IS CORPORATE SOCIAL RESPONSIBILITY ASSOCIATED WITH PERCEIVED FINANCIAL REPORTING CREDIBILITY?

by

XIANJING BORDERE

LINDA M. PARSONS, COMMITTEE CHAIR
GARY K. TAYLOR, COMMITTEE CHAIR
AUSTIN REITENGA
KIM SYDOW CAMPBELL
PAAN JINDAPON

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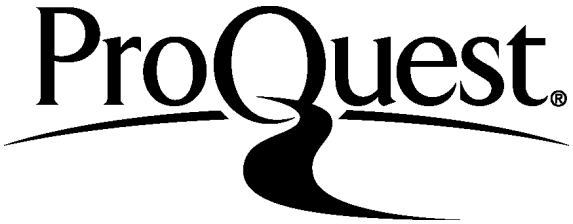

ABSTRACT

I examine the association between corporate social responsibility (CSR) and the perceived credibility of corporate financial reporting. Using the analyst forecast dispersion and the earnings response coefficient as measures of perceived financial reporting credibility, I evaluate whether market participants (analysts and investors) perceive the financial reporting of socially responsible firms (CSR firms) to be of higher credibility than that of less socially responsible firms (non-CSR firms). First, I investigate the difference of the quarterly analyst forecast dispersion between CSR and non-CSR firms. Then, I separately examine the difference of the three-day window earnings response coefficient around quarterly earnings announcements between CSR firms and non-CSR firms under positive earnings surprises and negative earnings surprises. Results documented in this study indicate that market participants perceive financial reporting of CSR firms to be of higher credibility than that of non-CSR firms by placing a higher level of reliance on CSR firm-provided financial information, resulting in CSR firms having a lower analyst forecast dispersion and a higher earnings response coefficient when earnings surprises are positive. However, when earnings surprises are negative, since the financial reporting credibility is less questionable, the earnings response coefficient of CSR firms is not different from that of non-CSR firm. This study extends a stream of research that seeks to link CSR to firm performance/value by providing empirical evidence on how CSR is related to a firm's stock price through its perceived financial reporting credibility. By separately examining positive and negative earnings surprises, I expect to provide possible explanations to the conflicting results documented in prior research. This study also extends our understanding of

market reactions to firms being socially responsible from investors' reactions to analysts' reactions.

DEDICATION

This dissertation is dedicated to my mom, dad and Terry, whose love, understanding and support has made my doctoral journey possible.

LIST OF ABBREVIATIONS AND SYMBOLS

AFD	Analyst forecast dispersion
CSR	Corporate social responsibility
ERC	Earnings response coefficient
GAAP	Generally Accepted Accounting Principles
p-value	Probability of test statistic
SEC	Securities and Exchange Commission
t	Computed value of *t* test
<	Less than
=	Equal to

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CHAPTER 1

INTRODUCTION

In this study, I examine whether corporate social responsibility (CSR) is associated with the perceived credibility of corporate financial reporting. I define perceived financial reporting credibility as the extent to which firm-released financial information is perceived to represent the underlying economic performance of the firm. I use two measures to capture this perceived credibility: the analyst forecast dispersion (e.g., Lang and Lundholm 1996) and the earnings response coefficient (e.g., Holthausen and Verrecchia 1988). Using this definition and these two measures of perceived financial reporting credibility, I evaluate whether market participants (analysts and investors) perceive the financial reporting of socially responsible firms (CSR firms) to be of higher credibility than that of less socially responsible firms (non-CSR firms).

CSR represents a firm's economic, legal, ethical, and discretionary responsibilities to stakeholders, including, but not limited to, investors, customers, the government, the law, society and the community (Carroll 1979). CSR firms consider the interests of all stakeholders in their decision making, and the interests of any given stakeholder do not dominate those of other stakeholders (Clarkson 1995; Hillman and Keim 2001). Some studies suggest that by considering interests of not only shareholders or managers but also all other stakeholders when making decisions, CSR firms adhere to higher ethical standards and behave in a more responsible manner (e.g., Blazovich, Cook and Smith 2014; Kim, Park and Wier 2012). Source credibility theory suggests that people are more likely to be persuaded when the source presents itself as credible (Hovland, Janis and Kelley 1953). If market participants, on average, believe

CSR firms' involvement in CSR activities is indicative of firms following higher ethical standards and behaving more responsibly, then they will perceive the financial reporting of CSR firms as more credible and place a higher level of reliance on CSR firm-provided financial information, which in turn will result in CSR firms having a higher earnings response coefficient and a lower analyst forecast dispersion.

Using a large sample of U.S. public firms over the period 2004–2013, I first compare the quarterly analyst forecast dispersions between CSR firms and non-CSR firms. If analysts perceive that CSR firms produce more credible financial information than non-CSR firms, I expect to find a lower analyst forecast dispersion in CSR firms. I then examine the difference of the three-day window earnings response coefficients around quarterly earnings announcements between CSR firms and non-CSR firms. If investors perceive that CSR firms produce more credible financial information than non-CSR firms, I expect to find a higher earnings response coefficient in CSR firms.

Capital markets research suggests that the market reacts differently to positive earnings surprise versus negative earnings surprise (e.g., Kasznik and McNichols 2002; Lopez and Rees 2002). I further examine the perceived credibility effect under positive earnings surprise condition and negative earnings surprise condition separately. I propose that when releasing good news (positive earnings surprises) where the market might be concerned about the credibility of firm released financial information, the earnings response coefficient of CSR firms will be higher than that of non-CSR firms. Investors will respond to good news released by CSR firms more than good news released by non-CSR firms as they believe the good news released by CSR firms to be of higher credibility. However, when firms release bad news (negative earnings surprises), the credibility of firm financial reporting may be less important to the market

because it believes that failing to deliver expected earnings is a signal of other potentially serious but unseen problems (Graham, Harvey and Rajgopal 2005). In addition, firms largely engage in earnings management to avoid missing earnings expectations (Graham et al. 2005; Burgstahler and Dichev 1997). When firms miss earnings expectations, the market may be less concerned about the credibility of firm financial reporting. As the market is less concerned about the credibility of firm financial reporting when firms miss earnings expectations, I do not expect to find that the earnings response coefficient of CSR firms is different from that of non-CSR firms when releasing bad news.

This study extends a stream of research that investigates the relationship between CSR and firm performance/value. To date, the results from these studies are inconclusive. In a meta-analysis of 251 CSR and firm performance/value studies for the past 35 years, Margolis, Elfenbein and Walsh (2011, p. 1) present evidence to conclude that "the overall effect is positive but small and results for the 106 studies from the past decade are even smaller." However, of all the studies reviewed in the meta-analysis, only 28 percent of studies document a positive relationship between CSR and firm performance/value, two percent provide evidence that CSR and firm performance/value are negatively associated, 59 percent indicate that CSR and firm performance/value are not related, and the remaining studies do not clearly indicate the association between CSR and firm performance. Linthicum, Reitenga and Sanchez (2010) (hereafter, LRS) argue that CSR is sticky and the influence of CSR on firm value could be already impounded in stock prices before the time periods investigated in prior studies. They suggest that an event study, examining a situation where the market is likely to re-assess the influence of CSR on firm value, is a more appropriate approach to investigate the relationship between CSR and firm performance/value. LRS (2010) identify the Enron audit failure as such

an event and examine whether CSR activities can mitigate the negative abnormal returns suffered by Arthur Andersen clients following the Enron audit failure.[1] However, the results do not support the contention that CSR activities mitigate the negative impact to a firm caused by the loss of the credibility of the firm's auditor.

This study is similar to LRS (2010) in that both investigate how market participants react to CSR in situations where CSR is re-assessed. Importantly, however, this study differs from LRS (2010) in that I do not propose that CSR mitigates negative market reactions caused by the credibility loss of a third party (the firm's auditor). Rather, I suggest that, if market participants believe that financial information released by CSR firms is more credible, they will place a higher level of reliance on CSR firm-released information. I extend LRS (2010) by separately examining the different market reactions to both positive and negative earnings surprises released in earnings announcements between CSR firms and non-CSR firms. Rather than seeking to determine whether CSR directly affects firm performance/value (e.g. Waddock and Graves 1997), I focus on whether CSR is associated with market participants' perceptions of firm financial reporting credibility. I suggest that through the influences of CSR on perceived financial reporting credibility, CSR may influence firm value indirectly.

This study contributes to the CSR literature in a number of important ways. First, this study responds to recent research calls to address the mechanisms (e.g., the perceived financial reporting credibility) through which CSR influences stakeholders' decisions (Moser and Martin 2012; Aguinis and Glavas 2012). Empirical results documented in this study suggest that CSR could influence investors' and analysts' decisions through its influence on perceived financial

[1] Chaney and Philipich (2002) suggest that the credibility of a firm's auditor can influence investors' decisions about the firm and document that Arthur Andersen clients, on average, suffer negative abnormal returns in days following the Enron audit failure.

reporting credibility. Second, studies that examine how market participants respond to firms being socially responsible primarily focus on investors' reactions. Unlike investors whose financial interests are directly related to firm value, analysts are not the owners of the firm. They may behave differently than investors when responding to CSR. Therefore, I extends market participants from investors to analysts by examining whether analysts have greater confidence in financial information released by CSR firms. Lastly, by examining the difference in the earnings response coefficient between CSR and non-CSR firms under positive (good news) and negative (bad news) events separately, I expect to provide possible explanations to some of the conflicting results documented in prior research related to the relationship between CSR and firm performance.

The remainder of the paper proceeds as follows. The next chapter discusses the related literature and develops the hypotheses. Chapters 3 describes the sample and the methodology. Chapter 4 and 5 present analyses and results, along with robustness tests and supplemental analyses. Chapter 6 summarizes and concludes.

CHAPTER 2

RELATED LITERATURE AND HYPOTHESIS DEVELOPMENT

Corporate Social Responsibility

CSR is consistent with stakeholder theory which posits that firms should be responsible not only to shareholders, but also to a broader range of stakeholders (e.g., Carroll 1979, 1999; Watts and Holme 1999; Phillips, Freeman and Wicks 2003; Moser and Martin 2012). Hoi, Wu and Zhang (2013) indicate that CSR is the belief in a firm's "right" course of actions that considers economic, social, environment and other external impacts of firm behaviors.

This is study is related to two streams of CSR research: 1) how CSR firms behave, and 2) how external parties (e.g., investors) respond to firms being socially responsible. CSR activities are often linked to firm ethics (e.g., Carroll 1979; Watts and Holme 1999). Being responsible to all stakeholders, CSR firms adhere to higher ethical standards and behave in a more responsible manner in their decision making (e.g. Blazovich et al. 2014; Kim et al. 2012). Research investigating the behaviors of CSR firms has generally documented that CSR firms are associated with a series of positive firm behavior. For example, Blazovich et al. (2014) document that, while the CEO gender pay gap is evident in non-CSR firms, CSR firms compensate female CEOs comparably to their male counterparts. Kim et al. (2012) compare the degree of earnings management between CSR and non-CSR firms and find that, relative to non-CSR firms, CSR firms are less likely to engage in earnings management through either discretionary accruals or real operating activities manipulation. Kim et al. (2012) also document that CEOs and CFOs of CSR firms are less likely to be the subjects of SEC investigations of

GAAP violations, as reported in Accounting and Auditing Enforcement Releases. Hoi et al. (2013) find that CSR firms are less likely to engage in aggressive tax avoidance activities, have smaller discretionary and permanent book-tax differences and less uncertain tax positions. In addition, Parker (2014), via case study analysis, provides evidence to support that CSR practices at the firm level are driven by corporate executives' moral and ethical beliefs. Gao, Lisic and Zhang (2014) evaluate whether the personal trading behaviors of executives of CSR firms are different from those of non-CSR firms. They find that executives of CSR firms are less likely to trade on private information and profit less from insider trades. To investigate whether CSR mitigates divisional managers' willingness to manage earnings, Beaudoin, Agoglia and Tsakumis (2013) conduct an experimental study in which divisional managers need to make a year-end accrual decision. Their results indicate that divisional managers tend to defer the recognition of expenses when there are incentives to manage earnings upward and accelerate expense recognition when they have incentives to manage earnings downward. However, a demonstrated commitment to socially responsible actions at the firm level moderates divisional managers' willingness to manage earnings in both directions.

