

Is Earnings Quality Associated with Corporate Social Responsibility?

Yongtae Kim

Santa Clara University

Myung Seok Park

Benson Wier

Virginia Commonwealth University

ABSTRACT: This study examines whether socially responsible firms behave differently from other firms in their financial reporting. Specifically, we question whether firms that exhibit corporate social responsibility (CSR) also behave in a responsible manner to constrain earnings management, thereby delivering more transparent and reliable financial information to investors as compared to firms that do not meet the same social criteria. We find that socially responsible firms are less likely (1) to manage earnings through discretionary accruals, (2) to manipulate real operating activities, and (3) to be the subject of SEC investigations, as evidenced by Accounting and Auditing Enforcement Releases against top executives. Our results are robust to (1) controlling for various incentives for CSR and earnings management, (2) considering various CSR dimensions and components, and (3) using alternative proxies for CSR and accruals quality. To the extent that we control for the potential effects of reputation and financial performance, our findings suggest that ethical concerns are likely to drive managers to produce high-quality financial reports.

Keywords: *corporate social responsibility; transparency in financial reporting; earnings management; discretionary accruals; real activities manipulation.*

Data Availability: *Data used in this study are available from public sources identified in the study.*

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I. INTRODUCTION

Corporate social responsibility (CSR) is an issue of growing interest, and the reporting of socially responsible activity is becoming more prevalent as investors, customers, and other stakeholders demand greater transparency about all aspects of business.¹ As the importance placed by stakeholders on socially responsible behavior has increased, the attitude toward CSR has changed dramatically over the last few decades. Grant Thornton (2008) claims that CSR is no longer the domain of large corporations; rather, it is a necessity for all businesses. CSR proponents suggest that firms should engage in socially responsible activities that benefit multiple stakeholders.

We examine whether firms that appear to exhibit corporate social responsibility in accordance with criteria established by Kinder et al. (2006), hereafter referred to as CSR firms, behave appropriately to constrain earnings management, thereby delivering more transparent and reliable financial information to investors as compared to other firms that do not meet the same social criteria. We use three different proxies for earnings management: (1) discretionary accruals, (2) real activities manipulation, and (3) the incidence of Accounting and Auditing Enforcement Releases (AAERs).

Prior research on CSR (e.g., Carroll 1979; Jones 1995; Garriga and Melé 2004; Mackey et al. 2007) provides theoretical background of integrating ethical expectations of business into a rational economic and legal framework. For instance, Carroll (1979) proposes a model that delineates a firm's social obligations, including economic, legal, ethical, and discretionary responsibilities. Jones (1995) develops a theoretical framework that integrates economic theory and business ethics. In his view, firms conducting business on the basis of trust and cooperation have an incentive to demonstrate a commitment to ethical behavior. Atkins (2006) claims that what the investing public really means by "social responsibility" is to be transparent in firms' financial reporting. Socially responsible firms that expend effort and resources in choosing and implementing CSR practices to meet ethical expectations by stakeholders in society are likely to constrain earnings management, thereby providing investors with more transparent and reliable financial information.

Alternatively, CSR practices can potentially be linked to the pursuit of a manager's self-interest (Jensen and Meckling 1976; McWilliams et al. 2006). A manager might engage in CSR activities to cover up the impact of corporate misconduct (Hemingway and Maclagan 2004). If managers engage in CSR practices based on opportunistic incentives, then they are likely to mislead stakeholders as to the value of the firm and financial performance. If these incentives prevail, then we would observe a positive relation between CSR and earnings management. Therefore, the association between CSR and financial reporting behavior is an empirical question.

We find that CSR firms are less likely to engage in aggressive earnings management. Specifically, CSR firms appear to reduce or avoid earnings manipulations through discretionary accruals, as compared to non-CSR firms. We also find evidence that CSR firms are less likely to engage in real activities manipulation. As well, our findings suggest that CEOs/CFOs of CSR firms are less likely to be the subject of SEC investigations of GAAP violations as reported in AAERs. To isolate the effect of ethical motivation from two other CSR incentives, reputation concern and financial performance, which could also drive a negative relation between CSR and earnings management, we control for reputation and financial performance in our multivariate analysis. Our results are consistent with ethical concerns driving managers to produce high-quality financial reports.

This study contributes to the literature in several ways. First, our study highlights that issues such as ethics can drive managers to produce high-quality financial reports. This is a new and

¹ Several firms publish annual CSR reports to communicate their CSR activities to their shareholders and investors including, for example, AT&T, IBM, Sprint, Texas Instruments, LexisNexis, Nike, and OfficeMax.

far-reaching addition to the earnings management literature that has been dominated by agency-based predictions of managerial opportunism.² Second, by providing strong and consistent evidence on the relation between CSR and financial reporting behavior of a firm, we shed light on how CSR extends to other aspects of corporate behavior, in this case, financial reporting transparency. Existing research on CSR (e.g., McGuire et al. 1988; Waddock and Graves 1997; McWilliams and Siegel 2000) generally focuses on the empirical linkage between a firm's social responsibility and their financial performance. Although some studies attempt to explore the association between CSR and earnings management, they provide inconsistent findings that limit our understanding of the true relation between CSR and earnings management. Third, our evidence has important implications to the investing community. If CSR affects managers' discretionary decisions (e.g., earnings management), our findings can be useful to investors in differentiating accurate and transparent financial information from less reliable information. Finally, evidence from this study can help standard-setters and regulators better understand firms' business practices and reporting behaviors in light of CSR.

In the next section, we discuss the related literature and develop our hypotheses. We describe our research design in Section III, while we present results in Section IV. A summary of our findings and concluding remarks appear in Section V.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Related Literature

Although the literature on the relation between CSR and financial performance is abundant, studies that examine CSR and earnings management are few, and the results are mixed. A few studies that examine the relation between CSR and financial reporting behavior primarily focus on the opportunistic use of CSR within an agency theoretic framework. Petrovits (2006) investigates the strategic use of corporate philanthropy programs to achieve earnings targets, finding that firms reporting small earnings increases make income-increasing discretionary charitable foundation-funding choices. Prior et al. (2008) examine whether firms use CSR strategically to disguise earnings management. They find a positive relation between earnings management and CSR for regulated firms, but this result is not statistically significant for unregulated firms. As regulated firms typically have less discretion in accounting choices, insignificant results reported for unregulated firms, comprising more than 80 percent of the sample, make their evidence less compelling. Kim and Venkatachalam (2011) find that "sin firms" (i.e., firms in the gaming, tobacco, and alcohol industries) exhibit superior financial reporting quality relative to a control group. Since reporting incentives may be different depending on whether socially responsible activities are discretionary, their results are less pertinent to our research objective, as inclusion in a "sin" industry is not a discretionary activity.

