

Article

CSR and Firm Risk: Is Shareholder Activism a Double-Edged Sword?

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Abstract: Few can argue with the notion that corporations should at least consider corporate social responsibility (CSR) to better understand the impact of their operations on society. However, recent empirical tests suggest CSR has an ambiguous impact on firm performance. To shed new light on this debate, we examine the extent to which voting support for nonbinding shareholder-initiated CSR proposals is empirically linked to changes in firms' underlying systematic risks. Using a rich dataset of proposals in the US from 1998 to 2011, we contribute several novel findings. First, we show that shareholder voting support is nonlinearly linked to changes in systematic risk. Specifically, proposals with low voting support increase risk while those with high support decrease risk. This nonlinearity is particularly pronounced for consumer-sensitive firms that cater primarily to individual consumers rather than for firms in non-consumer-sensitive industries that produce goods or services meant for industrial or governmental use. Second, the 2007–2009 financial crisis exacerbated increases in firms' systematic risks for proposals with low voting support. Our results, which highlight asymmetry regarding firms' CSR initiatives, remain robust when controlling for firm-specific factors as well as shifts in investor sentiment. From a risk management perspective, our findings suggest that CSR initiatives need strong shareholder support to realize benefits from the so-called 'risk-reduction hypothesis'.

Keywords: corporate social responsibility; nonbinding voting; shareholder activism; systematic risk

JEL Classification: G32; G34; M14



Citation: Bozos, Konstantinos, Timothy King, and Dimitrios Koutmos. 2022. CSR and Firm Risk: Is Shareholder Activism a Double-Edged Sword? *Journal of Risk and Financial Management* 15: 543. <https://doi.org/10.3390/jrfm15110543>

Academic Editor: Thanasis Stengos

Received: 29 October 2022

Accepted: 4 November 2022

Published: 21 November 2022

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1. Introduction

Do corporate social responsibility (CSR) activities impact firm risk? Recent interest in CSR has kindled debate as to why firms choose to engage in CSR initiatives. A growing belief is that while CSR can provide a competitive advantage it also carries significant risks (Albuquerque et al. 2019; Cao et al. 2019; Cheung 2016; Flammer 2015; Lins et al. 2017; Margolis et al. 2009; Servaes and Tamayo 2013). Nevertheless, it appears that the debate pertaining to CSR exacerbates frequently when highly publicized negative events, such as the BP oil spill in the Gulf of Mexico in 2010 and the Volkswagen emissions scandal in 2015, come to light and afflict society and the economy.

While interest in CSR has risen over the years, relatively little is understood as to how and when CSR activities impact a firm's underlying systematic risk. While recent studies typically document a negative relationship between CSR engagement and risk (Albuquerque et al. 2019; Hong et al. 2019; Jo and Na 2012; Kim et al. 2014), we argue that the risk implications of CSR are in fact more nuanced than previously shown. In particular, we conjecture that the association between CSR and risk is likely nonlinear and varies with

the nature of the industry, economic conditions, and the degree and identity, respectively, of shareholder support for activist proposals.

The objective of our study is to examine the extent to which voting support for shareholder-initiated nonbinding CSR proposals (Cai and Walkling 2011; Cuñat et al. 2012; Ertimur et al. 2010; Flammer 2015; Iliev and Vitanova 2019; Levit and Malenko 2011) is empirically linked to changes in firms' underlying systematic risks. Understanding this relationship is important since investors, consumers, regulators and special interest groups are exerting an increasingly higher degree of pressure on firms to consider the social impacts of their operations, which goes beyond mere compliance with the law (Cai and Walkling 2011; Cheung 2016; den Hond et al. 2014; Lev et al. 2010; Lins et al. 2017). Thus, there are likely to be both significant opportunities as well as risks associated with firms' CSR activities (Albuquerque et al. 2019; Cao et al. 2019; Jo and Na 2012; Kim et al. 2014; Lins et al. 2017; Rangan et al. 2015; Servaes and Tamayo 2013).

Our study draws inspiration from the philosophical dichotomy in views regarding the responsibility of management towards its stakeholders. One broad perspective is that the only stakeholders of primary concern to management are firm shareholders and, insofar as the firm operates within the law, it must utilize firm resources to increase its profits (Friedman 1970). The opposing view is that a firm's stakeholders consist not only of shareholders but also society at large. Thus, a firm has a fiduciary duty to contribute positively to the well-being of its society. While few can argue that firms should at least consider CSR and the societal impact of their actions, the complexities surrounding adoption of CSR initiatives, along with the diverse and, at times, contradictory proponents calling for it, make CSR an ever-moving target for management (Bird et al. 2007).

Motivated by dichotomous views on CSR, the prevailing consensus in the extant empirical literature is that CSR activities provide insurance-like benefits for firms (Godfrey et al. 2009). For example, Adhikari (2016) finds that less socially responsible firms tend to attract greater analyst coverage and Cui et al. (2018) show an inverse relation between CSR engagement and, respectively, information asymmetry and reputational risks. However, it is not clear if firms' motivations for engaging in CSR are altruistic or economic in nature (Rangan et al. 2015). Consistent with the so called 'risk-reduction hypothesis'¹ (e.g., Cai et al. 2016), Jo and Na (2012) show that CSR engagement may lead to reductions in firm risks for controversial industry sectors such as alcohol, tobacco and gambling. Kim et al. (2014) argue that CSR engagement may mitigate future crash risk while Flammer (2015) argues that although CSR proposals may not always be beneficial to a firm, there is a tendency for adoptions of close-call shareholder-initiated nonbinding proposals to generate positive announcement returns and superior accounting performance.

While CSR activities may be linked to a firm's underlying risk, understanding the nature of this linkage is empirically challenging. One challenge pertains to the complexity of CSR activities and how they should be valued. For instance, stakeholder assessments vary across time and are conditioned upon a wide range of factors that are also industry-specific (Ertimur et al. 2010). Thus, CSR activities have multifaceted risk management implications, which make it difficult to ascertain how CSR can impact firm risk. However, what does seem apparent is that failing to meet stakeholder expectations for CSR activities can lead to executive dismissals or other such dire consequences (Del Guercio et al. 2008), and may eventually convey negative signals to the market, leading to loss of firm value.² As mentioned, a rather acute example of how firm managers faced consequences for negligent decisions that afflicted the broader global economy and society is the Volkswagen emissions scandal. This resulted in the departure of then-CEO Martin Winterkorn and seven other top executives facing criminal charges in the US (Kentish 2017), a loss of approximately \$56 billion in firm value, a \$15.3 billion commitment to buy back or retrofit US diesel cars enforced by the regulator, reduced investment in R&D, and downgrades in the company's credit ratings by major rating agencies (Moody's, Fitch and Standard and Poor's). This chain reaction of events negatively impacted the firm's cost of capital (Reiter and Behrmann 2017; Ewing and Mouawad 2015; Sloat 2015).

In a novel approach to investigating how CSR is linked with firm risk, we examine shareholder-initiated proposals in the US (e.g., [Cai and Walkling 2011](#); [Cuñat et al. 2012](#); [Ertimur et al. 2010](#); [Flammer 2015](#); [Levit and Malenko 2011](#); [Iliev and Vitanova 2019](#)). We argue that such proposals can serve as an important theoretical and empirical laboratory for gauging the extent to which voting support for CSR initiatives is linked to changes in a firm's underlying systematic risks. Prior research establishes that nonbinding shareholder-initiated proposals, which are voted on at firms' annual general meetings (AGMs), constitute an important channel through which shareholders can convey their views or concerns to firm management. These proposals thus afford shareholders an empowering mechanism through which they can induce changes in firm governance and corporate operations ([Cuñat et al. 2012](#); [Flammer 2015](#); [Levit and Malenko 2011](#)).³ Despite their nonbinding nature, such shareholder-initiated proposals cannot be dismissed casually or on mere grounds that they are misaligned with managerial objectives ([Del Guercio and Hawkins 1999](#); [Flammer 2015](#)).

While a growing body of extant studies examine the impact of CSR initiatives on shareholder wealth or on underlying firms' stock prices and attempt to show support for or against CSR depending on its impact, there is relatively less discussion pertaining to the impact of CSR-centered nonbinding proposals. As [Flammer \(2015\)](#) notes, first, it is not clear whether CSR proposals are always beneficial to the firm and, second, it appears that only close-call CSR proposals are positively tied to firm performance. As mentioned, such proposals are nonbinding or precatory in nature, yet they cannot casually be ignored by managers given that they reflect shareholder expectations or concerns, which may intensify if left unheeded. For example, [Del Guercio and Hawkins \(1999\)](#) show that high voting support in nonbinding proposals is an important signal of institutional shareholder discontent and a significant predictor of the likelihood of a proxy contest attempt initiated by pension funds. The latter of these two points is particularly interesting because it suggests that voting support is likely to be an important determinant of shareholder wealth when nonbinding proposals are initiated. This is something that has received relatively less attention in the literature and serves as a motivation for our study. In addition, we are further motivated by the rise in shareholder activism among institutional investors, such as hedge funds and pension funds, which use nonbinding proposals as a low-cost medium for initiating change or expressing dissatisfaction.⁴

In this present study, we question whether shareholder proposals supported by institutional investors, given their various levels of voting support and despite their presumed good intentions, can adversely impact underlying firms' systematic risks. We argue that this question—which is of direct relevance to activist shareholders as well as firm managers—is important, yet, to the very best of our knowledge, has not received extensive empirical attention. Our study thus sheds new light on the linkages between CSR and firm systematic risk using these shareholder-initiated proposals. Specifically, we conjecture that shareholder voting support may act as a 'double-edged sword', whereby low or high voting support for nonbinding shareholder proposals is linked nonlinearly to firms' underlying systematic risks. As we discuss more, we focus on systematic risk since this is the component of firm risk that is undiversifiable, regardless of whether institutional investors have access to greater information and resources or the capacity to invest across a broader range of asset classes given the lower transaction costs they face.

