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Corporate goodness and shareholder wealth ☆

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ABSTRACT

Using a unique data set, I study how stock markets react to positive and negative events concerned with a firm's corporate social responsibility (CSR). I show that investors respond strongly negatively to negative events and weakly negatively to positive events. I then show that investors do value "offsetting CSR," that is positive CSR news concerning firms with a history of poor stakeholder relations. In contrast, investors respond negatively to positive CSR news which is more likely to result from agency problems. Finally, I provide evidence that CSR news with stronger legal and economic information content generates a more pronounced investor reaction.

1. Introduction

Economic theory suggests that companies should not internalize the negative externalities they exert on nonshareholding stakeholders such as communities, employees, or the environment (see, e.g., Pigou, 1920). Similarly, Friedman (1970) declared in his well known *New York Times* essay that the sole "social responsibility of business is to increase its profits." Nevertheless, companies continue to channel significant resources to improving their relations with key stakeholders. Although putting an accurate figure on exactly how much large corporations spend on corporate social responsibility (CSR) initiatives is difficult, Hong, Kubik, and Scheinkman (2012) quote anecdotal evidence showing that annual CSR outlays of large U.S. corporations can and do end up in the hundreds of millions of dollars.

At the same time, an impressive body of research has been devoted to understanding whether and how investments in stakeholder relations impact a firm's profitability. Yet, much of this research has yielded inconclusive results: some studies find a positive relation, whereas others show a negative or no relation at all. Margolis, Elfenbein, and Walsh (2007) conduct a meta-analysis of many such empirical studies and conclude that the average relation between CSR and profitability is positive but small. In the present paper, I revisit the salient question of whether and how CSR

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matters for shareholder value by analyzing how investors react to positive and negative CSR events[1] in the short-run.

Some have argued that CSR is simply the manifestation of agency problems inside the firm (see Tirole, 2001; Bénabou and Tirole, 2010; Cheng, Hong, and Shue, 2013). According to this line of thought, CSR primarily benefits managers who, at the expense of shareholders, earn a good reputation among key stakeholders (e.g., local politicians, non-governmental organizations, or labor unions). Consequently, this agency perspective implies that positive news about CSR is bad news for shareholders. In contrast, an alternative perspective holds that companies engage with stakeholders for value-enhancing purposes. This view is sometimes referred to as "doing well by doing good," and Edmans (2011), Dimson, Karakas, and Li (2013), Derwall, Guenster, Bauer, and Koedijk (2005), Flammer (2013a), Servaes and Tamayo (2013), or Dowell, Hart, and Yeung (2000) provide examples of mechanisms through which CSR can enhance shareholder wealth. Under this value-enhancing view of CSR, managers engage with stakeholders simply because such projects are deemed to have positive net present value (NPV), and thus, positive news about CSR should be received favorably by shareholders. In this paper, I disentangle the short-run shareholder value implications of such agency and value-motivated CSR and provide evidence consistent with the view that when CSR is more likely to be driven by agency problems, it is detrimental to shareholder value. In contrast, shareholders tend to react positively to CSR news whenever it is more likely to be the result of the firm addressing problematic stakeholder relations by "offsetting" previous corporate social irresponsibility.[2]

The second contribution of this paper is to provide unique short-run event study evidence on the shareholder value implications of CSR data by Kinder, Lydenberg, and Domini Research and Analytics (KLD), a data provider whose measures are widely used in the financial economics literature (see, e.g., Statman and Glushkov, 2009; Gillan, Hartzell, Koch, and Starks, 2010; Hong and Kostovetsky, 2012; Hong, Kubik, and Scheinkman, 2012; Cheng, Hong, and Shue, 2013; Di Giuli and Kostovetsky, 2014; Albuquerque, Durnev, and Koskinen, 2013; Servaes and Tamayo, 2013; Deng, Kang, and Sin Low, 2013).[3] Thirdly, this paper provides thought-provoking and novel insights into the measurement and value implications of CSR by relying on textual analysis in the spirit of Tetlock (2007): I show, for instance, that investors react more strongly to CSR news containing strong economic and legal information content. Finally, the present paper is innovative because it explicitly addresses two methodological concerns that are pervasive in research concerned with CSR, namely, (i) measurement error and (ii) reverse causality.

Measurement error is an issue in research that examines the value implications of CSR because of the difficulty in accurately quantifying CSR given the qualitative nature of many CSR-related issues. In addition, no legally binding standards exist that require publicly listed companies to report coherently and, above all, truthfully on the extent to which they impose positive or negative externalities on their stakeholders. Although numerous private and non-private sector reporting and certification initiatives exist,[4] regulators such as the Securities and Exchange Commission (SEC) have only tentatively started to explore the notion of making the disclosure of environmental and social information a mandatory listing requirement for public firms.[5] Another reason why accurately measuring a firm's stakeholder relations remains difficult is that overall measures of the effects of corporate actions on the welfare of stakeholders do not exist. For example, corporate policies that benefit communities might turn out to be harmful to employees. Hence, coming up with a measure of overall stakeholder value is particularly challenging (see Tirole, 2001). Finally, outsiders (e.g., investors or regulators) cannot observe firm choices regarding CSR, implying that measures are likely to be biased, because firms have an incentive to greenwash, i.e., overstate their good and understate their bad deeds.

To overcome these measurement challenges, this paper focuses on outcomes of corporate behavior in the form of publicly observable events. I do so by constructing a unique

[1] The Internet appendix contains numerous examples of the kind of events analyzed in the paper.

[2] Kotchen and Moon (2012) show that firms do indeed respond to previous negative external events (e.g., lawsuits, controversies) by subsequently improving their stakeholder relations.

[3] Statman and Glushkov (2009) use KLD's measures to examine the performance of CSR-screened equity portfolios. Gillan, Hartzell, Koch, and Starks (2010) study the extent to which the measures are related to operating performance, efficiency, compensation practices, trading by institutional investors, and valuation. Hong and Kostovetsky (2012) show that Democrat-leaning fund managers tend to invest more socially responsibly. Hong, Kubik, and Scheinkman (2012) provide evidence that less financially constrained firms score higher on KLD's measures. Cheng, Hong, and Shue (2013) present evidence of an agency theoretic perspective on CSR in which managers engage in unproductive CSR as a way to enjoy private benefits. Di Giuli and Kostovetsky (2014) show that firms with Democratic-leaning chief executive officers (CEOs) are more socially responsible. Albuquerque, Durnev, and Koskinen (2013) show that CSR decreases systematic risk and increases firm value. Servaes and Tamayo (2013) show that KLD's measures are positively related to firm value for firms with high customer awareness. In the context of Mergers and Acquisitions, Deng, Kang, and Sin Low (2013) show that CSR creates value for acquiring firms' shareholders.

[4] See, for instance, the International Organization for Standardization (ISO) 14000 family regarding "Environmental Management" http://www.iso.org, the Global Reporting Initiative http://www.globalreporting.org/, the Sustainability Accounting Standards Board http://www.sasb.org/, the Carbon Disclosure Project http://www.cdproject.net, the International Integrated Reporting Council http://www.theiirc.org, the Climate Disclosure Standards Board http://www.cdsb.net, or social rating agencies such as MSCI http://www.msci.com/products/esg/stats or Thomson Reuters http://thomsonreuters.com/esg-research-data.

[5] See the SEC's Environmental, Social, and Governance Disclosure Work Plan at http://www.sec.gov/spotlight/invadvcomm/iacmeeting022210-minutes.pdf. Notable exceptions are the UK and the European Union. Since 2013, the London Stock Exchange requires UK incorporated firms listed on the Main Market to disclose their greenhouse gas emissions. See http://www.gov.uk/government/news/leading-businesses-to-disclose-greenhouse-gas-emissions. In a similar spirit, The European Parliament adopted on 15 April 2014 the EU Non-Financial Reporting Directive, which will require large companies and groups to disclose information on policies, risks, and results regarding environmental matters, social and employee-related aspects, respect for human rights, anti-corruption and bribery issues, and diversity on boards of directors. See http://europa.eu/rapid/press-release_STATEMENT-14-124_en.htm.

data set of 2,116 corporate events with either positive or negative implications for the wellbeing of a firm's main stakeholders (e.g., communities, customers, the environment, or employees). In contrast to prior research, which focuses strongly on analyzing largely time-invariant CSR ratings,[6] the event-related data in the present study are of point-in-time nature. Focusing on publicly observable events is akin to studying changes in shareholder value at instances during which investors update their beliefs about a firm's stakeholder relations. Using such high-frequency point-in-time CSR measures allows for the precise measurement of both the date and information content of the events, enabling me to credibly address the measurement error problem.

Relying on short-run event study methodology allows for the effective handling of the second problem in research concerned with the value implications of CSR, i.e., the omnipresent reverse causality issue: studies that regress portfolio returns of trading strategies or other annual measures of firm value (e.g., Tobin's q) on low-frequency measures of CSR (e.g., annual ratings) cannot address the basic question of whether companies do well because they do good or whether they do good because they do well. Hence, the mere observation of a positive correlation between some low-frequency CSR measure and value is consistent with at least two different interpretations: either more responsible firms tend to be more profitable or, alternatively, more profitable firms tend to channel more resources into projects that increase the wellbeing of stakeholders. In fact, Hong, Kubik, and Scheinkman (2012) provide causal evidence that less financially constrained firms tend to have better CSR performance, which is somewhat consistent with the latter view.

Because this paper examines short-run changes in shareholder value in response to high-frequency changes in CSR, I can plausibly mitigate these reverse causality concerns. This is because the short-run stock market reaction gives a direct estimate of the NPV associated with an event, and the precise knowledge of the timing as well as the information contained in an event allows discarding alternative explanations for changes in shareholder value. On the contrary, research relating long-run returns or annual measures of valuation or profitability to low-frequency (e.g., annual) measures of CSR cannot credibly rule out that a positive relation between CSR and profitability is in fact driven by a latent factor, which is correlated with both the firm's profitability and its commitment to CSR. Finally, long-run studies are also sensitive to the presence of confounding effects because, after all, a plethora of value-relevant events which are not necessarily related to CSR occur throughout a year.

I show that investors react strongly negatively to the arrival of negative CSR news. The negative reaction is particularly pronounced for information regarding communities and the environment. Declining stock prices following the release of negative stakeholder information is consistent with the view that there is a substantial and non-negligible cost associated with social irresponsibility. The median cost of negative CSR, which I calculate as the product of the median sample market capitalization and the median 21-day cumulative abnormal return (CAR), is approximately $76 million. Although such a negative stock market reaction is a necessary condition for CSR to be in the shareholder's best interest, it does not yield a sufficient condition. This is because negative shareholder wealth effects with respect to negative events provide no insights into the costs associated with implementing policies aimed at reducing the likelihood of negative events.

Turning to the analysis of positive events, this paper provides evidence that investors respond slightly negatively to the release of positive CSR news. Again, the reaction is most pronounced when the news concerns communities or the environment. However, the negative reaction with respect to positive information is much weaker, both economically and statistically. The weakly negative reaction to positive news regarding CSR suggests that, unconditionally, investors do not appreciate the implementation of CSR policies. Focusing on the average stock market reaction with respect to positive events might be disguising, however, that CSR-related policies could enhance shareholder value under certain circumstances. As previously outlined, it could be that dependent on certain conditions (e.g., the desire to improve poor environmental policies or to make a notoriously dangerous workplace safer by investing in health and safety measures), CSR projects may actually have positive NPV. To explore this idea of conditionality, I separate positive events according to whether they are more likely to be the result of agency problems or the firm's desire to offset previous episodes of corporate social irresponsibility.

First, I measure agency problems in the spirit of Jensen (1986) by focusing on book leverage and liquidity. High leverage constrains managers to spend corporate resources sensibly, whereas high liquidity provides greater scope for wasteful spending through negative NPV projects. Hence, high leverage and low liquidity should indicate fewer agency concerns, and positive CSR events involving such firms should bring about more positive stock market reactions. Second, I build on a recent paper by Kotchen and Moon (2012) showing that firms that do more harm to stakeholders tend to "offset" such corporate social irresponsibility by improving their stakeholder policies in the future. In line with this view, I argue that the extent to which companies face problems with their stakeholders at the occurrence of an event is a reasonable proxy for whether the positive CSR event is more likely to be the result of value- or agency-motivated corporate policies. As such, positive events concerning firms with poor stakeholder relations should be received more positively by shareholders than events concerning firms with no apparent controversies.

The analysis largely confirms the view that the value implications of positive CSR events do depend on the motivation for stakeholder engagement. First, positive events concerning high-leverage and low-liquidity firms turn out to generate significantly higher cumulative abnormal returns (CARs). Likewise, and in line with the idea that offsetting

[6] A notable exception is Flammer (2013b), who studies the passage of close-call CSR-related shareholder proposals and provides causal evidence in favor of the view that CSR enhances shareholder value.

CSR in the spirit of Kotchen and Moon (2012) has different shareholder value implications, positive events regarding companies with known controversies generate a significantly more positive stock market reaction than positive events concerning firms with no apparent stakeholder problems. Taken together, the results from analyzing the cross section of CARs provide an economic justification, and thus a sufficient condition for companies with bad stakeholder relations to improve their CSR policies.

The remainder of the paper is organized as follows. The next section provides an overview of the related literature. Section 3 introduces the sources of the data. Section 4 presents the baseline event study results. In Section 5, I present the results from examining the value implications of agency-motivated and offsetting CSR. In Section 6, I examine the textual characteristics of the events and relate CARs to the textual variables before concluding in Section 7.

2. Related literature

This paper contributes to several strands of research. First, it is related to the extensive literature studying the link between CSR[7] and corporate value. For example, Edmans (2011) provides evidence of risk-adjusted excess returns for portfolios comprising firms with high employee satisfaction. Derwall, Guenster, Bauer, and Koedijk (2005) show that portfolios of companies with strong environmental responsibility generate risk-adjusted excess returns.[8] Statman and Glushkov (2009) and Kempf and Osthoff (2007) show that portfolios comprising firms with strong CSR policies perform better than portfolios consisting of weak CSR companies. In contrast, Geczy, Stambaugh, and Levin (2003), Renneboog, Ter Horst, and Zhang (2008), or Hong and Kacperczyk (2009) show that SRI funds or SRI-screened portfolios underperform, whereas Hamilton, Jo, and Statman (1993), Kurtz and DiBartolomeo (1996), Guerard (1997), Bauer, Koedijk, and Otten (2005), or Schröder (2007) find no (risk-adjusted) performance differences between SRI mutual funds/indices and conventional ones. Another recent paper in the CSR-financial performance literature is Eccles, Ioannou, and Serafeim (2013), who show a positive link between a firm's financial and corporate sustainability performance.