Unlike prior studies that highlight managerial opportunism in explaining the link between CSR and financial reporting, we examine ethical concerns as an alternative motivation for CSR that drives corporate financial reporting. While Petrovits (2006) focuses on the strategic timing of contributions to help achieve financial reporting objectives, we explore how motives for CSR in general influence financial reporting practice. Unlike Prior et al. (2008) and Kim and Venkatachalam (2011), our study is based on unregulated firms and such discretionary CSR

² The private information communication hypothesis advanced by Subramanyam (1996), Dye and Verrecchia (1995), and Sankar and Subramanyam (2001) is perhaps closest to our study's "benign" view on firms' financial reporting.

activities as charitable giving, environmental policies, and diversity hiring, thus providing more general evidence on the relation between CSR and financial reporting practice.

Two other studies that examine the relation between CSR and earnings management provide puzzling results. [Trébuq and Russ \(2005\)](#) do not find consistent results across different specifications. Specifically, they do not find a significant association between CSR and earnings management using a net CSR score, even though they observe a negative relation in other specifications. Their evidence is also inconsistent across different CSR dimensions. As well, they provide a puzzling result in which both total strengths and concerns are negatively correlated with accrual-based earnings management. More recently, using multinational data and only a limited set of proxies for earnings management, [Chih et al. \(2008\)](#) examine CSR and earnings management and provide inconsistent results across different earnings management proxies. They show that CSR firms are more aggressive in accruals management but are less likely to engage in earnings smoothing and earnings loss avoidance. Note that different countries have different accounting standards, different levels of investor protection and legality of CSR ([Reinhardt et al. 2008](#)), and earnings management practices also vary across countries ([Leuz et al. 2003](#)). The results in [Chih et al. \(2008\)](#) could be driven by these country differences rather than differences in CSR activities.³

Given the inconsistent evidence from prior research with mixed implications on the relation between CSR and earnings management, it is difficult to draw conclusions about the nature of the relationship. In this study, we provide a comprehensive investigation of the relation between CSR and financial reporting behavior of U.S. firms. Specifically, we examine a broad set of financial reporting characteristics that represent opportunistic financial reporting, including accruals management, real activities manipulation, and AAERs. Examination of real activities manipulation is particularly important because recent studies (e.g., [Roychowdhury 2006](#); [Cohen et al. 2008](#); [Cohen and Zarowin 2010](#); [Badertscher 2011](#); [Zang 2012](#)) suggest that firms use real activities manipulation as an alternative tool for earnings management and trade-off real activities manipulation and accrual-based earnings management as substitutes. AAERs represent a more aggressive form of earnings management that violates GAAP.

Hypothesis Development

Although the definition of CSR is not uncontested, the definition offered by [Carroll \(1979, 500\)](#) is most widely accepted:

The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time.

[Carroll's \(1979\)](#) delineation of a firm's social responsibilities suggests that CSR firms should strive to make a profit, obey the law, be ethical, and, further, be a good corporate citizen by financially supporting worthy social causes. Focusing on four main aspects of social reality, economics, politics, social integration, and ethics, [Garriga and Melé \(2004\)](#) classify CSR theories into four groups: (1) ethical theories, (2) political theories, (3) integrative theories, and (4) instrumental theories.⁴

³ Using two years of Canadian social investment data and 162 firm years, [Gargouri et al. \(2010\)](#) report a positive relation between corporate social performance and earnings management. However, due to very limited data and the *ad hoc* nature of their earnings management proxy (dichotomous transformation of discretionary accruals), it is difficult to draw valid inferences about the relation between CSR and earnings management.

⁴ Some theories consider two or more dimensions and their interconnection (see [Wood 1991](#); [Swanson 1995](#)).

Ethical theories (e.g., Carroll 1979; Jones 1995; Donaldson and Preston 1995; Phillips et al. 2003) suggest that a firm must accept social responsibility as an ethical obligation. Such theories are based on principles such as “the right thing to do” or the “necessity to contribute to the good of society by doing what is ethically correct,” requiring a CSR firm to give simultaneous attention to the legitimate interests of all stakeholders in reference to some guiding moral principle. Focusing on the responsible use of business power in the political arena, political theories (e.g., Donaldson and Dunfee 1994; Matten and Crane 2005) concern a firm’s relationship with society and its concomitant responsibility to that society. Political theories suggest that a firm needs to take into account the community where it is operating and seek ways of formalizing the firm’s willingness to improve the community. Integrative theory argues that business needs to integrate social demands into their business because its success is dependent on society. A number of prior studies (Carroll 1979; Wood 1991; Swanson 1995; Agle and Mitchell 1999) rely on this view. On the other hand, instrumental theories (e.g., Friedman 1970) consider economic objectives and view CSR as a mere means to wealth creation for shareholders. Under this theory, any proposed social activity is accepted if and only if it is consistent with wealth creation (e.g., McWilliams and Siegel 2001; Mackey et al. 2007).

Ethical, political, and integrative theories of CSR suggest that firms/managers have an incentive to be honest, trustworthy, and ethical in their business processes, and thus tend to adhere to a high standard of behavior. Numerous theoretical studies on the ethical view of CSR (e.g., Carroll 1979; Donaldson and Preston 1995; Jones 1995; Phillips et al. 2003) argue that there is a moral imperative for managers to “do the right thing.” For instance, Jones (1995) concludes that CSR firms have an incentive to be honest, trustworthy, and ethical because such behavior is beneficial to the firm. In Carroll’s (1979) model, ethical responsibilities embrace those activities and practices that are expected by society. Hence, if managers engage in CSR in the context of a moral imperative, then we predict that they are more likely to constrain earnings management and to make responsible operating decisions, thereby maintaining transparency in financial reporting. Therefore, we expect a negative relation between CSR and earnings management. We propose the following hypothesis:

Transparent Financial Reporting Hypothesis: A CSR firm is less likely to engage in earnings management.

While we focus on the effect of ethical implications of CSR on financial reporting, two other motivations for CSR could potentially explain a negative relation between CSR and earnings management, specifically, reputation concerns and/or financial performance.

CSR can provide a positive signal regarding the reputation of the firm (e.g., Fombrun and Shanley 1990; Grow et al. 2005). Prior studies (Fombrun and Shanley 1990; Verschoor 2005; Linthicum et al. 2010) view CSR activities as a form of reputation-building or maintenance. If a firm values its reputation, then the desire to protect that reputation can inhibit the firm and its managers from engaging in socially unacceptable activities. Thus, managers may use CSR to enhance the firm’s reputation and constrain earnings management to reduce the potential damage to its reputation, which is consistent with a negative association between CSR and earnings management.

