Essays on Corporate Social Responsibility

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A thesis submitted in fulfillment of the requirements for the degree of Doctor of Philosophy in Finance

School of Economics and Finance

Massey University

30 August 2014

ACKNOWLEDGEMENTS

I would like to acknowledge the young boy who grew up on an orange grove, in Africa, and thank him for setting his sights on the path to doctor hood. He set off on an unlikely journey that at times seemed unending. Sometimes through hard work, sometimes through smarts, and sometimes through luck he managed to cross the deserts, sail the seas and wade through the waters to this, the precipice of his new life. Through these trials and tribulations he met many an individual, most of negligible account, but the miasma of individuals that frequented his life did produce several people instrumental in forging his journey.

To Professor David K. Ding I would like to thank you for the last four years of support I have received. Of course your support and dedication to my academic studies deserves its own commendation, however it is the personal friendship that you have afforded me that I would like to acknowledge. Over the last few years you have shown yourself to be a kind, understanding person, generous, with an open heart, and a penchant or debate that compliments mine. I would not be in this position without your guidance and support, and I will be forever grateful.

Next I would like to recognize Dr. Udomsak Wongchoti, a man who managed to look past my crazy hair and crazy clothes nearly ten years ago to connect with a young man, guiding him through this process. I would like to thank you for sticking with me and being the constant during my academic journeys. Also, you have to be applauded for the speed and thoroughness with which you were willing to address my comments, queries, and concerns, at all manner of the hour.

To the office ladies, readers should not be fooled by the implied misogyny, I have nothing but the fondest of memories, and deepest respect, for these wonderful women. These individuals went above and beyond, to not only make me feel at home in a new city and a new school but, have supported me personally as friends throughout this journey. Fellow PhD students who have suffered with me are acknowledged here to highlight their capacity to subject themselves to my droning calls of grousing. I have no doubt that my presence impacted your productivity, and that I owe you several months of your life. Lastly, Somi Shin I would like to thank you for showing me the way out; Cherry Zhang your presence was a pleasure as were your musings; Jasmine Fang, you were there in the end when I was of questionable sanity; and Annie Zhang you are the voice of reason I sometimes loathed sometimes loved but always appreciated. Finally, Brandon Beattie for putting up with me, your capacity to love and see the best in me is absurd.

Vir my ouers, nou kan ma-hulle vra "Hoe gaan dit daar?".

ABSTRACT

This thesis aims to deepen our collective understanding of corporate social responsibility (CSR). The findings suggest the conventional aggregation of corporate social responsibility (CSR) raw scores and its interpreted impact on firm value is unsound. Instead, the value impact of CSR activities relies heavily on the relative position of the firm within its own industry. A firm tends to achieve a boost in value when it distinguishes itself over its peer firms. This finding is robust and holds for both responsible and irresponsible behavior. Information concerns and portfolio construction allude to a possible CSR clientele, which may suggest the existence of an optimal CSR level.

Building on CSR's effect on performance, the second part of the thesis focuses on the cultural drivers of CSR, using a geographic lens. This study investigates whether firm headquarter location is indicative of a firm's CSR profile, and presents evidence that location affects firm value. The findings document that location has a large significant effect on the CSR profile of resident firms. The results contend that CSR varies significantly across geography. Furthermore, firms that diversify along a CSR continuum within their locale could share in an increase in value. The legal, cultural, and social demographic differences across geography explain some of the significant variation in CSR means between metropolitan statistical areas, states, and regions. More significantly, we show that CSR might destroy firm value. The result is robust to concerns of endogeneity, as the socio-economic indicators are used as exogenous instruments for CSR.

The last part of the thesis contends that CSR is a proxy for good management, and as a result CSR firms should be less likely to engage in myopic activities. It presents evidence of an association between discretionary investment and CSR. The results indicate that firms that engage in socially destructive behavior are more likely to engage in myopic activities. More importantly, our results indicate that CSR (specifically concern) can be considered a proxy for good management. This indicates that firms with high levels of socially destructive behavior are more likely to manipulate earnings through myopic behavior. However firms with high levels of strength behavior are not less likely to be myopic, and in some cases might be more likely. Our results shed light on the complex interplay between discretionary activities and the multifaceted impact of CSR on firm's corporate activities. As a final point our results indicate that socially responsible behavior is a poor indicator of good management and is unrelated to myopic behavior with regard to other discretionary expenditures. However, a firm's level of socially destructive behavior is significantly correlated with management quality and the likelihood that a firm might engage in myopic practices for the sake of earnings manipulation.

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1. Chapter One: Overview

A major stammering point, in the drive to understand corporate social responsibility (CSR), is whether CSR is motivated by: a profit motive; pressure from shareholders, stakeholders; management; or a combination of the above. The value of engaging in CSR for a firm might be less reliant on what the firm actually does and more dependent on what it is perceived to do.[1] Over the last decade, the issue of CSR has grown within the corporate world. As CSR becomes inescapable in the corporate world it is apt to ask: Do such activities enhance firm value, or do they satisfy stakeholders at the expense of long-term wealth creation? At a basic level the following studies are concerned with the interplay between a firm's CSR profile and potential impact on firm performance, the markets perception, and the factors leading to a firm's choice of CSR policies.

CSR has been shown to enhance the reputation of a firm (Carroll and Shabana (2010) and Servaes and Tamayo (2013)), reduce idiosyncratic risk (Bassen, Meyer and Schlange (2006), McWilliams and Siegel (2001), and Lee and Faff (2009)), proxy for competent management (Renneboog, Ter Horst and Zhang (2008a) and Renneboog, Ter Horst and Zhang (2008b)), and enhance revenue (Flammer (2012b)). Many of these benefits are in part attributable to stakeholder management (Carroll and Shabana (2010)), which in turn imparts value to firms (Jiao (2010)). However, these benefits depend in some respect on the visibility of their prosocial behavior to

[1] For a discussion on the effect of good deeds and perception see Bénabou and Tirole (2010), Buraschi (2003), DellaVigna, List and Malmendier (2009), Glazer and Konrad (1996), and Lacetera and Macis (2010).

stakeholders (Servaes and Tamayo (2013) and Cho, Lee and Pfeiffer Jr. (2013)). Reducing the asymmetric nature of CSR information is the key in extracting benefits from CSR. However, a firm's ability to promote its pro-social behavior is restricted as stakeholders discount any behavior they perceive as "reputation buying." Instead, they value altruism (Bénabou and Tirole (2006), Bénabou and Tirole (2010), and Glazer and Konrad (1996)). Simply put, the value impact of CSR depends heavily on stakeholder welfare/perception and the markets' ability to price it.

Chapter Two investigates the impact of stakeholder perception on the relationship between CSR and firm value. The study adds new evidence to the literature indicating that socially responsible behavior's value to firms could be dependent on stakeholder perception, and the relative quality of a firm's CSR profile in relation to its industry peers. Jiao (2010), El Ghoul, Guedhami, Kwok and Mishra (2011), and Flammer (2012b) show strong support for a positive relationship between CSR and firm value, while Servaes and Tamayo (2013) have cautioned against this positive relationship. This study adds to the debate by evaluating whether the relative level of CSR (as opposed to the absolute level) conforms to a generalized positive expectation. Inspired by investors constructing best-in-class or worst-in-class CSR portfolios to extract superior returns (Statman (2000), Statman and Glushkov (2009), and Renneboog, Ter Horst and Zhang (2008b)), we consider that the relationship between CSR and firm value may not be linear based on raw CSR metrics. On the other hand, shareholders (stakeholders) evaluate a firm's CSR profile relative to its peers when investing (engaging). This behavior in turn influences the market-based (stakeholder) benefits transferred to the firm and ultimately alters the correlation between CSR and firm value. Market participants have difficulty perceiving a firm's actual CSR quality due to information asymmetry and opacity (Cho, Lee and Pfeiffer Jr. (2013)) along with the costs associated with collecting and analyzing CSR information. The contention is that, instead, the market classifies firms into groups with similar CSR levels based on their perception. Therefore, a change in a firm's actual level of CSR would only affect perception and, by extension, impact firm value, if the firm "moves" into a different grouping.

Using proprietary data from Kinder, Lydenberg, and Domini (KLD), this study presents that the relationship between CSR quality (the mix of responsible and irresponsible behavior) and firm value is ambiguous when considering CSR raw scores. The results show that both responsible (*strength)* and irresponsible behavior (*concern)* positively affect firm value, while the impact is more meaningful for responsible behavior in terms of magnitude and statistical significance. The performance of the *concern* variable, in these results, indicate that conventional aggregation techniques, at least, reduce the explanatory power of their CSR measure or potentially erroneously 'net-off' two metrics that are both positively correlated with firm value.

Furthermore, it is also arguable that CSR activities are, in part, endogenously determined by the firm's environment, which differs across firms in observable and unobservable ways. Firm-specific factors such as management talent, firm culture, and stakeholders could drive specific CSR activities or policies. In econometric terms, failing to account for these firm-specific characteristics could bias the correlation between CSR and firm value if the CSR variable is significantly correlated with these firm-specific characteristics. After controlling for unobserved heterogeneity (Gormley and Matsa (2013)), the positive value impact of responsible behavior turns negative and statistically significant. This result adds to the debate, in literature, concerning the inconsistency with which CSR quality impacts firm value, as some of the inconsistency could be attributed to unobserved characteristics such as management talent. The results indicate that the constituent parts of the conventional CSR metric are inconsistent with ex ante expectations even and after controlling for unobserved heterogeneity.

The study presents an alternative way of assessing the CSR quality/profile of a firm by constructing peer groups to account for the relative CSR standing of a company within its industry. To account for information asymmetry, search costs, and heterogeneous utility functions among market participants, five peer groups are defined, based as closely as possible on quintiles. Although arbitrary, it is likely that investors' screens are no more arbitrary or simple (Statman and Glushkov (2009)).

Accounting for potential institutional and stakeholder norms within industry, we assume that firms are perceived relative to their industry peers and not to the market as a whole. To ensure even representation, each firm is classified into one peer group, depending on industry, for each year. This mitigates any CSR shift that occurs over time. Last, an industry, based on two-digit Standard Industrial Classification (SIC) codes, is required to have at least 30 firms per year per industry for the whole study. Defining peer groups for industries with small erratic samples proved difficult, as there are not enough firms to fill each of the peer groups every year, and not enough variability between each firm's level of CSR to designate peer group breakpoints.

The results consistently find that higher firm value is achieved only when firms are above average (in the 60th to 80th percentile) in terms of their CSR (both responsible and irresponsible behavior). Below average firms experience insignificantly negative effects while the average firms (e.g. 40th to 60th percentile) are greeted with a null effect. Interestingly, well behaved firms (80th to 100th percentile) do not benefit significantly from the boosted firm value. The intriguing results are found on the irresponsible behavior side. Firms with more severe concerns relative to others in the same industry are associated with higher firm value. These results are even monotonic in their direction and significant across average to above average groups. Overall, the findings support the notion that investors (stakeholders) incorporate a firm's relative CSR position when investing (engaging), possibly inducing an investment clientele. The peer-effect results are robust to the inclusion of firm fixed effects in contrast with the raw CSR scores, indicating that CSR affects firms financially, regardless of firm-specific factors, but with respect to relative CSR. The results are also consistent when evaluating the impact of customer awareness on the CSR-corporate firm performance (CFP) relationship, results not reported for parsimony.

In addition to documenting a possible clientele effect in CSR, this study cautions against the use of aggregate absolute CSR measures. The results underscore the understanding that corporate socially responsible behavior (doing the right thing) and corporate socially irresponsible behavior (doing the wrong thing) are not perfect opposites (Arora and Dharwadkar (2011) and Chatterji, Levine and Toffel (2009)). Furthermore, the findings stress the importance of industry (Fernández-Kranz and Santaló (2010)) with the evidence indicating a significant difference in the relationship between CSR and firm value across industries when not explicitly adjusting the CSR measure for industry. The study's results show significant differences between industries, not only in the level of CSR but more importantly in the correlation between CSR and firm value. Analyzing CSR on a relative basis is advocated in order to overcome these issues, as the peer dummies are consistent across industries and remain consistent when controlling for unobserved heterogeneity.

As discussed previously, CSR activities are partly endogenously determined by the firm's environment, which differs across firms in observable and unobservable ways. Firm-specific factors such as management talent, firm culture, and stakeholders could drive specific CSR activities or policies. Building on the findings of Chapter Two, Chapter Three tries to make sense of the cross-sectional variation contained within CSR by focusing on the local culture and community traits inherent at a firm's headquarters. This cultural finance, perceived through a geographic lens, has come to explain much of the cross-sectional variation of corporate finance characteristics. Recent studies show that geographic specific factors play a crucial role in determining corporate financial policies. Although the literature notes cross-country differences, it has been thought that the disparity is mostly explained by differences in bankruptcy law, legal system origin, and investor protection among sovereign states.

Studies find similar geographic disparities within country; a sign that perhaps geography itself might play a role. Different factors might be responsible for the cross sectional variation. Gao, Ng and Wang (2011) show firms exhibit conformity in their financing policies to those of their geographically proximate firms. And that the location of firms' headquarters explains some cross-sectional differences of capital structures in the US. Similarly a geographic lens is used by: Granovetter (1985) for corporate decisions; Kedia & Rajgopal (2009) for compensation policy; Mizruchi, Stearns and Marquis (2006) for corporate borrowing; Haunschild (1993) looks into acquisitions; while Marquis, Glynn and Davis (2007) focus on charitable actions. Stotz (2011) show that private equity investment is more successful when the target company and private equity within the same country versus different countries. Pirinsky & Wang (2006) find stock returns experience co-movement in geographic clusters. Bebchuck & Cohen (2002) present that U.S states that offer stronger anti-takeover protections are more successful in retaining in state firms and in attracting out of state incorporations. Similarly, the results of this study show that firms' headquarter locations have a significant impact on a firm's level of CSR. This is in line with the findings of Card, Hallock, and Moretti (2010) who find that attracting and attaining the headquarters of traded firms increases charitable donations to resident charities. Work in the management field, alludes to the geographic differences in CSR, but presents a cultural explanation for the difference (Marquis, Glynn and Davis (2007)). Stulz and Williamson (2003) address the possibility that geography might proxy for the cultural effect on the finance world. They argue that the religion of a country has a significant effect on the protections afforded to creditors, and that geographic variation in financial characteristics is a manifestation of the cultural differences between areas. Brown, Ivkovic, Smith Weisbenner (2008) also document the effect of culture on finance and presents evidence that individual stock ownership is driven by community pressure, which is ultimately a function of the culture of the area.

In line with literature this study provides evidence of significant heterogeneity around the mean level of CSR across Metropolitan Statistical Areas (MSA) and the variance within each MSA. We present the first evidence of CSR at the local geographic level and show that some cities (Austin, Hartford, Minneapolis-St. Paul, Portland, and Seattle) tend to house firms with significantly higher levels of socially responsible behavior as well as some states (District of Columbia and California), while some regions tend to house firms that engage in more socially destructive behavior (the West South Central region as identified by the US Census Bureau). Moreover the findings provide evidence that firms tend to adjust their level of CSR in accordance with the CSR profiles of other local firms. To address the grouping of CSR across geography this paper investigates whether there is a financial benefit to mimicking peer CSR levels. The results indicate firms that deviate from their local MSA CSR norm associate with higher levels of value. The results are consistent across different controls for location and hold for responsible (*strength)* and irresponsible behavior (*concern*). It is likely the correlation between CSR diversification (variance of CSR scores within an MSA) within a location and increases in firm value is a reflection of a firm's propensity to satisfy local investor preference. Coval and Moskowitz (1999) show geographic proximity explains a significant part of portfolio allocation decisions, as a relative information advantage exists when investing in local firms. Similarly, US money managers bias portfolios to proximate firms. This preference is also observed for individual investors (Seasholes and Zhu (2010) and Ivkovic and Weisbenner (2005)). The results are consistent with the notion that local investors have heterogeneous utility functions, with regard to CSR, (Bollen (2007)) which would lead to financial incentives for firms to bias their CSR profile. Although CSR diversification might present value to firms, this financial incentive is not strong enough to induce heterogeneous CSR profiles across firms within the same location.

The evidence presented indicates that CSR is homogenous within locations, but that there is significant heterogeneity across geography with regard to mean levels of CSR. Further study reveals that a financial inventive exists for firms to diversify their CSR profile to target local investor appetite, although a more significant process is driving firms to group within locations, that is not linked to firm value. Following Stulz and Williamson (2003), among others, several metrics are used to determine whether the local demographics of a firms' location could be responsible for driving firms CSR profiles. The metrics aim to capture whether the local culture places a greater emphasis on the common good; if advocates are responsible for pressuring management to consider the firm's social impacts; or if managers, who are more connected with employees and community, are directing corporate policy for social perquisites. Notwithstanding, controls for the social or cultural motivations, legal or geographic obstructions that might affect a firm's CSR are also considered.

The results indicate that certain key demographic characteristics of a community significantly correlate with firms' CSR profile. The findings suggest more educated communities with greater levels of financial sophistication are associated with firms that engage in higher levels of responsible behavior, while simultaneously engaging in lower levels of irresponsible behavior. We also document that the presence of charities within the local MSA is positively correlated with the level of responsible behavior of firms in the community, and negatively correlated with irresponsible behavior. Furthermore bigger charities tend to associate with communities where firms engage in higher levels of responsible behavior. Further evidence finding irresponsible behavior (*concern*) positively related to tax regressivity. It would appear that communities where the wealthy are able to reduce their tax burden at the expense of the poor; firms engage in less CSR. Lastly the study documents that communities who prosecute environmental offenses and regulatory offenses are also associated with firms that engage in higher levels of responsible behavior. The findings indicate that despite financial pressure incentivizing firms to diversify their CSR profiles, the strong cultural, social, and legal pressures in a community likely channel firms toward adopting CSR profiles in accordance with the communities expectations. Lastly, we show that when evaluating Tobin's Q, zip codes might not be ideal proxies for CSR, but that socio-economic indicators are better exogenous proxies for CSR. Lastly we show that, once the effect of omitted variables and firm level heterogeneity is minimized, CSR might actually destroy value, using these socio-indicators as exogenous proxies for CSR.

Chapter Four investigates whether CSR should, as a proxy for good or non-myopic managers (McWilliams and Siegel (2001)), be associated with a significant reduction in myopia across advertising, R&D, and capital expenditure. The results indicate that the lack of socially destructive behavior is an indication of hyperopic managers, while socially responsible behavior is not associated with a reduction in myopia. Managers have a fiduciary duty to strategically align firm activities and partake in opportunities that maximizes shareholder wealth. Managers, then, should ensure that their strategies maximize the sum of the expected discounted future profits. As a result the firm discount rate is critical and informs the decisions made by management to strike the appropriate balance between current and future benefits. Unfortunately, an information asymmetry exists between management and shareholders around the true economic position of the firm (Myers and Majluf (1984)), as a result shareholders have a disadvantage when pricing the capital they provide and might require higher returns than might be warranted (Thakor (1990)). This effect could bias the discount rate upward, in turn managers would focus on short-term goals overemphasizing strategies with immediate payoffs (Bebchuk and Stole (1993)) at the expense of strategies with superior but more distant payoffs—that is, they would engage in myopic management (Mizik (2010)).

The incentives and pressures faced by managers may lead to an overemphasis on short-term goals. Earnings projections and failing to meet analysts' expectations could prove punitive. Secondly, managers' personal motivation and compensation structure often incentivize stock price gains (Grant, King and Polak (1996)). This creates an incentive to manipulate the signals they send to the stock market in an attempt to inflate the stock price. Managers, can manipulate performance signals (Stein (1989)) through accounting based earnings management (discretionary accruals manipulation) (Healy and Wahlen (1999)). While such practices have negative consequences for a firm when uncovered (DuCharme, Malatesta and Sefcik (2004)), they do not affect the foundations of firm business performance and do not alter either the amount or the temporal flow of true economic profits.

Conversely, myopic management, such as: ignoring stakeholder and corporate social responsibility interests (CSR), foregoing capital expenditure projects (Capex), underinvesting in research and development (R&D), and cutting advertising (Mktg.) will affect the firm's economic position. The change in economic position will alter the flow of expected true economic profits. Myopic management involves altering operational practices that directly affect the business process. When initiated at the top organizational level, myopic management poses particular challenges. This short-term focus could lead to underinvesting in the long run (for exceptions see Bebchuk and Stole (1993)) especially in research and development (Chan, Martin and Kensinger (1990)), advertising (Mizik (2010)), and capital expenditure (Burton, Lonie and Power (1999), Chung, Wright and Charoenwong (1998)) and McConnell and Muscarella (1985)). In turn myopia could affect economic profits. As a result myopic management poses a risk to the firm as this anemia could undermine the firm's position in the market place. Myopic management is not exclusively limited to performance incentives but could also stem from takeover threats (Stein (1989)), momentum trading (Bushee (1998)), and institutional ownership (Bushee (1998) and Wahal and McConnell (2000)).

We believe that the factors driving management myopia in capital expenditure, R&D and marketing, could also affect management's decisions relating to CSR (Brammer and Pavelin (2006), Harris and Raviv (1996) and Brammer, Brooks and Pavelin (2006)). Incentive and market pressures on management to massage earnings can induce management to reduce investment in these discretionary activities. Evidence suggests marketing intensity is especially sensitive to myopic investment (Deleersnyder, Dekimpe, Steenkamp and Leeflang (2009), and Graham, Harvey and Rajgopal (2005) and Lamey, Deleersnyder, Dekimpe and Steenkamp (2007)). Considering the close links between CSR and advertising (Servaes and Tamayo (2013)) it seems plausible that myopic managers would reduce CSR investment accordingly. Under investment in CSR could lead to increases in the cost of equity (El Ghoul, Guedhami, Kwok and Mishra (2011)), a reduction in firm value (Jiao (2010)), or a loss of performance (Flammer (2012a)).

More importantly, CSR is considered a proxy for good management (McWilliams and Siegel (2001)), due to the strategic and long-term nature associated with CSR. CSR should, as a proxy for good or non-myopic managers, be associated with a significant reduction in myopia across advertising, R&D, and capital expenditure. The key objective of the current study is to assess the market's ability to properly value CSR in the face of myopic management and to quantify financial consequences of myopia. Specifically, this study examines the consequences of cutting support for socially responsible activities or increasing irresponsible activities when a firm experiences enhanced financial performance. The current study is a large sample attempt to assess consequences of firm level myopic management and the importance of CSR. The context free firm level setting allows for broad generalizations about the financial market's ability to properly value firm strategies and about the consequences of myopia. Our results indicate that myopia does impact firms' risk adjusted performance; however the market might struggle to immediately recognize management myopia. We also show that CSR, specifically concern, is a good indicator of other forms of myopia and that the market has a better ability to recognize CSR myopia. Our results indicate that other forms of myopia do impact firms' risk adjusted performance; however the market might struggle to immediately recognize management myopia in the face of increased earnings. We also show that CSR, specifically concern, is a good indicator of other forms of myopia and that the market has a better ability to recognize CSR myopia. Milgrom & Roberts (1992) comment that, in general, managers "put too much emphasis on activities that boost short-term performance compared to those whose benefits will be hidden." Our results confirms that the market struggles to quickly recognize traditional myopia, but that socially destructive behavior of firms, and the associated economic impact on the firms, is recognized by the market.

Our results underscore the importance of considering socially responsible behavior and socially destructive behavior separately. We present evidence that the signaling behavior of myopic firms distort the market equilibrium to the point where good firms are unable to credibly signal economic prospects. As a result, the asymmetric information or information opacity around strength (Cho, Lee and Pfeiffer Jr. (2013)), coupled with the market's heterogeneous capacity and desire to price the complexities of strength behavior, explain the confounding strength results.

In addition, we supply evidence that strength and concern (CSR) behavior are incredibly persistent over time, reflecting the long-term nature of CSR activities. These result confirm our intuition that the persistence of CSR suggest that firms should carefully consider changes to their CSR profiles, as their decisions significantly impact the associated stakeholders, stakeholders with which the firm might have to co-exist for significant periods of time. We believe CSR myopic behavior is more easily observed by market participants perhaps as the number of parties with intimate knowledge of the firm's "normal" CSR level is not limited to management.

Furthermore, our results consistently suggest that discretionary activities might not be considered equal, or engaged similarly by management; management might focus on one discretionary activity at a time. Due to information asymmetry, management might act on private information to expand or focus on particular discretionary activities, where they believe the most gains can be captured. In addition, firms are unlikely to be universally myopic across all discretionary areas, but more likely to neglect a particular area. Our findings indicate that R&D myopia is not immediately or subsequently recognized by the market, making it an ideal candidate for myopic behavior. The results from the logistic regression consistently present evidence that increased levels of concern is associated with an increased likelihood in all forms of myopia, and the presence of other discretionary activities reduce the likelihood of concern myopia. This indicates that firms with high levels of socially destructive behavior are more likely to manipulate earnings through myopic behavior. However firms with high levels of strength behavior are not less likely to be myopic, and in some cases might be more likely.

We add to the literature by shedding light on the complex interplay between discretionary activities and the multifaceted impact of CSR on firm's corporate activities. Ultimately our results indicate that socially responsible behavior is a poor indicator of good management and is unrelated to myopic behavior with regard to other discretionary expenditures. However, a firm's level of socially destructive behavior is significantly correlated with management quality and the likelihood that a firm might engage in myopic practices for the sake of earnings manipulation.

2. CHAPTER TWO: DOES IT PAY TO OUTCLASS? CORPORATE SOCIAL RESPONSIBILITY AND ITS IMPACT ON FIRM VALUE

Over the last decade, corporate social responsibility (CSR) has been a dominant paradigm in the corporate world. In fact, many corporations devote significant attention to CSR by dedicating segments of their annual reports and websites, incorporating CSR into their marketing strategy, and perhaps even considering CSR when setting strategic goals. Given the increasingly pervasive nature of CSR, do such activities enhance firm value, or do they satisfy stakeholders at the expense of long-term wealth creation? The academic community seems divided on the topic (see Orlitzky, Schmidt and Rynes (2003) and Margolis, Elfenbein and Walsh (2009)), although a positive link between CSR and CFP or value receives more support.

CSR has been shown to enhance the reputation of a firm (Carroll and Shabana (2010) and Servaes and Tamayo (2013)), reduce idiosyncratic risk (Bassen, Meyer and Schlange (2006), McWilliams and Siegel (2001), and Lee and Faff (2009)), proxy for competent management (Renneboog, Ter Horst and Zhang (2008a) and Renneboog, Ter Horst and Zhang (2008b)), and enhance revenue (Flammer (2012b)). Many of these benefits are in part attributable to stakeholder management (Carroll and Shabana (2010)), which in turn imparts value to firms (Jiao (2010)). However, these benefits[2] depend in some respect on the visibility of their prosocial behavior to stakeholders (Servaes and Tamayo (2013) and Cho, Lee and Pfeiffer Jr. (2013)). Krueger (2014) shows that investors respond differently to different news

[2] For example employee, customer, community, and supplier loyalty; see discussion in Carroll and Shabana (2010).

announcements, with an ability to recognize CSR, which results from agency concerns. Thus, reducing the asymmetric nature of CSR information is key in extracting benefits from CSR. However, a firm's ability to promote its prosocial behavior is restricted as stakeholders discount any behavior they perceive as "reputation buying." Instead, they value altruism (Bénabou and Tirole (2006), Bénabou and Tirole (2010), and Glazer and Konrad (1996)). Simply put, the value impact of CSR depends heavily on stakeholder welfare/perception and the markets' ability to price it.[3]

Support for a positive relationship between CSR and firm value has grown recently (Jiao (2010), El Ghoul, Guedhami, Kwok and Mishra (2011), and Flammer (2012b)), however Servaes and Tamayo (2013) have downplayed this positive relationship. Inspired by investors constructing best-in-class or worst-in-class CSR portfolios to extract superior returns (Statman (2000), Statman and Glushkov (2009), and Renneboog, Ter Horst and Zhang (2008b)), we consider that the relationship between CSR and firm value may not be linear based on raw CSR metrics. We add to the debate by evaluating whether the relative level of CSR (as opposed to the absolute level) conforms to a generalized positive expectation. Shareholders (stakeholders) evaluate a firm's CSR profile relative to its peers when investing (engaging). This behavior in turn influences the market-based (stakeholder) benefits transferred to the firm and ultimately alters the association between CSR and firm value.

[3] Whether investors can price CSR is debatable; see Renneboog, Ter Horst and Zhang (2008a).

Using proprietary data from Kinder, Lydenberg, and Domini (KLD),[4] we show that the relationship between CSR quality (the mix of responsible and irresponsible behavior) and firm value is ambiguous when considering CSR raw scores. Both responsible and irresponsible behaviors positively affect firm value but the impact is more meaningful in terms of the magnitude and statistical significance of responsible behavior. Importantly, it is also arguable that CSR activities are, in part, endogenously determined by the firm's environment, which differs across firms in observable and unobservable ways. Firm-specific factors such as management talent, firm culture, and stakeholders could drive specific CSR activities or policies.[5] In econometric terms, failing to account for firm-specific characteristics could bias the correlation between CSR and firm value if these characteristics are significantly correlated with the proxies for CSR. After controlling for unobserved heterogeneity (Gormley and Matsa (2013)), the positive value impact of responsible behavior turns negative and statistically significant. This result informs the debate around the inconsistency in the literature about whether CSR quality has an impact on firm value, as some of the inconsistencies are attributable to unobserved characteristics such as management talent.

In this essay, we propose an alternative way of assessing CSR quality/profile of a firm by constructing peer groups to account for the relative CSR standing of a company within its industry. We document that higher firm value is achieved only

[4] The majority of the CSR literature uses the KLD database. Some examples include Jiao (2010), El Ghoul, Guedhami, Kwok and Mishra (2011), Servaes and Tamayo (2013), and Cho, Lee and Pfeiffer Jr. (2013).
[5] Unobserved heterogeneity is prevalent in a number of governance issues (Adams and Ferreira (2009), Chi (2005), and Himmelberg, Hubbard and Palia (1999)).

when firms are above average (in the 60th to 80th percentile) in terms of their CSR (both responsible and irresponsible behavior). Below average firms experience insignificantly negative effects while the average firms (e.g. 40th to 60th percentile) are greeted with a null effect. Interestingly, well-behaved firms (80th to 100th percentile) do not benefit significantly from the boosted firm value. The intriguing results are found on the irresponsible behavior side. Firms with more severe concerns relative to others in the same industry are associated with higher firm value. These results are even monotonic in their direction and significant across average to above average groups. Overall, our findings support our notion that investors (stakeholders) incorporate a firm’s relative CSR position when investing (engaging), possibly inducing an investment clientele.

Our peer-effect results are robust to the inclusion of firm fixed effects in contrast with the raw CSR scores, indicating that CSR affects firms financially, regardless of firm-specific factors, but with respect to relative CSR. Our results are also consistent when evaluating the impact of customer awareness on the CSR–CFP relationship.

In addition to documenting a possible clientele effect in CSR, this paper cautions against the use of aggregate absolute CSR measures. Our results underscore the understanding that corporate socially responsible behavior (doing the right thing) and corporate socially irresponsible behavior (doing the wrong thing) are not perfect opposites (Arora and Dharwadkar (2011) and Chatterji, Levine and Toffel (2009)). Furthermore, our findings stress the importance of industry (Fernández-Kranz and

Santaló (2010)) as we present a significant difference in the relationship between CSR and firm value across industries when not explicitly adjusting the CSR measure for industry. We propose analyzing CSR on a relative basis in order to overcome these issues, as our peer dummies are consistent across industries and remain consistent when controlling for unobserved heterogeneity

2.1. Related Literature

As alluded to earlier, corporate socially responsible behavior and corporate socially irresponsible behavior are not perfect opposites (Arora and Dharwadkar (2011)). Several studies (Servaes and Tamayo (2013), Bénabou and Tirole (2006), Chatterji, Levine and Toffel (2009), and Statman and Glushkov (2009)) highlight this issue and lament the aggregation of CSR across categories and between responsible and irresponsible behavior. Cho, Lee and Pfeiffer Jr. (2013) stress the importance of separately considering the impact of responsible and irresponsible CSR behavior. They show that the market's ability to process information differs between positive and negative behavior, perhaps due to differential information asymmetries and divergent opinions around the impact of positive and negative CSR. Some of the mixed findings present in the literature stem from inadvertently assuming that positive behavior and negative behavior share homogenous information costs, inverse performance effects, and the same cost–benefit tradeoff. As a result, we account for negative and positive behavior separately in our study.

The issues relating to responsible and irresponsible behavior are indicative of the informational concerns relating to CSR. The evidence suggests that CSR is mispriced by the market (Renneboog, Ter Horst and Zhang (2008a), Kempf and Osthoff (2007), and Statman and Glushkov (2009)). Fortunately, timely accurate CSR disclosure or increased visibility in part reduces these asymmetries (Dhaliwal, Radhakrishnan, Tsang and Yang (2012) and Ramchander, Schwebach and Staking (2012)). Notwithstanding these issues, market participants face heterogeneous search costs and processing ability relating to CSR.

These differences are compounded by the heterogeneous utility functions among investors (stakeholders) (Bollen (2007)). Bénabou and Tirole's (2006) incentive model for pro-social behavior suggests that the motivation behind CSR is key to market participants' utility. They conclude that the relative size of a firm's CSR should be used as a proxy for a firm's true CSR (Bénabou and Tirole (2010), Bénabou and Tirole (2006), and Glazer and Konrad (1996)). As a result, the asymmetric information or information opacity around CSR (Cho, Lee and Pfeiffer Jr. (2013)), coupled with the market's heterogeneous capacity and desire to price the complexities of CSR, could undermine the assumption that all aspects of CSR are uniformly, timely, and linearly priced. Even if CSR information were perfectly symmetric and freely accessible by market participants, the participants' reaction or non-reaction to the information would be heterogeneous depending on their utility function and the relative score of the firm's CSR. We posit that the asymmetry present in the market's ability to search, process, and value CSR would distort the relationship between CSR and CFP.

We employ a methodology that is amenable to the presence of arbitrary thresholds such as those found in socially responsible investment (SRI) funds which employ arbitrary CSR screens based on a best/worst-in-class criteria (Statman and Glushkov (2009) and Kempf and Osthoff (2007)). Of the CSR criteria employed by SRI funds, negative screening appears to be the most well accepted and simplest form of selecting securities (Bénabou and Tirole (2010) and Lee and Faff (2009)) but not necessarily the most effective (Statman and Glushkov (2009)). We therefore specifically ascertain whether the CSR–CFP relationship is heterogeneous at different levels of CSR following our peer group hypothesis.

Theoretical models (Heinkel, Kraus and Zechner (2001)) predict that SRI and, by extension, stakeholder activity would drive firms to increase their participation in CSR (Merton (1987)). This is echoed in the findings of Barnett and Salomon (2006) who document a curvilinear relationship between CSR investment screens and returns; with more screens being associated with lower returns initially and higher returns at the extreme ends. Conversely, Flammer (2012b) advocates that the benefit of CSR declines marginally as investment in responsible activities are increased. It is conceivable that the CSR–CFP relationship may not be strictly linear, and may in fact be curvilinear. In this paper, we test whether the CSR–CFP relationship is curvilinear and find that curvilinearity is indeed present but not robust to the presence of peer group dummies.

