

# Terrorist Attacks and Corporate Social Responsibility

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## ABSTRACT

Using a sample of 31 major terrorist attacks occurring in the U.S. between 1994 and 2012, this study examines the causal effect of the threat of terrorism on firms' corporate social responsibility (CSR) activities. Our findings indicate that relative to firms that share similar corporate characteristics but are located in regions that do not experience terrorist attacks, public firms located in close proximity to terrorist attacks (i.e., the impact firms) substantially increase their investment in CSR following terrorist events. We further observe a strengthened association between CSR and firm value for the impact firms in the periods following terrorist events, especially when the CSR efforts of the impact firms are associated with greater media attention. Our additional results reveal that the impact firms tend to commit more resources to enhancing the environment, community, and diversity related dimensions of CSR following terrorist events. Overall, our findings support the conjecture that although firms located in the areas most impacted by terrorist attacks are likely to experience a greater demand for CSR activities, the value of the impact firms' CSR investments increase because their CSR efforts are likely to gain greater community visibility, especially in the periods following terrorist events.

Keywords: Terrorist Attacks; CSR; Firm Value; Media Attention; Visibility

JEL classification: G10, K42, L82, M14

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## 1. Introduction

According to the World Economic Forum, terrorism is one of the main managerial concerns for companies doing business in countries around the world.<sup>1</sup> As the governments in many countries tighten the security at public sites, business targets have become relatively more attractive to terrorists (Enders and Sandler, 2000). The growing awareness of the risk of terrorism is further evident from the passage of the U.S. Terrorism Risk Insurance Act (TRIA) on November 26, 2002. Indeed, a review of the annual reports of Fortune 500 firms from 2003 to 2006 identified 1,141 mentions of “terrorism” by managers (Czinkota et al., 2010). More recent statistics reveal that in 2017, approximately 62 percent of U.S. companies purchased terrorism insurance (Marsh, 2018). Although numerous studies have shown that terrorism risk and terrorist attacks having significant economic effects within and across countries (Abadie and Gardeazabal, 2003; Blomberg and Hess, 2006; Fratianni and Kang, 2006; Lutz and Lutz, 2006; Chesney, Reshetar and Karaman, 2011), there is little direct evidence of an impact at the firm level. Yet such evidence is likely to be useful because it can enhance our understanding of the impact of unanticipated and exogenous events, in our case, terrorist attacks, on managerial decisions and firm performance.

Using a sample of 31 major terrorist attacks involving human fatalities occurring over the 19-year period between 1994 and 2012 in the U.S. as an experiment,<sup>2</sup> we empirically examine the effect of terrorist attacks on the corporate social responsibility (CSR) investments of publicly traded firms. To reduce the concern that a growing awareness of the importance of CSR may explain the changes in firms’ investment in CSR over time, we use a difference-in-difference (DID)

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<sup>1</sup> <https://www.weforum.org/agenda/2018/11/these-are-the-top-risks-for-doing-business-around-the-world/> .

<sup>2</sup> Our final sample consists of 5,984 firm-years spanning 1993-2013 (i.e., one year before the earliest terrorist event and one year after the latest terrorist event in our study).

research design. Specifically, for each firm headquartered within a 50-mile radius of the location of a terrorist attack (i.e., the impact firm), we identify a firm with similar corporate characteristics (using a propensity score matching method) but situated outside the 50-mile radius (i.e., the non-impact firm) and include it in our control sample. Contradictory to the argument that terrorist events that inflict considerable losses thereby reduce the impact firms' incentive to invest in CSR following the attacks, we find that relative to the non-impact firms, impact firms tend to commit more resources to CSR after the firm year in which the terrorist attacks occur. Moreover, we find no evidence indicating that such investment is likely to be reversed in later years, suggesting that negative events can have a real and permanent effect on firms' engagement in CSR.

Next, we examine whether and how terrorist attacks influence the relation between CSR and firm value. To the extent that corporate stakeholders (including for example, the community, employees, and shareholders domiciled in the impact area of the terrorist attacks), who are also likely to be affected by terrorist events, value firms' greater CSR efforts to facilitate the recovery and reconstruction of the impact area, we expect that the association between CSR investment and the firm value of the impact firms will be stronger after the terrorist events. In contrast, a weaker association between CSR investment and the firm value of the impact firms following the terrorist events would support the conjecture that the increased investment in CSR demanded by various stakeholders increases the liabilities of the impact firms. That is, the increased investment in CSR resulting from the stakeholders' belief that "greater power comes with greater responsibility" might bring little benefit and represent a true cost to the impact firms.<sup>3</sup> Supporting our first view that the greater CSR efforts of the impact firms are likely to be valued more by various stakeholders,

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<sup>3</sup> Studies have provided evidence in line with the cost-increasing view of CSR especially when firms are requested or required to increase their CSR efforts (Di Giuli and Kostovetsky, 2014; Manchiraju and Rajgopal, 2017; Chen, Hung and Wang, 2018).

we find that the association between CSR and firm value for the impact firms is a strengthened in period following the terrorist events.

Finally, we also attempt to identify the channel through which terrorist attacks influence the relation between CSR and firm value. Following our observation that the impact firms tend to commit more resources to enhancing the environment, community, and diversity related dimensions of CSR following the terrorist events, we conjecture that these locally focus and community oriented CSR efforts of the impact firms are likely to increase their community visibility, especially in the period after a terrorist event, which in turn, enhances the impact firms' legitimacy. Supporting our conjecture, our results suggest that firms' CSR efforts are positively associated with media attention, and that the relation between CSR and media attention is strengthened after the impact firms experience a terrorist attack. More directly, our findings show that the strengthened relation between CSR and firm value is more likely to be observed when the impact firms are associated with greater media attention.

Taken together, the findings of our study are consistent with the argument that although terrorist attacks have the potential to significantly and negatively affect business operations, thereby reducing firm value, the attacks can also have a positive role in fostering impact firms' investment in CSR. More importantly, the value of the CSR investment of impact firms is greater because the CSR efforts of the impact firms are likely to increase their community visibility, which in turn, will enhance the firms' legitimacy and help firms gaining supports from various stakeholders.

Our findings make several contributions to the literature. First, our study extends the limited research on the impact of terrorism on capital markets, which is an area of great concern to various stakeholders including shareholders and corporate managers. To the best of our knowledge, our

study is one of the first to examine the direct impact of such unanticipated and exogenous events (i.e., terrorist attacks) on the CSR efforts of public firms.<sup>4</sup> Following the argument that extreme negative events can adversely influence public sentiment due to the increased volatility of corporate performance, Antoniou, Kumar and Maligkris (2017) and Antoniou, Kumar and Maligkris (2018) suggest that after experiencing terrorist attacks, managers and analysts near the location of the events tend to adopt more conservative corporate policies (e.g., reducing R&D expenditure and increasing cash holdings) and issue more pessimistic earnings forecasts, respectively. In contrast to these studies, our findings suggest that terrorist attacks promote firms' long-term investment in CSR. Although a higher level of CSR investment following a terrorist attack is inconsistent with more conservative corporate policies, our findings support the inference that the impact firms are likely to signal their future financial performance (Lys, Naughton and Wang, 2015) and/or build their social capital (Lins, Servaes and Tamayo, 2017) via greater investment in CSR in the period following a terrorist attack.

Second, the findings of our study are also relevant to the literature on the factors associated with firms' CSR performance. In contrast to the studies that focus on the institutional characteristics across countries (Ioannou and Serafeim, 2012; El Ghouli, Guedhami and Kim, 2017) and managers' and investors' characteristics within a country (Masulis and Reza, 2015; Cronqvist and Yu, 2017; Davidson, Dey and Smith, 2019; Dyck et al., 2019; Hegde and Mishra, 2019) in explaining firms' CSR activities, our findings suggest that exogenous negative events such as terrorist attacks can have a significant impact on firms' investment in CSR. Thus, this study sheds light on the heterogeneity in CSR performance across firms by identifying a new factor with the potential to affect CSR.

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<sup>4</sup> Studies have examined the effect of extreme weather events on both the economy and capital market participants' behavior (Huang, Kerstein and Wang, 2018).

Finally, an emerging strand of literature has attempted to identify the variables that can influence the relation between CSR and firm value. These studies have generally attributed the inconclusive findings regarding the relation between CSR and firm value to a lack of understanding of the moderating factors, such as the level of customers' awareness (Servaes and Tamayo, 2013), the presence of sophisticated investors (Luo, Wang, Raithel, Zheng 2015; Nguyen, Kecskés and Mansi, 2017; Buchanan, Cao and Chen, 2018), and the differences in country-level institutions (Dhaliwal et al., 2011; El Ghouli et al., 2017). Thus, our study adds to this strand of literature by presenting evidence that the association between CSR investment and firm value varies with the level of visibility associated with a firm's CSR efforts.

The remainder of this study is organized as follows. Section 2 reviews the literature and develops the hypotheses. Section 3 describes the data, samples, and empirical models. Section 4 presents the primary results of the study. In Section 5, we discuss the results of additional robustness tests. Finally, Section 6 concludes the study.

## **2. Literature Review and Hypothesis Development**

The risk of terror attacks is a new type of catastrophic risk faced by investors and firms. The Terrorism Risk Insurance Program Reauthorization Act of 2015 (TRIPRA) defines an "act of terrorism" as a violent act or an act that is dangerous to human life, property, or infrastructure that occurs on U.S. territory and is committed by an individual or individuals as part of an effort to coerce the U.S. civilian population, influence policy, or affect the conduct of the U.S. government by coercion.<sup>5</sup> It has long been recognized that the risk associated with terrorism can substantially

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<sup>5</sup> <https://www.marsh.com/us/insights/research/2018-terrorism-risk-insurance-report.html>.

affect the financial markets and business activities (Chen and Siems, 2004; Eldor and Melnick, 2004; Arin, Ciferri and Spagnolo, 2008; Chesney et al., 2011).

Terrorist attacks can negatively affect firm performance because they can bring both direct and indirect costs to the firms in the regions in which the attacks occur. Research suggests that companies are concerned about terrorism and its implications for business activities including reduced buyer demand (e.g., due to fear and uncertainty), interrupted supply chains (delayed shipments), increased corporate expenses (e.g., terrorism insurance premiums ), and reduced investor confidence in corporate sustainability (higher costs of debt and a reduced supply of foreign capital) (Eckstein and Tsiddon, 2004; Spich and Grosse, 2005; Czinkota et al., 2010; Guan, Li and Xu, 2016; Procasky and Ujah, 2016). Anecdotal evidence further suggests that the costs associated with the risk of terrorism can be substantial. For example, following the September 11, 2001 attacks in the U.S., Ford temporarily closed five of its U.S. auto plants due to the interruptions to its international supply chain (Siekman, 2003). Similarly, numerous aviation companies and courier services, including Federal Express and UPS, and many firms in the hotel industry suffered significant financial losses as a result of the reduced demand post the September 11 attacks in the U.S., (Navarro and Spencer, 2001). These examples suggest that terrorist attacks can negatively affect firms' economic activities and financial performance.

