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The Relationship between Corporate Social Responsibility, Financial Misstatements and SEC Enforcement Actions

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Abstract

This study explores the relationship between corporate social responsibility (CSR), financial misstatements and SEC enforcement actions. We find that firms with higher CSR are less likely to receive SEC enforcement actions for financial misstatements. Drawing on insights from stakeholder theory and the reputational literature, we identify two channels underpinning this relationship: (1) firms with higher CSR are less likely to engage in financial misstatements and (2) the reputational effect of CSR reduces the likelihood of SEC enforcement actions. We find empirical evidence consistent with both channels.

Keywords: corporate social responsibility; financial misstatement; corporate reputation; SEC enforcement action; AAER.

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Abstract

This study explores the relationship between corporate social responsibility (CSR), financial misstatements and SEC enforcement actions. We find that firms with higher CSR are less likely to receive SEC enforcement actions for financial misstatements. Drawing on insights from stakeholder theory and the reputational literature, we identify two channels underpinning this relationship: (1) firms with higher CSR are less likely to engage in financial misstatements and (2) the reputational effect of CSR reduces the likelihood of SEC enforcement actions. We find empirical evidence consistent with both channels.

1. INTRODUCTION

In recent decades, firms have increasingly allocated resources to CSR activities (Hong and Liskovich, 2014). The heightened attention given to CSR is, in part, thought to reflect firms' greater recognition of their duty to behave responsibly towards stakeholders and society at large—to be good corporate citizens (Carroll, 1979; Marcus, 1993). The attention given to CSR is also attributed to firms' growing recognition of the economic benefits created by a positive reputation for CSR (Porter and Kramer, 2006). Both motivations—acceptance of a duty to behave responsibly and recognition of the reputational benefits of CSR—suggest that CSR may have an impact on the likelihood of firms receiving SEC enforcement actions for financial misreporting (Accounting and Auditing Enforcement Releases, hereafter AAER). First, firms that seek to uphold their social responsibility may refrain from engaging in material financial misstatements in the first place. Second, the positive reputation created by CSR may reduce the likelihood of receiving an AAER, independent of whether high CSR firms are less likely to engage in financial misstatements. In this study, we examine whether firms with higher CSR are less likely to receive an AAER and, if so, whether the relationship is attributable to firms with higher CSR being less likely to engage in financial misstatements (the behavioral channel) or to a reputation for CSR reducing the likelihood of receiving an AAER (the reputational channel).

Kim, Park, and Wier (2012) provide some evidence that firms with higher CSR are less likely to receive an AAER.¹ However, they do not examine the channels underpinning this relationship. The extant literature offers little empirical evidence on whether firms with higher CSR are less likely to engage in material financial misstatements that may give rise to SEC enforcement actions—the behavioral channel. Prior studies that examine the relation between CSR and earnings management, measured using discretionary accruals, find mixed results. While some studies find that CSR is negatively related to earnings management (e.g., Chih, Shen and Kang, 2008; Hong and Andersen, 2011; Kim et al., 2012), others find that the relation is positive (e.g., Prior, Surroca, and Tribo, 2008; Grougiou, Leventis, Dedoulis, and Owusu-Ansah, 2014).² Moreover, discretionary accruals estimated using existing models have little power in predicting AAERs (Bayley and Taylor, 2007; Dechow, Ge, Larson, and Sloan, 2011; Kim et al., 2012). Thus, notwithstanding the evidence in Kim et al. (2012), it is

¹ Kim et al. (2012) find that firms' CSR is negatively related to the likelihood of receiving an AAER, but the relation is only statistically significant for AAERs against CEOs and CFOs.

² It is not possible to directly reconcile the findings in these studies since they use different samples. Kim et al. (2012) use non-financial U.S. firms, Grougiou et al. (2014) focus on U.S. banks, while Prior et al. (2008) examine a sample of international companies.

unclear whether firms with higher CSR are less likely to engage in material financial misstatements that give rise to an AAER. It is possible that the decision to engage in “within GAAP” accruals management is different from the decision to engage in more material financial misstatements that might lead to SEC enforcement actions. The potential costs associated with SEC enforcement actions may be severe enough to discourage even firms with low ethical standards from engaging in material misstatements, especially if executives are mindful that a reputation for being “socially irresponsible” may attract greater scrutiny from regulators. Thus, it is plausible that there is no relation between CSR and the likelihood of firms engaging in material financial misstatements that lead to AAERs. Given the importance of this issue, we employ a new approach to estimate the likelihood that firms have engaged in material financial misstatements (Beneish, 1999; Bayley and Taylor, 2007; Dechow et al., 2011) and test whether firms with higher CSR exhibit a lower likelihood of financial misstatements.

CSR may also reduce the likelihood of receiving an AAER through a reputational channel. Reputational theorists argue that CSR activities are taken by outsiders as a positive signal of a firm’s character (i.e., its underlying values and intentions) (e.g., Fombrun, Gardberg, and Barnett, 2000; Gardberg and Fombrun, 2006). Godfrey (2005) argues that outsiders’ assessment of a firm’s character influences whether subsequent firm behavior is attributed to benevolent or malevolent intent. Since establishing malevolent intent is a necessary precondition for determining whether a firm’s conduct is fraudulent (Dechow et al., 2011; Zahra, Priem, and Rasheed, 2005), it is possible that CSR has a reputational effect that reduces the likelihood of receiving an AAER, holding the likelihood of financial misstatements constant. To the extent that it is taken as a positive signal of firm character, CSR may reduce the likelihood of a firm being investigated by the SEC and, conditional on being investigated, the likelihood of malevolent intent being attributed to uncovered misstatements. There is anecdotal evidence that some firms seek to exploit this potential benefit by engaging in CSR to camouflage their misconduct. For example, Enron Corporation and Xerox Corporation had a reputation for engaging in various CSR activities during the period 1997-2000, yet both companies committed serious financial misconduct during that same period.³ Some academic studies have also suggested that firms use a positive reputation for CSR to camouflage earnings management (e.g., Prior et al., 2008; Grougiou et al., 2014).

³ Similarly, Volkswagen Group was ranked the “most sustainable automaker” according to Dow Jones Sustainability Indices in 2013 and 2015, yet the company subsequently admitted using software to manipulate emissions tests in those years.

Our study examines whether CSR relates to the likelihood of firms receiving an AAER through both the behavioral and reputational channels. We conduct our analyses using a large sample of U.S. public firms from the MSCI ESG KLD STATS database over the period 1995-2012.⁴ Using KLD ratings, we measure CSR as total strengths minus total concerns for seven broad categories: community, diversity, environmental issues, employee relations, human rights, product, and corporate governance. Consistent with Kim et al. (2012), we find that firms with higher CSR are less likely to receive an AAER. Having established this baseline result, we examine two possible channels—behavioral and reputational—underlying the CSR-AAER relationship. Consistent with the hypothesized behavioral channel, we find that financial statements of firms with higher CSR exhibit a lower likelihood of material misstatements.

To provide evidence on the reputational channel, we examine whether CSR continues to be negatively related to the likelihood of firms receiving an AAER after controlling for the likelihood of financial misstatements. We employ two approaches to control for the likelihood of misstatements. First, we include a measure of the likelihood of financial misstatements as a control variable in the regression model that relates CSR to AAER. We find that controlling for the likelihood of misstatements reduces the magnitude of the association between CSR and AAER, but the association continues to be statistically significant. We then conduct a path analysis using the generalized structural equation modeling technique to provide evidence that both the direct path (reputational effect) and indirect path (through the likelihood of misstatements) that link CSR to AAER are statistically significant. These results suggest that the negative association between CSR and AAER is not fully attributable to the behavioral effect of CSR (i.e., firms with higher CSR are less likely to engage in material financial misstatements). Second, we examine the relation between CSR and AAER for a sample of firms whose financial statements were known to have been misstated, as evidenced by subsequent financial restatements. By focusing on this restatement sample, we hold the likelihood of financial misstatements constant (at 100%), thus avoiding the issues caused by noise in our proxy for the likelihood of misstatements. We conduct several tests using this sample to provide consistent evidence that firms with higher CSR are less likely to receive an AAER, holding the likelihood of financial misstatements constant. Taken together, our findings suggest that firms with higher

⁴ The MSCI ESG KLD STATS database was created by Kinder, Lydenberg, Domini Research & Analytics (KLD) in 1991. The CSR ratings provided by this database are known as KLD ratings in the literature. KLD Research & Analytics was acquired by MSCI in 2010. For brevity, in this study we use the term KLD ratings to indicate CSR ratings from the MSCI ESG KLD STATS database.

CSR are less likely to receive an AAER due to both the behavioral and reputational effects of CSR.

We conduct several additional tests to corroborate our main findings. First, we test and find evidence that firms with higher CSR are less likely to be investigated by the SEC for financial misstatements. Second, we use an alternative measure of CSR calculated using KLD ratings for six categories including community, diversity, environmental issues, employee relations, human rights and product. The corporate governance rating is included as a separate control variable. Third, we use an alternative approach to calculate the likelihood of financial misstatements that does not rely on actual AAERs. We find similar results using these alternative measures of CSR and the likelihood of financial misstatements.

Our findings contribute to a growing stream of research linking CSR to financial reporting quality. First, our findings corroborate the evidence in Kim et al. (2012) that more socially responsible firms are less likely to be subject to SEC enforcement actions for financial misreporting. More importantly, we provide insights on the two theorized channels—behavioral and reputational—underlying the relationship between CSR and SEC enforcement actions. As AAERs (and corporate fraud charges in general) can have severe consequences for shareholders and executives (Feroz, Park, and Pastena, 1991; Karpoff, Lee, and Martin, 2008a, 2008b; Yuan and Zhang, 2016), understanding how and why CSR relates to the likelihood of SEC enforcement actions is of interest to shareholders, managers and regulators.

We organize our study as follows. In Section 2, we review the relevant literature and develop our hypotheses. In Section 3, we describe the data and variables. We report our empirical findings in Section 4. Additional tests are presented in Section 5. We conclude by discussing the theoretical and managerial implications of our findings in Section 6.

2. BACKGROUND, THEORY AND HYPOTHESES

Is CSR related to the likelihood of firms receiving an SEC enforcement action for financial misstatements? If so, is it because high CSR firms are less likely to engage in financial misstatements or because a reputation for CSR reduces the likelihood of SEC enforcement actions? These questions are of interest to investors, managers, analysts and regulators, given that SEC enforcement actions have a severe negative impact on firm value and on managers' wealth and tenure (Feroz et al., 1991; Karpoff et al., 2008a, 2008b).