Second, although investors' and stakeholders' perception of the firm's CSR may change based on new information, an inertia, such as contractual obligations, barriers to entry, transaction costs, etc., could inhibit the market from adjusting to it. The consequence is twofold. On the one hand, the benefits of CSR may be present several periods after the CSR outlay, undermining the ability to capture the full effect of CSR. We address this concern by employing different lag specifications and using a first differenced approach. On the other hand, our peer group hypothesis may suffer as firms would be less likely to experience a hard threshold but more of a soft transitional zone as perception of the firm adjusts. These factors in turn could reduce the ability to capture a relative CSR phenomenon. Figure 2-1 displays an approximation of the potential impact that shareholder (stakeholder) perception could have on firm value. It attempts to illustrate how investors and other stakeholders perceive CSR, as the strength of this perception has an impact on the relationship between CSR and firm value. Market participants have difficulty perceiving a firm's actual CSR quality due to information asymmetry and opacity along with the costs associated with collecting and analyzing CSR information. We contend that, instead, the market classifies firms into groups with similar CSR levels based on their perception. Therefore, a change in a firm's actual level of CSR would only affect perception and, by extension, impact firm value, if the firm "moves" into a different grouping.

The rest of the paper is organized as follows: Section I describes the data used in this study along with our variable construction and methodologies employed. Section II presents the initial results of the study, with section III expanding on our findings over various robustness concerns. Finally, section IV offers some conclusions and implications of our results.

2.2. Data and Methodology

2.2.1. Data

This study is principally based on the Environmental, Social and Governance (ESG) ratings developed by KLD, which is a proprietary database that rates securities from 1991 onward on the Russell 3000 according to various measures. The ratings fall within seven categories relating to community, corporate governance, diversity, employee relations, environment, human rights, and product. The KLD data also rate securities in the alcohol, gambling, firearms, military, nuclear power, and tobacco industries according to exclusionary screening criteria. Each category has several subcategories representing possible *strength* or responsible behavior (positive points) and *concern* or negative behavior (negative points). KLD analysts rate firms on their various CSR characteristics annually by assigning a binary point to several subcategories within each aforementioned category. It is important to note that the *strength* and *concern* scores within each category are not perfect opposites, nor are there equal amounts of possible *strength* and *concern* criteria within each category or across categories. We exclude stocks (unless otherwise stated) that have been marked as controversial and stocks that were examined by KLD but failed to receive a score, in line with the literature.

The KLD data have been extensively covered in the literature, being the basis of many studies relating to CSR.[6] The usual aggregation method of KLD takes the sum of *strength* net of *concern* for each category

$$CSR_t^j = \sum_{s=1}^{u_t^j} strength_s^j - \sum_{r=1}^{k_t^j} concern_r^j \qquad (2\text{-}1)$$

and aggregates this into an overall score

$$CSR_t = \sum_{j=1}^{7} CSR_t^j, \qquad (2\text{-}2)$$

where CSR_t^j is the aggregated CSR score for category *j* in year *t*. Similarly, $strength_s^j$ is equal to 1 if the firm meets *strength s* in category *j*, otherwise 0; $concern_r^j$ is equal to 1 if the firm meets *concern r* in category *j*, otherwise 0. $\sum_{s=1}^{u_t^j}$ is the aggregation across subcategories for *strength*, while $\sum_{r=1}^{k_t^j}$ is the aggregation across subcategories for *concern.* As KLD data are binary with a heterogeneous amount of *strength* and *concern* criteria allocated across various subcategories, it could be misleading to look at a firm's ultimate score. First, the result of the "netting off" process would obscure information, as *concern* and *strength* are not perfect opposites. . Netting off erroneously assumes all binary points are equal and opposite. The number of possible points varies not only across *strength* and *concern* categories but also over subcategories; it then becomes difficult to interpret the meaning of a whole number.

[6] See Chatterji, Levine and Toffel (2009), Galema, Plantinga and Scholtens (2008), Statman and Glushkov (2009), Jiao (2010), Servaes and Tamayo (2013), Cho, Lee and Pfeiffer Jr. (2013), and El Ghoul, Guedhami, Kwok and Mishra (2011) for the use of the KLD dataset.

Furthermore, comparing and ranking CSR scores across firms proves difficult if the range of possible CSR scores is confined to only several integers. In this study, each firm is assigned a percentage of possible points for both *strength* and *concern*, referred to as their level of CSR. This allows us to compare a firm's performance across subcategories, between *strength* and *concern*, and across years. For example, if a firm scored one 1 of the possible 4 for the *strength* section of the environmental category, it would be modified to 0.25, as there were four possible points available, but only one point was awarded. Following, if the firm also scored 2 from a possible 10 points for the *concern* section of the environmental category, a percentage score of 0.2 would be awarded. Under the binary system, the firm would have a net score of –1 (one *strength* less two *concerns*), while as a percentage the firm would have a Net CSR score of 0.05 (0.25 *strengths* less 0.2 *concerns*).

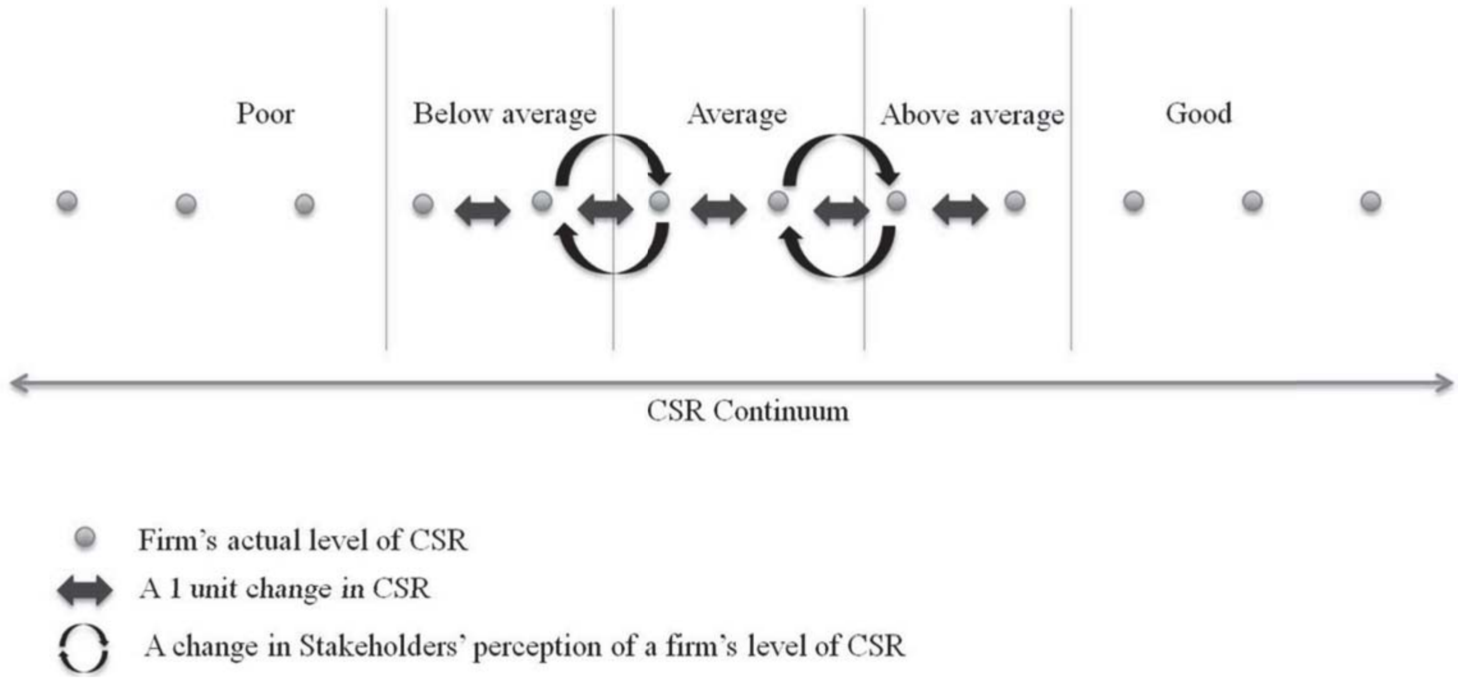

FIGURE 2-1 MARKET APPROXIMATION OF FIRMS' LEVEL OF CSR. The figure attempts to illustrate how investors and possibly stakeholders perceive CSR, the impact of which undermines the relationship between CSR and firm value. Market participants have difficulty perceiving a firm's actual CSR due to information asymmetry, opacity and costs associated with CSR information. We contend that instead they classify firms into groups with similar levels, based on their perception. Therefore, a change in a firm's actual level of CSR would only affect perception and, by extension, impact firm value, if the firm happens to move into a different grouping. Investors' and stakeholders' ability to perceive firm movement within groups is limited, reducing the incremental impact of CSR on firm value..

Formally, our aggregation takes the following form

$$CSR_t^j = \frac{\sum_{s=1}^{u_t^j} strength_s^j}{u_t^j} - \frac{\sum_{r=1}^{k_t^j} concern_r^j}{k_t^j} \qquad (2\text{-}3)$$

with an overall score of

$$CSR_t = \sum_{j=1}^{7} \frac{CSR_t^j}{7} \qquad (2\text{-}4)$$

The KLD data are matched with data from the Center for Research in Security Prices (CRSP) for the period 1991 to 2009. We average volume (*volume*), adjusted price (*price*), and adjusted shares outstanding (*shares outstanding*) for each calendar year end *t*. Furthermore, income statement and balance sheet items are obtained by matching the CRSP data with Compustat through CRSP Link.

2.2.1.1. Firm Value

Awkwardly, CSR is the sum of many policies, procedure, activities, costs, and assets implemented fully or in part. The inherent structure of CSR undermines our ability to link the costs or measurement of CSR with its potential benefits. CSR benefits might accrue several periods after the initial outlay or only once investment reaches a critical mass. Traditional performance measures, such as return on assets, might be incapable of recognizing the long-term impact of CSR. We employ Tobin's Q as our measure of performance. Tobin's Q aims to incorporate the markets' adjustment to the firm's value with respect to CSR's effect on the present value of future cash flows and the value generated from the asset base. In line with the literature (Bebchuk and Cohen (2005)), we calculate Tobin's Q as market value of assets over book value of assets, where market value is equal to book value of assets plus market value of common stock less sum of book value of common stock. Concerns have been raised regarding measurement errors contained in Tobin's Q.[7] However, given that Tobin's Q is the dependent variable in our analysis and Greene's (2007) assertion that "… measurement error in the dependent variable can be absorbed in the disturbance of the regression and ignored …" (p. 326), we consider that, in the absence of an accessible, well-established alternative, any measurement errors, if present, should not materially impact our analyses (Jiao (2010)).

2.2.1.2. Control Variables

Drawing on previous work linking Tobin's Q and CSR, we include the following control variables in our analysis: firm size = natural logarithm of total assets; leverage = total liabilities over total assets; turnover = natural logarithm of average monthly volume over shares outstanding at the end of each year *t*; return on assets (ROA) = earnings before interest and tax (EBIT) to total assets; advertising = advertising expense over sales; research and development (R&D) = R&D expenditure over sales; capital expenditure (CAPEX) = CAPEX over total assets; and sales growth = change in sales at time *t* with respect to *t–1*.[8]

[7] For an informative discussion, see Erickson and Whited (2000), Almeida, Campello and Galvao (2010), and Erickson and Whited (2012).

[8] We assign missing values for R&D and Capex to zero to ensure a robust sample size (Himmelberg, Hubbard and Palia (1999)).

TABLE 2-1

Sample Size by Year

Table 2-1 shows the number of firms included in the study assessed by KLD for each calendar year from 1991 to 2009.

Year	Number of Firms
1991	546
1992	556
1993	548
1994	546
1995	554
1996	561
1997	563
1998	565
1999	573
2000	561
2001	991
2002	1,002
2003	2,728
2004	2,802
2005	2,783
2006	2,732
2007	2,702
2008	2,597
2009	2,655

2.2.2. Descriptive Statistics

Table 2-1 presents the number of firms assessed by KLD for each year matched with CRSP Link. As can be seen the number of firms assessed by KLD expands significantly over our sample, with notable increases in the years from 2000 through 2003. Table 2-2 shows the descriptive statistics of the CSR subcategories. In short it seems that firms attract around twice as many concern scores as strength scores on average. The Community subcategory is the only category in which firms tend to score more strengths than concerns, while the Corporate Governance category has the most negative score overall. Table 2-3 shows the financial characteristics of the firms. Table 2-4 presents the shift in CSR scores over time and the average yearly score of strength, concern, and Net-CSR. It seems that firms in the early part of the sample managed to score roughly similar amounts of strength and concern, but that the net scored tended negatively as the sample was expanded. Figure 2-2 illustrates firm distribution along the Net-CSR strength, and concern continuums. These figures illustrate the distribution of CSR percentage scores, as computed using equations (2-3) and (2-4), for the sample firms. The prevalence of firms that fail to score is apparent, contributing to the significantly skewed distributions.[9] Furthermore, a noticeable gap exists between firms that do not attract a CSR score and those that do. Second, firms' *concern* scores appear to experience similar jumps or trenches at higher levels; a similar pattern is apparent for *Net-CSR* and, although less apparent, for *strength*.

[9] Firms that fail to score are firms that were analyzed by KLD but did not managed to attract a score in either strength or concern. We also exclude firms that do not attract a single score from either strength or concern for robustness with no change in results.

TABLE 2-2

KLD's ESG Descriptive Statistics

Table 2-2 presents the descriptive statistics of the *Net-CSR*, *strength*, and *concern* scores for each of KLD's ESG categories as well as the overall score. The scores presented are transformed from binary points used by KLD and instead represent a percentage of possible points obtained. The statistics are calculated on the pooled sample, spanning calendar years 1991 to 2009.

Variable	Obs.	Mean	Std. Dev.	Min	Max
		Pooled			
Net	26,565	-0.02	0.06	-0.40	0.34
Strength	26,565	0.03	0.05	0.00	0.49
Concern	26,565	0.06	0.06	0.00	0.51
		Community			
Net	26,565	0.01	0.11	-0.61	1.00
Strength	26,565	0.03	0.09	0.00	1.00
Concern	26,565	0.02	0.07	0.00	0.75
		Corporate Governance			
Net	26,565	-0.05	0.17	-1.00	0.75
Strength	26,565	0.04	0.09	0.00	0.75
Concern	26,565	0.08	0.14	0.00	1.00
		Diversity			
Net	26,565	-0.04	0.22	-0.67	0.88
Strength	26,565	0.07	0.12	0.00	0.88
Concern	26,565	0.11	0.16	0.00	0.67
		Employment			
Net	26,565	-0.03	0.16	-0.80	0.83
Strength	26,565	0.05	0.11	0.00	0.83
Concern	26,565	0.08	0.12	0.00	0.80
		Environmental			
Net	26,565	-0.01	0.10	-0.83	0.60
Strength	26,565	0.02	0.07	0.00	0.80
Concern	26,565	0.03	0.10	0.00	1.00
		Humanity			
Net	24,915	-0.01	0.07	-0.75	1.00
Strength	24,915	0.00	0.04	0.00	1.00
Concern	26,565	0.02	0.08	0.00	1.00
		Product			
Net	26,565	-0.03	0.15	-1.00	0.75
Strength	26,565	0.02	0.07	0.00	0.75
Concern	26,565	0.05	0.13	0.00	1.00

TABLE 2-3

Financial Descriptive Statistics

Table 2-3 reports the descriptive statistics for the pooled sample spanning calendar years 1991 to 2009. ('000) indicate figures presented in thousands and (%) indicate figures in a percentage or ratio. EBIT is earnings before interest and tax, ln(Total Assets) is the natural logarithm of total assets, ln(Turnover) is the natural logarithm of volume to shares outstanding, leverage is total liabilities over total assets.

Variable	Obs.	Mean	Std. Dev.	Min	Max
Adjusted Price	26,562	$28.66	$58.06	$1	$3,561
Adjusted Shares ('000)	26,562	204,401	588,845	372	22,900,000
Average Monthly Volume ('000)	26,562	1,317,066	5,372,910	189	484,000,000
Market Capitalization ('000)	26,562	$5,925,838	$19,900,000	$5,831	$602,000,000
Tobin's Q	26,160	2.00	1.80	0.34	56.98
ln(Total Assets)	26,166	7.43	1.72	3.89	12.14
ln(Turnover)	26,562	1.65	1.09	-4.43	7.74
Book to Market (%)	25,503	55.45	43.63	4.41	275.77
EBIT to Assets (%)	26,149	6.80	11.91	-50.20	35.64
Cash to Total Assets (%)	26,162	16.03	20.01	0.00	99.95
Leverage (%)	26,098	57.46	27.83	0.21	771.17
R&D over Sales (%)	26,057	8.99	39.25	0.00	331.75
CAPEX over Total Assets (%)	26,166	4.49	5.35	0.00	29.38
Advertising over Sales (%)	8,694	3.35	7.05	0.00	332.23
Sales Growth (%)	25,713	49.35	264.45	-98.85	2153.13

TABLE 2-4

Shift in CSR Scores Over Time

The TABLE 2-4 reports the yearly average CSR score of *net-CSR*, *strength*, and *concern* for calendar years 1991 to 2009. Panel a reports the yearly averages for 1991 to 2000, as well as the average for that decade. Panel B reports the yearly averages for 2001 to 2009, as well as the average for that nine-year period.

Year	Net	Strength	Concern
Panel A: 1991–2000			
1991	0.01	0.04	0.03
1992	0.01	0.05	0.04
1993	0.00	0.06	0.06
1994	-0.01	0.05	0.06
1995	0.00	0.06	0.06
1996	0.01	0.06	0.04
1997	0.00	0.06	0.06
1998	0.00	0.06	0.06
1999	0.00	0.06	0.07
2000	-0.01	0.06	0.07
Average	0.00	0.06	0.06
Panel B: 2001–2009			
2001	-0.01	0.04	0.05
2002	-0.02	0.04	0.06
2003	-0.02	0.02	0.04
2004	-0.03	0.03	0.06
2005	-0.03	0.02	0.05
2006	-0.03	0.03	0.06
2007	-0.03	0.03	0.06
2008	-0.03	0.03	0.06
2009	-0.03	0.03	0.06
Average	-0.03	0.03	0.06

2.2.3. Peer Groups

To account for information asymmetry, search costs, and heterogeneous utility functions among market participants, we define five peer groups based as closely as possible on quintiles.[12] In Figure 2-2, we attempt to capture the possible groupings that may exist based on investors' perception or ranking of firms in terms of CSR. Although arbitrary, it is likely that investors' screens are no more

[12] For *strength* and *concern*, it is impossible to divide the sample into true quintiles; far too many firms have a score of 0, so we approximate as best as we can.

arbitrary or simple.[13] We define peer groups as follows: For *strength* and *concern*, peer group 1 represents firms with a score of zero; peer group 2, firms in the 40th percentile and below; peer group 3, the 40th to 60th percentiles; peer group 4, the 60th to 80th percentiles; and peer group 5, the 80th percentile and above. Accounting for potential institutional and stakeholder norms within each industry, we assume that firms are perceived relative to their industry peers and not to the market as a whole. To ensure even representation, each firm is classified into one peer group depending on its industry, for each year.

This mitigates any CSR shift that occurs over time. We further require an industry, based on two-digit Standard Industrial Classification (SIC) codes, to have at least 30 firms per year per industry for the whole study.[14] Defining peer groups for industries with small erratic samples proved difficult, as there are not enough firms to fill each of the peer groups every year, and not enough variability between each firm's level of CSR to designate peer group breakpoints. This reduces our sample from over 23,000 firm years to 19,605 but it remains well over 80% of our original sample.[15]

[13] Funds tend to define their CSR screens arbitrarily when constructing portfolios (Kempf and Osthoff (2007)); additionally, individual or less sophisticated investors are unlikely to have the capacity for complex CSR screens, similar to portfolio diversification (Goetzmann and Kumar (2008)).
[14] The manufacturing (Division D: SIC codes 20 through 39), transportation (Division E: SIC codes 40 through 49), finance (Division H: SIC codes 60 through 67), and services (Division I: SIC codes 70 through 89) industries qualify.
[15] We also employ two other methods to define peer groups for robustness but do not report the results in the interest of parsimony.

2.2.4. Methodology

For each firm *i* in year *t* we proxy for firm value with Tobin's Q and control for size (natural logarithm of total assets), leverage (total liabilities over total assets), turnover (the natural logarithm of average monthly volume over shares outstanding at the end of each year *t*), ROA (EBIT over total assets), advertising intensity (advertising expense over sales), R&D intensity (R&D expenditure over sales), CAPEX expenditure (CAPEX over sales), and sales growth (change in sales at time *t* with respect to *t*-1). We include industry (defined by two-digit SIC codes) and year fixed effects, and cluster standard errors at the firm level. Following on from our earlier discussion, we construct a model similar to that found in the existing literature but distinguish between responsible and irresponsible behavior.

Specifically, we use

$$Tobin's\ Q_{it} = \alpha + \beta_1{}'CSR_{it} + \beta_2{}'Y_{it} + \varepsilon_{it} \tag{2-5}$$

We build on equation (2-5) by incorporating peer group dummy variables D_{it} to account for a firm's relative standing among its peers. If a firm fell within one of these peer groups at the end of time *t–1*, the associated dummy would take the value of 1, otherwise 0.

This gives us

$$Tobin's\ Q_{it} = \alpha + \beta_1{'}CSR_{it} + \beta_2{'}D_{it} + \beta_3{'}Y_{it} + \varepsilon_{it} \tag{2-6}$$

where $'CSR$ is the vector of CSR measures, namely *concern* and *strength* for firm *i* in year t; $'D_{it}$ is the vector of dummy variables indicating peer groups for *concern* and *strength*, respectively; and $'Y$ is the vector of control variables.

2.3. Results

We start by examining whether responsible and irresponsible behavior held separately still conforms to the expected CSR–CFP relationship. Following equation (2-5), we employ a pooled ordinary least squares (OLS) regression and regress firm value on CSR. We include control variables, industry (two-digit SIC code) and year fixed effects, and cluster standard errors at the firm level. Model 1 of Table 2-5 presents the results of firm value as a function of responsible and irresponsible behavior (*strength* and *concern*, respectively). Notably, the coefficient for responsible behavior (*strength*) is positively significant, while the coefficient for irresponsible behavior (*concern*) is insignificant.

This finding confirms our suspicion that responsible and irresponsible behavior may be associated differently with firm value. Next, we model the same relationship but include firm-level fixed effects (FE) to control for unobserved heterogeneity that could be correlated with CSR. We regress a panel data model with firm value as a function of responsible and irresponsible behavior along with control variables, year and industry fixed effects, and cluster standard errors at the firm level.

Interestingly, once we control for the unobserved heterogeneity across firms, the *strength* coefficient changes sign and becomes significantly negative, while the *concern* coefficient remains insignificant. The inconsistency of the *strength* measure across the OLS and FE approaches in models 1 and 2 is troubling.[16] We consider that CSR, or at least *strength*, is correlated with certain unobserved firm-specific characteristics that affect firm value, akin to talent or culture within the firm. In addition, Chatterji, Levine and Toffel (2009) allude to the negligible value of the *strength* measures in their criticism of the KLD measures. These results appear to contrast with previous work linking CFP and CSR, but we are mindful of such an interpretation. We must stress that we account for *strength* and *concern* separately and that the "net" measure of CSR likely accounts for the discrepancy.

[16] Servaes and Tamayo (2013) also noted a tendency for CSR measures to be sensitive to fixed effects, although our results not only indicate a change of sign, but also a maintained significance. In addition, we document that the likely origin of this effect lies with *strength*, not necessarily with *concern*.

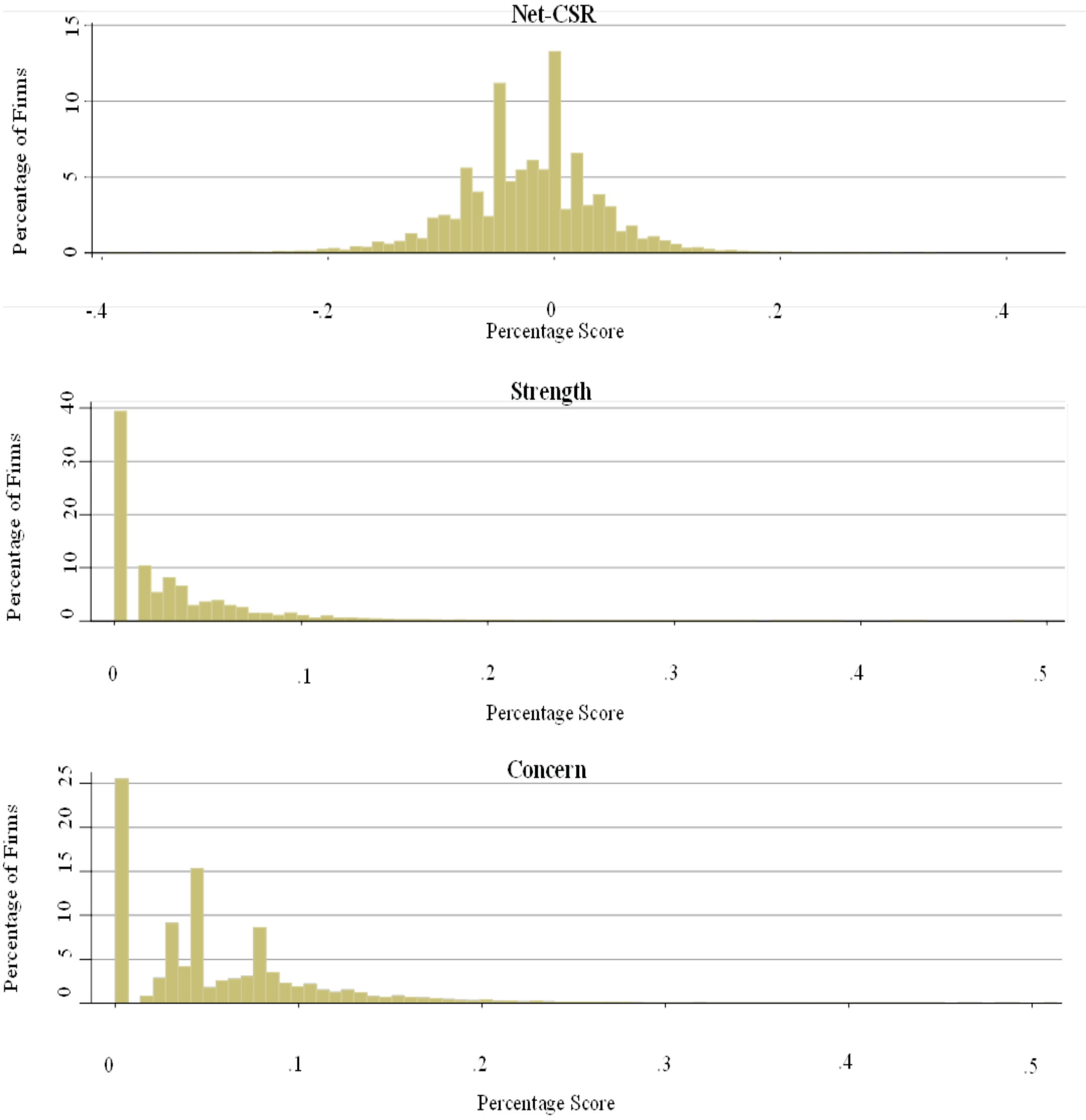

FIGURE 2-2. DISTRIBUTION OF CSR SCORES. These figures illustrate the distribution of percentage *net-CSR, strength*, and *concern* scores over the pooled sample, spanning calendar years 1991 to 2009. The scores presented are transformed from binary points used by KLD and instead represent a percentage of possible points obtained. Formally, our aggregation takes the following form: $\boldsymbol{CSR_t^j} = \frac{\sum_{s=1}^{u_t^j} \boldsymbol{strength_s^j}}{\boldsymbol{u_t^j}} - \frac{\sum_{r=1}^{k_t^j} \boldsymbol{concern_r^j}}{\boldsymbol{k_t^j}}$, with an overall score of $\boldsymbol{CSR_t} = \sum_{j=1}^{7} \frac{\boldsymbol{CSR_t^j}}{7}$. Where $\boldsymbol{CSR_t^j}$ is the aggregated csr score for category *j* in year *t*. Similarly, $\boldsymbol{strength_s^j}$ is equal to 1 if the firm meets *strength s* in category *j*, otherwise 0; $\boldsymbol{concern_r^j}$ is equal to 1 if the firm meets *concern r* in category *j*, otherwise 0.

TABLE 2-5

Relationship between CSR and Firm Value

Table 2-5 reports the regression coefficients for the relationship between firm value and CSR from calendar year 1991 to 2009. Models 1, 3, and 5 present the pooled OLS results, while models 2, 4, and 6 present the panel fixed effect results. Models 3 and 4 include peer dummies to account for any potential market trenches or clientele effects. Models 5 and 6 interact each of the industry dummies, defined by two-digit SIC codes, with strength and concern. Industries are defined as manufacturing (SIC codes 20–39), transportation (SIC codes 40–49), finance (SIC codes 60–67), and services (SIC codes 70–89). Peer dummies 2 to 5 indicate a firm's peer group. Peer groups for both strength and concern are calculated at the end of each year *t-1* for each industry *j* and take the value of 1 if a firm falls within that peer group in that year or 0 otherwise. Peer dummy 1 represents firms with a score of zero (dropped as it is the most prevalent), peer dummy 2 represents firms in the 40th percentile and below, peer dummy 3 represents the 40th through 60th percentiles, peer dummy 4 represents the 60th through 80th percentiles, and peer dummy 5 represents the 80th and above percentiles. Size = natural logarithm of total assets; Leverage = total liabilities over total assets; Turnover = natural logarithm of average monthly volume over shares outstanding at the end of each year t; return on assets (ROA) = earnings before interest and tax (EBIT) to total assets; Advertising = advertising expense over sales; research and development (R&D) = R&D expenditure over sales; capital expenditure (CAPEX) = CAPEX over total assets; and Sales Growth = change in sales at time *t* with respect to *t*–1 We control for year fixed effects, industry fixed effects, and cluster standard errors at the firm level, the results are not reported. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

Variable	1	2	3	4	5	6
Strength	2.487***	-1.911***	1.702***	-1.991***	2.378***	-1.958**
	(0.390)	(0.630)	(0.434)	(0.660)	(0.486)	(0.817)
Concern	0.488	0.240	0.0470	-0.0560	0.736	0.0366
	(0.305)	(0.349)	(0.316)	(0.323)	(0.453)	(0.511)
Size	-0.151***	-0.824***	-0.140***	-0.803***	-0.150***	-0.822***
	(0.0226)	(0.0757)	(0.0236)	(0.0750)	(0.0224)	(0.0752)
R&D	1.596***	0.475***	1.708***	0.325*	1.594***	0.473***
	(0.142)	(0.161)	(0.150)	(0.169)	(0.141)	(0.161)
Leverage	0.00902	-0.0848	0.0280	-0.0831	0.0261	-0.0559
	(0.187)	(0.153)	(0.197)	(0.140)	(0.186)	(0.153)
Turnover	0.0663***	0.262***	0.0558***	0.240***	0.0634***	0.262***
	(0.0197)	(0.0261)	(0.0203)	(0.0266)	(0.0197)	(0.0263)
CAPEX	0.463	0.436	0.462	0.248	0.523	0.466
	(0.463)	(0.495)	(0.470)	(0.472)	(0.463)	(0.491)
Advertising	3.438***	0.791	3.281***	1.063	3.369***	0.613
	(0.882)	(1.183)	(0.865)	(1.124)	(0.873)	(1.201)
Sales Growth	0.440***	0.215***	0.413***	0.190***	0.439***	0.212***
	(0.0589)	(0.0433)	(0.0599)	(0.0409)	(0.0585)	(0.0429)
ROA	6.176***	3.340***	6.619***	3.758***	6.128***	3.344***
	(0.468)	(0.420)	(0.468)	(0.363)	(0.466)	(0.419)

(Continued)

Table 2-5-*Continued*

Variable	1	2	3	4	5	6
Peer dummy 2 (strength)			-0.0373	-0.0337		
			(0.0647)	(0.0533)		
Peer dummy 3 (strength)			0.0574	0.0170		
			(0.0438)	(0.0363)		
Peer dummy 4 (strength)			0.135***	0.0946**		
			(0.0437)	(0.0442)		
Peer dummy 5 (strength)			0.130***	0.0604		
			(0.0498)	(0.0493)		
Peer dummy 2 (concern)			0.00887	-0.0145		
			(0.0422)	(0.0350)		
Peer dummy 3 (concern)			0.153***	0.0889**		
			(0.0505)	(0.0380)		
Peer dummy 4 (concern)			0.136***	0.0910***		
			(0.0447)	(0.0351)		
Peer dummy 5 (concern)			0.120**	0.126***		
			(0.0481)	(0.0434)		
Strength * Transport industry dummy					-2.140***	1.919*
					(0.804)	(1.126)
Strength * Financial industry dummy					-1.151**	1.354
					(0.575)	(1.003)
Strength * Services industry dummy					5.021***	-4.996
					(1.826)	(4.053)
Concern * Transport industry dummy					1.031**	2.143***
					(0.524)	(0.698)
Concern * Financial industry dummy					-0.130	-0.142
					(0.486)	(0.621)
Concern * Services industry dummy					-2.816**	-1.838
					(1.138)	(1.294)
Intercept	2.357***	7.570***	1.802***	7.409***	2.341***	7.555***
	(0.148)	(0.626)	(0.150)	(0.614)	(0.148)	(0.626)
Industry effects	Yes	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	No	Yes	No	Yes	No	Yes
Adj. R^2	0.35	0.24	0.36	0.25	0.35	0.24
N	13643	13643	13317	13317	13643	13643

Our results suggest giving careful consideration when "netting off" the "good" and "bad" aspects of a firm. Ultimately, it is likely that each individual CSR aspect (as measured by KLD), whether a *strength* or *concern*, affects the firm uniquely and over different periods and be interpreted by different stakeholders heterogeneously

Models 3 and 4 in Table 2-5 employ equation (2-6), which includes peer group dummy variables $'D_{it}$. These peer dummies capture any groupings implied by investors when analyzing firms along a CSR continuum. Heterogeneous information constraints and utility functions could lead investors and stakeholders to value CSR differently, inducing striations along the CSR–CFP continuum similar to a clientele effect. By implication, the financial effect of CSR would be present as a firm moves across striations or into clienteles. We construct these peer groups in an attempt to capture any differences in the markets' CSR appetite. Again, model 3 employs a pooled OLS approach, contrasted with model 4, which utilizes an FE approach. Both the models include dummy variables (*peer dummy 2* through *peer dummy 5*) taking the value of 1 if a firm falls within a specific quintile for either *strength* or *concern.*

The CSR coefficients for responsible and irresponsible behavior are inconsistent across the OLS and FE models, with *strength* significant at all times. In contrast, a firm's relative grouping, proxied by the dummies, not only is significant, indicating certain trenches of the market in CSR terms are associated with higher levels of value but these results also are consistent across both the OLS and FE models. It seems that above average and high levels (*peer dummy 4* and *peer dummy 5*) of responsible behavior (*strength*), relative to firms with no CSR, is associated with a Tobin's Q that is 6.5% higher (e.g., if *peer dummy 5* took the value of 1, Tobin's Q is expected to be higher by 0.130 and this increase of 0.130 over the mean Tobin's Q of 2 is 6.5%) at a 1% significance level under OLS (model 3). Similarly, above average levels of responsible behavior (*peer dummy 4*) are associated with a Tobin's Q that is 4.5% higher at 5% significance with an FE approach.

