crises are characterized by information uncertainty and ambiguity (Pearson & Clair, 1998; Yu et al., 2008), a favorable reputation may create a halo effect due to stakeholders' tendency to hold onto their original opinions and beliefs. This should soften the blow of the potential reputational damage from a crisis (Coombs, 1995; Grunig, 1993) as ambiguous information tends to be interpreted in a manner that confirms stakeholders' initial expectations (Mishina et al., 2012).

In other words, generalized favorability is likely to produce a buffering effect due to a self-confirming bias whereby stakeholders search for, recall, weigh, and interpret information in a manner that confirms their prior beliefs (Lord, Ross, & Lepper, 1979; Nickerson, 1998; Powell, Lovaglio, & Fox, 2011) akin to a primacy effect in information updating (Fudenberg & Levine, 1993; Lind, Kray, & Thompson, 2001). Just like individuals have the tendency to form perceptions about others that are consistent with their prior beliefs (Cook, Hardin, & Levi, 2005; Huici, Ros, Carmona, Cano, & Morales, 1996; Levin, Wasserman, & Kao, 1993), generalized favorability of a firm is likely to be confirmed in the presence of ambiguous information as stakeholders interpret information in

such a way that supports their favorable impression of a firm. We therefore predict that:

Hypothesis 1: Generalized favorability has a positive effect on firm value at the onset of a crisis.

The Effect of Being Known

The conceptualization of being known implies that a firm is recognized among its stakeholders (Lange et al., 2011). That is, information asymmetry between those well-known firms and their external stakeholders is relatively low. As a result, firms that are well known to stakeholders are subject to especially intense scrutiny (Zyglidopoulos et al., 2012).

When a firm is well known, both positive and negative information about the firm is available and accessible (Brooks, Highhouse, Russell, & Mohr, 2003). This is because familiarity (i.e., how enriched an object is perceived to be) brings to memory both more positive and more negative information (Downs & Shafir, 1999; Shafir, 1993). When both positive and negative information are available, individuals have the tendency to weigh the negative information more heavily than the positive information (Kahneman & Tversky, 1979), leading to the well-documented negativity bias (Pfarrer et al., 2010; Rozin & Royzman, 2001). This negativity bias has been documented in, among other things, investors' response to firm earnings surprises (Pfarrer et al., 2010; Skinner & Sloan, 2002). The overweighting of negative information should be further strengthened by the salience (Mullainathan, 2002) and accessibility of negative information at the onset of a crisis (Coombs, 2007). Therefore, a well-known firm is likely to be hurt by a crisis even more. Following this logic, we predict that:

Hypothesis 2: Being known has a negative effect on firm value at the onset of a crisis.

The Interaction Effect Between the Two Reputation Dimensions

We further postulate that the two dimensions of corporate reputation should interact to affect firm value. Being known leads to more developed cognitive structures, which facilitate the acquisition

and comprehension of information (Brucks, 1985; Marks & Olson, 1981; Park & Lessig, 1981; Wood, Rhodes, & Biek, 1995). When a firm is well known, stakeholders therefore possess a large amount of information, which they can recall and leverage to deal with the uncertainty and ambiguity at the onset of a crisis (Brooks & Highhouse, 2006; Wei, Wang, & Lindell, 2016; Wei, Zhao, Wang, Cheng, & Zhao, 2016). This may mitigate the buffering effect of generalized favorability for two reasons. First, as “familiarity may breed both admiration and contempt” (Brooks et al., 2003, p. 905) for well-known firms, there should be large amounts of both positive and negative information (Downs & Shafir, 1999; Shafir, 1993). When both are available, individuals’ tendency to weigh negative information more heavily than positive information (Kahneman & Tversky, 1979; Pfarrer et al., 2010; Rozin & Royzman, 2001) should be intensified, thus mitigating the buffering effect of generalized favorability on firm value. Second, stakeholders are likely to rely on prior positive perceptions when firms are less known and stakeholders do not have other, more relevant, information to use (Mishina et al., 2012), leading to a self-confirming bias. However, the diagnosticity of the large amount of negative information when firms are well known (Ahluwalia, 2002; Herr, Kardes, & Kim, 1991) should make it harder for stakeholders to hold onto their prior positive perceptions. This should further attenuate the self-confirming bias.

Therefore, the positive effect of generalized favorability on firm value should be strong when stakeholders evaluate firms that are less known. However, when they evaluate a well-known firm, the high level of familiarity with the firm should reduce their reliance on generalized favorability, thus weakening its buffering effect on firm value. We therefore predict that:

Hypothesis 3: Being known attenuates the positive effect of generalized favorability on firm value.

The Main and Moderating Effects of Responsibility Attribution

In applying the attribution theory (Weiner, 2006) to crisis management, recent research has identified three crisis clusters, that is, victim, accidental, and intentional (Coombs, 2004, 2007). The victim cluster includes crises that are perceived as having little

attribution of responsibility, with a firm perceived as a victim of the crisis. Examples of the victim type include product tampering and rumors. The accidental cluster includes crises that have limited attribution of responsibility, with the crises perceived as uncontrollable or unintentional. An example of the accidental type is employee injuries due to technical failures (“technical accidents”). Finally, the intentional cluster includes crises that have strong attribution of responsibility, with the crises perceived as intentional. Examples of intentional crises include organizational misdeeds and financial fraud.