Numerous studies (e.g., Waddock and Graves 1997; Griffin and Mahon 1997; Roman et al. 1999) show a positive association between CSR and financial performance. In this regard, Waddock and Graves (1997, 312) contend that firms with available resources are more inclined to spend those resources on “doing good by doing well,” and that those resource allocations can result in improved performance overall. Firms with more economic slack have less need to engage in aggressive earnings management, and thus, we would expect a negative relation between CSR

and earnings management.⁵ We control for reputation and financial performance in our multivariate analyses.⁶

While ethical obligation, reputation, and financial performance motivations for CSR predict a negative association between CSR and earnings management, some studies relying on opportunistic use of CSR suggest a positive relation. That is, managers might engage in CSR practices for personal benefit rather than for the interest of the firm and its stakeholders. Prior theoretical studies (e.g., Jensen and Meckling 1976; Carroll 1979) suggest that CSR can potentially be linked to the pursuit of managers' self-interest. From an agency cost perspective, McWilliams et al. (2006) argue that CSR is a managerial perquisite, in the sense that managers use CSR to advance their careers or other personal agendas. Focusing on managers' opportunistic behavior within an agency theoretic framework, Petrovits (2006) and Prior et al. (2008) find evidence consistent with this view.

Prior studies (e.g., Fritzsche 1991) suggest that ethical codes can become window-dressing when they pertain to the pursuit of self-interest or economic egoism of the organization. Hemingway and MacLagan (2004) argue that firms adopt CSR to cover up the impact of some corporate misconduct.⁷ Thus, firms may engage in CSR as a form of reputation insurance, which then gives them a "license to operate" with respect to earnings management. This motivation indicates that decisions to participate in CSR activities may be made to give stakeholders the impression that the firm is transparent, when, in fact, the firm "hides" behind the appearance of transparency while engaging in earnings management. This motive is somewhat consistent with evidence in Prior et al. (2008). Together, if managers' opportunistic incentives deriving from self-interest and/or reputation insurance prevail, then we would observe a positive relation between CSR and earnings management because managers of these firms are more likely to attempt to mislead stakeholders as to the value of the firm and financial performance. This discussion leads to a competing hypothesis on the relation between CSR and earnings management.

Opportunistic Financial Reporting Hypothesis: A CSR firm is more likely to engage in earnings management.

III. RESEARCH DESIGN

Data and Sample Selection

We begin with information on corporate social performance from Kinder et al. (2006; hereafter KLD). KLD uses a combination of surveys, financial statements, and articles in the popular press and academic journals, as well as government reports, to assess social performance along dimensions such as corporate governance, community, diversity, employee relations, environment, product, and exclusionary screen categories including alcohol, gambling, military contracting, nuclear power, and tobacco.⁸ KLD researchers assess these dimensions in order to determine if a

⁵ One caveat of this characterization is that it does not apply to the potential relation between CSR and income-decreasing earnings management.

⁶ We note that potential motives for CSR discussed in this study are not necessarily mutually exclusive. A combination of different incentives may drive a firm's CSR efforts.

⁷ Enron provides anecdotal evidence of this explanation. Enron was considered a strong social performer when the accounting scandal surfaced in 2000. We are grateful to an anonymous reviewer for suggesting this example.

⁸ KLD has also assessed firms in the areas of human rights and firearms since 2002. Since these two dimensions are not available before 2002, we exclude these two dimensions in constructing CSR scores.

company is socially responsible.⁹ KLD examines a number of positive indicators (strengths) and negative indicators (concerns) in each non-exclusionary dimension, but evaluates only negative indicators in each exclusionary dimension.¹⁰ To date, KLD data have been used extensively in scholarly research to operationalize the CSR construct (e.g., Turban and Greening 1997; Waddock and Graves 1997; Sz wajkowski and Figlewicz 1999). Deckop et al. (2006, 334) describe KLD as “the largest multidimensional corporate social performance database available to the public.” Sz wajkowski and Figlewicz (1999) evaluate and assess the validity and reliability of the KLD database. They find that KLD ratings have substantial and discernible validity with especially strong internal discriminant validity. Some researchers maintain that the KLD data are “the *de facto* research standard” for measuring CSR in scholarly research (e.g., Waddock 2003, 369). Chatterji et al. (2009) contend that KLD’s social ratings are among the most influential and the most widely accepted CSR measure used by academics. Mattingly and Berman (2006) assert that the KLD dataset has become the standard for quantitative measurement of corporate social actions.

KLD compiles information on CSR beginning in 1991. After matching KLD data with the Compustat database, we obtain an initial sample of 28,741 firm-year observations from 1991 to 2009. We exclude 5,350 firm-year observations of financial institutions (SIC codes 6000–6999) because characteristics of accruals differ in these firms. Of the remaining 23,391 firm-year observations, we have sufficient information to determine discretionary accruals and proxies for real activities manipulation, as well as control variables for 18,160 firm-year observations.

Measurement of CSR and Other Variables

CSR Scores

KLD evaluates CSR on dimensions including corporate governance, community relations, diversity, employee relations, environment, product, alcohol, gambling, military contracting, nuclear power, and tobacco. The last five dimensions are exclusionary screen categories; companies involved beyond specific thresholds in these categories are not eligible for inclusion in the Domini 400 Social Index (hereafter, DSI400) that KLD constructs for CSR firms. We did not consider these exclusionary categories in constructing CSR scores, as these dimensions do not pertain to firms’ discretionary activities. The remaining six dimensions are qualitative evaluation categories. Corporate governance is perceived as a distinct construct from CSR and its impact on financial reporting practice is widely examined in the prior literature (e.g., Klein 2002; Bergstresser and Philippon 2006).¹¹ In order to disentangle the effect of CSR and corporate

⁹ Based on this information, KLD constructs the Domini 400 Social Index for socially responsible firms. In order to be eligible for the index, a firm must derive less than 2 percent of its gross revenue from the production of military weapons, have no involvement in nuclear power, gambling, tobacco, and alcohol, and have a positive record in each of the remaining six categories.

¹⁰ For instance, positive indicators on the product dimension include: a well-developed quality program; industry-leading research, development, and innovation; a mission to provide products and services to the economically disadvantaged; and other notable social benefits from the products. Negative indicators include: fines or penalties relating to product safety; marketing or contracting controversies; controversies relating to antitrust practice; and other major controversies. For details, see KLD rating data manual by KLD Research & Analytics, Inc. (2006).