The results for irresponsible behavior provide striking ground for greater exploration. Apparently, a moderate to high level (*peer dummy 3* through *peer dummy 5*) of irresponsible behavior (*concern*) is associated with a higher level of firm value. A moderate level of irresponsible behavior (*peer dummy 3*), modeled with OLS, is associated with a Tobin's Q 7.5% higher at 1% significance. The findings remain positively significant for the FE model where a high level of irresponsible behavior (*peer dummy 5*) is associated with a Tobin's Q 6.3% higher at 1% significance. We consider firms heavily constrained by restrictive CSR policies are unable to exploit lucrative, albeit controversial, opportunities. Furthermore, accessing controversial opportunities is not mutually exclusive to engaging in some responsible behavior. We contend that firms that best manage the delicate interplay between responsible and irresponsible behavior extract the greatest return from CSR over firms that shun irresponsible behavior in favor of responsible behavior.

2.3.1. Intra-Industry Analysis

Next, we investigate whether the relationship between CSR and value is consistent across industries. Again, we build on equation (2-5) by interacting each of the CSR measures with industry dummies $'CSR_{it} * IND_{it}$ to capture the incremental impact of CSR on firm value per industry. Specifically,

$$Tobin's\ Q = \alpha + \beta_1'CSR + \beta_2'CSR_{it} * IND_{it} + \beta_3'Y + \varepsilon_{i,t} \qquad (2\text{-}7)$$

Models 5 and 6 in Table 2-5 represent the results for the OLS and FE approaches respectively, using equation (2-7). If all industries had similar institutional norms with respect to CSR, the interaction terms should remain insignificant. However, our results indicate otherwise. The interaction terms of responsible and irresponsible behavior in the transport industry (*strength*transport industry dummy* and *concern*transport industry dummy*) are significant for both the OLS and FE models. All the *strength* interaction terms are significant in the OLS model with the transport and finance industries indicating significant and opposite signs. The size and sign of the coefficients for the transport and finance industries in economic terms implies no association between value and CSR, with only the service industry indicating a relationship that might be more pronounced than that found in the manufacturing industry. The evidence suggests that simply including industry fixed effects could underestimate the differences across industries. CSR potentially affects firm value in opposite directions across industries, not just at different levels.

In Table 2-6 we model equation (2-6) again but restrict our sample to each of the four industries in turn. The manufacturing, services, and transportation industries are most sensitive to CSR and peer dummies. Similar to our earlier findings, *strength* is sensitive to FE, while the peer dummies remain consistent, albeit less pronounced, with our previous results. The results of our industry analysis are, in part, attributable to the smaller sample sizes, as manufacturing has the strongest results and the largest sample. The great number of control variables and fixed effects in the smaller industries could reduce the power of the models. Notably, only the finance industry has a marginally significant result under OLS for our *concern peer dummy 3* that is not consistent with the previous findings, although the effect disappears under FE.

Overall, the results indicate that the value impact of responsible behavior is inconsistent across the OLS and FE models, as well as across industries. The evidence supports the notion that market participants evaluate firm CSR relative to the CSR present in the market. Additionally, it seems that above average levels of responsible behavior are associated with higher levels of firm value regardless of the estimation technique. More surprisingly, irresponsible behavior may also be associated with higher levels of firm value. Our peer group dummies show a consistent highly significant correlation between moderate to high levels of *concern* and high levels of firm value. The industry level analysis indicates that not only does the level of CSR differ across industries, but also the direction of value impact may differ. Although our peer dummy results weaken when industries are analyzed separately, the results remain consistent. We contend that the lack of power speaks to this effect and that our peer dummies offer a more consistent measure of the value impact of CSR across industries when compared with the earlier industry results.[17]

2.4. Robustness

2.4.1. Curvilinear function

As discussed previously and alluded to in previous work (Flammer (2012b)), CSR may affect firm value in a curvilinear fashion, perhaps due to marginally reducing returns. As a result, the dummies in our model may be criticized for capturing the quadratic nature of CSR. We modify equations (2-5) and (2-6) into equations (2-8) and (2-9), respectively, to include squared terms of the CSR variables ($'CSR\hat{}2_{it}$) to capture any curvilinear concern. Specifically:

$$Tobin's\ Q = \alpha + \beta_1{}'CSR + \beta_2{}'CSR\hat{}2_{it} + \beta_3{}'Y + \varepsilon_{i,t} \qquad (2\text{-}8\ )$$

and

$$Tobin's\ Q = \alpha + \beta_1'CSR + \beta_2{}'CSR\hat{}2_{it} + \beta_3{}'D_{it} + \beta_4'Y + \varepsilon_{i,t} \qquad (2\text{-}9\ )$$

Using a pooled ordinary least squares (OLS) approach in model 1 of Table 2-7, we regress firm value as a function of the square of the responsible and irresponsible behavior in accordance with equation (2-8). The results, at first, indicate that CSR does indeed conform to some curvilinear functional form with respect to firm value. Both the coefficients of *strength* and *concern* are significant and positively associated with firm value, while those of *strength*^2 and *concern*^2 are negative and

[17] Possibly with the exception of the finance industry.

significant. Consistent with our earlier findings, the FE results presented in model 2 fail to support the OLS regression where all the CSR coefficients become insignificant, with *strength* again changing signs. Next, we combine the squared CSR terms with the peer group dummies. The OLS and FE results are represented in models 3 and 4, respectively, in Table 2-7.

Our peer dummies remain significant and consistent across the OLS and FE approaches even in the presence of squared CSR terms. The significance and magnitude of the *strength* and *strength*^2 variables fall while *concern* and *concern*^2 become insignificant. All significance is lost for the CSR variables in the presence of firm fixed effects and most experience a sign change, while the peer dummy variables remain consistent and significant. We do not suspect that a curvilinear aspect of CSR drives our peer dummies. However, we provide some evidence to suggest that CSR has a curvilinear functional form.

TABLE 2-6

Industry-Specific Examination

Table 2-6 examines the intra-industry relationship between CSR and firm value. For parsimony we repeat models 3 and 4 from Table 2-5 across the four industries we examine. Industries are defined as manufacturing (SIC codes 20–39), transportation (SIC codes 40–49), finance (SIC codes 60–67), and services (SIC codes 70–89). All models include the set of control variables used in the study, but for parsimony we have excluded them here. We control for year fixed effects, industry fixed effects, and cluster standard errors at the firm level, the results are not reported. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

Variable	Manufacturing		Transportation		Financial		Services	
	1	2	3	4	5	6	7	8
Strength	1.990***	-1.500*	0.241	-0.830	-0.0020	-0.510	5.378**	-7.320*
	(0.551)	(0.792)	(0.681)	(0.511)	(0.274)	(0.450)	(2.494)	(3.897)
Concern	0.0700	0.149	1.056**	0.171	0.134	-0.436**	-0.948	-1.032
	(0.477)	(0.484)	(0.413)	(0.244)	(0.194)	(0.199)	(1.094)	(1.027)
Peer dummy 2 (strength)	-0.168	-0.0929	0.0672	0.0197	0.0317	0.0149	0.0422	0.342
	(0.114)	(0.0879)	(0.0608)	(0.0447)	(0.0325)	(0.0255)	(0.661)	(0.506)
Peer dummy 3 (strength)	0.0458	-0.0274	-0.0019	0.0300	0.0354	0.00716	0.0179	0.0510
	(0.0638)	(0.0604)	(0.0632)	(0.0292)	(0.0293)	(0.0219)	(0.170)	(0.109)
Peer dummy 4 (strength)	0.156**	0.0649	0.0737	0.0521	0.0405	0.0221	0.0998	0.191
	(0.0759)	(0.0749)	(0.0714)	(0.0334)	(0.0372)	(0.0274)	(0.124)	(0.119)
Peer dummy 5 (strength)	0.0480	-0.0219	0.0486	0.0342	0.0200	0.0361	0.312	0.317*
	(0.0766)	(0.0714)	(0.0757)	(0.0355)	(0.0339)	(0.0328)	(0.192)	(0.184)
Peer dummy 2 (concern)	0.0548	-0.0105	0.0444	0.0187	-0.0225	-0.0104	0.0650	0.120
	(0.0733)	(0.0520)	(0.0491)	(0.0298)	(0.0348)	(0.0225)	(0.143)	(0.153)
Peer dummy 3 (concern)	0.193**	0.109*	0.150**	0.0117	0.00706	0.00961	0.200	0.0683
	(0.0864)	(0.0590)	(0.0589)	(0.0387)	(0.0334)	(0.0259)	(0.149)	(0.162)
Peer dummy 4 (concern)	0.186**	0.0845	0.107*	0.0249	-0.0521*	-0.0118	0.353**	0.223*
	(0.0740)	(0.0561)	(0.0570)	(0.0336)	(0.0291)	(0.0153)	(0.157)	(0.132)
Peer dummy 5 (concern)	0.233***	0.165**	0.0280	0.0438	-0.0243	-0.00985	0.241	0.134
	(0.0888)	(0.0710)	(0.0745)	(0.0492)	(0.0389)	(0.0261)	(0.147)	(0.129)
Intercept	2.262***	8.134***	1.666***	2.528***	1.645***	3.073***	2.432***	11.39***
	(0.244)	(0.755)	(0.260)	(0.394)	(0.129)	(0.561)	(0.447)	(1.509)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Effects	No	Yes	No	Yes	No	Yes	No	Yes
N	6460	6460	1531	1531	3289	3289	2037	2037
adj. R^2	0.29	0.28	0.27	0.29	0.52	0.23	0.40	0.35

2.4.2. Lags

The financial benefits associated with CSR might not accrue to the firm instantly upon taking a certain CSR position, especially if those benefits depend on investors rebalancing their portfolios (or stakeholders adjusting their behavior toward the firm). Therefore, a significant lag between implementing CSR and accruing tangible benefits recognizable by investors could exist. The inconsistent performance of our CSR measures might stem from a timing issue. In Table 2-7, models 5 through 8, we build on equations (2-55) and (2-6) to include a *t–1* lag of the CSR measures to capture the potential performance lag associated with CSR. However, in the interest of parsimony, we have not reported the qualitatively similar results for lags of different lengths, specifically

$$Tobin's\ Q = \alpha + \beta_1{}'CSR + \beta_2{}'CSR_{it-1} + \beta_3{}'Y + \varepsilon_{i,t} \tag{2-10}$$

and

$$Tobin's\ Q = \alpha + \beta_1'CSR + \beta_2{}'CSR_{it-1} + \beta_3{}'D_{it} + \beta_4'Y + \varepsilon_{i,t} \tag{2-11}$$

Comparing models 5 and 6, the OLS and FE approaches, respectively, responsible behavior is again inconsistent across OLS and FE. The concern lag, *L1.Concern*, is positive and significant across both models. The results suggest that irresponsible behavior in *t–1* could be associated with higher levels of firm value at time *t*. In the presence of peer dummies (models 7 and 8), *L1.Concern* is insignificant and changes signs. Our peer dummies maintain their significance and signs across both the models in the presence of lags.[18] We posit that a dynamic model is likely to represent the true nature of CSR; however, the market's ability to anticipate the dynamic nature of CSR is captured by the peer dummies instead.

2.4.3. Endogeneity

Any discussion about CSR's link with CFP will in due course have to address the endogenous nature of CSR and firm performance. We do not believe that we can effectively eliminate all endogeneity concerns in this study. First, the quantification of a qualitative process such as CSR will undoubtedly introduce measurement error, which ultimately leads to a correlation between the CSR variables and the error term, a problem that will only diminish as our ability to standardize and better quantify CSR increases. Furthermore, it is conceivable that firms adjust their CSR spending based on their access to funds, which in turn is dependent on the firm's financial performance.

It follows that increases in firm performance lead to more disposable funds, which could precipitate increases in CSR spending. One potential reprieve from this endogenous cycle is our finding that irresponsible behavior is associated with higher levels of firm value. Although plausible, it is highly unlikely that firms would increase irresponsible behavior in response to an increase in disposable funds.

[18] We construct a firm's peer group at time *t* based on the relative standing of the firm at time *t–1*. In effect, our peer groups could capture any lag associated with CSR, information, and financial benefits indirectly.

TABLE 2-7

Additional Specifications for Robustness

Table 2-7 reports additional specifications to increase robustness. Models 1 through 4 incorporate quadratic terms to account for any curvilinear relationship between firm value and CSR. Strength^2 is the square of the firm's strength score while concern^2 is the square of a firm's concern score. Models 5 through 8 incorporate lagged terms of a firm's strength and concern scores. The *t*-1 lagged strength score of a firm is *L1.strength* and the *t*-1 lagged concern score of a firm is *L1.concern*. Models 9 and 10 present the first differenced estimator results, where a change in our dependant variable, ΔTobin's Q, is modelled as a function of a change in our control variables and various CSR measures. We restrict the sample in model 10 to only include firms that did not experience a change in their CSR level in *t* with respect to *t-1*, but did experience a change in their peer group in *t* with respect to *t-1*. Pos.Δstrength is a dummy variable taking the value of one if a firm experiences a lift in peer groups for strength. Neg.Δstrength is a dummy variable taking the value of one if a firm experiences a drop in peer groups for strength. Pos.Δconcern is a dummy variable taking the value of one if a firm experiences a lift in peer groups for concern (more concern relative to other firms). Neg.Δconcern is a dummy variable taking the value of one if a firm experiences a drop in peer groups for concern (less concern relative to other firms). All models include the set of control variables used in the study, but for parsimony we have excluded them here. We control for year fixed effects, industry fixed effects, and cluster standard errors at the firm level for all models, the results are not reported. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

Variable	Curvilinear				Lags				First difference (Δ)		ROA
	1	2	3	4	5	6	7	8	9	10	11
Strength	4.292***	-0.698	3.282***	-1.132	2.049***	-1.324**	2.272***	-1.030**	-0.202		0.3648
	(0.729)	(0.905)	(0.853)	(0.894)	(0.425)	(0.530)	(0.437)	(0.518)	(0.399)		(3.226)
Concern	1.417**	0.503	0.228	-0.0411	-0.425	-0.105	-0.169	0.0534	-0.567***		-10.130***
	(0.575)	(0.537)	(0.548)	(0.496)	(0.330)	(0.283)	(0.338)	(0.283)	(0.214)		(2.845)
Strength^2	-8.086***	-5.083	-5.690**	-3.423							
	(2.468)	(3.109)	(2.425)	(2.819)							
Concern^2	-3.236*	-0.785	-0.401	0.132							
	(1.719)	(1.939)	(1.454)	(1.910)							
L1.Strength					0.332	-0.837*	-0.890	-1.949**			
					(0.436)	(0.484)	(0.634)	(0.776)			
L1.Concern					1.015***	0.675**	0.516	-0.118			
					(0.311)	(0.294)	(0.470)	(0.496)			
Peer dummy 2 (strength)			-0.0548	-0.0386			-0.0364	-0.0125	0.0138		-0.9806
			(0.0653)	(0.0530)			(0.0647)	(0.0545)	(0.0303)		(0.7117)
Peer dummy 3 (strength)			0.0285	0.00776			0.0668	0.0574	-0.0337		-0.1699
			(0.0460)	(0.0347)			(0.0460)	(0.0432)	(0.0254)		(0.2932)
Peer dummy 4 (strength)			0.0879**	0.0796**			0.152***	0.159***	0.0212		-0.3030
			(0.0404)	(0.0406)			(0.0487)	(0.0580)	(0.0277)		(0.3153)
Peer dummy 5 (strength)			0.0611	0.0398			0.166**	0.176**	0.00809		-0.768**
			(0.0541)	(0.0447)			(0.0648)	(0.0776)	(0.0398)		(0.3882)

(Continued)

Table 2-7 -*Continued*

Variable	Curvilinear				Lags				First difference (Δ)		ROA
	1	2	3	4	5	6	7	8	9	10	11
Peer dummy 2 (concern)			0.00812	-0.0136			0.000236	-0.0117	-0.00298		0.1687
			(0.0416)	(0.0346)			(0.0438)	(0.0379)	(0.0275)		(0.3367)
Peer dummy 3 (concern)			0.150***	0.0887**			0.137**	0.0902**	0.0572**		0.5591**
			(0.0492)	(0.0382)			(0.0554)	(0.0433)	(0.0279)		(0.2838)
Peer dummy 4 (concern)			0.133***	0.0903***			0.113**	0.0950**	0.0587**		-0.2770
			(0.0409)	(0.0336)			(0.0523)	(0.0477)	(0.0266)		(0.3007)
Peer dummy 5 (concern)			0.113**	0.125***			0.0761	0.135*	0.0653*		-0.3126
			(0.0456)	(0.0424)			(0.0691)	(0.0714)	(0.0350)		(0.3558)
Pos.Δstrength										0.0325	
										(0.0325)	
Neg.Δstrength										-0.00427	
										(0.0342)	
Pos.Δconcern										-0.00783	
										(0.0255)	
Neg.ΔConcern										-0.0799**	
										(0.0404)	
Intercept	2.287***	7.554***	1.779***	7.408***	1.916***	7.456***	1.816***	7.425***	0.0241***	0.0308	3.6272
	(0.151)	(0.627)	(0.153)	(0.615)	(0.145)	(0.613)	(0.153)	(0.614)	(0.00738)	(0.0209)	(4.4258)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	No	Yes	No	Yes	No	Yes	No	Yes	No	No	Yes
N	13643	13643	13317	13317	13375	13375	13317	13317	10771	4303	15901
adj. R^2	0.35	0.24	0.36	0.25	0.36	0.24	0.36	0.25	0.14	0.13	0.25

Responsible behavior is usually costly, while irresponsible behavior is often brought about by inaction, cost cutting, poor management, and/or safety procedures. In theory, it is highly unlikely that the results linking moderate to high levels of irresponsible behavior with higher levels of firm performance are purely endogenous. Moreover, the construction of our dummies represents a firm's relative level of CSR with respect to its industry at the end of the previous year. We contend that observing firms relative to each other reduces the absolute impact of a change in CSR and, in so doing, some of the endogeneity, as well as the lagged nature of CSR, is mitigated. Nonetheless, to increase the robustness of our results, we estimate the first difference estimator based on equation (2-6), as

$$\Delta Tobin's\ Q = \alpha + \beta_1{}'\Delta CSR + \beta_2{}'\Delta D_{it1} + \beta_3{}'\Delta Y + \Delta\varepsilon_{i,t} \qquad (2\text{-}12)$$

Model 9 of Table 2-7 presents the results of a first-differenced estimator approach, regressing a change in firm value (ΔTobin's Q) as a function of a change in responsible and irresponsible behavior, peer group dummy variables, control variables, year and industry fixed effects, and clustered standard errors at the firm level. In line with the FE results, responsible behavior is again negatively associated with value. However, irresponsible behavior is significantly negative at the 1% level. This result contrasts with our earlier findings where irresponsible behavior is linked to higher levels of value. Economically, the result implies that a 10% increase in the average level of *concern* associates with a 0.15% reduction in the average level of Tobin's Q. The economic impact of increasing or decreasing irresponsible behavior, although significant according to these results, might be lost. More importantly, our peer dummies indicating irresponsible behavior are significantly positive at the 5% and 10% levels; those for responsible behavior are insignificant. Firms shifting into the top quintile of irresponsible behavior (*Peer dummy 5 (concern)*) experience an associated increase in firm value of 3%, as measured by Tobin's Q, not an economically insignificant effect.

To further address the potential feedback between firm performance and CSR, we regress a restricted version of the first differenced estimator in equation (2-12). We restrict our sample to firms that did not experience a change in their CSR level in *t* with respect to *t–1*, but did experience a change in their peer group in *t* with respect to *t–1*. Therefore, we now eliminate all firms that experienced a change in their CSR profile, eliminating the effect of CSR on value. Due to the reduced sample, we had to drop our peer dummies. Alternatively, we constructed dummy variables capturing a positive or a negative change in any peer group in *t* with respect to *t–1*. The dummy variable *Pos.Δstrength* takes the value of 1 if a firm experiences a lift in peer groups for *strength*, *Neg.Δstrength* is 1 if a firm experiences a drop in peer groups for *strength*, *Pos.Δconcern* is 1 if a firm experiences a lift in peer groups for *concern* (more concern relative to other firms), and *Neg.Δconcern* is 1 if a firm experiences a drop in peer groups for concern (less concern relative to other firms). Accordingly, a significant result for any of the peer change dummy variables would indicate that firm value is sensitive to changes in the perception of firms.

The results presented in model 10 of Table 2-7 are consistent with our previous findings that the dummy variable indicating a reduction in *concern* peer groups (*Neg.*Δ*concern*) is significant and negative at the 5% level. This suggests that firms that move into lower *concern* quintiles experience a reduction in value of around 3%, even though they did not change their CSR profile at all. The results indicate that a change in a firm's CSR with respect to other firms could affect firm value, even if the firm did not alter its actual level of CSR. We stress that although we attempt to mitigate the aforementioned issue of endogeneity, and we believe these results go some way toward addressing those concerns, we do not believe our results are free from endogenous concerns.

2.4.4. Alternative Measures of Performance

As discussed previously, the inherent structure of CSR undermines the link between costs and financial returns. CSR benefits might accrue several periods after the initial outlay or only once investment reaches a critical mass. As such, one of the reasons we employed Tobin's Q as a dependent variable was to mitigate this issue. For model 11 of Table 2-7, the dependent variable is ROA. We must stress that the mechanism driving our peer dummies is dependent on the market's ability to perceive CSR relative to other firms in the market. Investors constructing portfolios are unlikely to impact a firm's ROA. It is likely that, if the relative level of CSR were to affect a firm's ROA, stakeholders would be the major mechanism. Similar to investors constructing their portfolio based on thresholds, stakeholders might also engage or shun firms based on acceptable levels of CSR, which are determined relatively (it is unlikely that an activist group would picket every firm that has environmental concerns; rather, the most abhorrent offenders would be targeted).

Turning to our results, we find that *concern* is highly negatively associated with ROA at the 1% significance level, similar to the expectation in the literature. Meanwhile, *peer dummy 5* for *strength* is negative and significant at the 5% level, indicating that high levels of responsible behavior could affect performance. It is conceivable that the costs of maintaining levels of responsible behavior at a sufficiently high level to be considered best in class would impose a significant financial burden on the firm. Finally, *peer dummy 3* for *concern* is significant and positive at the 5% level. The result would indicate that firms that engage in average levels of irresponsible behavior are able to extract the additional benefits associated with *concern* behavior, perhaps without incurring the costs associated with being considered worst in class. The results indicate that relative standing is important even when considering traditional performance measures, although not as pronounced.

2.4.5. Awareness

Servaes and Tamayo (2013) document that CSR's impact on value is dependent on the customer awareness of a firm. Firms with greater customer awareness extract the most benefit from engaging in CSR, while firms with low customer awareness receive no benefit or even incur penalties. Although we already control for advertising intensity throughout our study (and as a result for customer awareness[19]), we now attempt to explicitly examine whether conditioning firms over awareness affects our findings. We divide our sample in two over the median

[19] Servaes and Tamayo (2013) show that a firm's public profile and media coverage is empirically linked to advertising expenditure. Advertising intensity is therefore an appropriate measure of customer awareness and we follow their proxy.

industry-adjusted advertising intensity for each year end *t*. We treat the firms falling below the median as low awareness firms (up to the 50th percentile) and those falling above the median (50th percentile and above) as high awareness firms. Just over 8,000 firm year observations include advertising expenditure. After dividing this sample in half and taking into account the lagged nature of our peer dummies and the construction of *sales growth,* each sub-sample includes around 2,500 firm year observations.[20] Table 2-8 documents the results of customer awareness: model 1 presents the regression results for the sub-sample of firms classified as low awareness firms, while model 2 presents the results for firms classified as high awareness firms. Both models present the pooled OLS findings of equation (2-6) over each of the sub-samples. Again, Tobin's Q is the dependent variable and we include the vector of control variables, year and industry-fixed effects, and cluster standard errors at the firm level.

Model 1 indicates that firms with low levels of *strength* suffer a discount of firm value (*peer dummy 2)* if they have low customer awareness, while average to high levels of *concern (peer dummy 3* through *peer dummy 5*) are positive and significant. Conversely, firms with high levels of customer awareness (model 2) tend to have an associated increase in firm value if they have relatively high levels of *strength* (*peer dummy 4* and *peer dummy 5*), but they see no associated benefit with *concern* behavior. Our results in part reflect the findings of Servaes and Tamayo

[20] Due to the small samples and large number of controls in our models the power of a fixed effect model is reduced, we do not report the fixed effect regression results for parsimony. In short, for the low awareness sample the FE approach increases the significance of our findings, while the findings for the high awareness sample become insignificant.

(2013) who find that the value of CSR is associated with high awareness firms; however, we fail to find evidence that irresponsible behavior is associated with a reduction of value for high awareness firms. This contrasts with their findings that high awareness firms are penalized more for *concern* behavior, when in fact our *concern* variable is positive and significant for high awareness firms. More interestingly, they document that low awareness firms experience little, if no negative association, with value when considering CSR. We have similar results for firms engaging in low levels of *strength*; however, our results indicate that moderate to heavy relative levels of *concern* behavior are positively associated with firm value for firms with low levels of customer awareness. We contend that responsible behavior is most affected by information asymmetry and search costs.

As a result, firms that spend the most resources on communicating their brand and their positive contribution to society will ultimately gain the most benefit from engaging in responsible behavior. Importantly, it seems that only firms that outclass their peers in *strength* activities reap the benefits associated with communicating their message in that CSR is only advantageous when a firm is perceived as “good” (having significantly higher levels of *strength* than its peers). Firms that do not communicate their CSR quality to the public risk financial penalties. Our results seem to suggest firms that engage in below average levels of responsible behavior, and have a low level of awareness, are penalized. Furthermore, our results suggest that obscure firms are able to extract benefits from irresponsible behavior.[21]

2.5. Discussion and Conclusion

We show that responsible behavior and irresponsible behavior impacts firm value positively when considered in a relatively sense. Our results indicate that the relative CSR standing of firms may be integral to understanding CSR's impact on firm value. We find that above average to high levels of responsible behavior are associated with increased firm value, while average to low levels of responsible behavior are not significantly correlated with value. More importantly, we find that moderate to high levels of irresponsible behavior are associated with increased value. Irresponsible behavior could enhance firm value as firms unconstrained by restrictive CSR policies are not precluded from the advantages some irresponsible activities present.

Alternatively, a significant shareholder presence of ethical investors (pension funds, etc.), could deter management from engaging in risky projects or exploit certain opportunities, if these activities are regarded as socially irresponsible. In either case, irresponsible behavior, although risky, would ultimately increase the volatility of discounted future cash flows and as a result entice less risk-averse investors. As a result, some investors might construct portfolios to capture the increased volatility, driving part of the peer effect that we observe.

[21] It is important to note that our sample is restricted and that the power of the models will be reduced.

TABLE 2-8

Awareness and CSR

Table 2-8 documents the differences between firms considered as high awareness firms against those with low awareness, as proxied by advertising expenditure. We divide our sample in half over the median industry-adjusted advertising expense for each year end *t*. Model 1 present the results for firms with industry adjusted advertising expenses below the median, while model 2 reports the results for firms above the median. All models include the set of control variables used in the study, but for parsimony we have excluded them here. Tobin's Q is the dependant variable in both models and we control for year fixed effects, industry fixed effects, and cluster standard errors at the firm level for all models, the results are not reported. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

Variables	Low awareness	High awareness
	1	2
Strength	1.3161	2.2569*
	(1.0476)	(1.1861)
Concern	0.0259	1.9201**
	(0.8028)	(0.8822)
Peer dummy 2 (strength)	-0.4011**	-0.1736
	(0.1975)	(0.1927)
Peer dummy 3 (strength)	0.0452	0.0159
	(0.1188)	(0.1053)
Peer dummy 4 (strength)	0.0852	0.2347**
	(0.0847)	(0.1154)
Peer dummy 5 (strength)	0.1181	0.3060**
	(0.1202)	(0.1315)
Peer dummy 2 (concern)	-0.0222	0.0174
	(0.0952)	(0.1295)
Peer dummy 3 (concern)	0.2577**	0.1142
	(0.1274)	(0.1362)
Peer dummy 4 (concern)	0.2777**	0.1409
	(0.1223)	(0.1375)
Peer dummy 5 (concern)	0.1963*	-0.0359
	(0.1163)	(0.1443)
Intercept	1.7557***	2.2855***
	(0.3486)	(0.3719)
Industry effects	Yes	Yes
Year effects	Yes	Yes
Firm effects	No	No
N	2672	2323
adj. R^2	0.302	0.338

Following Gormley and Matsa (2013), we argue that CSR activities are in part endogenously determined by a firm's environment, which differs across firms in observable and unobservable ways. We show that accounting for these firm-specific characteristics could bias the correlation between CSR and firm value.

We find that our peer dummies are robust to the inclusion of firm fixed effects in contrast with the absolute level of CSR. Our findings suggest that the industry-specific relationship between CSR and firm value should be considered carefully going forward. These relationships change significance levels and signs across industries for absolute CSR levels. Alternatively, our peer dummies provide results that are more consistent. The presence of consumers within an industry and the importance of marketing and projecting a reputation presented in previous studies are perhaps key to this discrepancy. We find that a firm's relative standing is particularly important when considering the impact of awareness on the relationship between CSR and value, as the benefits of CSR are only reaped if firms ensure that they outclass their peers and communicate their CSR profile in line with Servaes and Tamayo (2013). Finally, we advocate against the use of an aggregate absolute CSR measure. Our results underscore the understanding that "doing the right thing" and "doing the wrong thing" are not perfect opposites. We contend that the complexities of CSR necessitate caution.

2.6. Appendix A

A1. Peer groups

For robustness we defined three sets of possible thresholds stakeholders could hold. The first threshold set, used in the study, simply defines firms within 5 peer groups based on quintiles using the 20^{th}, 40^{th}, 60^{th} , and 80^{th} percentiles, known as peer group 1 through 5, respectively. The second set assumes that a firm would need to be significantly different from the 'average' firm before it is noticed. This threshold, named 'High', uses the 10^{th}, 30^{th}, 70th and 90^{th} percentiles, known as Peer Group 1 through 5, respectively. Alternatively, the "Low" threshold set defines Peer Groups using the 10^{th}, 40^{th}, 60^{th} ,and 90^{th} percentiles. The assumption here is that stakeholders notice easily when firms deviate from the average but only readjust their perceptions once the firm becomes best in class.

We must stress that the thresholds used should not be seen as robustness checks around the relationship between CSR and value. As stakeholders likely define arbitrary CSR thresholds, we employ several models to help us to determine where these thresholds lie. It is conceivable that relationship between CSR and value would be altered by bunching two groups of firms, perceived differently by stakeholders, into the same peer group. Our assumption in this study is that the linear relationship between CSR and value is not robust, but is dependent on a firm's perceived standing among its peers. Therefore, insignificant results are just as meaningful as significant results in determining where stakeholders define firms along a CSR continuum.

Table A-1 presents the reduced form results of the relationship between CSR and firm value across all threshold specifications. The results across the whole sample in the first column (Pooled) of results show that only the 'High' model presented a significantly positive relationship between CSR and firm value, eroding the notion that CSR has a robust significantly positive relationship with firm value. Counter intuitively both the 'Quintile' and 'High' models indicate that firms that are perceived as irresponsible or 'bad' are inherently more valuable. This would indicate that 'bad' firms are not "punished' by society for irresponsible behavior. Similarly 'good' firms have a significantly negative marginal relationship between CSR and firm value across all three models. The results would suggest that as a rule of thumb CSR is not associated with increased value, and significant investment in CSR is value destroying.

Turning to the industry panels it becomes clear that the relationship is not homogenous across industries, and that some industries are particularly sensitive to CSR. The second column shows the results for manufacturing firms. Again, the relationship between CSR and firm value is shown for the 'High' model, with 'bad' firms being inherently more valuable ('Quintile' model only). Interestingly 'good' firms are also inherently more valuable ('Quintile') but experience a negative marginal relationship between further involvement in CSR and value ('High' and 'Low' models). It would seem that the relationship between CSR and value is temperamental for the manufacturing industry, with the most robust result indicating too much CSR is value destroying.

TABLE A1- 1

Qualitative Comparison Of The Relationship Between Net-CSR And Firm Value Over Different Peer Group Threshold Specifications

Table A1- 1 reports a reduced form results of the relationship between firm value and CSR employing 3 different specifications over the pooled sample and within each of four industries, defined by 2-digit SIC code, from calendar year 1991 through 2009. Each of the Quint., High and Low columns report the regression results obtained when the 'Quintile', 'High' and 'Low' threshold specifications used, respectively. 'Quintile' defines firms within 5 peer groups based on quintiles using the 20th, 40th, 60th and 80th percentiles, 'High' defines firms using the 10th, 30th , 70th and 90th percentiles and the 'Low' threshold set defines peer groups based on the 10th, 40th, 60th and 90th percentiles. Peer groups are calculated at the end of each year *t* for each industry *j* and take the value of 1 if a firm falls within that peer group in that year or 0 otherwise. CSR represents the level of CSR undertaken by each firm. Bad, Average and Good approximate for the low, mid and high peer group dummies across the three threshold specifications. We control for year fixed effects and cluster standard errors at the firm level. Tobin's Q is calculated as market value of assets over book value of assets, where market value is equal to total assets plus market equity less book equity at the end of each year t. Size is the log of market capitalization at the end of each year t (not reported). Leverage is the total liabilities over total assets at the end of each year t, foreign is foreign sales to sales at the end of each year t, advertising is advertising expense to sales at the end of each year *t*. **(+),(−)** indicate a positive or negative relationship between the variable and Tobin's Q based on the sign of the corresponding coefficient in the regression results. *,**,*** indicate significance levels at the 10%, 5%, and 1% significance level ,respectively.

	Pooled			Manufacturing			Transport			Finance			Service		
Variable	Quint	High	Low	Quint	High	Low	Quint	High	Low	Quint	High	Low	Quint	High	Low
CSR		(+)**			(+)**								(+)***		(+)***
Bad	(+)***	(+)**		(+)***										(+)**	
Bad * CSR	(+)**						(+)**		(+)**	(+)**					(−)**
Average															
Average * CSR															
Good				(+)***									(−)***	(−)**	(−)***
Good * CSR	(−)**	(−)***	(−)**		(−)**	(−)**			(+)**				(−) ***		(−)***

Column three, showing transport firms, conversely suggest that CSR has a positive relationship with value for 'good' ('Low' model) firms and 'bad' firms ('Quintile' and 'Low"). It would seem that firms are able to extract value from CSR if they are perceived as different from the mean or 'average'. The results suggest that engaging in CSR only affect value as firms move from being 'bad' to 'average' or from 'average' to 'good'. It would suggest that Stakeholders with a sensitivity towards CSR will assess the CSR profile of firms more closely when they deviate away from the mean, while largely ignoring CSR changes in firms considered average.

Column four, showing the Finance Industry, is marginal at best showing only a positive marginal relationship between CSR and firm value for the 'Quintile' model Column five, showing the service industry, has the most robust result (possibly driving the results for the pooled regression). CSR exhibits a positive relationship with value; both the 'Quintile and 'Low" models showing extremely significant results.[22] Interestingly, it would seem that 'bad' firms are inherently more valuable ('High' model) with a negative marginal relationship between CSR value ('Low' model). Most importantly, firms seen as 'good' experience an inherent value drop (all three models), but also a negative marginal relationship ('Quintile' and 'Low') between CSR and value. The results imply that for 'average' firms CSR adds value to

[22] One must remember that the models capture different segments, again the 'High' model places a greater burden of proof on firms to differentiate themselves from 'average' than the other models, while the 'Low' model focuses on the relationship of firms at the extreme end. Different models help us understand where stakeholders place their arbitrary CSR thresholds; they are not robustness checks for the relationship between CSR and value.

the firm but too much is value destroying. Secondly it would seem that a healthy market exists for firms engaging in irresponsible behavior

In sum the results suggest CSR does not have a clear result with firm value, and that engaging in too much CSR has a negative impact. The results seem to be concentrated in the Service industry. If the results seem confounding the reader should not that the results presented are for *Net-CSR* and take the difference between responsible and irresponsible behavior (*Strength* less *Concern*), we argue that this method produces results that are hard to interpret and argue that responsible and irresponsible behavior should be evaluated separately, as we will do in the following sections.

