

## LOOKING GOOD BY DOING GOOD: THE ANTECEDENTS AND CONSEQUENCES OF STAKEHOLDER ATTENTION TO CORPORATE DISASTER RELIEF

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*Stakeholder theory suggests a relationship between corporate social responsibility (CSR) and corporate financial performance (CFP) because certain stakeholders reward certain types of CSR. This argument assumes that stakeholders attend to firms' CSR activities—an assumption that has yet to be examined. We fill this gap by extending stakeholder theory to the context of stakeholder attention to firm CSR and exploring the antecedents and consequences of stakeholder attention to corporate disaster relief CSR. We test the resulting hypotheses on a sample of public companies that engaged in natural disaster relief efforts, finding that stakeholder attention partially mediated the relationship between disaster relief and CFP and that stakeholder attention to corporate disaster relief was driven by the legitimacy, urgency, and enactment of disaster relief CSR initiatives. Copyright © 2014 John Wiley & Sons, Ltd.*

### INTRODUCTION

On January 12, 2010, Port-au-Prince, Haiti's largest metropolitan area, suffered a massive 7.0 magnitude earthquake. The disaster killed an estimated 230,000 people, injured an additional 300,000, and left more than 1.5 million homeless. Nearly one-third of all Haitians were directly impacted by the disaster, and virtually all Haitians were affected by the earthquake-induced strain on an already fragile economic and political system (85% of Haitians were below the \$2 US/day poverty line

before the disaster, and Haiti as a whole was the poorest country in the Western hemisphere). The Haitian earthquake ranks among the five worst earthquakes in world history in terms of human suffering (USGS, 2010).

The devastation caused by the earthquake generated a huge outpouring of charitable giving from around the world. ReliefWeb, an organization that tracks disaster relief, estimated that individuals, governments, nonprofit governmental organizations (NGOs), and corporations had donated roughly \$3.5 billion (U.S.) to fund earthquake relief efforts by the end of 2010 (ReliefWeb, 2010). Verizon Wireless was among the first corporate responders to the disaster. On January 13, the day after the earthquake, Verizon Wireless issued press releases to solicit donations and announce fee waivers for all donation-related text messages. Two days later, Verizon bypassed the standard 90-day waiting period from customer “pledge” to NGO receipt of

Keywords: stakeholder theory; corporate social responsibility; attention; corporate social performance; philanthropy; stakeholder salience

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Zachariah J. Rodgers' affiliation was changed on 5 September 2014 after online publication.

funds, and remitted \$2.8 million worth of customer pledges to the American Red Cross. One week later, Verizon announced free calling to and from the earthquake zone through the end of January from all Verizon phones and calling cards. Verizon also matched employee contributions for a combined donation of over \$1 million to relief efforts. Although Verizon's earthquake relief activities were, no doubt, prompted by compassion, Verizon also received significant tangible benefits from these efforts as Verizon's relief activities received a great deal of attention from the media and other stakeholder groups.

Verizon's experience following the 2010 Haiti earthquake highlights a frequently implicit assumption behind the studied link between corporate social responsibility (CSR) and corporate financial performance (CFP); namely, that "for CSR differentiation to be successful, potential customers *must be fully aware* of CSR characteristics." (McWilliams and Siegel, 2001: 120, emphasis added) Godfrey, Merrill, and Hansen (2009: 428, emphasis added) stated similarly that CSR "*must be public knowledge*" in order to be rewarded by stakeholders. In other words, stakeholders may reward firms for their CSR, but only to the extent that those stakeholders become aware of firm CSR activities. Despite the importance of the assumption that stakeholders must pay attention to firm CSR in order for a positive effect of CSR on CFP to materialize, neither the current CSR literature nor the stakeholder theory literature has yet explicitly examined stakeholder attention to firm CSR.

The purpose of this paper is to address this gap in the literature by theoretically and empirically exploring the antecedents and consequences of stakeholder attention to CSR. In effect, the aim of this paper is to answer the questions: What characteristics of CSR activities lead stakeholders to pay attention to them? And what impact does stakeholder attention to CSR have on the financial performance of firms? As we approach these topics, we focus on one form of CSR: disaster relief CSR wherein firms assist the victims of a natural disaster. Stakeholder attention is especially relevant for firms to benefit from this type of CSR as it generally involves service to stakeholders unable to directly contribute to firms' financial benefit. In examining disaster relief CSR, we first theoretically explore the factors that induce stakeholders to pay attention to various CSR activities engaged in by firms. In doing so, we draw from the literature

on attention in organizations—especially Mitchell, Agle, and Wood's (1997) model of the factors that lead corporate executives to pay attention to different stakeholder groups. While this work focuses on managerial attention, we propose that a parallel process influences which disaster relief CSR initiatives draw the attention of corporate stakeholders. Building on this model, we propose stakeholder attention as a mediator of the disaster relief CSR-CFP link and develop a series of hypotheses detailing the antecedents of stakeholder attention to disaster relief CSR. We test these hypotheses in the context of CSR focused on natural disaster response and recovery using a sample of public companies that participated in the relief efforts following four recent natural disasters: the Indian Ocean tsunami of 2004, Hurricane Katrina in 2005, the Haitian earthquake of 2010, and the Japan "Tohoku" earthquake and tsunami of 2011.

## THEORY AND HYPOTHESES

### Stakeholder theory and the CSR-CFP link

CSR represents a firm's voluntary attempts to influence social conditions, including corporate philanthropy, the minimization of corporate environmental and community impacts, and fair treatment of employees (Whetten, Rands, and Godfrey, 2002). The bulk of the CSR literature has examined whether firms "do well by doing good," or in other words whether or not firms benefit financially from their CSR (Margolis and Walsh, 2003; Orlitzky, Schmidt, and Rynes, 2003). Despite over 170 empirical studies on this question, the evidence remains inconclusive (Rivoli and Waddock, 2011).

The primary theoretical lens applied by contemporary work to the link between CSR and corporate financial performance (CFP) is stakeholder theory, which holds that several classes of stakeholders have the ability to impact CFP (Clarkson, 1995; Freeman, 1984; Mitchell *et al.*, 1997). Stakeholder theory argues that, in addition to shareholders, a firm's stakeholders may include customers, suppliers, employees, local communities, regulators, and in some cases the general public and the natural environment (Jones, 1995; Wood, 1991). The stakeholder theory perspective on the CSR-CFP relationship suggests that some stakeholders value certain types of CSR and that these stakeholders may reward firms that engage in these forms of

CSR (Agle, Mitchell, and Sonnenfeld, 1999; Hillman and Keim, 2001; Lev, Petrovits, and Radhakrishnan, 2010). Prior work documents examples of these effects. Customers may favor brands produced by firms engaged in CSR (Brown and Dacin, 1997; Schuler and Cording, 2006). Employees may accept discounted wages (Bunderson and Thompson, 2009; Montgomery and Ramus, 2007) and stay longer (Cone, 2007; Rupp *et al.*, 2006) when working for a firm involved in social causes that they value. Community-based corporate network access can be enhanced for high CSR firms (Marquis, Glynn, and Davis, 2007), and regulators may be more likely to cooperate with these firms in shaping regulations (Knauer, 1994; Vogel, 1997). When the benefits that accrue to the firm from stakeholder rewards outweigh the costs of the associated social initiatives, those initiatives will enhance the firm's financial performance and will generate a positive relationship between CSR and CFP.