The idea of socially responsible corporate behavior is open to a wide array of interpretations. As a result, the question of whether, how, and when CSR is related to corporate financial performance has attracted significant research interest across various business disciplines and has long been the subject of extensive empirical inquiry (see Huang and Watson (2015); Radhakrishnan, Tsang and Liu (2018) for reviews of the CSR literature). The stakeholder view of CSR suggests that CSR can facilitate the maximization of shareholder value. However, others

argue that CSR is a manifestation of the agency problem and thus tends to benefit managers at the expense of shareholders (Bénabou and Tirole, 2010; Cheng, Hong and Shue, 2013; Krüger, 2015; Ferrell, Liang and Renneboog, 2016). For example, Cheng et al. (2013) directly support this view by empirically demonstrating that agency problems are an important determinant of CSR. Similarly, Krüger (2015) finds that investors respond negatively to positive CSR news, and argues that when CSR is driven by potential agency considerations, it is detrimental to shareholder value. In sum, although an extensive body of literature examines the link between CSR and firm value, the studies largely yield inconclusive results (Orlitzky, Schmidt and Rynes, 2003; Margolis, Elfenbein and Walsh, 2007).<sup>6</sup>

The literature suggests that a key driver of CSR at the firm level is a firm's financial performance/constraints (Orlitzky et al., 2003; Campbell, 2007; McWilliams and Siegel, 2011). Therefore, to the extent that terrorist attacks hinder firms' financial performance and/or increase the volatility of corporate performance (e.g., having more volatile earnings and cash flow) thereby increasing the firms' incentives of cash holding, we predict that relative to firms located outside the area affected by terrorist attacks, firms located near the location of the terrorist attacks are likely to reduce their investment in CSR following a terrorist event.

This is a plausible prediction because CSR is often considered to be a cost and the degree to which it contributes to the corporate bottom line has been a subject of controversy among practitioners and academics. As the scope of CSR has expanded, the monetary burden it creates for firms has invited greater level of criticism from investors. Hence, CSR is likely to be among the costs that managers first reduce when firms' face high financial constraints. Managers and

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<sup>6</sup> Studies generally suggest that CSR can be a costly investment with tenuous financial implications (Orlitzky et al., 2003; Margolis et al., 2007). For example, some studies report positive, negative, and even neutral effects of CSR on financial performance/firm value (McWilliams and Siegel, 2000).

investors may also perceive the reduction in firms' CSR investment as a rational decision following such events, especially given the uncertain financial implications associated with future-oriented CSR investments. In line with this argument, Antoniou et al. (2017) show that the managers of firms located in close proximity to terrorist attacks tend to increase their firms' cash holdings and reduce long-term investment (measured by R&D expenditure) following the events.

<sup>7</sup> Further lending support to this argument, Hubbard, Christensen and Graffin (2017) show that greater investment in CSR exposes the CEOs of firms with poor financial performance to a greater risk of dismissal.

Alternatively, however, the literature suggests that terrorist attacks can influence individuals' general risk perceptions and that this effect is greater when a person is in close proximity to such events (Lerner and Keltner, 2001; Fischhoff et al., 2005; Antoniou et al., 2018). For example, Ahern (2018) investigates the changes in individual psychology following the two largest terrorist attacks in European history (i.e., the 2004 Madrid train bombing and the 2005 London metro attacks) and finds that the terrorist attacks lead to declines in trust, which Sapienza and Zingales (2012) define as "the expectation that another person (or institution) will perform actions that are beneficial, or at least not detrimental, to us regardless of our capacity to monitor those actions...so that we will consider cooperating with him [the institution]" (p. 124).<sup>8</sup> Generalizing the concept of trust to our setting, it is possible that various types of stakeholders may have lower trust in managers or vice versa following a terrorist event and thus managers may have a greater incentive to build trust between firms and their stakeholders including shareholders.

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<sup>7</sup> Analogous to this finding, which supports the importance of cash holdings when firms are facing catastrophic risk, in their examination of the impact of climate risk on firms' performance and financing choices, Huang et al. (2018) present evidence showing that firms located in countries with higher levels of climate risk tend to hold more cash and issue less cash dividends.

<sup>8</sup> The literature suggests that a lower level of trust between economic agents increases transaction costs and hinders trade (Zak and Knack, 2001).

Indeed, a widespread view among practitioners and corporations is that a firm's CSR activities can play an influential role in building social capital and trust. Studies have demonstrated the importance of social capital and trust for firm value, especially after an unexpected shock leading to a decline in trust. For example, using the 2008-2009 financial crisis, Lins et al. (2017) present evidence suggesting that the trust between a firm and its stakeholders and/or investors that is built through investment in social capital has a positive effect on firm value when the overall level of trust in corporations suffers a negative shock.

Anecdotal evidence lends further support to this view. For example, CEOs surveyed by PricewaterhouseCoopers (2014) indicated a general willingness to increase their firms' engagement in CSR to restore stakeholder trust after the financial crisis. Finally, stronger stakeholder engagement can also serve as a mechanism in signaling firms' future financial performance (Lys et al., 2015). Presumably, this signaling enables the firms to reduce the concerns of investors and other stakeholders in regard to the sustainability of firms whose operational activities have been affected by terrorist events. Together, these findings suggest that building trust and signaling motives can play important roles in motivating firms to increase their investment in CSR following the negative shock resulting from a terrorist event. Based on the above discussion, we present the following hypotheses:

***Hypothesis 1a: Terrorist attacks reduce firms' investment in CSR.***

***Hypothesis 1b: Terrorist attacks increase firms' investment in CSR.***

The first objective of our study is to examine the possible effect of terrorist attacks on firms' CSR investment decisions. As a second objective, we also examine whether and how terrorist attacks influence the relation between CSR and firm value.

A major terrorist attack can have significant psychological effects, especially for those living in close proximity to the attack. Terrorism can induce strong negative feelings such as fear, anxiety,

and depression, and subsequently generate pessimism, creating an avenue for corporate investment in CSR to play a role in recovering and reducing such negative feelings. In our view, to the extent that greater commitment to CSR by the impact firms following a terrorist attack is more likely to be valued by stakeholders (e.g., communities, employees, and shareholders) who also suffer mentally and/or physically from the attack, we predict that the post-attack investment in CSR will have a more positive effect on firm value. That is, we expect that the relation between CSR and firm value will be strengthened following a terrorist attack for the impact firms, because commitment to CSR may facilitate the creation of new social spaces that connect communities to companies.

However, a major disaster also has the potential to reframe the public perception of corporate responsibility (Mithani, 2017). For example, stakeholders may expect companies to fulfill their social responsibility by providing more financial support to those affected by terrorist attacks. Thus, if the increased investment in CSR by impact firms following a terrorist attack simply represents the increased pressure various stakeholders place on the firms to increase their investment in CSR, we would expect to observe a weaker relation between CSR and firm value. Accordingly, we state our second set of hypotheses as follows:

***Hypothesis 2a:*** *Terrorist attacks weaken the association between investment in CSR and firm value.*

***Hypothesis 2b:*** *Terrorist attacks strengthen the association between investment in CSR and firm value.*

### **3. Data, Sample, and Research Design**

#### *3.1 Terrorist Attack Data*

We obtain data on terrorist attacks and mass shootings in the U.S. from the Global Terrorism Database (GTD) and the Stanford Mass Shootings in America database (MSA).<sup>9</sup> These two data sources provide detailed information on the date and location (e.g., latitude and longitude) of each terrorist attack and mass shooting. We use three filters to identify our list of terrorist events. First, we only retain the events that occur in the U.S. Second, we only keep attacks with at least one civilian death to strength our focus on major terrorist events. Third, to ensure that our sample includes salient events that attract significant public attention, we only consider events that are covered in newspaper articles. Appendix C lists the 31 events that occurred during the 1994-2012 period that comprise our final sample.

In this study, an impacted firm is defined as a firm that is headquartered within a 50-mile radius of a terrorist attack in the attack year. We first obtain the coordinates of a terrorist attack by matching the ZIP code of a terrorist attack with the Gazetteer Files from the U.S. Census Bureau. We then collect each firm's historical coordinates by matching the business ZIP code of a firm with the business address latitude and longitude data provided by Bill McDonald.<sup>10</sup> We then calculate the distance between each terrorist attack and each firm's location using the procedure in Vincenty (1975).<sup>11</sup>

### 3.2 CSR Scores

We obtain the CSR scores (our proxy for CSR investment) from the Kinder, Lydenberg, Domini Research & Analytics, Inc. (KLD), an independent investment advisory firm. KLD

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<sup>9</sup> Global terrorism data are available at <https://www.start.umd.edu/gtd/>; The MSA data are available at <https://library.stanford.edu/projects/mass-shootings-america>

<sup>10</sup> We thank Bill McDonald for making the business address latitude and longitude information available on his website. <https://sraf.nd.edu/>

<sup>11</sup> Vincenty (1975) devised a formula for calculating the geodesic distance between a pair of latitude/longitude points on the earth's surface using an accurate ellipsoidal model of the earth. We use Picard's (2012) Stata code `geodist` to perform the calculation. To ensure the accuracy of our calculation, we also conduct additional check by manually calculating the distance between a terrorist attack and impacted firms randomly selected using Google map and find that the calculation of distance accurate.

compiled ratings of how companies address the needs of their stakeholders, and was subsequently acquired by Morgan Stanley Capital International (MSCI). According to the management, accounting, and finance literature, the MSCI ESG Stats Database (formerly known as the KLD database) is currently the most widely used source of CSR ratings (Waddock and Graves, 1997; Dhaliwal et al., 2011; Deng, Kang and Low, 2013; Krüger, 2015; Borisov, Goldman and Gupta, 2016).<sup>12</sup>

In 1991, KLD began providing yearly ratings for approximately 650 companies (comprising all of the firms in the Standard & Poor's (S&P) 500 and Domini 400 Social Index). From 2001 to 2002, KLD increased its coverage to include the largest 1,000 U.S. companies. In 2003, the database further increased its coverage to incorporate the largest 3,000 U.S. companies (comprising all of the firms in the Russell 3000 Index). According to KLD, it reviewed various company documents, such as firms' annual reports and CSR reports, and the corporate websites, to produce a yearly CSR rating for each company. Each year, the firms were rated on a variety of positive indicators (strengths) and negative indicators (concerns) in each non-exclusionary category. In each case, if the company met the requirement for a particular issue (either positive or negative), it gained one point in the corresponding cell. If the company did not have a strength or concern relating to that issue, it received a value of 0.