Turning to Table A-2, the first column, showing the pooled results, indicates that overall *Strength* is negatively associated with firm value (Quintile and Low models), interestingly firms with high levels of *Strength* experience an inherent value increase (Quintile and Low), but do have a negative marginal relationship (Quintile only).

Turning to the second column, for manufacturing, *Strength* seems to bear little in terms of value. Looking at the third column, showing Transport, the 'Quintile' and 'Low' models predict contrasting results for the relationship between Strength and value, however it does seem that 'average' firms have a marginally positive relationship with between value and *Strength* (Quintile and High models), but that high levels of *Strength* reduces value inherently (High and Low models) and might inversely affect the marginal relationship (Low model).

Column four, showing the results for Finance, indicates that the finance industry is largely subject to a negative relationship (Quintile and Low) between responsible behavior and value, but firms that are perceived as good are inherently more valuable (all models). This would suggest that responsible behavior is more costly than the benefits that are produced, until a firm is perceived as ‘good’ when firm value is positively affected, although the relationship between *Strength* and value would still be negative.

This would imply, engaging in *Strength* only to the point where one sates the definition of being ‘good’ (if the firm wanted to extract value from Stakeholders with a CSR utility function). Do remember that until the firm is perceived as ‘good’ responsible behavior will most likely erode the firm financially.

Lastly, column five shows that firms in the Service industry are largely penalized for being perceived as ‘average’ (all three models). This would suggest that the service industry is subject to two distinct stakeholder groups, one with and the other without a utility function for responsible behavior. Engaging in ‘average’ levels of responsible behavior could create uncertainty for both groups around engaging the firm and ultimately lead to negative impact on value.

In sum the relationship between *Strength* and value is highly dependent on industry and peer group and any holistic assumption regarding Strength and its relationship with value should be abandoned.

TABLE A- 2

Qualitative Comparison of the Relationship Between Strength and Firm Value Over Different Peer Group Threshold Specifications

Table A- 2 reports a reduced form results of the relationship between firm value and Strength employing 3 different specifications over the pooled sample and within each of four industries, defined by 2-digit SIC code, from calendar year 1991 through 2009. Each of the Quint., High and Low columns report the regression results obtained when the 'Quintile', 'High' and 'Low' threshold specifications used, respectively. 'Quintile' defines firms within 5 peer groups based on firms that failed to score and firms who fall in the 40th, 60th and 80th percentiles, 'High' defines firms in 4 peer groups for the firms that failed to score and firms that fall in the 30th , 70th and 90th percentiles and the 'Low' threshold set defines 4 peer groups based on firms that failed to score and firms that fall in 40th, 60th and 90th percentiles. Peer groups are calculated at the end of each year *t* for each industry *j* and take the value of 1 if a firm falls within that peer group in that year or 0 otherwise. CSR represents the level of CSR undertaken by each firm. Bad, Average and Good approximate for the low, mid and high peer group dummies across the three threshold specifications. We control for year fixed effects and cluster standard errors at the firm level. Tobin's Q is calculated as market value of assets over book value of assets, where market value is equal to total assets plus market equity less book equity at the end of each year t. Size is the log of market capitalization at the end of each year t (not reported). Leverage is the total liabilities over total assets at the end of each year t, foreign is foreign sales to sales at the end of each year t, advertising is advertising expense to sales at the end of each year *t*. **(+),(−)** indicate a positive or negative relationship between the variable and Tobin's Q based on the sign of the corresponding coefficient in the regression results. *,**,*** indicate significance levels at the 10%, 5%, and 1% significance level ,respectively.

Pooled				Manufacturing			Transport			Finance			Service		
Variable	Quint.	High	Low	Quint.	High	Low	Quint.	High	Low	Quint.	High	Low	Quint.	High	Low
Strength	(−) **		(−) ***				(−) **		(+) **	(−) **		(−) **			
Low															
Low * Strength															
Average				(+) **									(−) **	(−) ***	(−) ***
Average* Strength	(+) **						(+) ***	(+) **						(+) **	(+) **
High	(+) **		(+) **					(−) ***	(−) ***	(+) **	(+) **	(+) **			
High * Strength	(−) **								(−) ***						

Table A-3 illustrates the relationship between *Concern* and firm value, the first column showing the pooled results, indicates that *Concern* has a negative relationship with respect to firm value (‘Quintiles’ and ‘High’ models). Noteworthy is the phenomenon that firms with little *Concern* (‘good’ or responsible firms) are inherently less valuable (‘Quintiles’ and ‘High’ models), these firms also experience a positive marginal relationship between *Concern* and firm value (‘Quintiles’ and ‘High’ models). Interestingly firms that engage in reasonable levels of irresponsible behavior (firms perceived as ‘average’) are inherently more valuable (all models).

Lastly as firms engage in more *Concern*, their marginal relationship between *Concern* and value becomes less negative (‘Quintiles’ and ‘High’ models). This would suggest that firms can only be ‘punished’ for engaging in negative behavior up to a certain point after which more irresponsible behavior does not have a negative impact on the firm.

Column two shows similar results for the manufacturing industry with *Concern* exhibiting a negative relationship in respect to value (Quintile and High). Similarly the marginal relationship is positive for firms with little *Concern* ‘good’ (Quintile and High) and ‘average’ firms experience an inherent increase in value (Quintile and Low), while ‘Bad firms experience a decrease in value (High and Low).Columns three and four indicate that the relationship between *Concern* and value is less clear for the transport and finance industries.

TABLE A- 3

Qualitative Comparison of the Relationship Between Concern and Firm Value Over Different Peer Group Threshold Specifications

Table A-3 reports a reduced form results of the relationship between firm value and Concern employing 3 different specifications over the pooled sample and within each of four industries, defined by 2-digit SIC code, from calendar year 1991 through 2009. Each of the Quint., High and Low columns report the regression results obtained when the 'Quintile', 'High' and 'Low' threshold specifications used, respectively. 'Quintile' defines firms within 5 peer groups based on firms that failed to score and firms that fall in the 40th, 60th and 80th percentiles, 'High' defines firms in 4 peer groups for the firms that failed to score and firms that fall in the 30th, 70th and 90th percentiles and the 'Low' threshold set defines 4 peer groups based on firms that failed to score and firms that fall in 40th, 60th and 90th percentiles.. Peer groups are calculated at the end of each year *t* for each industry *j* and take the value of 1 if a firm falls within that peer group in that year or 0 otherwise. CSR represents the level of CSR undertaken by each firm. Bad, Average and Good approximate for the low, mid and high peer group dummies across the three threshold specifications. We control for year fixed effects and cluster standard errors at the firm level. Tobin's Q is calculated as market value of assets over book value of assets, where market value is equal to total assets plus market equity less book equity at the end of each year t. Size is the log of market capitalization at the end of each year *t* (not reported). Leverage is the total liabilities over total assets at the end of each year t, foreign is foreign sales to sales at the end of each year t, advertising is advertising expense to sales at the end of each year *t*. **(+),(−)** indicate a positive or negative relationship between the variable and Tobin's Q based on the sign of the corresponding coefficient in the regression results. *,**,*** indicate significance levels at the 10%, 5%, and 1% significance level ,respectively.

	Pooled			Manufacturing			Transport			Finance			Service		
Variable	Quint	High	Low	Quint	High	Low	Quint	High	Low	Quint	High	Low	Quint	High	Low
Concern	(−) ***	(−) ***		(−) ***	(−) ***		(−) **					(−) ***		(−) ***	(−) ***
Low	(−) ***	(−) **		(−) ***											
Low*Concern	(+) ***	(+) ***		(+) ***	(+) ***		(+) **							(+) **	
Average	(+) ***	(+) ***	(+) ***	(+) ***		(+) ***							(+) ***	(+) ***	(+) ***
Average*Concern			(−) **			(−) ***				(+) **			(−) **		
High				(−) **		(−) **							(+) ***	(+) ***	(+) ***
High*Concern	(+) **	(+) ***													

Finally the last column, suggests that firms' value, in the service industry, is heavily affected by irresponsible behavior (*Concern*). In step with the results from the pooled and manufacturing columns *Concern* bears a negative relationship with value (High and Low), but 'average' firms tend to experience higher inherent value (all models). More surprisingly 'bad' firms or firms with the highest levels of *Concern* also experience significant increases in value (all models). This would suggest that avoiding irresponsible behavior in the service industry is very costly. Perhaps avoiding irresponsible behavior severely limits economic opportunities for firms. As such, although there might be negative association between *Concern* and value, foregoing certain opportunities might prove costly to firms. Interestingly 'good' firms are not penalized in the service industry, as in the manufacturing industry.

In sum, it is clear that that *Concern* exhibits a much stronger and robust relationship to value compared to *Strength*. Secondly, much of the confounding results exhibited by *Net-CSR* regressions can be explained by the positive relationship, for, between firm value and *Concern*.

A2. Additional Descriptive Statistics

TABLE A2- 1

Financial Descriptive Statistics

Table A2- 1 reports the descriptive statistics for the pooled sample spanning calendar years 1991 to 2009. ('000) indicate figures presented in thousands and (%) indicate figures in a percentage or ratio. EBIT is earnings before interest and tax, ln(Total Assets) is the natural logarithm of total assets, ln(Turnover) is the natural logarithm of volume to shares outstanding, leverage is total liabilities over total assets.

Variable	Obs.	Mean	Std. Dev.	Min	Max
Adjusted Price	1398	$28.45	$49.65	$1.22	$1,235.54
Adjusted Shares ('000)	1398	279032	660597	1563	10246811
Average Monthly Volume ('000)	1398	1147754	3200664	890	66378530
Market Capitalization ('000)	1398	$7,665,915	$19,274,108	$20,282	$276,394,737
Tobin's Q	1377	1.97	1.36	0.73	8.71
ln(Total Assets)	1377	7.78	1.64	3.89	12.14
ln(Turnover)	1398	1.24	0.92	-2.55	5.59
Book to Market (%)	1342	52.91	37.61	4.43	269.07
EBIT to Assets (%)	1376	8.26	9.92	-38.78	35.64
Cash to Total Assets (%)	1377	12.77	15.76	0.00	86.67
Leverage (%)	1374	58.91	24.87	5.50	279.22
R&D over Total Assets (%)	1377	2.56	5.62	0.00	56.37
CAPEX over Total Assets (%)	1377	4.89	5.06	0.00	44.66
Advertising over Sales (%)	443	3.35	7.05	0.00	332.23
Sales Growth (%)	1353	64.19	250.80	-96.96	2144.19

A3. KLD Variable Descriptions

Community

Strengths

Charitable Giving (COM-str-A). The company has consistently given over 1.5% of trailing three year net earnings before taxes (NEBT) to charity, or has otherwise been notably generous in its giving. In 2002, KLD renamed the Generous Giving Strength as Charitable Giving.

Innovative Giving (COM-str-B). The company has a notably innovative giving program that supports nonprofit organizations, particularly those promoting self-sufficiency among the economically disadvantaged. Companies that permit nontraditional federated charitable giving drives in the workplace are often noted in this section as well.

Non-US Charitable Giving (COM-str-F). The company has made a substantial effort to make charitable contributions abroad, as well as in the U.S. To qualify, a company must make at least 20% of its giving, or have taken notably innovative initiatives in its giving program, outside the U.S.

Support for Housing (COM-str-C). The company is a prominent participant in public/private partnerships that support housing initiatives for the economically disadvantaged, *e.g.,* the National Equity Fund or the Enterprise Foundation.

Support for Education (COM-str-D). The company has either been notably innovative in its support for primary or secondary school education, particularly for those programs that benefit the economically disadvantaged, or the company has prominently supported job-training programs for youth. In 1994, KLD added the Support for Education Strength.

Indigenous Peoples Relations (COM-str-E). The company has established relations with indigenous peoples in the areas of its proposed or current operations that respect the sovereignty, land, culture, human rights, and intellectual property of the indigenous peoples. KLD began assigning this strength in 2000. In 2002 KLD moved this strength rating into the Human Rights area.

Volunteer Programs (COM-str-G). The company has an exceptionally strong volunteer program. In 2005, KLD added the Volunteer Programs Strength.

Other Strength (COM-str-X). The company has either an exceptionally strong in-kind giving program or engages in other notably positive community activities.

Concern

Investment Controversies (COM-con-A). The company is a financial institution whose lending or investment practices have led to controversies, particularly ones related to the Community Reinvestment Act.

Negative Economic Impact (COM-con-B). The company's actions have resulted in major controversies concerning its economic impact on the community. These controversies can include issues related to environmental contamination, water rights disputes, plant closings, "put-or-pay" contracts with trash incinerators, or other company actions that adversely affect the quality of life, tax base, or property values in the community.

Indigenous Peoples Relations (COM-con-C). The company has been involved in serious controversies with indigenous peoples that indicate the company has not respected the sovereignty, land, culture, human rights, and intellectual property of indigenous peoples. KLD began assigning this concern in 2000. In 2002 KLD moved this strength rating into the Human Rights area.

Tax Disputes (COM-con-D). The company has recently been involved in major tax disputes involving Federal, state, local or non-U.S. government authorities, or is involved in controversies over its tax obligations to the community. In 2005, KLD moved Tax Disputes from Corporate Governance to Community.

Other Concern (COM-con-X). The company is involved with a controversy that has mobilized community opposition, or is engaged in other noteworthy community controversies.

Corporate Governance

In 2002 KLD renamed the Other category to Corporate Governance in order to better communicate the intent and content of
these ratings.

Strengths

Limited Compensation (CGOV-str-A). The company has recently awarded notably low levels of compensation to its top management or its board members. The limit for a rating is total compensation of less than $500,000 per year for a CEO or $30,000 per year for outside directors.

Ownership Strength (CGOV-str-C). The company owns between 20% and 50% of another company KLD has cited as having an area of social strength, or is more than 20% owned by a firm that KLD has rated as having social strengths. When a company owns more than 50% of another firm, it has a controlling interest, and KLD treats the second firm as if it is a division of the first.

Transparency Strength (CGOV-str-D). The company is particularly effective in reporting on a wide range of social and environmental performance measures, or is exceptional in reporting on one particular measure. In 2005, KLD added the Transparency Strength, which incorporates information from the former Environment: Communications Strength (ENV-str-E) as part of its content.

Political Accountability Strength (CGOV-str-E). The company has shown markedly responsible leadership on public policy issues and/or has an exceptional record of transparency and accountability concerning its political involvement in state or federal-level U.S. politics, or in non-U.S. politics. In 2005, KLD added the Political Accountability Strength.

Other Strength (CGOV-str-X). The company has a unique and positive corporate culture, or has undertaken a noteworthy initiative not covered by KLD's other corporate governance ratings.

Concerns

High Compensation (CGOV-con-B). The company has recently awarded notably high levels of compensation to its top management or its board members. The limit for a rating is total compensation of more than $10 million per year for a CEO or $100,000 per year for outside directors.

Ownership Concern (CGOV-con-F). The company owns between 20% and 50% of a company

KLD has cited as having an area of social concern, or is more than 20% owned by a firm KLD has rated as having areas of concern. When a company owns more than 50% of another firm, it has a controlling interest, and KLD treats the second firm as if it is a division of the first.

Accounting Concern (CGOV-con-G). The company is involved in significant accounting-related controversies. In 2005, KLD added the Accounting Concern.

Transparency Concern (CGOV-con-H). The company is distinctly weak in reporting on a wide range of social and environmental performance measures. In 2005, KLD added the Transparency Concern.

Political Accountability Concern (CGOV-con-I). The company has been involved in noteworthy controversies on public policy issues and/or has a very poor record of transparency and accountability concerning its political involvement in state or federal-level U.S. politics, or in non-U.S. politics. In 2005, KLD added the Political Accountability Concern.

Other Concern (CGOV-con-X). The company is involved with a controversy not covered by KLD's other corporate governance ratings.

Diversity

Strengths

CEO (DIV-str-A). The company's chief executive officer is a woman or a member of a minority group.

Promotion (DIV-str-B). The company has made notable progress in the promotion of women and minorities, particularly to line positions with profit-and-loss responsibilities in the corporation.

Board of Directors (DIV-str-C). Women, minorities, and/or the disabled hold four seats or more (with no double counting) on the board of directors, or one-third or more of the board seats if theboard numbers less than 12.

Work/Life Benefits (DIV-str-D). The company has outstanding employee benefits or other programs addressing work/life concerns, *e.g.*, childcare, elder care, or flextime. In 2005, KLD renamed this strength from Family Benefits Strength.

Women & Minority Contracting (DIV-str-E). The company does at least 5% of its subcontracting, or otherwise has a demonstrably strong record on purchasing or contracting, with women and/or minority-owned businesses.

Employment of the Disabled (DIV-str-F). The company has implemented innovative hiring programs; other innovative human resource programs for the disabled, or otherwise has a superior reputation as an employer of the disabled.

***Gay & Lesbian Policie*s (DIV-str-G).** The company has implemented notably progressive policies toward its gay and lesbian employees. In particular, it provides benefits to the domestic partners of its employees. In 1995, KLD added the Gay &

Lesbian Policies Strength, which was originally titled the Progressive Gay/Lesbian Policies strength.

Other Strength (DIV-str-X). The company has made a notable commitment to diversity that is not covered by other KLD ratings.

Concerns

Controversies (DIV-con-A). The company has either paid substantial fines or civil penalties as a result of affirmative action controversies, or has otherwise been involved in major controversies related to affirmative action issues.

Non-Representation (DIV-con-B). The company has no women on its board of directors or among its senior line managers.

Other Concern (DIV-con-X). The company is involved in diversity controversies not covered by other KLD ratings.

Employee Relations

Strengths

Union Relations (EMP-str-A). The company has taken exceptional steps to treat its unionized workforce fairly. KLD renamed this strength from Strong Union Relations.

No-Layoff Policy (EMP-str-B). The company has maintained a consistent no-layoff policy. KLD has not assigned strengths for this issue since 1994.

Cash Profit Sharing (EMP-str-C). The company has a cash profit-sharing program through which it has recently made distributions to a majority of its workforce.

Employee Involvement (EMP-str-D). The company strongly encourages worker involvement and/or ownership through stock options available to a majority of its employees; gain sharing, stock ownership, sharing of financial information, or participation in management decision making.

Retirement Benefits Strength (EMP-str-F). The company has a notably strong retirement benefits program. KLD renamed this strength from Strong Retirement Benefits.

Health and Safety Strength (EMP-str-G). The company has strong health and safety programs.

Other Strength (EMP-str-X). The company has strong employee relations initiatives not covered by other KLD ratings.

Concerns

Union Relations (EMP-con-A). The company has a history of notably poor union relations. KLD renamed this concern from Poor Union Relations.

Health and Safety Concern (EMP-con-B). The company recently has either paid substantial fines or civil penalties for willful violations of employee health and safety standards, or has been otherwise involved in major health and safety controversies.

Workforce Reductions (EMP-con-C). The company has made significant reductions in its workforce in recent years.

Retirement Benefits Concern (EMP-con-D). The company has either a substantially under funded defined benefit pension plan, or an inadequate retirement benefits program. In 2004, KLD renamed this concern from Pension/Benefits Concern.

Other Concern (EMP-con-X). The company is involved in an employee relations controversy that is not covered by other KLD ratings.

Environment

Strengths

Beneficial Products and Services (ENV-str-A). The company derives substantial revenues from innovative remediation products, environmental services, or products that promote the efficient use of energy, or it has developed innovative products with environmental benefits. (The term "environmental service" does not include services with questionable environmental effects, such as landfills, incinerators, waste-to-energy plants, and deep injection wells.)

Pollution Prevention (ENV-str-B). The company has notably strong pollution prevention programs including both emissions reductions and toxic-use reduction programs.

Recycling (ENV-str-C). The company either is a substantial user of recycled materials as raw materials in its manufacturing processes, or a major factor in the recycling industry.

Clean Energy (ENV-str-D). The company has taken significant measures to reduce its impact on climate change and air pollution through use of renewable energy and clean fuels or through energy efficiency. The company has demonstrated a commitment to promoting climate-friendly policies and practices outside its own operations. KLD renamed the Alternative Fuels strength as Clean Energy Strength.

Communications (ENV-str-E). The company is a signatory to the CERES Principles, publishes a notably substantive environmental report, or has notably effective internal communications systems in place for environmental best practices. KLD began assigning strengths for this issue in 1996, and then incorporated the issue with the Corporate Governance: Transparency rating

Property, Plant, and Equipment (ENV-str-F). The company maintains its property, plant, and equipment with above average environmental performance for its industry. KLD has not assigned strengths for this issue since 1995.

Other Strength (ENV-str-X). The company has demonstrated a superior commitment to management systems, voluntary programs, or other environmentally proactive activities.

Concerns

Hazardous Waste (ENV-con-A). The company's liabilities for hazardous waste sites exceed $50 million, or the company has recently paid substantial fines or civil penalties for waste management violations.

Regulatory Problems (ENV-con-B). The company has recently paid substantial fines or civil penalties for violations of air, water, or other environmental regulations, or it has a pattern of regulatory controversies under the Clean Air Act, Clean Water Act or other major environmental regulations.

Ozone Depleting Chemicals (ENV-con-C). The company is among the top manufacturers of ozone depleting chemicals such as HCFCs, methyl chloroform, methylene chloride, or bromines.

Substantial Emissions (ENV-con-D). The company's legal emissions of toxic chemicals (as defined by and reported to the EPA) from individual plants into the air and water are among the highest of the companies followed by KLD.

Agricultural Chemicals (ENV-con-E). The company is a substantial producer of agricultural chemicals, *i.e.*, pesticides or chemical fertilizers.

Climate Change (ENV-con-F). The company derives substantial revenues from the sale of coal or oil and its derivative fuel products, or the company derives substantial revenues indirectly from the combustion of coal or oil and its derivative fuel products. Such companies include electric utilities, transportation companies with fleets of vehicles, auto and truck manufacturers, and other transportation equipment companies. In 1999, KLD added the Climate Change Concern.

Other Concern (ENV-con-X). The company has been involved in an environmental controversy that is not covered by other KLD ratings.

Human Rights

In 2002 KLD reorganized the presentation of data in the Non-U.S. Operations and Community category. Ratings in the Human Rights area were mostly taken from the former Non-U.S. Operations category.

Strengths

Positive Record in South Africa (HUM-str-A). The company's social record in South Africa is noteworthy. KLD assigned strengths in this category in 1994 and 1995.

Indigenous Peoples Relations Strength (HUM-str-D*)*. The company has established relations with indigenous peoples near its proposed or current operations (either in or outside the U.S.) that respect the sovereignty, land, culture, human rights, and intellectual property of indigenous peoples. In 2000, KLD added the Indigenous Peoples Relations Strength. In 2004, KLD moved the Indigenous Peoples Relations Strength from Community to Human Rights.

Labor Rights Strength (HUM-str-G). The company has outstanding transparency on overseas sourcing disclosure and monitoring, or has particularly good union relations outside the U.S., or has undertaken labor rights-related initiatives that KLD considers outstanding or innovative. In 2002, the Labor Rights Strength was added.

Other Strength (HUM-str-X). The company has undertaken exceptional human rights initiatives, including outstanding transparency or disclosure on human rights issues, or has otherwise shown industry leadership on human rights issues not covered by other KLD human rights ratings.

Concerns

South Africa (HUM-con-A). The company faced controversies over its operations in South Africa. KLD assigned concerns for this issue from 1991 to 1994.

Northern Ireland (HUM-con-B). The company has operations in Northern Ireland. KLD assigned concerns for this issue from 1991 to 1994.

Burma Concern (HUM-con-C). The company has operations or direct investment in, or sourcing from, Burma. KLD started assigning concerns for this issue in 1995.

Mexico (HUM-con-D). The company's operations in Mexico have had major recent controversies, especially those related to the treatment of employees or degradation of the environment. KLD assigned concerns for this issue from 1995 to 2002.

Labor Rights Concern (HUM-con-F). The company's operations have had major recent controversies primarily related to labor standards in its supply chain. KLD started assigning concerns for this issue in 1998, and subsequently renamed it from International Labor Concern. KLD subsequently created the Labor Rights Concern using data from the International Labor Concern. KLD started assigning concerns for this issue in 1998.

Indigenous Peoples Relations Concern (HUM-con-G). The company has been involved in serious controversies with indigenous peoples (either in or outside the U.S.) that indicate the company has not respected the sovereignty, land, culture, human rights, and intellectual property of indigenous peoples. KLD started assigning concerns for this issue in 2000.

Other Concern (HUM-con-X). The company's operations have been the subject of major recent human rights controversies not covered by other KLD ratings.

Product

Strengths

Quality (PRO-str-A). The company has a long-term, well-developed, company-wide quality program, or it has a quality program recognized as exceptional in U.S. industry.

R&D/Innovation (PRO-str-B). The company is a leader in its industry for research and development (R&D), particularly by bringing notably innovative products to market.

Benefits to Economically Disadvantaged (PRO-str-C). The company has as part of its basic mission the provision of products or services for the economically disadvantaged.

Other Strength (PRO-str-X). The company's products have notable social benefits that are highly unusual or unique for its industry.

Concerns

Product Safety (PRO-con-A). The company has recently paid substantial fines or civil penalties, or is involved in major recent controversies or regulatory actions, relating to the safety of its products and services.

Marketing/Contracting Concern (PRO-con-D). The company has recently been involved in major marketing or contracting controversies, or has paid substantial fines or civil penalties relating to advertising practices, consumer fraud, or government contracting. (Formerly: Marketing/Contracting Controversy)

Antitrust (PRO-con-E). The company has recently paid substantial fines or civil penalties for antitrust violations such as price fixing, collusion, or predatory pricing, or is involved in recent major controversies or regulatory actions relating to antitrust allegations.

Other Concern (PRO-con-X). The company has major controversies with its franchises, is an electric utility with nuclear safety problems, defective product issues, or is involved in other product-related controversies not covered by other KLD rating

3. Chapter Three: The Geography of CSR

The relationship between CSR and firm performance currently receives much academic scrutiny. However, much of the cross-sectional variation contained within CSR could be explained by the local culture and community traits inherent at a firm's headquarters. This cultural finance has come to explain much of the cross-sectional variation of corporate finance characteristics. Jiraporn, Jiraporn, Boeprasert and Chang (2013) argue that the observable nature of CSR makes it likely that firms are influenced by their geographic peers when formulating their own CSR policy. They show a significant CSR correlation between surrounding firms and, as a result, use zip codes as an exogenous proxy to evaluate CSR's impact on credit ratings. Similarly, Di Giuli and Kostovetsky (2014) show that firms headquartered in Democratic-leaning states tend to score higher in CSR than Republican-leaning states. We build on these findings and show that while peer influence does impact on a firms CSR profile, socio-economic factors might be driving the location effect to a larger extent. We also expand our study beyond zip codes to more socially meaningful aggregates like Metropolitan Statistical Area (MSA), State, and Regions

The geographic effect is not just limited to CSR. Gao, Ng, and Wang (2011) show that firms exhibit conformity in their financing policies to those of their geographically proximate firms and that the location of firms' headquarters explains some cross-sectional differences of capital structures in the U.S. Similarly a geographic lens is used by: Granovetter (1985) for corporate decisions; Kedia and Rajgopal, (2009) for compensation policy; Mizruchi, Stearns and Marquis (2006) for corporate borrowing; Haunschild (1993) looks into acquisitions; while Marquis, Glynn, and Davis (2007) focus on charitable actions. Stotz (2011) shows that private equity investment is more successful when the target company and private equity are located within the same country versus different countries. Pirinsky and Wang (2006) find stock returns experience co-movement in geographic clusters. Bebchuck and Cohen (2002) document that U.S. states which offer stronger anti-takeover protection are more successful in retaining in-state firms and in attracting out-of-state incorporations. Finally, Card, Hallock, and Moretti (2010) find that attracting and attaining the headquarters of traded firms increase charitable donations to resident charities.

The literature clearly documents a relationship between firm HQ location and corporate behavior. However, the mechanism through which geography effects corporate policies is poorly understood. Stulz and Williamson (2003) address the possibility that geography might proxy for the cultural effect on the finance world. They argue that the religion of a country has a significant effect on the protections afforded to creditors, and that geographic variation in financial characteristics is a manifestation of the cultural differences between areas. Brown, Ivkovic, Smith , and Weisbenner (2008) also document the effect of culture on finance and presents evidence that individual stock ownership is driven by community pressure, which is ultimately a function of the culture of the area. We evaluate what socio-economic factors might be responsible for inducing certain CSR profiles at certain locations. We aim to identify whether the local culture places a greater emphasis on the common good; if advocates are responsible for pressuring management to consider the firm's social impacts; or if managers, who are more connected with employees and their community, are directing corporate policy for social perquisites. Notwithstanding the social or cultural motivations, legal or geographic obstructions might also affect a firm's CSR, and we attempt to disentangle the various effects.

This study adds to the literature and document the impact of culture on CSR and show that better educated and sophisticated societies with a propensity for the common good and a low tolerance of illegal behavior are likely to have resident firms with higher levels of strength behavior and lower levels of concern behavior

Furthermore, we document a tendency for firms to conform within geographic locales, but provide evidence that firms which differentiate along CSR within their community tend to be more valuable. Furthermore, this study indicates that some cities (Austin, Hartford, Minneapolis-St. Paul, Portland, and Seattle) as well as some states (District of Columbia and California) tend to house firms with significantly higher levels of socially responsible behavior, while some regions tend to house firms that engage in more socially destructive behavior (the West South Central region as identified by the US Census Bureau).

Lastly, we show that instrumenting with zip codes might not be ideal proxies for CSR, but that socio-economic indicators are better exogenous proxies for CSR. Lastly we show that, once the effect of omitted variables and firm level heterogeneity is minimized, CSR might actually destroy value, using these socio-indicators as exogenous proxies for CSR.

3.1. Supporting Literature

It is conceivable that the location effect is simply a reflection of a firm's propensity to satisfy local investor preference. Coval and Moskowitz (1999) show that geographic proximity explains a significant part of the portfolio allocation decision, as a relative information advantage exists when investing in local firms. Similarly, US money managers have a home bias preference. This preference is also observed for individual investors Ivkovic and Weisbenner (2005), and Seasholes and Zhu (2010), and on an international level Grinblatt and Keloharju (2000). The clustering of local investors with a specific investment appetite could have an influence on firm policies, creating a clientele effect. Becker, Ivković, and Weisbenner (2011) reveal the presence of one such clientele effect where seniors constitute a larger fraction of the population. This senior citizen effect is associated with an increase in dividend payments and dividend yields. The clienteles driving CSR policies is also considered by Jiraporn, Jiraporn, Boeprasert and Chang (2013)

Consistent with the above literature, the possibility exists that a clientele effect might contribute to the location effect on CSR. If investor preference for local firms is strong enough then firms might structure their corporate actions to satisfy the desires of those investors. Those investors, in turn, would be conditioned by the culture present in that community, indirectly creating a link between the cultural values of the locale and firms located within. We believe our results support this notion, indicating that the level of CSR across firms relates to their geographic location.

The economic relevance of culture was first looked at by Weber (1930), who investigated the protestant reformation and how this cultural change explained the rise of capitalism in Western Europe and America. Due to the subjective nature of CSR, it is highly plausible that the culture of geography could affect a firm's CSR decisions based on the cultural norms which dictate the common good and taboo. Stulz and Williams (2003) draw on religion and language to proxy for culture, explaining the cross-sectional differences in investor protections. As a result, there is a growing body of research focused on the integration of cultural aspects into the analysis of financial problems. For example, Grinblatt and Keloharju (2000) study the cultural effect on stock market investment behavior. They find that stock selections of both institution and household investors are affected by firms' official language and the cultural background of their chief executives, and that cross-country cultural differences are associated with the returns of momentum strategies. Barro and McCleary (2003) find that macroeconomic development has a negative correlation with church attendance across countries. They report that economic growth responds positively to the extent of religious beliefs, notably beliefs in heaven and hell, but negatively to church attendance. Guiso, Sapienza, and Zingales (2003) find that, across countries, religious beliefs are associated with "good" economic attitudes, where good is defined as conducive to higher per capita income and growth.

The United States is a geographically large and diverse country. Culture and other socioeconomic factors vary substantially across regions. Thus, it seems plausible that the location effect is potentially related to the immediate institutional environment or the social context of a firm's location. Yet, it seems intuitive that firms operating in different social environments would exhibit different behaviors. In actuality, firms do not make decisions, people do and what they do outside work is likely to affect the ways they make these decisions at work (Hilary and Hui (2009)). While culture and other social factors can fundamentally shape the value and behavior of corporate managers, social interaction can facilitate culture transmission within a social context. Firm managers' immersion in social networks serves as a major channel of conveying information and ideas about firm behavior (Granovetter (1985)). This proposition can be further justified by two facts. First, firm managers are acknowledged to imprint their mark on a wide range of corporate policies. For example, personal attributes of corporate executives and particularly their management styles can affect acquisition or diversification decisions, dividend policy, interest coverage, and cost-cutting policy (Bertrand and Schoar (2003)). Hence, corporate decision making is, to a certain degree, rooted in firm managers' background.

Second, corporate managers, through both market and nonmarket interactions with peers, can be influenced by network contacts in decision making. Social scientists suggest that analogy plays an important role in perceiving and framing the decision situation, as well as in comparison of the alternatives. This analogy may unify the mechanisms of decision making. Operating in an uncertain environment, firm officials may look to their peers for ideas about appropriate strategies or mimic one another's behavior through direct contact.

Recent studies suggest that social interaction with peers has tangible effects on a wide range of firm activities from adoption of anti-takeover protections (Davis and Greve (1997)), corporate borrowing (Mizruchi, Stearns and Marquis (2006)), acquisition decisions (Haunschild (1993)); to charitable actions (Marquis, Glynn and

Davis (2007)) and political contributions More recently, Kedia and Rajgopal (2009) study the “neighborhood effects” in corporate compensation policy, where the peer effects are clearly location based. They find that firms grant more options to rank-and-file workers when a higher fraction of firms in the local community grant more broad-based options. John and Kadyrzhanova (2008) document robust evidence for peer effects in corporate governance. They find that firms are more likely to adopt anti-takeover protections if other firms headquartered in the same geographic area adopt them and that good governance matters the most for corporate performance and policies when peers have good governance. On investment decisions, Hong, Kubik and Stein (2008) find evidence of “word of mouth” effects on portfolio decisions of mutual fund managers and individual investors, respectively.

The social interaction effect should be especially important for local firms because geographic proximity facilitates face-to-face interaction and makes contact/relationship easier to start and maintain. Furthermore, geographic proximity facilitates observational learning even without direct contact. Simple exposure to the strategies of other firms may prompt firms to adopt similar strategies and to align their activities with those of other firms in the local geographic community. Naturally, we posit that social interaction matters for CSR; that is, firm managers may receive some input from their peers and take this information into account when they make the firms’ CSR decision.