SEC enforcement actions have been an important topic in the literature on corporate fraud (e.g., Dechow, Sloan, and Sweeney, 1996; Dyck, Morse, and Zingales, 2010; Dechow

et al., 2011; Kedia and Rajgopal, 2011; Markelevich and Rosner, 2013; Marcel and Cowen, 2014). The SEC is empowered to investigate and take enforcement action against firms, managers, auditors, and other parties for violating SEC and federal rules. At the completion of a significant investigation involving accounting and auditing violations, the SEC issues an Accounting and Auditing Enforcement Release (AAER). To identify firms for review and investigation, the SEC typically relies on sources such as anonymous tips, news reports, and firms' restatements of financial reports. In addition, each year the SEC selects a number of public firms' financial statements for review (Dechow et al., 2011). The SEC does not disclose the specific criteria it uses to identify firms for review in order to "preserve the integrity of the selective review process".^{5 6} Given its limited resources, the SEC is likely to focus on firms where there is a high probability of successfully establishing fraudulent conduct (Feroz et al., 1991). As Cox, Thomas, and Kiku (2003, p. 759) note, the SEC "gauges its enforcement priorities by the message the action sends to the industry and public, the relative harm to investors, the deterrent effects of the action and the visibility the SEC enjoys in combating such abuses."

The Relation between CSR and AAER

There are at least two reasons to expect a negative relation between CSR and the likelihood of firms receiving an AAER. First, CSR reduces the likelihood of firms engaging in financial misstatements. Stakeholder theorists emphasize that, in addition to the responsibility to maximize shareholder value, firms also have a social responsibility, which "encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time" (Carroll, 1979, p. 500). Viewed from this angle, CSR is the antithesis of fraud—a firm deliberately deceiving, swindling or cheating stakeholders (Power, 2013; Zona, Minoja, and Coda, 2013). To the extent that CSR activities are motivated by a commitment not to engage in illegal or unethical conduct, we expect that firms with higher CSR are less likely to engage in financial misstatements. Moreover, there are also economic incentives for firms with high CSR to refrain from engaging in financial misstatements. CSR can enhance a firm's ability to acquire and retain customers (Brown and

⁵ See: <https://www.sec.gov/divisions/corpfin/cffilingreview.htm>

⁶ Sarbanes Oxley Act Section 408 prescribes some factors that the SEC should consider when selecting companies for review: material financial restatements, significant stock price volatility, large market capitalization, disparities in price-earnings ratios, operations having a material impact on the economy. Section 408 also requires that each reporting company be reviewed at least once every three years.

Dacin, 1997; Sen and Bhattacharya, 2001), attract, retain and motivate employees (Turban and Greening, 1997; Greening and Turban, 2000), and enhance relations with the media, policy makers and investors (Freeman, 1984; Berman, Wicks, Kotha, and Jones, 1999; Hillman and Keim, 2001; Dhaliwal, Li, Tsang, and Yang, 2011).⁷ Consistent with these benefits, prior research finds a positive association between CSR and firm value (Flammer, 2013; Gregory, Tharyan, and Whittaker, 2013). Financial misstatements put firm value and the wealth and career of its senior executives at risk (Karpoff et al., 2008a, 2008b). Therefore, firms with high CSR have strong economic incentives to refrain from engaging in financial misstatements.

Second, CSR may influence the likelihood of receiving an AAER through a reputational channel. The corporate reputation literature suggests that outsiders make judgments regarding a firm's moral character based on observable signals (e.g., Love and Kraatz, 2009; Mishina, Block, and Mannor, 2012). Scholars emphasize that outsiders tend to view CSR as a positive signal of a firm's moral character—a signal that the firm is willing to act, at least in part, altruistically (Fombrun et al., 2000; Gardberg and Fombrun, 2006). A positive signal of moral character—such as that provided by CSR—may reduce suspicion of *mens rea* (malevolent intent) on the part of the firm and its senior executives (Godfrey, Merrill, and Hansen, 2009; Christensen, 2016).⁸ This line of reasoning suggests that CSR may reduce the likelihood of a firm being investigated by the SEC, thus reducing the likelihood of financial misstatements being detected. Further, conditional on misstatements being detected, CSR may reduce the likelihood of receiving an AAER by reducing the SEC staff's and others' suspicion of malevolent intent. For example, reporters might be less inclined to investigate firms with a reputation for being good corporate citizens. Likewise, SEC staff might be more vigilant of firms with a reputation for being poor corporate citizens.⁹ The reputational effect can be viewed as a dark side of CSR since it effectively

⁷ Survey results suggest that managers consider “enhances reputation internally and externally” among the most important benefits of CSR (KPMG, 2013).

⁸ This positive reputation can mitigate consequences of negative events such as product recalls or adverse regulatory actions, as outsiders are less likely to attribute such events to malevolent intent on the part of the firm. For example, Godfrey et al. (2009) find that the negative stock price reaction to adverse legal events is smaller for firms with higher CSR. Similarly, Hong and Liskovich (2014) find that among firms charged with bribery, the penalty is less severe for those with higher CSR.

⁹ The reputational effect of CSR could be conscious (i.e., the SEC staff or reporters consciously use CSR performance as a signal of malevolent intent) or unconscious (a halo effect). As an anecdote, the SEC failed to uncover the Ponzi scheme run by Bernard Madoff after receiving repeated warnings from outside sources and conducting two investigations of his brokerage business. One important factor that was thought to have helped Mr. Madoff in this case was his good reputation on Wall Street (Scannell, 2008). With the benefit of hindsight, many have criticized the SEC staff for failing to detect obvious fraudulent activities by Madoff. However, one

provides high-CSR firms with a license to engage in misconduct. Prior studies have found that at least some firms appear to have used CSR reputation as camouflage for earnings management (e.g., Prior et al., 2008; Grougiou et al., 2014).

Based on the above analyses, we predict that firms with higher CSR are less likely to receive an AAER because (1) they are less likely to engage in financial misstatements (the behavioral channel) and (2) CSR creates a reputational effect that reduces the likelihood of SEC enforcement actions, holding the likelihood of financial misstatements constant (the reputational channel). Thus, we propose three related hypotheses. The first hypothesis describes the overall relationship between CSR and the likelihood of receiving an AAER, the second and third hypotheses describe the two mechanisms underlying the CSR—AAER relationship.

Hypothesis 1a: CSR is negatively associated with the likelihood of receiving an AAER.

Hypothesis 1b: CSR is negatively associated with the likelihood of financial misstatements.

Hypothesis 1c: Controlling for the likelihood of financial misstatements, CSR is still negatively associated with the likelihood of receiving an AAER.

3. DATA AND VARIABLES

3.1. Sample Selection

We draw our sample from the MSCI ESG KLD STATS database (hereafter KLD). KLD CSR ratings have been validated and used extensively in academic research (e.g., Sharfman, 1996; Waddock and Graves, 1997; McWilliams and Siegel, 2000; Hillman and Keim, 2001). Our sample period is from 1995 to 2012. Although KLD CSR data are available from 1991, the database only contains Committee on Uniform Securities Identification Procedures (CUSIPs) for observations from 1995. As we match KLD data with firms' financial data from Compustat using CUSIPs, we start our sample in 1995. To allow for a time lag between the year in which financial misstatements occur and when the SEC takes enforcement action against firms, we end our sample period in 2012 but continue to track SEC enforcement actions over the subsequent four years (i.e., AAERs issued over the period 2013–2016 for financial misstatements occurring in 2012 or earlier).

Our initial sample from KLD has 35,406 firm-years. Merging the KLD database with the Compustat database reduces our sample to 29,690 firm-years. We drop firms from the

plausible explanation is that, faced with ambiguity and uncertainty, the SEC staff might have been influenced (consciously or not) by Madoff's good reputation.

financial industry (SIC 6000-6999) as the model we use to estimate the likelihood of financial misstatements, a key variable in our analyses, was developed for non-financial firms (Beneish, 1999; Bayley and Taylor, 2007; Dechow et al., 2011). This choice reduces our sample to 23,514 firm-years. Requiring data for calculating the likelihood of financial misstatements and control variables further reduces our sample to 20,514 firm-years.

The SEC began issuing AAERs in 1982. Most AAERs can be found on the SEC's website, or by searching the NexisLexis database. The Center for Financial Reporting and Management at the University of California, Berkeley collects individual AAERs from these two sources and comprises a database containing summary information about individual AAERs, including the identification of the firm and year in which misstatements occurred, and the nature of the misstatements. It is currently the most comprehensive publicly available AAER database.¹⁰ We use this AAER database to identify firms that received SEC enforcement actions for financial misstatements. In our final sample of 20,514 firm-years, 243 firm-years (96 unique firms) received an AAER.

3.2. Variable Descriptions

3.2.1. Dependent Variables

AAER: This is an indicator variable equal to one for firm-years that are the subject of an AAER and zero for all other firm-years. We only count enforcement actions against firms for committing financial misstatements (i.e., enforcement actions involving a firm's auditors or bribery are excluded).

Likelihood of Financial Misstatements (M_SCORE): As previously discussed, the SEC has limited resources and cannot investigate all firms. Hence, firms that received an AAER likely represent a subset of firms that have engaged in material financial misstatements. Identifying the complete set of firms with material financial misstatements is difficult, as misstating firms go to great lengths to ensure that their misstatements are not easily detected. To address this issue, several studies have attempted to develop measures of the likelihood

¹⁰ Karpoff, Koester, Lee, and Martin (2016) examine common databases of financial misconduct including (1) the Government Accountability Office (GAO), (2) the Audit Analytics (AA) databases of restatement announcements, (3) the Stanford Securities Class Action Clearinghouse (SCAC) database of securities class action lawsuits, and (4) the AAER database compiled by the University of California-Berkeley's Center for Financial Reporting and Management (CFRM). They conclude that the AAER database is the most suitable for researchers interested in incidents of material financial misstatements as opposed to reporting errors. To address one issue raised by Karpoff et al. (2016)—that the AAER database has missing Central Index Keys (CIKs) for some firm-years—we use the “CIK lookup” function on the SEC's website to manually collect and add as many CIKs as possible. More details about this database are described in Dechow et al. (2011). We thank the authors and the Center for Financial Reporting and Management at the University of California, Berkeley for allowing us to use the database.

that a firm has engaged in financial misstatements (e.g., Beneish, 1999; Bayley and Taylor, 2007; Dechow et al., 2011). We employ the approach developed by these prior studies to estimate the likelihood of financial misstatements for individual firm-years. The approach involves two steps. In the first step, we estimate the following logistic regression using all available observations from the Compustat Annual File over the period 1995-2012 that have the required data.

$$AAER_{it} = b_0 + b_1 WC_ACC_{it} + b_2 \Delta AR_{it} + b_3 \Delta INV_{it} + b_4 Soft_Asset_{it} + b_5 \Delta Cash_Sales_{it} + b_6 \Delta ROA_{it} + b_7 Issuance_{it} + b_8 \Delta Gross_Margin_{it} + \varepsilon_{it} \quad (1)$$

$AAER_{it}$ is a dummy variable equal to one for firm-years that receive an AAER and zero otherwise. WC_ACC_{it} is working capital accruals, calculated as income before extraordinary items, depreciation and amortization, minus operating cash flow, scaled by average total assets. ΔAR_{it} is the change in accounts receivable over the current year, scaled by average total assets. ΔINV_{it} is the change in inventory over the current year, scaled by average total assets. $Soft_Asset_{it}$ is total assets excluding net property, plant and equipment and cash & cash equivalent, scaled by total assets. $\Delta Cash_Sales_{it}$ is the change in cash sales from the previous year to the current year, scaled by cash sales for the previous year. ΔROA_{it} is the change in ROA from the previous year to the current year; ROA is calculated as income before extraordinary items divided by average total assets. $Issuance_{it}$ is a dummy variable equal to one if the firm issues new debt or equity during the current year and zero otherwise. $\Delta Gross_Margin_{it}$ is the change in gross profit margin from the previous year to the current year. Gross profit margin is calculated as the difference between sales and cost of goods sold scaled by sales. These independent variables have been found to be predictive of the likelihood that a firm has engaged in material financial misstatements (e.g., Beneish, 1999; Bayley and Taylor, 2007; Dechow et al., 2011).