We focus on six major categories of CSR investments: (1) environment (*ENV*), (2) employee relations (*EMP*), (3) products (*PRO*), (4) community (*COM*), (5) human rights (*HUM*), and (6) diversity (*DIV*). We focus on the six non-exclusionary categories and exclude the corporate governance category due to the well-recognized difference between corporate governance and

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<sup>12</sup> We provide a description of the various strengths and concerns under each CSR category we use in our study from the KLD database in Appendix B.

CSR (Di Giuli and Kostovetsky, 2014).<sup>13</sup> For each of the CSR categories considered, we first compute a firm-year net CSR score defined as the difference between the total number of strengths and total number of concerns in that category. For example, the net environment score (*CSR\_ENV*) is the total number of strengths in regard to the environment minus the total number of concerns relating to the environment. The sum of all of the differences from the six CSR categories is our proxy for overall CSR investment (*CSR*). In additional tests, we separately examine the effects of terrorist attacks on CSR strengths (*CSR\_STR*) and CSR concerns (*CSR\_CON*). For this purpose, we calculate *CSR\_STR* (*CSR\_CON*) as the total number of strength (concern) ratings across all six of the CSR categories.

### 3.3 Sample

To construct our sample, we merge the sample of firms that experienced exogenous terrorist attacks with the CSR score data from the KLD database, financial data from Compustat, and media coverage data from the RavenPack database. One concern could be that a ‘sin’ company provides material support for terrorists (i.e., selling weapons) or that a company may be a target of terrorist organizations. To mitigate these possibilities, which could drive our results, we exclude all of the ‘sin’ companies from the sample. These firms include those involved with weapons, nuclear, oil, cement, biotech, alcohol, tobacco, and gambling industries. According to Fama and French’s (1997) 48 industry classifications, alcohol firms are in industry group 4 (SIC codes 2100–2199) tobacco firms are in group 5 (SIC codes 2080–2085), weapons firms are in group 26 (SIC codes 3760–3769, 3795, 3480–3489), and oil firms are in group 30 (SIC codes 1300, 1310–1339, 1370–1382, 1389, 2900–2912, 2990–2999). Biotech firms have SIC codes 2833–2836, while cement firms have SIC codes 3240–3241. As the Fama-French classification scheme does not separate gambling

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<sup>13</sup> Unlike corporate governance, which is generally considered to be a mechanism allowing shareholders to monitor managers, the concept of CSR is more related to social objectives and stakeholders other than shareholders.

firms from hotel and other entertainment firms, we follow Hong and Kacperczyk (2009) and identify gambling stocks as those with NAICS codes (7132, 71312, 713120, 71329, 713290, 72112, 721120).

The sample period spans from 1993, one year before the earliest terrorist event (i.e., the Brooklyn Bridge shooting on March 19, 1994, in New York City), to 2013, one year after the latest terrorist event (i.e., the Sandy Hook Elementary School shooting on December 14, 2012, in Newtown, Connecticut). Our final sample comprises 17,487 firm-year observations representing 2,608 unique firms, of which 319 firms (17.4%) are within a 50-mile radius of a terrorist attack.

### *3.4 Methodology*

To explore the effect of terrorist attacks on CSR, we use a difference-in-differences methodology based on the 31 terrorism events listed in Appendix C (treatments). Specifically, we compare the difference in CSR before and after the treatments for firms that are headquartered within a 50-mile radius of an attack with the corresponding difference for firms that are not affected by such attacks but are otherwise similar. The treatment group consists of all of the impact firms that experience a terrorist attack and are covered by the Compustat and KLD databases at least one year before and one year after the terrorist attack. The impact firms are those located within a 50-mile radius of a terrorist attack. If a firm is affected by more than one attack, its attack event is the latest year. The 31 terrorist events yield a sample of 319 treated firms that satisfy these criteria. We require that the matched control firms are located outside the 50-mile radius of the attacks and operate in the same two-digit SIC industry. The treated firms are then matched with the control firms by the year and based on the following firm characteristics: Tobin's Q, ROA, size, leverage, cash holdings, and R&D intensity based on the propensity score matching method.<sup>14</sup> This approach

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<sup>14</sup> Based on the listed firms' characteristics, we conduct a first-stage logit regression to calculate the propensity score of a firm identified as an impact (treated) firm. We then implement the one-to-one matching without replacement

addresses the possibility that differences in the firms' characteristics may affect future investments in CSR. After matching, the sample contains 292 unique control firms.

The comparative descriptive statistics between the treatment and control groups are reported in Appendix D. For each characteristic, we report the mean and t-value of the difference in means test for both the treated and control firms. The treated and control firms are very similar along all of these characteristics. In particular, the null of equal means cannot be rejected (with absolute t-values ranging from 0.08 to 1.15). Overall, the statistics verify that the treated and control firms do not significantly differ from each other in any of our matching characteristics, and hence likely provide a reliable counterfactual of how the impact (treated) firms would behave after suffering damage from a terrorist attack.

### *3.5 Summary Statistics*

Table 1 presents the sample distribution and the average CSR score by year (Panel A) and by industry based on the 23 industry definitions suggested by Barth et al. (2005) (Panel B). As shown in Panel A, the number of firms per year is fairly evenly distributed around the 100 range over the 1993–2000 period, increasing to the 200 range in 2001 and 2002 before rising dramatically to between 360 and 480 firms per year over the 2003–2013 period. The increase in the number of firms per year is largely due to the increased sample coverage as discussed in Section 3.2. In addition, Panel B documents that our sample firms are from a wide variety of industry groups. The firms in the service and transportation industries make up the largest portions of our sample (25.25% and 10.09%, respectively), with each of the remaining industry groups constituting around 1% to 7% of the sample.

[Insert Table 1 about here]

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approach. Specifically, for each impact firm, we find a comparably control firm that is from non-impacted area but that has a propensity score closest to that of the impact firm (within 0.01 caliper).

Table 2 shows the comparative statistics between the pre- and post-attack period for the impact firms in Columns (1)-(3) and for the non-impact firms in Columns (4)-(6). In addition, in the last column, we report the difference-in-differences result between impact and non-impact firms. While our results indicate a significantly higher CSR score in the post-attack period than in the pre-attack period for both the impact and non-impact firms, it shows that the average increase in CSR score for impact firms is twice as much as the increase in CSR score for the non-impact firms (1.123 versus 0.503). We also find that for impact firms, there is a significant increase in firm value after terrorist attacks on average. However, we find no significant increase in firm value for non-impact firms during the same period. Finally, it is also important to note that there is a substantially higher level of increase in firms' media coverage for impact firms after terrorist attacks than that of the non-impact firms. Together, these findings lend preliminary supports to our conjecture that the increase in firm value in the period post the terrorist attacks is likely associated with change in CSR activities and/or media coverage.

[Insert Table 2 about here]

Table 3 reports the Pearson/Spearman correlation coefficients of the key variables used in the subsequent multivariate analyses. The Pearson's correlation coefficients are shown in the lower triangle, while the Spearman's rank correlations appear above the diagonal. The table shows the results for 5,891 firm-year observations over the full sample period of 1993-2013. Although many of the variables are significantly correlated, the magnitude of most of the correlations does not indicate multicollinearity problems (absolute value <0.35), thus providing assurance that the associations found in the subsequent analysis are unlikely to subject to multicollinearity concern. It is worth noting that the correlation coefficients between post-attack and CSR and post-attack and Tobin's Q are positively significant, thus providing preliminary support to our hypothesis that

terrorist attacks may increase firm's investment in CSR, which in turn, helps enhance their firm performance.

[Insert Table 3 about here]

## 4 Empirical Results

In this section, we perform regression analyses examining the effect of terrorist attacks on firms' CSR investment decisions, and whether and how terrorist attacks influence the relationship between CSR and firm value.

### 4.1 The effect of terrorist attacks on investment in CSR

We first examine whether firms change their investments in CSR activities as a result of the terrorist attacks. We conduct our analysis over the 1993-2013 period using the following difference-in-difference model:

$$CSR_{i,t} = \beta_1 Impact_{i,t} + \beta_2 Post\_attack_t + \beta_3 Impact_{i,t} \times Post\_attack_t + \gamma X_{i,t} + \varepsilon_{i,t} \quad (1)$$

where  $CSR_{i,t}$  is the CSR score measuring firms' CSR performance/investment.  $Impact_{i,t}$  is an indicator variable that equals 1 for the treated firms and zero otherwise.  $Post\_attack_t$  is an indicator variable set to 1 for all of the years following the terrorist attacks (with the year of terrorist attack excluded).  $X_{i,t}$  is a vector of firm characteristics.  $\varepsilon_{i,t}$  is the error term. We further control for the year and industry fixed effects and use heteroskedasticity-robust standard errors.

In the regression model, the estimate coefficient for  $Impact_{i,t}$  reflects the difference in the CSR activities between the impact and non-impact firms in period before a terrorist attack. The estimate coefficient for  $Post\_attack_t$  captures the changes in CSR activities for the non-impact firms across the two periods (i.e., the period before and after the attack events). The key variable of interest in the model is the interaction term,  $Impact_{i,t} \times Post\_attack_t$ , which captures the

changes in firms' CSR activities for the impact firms in the post-attack period relative to the changes in firms' CSR activities for the non-impact firms during the same period. We expect the coefficient of interest,  $\beta_3$ , to be positive if the impact firms increase their investment in CSR activities more after the attacks relative to that of the non-impact firms.

[Insert Table 4 about here]

The regression results of model (1) are presented in Table 4. We find that terrorist attacks affect the CSR investment decisions of the impact firms. More specifically, our result shows that the impact firms increase their investment in CSR activities by 0.501 more (t-statistic= 4.02) relative to the matched control firms. This result is economically significant compared to the mean raw CSR score (0.246) of the whole sample. Therefore, the finding indicates support to our hypothesis 1b that the impact firms (i.e., firms located within a 50-mile radius of the attacks) tend to commit more resources to CSR activities in the years following a terrorist attack.