This paper differs from those stated above primarily because it focuses not only on higher frequency measures of CSR, but also on event study methodology and short-run value implications. The present paper is by far not the first to apply event study methodology to the study of CSR. For example, Karpoff, Lott, and Wehrly (2005), Becchetti, Ciciretti, Hasan, and Kobeissi (2012), Fisher-Vanden and Thorburn (2011), Capelle-Blancard and Laguna (2010), Flammer (2013a), Deng, Kang, and Sin Low (2013), or Aktas, De Bodt, and Cousin (2011) also focus on event study methodology in the CSR context. However, the present paper makes important contributions with respect to these studies, because it examines the individual importance of a large variety of different aspects of CSR (e.g., product safety, use of clean energy, workplace safety violations, or human rights abuses). In addition, prior papers employing event study methodology have neither addressed the trade-off between agency and offsetting CSR, nor have they applied textual analysis to the study of CSR.

The present paper is also closely related to a contemporaneous paper, which studies the shareholder value implications of Environmental, Social, and Governance (ESG) shareholder engagements carried out by a large institutional investor (see Dimson, Karakas, and Li, 2013). The authors provide evidence that successful engagements with respect to climate change and corporate governance issues generate positive shareholder value effects. Their analysis is somewhat consistent with the evidence provided in the present paper but differs in an important respect: whereas Dimson, Karakas, and Li (2013) analyze how private ESG information (i.e., shareholder engagements) is incorporated into corporate valuations, my paper focuses on how markets process public environmental and social information in the short-run. Reassuringly, however, both papers allow for similar conclusions.

Moreover, the paper is also related to the growing literature dealing with theories of stakeholder-oriented firms (see Allen, Carletti, and Marquez, 2014; Jensen, 2001; Magill, Quinzii, and Rochet, 2013 and theories of SRI investors (Heinkel, Kraus, and Zechner, 2001; Gollier and Pouget, 2014). Finally, the paper contributes to the literature on determinants of CSR. In this stream of research, Hong, Kubik, and Scheinkman (2012) study the role of financial constraints for corporate policies aimed at increasing stakeholder welfare and provide evidence that less financially constrained firms care more about stakeholders. Di Giuli and Kostovetsky (2014) study how political opinions of the main executives affect the stakeholder relations of a company, and provide evidence that Democratically leaning executives tend to pay more attention to stakeholders than Republican ones. Cheng, Hong, and Shue (2013) provide evidence that agency problems have an important bearing on a firm's CSR. Liang and Renneboog (2013) examine whether legal origins and political institutions shape the trade-off between shareholder and stakeholder rights. Other papers in this branch of the literature study the role of governance mechanisms (see Kacperczyk, 2009; Barnea and Rubin, 2010; Krüger, 2010).

3. Data and summary statistics

The data used in this paper come from KLD, now part of MSCI.[9] KLD is an information intermediary that specializes in quantifying stakeholder relations of publicly listed firms. To quantify ESG performances, KLD's analysts rely to

[7] For a literature review on the economics of CSR, see Kitzmueller and Shimshack (2012). For more general overviews of issues related to CSR and socially responsible investing (SRI), see Landier and Nair (2009), Heal (2005, 2008), and Carroll, Lipartito, Post, and Werhane (2012).

[8] Chava (2014), Bauer and Hann (2010), and Konar and Cohen (2001) provide further evidence on the impact of environmental policies on firm value, credit risk, or the cost of capital.

[9] Kinder, Lydenberg, and Domini Research and Analytics was acquired by the RiskMetrics Group in November 2009. In turn, MSCI (http://www.msci.com), a leading provider of investment decision support tools, acquired RiskMetrics in June 2010.

a large extent on publicly available information gathered through customized press searches. During this process, the analysts single out information relevant to measuring a firm's ESG performance. One important source of information is news stories about corporate events that have welfare implications for the firm's stakeholders. Examples of these events include a newspaper article about poor labor relations at one of the firm's plants or a critical report published by a non-governmental organization regarding the disposal of toxic waste. The Internet appendix contains numerous representative events. If an event is deemed sufficiently important in terms of its ESG impact, the analysts at KLD record and classify the event based on pre-established criteria. KLD classifies events into one of the following stakeholder issue areas:

1. Community
2. Corporate governance
3. Diversity
4. Employee relations
5. Environment
6. Human rights
7. Product

In each of the seven issue areas, KLD has defined a set of binary indicator variables, which are either positive (Strengths), or negative (Concerns). For example, a positive indicator might be concerned with the work-life benefits a company offers to its employees, and a negative employee relations indicator could be concerned with poor union relations. In essence, KLD's analysts match publicly available information with the most appropriate positive or negative indicator.[10]

In this paper, I eliminate the corporate governance issue area, mainly because previous research has shown that KLD's corporate governance issue area differs from the other issue areas (see Hong, Kubik, and Scheinkman, 2012). Furthermore, there are doubts about whether KLD measures corporate governance in the traditional sense. Also, improving corporate governance does not necessarily require monetary investments, while improving the welfare of other stakeholders most often requires pecuniary outlays. In addition, it is unclear whether shareholders should be thought of as stakeholders in the context of CSR and dismissing the corporate governance issue area allows for a focus on the firm's primary nonshareholding stakeholders. To construct the data set, I rely on two different KLD products, namely, KLD Socrates and the @KLD newsletters.

3.1. KLD socrates

KLD Socrates is a database containing complete ESG profiles for a large number of publicly listed U.S. firms. The information in these profiles forms the basis for constructing the widely studied KLD STATS measures of CSR (see, for instance, Hong and Kostovetsky, 2012; Hong, Kubik, and Scheinkman, 2012; Cheng, Hong, and Shue, 2013; Waddock and Graves, 1997; Chatterji, Levine, and Toffel, 2009). For each firm, KLD's analysts collect relevant ESG information and include it in the respective Socrates company profile. Fig. 1 shows a screenshot of parts of Apple Inc.'s Socrates profile.

KLD organizes the information contained in the profiles around the seven different issue areas and according to whether the information is deemed positive or negative for the stakeholder. For example, the following event regarding the food-processing and commodities-trading firm Archer Daniels Midland Company[11] was filed under the negative indicator "Other Concern" in the environment issue area:

> In May 2006, the Political Economy Research Institute (PERI) included ADM on its Toxic 100, a list of the top 100 corporate air polluters in the U.S. ADM ranked tenth on the Toxic 100, which is based on the quantity and toxicity of hundreds of chemicals released into the air.

Within the database, companies are identified by their ticker symbol. I download all available company profiles and isolate text elements containing references to events. Often, the description of the corporate events contained in the Socrates profiles commence with expressions such as "In August 2004," "In 2004," or "A 2004 *New York Times* article..." This systematic character of the event descriptions allows parsing the events by relying on regular expressions. I retain all events with explicit time references and run a Factiva search to obtain the date on which the news item to which KLD is referring to became publicly available. For each retained event from the KLD Socrates database, I collect the company ticker, event description, issue area (e.g., community, etc.), indicator (e.g., Other Strength), and event date (i.e., the date the event occurred or, more generally, the date on which the information became publicly available). I retain all events with time references that fall between 2001 and 2007.

3.2. @KLD newsletters

In addition to maintaining the Socrates database with company profiles of the aforementioned form, KLD used to send out irregularly spaced newsletters, which contained the most noteworthy CSR-related news stories retained by the analysts. I obtain a sample of 92 such newsletters between August 2001 and April 2007 and extract all events. Each event in a given newsletter contains the following information:

- Company name (e.g., Allied Capital Corporation)
- Company ticker (e.g., ALD)
- KLD Issue Area (e.g., environment)
- KLD Social Indicator (e.g., Other Concern)
- Event description
- Event date (e.g., 11/12/2006)

[10] See the KLD STATS manual at http://wrds.wharton.upenn.edu for more information on the different binary indicators and issue areas.

[11] http://www.adm.com

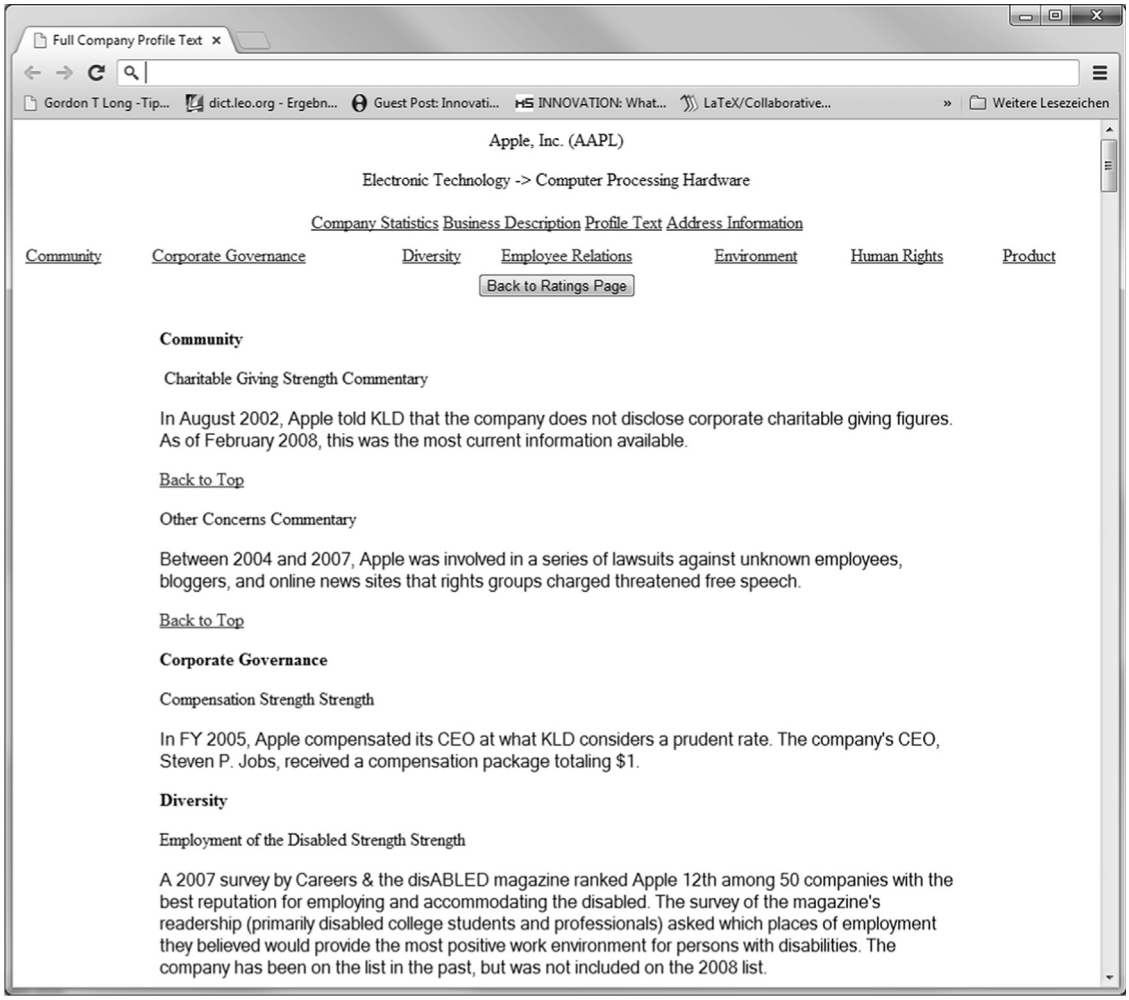

Fig. 1. Kinder Lydenberg Domini (KLD) is an information intermediary that is now part of MSCI Inc. KLD specializes in creating ESG profiles of publicly listed firms. These profiles are gathered in the KLD Socrates database, which contains complete ESG profiles for thousands of publicly listed U.S firms. This figure shows a screenshot of parts of Apple Inc.'s KLD Socrates profile.

The event date refers to the point in time when the information reported in the newsletter is publicly released. For example, this date may correspond with the date on which a newspaper article on a socially controversial topic is published, a regulatory filing is made, or irresponsible corporate behavior is reported by a non-governmental organization. Analysts at KLD systematically collect these dates and include them in the @KLD newsletters. Fig. 2 shows a screenshot of such a newsletter.

3.3. *Relation between events and KLD STATS*

KLD also provides a set of binary indicators (KLD Strengths and Concerns) that quantify the effect firms have on the welfare of their main stakeholders. These indicators are known as KLD STATS.[12] In the process of constructing KLD STATS indicators, KLD relies heavily on the type of events analyzed in this paper (e.g., newspaper articles, Non-governmental organization (NGO) reports, regulatory reports, or company rankings). In fact, the occurrence of such firm-specific events has an important influence on KLD's decision to assign a certain concern or strength to a company. For example, the inclusion of General Electric in the 100 Best Workplaces for Working Mothers Ranking in 2003 (see Fig. 2) resulted in KLD subsequently assigning a family benefits strength to General Electric.

However, firm-specific events such as those gathered in KLD Socrates or the @KLD newsletters constitute an important, but not the only component in determining KLD Strengths or Concerns. This statement is evidenced by the fact that the correlation between the KLD STATS scores and the number of events is imperfect. Hence, changes in KLD's scores exist which cannot be attributed to the occurrence of specific events. For example, such changes can be the result of information obtained by KLD through company interviews or questionnaires. Nonetheless, events are an

[12] STATS stands for Statistical Tool for Analyzing Trends in Social and Environmental Performance. See: http://www.msci.com/products/esg/stats/.