However, stakeholder rewards may occur in response to CSR without immediately materializing for some types of CFP measures. For instance, when CSR benefits accrue as reputational insurance (Gardberg and Fombrun, 2006; Godfrey, 2005), leniency from regulators (Godfrey *et al.*, 2009), or decreased risk of public activism (Hiatt, Sine, and Tolbert, 2009; King, 2008; Lounsbury, Ventresca, and Hirsch, 2003), costs of CSR may exceed benefits for shorter time horizons. Yet the expected value of CFP over the long term may still be positive. As Godfrey *et al.*, 2009 observed, "CSR activities can provide an insurance mechanism to *preserve*—rather than to *generate*—CFP" (p. 426, emphasis in original). "Expected" benefits are more visible in market measures of firm performance such as stock price than in period-delineated accounting measures of firm performance such as return on assets (Orlitzky and Benjamin, 2001). Our study utilizes a market measure of CFP rather than an accounting measure in order to include these expected and longer-term potential benefits of CSR.

### Stakeholder attention as a (partial) mediator of the CSR-CFP link

Implicit in the argument that stakeholder groups may reward firms for their CSR activities is the assumption that stakeholders attend to firm social initiatives (cf. earlier excerpts from both McWilliams and Siegel, 2001; Godfrey *et al.*,

2009).<sup>1</sup> Absent stakeholder attention to corporate social initiatives, the "stakeholder rewards generate a positive CSR-CFP relationship" argument falls apart.

Some stakeholder groups—primarily employees and shareholders—are closely tied to firms and receive communications directly from the firm's representatives. Wood and Jones (1995) label these stakeholder groups "internal stakeholders." Firms face few challenges in drawing the attention of internal stakeholders to their CSR actions, as the close connection of internal stakeholders to the firm increases the salience of firm CSR to them. However, other stakeholder groups ("external stakeholders" in Wood and Jones' typology) are not generally as closely tied to the firm and do not typically communicate directly with firm representatives (Carroll, 2010). Yet, these external stakeholders must first attend to a firm's social initiatives before they could be expected to reward the firm.

While stakeholders may be especially prone to attend to social initiatives that directly impact their own interests (Jones, Felps, and Bigley, 2007), firm CSR in general nevertheless represents a key type of firm action that may provide stakeholders with information about a firm's priorities and intentions (Godfrey, 2005). Attending to firm *social* activities in particular (as opposed to, say, purely productive or consumptive activities) provides stakeholders with valuable cues about a firm's use of power, and its relative "other-regarding" orientation (Agle *et al.* 1999; Godfrey, 2005) and may lead stakeholders to a generalized inference of firm quality and benevolence (McWilliams and Siegel, 2001). Lack of stakeholder benefit may enhance these signaling effects of CSR. Godfrey *et al.* (2009) found that CSR that directly benefited primary stakeholders did not impact CFP, while "altruistic" CSR directed at nonprimary stakeholders did yield CFP. Other-regarding that appears instrumental ruins its instrumental efficacy. Disaster relief CSR is especially likely to be perceived by stakeholders as genuinely altruistic, given that disaster victims are unlikely to be instrumental to firms.

Consequently, stakeholder attention to disaster relief CSR (particularly from external stakeholders) should partially mediate the impact of

<sup>1</sup>This explanation is also consistent with Barnett & Salomon's (2006, 2012) observations that only high—not moderate—corporate social performance (CSP) yielded CFP gains. High CSP is much more likely to capture stakeholder attention than moderate CSP.

corporate relief initiatives on the rewards firms receive from important stakeholder groups—in that rewards from internal stakeholders should accrue regardless of the amount of attention paid by external stakeholders, but that rewards from external stakeholders will be contingent on external stakeholder attention. In other words, the amount of stakeholder goodwill (and associated financial benefits) that a firm receives in exchange for its disaster relief activities depends critically on how much attention external stakeholders pay to those activities. Or, more formally:

*Hypothesis 1 (H1): External stakeholder attention to firm disaster relief CSR activities partially mediates the relationship between those disaster relief CSR activities and CFP.*

### Antecedents of stakeholder attention to disaster relief CSR

Although stakeholder attention to firm actions has not previously been studied, the stakeholder theory literature has devoted considerable attention to the complementary question of what leads firms (i.e., corporate decision makers) to pay attention to different stakeholders. For example, Freeman (1984: 411) argues that central to stakeholder theory is the “principle of who or what really counts,” or how managers decide which stakeholders they will pay attention to and which they will ignore. Building on Freeman’s observation, Mitchell *et al.* (1997) propose a model of how managers allocate their attention among different stakeholder groups (the model has subsequently been tested and extended in Agle *et al.*, 1999; Mitchell *et al.*, 2011). This work is part of a larger stream of literature that examines the effects of managerial attention on a wide variety of firm outcomes (e.g., Cho and Hambrick, 2006; Kaplan, 2008; Ocasio, 1997, 2011; Rerup, 2009). This literature holds that corporate managers have a limited amount of attention and, consequently, cannot attend to every issue or group that may affect or be affected by the firm at any given time. In the context of corporate stakeholders, this work implies that managers select a certain subset of firm stakeholders to attend to and only these stakeholders receive the benefits associated with managerial recognition of their claims on the firm (Mitchell *et al.*, 1997; also see Simon, 1947).

We argue that parallel arguments may apply for stakeholder attention to firm disaster relief CSR

activities. Just as managers have limited attention to spread among stakeholders, stakeholders also have limited attention that they may allocate to various firm social activities. For example, customers could potentially choose to patronize many different retailers or buy products and services offered by many different producers. But these customers are unlikely to devote the time or effort required to attend to all of the social activities that all of these different firms engage in. Consequently, stakeholders must choose which firm CSR activities to pay attention to and only these firms will receive the rewards associated with stakeholder attention to firm CSR.

Mitchell *et al.* (1997) propose that managers attend to stakeholders based on certain characteristics displayed by different stakeholder groups, specifically, power, legitimacy, and urgency. Agle *et al.* (1999) report strong empirical support for this model of managerial attention. Moreover, work on managerial attention in other contexts suggests that enactment—the manner in which the different actors connected with an event carry it out—also plays an important role in the level of attention managers pay to the event (Hoffman and Ocasio, 2001; Ocasio, 1997). In this paper, we explore the converse of these findings from managerial attention work by investigating the factors that lead *stakeholders* to pay attention to *firms*. We propose that the characteristics of power, legitimacy, urgency, and enactment may also apply to stakeholder attention to firms, but that these mechanisms operate differently in the context of stakeholder attention. Firms are operating from a dominant center position within a nexus of various stakeholder groups (Hill and Jones, 1992). On the other hand, stakeholders often occupy relatively subservient roles within the orbit of many different firms. For this very reason, managers’ other-regarding (as evidenced by CSR, e.g., Agle *et al.*, 1999) are especially of interest to stakeholders, as these managerial actions and attributes may signal the likelihood of dominant firms to respond to the needs of stakeholders. Thus, in the disaster relief CSR context, stakeholders should attend to firm CSR actions inasmuch as they signal *bona fide* other-regarding.

### Power

Mitchell *et al.* (1997) propose power as a key characteristic of stakeholder groups that draws managerial attention. This proposition is in line with



prior work on managerial attention, which suggests that one characteristic of an issue or event that enhances managerial attention to it is its relative size and significance to the organization (Cyert and March, 1963; Ocasio, 1997; Simon, 1947). Mitchell *et al.*'s (1997) framework presents a straightforward picture of managers attending to stakeholders with high power, be it coercive (power based on force or threat of force), utilitarian (power based on material incentives), or normative (power based on symbolic importance) (Etzioni, 1964).