Stakeholders often attribute responsibility for a crisis, and their attribution of the cause of the crisis may change their perceptions of, and attitudes toward, a firm. As a result, they may mete out punishment to the firm based in part on their attribution of responsibility. Thus, how firm value changes as a result of a corporate crisis should also be a function of stakeholders’ attribution of crisis responsibility: As stakeholders attribute more responsibility to a firm, the information derived from the strong attribution imposes a bigger threat to the firm’s market value (Coombs, 1995, 2007). Similarly, as perceptions of a firm’s locus and controllability of a mishap increase, stakeholders’ perceptions of the firm worsen (Folkes, 1988). Stockholders’ reaction to a crisis thus may become more severe as perceived firm responsibility increases as the crisis type changes from victim, to accidental, and to intentional. Following this logic, we predict that:

Hypothesis 4: The negative effect of a corporate crisis on firm value is stronger as responsibility attribution increases.

In addition to this hypothesized main effect, responsibility attribution should also moderate the reputation’s effects on firm value. Specifically, we posit that the buffering effect of generalized favorability on firm’s market value should depend on the initial attribution of crisis responsibility. As we argued earlier, the buffering effect associated with a well-liked firm should mitigate the damage of a crisis to firm value—the result of the stakeholders’ tendency to interpret ambiguous information in a manner that confirms their prior, positive impression of the firm. This is especially likely to happen when there is little or limited attribution of crisis responsibility, which would allow stakeholders to hold onto their prior positive impression

of a firm. This effect should be weakened, however, when the firm is perceived to have intentionally caused a crisis (i.e., when it is attributed a high level of responsibility). Under such circumstances, the ambiguity of crisis responsibility is minimal, making it hard for stakeholders to hold onto their prior positive impressions of the firm. As a result, firm value should be significantly but *uniformly* depressed when the crisis is perceived as firm-intentional, regardless of whether the firm is well liked or not. Following this logic, we predict that:

Hypothesis 5: There is a negative interaction between generalized favorability and responsibility attribution on firm value such that the positive effect of generalized favorability is stronger when responsibility is low (vs. high).

Finally, due to the theoretical ambiguity we do not advance a prediction concerning an interaction effect between being-known and responsibility attribution. As we argued earlier, the being-known dimension of corporate reputation should magnify the damage of a crisis to firm value, because of the overweighing of negative information that is more available and accessible for well-known firms. However, it is unclear how this effect is moderated by responsibility attribution. On the one hand, one may argue that this effect should be weakened when the firm is perceived to have intentionally caused a crisis, as the strong, negative attribution of crisis responsibility should significantly but uniformly depress firm value, regardless of whether the firm is well known or not. In other words, the unambiguous negative attribution as the most accessible and diagnostic information may dominate stakeholders' evaluation of a crisis (Ahluwalia & Gürhan-Canli, 2000; Feldman & Lynch, 1988). This argument would lead to a positive interaction effect between being-known and responsibility attribution on firm value. On the other hand, one may argue that for an intentional type of crisis, the weight stakeholders place on the large amount of negative information about a well-known firm should be even higher as the crisis is unambiguously the firm's responsibility. This could occur because the negative information about the firm is similar in valence to the unambiguous-responsibility information, and thus, should be recalled better (Mullainathan, 2002). This argument would lead to a

negative interaction effect between being-known and responsibility attribution. Due to the theoretical ambiguity concerning how being-known and responsibility attribution would interact to affect firm value, we therefore do not advance a prediction about this effect.

Methods

Sample and Data Sources

The sample for this study consisted of publicly listed firms in China. We chose to focus on public companies because they are more visible in the media and their financial statements are available (Zavyalova et al., 2012). We investigate crises befalling the publicly listed firms by reviewing articles in the *China Business News* and the *China Securities Journal* published between 2008 and 2014. The *China Business News* is a major daily Chinese newspaper focusing on business and economic news, and the *China Securities Journal* is a major daily international newspaper with a special emphasis on the information promulgation of publicly listed firms in China. Altogether, our review yielded 148 crises during our study period. We eliminated confounding events (e.g., announcement of major sales, mergers) within 7 days of a crisis (Godfrey et al., 2009). The final sample consists of 126 crises.

Dependent Variables

Crisis-related abnormal returns. To capture the potential impact of a crisis on firm value, we analyze a corporation's cumulative abnormal adjusted return (CAR) associated with a crisis over a 3-day ($-1, 1$) time window. The choice of the 3-day time window follows the practice in the literature and allows us to capture possible information leakage prior to a crisis while minimizing confounds of post-crisis events (e.g., McWilliams & Siegel, 1997; Muller & Kräussl, 2011).⁵

Abnormal returns refer to unexpected percentage differences between the normal expected return and the actual return. We follow existing research (Godfrey et al., 2009; Muller & Kräussl, 2011),

⁵ To capture the long-term financial impact of a crisis, we also conducted similar analyses over a 30-day time window ($-1, 28$). We briefly mention those results in the Discussion, Limitations, and Conclusions sections.

and use the market model to capture the normal expected return:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}.$$

In this model, R_{it} captures the normal return of security i on day t , α_i is the intercept and β_i represents the systematic risk. R_{mt} is the return on a market portfolio of stocks on day t , and ε_{it} is the error term with a zero mean. Subsequently, the abnormal return is calculated as:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}),$$

where AR_{it} captures the abnormal return on day t of security i , and α_i and β_i are the ordinary least squares parameter estimates obtained from the regression. Thus, the 3-day CAR is the cumulative daily abnormal return for security i over the 3-day event window.