To test our research question, we implement a novel research design using nonbinding shareholder-initiated proposals to examine risk/price reactions around proposal votes. We adapt the market model, in line with [Grullon et al. \(2002\)](#) and [Grullon and Michaely \(2004\)](#), to detect shifts in systematic risk before and after a shareholder proposal is voted on during the AGM. We then test whether CSR voting support explains the estimated shifts in systematic risk. Thus, our approach helps us mitigate issues with endogeneity that may obfuscate causal interpretations of the effect of CSR on firm risk. For example, since we can control for pre-event observable and unobservable characteristics including pre-event firm risk, we can obtain unbiased causal estimates regarding how investors evaluate systematic

risk in the context of CSR. This allows us to uncover nuances in the CSR-risk relation across industries and time.

From our analysis, we show the following. First, that shareholder voting support serves as an indicator for CSR commitment and maintains a nonlinear and inverse U-shaped relation to systematic risk. CSR proposals with low levels of voting support (commitment) are linked to increases in systematic risk. As CSR commitment rises (high voting support), systematic risk declines. Second, we show that the 2007–2009 financial crisis only seems to exacerbate this nonlinearity, but the nature of the relation is robust; specifically, there are increases in systematic risk for proposals with low CSR commitment (low voting support) while systematic risk declines with high CSR commitment (high voting support). Finally, we show that the nonlinearity between voting support and systematic risk is particularly more pronounced for consumer-sensitive industries—firms that produce goods or services meant for individual customers rather than for industrial or governmental use (Lev et al. 2010).

These findings make several theoretical contributions to our understanding of the CSR-risk relation. First, we elucidate upon the growing body of literature that explores the risk implications of CSR activities. This body of literature posits a negative and linear relation between CSR engagement and firm risk. Jo and Na (2012) find that CSR engagement is associated with lower firm risk, especially for firms in controversial industry sectors. Kim et al. (2014) show CSR engagement is associated with lower downside risk. Albuquerque et al. (2019) show that systematic risk is lower in firms with higher CSR scores. Hong et al. (2019) find that firms with stronger CSR performance have lower litigation risk. We contribute to this literature by presenting a new stylized fact in CSR; specifically, and using shareholder proposals, we reveal a concave relation between voting support and changes in systematic risk, whereby surpassing the voting support threshold of approximately 39–45% is necessary in order for a firm to see a reduction in its systematic risk. In other words, while previous research identifies that CSR engagement may be associated with lower firm risks, we demonstrate that the impact of CSR engagement on firms' risk is in fact more nuanced.

Second, since we examine CSR in the context of firms' nonbinding shareholder proposals, we also contribute to a budding literature on shareholder voting. Several studies focusing on firm value effects serve as motivation for why we use nonbinding shareholder proposals to quantify the CSR-risk relation. Cuñat et al. (2012) and Flammer (2015) find that close-call CSR proposals typically create value for shareholders while Cao et al. (2019) find that non-targeted firms react to close-call proposals at peer firms. Cai and Walkling (2011) and Iliev and Vitanova (2019) focus on say-on-pay proposals and find they can add or destroy firm value contingent upon a firm's executive pay arrangements. Separately, a small number of studies seek to make inferences about the likelihood of proposals being adopted based on the extent of shareholder voting support. Ertimur et al. (2010) find that proposals receiving higher voting support are more likely to be implemented. Levit and Malenko (2011) add that the identity of the activist shareholder matters for the likelihood of a proposal being implemented.

Building on this literature, and to the best of our knowledge, this study is the first to focus on the risk implications of CSR shareholder voting. Our empirical findings, which show that CSR proposals have significant implications for systematic risk that depend on the degree of voting support as well as firm and industry heterogeneous factors, are of particular relevance to activist shareholders. Such shareholders, who may have good intentions for CSR, may inadvertently increase the risk of the underlying firm if they initiate proposals that garner low levels of support. While we empirically confirm this here, the theoretical reasons as to why this may happen are not readily apparent and make for interesting future research. One plausible reason is that low voting support, which can otherwise lead to a dismissal of the proposal by firm management, can raise the information asymmetry of the firm and lead to higher systematic risk. This explanation aligns with the conclusions of Cui et al. (2018), who find that CSR engagement leads to decreases in information asymmetry. However, Cui et al. (2018) do not formally test whether levels of

voting support are related to this information asymmetry. Finally, our findings also serve as a cautionary note for firm managers as well as activist shareholders. In particular, since the results of our study both validate and challenge current theories on CSR, we show that the risk-reduction hypothesis can only hold when there is a high degree of CSR commitment.

The rest of this paper proceeds as follows. Section 2 presents the theoretical background and develops the study hypotheses. Section 3 describes the data and presents the methodological framework. Section 4 presents and discusses the results. Finally, Section 5 concludes.

2. Theoretical Development

‘Don’t be evil’. This long served as Google’s signature credo until its corporate restructuring under the conglomerate Alphabet Inc. in October 2015 when it was replaced with ‘Do the right thing’. Behind credos such as these is the notion that business enterprises are expected to contribute positively to the general welfare of society and not merely ensure they are compliant with relevant laws and statutes. In similar spirit, Forbes annually publishes a list of companies with the best CSR reputations.⁵ Moreover, there has been a surge of consulting companies over the years that actively monitor and measure the reputations of managers across global firms in areas pertaining to CSR; for example, the Reputation Institute, a Boston-based consulting firm, measures the CSR impact of companies around the globe.⁶

These observations serve to highlight the current debate in the CSR literature, which centers on whether CSR engagement is in shareholders’ interests and whether it enhances returns. The classical view, which is rooted in the shareholder primacy norm and plays a large role in how students across business schools are taught about the role of managers, generally maintains that the firm’s sole responsibility is to its shareholders and that it is free to legally operate in ways that maximize shareholder value.

The call for CSR among various stakeholders has grown remarkably in recent years. An emergent view, which is gaining more attention, is that firms have a responsibility beyond shareholders and legal requirements to other constituents and stakeholders that can be affected by a firm’s operations. Such a view motivates CSR initiatives and has led to a rise in independent ratings of the CSR ‘worthiness’ of publicly traded firms. Such ratings are publicly available or covered by the media and, over the years, investors are becoming more sensitized to CSR issues and to any possible negative externalities that may arise from firm operations. This trend is partly attributable to the growing use of the internet as a tool for companies to publicize information about their operations and for stakeholders to proactively highlight CSR issues that need to be addressed. Indeed, companies increasingly expend considerable financial and managerial resources to communicate their CSR initiatives with stakeholders (Wanderley et al. 2008). From a managerial perspective, communicating such initiatives helps managers to solidify their firm’s reputation. Ultimately, this may lead to tangible benefits to the firm such as reductions in the implied cost of capital through the goodwill that is cultivated between the firm and its stakeholders (Dhaliwal et al. 2011; El Ghouli et al. 2011). Some studies even document how CSR can actually improve firms’ credit ratings (Attig et al. 2013) or can improve analyst forecast accuracy (Dhaliwal et al. 2012).

The question of why CSR activities can improve a firm’s visibility, thereby resulting in improved coverage among credit rating agencies or analysts, was addressed recently by Cui et al. (2018). In their study, they argue that the Modigliani and Miller (1963) proposition, which postulates that investors have access to the same quality of information as firm managers, may not hold in reality and that CSR engagement can mitigate the information asymmetry that lies between stakeholders and managers. The findings by Cui et al. (2018) complement previous studies that show that CSR activities can raise firms’ reputations (Albinger and Freeman 2000), can distinguish low- from high-performing firms (Clarkson et al. 2008; Dhaliwal et al. 2011; Lys et al. 2015), and can improve the information quality that managers provide to stakeholders (Kim et al. 2012).