In contrast, firms may expend efforts and/or resources on CSR activities opportunistically. Agency theory (Jenson and Meckling 1976) predicts that self-interested CEOs may engage in CSR practices at the expense of other stakeholders in order to pursue their personal interests (e.g., CEO reputation or compensation). CSR may also be used as a risk management tool to mitigate the negative impact of a corporate misconduct (Hemingway and Maclagan 2004; Godfrey 2005; Cespa and Cestone 2007; Prior, Surroca and Tribo 2008; Godfrey, Merrill and Hansen 2009). Specifically, Godfrey (2005) theorizes that when a firm is facing negative effects of a known corporate misconduct, its involvement in corporate

philanthropy can serve as an insurance-like protection against negative effects of corporate misdeeds. Empirically, Prior et al. (2008) propose that firms with high level of manipulated accounting numbers are more interested in presenting the general public with socially friendly images to disguise their earnings manipulation behaviors. The positive relationship between earnings management and CSR for regulated firms presented in their study supports this proposition. However, the relationship between earnings management and CSR is insignificant for unregulated firms. As regulated firms comprise less than 20 percent of the sample, results documented for regulated firms in Prior et al. (2008) are less generalizable.

Even though it is possible that CSR firms theoretically could be motivated to engage in CSR activities for opportunistic reasons, evidence to date does not indicate that firms, on average, engage in CSR activities opportunistically. In fact, there is some empirical evidence suggesting that investors view CSR favorably and respond to firms being socially responsible in a positive manner. Cullinan, Mahoney and Roush (2015) examine whether firms' CSR performance influences shareholder voting at corporate annual meetings and find that shareholders of CSR firms are more supportive of the boards' director nominees and management compensation packages. Therefore, I do not predict that market participants will view CSR firms' involvement in CSR activities skeptically. Rather, I suggest that, in general, market participants believe that CSR firms engage in CSR activity to be responsible to all stakeholders and a firm's involvement in CSR activities is indicative of following higher ethical standards and behaving more responsibly. Source credibility theory states that perceived credibility can enhance the value of information in a message and that a recipient's acceptance level of new information is affected by the perceived credibility of the source (Hovland and Weiss 1952; Hovland et al. 1953; Anderson 1971). As a result, market participants will

perceive the financial reporting of CSR firms as more credible, thereby, placing a higher level of reliance on CSR firm provided financial information. I operationalize the concept of perceived financial reporting credibility in a couple of specific ways: the analyst forecast dispersion and the earnings response coefficient.

Analyst Forecast Dispersion

Dispersion in analyst forecasts measures divergence in analysts' beliefs of a firm's future performance (Diether, Malloy and Scherbina 2002). Lang and Lundholm (1996) find that information differences cause disagreements among analysts about a firm's future performance. Firm-released information is public information to all analysts (especially after Regulation Fair Disclosure became effective in October 2000).[2] There is no difference in firm-released common information. Therefore, the more analysts base their forecasts on firm-released common information, the lower the analyst forecast dispersion (Lang and Lundholm 1996). Moreover, analysts' assessment of the credibility of firm-provided financial information drives the level of reliance analysts will place on this common information in their forecasting analysis. The more credible of firm-released information, the more analysts will rely on this common information in their forecasting process, the lower the analyst forecast dispersion. Concisely, analyst forecast dispersion (AFD) is a decreasing function of the credibility of firm-released financial information: the more credible the firm-released financial information, the lower the analyst forecast dispersion.

[2] Regulation Fair Disclosure (Reg FD) is a regulation that was passed by the U.S. Securities and Exchange Commission (SEC) in August 2000 in an effort to prevent selective disclosure by public companies. Reg FD provides that "when an issuer discloses material nonpublic information to certain individuals or entities—generally, securities market professionals, such as stock analysts, or holders of the issuer's securities who may well trade on the basis of the information—the issuer must make public disclosure of that information".

Following Lang and Lundholm (1996), Palmrose, Richardson and Scholz (2004) use the AFD to estimate the credibility of corporate financial reporting. Palmrose et al. (2004) find that the AFD of a restating firm increases following its earnings restatement announcement which suggests that the financial reporting credibility of restating firms decreases subsequent to the restatement announcement. deHaan, Hodge and Shevlin (2013) examine whether voluntarily adopting a compensation clawback provision affects market participants' perceptions of the adopting firm's financial reporting credibility. They find that, subsequent to the voluntary adoption, the AFD of adopting firms not only decreases but also is lower than that of non-adopting firms. The financial reporting credibility of adopting firms improves subsequent to the voluntary adoption.

In general, if financial reporting of CSR firms is perceived to be more credible, I propose the following hypothesis, stated in the alternative form.

H1: The analyst forecast dispersion of CSR firms is lower than that of non-CSR firms.

Earnings Response Coefficient

Ball and Brown (1968) document a positive relationship between abnormal stock returns and unexpected earnings (measured by change in earnings over the previous period) which is consistent with their proposition that accounting earnings contain information that has not yet been impounded into the security price. In this standard earnings-price framework, the earnings response coefficient (ERC) is the coefficient of unexpected earnings when regressing abnormal returns on unexpected earnings. The ERC measures the extent to which the market reacts to the news released in accounting earnings.

Holthausen and Verrecchia (1988) develop an analytical model to investigate determinants of the magnitude of price reactions to the newly released accounting information.

The construct of the model suggests that the market reaction is inversely related to the perceived noise of the newly released accounting information, which further implies that, all else equal, the higher the perceived financial reporting credibility, the greater the ERC.

Following Holthausen and Verrecchia (1988), many studies use the ERC to proxy for investors' perception of financial reporting credibility (e.g., Wilson 2008; deHaan et al. 2013; Chakravarthy, deHaan and Rajgopal 2014). Wilson (2008) investigates the duration of the loss of credibility in subsequently reported financial information of firms that issue an earnings restatement and finds that the quarterly ERC of restating firms is significantly lower four quarters following the restating announcement. Extending Wilson (2008), Chakravarthy et al. (2014) suggest that, subsequent to a restatement, the restating firm can take actions to repair its financial reporting credibility. They find that restating firms that take a greater number of repair actions have greater increases in the ERC following the restatement.

If financial reporting of CSR firms is perceived to be more credible, I, therefore, propose the following hypothesis, stated in the alternative form.

H2: The earnings response coefficient of CSR firms is higher than that of non-CSR firms.

Further, capital markets research in accounting suggests that the market reacts differently to good news (meeting or beating earnings expectations) versus bad news (missing earnings expectations) (e.g., Kasznik and McNichols 2002; Lopez and Rees 2002; Bartov, Givoly and Hayn 2002). Specifically, the market rewards firms that meet or beat earnings expectations with a premium and penalize firms that miss earnings expectation with a penalty (e.g., Bartov et al. 2002; Lopez and Rees 2002; Conrad, Cornell and Landsman 2002). Some studies even find that the absolute value of market reactions to negative earnings surprises is larger than to positive

earnings surprises (Skinner and Sloan 2002; Conrad et al. 2002).[3] For example, Skinner and Sloan (2002) find that growth firms that fail to meet earnings benchmarks suffer asymmetrically larger negative price reactions.

Graham et al. (2005) indicate that the market always expects firms to hit or slightly exceed earnings expectations, and failing to deliver expected earnings is interpreted by the market as evidence of potentially serious problems.[4] One executive interviewed by Graham et al. (2005, p. 28) plainly stated "I miss the target. I am out of a job." Therefore, firms have great incentives to meet earnings expectations. Burgstahler and Dichev (1997) present that earnings measures are normally distributed with a irregularity near earnings targets – slightly missing earnings targets occurs abnormally less frequently and meeting or slightly beating earnings targets occurs abnormally more frequently. These results are consistent with earnings management to avoid missing earnings targets.[5]

Given the findings of Burgstahler and Dichev (1997) and Graham et al. (2005), the market may be concerned about the credibility of firm financial reporting in the case of a positive surprise. It will look for a signal indicative of the firm's financial reporting credibility. If a firm's involvement in CSR activities provides such a signal, then the financial information released by CSR firms will be perceived as a better representation of the underlying economic performance of the firms. The market will place a higher level of reliance on CSR firms reported good news. Therefore, I propose the following hypothesis, stated in the alternative form.

[3] Some studies do not find the asymmetric market reactions to positive and negative earnings surprises. For example, Lopez and Rees (2002) find that market reactions to positive and negative earnings surprises are symmetric. However, these results could be impacted by bad news preannouncements.
[4] Brown and Caylor (2005) also provide empirical evidence to support that firms on average do meet analyst forecasted earnings.
[5] It should be noted that Durtschi and Easton (2009) argue that the discontinuities in earnings distributions around earnings targets are likely caused by factors other than earnings management.

H2a: The earnings response coefficient of CSR firms is higher than that of non-CSR firms when releasing good news.

However, when bad news (negative earnings surprises) is announced, the market may be less concerned about the credibility of firm financial reporting. It is possible that firms could manage earnings downward to create cookie jar reserve, to depress stock price prior to insider purchasing or to minimize political cost when missing earnings expectations (Levitt 1998). However, the earnings distributions presented in Burgstahler and Dichev (1997) do not show any irregularity as moving away from the earnings targets. Also, failing to meet earnings expectations is such a negative signal with respect to firm performance that the market may be too focused on this negative signal itself to take financial reporting credibility into account.

Therefore, I propose the following hypothesis, stated in the null form.

H2b: The earnings response coefficient of CSR firms and non-CSR firms are the same when releasing bad news.

CHAPTER 3

METHODOLOGY

Corporate Social Responsibility Database

I obtain firm-specific CSR performance ratings from MSCI ESG STATS (hereafter KLD).[6] KLD is an annual database of environmental, social, and governance (ESG) ratings of publicly traded companies. KLD has provided ESG ratings for 650 companies included in the Domini 400 social index or S&P 500 since 1991, and it has expanded its coverage to the largest 3,000 U.S. publicly traded companies by market capitalization since 2003. KLD is the largest multidimensional corporate social performance database, and it presents the most widely accepted CSR measures used by academic researchers (Deckop, Merriman and Gupta 2006; Huang and Watson 2015).

KLD evaluates a firm's ESG performance on seven qualitative dimensions which include environment, community, diversity, employee relations, human rights, product quality/customer safety, and corporate governance. There are over 80 ESG indicators included in the seven qualitative dimensions. These ESG indicators are designed to identify positive ESG performance (strength indicators) and negative ESG performance (concern indicators) of a firm. KLD utilizes a binary representation of ESG performance indicators. If a firm meets the criteria

[6] The Kinder, Lydenberg, and Domini Research and Analytics, Inc. (KLD) database was acquired in 2010, and is now formally called MSCI ESG STATS. Firm CSR disclosure is largely voluntary, unregulated and inconsistent (see Appendix E for examples). However, KLD database uses a combination of surveys, financial statements, and articles in the popular press and academic journals, as well as government reports, to access social performance (KLD 2006). Hillman and Keim (2001) identify KLD as the best source of social responsibility measures available. Also, see Waddock and Graves (1997) for advantages of using KLD as a source for CSR measures. I refer to the database using its former, and more familiar, acronym.

established for a positive or negative ESG performance indicator, the binary representation of ESG performance is indicated with a "1". If a company does not meet the criteria established for a positive or negative ESG performance indicator, the binary representation of ESG performance is indicated with a "0". For example, in the environment dimension, a firm receives a strength rating of 1 if it has notably strong programs to reduce emissions or the use of toxic substances, and 0 otherwise. A firm receives a concern rating of 1 if it has recently paid substantial fines or civil penalties for violations of environmental regulations, or if it has a pattern of regulatory controversies under the Clean Air or Clean Water Acts or other major environmental regulations, and 0 otherwise. The ESG strength and concern indicators of KLD database are detailed in Appendix B.

As of the end of 2012, KLD covers 46 possible strength indicators and 36 possible concern indicators across all six environmental and social dimensions, with possible ratings of 46 in the strength category and 36 in the concern category. Table 1 summarizes the maximum rating for each of the environmental and social dimensions and the maximum total environmental and social ratings.

TABLE 1

KLD Possible Environmental and Social Ratings

	Environment	Community	Diversity	Human Rights	Employee Relations	Product	Total
Possible Strengths	10	8	9	3	11	5	46
Possible Concerns	11	4	4	6	7	4	36

See Appendix B for strength indicators and concern indicators rated in KLD database for each dimension.

In addition to qualitative dimensions, KLD assigns additional concern ratings to firms doing business in industries it considers to be controversial. These industries include alcohol, gambling, firearms, military, nuclear power, and tobacco.