We followed Godfrey et al. (2009) and calculated the expected returns for a period of 128 to 8 trading days prior to the crisis event (i.e., for a total of 120 trading days). We calculated the daily volatility of market return using the Shanghai Stock Exchange Composite Index and the Shenzhen Stock Exchange Component Index with the equal weight average method. We obtained return and market data from the China Stock Market and Accounting Research Database (CSMAR).

Independent Variables

Generalized favorability. To operationalize generalized favorability, this study applies a measurement method that was introduced by Deephouse (2000). By analyzing media coverage about the firm, we capture the public's overall evaluation of a firm. The public acquires most of the information from news media that record and influence knowledge and opinions about firms (Deephouse, 2000). Such market-level information influences investors' actions (e.g., sell or buy stocks) (Pollock, Rindova, & Maggitti, 2008; Zavyalova et al., 2012), beyond the effects of asset-specific information (Peng, Xiong, & Bollerslev, 2006).

The media plays an important role in shaping firms' reputations (Deephouse & Carter, 2005). The information in the media originates from many sources, including firms' press releases, stakeholders (i.e., consumers, suppliers, the government, and specialized rating agencies), and media workers.

Based on the information from the media, "firms and stakeholders debate what constitutes a good firm and which firms have good reputations" (Deephouse, 2000, p. 1097). The accumulation of perceptions through the debates constitutes a record of stakeholders' evaluations of a firm. In other words, the media circulates reputational information among firms' stakeholders (e.g., Deephouse, 2000; Rindova, Petkova, & Kotha, 2007). In a similar vein, Rhee and Haunschild (2006, p. 115) argued that "the press serves as a mediating structure for the dissemination of reputation standards/norm." Consistent with these arguments, Lange et al. (2011, p. 169) recommended that "[g]eneralized favorability might be derived from content analysis measuring the positive, neutral, or negative tones of each firm's press coverage." Similarly, Fombrun (1996) suggested a measure of generalized favorability using content analysis of print media data.

Moreover, communication research finds that public opinions closely follow newspaper coverage (Deephouse & Carter, 2005). Compared to other media sources, newspaper stories are better recalled (DeFleur, Davenport, Cronin, & DeFleur, 1992), and stakeholders tend to use information from these stories to form their opinions about a firm (Fiske & Taylor, 1991). Thus, among different media, newspaper articles should be the most influential source of firms' reputation.

We thus used data collected from the China Core Newspapers Full-text Database (CCND) to measure generalized favorability. CCND retrieves news stories from 153 national newspapers and 440 local newspapers, providing a good source of information to capture the media coverage of firms. The articles used in this study were identified from CCND with advanced search of article titles to ensure they covered the focal firms. For each crisis, we collected newspaper articles on the crisis-inflicted firms over the period of 1 year before the date that the crises occurred. In total, this sampling procedure generated a database of 4,574 articles.

We followed the common practice in this line of research, and coded each article as favorable, neutral, or unfavorable (Deephouse, 2000; Pfarrer et al., 2010). Two of the co-authors of the current research read and coded full text versions of all sampled articles separately. For each article, they recorded the numbers of positive, negative, and neutral phrases concerning the focal firm. If the number of positive phrases was at least two-thirds of the total phrases, the article was coded as "positive";

if the number of negative phrases was at least two-thirds of the total phrases, the article was coded as “negative”; otherwise, it was coded as “neutral.” Most of the articles were clearly positive or negative, and the two-coders agreed 85% of the time—suggesting reasonable inter-coder reliability (Weber, 1990). Disagreement was resolved through discussions. The final coding was verified by a colleague who coded the 530 articles from year 2013 (with 83% agreement). We then estimated the overall rating of media coverage using the Janis-Fader coefficient of imbalance (Deephouse, 2000). Specifically, the coefficient of reputation was calculated using the formula:

$$\text{Coefficient of generalized favorability} = \frac{(P^2 - PN)}{V^2} \text{ if } P > N; 0 \text{ if } P = N; \text{ and } \frac{(PN - N^2)}{V^2} \text{ if } N > P,$$

where P is the number of positive news articles, N is the number of negative news articles, and V is the total number of news articles about a corporation, including articles that received neutral ratings. The range of this coefficient is -1 to 1 , where -1 indicates all unfavorable coverage, and 1 indicates all favorable coverage.

Being known. Since the focus of the current study is on the financial performance of publicly listed firms, we elected to measure the being-known dimension of corporate reputation from the investors’ perspective. We believe this is an appropriate approach, for investors care about corporate reputation and their familiarity with publicly listed firms should have nontrivial, but nonobvious, impacts on a firm’s financial performance. Therefore, we measured the being-known dimension of corporate reputation by focusing on the familiarity of the focal firms to investors.