#### 4.2 *The effect of terrorist attacks on the relation between CSR investment and firm value*

In this section, we examine the impact of terrorist attacks on the relationship between CSR and firm value. Specifically, we investigate the changes in firm value, measured by Tobin's Q, for the impact firms located in the areas surrounding the terrorist attacks, while controlling for the changes in firm value of the matched non-impact firms over the same period. We estimate the model:

$$\text{Tobin's } Q_{i,t+1/t+2/t+3} = \beta_1 \text{Impact}_{i,t} + \beta_2 \text{CSR}_{i,t} + \beta_3 \text{CSR}_{i,t} \times \text{Impact}_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t}, \quad (2)$$

where Tobin's Q is defined as the book value of total assets minus the book value of equity minus the balance-sheet deferred taxes plus the market value of equity divided by the book value of assets, and estimated at  $t+1$ ,  $t+2$ ,  $t+3$ , respectively. Motivated by the research on the determinants of Tobin's Q (Laeven and Levine, 2007; Servaes and Tamayo, 2013; Ferrell et al., 2016; Buchanan et al., 2018), we control for an array of factors that may affect firm value, such as firm size,

leverage, fixed assets to total assets ratio, cash holdings, sales growth, capital expenditure, advertising intensity, R&D intensity, and return on equity. Specifically, firm size is calculated as the logarithm of total assets. Leverage is the ratio of total debt to total assets. We measure fixed assets to total assets as the ratio of the book value of property, plant, and equipment to the book value of total assets. Cash holdings is measured as cash and short-term investments divided by total assets. We define the sales growth rate as the ratio of the current year's sales to the previous year's sales minus one. The capital expenditure to book asset ratio is the capital expenditure scaled by total assets. R&D intensity is the ratio of the research and development expenses to the total book assets, with R&D equal to zero when the research and development expenses are missing. Return on equity is income before extraordinary items divided by book equity. Finally, we follow Servaes and Tamayo (2013) and construct a measure of consumer awareness, proxied by the advertising intensity, or the ratio of annual advertising expenses to annual sales measured at the end of a year. The coefficient of interest in Eq. (2) is  $\beta_3$ , which allows us to investigate whether the changes in the CSR activities of the impact firms lead to superior future performance compared with the non-impact firms.

Table 5 presents the results of estimating Eq. (2) where Tobin's Q is measured at year  $t+1$ ,  $t+2$ , and  $t+3$  in Columns (1), (2), and (3), respectively. We find that terrorist attacks significantly strengthen the relationship between CSR and firm value ( $\beta_3 = 0.025$  and is significant at the 5% level). The corresponding effect is even larger for longer periods following the attack events, i.e., two and three years after the terrorist events. These findings suggest that the relationship between CSR and firm value is stronger for the impact firms, and invite a more in-depth examination of this relation especially in periods following the terrorist attacks.

[Insert Table 5 about here]

We next use a three-way interaction regression model to comparing the pre- and post-attack effects on the relationship between CSR and future financial performance using a difference in difference research design. The model is:

$$Tobin's\ Q_{i,t+1/t+2/t+3} = \beta_1 Impact_{i,t} + \beta_2 Post\_attack_t + \beta_3 Impact_{i,t} \times Post\_attack_t + \beta_4 CSR_{i,t} + \beta_5 Impact_{i,t} \times CSR_{i,t} + \beta_6 Post\_attack_t \times CSR_{i,t} + \beta_7 Impact_{i,t} \times Post\_attack_t \times CSR_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t} \quad (3)$$

The coefficient of interest in this equation,  $\beta_7$ , captures the change in the relationship between CSR and firm value after terrorist events of the impact firms relative to their non-impact counterparts. Table 6 reports a strengthened association between CSR and the one-, two-, and three-year ahead values of the impact firms following the terrorist events. The coefficients on the triple interaction term,  $Impact \times Post\_Attack \times CSR$ , load positively and significantly at the 1% level for all of the models. Thus, we provide evidence supporting hypothesis 2b, that terrorist attacks strengthen the relationship between investment in CSR and firm value. This implies that the post-attack CSR investments have a more positive effect on firm value perhaps because these investments facilitate the creation of new social spaces that connect communities to companies.

[Insert Table 6 about here]

#### 4.3 The effect of terrorist attacks on the relation between CSR investment and media attention

By replacing the dependent variable, Tobin's Q, in the previous models by media coverage, in this section, we aim to explore the underlying mechanism through which engaging in CSR after the attacks results in increased firm value. This allows us to examine the changes in the media coverage of the impact firms surrounding the terrorist attacks, while controlling for changes in the news covering the matched non-impact firms over the same period. We sequentially estimate the following regression models:

$$Media\ Coverage_{i,t/t+1/t+2} = \beta_1 Impact_{i,t} + \beta_2 CSR_{i,t} + \beta_3 CSR_{i,t} \times Impact_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t} \quad (4)$$

$$Media\ Coverage_{i,t/t+1/t+2} = \beta_1 Impact_{i,t} + \beta_2 Post\_attack_t + \beta_3 Impact_{i,t} \times Post\_attack_t + \beta_4 CSR_{i,t} + \beta_5 Impact_{i,t} \times CSR_{i,t} + \beta_6 Post\_attack_t \times CSR_{i,t} + \beta_7 Impact_{i,t} \times Post\_attack_t \times CSR_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t} \quad (5)$$

where *Media Coverage* is the total number of news articles of a firm in each year (in hundred), measured at year  $t$ ,  $t+1$ ,  $t+2$ , respectively. The coefficients of interest are  $\beta_3$  in Eq. (4) and  $\beta_7$  in Eq. (5). These estimated coefficients enable us to examine whether the changes in the CSR activities of the impact firms following the terrorist attacks, compared with the non-impact firms, attract greater public attention.

The estimates of Eq. (4) and Eq. (5) are reported in Table 7 and Table 8, respectively. As shown in Table 7, the coefficient of interest in Eq. (4), *Impact*×*CSR*, is highly significant across all of the models. Table 8 further shows that the coefficient on the triple interaction term, *Impact*×*Post\_Attack*×*CSR*, is generally positive and statistically significant. These findings suggest that firms' CSR investments are positively related to media attention, and the relationship between CSR and media attention is indeed more pronounced after the impact firms experience terrorist attacks.

[Insert Table 7 & 8 about here]

#### 4.4 The effect of media attention on the relation between CSR investment and firm value

Our analysis is based on the idea that the trust building and signaling motives inspire firms to increase their investment in CSR after a terrorist event, and that the firms that increase their investment in CSR draw greater media attention. Thus, a natural next step would be to examine the impact of media attention on the relationship between CSR investment and firm value.

Therefore, we estimate the following model:

$$Tobin's\ Q_{i,t+1/t+2/t+3} = \beta_1 Impact_{i,t} + \beta_2 HiMediaCoverage_{i,t} + \beta_3 CSR_{i,t} + \beta_4 Impact_{i,t} \times CSR_{i,t} + \beta_5 HiMediaCoverage_{i,t} \times CSR_{i,t} + \beta_6 Impact_{i,t} \times HiMediaCoverage_{i,t} + \beta_7 Impact_{i,t} \times HiMediaCoverage_{i,t} \times CSR_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t} \quad (6)$$

Here, *HiMediaCoverage* is an indicator variable that equals 1 if the total number of news articles for a firm in a given year exceeds the median value of all of the sample firms in that year, and zero otherwise. The coefficient of interest in this equation,  $\beta_7$ , is an estimate of the changes in the relationship between CSR and firm value for the impact firms with higher level of media coverage relative to the corresponding change in the impact firms with lower level of media coverage. We report our estimation results in Table 9. We find evidence supporting our view that the strengthened relationship between CSR and firm value is more likely to be observed when the impact firms are associated with greater media attention. Overall, we conclude that investment in CSR is of greater value to the impact firms because the CSR efforts of these firms are more likely to receive favorable news coverage and gain greater community visibility, which in turn, facilitate the firms' legitimacy.

[Insert Table 9 about here]

## **5 Additional Tests**

### *5.1 The dynamics of CSR investment*

The evidence presented in the previous section suggests that relative to non-impact firms, impact firms increase their investment in CSR more following their experience of a terrorist attack. Thus, we now investigate when the impact firms are likely to make such a decision. Using a dynamic model that allows us to examine the changes in the CSR investments of the impact firms across years relative to the changes in the CSR investments of non-impact firms, we find that relative to the non-impact firms, the impacts firms tend to commit more resources to CSR after the year in which the terrorist attacks occurred and this change appears to be permanent thereafter (Column (1) of Table 10).

### 5.2 Increased CSR strengths versus reduced CSR concerns

To mitigate the concern that our finding of increased CSR investment following terrorist events is driven by the firms' reduced CSR concerns (e.g., less stakeholder attention on the CSR controversies of the impact firms) instead of the increased CSR strengths (e.g., additional efforts dedicated to improved CSR by the impact firms), we repeat our analysis of the effect of terrorist events on CSR by replacing the overall CSR score with the total CSR strength score (*CSR\_STR*) and total CSR concern score (*CSR\_CON*). We find evidence supporting our prediction that the impact firms increase their commitment to their CSR strengths following terrorist attacks (Columns (2) and (3) of Table 10). However, our evidence does not indicate support for the possibility that the impact firms are likely to have lower CSR concerns following the terrorist events.

[Insert Table 10 about here]

### 5.3 The choices of CSR categories in measuring CSR

In this study, we use an overall measure of CSR that is computed as the sum of all of the strengths minus the sum of all of the concerns across the six major CSR categories. Although a large number of studies have used the net score obtained from multiple CSR categories to measure a firm's CSR performance or investment in a given year, there is no consensus on how many (and also which) categories should be considered when measuring a firm's overall CSR performance. For example, Davidson et al. (2019) and Davis et al. (2016) consider the five CSR categories of the environment, employee relations, products, community, and diversity (as we do) but exclude human rights. Davidson et al. (2019) argue that the CSR category related to human rights is designed primarily for firms with substantial business relationships in countries with high human rights concerns (e.g., South Africa) and thus is less applicable to firms without such business

relationships. Hence, they exclude this category in the calculation of the overall CSR score in their study. Servaes and Tamayo (2013) and Lins et al. (2017) also consider five CSR categories in defining and calculating their CSR measures. However, neither of these studies includes the product category (but include human rights instead) in their analyses based on the belief that some elements of the product category (such as product quality and innovation) are outside the scope of CSR.

On the other hand, Chen et al. (2016) only use the four CSR categories of the environment, employee relations, products, and community in the KLD database (as we do) to measure firms' CSR performance and CSR concerns but exclude human rights and diversity. They justify their use of these four categories by the fact that these categories can reflect the needs of the four major primary stakeholder groups more directly. Similarly, Adhikari (2016) only uses four categories in defining the CSR strengths/concerns, and replaces employee relations with human rights. Finally, in creating their CSR performance measure, Dhaliwal et al. (2011) consider all seven CSR categories as defined in the KLD database.

Thus, given the heterogeneity in calculating firms' CSR performance by previous studies, we conduct additional tests to ensure that the findings of our study are not sensitive to the choice and number of CSR categories used in calculating the CSR score. First, we define our CSR investment measure differently following the literature. Our findings (untabulated) are unchanged if we exclude the products, human rights, or diversity categories in our calculation of CSR performance. Second, we repeat our main analyses of the effect of terrorist attacks on CSR and the CSR-firm value relationship (i.e., the tests presented in Tables 4 and 6) by replacing the overall CSR score by the CSR scores of each of the six CSR categories. The results (untabulated) show that among

the six CSR categories, firms appear to increase their investment in the environment, community, and diversity more following terrorist events.