KLD has created a set of criteria to evaluate a business' involvement in these six controversial industries. For example, KLD deems a firm to be involved in the tobacco industry (thereby receiving a concern rating of 1) if it produces cigarettes, cigars, pipe tobacco, and smokeless tobacco products or if it owns more than 20 percent of another firm with tobacco involvement. KLD controversial business issue indicators are detailed in Appendix C.

Corporate Social Responsibility Measures

Following prior studies, I exclude ratings of the six controversial industries from the CSR measure since firms do not have a significant amount of discretionary power in selecting their industries (e.g. LRS 2010; Kim et al. 2012). I also exclude corporate governance ratings from the CSR measure since corporate governance is a distinct construct that is different from CSR (e.g. Kim et al. 2012; Gao et al. 2014).

CSR strengths (concerns) is the sum of all strengths (concerns) a firm received in all six environmental and social dimensions, including community, diversity, employee relations, environment, human rights and product quality/customer safety. The net CSR measure of a firm is its CSR strengths minus its CSR concerns. The indicators used by KLD to evaluate firms' environmental and social performance vary over time. In order for firm CSR performance measures obtained from KLD to be comparable, I rank the net CSR measure by year. A firm is

defined to be a CSR firm in year t if its net CSR measure in year t-1 meets two requirements: 1) greater than 0; 2) greater than the median net CSR measure of the year t-1.[7]

Sample

To examine whether CSR is associated with perceived financial reporting credibility, I obtain quarterly financial data from Compustat Quarterly, quarterly analyst forecasting data from International Brokers Estimate System (I/B/E/S) and daily stock price data from the Center for Research in Security Prices (CRSP) from 2004 to 2013. I obtain firm environmental and social performance ratings from the KLD database for the period 2003-2012.[8] I winsorize all variables at the 1st and 99th percentiles. After deleting observations with missing data, the final sample of this study consists of 2,552 unique firms with 49,747 firm-quarter observations from the first quarter of 2004 to the fourth quarter of 2013.

Analyst Forecast Dispersion (H1)

To investigate whether financial analysts perceive CSR firms' financial reporting to be of higher credibility, I first examine the difference of quarterly analyst forecast dispersions between CSR firms and non-CSR firms before earnings announcements. Following prior research, I estimate the following regression model (Diether et al. 2002; Liu and Natarajan 2012; deHaan et al. 2013).

$$DISP_{i,q} = \beta_0 + \beta_1 CSR_{i,q} + \beta_2 Numest_{i,q} + \beta_3 Persist_{i,q} + \beta_4 Predict_{i,q} + \beta_5 Beta_{i,q} + \beta_6 Size_{i,q} + \beta_7 Loss_{i,q} + \beta_8 MB_{i,q} + \beta_9 Gov_{i,q} + \sum \beta_k QTR + e_{i,q} \quad (1)$$

[7] I use one year lagged CSR measure to ensure that a firm's CSR performance is publicly available information at the time when earnings are announced. It also addresses potential reverse causality and simultaneity issues caused by using concurrent CSR measure.

[8] The data period starting point is chosen for two reasons: 1) keeping database coverage consistent over the sample period (KLD expanded its coverage to the largest 3,000 U.S. publicly traded companies by market capitalization in 2003); 2) keeping the disclosure environment consistent over the sample period (Reg FD became effective in late 2000).

$DISP_{i,q}$ is the standard deviation of quarterly analysts forecasts scaled by adjusted stock price as of the end of the quarter for which earnings are announced for firm *i* at quarter *q*. It is calculated using each analyst's most recent forecast prior to the quarterly earnings announcement, as per the IBES detail file. Forecasts older than 3 months are not included in the $DISP_{i,q}$ calculation. In addition, each firm-quarter observation must have forecasts from at least two analysts to be included in the sample (Liu and Natarajan 2012). $CSR_{i,q}$ is an indicator variable which equals 1 if firm *i*'s quarter *q*'s previous year's net CSR measure is greater than the median of the year, and 0 otherwise.

$Numest_{i,q}$ is the number of individual analyst forecasts included in each firm-quarter observation for firm *i* at quarter *q* (Diether et al. 2002). All other control variables are measured with respect to firm *i* at quarter *q*'s earnings announcement. *Persist* is the autoregressive coefficient from adjusted earnings per share regressed on seasonally lagged adjusted earnings per share, estimated over the preceding eight quarters (Kormendi and Lipe 1987; Easton and Zmijewski 1989). *Predict* is the variance of the absolute value of unexpected earnings over the preceding eight quarters, where unexpected earnings are based on a seasonal random walk (Liu and Natarajan 2012; Lipe 1990). *Beta* is the market model beta, which is estimated using CRSP daily data over the years ending 5 days prior to the earnings announcement date (Diether et al. 2002; Collins and Kothari 1989; Easton and Zmijewski 1989). *Size* is the natural logarithm of total assets as of the end of the quarter for which earnings are announced (Diether et al. 2002). *Loss* is a binary variable which equals 1 if actual earnings per share is less than 0, and 0 otherwise. It measures the uncertainty in the analysts' information environment (Liu and Natarajan 1990). *MB* is the market-to-book ratio, calculated as the market value of common equity divided by the book value of equity as of the end of the quarter for which earnings are

announced (Collins and Kothari 1989; Diether et al. 2002). *Gov* is the KLD previous year's net corporate governance rating of the firm adjusted by previous year's median net corporate governance rating for which earnings is announced (Francis, Schipper and Vincent 2005; Wang 2006). Lastly, quarter binary variables are included to control for quarter fixed effects.

Based on empirical evidence documented in Deither et al. (2002) and Liu and Natarajan (2012), I expect *Numest, Beta, Predict* and *Loss* to be positively associated with the AFD, and *Size, Persist, MB* and *Gov* to be negatively associated with the AFD.

In addition, if analysts, on average, believe that financial reporting of CSR firms is a better representation of firm performance, they will have greater confidence in firm-provided financial information and make greater use of this common information in their analyses. This will, in turn, result in greater consensus among their forecasts. After controlling for the effects of all other factors, CSR firms will have relatively lower AFD, suggesting a significantly negative coefficient on CSR (β_1).

Earnings Response Coefficient (H2)

To investigate whether shareholders perceive CSR firms' financial reporting to be of higher credibility, I first examine the difference of the three-day window earnings response coefficient around quarterly earnings announcements between CSR firms and non-CSR firms with the full sample. I exclude firm-quarter observations with unexpected earnings being 0 from the ERC analyses because the ERC does not exist in these observations. I then partition the sample into two subsamples based on unexpected quarterly earnings. The first subsample includes all firm-quarter observations with positive unexpected quarterly earnings. It consists of 2,417 unique firms with 29,759 firm-quarter observations. The ERC sample consists of 2,534 unique firms with 44,621 firm-quarter observations. The second subsample includes all firm-

quarter observations with negative unexpected quarterly earnings. It consists of 2,270 unique firms with 14,862 firm-quarter observations.

In a review of capital market research on the relationship between market returns and accounting earnings, Kothari (2001) summarizes earnings persistence, macroeconomic conditions, risk and some other firm level characteristics (e.g., size, growth opportunities) systematically affect the association between abnormal return and unexpected earnings. To separate the portion of the ERC that reflects market perceptions of earnings credibility, I include a group of variables in the following regression model to control for the effects of other factors that also affect the ERC.

$$CAR_{i,q} = \alpha_0 + \alpha_1 CSR_{i,q} + \alpha_2 UE_{i,q} + \alpha_3 (UE_{i,q} * CSR_{i,q}) + \alpha_4 Nonlinear_{i,q} + \alpha_5 Persist_{i,q} + \alpha_6 Predict_{i,q} + \alpha_7 Beta_{i,q} + \alpha_8 Size_{i,q} + \alpha_9 MB_{i,q} + \alpha_{10} Loss_{i,q} + \alpha_{11} Q4_{i,q} + \alpha_{12} (Persist_{i,q} * UE_{i,q}) + \alpha_{13} (Predict_{i,q} * UE_{i,q}) + \alpha_{14} (Beta_{i,q} * UE_{i,q}) + \alpha_{15} (Size_{i,q} * UE_{i,q}) + \alpha_{16} (MB_{i,q} * UE_{i,q}) + \alpha_{17} (Loss_{i,q} * UE_{i,q}) + \alpha_{18} (Q4_{i,q} * UE_{i,q}) + \sum \alpha_k QTR + \varepsilon_{i,q} \quad (2)$$

$CAR_{i,q}$ is the three-day buy-and-hold market adjusted returns surrounding the quarterly earnings announcement date for firm *i* at quarter *q*, where market adjustment is based on CRSP equal-weighted market returns.[9] $UE_{i,q}$ is unexpected quarterly earnings for firm *i* at quarter *q*'s earnings announcement date, scaled by adjusted stock price as of the end of the quarter for which earnings are announced, where unexpected quarterly earnings equal the IBES summary quarterly actual earnings per share less the most recent median analyst forecast prior to the earnings announcement. $Nonlinear_{i,q}$ is a control for nonlinearity in the price-earnings relation. It is calculated as multiplying the $UE_{i,q}$ and the absolute value of $UE_{i,q}$. Extreme values of unexpected earnings are less value relevant, therefore, I expect the coefficient on Nonlinear to be negative (Freeman and Tse 1989; Subramanyam 1996; Lipe, Bryant and Widener 1998). *Q4* is a

[9] Results are consistent when market adjustment is based on CRSP value-weighted market returns.

binary variable which equals 1 if the observation is the firm's fourth fiscal quarter, and 0 otherwise. There is less information content contained in the fourth quarter earnings announcement (Mendenhall and Nichols 1988; Salamon and Stober 1994; deHaan et al. 2013). Therefore, I expect the coefficient on *Q4* interacting with *UE* to be negative. All other control variables are consistent with the control variables (except $Numest_{i,q}$) adopted in the earnings response coefficient model.[10]

Based on empirical evidence documented in Kormendi and Lipe (1987), Easton and Zmijewski (1989), Collins and Kothari (1989), Lipe (1990) and Wang (2006), I expect that the coefficients on *Persist*UE, MB*UE* and *Gov*UE* will be positive, and that the coefficient on *Beta*UE* and *Predict*UE* will be negative. Hayn (1995) and Basu (1997) suggest that because of the conservative nature of accounting, earnings has less information content when it is a loss. Therefore, I expect that the coefficient on *Loss* interacting with *UE* will be negative. I do not predict the direction of coefficient on *Size*UE* because *Size* is likely correlated with other firm level characteristics.

In addition, if the market perceives the financial information released by CSR firms to be of higher credibility, then the ERC of CSR firms will be higher than that of non-CSR firms when good news is released (i.e., α_3 will be significantly positive). If the market does not take financial reporting credibility into account when firms miss earnings expectations, then the ERC of CSR firms will not be different from that of non-CSR firms, and α_3 will be insignificant.

[10] *Numest* is irrelevant to the ERC since the most recent median analyst forecast prior to the earnings announcement is used to measure expected earnings in this study. Therefore, it is not included in equation (2).

CHAPTER 4

RESULTS

Descriptive Statistics

Panel A of Table 2 provides descriptive statistics of non-CSR variables for the full sample of observations. Approximately 30 percent of the sample firm-quarter observations fail to meet earnings targets. Panel B of Table 2 reports descriptive statistics of CSR measure by dimension with environment, community and diversity dimension having a sample mean slightly greater than 0 and human rights, employee relations and product quality and customer safety having a sample mean slightly smaller than 0. Panel C of Table 2 provides descriptive statistics of net CSR measures by year. The mean of net CSR measures for each year is slightly smaller than 0 except the mean of net CSR measure of 0.81 at year 2012, and the medians of net CSR measures are at 0 for majority of the sample years with the median of -1 at year 2010 and 2011. Net CSR measures of the sample range from -9 to 18.

TABLE 2

Descriptive Statistics

Panel A: Descriptive Statistics of non-CSR Variable

Non-CSR Variable	N	Mean	Std. Dev.	Q1	Median	Q3
DISP	49,747	0.0029	0.0064	0.0004	0.001	0.0023
CAR	44,621	0.002	0.0793	-0.0372	0.0011	0.0417
Numest	49,747	8.9423	6.6131	4	7	12
SUE	44,621	-0.0002	0.0007	-0.0009	0.0007	0.0025
PUE	29,759	0.004	0.0067	0.0007	0.0017	0.0039
NUE	14,862	-0.0084	0.0167	-0.0068	-0.0022	-0.0009
Predict	49,747	1.336	6.8343	0.0036	0.0183	0.1232
Persist	49,747	0.2622	0.7588	-0.1296	0.1805	0.6875
Beta	49,747	1.3278	0.5145	0.9669	1.2726	1.6256
MB	49,747	2.9423	3.699	1.3636	2.1601	3.5193
Size	49,747	7.3029	1.585	6.13	7.12	8.32
Loss	49,747	0.158	0.3647	0	0	0
Gov	49,747	0.9603	0.1812	0.75	1	1
Q4	44,621	0.2118	0.4086	0	0	0

All variables are defined in Appendix A.

