ORIGINAL PAPER



When Does Corporate Social Responsibility Backfire in Acquisitions? Signal Incongruence and Acquirer Returns

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Received: 7 December 2019 / Accepted: 16 July 2020 / Published online: 23 July 2020 © Springer Nature B.V. 2020

Abstract

This study examines whether an acquirer's pre-announcement corporate social responsibility (CSR) engagement can provide an insurance-like effect to preserve acquirer returns during the announcement of an acquisition event. Drawing on stakeholder theory and signaling theory, we posit that CSR engagement accrues positive moral capital for an acquirer and sends a positive signal indicating the acquirer's altruism, both of which temper stakeholders' negative responses and prevent a reduction in market returns around the announcement of an acquisition. However, high-CSR engagement could backfire when the acquirer makes a hostile takeover announcement. Incongruent signals between high-CSR engagement and the hostile practice are a sign of hypocrisy in the eyes of stakeholders, which can worry investors and hurt acquirer returns. By analysing 1310 acquisition transactions from 2002 to 2012, the results of our event study show that high-CSR acquirers generally enjoy positive acquirer returns during their acquisition announcements, but negative returns when the acquisitions are hostile. These findings support the idea that CSR engagement can provide insurance-like benefits during an event that is often seen as "negative", while also identifying signal incongruence as an important boundary condition.

Keywords Corporate social responsibility \cdot Insurance-like effect of CSR \cdot Acquirer returns \cdot Mergers and acquisitions \cdot Signal incongruence \cdot Authenticity

Introduction

Acquisitions are controversial expansion strategies that elicit a variety of investors reactions, and often result in reduced acquirer returns (King et al. 2004). Investors could react negatively to an acquisition announcement because acquisitions dramatically influence stakeholder relationships in both

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acquirers and targets, potentially violating firm-stakeholder implicit contracts (Meyer 2008; Rogan and Greve 2015), and thus put acquirer returns at stake (Cuypers et al. 2017; Graffin et al. 2016). Corporate social responsibility (CSR) engagement can be helpful in building and retaining firmstakeholder reciprocal relationships (Cording et al. 2014; Harrison and Freeman 1999). Hence, it is important to know whether acquirers' pre-announcement CSR engagement reduces negative market reactions of investors and thus preserves acquirer returns.

To answer the question, our study uses stakeholder theory and signaling theory to examine the effect of acquirers' CSR engagement on acquirer returns when they make acquisition announcements. From a stakeholder theory perspective (Freeman 1984; Harrison and Freeman 1999), CSR engagement could accrue abundant relational assets between a firm and its stakeholders, and thus generate positive moral capital that can serve as insurance-like protection for firm-stakeholder reciprocity (Godfrey et al. 2009; Godfrey 2005). The protected firm-stakeholder reciprocity can provide investors with more confidence in the firm, and reduce stakeholder negative assessments or responses. As such, a high-CSR firm is likely to preserve its market returns even when its stakeholders' interests are put at risk by negative events like a global financial crisis (Lins et al. 2017) or wrongdoings such as illegal activities, bribery, financial fraud, and patent infringement (Godfrey et al. 2009; Shiu and Yang 2017).

Distinctive from the aforementioned destructive-negative events that bring easily identifiable harm to stakeholder interests, an acquisition only increases the risk of violating the interests of the stakeholders. It is up to market participants to determine the extent to which an acquisition is likely to harm stakeholder relationships and thus future performance. The positive moral capital accumulated via acquirers' CSR engagement prior to their acquisition announcements applies mostly to existing stakeholders, but may not apply as much to potential stakeholders because they only have limited knowledge about the nature of the firm. Signaling theory (Spence 1978, 2002) is germane to supplement this logic gap of stakeholder theory, as it suggests that firms often use various signals to influence their stakeholders, including the potential ones that know relatively little about the firm's nature. As potential stakeholders could be influenced by or are the potential influencers of a firm (Clarkson 1994), a high-CSR firm provides a positive signal that helps these stakeholders recognize the goodwill of the firm and thus inspires their cooperation (Turban and Greening 1997; Zerbini 2017). Consequently, signaling theory provides a complementary perspective to explain why target stakeholders that hold few actual connections with the high-CSR acquirer take cooperative responses. Similarly, such a positive signal can influence investor perceptions that harm from an acquisition will be minimized.

Our study extends this reasoning and first aims to investigate whether the insurance-like property of CSR engagement (Godfrey et al. 2009; Godfrey 2005) is applicable to the context of the potentially harmful event of an acquisition in preserving acquirer returns. Second, we probe into the boundary condition in which the insurance-like property of acquirers' CSR engagement would not function. Specifically, we identify hostile takeovers that are most likely to reduce the welfare of stakeholders and the relationships that exist between stakeholders and the firm (Cain et al. 2017; Shleifer and Summers 1988). As such, we can predict investors' negative market reactions when an acquirer's acquisition practice violates the interests of target stakeholders and is incongruent with its goodwill manifested in pre-announcement CSR engagement.

We seek to make two primary contributions to the nexus between studies of CSR insurance-like properties and the literature of acquirer returns around acquisition announcements. First, this study advances the insurance-like effect of CSR engagement on preserving market returns of a firm to a new context of potentially harmful events, particularly acquisition announcements. Linking signaling theory (Spence 1978, 2002) to stakeholder theory (Freeman 1984), this study conceptualizes acquisitions as potentially harmful events distinctive from the destructive-negative events studied by the existing literature of CSR insurance properties (Godfrey et al. 2009; Godfrey 2005). Our findings highlight that a high-CSR firm can preserve its market returns when it experiences potentially harmful events of acquisitions that put a broad group of stakeholders' interests at stake.

Second, this study extends the insights gained from the recent literature on signal incongruence (De Roeck et al. 2016; Vergne et al. 2018) to show that the high-CSR engagement of an acquirer would backfire when the firm conducts a hostile takeover. The hostile takeover sends a negative signal incongruent to the positive goodwill and altruism shown by high-CSR engagement of an acquirer. The contradiction evokes stakeholders to question the acquirer's the motivation and the integrity of its CSR engagement, leading to investors' negative market reactions and the loss in acquirer returns. Our paper identifies signal incongruence as an important boundary condition for the insurance-like effect of acquirers' CSR engagement.

In the rest of the paper, we first review the literature on stakeholder theory and the insurance-like properties of CSR engagement, define the potentially harmful events of acquisition strategies based on stakeholder theory, and give a brief introduction of signaling theory. Then, we develop the theories and two hypotheses. The method and result sections follow the hypotheses development, in which we describe our data source, sample and analysis findings. Finally, in the discussion section, we highlight the paper's theoretical and practical implications, and then identify the limitations and future directions at the end of the paper.