A large body of empirical evidence indicates that local peer group effects have important consequences for a number of economic outcomes, including educational attainment and participation in crime (Case and Katz (1991)). Extending this tract of thought the value of CSR depends on the lack of CSR of neighboring firms. Previous studies have documented peer effects for stock market participation and, more broadly, asset pricing (Brown, Ivkovic, Smith and Weisbenner (2008), Coval and Moskowitz (1999), and Hong, Kubik and Stein (2008)). John and Kadyrzhanova (2008) find anti-takeover protection (ATP) is associated with peer ATP. The adoption of ATP by a firm shifts takeover focus to neighboring firms, thereby increasing the value of ATP to neighboring firms as the level of predation experienced by them has increased. As the effect compounds the few firms without ATP, they become easy targets for takeover. This phenomenon creates geographic clustering due to a local bias for takeovers and a firm's awareness of its relative vulnerability to takeover.

We broaden the reach of this literature by studying peer effects on CSR. Peer effect has two distinct impacts on firm's decision to engage in CSR. Firstly if CSR functions as a channel through which management could extract social perquisites or increase firm value then management would be incentivized to increase the firms CSR relative to neighboring firms. Such an effect would lend itself to geographic clustering based on the value society places on CSR. Societies in which CSR is highly valued would provide significant benefits to managers and/or firms to justify the expense of engaging in CSR. As one firm increases its CSR, other firms in the community would see a drop off in value extracted from CSR, inducing a pressure on other firms to increase their level of CSR.

The second peer effect impact works on a similar basis, but with different results. Assume there is no discernible geographic cross-sectional difference in stakeholders' multi-attribute utility functions but the bias towards local firms is significantly strong. Firms would then be incentivized to diversify along a CSR continuum within a community. As the value extracted from CSR is finite, it would seem plausible that few firms would capture the extreme ends of the CSR spectrum, while most firms would compete for the attention of the majority stakeholders with a moderate appetite for CSR. Therefore, not only would geographic clustering not occur but a geographic scattering might occur, as CSR firms spread geographically to absorb the local appetite for CSR.

This essay is organized as follows: Section II describes the data used in this study along with our variable construction and methodologies employed. Section III presents the initial results of the study, with the subsections expanding on our findings over various robustness concerns. Finally, section IV offers some conclusions and implications of our results.

3.2. Data and Methodology

3.2.1. Data

This study is principally based on the Environmental Social and Governance (ESG) ratings developed by Kinder, Lydenberg, and Domini (KLD), as discussed in section **2.2.1**. The KLD data is matched with data from the Center for Research in Securities Prices (CRSP) for the period beginning 1991 through 2009[23]. We average volume (volume), adjusted price (price), and adjusted number of shares outstanding

[23] Company Name and Ticker is matched between KLD and CRSP for each yearend, as the KLD database focuses on the most prominent US firms very few matching issues arose. In the case of a matching issue Company Name formatting or spelling was usually to blame and manually corrected. Our study matches similar number of firms in line with literature.

(shares outstanding) for each calendar year end *t*. Furthermore, income statement and balance sheet items are obtained by matching the CRSP data with Compustat through CRSPlink.

We define a firm's location as the metropolitan statistical area (MSA) where the firm is headquartered (John, Knyazeva and Knyazeva (2011), and Pirinsky and Wang (2006)). To classify location, we obtain data on State and Zip code of companies' headquarters from Compustat. Using the Zip code we merge the sample firms with the Metropolitan Areas and Components data defined by the Office of Management Bureau (OMB) as of 2005. The OMB defines a MSA according to the degree of social and economic integration between a core population nucleus and adjacent communities. This results in the creation of MSAs that span multiple counties and sometimes multiple states. When controlling for location we include only firms from MSAs with at least 10 sample firms per year, for at least 5 years, allowing no less than 50 firm-year observations per MSA. We obtain demographic information, at the county level and aggregate to the MSA, from the US Census Bureau Census 2000, as it falls exactly in the middle of our sample period.

Cultural variables are obtained from World Value Surveys (WVS) at the regional level. Information relating to charities and charitable receipts are obtained from the Urban Institutes' National Center for Charitable Statistics at county level and aggregated to MSA. Tax data is obtained from the Chief Financial Officer of the District of Columbia's Annual Tax Rates and Tax Burdens Report for the largest city in each state. We apply the information to all firms resident within the state. Crime data is obtained from the US Department of Justice for each district court and aggregated to state level.

3.2.1.1. Dependent Variables

For the first part of our study, responsible behavior (*strength)* and irresponsible behavior (*concern*) (as the constituent parts of CSR) function as our dependent variables, we proxy for CSR using the KLD STATS database, which is widely used.[24] We use the *strength* and concern measures, as defined in section 2.2.1.

We employ Tobin's Q as our measure of performance in the second part of the study. Tobin's Q aims to incorporate the markets' adjustment to the firm's value with respect to CSR's effect on the present value of future cash flows and the value generated from the asset base. In line with literature Bebchuk and Cohen (2005) we compute Tobin's Q as the market value of assets over book value of assets, where market value is equal to book value of assets plus market value of common stock less sum of book value of common stock. Concerns have been raised regarding measurement errors contained in Tobin's Q (for an enlightening discussion see Almeida, Campello and Galvao (2010), Erickson and Whited (2000), and Erickson and Whited (2012)). However, given that Tobin's Q is the dependent variable in our analysis and Greene's (2007) assertion that " …measurement error in the dependent variable can be absorbed in the disturbance of the regression and ignored…", we

[24] See Chatterji, Levine and Toffel (2009), Cho, Lee and Pfeiffer Jr. (2013), Galema, Plantinga and Scholtens (2008), Jiao (2010), Servaes and Tamayo (2013), and Statman and Glushkov (2009) and El Ghoul, Guedhami, Kwok and Mishra (2011) for the use of the KLD dataset.

believe that in the absence of an accessible and well established alternative any measurement errors, if present, should not materially impact our analyses Jiao (2010).

3.2.1.2. Control variables

Drawing on previous work linking Tobin's Q and CSR we include the following control variables in our analysis. Firm size is calculated as the natural logarithm of total assets, leverage is calculated as total liabilities over total assets, and turnover is calculated as the natural logarithm of average monthly volume over shares outstanding at the end of each year *t*. Return on assets (ROA) is calculated as earnings before interest and tax (EBIT) to total assets. Advertising is calculated as advertising expense over sales, research and design (R&D) is R&D expenditure over sales, capital expenditure (CAPEX) is CAPEX over total assets, Finally sales growth is calculated as the change in sales at time *t* with respect to *t-1*[25]. Cash ratio is calculated as cash and marketable securities to total assets at the end of each year *t*.

3.2.1.3. Geographic variables

To account for any location based CSR peer effect we construct two measures. We test whether firms' CSR profile is affected by the CSR activities of their peers. Firstly we examine the effect firms with high levels of CSR have on their peers. We posit that the presence of a firm with high levels of *strength* or *concern* might encourage other firms in the community to increase their level of CSR. We construct the variable CSR_D_{10} to indicate the proportion of firms within a MSA that are ranked

[25] Coded missing advertising, R&D and Capex values to zero to ensure robust sample size ,Himmelberg, Hubbard and Palia (1999).

in the 10th decile nationally (D_{10} being a dummy indicating the tenth decile) and above for either *strength* or *concern* regardless of geographic location. To determine the decile we rank each firm within industry, for each year across all locations and aggregate firms in the 10th decile across industry in each year. Specifically *CSR_*D_{10} is the incidence of D_{10} in geographic area x (excluding firm i). We exclude the incidence of firm *i* being D_{10} when computing the variable. Specifically:

$$CSR\_D_{10} = \hat{E}_i(D_{10}|x) \tag{3-1}$$

where

$$\hat{E}_i(D_{10}|x) = \frac{\sum_{j \in x/[i]} D_{10j}}{N_x - 1} \tag{3-2}$$

*CSR_*D_{10} is the incidence of D_{10} in geographic area x(excluding firm i). Secondly we also model the effect of the average level of *strength* and *concern* (*Group_CSR)* within an MSA, again not including the score of firm *i*.

Specifically:

$$Group_{CSR} = \hat{E}_i(CSR|x) \tag{3-3}$$

where

$$\hat{E}_i(CSR|x) = \frac{\sum_{j \in x/[i]} CSR_j}{N_x - 1} \tag{3-4}$$

To account for investor clientele in a location, we construct three variables *Education*, *Wealth*, and *Sophistication* in line with Gao, Ng and Wang (2011), Pirinsky and Wang (2006). We proxy for local economic development with personal income where *Wealth* is the per capita personal income at the MSA level. We proxy for the financial sophistication of local residents with investment income where *Sophistication* is the per capita investment income at the MSA level. We obtain income data from the Bureau of Economic Analysis. Next we obtain education data, at the county level and aggregate to MSA level, from the U.S Census Bureau Census 2000. The percent of the population over 25 with a bachelor's degree or more proxies for the level of education in an area (*Education)*

In line with Stulz and Williamson (2003), Grinblatt and Keloharju (2000), and Guiso, Sapienza and Zingales (2003), we account for the cultural difference across locations. We define two variables *Protestant* and *Trust*. *Protestant* is the percentage of people who belong to Protestant religions based on the question: "Do you belong to a religious denomination? If yes, which one?". *Trust* proxies for interpersonal and is defined as the percentage of respondents who answered "yes" to the question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" The data is obtained from the World Values Survey. We average for each U.S Census region the survey responses conducted on 1990, 1995, and 2000.

Similar to Hallock and Moretti (2010) and Marquis, Glynn and Davis (2007) we include five variables to account for the effect charities might have on the community. *#Charities* is the number of non-profit organizations registered within an MSA. *Char.Rev/Pop* is the per capita charitable revenue. Specifically the natural logarithm of the total revenue raised by nonprofit organizations in a MSA to resident population within the MSA. *Rev/Char* is the total charitable revenue within a MSA to number of nonprofit organizations. Non-profit organizations are defined as those registered with the IRS that filed Form 990 within 24 months of the database date selected, the information is obtained from the IRS Business Master Files (1995 to 2009) available through the National Center for Charitable Statistics. Resident population is obtained at the zip code level and aggregated to MSA level from the U.S Census 2000. Lastly, we include *Giving*, defined as charitable giving to adjusted gross income by county, aggregated to MSA, as reported on IRS tax return Form 1040, Schedule A, by households that itemize deductions, from IRS Tax Return Summary Files (1997 to 2008), obtained from the National Center for Charitable statistics.

Furthermore, we include tax related data from the annual Tax Rates and Tax Burdens report prepared by the Office of the Chief Financial Officer for the District of Columbia for the years 1997 through 2009. Specifically, we compute the tax regressivity or *Tax Burden*, for each state as the ratio of the estimated burden of major taxes for a hypothetical family of three earning $25,000 to the estimated burden of major taxes for a hypothetical family of three earning $75,000 in the largest city in each state. We posit that tax burdens would indicate the community's propensity to sacrifice personal wealth in the interest of the common good. Specifically a more regressive local tax structure would be indicative of a community where individuals in lower socio-economic circumstances bear a greater share of the tax burden, perhaps signaling the community's unwillingness or inability to constrain the behavior of the wealthier, more powerful, members of the community. Ultimately, such a cultural context could influence firms' CSR decisions.

Lastly, drawing on Case and Katz (1991) we include crime data to account for the community's tolerance of illegal or socially undesirable behavior. *Fraud* is the number of fraud related prosecutions to total prosecutions filed for all U.S. Federal Judicial district courts within a state. *Regulatory* is the number of regulatory related offences prosecuted to total prosecutions filed for all U.S. Federal Judicial district courts within a state. *Tax Offenses* is the number of tax related prosecutions to total prosecutions filed for all U.S. Federal Judicial district courts within a state. *Environmental* is the number of environment related prosecutions to total prosecutions filed for all U.S. Federal Judicial district courts within a state. They are obtained from Bureau of Justice statistics where we utilize the broad categories defined by the Bureau of Justice statistics and code all withheld prosecutions in a district court to five. Table B-1 in Appendix B, section 3.5, displays the list of geographic variables used in this study to reference for convenience.

3.2.1.4. Descriptive Statistics

Table 3-1, Panel A present the financial descriptive statistics for the pooled sample spanning years 1991 through 2009. In addition, Panel B, presents the demographic variable descriptive statistics for the pooled sample spanning calendar years 1991 through 2009, as defined in section 3.5 Appendix B, Table B- 1. As you can see, the incidence of a CSR leader (CSR_D_{10}) is roughly 10 percent while the average level of CSR within the MSA's (Group_CSR) that qualify is slightly higher than the pooled averages at 0.04, for strength and 0.07, for concern. Alternatively, the average difference between firm i's level of CSR and the average within the MSA is negative -0.01, for both strength and concern. The combination for these statistics indicate that the average level of CSR within each city is skewed by the presence of a CSR leader. Moreover, on average 27 percent of residents within the MSA's have an education, bachelor's degree or higher, with an average income of $40, 000 and $7, 000 to invest. Around 30 percent of the MSA's are home to individuals who identify as Protestant and 37 percent of individuals would trust "most" people. On average there are thirty charities per 100,000 people raising $1,235 per person on average each year. However the total amount of charitable revenue raised within an MSA to the number of charities is $4,000,000 on average.

TABLE 3-1

Descriptive Statistics

Table 3-1 Panel A reports the financial descriptive statistics for the pooled sample spanning calendar years 1991 through 2009. (‘000) indicate figures presented in thousands and (%) indicate figures in a percentage or ratio. EBIT is earnings before interest and tax, Ln(Total Assets) is the natural logarithm of Total Assets, ln(Turnover) is the natural logarithm of volume to shares outstanding, leverage is Total Liabilities over Total Assets. Panel B reports the demographic variables descriptive statistics for the pooled sample spanning calendar years 1991 through 2009. (‘000) indicate figures presented in thousands and (%) indicate figures in a percentage or ratio.

Panel A: Financial Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Adjusted Price	26562	$28.66	$58.06	$1	$3561
Adjusted Shares ('000)	26562	204,401	588,845	372	22,900,000
Average Monthly Volume ('000)	26562	1,317,066	5,372,910	189	484,000,000
Market Capitalization ('000)	26562	$5,925,838	$19,900,000	$5,831	$602,000,000
Tobin’s Q	26160	2.00	1.80	0.34	56.98
Ln(Total Assets)	26166	7.43	1.72	3.89	12.14
Ln(Turnover)	26562	1.65	1.09	-4.43	7.74
Book to Market (%)	25503	55.45	43.63	4.41	275.77
EBIT to Assets (%)	26149	6.80	11.91	-50.20	35.64
Cash to Total Assets (%)	26162	16.03	20.01	0.00	99.95
Leverage (%)	26098	57.46	27.83	0.21	771.17
R&D over Sales (%)	26057	8.99	39.25	0.00	331.75
CAPEX over Total Assets (%)	26166	4.49	5.35	0.00	29.38
Advertising over Sales (%)	8694	3.35	7.05	0.00	332.23
Sales Growth (%)	17365	25.34	46.70	-63.53	260.90

Panel B: Demographic Variable Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Strength	26565	0.03	0.05	0.00	0.49
Concern	26565	0.06	0.06	0.00	0.51
Strength CSR_D_{10}	18904	0.0936	0.0943	0	1
Concern CSR_D_{10}	18904	0.0928	0.1014	0	1
Strength Group_CSR	18926	0.0436	0.0211	0	0.2954
Concern Group_CSR	18926	0.0703	0.0253	0	0.3925
Strength Difference	18926	-0.0101	0.0488	-0.2726	0.4319
Concern Difference	18926	-0.0109	0.0615	-0.3925	0.4250
Education	20416	27.7421	8.1008	6.5022	57.1333
Wealth	20364	$40,199	$9,838	$14,515	$80,139
Sophistication	20364	$7,094	$2,551	$1,568	$39,645
Protestant %	20538	30.8835	7.1390	21.3178	44.8980
Trust %	20538	37.4726	3.5794	24.1791	40.2961
# Charities/Pop	20362	3.1230E-04	3.8530E-04	1.4500E-05	4.5461E-03
Ln(Char.Rev)./Pop.	20362	1.2400E-05	1.6100E-05	2.3900E-07	4.1310E-04
Revenue per Charity	20362	4.3363E-02	1.6998E-02	1.2483E-03	1.9082E-01
Average giving %	15257	1.9513	0.5067	0.0000	6.3804
Tot. Char. Rev. (‘000)	20362	$28,700,000	$34,300,000	$1,748	$132,000,000
Tax Regressivity	18790	1.1532	0.3687	0.4409	2.5366
Fraud Prosecutions %	18456	3.2586	1.4479	0.7318	20.6272
Regulatory offenses %	18456	0.1974	0.3172	0.0000	7.3419
Tax Offenses %	18456	0.2089	0.1066	0.0000	1.7015
Environmental Offenses %	18456	0.0307	0.0503	0.0000	0.8213

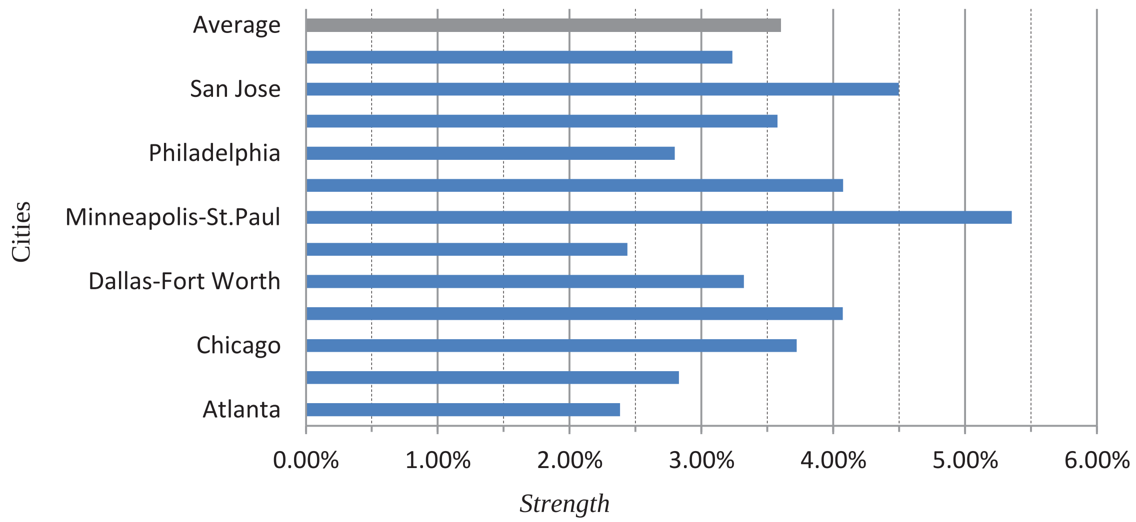

FIGURE 3-1 PERCENTAGE STRENGTH PER METROPOLITAN STATISTICAL AREA. This figure illustrates the differences in strength across the 12 metropolitan statistical areas with at least ten firms resident for ten years during our sample

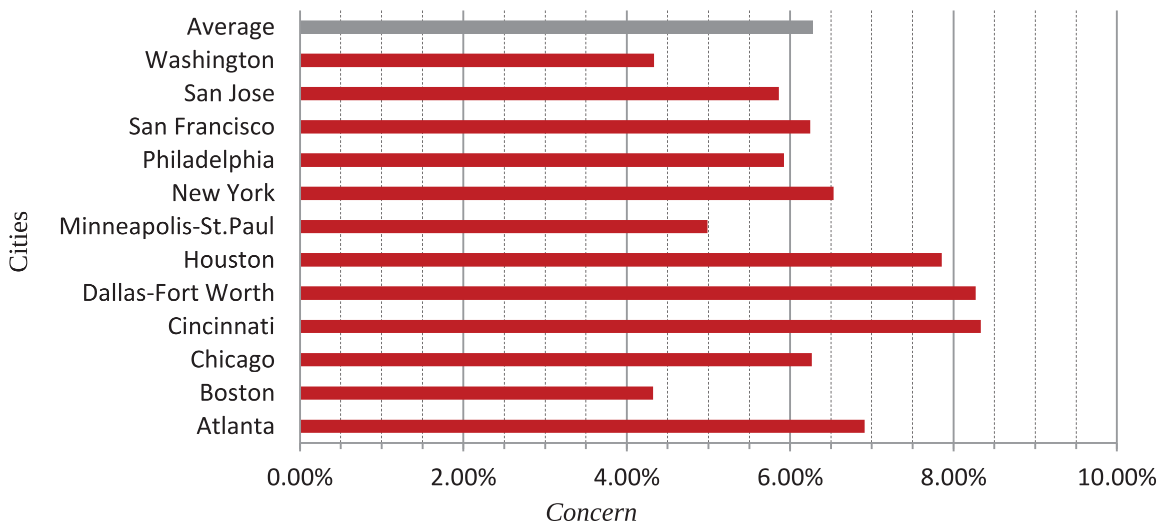

FIGURE 3-2. PERCENTAGE CONCERN PER METROPOLITAN STATISTICAL AREA. this figure illustrates the differences in strength across the 12 metropolitan statistical areas with at least ten firms resident for ten years during our sample

Furthermore individuals contributed around 2 percent of earnings to charity each year, with the average total amount of charitable receipts within an MSA topping $28bn., however the lowest being $1.7 mil. and highest being $132bn.The average MSA has a regressive tax structure with the tax burden being 15 percent greater on families earning $25,000 compared to families earning $75,000. Lastly, fraud prosecutions present the largest shares of offenses reported in our study and are 3 percent of total filings, with environmental offenses the lowest at 0.03 percent. Lastly Table 3-2, Panel A, presents the descriptive statistics of the strength and concern scores for each of the twelve MSAs with at least ten resident firms per year for at least ten years. In addition the averages across the MSAs are presented in Figure 3-1 and 3-2. As can clearly be seen Minneapolis-St. Paul has significantly more strength than the other MSA's, followed by San Jose. Alternatively the southern cities of Atlanta and Houston have quite low levels of strength. The CSR profile of Houston and Minneapolis are quite interesting as both reverse course, in terms of concern, with Houston having some of the highest levels of concern, and Minneapolis-St. Paul with some of the lowest.

TABLE 3-2

CSR Scores Across Metropolitan Statistical Areas

Table 3-2 Panel A Presents the descriptive statistics of the, Strength and Concern scores for each of the twelve metropolitan statistical areas with at least ten resident firms per year for at least ten years. The scores presented are transformed from binary points used by KLD and instead represent a percentage of possible points obtained. The statistics are calculated on the pooled sample, spanning calendar years 1991 through 2009. Panel B reports the joint significance tests for both strength and concern across a number of tests. Specifically Anova tests for equality of means across all metropolitan statistical areas, by strength and concern. Levene tests for homogeneity of variances within each metropolitan statistical area across all the metropolitan statistical areas. Borwn Forsyth modifies the Levene test by substituting medians and ten percent trims. The statistics reported are the joint F-tests, with critical p values beneath.

Panel A: CSR Scores Across Metropolitan Statistical Areas

	Strength		Concern		
MSA	Mean	Std. Dev.	Mean	Std. Dev.	Freq.
Atlanta	0.0281	0.0419	0.0663	0.0611	499
Boston	0.0295	0.0368	0.0430	0.0369	916
Chicago	0.0372	0.0492	0.0627	0.0620	1064
Cincinnati	0.0484	0.0600	0.0742	0.0659	261
Dallas-Fort Worth	0.0342	0.0488	0.0825	0.0752	671
Houston	0.0244	0.0288	0.0786	0.0693	923
Minneapolis-St. Paul	0.0535	0.0590	0.0499	0.0511	575
New York	0.0407	0.0592	0.0653	0.0661	2333
Philadelphia	0.0325	0.0431	0.0601	0.0677	679
San Francisco	0.0381	0.0480	0.0627	0.0594	788
San Jose	0.0465	0.0632	0.0579	0.0392	964
Washington	0.0405	0.0514	0.0422	0.0409	548
Average	0.0375	0.0515	0.0623	0.0608	10221

Panel B: Tests For The Homogeneity Of Variances And Means

Test	Strength	Concern
ANOVA: Equality of means	20.10	30.89
	0.00	0.000
Levene’s test: Homogeneity of variances	8.99	7.086
	0.00	0.00
Brown-Forsyth modification (median)	5.49	5.21
	0.00	0.00
Brown-Forsyth modification (10% trim)	5.85	5.37
	0.00	0.00
N	18359	18359

3.2.2. Methodology

In our analysis we perform a baseline regression by regressing each CSR variable on year end fixed effects, industry fixed effects and control variables. We then include location fixed effects of headquarters and examine the joint significance and explanatory power of firm locations. Specifically we estimate two regressions, in line with Gao, Ng, and Wang (2011):

$$y_{it} = \alpha + \beta_1{}'X_{it} + \delta_{it} + \gamma_{it} + \varepsilon_{it} \tag{3-5}$$

$$y_{it} = \alpha + \beta_1{}'X_{it} + \beta_2{}'L + \delta_{it} + \gamma_{it} + \varepsilon_{it} \tag{3-6}$$

where y_{it} represents the CSR variable, $\beta_1{}'X_{it}$ is the vector of firm-level control variables, $\beta_2{}'L$ is the vector of location fixed effects, δ_{it} and γ_{it} are the year and industry[26] fixed effects, respectfully. $'L$ represents the fixed effects of location, accounted for by a dummy for each sample MSA (Metropolitan Statistical Area), State, or Region, taking the value of 1 if a firm is headquartered there and 0 otherwise. ε_{it} is an error term. In each model we cluster standard errors at the firm level to account for within firm correlation over time.

[26] 2-digit SIC code.

3.3. Results

Table 3-2, Panel B, reports the results of the equality of means and variances tests. Specifically, we test whether the mean *strength* and *concern* scores are jointly equal for all MSAs across our sample. The result of the ANOVA regression strongly rejects this, with the joint F-test significant at p <0.01 or more for both *strength* and *concern*. This confirms the intuition that the level of CSR varies among firms located in different areas, with at least one MSA's CSR statistically different from the other MSAs. Next we test whether the variance around the mean for *strength* and *concern* are homogenous. Specifically, we employ Levene's test for homogeneity around variances Levene (1960) and find the F-test results to be significant at $p<0.01$ for both *strength* and *concern*, rejecting the null of homogenous variance across MSAs. Next, we adjust the Levene test according to Brown and Forsythe (1974) and replace the mean with the median or a 10% trim, to compensate for non-normality. Again we comfortably reject the null of homogeneity across MSAs. Our results indicate that firms headquartered in at least one MSA experience a statistically different level of CSR and/or variance around CSR compared to firms located in other MSAs.

Table 3-3 presents our results from equation (3-5) and (3-6). Models (1) through (4) illustrate the control regression results for *strength* with the addition of MSA, State, and Region fixed effects, respectively. Furthermore, models (5) through (8) present the results for *concern* in the same order. Overall, as expected, the variables indicating a firm's size and ability to access funds *(Size* and *Cash ratio*) are positively and significantly associated with responsible behavior and irresponsible behavior. Bigger firms would naturally have a greater impact on their surroundings, in a both positive and negative fashion.

Visibility and debt (*Turnover and Leverage*) are significant and negative for responsible behavior only, while growth (*Sales growth*) is negative for both *strength* and *concern*. It seems that heavily traded firms (under greater scrutiny) that are financially constrained tend to be associated with lower levels of responsible behavior, and overall growing firms tend to refrain from engaging in CSR as a whole. In line with research, *CAPEX* and *R&D* are positively associated with responsible behavior (Servaes and Tamayo (2013)), albeit only significantly for CAPEX. Inversely, R&D is significantly negative with respect to *concern*. It would seem that R&D might provide firms with the capacity to reduce their irresponsible behavior, or firms with a propensity to innovate also tend to reduce irresponsible behavior, while CAPEX projects provide the firm an opportunity to positively affect the community.[27]

Interestingly, ROA is not significantly associated with *strength*, unless location fixed effects are included, but does have an inverse effect on *concern*. More importantly, the small coefficient for ROA indicates that profitability might not be incredibly important when considering CSR, compared to other factors.

Turning to models (2) through (4) and (6) through (8), the location fixed effects indicate that firms headquartered in Columbus (OH), Jacksonville (FL) , and Tampa (FL) generally have reduced levels of *strength*,[28] similarly the states of

[27] Practically speaking R&D could provide a manufacturing firm the process or technology to reduce emissions while a CAPEX project might need planning consent and as a result would have to consider the social impact of the project.
[28] In contrast with San Diego CA from the Pacific region of the US. As a result the omitted fixed effects are San Diego, CA, and Pacific for MSA, State, and Region respectively.

Florida, Kentucky, Texas, and Ohio, among others, tend to house firms with lower levels of *strength*. The Pacific region of the US tends to house firms with higher levels of *strength* along with the states of North Carolina and Delaware, and the cities of Minneapolis-St. Paul (MN), Seattle (WA) and St. Louis (MO). Boston (MA) and Washington D.C. exhibit marked decreases in the average level of *concern* present within the cities, while Florida, Tennessee and Texas tend to house firms with elevated levels of irresponsible behavior, the elevated irresponsible behavior is carried over to the regions of East South Central and West South Central. We caution the interpretation of the fixed effects, as they are very sensitive to the omitted location in each model. Omitting Minneapolis-St Paul (MN), for example, would generate extremely negative and significant coefficients for most locations when considering *strength*. More importantly, the joint test of significance across all location fixed effect dummies is significant at the $p < 0.05$ or less. Furthermore, the addition of the location fixed effects increases the adjusted R^2 of each regression by around 2 percent. Drawing on this information, it becomes clear that firms located in different areas could engage CSR at differently levels or variances, even over large geographic areas.

TABLE 3-3

Geography and CSR

Table 3-3 reports the regression coefficients for the relationship between CSR and geography from calendar year 1991 through 2009. We control for year fixed effects, industry fixed effects, and cluster standard errors at the firm level. The dependent variable for model one through four is strength and for model five though eight concern. We also incorporate the following control variables. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively. We exclude standard errors for parsimony

Variables	Strength				Concern			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Cash ratio	0.0357***	0.0259***	0.0298***	0.0306***	0.0232***	0.0286***	0.0260***	0.0273***
Size	0.0157***	0.0155***	0.0157***	0.0157***	0.0191***	0.0190***	0.0189***	0.0191***
Turnover	-0.0059***	-0.0063***	-0.0058***	-0.0061***	0.0004	0.0006	0.0003	0.0004
Leverage	-0.0091***	-0.0087***	-0.0084***	-0.0078**	-0.0026	-0.0040	-0.0039	-0.0036
R&D	0.0010	0.0016	0.0012	0.0013	-0.0042**	-0.0042**	-0.0047**	-0.0043**
CAPEX	0.0703***	0.0733***	0.0732***	0.0737***	0.0061	-0.0016	-0.0019	-0.0002
Advertising	0.0907***	0.0860***	0.0878***	0.0879***	0.0201	0.0162	0.0172	0.0210
ROA	0.0001	0.0001*	0.0001*	0.0001**	-0.0002***	-0.0003***	-0.0003***	-0.0003***
Sales growth	-0.0007***	-0.0007***	-0.0007***	-0.0007***	-0.0003*	-0.0004**	-0.0004*	-0.0003*
Atlanta		-0.0060				-0.0008		
Austin		0.0226				-0.0118		
Baltimore		-0.0054				-0.0007		
Birmingham		-0.0093				-0.0164		
Boston		0.0036				-0.0186*		
Bridgeport		0.0112				-0.0182		
Charlotte		-0.0073				-0.0029		
Chicago		-0.0012				-0.0055		
Cincinnati		0.0034				-0.0011		
Cleveland		-0.0141				-0.0153		

Continued

Table 3-3-*Continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Columbus		-0.0191*				-0.0110		
Dallas Fort Worth		-0.0058				0.0065		
Denver		-0.0093				-0.0044		
Detroit		0.0091				-0.0004		
Hartford		0.0144				-0.0184		
Houston		-0.0083				0.0036		
Indianapolis		0.0044				0.0026		
Jacksonville		-0.0199**				0.0049		
Kansas City		-0.0068				-0.0013		
Los Angeles		0.0019				-0.0046		
Memphis		0.0123				0.0073		
Miami		-0.0007				0.0033		
Milwaukee		0.0004				-0.0171		
Minneapolis-St. Paul		0.0168*				-0.0158		
Nashville		-0.0073				0.0090		
New York		0.0016				-0.0040		
Oxnard		-0.0041				-0.0147		
Philadelphia		0.0002				-0.0046		
Phoenix		-0.0059				0.0026		
Pittsburgh		-0.0032				-0.0045		
Portland		0.0129				-0.0196		
Richmond		-0.0086				-0.0130		
Salt Lake City		-0.0070				0.0020		
San Antonio		-0.0141				0.0037		
San Francisco		-0.0007				-0.0173		
San Jose		0.0078				-0.0031		

Continued

Table 3-3-*Continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Seattle		0.0139*				-0.0155		
St. Louis		0.0177*				-0.0107		
Tampa		-0.0163*				-0.0103		
Washington DC		0.0140				-0.0190*		
AL			-0.0148				-0.0079	
AZ			-0.0120**				0.0111	
CO			-0.0147***				0.0040	
CT			0.0061				-0.0096	
DC			0.0216				0.0604	
DE			0.0366***				-0.0240***	
FL			-0.0143***				0.0093*	
GA			-0.0119**				0.0075	
IL			-0.0076				0.0026	
IN			-0.0025				0.0119	
KS			-0.0088				0.0176	
KY			-0.0365***				0.0114	
MA			-0.0088**				-0.0037	
MD			-0.0052				-0.0095***	
MI			0.0030				0.0081	
MN			0.0107				-0.0074	
MO			-0.0140***				0.0068	
NC			0.0723**				-0.0114***	
NH			-0.0093				-0.0004	
NJ			-0.0030				0.0062	
NY			-0.0129				0.0052	
OH			-0.0131**				-0.0009	

Continued

Table 3-3-*Continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OR			0.0062				-0.0149*	
PA			-0.0086**				0.0002	
TN			-0.0057				0.0167**	
TX			-0.0108***				0.0119**	
UT			-0.0060				0.0086	
VA			-0.0045				-0.0020	
WA			0.0111				-0.0006	
WV			-0.0037				-0.0057	
New England				-0.0020				-0.0088***
Mid-Atlantic				-0.0076**				0.0039
East North Central				-0.0088**				0.0029
West North Central				-0.0013				0.0008
South Atlantic				-0.0077**				0.0050
East South Central				-0.0114*				0.0120*
West South Central				-0.0119***				0.0128**
Mountain				-0.0133***				0.0078
Intercept	-0.0606***	-0.0615***	-0.0571***	-0.0553***	-0.0942***	-0.0852***	-0.0926***	-0.0965***
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	14271	14271	14271	14271	14271	14271	14271	14271
adj. R^2	0.282	0.306	0.307	0.288	0.269	0.283	0.286	0.275
MSA (p)		0.0000				0.0043		
STATE (p)			0.0000				0.0000	
REGION (p)				0.0003				0.0020

3.3.1. Locale Characteristics

3.3.1.1. Peer effect

Given the evidence that location could impact or perhaps even drive firms' CSR decisions, we explore potential impacting factors. We test whether firms' CSR profile is affected by the CSR activities of their peers. We specify a pooled OLS model that identifies if a firm headquartered in a given MSA is likely to change their CSR engagement in the presence of firms with extremely high levels (CSR_D_{10}) of *strength* (*concern*) John and Kadyrzhanova (2008). We also include the average level of *CSR* (either *strength* or *concern*) in a city (*Group_CSR*), not including the score of firm *i*; specifically we model:

$$y_{it} = \alpha + \beta_1{}'X_{it} + \beta_2 CSR\_D_{10_{it}} + \beta_3 Group\_CSR_{it} + \delta_{it} + \gamma_{it} + \varepsilon_{i,t} \qquad (3\text{-}7)$$

where y_{it} represents the CSR variable, either *strength* or *concern*, for firm *i*, and $CSR\_D_{10_{it}}$ is the incidence of firms in the tenth decile (for either *strength* or *concern*) within geographic area x (excluding firm i). $Group\_CSR_{it}$ is the average level of *strength* (or *concern*) in a city, not including the score of firm *i*, $'X$ is the set of firm-level control variables, δ_{it} and γ_{it} are the year and industry[29] fixed effects,

[29] 2 digit SIC code

respectively, and $\varepsilon_{i,t}$ is an error term. In each model we cluster standard errors at the firm level to account for within firm correlation over time.