TABLE 2 (continued)

Panel B: Descriptive Statistics of CSR Measure by Dimension

Dimension	N	Mean	Std. Dev.	Min	Median	Max
Environment	14,314	0.0387	0.7365	-5	0	5
Community	14,314	0.0677	0.4967	-2	0	4
Diversity	14,314	0.0538	1.3805	-3	0	7
Human Rights	14,314	-0.0424	0.2495	-3	0	2
Employee Relations	14,314	-0.1139	0.9022	-4	0	7
Product	14,314	-0.1187	0.5656	-4	0	2

All variables are defined in Appendix A.

TABLE 2 (continued)

Panel C: Descriptive Statistics of Net CSR Measure by Year

Year	N	Mean	Std. Dev.	Min	Median	Max
2003	1,459	-0.0939	1.7619	-9	0	10
2004	1,525	-0.2885	1.8608	-7	0	10
2005	1,482	-0.2362	1.9931	-8	0	11
2006	1,449	-0.2167	2.1536	-8	0	13
2007	1,438	-0.1822	2.1999	-8	0	14
2008	1,447	-0.2025	2.2664	-9	0	13
2009	1,406	-0.2041	2.2610	-9	0	13
2010	1,441	-0.3449	2.8301	-7	-1	14
2011	1,372	-0.0824	3.1155	-7	-1	18
2012	1,295	0.8108	2.4034	-4	0	16

All variables are defined in Appendix A.

Table 3 compares variable means between CSR firms and non-CSR firms. Panel A of Table 3 reports the comparisons of variables for the analyst forecast dispersion analyses sample, and Panel B Table 3 reports the comparisons of variables for the earnings response coefficient analyses sample. Panel C (Panel D) of Table 3 reports the comparisons of variables for the earnings response coefficient analyses sample when earnings surprise is positive (negative)

separately. For all samples, I note that the mean of *Size* of CSR firms are greater than those of non-CSR firms which suggest that CSR firms are bigger firms. The means of *Beta* and *Loss* of CSR firms are lower than those of non-CSR firms, which suggest that CSR firms are less risky and less likely to incur a loss. For the analyst forecast dispersion sample, the mean of *DISP* of CSR firms are lower. However, the mean of *Numest* of CSR firms is greater, which suggests that with greater analyst coverage, the analyst forecast dispersion of CSR firms is still lower.

TABLE 3

Mean Comparison

Panel A: Analyst Forecast Dispersion Sample

Variable	Mean		T-test
	CSR (n=14,592)	Non-CSR (n=35,155)	Difference
DISP	0.0025	0.0031	<0.0001***
Numest	11.3960	7.9238	<0.0001***
Predict	1.3024	1.3499	0.4738
Persist	0.2814	0.2542	0.0003***
Beta	1.2153	1.3745	<0.0001***
MB	3.1717	2.8470	<0.0001***
Size	8.0786	6.9676	<0.0001***
Loss	0.1253	0.1715	<0.0001***
Gov	0.9679	0.9511	<0.0001***

All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.

Table 3 (continued)

Panel B: Earnings Response Coefficient Sample (UE>0)

Variable	Means		T-test
	CSR (n=9,245)	Non-CSR (n=20,514)	*P* Value
CAR	0.0159	0.0214	<0.0001***
UE	0.0033	0.0043	<0.0001***
Predict	1.2239	1.2051	0.8154
Persist	0.2887	0.2672	0.0239**
Beta	1.1965	1.3609	<0.0001***
MB	3.2875	2.9246	<0.0001***
Size	7.6952	6.9781	<0.0001***
Loss	0.0729	0.1056	<0.0001***
Gov	0.9668	0.9504	<0.0001***
Q4	0.2192	0.2057	0.0016***

All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.

Table 3(continued)

Panel C: Earnings Response Coefficient Sample (UE<0)

Variable	Means		T-test
	CSR (n=3,841)	Non-CSR (n=11,021)	*P* Value
CAR	-0.0344	-0.0331	0.3178
UE	-0.0082	-0.0085	0.2598
Predict	1.6995	1.7595	0.6821
Persist	0.2426	0.2272	0.3118
Beta	1.2783	1.3983	<0.0001***
MB	2.7113	2.6123	0.1510
Size	7.6125	6.7623	<0.0001***
Loss	0.2715	0.3108	<0.0001***
Gov	0.9765	0.9722	0.8451
Q4	0.2354	0.2148	0.0091***

All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.

Table 4 reports Pearson correlation coefficients. Panel A of Table 4 reports Pearson correlation coefficients among the regression variables for the analyst forecast dispersion analyses sample. Panel B of Table 4 reports Pearson correlation coefficients among the regression variables for the ERC analyses sample. Panel C (Panel D) of Table 4 reports Pearson

correlation coefficients among the regression variables for the ERC sample when *UE* is positive (negative) separately. The Pearson correlation coefficient between CSR and *DISP* is significantly negative at the 0.01 level. The Pearson correlation coefficient between *CSR* and *CAR* is insignificant. However, when good news condition and bad news condition are examined separately, while the Pearson correlation coefficient between *CSR* and *CAR* is insignificant under good news condition, it is marginally negative (*P* value = 0.0775) under bad news condition.

TABLE 4

Pearson Correlation Coefficients

Panel A: Pearson Correlation Coefficients for Analyst Forecast Dispersion Variables (n=49,747)

	DISP	Numest	CSR	Beta	MB	Persist	Predict	Size	Loss
Numest	0.0098								
	(0.0896)								
CSR	-0.0156	0.0929							
	(0.0065)	(<.0001)							
Beta	0.2237	0.0190	-0.1080						
	(<.0001)	(0.0010)	(<.0001)						
MB	-0.1409	-0.0195	0.0488	-0.0691					
	(<.0001)	(0.0007)	(<.0001)	(<.0001)					
Persist	-0.0421	-0.0117	-0.0041	-0.0631	0.0685				
	(<.0001)	(0.0421)	(0.4739)	(<.0001)	(<.0001)				
Predict	0.2166	0.0164	-0.0079	0.1198	-0.0788	-0.0742			
	(<.0001)	(0.0043)	(0.1678)	(<.0001)	(<.0001)	(<.0001)			
Size	-0.2346	0.3847	0.2425	-0.2918	0.1860	0.0440	-0.0474		
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)		
Loss	0.4263	-0.0487	-0.0260	0.2128	-0.0486	-0.1376	0.2222	-0.2979	
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	
Gov	-0.0321	-0.0243	0.0180	0.0253	0.0001	-0.0364	-0.0755	-0.1218	-0.0085
	(<.0001)	(<.0001)	(0.0018)	(<.0001)	(0.9820)	(<.0001)	(<.0001)	(<.0001)	(0.1372)

All variables are defined in Appendix A.
P values are reported in parentheses.

TABLE 4 (continued)

Panel B: Pearson Correlation Coefficients for the ERC Variables (n=44,621)

	CAR	UE	CSR	Beta	MB	Persist	Predict	Size	Q4	Loss
UE	0.2128									
	(<.0001)									
CSR	-0.0072	0.0043								
	(0.1289)	(0.3690)								
Beta	-0.0122	-0.0624	-0.1360							
	(0.0100)	(0.0001)	(<.0001)							
MB	0.0064	0.0392	0.0373	-0.0195						
	(0.1795)	(<.0001)	(<.0001)	(<.0001)						
Persist	0.0126	0.0036	0.0131	-0.0581	0.0495					
	(0.0077)	(0.4444)	(0.0057)	(<.0001)	(<.0001)					
Predict	-0.0234	-0.0869	-0.0023	0.1269	-0.0488	-0.0592				
	(<.0001)	(<.0001)	(0.6238)	(<.0001)	(<.0001)	(<.0001)				
Size	0.0143	0.0812	0.3081	-0.2949	0.1634	0.0785	-0.0633			
	(0.0025)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)			
Q4	0.0060	-0.0252	0.0186	-0.0217	-0.0013	0.0023	-0.0060	0.0634		
	(0.2031)	(<.0001)	(<.0001)	(<.0001)	(0.7858)	(0.6344)	(0.2022)	(<.0001)		
Loss	-0.1173	-0.3233	-0.0567	0.2143	0.0026	-0.0531	0.1259	-0.3101	-0.0114	
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.5893)	(<.0001)	(<.0001)	(<.0001)	(0.0158)	
Gov	-0.0064	-0.0062	-0.0150	0.0484	-0.0010	-0.0062	-0.0361	-0.2051	-0.0128	0.0122
	(0.1741)	(0.1896)	(0.0016)	(<.0001)	(0.8393)	(0.1917)	(<.0001)	(<.0001)	(0.0069)	(0.0101)

All variables are defined in Appendix A.
P values are reported in parentheses.

TABLE 4 (continued)

Panel C: Pearson Correlation Coefficients for the ERC Variables (UE>0; n=29,759)

	CAR	PUE	CSR	Beta	MB	Persist	Predict	Size	Q4	Loss
PUE	0.3275									
	(<.0001)									
CSR	-0.0056	0.0155								
	(0.3523)	(0.0104)								
Beta	0.0113	0.0234	-0.0966							
	(0.0623)	(0.0001)	(<.0001)							
MB	0.0117	-0.0011	0.0418	-0.1164						
	(0.0540)	(0.8575)	(<.0001)	(<.0001)						
Persist	0.0160	-0.0205	-0.0010	-0.0998	0.1425					
	(0.0084)	(0.0007)	(0.8699)	(<.0001)	(<.0001)					
Predict	-0.0364	0.0581	-0.0236	0.2057	-0.3116	-0.3518				
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)				
Size	0.0086	0.0363	0.2363	-0.2898	0.2990	0.0645	-0.0324			
	(0.1572)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)			
Q4	0.0118	-0.0205	0.0092	0.0044	0.0047	-0.0093	0.0007	0.0266		
	(0.0516)	(0.0007)	(0.1294)	(0.4698)	(0.4410)	(0.1233)	(0.9045)	(<.0001)		
Loss	-0.1004	-0.2270	-0.0220	0.1959	-0.1667	-0.0701	0.2232	-0.3056	-0.0090	
	(<.0001)	(<.0001)	(0.0003)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.1353)	
Gov	-0.0016	-0.0459	0.0280	0.0559	-0.0143	0.0176	-0.0726	-0.2049	-0.0051	0.0077
	(0.7906)	(<.0001)	(<.0001)	(<.0001)	(0.0180)	(0.0036)	(<.0001)	(<.0001)	(0.3969	(0.2037)

All variables are defined in Appendix A.
P values are reported in parentheses.

TABLE 4 (continued)

Panel D: Pearson Correlation Coefficients for the ERC Variables (UE<0; n=14,862)

	CAR	NUE	CSR	Beta	MB	Persist	Predict	Size	Q4	Loss
NUE	0.0677									
	(<.0001)									
CSR	-0.0145	-0.0044								
	(0.0775)	(0.5957)								
Beta	-0.0622	-0.1675	-0.0989							
	(0.0623)	(0.0001)	(<.0001)							
MB	-0.0164	0.1362	0.0003	-0.0178						
	(0.0450)	(<.0001)	(0.9696)	(0.0299)						
Persist	-0.0029	0.0193	0.0050	-0.0386	0.0260					
	(0.7269)	(0.0187)	(0.5441)	(<.0001)	(<.0001)					
Predict	-0.0082	-0.2295	-0.0143	0.1607	-0.0442	-0.0550				
	(0.3178)	(<.0001)	0.0817)	(<.0001)	(<.0001)	(<.0001)				
Size	0.0606	0.3197	0.1684	-0.1823	0.1416	0.0654	-0.0718			
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)			
Q4	0.0118	-0.0205	0.0213	0.0044	0.0047	-0.0093	0.0007	0.0266		
	(0.0516)	(0.0007)	(0.1004)	(0.4698)	(0.4410)	(0.1233)	(0.9045)	(<.0001)		
Loss	-0.0250	-0.4920	-0.0147	0.2111	-0.0035	-0.0606	0.1562	-0.3374	-0.0059	
	(0.0023)	(<.0001)	(0.0734)	(<.0001)	(0.6687)	(<.0001)	(<.0001)	(<.0001)	(0.4727)	
Gov	-0.0151	0.0639	0.0315	0.0074	0.0155	-0.0096	-0.0612	-0.1799	-0.0080	0.1799
	(0.0664)	(<.0001)	(<.0001)	(<.0001)	(0.0585)	(0.2401)	(<.0001)	(<.0001)	(0.3312)	(<.0001)

All variables are defined in Appendix A.
P values are reported in parentheses.