Theoretical Basis and Literature Review

Stakeholder theory suggests that a firm is embedded in a stakeholder structure that determines the firm's access to critical resources based on a series of explicit and implicit contracts formed with its stakeholders (Freeman 1999; Hannan and Freeman 1984). Explicit contracts, such as supplying contracts and underwriting agreements, are the bases of tangible asset exchange, while implicit contracts, such as partnership and psychological contracts, are the bases of intangible relational asset exchange. Although explicit contracts can be protected by a legal apparatus, corporate governance and third-party enforcement (Acemoglu and Johnson 2005; Rowley 1997), implicit contracts lack coercive enforcement and desire a sustainable dedication of resources for self-enforcement between the involved parties (Bull 1983, 1987). The greater the amount of intangible relational assets accrued between a firm and its stakeholders, the greater the reciprocity that can be developed between

them (Bosse et al. 2009; Fassin 2012). Hence, a firm without sufficient moral capital is not able to well protect its implicit contracts with stakeholders, and thus will suffer from stakeholders' punitive actions when negative events occur and harm stakeholder interests.

Along with stakeholder theory, a stream of research has suggested that CSR engagement accrues positive moral capital for a firm that protects its implicit contracts with stakeholders and preserves the firm's market returns when negative events occur (Godfrey et al. 2009; Lins et al. 2017; Shiu and Yang 2017). The negative events examined in this research include exogenous crises (Lins et al. 2017) and wrongdoing actions by firms, both of which definitely violate stakeholder interests, evoke punitive actions from stakeholders and, in turn, cause negative market reactions of investors (Godfrey et al. 2009; Shiu and Yang 2017). It is worthwhile to note that the negative events examined in the literature are destructive and cause real harms to stakeholders.

Acquisitions, in contrast, have less-destructive impacts on stakeholder interests, and hence could be called potentially harmful events. According to stakeholder theory, acquirers often need to breach existing contracts, both implicit and explicit, with the existing (Rogan and Greve 2015) and of the target stakeholders (Anderson et al. 2001). This situation harms the vested interests of the stakeholders. Hence, unlike the destructive-negative events that undoubtedly harm stakeholder interests and impair firm-stakeholder relationships, acquisition events only increase the risk of violating stakeholder interests, lead to the possible harming of firm-stakeholder reciprocal relationships and jeopardize the firm value of acquirers (Meyer 2008). Given that CSR engagement could preserve a firm's market returns when destructive-negative events occur, it is natural to expect that CSR engagement can also provide insurance-like protection in the context of potentially harmful events, such as acquisitions, that only cause possible harms to the vested interests of stakeholders.

Stakeholder theory, however, mainly focuses on a firm's interactions and relationships with its existing stakeholders (Carroll and Buchholtz 2014; Mitchell et al. 1997), but is limited when interpreting the insurance property of CSR engagement in acquisition event contexts. In the acquisitions contexts, potential stakeholders, especially target stakeholders, could lack direct interactions or connections with the acquirers but still have an impact on the progress of the acquisition deal (Welch et al. 2019). Using signaling theory to complement stakeholder theory, we are better equipped to understand how potential stakeholders would react to a firm's CSR engagement and decide to be cooperative or not (Zerbini 2017). The combined two perspectives suggest that a high level of CSR engagement by an acquirer not only allows the firm to accrue moral capital to enforce its implicit contracts with existing stakeholders but also sends a salient positive signal to potential stakeholders, especially target stakeholders, to infer the acquirer's altruism, based on which they will decide whether to cooperate.

Signaling Theory and Signal Incongruence in the Context of Acquisitions

Dating back to Spence's seminal work (1978), signals are an useful tool to overcome information asymmetry in the job market. A firm provides multiple signals to communicate with its stakeholders, such as employees, suppliers and customers, to affect their decisions regarding whether to bind themselves with the firm (Carter 2006; Spence 2002; Stiglitz 2000). Congruent signals are vital for firms to communicate effectively with stakeholders (Connelly et al. 2011; Stern et al. 2014) because congruent signals simplify the interpretation of stakeholders (Lamberg et al. 2009). Incongruent signals, by contrast, deviate the value of each signal so that the benefits of positive signals could be even wiped out by negative signals (Stern et al. 2014). Stakeholders will find it challenging to interpret and understand incongruent signals because of their contradictions. As a result, stakeholders become suspect of the authentic motivation of the firm in sending positive signals, and deny the positive attribute of the firm that is embedded in the positive signals (Cording et al. 2014; Stern et al. 2014).

Prior studies based on signaling theory (Spence 1978, 2002) showed that acquirers disclosing their positive reputational information during the windows of acquisition announcements can offset investors' negative reactions to the acquisition and increase acquirer returns (Graffin et al. 2016; Yang and Lander Michel 2018). However, such practices by acquirers during announcement windows can also be subject to a suspicion that they engaged in a window-dressing strategy (Cai and Pan 2012; Scalet and Kelly 2010). Acquirers that sustainably dedicate resources to CSR engagement can be exempt from such suspicion, which is similar to insurance in that it requires policyholders to continuously pay premiums until an accident occurs (Rejda and McNamara 2016). As such, we regard the sustainable pre-announcement CSR engagement of an acquirer as a convincing positive signal indicating the altruism of the firm.

Drawing on the insights of signal incongruence (Connelly et al. 2011; Stern et al. 2014), high-CSR engagement may backfire when the engaging firm performs opportunistic actions that hurt stakeholder interests to the point that these actions overrule the moral capital and altruism reflected in the firm's early CSR engagement, and destroy the benefits of the CSR engagement (De Roeck et al. 2016; Vergne et al. 2018). While CSR engagement is a positive signal implying the goodwill and altruism of a firm to stakeholders (Minor and Morgan 2011; Schnietz and Epstein 2005), committing serious opportunistic actions sends a negative signal indicating the firm's hostility to stakeholders. This contradiction makes stakeholders question the authenticity and motivation of the firm's prior engagement in CSR activities and doubt its fundamental integrity (Cording et al. 2014; Simons 2002). With the advent of stakeholders' suspicion and distrust, the insurance-like effect of CSR engagement would be reduced.

Extending this reasoning to the context of acquisitions, we introduce hostile takeovers as a salient negative signal that is incongruent with an acquirer's CSR engagement, and examine how the signal incongruence destroys stakeholders' trust in the acquirer, induces investors' negative evaluation on the acquirer and yields negative acquirer returns. By doing so, we highlight that CSR engagement does not provide insurance-like benefits for all forms of potentially harmful events. Some of these events, such as hostile takeovers, can even cause high-CSR engagement to hurt acquirer returns.

Hypotheses Development

Pre-announcement CSR Engagement and Acquirer Returns

High-CSR engagement is a good method that not only accrues positive moral capital for an acquirer with its existing stakeholder structure, but also communicates with potential stakeholders, especially the target ones, regarding its goodwill as an altruistic and stakeholder-oriented entity. Both mechanisms play important roles in preserving acquirer returns around the acquisition announcement windows.

First, according to stakeholder theory (Harrison and Freeman 1999), a firm adopts a high-CSR engagement to accumulate positive moral capital, which acts as insurance protection when the existing firm-stakeholder relationships are interrupted or harmed (Godfrey et al. 2009; Godfrey 2005). When making an acquisition announcement, the acquirer will inevitably breach contracts with existing stakeholders and reconfigure its stakeholder structure (Öberg et al. 2007), which reduces stakeholder reciprocity (Meyer 2008; Rogan 2014). A high level of CSR engagement prior to an acquirer's acquisition announcement can serve as an effective stakeholder management practice to which the acquirer dedicates its resources for the sake of stakeholder interests in exchange for stakeholder reciprocity (Berman et al. 1999; Hillman and Keim 2001). High-CSR engagement puts the acquirer in an advantageous position to convince stakeholders that despite the context of a potentially harmful event, such as an acquisition, it is likely to act in the best interests of stakeholders. Therefore, compared with low-CSR acquirers, high-CSR acquirers tend to experience less reduction in the trust and reciprocity from existing stakeholders and thus incur less loss in their stock market returns.