As mentioned, despite the possible benefits associated with CSR engagement, classical views on this subject do not necessarily support such initiatives as a means to optimizing the well-being of firms. [Friedman \(1970\)](#) proposes the agency cost view, which considers CSR activities as generally inconsistent with shareholder wealth maximization. This view is consistent with the shareholder primacy norm, which asserts that managers have a legal obligation to prioritize the needs of shareholders. Such a view is consistent with Adam Smith's 'invisible hand' doctrine, which argues that individuals, and, by extension, businesses and governments, do not have access to complete and perfect knowledge and therefore cannot be 'do-gooders' without the risk of creating ill-fated consequences for society ([Friedman 1970](#); [Silverstein 1987](#)). The belief that CSR is not value relevant is also echoed in the *charity hypothesis* ([Lys et al. 2015](#)), which suggests that firms engage in CSR initiatives not because they are value relevant but because they have a duty to society. A contrasting view is the *investment hypothesis* ([Porter and Kramer 2002](#)), which posits that CSR activities improve perceptions of a company by stakeholders, thereby enhancing corporate reputation, which can lead to improvements in firm value and reductions in risk through a reputation effect ([El Ghoul et al. 2011](#)). Broadly related is the *information hypothesis* ([Lys et al. 2015](#)), which suggests that firms that predict strong future financial performance invest relatively more in CSR. Doing so conveys positive information to the market regarding future firm performance. However, whilst the investment and information hypotheses both associate CSR with positive financial performance, the direction of causality is opposite, with only the *investment hypothesis* suggesting that CSR can directly improve firm performance.

Thus far, extant studies have struggled to disentangle relations between CSR and firm performance and, given the mixed findings, it remains unclear as to whether firms should engage in CSR and, if so, to what extent.⁷ Even if CSR is taken to be beneficial ex-post, inconclusive evidence exists as to whether benefits accruing to firms exceed costs of implementation ([Margolis et al. 2009](#) and references therein). Moreover, from the perspective of society, asymmetric information makes it difficult for stakeholders to evaluate if a firm meets their expectations regarding CSR. Importantly, although CSR communications by the firm may decrease information asymmetries for investors to some extent, they may also be perceived to be selective, lack accuracy and be prone to bias. Thus, activists are therefore thought to play an important role in mitigating informational asymmetries regarding a firm's CSR activities ([McWilliams and Siegel 2011](#)).

One source of this ambiguity stems from an inability to define CSR in universally accepted and precise terms, with diverse stakeholders prioritizing and stressing different aspects according to individual preferences ([Sheehy 2015](#)). For instance, managers may promote their specific achievements and activities as being consistent with being socially responsible, leading to substantial cross-firm and cross-industry heterogeneity in CSR reporting ([Sheehy 2015](#)). In addition, stakeholder expectations of firms' CSR activities may be shaped by industry practice ([Schuler and Cording 2006](#); [Jo and Na 2012](#)), which may themselves be driven by collective firm lobbying efforts to prioritize specific aspects of CSR that are less costly for member firms to implement ([den Hond et al. 2014](#)).

Furthermore, it is unclear which channels drive relations between firm financial and CSR performance as well as what the direction of the causality is between CSR and firm performance ([Horváthová 2010](#); [Surroca et al. 2010](#)). A reason for this relates to difficulties in empirical research design. This is because it is a challenge for empiricists to identify how CSR shapes firm risk while coping with potential endogeneity issues that may arise from unobserved heterogeneity, simultaneity, and reverse causality ([Wintoki et al. 2012](#)).

Some examples of the aforementioned are as follows. First, unobserved heterogeneity may arise because CSR activities can be correlated with other aspects of firm performance that impact firm risk. Second, causality between CSR and firm risk may be bidirectional. For instance, firms that pursue CSR activities may realize lower systematic risk simply because of investor preferences for, and customer loyalty to, CSR active firms (e.g., [Cheung 2016](#)). Adopting CSR initiatives may also enhance a firm's corporate reputation and lower a

firm's financial risk (Hammond and Slocum 1996). Third, simultaneous endogeneity could arise if changes in risk are jointly determined with CSR activities over the firm year.

In this study, we posit that nonbinding shareholder proposals serve as an empirical laboratory for gauging the impact of CSR on firm risk. It is also of interest to test whether the so-called risk-reduction hypothesis that the extant literature documents actually holds when you consider the fact that various nonbinding proposals carry different levels of voting support. From a theoretical point of view, establishing relations between voting support and systematic risk can shed more light on the information asymmetry arguments which, among others, Cui et al. (2018) cite.

We argue herein that a plausible reason for CSR's 'risk-reduction' benefits arise when there is strong support from shareholders for an initiative. Nonbinding proposals with low voting support, which can otherwise lead to a dismissal of the proposal by firm management, can raise the information asymmetry of the firm and lead to higher systematic risks. The risk effects of CSR engagement thus add a key dimension to our understanding as to whether CSR 'adds value' to shareholder wealth and under what circumstances the risk-reduction hypothesis actually holds. Furthermore, since industry differences are likely salient in how CSR activities are expected to impact society (Schuler and Cording 2006; Jo and Na 2012) we further consider that the impact of activist CSR proposals on firm risk should be asymmetric across industries; with industry serving as a conditioning factor that guides managers as to how much managerial effort and firm resources to direct to CSR, as well as conditioning stakeholder expectations. For example, several studies (Hillman and Keim 2001; Lev et al. 2010; Servaes and Tamayo 2013) offer empirical support that industry matters and that firms operating in consumer-sensitive industries that engage in CSR can actually realize stronger revenue growth. Moreover, in specific industries, information transparency regarding CSR likely serves a more important role in reducing information asymmetries between the firm and investors and that this may be associated with reductions in firm risk (Jo and Na 2012).

Finally, we conjecture that the effects of nonbinding CSR proposals by activist shareholders on firm risk are also conditional on the general economic environment. The ill-effects of economic recessions are well-documented in prior studies, which show how such periods are associated with drops in consumer sentiment and resources, unemployment, reduced efficiency, moral hazard, and poor firm performance (Greenwald and Stiglitz 1988; Pearce and Michael 2006; Richardson et al. 1998). With respect to the crisis of 2007–2009 in particular, den Butter (2012, p. 127) points out that severe credit deficits and illiquidity emerged as soon as the general environment moved from one of mutual trust to one of mutual distrust. Thus, in such an environment, with the general level of trust between corporations, institutions and capital markets plummeting (Lins et al. 2017), information asymmetry widens, thus raising costs of capital. Since trust is central in the relationship of any firm with its stakeholders, Lins et al. (2017) argue that a firm's social capital (resulting from its investment in CSR activities) should therefore become even more relevant during periods of unexpectedly low trust. Along the same vein, we posit that CSR initiatives should have a relatively more direct and pronounced effect in reducing information asymmetry during recessionary periods compared to periods of economic stability and growth.

3. Data and Methodological Framework

3.1. Description of Sample Data

We source data on nonbinding shareholder-initiated environmental, social and governance (ESG) proposals targeting US firms from the shareholder proposals database managed by the Institutional Shareholder Services (ISS). This database provides us with a rich dataset capturing all 'voted on' shareholder proposals submitted to firms listed in the Standard and Poor's 1500 index from 1998 to 2011. This sampled time frame is important because it encapsulates the 2007–2009 financial crisis, a time when aggregate investors' risk aversions and opportunity costs of capital rose sharply as economic activity decelerated.

We begin with an initial sample of 4482 ESG-focused proposals. We are careful to include only ESG proposal ‘events’ in which only a singular proposal is voted on at an AGM. This treatment is important to mitigate possible confounding effects arising from multiple proposals being voted on at the same AGM. For instance, two (or more) proposals may convey a dissimilar impact on pre- and post-vote changes in sampled firms’ systematic risks, thereby impeding our ability to obtain unbiased estimates of changes in firm systematic risk. Our final sample (which excludes such events) consists of 2115 nonbinding proposals. To this data set we match company financials from Compustat North America, price data from the Center for Research in Security Prices (CRSP) and market sentiment indexes from Bloomberg. For illustrative purposes and for each sampled year, Table A1 in the Appendix A includes a random subsample of firms that made it into our final sample along with the nature of the proposal, a link to the proxy statement and the percentage vote for the proposal.

We classify each firm in our cross-industry sample as belonging to one of nine broad industry categories (based on two-digit SIC codes): (1) Basic Industries; (2) Capital Goods; (3) Construction; (4) Consumer Goods; (5) Energy; (6) Finance; (7) Transportation; (8) Utilities; (9) Others. Our rich sample data include details such as company name, the date of the annual general meeting (AGM), the proposal sponsor, a description of each proposal (which we use to identify ESG proposals), and the vote percentage.

Throughout our analysis, we are careful to distinguish between consumer-sensitive vs. non-sensitive industries by employing a dummy variable to classify firms as belonging to a consumer sensitive industry if they operate in (4) Consumer Goods industry (based on four-digit SIC codes: 0000-0999; 2000-2399; 2500-2599; 2700-2799; 2830-2869; 3000-3219; 3420-3429; 3523; 3600-3669; 3700-3719; 3751; 3850-3999; 4813-4899; 5000-5079; 5090-5099; 5130-5159; 5220-5999; 7000-7299; 7400-9999) or in (6) Finance (6000-6999), by assigning a value of one to these firms.