#### *5.4 The choices of distances in defining the impact region*

With respect to the distance between a terrorist event and a firm, there is no consensus on the specific distance that should be used in defining impact firms. For example, Ivković and Weisbenner (2005) argue that commuters can cover a daily round trip by car of 250-miles, and that local newspapers, radio, and TV can provide coverage of local events within that distance. In contrast, Dai et al. (2019) use a distance of 100 miles to determine the impact regions, whereas Rosenthal and Strange (2008) select a radius of 25 miles. Malloy (2005) and Uysal, Kedia and Panchapagesan (2008) use a cutoff of 100 kilometers.

In our study, we identify firms located in close proximity to terrorist attacks as the impact firms using a discretionary choice of a 50-mile radius. Thus, for robustness, we conduct additional sensitivity analyses by using different radii to identify the impact firms versus non-impact firms in our empirical examination and find inferences generally consistent across the alternative choices of 25-, 75-, or 100-mile cut-offs.<sup>15</sup>

#### *5.5 Alternative measures of CSR Investment*

Consistent with many existing studies, we define CSR investment using the net *raw* CSR score obtained from the total CSR strengths ratings minus the total CSR concern ratings. However, there is also no consensus in the literature on how to define CSR investment. For example, in constructing their CSR performance variable, Dhaliwal et al. (2011) adjust a firm's raw CSR

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<sup>15</sup> Consistent with the argument that the geographical proximity likely increases a terrorist event's salience to the various stakeholders located in regions close to the location of the events, we observe a substantially weakened effect of terrorist attacks when we use a larger radius as a cut-off. For example, our results indicate that the difference between CSR investment of the impact firms and non-impact firms during the period following a terrorist event is reduced and becomes only marginally significant when we use a radius greater than 100-miles in defining the impact firms.

strength ratings each year by the industry median to create a *relative* CSR performance measure that is comparable across industries. More recently, Lins et al. (2017) construct a net *scaled* CSR measure by first dividing the total strengths (concerns) in each CSR category by the maximum number of strengths (concerns) possible for that category in that year.

Thus, following previous studies, for robustness, we use the industry-adjusted CSR strength score (Dhaliwal et al., 2011) and a net scaled CSR measure (Lins et al., 2017) as additional CSR investment measures, and repeat our analyses. Finally, we also obtain CSR performance data from an alternative CSR database, namely the Thomson Reuters ASSET4 ESG database. We find similar evidence supporting our inferences in all of these tests.

#### *5.6 Differences in the time trends across the treatment and control samples*

In our study, we exploit a natural experiment in which firms are impacted by unanticipated terrorist attacks. Presumably, terrorist attacks are exogenous to corporate decision-making because of the unpredictability of the location and timing of an attack. Thus, this setting offers a relatively clean way of identifying the casual effect. However, a possible concern is that the finding of increased CSR investment among the impact firms relative to the non-impacted firms could be a result of the different time trends in CSR investment between the impact firms and non-impact firms. For example, if a terrorist attack is more likely to occur in a region with more established companies, the level of investment in CSR among the sample firms could increase even without the occurrence of a terrorist attack. To mitigate this concern, we perform a placebo test by either increasing or decreasing the actual year of a terrorist attack by a non-zero random number. Our results reject the possibility that a different time trend in CSR activities between the treatment and control groups contributes to our findings.

## 6 Conclusion

Evidence from practitioners indicates that terrorism is among the top concerns of businesses. Concerns about the risk of terrorism have prompted extensive research on the economic effects of terrorist attacks in fields such as economics and political science. However, relatively few studies have examined the impact of terrorism on the managerial decision-making of public firms. Thus, in this study, we use a unique natural experiment to obtain causal estimates of how terrorist attacks affect firms' investment in CSR.

Using a difference-in-difference design to control for the general trend of CSR and possible and likely unobservable changes in the economic environment unrelated to terrorist attacks, our findings indicate that relative to firms in the control regions without terrorism, firms domiciled in regions with terrorist attacks substantially increase their investment in CSR following a terrorist attack. We also observe a strengthened association between CSR and firm value for the impact firms in period following a terrorist event and further find that the strengthened relationship between CSR and firm value is more pronounced when the CSR efforts of the impact firms are likely to be associated with greater media attention. Taken together, our findings support the conjecture that although local communities are likely to demand higher levels of CSR from the impact firms, a greater value is associated with impact firms' CSR investment, especially in period post terrorist events.

Our empirical findings are likely to be of use to both investors and managers because they provide insights into the managerial decisions following unanticipated negative events such as terrorist attacks. Our results suggest that firms that experience terrorist attacks tend to commit more resources to local-community oriented CSR investments following the events, and that the value of their CSR investment is greater because the CSR efforts of impact firms are likely to be

more visible to the various local stakeholders, which in turn, facilitates the impact firms' legitimacy gains.

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## Appendix A: Variable Definitions

Variable	Definition	Source
<i>CSR</i>	The total CSR strengths minus total CSR concerns in the six MSCI ESG KLD social rating categories: (1) environment, (2) employee relations, (3) products, (4) community, (5) human rights, and (6) diversity.	MSCI ESG KLD database
(1) <i>CSR_ENV</i>	Total number of strengths minus total number of concerns in <b>environment</b> .	
(2) <i>CSR_EMP</i>	Total number of strengths minus total number of concerns in <b>employee relations</b> .	
(3) <i>CSR_PRO</i>	Total number of strengths minus total number of concerns in <b>products</b> .	
(4) <i>CSR_COM</i>	Total number of strengths minus total number of concerns in <b>community</b> .	
(5) <i>CSR_HUM</i>	Total number of strengths minus total number of concerns in <b>human rights</b> .	
(6) <i>CSR_DIV</i>	Total number of strengths minus total number of concerns in <b>diversity</b> .	
<i>Impact</i>	An indicator variable that equals 1 if a firm is headquartered within a 50-mile radius of the location of a terrorist attack (based on the latitude and longitude of the location of the attack), and 0 for the matched control firm selected from outside the 50-mile radius.	(1) Global Terrorism Database (GTD) created by the National Consortium for the Study of Terrorism and Responses to Terrorism of University of Maryland; and (2) the Stanford's Mass Shootings in America database (MSA)
<i>Post_Attack</i>	An indicator variable that equals 1 for the years following a terrorist attack, and 0 otherwise.	
<i>Tobin's Q</i>	Book value of total assets minus the book value of equity minus the balance-sheet deferred taxes plus the market value of equity divided by the book value of assets.	Compustat
<i>Size</i>	Logarithm of total assets.	Compustat
<i>Leverage</i>	Total debt divided by total assets.	Compustat
<i>Fixed Assets</i>	Net property, plant, and equipment scaled by total assets.	Compustat
<i>Cash Holdings</i>	Cash and short-term investments divided by total assets.	Compustat
<i>Sales Growth</i>	Ratio of current year's sales to previous year's sales minus one.	Compustat
<i>Capital Expense</i>	Ratio of capital expenditure scaled by total assets.	Compustat
<i>Advertising Intensity</i>	Ratio of annual advertising expenses to sales ratio.	Compustat
<i>R&amp;D Intensity</i>	Ratio of research and development expense to total assets, with the value of R&D equal to zero when the research and development expenses are missing.	Compustat
<i>ROE</i>	Return on equity is income before extraordinary items divided by book equity.	Compustat
<i>Media Coverage</i>	Total number of news articles (with the relevant news score =100) for a firm in a given year, divided by 100.	RavenPack
<i>HiMediaCoverage</i>	An indicator variable that equals 1 if the total number of news articles for a firm in a given year exceeds the median value of all of the sample firms in that year, and 0 otherwise.	RavenPack

## Appendix B: CSR Categories

This table provides the subcategories of the six MSCI ESG KLD strength (*STR*) and concern (*CON*) categories: environment, employee relations, products, community, human rights, and diversity.

CSR Category	<i>STR/CON</i>	Subcategories
(1) Environment (ENV)	<i>ENV_STR</i>	(1) Beneficial products and services, (2) pollution prevention, (3) recycling, (4) clean energy, (5) management systems, and (6) other strengths.
	<i>ENV_CON</i>	(1) Hazardous waste, (2) regulatory problems, (3) ozone-depleting chemicals, (4) substantial emissions, (5) agricultural chemicals, (6) climate change, and (7) other concerns.
(2) Employee Relations (EMP)	<i>EMP_STR</i>	(1) Union relations, (2) cash profit sharing, (3) employee involvement, (4) retirement benefits, (5) health and safety, and (6) other strengths.
	<i>EMP_CON</i>	(1) Union relations, (2) health and safety concerns, (3) workforce reductions, (4) retirement benefits, and (5) other concerns.
(3) Products (PRO)	<i>PRO_STR</i>	(1) Benefits for the economically disadvantaged, (2) quality, (3) R&D/innovation, and (4) other strengths.
	<i>PRO_CON</i>	(1) Product safety, (2) marketing/contracting concern, (3) antitrust, and (4) other concerns.
(4) Community (COM)	<i>COM_STR</i>	(1) Charitable giving, (2) innovative giving, (3) non-U.S. charitable giving, (4) support for housing, (5) support for education, (6) volunteer programs, and (7) other strengths.
	<i>COM_CON</i>	(1) Investment controversies, (2) negative economic effect, (3) tax disputes, and (4) other concerns.
(5) Human Rights (HUM)	<i>HUM_STR</i>	(1) Positive record in South Africa, (2) indigenous people relations strength, (3) labor rights strength, and (4) other strengths.
	<i>HUM_CON</i>	(1) South Africa, (2) Northern Ireland, (3) Burma, (4) Mexico, (5) labor rights concerns, (6) indigenous people relations concerns, and (7) other concerns.
(6) Diversity (DIV)	<i>DIV_STR</i>	(1) CEO, (2) promotion, (3) board of directors, (4) work/life benefits, (5) women & minority contracting, (6) employment of the disabled, (7) gay & lesbian policies, and (8) other strengths.
	<i>DIV_CON</i>	(1) Controversies, (2) non-representation, and (3) other concerns.

### Appendix C: Sample of Terrorist Events

This table shows the event sample for the 1994-2012 period. All of the events occurred in the U.S., resulted in more than one human casualty, and were covered in newspapers.