Second, CSR engagement from the signaling perspective implies that potential stakeholders who potentially affect a firm (Zerbini 2017), but know little about espoused value of an acquirer tend to cooperate when they observe a high-CSR engagement by the acquirer. Since acquisitions are often followed up with restructuring arrangements, such as plant closures and workforce reductions, that threaten the vested interests of target stakeholders (Barkema and Schijven 2008; Chatterjee 1992), the stakeholders are unlikely to be cooperative and tend to response negatively to an acquisition announcement (Anderson et al. 2001; Welch et al. 2019). Nevertheless, when facing an acquisition by an acquirer who continuously dedicated to CSR engagement, target stakeholders could be convinced that the acquirer is an altruistic entity and will care about their interests when implementing the acquisition (Cording et al. 2014). As such, the signal of high-CSR engagement by the acquirer would drive target stakeholders to cooperate and respond positively to the high-CSR acquirer, which in turn will incur investors' positive reactions. For example, when employees of targets observe safe working environments in the acquiring firms before the acquisition announcements, they would show some positivity to the firms (Panchal and Cartwright 2001).

Alternatively, a low-CSR acquirer holds little moral capital and shows little altruism. As such, stakeholders would be concerned that the acquirer has no goodwill to protect their interests during and after the acquisitions. For one thing, existing stakeholders would reduce their commitments to the acquirer and even respond negatively to the acquirer. Meanwhile, target stakeholders have no reason to believe that a low-CSR acquirer will protect their interests during and after the acquisition announcement when they observe no positive cue that the acquirer cares about the interests of its existing stakeholders. Consequently, both existing and target stakeholders tend to act against a low-CSR acquirer during its acquisition announcement, leading to reduced acquirer returns.

Hypothesis 1 An acquirer with more pre-announcement CSR engagement is likely to experience a higher cumulative market return around announcement windows of an acquisition than an acquirer with less CSR engagement.

Hostile Takeover: The Effect of Signal Incongruence

Our arguments above suggest that a high-CSR acquirer preserves its market returns better than a low-CSR acquirer does because pre-announcement CSR engagement is expected to provide insurance prevention against the potential negative responses from both existing and target stakeholders. However, the protection mechanism may not be viable for all acquisitions. In this part, we submit that the insurance protection of CSR may disappear and even cause repercussions for an acquirer when the firm makes the acquisition practice counteracting the goodwill and altruism of its CSR engagement, such as a hostile takeover (e.g., Cain et al. 2017; Shleifer and Summers 1988).

A hostile takeover refers to a firm providing an unsolicited purchase offer without the consent of the board of the target (Morck et al. 1988; Shleifer and Summers 1988). This acquisition practice is an opportunistic action that benefits the acquirers' wealth by violating the will of target shareholders (Franks and Mayer 1996) and eroding the interests of target stakeholders (e.g., Cain et al. 2017; Shleifer and Summers 1988). Acquirers conducting hostile takeovers face the risk of losing their integrity (Schneider and Roger 1992) and may also suffer from antitakeover defences from targets, such as poison pills, white knights, and managerial takeovers (Comment and Schwert 1995; Shleifer and Summers 1988). By contrast, firms making friendly takeovers would announce acquisitions after reaching an agreement with the targets. Considering the effort and time invested in negotiations and communications with targets before announcements, acquirers performing friendly takeovers are likely to better understand and satisfy the needs of target stakeholders.

A high-CSR acquirer announcing a hostile takeover would definitely shock stakeholders, especially target stakeholders. From signaling theory (Connelly et al. 2011; Spence 2002), potential stakeholders would like to decide whether to develop reciprocal relationships with a firm based on a series of signals indicating how the firm treats stakeholders (Zerbini 2017). A high-CSR acquirer sends a salient altruistic signal and establishes stakeholders' expectations that the acquirer is stakeholder-oriented and less likely to violate their interests. However, making a hostile takeover sends another salient yet negative signal that clashes with the altruistic signal from the high-CSR engagement of the acquirer. The signal incongruence between high-CSR engagement and the hostility of an acquirer to target stakeholders reveals the contradiction between its espoused value and the actual deeds. The contradiction challenges the acquirer's organizational authenticity and makes it appear distrustful to stakeholders (Cording et al. 2014), especially target stakeholders who will be more cautious about binding with the acquirer.

In the face of a hostile takeover, stakeholders would feel deceived because their established expectations due to the high-CSR engagement of an acquirer are reversed by the opportunistic acquisition practice of the firm. Prior research has suggested that the signal incongruence between a firm's CSR engagement and opportunistic actions reflects the self-serving deeds of the firm carried out under the banner of virtue (Vergne et al. 2018). The opportunistic action of a firm would make stakeholders question the firm's authentic motivation for performing CSR activity and conclude that the firm is hypocritical (Anderson 1981; Wagner et al. 2009). As a result, the stakeholders are likely to be more resistant and defensive to hostile acquisitions conducted by a high-CSR acquirer. Investors are also likely to perceive such a negative signal and understand to some degree its negative effects on stakeholders, and thus the future performance of the firm, resulting in negative assessments of the value of the firm's stock.

Hypothesis 2 An acquirer with more pre-announcement CSR engagement is likely to experience a lower cumulative market return around announcement windows of an acquisition when conducting a hostile takeover than an acquirer conducting a friendly acquisition.

Methodology

Data Sample

We construct the analysis sample using the Datastream ASSET4 database, COMPUSTAT, and SDC (Security Data Company) Platinum. The ASSET4 database includes the ESG dataset, which provides indexes that measure the extent to which a company engages in CSR activities in three different aspects: a social index, a governance index, and an environmental index. In addition, to obtain the financial indicators of both the acquirers and targets, we merge the COMPUSTAT data with the ASSET4 corporate social responsibility data using the companies' global identifications and six-digit CUSIP codes and then delete all firm-year observations with missing financial data. The data cover the period from 2002 to 2012. Finally, SDC Platinum provides the basis for tracing acquisition transactions, and its use has been legitimized by many acquisition studies (Bena and Kai 2014; Chen et al. 2007; Deng et al. 2013). We follow the sample selection methods proposed by the prior acquisition literature (Bettinazzi and Zollo 2017; Deng et al. 2013) and exclude all the acquiring firms taking minority shares in the acquired firms (less than 50 percent), acquisitions for which effective announcement dates are missing, transactions that are not fully recorded, and transactions with a disclosed deal value that is less than \$1 million. We ultimately compile a sample of 1310 firm-year transactions with no missing information for the analysis. The acquirers of the sample are headquartered at twenty-three developed economies, such as U.S., U.K., Japan and Germany. Additionally, 59 percent of the targets being acquired among those transactions are private firms or subsidiaries of public firms.