¹¹ Corporate governance refers to the set of mechanisms that influence the decisions made by managers when there is a separation of ownership and control (Larcker et al. 2007). Good corporate governance ensures that the firm operates in the best interest of shareholders. Because CSR includes activities that improve social and environmental conditions and serve interests of all stakeholders, depending on how one defines shareholders’ best interest, corporate governance and CSR may or may not be two completely different constructs. The relation between corporate governance and CSR may also depend on CSR incentives. If CSR is motivated by managers’ self-interest and good corporate governance works as a disciplinary mechanism, then corporate governance and CSR could be negatively associated.

governance, we construct CSR scores based on the five remaining dimensions, excluding corporate governance.¹²

Following prior studies (Waddock and Graves 1997; Johnson and Greening 1999; Chatterji et al. 2009), we construct a CSR Score, measured as total strengths minus total concerns in KLD's five social rating categories: community, diversity, employee relations, environment, and product. In a sensitivity test, as in McWilliams and Siegel (2000), we also use an alternative measure of CSR, *CSR_DSI400*, an indicator variable that takes a value of 1 if the firm is included in the DSI400 in a given year (for having passed the "social screen"), and 0 otherwise.

Discretionary Accruals

Numerous prior studies on earnings management (e.g., Jones 1991; Subramanyam 1996; DeFond and Subramanyam 1998; Kothari et al. 2005) use measures of discretionary accruals as surrogates for earnings quality and earnings management. Similarly, we employ discretionary accruals as our first proxy for earnings management. As in DeFond and Subramanyam (1998), we use a cross-sectional version of the modified Jones model due to its superior specification and less restrictive data requirements. Following Kothari et al. (2005), we include return on assets (ROA) in the prior year as a regressor in the estimation model to control for the effect of performance on measured discretionary accruals (see Appendix A for details). We use the absolute value of discretionary accruals (*ABS_DA*) for our main analyses, as earnings management can involve either income-increasing or income-decreasing accruals (Warfield et al. 1995; Klein 2002). If the results are consistent with the *transparent financial reporting (opportunistic financial reporting)* hypothesis, we expect a negative (positive) association between CSR score and the absolute discretionary accruals.

Real Activities Manipulation

Real activities manipulation is defined as management actions that deviate from normal business practices undertaken for purposes of meeting or beating certain earnings thresholds (Roychowdhury 2006). We rely on prior studies (e.g., Roychowdhury 2006; Cohen et al. 2008; Cohen and Zarowin 2010; Badertscher 2011; Zang 2012) to develop our proxies for real activities manipulation. Specifically, we use the following four measures to detect real activities manipulation: (1) abnormal levels of operating cash flows (*AB_CFO*), (2) abnormal production costs (*AB_PROD*), (3) abnormal discretionary expenses (*AB_EXP*), and (4) a combined measure of real activities manipulation. We measure abnormal levels of the first three real activities manipulation measures as the residual from the relevant models estimated by year and the two-digit SIC industry code (see Appendix A for details).

Following Cohen et al. (2008), we use three individual proxies as well as a combined proxy (*COMBINED_RAM*). Considering the expected directions of the first three variables, we calculate *COMBINED_RAM* as $AB_CFO - AB_PROD + AB_EXP$.¹³ If the results are consistent with the *transparent financial reporting (opportunistic financial reporting)* hypothesis, then the CSR score will be positively (negatively) associated with *AB_CFO*, *AB_EXP*, and *COMBINED_RAM*, and negatively (positively) related to *AB_PROD*.

¹² We gratefully acknowledge insights provided by two anonymous reviewers. We control for corporate governance in our regressions by including a net score of KLD's corporate governance ratings.

¹³ Note that our combined real activities manipulation proxy decreases as firms engage in more aggressive earnings management through real activities. In contrast, Cohen et al. (2008) define their combined measure to increase in earnings management through real operating activities.

Accounting and Auditing Enforcement Releases (AAERs)

While discretionary accruals and real activities manipulation include within-GAAP earnings management, firms may be subject to AAERs by engaging in earnings management in violation of GAAP. Dechow et al. (1996) use AAERs to identify firms subject to enforcement actions for those violations. Following Dechow et al. (1996), we identify firms with AAERs in which actions are brought against firms pursuant to Section 13 (a) of the Securities Exchange Act of 1934. We use an indicator variable, *AAER*, which takes a value of 1 if the firm is subject to SEC enforcement action for a given fiscal year, and 0 otherwise. Our *transparent financial reporting (opportunistic financial reporting)* hypothesis predicts a negative (positive) association between CSR score and the incidence of AAERs.

Empirical Models

To capture the relation between earnings management and CSR firms in financial reporting, we estimate the following models:

$$\begin{aligned} ABS_DA_t(\text{or } DA_t) = & \alpha_0 + \alpha_1 CSR_SCORE_t + \alpha_2 COMBINED_RAM_t + \alpha_3 SIZE_{t-1} + \alpha_4 MB_{t-1} \\ & + \alpha_5 ADJ_ROA_{t-1} + \alpha_6 BIG4_t + \alpha_7 LEV_{t-1} + \alpha_8 EO_t + \alpha_9 RD_INT_t \\ & + \alpha_{10} AD_IND_INT_t + \alpha_{11} GOVERNANCE_t + \alpha_{12} FIRM_AGE_t \\ & + \alpha_{13} ADMIRE_d_t \\ & + \varepsilon_t; \end{aligned} \quad (1)$$

$$\begin{aligned} RAM_PROXY_t = & \alpha_0 + \alpha_1 CSR_SCORE_t + \alpha_2 ABS_DA_t + \alpha_3 SIZE_{t-1} + \alpha_4 MB_{t-1} \\ & + \alpha_5 ADJ_ROA_{t-1} + \alpha_6 BIG4_t + \alpha_7 LEV_{t-1} + \alpha_8 EO_t + \alpha_9 RD_INT_t \\ & + \alpha_{10} AD_IND_INT_t + \alpha_{11} GOVERNANCE_t + \alpha_{12} FIRM_AGE_t \\ & + \alpha_{13} ADMIRE_d_t + \varepsilon_t; \end{aligned} \quad (2)$$

$$\begin{aligned} Pr(AAER = 1) = & \alpha_0 + \alpha_1 CSR_SCORE_t + \alpha_2 ABS_DA_t + \alpha_3 COMBINED_RAM_t + \alpha_4 SIZE_{t-1} \\ & + \alpha_5 MB_{t-1} + \alpha_6 ADJ_ROA_{t-1} + \alpha_7 BIG4_t + \alpha_8 LEV_{t-1} + \alpha_9 EO_t \\ & + \alpha_{10} RD_INT_t + \alpha_{11} AD_IND_INT_t + \alpha_{12} GOVERNANCE_t + \alpha_{13} FIRM_AGE_t \\ & + \alpha_{14} ADMIRE_d_t + \varepsilon_t; \end{aligned} \quad (3)$$

where:

ABS_DA (DA) = absolute value of discretionary accruals (signed discretionary accruals), where discretionary accruals are computed through the cross-sectional modified Jones model adjusted for performance;

RAM_PROXY = *AB_CFO*, *AB_PROD*, *AB_EXP*, or *COMBINED_RAM*:

AB_CFO = the level of abnormal cash flows from operations;

AB_PROD = the level of abnormal production costs, where production costs are defined as the sum of cost of goods sold and the change in inventories;

AB_EXP = the level of abnormal discretionary expenses, where discretionary expenses are the sum of R&D expenses, advertising expenses, and SG&A expenses;

COMBINED_RAM = *AB_CFO* - *AB_PROD* + *AB_EXP*;

AAER = an indicator variable that takes a value of 1 if the firm is subject to SEC enforcement action, and 0 otherwise;

CSR_SCORE = net score of CSR ratings, measured as total strengths minus total concerns in five social rating categories of KLD ratings data: community, diversity, employee relations, environment, and product;

SIZE = natural logarithm of the market value of equity (MVE);

MB = market-to-book equity ratio, measured as MVE/BVE, where BVE is the book value of equity;

ADJ_ROA = industry-adjusted ROA, where ROA is measured as income before extraordinary items, scaled by lagged total assets;

BIG4 = an indicator variable if the firm is audited by a Big 4 auditor;

LEV = long-term debt scaled by total assets;

EO = an indicator variable that takes a value of 1 if the firm has equity offerings in the following year, and 0 otherwise;

RD_INT = R&D intensity (R&D expense/net sales) for the year;

AD_IND_INT = advertising intensity for the two-digit SIC code industry for the year;

GOVERNANCE = net score of KLD ratings in the governance category, measured as the number of strengths minus the number of concerns;

FIRM_AGE = natural logarithm of (1 + number of years since the firm first appears in the CRSP database); and

ADMIRED = an indicator variable that takes a value of 1 if the firm is listed in *Fortune's America's Most Admired Companies*, and 0 otherwise.

We estimate Equations (1) and (2) with multiple regressions and Equation (3) with a logistic regression.¹⁴ Firms likely use a mix of discretionary accruals and real activities manipulation as tools to manage their reported earnings. Alternatively, firms can choose between the two mechanisms using the technique that is less costly to them (Cohen et al. 2008; Zang 2012). Zang (2012) finds that the trade-off between two earnings management methods is a function of their relative costs. To control for the substitutive nature of these two earnings management methods, as in Cohen et al. (2008), we include *ABS_DA*, a proxy for accrual-based earnings management, as a control variable in the real activities manipulation (i.e., *RAM_PROXY*) regressions and a proxy for real activities manipulation as a control variable in the accrual-based earnings management (i.e., *ABS_DA* or *DA*) regressions.

To avoid the problem of correlated omitted variables, we include various control variables that could affect financial reporting behavior and CSR performance. Roychowdhury (2006) suggests that firm-specific growth opportunity and the size of the firm can potentially explain significant variation in earnings management. Prior studies (e.g., Waddock and Graves 1997; McWilliams and Siegel 2000; Prior et al. 2008) show that firm size is correlated with CSR performance. Thus, we include proxies for growth opportunities and firm size (*MB* and *SIZE*, respectively). To isolate the effect of the ethical aspect of CSR on earnings management after controlling for the potential effect of financial performance, we include industry-adjusted ROA (*ADJ_ROA*) in the regressions.¹⁵

Further, to the extent earnings management might differ for firms audited by large audit firms (e.g., Becker et al. 1998; Francis et al. 1999), we include an indicator variable, *BIG4*, for those firms using one of the Big 4 auditors in the regressions. We also include leverage and an indicator for the incidence of an equity offering during the following fiscal year to control for the leverage-

¹⁴ Since we estimate Equation (1) with absolute discretionary accruals, positive discretionary accruals, or negative discretionary accruals as a dependent variable and the natural lower bound or upper bound of these variables is zero, we also estimate Equation (1) with Tobit models. The untabulated results of our Tobit models are qualitatively similar to those from the multiple regression models.

¹⁵ To check the robustness of our results to various proxies of financial performance, we conduct additional regression analyses using seven alternative lagged measures of financial performance as control variables. Details are discussed in the "Additional Analyses" section.

and equity-offering-related incentives for earnings management (e.g., Teoh et al. 1998; Kim and Park 2005). We compile equity offerings from the Securities Data Company's New Issue Database. McWilliams and Siegel (2000) find that R&D intensity and advertising intensity in the industry are positively associated with CSR and earnings. Thus, we include *RD_INT* and *AD_IND_INT* to control for a firm's R&D expenditure and the advertising intensity of its industry, respectively.

Corporate governance is a distinct construct from CSR, as both corporate governance and CSR can affect firms' financial reporting behaviors.¹⁶ We control for corporate governance in our regression models by including a net score of KLD's corporate governance ratings (*GOVERNANCE*). Because both financial reporting behavior and CSR activity could change as a firm matures, we include *FIRM_AGE* to control for the potential effect across different developmental stages of the business. Musteen et al. (2009) find that a firm's reputation is positively associated with its earnings performance. KLD's evaluation of CSR performance can also be potentially influenced by a firm's reputation. To control for this possibility, we include *ADMIRERED*, which is an indicator for firms in the *Fortune's America's Most Admired Companies* list (1991–2009), in the regressions as a proxy for firm reputation.¹⁷

IV. RESULTS

Descriptive Statistics and Univariate Analysis

In Table 1, we present the sample distribution by the two-digit SIC code industry. The most heavily represented industry is Business Services (10.84 percent, SIC code 73), followed by Electronic and Other Electric Equipment (9.42 percent, SIC code 36), and Chemical and Allied Products (8.83 percent, SIC code 28).

Table 2 reports descriptive statistics and Pearson correlations (see Appendix B for variable definitions). All continuous variables are winsorized at the top and bottom 1 percent of their distributions. Panel A of Table 2 shows a mean value of 0.200 for the absolute value of discretionary accruals (*ABS_DA*). The mean value of *DA* is 0.5 percent of lagged total assets and similar to the level reported by Cohen et al. (2008) and Klein (2002). The mean values of *AB_CFO*, *AB_PROD*, and *COMBINED_RAM* are 0.129, -0.096, and 0.238, respectively, suggesting that, on average, firms do not seem to engage in real activities manipulation such as sales manipulation or overproduction. However, the mean value of abnormal discretionary expenses (*AB_EXP*) of -0.059 indicates that our sample firms tend to reduce their discretionary expenditures as a means of earnings management.