For any stakeholder, these three types of power could draw increased attention as all of these types of power would increase firms' ability to impact stakeholders. Of particular import in the disaster relief CSR context for stakeholders is utilitarian power, in that utilitarian power deals with how firms allocate resources based on their priorities. Firms that choose to allocate resources toward noninstrumental CSR signal to stakeholders their other-regarding and indicate that they may consider future claims made by stakeholders (e.g., Agle *et al.*, 1999; Godfrey, 2005). Stakeholders are likely to devote extra attention to the disaster relief CSR activities of such firms in the hope that they themselves may benefit from future firm CSR. Since firms typically report the magnitude of their social initiatives in monetary terms, the most consistent aspect of CSR-related utilitarian power that may attract stakeholder attention is monetary value.

*Hypothesis 2 (H2): Disaster relief CSR activities of larger monetary value receive more stakeholder attention than those of smaller monetary value.*

### Legitimacy

A second aspect of firm CSR actions that may draw stakeholder attention is legitimacy. In the context of managerial attention, Mitchell *et al.* (1997) define legitimacy as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, definitions" (p. 869). This focus on the role of legitimacy in attracting attention is in line with the findings of the broader managerial attention literature in which legitimacy is seen as a primary driver of attention (Ocasio, 1997, 2011). For example, Thornton and Ocasio (1999) find that managerial attention in

the context of CEO succession is, in large part, a product of the legitimacy of different alternatives based on their adherence to the norms of applicable institutional logics—where institutional logics are defined as a "set of assumptions and values, usually implicit, about how to interpret organizational reality, what constitutes appropriate behavior, and how to succeed" (Thornton and Ocasio, 1999: 804). Mitchell *et al.* (2011) also highlight the role of institutional logics in establishing the legitimacy of stakeholders and thus attracting managerial attention to them.

In the context of CSR, stakeholders may view firm disaster relief CSR initiatives broadly as illegitimate because the role of firms as profit-seeking entities does not fit with institutional logics surrounding the delivery of social good (Rivera-Santos and Rufin, 2010). However, because nonprofit, charitable organizations, such as NGOs do fit with these institutional logics, firms often seek to enhance the perceived legitimacy of their CSR efforts by partnering with an established NGO (Peloza and Falkenberg, 2009; Rivera-Santos and Rufin, 2010). If a CSR initiative involves close partnership with an NGO, the involvement of the NGO should lead observers to transfer some of the legitimacy of the NGO in the context of the pursuit of social good to the partnered firm. Such enhanced legitimacy of firm CSR activities may enhance stakeholder attention to those CSR activities because of the effect of legitimacy on attention (Mitchell *et al.*, 1997; Thornton and Ocasio, 1999). This being the case, firms that partner with NGOs in delivering disaster relief CSR initiatives should receive greater stakeholder attention toward those activities than firms who engage in initiatives without an NGO partner.

*Hypothesis 3 (H3): Disaster relief CSR activities of firms whose activities involve a partner NGO will receive more stakeholder attention than those of firms whose disaster relief CSR efforts do not involve a partner NGO.*

### Urgency

Mitchell *et al.* (1997) define urgency as the "degree to which stakeholder claims call for immediate attention" (p. 869). Urgency, therefore, in the context of managerial attention to different stakeholder groups, represents the temporal dimension of stakeholders' needs. Urgency draws managerial attention

because it indicates a short time frame for possible action such that, if attention is not paid immediately, the opportunity for action will pass. This potential for loss of the opportunity to address stakeholder claims in the future serves to focus managerial attention (Mitchell *et al.*, 1997).

A related temporal process could be an important driver of stakeholder attention to disaster relief CSR. Specifically, the urgency or promptness with which a firm responds to a disaster with relief-oriented CSR (or at least concrete plans for relief-oriented CSR) may enhance the amount of stakeholder attention that the firm's disaster relief CSR receives. We expect that urgency will impact stakeholder attention in this context for two reasons. First, disasters are inherently highly visible events that receive a good deal of attention from the media and the general public (including stakeholders). To the extent that a firm announces its plans for disaster-relief CSR shortly after the occurrence of the disaster, the firm's relief CSR should have a greater likelihood of garnering a portion of the attention already being focused on the disaster event and, thus, should increase the level of stakeholder attention the firm's relief efforts receive. Second, the urgency with which a firm responds to the needs created by a disaster may be perceived as an especially clear signal of the firm's genuine other-regarding (e.g., Godfrey, 2005). Immediate action is critical in disaster relief to minimize the casualties and suffering of disaster victims. Responding promptly via disaster relief CSR to urgent disaster-related needs of these victims may illustrate to stakeholders the priority a firm places on responding to the needs of others. Such demonstrations of other-regarding, as argued above, should enhance stakeholder attention because they give stakeholders hope that the firm may attend to their own future needs and claims. For both of these reasons, we hypothesize that urgent (or prompt) disaster relief CSR will receive more stakeholder attention than less prompt disaster relief CSR.

*Hypothesis 4 (H4): Disaster relief CSR activities that promptly address disaster-created needs receive more stakeholder attention than those that less promptly address these needs.*

#### *Enactment*

A fourth factor that has been shown to play an important role in drawing managerial attention to

an issue or event is enactment, the manner in which actors involved in the event behave (Ocasio, 1997; Weick, 1979). Although not one of the factors hypothesized to draw managerial attention to stakeholders by Mitchell *et al.* (1997), enactment may nonetheless be an important consideration in the context of stakeholder attention to firm disaster relief CSR. The central idea of enactment as a factor in managerial attention is that decision makers' perceptions of events are driven not only by the objective characteristics of events, but also by how narratives of the events are constructed. One key feature of the enactment of an event that has been demonstrated to draw attention is the presence of active participation in the event by identifiable actors (Hoffman and Ocasio, 2001). For example, Hoffman and Ocasio found that negative events related to the chemical industry received more attention to the extent that observers could identify concrete actions related to the event's creation. Along these lines, these authors argued that the 1978 Love Canal disaster received much more attention than did the (apparently similar) 1969 Cuyahoga River fire because news coverage of the former involved accusations of illegal dumping of toxic wastes by an identified actor, while coverage of the latter involved no observed direct actions that may have caused the event. In the context of disaster relief CSR, firms may enact their relief efforts in different ways—with one of the primary distinctions being whether the firm donates cash or offers some form of in-kind assistance (Seifert, Morris, and Bartkus, 2003). In this context, we argue that relief activities involving in-kind donations are more likely to be perceived by stakeholders to involve active participation by the firm because in-kind donations involve the giving of concrete goods or services. Thus, since events characterized by active, observable participation garner greater attention, disaster relief CSR involving in-kind donations should attract greater stakeholder attention. We hypothesize that disaster relief CSR activities involving in-kind donations should receive more stakeholder attention than those that involve only monetary donations.

*Hypothesis 5 (H5): Disaster relief CSR activities that involve in-kind contributions (in place of or in addition to monetary contributions) receive more stakeholder attention than those that involve only monetary contributions.*

## METHOD

### Sample and data

To test the hypotheses developed above, we constructed a sample of firms that participated in relief efforts following a set of large-scale natural disasters, including the 2004 Indian Ocean tsunami, Hurricane Katrina in 2005, the 2010 earthquake in Haiti, and the 2011 earthquake and Tohoku tsunami in Japan. These events are the four natural disasters that have generated the most corporate disaster relief philanthropy during the past decade according to the U.S. Chamber of Commerce's Business Civic Leadership Center (BCLC), which has tracked corporate disaster relief activities since the 2004 Indian Ocean tsunami and constitutes the most comprehensive source of data on such activities available (BCLC, 2010). Although these four disasters do not represent a random sample of all natural disasters to which firms could respond, they include variation on at least two key variables that could influence corporate disaster relief giving. Of the four disasters, two occurred in developed countries (Hurricane Katrina and the Japanese earthquake) and two occurred in developing countries (the Indian Ocean tsunami, which hit Indonesia, Sri Lanka, India, and Thailand the hardest; also the Haitian earthquake). Similarly, two occurred in the Western Hemisphere and two in the Eastern Hemisphere. This symmetry reduces the likelihood that the results reported below are driven by the development status or location of the countries affected by the disasters.