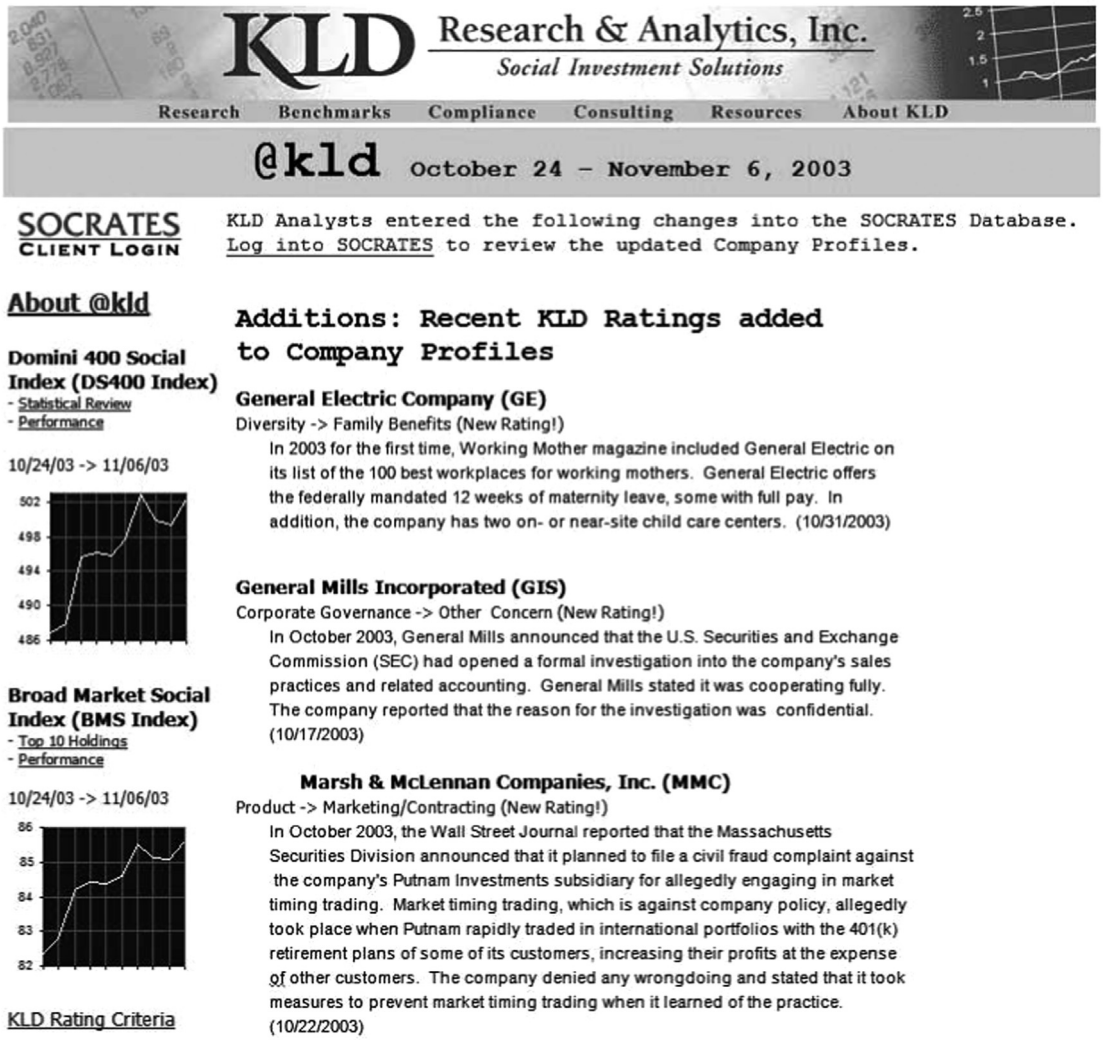
KLD Research & Analytics, Inc.
Social Investment Solutions
Research Benchmarks Compliance Consulting Resources About KLD
@kld October 24 – November 6, 2003
SOCRATES CLIENT LOGIN
KLD Analysts entered the following changes into the SOCRATES Database.
Log into SOCRATES to review the updated Company Profiles.
About @kld
Domini 400 Social Index (DS400 Index)
- Statistical Review
- Performance
10/24/03 -> 11/06/03
502
498
494
490
486
Broad Market Social Index (BMS Index)
- Top 10 Holdings
- Performance
10/24/03 -> 11/06/03
86
85
84
83
82
KLD Rating Criteria
Additions: Recent KLD Ratings added to Company Profiles
General Electric Company (GE)
Diversity -> Family Benefits (New Rating!)
In 2003 for the first time, Working Mother magazine included General Electric on its list of the 100 best workplaces for working mothers. General Electric offers the federally mandated 12 weeks of maternity leave, some with full pay. In addition, the company has two on- or near-site child care centers. (10/31/2003)
General Mills Incorporated (GIS)
Corporate Governance -> Other Concern (New Rating!)
In October 2003, General Mills announced that the U.S. Securities and Exchange Commission (SEC) had opened a formal investigation into the company's sales practices and related accounting. General Mills stated it was cooperating fully. The company reported that the reason for the investigation was confidential. (10/17/2003)
Marsh & McLennan Companies, Inc. (MMC)
Product -> Marketing/Contracting (New Rating!)
In October 2003, the Wall Street Journal reported that the Massachusetts Securities Division announced that it planned to file a civil fraud complaint against the company's Putnam Investments subsidiary for allegedly engaging in market timing trading. Market timing trading, which is against company policy, allegedly took place when Putnam rapidly traded in international portfolios with the 401(k) retirement plans of some of its customers, increasing their profits at the expense of other customers. The company denied any wrongdoing and stated that it took measures to prevent market timing trading when it learned of the practice. (10/22/2003)

Fig. 2. Kinder Lydenberg Domini (KLD) is an information intermediary that is now part of MSCI Inc. KLD specializes in creating ESG profiles of publicly listed firms. KLD used to send out irregularly spaced newsletters (the @KLD newsletters), which contained the most noteworthy ESG-related news stories. This figure shows an example of a typical @KLD newsletter.

important element in determining KLD's STATS scores. Empirically, it turns out that whenever events in a given issue area occur, scores in that issue area increase somewhat permanently. In other words, an environmental accident results in a company being attributed an environmental concern for several of the subsequent years.

In analysis reported in the Internet appendix, I regress KLD scores by issue area in year t on the number of events in that issue area in years t, $t-1$, and $t-2$. The results show that scores depend strongly not only on the number of contemporaneous events, but also on the number of past events. In fact, lagged events appear to have a stronger association with current KLD scores, underpinning the notion that following the occurrence of events, scores change permanently for at least a couple of years. The finding that current scores depend more strongly on lagged events is also largely consistent with anecdotal evidence from KLD that scores are updated once a year to account for newly arrived information from the previous year(s) and could explain the positive autocorrelation or stickiness present in KLD STATS data.

3.4. Event selection

I join all events from the @KLD newsletters with the parsed events from the KLD Socrates database for which I can identify an event date. Whenever a positive and a negative event for a company fall on the same day, I drop both events from the analysis. I check and remove all events with ambiguous time stamps. I also manually check on Factiva for confounding events and whether KLD's reported event date coincides with the date the information is publicly released. I remove events with confounding events and, in most of the cases, the event date in Factiva coincides with the event date included in the @KLD newsletter. Furthermore, I perform company-specific

Factiva searches for a random subsample of 250 firms to check whether KLD systematically misses relevant events, but do not find this to be the case.

Next, I match daily stock prices and returns with the value-weighted market index from the Center for Research in Security Prices (CRSP) as well as balance sheet and income statement items from Compustat. I also obtain KLD STATS scores for the sample firms. I drop all events for which the average daily closing price over the previous year has been lower than $3 to mitigate a biased measurement of shareholder value effects due to extreme abnormal returns of penny stocks. The sample selection procedure yields a final sample of 2,116 events concerning 745 different firms between 2001 and 2007. Table 1 shows the distribution of events by issue area.

Table 1 reveals that KLD records more negative than positive events. Out of a total of 2,116 events, 1,542 were classified as negative, while 574 were deemed positive in terms of CSR. In addition, the relative importance of issue areas (e.g., community, environment, human rights) differs substantially for positive and negative events. For example, issues related to a company's diversity, the environment, or the firm's relation with communities make up almost 60% of the set of positive events. In contrast, negative events are largely dominated by matters related to the firm's products and its relation with customers. As such, the majority of negative events pertains to issues such as product safety or fraudulent marketing and contracting practices. Hence, an important element of KLD's definition of CSR deals with the wellbeing of a firm's customers.

Table 1
Distribution of events by issue area.
This table shows the relative and absolute importance of the analyzed issue areas (e.g., community, diversity) for the set of positive, negative, and all events. For more information on KLD's issue areas, see Section 3. Number refers to the absolute frequency of events belonging to a given issue area, whereas Proportion refers to the relative frequency. The Internet appendix contains representative examples of the events for each of the issue areas.

	Positive events		Negative events		All events	
	Number	Proportion	Number	Proportion	Number	Proportion
Community	94	16.38%	83	5.38%	177	8.36%
Diversity	155	27.00%	179	11.61%	334	15.78%
Employee relations	108	18.82%	361	23.41%	469	22.16%
Environment	91	15.85%	121	7.85%	212	10.02%
Human rights	54	9.41%	61	3.96%	115	5.43%
Product	72	12.54%	737	47.80%	809	38.23%
All	574	100%	1,542	100%	2,116	100%

Table 2
Summary statistics.
This table reports summary statistics of firm-level variables. The sample period runs from 2001–2007. *Employees* is Compustat item *emp*. *Market cap* is the product of stock price at calendar year-end (item *prcc_c*) and shares outstanding (item *csho*). *Assets* is item *at*. ln() is the natural logarithm. *Book leverage* is total liabilities (item *lt*) scaled by total assets (item *at*). Liquidity is cash and short-term investments (item *che*) scaled by total assets (item *at*). The *S&P issuer credit rating* is the median S&P domestic long-term issuer credit rating in a given year. Letter ratings are transformed into numerical ones as follows: 9="AAA," 8="AA," 7="A," 6="BBB," 5="BB," 4="B," 3="CCC," 2="CC," 1="C," and 0="D." All variables are winsorized at the 1st and 99th percentiles. SD displays the standard deviation, P25 the first and P75 the third quartile of the respective variable.

Panel A: Sample firms

	Mean	Median	SD	P25	P75	N
Employees	59.15	20.07	141.74	5.27	60.62	1,400
Market cap	26,079.84	6,859.65	51,654.52	1,499.12	23,505.92	1,413
Assets	57,469.73	8,651.00	178,857.82	1,755.01	29,156.00	1,413
ln(Market cap)	8.67	8.83	1.96	7.31	10.07	1,413
Book leverage	0.62	0.64	0.23	0.47	0.80	1,409
Liquidity	0.14	0.08	0.17	0.03	0.19	1,413
S&P issuer credit rating	6.27	6.00	1.23	6.00	7.00	1,091

Panel B: Compustat firms

	Mean	Median	SD	P25	P75	N
Employees	7.98	0.50	37.20	0.09	3.29	70,629
Market cap	2,768.68	147.00	15,386.27	26.22	797.30	75,967
Assets	7,819.59	248.56	70,328.97	32.29	1,349.03	77,059
ln(Market cap)	4.94	4.99	2.62	3.27	6.68	75,953
Book leverage	0.83	0.59	1.29	0.34	0.87	76,520
Liquidity	0.19	0.08	0.24	0.03	0.27	76,655
S&P issuer credit rating	5.54	6.00	1.37	5.00	6.00	18,303

Table 2 shows summary statistics for some firm-level variables. The median sample firm has approximately 20,000 *Employees*, a *Market cap* of about $6.86 billion, and *Assets* of $8.65 billion. During the sample period (2001–2007), median *Employees*, *Market cap*, and *Assets* for the entire Compustat universe are about 500, $147 million, and $249 million, respectively. Hence, the median sample firm corresponds roughly to the 90th percentile firm in the Compustat universe, and the sample seems skewed toward large firms. Table 2 also reports *Liquidity*, defined as cash and short-term investments (Compustat item *che*) scaled by total assets (item *at*), *Book leverage* defined as total liabilities (item *lt*) scaled by total assets, and the *S&P issuer credit rating*, which is defined as the median Standard & Poor's (S&P) domestic long-term issuer credit rating in a given year. The medians of these variables are approximately the same among the sample firms and the entire Compustat universe, i.e., 0.64, 0.08, and "BBB," respectively.

4. Event study analysis

In studying the shareholder wealth effects of the CSR events, I focus on daily CARs. I start by estimating market model parameters for each firm-event date pair using estimation periods of 250 trading days ending 50 days before the event date. The CRSP value-weighted index serves as the market index in the regressions, and abnormal returns for event i and event day t are defined as

$$AR_{it} = r_{it} - a_i - b_i \times r_{vw,t}, \quad (1)$$

where a_i and b_i are the estimated market model parameters, r_{it} the firm return, and $r_{vw,t}$ the value-weighted market index return on event day t. Besides calculating a t-statistic allowing for event-induced changes in variance (see Boehmer, Musumeci, and Poulsen, 1991), I also compute a nonparametric sign test due to Cowan (1992).

Table 3
Cumulative abnormal returns (negative events).
This table reports cumulative abnormal returns for negative events. I consider event windows of 11 [−5,5] and 21 [−10,10] days. The test portfolio in Panel A contains all negative events, whereas the test portfolios in Panels B–G contain only negative events belonging to the respective issue areas. For representative negative events belonging to each issue area, see the Internet appendix. The columns MEAN, MIN, MED, and MAX display the mean, minimum, median, and maximum CAR, respectively. The column Perc. pos. represents the fraction of positive event CARs. The t-statistics account for event-induced changes in volatility and are calculated according to Boehmer, Musumeci, and Poulsen (1991). The generalized sign test (see Cowan, 1992), displayed in column Sign test, is a test of the median cumulative abnormal return being equal to zero. (*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.)