With the development of the Internet, investors are increasingly sharing their opinions via stock forums. The online stock forum thus provides an opportunity for investors to publicize and collect information of different firms. Since investors face cognitive and time constraints (Fiske & Taylor, 1991), investors may have more awareness of the firms that they search and discuss on the Internet. We therefore measured being known by using the number of posts concerning a firm in an online stock forum over a 1-year period before the crises. An advantage of this measure over previous measures of being known (e.g., trading volume, survey-based measures, media coverage) is its ability to more

accurately capture investors’ familiarity with and knowledge of a firm.

The data are taken from a well-known online stock forum, Guba (<http://guba.eastmoney.com/>). Guba is one of the most-visited and influential online stock forums in China. There is a subforum devoted to discussions of each stock, with a message board displaying various posts by potential and actual investors. Those posts include comments and research reports released by analysts and institutional investors; company announcements released

by the listed firms; and bullish, bearish, and neutral views posted by various investors. Investors can communicate with each other by posting or commenting on other investors’ comments. Consequently, this platform provides good data to observe the effects of the being-known aspect of corporate reputation. The natural logarithm transformation of this variable was taken to achieve a univariate normal distribution.

Attribution of crisis responsibility. To measure attribution of crisis responsibility, we reviewed news articles of each crisis on the day of the crisis. Two of the co-authors of the current research used Coombs’ (2004) coding scheme to separately code each crisis according to its descriptions and categorized all crises into different types, including product harms, product defects, product tampering, malicious rumors, technical accidents, organizational misdeeds, environment spill, stealth pollution, and financial fraud (see Appendix S1). The two coders agreed on 90.5% of the codes, suggesting high inter-coder reliability (Weber, 1990). Disagreement was resolved through discussions. The final coding was verified by a colleague who coded a random sample of 25 events (with 84% agreement). The different types of crises were then classified into three clusters (Coombs, 2004). These included the victim cluster (coded as 1), accidental cluster (coded as 2), and the intentional cluster (coded as 3). Thus, the higher the score, the more the attribution of crisis responsibility to the focal firm.

Control Variables

We used the log-transformed values of sales for the fiscal year before the event to measure *Firm size* to account for the possibility that large corporations may attract more attention from the investors and enjoy more positive media coverage (Zavyalova et al., 2012). We also controlled for *Tobin's Q*, *Profitability*, and *Leverage*, all of which have known correlations with firms' stock market performance (Muller & Kräussl, 2011). Profitability was measured as the ratio of net profit to sales, and leverage as the debt to equity ratio. All this information was obtained from the China Stock Market and Accounting Research Database (CSMAR). Finally, we controlled for *Crisis type* since the type of crisis could influence the attribution of blame: Organizational misdeeds would seem almost by definition to be classified as intentional, product harm incidents might be judged intentional, and technical accidents might be assigned a relatively more lenient attribution. We therefore created three dummies for the crisis types that occurred most frequently in our data, including *Technical accidents* (25%), *Organizational misdeeds* (18%), and *Product harm* (13%).

Results

We report the daily average abnormal returns in Figure 1. With a negative number indicating that crises have a negative effect on firm value, the figure shows that the abnormal return is significantly depressed on the day of the crisis and the day after (i.e., day 0 and 1). Volatility was considerably high for the two days preceding a crisis (i.e., day -2 and day -1), hinting at possible information leakage that may have caused an earlier negative reaction among some investors and the opposite reactance among others. Table 1 presents the descriptive statistics and correlations for variables of interest.

Table 2 contains regression models predicting values of cumulative abnormal returns associated with crises over the 3-day window (i.e., [-1, 1]). Model 1 contains only the control variables. Model 2 includes the main effects of generalized favorability, being known, and attribution of crisis. Models 3 and 4 include the two interaction effects, respectively. Model 5 is the full model that includes all main and interaction effects. The highest variance inflation factor in Model 5 is 2.702; thus, multicollinearity is not a serious concern.

Model 2 tests the main effects of generalized favorability, being known, and attribution of crisis responsibility. The increase in the R^2 statistic from Model 1 to Model 2 is significant (0.25, $p = .000$). Generalized favorability is significantly and positively associated with crisis-related abnormal returns at the onset of a crisis ($p = .000$), supporting Hypothesis 1 that financial performance of well-liked firms is initially insulated from crisis events. Additionally, we find a negative and significant effect of being known ($p = .007$), supporting Hypothesis 2 that firms that are well known experience more of a loss in shareholder value at the onset of a crisis. Finally, we find a negative and significant effect of attribution of crisis responsibility on abnormal return ($p = .024$). Pair-wise comparisons reveal that the victim type of crises causes the least damage to firm value (0.01), followed by the accidental type (-0.01), and then the intentional type (-0.04; $0.01 > -0.01$, $p = .058$; $-0.01 > -0.04$, $p = .016$). These results are supportive of Hypothesis 4.

Model 3 tests the interaction between generalized favorability and being known. The increase in the R^2 statistic from Model 2 to 3 is significant (0.057, $p = .000$). There is a negative and significant interaction between generalized favorability and being known on crisis-related abnormal return ($p = .001$). To facilitate the interpretation of the significant interaction effect, we identified the region indicating the range of being known with which the effect of generalized favorability is statistically significant but beyond which it becomes nonsignificant (Hayes, 2013; Spiller, Fitzsimons, Lynch, & McClelland, 2013). The analysis shows that at low levels of being known, the effect of generalized favorability is positive and significant; however, at high levels of being known, the effect of generalized favorability becomes insignificant (see Figure 2). In other words, the buffering effect of the generalized-favorability dimension of corporate reputation on investor reaction at the onset of a crisis weakens for better-known (vs. less-known) firms. These results are supportive of Hypothesis 3.