Our initial sample consisted of all companies that reported having contributed to the relief efforts for any of these disasters to the BCLC—a total of 2,054 firms (567 firms donated to relief efforts following the Indian Ocean tsunami, 816 to Hurricane Katrina, 355 to the Haitian earthquake, and 317 to the Japanese earthquake). Because some of our key variables were based on stock market reactions to news of a company's disaster relief activities (see below for details), we restricted the sample to publicly traded companies listed on U.S.-based exchanges for which stock returns data around the announcement of relief efforts were available from the Center for Research in Security Prices (CRSP) database and which issued press releases announcing their disaster relief programs. These restrictions left a sample of 515 firms. Furthermore, we excluded an additional 45 firms that made potentially confounding announcements in

close proximity to the announcements of their disaster relief plans. In doing this, we considered the following events as confounds: announcements of quarterly financial results, announcements of a dividend, and any announcements related to mergers or lawsuits that involved sums equivalent to 10 percent or greater of annual revenues. Finally, we excluded 37 firms whose relief efforts had been discussed in the media in advance of the firms' official announcements because it was not clear when information about these firms' disaster relief philanthropy became available to financial markets (however, the results of the analysis were not materially altered when these firms were retained in the sample, with the day of the first media report of firm activities being considered the event day). These restrictions left a final sample of 433 firm disaster relief programs across the four disasters.

### Variables and analysis

#### *Dependent variables*

We employed three different dependent variables in the various analyses reported below. The first two were measures of stakeholder attention constrained by different time horizons to proxy for longer and shorter term effects. We proxied for stakeholder attention by tracking coverage of firm disaster relief activities in U.S. newspapers within two time windows. Consequently, the first dependent variable, which we refer to as *Stakeholder Attention (six-month window)* is a count of the number of articles run in U.S. newspapers that discuss a particular firm's disaster relief efforts in the first six months following the firm's first announcement of its disaster relief plans. This variable was constructed by searching for the combination of the company name (along with abbreviations) and the disaster name (along with variants) in the "U.S. Newspapers" source category of Dow Jones' Factiva database. Hits were then reviewed by hand to count the articles discussing the company's disaster relief efforts and to discard duplicates before being summed to create the count variable.

Media coverage serves as an effective proxy for stakeholder attention because of media's unique stakeholder role as information intermediary to other stakeholders (Deephouse and Heugens, 2009). The media both reflect and influence public opinion (Deephouse, 2000; Fombrun, 1996). Much as for Brown and Deegan (1998: 27), it is "not crucial to our purposes" whether the media primarily

influences or reflects stakeholder opinion; in either case media coverage serves as an indicator of stakeholder attention levels (Deephouse and Heugens, 2009; see also Deephouse and Carter, 2005).

The second dependent variable, which we referred to as *Stakeholder Attention (five-day window)* is also a count of newspaper mentions of corporate disaster relief philanthropy. It was constructed exactly as described above with the exception that only articles that occurred within the first five days following a firm's first announcement of its disaster relief plans (including the day of the announcement) were counted. This variable was designed to proxy for short-term stakeholder attention.

The third dependent variable used in the analysis was *Cumulative Abnormal Market Returns (CAMR)*, which we use as a proxy for CFP. Strictly speaking, *CAMR* tracks corporate market performance (CMP) rather than accounting-based CFP. However, because short-term *CAMR* has been shown to be highly correlated with long-term, accounting-based performance metrics (Kale, Dyer, and Singh, 2002), we consider it a viable proxy for CFP in our context. Further, a market-based measure of CFP is more likely to capture financial benefits of CSR that elude same-period accounting measures of CFP (such as for the "insurance-effect" of CSR—cf. Godfrey *et al.*, 2009). *CAMR* compares a firm's actual market returns around an event of interest to the firm's expected market returns in the absence of that event; the difference between actual market returns and expected market returns is termed the abnormal (or excess) market return (Brown and Warner, 1985). The events of interest in our study were corporate announcements of disaster relief aid. In estimating the abnormal market returns around these events, we used two widely employed approaches to estimate expected market returns. The first approach is known as the market model method, in which expected returns are calculated by linearly regressing a firm's daily stock return against that of a market portfolio over a period of time preceding the event of interest and using the resulting regression parameters to estimate that firm's expected return on the days of interest given the return of the market portfolio on those days (see Arthur and Cook, 2004; Sanders and Boivie, 2004). Following prior work, for our market model analysis, we used a standard estimation window of 255 days ending 46 days before the event day and a value-weighted market portfolio made up

of all securities in the CRSP database (e.g., Wade *et al.*, 2006). The second approach we employed to estimate expected returns is known as the market adjusted method, in which expected market returns are set equal to the market portfolio returns on the days of interest (Arthur and Cook, 2004; Brown and Warner, 1985). For our analysis, using the market adjusted method we again employed the value-weighted CRSP portfolio. Both approaches yielded a daily abnormal return equal to each firm's actual return minus its expected return. We summed these daily abnormal returns over several different event windows surrounding the earthquake aid announcement (four, five, and six days) into *CAMR*.

### Independent variables

Independent variables included several characteristics of corporate disaster aid programs. The first independent variable, *Disaster CSR value*, indicates the magnitude (monetary value) of a firm's disaster relief philanthropy (scaled by firm assets). In the BCLC data, 15 percent of firms that reported contributions to the four disasters in our sample did not indicate the value of their contributions. In the analyses reported below, *Disaster CSR value* was imputed for these missing values based on the other independent and control variables using the "impute" function in Stata 9. However, as discussed further below, the reported results would not have been changed qualitatively if these observations had simply been excluded from the analysis. The next independent variable, *NGO partner indicator*, was an indicator variable that took a value of 1 if at least one press release discussing a firm's relief philanthropy was issued by a nongovernmental relief organization that partnered with the firm (within the first six months following the firm's announcement of its relief activities), and a value of 0 otherwise. *CSR urgency indicator* tracked the timing of the firm's first public announcement of its disaster relief aid, taking a value of 1 if the first press release occurred within five days of the disaster, and 0 otherwise. Finally, the last independent variable was also an indicator variable, denoted *In-kind indicator*, which took a value of 1 if at least a portion of a firm's relief aid consisted of in-kind donations of goods and/or services, and a value of 0 otherwise.

### Control variables

We also included several firm characteristics in the analysis as control variables that may have



influenced the amount of stakeholder attention a firm received. *Prior attention* was a count of the number of articles in major U.S. newspapers discussing any aspect of the firm in the year before the disaster (denoted year  $t-1$ , and scaled by firm assets). *CSR press releases* was a count of press releases issued by a firm or other organizations publicizing that firm's relief philanthropy over the same six-month window discussed above. *Total assets* was a measure of firm size—the logged value of each firm's total assets in year  $t-1$ . *ROA* tracked firm profitability in terms of return on assets (again in year  $t-1$ ). *Advertising* was firm advertising intensity (advertising expenditures in year  $t-1$  scaled by assets). As roughly 50 percent of the firms in the sample were missing advertising expenditures data in Compustat, we assigned 0 in advertising expenditures for these firms (the results reported below for the independent variables do not change if these missing values are imputed).