Window	Mean (%)	t-Stat	MIN (%)	MED (%)	MAX (%)	Perc. pos. (%)	Sign test	N
Panel A: All negative events								
[−5,5]	−0.88***	−4.95	−73.49	−0.42	55.39	43.57	−4.00	1,542
[−10,10]	−1.31***	−6.57	−65.38	−1.11	60.58	42.08	−5.20	1,542
Panel B: Community								
[−5,5]	−2.14***	−2.80	−27.64	−1.22	13.12	35.71	−2.53	83
[−10,10]	−3.33***	−3.17	−29.68	−2.30	34.35	30.95	−3.41	83
Panel C: Diversity								
[−5,5]	−0.45	−1.08	−27.61	−0.27	19.28	45.45	−0.71	179
[−10,10]	−0.84*	−1.93	−36.99	−0.46	23.50	44.39	−1.00	179
Panel D: Employee relations								
[−5,5]	−0.88*	−1.76	−73.49	−0.18	55.39	44.62	−1.11	361
[−10,10]	−0.94**	−2.33	−64.88	−1.10	54.98	42.82	−1.82	361
Panel E: Environment								
[−5,5]	−1.54*	−1.77	−43.90	−0.35	22.40	41.73	−1.60	121
[−10,10]	−3.03**	−2.43	−56.45	−1.11	26.54	40.16	−1.95	121
Panel F: Human rights								
[−5,5]	1.07	1.34	−6.86	0.89	20.56	57.14	1.35	61
[−10,10]	0.17	−0.09	−34.52	0.01	17.56	49.21	0.09	61
Panel G: Product								
[−5,5]	−0.89***	−3.98	−51.49	−0.53	39.06	42.61	−3.57	737
[−10,10]	−1.22***	−4.71	−65.38	−1.15	60.58	42.08	−3.86	737

4.1. Negative events

I analyze the statistical properties of the 11-day [−5,5] and 21-day [−10,10] CARs around the event date.

Table 3 displays the results for negative events. Panel A reports the mean, median, minimum, and maximum CAR for all negative events alongside the aforementioned test statistics. The mean and median CARs are significantly negative for negative events, providing evidence that whenever information with negative stakeholder implications becomes publicly available, stock prices of concerned companies decline significantly. The effect is economically meaningful with a mean (median) 11-day CAR of −88 (−42) basis points. Both the mean and median CARs are highly statistically significant with a *t*-statistic (generalized Z-statistic) of −4.95 (−4.00). Given that the median market capitalization of the sample firms is approximately $6.86 billion and the median 21-day CAR is −111 basis points, the median cost associated with negative CSR events is approximately $76 million ($0.0111 \times \$6.86\text{billion}$) .

However, pooling together all negative incidents is a crude way of analyzing the relation between changes in shareholder value and negative CSR news because this procedure assumes that all six issue areas are equally relevant in terms of their shareholder value implications. Yet, certain issue areas might not be value-relevant when analyzed individually. To address this issue, I sort negative events by issue area and run event studies for each issue area separately. Panels B–G, Table 3 report the results. All issue areas except for human rights and diversity show negative and significant mean 11-day CARs. Product-related events seem to generate the most statistically significant *t*-statistic=−3.98) 11-day mean CAR, followed by community- (*t*-statistic=−2.80), environment- (*t*-statistic=−1.77), and employee-related (*t*-statistic=−1.76) issues. In terms of economic magnitudes, the value effects of negative community and environment events are the strongest. Mean (median) 11-day CAR in the community issue area is −214 (−122) basis points, whereas negative events classified in the environment issue area generate mean (median) CAR of −154 (−35) basis points. The results are stronger, both economically and statistically, when looking at 21-day CARs.

The empirical evidence shows that whenever negative information about a firm's stakeholder policies becomes publicly available, shareholders also incur economically meaningful losses. Such evidence is consistent with the view that shareholders do care strongly about corporate social irresponsibility. A plausible explanation for the strong negative reaction to negative events is that negative events contain substantive negative cash-flow news, which is crucially important for the discounted value of the firm's future cash flows. This interpretation is also consistent with evidence from the textual analysis showing that negative events contain hard, i.e., legal and quantitative, information content.

The negative CARs associated with negative news about a firm's stakeholder relations provide a necessary, but not sufficient condition for CSR being in the best interest of shareholders. Studying how the stock market processes negative information regarding stakeholders cannot provide a sufficient condition because negative shareholder wealth effects with respect to negative events convey no information about the costs associated with implementing policies aimed at reducing the likelihood of such events from occurring: corporate actions aimed at preventing negative CSR events could be much more costly than the occasional stock price decline induced by the manifestation of negative events.

4.2. Positive events

To examine whether the data bear out a sufficient condition for CSR being in the best interest of shareholders, I now turn to analyzing shareholder wealth effects induced by positive events. In line with the previous analysis, I begin by examining the shareholder wealth effects of an event portfolio consisting of all positive events.

Panel A, Table 4 shows that the mean (median) 11-day CAR is not significantly different from zero for the set of positive events. However, marginal statistical evidence exists that the 21-day CAR is slightly negative. With a *t*-statistic (generalized Z-statistic) of −1.82 (−1.66), the level of statistical significance of the mean (median) CAR is much lower for positive than for negative events. In addition, the mean 21-day positive event CAR of −47 basis points is much smaller when compared with the mean CAR for negative events. Hence, stock markets react much less systematically to positive news regarding stakeholder welfare. However, marginally negative CARs around days on which positive information about a firm's stakeholder relations become known to the market are consistent with the view that investing in CSR is not, on average, beneficial for shareholder value. In other words, the negative stock market reaction suggests that (i) implementing CSR policies is costly and (ii) the expected benefits from implementing these policies fall short of the costs. Also, this evidence is consistent with the view that the implementation of positive CSR policies is in fact costly. Such a view is neglected by CSR proponents, who sometimes claim that increasing stakeholder welfare is costless and, at the same time, miraculously profit-enhancing. Di Giuli and Kostovetsky (2014) provide evidence consistent with the view that positive CSR could be costly: companies with better stakeholder relations also tend to have higher selling, general, and administrative expenses.

The next step sorts positive events by issue area and runs individual event studies for positive events from each issue area. This analysis paints a somewhat more nuanced picture. The conditional analysis reveals that, individually, CARs are not statistically significantly different from zero for the majority of the six issue areas. The only issue areas displaying significantly negative CARs for the 21-day event window are those concerned with the environment and communities. This evidence suggests that stock markets perceive policies aimed at voluntarily increasing the welfare of communities as wasteful wealth transfers from shareholders to communities. This negative reaction could be due to at least two reasons: first, increasing the welfare of communities might reflect agency problems in that managers seek to build strong ties with their surrounding communities at the expense of shareholders. If community-related CSR

Table 4
Cumulative abnormal returns (positive events).

This table reports cumulative abnormal returns for positive events. I consider event windows of 11 [−5,5] and 21 [−10,10] days. The test portfolio in Panel A contains all positive events, whereas the test portfolios in Panels B–G contain only positive events belonging to the respective issue areas. For representative positive events belonging to each issue area, see the Internet appendix. The columns MEAN, MIN, MED, and MAX display the mean, minimum, median, and maximum CAR, respectively. The column Perc. pos. represents the fraction of positive event CARs. The *t*-statistics account for event-induced changes in volatility and are calculated according to Boehmer, Musumeci, and Poulsen (1991). The generalized sign test (see Cowan, 1992), displayed in column Sign test, is a test of the median cumulative abnormal return being equal to zero. (*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.)

Window	Mean (%)	*t*-Stat	MIN (%)	MED (%)	MAX (%)	Perc. pos. (%)	Sign test	*N*
Panel A: All positive events								
[−5,5]	−0.16	−0.77	−37.11	−0.31	31.08	45.36	−1.25	574
[−10,10]	−0.47*	−1.82	−61.62	−0.54	37.90	44.52	−1.66	574
Panel B: Community								
[−5,5]	−1.25*	−1.75	−30.69	−0.98	8.92	43.30	−0.91	94
[−10,10]	−1.61**	−2.35	−31.83	−1.44	13.42	38.14	−1.92	94
Panel C: Diversity								
[−5,5]	−0.10	−0.61	−25.78	−0.53	31.08	44.44	−0.98	155
[−10,10]	−0.56	−0.80	−61.62	−0.67	37.90	44.44	−0.98	155
Panel D: Employee relations								
[−5,5]	−0.42	−0.41	−37.11	−0.63	19.83	39.64	−1.73	108
[−10,10]	0.59	0.69	−25.36	0.88	31.90	52.25	0.93	108
Panel E: Environment								
[−5,5]	0.07	−0.05	−12.75	−0.02	11.31	47.31	−0.11	91
[−10,10]	−1.37*	−1.85	−19.26	−0.96	9.23	44.09	−0.73	91
Panel F: Human rights								
[−5,5]	−0.45	−0.74	−13.91	0.24	14.67	51.85	0.42	54
[−10,10]	0.02	−0.10	−15.02	−0.50	18.67	42.59	−0.94	54
Panel G: Product								
[−5,5]	1.41*	1.75	−9.82	0.28	22.15	51.32	0.80	72
[−10,10]	0.41	−0.25	−17.91	−0.68	19.40	43.42	−0.58	72

initiatives are the result of agency problems, stock markets should indeed react negatively. Cespa and Cestone (2007) provide a theoretical argument along these lines. A second potential explanation is related to negative cash-flow shocks. Community-related events are often concerned with charitable giving to or pro bono work in communities. Shareholders could perceive news about initiatives that increase community welfare as negative cash-flow shocks, which should then lead to a decline in stock prices in the short-run.

The marginally negative mean 21-day CAR for positive events related to environmental responsibility is more puzzling because the negative short-term reaction seems to suggest that shareholders do not reward investments aimed at improving a firm's environmental footprint. Again, agency problems could play an important role here in that CEOs of firms involved in positive environmental events might be improving their personal reputation as "sustainable" or "green" corporate leaders at the expense of shareholders. Another potential explanation for the negative stock price reaction could be that positive environmental events are related to substantial current cash outlays, and therefore have negative short-term cash-flow implications. In contrast, the benefits from such policies accrue only in the long-run. Although the short-run outlays are easy to quantify, it may be more difficult for investors to accurately value the long-term benefits resulting from sound environmental policies. If the majority of shareholders are short-term oriented, such long-term oriented investments in environmental responsibility would not be sufficiently rewarded and stock prices should decline on average

Finally, a marginally positive reaction exists to positive product events (see Panel G, Table 4). These events are often related to issues such as high product quality or being an industry leader in terms of research and development and supply of innovative products. If anything, it seems surprising that the stock market reaction to these events is not more pronounced.[13]

[13] For completeness, I verify in the Internet appendix that the event study results are not due to other non-event characteristics (e.g., size or

5. Agency-motivated and offsetting CSR

5.1. Positive events

In this subsection, I analyze the cross section of positive event CARs to determine whether the stock market's reaction to news about CSR depends on the firm's motives for engaging with stakeholders. In doing so, I distinguish whether positive CSR events are more likely to be the result of a firm's desire to improve poor stakeholder relations, that is, to "offset" prior corporate irresponsibility,[14] or, whether events are more likely to be due to agency problems inside the firm. I use two distinct and indirect ways to separate the events into agency-motivated ones, and events more likely to result from the firm offsetting prior irresponsibility.

First, I measure agency concerns in the spirit of Jensen (1986) by focusing on book leverage and liquidity. High leverage forces managers to spend corporate resources sensibly, whereas high liquidity provides greater scope for wasteful spending in the form of negative NPV projects. Hence, high leverage and low liquidity should indicate fewer agency concerns, and positive CSR events involving such firms should bring about a more favorable stock market reaction.

Second, a firm's prior CSR performance is also an indication of the motives for stakeholder engagement. It seems plausible that investor reaction to positive CSR information should depend on whether a firm is known for having a history of poor relations with stakeholders. For example, if a company with a highly polluting production technology decides to invest in environmental efficiency, markets should react favorably because an improvement in corporate environmental policies is likely to bring down costs in the long-term. In contrast, if a company with no apparent environmental problems or an already clean production technology decides to allocate substantial resources to increasing environmental responsibility, such investments might indicate wasteful spending and markets should, on average, react unfavorably.

Testing this notion of offsetting versus agency-motivated CSR, I begin by regressing the 21-day CAR for all positive events on a constant, a measure of company size, and indirect measures of agency concerns. Formally, I estimate the following model:

$$CAR_{it} = a + b \times Size_{it} + c \times Agency_{it} + \epsilon_{it}, \quad (2)$$

where CAR_{it} is the cumulative abnormal return associated with the occurrence of positive events and $Size_{it}$ is simply the natural logarithm of the firm's market capitalization. I use the logarithm of the firm's market capitalization as a size control, but obtain qualitatively similar results when using other proxies for size (e.g., the logarithm of assets). In line with Jensen (1986), I use *Book leverage* and *Liquidity* as measures of agency concerns. The coefficient estimate for *Book leverage* is significantly positive (t-statistic=2.73), suggesting that markets value positive stakeholder news more for high- than for low-leverage firms (see column 1, Panel A, Table 5). Similarly, column 2, Panel A, Table 5 shows a statistically significant and negative coefficient estimate for *Liquidity* (t-statistic=−2.29), indicating that when companies with high levels of liquidity are involved in positive CSR news, investors react less favorably. Together, the evidence in columns 1 and 2 is consistent with the view that CSR is shareholder value-reducing whenever it is conducted by companies that are more likely to be facing agency problems.

A possible concern with the interpretation of the previous finding is that both liquidity and leverage are correlated with financial distress. Hence, alternatively, the stock market might be reacting more positively to positive events concerning low-liquidity and high-leverage firms because these firms are in financial distress, and good news in terms of CSR indicates that management sees better financial prospects ahead, and is thus confident enough to spend resources on CSR. To rule out this alternative interpretation, I now control explicitly for the firm's credit rating by estimating the following equation:

$$CAR_{it} = a + b \times Size_{it} + c \times Agency_{it} + d \times CreditRating_{it} + \epsilon_{it}. \quad (3)$$

I obtain firm-wide credit ratings from S&P and transform letter ratings into numerical ones. $CreditRating_{it}$ is simply the median credit rating of firm i in the year of the event. The rating variable is not available for all firms, which is why I estimate the model on a reduced sample. In these alternative specifications, the credit rating is not significantly related to positive event CARs, and the coefficient estimate for *Book leverage* is of similar magnitude (see column 3, Panel A, Table 5). In contrast, the coefficient estimate for *Liquidity* becomes stronger both economically and statistically (see column 4).