Table 1 outlines the distribution of the nonbinding CSR proposals and firms in our sample by year, industry and percentage of voting support at the AGM. In Panel A we observe that proposals are fairly well distributed over time within our sample, with the highest volume of proposals taking place in the year 2008 and the lowest in 1998. These proposals are also distributed rather evenly across larger and smaller firms over the sample period, with the median total assets of sampled firms being approximately USD 9 billion. In Panel B of Table 1, and consistent with other findings, we observe that the majority of CSR proposals ($N = 1107$; 52.34%) come from firms operating within the broader consumer goods sector, followed by the finance sector ($N = 311$; 14.70%). This is to be expected because the more ‘consumer sensitive’ sectors reasonably attract more activist shareholders (Lev et al. 2010).

However, all major sectors are well represented in the sample, with numerous CSR proposals in the utilities, transportation and the basic industries sectors as well. The largest firms appear to come from the finance sector, with median total assets of approximately USD 70 billion. Finally, in Panel C, we illustrate the distribution of CSR proposals with respect to the level of shareholder voting support received at the respective AGM. The concentration of voting support for shareholder proposals lies in the lower brackets (0–10% up to 40–50%). This is to be expected since, in relative terms, it is uncommon for a nonbinding shareholder proposal to immediately gather full voting support across shareholders. As mentioned in Notes (2) and (3), respectively, usually activist shareholders will employ nonbinding proposals as a low-cost method for communicating their dissatisfaction to firm management or to initiate changes. Unlike management-initiated binding proposals, management decides whether or not to implement shareholder-initiated nonbinding proposals, regardless of the degree of voting support they may have. Nevertheless, in the context of CSR initiatives, nonbinding proposals have become an empowering mechanism for activist shareholders seeking to initiate changes (Levit and Malenko 2011).

Table 1. Data Sample Description: Activist CSR Proposals. The table illustrates the distribution and key summary statistics of the 2115 activist-initiated CSR proposals in our sample. Panel A describes the distribution of proposals per year, along with median pre-proposal betas and size for all firms in our sample. Panel B describes the distribution of proposals by industry, along with median pre-proposal betas and size for all firms in our sample. Finally, Panel C describes the distribution of proposals by levels of voting support received.

Panel A: Distribution of Firms—Proposals by Year				
Year	N	Percent	Median Beta	Median Total Assets (\$ mil)
1998	72	3.40	0.776	6216.9
1999	103	4.87	0.512	5842.8
2000	115	5.44	0.570	5127.0
2001	114	5.39	0.573	7799.1
2002	127	6.00	0.703	4929.6
2003	174	8.23	0.906	6613.2
2004	157	7.42	0.927	10,752.0
2005	142	6.71	1.023	10,435.4
2006	169	7.99	0.949	11,322.6
2007	187	8.84	0.976	9514.1
2008	203	9.60	1.013	9856.6
2009	200	9.46	1.091	8467.0
2010	176	8.32	1.063	12,097.2
2011	176	8.32	1.002	15,215.0
Total/Overall	2115	100.0	0.915	8997.1
Panel B: Distribution of Firms—Proposals by Industry				
Industry	N	Percent	Median Beta	Median Total Assets (\$ mil)
(1) Basic industries	130	6.15	1.054	6091.0
(2) Capital Goods	37	1.75	0.843	2479.3
(3) Construction	55	2.60	1.568	5938.6
(4) Consumer Goods	1107	52.34	0.888	5496.3
(5) Energy	85	4.02	0.971	17,812.0
(6) Finance	311	14.70	1.058	69,896.0
(7) Transportation	132	6.24	1.039	18,775.0
(8) Utilities	232	10.97	0.646	15,592.5
(9) Others	26	1.23	0.914	20,281.0
Total	2115	100.00	0.915	8997.1
Panel C: Distribution of Firms—Proposals by Level of Voting Support				
Voting Threshold	N	Percent	Mean % in Favor	Median % in Favor
0% ≤ Votes in Favor < 10%	676	31.96	6.20	6.00
10% ≤ Votes in Favor < 20%	255	12.06	13.91	13.00
20% ≤ Votes in Favor < 30%	200	9.46	25.15	25.00
30% ≤ Votes in Favor < 40%	219	10.35	35.36	35.00
40% ≤ Votes in Favor < 50%	249	11.77	45.27	45.00
50% ≤ Votes in Favor < 60%	192	9.08	55.32	55.00
60% ≤ Votes in Favor < 70%	147	6.95	64.86	64.00
70% ≤ Votes in Favor < 80%	106	5.01	75.04	74.90
80% ≤ Votes in Favor < 90%	49	2.32	84.61	84.90
90% ≤ Votes in Favor ≤ 100%	22	1.04	95.17	95.50
Total	2115	100.00	31.27	27.00

3.2. Methodological Framework for Measuring Systematic Risk

Do nonbinding shareholder proposals pertaining to CSR issues lead to changes in the systematic risks of underlying firms? Furthermore, since various nonbinding proposals presented before firm management are inherently associated with varying degrees of voting support, does this play a role in changes to firms' systematic risks? While standard event study methodologies normally estimate the information content of firm announcements and or other news by calculating abnormal returns using some market model benchmark, we take a different approach here. Unlike ordinary events that mainly influence cash flows, and whose information content can be estimated by a standard event study, we conjecture that CSR issues may cause changes in both the risk and returns of individual securities. As a matter of fact, [Brown et al. \(1988\)](#) showed that many events cause the variance of returns to shift due to a temporary (or permanent) shift in systematic risk, so that the use of common methods may fail ([Boehmer et al. 1991](#)).

If news about the CSR proposal has an impact on a firm's systematic risk beyond what can be discerned from cash flow analysis, estimation parameters (factor loadings) calculated unconditionally during the estimation (pre-announcement) period will be biased and cannot be used in the event window (post announcement) because betas are time-dependent (and shift across time). In contrast to most event studies that use pre-announcement parameters to estimate post-announcement returns, our aim is to actually model possible shifts in systematic risk. To therefore address whether an event impacts risk we need to reformulate the market model to allow betas to change over the event. To accomplish this, we follow [Grullon et al. \(2002\)](#) and [Grullon and Michaely \(2004\)](#) and adopt a type of market model approach that accommodates a dummy variable, D , to test for shifts in systematic risk before and after a shareholder proposal is voted on during the AGM:

$$r_{it} - r_{ft} = a_i + a\Delta_i D_t + b_i(r_{mt} - r_{ft}) + b\Delta_i D(r_{mt} - r_{ft})_t + \varepsilon_t \quad (1)$$

In this framework, the dummy variable, D , takes a value of 1 for $t \geq T_0$ and 0 otherwise. In this case, T_0 denotes the day which a nonbinding shareholder proposal is brought before the AGM meeting to be voted on. The returns of the underlying sampled firm i at time t are denoted by r_{it} ; the returns on the market portfolio, r_{mt} , consist of value-weighted returns on all CRSP firms; r_{ft} is the daily holding period return on the 1-month treasury bill rate.

We estimate (1) for the 126 days surrounding the day, T_0 , when the shareholder proposal is brought before the AGM.⁸ The coefficient of principal interest is b (beta), which signifies firm i 's degree of systematic risk. The dummy variable, D , allows for empirical testing of the model following day T_0 in order to decipher whether there are any shifts in systematic risk. Thus, while b_i represents beta prior to T_0 , $b\Delta_i$ is the change in the underlying firm's beta following T_0 .

As is discussed in the proceeding section, and to gain a multifaceted view of the behavior of firms' systematic risks following T_0 , we estimate (1) and compare results for nonbinding proposals that occur (a) during economic growth versus recessionary periods and (b) for low-consumer-sensitivity versus high-consumer-sensitivity firms. In addition, we combine (a) and (b) for a subsection of our analysis and examine systematic risk changes for low-consumer-sensitivity firms during economic growth versus expansionary periods and compare these results with systematic risk changes for high-consumer-sensitivity firms during growth versus expansionary periods.

Finally, our analysis also allows for interaction effects in voting support on systematic risk. This allows us to fully gauge how nonlinearities in voting support can affect systematic risk across firms with low and high consumer sensitivity, respectively, and across economic growth and recessionary periods. Taking this multifaceted analytical approach enables us to better understand, first, how nonbinding shareholder proposals affect underlying firms' systematic risks and, second, what role voting support plays. These findings are expected to be useful to activist shareholders as well as managers of firms who are presented with such CSR-related proposals during an AGM. Theoretically, they are also expected to contribute

broadly to the CSR literature while specifically providing a test for the aforementioned risk-reduction hypothesis that is often cited as a reason for CSR initiatives.

4. Empirical Results

In Table 2, we present a preliminary univariate analysis of changes in systematic (beta) risk following the activist shareholder proposals in our sample. For the purposes of the analyses, we split our sample across three key dimensions of interest; specifically, *Economic Activity* (Economic Growth and Economic Recession, respectively), *Consumer Sensitivity* and *Voting Support*. By splitting our sample accordingly, we are providing a multifaceted view of how firms' systematic risks shift with nonbinding shareholder proposals pertaining to CSR.