In the second step, using the estimated coefficients for equation (1), we calculate the fitted values for individual firm-years. Then, the likelihood of financial misstatements (M_SCORE) is calculated for individual firm-years as follows:

$$M_SCORE = \frac{e^{Fitted\ value}}{1 + e^{Fitted\ value}} \times 100 \quad (2)$$

Accordingly, higher M_SCORE implies a higher likelihood of material financial misstatements. We report the estimation result for M_SCORE and the correct classification rate in Appendix B.¹¹

3.2.2. Main Independent Variable

Net_CSR: We measure firms' CSR using ratings from the KLD database. The KLD CSR ratings database is designed as a binary system, where for each strength (i.e., a positive screen) or concern (i.e., a negative screen) KLD includes a 1 indicating the presence of that screen or a 0 indicating its absence. In aggregate, the KLD database reports ratings on seven broad categories: (1) community, (2) diversity, (3) environmental issues, (4) employee relations, (5) human rights, (6) product, and (7) corporate governance. For each firm-year, we calculate total CSR strengths (concerns) as the sum of strengths (concerns) over the seven categories. Our key independent variable Net_CSR equals total CSR strengths minus total CSR concerns.¹² In our empirical analyses, we show the results using both Net_CSR and an alternative measure High_CSR—a binary variable equal to one for firms with positive Net_CSR and zero otherwise.

3.2.3. Control Variables

We control for firm size, market-to-book ratio, profitability, auditor reputation, financial leverage, equity offerings, R&D intensity, industry advertising intensity, firm age, stock return performance, stock return volatility, abnormal accruals and firm general reputation in our regression analyses of the relations between CSR, M_SCORE, and AAER. We calculate firm size (SIZE) as the natural logarithm of the firm's market value of equity at the end of the current financial year. With respect to firm size, on the one hand, large firms have less incentive to overstate earnings because of concerns about political costs (Watts and Zimmerman, 1986). On the other hand, large firms are more likely to receive an AAER (Dechow et al. 2011; Kim et al. 2012). One possible reason for a positive relation between firm size and the likelihood of receiving an AAER is that large firms draw more attention from the SEC. However, it could also be that large firms engage in more material financial

¹¹ Hui, Lennox, and Zhang (2014) use this approach to estimate the likelihood of financial misstatements and show that the market assigns a lower valuation to the earnings of firms with higher likelihood of financial misstatements. Their findings suggest that investors appear to use the same information from financial statements to assess the risk of misreporting. We expect that the SEC also rely on information from financial statements (in addition to other sources) in assessing the likelihood that a firm has misstated its financial statements. In our additional tests, we use an alternative approach to estimate M_SCORE without using actual AAERs. Our main test results hold when we use this alternative measure of M_SCORE (see Section 5).

¹² As a robustness test, we calculate Net_CSR using strengths and concerns for the first six categories and include corporate governance as a separate control variable. We find similar results using this alternative measure of CSR (results are untabulated).

misstatements. We include market-to-book ratio (MB), calculated as the firm's market value divided by book value of equity at the end of the current financial year. Roychowdhury (2006) and Kim et al. (2012) find that market-to-book ratio is predictive of earnings management. Profitability (ADJ_ROA) is the prior year industry-adjusted income before extraordinary items divided by average total assets. We control for ADJ_ROA since more profitable firms tend to engage in more CSR activities. If more profitable firms are also more (or less) likely to engage in financial misstatements or draw more attention from market participants and the SEC, then failure to control for profitability might bias the estimated association between CSR and the likelihood of financial misstatements as well as the likelihood of receiving an AAER. Financial leverage (LEV) is the firm's long-term debt divided by total assets at the end of year t . Prior studies find mixed results with respect to the relation between leverage and financial misreporting. Dechow et al. (1996) find that firms receiving an AAER have higher leverage, while Beneish (1999) finds that leverage does not predict AAER. Auditor reputation (BIG4) is a dummy variable equal to one if the firm is audited by a Big4 audit firm, zero otherwise. BHAR is the market-adjusted buy-and-hold stock return of the firm over year t . RET_VOL is the standard deviation of monthly stock returns over year t . We control for BHAR as Dechow et al. (2011) find that stock price performance tends to be higher in the year when financial misstatements occur—one possible explanation is that high stock prices create pressure to engage in financial misreporting to meet the market's high expectation. We include RET_VOL as high stock return volatility may attract more attention from the media, an important source of information and pressure that likely affects the SEC's decision to investigate a firm. Following Kim et al. (2012), we also control for firm age (AGE), calculated as the natural logarithm of one plus the number of years from when the firm first appears in the CRSP database up to the current year; R&D intensity (RD), calculated as R&D expenditure scaled by sales; industry advertising intensity (IND_AD), calculated as the average advertising expenses scaled by sales for the industry that the firm operates in; and equity offering (ISSUANCE), a dummy variable equal to 1 if the firm issues equity during the current year, zero otherwise. Finally, we include an indicator (ADMIRE) equal to 1 for firms that are included in the list of *Fortune's Most Admired Companies* and zero otherwise (Cao, Myers, and Omer, 2012; Kim et al., 2012).¹³ In our models (3) and (5), which examine the link between CSR and the likelihood of receiving an

¹³ We thank professor Ying Cao for generously providing us with the *Fortune's Most Admired Companies* data.

AAER, we also control for abnormal accruals (ABN_ACC), estimated using the model in Kim et al. (2012).

4. RESULTS

4.1. Descriptive Statistics

We present descriptive statistics for our sample in Table 1 Panel A. Our sample firms are, on average, significantly larger than the firms covered by Compustat, as the KLD database generally covers large firms. Firm-years with an AAER have a significantly higher average M_SCORE than firm-years without an AAER; the difference in M_SCORE between the two subsamples is statistically significant at the one-percent level.¹⁴ Firms that received an AAER tend to have lower CSR (lower Net_CSR and lower High_CSR) than firms that did not receive an AAER. Firms that received an AAER also tend to be larger and have more growth opportunities (higher market-to-book ratio). Interestingly, firms in the *Fortune's Most Admired Companies* list are more likely to receive an AAER. One possible explanation for this result is that firms in the *Fortune's Most Admired Companies* list tend to be larger, and larger firms are more likely to receive an AAER (i.e., the SEC is more likely to target large firms given their significant impact on society). Indeed, after we control for firm size and other variables in regression analyses, the relation between the “most admired” status and AAER becomes insignificant. This result is consistent with Kim et al. (2012).¹⁵ Finally, firms that received an AAER tend to have lower leverage and lower R&D intensity, operate in industries with higher advertising intensity, and have higher stock return volatility. In our multivariate analyses, we control for these variables when examining the relations between CSR and the likelihood of financial misstatements as well as the likelihood of receiving an AAER. Table 1 Panel B presents the distribution of the sample by industry. The likelihood of receiving an AAER is higher in some industries than others. Therefore, we control for industry fixed effects in our regression models.

[INSERT TABLE 1 ABOUT HERE]

Table 2 presents the pair-wise correlation coefficients among the key variables. As expected, AAER is positively correlated with M_SCORE. The negative correlation between

¹⁴ Given the way we calculate M_SCORE using equation (2), the mean M_SCORE for AAER firm-years should read as 0.957 percent and mean M_SCORE for Non-AAER firm-years is 0.790 percent.

¹⁵ It is worth noting that the “most admired firms” status is based on the surveyed opinions of peer-firm executives—it is not the same as corporate social responsibility. Peer-firm executives might place more weights on factors such as profitability or firm size than on socially responsible behavior. Therefore, being admired by peer executives might not generate a positive social capital that helps reduce the likelihood of SEC enforcement actions.

AAER and Net_CSR is consistent with firms with higher CSR being less likely to receive an AAER. However, the correlation coefficient is not statistically significant at the 10-percent level. Interestingly, the correlation between M_SCORE and Net_CSR is positive, although it is not statistically significant at the 10-percent level. M_SCORE and AAER are also significantly correlated with several other firm characteristics such as size, profitability, and market-to-book ratio. In addition, several firm characteristic variables are correlated with each other. Thus, we control for these variables in regression analyses of the relations between CSR, M_SCORE and AAER.

[INSERT TABLE 2 ABOUT HERE]

4.2. Relationship between CSR and AAER

Hypothesis 1a predicts that the likelihood of receiving an AAER is negatively related to CSR. We test this hypothesis using the following logistic regression:

$$\begin{aligned} \text{AAER}_{it} = & \delta_0 + \delta_1 \text{CSR}_{it} + \delta_2 \text{SIZE}_{it} + \delta_3 \text{MB}_{it} + \delta_4 \text{ADJ_ROA}_{it} + \delta_5 \text{BIG4}_{it} \\ & + \delta_6 \text{LEV}_{it} + \delta_7 \text{ISSUANCE}_{it} + \delta_8 \text{RD}_{it} + \delta_9 \text{IND_AD}_{it} + \delta_{10} \text{AGE}_{it} + \delta_{11} \text{BHAR}_{it} \\ & + \delta_{12} \text{RET_VOL}_{it} + \delta_{13} \text{ABN_ACC}_{it} + \delta_{14} \text{ADMIRED}_{it} + \eta_{it} \end{aligned} \quad (3)$$

AAER_{it} is a dummy variable equal to one if firm i receives an AAER in year t , and zero otherwise. CSR_{it} is alternatively Net_CSR_{it} (calculated as CSR strengths minus CSR concerns) and High_CSR_{it} (a dummy variable equal to one for firms that have positive Net_CSR_{it} and zero otherwise). Hypothesis 1a predicts that CSR_{it} is negatively related to AAER_{it} ($\delta_1 < 0$). Control variables include firm size, market-to-book ratio, lagged industry-adjusted return on assets, auditor reputation, financial leverage, equity issuance, R&D intensity, industry advertising intensity, firm age, stock price performance, stock return volatility, abnormal accruals and a dummy variable indicating whether the company is included among *Fortune's* Most Admired Companies (see Appendix A for variable descriptions). Continuous variables are winsorized at the first and 99th percentiles. The regression model also includes controls for industry fixed effects (industries are Fama-French 12 industry classifications). Standard errors are clustered by firm and year to control for error correlation within clusters.