Table 3-4 model one and two report the result of the peer effects in our pooled OLS regression for *strength* and *concern* respectively. The presence of firms with high levels of CSR (CSR_D_{10}) within a MSA appears not to affect the level of *strength* a firm might exhibit, but does tend to associate with irresponsible behavior (*concern*). It would appear that as the number of firms that exhibit extreme levels of irresponsible behavior within a community increases, other firms within the same community tend to engage in higher levels of irresponsible behavior. We posit that the presence of these firms is perhaps indicative of communities who tolerate irresponsible behavior.

Alternatively the presence of highly irresponsible firms might reduce the negative impact of engaging in irresponsible behavior for the other firms in the community, as their level of irresponsible behavior might be overlooked in the presence of truly extreme levels of *concern* behavior. The cost-benefit relationship might be altered around engaging in irresponsible activities as the downside risk is reduced, inducing an increase in irresponsible behavior overall within a community. Furthermore, we examine the impact of the average level of CSR within a MSA on a firm's level of CSR.

Conversely, the evidence suggests that the average level of *strength* behavior could inform firms' decisions around responsible behavior, unlike *concern* behavior which does not share the same relationship. It isn't clear whether firms adjust their CSR in an effort to mimic the CSR of their peers, or whether inherent cultural and legal factors present in the community might induce certain types of responsible or irresponsible behavior. Our results would suggest that the conformity of CSR profiles within locations are not materially dependent on the CSR profiles of other firms within an area. Some relationship does exist, however the inconsistency between *concern* and *strength* results would indicate that the location effect is dependent on other factors beyond firms mimicking each other's CSR profiles

3.3.1.2. Socio-Economic Indicators

In an attempt to explore the local factors that might induce certain CSR activities within a community we specify a pooled OLS model that identifies if a firm headquartered in a given area is likely to alter their CSR engagement in the presence of a number of local characteristics that could potentially explain the geographic effect present in our study. Specifically:

$$y_{it} = \alpha + \beta_1{}'X_{it} + \beta_2{}'Y_{it} + \delta_{it} + \gamma_{it} + \varepsilon_{i,t} \qquad (3\text{-}8)$$

where $'Y$ is a vector of variables controlling for different characteristics of the local area. Specifically for models three and four (clientele effect) $'Y$ represents: *Education*, *Wealth*, and *Sophistication*; for models five and six (culture) $'Y$ represents: *Protestant* and *Trust*; for models seven and eight (goodwill) $'Y$ represents: *#Charities, Char.Rev/Pop., Rev./#Char.*, and *Giving*; for models nine and ten (Tax) $'Y$ represents; *Tax Burden*; and finally for models eleven and twelve (crime) $'Y$ represents: *Fraud, Regulatory, Tax,* and *Environmental.*

Models three and four in Table 3-4 (clientele), model the impact of potential clienteles within a community, all three clientele variables are designated at the MSA level and document the impact education, wealth, and sophistication might have on the level of CSR. Firstly the F-test for joint significance rejects the null for both models three and four, indicating at least one of the variables has a significant impact on CSR. The evidence suggests that more educated communities with greater levels of financial sophistication are associated with firms that engage in higher levels of responsible behavior, while simultaneously engaging in lower levels of irresponsible behavior.

Surprisingly wealthier or economically more developed communities tend to associate with firms engaging in more irresponsible behavior and less responsible behavior. Given investors' preference for local firms, our results would suggest communities where local investors are better educated and have greater access to investment funds tend to house firms engaging in more responsible behavior and less irresponsible behavior. Perhaps in areas where local investors represent a significant portion of firm financing, firms are more sensitive to the impact they might have on the local community. However wealthier communities do not share this phenomenon, perhaps as wealthier individuals are able to insulate themselves from negative phenomena in their environment. Although the coefficients might seem small, bear in mind the dependent variable is a decimal number while some independent variables are in thousands of dollars.

TABLE 3-4

Geographic Demographics and CSR

Table 3-4 reports the regression coefficients for the relationship between CSR geographic and demographics from calendar year 1991 through 2009. We control for year fixed effects, industry fixed effects, and cluster standard errors at the firm level. The dependent variables are strength for odd numbered models and concern for even numbered models. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

	Peer		Clientele		Culture		Goodwill		Tax		Crime	
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Cash ratio	0.0335***	0.0264***	0.0276***	0.0274***	0.0313***	0.0269***	0.0334***	0.0258***	0.0332***	0.0261***	0.0340***	0.0262***
	(0.0046)	(0.0053)	(0.0043)	(0.0048)	(0.0042)	(0.0048)	(0.0042)	(0.0048)	(0.0042)	(0.0048)	(0.0042)	(0.0048)
Size	0.0159***	0.0190***	0.0141***	0.0191***	0.0141***	0.0192***	0.0153***	0.0179***	0.0145***	0.0191***	0.0146***	0.0191***
	(0.0012)	(0.0013)	(0.0010)	(0.0012)	(0.0010)	(0.0012)	(0.0010)	(0.0011)	(0.0010)	(0.0012)	(0.0010)	(0.0012)
Turnover	-0.0059***	-0.0003	-0.0063***	0.0003	-0.0061***	0.0003	-0.0055***	-0.0000	-0.0059***	-0.0001	-0.0059***	-0.0002
	(0.0009)	(0.0012)	(0.0009)	(0.0010)	(0.0008)	(0.0010)	(0.0008)	(0.0011)	(0.0008)	(0.0011)	(0.0008)	(0.0011)
Leverage	-0.0089***	-0.0028	-0.0051*	-0.0057*	-0.0055*	-0.0059*	-0.0060**	-0.0057*	-0.0058**	-0.0059*	-0.0062**	-0.0057*
	(0.0032)	(0.0039)	(0.0028)	(0.0033)	(0.0028)	(0.0033)	(0.0027)	(0.0032)	(0.0028)	(0.0033)	(0.0028)	(0.0033)
R&D	0.0011	-0.0038**	0.0010	-0.0042**	0.0013	-0.0043**	0.0003	-0.0035**	0.0008	-0.0040**	0.0007	-0.0037**
	(0.0013)	(0.0019)	(0.0013)	(0.0017)	(0.0013)	(0.0018)	(0.0013)	(0.0017)	(0.0012)	(0.0017)	(0.0012)	(0.0017)
CAPEX	0.0614***	0.0118	0.0698***	0.0103	0.0684***	0.0103	0.0570***	0.0241	0.0636***	0.0136	0.0607***	0.0144
	(0.0164)	(0.0205)	(0.0153)	(0.0188)	(0.0151)	(0.0185)	(0.0137)	(0.0182)	(0.0147)	(0.0185)	(0.0146)	(0.0186)
Advertising	0.0849***	0.0199	0.0894***	0.0165	0.0932***	0.0137	0.0829***	0.0117	0.0882***	0.0173	0.0908***	0.0124
	(0.0237)	(0.0237)	(0.0248)	(0.0228)	(0.0248)	(0.0225)	(0.0238)	(0.0217)	(0.0246)	(0.0223)	(0.0246)	(0.0224)
ROA	0.0001*	-0.0002***	0.0001**	-0.0003***	0.0001**	-0.0003***	0.0001	-0.0002***	0.0001*	-0.0002***	0.0001*	-0.0002***
	(0.0000)	(0.0001)	(0.0000)	(0.0001)	(0.0000)	(0.0001)	(0.0000)	(0.0001)	(0.0000)	(0.0001)	(0.0000)	(0.0001)
Sales growth	-0.0008***	-0.0004**	-0.0007***	-0.0002	-0.0007***	-0.0002	-0.0008***	-0.0000	-0.0009***	-0.0003	-0.0008***	-0.0003
	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0003)	(0.0001)	(0.0002)	(0.0001)	(0.0002)
CSR_D_{10}	0.0020	0.0312**										
	(0.0150)	(0.0137)										
Group_CSR	0.1423**	0.0077										
	(0.0690)	(0.0669)										
Education			0.0007***	-0.0004*								
			(0.0002)	(0.0002)								
Wealth			-0.0001**	0.0002*								
			(0.0000)	(0.0000)								
Sophistication			0.0001*	-0.0002**								
			(0.0000)	(0.0000)								

Continued

Table 3-4-*Continued*

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Protestant					-0.0251	0.0242						
					(0.0162)	(0.0159)						
Trust					0.0245	-0.0271						
					(0.0287)	(0.0314)						
# Charities							14.501**	-11.69***				
							(5.6511)	(3.300)				
Char.Rev./Pop.							-168.662	35.820				
							(104.10)	(77.50)				
Rev./#Char							0.1538**	-0.0947				
							(0.0631)	(0.0582)				
Giving							0.0420	0.2981				
							(0.1814)	(0.2147)				
Tax Burden									-0.0049**	0.0077***		
									(0.0023)	(0.0028)		
Fraud											-0.0493	0.2568***
											(0.0572)	(0.0619)
Regulatory											0.8126***	-0.5738***
											(0.2611)	(0.2185)
Tax											0.8028	-1.1939
											(0.7195)	(1.0392)
Environmental											1.7722*	0.6850
											(0.9098)	(0.9639)
Intercept	-0.071***	-0.097***	-0.062***	-0.089***	-0.052***	-0.092***	-0.064***	-0.078***	-0.044***	-0.090***	-0.0507***	-0.0881***
	(0.0117)	(0.0121)	(0.0094)	(0.0096)	(0.0158)	(0.0178)	(0.0098)	(0.0103)	(0.0079)	(0.0091)	(0.0086)	(0.0092)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	13045	13045	17883	17883	18033	18033	13718	13718	16564	16564	16256	16256
adj. R^2	0.285	0.269	0.263	0.266	0.257	0.266	0.259	0.258	0.255	0.265	0.257	0.267
Peer	0.0340	0.0219										
Clientele			0.0003	0.0475								
Culture					0.0197	0.0478						
Goodwill							0.0451	0.0000				
Crime											0.0067	0.0003

Models five and six (culture) document the impact of local culture on the level of CSR within a community. Both Protestant and Trust are designated at the regional level. Although each individual variable does not present a significant result the F-test for joint significance rejects the null for both models five and six, indicating at least the sum of the variables has a significant impact on CSR. The joint significance is consistent with literature, furthermore if we control for location both variables become significant.[30]

The link between charities and corporate behavior is documented. Hallock and Moretti (2010) show that charities are able to extract more donations from firms resident within their community. Whether firms increase donations to local charities due to lobbying or the threat of activism, or due to the perquisite benefits management extract from being agents of the benefactor is unclear. However, along with Marquis, Glynn and Davis (2007) it is apparent that the presence of charities within a community can have a notable impact on the behavior of managers and their firms. Models seven and eight include four variables to account for charitable actions within each MSA. We control for the number of charities in the community, the ability of those charities to extract donations from the resident population, the size of the charities, and the generosity of the community. It is evident that the number of charities has a profound impact on the CSR behavior firms exhibit. Charities seem to increase the level of responsible behavior within a community, while also decreasing the level of irresponsible behavior at the same time. Furthermore bigger charities tend to also associate with communities where firms engage in higher levels of responsible

[30] Results not reported for parsimony and available upon request.

behavior. Whether charities and high CSR firms are drawn to the same communities, or whether charities truly affect CSR is unclear, but a definite association exists.

Pinker (2011) makes a convincing argument linking our propensity for the common good and altruistic behavior and our political beliefs. Briefly, the value we place on an egalitarian society and the public good could manifest in the taxation policies we implement. In models nine and ten we include the tax regressivity of state and local taxes. Our results suggest that as the tax burden becomes more regressive, a greater tax burden on the low socio-economic class, the level of responsible behavior of firms reduces. The level of irresponsible behavior in communities exhibited by firms however is positively related to tax regressivity. It would appear that communities where the wealthy are able to reduce their tax burden at the expense of the poor firms engage in less CSR. Individuals in lower socio-economic circumstances bearing a greater share of the tax burden, might indicate communities unwilling or unable to constrain the behavior of the wealthier more powerful members of the community

Lastly, Herrmann, Thöni and Gächter (2008) provide evidence that societies where laws are respected and violence is ceded to the government are more likely to have a propensity towards the common good. In line with this research and following Case and Katz (1991) we include crime data at the state level documenting prosecutions for non-violent crimes that relate most to trust and respect of the environment and legal system. Our results indicate that communities who prosecute environmental offenses and regulatory offenses are also associated with firms that engage in higher levels of responsible behavior. Similarly regulatory offense prosecutions are also negatively associated with irresponsible behavior. Surprisingly prosecutions relating to fraudulent behavior are positively associated with irresponsible behavior. We conclude that this correlation is perhaps driven by the positive association between high levels of crime and high levels of prosecution. Our evidence suggests that communities who prosecute environmental offenses and regulatory infractions are likely to house firms with higher levels of CSR. Supporting the idea that, as a society's faith and respect in the government and law increases, so too does their desire for the common good, which is ultimately translated to the corporate world.

3.3.2. Impact of Geography and CSR on Tobin's Q

We address the impact of peers on firm value next. We hope to understand the financial impact of diversifying along a CSR continuum within a locality. Our previous results indicate heterogeneity around means and variances of CSR across MSAs; moreover, we found that firms tend to adjust their level of CSR in accordance with other local firms. However, is there a financial benefit to mimicking peers' CSR levels? Does diversifying along a CSR continuum in a locale offer any financial benefits?

We specify a pooled OLS model that identifies whether a firm's value is affected by the deviation from the group mean within a locality:

$$y_{it} = \alpha + \beta_1{}'X_{it} + \beta_2 Deviation_{it} + \delta_{it} + \gamma_{it} + \varepsilon_{i,t} \qquad (3\text{-}9)$$

where y_{it} represents the value measure for firm *i*, and

$$Deviation_{it} = (CSR_{it} - Group\_CSR_{it}) \qquad (3\text{-}10)$$

where $Deviation$ is a vector of the difference between the set of $Group\_CSR_{it}$ (from equation (3-4)) and the actual *strength* or *concern* of firm *i* in time t (CSR_{it}). Again, $Group\_CSR_{it}$ is the average level of *strength* (or *concern*) in an MSA, not including the score of firm *i*,.

Table 3-5 presents the results of equation (3-9). We see in model (1) that the effect of deviating from the group average of both *strength* and *concern* is significant and positive. Firms that distinguish themselves along a CSR continuum within a locality experience an increase in value, with the effect more pronounced for responsible behavior. Specifically, a one standard deviation increase in the level of *strength* (*concern)* is associated with a 7.5% (3%) percent increase in Tobin's Q at one percent significance. The considerable differences in CSR quality within each MSA between firms could translate to considerable effects on value. Furthermore, the average level of *strength* and *concern* varies greatly across cities with Minneapolis-St. Paul having twice the *strength* than Houston or Atlanta; conversely Houston has twice

TABLE 3-5

Effect of Geography on Tobin's Q

Table 3-5 reports the regression coefficients for the relationship between CSR and deviating from the CSR norm within a MSA from calendar year 1991 through 2009. We control for year fixed effects, industry fixed effects, and cluster standard errors at the firm level. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

Variables	Basic	MSA	State	Region
	(1)	(2)	(3)	(4)
Size	-0.2574***	-0.2660***	-0.2636***	-0.2574***
	(0.0171)	(0.0165)	(0.0174)	(0.0173)
Turnover	0.1452***	0.1115***	0.1298***	0.1294***
	(0.0176)	(0.0178)	(0.0178)	(0.0177)
Leverage	0.0126	0.1752	0.1330	0.0918
	(0.1605)	(0.1497)	(0.1592)	(0.1598)
R&D	1.3656***	1.3107***	1.3172***	1.3412***
	(0.0750)	(0.0737)	(0.0741)	(0.0746)
CAPEX	1.7914***	1.8475***	1.8795***	1.8899***
	(0.3495)	(0.3405)	(0.3483)	(0.3462)
Advertising	3.4399***	2.7440***	2.7193***	2.9815***
	(0.8752)	(0.8640)	(0.8682)	(0.8688)
ROA	4.8384***	5.0219***	4.9371***	4.9295***
	(0.2542)	(0.2523)	(0.2544)	(0.2556)
Sales growth	0.0229***	0.0223***	0.0221***	0.0216***
	(0.0076)	(0.0075)	(0.0076)	(0.0076)
Deviation strength	2.7348***	3.1639***	3.1461***	2.8631***
	(0.2839)	(0.2897)	(0.2883)	(0.2864)
Deviation concern	0.9651***	0.9760***	1.0461***	0.9743***
	(0.2198)	(0.2173)	(0.2277)	(0.2262)
Intercept	3.3689***	4.0506***	3.6171***	3.5655***
	(0.1293)	(0.2593)	(0.1325)	(0.1316)
Year Effects	Yes	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes	Yes
N	14202	14202	14202	14202
adj. R^2	0.262	0.289	0.277	0.269
MSA		0.0000		
STATE			0.0000	
REGION				0.0000

the level of *concern* than Washington D.C. In models two through four include location fixed effects. The results would indicate that after controlling for location, deviating from MSA CSR levels is not only positively related to firm value, but the magnitude of the effect increases. We suspect that firms with different CSR structures in a community are able to capture a niche within a community and avoid competition in the middle.

It should be obvious that not all investors share a homogenous utility function with regards to CSR. If investors prefer investing in local firms, then by implication the heterogeneous appetite among local investors for CSR should also manifest in local firms. Secondly, cultural and institutional norms in a community can drive firms' CSR to an arbitrary level, beyond the optimal firm specific level. Firms that adopt CSR structures targeted to their preferred investors and stakeholders are able to avoid unnecessary costs, avoid competing with "normalized" firms, and capture a niche within their community by targeting their CSR. Our results indicate the deviation effect is stronger, by a factor of three, for responsible behavior. Not surprisingly, the impact of responsible behavior on firm performance and value is poorly understood.[31]Arguably this uncertainty around *strength* activities would see more heterogeneity among investor appetite for *strength* activities. In due course, the increased dispersion among investor expectation with regard to *strength* activities would increase the value to firms for diversifying away from the cultural norm.

3.3.3. CSR Instruments

The relationship between firm performance and CSR is fraught with endogeneity issues as mentioned earlier. It is difficult to determine if better performance allows firms to engage in CSR or if CSR impacts firm performance. An appropriate exogenous CSR proxy will help to alleviate some of the endogeneity concerns. Flammer (2012b) uses "close call" proposals as a casual estimate of the CSR-CFP

[31] The literature documents the difficulty in perceiving, defining, measuring, and pricing responsible behavior Chatterji, Levine and Toffel (2009), Cho, Lee and Pfeiffer Jr. (2013), Renneboog, Ter Horst and Zhang (2008b), and Servaes and Tamayo (2013)

relationship. Secondly Jiraporn, Jiraporn, Boeprasert and Chang (2013) show a significant CSR correlation between surrounding firms and, as a result, use zip codes as an exogenous proxy to evaluate CSR's impact on credit ratings. Our results thus far have indicated that the CSR profiles of firms are significantly associated with the socio-economic environment in which a firm is headquartered. Our results suggest that zip codes could simply be a proxy these indicators. Following Jiraporn, Jiraporn, Boeprasert and Chang (2013) we use the average CSR score of a firm's MSA peers (*Group_CSR)* as an instrumental variable to estimate the endogenous CSR variables, assuming that group CSR is exogenously determined. Whether peer CSR is a true exogenous proxy for CSR is debatable. If CSR is a reflection of a firm's financial performance then the market and local economic conditions that impact firm *i's* performance should also impact the peers similarly, inducing the same CSR response. Alternatively, we also instrument CSR with the socio-economic indicators evaluated in our study. Our results indicate that certain socio-economic indicators have significant impacts on *strength* and *concern*. We believe these indicators are good exogenous proxies for CSR. Yet, there is another type of endogeneity that could produce a spurious relationship. It is possible that both firm value and CSR are related to certain unobservable firm characteristics that are omitted in the model. We address this potential problem by including fixed-effects in our two-stage analysis, this approach helps alleviate endogeneity due to reverse causality.

Specifically, equation (3-11) takes the following form:

$$y_{it} = \alpha + \beta_1{}'X + \beta_2 CSR\_Instrument_{it} + \delta_{it} + \gamma_{it} + \varepsilon_{i,t} \qquad (3\text{-}11)$$

where y_{it} represents the value measure for firm i, and $CSR\_Instrument_{it}$ is derived in equations (3-12) and (3-13):

$$y_{it} = \alpha + \beta_1{}'X + \beta_2{}'Y + \delta_{it} + \gamma_{it} + \varepsilon_{i,t} \qquad (3\text{-}12)$$

$$y_{it} = \alpha + \beta_1{}'X + \beta_2 Group\_CSR + \delta_{it} + \gamma_{it} + \varepsilon_{i,t} \qquad (3\text{-}13)$$

where y_{it} represents the CSR variable, either *strength* for models (1) and (3) or *concern* for models (2) and (4), for firm i .$'Y$ is a vector of variables controlling for different characteristics of the local area. Specifically $'Y$ represents: *Education*, *Wealth*, *Sophistication*, *#Charities*, *Rev/#Char.*, *Tax Burden*, *Fraud, and Regulatory.*

The results of equation (3-11) are presented in Table 3-6. Models (1) and (2) contain the results from equation (3-12) while models (3) and (4) present the results of equation (3-13). Model (1) presents the impact of *strength*, instrumented with several socio-economic indicators, on Tobin's Q.

TABLE 3-6

Two-Stage Least Squared analysis of the Effect of CSR on Firms Value

Table 3-6 reports the coefficients for the two-stage least squared regression analyzing the relationship between CSR and Tobin's Q from calendar year 1991 through 2009. In models (1) and (2) we instrument *strength* and *concern* with the following variables: *Education, Wealth, and Sophistication, #Charities, Rev/#Char., Tax Burden, Fraud, and Regulatory.* In models (3) and (4) we instrument *strength* and *concern* with the average CSR scores of peer firms within the MSA (Group_CSR). We control for year fixed effects, industry fixed effects. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

	Socio-Economic Factors		Peer CSR	
	(1)	(2)	(3)	(4)
Strength	-54.35***		-2.821	
	(9.562)		(13.24)	
Concern		12.39***		112.3
		(4.178)		(172.1)
Size	-1.046***	-1.214***	-0.997***	-1.792
	(0.052)	(0.040)	(0.041)	(1.212)
Turnover	0.376***	0.3202***	0.358***	-0.068
	(0.033)	(0.028)	(0.030)	(0.650)
Leverage	-0.234*	0.008	-0.072	0.354
	(0.141)	(0.100)	(0.092)	(0.711)
R&D	0.371***	0.351***	0.445***	0.393
	(0.110)	(0.082)	(0.074)	(0.278)
CAPEX	0.808	0.324	0.902**	-3.317
	(0.600)	(0.468)	(0.383)	(6.634)
Advertising	-4.378***	-3.181***	-2.228**	-7.329
	(1.338)	(0.985)	(0.880)	(8.431)
ROA	2.638***	2.989***	3.239***	5.398
	(0.245)	(0.191)	(0.184)	(3.328)
Sales growth	0.014*	0.025***	0.0101*	0.086
	(0.007)	(0.006)	(0.005)	(0.117)
Intercept	10.596***	10.330***	8.458***	12.51**
	(0.362)	(0.266)	(0.227)	(6.241)
Year Effects	Yes	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes	Yes
Fixed Effects	Yes	Yes	Yes	Yes
N	12832	12832	14202	14202
F-statistic	0.000	0.000	0.000	0.000

The results is significant and negative , indicating that firms which engage in socially responsible behavior could potentially do so at the expense of firm value. Secondly, Model (2) presents the impact of *concern,* instrumented with several socio-economic indicators, on Tobin's Q. The results are significant and positive, indicating that firms which engage in socially irresponsible behavior could potentially increase firm value. The results for Models (3) and (4) are insignificant. It suggests that a simple proxy based on location does not significantly relate to Tobin's Q. Our results are in sharp contrast with the findings of recent studies linking CSR with firm value and performance.

3.4. Conclusion

In this study, we posit that a firm's headquarter location is indicative of the socio-economic factors which affect a firm's CSR profile. Our results offer strong evidence that location has a significant effect on the CSR profile of resident firms. We find that firms' CSR levels not only vary significantly across geography, but that each metropolitan statistical area (MSA) experiences significant differences in variance around the mean over their resident firms. Houston has a *strength* standard deviation half that of San Jose, while San Jose has a *concern* standard deviation half that of Dallas-Fort Worth. We find that location has a significant impact on the level of a firm's strength and concern, although the effect is more pronounced for *strength* than *concern*.

We document that the economic, legal, regulatory and charitable demographic differences across geography explain some of the variation in CSR means between metropolitan statistical areas. Charitable behavior is the most significant. Our results indicate that Tobin's Q is affected by firms diversifying along a CSR continuum within their locale. The economic impact of this CSR diversification tends to be positive with firms experiencing small increases in value as they differentiate from the locale mean. More importantly we document the impact of culture on CSR and show that better educated and sophisticated societies with a propensity for the common good and a low tolerance of illegal behavior are likely to have resident firms with higher levels of strength behavior and lower levels of concern behavior.

Lastly we use this knowledge the local socio-economic indicators as exogenous proxies for CSR. In sharp contrast with recent literature, our results indicate that CSR could potentially destroy firm value.

3.5. Appendix B

TABLE B- 1

Demographic Variables Definitions

Table B- 1 reports the definitions and sources of the main demographic and geographic variables employed in the study, for the pooled sample spanning calendar years 1991 through 2009.

Variable	Definition
CSR_D_{10} Strength	Proportion of firms within each firm's MSA with levels of industry adjusted strength in the top decile nationwide. The proportion excludes current firm's level of Strength
CSR_D_{10} Concern	Proportion of firms within the MSA with levels of industry adjusted concern in the top decile nationwide. The proportion excludes current firm's level of concern
$Group\_CSR_{it}$ Strength	Average level of strength present per MSA, excluding firm *i*
$Group\_CSR_{it}$ Concern	Average level of concern present per MSA, excluding firm *i*
Deviation Strength	Difference between firm *i*'s level of strength and the *Group Strength* of firm *i*
Deviation Concern	Difference between firm *i*'s level of concern and the *Group Concern* of firm *i*
Education	Percentage of population over 25 with a bachelor's degree or more per MSA. Obtained from the U.S census Bureau for the year 2000
Wealth	Per Capita personal income at the MSA level. Obtained from the bureau of Economic analysis
Sophistication	Per Capital investment income a the MSA level .Obtained from the bureau of Economic analysis
Protestant	Percentage of people who belong to Protestant based on the question: "Do you belong to a religious denomination? If yes, which one?". Obtained from the World Values Survey. Average per U.S Census region over Survey, conducted on 1990 1995 , and 2000
Trust	Interpersonal trust is defined as the percentage of respondents who answered "yes" to the question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". Obtained from the World Values Survey. Average per U.S Census region over Survey conducted on 1990 1995 , and 2000
# Charities	The number of non-profit organizations registered with the IRS by county aggregated to MSA level that filed Form 990 within 24 months of the BMF database date selected, from IRS Business Master Files (1995 to 2009). Obtained from the National Center for Charitable statistics

Continued

Table B- 1-*Continued*

Variable	Definition
Rev./#Charity	The total charitable revenue within a MSA to number of nonprofit organizations registered with the IRS by county aggregated to MSA level that filed Form 990 within 24 months of the BMF database date selected, from IRS Business Master Files (1995 to 2009). Obtained from the National Center for Charitable statistics
Giving	Charitable giving to adjusted gross income by county as reported on IRS tax return Form 1040, Schedule A, by households that itemize deductions, from IRS Tax Return Summary Files (1997 to 2008). Obtained from the National Center for Charitable statistics
Tax Burden	The ratio of the estimated burden of major taxes for a hypothetical family of three earning $25,000 to the estimated burden of major taxes for a hypothetical family of three earning $75,000. Obtained from the annual Tax Rates and Tax Burdens report prepared by the Office of the Chief Financial Officer for the District of Columbia for the years 1997 through 2009
Fraud	Number of Fraud related prosecutions to total prosecutions filed for all U.S Federal Judicial district courts within a state. Obtained from Bureau of Justice statistics
Regulatory	Number of Regulatory related prosecutions to total prosecutions filed for all U.S Federal Judicial district courts within a state. Obtained from Bureau of Justice statistics
Tax	Number of Tax related prosecutions to total prosecutions filed for all U.S Federal Judicial district courts within a state. Obtained from Bureau of Justice statistics
Environmental	Number of Environment related prosecutions to total prosecutions filed for all U.S Federal Judicial district courts within a state. Obtained from Bureau of Justice statistics

4. CHAPTER FOUR: CSR: THE MYOPIC BAROMETER?

Managers have a fiduciary duty to strategically align firm activities and partake in opportunities that maximizes shareholder wealth. Managers, then, should ensure that their strategies maximize the sum of the expected discounted future profits. As a result the firm discount rate is critical and informs the decisions made by management to strike the appropriate balance between current and future benefits. Unfortunately, an information asymmetry exists between management and shareholders around the true economic position of the firm (Myers and Majluf (1984)), as a result shareholders have a disadvantage when pricing the capital they provide and might require higher returns than might be warranted (Thakor (1990)). This effect could bias the discount rate upward, in turn managers would focus on short-term goals overemphasizing strategies with immediate payoffs (Bebchuk and Stole (1993)) at the expense of strategies with superior but more distant payoffs—that is, they would engage in myopic management (Mizik (2010)).

The incentives and pressures faced by managers may lead to an overemphasis on short-term goals. Earnings projections and failing to meet analysts' expectations could prove punitive. Secondly, managers' personal motivation and compensation structure often incentivize stock price gains (Grant, King and Polak (1996)). This creates an incentive to manipulate the signals they send to the stock market in an attempt to inflate the stock price.

Managers, can manipulate performance signals (Stein (1989)) through accounting based earnings management (discretionary accruals manipulation) (Healy and Wahlen (1999)). While such practices have negative consequences for a firm when uncovered (DuCharme, Malatesta and Sefcik (2004)), they do not affect the foundations of firm business performance and do not alter either the amount or the temporal flow of true economic profits.

Conversely, myopic management, such as: ignoring stakeholder and corporate social responsibility interests (CSR), foregoing capital expenditure projects (Capex), underinvesting in research and development (R&D), and cutting advertising (Mktg.) will affect the firm's economic position. The change in economic position will alter the flow of expected true economic profits. Myopic management involves altering operational practices that directly affect the business process. When initiated at the top organizational level, myopic management poses particular challenges. This short-term focus could lead to underinvesting in the long run (for exceptions see Bebchuk and Stole (1993)) especially in research and development (Chan, Martin and Kensinger (1990)), advertising (Mizik (2010)), and capital expenditure (Burton, Lonie and Power (1999), Chung, Wright and Charoenwong (1998), and McConnell and Muscarella (1985)). In turn myopia could affect economic profits. As a result myopic management poses a risk to the firm as this anemia could undermine the firm's position in the market place.

Myopic management is not exclusively limited to performance incentives but could also stem from takeover threats (Stein (1989)), momentum trading (Bushee (1998)), and institutional ownership (Bushee (1998), and Wahal and McConnell (2000)).

We believe that the factors driving management myopia in capital expenditure, R&D and marketing, could also affect management's decisions relating to CSR (Brammer, Brooks and Pavelin (2006), Brammer and Pavelin (2006), and Harris and Raviv (1996)). Incentive and market pressures on management to massage earnings can induce management to reduce investment in these discretionary activities. Evidence suggests marketing intensity is especially sensitive to myopic investment (Deleersnyder, Dekimpe, Steenkamp and Leeflang (2009), Graham, Harvey and Rajgopal (2005), and Lamey, Deleersnyder, Dekimpe and Steenkamp (2007)). Considering the close links between CSR and advertising (Servaes and Tamayo (2013)) it seems plausible that myopic managers would reduce CSR investment accordingly. Under investment in CSR could lead to increases in the cost of equity (El Ghoul, Guedhami, Kwok and Mishra (2011)), a reduction in firm value (Jiao (2010)), or a loss of performance (Flammer (2012a)).

More importantly, CSR is considered a proxy for good management, due to the strategic and long-term nature associated with CSR. CSR should, as a proxy for good or non-myopic managers, be associated with a significant reduction in myopia across advertising, R&D, and capital expenditure. The key objective of the current study is to assess the market's ability to properly value CSR in the face of myopic management and to quantify financial consequences of myopia. Specifically, this study examines the consequences of cutting support for socially responsible activities or increasing irresponsible activities when a firm experiences enhanced financial performance. The current study is a large sample attempt to assess consequences of firm level myopic management and the importance of CSR. The context free firm level setting allows for broad generalizations about the financial market's ability to properly value firm strategies and about the consequences of myopia. Our results indicate that myopia does impact firms' risk adjusted performance; however the market might struggle to immediately recognize management myopia. We also show that CSR, specifically concern, is a good indicator of other forms of myopia and that the market has a better ability to recognize CSR myopia.

4.1. Additional Literature

Stock price based compensation and incentives for management will result in efficient managerial decisions in the absence of information asymmetry. However, in the presence of information asymmetries the economic outcomes differ significantly from the outcomes of the perfect information models. Under information asymmetry, compensation linked to stock market performance can incentivize managers to manipulate stock prices rather than maximize shareholder wealth.

Troublingly, managers can take actions the principal cannot observe. Narayanan (1985) and Stein (1989) show that managers have the ability to manipulate the earnings flow at the expense of long-term prosperity. The principal might observe the distorted earnings but cannot allot the reported numbers into the 'true' and 'distortion' components. This reduces the principal's ability to use current reported earnings as predictors of future financial performance as these could come at the expense of future performance. Managerial incentives to engage in myopia and manipulate current earnings increase with the importance managers attach to their current period earnings and current stock price.

If managers hold private information, myopic management could occur even if the principal is able to perfectly observe the manager's actions. The stock market may try to infer the private information managers have from firm actions; some managers might manipulate their actions to create a favorable market reaction through signaling. Introduced by Spence (1973), signaling models provide a framework that demonstrates how private information can lead to myopia. The market has difficulty determining the true economic prospects of firms. However, the market can infer economic prospects from the firm's investment level (Bebchuk and Stole (1993), Bizjak, Brickley and Coles (1993), and Trueman (1986)) or by a specific project type (Hirshleifer, Chordia and Lim (2001)). Investment decisions act as a signal to the market about the firm's economic state. However, firms with poor prospects have an incentive to mimic the behavior of good type firms to extract short-term stock market gains. Depending on circumstance, myopic incentives can lead to over/underinvestment or result in a suboptimal choice of a particular project type. Milgrom and Roberts (1992) comment that, in general, managers "put too much emphasis on activities that boost short-term performance compared to those whose benefits will be hidden."

The signaling behavior of myopic firms will distort the market equilibrium forcing good firms to invest at an even greater level (lower in the case of better efficiency) to separate themselves from the bad firms. At the extreme, good firms will be unable to credibly signal economic prospects. Akerlof (1970)'s lemon's market mechanism shows under these circumstances good firms will completely forgo an appropriate opportunity, if it requires equity finance (Myers and Majluf (1984)).