Table 2. Univariate Analysis: Changes in Beta Risk Following Activist CSR Proposals. The table illustrates univariate *t*-tests of mean changes in beta risk following activist CSR proposals across the key dimensions of the study. Panel A tests mean changes in firm risk (beta) between high and low levels of voting support (vertically) and between the periods of Growth and Recession (horizontally). Panel B tests mean changes in firm risk (beta) between high and low levels of voting support (vertically) and between Low- and High-Consumer-Sensitivity Industries (horizontally). Finally, Panel C tests mean changes in firm risk (beta) between high and low levels of voting support (vertically) and all possible combinations of (low-high) consumer industry, growth and recession (horizontally). T-statistics are in brackets. * and ** denote significance at the 10% and 5%, levels, respectively.

Panel A: Changes in Beta by Economic Activity and Voting Support					
	Economic Growth	Economic Recession	Diff.	<i>t</i> -Test	Total
Low Voting Support	0.016	0.072	0.056 *	(1.816)	0.025
High Voting Support	0.048	0.016	−0.032	(−0.808)	0.041
Diff.	0.032	−0.056			0.016
<i>t</i> -test	(1.404)	(−1.248)			(0.797)
Total	0.031	0.038	0.007	(0.271)	0.033
Panel B: Changes in Beta by Industry Consumer Sensitivity and Voting Support					
	Low Consumer Sensitivity	High Consumer Sensitivity	Diff.	<i>t</i> -Test	Total
Low Voting Support	0.046	0.013	−0.033	(−1.333)	0.025
High Voting Support	−0.010	0.064	0.074 **	(2.071)	0.041
Diff.	−0.056	0.051 **			0.016
<i>t</i> -test	(−1.578)	(2.033)			(0.797)
Total	0.019	0.039	0.020	(0.930)	0.033
Panel C: Changes in Beta: Three-way Intra-Group Comparisons					
	Low Consumer Sensitivity		High Consumer Sensitivity		
	Economic Growth	Economic Recession	Economic Growth	Economic Recession	
Low Voting Support	0.031	0.126	0.008	0.043	
High Voting Support	−0.009	−0.013	0.073	0.031	
Diff.	−0.041	−0.138 *	0.065 **	−0.011	
<i>t</i> -test	(1.029)	(1.752)	(2.352)	(0.185)	

In Panel A, we examine differences in the *Changes in Beta Risk* across *High-* and *Low- Consume- Sensitivity* industries and between the period of the most recent economic Recession (2007–2009) with the rest of the sample.⁹ In addition, in Panel B, we also compare mean changes in beta risk across proposals that garner *High* and *Low Voting Support*¹⁰

and across periods of *Economic Growth* versus *Recession*. In Panel C, we run intra-group comparisons across *Consumer Sensitivity* and *Voting Support*.

Examining the results, notable increases in mean *Changes in Beta Risk* appear to exist between *Recession* and *Growth* but this is only evident for *Low Voting Support*. In addition, beta risk increases more in cases of *High* rather than *Low Voting Support*, but this is only evident for *High-Consumer-Sensitivity* industries. Finally, we observe significant increases in *Changes in Beta Risk* across *High-* and *Low-Consumer-Sensitivity* industries, but this seems to manifest in cases of *High Voting Support*. As we will demonstrate soon, this finding hides important nuances in the data; when allowing for nonlinearities in voting support, we show that a concave relation between voting support and changes in beta risk, whereby surpassing the voting support threshold of approximately 39–45% is required for a firm to realize a reduction in its systematic risk. This is a novel stylized fact that we document in our study that contributes to the CSR literature and, more broadly, the CSR-risk relation.

In Table 2 Panel D we also perform three-way univariate comparisons by first grouping the nonbinding CSR proposals in our sample by industry (*High-* and *Low-Consumer-Sensitivity*) and subsequently cross-comparing mean *Changes in Beta Risk* over *Economic Activity* and *Voting Support*. The results suggest that in *Low-Consumer-Sensitivity* industries, *Voting Support* reduces *Beta Risk* but more so during the *Recession*. In *High-Consumer-Sensitivity* industries, *Voting Support* increases *Beta Risk*—notably more so during periods of *Economic Growth*. As a result, our univariate analysis shows some preliminary evidence that aggregate economic conditions, the inherent level of an industry’s sensitivity to CSR issues, and the degree of voting support for a CSR proposal, respectively, will have an impact on changes in firms’ beta risks.

However, to provide a more holistic and multifaceted view, and, for the sake of robustness testing in the presence of potential confounding effects, we also implement a multivariate cross-sectional model in which we control for covariates that are well-known in impacting shifts in firms’ beta risk (which serves as the dependent variable). The results are presented in Panel A of Table 3, which presents pairwise correlations of all the variables (beta risk along with control variables). *Investor Sentiment* is the mean 6-month percentage from the American Association of Institutional Investors (AAII) survey, calculated as (Bullish)/(Bullish + Bearish). This variable matches the dependent variable of each sampled firms’ (T0, T126) time window. Similarly, we control for the 6-month average of the CBOE implied volatility index (VIX) during the event window (T0, T126) for each of the sampled firms.

In addition to these aggregate investor sentiment measures, we also include firm-level controls including the following: firm size (*Sales* (in log)), using the natural logarithm of sales revenue 1-year prior to the CSR proposal (Compustat item SALE at Y-1); leverage (Total Debt/Equity); the ratio of total debt (items DLTT + DLC) to the book value of equity (item SEQ), also at Y-1; the typically used proxy for *Tobin’s Q*, measured as the ratio of firm market value to the book value of assets at Y-1. For this proxy, the market value of assets is the sum of the book value of assets (Compustat item AT) and the market value of common stock (items PRCC_F \times CSHO), less book value of equity (item SEQ) minus preferred stock and deferred taxes and net of post-retirement benefits when available (items PSTKL–TXDITC–PRBA).

To account for mean reversals in risk as well as for the persistence in beta, we also control for the 6-month average firm beta prior to the CSR proposal (*Beta Risk-6m*). While a number of pairwise cross-correlations between the model variables are significant at 1%, 5% and 10%, they do not exceed the critical values and hence do not raise concerns about collinearity. Meanwhile, all summary statistics of the model variables in Panel B suggest that variable observations rest within their expected ranges, reducing the possibility that our findings are driven by outliers.

Table 3. Correlation Matrix and Summary Statistics. The table presents the Pearson correlation coefficients and key summary statistics for all the variables used in the main regressions for the 2115 activist CSR proposals in our sample. *Change in Beta Risk* is the change in the underlying firm's beta between the two 6-month periods surrounding the CSR proposal, estimated as in Grullon and Michaely (2004). *Investor Sentiment* is the mean 6-month percentage from the American Association of Institutional Investors (AAII) survey calculated as (Bullish)/(Bullish + Bearish) during the 6 months after each CSR proposal. *VIX Index 6m Average* is the 6-month average of the CBOE implied volatility index (VIX) during the 6 months after each CSR proposal. *Recession* is a dummy variable, which takes the value of 1 if a proposal was initiated during the NBER recession period (December 2007 until June 2009) or 0 otherwise. *Turnover* is the natural logarithm of sales revenue 1 year prior to the CSR proposal (Compustat item SALE at Y-1). *Leverage* is the ratio of total debt (items DLTT + DLC) to the book value of equity (item SEQ) at Y-1. *Tobin's Q* is the ratio of firm market value to the book value of assets at Y-1: the market value of assets is the sum of the book value of assets (Compustat item AT) and the market value of common stock (items PRCC_F \times CSHO) less the book value of equity (item SEQ) minus preferred stock and deferred taxes, net of post-retirement benefits, when available (items PSTKL–TXDITC–PRBA). *Beta Risk-6m* is the 6-month average firm beta prior to the CSR proposal. *Vote for Percentage* is the percentage of votes in favor of a proposal. Our sample includes only 'events' at which a singular activist-initiated ESG proposal was voted on. Finally, *HCS Industry* is a dummy variable equal to 1 if a firm belongs in a consumer-sensitive industry (consumer goods or finance) and 0 otherwise, as in Lev et al. (2010). *, ** and *** denote significance at 10%, 5%, and 1% levels, respectively.