Measurement

Dependent Variables

The dependent variable of this study is the cumulative abnormal stock returns of acquirers around different announcement time windows. We focus on cumulative abnormal returns (CAR) as a proxy for the immediate market reactions of investors to the acquisition announcement of an acquirer. We obtain the daily value-weighted stock returns from CRSP (Center for Research in Security Prices), and each daily abnormal return (AR) for an acquirer is calculated using the return of daily closing stock price minus the market index return on the same day. The construction of daily abnormal return is as follows:

$$AR_{i,t} = r_{i,t} - r_{m,t} \tag{1}$$

where $r_{i,t}$ represents the daily stock return of a firm, and $r_{m,t}$ represents the return of a market index on the same day.

We then combine the daily abnormal returns to construct the CARs based on four different event windows around the announcement date of each acquisition deal, ranging from one day before and after an acquisition announcement ([-1,1]) to five days ([-5,5]). CARs has been widely used in event studies of both the insurance property of CSR engagement (Godfrey et al. 2009; Shiu and Yang 2017) and in the acquisition context to test stock market reactions of investors under the circumstance of significant corporate incidents (Fuller et al. 2002; Lubatkin 1987).

Independent Variables

In this research, we construct a set of key independent variables. First, CSR captures the level of the corporate social responsibility of an acquirer one year before the acquisition announcement. The level of CSR engagement is obtained from the ASSET4 database. The ASSET4 database provides three dimensions of CSR engagement. The social index is constructed based on statistics regarding the employment quality and human rights protections in the workforce (e.g., employee satisfaction, average training hours, trade union representation, total injury rate, etc.). The governance index covers metrics regarding board structures/functions, compensation policies, company visions, and strategic development. Finally, the environmental index is constructed based on whether companies are considering reducing their pollution emissions or implementing innovative product mechanisms to reduce the negative environment externalities. We construct a weighted average value of the three indices after principal

component analysis (PCA), which is referred to as *CSR* (the overall corporate social responsibility index), and it incorporates all three aspects of CSR engagement.

To verify that CSR engagement is a continuous insurance investment rather than a temporary effort of windowdressing, we replace the one-year lagged CSR score with a three-year-weighted CSR score by following Shiu and Yang (2017)'s measurement of long-term CSR engagement and then create a proxy for sustainable CSR engagement, namely, LACSR, which is defined as follows:

$$LACSR = \frac{1}{2}CSR_{t-1} + \frac{1}{4}CSR_{t-2} + \frac{1}{8}CSR_{t-3}.$$
 (2)

LACSR allows an unusual jump in CSR engagement in a particular year to be smoothed out, thus making a trade-off between the responsiveness and stability. A higher weight for more recent CSR engagement makes the CSR score a higher impact.

In addition, we construct *Hostile*, which is equal to 1 if an acquirer initiates an offer of takeover without the consent of the board of the target, and 0 otherwise (Laamanen and Keil 2008; Schwert 2000), as an indicator variable of hostile takeover. We then construct an interactive indicator of *CSR* (or *LACSR*)×*Hostile* to investigate whether the signal incongruence plays a role in affecting the acquirer returns between the altruism presented by CSR engagement and the acquisition practice.

Control Variables

In the next step, we construct the following firm characteristics that potentially affect acquirer returns based on the existing literature (Barney 1988; Campbell et al. 2016; Fuller et al. 2002; Zollo and Meier 2008). Size is the logtransformed value of a firm's total book value of assets. We follow Berger and Ofek (1995)'s measurement of the acquirer's value and created $Q_A dj$, which is defined as the industry-mean adjusted Tobin's Q based on the twodigit SIC codes of an acquirer. This indicator is included to control the market value of an acquirer. Additionally, as a robustness test, we construct ROA_Adj as a substitute measure of acquirer performance. The variable is the adjusted industrial mean of the return on assets (ROA) based on two-digit SIC codes. R&D is also included to control for the research and development expenditures of an acquirer. Invest is a firm's capital expenditures per asset. Leverage is the book value of the total debts divided by the total assets. Tangibility is a firm's proposition of net property, which is the sum of its plant and equipment divided by total assets. HHI is the Herfindahl-Hirschman index, which is calculated using sales based on the first two digits of the SIC codes, and it represents the intensity of market competition. Age is the logarithm of a firm's maturity. *Relsize* describes the relative size of an acquirer and the target in an acquisition deal and is equal to 1 if the total assets of the acquirer are less than those of the target, and 0 otherwise.

We also incorporate three country characteristic variables in our analysis to control for the possibility of CSR engagement being driven by macro-level factors (Campbell 2007; Greening and Gray 1994). The country characteristic variables are obtained from the World Bank. The unemployment rate of the acquirer's original country in a given calendar year is used to control for the acquisitions driven by the resource-seeking motivation (Serdar Dinc and Erel 2013). Rulelaw is the perception of the extent to which agents have confidence in and abide by the rules of society, in particular, the quality of the contract enforcement in the original country of an acquirer in a given calendar year. Voice is the perception of the extent to which the citizens of the acquirer's original country are able to participate in selecting their political representatives and possess freedom of expression, association, and media broadcasting. This variable captures the political institutional environments of the acquirer's home country (Zhu et al. 2019). Table 1 provides the detailed summary statistics of all the variables except for the interacting terms.

Analysis and Results

Table 2 presents the Pearson correlation coefficient matrix. In this table, most correlation coefficients are less than 0.5, suggesting that there is no significant multi-collinearity problems among different variables. CSR_{I-I} and LACSR are positively related to CAR within [-1, 1] window, however, *Hostile* is all negatively related to different CAR variables.

Our baseline model is constructed as follows:

$$CAR_{i[-d,d]} = \alpha_{i0} + Time_t + Industry_m + \beta_1 CSR_{t-1}(orLACSR) + \gamma X_{i,m,n,t} + \varepsilon_i,$$
(3)

where $CAR_{i[-d,d]}$ represents the dependent variable of acquirer *i* with different acquisition announcement windows, which was as defined in the previous section. *Time_t* and *Industry_m* represent the fixed effects in acquiring year *t* and industry *m*, respectively, and are included in the model to account for the unobservable time-varying and industry characteristics. $X_{i,m,n,t}$ is the vector of the acquirer *i*'s, industry *m*'s, or country *n*'s control variables in the acquiring year *t*, as described in the previous section. CSR_{t-1} is the variable of interest in our analysis and defined as the overall corporate social responsibility for acquirer *i* in one year before the acquisition announcement. *LACSR* is the measure of sustainable CSR engagement of acquirer *i*. All standard