We included an indicator variable that took a value of 1 if a firm was headquartered in the U.S. and a series of industrial sector dummy variables based on the firms' primary SIC code, including finance (SIC 6000–6799), manufacturing (SIC 2000–3999), services (SIC 7000–8999), trade (SIC 5000–5999), telecommunications (SIC 4800–4899), transportation (4000–4799), and agriculture and natural resources (SIC 0100–2999). We also included dummy variables for each of the different disasters.

Finally, we controlled for the possibility that sample selection bias impacted the results using the Heckman selection model (Heckman, 1979), which controls for selection effects by modeling the selection of observations into the sample from the broader population in the first stage and then using the results of this first-stage model to account for selection bias in the second-stage model (see Karaevli, 2007; Semadeni *et al.*, 2008; Zajac and Westphal, 1996). Because we considered all publicly traded companies listed on U.S.-based exchanges to be at risk of becoming involved in disaster relief efforts, we included the entire population of firms in the Compustat database at the times of each of our four disasters in the first-stage selection models—a total of 37,120 firm-years across the four events. From this first-stage model, we generated the nonselection hazard, known as the *inverse Mills ratio*, for each firm in the sample and included this value as an additional control

variable in the analysis to account for selection effects.<sup>2</sup>

## Analysis

We conducted three separate analyses to test the hypotheses laid out above. The first analysis examined the factors that predict stakeholder attention to corporate disaster CSR. Because the dependent variable of this analysis was a count variable, we conducted preliminary analyses using both Poisson and negative binomial regression, as count data may be accurately approximated by the Poisson and negative binomial distributions. Poisson regression is the more efficient (i.e., makes better use of all the data) of the two approaches, but is only valid when its underlying assumption that the sample mean is equal to its variance (the equidispersion assumption) is met. To test the validity of the equidispersion assumption (and, consequently, the appropriateness of Poisson regression) for our sample, we estimated preliminary models using both Poisson regression and negative binomial regression and compared the two in a series of likelihood ratio tests. The likelihood ratio test  $\chi^2$  statistics were consistently significant, indicating that the two approaches were not equivalent and rejecting the equidispersion assumption of Poisson regression. Consequently, all of the reported models were estimated using negative binomial regression.

Moreover, about one-third of the firms in the sample responded to more than one of the four disasters in the sample. Such clustering of observations within firms has the potential to bias the results of the analysis if unobserved firm characteristics lead to correlation between the error terms of observations from the same firm. The two primary methods for controlling unobserved unit characteristics are the inclusion of random effects or fixed effects (Kennedy, 2003). Random-effects models are more efficient than fixed-effect models, but make the assumption that unit effects are uncorrelated with independent variables. A well-accepted method for testing whether or not this assumption is met is to conduct a Hausman test comparing a random-effect model with an

<sup>2</sup>The selection model included all of the control variables discussed in the preceding paragraphs except *Prior Attention* and *CSR Press Releases*. This first-stage selection model produced a pseudo  $R$ -square of 0.174, indicating that the selection model accounted for roughly 17% of the variance in firm involvement with disaster relief.

equivalent fixed-effect model (Kennedy, 2003). We conducted such a test for the analysis of stakeholder attention to firm disaster relief using Stata's "Hausman" function. The results of this test ( $\chi^2 = 8.99$ ,  $p > 0.9$ ) strongly reject the null hypothesis that the random-effects and fixed-effects models are distinct. This result indicates that the assumptions of the random-effects model are not violated. Consequently, random-effects negative binomial regression is used in all models of stakeholder attention.

The second analysis was an event study looking at the CAMR following the announcement of firm disaster relief programs. Event studies have become increasingly popular among management scholars in the past decade because of their ability to examine the financial implications of discrete events and announcements (Arthur and Cook, 2004; Sanders and Boivie, 2004; Wade *et al.*, 2006). As the purpose of this analysis was not simply to document the effect of corporate disaster relief on stock market reaction (for prior evidence on this issue, see Patten, 2008), but to explore stakeholder attention as a mediator of this relationship, we divided the initial event study sample into two subsamples. The first subsample consisted of firms whose disaster relief aid received visible stakeholder attention during the first five days following the firm's announcement of its disaster relief plans, and the second consisted of firms whose relief efforts received no attention during that window. Of the original 433 firms in the sample, 168 received stakeholder attention and were placed in the stakeholder-attention subsample, while 265 did not and were placed in the no-stakeholder-attention subsample. We conducted the event study using Eventus software available through Wharton Research Data Services.

The third analysis employed generalized least squares (GLS) regression with CAMR (using the market method model) over a five-day event window as its dependent variable. This event window was selected because CAMR was slightly larger, on average, for the firms in the sample for this window than for alternate event windows. However, the results are not qualitatively changed if a four-day or six-day window is used. This analysis also included *Stakeholder attention (five-day window)*, which was previously used as a dependent variable, as an independent variable to test whether short-term stakeholder attention mediates the relationship between disaster relief CSR and CFP. This analysis also included the balance of the independent and control variables described above with the exception

that for all of the variables that were previously constructed over six-month windows following a firm's announcement of its CSR plans, variants are constructed over only the five-day window following each firm's announcement of its disaster relief CSR plans. The use of these shorter-term, alternate variable constructions is necessitated by the short-term construction of the dependent variable employed in this third analysis.

As above, the results of the GLS regression models of CAMR are clustered by firm. Again, we conducted a Hausman test of the appropriateness of using random-effects models to control for unobserved heterogeneity caused by such clustering. The results of this test ( $\chi^2 = 8.82$ ,  $p > 0.7$ ) rejected the null hypothesis that the results of the random-effects model were different from those of the fixed-effect model. Consequently, we employed random effects in all reported models.

## RESULTS

### Antecedents of stakeholder attention

Table 1 reports descriptive statistics and pairwise correlations for study variables. As can be seen in the table, none of the correlations among study variables was large enough to cause concern that the reported results were affected by multicollinearity.

Table 2 reports results of the random-effects negative binomial regression models of stakeholder attention to corporate disaster relief CSR. Model 1 included only control variables. As can be seen, disaster relief efforts of firms with more prior media coverage and more CSR-related press releases received more attention than those of firms with less prior coverage and fewer press releases. Additionally, several of the event and industry dummies are significant. Finally, the coefficient for the inverse Mills ratio is negative and significant, indicating that the types of firms that chose to engage in disaster relief CSR were more likely to receive stakeholder attention for these efforts than those that chose not to provide disaster relief CSR, on average.