Panel A: Matrix of Pairwise Correlations										
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Change in Beta Risk	1.000									
2. Investor Sentiment	−0.040 *	1.000								
3. VIX Index 6m Average	0.012	−0.251 ***	1.000							
4. Recession	0.006	−0.210 ***	0.492 ***	1.000						
5. Turnover	−0.013	−0.083 ***	−0.030	0.026	1.000					
6. Leverage	0.009	0.006	0.008	−0.014	0.010	1.000				
7. Tobin's Q	−0.045 **	0.045 **	−0.094 ***	−0.087 ***	0.013	−0.036 *	1.000			
8. Beta Risk-6m	−0.343 ***	−0.127 ***	−0.048 **	0.157 ***	−0.023	0.042 *	−0.060 ***	1.000		
9. Vote for Percentage	0.001	−0.135 ***	0.054 **	0.118 ***	−0.206 ***	0.014	−0.097 ***	0.125 ***	1.000	
10. HCS Industry	0.020	0.003	−0.031	−0.021	0.001	0.009	0.215 ***	0.031	0.016	1.000
Panel B: Summary Statistics										
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Mean	0.033	0.548	22.753	0.191	8.747	3.142	1.681	0.964	0.313	0.670
5th Percentile	−0.594	0.395	12.847	0.000	6.300	0.288	0.948	0.247	0.035	0.000
Median	0.032	0.530	23.671	0.000	8.761	1.749	1.371	0.915	0.270	1.000
95th Percentile	0.658	0.720	32.026	1.000	11.071	12.146	3.562	1.848	0.770	1.000
SD	0.471	0.100	6.601	0.393	1.441	22.074	0.832	0.508	0.247	0.470
N	2115	2115	2115	2115	2115	2115	2115	2115	2115	2115

Satisfied with these diagnostics, we proceed in Table 4 by estimating OLS regression coefficients for a number of model specifications. In the first column, we regress all control variables including fixed year and industry effects against *Changes in Beta Risk*, thereby establishing a 'baseline' model of satisfactory explanatory power. *Investor Sentiment* is negatively related with *Changes in Beta Risk*, as is expected. This is because periods of bullishness (rises in sentiment) are typically linked with declines in firms' systematic risks. In addition, *Tobin's Q* is also negatively related with *Changes in Beta Risk*. Finally, prior betas (*Beta Risk-6m*) are negatively related to *Changes in Beta Risk*. This reflects mean reversion in stock price dynamics and, ultimately, the time series behavior of beta (high betas are followed by low betas and vice versa).

Table 4. Model Estimates. The table presents coefficient estimates of standard OLS regressions where the dependent variable is the *Change in Beta Risk*, the change in the underlying firm's beta between the two 6-month periods surrounding the CSR proposal, estimated as in Grullon and Michaely (2004). *Investor Sentiment* is the mean 6-month percentage from the American Association of Institutional Investors (AAII) survey calculated as (Bullish)/(Bullish + Bearish) during the 6 months after each CSR proposal. *VIX Index 6m Average* is the 6-month average of the CBOE implied volatility index (VIX) during the 6 months after each CSR proposal. *Turnover* is the natural logarithm of sales revenue 1 year prior to the CSR proposal (Compustat item SALE at Y-1). *Leverage* is the ratio of total debt (items DLT + DLC) to the book value of equity (item SEQ) at Y-1. *Tobin's Q* is the ratio of firm market value to the book value of assets at Y-1: the market value of assets is the sum of the book value of assets (Compustat item AT) and the market value of common stock (items PRCC_F \times CSHO) less the book value of equity (item SEQ) minus preferred stock and deferred taxes, net of post-retirement benefits, when available (items PSTKL-TXDITC-PRBA). *Beta Risk-6m* is the 6-month average firm beta prior to the CSR proposal. *Recession* is a dummy variable that takes the value of 1 if a proposal was initiated during the NBER recession period (December 2007 until June 2009) or is 0 otherwise. *High-Consumer-Sensitivity Ind. (HCS)* is a dummy variable that equals 1 if a firm belongs in a consumer-sensitive industry (consumer goods or finance) or 0 otherwise, as in Lev et al. (2010). *Vote for Percentage (Vote)* is the percentage of votes in favor of a proposal. Models 1–4 present coefficient estimates of control variables and the three variables of interest. Model 5 introduces the squared term $Vote^2$, to capture non-linearities. The geometric figure of equation in Model 5 is a parabola with the following PDE: $\partial/\partial x (-0.3923x^2 + 0.3083x + 0.1624z + 0.0338\omega + \dots + 0.7065) = 0.3083 - 0.7846x$. The equation has a global maximum at $\partial/\partial x = 0: x \approx 0.3929$ (i.e., Percent Voting for). All models include year and industry fixed effects whose coefficients are suppressed for brevity. Robust standard errors are clustered at the firm level. T-statistics are in parentheses. ***, **, and * denote significance at the 10%, 5%, and 1% levels, respectively.

DV: Change in Beta Risk	Model 1 (Controls)	Model 2 (Recession)	Model 3 (HCS)	Model 4 (Vote %)	Model 5 (Vote % ²)
Constant	0.8041 *** (5.266)	0.8542 *** (5.400)	0.8331 *** (5.374)	0.8060 *** (5.150)	0.7065 *** (3.592)
Investor Sentiment	-0.4473 *** (-3.627)	-0.4246 *** (-3.476)	-0.4236 *** (-3.480)	-0.4132 *** (-3.376)	-0.0593 (-0.332)
VIX Index	-0.0026 (-1.596)	-0.0053 *** (-2.767)	-0.0053 *** (-2.765)	-0.0053 *** (-2.746)	-0.0019 (-0.564)
Turnover	-0.0096 (-1.233)	-0.0106 (-1.349)	-0.0106 (-1.348)	-0.0094 (-1.179)	-0.0194 ** (-2.309)
Leverage	0.0005 * (1.932)	0.0005 ** (2.035)	0.0005 ** (2.057)	0.0005 ** (2.033)	0.0007 *** (2.610)
Tobin's Q	-0.0363 *** (-2.995)	-0.0350 *** (-2.881)	-0.0407 *** (-3.252)	-0.0399 *** (-3.208)	-0.0390 *** (-2.714)
Beta Risk-6m	-0.3355 *** (-9.634)	-0.3481 *** (-9.620)	-0.3500 *** (-9.667)	-0.3513 *** (-9.661)	-0.4172 *** (-9.969)
Recession	-	0.0941 *** (3.088)	0.0945 *** (3.102)	0.0925 *** (3.026)	0.0338 (0.922)
High-Consumer-Sensitivity Ind. (HCS)	-	-	0.0466 ** (2.167)	0.0461 ** (2.147)	0.1624 ** (2.561)
Vote for Percentage (Vote)	-	-	-	0.0331 (0.899)	0.3083 ** (2.141)
Vote for Percentage ² (Vote ²)	-	-	-	-	-0.3923 ** (-2.153)
Year Effects	No	No	No	No	Yes
Industry Effects	No	No	No	No	Yes
R ²	0.131	0.136	0.138	0.138	0.181
R ² Adj.	0.129	0.133	0.134	0.134	0.170
F	16.819	14.812	13.079	11.623	5.501
N	2115	2115	2115	2115	2115

In the next three columns (Models 2–4), we add the following three main-effects variables: *Recession*, a dummy capturing the 2007–2009 financial crisis, a high-consumer-sensitivity (*HCS*) industry dummy, and *Vote for Percentage* (*Vote*), respectively. The effects of *Recession* and *HCS* are both positive and significant at 1% and 5%, respectively. This suggests that, ceteris paribus, *Changes in Beta Risk* are positive during recessionary periods and for high-consumer-sensitivity firms. Finally, in Model 5 we introduce the squared term of *Vote* in order to detect nonlinearities in the risk-voting support relation. The coefficient for *Vote* is positive (0.3083) while the coefficient for *Vote*² is negative (−0.3923). Both are significant at 5%. This result implies that the above relationship is inverse U-shaped. Thus, while low voting support can lead to the dismissal of the proposal by firm management (thereby raising information asymmetry) a strong degree of support from shareholders can actually reduce beta risk and can realize ‘risk-reduction’ benefits. Based on the coefficient estimates of Model 5, the critical level of *Vote* above which risk reduction are observed is approximately 39.29%. This is calculated as the root of the following partial differential equation (PDE):

$$\frac{\partial}{\partial x}(-0.3923x^2 + 0.3083x + 0.1624z + 0.0338\omega + \dots + 0.7065) = 0 \Rightarrow 0.3083 - 0.7846x = 0 \Rightarrow x \approx 0.3929$$

In Table 5, we expand the previous analysis to allow nonlinear interactions between all three main effects variables (*Voting Support*, *Recession* and *HCS*) to test whether the effects of *Vote* on *Changes in Beta Risk* are indeed asymmetric across different types of firms and between economic conditions. For exposition and simplicity, in column 1 we replicate Model 5 above without tabulating control variables. In columns 2 (Model 6: *HCS* × *Vote*²) and 3 (Model 7: *Recession* × *Vote*²) we run interaction regressions of the simple and quadratic terms of *Vote* with the two conditional dummy variables (*HCS* and *Recession*). While the results are generally consistent, the quadratic interaction effects are also significant at 5%, supporting the inverse U-shaped relationship between *Vote* and *Changes in Beta Risk*, but only for high-consumer-sensitivity (*HCS* = 1) firms and only for proposals during the period of growth (*Recession* = 0). These findings suggest that in high-consumer-sensitivity industries and during adverse economic times, only strong CSR support of activist shareholder initiatives can reduce systematic risk. On the contrary, weak support may in fact accentuate information asymmetries and can lead to adverse risk effects. Model 8 in the last column presents three-way interaction effects across *Vote*, *HCS* and *Recession* and confirms the above result in a more stringent empirical setting. According to the coefficient estimates of *HCS* × *Growth* × *Vote* and *HCS* × *Growth* × *Vote*², which are positive (0.5227) and negative (−0.5543) and significant at 1% and 5%, respectively, the inverse U-shape relationship between activist CSR voting support and risk is most pronounced for high-consumer-sensitive industries and during periods of economic growth—the critical level for *Vote* being 47.14%. These findings both validate and challenge extant CSR findings, such as the risk-reduction hypothesis, and pave the way for future research in better understanding when and under what conditions the risk reduction postulation holds.