To rule out that other non-event characteristics such as size, value, growth, or industry are driving the presented results, I also compute cumulative abnormal returns with respect to alternative benchmark models. Columns 5 and 6 show regressions in which event returns are risk adjusted using the asset pricing model proposed by Fama and French (1993). In columns 7 and 8, I use the Fama and French 48 value-weighted industry return (see Fama and French, 1997) as the benchmark return. These alternative ways of calculating abnormal returns leave the previous conclusions unaffected, which is in line with prior methodological research on event studies (see Brown and Warner, 1985; Kothari and Warner, 2007) showing that benchmark returns used for risk adjustment rarely matter in the short-run. Overall, the evidence presented in Panel A, Table 5 supports the view that investors perceive positive CSR news concerning firms in which agency problems are less likely to be present more favorably.

I now turn to the second approach of separating positive events into agency-motivated ones and those that are more likely to be the result of the firm's implementation of useful and potentially value-enhancing CSR policies. Kotchen and

(*footnote continued*)
value) of the sample firms by basing the analysis on abnormal returns with respect to the Fama and French (1993) model.

[14] Prior research has shown that companies tend to offset corporate social irresponsibility by improving their CSR in subsequent years. Kotchen and Moon (2012) show that companies with more CSR controversies also tend to show more pro-social behavior in the future.

Table 5
Agency-motivated CSR.

In this table, I regress 21-day CAR on several firm-level characteristics. Panel A (B) shows the results for regressions in which the CAR following positive (negative) events serves as the dependent variable. ln() is the natural logarithm. *Liquidity* is cash and short-term investments scaled by total assets. *Book leverage* is defined as total liabilities scaled by total assets. The *S&P issuer credit rating* is the median S&P domestic long-term issuer credit rating in the year in which an event occurs. In columns 1–4, CARs are calculated with respect to the Capital Asset Pricing Model (CAPM). In columns 5 and 6, the dependent variable is CAR based on the Fama and French (1993) model. In columns 7 and 8, CAR is calculated with respect to the value-weighted Fama and French 48-industry return (see Fama and French, 1997). The *t*-statistics (in parentheses) are based on robust standard errors. (*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.)

Panel A: Positive events

	(1)	(2)	(3)	(4)	(5) FF1993	(6) FF1993	(7) FF48	(8) FF48
Dependent variable	CAR	CAR	CAR	CAR	CAR	CAR	CAR	CAR
Constant	−0.027	0.003	−0.015	0.017	−0.019	0.017	−0.033	0.004
	(−1.39)	(0.16)	(−0.59)	(0.77)	(−0.76)	(0.79)	(−1.41)	(0.21)
ln(Market cap)	−0.000	−0.000	−0.005	−0.003	−0.004	−0.002	−0.003	−0.001
	(−0.24)	(−0.02)	(−1.54)	(−1.01)	(−1.25)	(−0.63)	(−0.93)	(−0.44)
Liquidity		−0.053**		−0.102***		−0.121***		−0.097***
		(−2.29)		(−3.56)		(−4.18)		(−3.58)
Book leverage	0.042***		0.032**		0.037**		0.041***	
	(2.73)		(2.01)		(2.30)		(2.74)	
S&P issuer credit rating			0.006	0.004	0.005	0.002	0.005	0.003
			(1.37)	(0.84)	(1.10)	(0.48)	(1.19)	(0.70)
Observations	573	574	468	469	468	469	462	463
R^2	0.013	0.009	0.015	0.032	0.015	0.040	0.020	0.031

Panel B: Negative events

	(1)	(2)	(3)	(4)	(5) FF1993	(6) FF1993	(7) FF48	(8) FF48
Dependent variable	CAR	CAR	CAR	CAR	CAR	CAR	CAR	CAR
Constant	−0.013	−0.018	0.008	0.006	−0.007	0.008	−0.015	−0.006
	(−0.77)	(−1.23)	(0.34)	(0.33)	(−0.32)	(0.50)	(−0.69)	(−0.38)
ln(Market cap)	−0.000	0.000	0.006**	0.006**	0.004	0.004	0.005**	0.005**
	(−0.19)	(0.04)	(2.22)	(2.16)	(1.49)	(1.45)	(2.06)	(2.02)
Liquidity		0.039*		0.027		−0.008		0.003
		(1.91)		(1.11)		(−0.34)		(0.13)
Book leverage	0.003		−0.000		0.017		0.010	
	(0.23)		(−0.00)		(1.04)		(0.63)	
S&P issuer credit rating			−0.012***	−0.012***	−0.008**	−0.009**	−0.008**	−0.008**
			(−3.19)	(−3.18)	(−2.17)	(−2.28)	(−2.22)	(−2.29)
Observations	1,538	1,541	1,319	1,319	1,319	1,319	1,297	1,297
R^2	0.000	0.002	0.008	0.009	0.005	0.004	0.004	0.004

Moon (2012) provide evidence that companies engage in CSR to offset prior corporate social irresponsibility. They find that firms which do harm tend to do more good in the future, suggesting that firms often respond to negative external events (e.g., lawsuits or other controversies) by subsequently changing corporate behavior. Here, I develop this evidence further by hypothesizing that whenever positive events are more likely to result from offsetting prior corporate irresponsibility, shareholders should not react the same as when firms start engaging in CSR out of the blue. In other words, I expect offsetting CSR to be driven by efficiency considerations, and hence to be shareholder value-enhancing, whereas CSR which occurs unexpectedly and thus for no apparent reason to be due to agency problems, and thus detrimental to value.

To test this idea, I now condition positive event CARs on KLD's Concerns. I start by regressing the 21-day CAR induced by the occurrence of positive events from a specific issue area on a constant and a category-specific dummy variable indicating whether the involved firm has had at least one KLD Concern in the specific issue area. Formally, I estimate the following model for each issue area *j*:

$$CAR^j_{it} = a^j + b^j \times Concern^j_{it} + \epsilon^j_{it}, \tag{4}$$

where the variable $Concern^j_{it}$ takes the value of one if firm *i* has had a KLD Concern in issue area *j* at the beginning of the year in which the event takes place, and zero otherwise. CAR^j_{it} is the 21-day CAR associated with positive events from issue area *j*. In this specification, the coefficient estimate b^j measures the differential 21-day CAR for positive events from issue area *j* that are more likely to be the result of a firm's desire to offset prior corporate social irresponsibility.

The test in column 1, Panel A, Table 6 shows a slightly more positive stock market reaction for positive community events concerning firms with problematic community relations. In a similar vein, columns 3, 4, and 5 show significantly higher CARs for positive events from the employee relations, environment, and human rights issue

Table 6
Offsetting CSR—base specification.
This table shows the results from regressing CARs associated with positive (negative) events from each issue area on a constant and a dummy variable indicating whether the firm involved in the event has KLD Concerns (Strengths) in the respective issue area. For example, *Community concern* is an indicator variable that takes the value of one if the company involved in the event has at least one KLD Community concern in the year the event occurs, and zero otherwise. The other indicator variables are defined accordingly. The *t*-statistics (in parentheses) are based on robust standard errors. (*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.)

Panel A: Positive events

	(1) Community	(2) Diversity	(3) Empl relations	(4) Environment	(5) Human rights	(6) Product
Constant	−0.024***	−0.013	−0.009	−0.025***	−0.019	0.016
	(−2.95)	(−1.17)	(−0.82)	(−3.58)	(−1.43)	(1.54)
Community concern	0.025*					
	(1.73)					
Diversity concern		0.027				
		(1.26)				
Empl relations concern			0.034**			
			(2.11)			
Environment concern				0.036***		
				(2.90)		
Human rights concern					0.032*	
					(1.84)	
Product concern						−0.024
						(−1.63)
Observations	94	155	108	91	54	72
R^2	0.032	0.010	0.040	0.086	0.061	0.037

Panel B: Negative events

	(1) Community	(2) Diversity	(3) Empl relations	(4) Environment	(5) Human rights	(6) Product
Constant	−0.049***	−0.004	−0.005	−0.033**	−0.001	−0.011**
	(−3.80)	(−0.42)	(−0.50)	(−2.60)	(−0.06)	(−2.40)
Community strength	0.038*					
	(1.91)					
Diversity strength		−0.008				
		(−0.62)				
Empl relations strength			−0.015			
			(−0.87)			
Environment strength				0.009		
				(0.39)		
Human rights strength					0.029	
					(0.79)	
Product strength						−0.010
						(−0.93)
Observations	83	179	361	121	61	737
R^2	0.043	0.002	0.002	0.001	0.010	0.001

areas whenever these events concern firms with known controversies. In contrast, the mean 21-day CAR for positive events from the community and environment issue areas concerning firms in which agency problems are more likely to be present, i.e., firms with no concerns, is significantly negative (see the *Constant* in columns 1 and 4). For example, column 4 shows that the 21-day mean CAR associated with environmental events for which the involved companies do not have any environmental concerns is approximately −250 basis points. On the contrary, the mean 21-day CAR for events involving companies having at least one environmental concern is 110 basis points (−0.025 + 0.036), with the coefficient estimate for the interaction term *Environment concern* being highly statistically significant (*t*-statistic=2.90). Taken together, the tests in Panel A, Table 6 provide evidence in favor of the view that investors distinguish between positive news about CSR—more likely to be the result of a firm's desire to offset prior corporate irresponsibility—and positive CSR news more likely to be the result of agency problems.

An important question regarding the previous results of higher CARs for offsetting as opposed to agency-motivated CSR is whether these results generalize to all firms or whether they are only valid for large firms in which agency problems are more severe. To address this issue, I add the natural logarithm of the firm's market capitalization as a control variable to the previous specification and estimate the following model for each issue area:

$$CAR_{it}^{j} = a^{j} + b^{j} \times Concern_{it}^{j} + c^{j} \times Size_{it} + \epsilon_{it}^{j}. \quad (5)$$

Table 7
Offsetting CSR—controlling for firm size.

This table shows the results from regressing CARs associated with positive (negative) events from each issue area on a constant, firm size, and a dummy variable indicating whether the firm involved in the event has KLD Concerns (Strengths) in the respective issue area. For example, *Community concern* is an indicator variable that takes the value of one if the company involved in the event has at least one KLD Community concern in the year the event occurs, and zero otherwise. The other indicator variables are defined accordingly. The *t*-statistics (in parentheses) are based on robust standard errors. (*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.)

Panel A: Positive events

	(1) Community	(2) Diversity	(3) Empl relations	(4) Environment	(5) Human rights	(6) Product
Constant	−0.033	−0.030	0.019	−0.032	0.079*	0.086
	(−0.85)	(−0.74)	(0.45)	(−0.96)	(1.72)	(1.58)
Community concern	0.023					
	(1.37)					
Diversity concern		0.024				
		(1.11)				
Empl relations concern			0.036**			
			(2.18)			
Environment concern				0.036***		
				(2.82)		
Human rights concern					0.049***	
					(2.69)	
Product concern						−0.013
						(−0.81)
ln(Market cap)	0.001	0.002	−0.003	0.001	−0.011**	−0.008
	(0.24)	(0.45)	(−0.67)	(0.22)	(−2.23)	(−1.31)
Observations	94	155	108	91	54	72
R^2	0.032	0.012	0.044	0.087	0.144	0.060

Panel B: Negative events

	(1) Community	(2) Diversity	(3) Empl relations	(4) Environment	(5) Human rights	(6) Product
Constant	0.020	0.027	−0.051	−0.158***	−0.018	0.025
	(0.33)	(0.76)	(−1.51)	(−2.90)	(−0.36)	(1.09)
Community strength	0.057**					
	(2.24)					
Diversity strength		0.001				
		(0.05)				
Empl relations strength			−0.029			
			(−1.47)			
Environment strength				0.001		
				(0.03)		
Human rights strength					0.032	
					(0.83)	
Product strength						−0.004
						(−0.39)
ln(Market cap)	−0.008	−0.004	0.006	0.014**	0.002	−0.004
	(−1.19)	(−0.91)	(1.43)	(2.36)	(0.35)	(−1.56)
Observations	83	179	361	121	61	736
R^2	0.060	0.007	0.008	0.046	0.012	0.005

The results by issue area are presented in Panel A, Table 7. The specifications that control explicitly for firm size suggest that offsetting CSR generates a more positive stock market reaction independent of whether a firm is small or large: after controlling for size, the coefficient estimate for $Concern^j$ remains significant in the employee relations, environment, and human rights issue areas (see columns 3, 4, and 5, Panel A, Table 7). In contrast, the *Constant* becomes insignificant in all but the human rights issue area. The lack of statistical significance for the constant suggests that the result of negative value implications for agency-motivated CSR may not be applicable to small firms but should be regarded as a large-firm phenomenon.[15] This result seems quite plausible as agency problems are likely to be more pronounced in larger firms.

Note also, as an aside, that the coefficient estimate for *ln(Market cap)* is significantly negative (*t*-statistic = −2.23) in the human rights issue area (see column 5, Panel B, Table 7). A significantly negative coefficient estimate for firm size suggests that it is more costly for large firms to become good corporate citizens with respect to human rights issues.

[15] Note, however, that the result of lower CARs for positive CSR events involving low-leverage and high-liquidity firms is robust to controlling for size (see Panel A, Table 5).

In their paper, Kotchen and Moon (2012) also show that firms sometimes offset weaknesses in one of KLD's issue areas with subsequent strengths in others. I now study whether I find a similar pattern when analyzing the cross section of CARs, by examining, for instance, whether responding to product-related concerns by increasing employee-related strengths creates value for shareholders. Conducting such an analysis is also an important robustness check on the results regarding offsetting CSR because the issue area-specific concerns indicator variables are correlated with each other: the average pairwise correlation is 0.15. To examine the issue, I now regress positive event CARs by issue area on all category-specific concerns indicators simultaneously:

$$CAR^j_{it} = a^j + \sum_{j=1}^{6} b^j \times Concern^j_{it} + c^j \times Size_{it} + \epsilon^j_{it}. \quad (6)$$

The tests (see Panel A, Table 8) convey that it is almost exclusively the dummy variable indicating concerns in the specific issue area which is statistically significant (see columns 3, 4, and 5). Some marginally significant evidence exists that positive human rights events concerning firms with past environmental controversies generate a more positive stock market reaction too (see column 5). Overall, however, these results suggest that the underlying value-creating mechanism behind offsetting CSR is more one of addressing specific stakeholder problems by improving the policies in the specific issue area rather than one of ramping up the entire CSR profile of the firm.