	Ν	Mean	Std	Min	Median	Max
Dependent variables	;					
CAR[-1,1]	1310	0.0005	0.0495	-0.3737	0.0009	0.2772
CAR[-2,2]	1310	0.0014	0.0553	-0.2919	0.0010	0.2532
CAR[-3,3]	1310	0.0006	0.0622	-0.4535	0.0018	0.3073
CAR[-5,5]	1310	0.0024	0.0689	-0.6630	0.0038	0.2903
Independent variable	es					
CSR_{t-1}	1310	0.6559	0.2673	0.1068	0.7023	0.9745
LACSR	1310	0.5618	0.2269	0.0684	0.6180	0.8551
Hostile	1310	0.0053	0.0729	0	0	1
Control variables						
Size	1310	9.7724	1.5624	4.2598	9.7061	12.8813
Q_Adj	1310	0.1704	0.8539	-1.2830	-0.0036	2.9074
R&D	1310	0.0317	0.0493	0	0.0032	0.2290
Invest	1310	0.0424	0.0414	0	0.0299	0.1941
Leverage	1310	0.2226	0.1599	0	0.2045	0.7130
Tangibility	1310	0.2499	0.2414	0.0021	0.1479	0.8491
HHI	1310	0.1790	0.2353	0.0122	0.0796	1
Age	1310	3.1403	0.5456	1.3863	3.2581	3.7842
Relsize	1310	0.7733	0.4189	0	1	1
Rulelaw	1310	1.5732	0.1858	-0.8209	1.5767	1.9741
Unemployment	1310	6.5668	2.0872	2.5000	5.8015	24.8994
V&A	1310	1.2105	0.1818	-0.9760	1.1219	1.8264

Table 1Summary of statisticsand distribution of sample

	CAR[-I,I] $CAR[-2,2]$ $CAR[-2,2]$ $CAR[-3,3]$ $CAR[-5,5]$ $CAR[$.8468 .7477 .2040												(13)
	CAR[-2,2] $CAR[-2,2]$ $CAR[-3,3]$ $CAR[-5,5]$ $CAR[$.8468 .7477 												
	$CAR[-3,3]$ $CAR[-5,5]$ CSR_{t-1} CSR_{t-1} $LACSR$ $Hostile$ $Size$.7477 2010	1											
	$CAR[-5,5]$ CSR_{r-1} $LACSR$ $Hostile$ $Size$	60 40	0.8840	1										
	CSR ₁₋₁ (LACSR (Hostile Size	.0040	0.7991	0.8963	1									
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	LACSR Hostile Size	.0121	-0.0127	0.0011	-0.0200	1								
	Hostile Size	.0070	-0.0192	-0.0185	-0.0300	0.8586	1							
Size -0.0652 -0.0894 -0.0757 -0.081 0.4136 0.0217 1 R&D -0.0548 -0.0542 -0.0679 -0.0513 -0.1691 1 $P.Adj$ 0.0213 0.0413 0.0513 0.0612 0.0679 -0.0534 -0.1724 0.2779 0.2179 0.2179 0.2177 0.2247 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2177 0.2176 0.0109 HHH 0.0168 0.0109 0.226 0.0177 0.2174 0.0125 0.1015 0.0115 0.0115 0.0125 0.0133 0.0125 0.0133 0.0125 0.0127 0.2174 0.0272 0.2174 0.0272 0.0125 0.0127 0.2174 0.0072 0.01	Size	- 0.0380	-0.0199	-0.0173	-0.0012	0.0159	0.0349	1						
R&D -0.0548 -0.0548 -0.0548 -0.0548 -0.0548 -0.0543 -0.0691 1 $QAdj$ 0.0213 0.0412 0.0412 0.0513 -0.0461 -0.053 -0.174 0.1289 0.0811 0.0314 0.0513 0.0612 0.0514 0.0842 0.0842 0.0842 0.0842 0.0842 0.0149 0.1025 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0172 0.0112 0.0125 0.0112 0.0125 0.0112 0.0125 0.0132 0.0132 0.0132 0.0132 0.0132 0.0132 0.0132 0.0132 0.0132 0.0132 0.0132 0.0132 0.0132 0.0132 0.0132 $0.$		- 0.0652	- 0.0894	-0.0757	-0.082I	0.4355	0.4136	0.0217	1					
	R&D	- 0.0548	-0.0542	- 0.0679	-0.0574	0.0662	0.0989	-0.0153	- 0.1691	1				
Invest 0.0463 0.0513 0.0612 0.0840 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0841 0.0127 0.02217 0.0127 0.0127 0.0117 0.0284 0.0117 0.0284 0.0117 0.0284 0.0117 0.0284 0.0126 0.01177 0.0284 0.0126 0.0127 0.0284 0.0127 0.0284 0.0127 0.0284 0.0127 0.0127 0.0126 0.0127 0.0284 0.0127 0.0284 0.0127 0.0284 0.0127 0.0284 0.0072 0.0284 0.0072 0.0127 0.0127 0.0127 0.0127 0.0127 0.0127 0.0127 0.0127 0.0127 0.0127 0.0127 0.0127 0.0127 0.0127	Q_{-Adj}	.0278	0.0412	0.0403	0.0518	-0.0420	-0.0461	-0.0531	-0.2477	0.2749	1			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Invest	.0463	0.0513	0.0612	0.0524	0.0864	0.0811	-0.0304	-0.1724	-0.1589	0.0860	1		
	Leverage	.0776	0.0842	0.0849	0.0704	- 0.0945	- 0.0885	0.0149	0.1095	-0.2217	-0.1172	0.0216	1	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Tangibility	.0428	0.0404	0.0380	0.0278	0.0995	0.0901	-0.0138	-0.1277	- 0.2844	-0.0722	0.7802	0.0961	1
Age -0.0390 -0.0351 -0.0365 -0.0365 -0.0365 -0.0365 -0.0993 0.0015 Relize 0.0064 0.0076 0.0116 -0.0135 -0.1485 -0.1762 0.0365 -0.1364 0.0333 -0.0365 -0.0365 -0.0365 -0.0365 -0.0365 -0.0365 -0.0365 -0.0365 -0.0365 -0.0365 -0.0365 -0.0365 -0.0365 -0.0077 0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0037 -0.0077 -0.0123 -0.0077 -0.0123	ІНН	.0168	0.0109	0.0226	0.0042	0.1752	0.1872	-0.0177	0.2566	-0.1041	-0.0955	0.1546	0.0862	0.1402
	Age	- 0.0399	-0.0351	-0.0136	-0.0305	0.2893	0.2269	0.0185	0.2645	-0.0235	- 0.0993	0.0015	0.0253	0.0388
Rulelaw -0.0030 -0.015 -0.015 -0.0074 0.015 -0.0077 0.0033 Unemployment 0.0115 0.0011 -0.0074 0.0125 -0.0077 0.0033 V&A -0.0341 -0.0076 -0.0133 0.0334 -0.0128 -0.0123 -0.0180 -0.0123 -0.0123 -0.0123 -0.0123 -0.0123 -0.0241 -0.0077 -0.035 -0.0233 -0.0241 -0.0123 -0.0123 -0.0123 -0.0123 -0.0123 -0.0241 -0.0242 -0.0037 -0.0253 -0.0124 -0.0242 -0.0124 -0.0224 -0.0352 -0.0047 -0.0356 -0.0047 -0.0356 -0.0047 -0.0356 -0.0047 -0.0356 -0.0136 -0.0136 -0.0124 -0.0124 -0.0124 -0.0124 -0.0124 -0.0124 -0.0124 -0.0124 -0.0124 -0.0124 -0.0124 -0.0124 -0.0124 -0.0124 -0.0124 -0.0113 -0.0113 $-$	Relsize	.0064	0.0076	0.0311	0.0135	-0.1485	-0.1762	0.0397	- 0.0365	-0.1364	0.0383	-0.0018	0.0364	0.0383
	Rulelaw	- 0.0030	-0.0116	-0.0135	-0.0158	0.0689	0.0681	0.0059	- 0.0974	0.0125	-0.0077	0.0093	-0.1527	0.0783
V&A -0.0341 -0.0169 -0.0224 -0.0896 0.1302 0.0647 -0.0356 0.0553 HH (14) (15) (16) (17) (18) HH 1 (13) (16) (17) (18) Age -0.1243 1 (17) (18) Age -0.1243 1 (17) (18) Relize -0.1243 1 (17) (18) Relize -0.1243 1 (11) (17) (18) Relize -0.1243 1 (18) (18) (18) Relize -0.1243 1 (18) (18) (18) Relize -0.1243 1 (18) (18) (18) (18) Vealue 0.0228 0.0352 1 (17) (17) (17) (18) Vealue 0.0215 0.0228 -0.0113 1 (17) (18) (14) Vealue 0.021	Unemployment	.0115	0.0001	- 0.0079	-0.0013	0.0334	-0.0128	- 0.0089	-0.0158	- 0.1233	-0.0180	0.0403	0.0355	0.0760
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	V&A	-0.0341	-0.0169	-0.0224	- 0.0083	0.0896	0.1302	0.0334	-0.0647	-0.0072	- 0.0356	0.0553	- 0.1658	0.1347
HHI1 Age -0.1243 1 Age -0.1243 1 $Relsize$ -0.1242 -0.0352 1 $Rulelaw$ -0.1342 0.0228 -0.0113 1 $Unemployment$ 0.0272 0.0215 -0.0107 -0.1253 $V\&A$ 0.1270 -0.1072 -0.1083 0.5361				(14)		(15)		(16)		(17)		(18)		(19)
Age -0.1243 1Relsize -0.1243 1Relsize -0.0421 -0.0352 1Rulelaw -0.1542 0.0228 -0.0113 1Unemployment 0.0272 0.0215 -0.0107 -0.1253 V&A 0.1270 -0.1072 -0.1083 0.5361				1										
Relsize -0.0421 -0.0352 1 Ruletaw -0.1542 0.0228 -0.0113 1 Unemployment 0.0272 0.0215 -0.0107 -0.1253 V&A 0.1270 -0.072 -0.1033 0.5361				-0.1243		1								
Rulelaw -0.1542 0.0228 -0.0113 1 Unemployment 0.0272 0.0215 -0.0107 -0.1253 V&A 0.1270 -0.1072 -0.1083 0.5361		•		-0.0421		-0.0352		1						
Unemployment 0.0272 0.0215 -0.0107 -0.1253 V&A 0.1270 -0.1072 -0.1083 0.5361		М		-0.1542		0.0228		-0.0113		1				
V&A 0.1270 -0.1072 -0.1083 0.5361		hoyment		0.0272		0.0215		-0.0107		-0.1253		1		
				0.1270		-0.1072		-0.1083		0.5361		- 0.1444		1