Finally, as a further sensitivity procedure, we illustrate all results in Figures 1–3 by means of response and marginal effects plots of the (quadratic) main effects and interaction terms. In Figure 1, the graph on the left plots the nonlinear prediction of the *Change in Beta Risk* for all levels of *Vote* according to the estimates of Model 5. The graph on the right illustrates the marginal effects ($\partial y / \partial x$) of *Vote* on *Change in Beta Risk* evaluated across all levels of *Vote*, along with 90% confidence intervals and the histogram of our sample as distributed across all levels of *Vote*. The marginal effects plot clearly supports that the effect (slope) of *Vote* on *Change in Beta Risk* is:

- Positive and significant for low levels of voting support, especially for votes up to 28%. This effect applies to approximately 51% of our sample and suggests that low voting support can accentuate firm beta risk;

- Negative and significant for high levels of support, especially for votes over 52%. The effect is applicable to about 24% of proposals in our sample and in line with our expectation that the risk-reduction hypothesis applies in cases of high support for CSR proposals;
- Inconclusive for the intermediate levels. When *Vote* is between 28% and 52% (about 25% of the proposals in our sample) confidence lines cross both sides of the 0 reference line. Therefore, caution is to be exercised when interpreting the effects of such intermediate levels of voting support on firm beta risk.

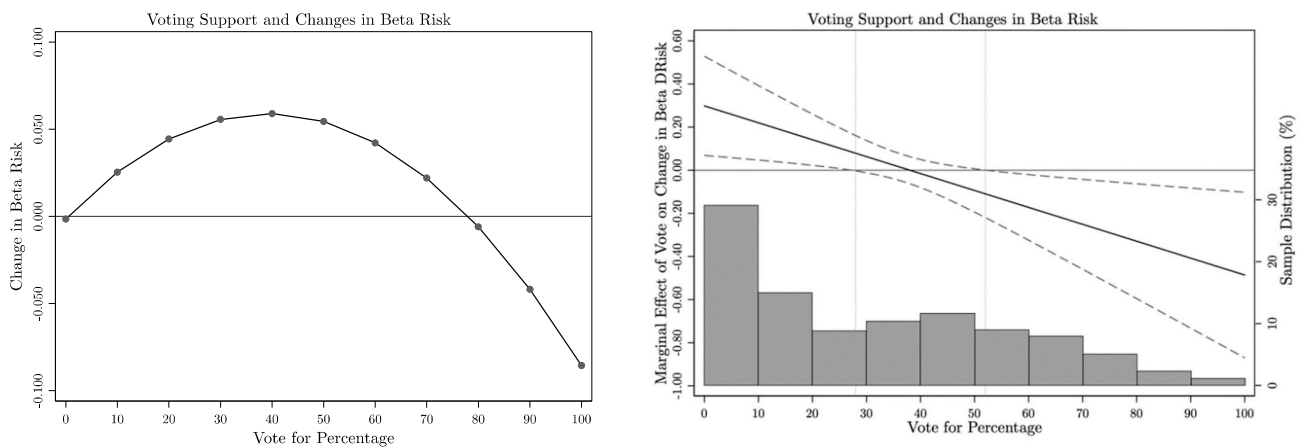


Figure 1. Main Effects Plots.

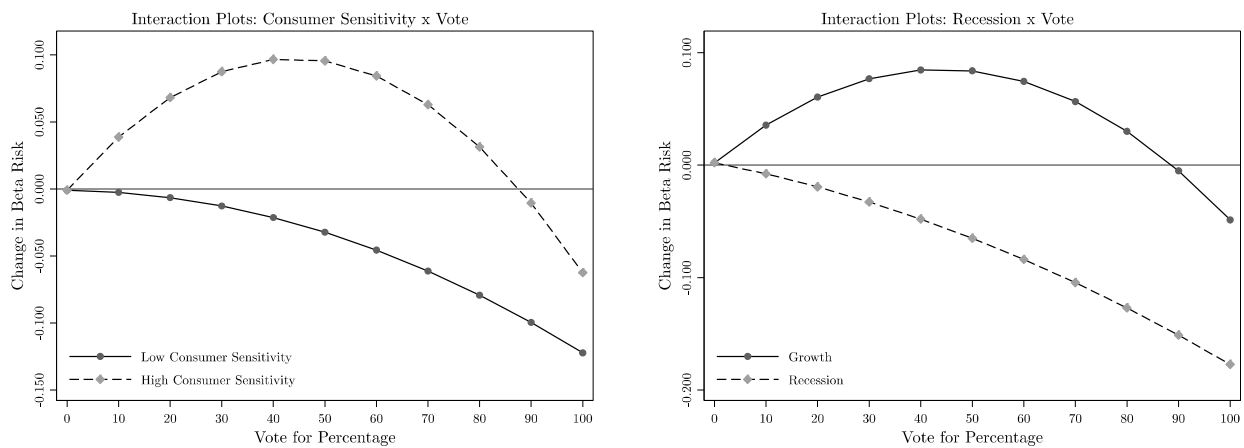


Figure 2. Two-Way Nonlinear Interaction Plots.

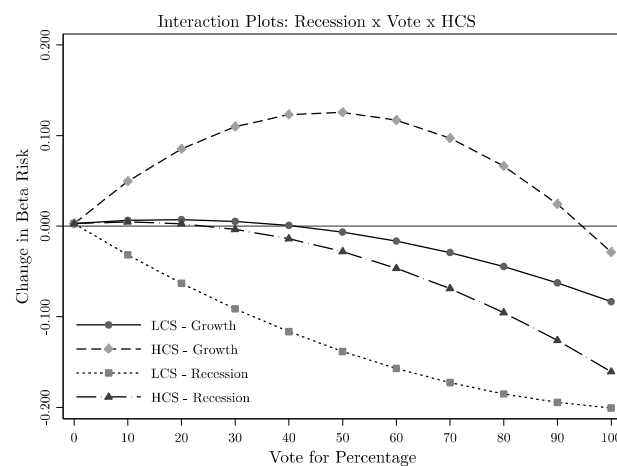


Figure 3. Three-way Nonlinear Interaction Plots.

Table 5. Nonlinear Interactions: Model Estimates. The table presents coefficient estimates of moderator regressions where the dependent variable is Change in Beta Risk, the change in the underlying firm's beta between the two 6-month periods surrounding the CSR proposal, estimated as in Grullon and Michaely (2004). All control variables are as in Table 4. Model 5 is replicated from Table 4 for comparison and illustrates the key (baseline) estimates of the four primary variables of interest: Recession (Growth), High-Consumer-Sensitivity Industry: HCS (Low-Consumer-Sensitivity Industry: LCS), Vote and Vote² (squared term of vote). Models 6 and 7 show the coefficient estimates of the interaction effects between Vote and the HCS (LCS) and Recession (Growth) indicator variables. Model 8 presents the coefficient estimates of all three-way interactions across Vote (Vote²), HCS (LCS) and Recession (Growth). All models include year and industry fixed effects, whose coefficients are suppressed for brevity. Robust standard errors are clustered at the firm level. T-statistics are suppressed for brevity. *** and ** denote significance at the 10% and 5% levels, respectively.

DV: Change in Beta Risk	Model 5 (Vote % ²)	Model 6 HCS × Vote % ²	Model 7 Recession × Vote % ²	Model 8 Three-Way Interactions
Controls (as in Table 4)	Yes	Yes	Yes	Yes
Constant	0.7065 ***	0.7568 ***	0.6866 ***	0.7369 ***
Recession	0.0338	0.0347	-	-
High-Consumer-Sensitivity Industry (HCS)	0.1624 **	-	0.1650 ***	-
Vote	0.3083 **	-	-	-
Vote ²	-0.3923 **	-	-	-
Low-Consumer-Sensitivity Industry (LCS) ×:				
Vote	-	-0.0039	-	-
Vote ²	-	-0.1174	-	-
HCS ×				
Vote	-	0.4474 **	-	-
Vote ²	-	-0.5089 **	-	-
Growth ×:				
Vote	-	-	0.3777 **	-
Vote ²	-	-	-0.4285 **	-
Recession ×:				
Vote	-	-	-0.0894	-
Vote ²	-	-	-0.0900	-
LCS ×				
Growth × Vote	-	-	-	0.0489
Growth × Vote ²	-	-	-	-0.1351
Recession × Vote	-	-	-	-0.3610
Recession × Vote ²	-	-	-	0.1575
HCS ×				
Growth × Vote	-	-	-	0.5227 ***
Growth × Vote ²	-	-	-	-0.5543 **
Recession × Vote	-	-	-	0.0397
Recession × Vote ²	-	-	-	-0.2031
Year Effects	Yes	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes	Yes
R ²	0.181	0.183	0.183	0.185
R ² Adj.	0.170	0.171	0.171	0.171
F	5.501	5.297	5.590	5.236
N	2115	2115	2115	2115

Overall, the results are quite clear and consistent with our predictions, while the empirical estimates correspond well to our range of data. Therefore, the nonlinear effects,

the turning point, the initial risk increase, and the following reduction are all observed for values within our sample.