Event #	Event Location	Date	Location	Fatalities	Injuries
1	Brooklyn Bridge	1-Mar-94	New York City, NY	1	3
2	Unabomber - Thomas Mosser	10-Dec-94	North Caldwell, NJ	1	0
3	Planned Parenthood Clinic	30-Dec-94	Brookline, MA	1	2
4	Federal Building	19-Apr-95	Oklahoma, OK	168	650
5	Unabomber - Gilbert Murray	24-Apr-95	Sacramento, CA	1	0
6	Olympic Park Bombing	27-Jul-96	Atlanta, GA	1	110
7	Empire State Building	23-Feb-97	New York City, NY	1	6
8	Abortion Clinic Bombing	29-Jan-98	Birmingham, AL	1	1
9	U.S. Capitol	24-Jul-98	Washington, DC	2	1
10	Barnett Slepian Murder	23-Oct-98	Amherst, NY	1	0
11	Columbine High School	20-Apr-99	Littleton, CO	13	24
12	Korean Methodist Church	4-Jul-99	Bloomington, IN	1	0
13	9/11 Attacks: World Trade Center	11-Sep-01	New York City, NY	1,377	7,365
14	9/11 Attacks: Hijacked Plane Crashed	11-Sep-01	Somerset County, PA	40	5
15	9/11 Attacks: Hijacked Plane Crashed	11-Sep-01	Alexandria, VA	184	106
16	Bank of America	5-Jan-02	Tampa, FL	1	0
17	LA International Airport	4-Jul-02	Los Angeles, CA	2	4
18	Seattle Jewish Federation	28-Jul-06	Seattle, WA	1	5
19	Virginia Tech	16-Apr-07	Blacksburg, VA	32	17
20	Knoxville Church	27-Jul-08	Knoxville, TN	2	7
21	Immigration Centre	3-Apr-09	Binghamton, NY	13	4
22	George Tiller Murder	31-May-09	Wichita, KS	1	0
23	Little Rock	1-Jun-09	Little Rock, AR	1	1
24	Holocaust Museum	10-Jun-09	Washington, DC	1	0
25	Fort Hood	5-Nov-09	Killeen, TX	13	31
26	IRS Building	18-Feb-10	Austin, TX	1	15
27	Pentagon	4-Mar-10	Arlington, VA	1	2
28	Discovery Communications	1-Sep-10	Silver Springs, MD	1	0
29	Aurora	20-Jul-12	Denver, CO	12	58
30	Sikh Temple	5-Aug-12	Oak Creek, WI	6	4
31	Sandy Hook School	14-Dec-12	Newtown, CT	27	2

**Appendix D: Comparative Statistics (Treatment vs. Control group)**

	Treated	Control	Difference	t -statistic
<i>Impact</i>	1	0		
<i>N (Obs.)</i>	319	292		
<i>Tobin's Q</i>	2.052	1.982	0.070	0.608
<i>ROA</i>	0.114	0.139	-0.025	-1.151
<i>Size</i>	7.243	7.213	0.029	0.230
<i>Leverage</i>	0.236	0.229	0.007	0.412
<i>Cash Holdings</i>	0.163	0.162	0.001	0.083
<i>R&amp;D Intensity</i>	0.026	0.024	0.003	0.746

**Table 1: Sample Distribution (N = 5,984)**

Panel A: Distribution by Year

	<b>Year</b>	<b>No. of Observation</b>	<b>Percentage</b>	<b>Average CSR</b>
1	1993	101	1.69	0.327
2	1994	105	1.75	0.381
3	1995	109	1.82	0.881
4	1996	112	1.87	1.009
5	1997	115	1.92	1.017
6	1998	119	1.99	1.034
7	1999	130	2.17	1.069
8	2000	136	2.27	0.919
9	2001	224	3.74	0.558
10	2002	231	3.86	0.416
11	2003	365	6.10	-0.030
12	2004	377	6.30	-0.127
13	2005	388	6.48	-0.052
14	2006	402	6.72	-0.070
15	2007	403	6.73	-0.213
16	2008	421	7.04	-0.216
17	2009	440	7.35	-0.245
18	2010	460	7.69	-0.150
19	2011	461	7.70	0.156
20	2012	476	7.95	0.794
21	2013	409	6.83	1.169
		5,984	100%	

Panel B: Distribution by Industry

	<b>Industry</b>	<b>No. of Observation</b>	<b>Percentage</b>	<b>Average CSR</b>
1	Mining/Construction	209	3.49	-1.230
2	Food	181	3.02	0.232
3	Textiles/Print/Publish	441	7.37	0.435
4	Chemicals	341	5.70	0.510
5	Manf: Rubber/Glass/Etc.	87	1.45	0.494
6	Manf: Metal	169	2.82	-0.420
7	Manf: Machinery	339	5.67	-0.383
8	Manf: Electrical Equipment	213	3.56	-0.498
9	Manf: Transport Equipment	180	3.01	-0.078
10	Manf: Instruments	404	6.75	0.366
11	Manf: Misc.	92	1.54	1.011
12	Computers	359	6.00	0.655
13	Transportation	604	10.09	0.204
14	Retail: Wholesale	260	4.34	-0.181
15	Retail: Misc.	425	7.10	0.513
16	Retail: Restaurant	127	2.12	1.165
17	Services	1511	25.25	0.419
18	Other	42	0.70	1.190
		5,984	100%	

**Table 2: Comparative Statistics**

This panel compares key variables between the pre- and post-attack period impact and non-impact firms, respectively. We exclude the number of observations (609 obs.) in period during the attack.

	Impact Firm			Non-Impact Firm			
	Post-attack period (1)	Pre-attack period (2)	Diff [(1)-(2)] (3)	Post-attack period (4)	Pre-attack period (5)	Diff [(4)-(5)] (6)	Diff-in-diff (3)-(6) (7)
<i>N (Obs.)</i>	1,181	1,554		1,031	1,607		
<i>CSR</i>	0.965	-0.158	<b>1.123***</b>	0.461	-0.042	<b>0.503***</b>	<b>0.620***</b>
<i>Tobin's Q</i>	2.169	2.031	<b>0.138**</b>	2.099	2.103	<b>-0.004</b>	<b>0.142*</b>
<i>Size</i>	8.089	7.323	<b>0.766***</b>	7.703	7.204	<b>0.499***</b>	<b>0.267***</b>
<i>Leverage</i>	0.226	0.233	<b>-0.006***</b>	0.225	0.225	<b>0.000</b>	<b>-0.006</b>
<i>Fixed Assets</i>	0.221	0.264	<b>-0.043***</b>	0.242	0.267	<b>-0.025***</b>	<b>-0.018</b>
<i>Cash Holdings</i>	0.161	0.146	<b>0.016**</b>	0.157	0.143	<b>0.013**</b>	<b>0.002</b>
<i>Sales Growth</i>	0.076	0.106	<b>-0.030***</b>	0.079	0.109	<b>-0.030***</b>	<b>0.000</b>
<i>Capital Expense</i>	0.042	0.050	<b>-0.008***</b>	0.045	0.048	<b>-0.004**</b>	<b>-0.004**</b>
<i>Advertising Intensity</i>	0.021	0.011	<b>0.010***</b>	0.014	0.013	<b>0.001</b>	<b>0.009***</b>
<i>R&amp;D Intensity</i>	0.028	0.024	<b>0.003*</b>	0.028	0.023	<b>0.005**</b>	<b>-0.002</b>
<i>ROE</i>	0.022	0.002	<b>0.019*</b>	0.005	0.004	<b>0.001</b>	<b>0.018</b>
<i>Media Coverage</i>	2.357	1.337	<b>1.020***</b>	1.851	1.248	<b>0.603***</b>	<b>0.417***</b>

**Table 3: Correlation Matrix (Pearson/ Spearman)**This table shows the correlation matrix of the key variables. **Bold** and *Italic* indicate that the correlation is significant at least at the 10% level.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 CSR		0.013	<b>0.152</b>	<b>0.164</b>	<b>0.197</b>	0.011	0.019	0.014	<b>-0.060</b>	<b>0.064</b>	<b>0.106</b>	<b>0.060</b>	0.017	<b>0.233</b>
2 Impact	<b>0.033</b>		<b>0.036</b>	0.021	<b>0.077</b>	0.019	<b>-0.032</b>	<b>0.024</b>	0.010	-0.001	0.005	<b>0.031</b>	-0.010	<b>0.086</b>
3 Post_Attack	<b>0.156</b>	<b>0.036</b>		0.014	<b>0.212</b>	0.002	<b>-0.057</b>	<b>0.066</b>	<b>-0.050</b>	<b>-0.062</b>	<b>0.073</b>	0.008	<b>0.023</b>	<b>0.314</b>
4 Tobin's Q	<b>0.130</b>	-0.001	<b>0.025</b>	<b>-0.172</b>	<b>-0.172</b>	<b>-0.320</b>	<b>-0.114</b>	<b>0.312</b>	<b>0.260</b>	<b>0.120</b>	<b>0.086</b>	<b>0.223</b>	<b>-0.114</b>	<b>0.054</b>
5 Size	<b>0.217</b>	<b>0.075</b>	<b>0.205</b>	<b>-0.231</b>	<b>0.324</b>	<b>0.412</b>	<b>0.155</b>	<b>-0.310</b>	<b>-0.065</b>	<b>0.035</b>	0.015	<b>-0.092</b>	<b>0.159</b>	<b>0.621</b>
6 Leverage	0.000	0.013	-0.008	<b>-0.214</b>	<b>0.324</b>	<b>0.412</b>	<b>0.255</b>	<b>-0.457</b>	<b>-0.114</b>	<b>0.057</b>	-0.013	<b>-0.195</b>	<b>0.058</b>	<b>0.125</b>
7 Fixed Assets	-0.004	<b>-0.029</b>	<b>-0.073</b>	<b>-0.117</b>	<b>0.140</b>	<b>0.233</b>	<b>-0.327</b>	<b>-0.324</b>	<b>-0.075</b>	<b>0.749</b>	<b>-0.042</b>	<b>-0.225</b>	<b>0.058</b>	-0.014
8 Cash Holdings	0.011	0.012	<b>0.034</b>	<b>0.342</b>	<b>-0.361</b>	<b>-0.354</b>	<b>-0.057</b>	<b>0.037</b>	<b>0.046</b>	<b>-0.137</b>	<b>0.090</b>	<b>0.307</b>	<b>-0.136</b>	<b>-0.031</b>
9 Sales Growth	<b>-0.042</b>	-0.005	<b>-0.056</b>	<b>0.143</b>	<b>-0.035</b>	<b>-0.057</b>	<b>-0.022</b>	<b>0.037</b>	<b>0.039</b>	<b>0.054</b>	<b>-0.043</b>	<b>0.038</b>	<b>0.053</b>	0.013
10 Capital Expense	<b>0.033</b>	0.001	<b>-0.066</b>	<b>0.087</b>	-0.019	<b>0.031</b>	<b>0.625</b>	<b>-0.125</b>	<b>0.039</b>		<b>0.042</b>	<b>-0.100</b>	<b>0.054</b>	0.012
11 Advertising Intensity	<b>0.131</b>	<b>0.029</b>	<b>0.075</b>	<b>0.102</b>	0.003	-0.035	-0.077	0.116	-0.009	-0.014		<b>-0.082</b>	-0.006	<b>0.114</b>
12 R&D Intensity	<b>0.041</b>	0.014	<b>0.039</b>	<b>0.202</b>	<b>-0.204</b>	<b>-0.216</b>	<b>-0.240</b>	<b>0.427</b>	<b>0.033</b>	<b>-0.085</b>	<b>-0.034</b>		<b>-0.136</b>	<b>0.065</b>
13 ROE	0.020	0.009	0.016	<b>0.059</b>	<b>0.039</b>	<b>-0.105</b>	0.000	-0.006	<b>0.044</b>	0.003	0.010	<b>-0.061</b>		<b>0.099</b>
14 Media Coverage	<b>0.333</b>	<b>0.087</b>	<b>0.233</b>	0.007	<b>0.596</b>	<b>0.066</b>	0.008	<b>-0.073</b>	-0.019	-0.015	<b>0.047</b>	0.012	<b>0.027</b>	