Regardless of firms economic position managers have better information or a better ability to evaluate available strategic options than outsiders, allowing myopia to occur even in firms with 'good' prospects. The market uses available public information and forms a general opinion about the best course of actions for a firm as managers cannot credibly reveal their better private information about the firm prospects. Managers incentivized by stock price, may choose projects the stock market believes are in the best interest of the firm (Brandenburger and Polak (1996)) rather than acting on their better private information and making optimal investments for the firm.

Bizjak, Brickley and Coles (1993) maintain that managers with a greater incentive to maximize current stock price relative to future profits and future stock price are more likely to engage in signal jamming. They also argue that myopia will increase as the probability of the manager departing or retiring from the firms increases.

4.2. Hypothesis

We believe that the factors which inform managements' decisions regarding marketing, R&D, and capital expenditure also inform CSR decisions. Furthermore, we believe that many CSR related activities are interconnected, or part of, the aforementioned activities. As a result we believe that CSR will be positively correlated with advertising, R&D, and capital expenditure.

H_1: The level of CSR within a firm is positively correlated with advertising, R&D and capital expenditure.

As discussed, incentives for myopic behavior increase with the market's inability to recognize and evaluate the long-term consequences of managerial actions. Managers' choice of tools and strategy to obfuscate myopia is also driven by the market's ability to recognize the impact of these tools and strategies on firms' long-term performance. These informational concerns are particularly pertinent when considering mangers choice to engage in CSR. The evidence within our literature suggests that CSR is inherently mispriced by the market (Kempf and Osthoff (2007 Statman, 2009 #172, Renneboog, Ter Horst and Zhang (2008a)). Fortunately, timely accurate CSR disclosure or increased visibility in part reduces these asymmetries (Dhaliwal, Radhakrishnan, Tsang and Yang (2012 , Ramchander, Schwebach and Staking (2012)). Notwithstanding these issues, market participants face heterogeneous search costs and processing ability relating to CSR. These differences are compounded by the heterogeneous utility functions among investors (stakeholders) (Bollen (2007)). As a result, the asymmetric information or information opacity around CSR (Cho, Lee and Pfeiffer Jr. (2013)), coupled with the market's heterogeneous capacity and desire to price the complexities of CSR, could undermine the assumption that all aspects of CSR are uniformly, timely, and linearly priced.

This presents a particular concern when considering myopic behavior by management, as the markets inability to price CSR allows managers to underinvest in CSR for short-term gains with potential long-term consequences. Even if CSR information were perfectly symmetric and freely accessible by market participants, the participants' reaction or non-reaction to the information would be heterogeneous depending on their utility function and the relative score of the firm's CSR. We posit that the asymmetry present in the market's ability to search, process, and value CSR would distort the relationship between CSR and stock price reaction even further.

Do market participants recognize that firms cutting discretionary activities at the same time as they are reporting increased earnings might be engaging in myopic management? And that these increased earnings might not be indicative of improved future prospects but might instead be coming at the expense of future performance? If market participants can determine the quality of reported earnings, they should value those earnings systematically lower for those firms with discretionary cuts. If CSR is a proxy for good management, as well as being interconnected with other discretionary investments then CSR should be a good indicator of myopic management. We expect if investors use CSR information to form expectations about a firm's future performance and current state of management, then they are expected to appreciate the possibility that firms cutting CSR investment at the same time as they are reporting increased earnings might be engaging in myopic management. And that these increased earnings might not be indicative of improved future prospects but might instead be coming at the expense of future performance. If market participants indeed appreciate this possibility and realize that the "quality" of reported earnings might be lower for firms cutting CSR, they will value such earnings systematically lower than those of other firms with increased profitability.

H_2: Same-year stock returns for firms with myopic CSR will be lower than returns for other firms with increased profitability

Investors might not appreciate the long-term consequences of CSR cuts or cannot recognize management myopia as it occurs but do so only in the future, when the consequences of spending cuts have affected future profits. If investors struggle to recognize CSR myopia initially and only adjust and incorporate the information in subsequent years; does the potential future negative adjustment outweigh the benefits of higher valuation in the initial period? To the extent that the stock market participants do not fully and immediately appreciate the trade-off between CSR and the reported earnings, or do not fully appreciate the long-term consequences of CSR, there will be a systematic future-term negative adjustment in the valuation of myopic firms.

H_3: Future stock returns will be lower for firms with myopic CSR at the time they reported increased earnings than the future stock returns for other firms.

It should follow that a management team ethically inclined to reduce the firm's negative impact on society, would potentially face a moral conflict with regard to any earnings manipulation. We believe that the factors driving management myopia in capital expenditure, R&D and marketing, could also affect management's decisions relating to CSR. Incentives and market pressures on management to massage earnings can induce management to reduce investment in these discretionary activities. Considering the sensitivity of discretionary expenditures to myopic investment and the close links between CSR and other discretionary activities it seems plausible that myopic managers would reduce CSR investment in accordance with other discretionary activities. If CSR is a proxy for good management, as well as being interconnected with other discretionary investments then CSR should be a good indicator of myopic management. Alternatively, if CSR is not given the same level of consideration as other discretionary expenditures but, rather is a downstream consequence of upstream discretionary expenditure, then CSR might act as the "canary in the coal mine" indicating a reduction in discretionary expenditure as firms'

CSR profiles degrade. CSR should, in either case, be associated with a significant reduction in myopia across marketing, R&D, and capital expenditure. We believe that CSR could act as a myopic barometer potentially signaling myopic behavior.

H_4: An increase in CSR will be associated with a reduction in managerial myopia.

4.3. Data & Methodology

This section is also principally based on the Environmental Social and Governance (ESG) ratings developed by Kinder, Lydenberg, and Domini (KLD), as discussed in section 2.2.1. The KLD data is matched with data from the Center for Research in Securities Prices (CRSP) for the period beginning 1991 through 2009. We average volume (volume), adjusted price (price), and adjusted shares outstanding (shares outstanding) for each calendar yearend *t*. Furthermore, income statement and balance sheet items are obtained by matching the CRSP data with Compustat through CRSPlink. Size is calculated as the natural logarithm of total assets, leverage is calculated as the total liabilities over total assets, turnover is calculated as the natural logarithm of average monthly volume over shares outstanding at the end of each year *t*. Return on assets and return on equity are calculated as earnings before interest and tax (EBIT) to total assets, and EBIT to book equity, respectively. Tobin's Q is calculated as market value of assets over book value of assets, where market value is equal to total assets plus market equity less book equity. The interest rate is interest expense to total liabilities. Marketing intensity is selling general and administrative expenses less research and development R&D expenses over total assets. R&D

intensity is R&D expenditure over total assets, capital expenditure intensity (capex) is capex over total assets. Finally sales growth is calculated as the change in sales at time *t* with respect to *t-1*.[32] To estimate the risk adjusted stock returns we employ The Fama and French (1993), (1996) three-factor plus momentum Carhart (1997) model to compute compounded abnormal yearly returns from the current year $t = 0$ weekly returns.

Specifically compounded abnormal stock return (CAR) is:

$$CAR_{it} = log \sum_{w=1}^{52} = [1 + (ret_{iw} - expRet_{iw}) \qquad (4\text{-}1)$$

where

$$expRet_{iw} = \hat{\beta}_{it}\left(Ret_{Market,w} - Ret_{Riskfree,w}\right) + \hat{s}_{it}(SMB_w)$$

$$+\hat{h}_{it}(HML_w) + \widehat{m}_{it}(MOM_m) \qquad (4\text{-}2)$$

[32] Coded missing values to zero to ensure robust sample size, results are not affected.

and $\hat{\beta}, \hat{s}, \hat{h}$, and $\hat{m}$ come from estimating The Fama and French (1993), (1996) three factor model augmented with momentum (Carhart (1997)) factor[33], for each firm *i*, in year *t*:

$$\left(Ret_{i,w} - Ret_{Riskfree,w}\right) = \alpha + \beta_{it}\left(Ret_{Market,w} - Ret_{Riskfree,w}\right)$$

$$+s_{it}(SMB_w) + h_{it}(HML_w) + m_{it}(MOM_m) + \varepsilon_{i,w} \quad (4\text{-}3)$$

Lastly, we proxy for CSR using the KLD STATS database. We use the strength and concern measures, as defined in section **2.2.1**. Table 4-1 shows the financial characteristics of the firms. These statistics expand on those in Chapter Two and Three with the addition of Marketing Intensity, R&D Intensity, CAPEX intensity, raw return, and CAR. The statistics show that firms' marketing related expenditure, on average, totals around 21 percent of assets, while R&D and Capex expenditure hovers around three and four percent, respectfully. As expected the CAR is negative for most firms, while their raw returns are positive.

[33] Retrieved from Kenneth French's online data library available at http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.

4.3.1. Methodology

To identify myopia we focuses on the group of firms that simultaneously report greater-than-normal operating profits (return on assets) and lower-than-normal of either marketing intensity (Mktg), R&D intensity, capital intensity (Capex), or CSR that is, firms with $\left(ROA_{it} - \widehat{ROA}_{it|it-1}\right) > 0$, $\left(Mktg_{it} - \widehat{Mktg}_{it|it-1}\right) < 0$, $\left(R\&D_{it} - \widehat{R\&D}_{it|it-1}\right) < 0$, $\left(Capex_{it} - \widehat{Capex}_{it|it-1}\right) < 0$, and $\left(CSR_{it} - \widehat{CSR}_{it|it-1}\right) < 0$, where $\widehat{ROA}_{it|it-1}$, $\widehat{Mktg}_{it|it-1}$, $\widehat{R\&D}_{it|it-1}$,$\widehat{Capex}_{it|it-1}$, $\widehat{CSR}_{it|it-1}$ reflect the normal or expected level of profitability, marketing intensity, R&D intensity, capital expenditure, and CSR for firm *i* in period *t*, respectively. These are the firms that might be decreasing their marketing, R&D, Capex, and CSR spending with the intention to inflate reported earnings. To identify potentially myopic firms, it is first necessary to determine the "normal" or expected level of the above mention factors for each firm for each period. The following models represent the intuition behind estimating normal levels of firm earnings, marketing intensity, R&D intensity, Capex intensity, and CSR

TABLE 4-1

Financial Descriptive Statistics

Table 4-1 reports the descriptive statistics for the pooled sample spanning calendar years 1991 through 2009. (‘000) indicate figures presented in thousands. EBIT is earnings before interest and tax, Ln(Mcap) is the natural logarithm of market capitalization, ln(Turnover) is the natural logarithm of volume to shares outstanding.

Variable	Obs.	Mean	Std. Dev.	Min	Max
Adjusted Price	26565	$28.66	$58.06	$1	$3561
Adjusted Shares ('000)	26565	204,401	588,845	372	22,900,000
Ave. Month Volume ('000)	26565	1,317,066	5,372,910	189	484,000,000
Market Cap. ('000)	26565	$5,925,838	$19,900,000	$5,831	$602,000,000
Raw return	24501	0.05	0.50	-4.77	3.26
CAR	24501	-0.11	0.24	-12.97	0.05
Ln(Total Assets)	26166	7.43	1.72	3.89	12.14
ln(Turnover)	26565	1.65	1.09	-4.43	7.74
Tobin’s Q	26163	2.00	1.80	0.34	56.98
Book to Market	25503	0.55	0.44	0.04	2.76
Total Liabilities/Total Assets	26101	0.57	0.28	0.00	7.71
EBIT to Assets	26152	0.07	0.17	-12.48	1.95
EBIT to Equity	26145	0.20	5.66	-568	324
R&D to Sales	26057	0.09	0.39	0	3.32
Advertising to Sales	8694	0.03	0.07	0.00	3.32
Sales growth	25713	0.49	2.64	-0.99	21.53
Marketing Intensity	21063	0.21	0.21	-0.37	2.62
R&D Intensity	26166	0.03	0.08	0	1.17
CAPEX intensity	26166	0.04	0.06	0	0.74

$$ROA_{it} = \alpha_{roa} + \phi_{roa} ROA_{it-1} + \beta_{roa} Controls_{it} + \psi_t + \delta_i + v_{it} \tag{4-4a}$$

$$Mktg_{it} = \alpha_{mktg} + \phi_{mktg} Mktg_{it-1} + \beta_{mktg} Controls_{it} + \psi_t + \delta_i + v_{it} \tag{4-4b}$$

$$R\&D_{it} = \alpha_{r\&d} + \phi_{r\&d} R\&D_{it-1} + \beta_{r\&d} Controls_{it} + \psi_t + \delta_i + v_{it} \tag{4-4c}$$

$$Capex_{it} = \alpha_{capex} + \phi_{capex} Capex_{it-1} + \beta_{capex} Controls_{it} + \psi_t + \delta_i + v_{it} \tag{4-4d}$$

$$CSR_{it} = \alpha_{csr} + \phi_{csr} CSR_{it-1} + \beta_{csr} Controls_{it} + \psi_t + \delta_i + v_{it} \tag{4-4e}$$

where $v_{it} = \varepsilon_{it} + u_{it}$ and i =1,….N, t =1,….T. Furthermore, i represents the cross-sectional units, t represents the time periods. ROA_{it}, $Mktg_{it}$, $R\&D_{it}$, $Capex_{it}$, and CSR_{it} are profitability, marketing intensity, R&D intensity, capital expenditure intensity, and CSR (either *Strength* or *Concern*) respectively, for firm i in period t, and α_{roa}, α_{mktg}, $\alpha_{r\&d}$, α_{capex} , and α_{csr} are the firm-specific intercepts; ϕ are the estimates of persistence for each dependent variable using their lagged values ROA_{it-1}, $Mktg_{it-1}$, $R\&D_{it-1}$,$Capex_{it-1}$, CSR_{it-1}. $Controls_{i,t}$ are a series of control variables including *Size* (logarithm of total assets), *Leverage* (total liabilities to total assets), *Sales-growth* (sales in time *t* with respect to sales in *t-1* over sales in *t-1*), *Mktg.*(selling, general, and administrative expenses less R&D expenses to total assets), *R&D* (R&D expenses to total assets), *Capex* (capital expenditure to total assets), *strength*, and *concern* (as defined earlier). Naturally, for each set of equations, the dependent variable will not be included in the list of the control variables. ψ_t is the time specific effect; δ_i accounts for the industry specific effect. Assuming fixed effects, the cross-sectional error term,v_{it}, contains the following two effects: (1) the unobserved time-invariant, firm-specific effect, ε_{it}, and (2) a stochastic error term, u_{it}, varying across time and cross-section. The time-specific effect is included to capture aggregate shocks, which may appear in any year, similarly the industry effect captures industry specific heterogeneity. The firm-specific effect, ε_{it}, is included to capture firm-specific differences, such as managerial ability, geographical location, and other unobserved factors. The unobserved firm-specific effect, ε_{it}, is correlated with the explanatory variables but not with the changes in the explanatory variables. We assume the vector of control variables to be endogenous with regard to the dependent variable, with only the time and industry effects treated as exogenous.

In order to obtain consistent and efficient parameter estimates of our model specified in equation (4-5), we use the system general method of moments (GMM) approaches originally proposed by Arellano and Bover (1995) and Blundell and Bond (1998), (2000). The GMM method allows for a number of advantages: it exploits the time series element of the data; it controls for firm-specific effects, like the fixed effect method; it also allows for the inclusion of lagged dependent variables as regressors; and controls for the endogeneity of all explanatory variables. The GMM is designed for panel data, which is a cross-section of data over time. As a result of including the time-series dimension of the data, degrees of freedom increase.

The GMM can be used when: (1) N is large but T is small; (2) the explanatory variables are endogenous; and (3) unobserved firm-specific effects are correlated with other regressors. Other estimators do not seem to be as effective. The within-groups estimator results in biased upward parameter estimates in a panel of short length. This occurs since the new lagged dependent variable, after the subtraction of the variable means and the new independent variables after the subtraction of the variable means, is correlated with the new error term. In this case, the Ordinary Least Squares (OLS) estimator continues to be biased, even when firm-specific effects are eliminated through first differencing. If the number of years in the panel data is small, the problem with this estimator is even more distinct.

Arellano and Bond (1991) show that the following moment conditions hold for the equations in first differences, under the assumption that $u_{i,t}$, is not serially correlated and explanatory variables are endogenous:

$$E(\Delta u_{i,t} y_{i,t-r}) = 0;\ E(\Delta u_{i,t} x_{i,t-r}) = 0; \text{ where } r = 2,\ldots,t\text{-1 and } t = 3,\ldots,T$$

These conditions make it possible to use, as instrumental variables for the equations in first-differences, lagged values of endogenous variables dated t-2. The first differenced GMM estimator is a more efficient estimator than the Anderson and Hsiao (1982) estimator, according to Arellano and Bond (1991).There is another issue with the first-differenced GMM. If lagged dependent variables and explanatory variables are persistent over time, the lagged levels of these variables, the internal instruments, are weak. This causes a large finite sample bias and weak accuracy.

In response to the weaknesses of the first-differenced GMM, Arellano and Bover (1995) propose the System GMM. This method reduces the biases found in first-differenced GMM and improves its precision, as noted by Blundell and Bond (1998). The reason for these improvements lies in the incorporation of the regression in levels. Variables in levels imply a stronger correlation with the instruments, but a drawback is that firm-specific effects cannot be controlled for. Additional specific instruments must be added to remedy this potential bias. The system GMM uses lagged differences of the independent variable as instruments. The correlation between the error term and levels of explanatory variables is constant over time. This implies that the instruments are valid.

$$E[X_{i,t+p} * u_i] = E[X_{i,t+q} * u_i], \text{ for all } p \text{ and } q$$

In order to maintain the validity of these instruments, the initial condition, $X_{i,1}$ must comply with the stationarity restriction $E(\Delta X_{i,2\varepsilon_i}) = 0$, according to Arellano and Bover (1995). At this point, $\Delta X_{i,t}$ will correlate with ε_i if and only if $\Delta X_{i,2}$ is correlated with ε_i. Although there is a correlation between the level of right-hand-side variables, ΔX_{it} and the firm-specific effect, ε_i, there is no correlation between the differences of right-hand¬side variables, ΔX_{it}, and the firm-specific effect, ε_i. A level equation estimator is developed from this new assumption, which exploits more moment conditions. Lagged differences of independent variables, ΔX_{it-r} are used as additional instruments for the equations in levels when X_{it} is mean stationary.

Blundell and Bond (1998) show that the moment conditions defined for the first-differenced equation can be combined with the moment conditions defined for the level equation to estimate a system GMM. When an independent variable is acknowledged as endogenous, the moment conditions for the system GMM are as follows:

$E(\Delta u_{i,t} y_{i,t-r}) = 0$; $E(\Delta u_{i,t} x_{i,t-r}) = 0$; where r = 2,…,t-1 and $t = 3, \ldots, T$

$E(v_{i,t} \Delta y_{i,t-r}) = 0$; $E(v_{i,t} \Delta x_{i,t-r}) = 0$; where r = 1,…,t-1 and $t = 3, \ldots, T$

The system GMM uses lagged levels of the independent and dependent variables as well as lagged differences of dependent and independent variables as instruments. It does this by connecting the T-2 equations from the first-differenced GMM and the T-2 equations in levels into one system. According to Yasar, Nelson and Rejesus (2006) , these instruments hold so long as the initial conditions, $Y_{i,1}$, satisfy the stationary restriction $E(\Delta Y_{i,2\varepsilon_i}) = 0$. When both $\Delta X_{it}$and ΔY_{it} are uncorrelated with ε_i both lagged differences of explanatory variables, ΔX_{it-r} and lagged differences of dependent variable, ΔY_{it-r}, are valid instruments for the equations in levels.

In our quest to identify myopia we naturally assume that there is persistence in our dependent variable, in order to determine 'normal' levels. Our estimates of the AR (1) coefficients on our dependent variables show high levels of persistence, thus, the lagged levels of variables would provide weak instruments for the differences in the first-differenced GMM model. As a result, the system estimator is a more apt method than the first-differenced GMM. Therefore, this paper combines the first-differenced version of our model with the level version of the model for which the instruments used must be orthogonal to the firm-specific effects. To review, the system GMM estimator uses lagged levels of the dependent and independent variables as instruments for the first-difference equation, while for the level version of the model, a lagged difference of these variables are used as instruments.

We estimate the parameters using system GMM with standard errors robust to patterns of heteroskedasticity and autocorrelation within panels; secondly we use the Hansen-J test of over identifying restrictions proposed by Arellano and Bond (1991) to assess whether the instrumental variables are associated with the dependent variable beyond its ability to explain the independent variables. The null hypothesis of the Hansen-J tests states that the instruments are not correlated with the error terms, while the alternative states that the instruments are correlated with the error terms. This test uses a x^2 distribution with (*J*-*K*) degrees of freedom, where *J* represents the number of instruments used and *K* represents the number of regressors used. Failure to reject the null hypothesis provides evidence that valid instruments are used.

Secondly, this study tests whether serial correlation exists among the error terms, also proposed by Arellano and Bond (1991). Failure to reject the null hypothesis of no second order serial correlation supports our model. Valid orthogonality conditions are used and the instruments are valid. One would expect the differenced error term to be first order serially correlated, although the original error term is not.

After using system GMM to estimate the estimates of persistence, ϕ, for each dependent variable using their lagged values (ROA_{it-1}, $Mktg_{it-1}$, $R\&D_{it-1}$, $Capex_{it-1}$, and CSR_{it-1}), we estimate predicted dependent variables, $\widehat{ROA}_{it|it-1}$, $\widehat{Mktg}_{it|it-1}$, $\widehat{R\&D}_{it|it-1}$, $\widehat{Capex}_{it|it-1}$, and $\widehat{CSR}_{it|it-1}$. The forecast errors in these models provide the estimates of the deviation of the series from the norm in each period; that is, $\varepsilon_{roa,it} = \left(ROA_{it} - \widehat{ROA}_{it|it-1}\right)$, $\varepsilon_{mktg,it} = \left(Mktg_{it} - \widehat{Mktg}_{it|it-1}\right)$, $\varepsilon_{r\&d,it} = \left(R\&D_{it} - \widehat{R\&D}_{it|it-1}\right)$, $\varepsilon_{capex,it} = \left(Capex_{it} - \widehat{Capex}_{it|it-1}\right)$, and $\varepsilon_{csr,it} = \left(CSR_{it} - \widehat{CSR}_{it|it-1}\right)$. These values are used to classify firms into potentially myopic and no myopic groups. With *Mktg_M.* being a categorical variable taking the value of 1 if $\left(Mktg_{it} - \widehat{Mktg}_{it|it-1}\right) < 0$, otherwise 0. *R&D_M.* being a categorical variable taking the value of 1 if $\left(R\&D_{it} - \widehat{R\&D}_{it|it-1}\right) < 0$,otherwise 0.*Capex_M.* being a categorical variable taking the value of 1 if $\left(Capex_{it} - \widehat{Capex}_{it|it-1}\right) < 0$, otherwise 0. *Str_M.* being a categorical variable taking the value of 1 if $\left(Strength_{it} - \widehat{Strength}_{it|it-1}\right) < 0$, otherwise 0. *Con_M.* being a categorical variable taking the value of 1 if where $\left(Concern_{it} - \widehat{Concern}_{it|it-1}\right) > 0$, otherwise 0 .

H_2 predicts that market participants appreciate the differences in earnings quality of potentially myopic and non-myopic firms and react less positively to earnings reported by myopic firms immediately. Alternatively H_3 suggests that the financial markets do not distinguish or do not fully appreciate long-term financial consequences CSR activities and are not able to properly price myopic spending cuts until the consequences are realized. To assesses the magnitude of adjustment in the valuation of potentially myopic firms in future years. We determine the total value implications of myopia, including the financial market reaction in the initial period, when the myopic firms presumably realized the benefits of myopic management. We assess the difference in future multiyear cumulative risk-adjusted stock returns for firms with myopic CSR behavior versus benchmark firms when the initial period is taken into account. That is, the following can be estimated:

$$CAR_{it+k|t} = \alpha_i + \beta_{1,k} Myopic_{it} + \beta_2{}' Controls_{it} + \psi_t + \delta_i + v_{it}, \qquad (4\text{-}5)$$

for k = 0, 1, 2, 3, and 4

where $CAR_{it+k|t}$ is the k-period ahead (i.e., future multi-period) risk-adjusted stock return or for firm i, with classification into myopic and non-myopic portfolios occurring at time *t*, and $Myopic_{it}$ is defined as a categorical variable that takes the value of 1 if firm *i* in year *t* was categorized as potentially myopic and 0 if otherwise. If the market captures the impact of myopia in the year it occurs then $\beta_{i,0}<0$ and $0=\beta_{i,1}=\beta_{i,2}=\beta_{i,3}=\beta_{i,4}$. If the market cannot immediately detect myopic behavior but reacts to the future negative consequences then a slow negative adjustment in the valuation of potentially myopic firms should be observed, and then $\beta_{i,0}\geq 0$ *and* $\beta_{i,1}\leq \beta_{i,2}\leq \beta_{i,3} \leq \beta_{i,4}\leq 0$. $Controls_{i,t}$ is a vector of control variables including *Size* (logarithm of total assets), *Leverage* (total liabilities to total assets), *Sales-growth* (sales in time *t* with respect to sales in *t-1* over sales in *t-1*), *M/B* (market value of equity to book value of equity), *Advertising* (advertising expense to sales), *R&D* (R&D expenses to total assets), *Capex* (capital expenditure to total assets), *Strength*, and *Concern.*

H_4 considers whether CSR decreases the likelihood of firms engaging in myopic behavior, as such we specify a logistic model to capture the impact of CSR on the likelihood of a firm being myopic. Specifically:

$$\Pr(Myopic_{it}=1)=\alpha_i+\beta_1' CSR_{i,t}+\beta_2' Controls_{i,t}+\psi_t+\delta_i+v_{i,t} \quad (4\text{-}6)$$

where $Myopic_{it}$ is defined as a categorical variable that takes the value of 1 if firm *i* in year *t* was categorized as potentially myopic and 0 if otherwise. $'CSR_{i,t}$ is either *Strength*, and *Concern* as defined earlier. $'Controls_{i,t}$ is a vector of control variables including *Size* (logarithm of total assets), *Leverage* (total liabilities to total assets), *Sales-growth* (sales in time *t* with respect to sales in *t-1* over sales in *t-1*), *Mktg.*(selling, general, and administrative expenses less R&D expenses to total assets), *R&D* (R&D expenses to total assets), *Capex* (capital expenditure to total assets).Naturally, for each set of equations, the dependent variable will not be included in the list of the control variables.

Furthermore $F(z) = e^z/(1 + e^z)$ is the cumulative logistic distribution and the likelihood function of the logit is:

$$lnL = \sum_{j \in S} w_j \; lnF(x_j \, b) + \sum_{j \notin S} w_j \ln\{1 - F(x_j b)\}$$

Where *S* is the set of all observations j, such that$y_j \neq 0, F(z) = e^z/(1 + e^z)$, and w_j denotes the optional weights. And the margins of the derivatives of the responses (marginal effects) are

$$dy/d(CSR) = \beta_1$$

$$dy/d(Controls) = \beta_2$$

For our analysis we only report the marginal effects results at their observed value.

4.4. Results

4.4.1. Identifying Myopia

Equations (4-4) a, b, c, d, and e are estimated using a system GMM. The results of this estimation are contained in Table 4-2. All six models document significant persistence levels in the dependent variables. The Hansen-J test statistic indicates that the instruments are not correlated with the error terms, as we do not reject the null. Similarly first order serial correlation exists among the error terms (AR(1)), however no second order serial correlation (AR(2)) is present within our models, as we cannot reject the null of no second order serial correlation supports our model.

Turning to model one, as expected ROA has the lowest level of persistence indicating that it is least dependent on past performance. Both Mktg and R&D, in models two and three, have estimates of persistence in excess of 0.6 indicating previous discretionary expenditures are very persistent through time, significantly higher than those reported by Mizik (2010). We believe the more efficient, unbiased and consistent estimators obtained by System GMM is contrasted here with the Anderson and Hsiao (1982) estimation used by Mizik (2010). Similarly Capex, in model four, has a high level of persistence, around 0.45. Models five and six indicate that strength and concern have even higher estimates of persistence, 0.82 and 0.71 respectively (all our estimates of persistence are significant at the one percent level). The results reflect the long-term nature of CSR activities. CSR activities tend to take several years to implement and require an ongoing commitment. For example, if a firm opens a crèche for its employees, the cost of staffing and running the crèche would represent an ongoing commitment for the firm, one which would be difficult to undo. Unlike other discretionary activities CSR is often a series of undertakings to placate stakeholders, creating long-term counterparties who could take exception to changes in CSR commitments.

After estimates of $\hat{\alpha}$ and $\hat{\phi}$ are obtained for each series, the predicted dependent variables are computed for profitability($\widehat{ROA}_{it|it-1}$,marketing intensity($\widehat{Mktg}_{it|it-1}$), Capex ($\widehat{Capex}_{it|it-1}$), R&D intensity ($\widehat{R\&D}_{it|it-1}$), and CSR profile ($\widehat{CSR}_{it|it-1}$). The error terms are computed for each firm and each year, and firms are assigned to a 'myopic' group and 'non-myopic' benchmark groups on the basis of the sign of the resultant error term. Sample observations are classified as instances in which myopic management potentially takes place (i.e., $\left(ROA_{it} - \widehat{ROA}_{it|it-1}\right) > 0$ and ($Mktg_{it} - \widehat{Mktg}_{it|it-1}$) < 0, or ($R\&D_{it} - \widehat{R\&D}_{it|it-1}$), < 0, or ($Capex_{it} - \widehat{Capex}_{it|it-1}$)<0,or ($CSR_{it} - \widehat{CSR}_{it|it-1}$)<0)

TABLE 4-2

Identifying Myopia

Table 4-2 reports the system GMM estimates of persistence, ϕ, for each dependent variable using their lagged values, from calendar year 1991 through 2009. We control for year fixed effects, industry fixed effects, and specify errors robust to heteroskedasticity and autocorrelation. The dependent variable for model one through six is *ROA*, *Mktg*, *R&D*, *Capex*, *Strength*, and *Concern*. We also incorporate the following control variables *Size* (logarithm of total assets), *Leverage* (total liabilities to total assets), *Sales-growth* (sales in time t with respect to sales in t-1 over sales in t-1), *Mktg.* (selling, general, and administrative expenses less R&D expenses to total assets), *R&D* (R&D expenses to total assets), *Capex* (capital expenditure to total assets), *Strength*, and *Concern*. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

	(1) ROA	(2) Mktg.	(3) R&D	(4) Capex	(5) Strength	(6) Concern
ϕ	0.231***	0.685***	0.662***	0.446***	0.823***	0.713***
	(0.026)	(0.027)	(0.042)	(0.030)	(0.012)	(0.012)
Size	1.160***	-0.012***	-0.001*	-0.002***	0.005***	0.006***
	(0.262)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Leverage	-26.035***	0.042***	-0.011*	-0.007*	-0.001	0.002
	(3.373)	(0.013)	(0.006)	(0.004)	(0.002)	(0.002)
ROA		-0.001***	-0.001***	-0.000	0.000	-0.000***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Mktg.	-9.254***		0.009	0.016**	0.007*	-0.001
	(3.106)		(0.012)	(0.007)	(0.004)	(0.005)
R&D	-98.551***	-0.084		0.028	0.020***	0.028***
	(8.762)	(0.074)		(0.018)	(0.006)	(0.010)
Capex	-1.318	0.105***	0.048***		0.016***	0.010
	(4.847)	(0.038)	(0.012)		(0.005)	(0.009)
Strength	3.947	0.132***	0.041***	0.015		-0.001
	(4.746)	(0.032)	(0.014)	(0.014)		(0.014)
Concern	-8.717***	0.003	0.008	0.017*	-0.004	
	(3.327)	(0.023)	(0.009)	(0.010)	(0.008)	
Sales_growth	4.384***	-0.062***	-0.010***	0.015***	-0.001	0.001
	(0.835)	(0.009)	(0.003)	(0.003)	(0.001)	(0.001)
Intercept	12.274***	0.117***	0.023***	0.024***	-0.029***	-0.026***
	(2.006)	(0.014)	(0.007)	(0.006)	(0.004)	(0.005)
N	16809	16691	16810	16810	16810	16810
Hansen J Test	1345	1297	1324	1355	1400	1342
p	0.967	0.997	0.988	0.951	0.786	0.972
AR1	0.000	0.000	0.000	0.000	0.000	0.000
AR2	0.462	0.088	0.090	0.200	0.226	0.160
Chi^2	1208	14318	9197	5841	13202	6846
p	0.000	0.000	0.000	0.000	0.000	0.000
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Robust S.E	Yes	Yes	Yes	Yes	Yes	Yes

4.4.2. Correlations

Our initial analysis focuses on the correlation between our CSR measures and other discretionary corporate activities, usually associated with management myopia. Table 4-3, Panel A, reports the pairwise correlations and significance values between *Tobin's Q*, *ROA*, *Mktg.*, *R&D*, *Capex*, *Strength*, *Concern*, *Raw Ret.*, and *CAR*. The correlations provide the first indication of the relationship between performance indicators and the various discretionary expenditures firms might undertake. *Tobin's Q* is significantly correlated with *Mktg*. (0.21), *R&D* (0.32), and *Raw Returns* (0.22), as expected. Alternatively, *ROA* shares a significantly negative correlation with *R&D* (-0.49) indicating that R&D intensity, at least in the short-term, could be quite costly, but should provide long-term benefits. Turning to the discretionary expenditures *Mktg*., *R&D* and *Capex* are all significantly correlated with each other but the correlations are quite small. This would suggest that firms might evaluate and implement discretionary expenditures with regard to a basket of discretionary expenditures, although the interrelatedness is certainly small. Similarly the CSR measures share a significant and large correlation (0.25) between each other, suggesting firms might offset negative behavior with positive behavior. *Strength* is not significantly correlated with the other discretionary activities, except *R&D*, with which it shares an inverse relationship (-0.04). Strength activities do not seem to correlate with Mktg. and Capex. This is surprising as ex ante we would expect Mktg. and strength to correlate, as there is considerable synergy between the two activities. These results, in part oppose our initial hypothesis (H_1). *Concern*, on the other hand, does correlate with all three discretionary activities. *Mktg.* (-0.1) and *R&D* (-0.04) are both negatively and significantly correlated with concern behavior. The presence of socially destructive behavior seems to correlate with a management team who also underinvest in Mktg. and R&D, unlike, *Concern* and *Capex*, that share a positive significant correlation (0.04).

We believe the correlation reflects the nature of capital expenditure activities in that big capital expenditure projects can be quite disruptive to local communities and the environment, as such these downstream impacts are reflected in the correlation.[34] These results support our notion that strength and concern activities should not be considered 'opposites' or be 'netted-off'. The simple correlations clearly indicate that strength activities do not share a significant correlation with other discretionary activities, with the exception being R&D where the relationship is negative. Alternatively concern behavior is significantly correlated with discretionary activities Mktg., R&D, and capex, supporting our initial hypothesis (H_1), however the relationships might not be as straightforward. Panel B, of Table 4-3, presents the pairwise correlations between discretionary activities and the myopic indicators, discussed prior. Mktg. is naturally inversely, significantly, and materially correlated (-0.472) with its own myopic indicator (*Mktg_M.*).

[34] Note that we standardize Mktg. R&D and Capex over Total Assets when reporting correlations, correlations between the raw discretionary expenditures and our CSR variables, yield significantly larger results.