The illustration of the marginal effects helps further clarify the nature of the risk-voting support relation. In particular, and as seen in Figures 2 and 3, while for low-consumer-sensitivity industries and during the recession all levels of CSR support are effective towards mitigating risk and reducing information asymmetries, in periods of economic growth or for high-consumer-sensitivity industries a voting threshold of over ~47% needs to be surpassed for beta risk to begin to decline.

5. Conclusions

Nonbinding shareholder proposals constitute an important channel for activist shareholders by which they can express dissatisfaction to firm managers or initiate changes within the firm. Our study uses a rich sample of nonbinding shareholder proposals across industries in the US for the period 1998–2011. This sampled time frame is important because it encapsulates the 2007–2009 financial crisis, a time when aggregate investors' risk aversions and opportunity costs of capital generally increased as economic activity decelerated.

Using our econometric analysis to gauge firms' systematic risks before and after CSR-related shareholder proposal votes, we show that voting support serves as an indicator for CSR commitment and is nonlinearly related to systematic risk. In particular, we find that CSR proposals with low levels of voting support, or commitment, are linked with increases in systematic risk. As CSR commitment rises (high voting support), systematic risk declines. Interestingly, our results suggest that economic crises periods only seem to exacerbate this nonlinearity. Finally, we show how this nonlinearity between voting support and systematic risk is particularly more pronounced for consumer-sensitive industries—firms that produce goods or services meant for general customers rather than for industrial or governmental use (Lev et al. 2010).

Our findings present a new stylized fact that is important to the CSR literature. Specifically, there is a concave relation between voting support and changes in systematic risk whereby surpassing the voting support threshold of approximately 39–45% is necessary for a firm to see a reduction in its systematic risk. This finding is of theoretical importance in terms of how we potentially test and interpret the risk-reduction hypothesis, which so far does not account for how 'levels of CSR support' can affect firm risk. This is important to highlight because activist shareholders may inadvertently increase the risk of the firm for all shareholders if they bring forward proposals that garner low voting support. Our newly documented stylized fact aligns with the conclusions of Cui et al. (2018), who find that CSR engagement leads to decreases in information asymmetry. In our study, however, we shed new light on this finding by showing that high levels of support for CSR engagement are needed to possibly reduce information asymmetry.

Finally, as the debate on the impact of CSR on shareholder wealth continues to evolve over time, we should expect to see future studies examining the intricacies underlying the risk-reduction hypothesis. Our study takes an important first step in this direction by demonstrating that CSR matters for firm risk and that market assessments of CSR depend on industry and on the degree of voting support for nonbinding shareholder proposals. Our study emphasizes that more nuanced research is required that can disentangle complex relationships between CSR and firm performance in order to advance our understanding and inform industry practitioners including managers, investors, policy makers and wider stakeholders as to how CSR is linked to firms' systemic risks.

Author Contributions: Conceptualization, K.B., T.K. and D.K.; Methodology, K.B., T.K. and D.K.; Data, K.B., T.K. and D.K.; Software Analyses, K.B., T.K. and D.K.; Writing, K.B., T.K. and D.K.; reviewing and editing, K.B., T.K. and D.K. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: All data used in this article are available from commercially available data sources.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Sample of Activist CSR Proposals.

Year	Firm (Industry)	Proposal (Link to SEC Proxy Statement)	Vote for Percentage
1997	Baker Hughes Inc. (Energy)	Implement MacBride Principles	16
1998	Nalco Chemical Co. (Basic Industries)	Endorse Ceres Principles	13
1999	Tosco Corp. (Energy)	Conduct Annual Pollution Prevention Preview	4
2000	Ameren Corp. (Utilities)	Reduce Radioactive Emissions	11
2001	Alcoa Inc. (Basic Industries)	Review/Report on Global Standards	11
2002	Chevron Corp. (Energy)	Report on Global Climate Change Risk	10
2002	Cooper Companies Inc. (Consumer Goods)	Issue Sustainability Report	22
2003	National Fuel Gas Co. (Utilities)	Take Steps to Eliminate Workplace Discrimination	8
2004	Ruby Tuesday Inc. (Consumer Goods)	Report on Gene-Engineered Food	12
2005	Baker Hughes Inc. (Energy)	Implement MacBride Principles	24
2006	Leggett & Platt Inc. (Consumer Goods)	Adopt Sexual Orientation Anti-Bias Policy	25
2007	MDU Resources Group Inc. (Utilities)	Issue Sustainability Report	35
2008	The Hershey Company (Consumer Goods)	Report on Steps Against Child Labour	2
2010	Gentex Corp. (Consumer Goods)	Report on Sustainability, Including Climate Change	33
2011	Regions Financial Corp. (Finance)	Report on Political Donations and Policy	42

Notes

¹ In the context of CSR, the risk-reduction hypothesis holds that CSR engagement can serve to reduce firms' risks.

² Activist shareholders may employ 'high-cost' or 'low-cost' methods to induce changes within a firm or to express their dissatisfaction. While high-cost methods, reserved for large market participants such as hedge funds, entail establishing significant ownership stakes within the firm and conducting proxy fights to secure board seats, low-cost methods involve the sponsoring of nonbinding shareholder proposals or the withholding of votes in director elections (Del Guercio et al. 2008; Ertimur et al. 2010). Firms that ignore shareholder proposals, especially those that have strong support, can suffer negative investor attention. For example, in the past, the California Public Employees' Retirement System (CalPERS) maintained a focus list of firms that ignore shareholder proposals with a majority of votes. This name-and-shame approach has, as of 2011, been gradually phased out in favor of a more mutually engaging approach with companies that would otherwise be on this list (see <https://www.calpers.ca.gov/page/investments/governance/corporate-engagements/focus-list-program>) (accessed on

- 1 March 2001). In a similar vein, CFO.com regularly publishes information on shareholder proposals and the responses of firm management.
- 3 In accordance with Securities and Exchange Commission (SEC) Rule 14a-8, shareholders can submit proposals to be voted on in annual shareholder meetings and these can either be adopted by the board of directors, in part or in whole, or can be dismissed in their entirety regardless of the amount of voting support they receive (see <https://www.sec.gov/interps/legal/cfslb14i.htm>) (accessed on 1 February 2001).
- 4 TIAA-CREF is an example of a firm that has been very active in the past two decades through their use of ‘high cost’ and ‘low cost’ methods of inducing change within a firm (see Note 2). Specifically, when utilizing low-cost methods of shareholder activism, they have an established record on using nonbinding shareholder proposals to successfully implement desired changes (Cai and Walkling 2011; Uysal and Tsetsura 2015).
- 5 The 2017 list, for example, is available here: <https://www.forbes.com/sites/karstenstrauss/2017/09/13/the-10-companies-with-the-best-csr-reputations-in-2017/#5e416097546b> (accessed on 1 March 2001). A naive Google search of ‘Forbes best CSR reputations’ followed by a year produces search results that indicate *Forbes*’ selection of companies for that given year that exemplified CSR leadership.
- 6 One of the indicators which the Reputation Institute looks for in companies is CSR leadership abilities. They contend that ‘... companies with CEOs and senior executives who take a stand on critical, often controversial, issues tend to outperform companies that remain silent ...’ More information on how they measure the reputations of firms is available here: <https://www.reputationinstitute.com/why-ri> (accessed on 7 March 2001).
- 7 The Berle–Dodd debate epitomizes this ongoing controversy between shareholder and stakeholder views of firms’ responsibilities (Windsor 2008). While Berle argued that public policy should provide a well-defined fiduciary duty for firm managers, Dodd argued for public policy that incorporates community responsibilities. As Windsor (2008) indicates, Dodd’s views can be regarded as precursor to many of the modern-day corporate social responsibility and stakeholder theories that are being discussed in the literature.
- 8 For the sake of robustness, we replicated the entire analysis of our study using time windows such as 63 days (3 months) and 252 days (12 months) and conclude qualitatively similar findings. These findings are not tabulated for the sake of brevity but are available upon request.
- 9 The sample range for the economic recession is from December 2007 to June 2009. This is consistent with the dates identified by the National Bureau of Economic Research (NBER), available online here: <http://www.nber.org/cycles.html> (accessed on 1 February 2000).
- 10 Based on our in-sample median of 27 percent in favor.

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