Table 5 reports Spearman correlation coefficients. Panel A of Table 5 reports Spearman correlation coefficients among the regression variables for the analyst forecast dispersion analyses sample. Panel B of Table 5 reports Spearman correlation coefficients among the regression variables for the ERC analyses sample. Panel C (Panel D) of Table 5 reports Spearman correlation coefficients among the regression variables for the ERC sample when *UE* is positive (negative) separately. The Spearman correlation coefficient between CSR and *DISP* is significantly negative (*P* value < 0.0001). The Spearman correlation coefficient between *CSR* and *CAR* is insignificant. However, when good news condition and bad news condition are examined separately, while the Spearman correlation coefficient between *CSR* and *CAR* is insignificant under good news condition, it is negative under bad news condition (*P* value < 0.0001).

TABLE 5

Spearman Correlation Coefficients

Panel A: Spearman Correlation Coefficients for Analyst Forecast Dispersion Variables (n=49,747)

	DISP	Numest	CSR	Beta	MB	Persist	Predict	Size	Loss
Numest	0.1641								
	(<.0001)								
CSR	-0.0514	0.1012							
	(<.0001)	(<.0001)							
Beta	0.2378	0.0021	-0.1013						
	(<.0001)	(0.7123)	(<.0001)						
MB	-0.3817	-0.0056	0.0441	-0.1191					
	(<.0001)	(0.3285)	(<.0001)	(<.0001)					
Persist	-0.1658	0.0009	0.0001	-0.1025	0.1475				
	(<.0001)	(0.8698)	(0.9886)	(<.0001)	(<.0001)				
Predict	0.3714	0.0912	-0.0210	0.2012	-0.3139	-0.3556			
	(<.0001)	(<.0001)	(0.0003)	(<.0001)	(<.0001)	(<.0001)			
Size	-0.2609	0.3888	0.2425	-0.2974	0.3008	0.0678	-0.0332		
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)		
Loss	0.3480	-0.0400	-0.0260	0.1933	-0.1621	-0.0707	0.2222	-0.2991	
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	
Gov	-0.0048	-0.0846	0.0315	0.0576	-0.0167	0.0188	-0.0755	-0.2077	0.0091
	(0.4074)	(<.0001)	(<.0001)	(<.0001)	(0.0037)	(0.0011)	(<.0001)	(<.0001)	(0.1116)

All variables are defined in Appendix A.
P values are reported in parentheses.

TABLE 5 (continued)

Panel B: Spearman Correlation Coefficients for the ERC Variables (n=44,621)

	CAR	UE	CSR	Beta	MB	Persist	Predict	Size	Q4	Loss
UE	0.3461									
	(<.0001)									
CSR	-0.0055	0.0057								
	(0.2427)	(0.2329)								
Beta	-0.0115	0.0238	-0.1413							
	(0.0153)	(<.0001)	(<.0001)							
MB	0.0236	-0.0164	0.0681	-0.0749						
	(<.0001)	(0.0005)	(<.0001)	(<.0001)						
Persist	0.0160	-0.0258	0.0180	-0.0957	0.1129					
	(0.0077)	(0.4444)	(0.0001)	(<.0001)	(<.0001)					
Predict	-0.0430	0.0469	0.0169	0.1563	-0.2720	-0.3085				
	(<.0001)	(<.0001)	(0.0004)	(<.0001)	(<.0001)	(<.0001)				
Size	0.0230	-0.0081	0.2876	-0.3039	0.3096	0.1182	-0.0110			
	(<.0001)	(0.0876)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.0204)			
Q4	0.0007	-0.0247	0.0186	-0.0215	0.0042	0.0038	0.0080	0.0667		
	(0.8794)	(<.0001)	(<.0001)	(<.0001)	(0.3754)	(0.4228)	(0.0909)	(<.0001)		
Loss	-0.1176	-0.1997	-0.0567	0.2023	-0.1027	-0.0811	0.1975	-0.3154	-0.0114	
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.0158)	
Gov	-0.0093	-0.0478	-0.0373	0.0645	-0.0317	-0.0131	-0.0843	-0.2468	-0.0138	0.0214
	(0.0503)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.0056)	(<.0001)	(<.0001)	(0.0035)	(<.0001)

All variables are defined in Appendix A.
P values are reported in parentheses.

TABLE 5 (continued)

Panel C: Spearman Correlation Coefficients for the ERC Variables (UE>0; n=29,759)

	CAR	PUE	CSR	Beta	MB	Persist	Predict	Size	Q4	Loss
PUE	0.2113									
	(<.0001)									
CSR	-0.0061	-0.0014								
	(0.3173)	(0.8177)								
Beta	0.0123	-0.0821	-0.1034							
	(0.0418)	(<.0001)	(<.0001)							
MB	0.0027	0.0625	0.0418	-0.0617						
	(0.6559)	(<.0001)	(<.0001)	(<.0001)						
Persist	0.0124	-0.0047	-0.0045	-0.0606	0.0644					
	(0.0412)	(0.4338)	(0.4602)	(<.0001)	(<.0001)					
Predict	-0.0137	-0.0792	-0.0062	0.1217	-0.0792	-0.0738				
	(0.0240)	(<.0001)	(0.3052)	(<.0001)	(<.0001)	(<.0001)				
Size	0.0027	0.1371	0.2415	-0.2843	0.1801	0.0424	-0.0470			
	(0.6617)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)			
Q4	0.0141	-0.0224	0.0092	0.0049	0.0039	-0.0060	-0.0037	0.0247		
	(0.0203)	(0.0002)	(0.1294)	(0.4154)	(0.5205)	(0.3252)	(0.5389)	(<.0001)		
Loss	-0.1003	-0.4016	-0.0220	0.2149	-0.0425	-0.0479	0.1372	-0.3045	-0.0090	
	(<.0001)	(<.0001)	(0.0003)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.1353)	
Gov	-0.0016	0.0028	0.0199	0.0247	0.0016	0.0193	-0.0336	-0.1210	-0.0067	-0.0105
	(0.7973)	(0.6463)	(0.0010)	(<.0001)	(0.7902)	(0.0014)	(<.0001)	(<.0001)	(0.2717)	(0.0822)

All variables are defined in Appendix A.
P values are reported in parentheses.

TABLE 5 (continued)

Panel D: Spearman Correlation Coefficients for the ERC Variables (UE<0; n=14,862)

	CAR	NUE	CSR	Beta	MB	Persist	Predict	Size	Q4	Loss
NUE	0.1295									
	(<.0001)									
CSR	-0.0143	-0.0397								
	(0.0824)	(<.0001)								
Beta	-0.0748	-0.2060	-0.0923							
	(<.0001)	(<.0001)	(<.0001)							
MB	-0.0161	0.1317	0.0141	-0.0739						
	(0.0496)	(<.0001)	(0.0858)	(<.0001)						
Persist	0.0021	-0.3349	0.0080	-0.0682	0.0855					
	(0.7973)	(<.0001)	(0.3270)	(<.0001)	(<.0001)					
Predict	-0.0151	-0.0792	-0.0143	0.1708	-0.2637	-0.0550				
	(0.0651)	(<.0001)	0.0817)	(<.0001)	(<.0001)	(<.0001)				
Size	0.0643	0.4447	0.1541	-0.1866	0.2925	0.1143	-0.0226			
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.0058)			
Q4	0.0478	-0.0108	0.0213	-0.0046	0.0008	-0.0101	0.0133	0.0699		
	(<.0001)	(0.1865)	(0.1004)	(0.5767)	(0.9192)	(0.2177)	(0.1046)	(<.0001)		
Loss	-0.0305	-0.5376	-0.0147	0.2005	-0.1457	-0.1027	0.2777	-0.3398	0.0059	
	(0.0002)	(<.0001)	(0.0734)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.4727)	
Gov	-0.0030	0.0208	0.0367	0.0224	0.0161	-0.0157	-0.1307	-0.2088	-0.0067	-0.0392
	(0.7148)	(0.0114)	(<.0001)	(0.0063)	(0.0495)	(0.0557)	(<.0001)	(<.0001)	(0.4161)	(<.0001)

All variables are defined in Appendix A.
P values are reported in parentheses.

Multiple Regression Analyses

Table 6 reports the multiple regression results of differences in perceptions of corporate financial reporting credibility between CSR and non-CSR firms with all test statistics and significance levels calculated based on standard errors adjusted by a two-dimensional cluster at the industry and year levels. H_1 posits that the analyst forecast dispersion of CSR firms is lower than that of non-CSR firms when good news is released. Results presented in Table 6 for H_1 show that β_1 is significantly negative with two tailed t-stat = -5.78, consistent with the analyst forecast dispersion of CSR firms being lower than that of non-CSR firms. Untabulated results show that control variables are mostly consistent with what has been documented in prior research, with *Persist* being insignificant.

TABLE 6

Perceptions of Corporate Financial Reporting Credibility Analyses
(Full Sample)

	DISP			CAR (UE ≠ 0)	CAR (UE = 0)
		Estimates		Estimates	Estimates
	H_1	(t-value)	H_2	(t-value)	(t-value)
Intercept		0.0113		-0.0034	0.0133
		(12.67)***		(-1.02)	(1.43)
CSR	(-)	-0.0055		-0.0021	-0.0004
		(-5.78)***		(-1.60)	(-0.20)
UE				2.474	
				(5.38)***	
UE*CSR			(+)	0.2897**	
				-2.23	
Controls		Included		Included	Included
Fixed Effects		Quarter		Quarter	Quarter
Adj R^2		0.259		0.027	0.011
n		49,747		44,621	5,126

Controls in the ERC model are *Nonlinear, Persist, Predict, Beta, Size, Loss, MB, Gov* and *Q4.* Controls in the DISP model are *Numest, Persist, Predict, Beta, Size, Loss, MB* and *Gov.*
All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.
Regression standard errors are clustered by industry and year.

H_2 posits that the ERC of CSR firms are higher than that of non-CSR firms. Results presented in Table 6 for H_2 show that the coefficient on the interaction term of *UE*CSR* is significantly positive (two tailed t-stat = 2.23) which are consistent with H_2. As compared to news released by non-CSR firms, the market has greater confidence in news released by CSR

firms and responds to CSR firms released news more. As a result, the ERC of CSR firms is greater than that of non-CSR firms. Untabulated results show that control variables interacted with *UE* are mostly consistent with what has been documented in prior research, with *MB* interacted with *UE* being insignificant.

I then further examine difference in the ERC between CSR and non-CSR firms under good news condition and bad news condition separately. H_{2a} posits that the ERC of CSR firms are higher than that of non-CSR firms when releasing good news. Results presented in Table 7 for H_{2a} show that the coefficient on the interaction term of *UE*CSR* is significantly positive (two tailed t-stat = 2.76) which are consistent with H_{2a}. As compared to good news released by non-CSR firms, the market has greater confidence in good news released by CSR firms and responds to CSR firms released news more. As a result, the ERC of CSR firms is greater than that of non-CSR firms. Untabulated results show that control variables interacted with *UE* are mostly consistent with what has been documented in prior research, with *Gov*, *Size* and *Predict* interacted with *UE* being insignificant.

TABLE 7

Perceptions of Corporate Financial Reporting Credibility Analyses
(Good News versus Bad News)

	CAR (UE>0)		CAR (UE<0)	
		Estimates		Estimates
	H_{2a}	(t-value)	H_{2b}	(t-value)
Intercept		0.0134		-0.0272
		(3.66)***		(-3.60)***
CSR		-0.0019		-0.0025
		(-1.60)		(-1.46)
UE		3.8562		1.3254
		(4.96)***		(2.14)**
UE*CSR	(+)	0.5933	?	0.2226
		(2.76)***		(1.45)
Controls		Included		Included
Fixed effects		Quarter		Quarter
Adj R^2		0.037		0.027
n		29,759		14,862

Controls in the ERC model are *Nonlinear, Persist, Predict, Beta, Size, Loss, MB, Gov* and *Q4*. Controls in the DISP model are *Numest, Persist, Predict, Beta, Size, Loss, MB* and *Gov*.
All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.
Regression standard errors are clustered by industry and year.