Model 2 introduced the independent variables. The *CSR value* coefficient was positive but failed to approach statistical significance, indicating that the size of disaster relief CSR was not a major driver of stakeholder attention over a six-month time window. This finding indicates that H2 is not supported over this time horizon. On the other hand, the *CSR urgency* and *NGO partner*

Table 1. Descriptive statistics and correlations

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<i>Dependent variable</i>																			
1. Stakeholder attention (# articles)	2.03	4.56																	
<i>Independent variables</i>																			
2. CSR value (\$ per \$mil assets)	0.06	1.45	0.02																
3. NGO partner indicator	5.62	0.22	0.28	0.03															
4. CSR urgency indicator	2.11	0.56	0.29	0.03	0.04														
5. In-kind indicator	0.42	0.49	0.17	0.02	0.09	0.13													
<i>Control variables</i>																			
6. Prior attention (# articles, $t-1$ per \$mil assets)	0.08	0.21	0.07	-0.06	0.12	0.01	0.09												
7. CSR press releases (# per \$mil assets)	0.001	0.005	-0.04	-0.10	-0.04	-0.09	-0.01	0.29											
8. Total assets, $t-1$ (\$100 bil)	0.86	2.50	0.02	-0.01	-0.03	0.04	-0.08	-0.11	-0.06										
9. ROA, $t-1$	0.05	0.08	0.04	-0.02	0.03	0.03	0.03	0.11	0.05	-0.11									
10. Advertising, $t-1$ (\$ per \$mil assets)	0.01	0.02	0.04	-0.04	0.08	0.03	0.14	0.20	0.00	-0.13	0.06								
11. Headquarters country (U.S. = 1)	0.86	0.35	0.13	-0.01	0.07	-0.02	0.01	0.13	0.05	-0.23	0.03	0.13							
12. Hurricane Katrina	0.34	0.47	0.06	0.06	0.07	0.28	0.36	0.05	-0.03	-0.03	0.02	-0.02	0.03						
13. Haiti earthquake	0.29	0.45	0.11	-0.13	0.07	0.11	-0.22	-0.06	0.07	0.02	-0.07	0.00	-0.01	-0.46					
14. Japan earthquake & tsunami	0.18	0.38	-0.14	0.01	-0.09	-0.05	-0.04	-0.03	-0.05	0.04	0.04	0.02	-0.10	-0.33	-0.30				
15. Finance sector	0.19	0.40	-0.02	-0.01	-0.08	0.05	-0.14	-0.08	-0.07	0.40	-0.16	-0.24	0.02	0.01	0.09	-0.01			
16. Manufacturing sector	0.46	0.50	-0.14	-0.02	-0.05	-0.04	0.05	-0.11	0.09	-0.17	0.16	0.04	-0.14	-0.08	0.00	0.06	-0.45		
17. Services sector	0.06	0.23	-0.01	0.02	0.02	-0.07	0.08	0.13	0.00	-0.07	-0.05	-0.04	0.04	0.13	-0.09	-0.06	-0.12	-0.22	
18. Retail/wholesale sector	0.15	0.36	0.09	0.02	0.14	-0.02	-0.02	0.22	0.00	-0.12	0.02	0.32	0.12	-0.10	0.05	-0.01	-0.21	-0.39	-0.10
19. Telecommunications sector	0.05	0.21	0.04	-0.01	-0.04	0.09	0.07	-0.02	-0.02	-0.01	0.00	0.02	0.03	0.04	-0.05	0.01	-0.11	-0.21	-0.05
20. Transportation sector	0.05	0.21	0.20	0.00	0.04	0.00	0.06	-0.01	-0.03	-0.02	-0.04	-0.02	0.06	-0.06	-0.02	0.07	-0.11	-0.20	-0.05
21. Inverse Mills ratio	1.78	0.63	-0.25	-0.05	-0.21	-0.21	-0.07	0.27	0.36	-0.30	0.00	-0.04	-0.15	-0.05	-0.08	0.06	-0.07	-0.11	-0.07

Correlations greater than 0.095 are significant at the 0.05 level

Table 2. Random-effects negative binomial regression models of stakeholder attention to corporate disaster relief CSR

Model: DV window:	Model 1 Six-month	Model 2 Six-month	Model 3 Five-day	Model 4 Five-day
<i>Independent variables</i>				
CSR value (per \$mil assets)		(0.18) (0.11)		0.25* (0.10)
NGO partner indicator		0.66*** (0.15)		1.00* (0.43)
CSR urgency indicator		1.21*** (0.18)		0.39** (0.15)
In-kind indicator		0.53*** (0.15)		1.23*** (0.20)
<i>Controls</i>				
Prior attention (# articles, <i>t</i> -1 per \$mil assets)	0.89** (0.33)	0.55 (0.29)	1.03*** (0.29)	0.81** (0.25)
CSR press releases (# per \$mil assets)	31.71* (14.83)	38.60** (14.85)	0.46*** (0.09)	0.39*** (0.09)
Total assets, <i>t</i> -1 (\$100 bil)	-0.76 (0.48)	-0.59 (0.46)	-0.46 (0.46)	-0.36 (0.39)
ROA, <i>t</i> -1	0.90 (1.01)	0.72 (0.84)	0.47 (1.07)	0.59 (0.89)
Advertising, <i>t</i> -1 (per \$mil assets)	2.26 (3.32)	-0.18 (3.18)	1.88 (3.29)	0.94 (2.98)
Headquarters country (U.S. = 1)	0.32 (0.30)	0.49 (0.29)	0.41 (0.33)	0.47 (0.31)
Hurricane Katrina <sup>a</sup>	0.50* (0.21)	-0.62** (0.22)	0.14 (0.23)	-0.74** (0.23)
Haiti earthquake <sup>a</sup>	0.15 (0.22)	-0.36 (0.22)	0.20 (0.23)	-0.39 (0.23)
Japan earthquake & tsunami <sup>a</sup>	-0.42 (0.26)	-1.09*** (0.27)	-0.26 (0.28)	-0.92** (0.28)
Finance sector <sup>b</sup>	-0.39 (0.30)	-0.38 (0.29)	-0.62* (0.30)	-0.46 (0.29)
Manufacturing sector <sup>b</sup>	-0.94*** (0.31)	-0.99*** (0.30)	-1.22*** (0.31)	-1.12*** (0.29)
Services sector <sup>b</sup>	-0.41 (0.40)	-0.29 (0.38)	-0.36 (0.37)	-0.25 (0.36)
Retail/wholesale sector <sup>b</sup>	-0.69 (0.36)	-0.82* (0.34)	-0.89* (0.35)	-0.82* (0.33)
Telecommunications sector <sup>b</sup>	0.31 (0.36)	-0.44 (0.33)	-0.77* (0.35)	-0.77* (0.32)
Transportation sector <sup>b</sup>	0.14 (0.35)	0.28 (0.32)	0.02 (0.33)	0.11 (0.31)
Inverse Mills ratio	-1.18*** (0.20)	-1.01*** (0.20)	-1.08*** (0.20)	-0.99*** (0.20)
<i>N</i>	433	433	433	433
Log likelihood	-694.65	-656.47	-444.93	-419.42
LR test (vs. Models 1 and 3)		76.37***		51.02***

Standard errors are in parentheses.

<sup>a</sup> Omitted event category = 2004 Asian tsunami.<sup>b</sup> Omitted industry category = agriculture and extraction.\**p* < 0.05; \*\**p* < 0.01; \*\*\**p* < 0.001. Two-tailed tests



*indicator* coefficients are both positive and highly significant, indicating that firms that announced their earthquake relief plans immediately after the disaster received more stakeholder attention than those that issued such releases later on and that firms whose disaster relief CSR was publicly announced by an NGO partner received more stakeholder attention than other firms. These results strongly support H3 and H4. Similarly, the *In-kind indicator* coefficient was positive and highly significant, suggesting that firms that made in-kind donations to disaster relief (instead of, or in addition to, cash donations) received more stakeholder attention than those that only made cash donations. This result provided strong support for H5.

Models 3 and 4 replicate Models 1 and 2, but employ the alternate dependent variable, *Stakeholder attention (five-day window)*, which tracks short-term stakeholder attention, and use variants of the independent variables constructed over five-day windows. The results of these models are consistent with those discussed above, with the exception that the *CSR value* coefficient reached statistical significance in Models 3 and 4. This finding demonstrates the monetary value of a firm's disaster relief CSR positively predicts stakeholder attention in the short term, and provides mixed support for H2. The results also show that *In-kind indicator*, *NGO partner indicator*, and *CSR urgency indicator* are meaningful predictors of stakeholder attention even in the short term. These results will be utilized below to help test whether or not stakeholder attention mediates the relationship between CSR characteristics and CFP.