Table 3 presents the estimation results for model (3). Consistent with Hypothesis 1a, the coefficient on CSR_{it} is negative and statistically significant at the five-percent level or lower. This is true for both the continuous (Net_CSR) and binary (High_CSR) measures of

CSR. Thus, we find that, on average, firms with higher CSR are less likely to receive an AAER. This result is broadly consistent with the finding in Kim et al. (2012, Table 5). As previously discussed, there are two plausible explanations for a negative relation between CSR and AAER: (1) firms with higher CSR are less likely to engage in financial misstatements and (2) a reputation for CSR reduces the likelihood of firms being investigated and charged by the SEC for financial misstatements. Our subsequent tests will provide evidence on these two mechanisms.

[INSERT TABLE 3 ABOUT HERE]

4.3. Relationship between CSR and Likelihood of Financial Misstatements (Behavioral Channel)

Hypothesis 1b predicts that CSR is negatively associated with the likelihood of financial misstatements. We test this hypothesis using the following OLS regression.

$$\begin{aligned} M_SCORE_{it} = & \beta_0 + \beta_1 CSR_{it} + \beta_2 SIZE_{it} + \beta_3 MB_{it} + \beta_4 ADJ_ROA_{it} + \beta_5 BIG4_{it} \\ & + \beta_6 LEV_{it} + \beta_7 ISSUANCE_{it} + \beta_8 RD_{it} + \beta_9 IND_AD_{it} + \beta_{10} AGE_{it} \\ & + \beta_{11} BHAR_{it} + \beta_{12} RET_VOL_{it} + \delta_{13} ADMIRE_{it} + v_{it} \end{aligned} \quad (4)$$

The dependent variable M_SCORE_{it} is calculated using equation (2). CSR_{it} is alternatively Net_CSR_{it} or $High_CSR_{it}$, defined as in model (3). Hypothesis 1b predicts that CSR_{it} is negatively related to M_SCORE_{it} ($\beta_1 < 0$). See Appendix A for other variable descriptions.¹⁶ Continuous variables are winsorized at the first and 99th percentiles. The regression model also includes controls for industry fixed effects. Standard errors are clustered by firm and year to control for error correlation within clusters.

Table 4 presents the estimation results for model (4). Consistent with Hypothesis 1b, the coefficient on CSR_{it} is negative and statistically significant at the one-percent level. This is true for both the continuous (Net_CSR) and binary ($High_CSR$) measures of CSR. The last two columns of Table 4 report estimation results for model (4) with an alternative dependent variable— $High_Risk$, which is an indicator variable equal to one if the firm has M_SCORE in the top 40% and zero otherwise. The results suggest that firms with higher CSR are less

¹⁶ Model (4) does not include abnormal accruals (ABN_ACC) because both ABN_ACC and M_SCORE are intended to capture firms' misreporting, although M_SCORE is intended to capture more material misstatements that may lead to an AAER. Including ABN_ACC in the model does not change our main results. Specifically, if we include ABN_ACC in model (4), then the coefficient on Net_CSR is -0.005 (t-statistic = -3.33) and the coefficient on $High_CSR$ is -0.040 (t-statistic = -4.10)

likely to exhibit a high likelihood of financial misstatements. Overall, we find that firms with higher CSR exhibit a lower likelihood of engaging in the material financial misstatements that give rise to an AAER. This result is consistent with the behavioral channel underlying the negative relation between CSR and the likelihood of receiving an AAER.

[INSERT TABLE 4 ABOUT HERE]

4.4. Relationship between CSR and AAER after Controlling for Likelihood of Financial Misstatements (Reputational Channel)

Hypothesis 1c predicts that, consistent with CSR having a reputational effect that reduces the likelihood of receiving an AAER, the negative relation between CSR and AAER remains significant after controlling for the likelihood of financial misstatements. We test this hypothesis using two alternative approaches. First, we estimate model (5) below using our full sample.

$$\begin{aligned} \text{AAER}_{it} = & \lambda_0 + \lambda_1 \text{CSR}_{it} + \lambda_2 \text{M_SCORE}_{it} + \lambda_3 \text{SIZE}_{it} + \lambda_4 \text{MB}_{it} + \lambda_5 \text{ADJ_ROA}_{it} + \lambda_6 \text{BIG4}_{it} \\ & + \lambda_7 \text{LEV}_{it} + \lambda_8 \text{ISSUANCE}_{it} + \lambda_9 \text{RD}_{it} + \lambda_{10} \text{IND_AD}_{it} + \lambda_{11} \text{AGE}_{it} + \lambda_{12} \text{BHAR}_{it} \\ & + \lambda_{13} \text{RET_VOL}_{it} + \lambda_{14} \text{ABN_ACC}_{it} + \lambda_{15} \text{ADMIRE}_{it} + \eta_{it} \end{aligned} \quad (5)$$

Model (5) is identical to model (3) except for one modification: M_SCORE_{it} is added to the model to control for the likelihood of financial misstatements. If the only reason why firms with higher CSR are less likely to receive an AAER is because they are less likely to engage in financial misstatements (i.e., the behavioral channel), then once we control for M_SCORE, we should no longer observe a negative relation between CSR and AAER. On the other hand, if CSR has a reputational effect that reduces the likelihood of AAER, then we should continue to observe a negative relation between CSR and AAER after controlling for M_SCORE. That is, Hypothesis 1c predicts that the coefficient on CSR_{it} in model (5) is negative ($\lambda_1 < 0$). Table 5 presents the estimation results for model (5). Consistent with Hypothesis 1c, the coefficient on CSR_{it} remains negative and statistically significant after controlling for M_SCORE. This is true for both the raw measure (Net_CSR) and the binary measure of CSR (High_CSR).

[INSERT TABLE 5 ABOUT HERE]

Path Analysis of the Relations between CSR, M_SCORE and AAER

To assess the relative significance of the direct path (reputational effect) and indirect path (through M_SCORE) that link CSR to AAER, we conduct a path analysis using the generalized structural equation modeling technique (Figure 1 describes the theoretical path model). The estimation results for the path analysis are presented in Table 6. We find that both the indirect and direct paths are statistically significant at conventional levels. In terms of economic magnitude, the direct path is much more significant than the indirect path.¹⁷

Overall, the results in Tables 3 through 6 together suggest that firms with higher CSR are less likely to receive an SEC enforcement action for financial misstatements, and that this relationship is not due entirely to the behavioral effect of CSR. It is important to note that while the results in Table 5 are suggestive of the reputational effect of CSR, they are not sufficient to draw a definitive conclusion about the reputational effect of CSR given that M_SCORE is not a perfect measure of the likelihood of misstatements (Dechow et al., 2011). Thus, one could argue that the negative association between CSR and AAER, even after controlling for M_SCORE, is still driven by differences in the likelihood of financial misstatements, rather than the reputational effect of CSR. To provide stronger evidence on the reputational effect of CSR, in the next sections we examine the relation between CSR and AAER for a sample of firm-years where misstatements are known to have occurred (i.e., holding the likelihood of misstatements constant at 100 percent).

[INSERT TABLE 6 ABOUT HERE]

Relationship between CSR and AAER for Firm-Years in which Financial Statements are Subsequently Restated

To mitigate the concern that M_SCORE is a noisy measure of the likelihood of financial misstatements, in this section we examine the relation between CSR and the likelihood of receiving an AAER for a sample of firm-years in which misstatements are

¹⁷ The most advanced package for conducting generalized structural equation modeling in Stata (GSEM) only supports clustering standard errors by one dimension. Therefore, in this test we cluster standard errors by firm but not by year. In untabulated tests, we find that the regression results in Table 4 and 5 are similar if we only cluster standard errors by firm, suggesting that not clustering standard errors by year should not significantly affect the path analysis results in Table 6. As a robustness check, we also use the approach developed by Sobel (1982) – a popular approach to test the statistical significance of mediation effects. Using this approach, we find that the indirect effect is statistically significant at less than one percent (z-statistic is 2.62).

known to have occurred, as evidenced by subsequent financial restatements.¹⁸ By focusing on this sample, we hold the likelihood of misstatements constant (i.e., equal to one). As a negative association between CSR and the likelihood of receiving an AAER for this sample could not be explained by differences in the likelihood of misstatements, it would provide strong corroborating evidence on the reputational effect of CSR.

We obtain financial restatement data from the Audit Analytics database (Non-Reliance Restatements). In this test we only include observations from the financial year 2000 onward, as Audit Analytics started collecting restatement data in 2000. Table 7 (Panel A) presents summary statistics for this sample of restatement firms. For comparison, the table also presents summary statistics for the full sample (except for the misstatement characteristics, which are not available for the full sample). The most notable difference is that, on average, restatement firms are smaller than firms in the full sample. Using the sample of restatement firms, we estimate model (6) below.

$$\begin{aligned} \text{AAER}_{it} = & \theta_0 + \theta_1 \text{CSR}_{it} + \theta_2 \text{SIZE}_{it} + \theta_3 \text{MB}_{it} + \theta_4 \text{ADJ_ROA}_{it} + \theta_5 \text{BIG4}_{it} \\ & + \theta_6 \text{LEV}_{it} + \theta_7 \text{ISSUANCE}_{it} + \theta_8 \text{RD}_{it} + \theta_9 \text{IND_AD}_{it} + \theta_{10} \text{AGE}_{it} + \theta_{11} \text{BHAR}_{it} \\ & + \theta_{12} \text{RET_VOL}_{it} + \theta_{13} \text{ABN_ACC}_{it} + \theta_{14} \text{ADMIRE}_{it} + \theta_{15} \text{FRAUD}_{it} \\ & + \theta_{16} \text{POS_EFF}_{it} + \theta_{17} \text{NI_EFF}_{it} + \eta_{it} \end{aligned} \quad (6)$$

Model (6) is similar to model (5) with three additional variables included to capture the characteristics of misstatements that likely affect the likelihood of receiving an AAER.¹⁹ FRAUD_{it} is a dummy variable equal to one if the misstatement was classified as fraud (by Audit Analytics) and zero otherwise. POS_EFF_{it} is a dummy variable equal to one if the misstatement had a positive effect on the company financial statements and zero otherwise. NI_EFF_{it} is the dollar amount of the cumulative effect of the misstatement on net income, scaled by the firm's market value of equity. All other variables are defined as in model (5). The estimation results for model (6) using the full sample of misstatement firms are presented in the first two columns of Table 7 (Panel B).²⁰ We find a negative and statistically

¹⁸ As an example, Interpublic Group of Companies' financial statements for the year 2000 were restated in 2002. The sample for this test includes data for this company for the year 2000.

¹⁹ M_SCORE_{it} is not included because model (6) is estimated on the subsample of firms with known misstatements. Including M_SCORE_{it} in the model has no significant effects on the main result.