However, the market believes that bad news is indicative of additional serious problems at firms that miss earnings expectations. In addition, financial reporting credibility in missing firms is less questionable. Therefore, H_{2b} posits that the ERC of CSR firms is not different from

that of non-CSR firms when releasing bad news. Results presented in Table 7 of subsample with UE < 0 support H_{2b}. The coefficient on the interaction term of *UE*CSR* is insignificant (two tailed t-stat = 1.45) which suggests that the market do not respond to bad news released by CSR firms and non-CSR firms differently. As I do not find the ERCs to be different between CSR and non-CSR firms under the condition when firms releasing bad news and the majority of the firm-quarter observations of the full sample beat earnings targets, the empirical results of CSR firms having a higher ERC than non-CSR firms documented in Table 5 under both good news and bad news conditions together are driven by the firm-quarter observations that beat earnings targets. Therefore, in the following ERC analyses, I focus only on firm-quarters that beat earnings targets.

CHAPTER 5

ROBUSTNESS TESTS AND ADDITIONAL ANALYSES

Excluding Middle Tercile CSR Ranking Firms

In above main analyses, CSR firms are firms with a net CSR measure that is greater than 0 and above the median net CSR measure of the year. To mitigate measurement error, I rank net CSR measure into terciles by year and exclude the firms that are ranked into the middle tercile of the year from analyses as it is unclear whether a firm is socially responsible or irresponsible if it falls into the middle tercile ranking.

TABLE 8

Perceptions of Corporate Financial Reporting Credibility Analyses
(Excluding Middle Tercile CSR Ranking Firms)

	DISP		CAR (UE>0)	
	H_1	Estimates (t-value)	H_{2a}	Estimates (t-value)
Intercept		0.0113		0.0115
		(11.51)***		(2.36)**
CSR	(-)	-0.0055		-0.0023
		(-5.19)***		(-1.64)
UE				3.6891
				(4.24)***
UE*CSR			(+)	0.6605
				(2.93)***
Controls		Included		Included
Fixed effects		Quarter		Quarter
Adj R^2		0.264		0.039
n		38,499		23,201

Controls in the ERC model are *Nonlinear, Persist, Predict, Beta, Size, Loss, MB, Gov* and *Q4.* Controls in the DISP model are *Numest, Persist, Predict, Beta, Size, Loss, MB* and *Gov.*
All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.
Regression standard errors are clustered by industry and year.

Table 8 summarize the regression results which are consistent with findings documented in the main analyses. For the analyst forecast dispersion, the coefficient on *CSR* is significantly negative (two tailed t-stat = -5.19), suggesting that the analyst forecast dispersion of CSR firms

is lower than that of non-CSR firms. For the ERC, the coefficient on the interaction term of *UE*CSR* is significantly positive (two tailed t-stat = 2.93), suggesting that the ERC of CSR firms is higher than that of non-CSR firms. Both analysts and investors place a higher level of reliance on CSR firm-provided financial information.

Propensity Score Matching

The variable means comparison between CSR and non-CSR firms presented in Table 2 suggest that there are some differences in firm characteristics between the types of firms. Since it is possible that a firm's CSR involvement can be endogenously determined by characteristics of the firm that are omitted from the perceived financial reporting credibility analyses, following prior literature (e.g., Armstrong, Jagolinzer and Larcker 2010; Jagolinzer, Larcker and Taylor 2011; Gao et al. 2014), I adopt a matched sample research design to mitigate this endogeneity concern. I match each CSR firm to a non-CSR control firm using propensity score matching. The following logistic regression model with a binary dependent variable $(CSR_{i,t-1})$ is estimated at the firm-year level to generate the propensity score.

$$Prob(CSR_{i,t-1}=1) = logit\ (\gamma_0 + \gamma_1 FCF_{i,t-1} + \gamma_2 IO_{i,t-1} + \gamma_3 Age_{i,t-1} + \gamma_4 PM_{i,t-1} + \gamma_5 Gov_{i,t-1} + \gamma_6 AD_{i,t-1} + \gamma_7 RD_{i,t-1} + \gamma_8 MB_{i,t-1} + \gamma_{9i,t-1} Size_{i,t-1} + \gamma_{10} Lev_{i,t-1} + \varepsilon_{i,t-1}) \quad (3)$$

$CSR_{i,t-1}$ equals 1 if the KLD net CSR measure of firm *i* at year $_{t-1}$ is greater than the median net CSR measure of the year, and 0 otherwise. $FCF_{i,t-1}$ is firm *i*'s free cash flow in year *t-1*, scaled by firm *i* at the end of year *t-1*'s total assets, where free cash flow is calculated as the sum of net cash flow from operating activities and net cash flow from investing activities (Gao et al. 2014). $IO_{i,t-1}$ is the percentage of institutional holdings of firm *i* at the end of year *t-1* (Kim et al. 2012).[11] $Age_{i,t-1}$ is the natural logarithm of the number of years firm *i* has been listed on CRSP

[11] Institutional ownership data is collected from Thomson Reuters.

at the end of year *t-1* (Dhaliwal, Radhakrishnan, Tsang and Yang 2012). $PM_{i,t-1}$ is firm *i*'s profit margin in year *t-1*, where profit margin is calculated as income before extraordinary items divided by net sales (Lys, Naughton and Wang 2015). $Gov_{i,t-1}$ is the KLD net corporate governance rating of firm *i* at year *t-1*, adjusted by year *t-1*'s median net corporate governance rating (Lys et al. 2015). $AD_{i,t-1}$ is firm *i*'s advertising expenses in year $_{t-1}$, scaled by its net sales in year *t-1* (Lys et al. 2015). $RD_{i,t-1}$ is firm *i*'s research and development expenses in year $_{t-1}$, scaled by its net sales in year *t-1* (Lys et al. 2015). Other firm characteristic variables are *Lev*, *MB* and *Size*. $Lev_{i,t-1}$ is the leverage of firm *i* at the end of year *t-1*, where leverage is calculated as long term debt divided by the sum of long term debt and stockholders' equity of firm *i* at the end of year *t-1*. $MB_{i,t-1}$ is firm *i*'s market-to-book ratio at the end of year *t-1*, calculated as its market value of common equity divided by the book value of equity at the end of year *t-1*. $Size_{i,t-1}$ is the natural logarithm of firm *i*'s total assets at the end of year *t-1*. Industry and year fixed effects are also included in the regression model.

TABLE 9

Propensity Score Matching Analyses

Panel A: Variable Mean Comparison between Treatment Group and Control Group

	Means		T-test
	CSR (n=3,517)	Non-CSR (n=9,057)	*P* Value
FCF	0.0245	-0.0048	<0.0001***
IO	0.5859	0.5220	<0.0001***
Age	2.8724	2.4906	<0.0001***
PM	-0.0247	-0.1031	<0.0001***
Gov	0.9558	0.9651	0.0174**
AD	0.0134	0.0093	<0.0001***
RD	0.1378	0.1652	0.0299**
MB	3.2205	2.8424	<0.0001***
Size	7.9928	6.9183	<0.0001***
Lev	0.1729	0.1835	0.0041***

All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.

Table 9 (continued)

Panel B: Logistic Regression Model

	Estimate	*P*-Value
FCF	0.7077	0.0002***
IO	0.0881	0.1843
Age	0.0524	0.0764*
PM	0.3314	0.0007***
Gov	0.8297	<0.0001***
AD	5.3705	<0.0001***
RD	0.5761	<0.0001***
MB	0.0325	<0.0001***
Size	0.5677	<0.0001***
Lev	-1.1019	<0.0001***
Fixed effects		Industry and Year
Pseudo R^2		0.229
N of firm-years		12,574
N of CSR=1		3,517

All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.

Table 9 (continued)

Panel C: Variable Mean Comparison of Matched-Pair

	Means		T-test
	CSR (n=3,266)	Non-CSR (n=3,266)	*P* Value
FCF	0.0163	0.0150	0.1243
IO	0.5729	0.5591	0.1766
Age	2.8631	2.7032	0.5164
PM	-0.0646	-0.0841	0.4021
Gov	0.9411	0.9558	0.0032***
AD	0.0111	0.0108	0.6864
RD	0.1684	0.1621	0.7337
MB	3.0709	2.9047	0.0899*
Size	7.8275	7.7577	0.0871*
Lev	0.1748	0.1824	0.3415

All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.

The regression is estimated for 12,574 firm-year observations with data available for model (3) with 3,517 firm-years having $CSR_{i,t-1}$ equal to 1. Panel B of Table 9 tabulates the logistic regression results. Consistent with prior studies (Dhaliwal et al. 2012; Gao et al. 2014; Lys et al. 2015), I find that larger firms, older firms, firms with higher level of free cash flow, higher profit margin, higher level of expenditure in advertising, research and development, lower leverage ratio, better corporate governance, better growth opportunities are more likely to

be socially responsible.[12] I then calculate propensity scores for each observation using predicted probabilities from the logistic regression model and match each CSR firm-year observation to a non-CSR control firm-year with the closest propensity score, giving that the difference in the propensity score of the matched-pair is no greater than 0.1. This propensity score matching procedure results in 3,266 matched pairs.

Panel A of Table 9 summarizes mean comparisons of CSR determinants between CSR firms and non-CSR control firms pool. Before the matching procedure, every determinant is significant different from each other between CSR firms and non-CSR firms, with *FCF*, *IO*, *Age*, *MB* and *Size* of CSR firms being larger than those of non-CSR firms, and *Lev* of CSR firms being lower than that of non-CSR firms. Interestingly, *Gov* and *RD* of CSR firms are slightly lower than those of non-CSR firms. Panel C of Table 9 summarizes mean comparisons of CSR determinants between CSR firms and matched non-CSR control firms. After the propensity score matching procedure, two determinants (*Size* and *MB*) are marginally different from each other one determinant (*Gov*) is significantly different from each other. *MB* and *Size* are different at 0.1 level and *Gov* is different at 0.1 level.

[12] However, I do not find that institutional ownership ratio is associated with the likelihood that firms being socially responsible.

TABLE 10

Perceived Financial Reporting Credibility of Matched-Pair Analyses

	DISP		CAR (UE>0)	
	H_1	Estimates (t-value)	H_{2a}	Estimates (t-value)
Intercept		0.0058 (6.78)***		0.0178 (2.61)***
CSR	(-)	-0.0032 (-3.36)***		-0.0012 (-1.64)
UE				5.3503 (4.32)***
UE*CSR			(+)	2.0383 (2.81)***
Controls		Included		Included
Fixed effects		Quarter		Quarter
Adj R^2		0.247		0.055
n		19,801		12,603

Controls in the ERC model are *Nonlinear, Persist, Predict, Beta, Size, Loss, MB, Gov* and *Q4.* Controls in the DISP model are *Numest, Persist, Predict, Beta, Size, Loss, MB* and *Gov.*
All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.
Regression standard errors are clustered by industry and year.

Regression results of differences in perceptions of corporate financial reporting credibility between CSR and non-CSR firms for the propensity score matched-pair sample with all test statistics and significance levels calculated based on standard errors adjusted by a two-dimensional cluster at the industry and year levels are reported in Table 10. They are consistent with the results documented in the main analyses. Market participants perceive financial reporting of CSR firms as more credible, resulting in and the analyst forecast dispersion of CSR firms being lower and the ERC of CSR firms being higher when releasing good news.