In summary, the analysis of this subsection provides a sufficient condition for CSR to be in the shareholder's best interest whenever such CSR improves poor stakeholder relations.[16]

5.2. Negative events

This subsection repeats the preceding analysis by focusing on CARs for negative events. I begin by regressing the 21-day CAR attributable to negative events on the previously employed measures of agency problems and the logarithm of market capitalization:

$$CAR_{it} = a + b \times Size_{it} + c \times Agency_{it} + \epsilon_{it}. \quad (7)$$

Panel B, Table 5 reports the results. Whereas, *Book leverage* is not significantly related to negative event CARs (see column 1), the test in column 2 shows some marginal evidence that investors respond more benignly to negative CSR news when such information concerns high-liquidity firms (t-statistic = 1.91). Considering that negative events are often related to issues such as lawsuits, fines, and regulatory concerns (see also Section 6), a positive coefficient estimate for *Liquidity* is somewhat plausible: it seems as if investors regard companies with higher cash reserves as being in a better position to shoulder the negative cash-flow implications of negative events.

Interestingly, the equation in which the credit rating is introduced as a control variable, that is,

$$CAR_{it} = a + b \times Size_{it} + c \times Agency_{it} + d \times CreditRating_{it} + \epsilon_{it}, \quad (8)$$

reveals that negative event CARs are significantly negatively related to the firm's credit rating (see columns 3–8, Panel B, Table 5). Put differently, firms with high credit ratings tend to suffer stronger negative stock market reactions following the occurrence of negative events compared with firms with low credit ratings. This evidence is consistent with the notion that negative events have the strongest negative price impact when the negative information starkly contrasts with current investor expectations about the firm's financial strength (high credit rating). In other words, the most pronounced change in shareholder value occurs when the negative events are likely to result in a dramatic update of investor beliefs about the firm's prospects.

Akin to the positive *Liquidity* coefficient (see column 2, Panel B, Table 5), the coefficient on *ln(Market cap)* is also significantly and positively related to negative event CARs in the specifications that control for the firm's credit rating (see columns 3, 4, 7, and 8).[17] This result is suggestive of investors believing that larger companies are in a better position to absorb the negative cash-flow news contained in negative events.

Turning to the second type of analysis, I now regress negative event CARs by issue area on category-specific dummy variables denoted by $Strength^j_{it}$, which indicate the presence of a KLD Strength in a specific issue area:

$$CAR^j_{it} = a^j + b^j \times Strength^j_{it} + \epsilon^j_{it}. \quad (9)$$

In these equations, as well as in the specifications that control explicitly for firm size, i.e.,

$$CAR^j_{it} = a^j + b^j \times Strength^j_{it} + c^j \times Size_{it} + \epsilon^j_{it}, \quad (10)$$

all KLD Strengths indicator variables are insignificant, except the community concern indicator (see column 1, Panel B, Tables 6 and 7), suggesting that firms with strong community relations suffer less-pronounced stock price declines following the release of negative news about the firm's impact on communities. Note also that the coefficient estimate for *ln(Market cap)* in column 4, Panel B, Table 7 is significantly positive for negative environment-related events, showing that negative events regarding the environment are less value-reducing for larger companies.

Finally, I repeat the Kotchen and Moon (2012)-type analysis for negative event CARs by estimating

$$CAR^j_{it} = a^j + \sum_{j=1}^{6} b^j \times Strength^j_{it} + c^j \times Size_{it} + \epsilon^j_{it}. \quad (11)$$

The test in column 1, Panel B, Table 8 continues to show a significantly positive coefficient for the community strength dummy. In addition, the regression in column 6 shows evidence that product-related concerns tend to have a less negative impact on firm value when associated

[16] In analysis which is available in the Internet appendix to this paper, I also verify that the results presented in Table 8 are not due to other non-event characteristics such as value, size, or industry of the sample firms.

[17] Not surprisingly, the *ln(Market cap)* coefficient is not significant when CARs are also risk-adjusted with respect to firm size (see columns 5 and 6, Panel B, Table 5).

Table 8
Offsetting CSR—Kotchen and Moon (2012).

This table shows the results from regressing CARs associated with positive (negative) events from each issue area on a constant, firm size, and all six dummy variables indicating whether the firm involved in the event has KLD Concerns (Strengths) in the respective issue areas. For example, *Community concern* is an indicator variable that takes the value of one if the company involved in the event has at least one KLD Community concern in the year the event occurs, and zero otherwise. The other indicator variables are defined accordingly. The *t*-statistics (in parentheses) are based on robust standard errors. (*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.)

Panel A: Positive events

	(1) Community	(2) Diversity	(3) Empl relations	(4) Environment	(5) Human rights	(6) Product
Constant	−0.039	−0.024	0.052	−0.033	0.090	0.119*
	(−0.91)	(−0.51)	(1.07)	(−0.77)	(1.61)	(1.91)
Community concern	0.019	0.008	−0.002	−0.017	0.030	0.038
	(1.07)	(0.32)	(−0.08)	(−1.01)	(1.35)	(1.56)
Diversity concern	0.011	0.020	−0.018	−0.001	−0.027	0.016
	(0.61)	(0.86)	(−0.92)	(−0.10)	(−1.21)	(0.85)
Empl relations concern	0.010	0.025	0.036**	−0.013	0.017	−0.007
	(0.62)	(1.15)	(2.01)	(−1.03)	(1.02)	(−0.45)
Environment concern	−0.005	−0.015	0.008	0.042***	0.032*	−0.001
	(−0.29)	(−0.78)	(0.43)	(3.05)	(1.69)	(−0.05)
Human rights concern	−0.025	−0.013	0.044	−0.000	0.059***	−0.009
	(−1.25)	(−0.50)	(1.63)	(−0.01)	(3.06)	(−0.38)
Product concern	−0.006	−0.017	0.011	0.006	−0.005	−0.023
	(−0.37)	(−0.71)	(0.57)	(0.34)	(−0.22)	(−1.32)
ln(Market cap)	0.002	0.002	−0.007	0.001	−0.015**	−0.011*
	(0.37)	(0.40)	(−1.29)	(0.31)	(−2.24)	(−1.67)
Observations	94	155	108	91	54	72
R^2	0.058	0.030	0.084	0.114	0.249	0.113

Panel B: Negative events

	(1) Community	(2) Diversity	(3) Empl relations	(4) Environment	(5) Human rights	(6) Product
Constant	0.055	0.032	−0.071*	−0.205***	−0.046	0.041*
	(0.87)	(0.87)	(−1.92)	(−3.09)	(−0.70)	(1.66)
Community strength	0.055*	0.006	0.003	−0.037	−0.020	0.022**
	(1.90)	(0.37)	(0.13)	(−1.26)	(−0.67)	(2.11)
Diversity strength	0.019	−0.004	−0.031	−0.019	0.001	−0.010
	(0.64)	(−0.22)	(−1.39)	(−0.69)	(0.05)	(−1.04)
Empl relations strength	0.009	−0.002	−0.008	0.015	−0.014	0.002
	(0.36)	(−0.11)	(−0.34)	(0.48)	(−0.56)	(0.17)
Environment strength	−0.020	0.020	−0.017	0.002	−0.025	0.011
	(−0.75)	(0.90)	(−0.68)	(0.07)	(−0.88)	(1.00)
Human rights strength	−0.158*	−0.019	−0.011	0.030	0.044	0.007
	(−1.68)	(−0.22)	(−0.11)	(0.35)	(1.03)	(0.11)
Product strength	0.035	0.005	−0.023	−0.032	0.034	−0.009
	(1.21)	(0.26)	(−0.88)	(−0.74)	(0.71)	(−0.79)
ln(Market cap)	−0.013*	−0.005	0.010**	0.020**	0.006	−0.006**
	(−1.75)	(−1.03)	(1.99)	(2.54)	(0.76)	(−2.05)
Observations	83	179	361	121	61	736
R^2	0.121	0.014	0.019	0.073	0.044	0.013

with firms with strong community relations. One potential explanation for negative product-related news being less damaging to shareholder value for firms with strong community relations could be that consumers are more loyal toward firms that are committed to doing good in their communities.

Finally, there is mildly significant evidence that negative community-related news concerning firms with human rights strengths generate a more negative stock market reaction (see column 1, Panel B, Table 8). Note also that the specifications in Panel B do not show a clear pattern as to how negative event CARs by issue area relate to firm size: columns 1 and 6 show a negative relationship for community- and product-related events, whereas employee- and environment-related events display a positive association (see columns 3 and 4).

5.3. Alternative hypothesis: selection bias

One concern with the results presented in this paper is that there could be a causal relation between the stock market reaction and an event making it into the media, and hence

KLD's ratings database.[18] Unlike earnings announcements, which are associated with SEC filings, there is the potential for selection of which CSR events are or are not covered by KLD. A large positive or negative stock market reaction can increase the probability that the media will notice and write about the event, and that KLD will include it in their newsletters. If such a bias is simply about only important events making it into the data, then that is a small problem. However, if negative events are more likely to make it into the data than positive events, then the measurement of the value and costs associated with CSR would be biased as well.

To rule out the possibility of such a selection bias, two questions need to be answered: First, do only important events make it into the data? Second, and more importantly, are negative events more likely to make it into the data than positive ones?

To answer these questions, I focus on a subset of the sample events, i.e., the events that were taken from the @KLD newsletters. I do so because I observe the exact date on which KLD disseminated these events to its clients. The median length of time between the day on which an event took place (event date) and the day it was sent out to clients (dissemination date) is about 13 trading days.

One observable implication of only important events making it into the data is that the entire return distribution between the event and the dissemination dates should be somewhat unusual. The event study results already suggests this, but to provide additional evidence, I compare the entire return distribution on days preceding the dissemination date with the return distribution proceeding random pseudo-dissemination dates. To obtain these pseudo-dissemination dates, I draw for each event a random date from the year in which the event was disseminated. For example, if an event was disseminated in October 2003, I draw a random dissemination date from 2003 for that specific event. The idea behind this test is that if KLD focuses only on important events, one would expect the return distributions that precede true and pseudo-dissemination dates to differ significantly.

Panel A, Table 9 shows distributional statistics (e.g., 25th percentile (P25) or median (P50)) of daily returns in the period running up to the true and to the pseudo-dissemination dates. The pseudo- (true) run-up period comprises the days preceding the pseudo (true) dissemination date. I use different lengths for these run-up periods, i.e., 6, 11, 16, and 21 trading days, which are denoted by [−5,0], [−10,0], [−15,0], and [−20,0]. For example, the median (P50) daily return in the five days running up to the true and the pseudo-dissemination dates is approximately 0%, and the 75th percentile (P75) return is about 1.2%. I use the Kolmogorov–Smirnov (KS) test to compare the daily return distribution of the true run-up period with that of the pseudo run-up period. The KS test confirms that unusual stock market returns occur in the run-up to the true dissemination date: the return distributions for the true and the pseudo run-up periods differ significantly at reasonable levels of significance (see last two columns, Panel A, Table 9). Consequently, this difference in return distributions implies that KLD somewhat focuses on important events. However, KLD's tendency toward sampling important events is not necessarily problematic as long as negative events are not more likely to make it into the data than positive events.

To address the more important question of whether negative events are more likely to make it into the data than positive ones, I now compare the run-up period return distribution of positive events with that of negative events focusing only on true dissemination dates. If positive and negative events differed in their likelihood to be included in the sample, they should demonstrate different return distributions in the true run-up period. The median (P50) daily return in the five days before dissemination is about 0% for both positive and negative events (see Panel B, Table 9). A comparison of the run-up period return distribution of positive and negative events using the KS test shows little evidence that the return distributions differ significantly (see last two columns, Panel A, Table 9). In other words, the KS test suggests that returns preceding the dissemination of positive and negative events are drawn from the same distribution. The statistical tests presented in Panel B, Table 9 should thus alleviate the concern that the likelihood of negative and positive events making it into the data differs. This, in turn, should also ease concerns of a biased measurement of the value and costs associated with CSR due to a selection problem.

6. Textual analysis

Recent work in accounting and finance has focused on the systematic analysis of qualitative information in the form of textual data (see,for instance, Tetlock, 2007). Such textual analysis consists of creating a quantitative profile of a text by mapping the words of the text to predefined word categories.

In this section, I first apply textual analysis to the event descriptions. Secondly, I relate event CARs to the textual characteristics of the events. Analyzing textual characteristics of the event descriptions may deliver insights into how KLD measures CSR and what may differentiate the measurement of negative and positive CSR. In turn, relating CARs to textual characteristics may deliver insights into what kind of CSR information is more relevant for stock prices. I focus on predefined word categories based on the Harvard IV-4 dictionary and calculate, for each event description, the fraction of words pertaining to each of the following categories[19]:

- Positive: 1,915 words of positive outlook. (e.g., ABILITY, ADMIRATION, ADVANTAGE)
- Negative: 2,291 words of negative outlook (e.g., ABSENCE, ACCIDENT, ACCUSE)
- Legal: 192 words relating to legal, judicial, or police matters. (e.g., ACCUSE, ALLEGATION, AMENDMENT)
- Econ: 510 words of an economic, commercial, industrial, or business orientation, including roles, collectivities, acts, abstract ideas, and symbols, including references

[18] I thank the referee for pointing out this issue to me.

[19] See http://www.wjh.harvard.edu/~inquirer/ for more details.

Table 9
Return distributions of true and pseudo run-up periods.

Panel A of this table compares the daily return distribution of the true run-up period, i.e., the time period between the occurrence and the dissemination of an event by KLD, with the daily return distribution of randomly generated pseudo run-up periods. P25, P50, and P75 denote the 25th, 50th, and 75th percentile return, respectively. KS is the combined Kolmogorov–Smirnov test statistic. Panel B examines whether the daily return distribution in the true run-up period differs for positive and negative events. [−5,0], [−10,0], [−15,0], and [−20,0] denote the lengths (in days) for the run-up periods.