²⁰ In estimating model (6) for this sample, we cluster standard errors by year but not by firm, because most firms only appear in the sample once.

significant association between CSR and the likelihood of receiving an AAER for this sample of misstatement firms. Given that the likelihood of misstatement is held constant in this sample, this result provides stronger evidence consistent with our hypothesis that CSR relates to the likelihood of AAER through a reputational channel. With regard to misstatement characteristics, while FRAUD and NI_EFF are strongly related to the likelihood of receiving an AAER as expected, whether the misstatement has a positive impact on the firm's financial statements is not related to the likelihood of AAER.

In the last two columns of Table 7 (Panel B), we report the results from estimating model (6) on a matched sample, which includes misstatement firms that received an AAER and matched misstatement firms that did not receive an AAER. Specifically, for each misstatement firm that received an AAER, we select a matched misstatement firm that did not receive an AAER using the propensity score matching technique. Propensity scores are calculated based on four variables: year, industry, firm size, and the magnitude of misstatement (NI_EFF). The first three matching variables are chosen following Burns, Kedia and Lipson (2010), while NI_EFF is included to ensure that AAER firms and matched Non-AAER firms have misstatements of similar magnitudes. This sample includes 152 AAER firms and 152 matched firms. As shown in the last two columns of Table 7 (Panel B), we find a strong negative relation between CSR and AAER. Given that AAER firms and non-AAER firms in this matched sample are similar in many characteristics, including having misstatements of similar magnitudes, this result provides stronger support for our hypothesis that CSR relates to the likelihood of AAER through a reputational channel.

[INSERT TABLE 7 ABOUT HERE]

Relationship between CSR and AAER for Subsample that Includes Restatement Firms and Matched Non-Restatement Firms

Table 7 (Panel A) suggests that restatement firms differ from non-restatement firms in some characteristics, most notably firm size. Also, it is possible that non-restatement firms include some that misstated their financial statements but did not restate. To show that these differences do not drive the results reported in Table 7 (Panel B), we re-estimate model (6) using a sample formed by matching each restatement firm with a non-restatement firm using the propensity score matching technique. Propensity scores are calculated based on four variables: year, industry, firm size, and M_SCORE. The first three matching variables are chosen following Burns, Kedia and Lipson (2010), while M_SCORE is included to ensure that restatement firms and matched firms exhibit similar likelihood of financial

misstatements. Table 8 presents the results from estimating model (6) using this matched sample. Since misstatement characteristics (FRAUD, POS_EFF and NI_EFF) are not available for non-restatement firms, these variables are dropped from the model. Consistent with the estimation results using restatement firms only, we continue to find that CSR is negatively related to the likelihood of receiving an AAER using this matched sample. This test provides further support for our hypothesis that CSR relates to AAER through a reputational channel.

[INSERT TABLE 8 ABOUT HERE]

Relationship between CSR and AAER for Subsamples of Restatement Firms

To provide further evidence on the reputational effect of CSR, we estimate model (6) using subsamples of restatement firms partitioned based on two attributes: (1) the magnitude of misstatements (large versus medium and small misstatements) and (2) whether the firm was already investigated by the SEC before the restatement (SEC investigation versus Non-SEC investigation). Large misstatements are those that inflate net income by at least one percent of the firm's market value, while medium and small misstatements include the remaining cases. SEC investigation subsample includes restatement firms that were already being investigated by the SEC before their restatements were announced, while the Non-SEC investigation subsample includes the remaining cases. The estimation results (untabulated) show that the negative relation between CSR and AAER is statistically significant at the five-percent level or lower for both the subsample of firms with large misstatements and the subsample of firms with medium and small misstatements. Similarly, the negative relation between CSR and AAER is statistically significant at the five-percent level or lower for firms that were not already investigated by the SEC before the restatement. For firms that were already investigated by the SEC before the restatement, the relation between CSR and AAER is negative but only statistically significant at the five-percent level for the binary CSR measure. One possible reason for this weaker relation is that a reputation for CSR reduces the likelihood of AAER by (1) reducing the likelihood that firms are chosen to be investigated by the SEC and (2) reducing the likelihood that firms are charged by the SEC conditional on being investigated and misstatements being uncovered. The former effect is no longer at work for firms that the SEC has already chosen to investigate. As a result, the relation between CSR and AAER is weaker for this subsample.

5. ADDITIONAL TESTS

Relationship between CSR and Likelihood of SEC Investigation

One possible mechanism through which CSR reputation affects the likelihood of a firm receiving an AAER is by reducing the likelihood that the firm is investigated by the SEC for financial misstatements. Unfortunately, examining the relation between CSR and the likelihood of SEC investigation for all Compustat firms is not feasible, as firms investigated by the SEC do not always disclose this fact. Therefore, instead of examining all Compustat firms, we focus on the subsample of firms with financial restatements. Among firms that restated their financial statements, some were already being investigated by the SEC, while others voluntarily restated.²¹ We utilize this feature to examine whether firms with higher CSR are less likely to be investigated by the SEC. Specifically, we estimate a model similar to model (5) using the subsample of firm-years for which financial statements are subsequently restated. The dependent variable is SEC_INVEST_{it}, a dummy variable equal to one for firms that were already being investigated by the SEC prior to the restatement and zero otherwise (we exclude M_SCORE from the model since this subsample includes firms with misstatements, the result is similar if the model includes M_SCORE). We find that the relation between CSR and the likelihood of SEC investigation is negative and statistically significant at conventional levels.²² This result indicates that, among firms with financial restatements, those with higher CSR are less likely to be investigated by the SEC for financial misstatements. This result further supports our hypothesis that CSR relates to the likelihood of AAER through a reputational channel.

Alternative Approach to Estimate the Likelihood of Financial Misstatements

In our main tests, our proxy for the likelihood of financial misstatements (M_SCORE) is estimated using actual AAERs in model (1). To ensure that our results are not driven by the fact that we use actual AAERs to derive M_SCORE, in this section we use an alternative approach to estimate M_SCORE—one that does not rely on actual AAERs. Conceptually, M_SCORE is intended to capture the likelihood that a firm's financial reports contain misstatements. An underlying assumption in estimating M_SCORE using equations (1) and (2) is that any financial misstatements will manifest in observed values of the relevant financial statement variables (e.g., unusually high accruals). Therefore, we use the same independent variables used to estimate M_SCORE in model (1), but instead of estimating a

²¹ In the Audit Analytics restatement database, the variable `res_sec_invest` captures these cases.

²² The coefficient on `Net_CSR` is -0.109 (t-statistic = -5.95) and the coefficient on `High_CSR` is -0.226 (t-statistic = -1.75).

regression that requires actual AAERs, we rank the variables into deciles and then average across the ranked variables to calculate an alternative measure of the likelihood of financial misstatements for each firm-year (ALT_M_SCORE).²³ This approach effectively assigns equal weights to all explanatory variables in model (1), instead of estimating their weights using actual AAERs. We then re-estimate models (4) and (5) using ALT_M_SCORE in place of M_SCORE. The results (untabulated) are qualitatively similar to our main tests. That is, firms with higher CSR are less likely to engage in material financial misstatements that give rise to AAER (i.e., having lower ALT_M_SCORE) and less likely to receive an AAER after controlling for ALT_M_SCORE. In addition, ALT_M_SCORE is significantly related to the likelihood of receiving an AAER. These results confirm that our main findings are not driven by the way we estimate M_SCORE using actual AAER cases.

6. CONCLUSION

Given the serious consequences for firms that receive SEC enforcement actions for financial misstatements and the significant resources devoted to improving CSR, understanding whether and how CSR relates to the likelihood of financial misstatements and the likelihood of receiving an AAER is warranted. In this study, we find that CSR is negatively related to the likelihood of receiving an AAER. Moreover, we provide evidence on two channels—behavioral and reputational—underpinning this relationship. First, we find that firms with higher CSR are less likely to engage in material financial misstatements—consistent with CSR reflecting firms’ recognition of their duty to behave as good corporate citizens (the behavioral channel). While prior research focuses on the relation between CSR and “within GAAP” earnings management, we provide evidence on the association between CSR and more material financial misstatements that may give rise to SEC enforcement actions. Second, we find that the negative relation between CSR and AAER remains significant after controlling for the likelihood of financial misstatements, consistent with CSR having a reputational effect that reduces the likelihood of AAER. Put differently, firms stand to gain from the benefits of CSR as it reduces the likelihood of the disruption associated with SEC enforcement actions—by reducing both the incidence of financial misstatements and the SEC’s suspicion that the firm has engaged in financial misstatements. Our findings contribute

²³ Two variables Δ ROA and Δ Gross_Margin are negatively related to AAER. For these variables, the corresponding ranked variables take the value of 1 for the highest decile and 10 for the lowest decile. The correlation between ALT_M_SCORE and M_SCORE is 0.584.

to the literature by providing a more fine-grained understanding of the relationship between CSR, financial misstatements and SEC enforcement actions.

Second, our work contributes to the ongoing debate on the motivations firms have to engage in CSR as a form of “window dressing” (Aguilera, Rupp, Williams, and Ganapathi, 2007). Prior work has identified the potential “dark side” of CSR—suggesting that firms may take advantage of the reputation created by CSR to provide a cover for managerial misconduct (Hemingway and MacLagan, 2004; Prior et al., 2008; Grougiou et al., 2014). Our finding that a reputation for CSR is negatively related to the likelihood of AAER suggests that this concern is warranted. Given that SEC enforcement actions, and allegations of fraud in general, have a significant negative impact on firm value and on the welfare of managers (Karpoff et al., 2008a, 2008b; Yuan and Zhang, 2016), our findings have important implications for managers seeking to ensure that their firm avoids such enforcement actions, and for investors interested in assessing the likelihood that firms have engaged in financial misstatements and/or whether firms will be subject to SEC enforcement actions.

Finally, we acknowledge that there is inherent difficulty in accurately separating the reputational effect from the behavioral effect of CSR. The likelihood of financial misstatements is unobservable, and our proxy for this theoretical construct (M_SCORE) contains noise. While we attempt to address this issue by conducting multiple tests, which provide consistent evidence that CSR relates to the likelihood of AAER through both behavioral and reputational channels, we cannot definitely rule out the possibility that some unknown factors omitted from our models may drive our results.

References

- Aguilera, R. V., D. E. Rupp, C. Williams, and J. Ganapathi, 2007, Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations, *Academy of Management Review* 32 (3), 836-63.
- Bayley, L., and S. Taylor, 2007, Identifying earnings overstatements: a practical test, Working Paper (ABN AMRO Sydney and University of New South Wales).
- Beneish, M. D., 1999, The detection of earnings manipulation, *Financial Analysts Journal* 55 (5), 24-36.