Model 4 tests the interaction between generalized favorability and attribution of crisis responsibility. The increase in the R^2 statistic from Model 2 to 4 is significant (0.096, $p = .000$). The interaction between generalized favorability and initial responsibility attribution is negative and significant ($p = .000$). To facilitate the interpretation of the

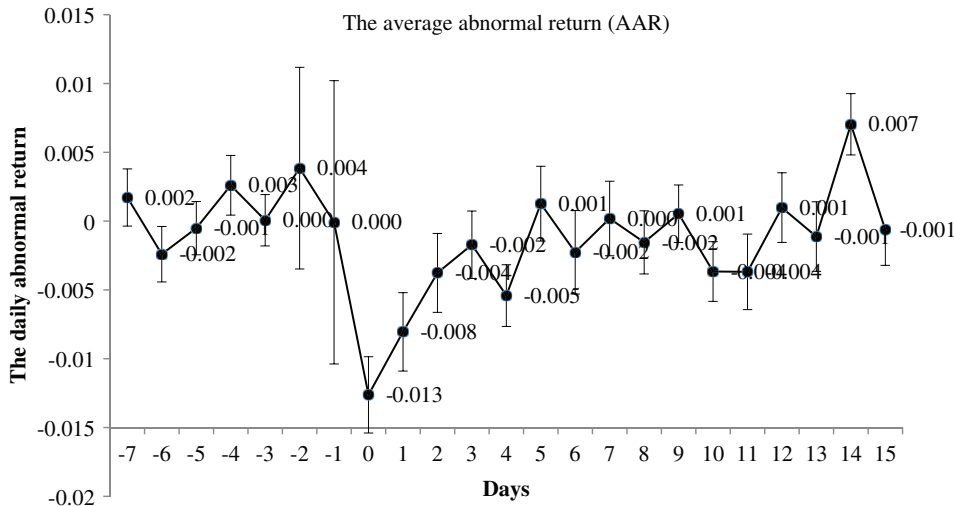


Figure 1. Stock market responses to firm crisis (95% confidence interval in brackets).

Table 1
Descriptive Statistics and Bivariate Correlations

Variables	Mean	Stdev	1	2	3	4	5	6	7	8	9	10	11	12
1. CAR ³	-0.01	0.07												
2. CAR ³⁰	-0.01	0.18	0.122											
			(.174)											
3. Firm size	22.36	1.68	0.211	0.061										
			(.018)	(.497)										
4. Profitability	0.09	0.09	0.147	-0.074	-0.041									
			(.101)	(.41)	(.651)									
5. Leverage	1.30	1.80	-0.049	-0.021	0.214	-0.182								
			(.585)	(.817)	(.016)	(.042)								
6. Tobin's Q	2.32	1.70	0.001	-0.295	-0.186	0.188	-0.177							
			(.988)	(.001)	(.037)	(.035)	(.047)							
7. Number of fatality	2.71	10.00	-0.115	0.005	0.209	0.074	-0.025	-0.126						
			(.201)	(.957)	(.019)	(.41)	(.783)	(.161)						
8. Product harms	0.13	0.33	-0.033	0.029	0.083	-0.113	0.015	0.008	-0.092					
			(.716)	(.749)	(.355)	(.208)	(.869)	(.931)	(.307)					
9. Security incidents	0.23	0.42	-0.003	0.070	0.023	-0.161	0.078	-0.134	0.361	-0.209				
			(.97)	(.439)	(.802)	(.072)	(.387)	(.134)	(.000)	(.019)				
10. Organizational misdeeds	0.18	0.39	-0.162	-0.069	0.132	-0.023	0.096	0.004	0.010	-0.180	-0.258			
			(.069)	(.442)	(.14)	(.798)	(.285)	(.967)	(.913)	(.043)	(.003)			
11. Generalized favorability	0.03	0.23	0.457	-0.070	0.238	0.008	-0.017	0.039	0.031	0.111	-0.064	0.060		
			(.000)	(.435)	(.007)	(.93)	(.850)	(.665)	(.733)	(.216)	(.474)	(.505)		
12. Being known	8.60	0.44	-0.169	-0.285	0.021	-0.073	-0.155	-0.015	-0.085	0.022	-0.052	0.008	0.043	
			(.059)	(.001)	(.815)	(.416)	(.083)	(.871)	(.346)	(.807)	(.565)	(.928)	(.630)	
13. Attribution of crisis responsibility	2.06	0.70	-0.257	-0.122	0.153	-0.082	0.097	-0.023	0.052	0.307	-0.050	0.604	0.053	0.022
			(.004)	(.172)	(.086)	(.364)	(.282)	(.795)	(.565)	(.000)	(.581)	(.000)	(.559)	(.805)

Note. n = 126; p-value are in parentheses.