For the control variables, 93.2 percent of our sample firms are audited by the Big 4 accounting firms. The mean value of *ADJ_ROA* is 0.033, indicating that our sample firms are more profitable than their industry peers. About 7 percent of the sample firms issue equity in the following fiscal year. On average, our sample firms' R&D expenditure is approximately 12 percent of their net sales. We also find the mean value of firm age is about 22 years, and that 19 percent of our sample firms are listed in the *Fortune's America's Most Admired Companies*.

Panel B of Table 2 compares descriptive statistics of variables between CSR and non-CSR firms. We define CSR firms as those with positive net scores of CSR ratings. Firms not so rated are classified as non-CSR firms. The mean value of *CSR_SCORE* for the CSR (non-CSR) firms is

¹⁶ We thank two anonymous reviewers for this insight.

¹⁷ We obtain the list of firms included in *Fortune's America's Most Admired Companies* from *Fortune Magazine* issues from 1991 through 2009.

TABLE 1
Sample Description:
Distribution of Firm-Year Observations by Industry

<u>Industry</u>	<u>Two-Digit SIC</u>	<u># of Obs.</u>	<u>% of Sample</u>	<u>Cumulative Percent</u>
Metal Mining, Ores	10	114	0.63%	0.63%
Oil and Gas	13	705	3.88%	4.51%
Heavy Construction, Except Building	16	77	0.42%	4.93%
Food, Beverage	20	626	3.45%	8.38%
Apparel and Other Textile Products	23	218	1.20%	9.58%
Lumber and Wood Products	24	136	0.75%	10.33%
Furniture and Fixtures	25	201	1.11%	11.44%
Paper and Allied Products	26	366	2.01%	13.45%
Printing and Publishing	27	415	2.29%	15.74%
Chemicals and Allied Products	28	1,604	8.83%	24.57%
Petroleum	29	249	1.37%	25.94%
Rubber	30	210	1.16%	27.10%
Primary Metal Industries	33	360	1.98%	29.08%
Fabricated Metal Products	34	309	1.70%	30.78%
Industrial Machinery and Computer Equipment	35	1,480	8.15%	38.93%
Electronic and Other Electric Equipment	36	1,710	9.42%	48.35%
Transportation Equipment	37	538	2.96%	51.31%
Instruments and Related Products	38	1,255	6.91%	58.22%
Miscellaneous Manufacturing	39	194	1.07%	59.29%
Air Transportation	45	120	0.66%	59.95%
Communication	48	589	3.24%	63.19%
Electric, Gas, Sanitary Services	49	180	0.99%	64.19%
Wholesale—Durable Goods	50	445	2.45%	66.64%
Wholesale—Non-Durable Goods	51	257	1.42%	68.05%
General Merchandise Store	53	224	1.23%	69.28%
Food Stores	54	181	1.00%	70.28%
Auto Dealers, Gas Stations	55	153	0.84%	71.12%
Apparel and Accessory Stores	56	362	1.99%	73.12%
Eating and Drinking	58	312	1.72%	74.83%
Miscellaneous Retail	59	406	2.24%	77.07%
Business Services	73	1,969	10.84%	87.91%
Amusement and Recreation Services	79	168	0.93%	88.84%
Health Services	80	237	1.31%	90.14%
Engineering and Management Services	87	295	1.62%	91.77%
Other		1,495	8.23%	100.00%
Total		<u>18,160</u>	<u>100.00%</u>	

2.354 (−1.165). Both CSR and non-CSR samples exhibit income-increasing accruals (e.g., mean $DA = 0.002$ for the CSR sample and 0.007 for the non-CSR sample). The magnitude of DA , ABS_DA , is larger for non-CSR firms relative to CSR firms (e.g., mean $ABS_DA = 0.188$ for the CSR and 0.206 for non-CSR firms). The mean and median differences in ABS_DA between the two groups are statistically significant ($p < 0.01$), indicating that CSR firms are less likely than non-CSR firms to use discretionary accruals to manage earnings.

TABLE 2
Descriptive Statistics of Selected Variables

Panel A: Full Sample

	<u>n</u>	<u>Mean</u>	<u>Median</u>	<u>Std. Dev.</u>	<u>25th Percentile</u>	<u>75th Percentile</u>
Dependent Variables						
<i>ABS_DA</i>	18,160	0.200	0.103	0.259	0.035	0.412
<i>DA</i>	18,160	0.005	0.019	0.576	-0.062	0.156
<i>Positive_DA</i>	10,478	0.178	0.111	0.255	0.037	0.413
<i>Negative_DA</i>	7,682	-0.231	-0.093	0.263	-0.408	-0.031
<i>AB_CFO</i>	18,160	0.129	0.080	0.354	-0.010	0.240
<i>AB_PROD</i>	18,160	-0.096	-0.063	0.309	-0.222	0.050
<i>AB_EXP</i>	18,160	-0.059	-0.062	0.536	-0.327	0.146
<i>COMBINED_RAM</i>	18,160	0.238	0.072	0.756	-0.187	0.524
Variable of Interest						
<i>CSR_SCORE</i>	18,160	-0.055	0.000	2.204	-1.000	1.000
Control Variables						
<i>SIZE</i>	18,160	6.955	6.869	1.644	5.818	8.007
<i>MB</i>	18,160	2.353	2.419	10.801	1.553	3.938
<i>ADJ_ROA</i>	18,160	0.033	0.034	0.211	-0.005	0.089
<i>BIG4</i>	18,160	0.932	1.000	0.252	1.000	1.000
<i>LEV</i>	18,160	0.184	0.148	0.200	0.011	0.281
<i>EO</i>	18,160	0.067	0.000	0.250	0.000	0.000
<i>RD_INT</i>	18,160	0.116	0.005	2.929	0.000	0.059
<i>AD_IND_INT</i>	18,160	0.032	0.018	0.138	0.006	0.031
<i>GOVERNANCE</i>	18,160	-0.278	0.000	0.724	-1.000	0.000
<i>FIRM_AGE</i>	18,160	2.741	2.773	0.985	2.200	3.500
<i>Age of firm (in years)</i>	18,160	22.218	15.000	19.846	8.000	32.000
<i>ADMIRE</i>	18,160	0.186	0.000	0.389	0.000	1.000