**Table 4: Terrorist Attack and CSR**

This table presents the regression results of the impact of terrorist attacks on CSR performance. Columns (1) and (2) present the regressions of CSR performance (*CSR*) on *Post\_Attack* and the other control variables, for the Impact and Non-Impact firms, respectively. Column (3) presents the results of estimating the following difference-in-difference regression model:

$$CSR_{i,t} = \beta_1 Impact_{i,t} + \beta_2 Post\_Attack_t + \beta_3 Impact_{i,t} \times Post\_Attack_t + \gamma X_{i,t} + \varepsilon_{i,t} \quad (1)$$

where  $CSR_{i,t}$  is our proxy for CSR performance;  $Impact_{i,t}$  is an indicator that equals 1 if a firm is headquartered within a 50-mile radius of the location of a terrorist attack, and 0 for the matched control firm;  $Post\_Attack_t$  is an indicator variable that equals 1 for the years following the actual (pseudo) terrorist attack year of the impact (non-impact) firms; and  $X_{i,t}$  is a vector of the control variables. The variable definitions are provided in Appendix A. The *t-values* in parentheses are robust to heteroscedasticity. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	<i>Dep. Var. = CSR</i>		
	<b>Impact Firms (1)</b>	<b>Non-Impact Firms (2)</b>	<b>All Firms (3)</b>
<i>Impact</i>			-0.155** (-2.32)
<i>Post_Attack</i>	0.354*** (3.11)	0.026 (0.25)	-0.062 (-0.64)
<b><i>Impact×Post_Attack</i></b>			<b>0.501*** (4.02)</b>
<i>Size</i>	0.494*** (9.65)	0.343*** (10.01)	0.401*** (13.37)
<i>Leverage</i>	-0.392* (-1.78)	-0.134 (-0.64)	-0.384** (-2.49)
<i>Fixed Assets</i>	0.145 (0.33)	0.294 (0.82)	-0.043 (-0.16)
<i>Cash Holdings</i>	1.128*** (3.80)	1.126*** (3.83)	0.968*** (4.71)
<i>Sales Growth</i>	-0.267* (-1.67)	-0.311** (-2.47)	-0.295*** (-2.62)
<i>Capital Expense</i>	1.448 (1.06)	1.559 (1.25)	2.047** (2.13)
<i>Advertising Intensity</i>	3.744*** (2.71)	8.768*** (4.40)	6.493*** (6.11)
<i>R&amp;D Intensity</i>	5.591*** (5.37)	1.845* (1.79)	3.114*** (4.04)
<i>ROE</i>	-0.051 (-0.31)	-0.051 (-0.39)	-0.034 (-0.33)
<i>Constant</i>	-4.249*** (-8.58)	-2.241*** (-4.84)	-3.014*** (-8.90)
Industry FE	YES	YES	YES
Year FE	YES	YES	YES
Chow test difference in <i>Post-Attack</i> (P-value) in Columns 1 and 2		0.029**	
Adjusted R <sup>2</sup>	0.183	0.200	0.163
N	3,054	2,930	5,984

**Table 5: The Relation between CSR and Future Financial Performance (Impact versus Non-Impact Firms)**

This table presents the results of estimating the following regression model:

$$Tobin's\ Q_{i,t+1/t+2/t+3} = \beta_1 Impact_{i,t} + \beta_2 CSR_{i,t} + \beta_3 Impact_{i,t} \times CSR_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t} \quad (2)$$

where *Tobin's Q* is the book value of total assets minus the book value of equity minus the balance-sheet deferred taxes plus the market value of equity divided by the book value of assets, measured at year  $t+1$ ,  $t+2$ ,  $t+3$ , respectively;  $Impact_{i,t}$  is an indicator that equals 1 if a firm is headquartered within a 50-mile radius of the location of a terrorist attack, and 0 for the matched control firm;  $CSR_{i,t}$  is our proxy for CSR performance; and  $X_{i,t}$  is a vector of the control variables. The variable definitions are provided in Appendix A. The *t-values* in parentheses are robust to heteroscedasticity. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	<i>Dep. Var. =Tobin's Q</i>		
	<i>Year t+1</i>	<i>Year t+2</i>	<i>Year t+3</i>
	(1)	(2)	(3)
<i>Impact</i>	-0.009 (-0.28)	0.010 (0.31)	0.018 (0.54)
<i>CSR</i>	0.070*** (6.94)	0.063*** (6.19)	0.053*** (5.13)
<b><i>Impact×CSR</i></b>	<b>0.025** (2.02)</b>	<b>0.037*** (2.90)</b>	<b>0.047*** (3.62)</b>
<i>Size</i>	-0.128*** (-5.37)	-0.136*** (-5.12)	-0.127*** (-4.64)
<i>Leverage</i>	0.022 (0.25)	0.006 (0.07)	0.056 (0.57)
<i>Fixed Assets</i>	-0.880*** (-6.93)	-0.732*** (-4.26)	-0.484** (-2.27)
<i>Cash Holdings</i>	2.009*** (9.60)	1.538*** (9.11)	1.383*** (8.82)
<i>Sales Growth</i>	0.397*** (3.20)	0.221** (2.53)	0.194** (2.49)
<i>Capital Expense</i>	3.849*** (6.41)	2.997*** (4.88)	2.202** (2.38)
<i>Advertising Intensity</i>	1.725*** (2.90)	2.111*** (3.48)	2.645*** (4.33)
<i>R&amp;D Intensity</i>	2.477*** (4.86)	2.593*** (4.92)	2.901*** (5.17)
<i>ROE</i>	0.142*** (3.85)	0.118*** (3.20)	0.121** (2.19)
<i>Constant</i>	2.566*** (11.50)	2.823*** (9.88)	2.707*** (10.64)
Industry FE	YES	YES	YES
Year FE	YES	YES	YES
Adjusted R <sup>2</sup>	0.263	0.254	0.239
N	5,984	5,762	5,547

**Table 6: The Relation between CSR and Future Financial Performance (Pre- versus Post-Attack)**

This table presents the results of estimating the following regression model:

$$Tobin's\ Q_{i,t+1/t+2/t+3} = \beta_1 Impact_{i,t} + \beta_2 Post\_Attack_t + \beta_3 Impact_{i,t} \times Post\_Attack_t + \beta_4 CSR_{i,t} + \beta_5 Impact_{i,t} \times CSR_{i,t} + \beta_6 Post\_Attack_t \times CSR_{i,t} + \beta_7 Impact_{i,t} \times Post\_Attack_t \times CSR_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t} \quad (3)$$

where *Tobin's Q* is the book value of total assets minus the book value of equity minus the balance-sheet deferred taxes plus the market value of equity divided by the book value of assets, measured at *t+1*, *t+2*, *t+3*, respectively; *Impact<sub>i,t</sub>* is an indicator that equals 1 if a firm is headquartered within a 50-mile radius of the location of a terrorist attack, and 0 for the matched control firm; *Post\_Attack<sub>t</sub>* is an indicator variable that equals 1 for the years following the actual (pseudo) terrorist attack year of the impact (non-impact) firms; and *X<sub>i,t</sub>* is a vector of the control variables. The variable definitions are provided in Appendix A. The *t-values* in parentheses are robust to heteroscedasticity. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	<i>Dep. Var. =Tobin's Q</i>		
	<i>Year t+1</i>	<i>Year t+2</i>	<i>Year t+3</i>
	(1)	(2)	(3)
<i>Impact</i>	-0.020 (-0.49)	0.019 (0.51)	0.055 (1.33)
<i>Post_Attack</i>	0.137** (2.40)	0.164*** (2.74)	0.182*** (3.08)
<i>Impact×Post_Attack</i>	0.001 (0.01)	-0.062 (-0.97)	-0.141** (-2.19)
<i>CSR</i>	0.091*** (6.57)	0.083*** (6.11)	0.075*** (5.66)
<i>Impact×CSR</i>	-0.008 (-0.47)	0.001 (0.06)	0.019 (1.07)
<i>Post_Attack×CSR</i>	-0.047*** (-2.65)	-0.047*** (-2.64)	-0.055*** (-2.91)
<b><i>Impact×Post_Attack×CSR</i></b>	<b>0.070*** (2.80)</b>	<b>0.081*** (3.04)</b>	<b>0.073*** (2.75)</b>
<i>Size</i>	-0.140*** (-5.26)	-0.147*** (-5.04)	-0.136*** (-4.71)
<i>Leverage</i>	0.043 (0.47)	0.027 (0.30)	0.074 (0.76)
<i>Fixed Assets</i>	-0.877*** (-6.94)	-0.732*** (-4.30)	-0.487** (-2.29)
<i>Cash Holdings</i>	1.985*** (9.47)	1.507*** (8.78)	1.353*** (8.58)
<i>Sales Growth</i>	0.410*** (3.28)	0.234*** (2.67)	0.206*** (2.60)
<i>Capital Expense</i>	3.875*** (6.49)	3.019*** (4.94)	2.204** (2.38)
<i>Advertising Intensity</i>	1.651*** (2.77)	2.058*** (3.39)	2.648*** (4.34)
<i>R&amp;D Intensity</i>	2.387*** (4.60)	2.505*** (4.73)	2.830*** (5.08)
<i>ROE</i>	0.144*** (3.86)	0.122*** (3.24)	0.125** (2.25)
<i>Constant</i>	2.660*** (10.78)	2.904*** (9.47)	2.750*** (10.54)
Industry FE	YES	YES	YES
Year FE	YES	YES	YES
Adjusted R <sup>2</sup>	0.265	0.257	0.241
N	5,984	5,762	5,547