Table 2
Regressions of Crisis-Related Cumulative Abnormal Returns (3-Day CAR)

Variables	Model 1	p-Value	Model 2	p-Value	Model 3	p-Value	Model 4	p-Value	Model 5	p-Value
(Constant)	−0.303 (0.088)	.001	0.118 (0.127)	.356	0.080 (0.122)	.513	0.093 (0.117)	.430	0.072 (0.115)	.532
Firm size	0.013 (0.004)	.001	0.009 (0.003)	.008	0.009 (0.003)	.011	0.006 (0.003)	.053	0.006 (0.003)	.047
Profitability	0.122 (0.073)	.100	0.113 (0.063)	.074	0.093 (0.060)	.125	0.120 (0.058)	.040	0.106 (0.057)	.066
Leverage	−0.003 (0.004)	.407	−0.003 (0.003)	.263	−0.004 (0.003)	.225	−0.002 (0.003)	.468	−0.002 (0.003)	.398
Tobin's Q	0.000 (0.004)	.964	−0.002 (0.003)	.581	−0.003 (0.003)	.271	−0.003 (0.003)	.359	−0.004 (0.003)	.218
Number of fatality	−0.001 (0.001)	.032	−0.002 (0.001)	.006	−0.002 (0.001)	.002	−0.001 (0.001)	.009	−0.002 (0.001)	.004
Product harm	−0.019 (0.020)	.327	0.000 (0.021)	.991	−0.018 (0.021)	.387	−0.005 (0.019)	.804	−0.015 (0.020)	.429
Technical accidents	0.004 (0.017)	.821	0.017 (0.016)	.286	0.016 (0.015)	.286	0.012 (0.014)	.417	0.012 (0.014)	.395
Organizational misdeeds	−0.037 (0.017)	.034	−0.003 (0.022)	.879	−0.011 (0.021)	.613	−0.002 (0.020)	.919	−0.007 (0.020)	.726
Generalized favorability (GF)			0.136 (0.023)	.000	0.170 (0.024)	.000	0.086 (0.024)	.001	0.116 (0.027)	.000
Being known (BK)			−0.033 (0.012)	.007	−0.028 (0.012)	.018	−0.023 (0.011)	.045	−0.021 (0.011)	.060
Attribution of crisis responsibility (AR)			−0.027 (0.012)	.024	−0.019 (0.011)	.107	−0.025 (0.011)	.023	−0.020 (0.011)	.071
GF × BK					−0.016 (0.005)	.001			−0.010 (0.005)	.028
GF × AR							−0.020 (0.004)	.000	−0.017 (0.005)	.000
R ²	0.150		0.403		0.460		0.499		0.520	
R ² adj	0.092		0.346		0.403		0.445		0.464	
F-statistic	2.591		7.000		8.017		9.361		9.330	

Note. $n = 126$; Values in table are unstandardized regression coefficients. Standard errors are in parentheses.

significant interaction effect, we regress abnormal stock return on generalized favorability separately under each level of attribution (see Figure 3). The analysis shows that generalized favorability has a positive effect on abnormal stock return for the victim type (0.218, $p = .000$) and the accidental type (0.094, $p = .000$), but its effect is negative and not significant for the intentional type of crises (−0.030, $p = .470$). In other words, the generalized-favorability dimension of corporate reputation buffers the negative effect of a corporate crisis on investor reaction only when the initial attribution of responsibility is low (for victim

and accidental types of crisis), but not when it is high (i.e., for intentional types of crisis). These results are supportive of Hypothesis 5.⁶

⁶ It is interesting to note that the conditional effect of generalized favorability seems to be nonnegative even for accidental and intentional crises. With regard to this result, we want to point out that (a) the significant decrease of the positive effect of generalized favorability from victim, to accidental, and to intentional crises, combined with the negative effect of being-known on firm value, is consistent with the double edged sword effect (e.g., Bundy & Pfarrer, 2015; Fombrun, 1996); and (b) even though the short-term financial loss (e.g., on CAR) may be minimal, we speculate that the damage of an intentional crisis for a well-liked firm is multi-faceted and long-lasting. For example, it could negatively

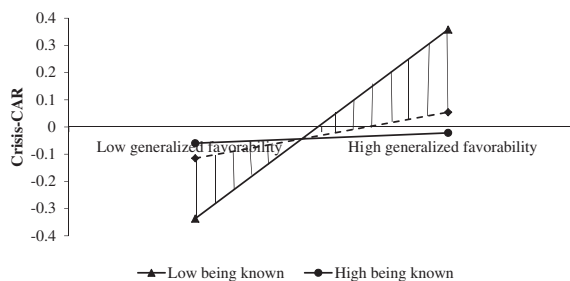


Figure 2. The interaction effect of generalized favorability and being known on Crisis-CAR. *Note.* The two solid lines represent the lowest ($=7.44$) and highest ($=9.59$) levels of being known. The dotted line represents the switching point of being known ($=9.16$) below which the effect of generalized favorability is positive and significant ($p < .05$), but above which the effect of generalized favorability is not significant ($p > .1$). This is done using the *Johnson–Neyman* technique (Hayes, 2013; Spiller et al., 2013). The shaded area thus represents the *Johnson–Neyman* region of significance.