Changes in CSR Focus

To provide additional evidence on the association between CSR and perceived financial reporting credibility, I investigate whether changes in a firm's CSR performance are also associated with perceived financial reporting credibility. I focus on two types of firms. The first type has an improvement in its CSR performance. It switches from non-CSR firm to CSR firm over the sample period, and the second type has a decrease in its CSR involvement. It switches from CSR firm to non-CSR firm over the sample period. Less than 11% of my sample has a CSR focus change, which suggests that a firm's CSR performance is largely consistent over time. In order to be included in the analyses, the switching firm has to have the same CSR focus two years before the switching and has maintained the switched CSR focus at least one year after the switching. I then compare the pre-post differences in the quarterly ERC and the analyst forecast dispersion of switching firms. The following two models are estimated separately for the two subsamples.

$$DISP_{i,q} = \beta_0 + \beta_1 Post_{i,q} + \beta_2 Numest_{i,q} + \beta_3 Persist_{i,q} + \beta_4 Predict_{i,q} + \beta_5 Beta_{i,q} + \beta_6 Size_{i,q} + \beta_7 Loss_{i,q} + \beta_8 MB_{i,q} + \beta_9 Gov_{i,q} + \sum \beta_k QTR + e_{i,q} \quad (4)$$

$$CAR_{i,q} = \alpha_0 + \alpha_1 Post_{i,q} + \alpha_2 UE_{i,q} + \alpha_3 (UE_{i,q} * Post_{i,q}) + \alpha_4 Nonlinear_{i,q} + \alpha_5 Persist_{i,q} + \alpha_6 Predict_{i,q} + \alpha_7 Beta_{i,q} + \alpha_8 Size_{i,q} + \alpha_9 MB_{i,q} + \alpha_{10} Loss_{i,q} + \alpha_{11} Q4_{i,q} + \alpha_{12} (Persist_{i,q} * UE_{i,q}) + \alpha_{13} (Predict_{i,q} * UE_{i,q}) + \alpha_{14} (Beta_{i,q} * UE_{i,q}) + \alpha_{15} (Size_{i,q} * UE_{i,q}) + \alpha_{16} (MB_{i,q} * UE_{i,q}) + \alpha_{17} (Loss_{i,q} * UE_{i,q}) + \alpha_{18} (Q4_{i,q} * UE_{i,q}) + \sum \alpha_k QTR + \varepsilon_{i,q} \quad (5)$$

Post is a binary variable, which equals 1 if the firm-quarter observation is in the time period after the firm's CSR focus switching, and 0 otherwise. As a firm increases its CSR involvement, switching from non-CSR focus to CSR focus, I propose that its perceived financial reporting credibility improves and expect to find a negative coefficient on *Post* for model (4) and a positive coefficient on *UE*Post* for model (5) when firms announcing positive earnings surprises. However, as a firm reduces its CSR involvement, switching from CSR focus to non-CSR focus, I propose that its perceived financial reporting credibility decrease and expect to find a positive coefficient on *Post* for model (4) and a negative coefficient on *UE*Post* for model (5) when firms announcing positive earnings surprises.

Empirical results of the market participants' perceptions of firm financial reporting credibility for changes in CSR focus with all test statistics and significance levels calculated based on standard errors adjusted by a two-dimensional cluster at the industry and year levels are documented in Table 11. They are generally consistent with my expectations. Panel A of Table 11 reports the regression analyses for firms that increase in CSR involvement and switch from non-CSR to CSR firms. For the analyst forecast dispersion, the coefficient on *Post* is marginally negative (*P* value = 0.0204), suggesting that the analyst forecast dispersion decreases as a firm becomes a CSR firms. For the ERC, the coefficient on the interaction term of *UE*Post* is marginally positive (*P* value = 0.0171), suggesting that the ERC increases as a firm becomes a CSR firms. Both analysts and investors place a higher level of reliance on firm-provided financial information as firms becoming socially responsible.

TABLE 11

Changes in CSR Focus Analyses

Panel A: Change from Non-CSR Focus to CSR Focus

	DISP		CAR (UE>0)	
	Estimate	*P*-Value	Estimate	*P*-Value
Intercept	0.0111	<0.0001***	0.0222	0.0862*
Post	-0.0066	0.0204**	-0.0013	0.3909
UE			4.9993	0.0092***
UE*Post			1.0090	0.0171**
Controls		Included		Included
Fixed effects		Quarter		Quarter
Adj R^2		0.273		0.068
n		4,987		3,254

Controls in the ERC model are *Nonlinear, Persist, Predict, Beta, Size, Loss, MB, Gov* and *Q4.* Controls in the DISP model are *Numest, Persist, Predict, Beta, Size, Loss, MB* and *Gov.*
All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.
Regression standard errors are clustered by industry and year.

TABLE 11 (continued)

Panel B: Change from CSR Focus to non-CSR Focus

	DISP		CAR (UE>0)	
	Estimate	*P*-Value	Estimate	*P*-Value
Intercept	0.0099	<0.0001***	0.0109	0.0939*
Post	0.0003	0.0481**	0.0036	0.2991
UE			5.3284	0.0063***
UE*Post			-1.6449	0.0163**
Controls		Included		Included
Fixed effects		Quarter		Quarter
Adj R^2		0.264		0.065
n		3,881		2,363

Controls in the ERC model are *Nonlinear, Persist, Predict, Beta, Size, Loss, MB, Gov* and *Q4.* Controls in the DISP model are *Numest, Persist, Predict, Beta, Size, Loss, MB* and *Gov.*
All variables are defined in Appendix A.
*, **, *** Indicate statistical significance at the 0.10, 0.05 and 0.01 levels, based on two-tailed tests.
Regression standard errors are clustered by industry and year.

Panel B of Table 11 reports the regression analyses for firms that reduce their CSR involvement and switch from CSR to non-CSR firms. For the analyst forecast dispersion, the coefficient on *Post* is marginally positive (*P* value = 0.0481), suggesting that the analyst forecast dispersion increases as a firm becomes socially irresponsible. For the ERC, the coefficient on the interaction term of *UE*Post* is marginally positive (*P* value = 0.0163), suggesting that the ERC decreases as a firm becomes socially irresponsible. Both analysts and investors perceive financial reporting to be less credible as firms becoming socially irresponsible. These findings

provide further evidence on the association between CSR and perceived financial reporting credibility documented in the main analyses.

Small Beat vs. Big Beat

To strengthen the findings of analysts and investors perceive the financial reporting of CSR firms to be more credible, I focus on CSR firms with positive earnings surprise only and then further partition this group of firms based on the magnitude of earnings surprises. Small (Big) beat firm-quarters are the firm-quarters that have a *UE* smaller (greater) than the sample mean. When firms just beat analyst forecast expectations (small beat), where financial reporting credibility is most questionable, I expect to find stronger credibility effect for firms that just beat analysts' forecasts than for firms that beat analysts' forecasts to a greater extent. The ERC of big beat firms is 5.5160 and the ERC of small beat firms is 9.8395, and they are significantly different from each other (*P* value < 0.0001). Consistent with my expectation, when firms just beat analyst forecast expectations, where financial reporting credibility is most questionable, CSR credibility effect is stronger in small beat firms than in big beat firms.

CHAPTER 6

CONCLUSIONS

The objective of this study is to examine the association between CSR and the perceived credibility of corporate financial reporting. First, I compare the quarterly analyst forecast dispersion of CSR and non-CSR firms regardless of whether earnings surprises are positive or negative since all firm-released news is neutral information to analysts. There is no good news or bad news. Next, I compare the short-window ERC of CSR firms and non-CSR firms separately based on positive earnings surprise and negative earnings surprise since the credibility effect on the ERC could be different between good news and bad news.

Using KLD CSR rating data, I find the analyst forecast dispersion of CSR firms is lower than that of non-CSR firms. I also find that when releasing good news -- firm earnings are better than expectations -- the ERC of CSR firms is higher than that of non-CSR firms. Results are robust when excluding the middle tercile CSR ranking firms from analyses, as well as when using propensity score matched pair sample. In addition, as a firm increases (decreases) its CSR involvement to become a CSR firm (non-CSR firm), I find that its perceived financial reporting credibility also improves (decreases). I also find the ERC is greater for firms that just beat analysts' forecasts than for firms that beat analysts' forecasts to a greater extent, which reinforce the finding that the perceived financial reporting credibility of CSR firms is higher than that of non-CSR firms.

Interestingly, when releasing bad news -- firm earnings are worse than expectations -- the ERCs are not different between CSR firms and non-CSR firms. Since firms largely manage

earnings to avoid missing earnings expectations, when releasing bad news where the credibility is less questionable, investors may not take financial reporting credibility into account when responding to the bad news.

This study extends a stream of research that seeks to link CSR with firm performance/value by providing empirical evidence on how CSR is related to a firm's stock return through its perceived financial reporting credibility. It also posits some potential reasons for the inconclusive results found in this stream of research by suggesting that: 1) CSR might not directly impact firm performance/value, but instead it may impact firm value through the influences of CSR on other mechanisms (e.g., the perceived financial reporting credibility); 2) CSR may only affect firm performance/value under conditions where CSR matters; or 3) CSR may affect firm performance/value differently under different conditions. Future research could identify conditions where CSR matters in evaluation firm performance/value and examine the impact of CSR on firm performance/value under each condition separately.

This study is limited to the timeliness of firm CSR performance measures. Even though a firm's CSR performance is largely consistent, there might still be some variation within a short period of time. I am not able to capture the possible CSR variation in this study since KLD rates a firm's CSR performance annually. Also, the binary measure of each indicator rated in KLD might not capture a firm's CSR performance precisely. Future research in CSR area could be performed in a controlled experimental environment to overcome limitations caused by the availability of archival data.

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APPENDIX A

VARIABLE DEFINITION

Panel A: ERC and AFD variables (based on quarterly data)

Beta	market model beta, estimated using CRSP daily data over the year ending 5 days prior to the earnings announcement date
CAR	three-day buy-and-hold market adjusted returns surrounding the quarterly earnings announcement date, where market adjustment is based on CRSP equal-weighted market returns
DISP	standard deviation of quarterly analysts forecasts scaled by adjusted stock price as of the end of the quarter for which earnings are announced, calculated using each analyst's most recent forecast prior to the quarterly earnings announcement, as per the I/B/E/S detail file. Forecasts older than 3 months are not included in the calculation. Also, each firm-quarter observation must have forecasts from at least two analysts to calculate *DISP*
Gov	KLD previous year's net corporate governance rating of the firm adjusted by previous year's median net corporate governance rating for which earnings is announced
Loss	binary variable, equals 1 if actual earnings per share is less than 0, and 0 otherwise
MB	market-to-book ratio, calculated as the market value of common equity divided by the book value of equity as of the end of the quarter for which earnings are announced.
Nonlinear	control for nonlinearity in the price-earnings relation, calculated as multiplying the *UE* and the absolute value of *UE*
NUE	equals *UE* if *UE* is smaller than 0
Numest	number of individual analyst forecasts included in each firm-quarter observation
Persist	autoregressive coefficient from adjusted earnings per share regressed on seasonally lagged adjusted earnings per share, estimated over eight quarters prior to the quarterly earnings announcement
Predict	variance of the absolute value of unexpected earnings over eight quarters prior to the quarterly earnings announcement, where unexpected earnings are based on a seasonal random walk
PUE	equals *UE* if *UE* is greater than 0

Q4	binary variable, equals 1 if firm *i* at quarter *q* is the firm's fourth fiscal quarter, and 0 otherwise
QTR	quarter binary variables
Size	natural logarithm of the total assets as of the end of the quarter for which earnings are announced
UE	unexpected quarterly earnings, scaled by adjusted stock price as of the end of the quarter for which earnings are announced, where unexpected quarterly earnings equal the IBES summary quarterly actual earnings per share less the most recent median analyst forecast prior to the earnings announcement

Panel B: Propensity score matching variables (based on annual data)

AD	advertising expenses scaled by net sales
Age	natural logarithm of number of years firm has been listed on CRSP at the end of the year
CSR	binary variable, equals 1 if KLD net CSR measure is greater than the median net CSR measure of the year, and 0 otherwise
FCF	free cash flow scaled by total assets, where free cash flow is calculated as the sum of net cash flow from operating activities and net cash flow from investing activities
Gov	KLD net corporate governance rating adjusted by median net corporate governance rating of the year
Lev	long term debt divided by the sum of long term debt and stockholders' equity at the end of the year
MB	market-to-book ratio, calculated as the market value of common equity divided by the book value of equity at the end of the year
PM	profit margin, calculated as income before extraordinary items divided by net sales
RD	research and development expenses scaled by net sales
Size	natural logarithm of total assets at the end of year

APPENDIX B

ESG INDICATORS RATED IN KLD DATABASE (2003-2012)

ENVIRONMENT STRENGTHS

Beneficial Products and Services

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

The company has notably strong pollution prevention programs including both emissions reductions and toxic-use reduction programs.

Recycling

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

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.

Water Stress

The company has proactively employed water efficient processes, water recycling and alternative water sources.

Biodiversity & Land Use

The company has policies and programs designed to protect biodiversity and address community concerns on land use.

Raw Material Sourcing

The company has policies and procedures to source materials with lower environmental impact and participate in initiatives to reduce environmental impact of raw materials production.