Panel B: Descriptive Statistics by CSR versus Non-CSR Firms

	<u>CSR Firms</u>			<u>Non-CSR Firms</u>			<u>Difference Tests:</u>	
	<u>n</u>	<u>Mean</u>	<u>Median</u>	<u>n</u>	<u>Mean</u>	<u>Median</u>	<u>t-test</u>	<u>Wilcoxon Test</u>
Dependent Variables								
<i>ABS_DA</i>	5,729	0.188	0.087	12,431	0.206	0.111	< 0.001	< 0.001
<i>DA</i>	5,729	0.002	0.017	12,431	0.007	0.020	0.252	0.041
<i>Positive_DA</i>	3,281	0.166	0.094	7,197	0.184	0.120	< 0.001	< 0.001
<i>Negative_DA</i>	2,448	-0.218	-0.081	5,234	-0.236	-0.100	0.005	< 0.001
<i>AB_CFO</i>	5,729	0.145	0.098	12,431	0.122	0.071	< 0.001	< 0.001
<i>AB_PROD</i>	5,729	-0.132	-0.100	12,431	-0.080	-0.046	< 0.001	< 0.001
<i>AB_EXP</i>	5,729	-0.047	-0.049	12,431	-0.065	-0.068	0.032	< 0.001
<i>COMBINED_RAM</i>	5,729	0.296	0.145	12,431	0.212	0.044	< 0.001	< 0.001
Variable of Interest								
<i>CSR_SCORE</i>	5,729	2.354	2.000	12,431	-1.165	-1.000	< 0.001	< 0.001
Control Variables								
<i>SIZE</i>	5,729	7.384	7.334	12,431	6.757	6.669	< 0.001	< 0.001
<i>MB</i>	5,729	3.508	2.899	12,431	1.821	2.235	< 0.001	< 0.001

(continued on next page)

TABLE 2 (continued)

	CSR Firms			Non-CSR Firms			Difference Tests: p-value	
	n	Mean	Median	n	Mean	Median	t-test	Wilcoxon Test
<i>ADJ_ROA</i>	5,729	0.056	0.048	12,431	0.022	0.028	< 0.001	< 0.001
<i>BIG4</i>	5,729	0.968	1.000	12,431	0.916	1.000	< 0.001	< 0.001
<i>LEV</i>	5,729	0.159	0.128	12,431	0.196	0.161	< 0.001	< 0.001
<i>EO</i>	5,729	0.046	0.000	12,431	0.076	0.000	< 0.001	< 0.001
<i>RD_INT</i>	5,729	0.077	0.013	12,431	0.134	0.002	0.225	< 0.001
<i>AD_IND_INT</i>	5,729	0.036	0.020	12,431	0.030	0.015	0.022	< 0.001
<i>GOVERNANCE</i>	5,729	-0.363	0.000	12,431	-0.239	0.000	< 0.001	< 0.001
<i>FIRM_AGE</i>	5,729	2.899	2.996	12,431	2.668	2.708	< 0.001	< 0.001
<i>Age of firm</i> (in years)	5,729	24.920	19.000	12,431	20.973	14.000	< 0.001	< 0.001
<i>ADMIRE</i>	5,729	0.283	0.000	12,431	0.141	0.000	< 0.001	< 0.001

Panel C: Frequency Distribution of Firm-Year Observations by the Quartile of Earnings Management Proxies

	<i>ABS_DA</i>		<i>AB_CFO</i>		<i>AB_PROD</i>		<i>AB_EXP</i>		<i>COMBINED_RAM</i>	
	CSR	Non-CSR	CSR	Non-CSR	CSR	Non-CSR	CSR	Non-CSR	CSR	Non-CSR
Conservative— Q1	1,549	2,988	1,495	3,045	1,715	2,825	1,543	2,997	1,571	2,971
(percent)	27.04%	24.04%	26.10%	24.50%	29.94%	22.73%	26.93%	24.11%	27.42%	23.90%
Quartile 2	1,517	3,026	1,641	2,901	1,593	2,947	1,453	3,087	1,647	2,891
(percent)	26.48%	24.34%	28.64%	23.34%	27.81%	23.71%	25.36%	24.83%	28.75%	23.26%
Quartile 3	1,345	3,195	1,431	3,107	1,293	3,247	1,387	3,153	1,349	3,191
(percent)	23.48%	25.70%	24.98%	24.99%	22.57%	26.12%	24.21%	25.36%	23.55%	25.67%
Aggressive— Q4	1,318	3,222	1,162	3,378	1,128	3,412	1,346	3,194	1,162	3,378
(percent)	23.01%	25.92%	20.28%	27.17%	19.69%	27.45%	23.49%	25.69%	20.28%	27.17%
Total	5,729	12,431	5,729	12,431	5,729	12,431	5,729	12,431	5,729	12,431

Panel D: Correlations among CSR Score, Earnings Management Proxies, and Other Selected Variables

	1	2	3	4	5	6	7
1. <i>CSR_SCORE</i>	1.000						
2. <i>ABS_DA</i>	-0.021***	1.000					
3. <i>AB_CFO</i>	0.042***	0.195***	1.000				
4. <i>AB_PROD</i>	-0.104***	-0.166***	-0.315***	1.000			
5. <i>AB_EXP</i>	0.017**	0.020***	-0.298***	-0.094***	1.000		
6. <i>COMBINED_RAM</i>	0.073***	0.287***	0.343***	-0.556***	0.679***	1.000	
7. <i>SIZE</i>	0.131***	-0.201***	-0.031***	0.146***	-0.082***	-0.160***	1.000
8. <i>MB</i>	0.079***	-0.027***	0.033***	-0.033***	-0.012	0.010	0.072***
9. <i>ADJ_ROA</i>	0.079***	0.021***	0.155***	-0.089***	-0.015**	0.082***	0.115***

(continued on next page)

TABLE 2 (continued)

	1	2	3	4	5	6	7
10. <i>LEV</i>	-0.106***	-0.078***	-0.048***	0.089***	-0.008	-0.065***	0.223***
11. <i>EO</i>	-0.059***	0.012	-0.008	0.019**	0.007	-0.001	-0.060***
12. <i>RD_INT</i>	0.001	0.025***	-0.020***	-0.001	0.010	0.007	-0.053***
13. <i>GOVERNANCE</i>	-0.032***	0.013	-0.019**	-0.013	0.039***	0.029***	-0.428***
14. <i>ADMIRE</i>	0.173***	-0.154***	-0.051***	0.056***	-0.004	-0.071***	0.523***

Panel D: Correlations among CSR Score, Earnings Management Proxies, and Other Selected Variables (continued)

	8	9	10	11	12	13	14
8. <i>MB</i>	1.000						
9. <i>ADJ_ROA</i>	0.068***	1.000					
10. <i>LEV</i>	-0.096***	-0.087***	1.000				
11. <i>EO</i>	-0.103***	-0.066***	0.119***	1.000			
12. <i>RD_INT</i>	0.005	-0.040***	-0.018**	0.026	1.000		
13. <i>GOVERNANCE</i>	-0.060***	-0.048***	-0.061***	0.043***	0.010	1.000	
14. <i>ADMIRE</i>	0.066***	0.046***	0.032***	-0.042***	-0.014	-0.196***	1.000

, * Indicate statistical significance at the 0.05 and 0.01 levels, respectively, based on a two-tailed test. Variables are defined in Appendix B.