- Berman, S. L., A. C. Wicks, S. Kotha, and T.M. Jones, 1999, Does stakeholder orientation matter? The relationship between stakeholder management models and firm financial performance, *Academy of Management Journal* 42 (5), 488-506.
- Brown, T. J., and P. A. Dacin, 1997, The company and the product: Corporate associations and consumer product responses, *Journal of Marketing* 61, 68-84.
- Burns, N., S. Kedia, and M. Lipson, 2010, Institutional ownership and monitoring: Evidence from financial misreporting, *Journal of Corporate Finance* 16: 443-455.
- Cao, Y., L. A. Myers, and T. C. Omer, 2012, Does company reputation matter for financial reporting quality? Evidence from restatements, *Contemporary Accounting Research* 29 (3), 956-990.
- Carroll, A., 1979, A three-dimensional conceptual model of corporate performance, *Academy of Management Review* 4 (4), 497-505.
- Chih, H-L., C-H. Shen, and F-C. Kang, 2008, Corporate social responsibility, investor protection, and earnings management: Some international evidence, *Journal of Business Ethics* 79, 179-198.
- Christensen, D. M., 2016, Corporate accountability reporting and high-profile misconduct, *The Accounting Review* 91 (2), 377-399.
- Cox, J. D., R. S. Thomas, and D. Kiku, 2003, SEC enforcement heuristics: An empirical inquiry, *Duke Law Journal* 53, 737-79.
- Dechow, P. M., W. Ge, C. R. Larson, and R. G. Sloan, 2011, Predicting material accounting misstatements, *Contemporary Accounting Research* 28 (1), 17-82.
- Dechow, P. M., R. G. Sloan, and A. P. Sweeney, 1996, Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC, *Contemporary Accounting Research* 13 (1), 1-36.
- Dhaliwal, D., O. Li, A. Tsang, and Y. Yang, 2011, Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting, *The Accounting Review* 86 (1), 59–100.
- Dyck, A., A. Morse, and L. Zingales, 2010, Who blows the whistle on corporate fraud? *The Journal of Finance* 65 (6), 2213-2253.

- Feroz, E. H., K. Park, and V. Pastena, 1991, The financial and market effects of the SEC's accounting and auditing enforcement release, *Journal of Accounting Research* 29, 107-42.
- Flammer, C., 2013, Corporate social responsibility and shareholder reaction: the environmental awareness of investors, *Academy of Management Journal* 56 (3), 758-81.
- Fombrun, C., N. A. Gardberg, and M. L. Barnett, 2000, Opportunity platforms and safety nets: Corporate citizenship and reputational risk, *Business and Society Review* 105 (1), 85-106.
- Freeman, R. E., 1984, *Strategic management: A stakeholder perspective*. Pitman, Boston, MA.
- Gardberg, N. A., and C. Fombrun, 2006, Corporate citizenship: Creating intangible assets across institutional environments, *Academy of Management Review* 31 (2), 329-46.
- Godfrey, P. C., 2005, The relationship between corporate philanthropy and shareholder wealth: a risk management perspective, *Academy of Management Review* 30 (4), 777-798.
- Godfrey, P. C., C. B. Merrill, and J. M. Hansen, 2009, The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis, *Strategic Management Journal* 30 (4), 425-45.
- Greening, D. W., and D. B. Turban, 2000, Corporate social performance as a competitive advantage in attracting a quality workforce, *Business and Society* 39, 254-80.
- Gregory, A., R. Tharyan, and J. Whittaker, 2013, Corporate social responsibility and firm value: Disaggregating the effects on cash flow, risk and growth, *Journal of Business Ethics* 124 (4): 633-657.
- Grougiou, V., S. Leventis, E. Dedoulis, and S. Owusu-Ansah, 2014, Corporate social responsibility and earnings management in U.S. banks, *Accounting Forum* 38 (3), 155-169.
- Hemingway, A., and P. W. MacLagan, 2004, Managers' personal values as drivers of corporate social responsibility, *Journal of Business Ethics* 50, 33-44.

- Hillman, A. J., and G. D. Keim, 2001, Shareholder value, stakeholder management, and social issues: What's the bottom line? *Strategic Management Journal* 22 (2), 125-39.
- Hong, Y., and M. L. Andersen, 2011, The relationship between corporate social responsibility and earnings management: An exploratory study, *Journal of Business Ethics* 104 (4), 461-471.
- Hong, H., and I. Liskovich, 2014, Crime, punishment and the halo effect of corporate social responsibility, Working Paper (Princeton University).
- Hui, K. W., C. Lennox, and G. Zhang, 2014, The market's valuation of fraudulently reported earnings, *Journal of Business Finance and Accounting* 41 (5 & 6), 627-51.
- Karpoff, J. M., D. S. Lee, and G. S. Martin, 2008a, The consequences to managers for financial misrepresentation, *Journal of Financial Economics* 88 (2), 193-215.
- Karpoff, J. M., D. S. Lee, and G. S. Martin, 2008b, The cost to firms of cooking the books, *Journal of Financial and Quantitative Analysis* 43 (3), 581-612.
- Karpoff, J. M., A. Koester, D. S. Lee, and G. S. Martin, 2016, Proxies and databases in financial misconduct research, Working Paper.
- Kedia, S., and S. Rajgopal, 2011, Do the SEC enforcement preferences affect corporate misconduct? *Journal of Accounting and Economics* 51 (3), 259-78.
- Kim, Y., M. S. Park, and B. Wier, 2012, Is earnings quality associated with corporate social responsibility? *The Accounting Review* 87 (3), 761-96.
- KPMG, 2013, KPMG Survey of Corporate Responsibility Reporting 2013, Zurich, Switzerland: KPMG International.
- Love, E. G., and M. S. Kraatz, 2009, Character, conformity, or the bottom line? How and why downsizing affected corporate reputation, *Academy of Management Journal* 52 (2), 314-335.
- Marcel, J. J., and A. P. Cowen, 2014, Cleaning house or jumping ship? Understanding board upheaval following financial fraud, *Strategic Management Journal* 35 (6), 926-937.
- Marcus, A. A., 1993, *Business and society: Ethics, government and the world economy*. Irwin, Homewood, IL.
- Markelevich, A., and R. L. Rosner, 2013, Auditor fees and fraud firms, *Contemporary Accounting Research* 30 (4), 1590-625.

- McWilliams, A., and D. Siegel, 2000, Corporate social responsibility and financial performance: Correlation or misspecification, *Strategic Management Journal* 21 (5), 603-609.
- Mishina, Y., E. S. Block, and M. J. Mannor, 2012, The path dependence of organizational reputation: how social judgment influences assessments of capability and character, *Strategic Management Journal* 33 (5), 459-77.
- Porter, M. E., and M. R. Kramer, 2006, Strategy & society: The link between competitive advantage and corporate social responsibility, *Harvard Business Review* 84 (12), 78-92.
- Prior, D., J. Surroca, and J. Tribo, 2008, Are socially responsible managers really ethical? Exploring the relationship between earnings management and corporate social responsibility, *Corporate Governance* 16 (3), 160-77.
- Power, M., 2013, The apparatus of fraud risk, *Accounting, Organizations and Society* 38 (6), 525-543.
- Roychowdhury, S., 2006, Earnings management through real activities manipulation, *Journal of Accounting and Economics* 42 (3), 335-370.
- Scannell, K., 2008, SEC had chances for years to expose Madoff's alleged Ponzi scheme. *Wall Street Journal* (December 15)
Available at: <http://www.wsj.com/articles/SB122928886040304911> (Accessed: December 7, 2016)
- Sen, S., and C. B. Bhattacharya, 2001, Does doing good always lead to doing better? Consumer reactions to corporate social responsibility, *Journal of Marketing Research* 38, 225-43.
- Sobel, M. E., 1982, Asymptotic confidence intervals for indirect effects in structural equation models, *Sociological Methodology* 13, 290-312.
- Sharfman, M., 1996, The construct validity of the Kinder, Lydenberg and Domini social performance rating data, *Journal of Business Ethics* 15 (3), 287-296.
- Turban, D. B., and D. W. Greening, 1997, Corporate social performance and organizational attractiveness to prospective employees, *Academy of Management Journal* 40 (3), 658-672.

- Waddock, S. A., and S. B. Graves, 1997, The corporate social performance-financial performance link, *Strategic Management Journal* 18 (4), 303-319.
- Watts, R. L., and J. L. Zimmerman, 1986, *Positive Accounting Theory*, Prentice-Hall Inc., Englewood Cliffs, NJ.
- Yuan, Q., and Y. Zhang, 2016, The real effects of corporate fraud: evidence from class action lawsuits, *Accounting and Finance* 56, 879-911.
- Zahra, S. A., R. L. Priem, and A. A. Rasheed, 2005, The antecedents and consequences of top management fraud, *Journal of Management* 31 (6), 803-828.
- Zona, F., M. Minoja, and V. Coda, 2013, Antecedents of corporate scandals: CEOs' personal traits, stakeholders' cohesion, managerial fraud, and imbalanced corporate strategy, *Journal of Business Ethics* 113 (2), 265-283.

APPENDIX A

VARIABLE DESCRIPTIONS

Variable Name	Description	Calculation
AAER	Accounting and Auditing Enforcement Release	A dummy variable equal to 1 for firm-years that received an AAER, 0 otherwise.
M_SCORE	Likelihood that the firm has engaged in financial misstatements	This variable is calculated using the approach developed in Dechow et al (2011), as described on pages 10-12 in this paper.
High_Risk	High risk of financial misstatements	An indicator variable equal to 1 if the firm has an M_SCORE higher than the 60 th percentile, zero otherwise.
Net_CSR	Net CSR	Total CSR strengths minus total CSR concerns for seven categories: community, diversity, environmental issues, employee relations, human rights, product, and corporate governance.
High_CSR	High CSR	A dummy variable equal to 1 for firms with Net_CSR greater than 0 (i.e., have more CSR strengths than CSR concerns), 0 otherwise.
SIZE	Firm size	Natural logarithm of the firm market value of equity at

		the end of the current year
MB	Firm market-to-book ratio	Market value divided by book value of equity at the end of the current year
ADJ_ROA	Lagged industry adjusted ROA	Income before extraordinary items divided by average total assets for the previous year, adjusted by the industry median
BIG4	Big 4 Auditor	A dummy variable equal to 1 if the firm is audited by a Big4 audit firm, 0 otherwise.
LEV	Financial leverage	Long-term debt divided by total assets at the end of the current year
ISSUANCE	Equity issuance	A dummy variable equal to 1 if the firm issues equity during the current year, 0 otherwise
RD	Firm R&D intensity	R&D expenditure scaled by sales
IND_AD	Industry advertising intensity	Mean advertising expenses scaled by sales for the industry that the firm belongs to
AGE	Firm age	Natural logarithm of one plus the number of years since the firm first appears in the CRSP database up to the current year
BHAR	Buy-and-hold stock return	Market-adjusted buy-and-hold stock return of the firm over the current year
RET_VOL	Stock return volatility	Standard deviation of monthly stock returns over the current year
ABN_ACC	Abnormal accruals	Abnormal accruals are estimated using equation (A-1) in Kim et al. (2012).
ADMIRE	Most admired status	An indicator equal to 1 if the firm is included among <i>Fortune's</i> Most Admired Companies in the current year, zero otherwise.