## Event study

The results of the event study examining the effect of disaster relief CSR on CAMR are reported in Table 3. As can be seen, the average CAMR in the full sample ranged from 0.14 to 0.35 percent for the various event windows and across the market model and market-adjusted returns model. The CAMR for the full sample was not significantly different than zero for any of the event windows or estimation methods.

Table 3 also reports separate results for the stakeholder-attention (within five days of firm announcement of its CSR) and no-stakeholder-attention (again over five days) subsamples. As can be seen, the CAMRs for the stakeholder-attention subsample across all three event windows are positive, larger, and significantly different from zero, whereas the CARs for the no-stakeholder-attention subsample are small and not significantly different from zero. These results suggest that stakeholder attention may mediate the effect of corporate disaster aid CSR on CAMR such that firms whose CSR announcements received visible stakeholder attention experienced positive CAMRs, but firms whose announcements received no visible stakeholder attention did not experience CAMRs meaningfully different from zero. To confirm this finding, we conducted a series of two-sample *t*-tests comparing CAMRs across the stakeholder-attention and no-stakeholder-attention subsamples. These tests indicated that mean CAMRs for all three time windows were significantly different between the two subsamples (at the 0.05 level). These tests lend further support to the previous result that

Table 3. Abnormal market returns surrounding the announcement of corporate disaster relief CSR

Model: Sample:	Market model			Market-adjusted		
	Full	Attention five-day window	No attention five-day window	Full	Attention five-day window	No attention five-day window
<i>Cumulative abnormal returns</i>						
Six-day window (0–5)	0.21% (0.45)	0.55%** (2.36)	0.00% –(1.30)	0.34% (1.10)	0.65%* (2.05)	0.15% –(0.25)
Five-day window (0–4)	0.23% (1.01)	0.54%* (1.90)	0.04% –(0.24)	0.35% (1.39)	0.62%* (1.90)	0.19 (0.22)
Four-day window (0–3)	0.14% (1.20)	0.37%* (1.74)	0.00% (0.12)	0.23% (1.48)	0.45%* (2.05)	0.09% (0.22)
<i>N</i>	433	168	265	433	168	265

Z-statistic in parentheses.

\* $p < 0.05$ ; \*\* $p < 0.01$

stakeholder attention mediates the relationship between CSR and CFP.

### Mediation test

However, the results of the event study reported above could possibly be driven by qualitative differences in the relief efforts of firms in our stakeholder-attention subsample relative to the no-stakeholder-attention subsample, rather than by the presence of stakeholder attention itself. Moreover, the event study cannot be construed as a clear test of whether stakeholder attention mediates the relationship between disaster relief CSR and CFP. To test these issues in more detail, we conducted

a GLS regression analysis of the effects of CSR characteristics and stakeholder attention on firm CAMR. The results of this analysis are reported in Table 4.

Model 1 reports only the control variables. As can be seen, none of the control variables approach statistical significance. This result is expected given that all of these variables contain information that was available to investors before the event window over which CAMRs were constructed here, and, consequently, any effects of these variables on market performance should have been priced in before the beginning of the event window. For brevity, the industry dummies are omitted here. But when they are included

Table 4. Random-effects GLS regression models of cumulative abnormal returns following disaster relief CSR announcements

	Model 1	Model 2	Model 3
<i>Independent variables</i>			
Stakeholder attention, five-day window (# articles)			0.29* (0.14)
CSR value (per \$mil assets)		-0.08 (0.11)	-0.09 (0.11)
NGO partner indicator (five-day window)		1.37 (1.01)	1.28 (1.01)
CSR urgency indicator		0.94** (0.36)	0.76* (0.37)
In-kind indicator		0.15 (0.34)	0.06 (0.34)
<i>Controls</i>			
Prior coverage (# articles in 2009 per \$mil assets)	-0.26 (0.85)	-0.47 (0.85)	-0.67 (0.85)
CSR press releases, five-day window (# per \$mil assets)	0.15 (0.39)	0.04 (0.39)	-0.24 (0.40)
Total assets, <i>t</i> -1 (\$100 bil)	0.17 (0.70)	0.24 (0.70)	0.21 (0.70)
ROA, <i>t</i> -1	-1.82 (1.97)	-1.74 (1.96)	-1.72 (1.95)
Advertising, <i>t</i> -1 (per \$mil assets)	0.87 (6.92)	0.25 (6.89)	0.78 (6.90)
Headquarters country (U.S. = 1)	-0.29 (0.50)	-0.24 (0.49)	-0.35 (0.49)
Hurricane Katrina <sup>a</sup>	0.43 (0.45)	-0.15 (0.50)	-0.05 (0.50)
Haiti earthquake <sup>a</sup>	0.83 (0.45)	0.32 (0.49)	0.35 (0.48)
Japan earthquake & tsunami <sup>a</sup>	-0.19 (0.51)	-0.58 (0.53)	-0.46 (0.52)
Inverse Mills ratio	0.04 (0.30)	0.17 (0.30)	0.26 (0.31)
<i>N</i>	433	433	433

Standard errors are in parentheses.

<sup>a</sup> Omitted event category = 2004 Asian tsunami.

\* $p < 0.05$ ; \*\* $p < 0.01$

in the model, none of them approach statistical significance and the other results do not change qualitatively.

Model 2 introduced independent variables relating to disaster relief CSR characteristics. The coefficients for *CSR value*, *NGO partner indicator*, and *In-kind indicator* all fail to reach statistical significance. On the other hand, the *CSR urgency* coefficient is positive and highly significant, indicating that firms that announce their disaster relief programs shortly after a disaster occurs receive more positive CAMRs than firms that announce such programs later.

Model 3 introduces *Stakeholder attention (five-day window)* in addition to the other independent variables. If stakeholder attention partially mediates the relationship between disaster relief CSR and CFP, as hypothesized, its coefficient would be significant and its inclusion in the model would reduce the significance of the relationship between the other independent variables and CAMR. This is indeed the case. The *Stakeholder attention* coefficient is positive and significant, while the significance of the *CSR novelty indicator* coefficient is reduced in Model 3 relative to Model 2 (from  $p = 0.006$  to  $p = 0.04$ ). These results suggest that stakeholder attention partially mediates the relationship between disaster relief CSR and CFP. To test this mediation effect more formally, we conducted a set of Sobel-Goodman mediation tests (MacKinnon, Warsi, and Dwyer, 1995). These tests confirmed that *Stakeholder attention* mediates the relationship between *CSR novelty indicator* and CAMR at the 0.05 level, accounting for about 24 percent of the relationship between these two variables. Taken together, these results provide strong support for H1.

The effect of stakeholder attention of CAMR is not only statistically significant, it is also economically meaningful. Over the five-day window examined here, a one standard deviation increase in stakeholder attention corresponds with an increase in a firm's CAMR by 0.4 percent. As the average market capitalization of the firms in our sample is roughly \$25 billion, this translates to an increase of roughly \$100 million in market capitalization.

### Robustness checks

In addition to the analysis reported in Tables 2–4, we conducted a series of tests of alternative

models and variable operationalizations to test the robustness of the reported results. First, to verify that the results in Table 2 were not contingent on the negative binomial specification, we re-estimated all reported models using ordinary least squares (OLS) regression; the results of the OLS regression models were qualitatively identical to those reported above. Second, in constructing several independent and control variables reported in Tables 2 and 4, we scaled variables by firm assets to make the interpretation of these variables independent of firm size. To verify that the reported results were not driven by this variable construction approach, we re-estimated all models with unscaled versions of these variables. The results of these alternate models were qualitatively identical to those reported above.