Management Systems

The company has demonstrated a superior commitment to management systems through ISO 14001 certification and other voluntary programs.

Other Strength

The company has demonstrated a superior commitment to management systems, voluntary programs, or other environmentally proactive activities.

ENVIRONMENT CONCERNS

Hazardous Waste

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

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.

Impact of Products & Services

Factors affecting this evaluation include, but are not limited to, a history of involvement in environmental impact-related legal cases, widespread or egregious impacts due to direct or indirect use of the firm's products or services, resistance to improved practices, and criticism by NGOs and/or other third-party observers.

Biodiversity& Land Use

Factors affecting this evaluation include, but are not limited to, a history of involvement in environmental impact-related legal cases, widespread or egregious impacts of the firm's non-hazardous waste streams, resistance to improved practices, and criticism by NGOs and/or other third-party observers.

Water Management

Factors affecting this evaluation include, but are not limited to, a history of involvement in water use-related legal cases, widespread or egregious impacts due to emissions, resistance to improved practices, and criticism by NGOs and/or other third-party observers.

Supply Chain Management

Factors affecting this evaluation include, but are not limited to, a history of widespread or egregious environmental impacts in a firm's supply chain, legal cases, resistance to improved practices, and criticism by NGOs and/or other third-party observers.

Ozone Depleting Chemicals

The company is among the top manufacturers of ozone depleting chemicals such as HCFCs, methyl chloroform, methylene chloride, or bromines.

Substantial Emissions

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

The company is a substantial producer of agricultural chemicals, i.e., pesticides or chemical fertilizers.

Climate Change

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.

Other Concern

The company has been involved in an environmental controversy that is not covered by other KLD ratings.

SOCIAL_COMMUNITY STRENGTHS

Charitable Giving

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.

Innovative Giving

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

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

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.

Community Engagement

The company has a notable community engagement program concerning involvement of local communities in areas where the firm has major operations.

Support for Education

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.

Volunteer Programs

The company has an exceptionally strong volunteer program. In 2005, KLD added the Volunteer Programs Strength.

Other Strength

The company has either an exceptionally strong in-kind giving program or engages in other notably positive community activities.

SOCIAL_COMMUNITY CONCERNS

Investment Controversies

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

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.

Tax Disputes

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
The company is involved with a controversy that has mobilized community opposition, or is engaged in other noteworthy community controversies.

SOCIAL_DIVERSITY STRENGTHS

CEO
The company's chief executive officer is a woman or a member of a minority group.

Promotion
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
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 the board numbers less than 12.

Work/Life Benefits
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
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
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.

Employment of Underrepresented Groups
Factors affecting this evaluation include, but are not limited to, its recruitment efforts to women and minority communities, and its participation in multi-stakeholder diversity initiatives.

Gay & Lesbian Policies
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.

Other Strength
The company has made a notable commitment to diversity that is not covered by other KLD ratings.

SOCIAL_DIVERSITY CONCERNS

Controversies
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
The company has no women on its board of directors or among its senior line managers.

Board of Directors - Minorities
This indicator captures companies with no minorities on their board of directors.

Other Concern
The company is involved in diversity controversies not covered by other KLD ratings.

SOCIAL_EMPLOYEE RELATIONS STRENGTHS
Union Relations
The company has taken exceptional steps to treat its unionized workforce fairly.
Cash Profit Sharing
The company has a cash profit-sharing program through which it has recently made distributions to a majority of its workforce.
Employee Involvement
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
The company has a notably strong retirement benefits program. KLD renamed this strength from Strong Retirement Benefits.
Health and Safety Strength
The company has strong health and safety programs.
Other Strength
The company has strong employee relations initiatives not covered by other KLD ratings.

SOCIAL_EMPLOYEE RELATIONS CONCERNS
Union Relations
The company has a history of notably poor union relations.
Health and Safety Concern
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.
Supply Chain Labor Standards
The company has established labor management policies meeting stringent international norms, implemented programs to verify compliance with the policies, and introduced incentives for compliance among suppliers.
Compensation & Benefits
The company provides noteworthy employee compensation and benefit programs.
Employee Relations
The company provides employee engagement opportunities through collective bargaining or other employee involvement programs, and actively measure employee satisfaction.
Professional Development
The company provides excellent employee training and development programs.
Human Capital Management
The company proactively manages human capital development through offering competitive benefit packages and performance incentives, implementing formalized training programs, offers employee engagement and professional development programs and actively measuring employee satisfaction.
Workforce Reductions
The company has made significant reductions in its workforce in recent years.

Retirement Benefits Concern
The company has either a substantially underfunded defined benefit pension plan, or an inadequate retirement benefits program. In 2004, KLD renamed this concern from Pension/Benefits Concern.
Other Concern
The company is involved in an employee relations controversy that is not covered by other KLD ratings.

SOCIAL_HUMAN RIGHTS_STRENGTHS
Indigenous Peoples Relations Strength
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.
Labor Rights Strength
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.
Supply Chain
Factors affecting this evaluation include, but are not limited to, a history of involvement in supply chain related legal cases, widespread or egregious instances of abuses of supply chain employee labor rights, supply chain employee safety, resistance to improved practices, and criticism by NGOs and/or other third-party observers.
Child Labor
Factors affecting this evaluation include, but are not limited to, a history of involvement in child labor related legal cases, widespread or egregious instances of child labor in the firm's supply chain, resistance to improved practices, and criticism by NGOs and/or other third-party observers.
Other Strength
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.

SOCIAL_HUMAN RIGHTS CONCERNS
Burma Concern
The company has operations or direct investment in, or sourcing from, Burma.
Labor Rights Concern
The company's operations have had major recent controversies primarily related to labor standards in its supply chain.
Human Rights Violations
Factors affecting this evaluation include, but are not limited to, a history of involvement in human rights-related legal cases, widespread or egregious complicity in killings, physical abuse, or violation of other rights, resistance to improved practices, and criticism by NGOs and/or other third-party observers.

Freedom of Expression & Censorship
Factors affecting this evaluation include, but are not limited to, cooperating with repressive governments seeking internet user data or requiring censorship, resistance to improved practices, and criticism by NGOs and/or other third-party observers.
Indigenous Peoples Relations Concern
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.
Other Concern
The company's operations have been the subject of major recent human rights controversies not covered by other KLD ratings.

SOCIAL_PRODUCT STRENGTHS
Quality
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
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
The company has as part of its basic mission the provision of products or services for the economically disadvantaged.
Access to Finance
The company offers products and services to communities with limited or no access to financial products.
Other Strength
The company's products have notable social benefits that are highly unusual or unique for its industry.

SOCIAL_PRODUCT CONCERNS
Product Safety
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
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
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
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 ratings.

CORPORATE GOVERNANCE STRENGTHS

Limited Compensation

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

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

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 2006, KLD added the Transparency Strength, which incorporates information from the former Environment: Communications Strength as part of its content.

Political Accountability Strength

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.

Other Strength

The company has a unique and positive corporate culture, or has undertaken a noteworthy initiative not covered by KLD's other corporate governance ratings.

CORPORATE GOVERNANCE CONCERNS

High Compensation

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

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

The company is involved in significant accounting-related controversies.

Transparency Concern

The company is distinctly weak in reporting on a wide range of social and environmental performance measures.

Political Accountability Concern

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.

Other Concern

The company is involved with a controversy not covered by KLD's other corporate governance ratings.

APPENDIX C

CONTROVERSIAL BUSINESS ISSUE INDICATORS IN KLD (2003-2012)

ALCOHOL

Licensing

The company licenses its company or brand name to alcohol products.

Manufacturers

Companies that are involved in the manufacture alcoholic beverages including beer, distilled spirits, or wine.

Manufacturers of Products Necessary for Production of Alcoholic Beverages

Companies that derive 15% or more of total revenues from the supply of raw materials and other products necessary for the production of alcoholic beverages.

Retailers

Companies that derive 15% or more of total revenues from the distribution (wholesale or retail) of alcoholic beverages.

Ownership by an Alcohol Company

The company is more than 50% owned by a company with alcohol involvement. Ownership of an Alcohol Company. The company owns more than 20% of another company with alcohol involvement. (When a company owns more than 50% of company with alcohol involvement, KLD treats the alcohol company as a consolidated subsidiary.)

GAMBLING

Licensing

The company licenses its company or brand name to gambling products.

Manufacturers

Companies that produce goods used exclusively for gambling, such as slot machines, roulette wheels, or lottery terminals.

Owners and Operators

Companies that own and/or operate casinos, racetracks, bingo parlors, or other betting establishments, including casinos; horse, dog, or other race tracks that permit wagering; lottery operations; on-line gambling; pari-mutuel wagering facilities; bingo; Jai-alai; and other sporting events that permit wagering.

Supporting Products or Services

Companies that provide services in casinos that are fundamental to gambling operations, such as credit lines, consulting services, or gambling technology and technology support.

Ownership by a Gambling Company

The company is more than 50% owned by a company with gambling involvement.

Ownership of a Gambling Company

The company owns more than 20% of another company with gambling involvement. (When a company owns more than 50% of company with gambling involvement, KLD treats the gambling company as a consolidated subsidiary.)

TOBACCO

Licensing

The company licenses its company name or brand name to tobacco products.

Manufacturers

The company produces tobacco products, including cigarettes, cigars, pipe tobacco, and smokeless tobacco products.

Manufacturers of Products Necessary for Production of Tobacco Products

The company derives 15% or more of total revenues from the production and supply of raw materials and other products necessary for the production of tobacco products.

Retailers

The company derives 15% or more of total revenues from the distribution (wholesale or retail) of tobacco products.

Ownership by a Tobacco Company

The company is more than 50% owned by a company with tobacco involvement.

Ownership of a Tobacco Company

The company owns more than 20% of another company with tobacco involvement. (When a company owns more than 50% of company with tobacco involvement, KLD treats the tobacco company as a consolidated subsidiary.)

FIREARMS

Manufacturers

The company is engaged in the production of small arms ammunition or firearms, including, pistols, revolvers, rifles, shotguns, or sub-machine guns.

Retailers

The company derives 15% or more of total revenues from the distribution (wholesale or retail) of firearms and small arms ammunition.

Ownership by a Firearms Company

The company is more than 50% owned by a company with firearms involvement.

Ownership of a Firearms Company

The company owns more than 20% of another company with firearms involvement. (When a company owns more than 50% of company with firearms involvement, KLD treats the firearms company as a consolidated subsidiary.)

MILITARY

Manufacturers of Weapons or Weapons Systems
Companies that derive more than 2% of revenues from the sale of conventional weapons or weapons systems, or earned $50 million or more from the sale of conventional weapons or weapons systems, or earned $10 million or more from the sale of nuclear weapons or weapons systems.

Manufacturers of Components for Weapons or Weapons Systems
Companies that derive more than 2% of revenues from the sale of customized components for conventional weapons or weapons systems, or earned $50 million or more from the sale of customized components for conventional weapons or weapons systems, or earned $10 million or more from the sale of customized components for nuclear weapons or weapons systems.

Ownership by a Military Company

The company is more than 50% owned by a company with military involvement.

Ownership of a Military Company
The company owns more than 20% of another company with military involvement. (When a company owns more than 50% of company with military involvement, KLD treats the military company as a consolidated subsidiary.)

NUCLEAR POWER

Construction & Design of Nuclear Power Plants
The company designs, engineers, and constructs nuclear power plants and nuclear reactors for use in nuclear power plants; including companies that design nuclear reactors and engineer and/or construct nuclear power plants.

Nuclear Power Fuel and Key Parts
The company supplies nuclear fuel material and key parts used in nuclear plants and reactors. Fuel includes mining of uranium and conversion, enrichment, and fabrication of uranium. Key parts include manufacture or sale of specialized parts for use in nuclear power plants including but not exclusive to steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation & controls.

Nuclear Power Service Provider
The company is involved in the transport of nuclear power materials and nuclear plant maintenance.

Ownership of Nuclear Power Plants
The company has an ownership interest or operates nuclear power plant(s). Does not include publicly traded companies that are an owner or operator of a nuclear plant that has shut down and is being decommissioned.

Ownership by a Nuclear Power Company
The company is more than 50% owned by a company with nuclear power involvement. Ownership of a Nuclear Power Company. The company owns more than 20% of another company with nuclear power involvement. If company ownership of company with nuclear power involvement is greater than 50%, KLD treats subsidiary as a consolidated subsidiary.