coefficients Table 2 Correlation

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When Does Corporate	Social Responsibility	y Backfire in	Acquisitions?	Signal I	ncongruence

Table 3 Pre-anno	ouncement CSR	engagement and	l acquirer returns	6				
	Model[1]	Model[2]	Model[3]	Model[4]	Model[5]	Model[6]	Model[7]	Model[8]
	CAR[-1,1]	CAR[-2,2]	CAR[-3,3]	CAR[-5,5]	CAR[-1,1]	CAR[-2,2]	CAR[-3,3]	CAR[-5,5]
CSR_{t-1}	0.0186**	0.0147^{\dagger}	0.0180*	0.0140				
	(2.71)	(1.90)	(2.11)	(1.45)				
LACSR					0.0249**	0.0207*	0.0210*	0.0159
					(3.10)	(2.29)	(2.07)	(1.39)
Hostile	-0.0237^{\dagger}	-0.0151	- 0.0167	-0.0034	-0.0247*	-0.0160	-0.0175	-0.0040
	(-1.88)	(-0.90)	(-1.08)	(-0.20)	(-1.99)	(-0.96)	(-1.13)	(-0.24)
Size	- 0.0036**	-0.0042**	-0.0048**	-0.0049**	-0.0037**	-0.0044**	-0.0047**	-0.0048**
	(-2.74)	(-2.86)	(-2.91)	(-2.68)	(-2.85)	(-3.05)	(-2.83)	(-2.63)
R&D	-0.0761^{\dagger}	-0.0748	-0.1197*	-0.1122^{\dagger}	-0.0775^{\dagger}	-0.0759	-0.1208*	-0.1131^{\dagger}
	(-1.70)	(-1.56)	(-2.25)	(-1.83)	(-1.73)	(-1.58)	(-2.27)	(-1.84)
Q_Adj	0.0014	0.0015	0.0021	0.0026	0.0014	0.0015	0.0022	0.0027
	(0.70)	(0.68)	(0.88)	(0.96)	(0.69)	(0.66)	(0.91)	(0.98)
Invest	0.0364	0.0853	0.1420	0.1741^{\dagger}	0.0349	0.0836	0.1421	0.1743^{\dagger}
	(0.42)	(0.92)	(1.42)	(1.74)	(0.40)	(0.90)	(1.41)	(1.74)
Leverage	0.0134	0.0217^{\dagger}	0.0199	0.0253	0.0119	0.0205	0.0184	0.0241
	(1.11)	(1.67)	(1.33)	(1.41)	(0.99)	(1.58)	(1.22)	(1.33)
Tangibility	0.0197	-0.0016	-0.0042	-0.0094	0.0192	- 0.0020	-0.0046	-0.0098
	(1.09)	(-0.08)	(-0.19)	(-0.43)	(1.06)	(-0.10)	(-0.21)	(-0.44)
HHI	- 0.0037	-0.0037	0.0040	- 0.0086	-0.0040	-0.0040	0.0040	-0.0085
	(-0.49)	(-0.46)	(0.40)	(-0.85)	(-0.53)	(-0.50)	(0.40)	(-0.84)
Age	-0.0067^{\dagger}	-0.0067^{\dagger}	- 0.0036	-0.0065	-0.0065^{\dagger}	-0.0067^{\dagger}	-0.0033	-0.0062
	(-1.93)	(-1.76)	(-0.83)	(-1.37)	(-1.93)	(-1.78)	(-0.76)	(-1.32)
Relsize	-0.0027	-0.0022	0.0013	-0.0012	-0.0026	-0.0021	0.0013	-0.0012
	(-0.87)	(-0.64)	(0.30)	(-0.27)	(-0.83)	(-0.61)	(0.30)	(-0.27)
Rulelaw	- 0.0037	-0.0111	- 0.0096	-0.0174	-0.0040	-0.0113	-0.0101	-0.0177
	(-0.31)	(-0.88)	(-0.63)	(-1.18)	(-0.35)	(-0.91)	(-0.67)	(-1.21)
Unemployment	-0.0005	-0.0007	-0.0008	-0.0002	- 0.0006	-0.0007	-0.0008	- 0.0003
	(-0.66)	(-0.68)	(-0.67)	(-0.18)	(-0.74)	(-0.73)	(-0.72)	(-0.22)
V&A	-0.0022	0.0042	0.0026	0.0128	-0.0027	0.0035	0.0029	0.0131
	(-0.17)	(0.30)	(0.15)	(0.80)	(-0.21)	(0.26)	(0.17)	(0.83)
Constant	-0.0033	0.0084	0.0059	0.0445	-0.0025	0.0096	0.0054	0.0439
	(-0.08)	(0.21)	(0.16)	(1.39)	(-0.06)	(0.24)	(0.14)	(1.37)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1310	1310	1310	1310	1310	1310	1310	1310
Adj. R ²	0.040	0.042	0.042	0.044	0.041	0.043	0.041	0.044

Table 3	Pre-announcement	CSR	engagement	and	acquirer	returns
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Numbers in parentheses are t-statistics computed using standard errors clustered at the firm level

***p < 0.001, **p < 0.01, *p < 0.05, †p < 0.10

errors are clustered at the firm level. Table 3 provides the detailed results of our baseline regressions.