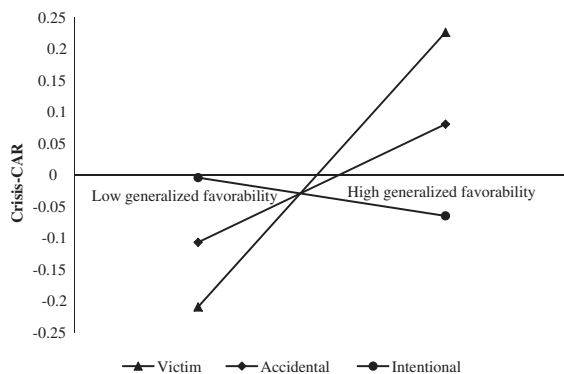


Figure 3. The interaction effect of attribution of crisis responsibility and generalized favorability on Crisis-CAR.

The above results hold when all the main and interaction effects are included simultaneously (see Model 5).

Among the control variables, both the effects of firm size and profitability are positive and significant, indicating that larger firms and those with higher levels of profit are more insulated from the damage of a crisis. The effect of the number of fatality is negative and significant, suggesting that severe crises damage firm value more.

affect the firm's relationship with its various stakeholders (e.g., suppliers, customers, and the local community), and the crisis may be rehearsed repeatedly over a long period of time among the stakeholders.

Robustness Checks

We conducted a series of robustness checks to further corroborate our results.

First, since two of the three crisis-type dummies are correlated with responsibility attribution (see Table 1), we conduct a robustness check of our results by running the models without these three dummies. Our results remain substantively unchanged (see Appendix S2).

Second, since we used an eight trading-day gap for calculating normal returns, as a robustness check, we also use the same 8-day gap to calculate generalized favorability and being known to investors (i.e., 1 year to eight trading days prior to the crisis event). Our results remain substantively unchanged (see Appendix S3).

Third, since our focus is on firm's financial performance, as an additional robustness check, we code both dimensions of corporate reputation from posts on the online stock forum. Specifically, we use the same measure of being known as in the main analysis, but code generalized favorability also based on investor posts at Guba. Instead of coding all the investor posts over a 1-year period before the crises (over 700,000), to keep it manageable, we use a subset of the data consisting of posts over a 1-month period before the crises (approximately 54,000). We then follow the same coding scheme and calculation method as in the main analysis to construct the alternative measure of generalized favorability. Our results remain substantively unchanged (see Appendix S4).

Finally, for the measure of attribution of crisis responsibility, we also construct two dummy variables to represent its three levels and re-run the above analyses. All of our results remain substantively unchanged (see Appendix S5a–d).

Discussion, Limitations, and Conclusion

The high profile corporate crises of recent years have drawn increasing attention to corporate reputation management in the strategic management literature (Bundy & Pfarrer, 2015; Godfrey et al., 2009; Muller & Kräussl, 2011). However, the role of corporate reputation in affecting how various constituents react to corporate crisis is understudied (Rhee & Haunschild, 2006, p. 101). From a socio-cognitive perspective, managing corporate crises is critical to corporations because they can

have serious negative impacts on stakeholders' perceptions, and subsequently, on firm value. Using an event study of 126 corporate crises in China, we test the relationships among two dimensions of corporate reputation, attribution of crisis responsibility, and stock market reactions to corporate crisis. Our empirical results suggest that the effects of reputation on firm value at the onset of a corporate crisis are more complicated than previously theorized.

Responding to a call for more research of corporate reputation as a multidimensional concept and the possible interactions among the dimensions of corporate reputation (Deephhouse & Carter, 2005; Jensen et al., 2012; Lange et al., 2011; Rindova et al., 2005), we identify a two-dimensional reputation that captures the stakeholders' evaluation of a firm's favorability and their awareness of the firm. Our investigation of the differential and interaction effects between the generalized-favorability dimension and the being-known dimension of corporate reputation suggests that firms that are well liked are initially insulated from a crisis, especially when they are less known. Firms are therefore advised to build their reputation to enhance their generalized favorability, and simultaneously, avert stakeholders' excessive attention at the onset of a crisis.

The simultaneous examination of two dimensions of reputation also allows us to shed light on the double-edged sword of corporation reputation on firm value. Our results indicate that well-liked firms can leverage their generalized favorability among stakeholders to assuage firm value loss, whereas well-known firms may have to better communicate with stakeholders to overcome the burden of stakeholders' attention that escalates firm value loss. These results advance current understanding of the relationship between corporate reputation and firm's economic performance, which has been one of the most central concerns of reputation and crisis management research.

Additionally, our examination of crisis responsibility reveals patterns that are relevant to advancing research on social evaluations and the growing literature on crisis attribution. Our finding that the perceived degree of a firm's responsibility has consequences for firm value provides empirical evidence for the effects of attribution postulated but rarely tested in the literature (Coombs, 2004; Moon & Rhee, 2012). In addition, our results indicate that a well-liked firm can leverage its generalized favorability in buffering against losses of firm value only when it cannot be perceived as having

intentionally caused the crisis. This moderating effect of crisis responsibility attribution sets up a theoretically meaningful boundary condition for the buffering effect of the generalized-favorability dimension of corporate reputation, and sheds light on circumstances under which corporate reputation exhibits differential effects on firm value. These results also resonate with Bundy and Pfarrer's (2015) postulation that social approval of a firm affects the optimal level of responsibility that the firm should accept for a crisis.