APPENDIX B

M_SCORE ESTIMATION RESULTS

This Appendix reports the results for our estimation of M_SCORE using the procedure described on pages 11-12. To estimate this model, we use all observations from Compustat for the period 1995-2012 for which we can obtain data for the included variables. Panel A reports the estimation result for model (1). Panel B reports the

detection rates for firm-years sorted into quintiles of M_SCORE, calculated using equation (2). Panel C reports the correct classification rate, type I and type II errors. In Panel C, high-risk firm-years are those with M_SCORE greater than the 60th percentile.

Panel A: Regression Results

	DV=AAER
WC_ACC	0.758*** (4.37)
ΔAR	2.086*** (5.64)
ΔINV	1.056* (1.93)
Soft_Asset	1.668*** (11.43)
ΔCash_Sale	0.093*** (4.43)
ΔROA	-0.396*** (4.30)
Issuance	1.888*** (7.25)
ΔGross_Margin	-0.053*** (2.96)
Misstating firm-years	818
Nonmisstating firm-years	109,220

* p<0.1; ** p<0.05; *** p<0.01
Absolute value of z-statistics in parentheses

Panel B: Detection Rates of Misstating Firms by Quintiles of M_SCORE

	Number of observations	% of total
Quintile 1		
Misstate firms	38	4.65
No-misstate firms	21,970	20.12
Quintile 2		
Misstate firms	85	10.39
No-misstate firms	21,923	20.07
Quintile 3		
Misstate firms	149	18.22
No-misstate firms	21,858	20.01
Quintile 4		
Misstate firms	224	27.38
No-misstate firms	21,784	19.95
Quintile 5		
Misstate firms	322	39.36
No-misstate firms	21,685	19.85

Panel C: Correct Classification Rate, Type I and Type II Errors

	Predicted High Risk (top 2 quintiles)	Predicted Low Risk (bottom 3 quintiles)
Observed AAER	546	272
Observed Non-AAER	43,469	65,751
Total	44,015	66,023
Correct classification rate		60.2%

$$[(546+65,751) / (44,015+66,023)]$$

Type I error 39.8%

$$[(43,469 / (43,469+65,751)]$$

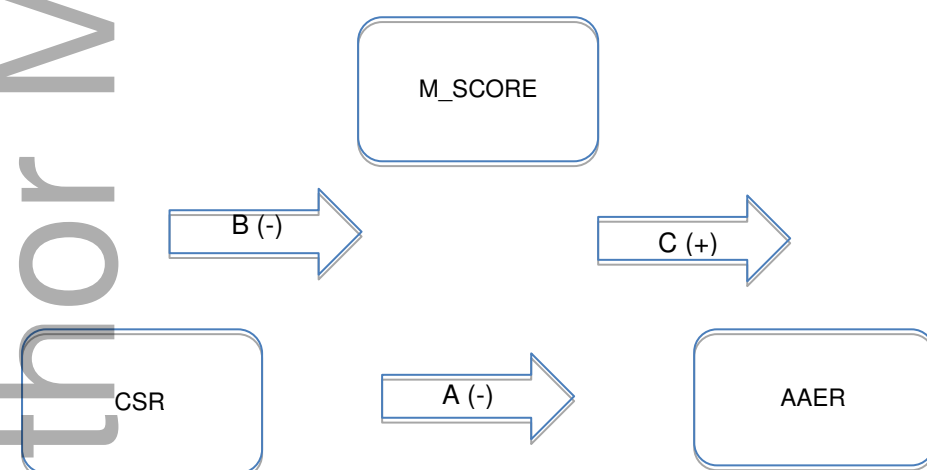
Type II error 33.3%

$$[(272 / (546+272)]$$

The correct classification rate of 60.2% is slightly lower than the correct classification rate of 63.7% reported in Dechow et al. (2011, Table 7 panel C) because our cutoff point to classify high-risk firm-years is the 60th percentile of M-SCORE (i.e., firms with M-SCORE in the top 2 quintiles are classified as having high risk of financial misstatements). In Dechow et al. (2011), the cutoff point is based on an F-Score equal to 1, which is equivalent to the 63rd percentile. If we used the 63rd percentile of M-SCORE as the cutoff point, the correct classification rate for our model would be 63.2%, which is similar to the correct classification rate reported in Dechow et al. (2011).

Figure 1

CSR, M_SCORE and AAER Path Diagram



This theoretical model is estimated empirically using the generalized structural equation modeling technique, and the estimation results are presented in Table 6.

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Table 1
Summary Statistics

Panel A: Sample Characteristics

MVE is market value of equity (\$ million) at the end of year t. FIRM_AGE is the number of years since the firm starts being included in the CRSP File up to the current year. See Appendix A for other variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. Bold text indicates the difference is statistically significant at the 10-percent level or lower.

	AAER Firm-Years		Non-AAER Firm-Years		Difference	
	Obs	Mean	Obs	Mean	Mean	t-stat
M_SCORE	243	0.957	20,271	0.790	0.168	7.082
Net_CSR	243	-0.634	20,271	-0.407	-0.227	-1.330
High_CSR	243	0.214	20,271	0.266	-0.052	-1.963
MVE	243	13,073	20,271	6,128	6,945	3.003
ADJ_ROA	243	0.045	20,271	0.043	0.002	0.200
MB	243	3.905	20,271	3.136	0.770	3.105
BIG4	243	0.881	20,271	0.878	0.003	0.127
LEV	243	0.170	20,271	0.186	-0.016	-1.599
ISSUANCE	243	0.926	20,271	0.905	0.021	1.217
RD	243	0.073	20,271	0.121	-0.048	-4.973
IND_AD	243	0.052	20,271	0.035	0.017	2.443
FIRM_AGE	243	21.523	20,271	21.917	-0.395	-0.305
BHAR	243	0.082	20,271	0.074	0.008	0.256
RET_VOL	243	0.126	20,271	0.119	0.007	1.844
ABN_ACC	243	-0.010	20,271	-0.006	-0.004	-0.573
ADMIRE	243	0.280	20,271	0.160	0.120	4.152

Panel B: Sample Distribution by Industry

Industry	Total Firm-Years	AAER Firm-Years
Consumer Non-Durables (Food, Tobacco, Textiles, Apparel, Leather, Toys)	1,342	23
Consumer Durables (Cars, TVs, Furniture, Household Appliances)	622	8

Manufacturing (Machinery, Trucks, Planes, Off Furn, Paper, Com Printing)	2,921	22
Oil, Gas, and Coal Extraction and Products	1,052	5
Chemicals and Allied Products	763	8
Business Equipment (Computers, Software, and Electronic Equipment)	4,401	101
Telephone and Television Transmission	591	3
Utilities	910	2
Wholesale, Retail, and Some Services (Laundries, Repair Shops)	2,642	38
Healthcare, Medical Equipment, and Drugs	2,512	10
Other -- Mines, Construction, Building Management, Transportation, Hotels, Business Services, Entertainment	2,758	23
Total	20,514	243

Table 2
Correlation Coefficients

See Appendix A for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. Bold text indicates statistical significance at the 10-percent level or lower.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) AAER	1.00															
(2) M_SCORE	0.05	1.00														
(3) Net_CSR	-0.01	0.01	1.00													
(4) SIZE	0.04	0.07	0.20	1.00												
(5) ADJ_ROA	0.00	0.14	0.09	0.25	1.00											
(6) MB	0.02	-0.02	0.09	0.22	0.09	1.00										
(7) BIG4	0.00	0.01	0.04	0.19	-0.01	0.01	1.00									
(8) LEV	-0.01	-0.01	-0.06	0.08	-0.12	-0.08	0.08	1.00								
(9) ISSUANCE	0.01	0.23	0.04	0.05	0.03	0.07	0.05	-0.11	1.00							
(10) RD	-0.01	-0.17	-0.01	-0.13	-0.29	0.09	0.02	-0.04	0.07	1.00						
(11) IND_AD	0.02	0.04	0.00	-0.01	0.04	0.07	-0.01	-0.07	0.03	0.03	1.00					
(12) AGE	-0.01	0.04	0.10	0.34	0.10	-0.04	0.00	0.03	-0.04	-0.15	-0.09	1.00				
(13) BHAR	0.00	0.00	-0.02	0.10	-0.04	0.18	0.01	-0.02	0.04	-0.02	0.01	-0.05	1.00			
(14) RET_VOL	0.01	-0.13	-0.10	-0.39	-0.23	-0.04	-0.06	0.02	-0.03	0.18	0.05	-0.29	0.15	1.00		
(15) ABN_ACC	0.00	0.04	-0.07	-0.01	-0.25	-0.04	-0.03	0.11	-0.05	0.02	-0.13	0.10	0.09	-0.07	1.00	
(16) ADMIRE	0.04	0.06	0.17	0.52	0.06	0.06	0.05	0.05	-0.01	-0.08	-0.03	0.28	-0.02	-0.18	0.01	1.00

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Table 3**Relationship between CSR and AAER**

This table presents estimated coefficients for regression model (3). The dependent variable is AAER. See Appendix A for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. Absolute value of robust z-statistics in parentheses. Model includes industry fixed effects. Standard errors are clustered by firm and year.

* significant at 10%; ** significant at 5%; *** significant at 1%

	DV = AAER	
	Continuous CSR	Binary CSR
Net_CSR	-0.101** (2.02)	
High_CSR		-0.690*** (2.75)
SIZE	0.339*** (3.52)	0.353*** (3.61)
MB	0.024 (1.23)	0.024 (1.23)
ADJ_ROA	-0.722 (0.91)	-0.696 (0.87)
BIG4	-0.294 (0.88)	-0.303 (0.91)
LEV	0.112 (0.17)	0.124 (0.19)
ISSUANCE	0.104 (0.31)	0.051 (0.15)
RD	-0.511 (1.14)	-0.515 (1.16)
IND_AD	0.187 (0.18)	0.240 (0.24)
AGE	-0.158 (1.27)	-0.158 (1.27)

BHAR	-0.264 (1.44)	-0.267 (1.45)
RET_VOL	3.257** (2.13)	3.302** (2.16)
ABN_ACC	1.139 (1.19)	1.195 (1.26)
ADMIRED	0.281 (0.88)	0.275 (0.85)
Pseudo R ²	0.07	0.07
N	20,514	20,514

Table 4
Relationship between CSR and M_SCORE

This table presents estimated coefficients for regression model (4). The dependent variable is M_SCORE in the first two columns and High_Risk in the last two columns. High_Risk is a dummy variable equal to 1 if the firm has an M_SCORE in the top 2 quintiles, zero otherwise. See Appendix A for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. Absolute value of robust t-statistics (z-statistics for the last two columns) in parentheses. Model includes industry fixed effects. Standard errors are clustered by firm and year.