Models 1 to 4 in Table 3 show that the regression coefficients β_1 for CSR_{t-1} are significantly positive. Specifically, the coefficients of CSR_{t-1} range from 0.014 to 0.0186 when different CARs are used, indicating that one percent increase of CSR engagement in the previous year will increase the CAR by 1.86 percent within the [-1, 1] window and 1.4 percent within the [-5, 5] window. In addition, we obtain similar results when LACSR replaces CSR_{t-1} . The coefficients of LACSR in Models 5 to 8 are positive and mostly significant at least better than the 5 percent significance level except for Model 8. The results suggest that both short-term and sustainable CSR engagement promote the acquirer returns. Therefore, Hypothesis 1 gains support.

In the next step, we investigate whether CSR engagement would preserve the acquirer returns in a hostile takeover. To investigate Hypothesis 2, we construct the following model:

 $CAR_{i[-d,d]} = \alpha_{1o} + Time_{t} + Industry_{m} + \beta_{1}CSR_{t-1}(orLACSR_{i}) + \beta_{2}Hostile + \beta_{3}CSR_{t-1}(orLACSR) \times Hostile + \gamma X_{i,m,n,t} + \varepsilon_{i}$ (4)

In Eq. (4), β_3 is the key parameter for verifying whether CSR engagement provides a market return preservation when the acquirers perform different acquisition practices. If the incongruence raised from a hostile takeover depreciates the acquirer returns of a socially responsible firm, β_3 should be significantly negative. In this model, $X_{i,m,n,t}$ represents the firm-, industry-, and country-level characteristics of the controls that were defined previously. Time and industry fixed effects are also included, and the standard errors are clustered at the firm level. Tables 4 and 5 provide the estimated results for Eq. (4).

Models 1 to 4 in Table 4 provide the results for the acquirer returns of a firm performing a hostile takeover but conducting different levels of CSR engagement in the preannouncement stage. The result shows that as the level of pre-announcement CSR engagement increases, the acquirer returns around a hostile takeover announcement significantly decrease. The coefficients of the interaction terms between CSR_{t-1} and *Hostile* are all significantly negative

	Model[1]	Model[2]	Model[3]	Model[4]
	CAR[-1,1]	CAR[-2,2]	CAR[-3,3]	CAR[-5,5]
$\overline{CSR_{t-1}}$	0.0186**	0.0146^{\dagger}	0.0180*	0.0139
	(2.70)	(1.89)	(2.10)	(1.44)
Hostile	0.0379	0.0594	0.0645^{\dagger}	0.1197***
	(1.10)	(1.23)	(1.89)	(5.21)
$CSR_{t-1} \times Hostile$	-0.0802^{\dagger}	-0.0970^{\dagger}	-0.1058*	-0.1603***
	(-1.91)	(-1.79)	(-2.47)	(-4.74)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Ν	1310	1310	1310	1310
Adj. R ²	0.040	0.043	0.042	0.045

Numbers in parentheses are *t*-statistics computed using standard errors clustered at the firm level. We included all the control variables in the regression models and label as 'Controls' in the table. However, to save space, all coefficients for control variables are omitted for brevity

***p < 0.001, **p < 0.01, *p < 0.05, †p < 0.10

Table 5Sustainable pre-announcement CSR engagementand acquirer returns around ahostile takeover announcement

Table 4Pre-announcementCSR engagement and acquirerreturns to a hostile takeover

announcement

	Model[1] CAR[-1,1]	Model[2] CAR[-2,2]	Model[3] CAR[-3,3]	Model[4] CAR[-5,5]
LACSR	0.0250**	0.0208*	0.0210*	0.0160
	(3.12)	(2.31)	(2.08)	(1.40)
Hostile	0.0813*	0.0850	0.0518	0.1228*
	(2.36)	(1.34)	(0.72)	(2.05)
LACSR × Hostile	-0.1707***	-0.1628	-0.1116	-0.2044*
	(-3.40)	(-1.64)	(-1.00)	(-2.29)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	1310	1310	1310	1310
Adj. R-squared	0.042	0.044	0.041	0.044

Numbers in parentheses are *t*-statistics computed using standard errors clustered at the firm level. We included all the control variables in the regression models and label as 'Controls' in the table. However, to save space, all coefficients for control variables are omitted for brevity

***p < 0.001, **p < 0.01, *p < 0.05, †p < 0.10

at more than 10 percent significance level. Particularly, a one percent increases in CSR engagement prior to a hostile takeover announcement will reduce CARs by about 8 percent within the [-1, 1] window and 16 percent within the [-5, 5] window. The results suggest that the insurance-like effect of CSR engagement vanish and even negatively affect the acquirer returns around a hostile takeover announcement. Thus, Hypothesis 2 receives support.

To verify the insurance-like effect of CSR engagement on acquirer returns, we examine whether a sustainable preannouncement CSR engagement has the same effect on the acquirer returns. The results are presented in Table 5. From Model 1 to 4 in Table 5, the interactive terms between *LACSR* and *Hostile* are all negative and mostly significant, which are consistent with the results of the short-term CSR engagement interacting with hostile takeovers.

In addition, the interactive effects of hostile takeovers and CSR engagement on the acquirer returns during the [-1, 1] window are presented in Fig. 1. The horizontal axis demonstrates different levels of CSR engagement within the range of the mean \pm SD. According to the figure, as the level of pre-announcement CSR engagement increases, the acquirer returns for the hostile takeover decrease.

Robustness Tests

First, we create an alternative measurement of CSR engagement by aggregating the different categories of the CSR scores from the KLD database in 2002–2016. We replace CSR_{t-1} with $CSR_{KLD,t-1}$ and find that the coefficients of interaction terms are negative yet insignificant. We also create $LACSR_{KLD}$ from the KLD database as the measure of sustainable CSR engagement. The results show that the variable

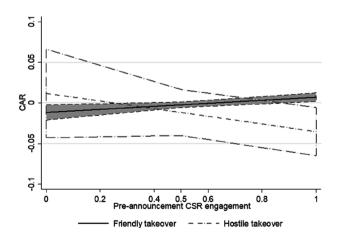


Fig. 1 Interactive effect of hostile/friendly takeover and preannouncement CSR engagement. *Note* The two gray dash-dot lines show 95% confidence interval for regression when a firm takes a hostile takeover. The two black dashed lines show 95% confidence interval for regression when a firm takes a friendly takeover

has significantly positive coefficients on acquirer returns, and its interactions with hostile takeovers are negative and significant. Therefore, we confirm that our findings are not subject to different database specifications.