TABLE 4-3

Correlations

Table 4-3 Panel A reports the pairwise correlation matrix between *Tobin's Q, ROA, Mktg, R&D, Capex, Strength, Concern, Raw Ret.,* and *CAR* for calendar years 1991 through 2009. Tobin's Q is calculated as market value of assets over book value of assets, where market value is equal to total assets plus market equity less book equity. Return on assets (ROA) is calculated as earnings before interest and tax (EBIT) to total assets. Marketing intensity (Mktg.) is selling general and administrative expenses less research and development expenses over total assets. Research and development intensity (R&D) is R&D expenditure over total assets. Capital expenditure intensity (Capex) is capital expenditure over total assets. Raw Ret. is $Raw_{it} = log \sum_{w=1}^{52} = [1 + (Ret_{i,w} - Ret_{Riskfree,w})$. To estimate the risk adjusted stock returns we employ The Fama and French (1993, 1996) three-factor plus momentum (Carhart, 1997) model to compute compounded abnormal yearly returns from weekly returns. Specifically compounded abnormal stock return (CAR) is:$CAR_{it} = log \sum_{w=1}^{52} = [1 + (ret_{iw} - expRet_{iw})$ where $expRet_{iw} = \hat{\beta}_{it}(Ret_{Market,w} - Ret_{Riskfree,w}) + \hat{s}_{it}(SMB_w) + \hat{h}_{it}(HML_w) + \hat{m}_{it}(MOM_m)$ and $\hat{\beta}, \hat{s}, \hat{h}$, and $\hat{m}$ come from estimating The Fama and French (1992, 1993) three factor model augmented with momentum (Carhart, 1997) factor, for each firm *i*, in year *t*: $(Ret_{i,w} - Ret_{Riskfree,w}) = \alpha + \beta_{it}(Ret_{Market,w} - Ret_{Riskfree,w}) + s_{it}(SMB_w) + h_{it}(HML_w) + m_{it}(MOM_m) + \varepsilon_{i,w}$. Panel B reports the pairwise correlation matrix between *Mktg., R&D, Capex, Mktg_ M., R&D_M., Capex_M., Str_M.,* and *Con_M.* for calendar years 1991 through 2009. With *Mktg_M.* being a categorical variable taking the value of 1 if $(Mktg_{it} - \widehat{Mktg}_{it|it-1}) < 0$, otherwise 0. *R&D_M.* being a categorical variable taking the value of 1 if $(R\&D_{it} - \widehat{R\&D}_{it|it-1}) < 0$, otherwise 0.*Capex_M.* being a categorical variable taking the value of 1 if $(Capex_{it} - \widehat{Capex}_{it|it-1}) < 0$, otherwise 0. *Str_M.* being a categorical variable taking the value of 1 if $(Strength_{it} - \widehat{Strength}_{it|it-1}) < 0$, otherwise 0. *Con_M.* being a categorical variable taking the value of 1 if where $(Concern_{it} - \widehat{Concern}_{it|it-1}) > 0$, otherwise 0 .

Panel A: Returns Correlation Matrix

	Tobin's Q	ROA	Mktg.	R&D	Capex	Strength	Concern	Raw Ret.	CAR
Tobin's Q	1								
ROA	0.019***	1							
Mktg.	0.214***	0.059***	1						
R&D	0.323***	-0.488***	0.069***	1					
Capex	0.075***	0.079***	0.052***	-0.053***	1				
Strength	0.023***	0.094***	0.003	-0.035***	0.006	1			
Concern	-0.042***	0.027***	-0.097***	-0.042***	0.044***	0.249***	1		
Raw Ret.	0.218***	0.173***	0.019***	-0.038***	-0.052***	-0.005	-0.032***	1	
CAR	-0.013**	0.302***	-0.033***	-0.148***	-0.016**	0.069***	-0.007	0.160***	1

Panel B: Myopia Correlation Matrix A

	Mktg.	R&D	Capex	Mktg_ M.	R&D_M.	Capex M.	Strength M.	Concern M.
Mktg.	1							
R&D	0.069***	1						
Capex	0.052***	-0.053***	1					
Mktg._M.	-0.472***	-0.074***	0.028***	1				
R&D_M.	0.083***	-0.351***	0.069***	0.164***	1			
Capex_M.	0.036***	0.107***	-0.461***	-0.062***	-0.068***	1		
Str_M.	-0.025***	-0.005	0.020**	-0.036***	-0.074***	-0.040***	1	
Con_M.	0.010	-0.004	-0.018**	0.008	0.040***	0.035***	-0.044***	1

The correlation would suggest, quite rightly, that firms with greater levels of Mktg. intensity are less associated with underinvestment in marketing. A small but significant correlation exists between Mktg. and strength myopia (*Str_M.*) indicating that firms with significant levels of marketing intensity are less associated with underinvestment in strength, as our a priori intuition would suggest (H_1) . Conversely marketing intensity is positively correlated with R&D myopia (*R&D_M.*) and Capex myopia (*Capex_M.*), 0.08 and 0.04 for R&D and Capex respectively. These rudimentary correlations could imply firms that focus more on marketing, are less likely to optimally invest in other discretionary activities. The correlations indicate that discretionary activities might not be considered equal, or engaged similarly by management; management might focus on one discretionary activity at a time (management preference). Due to information asymmetry, management might act on private information to expand or focus on particular discretionary activities, where they believe the most gains can be captured. This would only be exacerbated by limited funds, as firms prioritize among the basket of discretionary activities.

Conversely R&D intensity is negatively correlated with marketing myopia (*Mktg_M.*) but positively correlated with capex myopia (*Capex_M.*).We believe the results for R&D intensity require greater discussion beyond the scope of this paper, as the rest of our work will show these symptomatic results for R&D seem to be consistent. We conjecture, based on these limited correlations, that R&D spending comes at the expense of capex funding (leading to potential myopia), but that R&D investment naturally leads to advancements in products, which ultimately require marketing investment. Therefore R&D investment could be the upstream activity of a product launch, the downstream of which would be marketing.

Capital expenditure (*Capex*) is positively and significantly correlated with all forms of myopia except *Capex_M*. and concern myopia (*Con_M*.). The correlations confirm our previous assertions that firms might choose between different discretionary activities due to limited funds, the consequence of capex intensity might be myopic investment in other discretionary activities. Of note is the relationship between capex and concern myopia, the negative correlation would suggest that capital expenditure is negatively associated with concern myopia indicating that capex projects perhaps alleviate some of the concern behavior.[35] For example, building a new factory that also reduces workplace injury and environmental impact would be associated with an increase in capex intensity and a reduction in concern. This intuition is supported when considering the correlation between *Capex_M*. and *Con_M*. here the correlation is significantly positive indicating again, that capex anemia is associated with myopic behavior with regard to concern reduction. Conversely, *Capex_M*. is negatively associated with all other forms of myopia. Similarly *Mktg_M*. is negatively associated with all other forms of myopia, except R&D which is negatively associated with capex myopia.

Most intriguing, *Con_M*. is positively associated with all types of myopias, except strength myopia (*Str_M*). These initial correlations would indicate

[35] This correlation contrasts the results between capex intensity and concern behavior found in Panel A, of Table 4-3.

that concern behavior is associated positively with myopic behavior, as it is the only variable consistently positively associated with myopic behavior. Furthermore, other myopia are all generally negatively correlated with each other. This suggests that firms are unlikely to be myopic in more than one area at a time, supporting the notion that firms prioritize certain discretionary activities over others, with the exception of concern behavior.

4.4.3. Myopia and Performance

To assess the magnitude of adjustment in the valuation of potentially myopic firms in future years, we determine the total value implications of myopia, including the financial market reaction in the initial period, when the myopic firms presumably realized the benefits of myopic management. We assess the difference in future multiyear cumulative risk-adjusted stock returns for firms with myopic CSR behavior versus benchmark firms (firms with no myopia) when the initial period is taken into account.

To evaluate the impact of myopia on returns, we estimate the impact of myopia on a firm's CAR in the same year that they report an earnings surprise. Table 4-4, reports the results of estimating equation (4-5) using CAR, for firms with earnings surprises[36]. The dependent variables are the K_{th} period ahead CAR, such that models one through five represent *K=0,1,2,3,* and *4* for CAR. Turning to model one,

[36] It is necessary to evaluate performance surprises separately, as under investment in discretionary activities during periods of reduced performance, is not Myopia.

current year CAR (*K*=0), only strength myopia (*Str_M.*) and concern myopia (*Con_M.*) are significantly related to CAR, although differently. It would seem other forms of non-CSR myopia do not have an immediate association with CAR. CSR myopia on the other hand seems to be immediately recognized by the market; however the response is positive for strength myopia with an associated increase in CAR of 0.011, at one percent significance. The result, suggest that investors struggle to value or recognize strength myopia or perhaps see underinvestment in strength activities as appropriate cost-cutting behavior. These results support the notion that signaling behavior by myopic firms could distort the market equilibrium. At the extreme, good firms will be unable to credibly signal economic prospects, as Akerlof's lemon's market mechanism (1970) shows under these circumstances good firms will completely forgo an appropriate opportunity (Myers and Majluf 1984). The positive results could reflect a distortion in the market, with regard to strength, and reduce the markets ability to recognize strength myopia. Alternatively, strength activities might affect the risk profile of the firm, however unlikely, thereby impacting its abnormal returns (as we might be unable to account for the change in firm specific risk). Concern myopia (*Con_M.*) has a negative association with current CAR, 0.01 at five percent significance, indicating that investors immediately discount the increase in return associated with this myopia. Our results, once again underscore the importance of considering strength and concern activities separately, as concern behavior supports our second hypothesis (H_2) but the results for strength reject it.

TABLE 4-4

Myopia and Performance

Table 4-4 reports the regression coefficients for the relationship between CAR and myopia from calendar year 1991 through 2009. We control for year fixed effects, industry fixed effects, and cluster standard errors at the firm level. The dependent variables are the Kth period ahead CAR, such that models one through five represent K=0,1,2,3, and 4 for firms with performance surprises and models six through ten represent K=0,1,2,3, and 4 for firms with performance disappointments. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively. We also incorporate the following control variables *Size* (logarithm of total assets), *Leverage* (total liabilities to total assets), *Sales-growth* (sales in time t with respect to sales in t-1 over sales in t-1), M/B (market value of equity to book value of equity), *Advertising* (advertising expense to sales), *R&D* (R&D expenses to sales), *Capex* (capital expenditure to total assets), Strength, and Concern. Control variables are not reported for parsimony.

	Performance Surprise					Performance Disappointment				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	K=0	*K=1*	*K=2*	*K=3*	*K=4*	*K=0*	*K=1*	*K=2*	*K=3*	*K=4*
Str_M.	0.011***	0.018***	0.005	-0.005	-0.004	0.018***	0.016***	0.001	0.010	0.003
	(0.004)	(0.004)	(0.006)	(0.006)	(0.010)	(0.004)	(0.005)	(0.007)	(0.008)	(0.009)
Con_M.	-0.010**	-0.000	-0.000	-0.013**	-0.023**	-0.003	-0.013***	-0.019**	-0.019**	-0.016*
	(0.004)	(0.004)	(0.005)	(0.006)	(0.010)	(0.003)	(0.005)	(0.007)	(0.009)	(0.008)
Mktg._M.	-0.003	-0.004	-0.022***	-0.036***	-0.037***	0.013***	0.012**	0.014**	0.018**	0.013
	(0.003)	(0.004)	(0.005)	(0.007)	(0.009)	(0.004)	(0.005)	(0.006)	(0.008)	(0.010)
R&D_M.	-0.002	-0.001	0.004	0.006	-0.001	0.003	-0.004	-0.008	-0.013	0.004
	(0.004)	(0.004)	(0.006)	(0.007)	(0.011)	(0.004)	(0.005)	(0.008)	(0.010)	(0.009)
Capex_M.	-0.000	-0.010*	-0.034***	-0.033***	0.005	-0.005	-0.010*	-0.026***	-0.010	0.018*
	(0.006)	(0.005)	(0.006)	(0.008)	(0.014)	(0.004)	(0.006)	(0.008)	(0.011)	(0.010)
N	8034	6594	5259	4258	3380	8008	6530	5467	4354	3413
adj. R^2	0.260	0.230	0.149	0.136	0.115	0.440	0.263	0.130	0.085	0.085
F	55.52	50.63	34.25	32.54	21.76	49.264	43.605	15.836	15.994	18.653
p	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ind. Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	No	No	No	No	Yes	No	No	No	No
Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Surprisingly the market has difficulty recognizing Mktg., R&D, and Capex related myopia, as the coefficients are insignificant. These results imply that firms cutting strength spending are able to inflate their earnings sufficiently to circumvent any possible discounting of their earnings, unlike concern related myopia which will be captured by the market. These result confirm our earlier intuition that the persistence of CSR suggest that firms should carefully consider changes to their CSR profiles, as their decisions significantly impact the associated stakeholders, stakeholders with which the firm might have to co-exist for significant periods of time.

As such it would follow that CSR myopic behavior might be more easily observed by market participants as the number of parties with intimate knowledge of the firm's "normal" CSR level is not limited to management. Unlike other discretionary activities management's ability to secretly manipulate its CSR profile to "generate" returns is reduced by stakeholders' incentive to advocate against any changes that might negatively affect them, thereby informing the market.

Models two through five reports the total return implications of myopia against CAR in the *k =1, 2, 3,* and *4th* period ahead. With the exception of strength, myopic behavior is associated with later period negative adjustments in CAR. It would seem that the market discounts the returns of firms that behave myopically over several periods, as the market is able to comprehend the scale of occlusion, supporting our third hypothesis (H_3). The majority of the adjustment occurs in the 3rd period ahead with return adjustment of -0.013, -0.022, and -0.033 for *Con_M.*, *Mktg_M*., and *Capex_M*. respectively. Taking the results of model one into account it would seem that concern myopia is more immediately recognized than other types of myopia, however the adjustment might not be large enough, as there are further negative adjustments to firm's CAR as the scale of the myopic impact is absorbed by the market. Interestingly R&D myopia does not significantly affect CAR even several periods in the future. This result continues to build on our previous results suggesting that R&D might be subject to different circumstances. We believe the intangible nature of R&D with its inconsistent downstream benefits might reduce the markets ability to recognize R&D myopia.

Models six though ten, present the estimation results for firms that engaged in myopic behavior, when reporting a negative earnings surprise. These results serve to contrast the market's reaction to firms underinvesting in discretionary activities when negative earnings surprises occur as opposed to positive earnings surprises. Again models six through ten represent $k=0,1,2,3,4$ for CAR. Contrasting the CAR results between models one through five and models six through ten, we see that the market reacts favorably to firms reducing Mktg. investment when they experience lower than average earnings, not just immediately but over several periods. The results suggest that during periods of poor financial performance, firms are not penalized for reducing discretionary activities, particularly marketing. Similarly strength still shares an immediate positive response, while concern and capex myopia are still negatively associated with CAR over several periods. Overall our results would suggest that the market is least able to quantify changes in R&D intensity, as a result any earnings surprises driven by R&D myopia are not appropriately discounted. Furthermore, strength behavior either is not valued by the market (or firms in general over-invest in strength[37]) or the market has an inability to recognize strength myopia and the associated fictitious increase in returns. Most importantly our results provide evidence that the market instantly recognizes concern myopia in the face of potential earnings manipulation and continues to discount CAR for several periods after the fact. When these results are considered in association with the correlations, it stands that concern is the best indicator of illicit managerial actions, and the market is best able to approximate these potential agency issues as it concerns concern.

4.4.4. Likelihood of Myopia

Our results up to this point indicate that the market is most sensitive to CSR, concern in particular. Again, CSR depends on forming, and importantly, funding relationships with employees, customers, suppliers, communities, governments, etc. These stakeholder counterparties, are naturally sensitive to changes in a firms CSR profile, as these changes affect them. As a consequence changes in CSR profile, specifically negative ones, would be met with resistance and advocacy from these counterparties. The actions of the stakeholders, in turn would increase information to the market, around the CSR profile of firms with respect to other forms of myopia. It should follow that a management team ethically inclined to reduce the firm's negative impact on society, would potentially face a moral conflict with regard to any earnings

[37] Perhaps due to lobbying and activist pressure. Thereby maintaining sub-optimally high levels of strength.

manipulation. We believe that CSR could act as a myopic barometer potentially signaling myopic behavior.

We use equation (4-6) to determine whether firms that engage in CSR are more or less likely to engage in myopic behavior when they experience an earnings surprise. Our results are reported in Table 4-5. We report the average marginal effects keeping all other variables at their observed levels, instead of the initial regression, to aid interpretation. Model one, regresses Mktg. myopia (*Mktg_M.*) against a set of control variables, *Strength* and *Concern*. Turning to the control variables we can see that larger (*Size*, -0.022) more profitable firms (*ROA*, -0.01) with an increase in sales (*Sales-growth,* -0.462) are less likely to engage in myopic behavior while firms under more financial stress (*Leverage*, 0.299) and substantial capital expenditure requirements (*Capex*, 0.945) are more likely to be myopic, with regard to Mktg. (all the marginal effects are significant at the one percent level). The control variables perform as expected indicating firms better able to absorb financial stress and not faced with financial commitments are less likely to engage in Mktg. myopia, while reporting earnings surprises.

Next we look at the impact of strength on the likelihood of being myopic, in terms of Mktg., the marginal impact of *Strength* is small, at 0.178, and the result is not significant.

TABLE 4-5

Likelihood of Myopia

Table 4-5 represents the marginal estimates of the logistic model that captures the impact of CSR on the likelihood of a firm being myopic. Specifically:$\Pr(Myopic_{it} = 1) = \alpha_i + \beta_1' CSR_{i,t} + \beta_2' Controls_{i,t} + \psi_t + \delta_i + v_{i,t}$ where $Myopic_{it}$ is defined as a categorical variable that takes the value of 1 if firm i in year t was categorized as potentially myopic and 0 if otherwise. $'CSR_{i,t}$ is either *Strength*, and *Concern* $'Controls_{i,t}$ is a vector of control variables including *Size* (logarithm of total assets), *Leverage* (total liabilities to total assets), *Sales-growth* (sales in time *t* with respect to sales in *t-1* over sales in *t-1*), *Mktg.*(selling, general, and administrative expenses less R&D expenses to total assets), *R&D* (R&D expenses to total assets), *Capex* (capital expenditure to total assets). Furthermore $F(z) = e^z/(1+e^z)$ is the cumulative logistic distribution and the likelihood function of the logit is:$lnL = \sum_{j\in S} w_j \, lnF(x_j\, b) + \sum_{j\notin S} w_j \ln\{1 - F(x_j b)\}$ where S is the set of all observations j, such that$y_j \neq 0, F(z) = e^z/(1+e^z)$, and w_j denotes the optional weights. And the margins of the derivatives of the responses (marginal effects) are $dy/d(CSR) = \beta_1$ and $dy/d(Controls) = \beta_2$. For our analysis we only report the marginal effects results at their observed values. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

	(1)	(2)	(3)	(4)	(5)
	Mktg_M	R&D_M	Capex_M	Str_M.	Con_M.
Size	-0.022***	-0.034***	-0.058***	0.076***	-0.019***
	(0.008)	(0.009)	(0.007)	(0.008)	(0.007)
Turnover	0.036***	-0.052***	-0.008	0.059***	0.011
	(0.009)	(0.010)	(0.009)	(0.009)	(0.009)
Leverage	0.299***	0.297***	-0.148***	-0.017	-0.118***
	(0.053)	(0.073)	(0.040)	(0.031)	(0.038)
Sales_growth	-0.462***	-0.573***	0.046	-0.007	-0.017
	(0.037)	(0.042)	(0.034)	(0.030)	(0.029)
ROA	-0.010***	-0.006***	-0.010***	-0.008***	0.001
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
Mktg.		0.458***	0.065	0.036	-0.032
		(0.054)	(0.045)	(0.047)	(0.043)
R&D	-0.383**		0.541***	-0.270*	-0.316*
	(0.186)		(0.195)	(0.147)	(0.173)
Capex	0.945***	1.839***		0.357**	-0.540***
	(0.179)	(0.193)		(0.147)	(0.149)
Strength	0.178	0.679***	0.049		0.168
	(0.205)	(0.202)	(0.181)		(0.188)
Concern	0.419***	0.374**	0.536***	-0.640***	
	(0.159)	(0.150)	(0.149)	(0.148)	
N	8445	8500	8500	8500	8500
Year Effects	Yes	Yes	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes	Yes	Yes

This result again, is surprising, like the correlations, considering the association between CSR and Mktg., especially strength. Servaes and Tamayo (2013) indicates that the value associated with CSR, especially strength, lies in the firm's ability to communicate (advertising) its CSR profile with end consumers. Our intuition would lead us to believe that strength should reduce the likelihood of Mktg. myopia, but our finding is not significant. Turning to concern, we see that concern behavior is significantly related to the likelihood of Mktg. myopia, at the 1 percent level. The result indicates that the marginal impact of concern is to increase the likelihood of myopia by 41.9 percentage points of each discrete change in concern.

Model two, presents the results for R&D, again the control variables perform as expected. R&D seems to be the discretionary expenditure most sensitive to other discretionary activities, with the results suggesting firms would prioritize other spending before R&D, leading to myopia. These results help explain the correlations and market responses in our previous results. The presence of capital expenditure (*Capex*) has the largest impact on the likelihood of R&D myopia (1.839 at the one percent level), and marketing intensity is also positive and significant (0.458 at one percent significance). Strength behavior, rather confounding, is positively associated with the likelihood (0.679, at one percent significance) that firms might be R&D myopic. A discrete increase in strength behavior marginally increases the likelihood of R&D myopia by 68 percentage points of the discrete change in strength. Concern similarly increases the likelihood of R&D myopia (0.375 at five percent level). We believe that firms prioritize their funding, and in the presence of other funding commitments, with more tangible short-term benefits, firms would suspend R&D funding. Alternatively after a period of R&D a firm would commercialize its research efforts. In the case of a new product, firms would need to invest in property and plant to produce the product and marketing to take the product to market, during this period R&D expenditure might be scaled back to accommodate the increase in expenditure elsewhere. As such, our results might simply reflect the cycle of product development and innovation. However the results relate specifically to firms with earnings surprises, indicating that cash constraints, might not necessarily be an issue, which likely means management might choose to cannibalize R&D over other discretionary expenditures to manipulate earnings. The value of R&D is not immediate to the firm's current performance, as our previous results attest, and R&D progress is poorly observed by the market making it an ideal candidate for myopic behavior.

Model three, presents the results of capex myopia (*Capex_M*.). Again the control variables perform as expected. Of note leverage is negatively associated with capex myopia (0.148, at one percent significance) indicating that firms with increased debt financing are more likely to afford costly capex expansion. The results of the R&D continue to support the notion that management will myopically engage one discretionary activity for the sake of performance, as the marginal effects are significant and positive (0.541 at the one percent significance level). Strength is once again not significant. Concern behavior is again significant and positive. As with the previous models concern behavior increases the likelihood of firms behaving myopically with regard to capital expenditure (0.536, at the one percent level). It should be noted that the presence of concern within a firm, usually represents a lack of action and vision on the part of management to mitigate the negative impact the firm might have on its employees, environment, and community. Unlike other discretionary activities, an increase in concern is not expected to be related with an increase in cost to the firm (if anything a saving in expenditure). Our results would suggest that if firms are reluctant to expend the effort and absorb the costs associated with reducing their socially destructive behavior, then they are more likely to underinvest in other discretionary activities, especially if it allows them to manipulate their performance. The results for the other discretionary activities indicate that firms might prioritize funding between different activities, as such if a firm is already invested in Mktg. and R&D activities then thy might not prioritize capex funding, especially if it could impact performance. Concern on the other hand is consistently positively associated with the increase in likelihood of myopic behavior. Furthermore, increasing a firm's concerns does not reduce a firm's cash flows, therefore a reduction in funding for discretionary activities is more likely explained by dubious management prioritizing performance over investment in the long-term well-being of the firm.

Comprehensively, we include the results of strength myopia and concern myopia as a function of other discretionary activities in models four and five. Strength myopia seems to increase when firms are more actively traded, suggesting that the market disciplines excessive expenditure on strength activities, as our previous results suggest. Concern is significantly and negatively (-0.64, at one percent significance) associated with strength myopia. It is likely that firms will compensate for their socially destructive behavior by engaging in strength activities to remedy the negative externalities (we believe this course of action is often more cost effective then reducing the actual destructive behavior), as such firms with more concern activities will likely have more strength activities and be less likely to be myopic. Turning to our earlier correlations, we also saw a strong significant correlation between strength and concern, which is supported here. This result is reflected in model 5 where we see again that the presence of strength increases the likelihood of concern myopia (more concerns are associated with more strength). Capital expenditure, which has been positively associated with other forms of myopia, is negatively associated with concern; along with R&D and Mktg. Our results suggest that firms with adequate levels of capital expenditure, R&D and Mktg., are less likely to be concern myopic. (-0.540 at one percent significance, -0.316 at ten percent significance, and -0.032not significant, for Capex, R&D and Mktg. respectively)

The results from the logistic regression consistently present evidence that increased levels of concern is associated with an increased likelihood in all forms of myopia, and the presence of other discretionary activities reduce the likelihood of concern myopia. The results indicate that firms with high levels of socially destructive behavior are more likely to manipulate earnings through myopic behavior.

4.5. Conclusion

Managers have a fiduciary duty to strategically align firm activities and partake in opportunities that maximizes shareholder wealth. Myopic management, in turn, involves altering operational practices that directly affect the business process to falsely signal an increase in performance. We show that the factors driving management myopia in capital expenditure, R&D and marketing, could affect management's decisions relating to CSR, specifically concern. More importantly, our results indicate that CSR (specifically concern) can be considered a proxy for good management. Our results indicate that other forms of myopia do impact firms' risk adjusted returns; however the market might struggle to immediately recognize management myopia in the face of increased earnings. We also show that CSR, specifically concern, is a good indicator of non-CSR myopia which the market has a better ability to recognize CSR myopia. Milgrom & Roberts (1992) comment that, in general, managers "put too much emphasis on activities that boost short-term performance compared to those whose benefits will be hidden." Our results confirms that the market struggles to quickly recognize traditional myopia, but that socially destructive behavior of firms, and the associated economic impact on the firms, is recognized by the market.

Our results underscore the importance of considering socially responsible behavior and socially destructive behavior separately. We present evidence that the signaling behavior of myopic firms distort the market equilibrium to the point where good firms are unable to credibly signal economic prospects. As a result, the asymmetric information or information opacity around strength Cho, Lee and Pfeiffer Jr. (2013), coupled with the market's heterogeneous capacity and desire to price the complexities of strength behavior, explain the confounding strength results.

We supply evidence that strength and concern (CSR) behavior are incredibly persistent over time, reflecting the long-term nature of CSR activities. These result confirm our intuition that the persistence of CSR suggest that firms should carefully consider changes to their CSR profiles, as their decisions significantly impact the associated stakeholders, stakeholders with which the firm might have to co-exist for significant periods of time. We believe concern myopic behavior is more easily observed by market participants, in contrast with strength, perhaps as the number of parties with intimate knowledge of the firm's "normal" concern level is not limited to management.

Furthermore, our results consistently suggest that discretionary activities might not be considered equal, or engaged similarly by management; management might focus on one discretionary activity at a time. Due to information asymmetry, management might act on private information to expand or focus on particular discretionary activities, where they believe the most gains can be captured. In addition, firms are unlikely to be universally myopic across all discretionary areas, but more likely to neglect a particular area. Our findings indicate that R&D myopia is not immediately or subsequently recognized by the market, making it an ideal candidate for myopic behavior.

The results from the logistic regression consistently present evidence that increased levels of concern is associated with an increased likelihood in all forms of myopia, and the presence of other discretionary activities reduce the likelihood of concern myopia. This indicates that firms with high levels of socially destructive behavior are more likely to manipulate earnings through myopic behavior. However firms with high levels of strength behavior are not less likely to be myopic, and in some cases might be more likely.

Our results shed light on the complex interplay between discretionary activities and the multifaceted impact of CSR on firm’s corporate activities. Ultimately our results indicate that socially responsible behavior is a poor indicator of good management and is unrelated to myopic behavior with regard to other discretionary expenditures. However, a firm’s level of socially destructive behavior is significantly correlated with management quality and the likelihood that a firm might engage in myopic practices for the sake of earnings manipulation.

5. Chapter Five: Conclusion

This thesis presents evidence that shows responsible behavior and irresponsible behavior impacts firm value positively when considered in a relatively sense. Our results indicate that the relative CSR standing of firms may be integral to understanding CSR's impact on firm value. We find that above average to high levels of responsible behavior are associated with increased firm value, while average to low levels of responsible behavior are not significantly correlated with value. More importantly, we find that moderate to high levels of irresponsible behavior are associated with increased value. Irresponsible behavior could enhance firm value as firms unconstrained by restrictive CSR policies are not precluded from the advantages some irresponsible activities present. Alternatively, a significant shareholder presence of ethical investors (pension funds, etc.), could deter management from engaging in risky projects or exploit certain opportunities, if these activities are regarded as socially irresponsible. In either case, irresponsible behavior, although risky, would ultimately increase the volatility of discounted future cash flows and as a result entice less risk-averse investors. As a result, some investors might construct portfolios to capture the increased volatility, driving part of the peer effect that we observe.

Following Gormley and Matsa (2013), we argue that CSR activities are in part endogenously determined by a firm's environment, which differs across firms in observable and unobservable ways. We show that accounting for these firm-specific characteristics could bias the correlation between CSR and firm value. We find that our peer dummies are robust to the inclusion of firm fixed effects in contrast with the absolute level of CSR.

Our findings suggest that the industry-specific relationship between CSR and firm value should be considered carefully going forward. These relationships change significance levels and signs across industries for absolute CSR levels. Alternatively, our peer dummies provide results that are more consistent. The presence of consumers within an industry and the importance of marketing and projecting a reputation presented in previous studies are perhaps key to this discrepancy. We find that a firm's relative standing is particularly important when considering the impact of awareness on the relationship between CSR and value, as the benefits of CSR are only reaped if firms ensure that they outclass their peers and communicate their CSR profile in line with Servaes and Tamayo (2013). Finally, we advocate against the use of an aggregate absolute CSR measure. Our results underscore the understanding that "doing the right thing" and "doing the wrong thing" are not perfect opposites. We contend that the complexities of CSR necessitate caution.

Furthermore, we posit that a firm's headquarter location is indicative of the socio-economic factors which affect a firm's CSR profile. The results offer strong evidence that location has a significant effect on the CSR profile of resident firms. The study finds that firms' CSR levels not only vary significantly across geography, but that each metropolitan statistical area (MSA) experiences significant differences in variance around the mean over their resident firms. Houston has a *strength* standard deviation half that of San Jose, while San Jose has a *concern* standard deviation half that of Dallas-Fort Worth. We find that location has a significant impact on the level of a firm's responsible and irresponsible behavior, although the effect is more pronounced for *strength* than *concern*.

The study documents that the economic, legal, regulatory and charitable demographic differences across geography explain some of the variation in CSR means between metropolitan statistical areas. Charitable behavior is the most significant. Our results indicate that Tobin's Q is affected by firms diversifying along a CSR continuum within their locale. The economic impact of this CSR diversification tends to be positive with firms experiencing small increases in value as they differentiate from the locale mean. More importantly we document the impact of culture on CSR and show that better educated and sophisticated societies with a propensity for the common good and a low tolerance of illegal behavior are likely to have resident firms with higher levels of strength behavior and lower levels of concern behavior.

Lastly we use this knowledge of the local socio-economic indicators as exogenous proxies for CSR. Our results are in sharp contrast with recent literature indicating that responsible behavior could potentially destroy firm value. In support of the findings from chapter two, we present evidence that irresponsible behavior is associated with an increase in Tobin's Q.

The last part of the thesis, Chapter Four, investigates whether CSR is associated with management quality, as it relates to myopia. Managers have a fiduciary duty to strategically align firm activities and partake in opportunities that maximizes shareholder wealth. Myopic management, in turn, involves altering operational practices that directly affect the business process to falsely signal an increase in performance. We show that the factors driving management myopia in capital expenditure, R&D and marketing, could affect management's decisions relating to CSR, specifically *concern*. More importantly, our results indicate that CSR (specifically *concern*) can be considered a proxy for good management. Our results indicate that other forms of myopia do impact firms' risk adjusted return; however the market might struggle to immediately recognize management myopia in the face of increased earnings. We also show that CSR, specifically concern, is a good indicator of other forms of myopia and that the market has a better ability to recognize CSR myopia. Milgrom & Roberts (1992) comment that, in general, managers "put too much emphasis on activities that boost short-term performance compared to those whose benefits will be hidden." Our results confirms that the market struggles to quickly recognize traditional myopia, but that socially destructive behavior of firms, and the associated economic impact on the firms, is recognized by the market.

Again, our results underscore the importance of considering socially responsible behavior and socially destructive behavior separately. We present evidence that the signaling behavior of myopic firms distort the market equilibrium to the point where good firms are unable to credibly signal economic prospects.

As a result, the asymmetric information or information opacity around strength Cho, Lee and Pfeiffer Jr. (2013), coupled with the market's heterogeneous capacity and desire to price the complexities of strength behavior, explain the confounding strength results.

We supply evidence that strength and concern (CSR) behavior are incredibly persistent over time, reflecting the long-term nature of CSR activities. These result confirm our intuition that the persistence of CSR suggest that firms should carefully consider changes to their CSR profiles, as their decisions significantly impact the associated stakeholders, stakeholders with which the firm might have to co-exist for significant periods of time. We believe CSR myopic behavior is more easily observed by market participants perhaps as the number of parties with intimate knowledge of the firm's "normal" CSR level is not limited to management.

Furthermore, our results consistently suggest that discretionary activities might not be considered equal, or engaged similarly by management; management might focus on one discretionary activity at a time. Due to information asymmetry, management might act on private information to expand or focus on particular discretionary activities, where they believe the most gains can be captured. In addition, firms are unlikely to be universally myopic across all discretionary areas, but more likely to neglect a particular area. Our findings indicate that R&D myopia is not immediately or subsequently recognized by the market, making it an ideal candidate for myopic behavior.

The results from the logistic regression consistently present evidence that increased levels of concern is associated with an increased likelihood in all forms of myopia, and the presence of other discretionary activities reduce the likelihood of concern myopia. This indicates that firms with high levels of socially destructive behavior are more likely to manipulate earnings through myopic behavior. However firms with high levels of strength behavior are not less likely to be myopic, and in some cases might be more likely.

Our results shed light on the complex interplay between discretionary activities and the multifaceted impact of CSR on firm's corporate activities. Ultimately our results indicate that socially responsible behavior is a poor indicator of good management and is unrelated to myopic behavior with regard to other discretionary expenditures. However, a firm's level of socially destructive behavior is significantly correlated with management quality and the likelihood that a firm might engage in myopic practices for the sake of earnings manipulation.

In sum the thesis presents evidence that underscores of evaluating CSR using a multifaceted approach. Our findings are clear that there is not a linear association between CSR ad value/performance. The firm's CSR profile relative to its industry peers and geographic neighbors are important when making assumptions with regard to performance or value. More importantly, the impact of socially destructive behavior might at times, be associated with an increase in firm value/performance. we believe that certain irresponsible activities present economic opportunities that are too valuable for the firm to ignore. Lastly we show that the market largely discounts responsible behavior, when considered relative to the firms expected level, in line with the findings in Chapter Two and Three. Furthermore, my results show that the market is sensitive to CSR underinvesting, specifically destructive behavior. The results indicate that firms with degrading CSR profiles in the presence of earnings surprises are indicative of managers likely to behave myopically with regard to other discretionary activities. Finally CSR is an important part of the corporate paradigm, but this knowledge of the intricacies and delicate interplay of CSR's many facets should imbue one to approach CSR with caution.

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