* significant at 10%; ** significant at 5%; *** significant at 1%

	DV = M_SCORE		DV = High_Risk	
	Continuous CSR	Binary CSR	Continuous CSR	Binary CSR
Net_CSR	-0.006*** (3.58)		-0.029*** (2.62)	
High_CSR		-0.041*** (4.15)		-0.199*** (2.94)
SIZE	0.005 (0.97)	0.006 (1.14)	0.024 (0.76)	0.027 (0.87)
MB	-0.005*** (5.46)	-0.005*** (5.46)	-0.028*** (4.35)	-0.028*** (4.33)
ADJ_ROA	0.127***	0.128***	0.395*	0.394*

	(4.25)	(4.26)	(1.90)	(1.89)
BIG4	-0.022	-0.021	0.003	0.003
	(1.62)	(1.60)	(0.03)	(0.04)
LEV	0.134***	0.133***	0.690***	0.689***
	(4.23)	(4.20)	(3.68)	(3.67)
ISSUANCE	0.276***	0.275***	1.023***	1.013***
	(14.08)	(13.99)	(9.83)	(9.80)
RD	-0.120***	-0.120***	-2.024***	-2.026***
	(13.94)	(14.08)	(5.05)	(5.08)
IND_AD	0.141***	0.143***	1.008***	1.016***
	(3.98)	(3.99)	(4.90)	(4.98)
AGE	-0.003	-0.003	0.024	0.025
	(0.47)	(0.43)	(0.56)	(0.59)
BHAR	0.006	0.006	-0.004	-0.006
	(0.65)	(0.61)	(0.09)	(0.12)
RET_VOL	-0.571***	-0.567***	-3.763***	-3.743***
	(6.57)	(6.47)	(6.83)	(6.82)
ADMIRE	0.015	0.015	0.068	0.065
	(0.88)	(0.87)	(0.63)	(0.60)
R ² / Pseudo R ²	0.19	0.20	0.12	0.12
N	20,514	20,514	20,514	20,514

Table 5

Relationship between CSR and AAER Controlling for M_SCORE

This table presents estimated coefficients for regression model (5). The dependent variable is AAER. See Appendix A for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. Absolute value of robust z-statistics in parentheses. Model includes industry fixed effects. Standard errors are clustered by firm and year.

* significant at 10%; ** significant at 5%; *** significant at 1%

DV = AAER	
Continuous CSR	Binary CSR

Net_CSR	-0.097*	
	(1.91)	
High_CSR		-0.635**
		(2.51)
M_SCORE	1.211***	1.185***
	(3.86)	(3.82)
SIZE	0.342***	0.354***
	(3.67)	(3.76)
MB	0.032	0.031
	(1.57)	(1.52)
ADJ_ROA	-1.001	-0.973
	(1.24)	(1.20)
BIG4	-0.225	-0.233
	(0.69)	(0.71)
LEV	-0.089	-0.067
	(0.13)	(0.10)
ISSUANCE	-0.201	-0.245
	(0.60)	(0.72)
RD	-0.274	-0.284
	(0.83)	(0.87)
IND_AD	-0.038	0.021
	(0.04)	(0.02)
AGE	-0.142	-0.144
	(1.16)	(1.18)
BHAR	-0.249	-0.251
	(1.35)	(1.36)
RET_VOL	4.115**	4.134***
	(2.55)	(2.57)
ABN_ACC	0.354	0.426
	(0.38)	(0.46)
ADMIRE	0.288	0.272
	(0.90)	(0.84)
Pseudo R ²	0.08	0.08

N

20,514

20,514

Table 6**Path Analysis of the Relations between CSR, M_SCORE and AAER**

This table presents results for a path analysis of the effect of CSR on the likelihood of AAER using the generalized structural equation modeling technique. The theoretical path diagram is presented in Figure 1. The coefficients are estimated using maximum likelihood. Control variables in Table 4 and Table 5 and industry dummies are included in each regression. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are clustered by firm.

* significant at 10%; ** significant at 5%; *** significant at 1%

	Continuous CSR		Binary CSR	
	Coef.	z-stat	Coef.	z-stat
Direct effect				
Path A: CSR --> AAER	-0.097**	-2.02	-0.635**	-2.29
Indirect effect				
- Path B: CSR --> M_SCORE	-0.006***	-3.57	-0.041***	-4.75
- Path C: M_SCORE --> AAER	1.211***	3.90	1.185***	3.84
Indirect effect (B x C)	-0.007***	-2.69	-0.049***	-2.97
Total effect				
(A + B x C)	-0.104**	-2.17	-0.684**	-2.48
Ratio of direct to total effect	93.16%		92.84%	
Ratio of indirect to total effect	6.84%		7.16%	

Table 7**Relationship between CSR and AAER For Firm-Years with Misstatements**

The tables below present summary statistics and analyses of the relation between CSR and AAER for a sample of firm-years for which misstatements are known to have occurred, as evidenced by subsequent financial restatements. Panel A presents summary statistics for the misstatement sample and the full sample in this study. Panel B presents the estimated coefficients for model (6) using the full sample of restatement firms and a reduced sample of restatement firms that includes AAER firms and matched Non-AAER firms (using propensity scores calculated based on year, industry, firm size, and the magnitude of the misstatement). In Panel B, the dependent variable is AAER. FRAUD is a dummy variable equal to one if the misstatement was classified as fraud (by Audit Analytics) and zero otherwise; POS_EFF is a dummy variable equal to one if the misstatement had a positive effect on the company's financial statements and zero otherwise; and NI_EFF is the dollar amount of the cumulative effect of the misstatement on net income, scaled by the firm's market value of equity at the end of the current year. See Appendix A for definitions of other variables. All continuous variables are winsorized at the 1st and 99th percentiles. Absolute value of robust z-statistics in parentheses. Regression model includes industry fixed effects. Standard errors are clustered by year.

* significant at 10%; ** significant at 5%; *** significant at 1%

Panel A: Summary Statistics for Misstatement and Full Samples

	Misstatement Sample		Full Sample	
	Obs	Mean	Obs	Mean
M_SCORE	3,064	0.795	20,514	0.792
Net_CSR	3,064	-0.540	20,514	-0.410
High_CSR	3,064	0.242	20,514	0.265
MVE	3,064	3,648.936	20,514	6,210.632
ADJ_ROA	3,064	0.031	20,514	0.043
MB	3,064	2.818	20,514	3.145
BIG4	3,064	0.925	20,514	0.878
LEV	3,064	0.194	20,514	0.186
ISSUANCE	3,064	0.921	20,514	0.906
RD	3,064	0.097	20,514	0.120
IND_AD	3,064	0.035	20,514	0.035
FIRM_AGE	3,064	19.311	20,514	21.913
BHAR	3,064	0.069	20,514	0.074
RET_VOL	3,064	0.128	20,514	0.119
ABN_ACC	3,064	-0.011	20,514	-0.006
ADMIRE	3,064	0.116	20,514	0.161
FRAUD	3,064	0.028		N/A
POS_EFF	3,064	0.830		N/A
NI_EFF	3,064	0.013		N/A

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Table 7 (continued)

Panel B: Relation between CSR and AAER for Misstatement Firms

	Full Sample		Matched Sample	
	Continuous CSR	Binary CSR	Continuous CSR	Binary CSR
Net_CSR	-0.156*** (3.30)		-0.259*** (3.78)	
High_CSR		-1.155*** (4.98)		-1.430*** (3.47)
SIZE	0.481*** (6.48)	0.524*** (6.99)	0.080 (0.65)	0.099 (0.78)
MB	0.036* (1.95)	0.035* (1.88)	0.007 (0.24)	-0.002 (0.09)
ADJ_ROA	1.158 (1.42)	1.161 (1.37)	0.397 (0.63)	0.181 (0.26)
BIG4	-0.667** (2.56)	-0.655** (2.43)	-1.192* (1.73)	-1.048 (1.48)
LEV	-0.300 (0.60)	-0.222 (0.46)	-0.444 (0.75)	-0.388 (0.87)
ISSUANCE	-0.532 (1.54)	-0.590* (1.67)	-2.528*** (2.92)	-2.470*** (2.76)
RD	0.130 (0.39)	0.154 (0.47)	0.918 (1.02)	0.923 (1.02)
IND_AD	0.621 (0.52)	0.709 (0.59)	2.342* (1.94)	2.633** (2.00)
AGE	-0.222*** (3.16)	-0.202*** (2.94)	0.027 (0.18)	0.113 (0.74)
BHAR	0.320** (2.10)	0.328** (2.23)	0.116 (0.42)	0.140 (0.53)
RET_VOL	-0.210	-0.224	-4.621***	-5.089***

	(0.15)	(0.16)	(3.64)	(4.43)
ABN_ACC	1.212	1.354	0.695	0.815
	(0.95)	(1.07)	(0.38)	(0.44)
ADMIRE	0.416*	0.397*	-0.681**	-0.680**
	(1.84)	(1.67)	(2.47)	(2.44)
FRAUD	2.499***	2.522***	3.452***	3.481***
	(14.55)	(15.08)	(6.18)	(6.90)
POS_EFF	0.178	0.185	-0.456	-0.566
	(0.63)	(0.66)	(0.62)	(0.66)
NI_EFF	16.238***	16.698***	1.797	2.443**
	(12.70)	(14.15)	(1.62)	(2.18)
Pseudo R ²	0.23	0.24	0.18	0.19
N	3,064	3,064	304	304

Table 8
Relationship between CSR and AAER
(Sample includes restatement firms and matched non-restatement firms)

The table below presents estimated results for model (5) using a matched sample that includes restatement firms and non-restatement firms with similar characteristics. Matched non-restatement firms are selected using the propensity score matching technique (propensity scores are calculated based on year, industry, firm size, and M_SCORE). All continuous variables are winsorized at the 1st and 99th percentiles. Absolute value of robust z-statistics in parentheses. Regression model includes industry fixed effects. Standard errors are clustered by year.

* significant at 10%; ** significant at 5%; *** significant at 1%

	Continuous CSR	Binary CSR
Net_CSR	-0.152*** (3.03)	
High_CSR		-0.948*** (4.49)
M_SCORE	1.374*** (6.32)	1.358*** (6.37)
RESTATE	2.909*** (13.03)	2.923*** (13.25)
SIZE	0.415*** (5.98)	0.442*** (6.69)
MB	0.031** (2.52)	0.028** (2.12)
ADJ_ROA	-0.389 (0.80)	-0.488 (0.99)
BIG4	-0.501** (2.28)	-0.492** (2.21)
LEV	-0.108 (0.19)	-0.036 (0.07)
ISSUANCE	-0.402 (1.43)	-0.471* (1.67)
RD	0.030 (0.12)	0.013 (0.05)

IND_AD	-0.140 (0.15)	-0.062 (0.07)
AGE	-0.211*** (4.28)	-0.199*** (3.77)
BHAR	-0.043 (0.31)	-0.055 (0.41)
RET_VOL	2.450* (1.85)	2.432* (1.86)
ABN_ACC	0.227 (0.29)	0.276 (0.35)
ADMIRE	0.367 (1.07)	0.350 (1.03)
Pseudo R ²	0.21	0.21
N	6,410	6,410