Second, our sample covers the period of the global financial crisis during 2008–2010. Acquisitions in 2008 might be the largest outliers that would affect the market reactions of investors. To mitigate this concern, we create an indicator variable, namely, *Crisis*, which is equal to 1 if an acquisition was announced during 2008–2010, and 0 otherwise. We thus analyze our baseline regressions by including *Crisis*, along with the industry fixed effects and the control variables. The results are consistent with the results without controlling the variable. Additionally, we drop the acquisitions announced during 2008–2010 and find that the results still hold. We conclude that the results are not dominated by the transactions completed during the period of financial crisis in 2008–2010.

Finally, the other concern of endogeneity is whether the levels of CSR engagement of firms that conduct acquisition strategies systematically differ from those firms that do not conduct acquisition strategies in the same calendar year. To alleviate this concern, we use the propensity score matching (PSM) method and match each acquirer (treatment group) with a corresponding non-acquirer (control group) based on their size, pre-announcement performance, assetliability ratio and capital expenditure ratio. Then, we employ a dynamic model and compare the change of CSR engagement before and after acquisition announcements between the treatment group and the control group. We find that CSR engagement is not significantly different between treatment and control groups or between before and after the acquisition announcements. The results of all the robustness tests are available upon request.

Discussion, Implications and Limitations

This study sheds light on an important but unanswered question of whether the pre-announcement CSR engagement of an acquirer enhances acquirer returns around announcement windows of an acquisition. Acquisitions are conceptualized as potentially harmful events that enlarge the risk of acquirer returns (Fuller et al. 2002; Zollo and Meier 2008) by reconfiguring the existing stakeholder structures of both acquirers and targets (Anderson et al. 2001; Öberg et al. 2007; Rogan and Greve 2015). Since the inevitable changes of stakeholder structures due to acquisitions could hurt stakeholder interests, an acquirer's CSR engagement prior to its acquisition announcement could be vital to reduce investors' negative reactions. However, the relationship has not been sufficiently examined in previous studies. Our study fills this research gap by combining stakeholder theory with signaling theory. The finding extends the insurance-like effect of CSR engagement established in the context of destructive-negative events to a context of potentially harmful events that may include a wide range of competitive strategies, such as acquisitions. Moreover, the finding of this study also highlights the boundary condition in which the acquirers' pre-announcement CSR engagement would even backfire. Particularly, hostile takeovers provide such a condition that conflicts with the positive signal of an acquirer's altruism and hurts interests of target stakeholders. As a result, investors depreciate the market return of a high-CSR acquirer making a hostile takeover.

Theoretical Implications of Findings

The findings of this research extend the literature of insurance property of CSR engagement in two aspects, and enrich prior studies focusing on the acquirer-side antecedents to acquirer returns. First, this study goes beyond early studies to show that CSR engagement is still able to provide an insurance-like effect in the context of competitive actions of a firm. That is a firm's vigorous and aggressive actions in defence of its competitiveness in the market. Godfrey and colleagues (2009) failed to find the insurance-like effect of CSR engagement for such competitive actions, nor for the stakeholder-based wrongdoing actions that jeopardized stakeholders' well-being, such as providing unhealthy or unsafe workplaces. They ascribed such non-significant results to the difficulty in attributing the actual motivations of a firm when committing these actions: were the actions the results of the firm's self-serving practices or the firm's maladroit handling of a challenging situation? Linking signaling theory with stakeholder theory, our study develops a theoretical framework to show that CSR engagement can still provide an insurance-like effect for a firm when it engages in an acquisition, a competitive event yet with the potential risk to the well-being of stakeholders.

In addition, our study identifies hostile takeovers as an opportunistic action that offsets the insurance-like effect of an acquirer's high-CSR engagement. The opportunistic acquisition practice emits a salient negative signal that can seriously ruin the altruism and goodwill manifested in the acquirer's early high-CSR engagement. Thus, our study further advances the literature of CSR insurance by highlighting the signal incongruence as an important boundary condition for the insurance property of CSR engagement.

Furthermore, this study highlights that CSR engagement is worthy of an acquirer's continuous dedication before an acquisition announcement. Existing studies have found that the post-acquisition CSR engagement of acquirers is a remedy strategy of stakeholder management to reconstruct firm-stakeholder relationships and achieve a high level of integrated performance (Bettinazzi and Zollo 2017; Cording et al. 2014). The findings of our study highlight that pre-announcement CSR engagement is a "just-in-case" preparation of an acquirer to preserve its market returns by hedging the risk associated with stakeholders' acts against the acquisition announcement. As such, this study extends the prior acquirer return research that focuses on impression management of an acquirer around announcement windows to offset negative market reactions of investors (Gamache et al. 2019; Graffin et al. 2016).

Practical Implications for Management

The findings of this work also provide managerial implications for the decision makers of a firm. For one thing, firm managers need to make continuous efforts in CSR engagement to reduce the negative market reactions of investors when implementing strategies that reconfigure the existing stakeholder structures of the firm and are subject to suspicions that they violate the interests of a broader group of stakeholders. The findings of our study provide evidence that pre-announcement CSR engagement possesses the insurance-like properties that preserve acquirer returns. The managers of firms that tend to expand their business via combining with another firm could infer that prior CSR engagement can hedge against the downside risk of the strategy.

In addition, firm managers should avoid strategic practices that conflict with the altruism demonstrated by its previous CSR engagement because the incongruence would challenge the firm's authenticity and aggravate the reduction of its market returns. Our research shows that a high level of pre-announcement CSR engagement could be a shackle for a firm's subsequent practices. The insurance property of CSR engagement does not preserve the acquirer returns of a high-CSR acquirer performing a hostile takeover because it disproves the positive expectations among stakeholders and impairs stakeholder trust.

Limitations and Future Research

This work suffers from the following limitations that restrain the generalization of the conclusions. First, the sample for this analysis is composed of acquirers based in developed economies because these stock markets are highly efficient. Future studies might examine acquirers based in underdeveloped economies where stock markets are less efficient (Kim and Song 2017). Second, this study uses investors' reactions in stock markets to infer the possible responses of stakeholders to acquisition announcements of acquirers with different levels of CSR engagement. Without direct measures of stakeholder responses, the study could ignore specific responses of certain stakeholders to different CSR activities of an acquirer. Third, our study does not compare

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the effect of pre-announcement CSR engagement with that of post-announcement CSR engagement by an acquirer on its long-term financial performance. A direct extension of this study is to distinguish the insurance property of CSR engagement before the advent of an acquisition announcement from the property of stakeholder management via CSR engagement in the post-acquisition stage. Finally, future research could examine whether the insurance-like effects of CSR engagement on the market return of a firm still exists in other analogous expansion strategies, such as diversification and strategic alliances. Since these strategies reconfigure the stakeholder structures of firms and may reduce the reciprocity of both existing and potential stakeholders, analysis of the insurance-like properties of CSR engagement over a wider range of these potentially harmful events could clarify the applications and limitations of our theory.

Funding This work is supported by National Nature Science Foundation of China (No. 71602128); China University of Political Science and Law Fund (1000/10819120).

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