Panel A: True and pseudo run-up return distributions

	True run-up			Pseudo run-up			Difference	
Length	P25	P50	P75	P25	P50	P75	KS	*p*-Value
[−5,0]	−0.011	0.000	0.012	−0.011	0.000	0.012	0.011	0.548
[−10,0]	−0.011	0.000	0.012	−0.010	0.000	0.013	0.017	0.005
[−15,0]	−0.011	0.000	0.012	−0.011	0.000	0.013	0.021	0.000
[−20,0]	−0.011	0.000	0.012	−0.011	0.000	0.012	0.007	0.386

Panel B: Positive and negative event run-up return distributions

	Positive events			Negative events			Difference	
Length	P25	P50	P75	P25	P50	P75	KS	*p*-Value
[−5,0]	−0.010	0.000	0.011	−0.011	0.000	0.012	0.027	0.207
[−10,0]	−0.011	0.000	0.011	−0.012	0.000	0.012	0.020	0.188
[−15,0]	−0.011	0.000	0.011	−0.012	0.000	0.012	0.017	0.077
[−20,0]	−0.011	0.000	0.012	−0.011	0.000	0.012	0.007	0.386

to money. Includes names of common commodities in business. (e.g., ANTI-TRUST, AUCTION, BANKRUPT)
- Quan: 314 words indicating the assessment of quantity, including the use of numbers. (e.g., ADDITIONAL, ACCUMULATION, CONSIDERABLE)
- Numbers: 51 words identifying the use of numbers, which is divided in
  - Cardinal: 36 cardinal words (e.g., BILLION, MILLION, ZERO)
  - Ordinal: 15 ordinal words (e.g., FINAL, FORMER, LAST)

I also count the occurrence of digits in each of the event descriptions.

Table 10
Textual analysis.
This table displays the average fraction of words from a specific word category used to describe positive and negative events. Word categories are defined according to the Harvard IV-4 dictionary (see Section 6 for more details). For example, in the column Positive, *Legal words* is the average fraction of legal words used to describe positive events. The column Positive-Negative shows the mean-difference between positive and negative event descriptions, and the column *t*-Statistic displays the mean-difference test statistic. (*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.)

	Positive	Negative	Positive–Negative	*t*-statistic
Positive words	0.064	0.037	0.027***	15.14
Negative words	0.015	0.057	−0.042***	−24.90
Legal words	0.010	0.023	−0.013***	−11.07
Econ words	0.113	0.117	−0.004	−1.29
Digits	0.015	0.018	−0.003***	−3.34
Quantitative words	0.031	0.034	−0.003**	−2.17
Numbers	0.014	0.016	−0.002**	−2.28
Cardinal words	0.010	0.013	−0.003***	−4.13
Ordinal words	0.004	0.003	0.001***	2.80

6.1. All events

Mean difference tests reported in Table 10 reveal that positive and negative event descriptions differ systematically. Not surprisingly, positive event descriptions are more positively worded than negative ones, and vice versa. More interestingly, however, the tests also show that negative events are more strongly related to legal matters: the fraction of legal words (e.g., words referring to product litigation, regulatory concerns, or affirmative action lawsuits) is much higher for negative than for positive event descriptions. On average, 2.3% of the words used to describe negative events have a legal connotation, whereas only 1% do so for positive events. With a *t*-statistic of −11.07, this difference is also highly statistically significant. In contrast, the incidence of words with an economic connotation is not statistically different for positive and negative event descriptions, indicating that economic matters are equally important in positive and negative events.

Table 11
Textual analysis by issue area.
This table provides a breakdown of the distribution of different types of words across the six issue areas. Panel A examines whether the average fraction of words used to describe events from a specific issue area is higher or lower than the average fraction across all issue areas. Panel B (C) repeats the exercise separately for negative (positive) event descriptions. The first row of Panel B, for instance, displays how the average fraction of words from a specific word category used to describe negative events from the community issue area deviates from the average fraction of words used to describe all events. Word categories are defined according to the Harvard IV-4 dictionary (see Section 6 for more details). The significance stars indicate whether the issue-area specific average fraction is significantly higher/lower than the average across all six issues areas. (*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.)

Panel A: All events

	Positive	Negative	Legal	Econ	Digits	Quan	Numbers	Cardinal	Ordinal
Community	0.020***	−0.009***	−0.008***	0.012***	−0.003***	0.006***	0.005***	0.006***	−0.001***
Diversity	0.006***	−0.002	−0.007***	0.012***	−0.006***	0.002*	0.001	−0.002***	0.003***
Empl relations	−0.011***	−0.011***	−0.004***	−0.006**	0.013***	−0.003**	−0.004***	−0.004***	−0.000
Environment	−0.000	−0.002	0.003**	−0.017***	0.001	−0.000	−0.001	−0.000	−0.000
Human rights	0.024***	−0.014***	0.005***	−0.003	−0.010***	−0.010***	−0.006***	−0.004***	−0.001***
Product	−0.003***	0.012***	0.005***	0.001	−0.003***	0.001	0.002***	0.003***	−0.001***

Panel B: Negative events

Community	−0.002	0.003	−0.004*	0.003	−0.005***	0.006**	0.002	0.004*	−0.001**
Diversity	0.007***	0.016***	−0.004***	0.020***	−0.004***	−0.000	0.002	−0.002*	0.003***
Empl relations	−0.011***	−0.016***	−0.008***	−0.007**	0.013***	0.000	−0.005***	−0.005***	0.000
Environment	0.003*	0.008**	0.010***	−0.014***	0.000	0.002	0.002	0.003**	−0.001*
Human rights	0.021***	−0.012***	0.002	−0.006	−0.011***	−0.012***	−0.009***	−0.008***	−0.001**
Product	0.002**	0.004***	0.004***	0.001	−0.004***	−0.000	0.002***	0.003***	−0.001**

Panel C: Positive events

Community	0.026***	0.003	-0.005***	0.021***	0.001	0.008***	0.008***	0.009***	−0.002***
Diversity	−0.008**	−0.004***	−0.005***	0.005	−0.006***	0.006***	0.002*	−0.001*	0.003***
Empl relations	−0.004	−0.004**	0.007***	−0.002	0.012***	−0.013***	−0.005***	−0.004***	−0.001*
Environment	−0.015***	0.001	−0.001	−0.019***	0.002*	−0.003	−0.004**	−0.004***	−0.000
Human rights	0.018***	0.001	0.014***	0.002	−0.008***	−0.008***	−0.001	0.001	−0.002***
Product	−0.005	0.010***	−0.001	−0.013**	−0.003**	0.004	−0.002	−0.000	−0.002***

The mean difference tests also show that negative events contain significantly more quantitative information compared with positive ones. On average, 3.4% of the words used to describe negative events are words indicating the presence of quantities, while this fraction is 3.1% for positive ones. In the same spirit, negative event descriptions are also subject to a stronger use of digits and words indicating the presence of numbers. Finally, negative event descriptions contain more cardinal words, whereas ordinal words seem to play a more important role in positive event descriptions. The last finding could indicate that orderings such as rankings are important elements of positive events, while natural numbers and cardinality, potentially the result of fines, are more present in negative events. Taken as a whole, the evidence from Table 10 suggests that negative events contain more hard information (e.g., quantitative and legal) than positive ones.

6.2. By issue area

Table 11 provides a breakdown of how different types of words are distributed across the six issue areas. More

Table 12
CARs and textual analysis (negative events).

Panel A reports the coefficients c^{jk} from estimating the equation $CAR^{j}_{it} = a^{jk} + b^{jk} \times Size_{it} + c^{jk} \times Textual^{k}_{it} + \epsilon^{jk}_{it}$ for each combination of issue area j (e.g., community, diversity) and word category k (e.g., positive, negative, legal). For more information on KLD's issue areas, see Section 3. Word categories are defined according to the Harvard IV-4 dictionary (see Section 6 for more details). CAR^{j}_{it} is the 21-day negative event CAR from issue area j, $Size_{it}$ is the natural logarithm of the firm's market capitalization, and $Textual^{k}_{it}$ is the fraction of words from word category k. The coefficients c^{jk} measure the incremental CAR for negative events from issue area j that contain a higher fraction of words from word category k. Panel B reports the coefficients c^{jk} from estimating equation $CAR^{j}_{it} = a^{jk} + b^{jk} \times Size_{it} + c^{jk} \times HighTextual^{jk}_{it} + \epsilon^{j}_{it}$ for each pair of issue area and word category. In these equations, $HighTextual^{jk}_{it}$ indicates the top decile of the respective textual variable in a given issue area and the coefficient estimates c^{jk} measures the incremental CAR for the negative events from issue area j subject to the most extreme language in word category k. The t-statistics (in parentheses) are based on robust standard errors. ($^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.)

Panel A: Continuous variables

	(1) Community	(2) Diversity	(3) Empl relations	(4) Environment	(5) Human rights	(6) Product
Positive	0.772**	0.213	−0.247	−0.387	−0.385	0.204
	(2.47)	(1.04)	(−0.98)	(−1.04)	(−1.53)	(1.58)
Negative	−0.444	−0.136	−0.145	−0.014	−0.241	−0.376***
	(−1.37)	(−0.79)	(−0.76)	(−0.06)	(−0.68)	(−3.24)
Legal	0.662	−0.430	−0.267	0.131	−1.022*	−0.215
	(1.44)	(−1.52)	(−0.75)	(0.37)	(−1.82)	(−1.44)
Econ	−0.126	0.091	−0.270**	0.216	0.038	−0.025
	(−0.68)	(0.80)	(−2.38)	(1.02)	(0.19)	(−0.41)
Digits	−0.656	0.464	0.851**	−0.225	−0.844	−0.155
	(−0.77)	(1.08)	(2.49)	(−0.35)	(−0.90)	(−0.57)
Quan	0.073	0.382	−0.030	0.048	0.978**	0.008
	(0.21)	(1.49)	(−0.12)	(0.14)	(2.00)	(0.05)
Numbers	0.103	−0.020	−0.189	0.151	1.030	0.060
	(0.20)	(−0.07)	(−0.43)	(0.29)	(1.20)	(0.29)
Cardinal	−0.085	0.254	−0.081	0.120	0.686	0.056
	(−0.16)	(0.64)	(−0.15)	(0.21)	(0.78)	(0.24)
Ordinal	3.054	−0.534	−0.663	0.718	2.140	0.106
	(1.48)	(−0.99)	(−0.67)	(0.35)	(1.01)	(0.19)

Panel B: Dummy variables

	(1) Community	(2) Diversity	(3) Empl relations	(4) Environment	(5) Human rights	(6) Product
High positive	0.051	0.040*	−0.001	−0.084**	−0.056	0.021
	(1.49)	(1.88)	(−0.03)	(−2.38)	(−1.51)	(1.59)
High negative	−0.044	−0.016	0.003	−0.046	−0.008	−0.013
	(−1.24)	(−0.73)	(0.12)	(−1.31)	(−0.23)	(−0.94)
High legal	0.032	−0.017	−0.000	−0.010	−0.011	−0.023*
	(0.91)	(−0.81)	(−0.02)	(−0.27)	(−0.32)	(−1.73)
High econ	−0.071**	0.004	−0.009	0.045	−0.058*	−0.006
	(−2.11)	(0.19)	(−0.32)	(1.30)	(−1.66)	(−0.43)
High digits	−0.027	0.037*	0.064**	0.001	0.009	−0.020
	(−0.77)	(1.74)	(2.45)	(0.04)	(0.27)	(−1.52)
High quan	0.030	0.048**	0.018	0.028	0.074**	0.004
	(0.87)	(2.20)	(0.65)	(0.81)	(2.12)	(0.29)
High numbers	−0.061*	−0.013	0.005	0.039	0.066*	0.010
	(−1.68)	(−0.60)	(0.17)	(1.10)	(1.85)	(0.77)
High cardinal	−0.052	0.007	0.006	0.036	0.046	0.002
	(−1.53)	(0.30)	(0.24)	(1.03)	(1.31)	(0.11)
High ordinal	0.056	−0.009	−0.013	0.017	0.014	0.003
	(1.54)	(−0.40)	(−0.49)	(0.44)	(0.38)	(0.20)

Table 13
CARs and textual analysis (positive events).

Panel A reports the coefficients c^{jk} from estimating the equation $CAR_{it}^{j} = a^{jk} + b^{jk} \times Size_{it} + c^{jk} \times Textual_{it}^{k} + \epsilon_{it}^{jk}$ for each combination of issue area j (e.g., community, diversity) and word category k (e.g., positive, negative, legal). For more information on KLD's issue areas, see Section 3. Word categories are defined according to the Harvard IV-4 dictionary (see Section 6 for more details). CAR_{it}^{j} is the 21-day positive event CAR from issue area j, $Size_{it}$ is the natural logarithm of the firm's market capitalization, and $Textual_{it}^{k}$ is the fraction of words from word category k. The coefficients c^{jk} measure the incremental CAR for positive events from issue area j that contain a higher fraction of words from word category k. Panel B reports the coefficients c^{jk} from estimating equation $CAR_{it}^{j} = a^{jk} + b^{jk} \times Size_{it} + c^{jk} \times HighTextual_{it}^{jk} + \epsilon_{it}^{j}$ for each pair of issue area and word category. In these equations, $HighTextual_{it}^{jk}$ indicates the top decile of the respective textual variable in a given issue area and the coefficient estimates c^{jk} measures the incremental CAR for the positive events from issue area j subject to the most extreme language in word category k. The t-statistics (in parentheses) are based on robust standard errors. (*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$).