Similarly, several dependent and independent variables employed in the analyses reported in Models 2 and 4 were constructed using a five-day window following either the occurrence of a disaster or the firm's announcement of its disaster relief CSR plan. To ensure that the results were not contingent on this window, we reran all models with several different event windows (including four-day, six-day, and seven-day windows). In all cases, the results were similar to those reported above. Taken together, the results of these robustness checks suggest that the reported results are robust to alternative specifications of variables and models.

## DISCUSSION AND CONCLUSION

Our analysis examined the corollary to Mitchell *et al.*'s (1997) answer to which stakeholders “really count” to firms by considering which firms’ disaster relief CSR activities “really count” to stakeholders. More specifically, we examined how stakeholders spend their scarce attention when it comes to firm CSR activities. Because stakeholders have limited amounts of attention (e.g., Ocasio, 1997), they primarily attend to disaster relief CSR that signals other-regarding. Connecting to Mitchell *et al.*'s (1997) model of managerial attention, we hypothesized how these mechanisms would function in the opposite direction for stakeholders attending to CSR—in sum, that the volume of stakeholder attention to firm disaster relief CSR would be driven by firms’ willingness to use their power to assist others, firms’ legitimate (i.e., normative) engagement with social good, firms’ level of urgency or promptness

in responding to social needs, and the manner in which disaster relief CSR is enacted. The results provided support for the hypotheses associated with legitimacy (whether or not a disaster relief CSR initiative involves an NGO partner), urgency (prompt CSR response), and enactment (in-kind donations) but provided mixed support for our hypothesis dealing with power (the size of the donation).

The stakeholder theory perspective on CSR holds that CSR may benefit firms financially because various stakeholder groups may reward firms for their CSR activities. This paper explores a previously unexplored premise of this argument—that stakeholder rewards to CSR should only be expected to accrue to the extent that stakeholders pay attention to firm CSR activities. This being the case, many of the previously hypothesized stakeholder-generated benefits to firms as a result of their CSR activities should be contingent on the extent that these CSR activities manage to attract stakeholder attention. Our analysis finds support for this view, demonstrating that stakeholder attention partially mediated the relationship between disaster CSR initiatives and firm financial benefits.

### Implications for theory

A significant implication of this study for theory is that stakeholder attention plays a key role in the success or failure of firm CSR initiatives. Perhaps in no other management domain is the role of stakeholder attention to firm activities more crucial than in the translation of CSR to CFP—where the degree of attention that stakeholders pay to a firm's CSR initiatives may crucially shape their decisions to reward or punish that firm for its social impact. However, despite the significance of the impact that stakeholder attention may play in shaping the financial implications of firm CSR, research had not previously theorized explicitly the role of stakeholder attention in this process. The demonstration of stakeholder attention to firm CSR as a mediator of the CSR and CFP relationship may mark a significant development in the CSR literature. Researchers have struggled for decades to establish causal links between CSR and CFP (see the seminal reviews by Margolis and Walsh, 2003; Orlitzky *et al.*, 2003). This paper answers recent calls to identify the precise mechanisms through which CSR influences CFP (e.g., Lev *et al.*, 2010). While this paper focuses on only one form of CSR, disaster relief CSR, the theory developed here may

be more generally applicable to other forms of CSR as well.

This paper also enriches the stakeholder theory literature by developing a previously unexplored domain of the firm-stakeholder relationship—stakeholder attention to firm actions. While a vibrant and important literature on managerial attention to stakeholders exists (Agle *et al.*, 1999; Mitchell *et al.*, 1997, 2011), this paper constitutes the first attempt to theorize the converse processes that lead stakeholders to attend to firm activities. While this paper only considers the antecedents of stakeholder attention to firm disaster relief CSR activities, the theory developed here may generalize to other types of actions taken by firms. This being the case, the introduction of the concept of stakeholder attention to firm activities may be a significant contribution to stakeholder theory.

Furthermore, this paper contributes to the nascent literature on strategic philanthropy. Our operationalization of in-kind donations may approach something of a proxy for strategic philanthropy, especially the aspect of “creat[ing] the greatest value through giving in ways that no other company can match.” (Porter and Kramer, 2002:16; see also Saiia, Carroll, and Buchholtz, 2003) Given that in-kind donations were a very significant predictor of stakeholder attention and that in-kind donations were highly valued by the philanthropy recipients (cf. BCLC director's comments: BCLC, 2010), evidence suggests that strategic philanthropy is a potent source of value creation for both donor and recipient (Porter and Kramer, 2002, 2011).

### Implications for practice

This study also has several implications for firm CSR in practice in that application of our results may allow managers to more effectively allocate social investments. A number of the results reported above involve factors that are clearly under managerial control. For example, our analysis showed that the use of in-kind donations to disaster relief increases stakeholder attention to firm social initiatives relative to all-cash donations. This finding implies that managers can increase the positive publicity their firms receive for their social activities by contributing to causes that align with the firms' competencies. Similarly, the timing of the announcement of a firm's disaster relief CSR activities is strongly correlated with stakeholder attention: firms that make relief announcements



shortly after the disaster receive more stakeholder attention than later announcers. Thus, managers can increase the amount of stakeholder attention their firms' relief activities receive by being quick to respond following a disaster (this also obviously enhances the value of the relief to the relief recipients). Third, our results indicate that a firm's disaster relief CSR receives more stakeholder attention if a partner NGO publicizes the firm's contribution. This finding suggests that firms may generate greater returns on social investments if they partner with established NGOs engaged in the causes they involve themselves with. Such an approach could prove beneficial to both the NGOs (which could receive needed corporate resources and know-how) and firms (which should receive enhanced stakeholder attention). These results are clearly applicable in the context of corporate disaster relief, but may also have implications for other forms of corporate social activities.

### Limitations, future directions, and conclusion

As the first attempt to document the factors that influence stakeholder attention to firm CSR activities, this study is limited in a number of ways. First, although the theory developed in this paper may apply to CSR generally, only one type of CSR—disaster relief CSR—was examined, and our results may not strictly generalize to other forms of CSR. Future work examining the hypotheses considered here in relation to other forms of CSR could clarify this issue. Second, our sample consisted only of publicly traded firms. If private firms differ in their CSR activities, or if stakeholders attend to private firms differently, our results may not generalize to private firms. Third, our measure of stakeholder attention is a global measure, rather than a measure targeted to specific stakeholder groups. It is possible that our aggregate results contain meaningful variation between different stakeholder groups as to the factors that attract their attention. Future work could explore this possibility by examining stakeholder attention in a more granular manner. Fourth, our studies were centered around discrete events—and so the CFP proxies we employed were derived from an event study. McWilliams and Siegel (1997) criticize the use of event studies of CSR because they may inaccurately infer a net social benefit. Theoretically, it is possible that shareholder value may increase, as demonstrated by an increase in stock

price, even though the actual underlying net result was redistribution of wealth from one stakeholder group—e.g., customers—to the shareholders. We acknowledge this limitation. With our data, we cannot measure society-level benefit from corporate disaster response efforts.

This paper demonstrates that firm disaster relief CSR initiatives generate financial benefits to the extent that a firm's stakeholders attend to these activities and reward the firm for them. Stakeholder attention to firm disaster relief efforts, in turn, is driven by the legitimacy, urgency, and enactment of disaster relief CSR. These results contribute to both CSR theory and stakeholder theory and suggest several concrete strategies that firm leaders could use to increase returns on their social investments.

### ACKNOWLEDGEMENTS

The authors would like to thank Brad Agle, Paul Godfrey, and David Whetten for valuable comments and suggestions on prior versions of this paper.

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