Finally, a closer look at Figure 3 reveals that at very low levels of generalized favorability, firm value can actually be significantly lower when responsibility attribution is low (vs. high). This result is consistent with the aforementioned self-confirming bias (Lord et al., 1979; Nickerson, 1998; Powell et al., 2011) and Jensen et al.'s (2012) conceptualization of corporate reputation as role-specific expectations. Accordingly, a hated firm may be expected to cause a crisis. Information to the contrary (e.g., when the firm is a victim) violates this expectation and is often perceived as untrue, which could depress firm value. However, a caveat here is that the result may be driven by a limited number of observations due to our small sample size. This issue thus offers the opportunity for juxtaposing Jensen et al.'s (2012) perspective on corporate reputation with that adopted in the current research, and should be carefully studied in future research.

Several limitations of our study provide additional opportunities for future research. First, due to data limitations, we focus on two dimensions of corporate reputation. We did not study the "being known for something" dimension of corporate reputation, as its conceptualization and operationalization could vary depending on specific audience interests (Deephhouse, 2000; Deephouse & Carter, 2005). Indeed, according to Lange et al. (2011, p. 180), "Each interest group's idiosyncratic needs will dictate and affect their interpretations and perceptions of organizational action." Future research can fruitfully investigate the valence of, consistency across, and transferability among different dimensions of corporate reputation in affecting firm value (Jensen et al., 2012; Lange et al., 2011).

Second, in the current research, we focus on how corporate reputation and responsibility attribution affect firm value at the onset of a crisis. After this initial stage of a crisis, various intermediaries, such as the news media, professional online forums, and

even firms themselves, oftentimes provide investors with additional crisis-related information at a low cost (Lindell & Perry, 2012; Rindova et al., 2006). Therefore, the effects of corporate reputation and responsibility attribution on firm value over time may demonstrate interesting dynamics as a crisis unfolds. For example, since individuals adapt to positive information faster than negative information (Arkes, Hirshleifer, Jiang, & Lim, 2010; Chen & Rao, 2002), over time, the buffering effect of generalized favorability may quickly fade and the burden of being known and high attribution level may linger. Indeed, when we analyze the 30-day cumulative abnormal return to the crises in our data, we find preliminary results that are consistent with these speculations (i.e., the disappearance of the positive effect of generalized favorability, but the lingering of the negative effects of attribution and being known; see Appendices S6 and S7). We call for a systematic investigation of this important issue in future research.

Although we controlled for many firm- and crisis-related variables in our analysis, other variables can drive the relationship between corporate reputation and abnormal returns. For example, as Zavyalova et al. (2012) noted, managers can take actions to influence how corporations are covered in the media, which will in turn affect firm value. How firms leverage response strategies and reputation-repair tactics after a crisis is ripe for investigation. Future research may also investigate media's post-crisis coverage as an important source of information that influences evaluators' crisis perceptions (Bundy & Pfarrer, 2015). For example, the mass media may select to emphasize some features of (i.e., to "frame") a crisis, thereby shaping people's interpretation of the crisis (An & Gower, 2009; Coombs, 2007). This socially constructed process could be influenced by corporate reputation, severity of a crisis, and other factors that would affect the newsworthiness of the crisis (Mencher, 2003). Future research should also study the crisis history of a corporation and how that affects firm value. That is, whether or not a corporation had a similar crisis in the past may have an effect on the reputational threat posed by a crisis (Coombs, 2007). Finally, stakeholders may assume that if a corporation has a crisis, industry peers may run into similar problems. The negative spill-over effect of a crisis due to vicarious punishment should be explored.

In conclusion, in studying how social perceptions and situational factors affect key stakeholders'

responses to a corporate crisis, we propose formal predictions and provide empirical evidence for the joint effects of the being-known and generalized-favorability dimensions of corporate reputation and the attribution of crisis responsibility on firms' financial performance at the onset of a corporate crisis. Our study extends research on corporate reputation and crisis management, with the findings highlighting how firms can leverage corporate reputation to better cope with a corporate crisis. We hope our research spurs future investigations into corporate reputation as a multifaceted construct, management of a corporate crisis, and firms' coping strategies in the face of a corporate crisis.

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Supporting Information

Additional supporting information may be found in the online version of this article:

Appendix S1. Descriptions of the 126 crises (more detail available from authors on request).

Appendix S2. Regressions of crisis-related cumulative abnormal returns (3-day CAR; without the three crisis-type dummies).

Appendix S3. Regressions of crisis-related cumulative abnormal returns (3-day CAR; using 8-day gap for calculating generalized favorability and being known).

Appendix S4. Regressions of crisis-related cumulative abnormal returns (3-day CAR; using investor posts over a 1-month period before a crisis as an alternative measure of generalized favorability).

Appendix S5. Regressions of crisis-related cumulative abnormal returns (a) 3-day CAR; using two dummy variables for measuring attribution of crisis responsibility, (b) 3-day CAR; without the three crisis-type dummies; using two dummy variables for measuring attribution of crisis responsibility, (c) 3-day CAR; using 8-day gap for calculating generalized favorability and being known; using two dummy variables for measuring attribution of crisis responsibility, and (d) 3-day CAR; using investor posts over a 1-month period before a crisis as an alternative measure of generalized favorability; using two dummy variables for measuring attribution of crisis responsibility.

Appendix S6. Regressions of crisis-related cumulative abnormal returns (30-day CAR).

Appendix S7. Regressions of crisis-related cumulative abnormal returns (30-day CAR; using 8-day gap for calculating generalized favorability and being known).