Panel A: Continuous variable

	(1) Community	(2) Diversity	(3) Empl relations	(4) Environment	(5) Human rights	(6) Product
Positive	0.306**	−0.045	0.035	−0.217	−0.112	−0.110
	(2.07)	(−0.23)	(0.22)	(−1.48)	(−0.38)	(−0.56)
Negative	0.539**	0.144	0.610*	0.204	−0.157	0.113
	(1.98)	(0.36)	(1.78)	(0.69)	(−0.31)	(0.42)
Legal	0.483	0.191	−0.238	−0.308	−0.528	−0.906**
	(1.05)	(0.24)	(−0.45)	(−0.86)	(−1.10)	(−2.37)
Econ	0.030	0.229	0.084	−0.182	0.074	0.259*
	(0.24)	(1.31)	(0.49)	(−1.30)	(0.35)	(1.76)
Digits	−0.521	−0.667	−0.138	0.246	−1.427	0.095
	(−1.25)	(−0.80)	(−0.30)	(0.58)	(−0.99)	(0.13)
Quan	0.304	−0.044	0.546	0.104	−0.335	−0.054
	(1.44)	(−0.14)	(1.57)	(0.49)	(−0.62)	(−0.21)
Numbers	0.379	−0.439	0.981	0.130	−0.005	−0.459
	(1.27)	(−0.86)	(1.64)	(0.36)	(−0.01)	(−1.26)
Cardinal	0.403	0.067	1.567**	0.253	0.108	−0.422
	(1.27)	(0.10)	(2.17)	(0.52)	(0.11)	(−1.10)
Ordinal	0.267	−0.617	−0.192	−0.031	−0.606	−0.909
	(0.25)	(−1.07)	(−0.19)	(−0.06)	(−0.27)	(−0.74)

Panel B: Dummy variable

	(1) Community	(2) Diversity	(3) Empl relations	(4) Environment	(5) Human rights	(6) Product
High positive	0.005	−0.003	0.000	−0.001	−0.013	−0.001
	(0.22)	(−0.08)	(0.01)	(−0.04)	(−0.43)	(−0.02)
High negative	0.028	0.018	0.029	0.022	0.014	0.011
	(1.23)	(0.57)	(1.01)	(1.10)	(0.47)	(0.47)
High legal	−0.009	−0.005	0.014	0.024	−0.043	−0.018
	(−0.40)	(−0.16)	(0.50)	(1.16)	(−1.48)	(−0.70)
High econ	0.009	0.018	−0.012	−0.024	−0.002	0.026
	(0.40)	(0.56)	(−0.44)	(−1.17)	(−0.07)	(1.07)
High digits	−0.022	−0.023	−0.003	−0.004	−0.041	−0.020
	(−0.96)	(−0.78)	(−0.09)	(−0.22)	(−1.42)	(−0.81)
High quan	−0.003	−0.070**	0.040	0.020	−0.034	−0.045*
	(−0.11)	(−2.13)	(1.42)	(1.01)	(−1.17)	(−1.87)
High numbers	−0.009	−0.052	0.021	0.018	−0.027	0.000
	(−0.39)	(−1.61)	(0.74)	(0.90)	(−0.91)	(0.01)
High cardinal	0.017	0.023	0.030	−0.001	0.064*	−0.034
	(0.70)	(0.74)	(0.84)	(−0.05)	(1.68)	(−1.39)
High ordinal	0.013	−0.025	0.008	−0.015	−0.010	−0.022
	(0.55)	(−0.77)	(0.27)	(−0.72)	(−0.34)	(−0.91)

specifically, I report how the issue area-specific average word usage deviates from the overall word usage.

Negative events from the product, environment, and—above all—the diversity issue areas are mainly "strongly" negative, i.e., subject to event descriptions with above average use of negative words (see Panel B). This finding suggests that KLD's analysts perceive situations in which customers, the environment, or employees experience negative welfare effects due to corporate behavior as particularly harmful.

Product-, human rights-, and environment-related events are characterized by strong legal language: all three categories show above average use of legal words (see Panel A). The strong legal information content in the environment and product issue areas is mainly driven by negative events (see Panel B), suggesting that environment- and product-related negative events are concerned with matters such as lawsuits or fines. Positive events from both the human rights and the employee relations issue areas are subject to above average legal language (see Panel C), indicating that KLD attaches

great importance to legal rights (e.g., respect of labor or human rights treaties) when determining whether a company is a good corporate citizen with respect to human rights- and employee-related issues.

Employee-related event descriptions are subject to above average use of digits, suggesting that the information content of employee relations events is of quantitative nature (see Panels A, B, and C). A potential explanation for this pattern is that positive employee relations events are sometimes related to corporate rankings, whereas negative ones often entail issues related to the payment of fines or other indemnities.

Explicit language indicating the assessment of quantities is the most prominent among community- and diversity-related events (see Panel A). The above average quantitative information content in the community issue area is present in both positive and negative event descriptions (see Panels B and C), which could be explained by issues related to charitable giving for positive events, and fines and other penalties for negative ones. The above average quantitative information content of negative diversity events (see Panel B) is most likely due to fines such as those resulting from affirmative action lawsuits. Finally, negative events from the product area are characterized by above average use of words indicating the presence of numbers, particularly cardinal ones (see Panel B). This characterization is again likely to be due to fines.

6.3. CARs and textual analysis

In this last subsection, I relate CARs by issue area to the textual variables introduced in the previous subsection. I do so by estimating the following equation individually for positive and negative events from each issue area:

$$CAR_{it}^{j} = a^{jk} + b^{jk} \times Size_{it} + c^{jk} \times Textual_{it}^{k} + \epsilon_{it}^{jk}. \quad (12)$$

In this equation, $Textual_{it}^{k}$ measures the fraction of words from word category k (e.g., positive, negative, legal) contained in the event's description. *Size* is the natural log of the firm's market capitalization. I estimate the equation separately for each issue area and each word category. To minimize the number of tables, I report only the coefficient estimates c^{jk}. These coefficients measure the relation between CARs and the fraction of words belonging to a specific word category.

Panel A, Table 12 displays the regression results for negative events, whereas Panel A, Table 13 reports the results for positive ones. Each element in these tables represents a coefficient resulting from the estimation of an individual regression equation. For example, the coefficient estimate in the first column and first row of Panel A, Table 12 measures the relation between CARs of negative community events and the fraction of positive words in the event descriptions. Thus, the columns of the tables are not reporting results from multivariate regression equations in which the CARs are simultaneously related to all textual variables.

As an alternative way of analyzing whether CARs have any relation to the type of words used to describe the events, I also examine if the events with the most extreme language exhibit differential CARs. To this effect, I code dummy variables indicating the top decile of each textual variable and estimate the following equation by word category and issue area:

$$CAR_{it}^{j} = a^{jk} + b^{jk} \times Size_{it} + c^{jk} \times HighTextual_{it}^{jk} + \epsilon_{it}^{j}. \quad (13)$$

The dummy variable $HighTextual_{it}^{jk}$ indicates the top decile of the respective textual variable for positive or negative events in a given issue area. The coefficient estimates for $HighTextual^{jk}$ are reported in Panel B, Table 12 for negative events and in Panel B, Table 13 for positive ones. In a given issue area, these coefficients measure the incremental CAR for events that are subject to the most extreme language.[20]

6.3.1. Positive and negative language

I start by examining whether "strongly" positive, "strongly" negative, "weakly" positive, and "weakly" negative events generate differential stock market reactions. A positive event is considered "strongly" ("weakly") positive if its description contains a high fraction of positive (negative) words. In contrast, negative events are "strongly" ("weakly") negative when characterized by a high fraction of negative (positive) words.

The tests suggest that investors react less strongly to weakly negative events. For example, the coefficient estimate for *Positive* in column 1, Panel A, Table 12 shows that weakly negative community events, i.e., more positively worded negative community events, generate a less negative stock market reaction (t-statistic=2.47). A similar pattern holds for weakly negative diversity events: the coefficient estimate for *High positive* in column 2, Panel B, Table 12 is significantly positive (t-statistic=1.88). In a similar spirit, investors also respond more strongly to strongly negative events: the coefficient estimate for *Negative* regarding negative product events (see column 6, Panel A, Table 12) indicates that stock prices decrease more strongly for strongly negatively worded product events (t-statistic=−3.24). Analysis of positive events provides similar evidence: positive community events (see column 1, Panel A, Table 13) generate a more positive stock market reaction (t-statistic=2.07). Taken together, the results suggest that investors do sometimes manage to evaluate the severity of CSR events and incorporate this assessment into their reactions.

In contrast, the evidence also suggests that KLD's analysts and investors sometimes disagree over the severity of events. For example, the significantly negative coefficient estimate on *High positive* for negative environmental events (see column 4, Panel B, Table 12) shows that the most positively worded negative environment events generate a significantly more negative stock market reaction. In other words, stock prices decrease more strongly when weakly negative environmental events occur (t-statistic=−2.38). In a similar spirit, the significantly positive coefficient estimate for *Negative* in the community issue area (see column 1,

[20] The full regression results for the equations estimated in this section are reported in the Internet appendix, which also contains the results from relating the CARs for all positive and all negative events to the textual variables.

Panel A, Table 13) shows that more negatively worded positive community events are subject to a significantly more positive stock market reaction (t-statistic = 1.98). A potential alternative explanation for this last finding could be that these events refer to the resolution of previous episodes of irresponsible corporate behavior. If more negatively worded positive events refer to prior irresponsible corporate behavior, their descriptions should contain more negative language and a more positive stock market reaction to more negatively worded positive events would be perfectly consistent with the evidence on "offsetting CSR" presented in Section 5.

6.3.2. Legal language

Next, I condition CARs on the use of legal language, a proxy for the extent of legal information contained in an event. Interestingly, the coefficient estimate for *Legal* is significantly negative for negative human rights events (see column 5, Panel A, Table 12), suggesting that negative human rights events with more legal information content generate a more negative stock market reaction (t-statistic = −1.82). The same is true for negative events from the product issue area: column 6, Panel B, Table 12 reveals that the ten percent negative product events with the strongest legal information content exhibit significantly lower CARs (t-statistic = −1.73). Note that significance levels in these tests are not particularly high. I attribute the level of statistical significance to measurement error in the sense that the fraction of legal words is only a noisy proxy for the legal information contained in an event. As a consequence, imprecise measurement is likely to downward-bias the coefficient estimates.

Rather surprisingly, the coefficient estimate for *Legal* turns out to be significantly negative for positive product events (see column 6, Panel A, Table 13). In other words, positive product events with stronger legal information content result in a more negative stock market reaction (t-statistic = −2.37). A potential explanation for this finding is that positive product events with strong legal information content are related to consumer-oriented regulation, which can be good news for consumers but also impose substantial financial burdens on the concerned firms.

6.3.3. Economic language

Column 3, Panel A, Table 12 provides evidence of a more negative stock market reaction to negative employee relations events with strong economic information content: the coefficient estimate for *Econ* is significantly negative (t-statistic = −2.38). I observe similar patterns for negative community (t-statistic of −2.11) and human rights events (t-statistic = −1.66) with the highest economic information content (see columns 1 and 5, Panel B, Table 12). Finally, the finding that positive events from the product issue area with strong economic information content result in a higher CAR (t-statistic = 1.76) lends additional support to the view that stock markets react more strongly to CSR events that are more strongly related to economic issues (see column 6, Panel A, Table 13).

6.3.4. Digits

Rather surprisingly, Panels A and B, Table 12 show that negative events from the employee relations issue area with a high incidence of digits generate a more positive stock market reaction: both the coefficient estimate for *Digits* (t-statistic = 2.49) and *High digits* (t-statistic = 2.45) are significantly positive (see column 3, Panels A and B). I observe a similar, though less significant, pattern for negative diversity events (see column 2, Panel B, Table 12). A potential way to rationalize this counterintuitive result is that both negative employee relations and negative diversity events containing a high fraction of digits are related to payments of fines and/or the settlement of legal issues (e.g., employee harassment or affirmative action lawsuits, indemnities related to workplace accidents, etc.). Stock prices should go up as a result of such negative news if investors had anticipated the charges to be more severe than they actually turn out to be.

6.3.5. Quantitative language

The analysis of words indicating the assessment of quantity is largely consistent with the previous evidence of a more positive stock market reaction to negative events with a high incidence of digits. There is rather consistent evidence that investors react more positively to negative events characterized by the use of more quantitati;vely oriented language. As such, columns 2 and 5, Panel B, Table 12 show significantly positive coefficient estimates for *High quan* regarding negative diversity (t-statistic = 2.20) and negative human rights (t-statistic = 2.12) events. A potential explanation is that quantitative language indicates the settlement of fines or indemnities. If investors had formed overly negative expectations about the magnitude of the payouts related to the legal settlements, stock prices should increase once the uncertainty about the exact measure of indemnity is resolved.

Some of the most quantitatively worded positive events are subject to lower CARs (see columns 2 and 6, Panel B, Table 13): The *High quan* coefficient estimate is significantly negative in the diversity (t-statistic = −2.13) and product issue areas (t-statistic = −1.87). This negative relation could be attributable to quantitatively oriented positive events being related to corporate expenses aimed at increasing the welfare of employees (e.g., programs addressing work-life balance through offering childcare, elder care, or flextime) and communities (e.g., pro bono work, charitable donations). If investors regard such monetary transfers as wasteful spending, decreasing stock prices as a result of these events are not surprising.

7. Conclusion

In this paper, I study the shareholder value implications of positive and negative CSR events in the short-run. I show that investors react strongly negatively to negative news about CSR. The reaction is particularly pronounced for information regarding communities and the environment. A negative reaction with respect to negative events is consistent with the view that a substantial cost is associated with corporate social irresponsibility. My estimates place the median cost at approximately $76 million, implying that

when events that decrease the welfare of the firm's main stakeholders occur, shareholders also lose money.

The negative reaction with respect to negative stakeholder news provides a necessary but not sufficient condition for socially responsible policies being in the shareholder's best interest. This is because analysis of shareholder value effects due to negative events does not provide any insights into the costs associated with implementing corporate policies that would prevent such negative events from happening. To examine whether shareholders should encourage the implementation of socially responsible corporate policies, I then go on and study the value implications of positive events. I find that investors react slightly negatively when positive news about a firm's CSR policies is revealed. Yet, when contrasted with the market reaction to negative events, investor reaction with respect to positive events is much weaker and less systematic.

Nonetheless, a refinement of the analysis provides evidence that improving a firm's CSR can be shareholder value-enhancing under certain circumstances. It turns out that when positive news about CSR concerns firms in which agency problems are less likely to be present, investors tend to react more favorably. In addition, I also show that when the positive CSR news is more likely to be the result of managerial efforts aimed at offsetting prior corporate social irresponsibility, stock prices do increase on average. Hence, a sufficient condition for environmental and social responsibility being in the shareholder's best interest is borne out by the data for firms with a history of stakeholder-related controversies.

Finally, I apply textual analysis in the spirit of Tetlock (2007) to the study of shareholder value effects of CSR. The results from this analysis show that investors react more strongly to CSR news containing strong economic and legal information content. In addition, evidence seems to exist that investors tend to evaluate the severity of CSR events by reacting more strongly to strongly positive and strongly negative events and less strongly to weakly negative and weakly positive events.

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