**Table 7: The Relation between CSR and Media Attention (Impact versus Non-Impact Firms)**

This table presents the results of estimating the following regression model:

$$Media\ Coverage_{i,t/t+1/t+2} = \beta_1 Impact_{i,t} + \beta_2 CSR_{i,t} + \beta_3 Impact_{i,t} \times CSR_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t} \quad (4)$$

where *Media Coverage* is the total number of news articles (with the relevant news score =100) for a firm in a given year divided by 100, measured at year *t*, *t+1*, *t+2*, respectively; *Impact<sub>i,t</sub>* is an indicator that equals 1 if a firm is headquartered within a 50-mile radius of the location of a terrorist attack, and 0 for the matched control firm; *CSR<sub>i,t</sub>* is our proxy for CSR performance; and *X<sub>i,t</sub>* is a vector of the control variables, which is the same as in Table 3. The variable definitions are provided in Appendix A. The *t-values* in parentheses are robust to heteroscedasticity. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	<i>Dep. Var. =Media Coverage</i>		
	<i>Year t</i> <b>(1)</b>	<i>Year t+1</i> <b>(2)</b>	<i>Year t+2</i> <b>(3)</b>
<i>Impact</i>	0.054* (1.76)	0.052* (1.67)	0.063* (1.89)
<i>CSR</i>	0.037*** (2.89)	0.026** (2.19)	0.012 (0.95)
<b><i>Impact×CSR</i></b>	<b>0.122*** (5.37)</b>	<b>0.118*** (5.39)</b>	<b>0.124*** (5.43)</b>
<i>Size</i>	0.664*** (27.93)	0.666*** (27.66)	0.664*** (26.03)
<i>Leverage</i>	-0.821*** (-6.94)	-0.847*** (-6.82)	-0.865*** (-6.59)
<i>Fixed Assets</i>	0.003 (0.02)	-0.004 (-0.03)	0.125 (0.81)
<i>Cash Holdings</i>	0.688*** (5.81)	0.577*** (4.68)	0.620*** (4.42)
<i>Sales Growth</i>	-0.021 (-0.29)	0.023 (0.34)	-0.012 (-0.15)
<i>Capital Expense</i>	0.796* (1.80)	0.820* (1.74)	0.375 (0.74)
<i>Advertising Intensity</i>	1.061** (2.52)	1.073** (2.52)	0.951** (2.17)
<i>R&amp;D Intensity</i>	3.095*** (8.25)	3.300*** (8.38)	3.283*** (7.87)
<i>ROE</i>	-0.019 (-0.48)	0.011 (0.28)	0.016 (0.30)
<i>Constant</i>	-4.322*** (-19.52)	-3.705*** (-15.92)	-3.905*** (-16.53)
Industry FE	YES	YES	YES
Year FE	YES	YES	YES
Adjusted R <sup>2</sup>	0.530	0.518	0.509
N	4,826	4,807	4,416

**Table 8: The Relation between CSR and Media Attention (Pre- versus Post-Attack)**

This table presents the results of estimating the following regression model:

$$Media\ Coverage_{i,t/t+1/t+2} = \beta_1 Impact_{i,t} + \beta_2 Post\_Attack_t + \beta_3 Impact_{i,t} \times Post\_Attack_t + \beta_4 CSR_{i,t} + \beta_5 Impact_{i,t} \times CSR_{i,t} + \beta_6 Post\_Attack_t \times CSR_{i,t} + \beta_7 Impact_{i,t} \times Post\_Attack_t \times CSR_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t} \quad (5)$$

where *Media Coverage* is the total number of news articles (with the relevant news score =100) on a firm in each year divided by 100, measured at year *t*, *t+1*, *t+2*, respectively; *Impact<sub>i,t</sub>* is an indicator that equals 1 if a firm is headquartered within a 50-mile radius of the location of a terrorist attack, and 0 for the matched control firm; *Post\_Attack<sub>t</sub>* is an indicator variable that equals 1 for the years following the actual (pseudo) terrorist attack year of the impact (non-impact) firms; *CSR<sub>i,t</sub>* is our proxy for CSR performance; and *X<sub>i,t</sub>* is a vector of the control variables, which is the same as in Table 3. The variable definitions are provided in Appendix A. The *t-values* in parentheses are robust to heteroscedasticity. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	<i>Dep. Var. =Media Coverage</i>		
	<i>Year t</i> (1)	<i>Year t+1</i> (2)	<i>Year t+2</i> (3)
<i>Impact</i>	-0.101* (-1.70)	-0.100* (-1.66)	-0.076 (-1.23)
<i>Post_Attack</i>	-0.069 (-0.94)	-0.044 (-0.60)	-0.045 (-0.59)
<i>Impact×Post_Attack</i>	0.238*** (2.75)	0.256*** (2.89)	0.210** (2.17)
<i>CSR</i>	0.272*** (6.98)	0.245*** (6.40)	0.215*** (6.10)
<i>Impact×CSR</i>	-0.185*** (-3.89)	-0.152*** (-3.14)	-0.128*** (-2.72)
<i>Post_Attack×CSR</i>	-0.208*** (-4.56)	-0.196*** (-4.49)	-0.185*** (-4.43)
<b><i>Impact×Post_Attack×CSR</i></b>	<b>0.266*** (4.62)</b>	<b>0.220*** (3.85)</b>	<b>0.207*** (3.56)</b>
<i>Size</i>	0.689*** (22.41)	0.694*** (22.08)	0.696*** (20.19)
<i>Leverage</i>	-0.842*** (-4.92)	-0.933*** (-5.20)	-0.928*** (-4.83)
<i>Fixed Assets</i>	0.026 (0.15)	0.020 (0.12)	0.147 (0.76)
<i>Cash Holdings</i>	0.854*** (5.15)	0.701*** (4.07)	0.774*** (3.92)
<i>Sales Growth</i>	0.021 (0.20)	0.082 (0.83)	0.029 (0.26)
<i>Capital Expense</i>	0.347 (0.61)	0.246 (0.41)	-0.113 (-0.17)
<i>Advertising Intensity</i>	-0.252 (-0.53)	-0.055 (-0.11)	-0.131 (-0.27)
<i>R&amp;D Intensity</i>	3.993*** (7.50)	3.881*** (7.76)	3.634*** (6.93)
<i>ROE</i>	0.012 (0.29)	0.005 (0.13)	-0.006 (-0.10)
<i>Constant</i>	-4.447*** (-16.34)	-3.826*** (-13.27)	-4.049*** (-13.25)
Industry FE	YES	YES	YES
Year FE	YES	YES	YES
Adjusted R <sup>2</sup>	0.537	0.527	0.516
N	4,826	4,807	4,416

**Table 9: Media Attention and the Relation Between CSR and Future Financial Performance**

This table presents the results of estimating the following regression model:

$$Tobin's\ Q_{i,t+1/t+2/t+3} = \beta_1 Impact_{i,t} + \beta_2 HiMediaCoverage_{i,t} + \beta_3 CSR_{i,t} + \beta_4 Impact_{i,t} \times CSR_{i,t} + \beta_5 HiMediaCoverage_{i,t} \times CSR_{i,t} + \beta_6 Impact_{i,t} \times HiMediaCoverage_{i,t} + \beta_7 Impact_{i,t} \times HiMediaCoverage_{i,t} \times CSR_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t} \quad (6)$$

where *Tobin's Q* is the book value of total assets minus the book value of equity minus the balance-sheet deferred taxes plus the market value of equity divided by the book value of assets, measured at year  $t+1$ ,  $t+2$ ,  $t+3$ , respectively;  $CSR_{i,t}$  is our proxy for CSR performance;  $HiMediaCoverage_{i,t}$  is an indicator variable that equals 1 if the total number of news articles for a firm in a given year exceeds the median value of all of the sample firms in that year, and 0 otherwise.  $Impact_{i,t}$  is an indicator that equals 1 if a firm is headquartered within a 50-mile radius of the location of a terrorist attack, and 0 for the matched control firm; and  $X_{i,t}$  is a vector of the control variables. The variable definitions are provided in Appendix A. The *t-values* in parentheses are robust to heteroscedasticity. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	<i>Dep. Var. =Tobin's Q</i>		
	<i>Year t+1</i>	<i>Year t+2</i>	<i>Year t+3</i>
	(1)	(2)	(3)
<i>Impact</i>	0.094*** (7.34)	0.092*** (7.69)	0.088*** (6.77)
<i>HiMediaCoverage</i>	0.105* (1.85)	0.0861 (1.41)	0.169*** (2.59)
<i>CSR</i>	-0.051 (-1.15)	-0.060 (-1.30)	-0.008 (-0.16)
<i>Impact</i> × <i>CSR</i>	0.132* (1.91)	0.171** (2.34)	0.067 (0.90)
<i>HiMediaCoverage</i> × <i>CSR</i>	-0.023 (-1.37)	-0.008 (-0.41)	-0.001 (-0.02)
<i>Impact</i> × <i>HiMediaCoverage</i>	-0.048*** (-2.71)	-0.061*** (-3.29)	-0.077*** (-3.98)
<b><i>Impact</i>×<i>HiMediaCoverage</i>×<i>CSR</i></b>	<b>0.074*** (3.06)</b>	<b>0.070*** (2.59)</b>	<b>0.086*** (3.11)</b>
Controls	YES	YES	YES
Industry FE	YES	YES	YES
Year FE	YES	YES	YES
Adjusted R <sup>2</sup>	0.304	0.272	0.254
N	4,826	4,674	4,522

**Table 10: Terrorist Attack and CSR – A Dynamic Analysis**

This table presents the regression results for the impact of terrorist attacks on CSR performance using the terrorist attack timing variables. The dependent variables are the overall CSR performance score, total CSR strength score, and total CSR concern score in columns (1), (2), and (3) respectively. The controls are the same as in Table 3. The *t-values* in parentheses are robust to heteroscedasticity. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

<i>Dep. Var. =</i>	<i>CSR</i>	<i>CSR_STR</i>	<i>CSR_CON</i>
	(1)	(2)	(3)
<i>Impact</i>	-0.231*** (-2.94)	-0.206*** (-2.98)	0.024 (0.46)
<i>Year -1</i>	-0.259* (-1.66)	-0.267* (-1.82)	-0.008 (-0.08)
<i>Year 0</i>	-0.095 (-0.68)	-0.088 (-0.68)	0.007 (0.09)
<i>Year 1</i>	-0.399** (-2.48)	-0.327** (-2.22)	0.073 (0.81)
<i>Year 2 &amp; Above</i>	-0.044 (-0.40)	-0.055 (-0.57)	-0.010 (-0.16)
<i>Impact × Year -1</i>	0.284 (1.37)	0.223 (1.23)	-0.061 (-0.53)
<i>Impact × Year 0</i>	0.239 (1.29)	0.183 (1.08)	-0.056 (-0.56)
<i>Impact × Year 1</i>	<b>0.437**</b> <b>(2.00)</b>	<b>0.360*</b> <b>(1.81)</b>	<b>-0.076</b> <b>(-0.65)</b>
<i>Impact × Year 2 &amp; Above</i>	<b>0.622***</b> <b>(4.28)</b>	<b>0.553***</b> <b>(4.19)</b>	<b>-0.069</b> <b>(-0.78)</b>
Controls	YES	YES	YES
Industry FE	YES	YES	YES
Year FE	YES	YES	YES
Adjusted R <sup>2</sup>	0.165	0.334	0.350
N	5,984	5,984	5,984