In Panels B and C, a firm is defined as a CSR firm if the firm has a positive net score of CSR ratings, measured as total strengths minus total concerns, based on KLD's five social rating categories: community, diversity, employee relations, environment, and product; and a non-CSR otherwise. In Panel B, significances of means and medians are evaluated based on the t-test and Wilcoxon test, respectively (p-values for the t-statistic and Z-statistic are two-tailed). In panel C, quartiles are based on the magnitude of each of earnings management proxies.

For *RAM*, we find higher mean and median values of *AB_CFO*, *AB_EXP*, and *COMBINED_RAM* for the CSR firms than for the non-CSR firms (e.g., mean *COMBINED_RAM* is 0.296 for the CSR firms and 0.212 for the non-CSR firms). In contrast, mean and median value of *AB_PROD* for the CSR firms is lower than those for non-CSR firms. The mean and median differences in *AB_CFO*, *AB_PROD*, *AB_EXP*, and *COMBINED_RAM* between the two groups are statistically significant ($p < 0.01$, except $p = 0.03$ for the mean difference for *AB_EXP*). In sum, these results suggest that CSR firms are less likely to engage in real activities manipulation than non-CSR firms, a finding consistent with the *transparent financial reporting* hypothesis.

Furthermore, we observe that CSR firms are larger, have higher growth opportunities, have better earnings performance, and have lower leverage than non-CSR firms. We also find that CSR firms are less likely to issue new equities, are older, and are more likely to appear on the list of *Fortune's America's Most Admired Companies*.

The frequency distribution of firm-year observations by quartile of earnings management proxies is shown in Panel C of Table 2. We classify firm-year observations based on each measure of earnings management proxies, regardless of CSR and non-CSR firm classification, and examine whether the more conservative (aggressive) financial reporting group represents a higher (lower) proportion of CSR firms. The lowest (highest) quartile represents the more conservative (aggressive) earnings management group. We find that distributions for the conservative (aggressive) earnings management group of the CSR sample are higher (lower) than those of the non-CSR group for all earnings management proxies. Thus, the results presented in Panel C suggest

that CSR firms are more conservative than non-CSR firms, a finding that supports the *transparent financial reporting* hypothesis.¹⁸

Panel D of Table 2 presents Pearson correlation coefficients for selected variables. *CSR_SCORE* is negatively correlated with *ABS_DA*. As well, *CSR_SCORE* is significantly and positively (negatively) correlated with *AB_CFO*, *AB_EXP*, and *COMBINED_RAM* (*AB_PROD*). This evidence suggests that CSR firms are less likely to engage in earnings management compared to their less responsible counterparts. We also observe that *CSR_SCORE* is positively correlated with lagged financial performance, *ADJ_ROA*.

The Relation between CSR and Accrual-Based Earnings Management

Table 3 presents the results of multivariate regression analyses of discretionary accruals. Because the residuals can be correlated across firm and/or over time, for all multivariate analyses, we report test statistics and significance levels based on the standard errors adjusted by a two-dimensional cluster at the firm and year levels (Petersen 2009; Gow et al. 2010).

We report the results using the absolute value of discretionary accruals (*ABS_DA*) and positive as well as negative discretionary accruals (*Positive_DA* and *Negative_DA*). Consistent with the *transparent financial reporting* hypothesis, we find a negative relation between *CSR_SCORE* and the magnitude of earnings management, *ABS_DA*. Specifically, the estimated coefficient on *CSR_SCORE* is negative and significant ($p < 0.01$), indicating that CSR firms manage earnings less through accruals. We observe similar results from the regressions of signed discretionary accruals. In the second column, we find a negative and significant coefficient on *CSR_SCORE* in the sample of firms with *Positive_DA* ($p = 0.03$), indicating that CSR firms engage less in income-increasing earnings management through accruals. We also observe a significant and positive relation between *CSR_SCORE* and *Negative_DA* ($p < 0.01$), suggesting that CSR firms also engage less in income-decreasing earnings management.¹⁹

Further, the combined proxy for real activities manipulation, *COMBINED_RAM*, is positively (negatively) and significantly associated with accrual-based earnings management proxies in both the *ABS_DA* and *Positive_DA* (*Negative_DA*) regressions, indicating that firms choosing earnings management through accruals are less likely to engage in real activities manipulation, and *vice versa*. This implies that firms substitute between real operating-based and accrual-based earnings management activities, consistent with Graham et al. (2005), Cohen et al. (2008), Badertscher (2011), and Zang (2012). For the *ABS_DA* regression, we find that *SIZE*, *GOVERNANCE*, and *FIRM_AGE* are negatively associated with *ABS_DA*, suggesting that larger, better governed, and older companies are, in general, less likely to engage in accrual-based earnings management. As well, in the *ABS_DA* regression, the coefficient for R&D intensity (*RD_INT*) is positive and significant ($p < 0.05$), indicating that firms in our sample with high R&D expenditures have higher levels of discretionary accruals. In summary, the multiple regression analyses support the notion

¹⁸ For the accrual-based earnings management proxy (*ABS_DA*), approximately 27 percent of the CSR sample is recognized as conservative, while approximately 24 percent of the non-CSR sample falls in this group. This indicates that CSR firms seem to be more conservative regarding accrual-based earnings management. Distributions for the conservative earnings management group (Q1) of the CSR sample are higher than those of the non-CSR group (26 versus 25 percent, 30 versus 23 percent, 27 versus 24 percent, and 27 versus 24 percent for *AB_CFO*, *AB_PROD*, *AB_EXP*, and *COMBINED_RAM*, respectively). Conversely, the proportions for the aggressive earnings management group (Q4) of the CSR sample are lower than those of the non-CSR group (20 versus 27 percent, 20 versus 27 percent, 23 versus 26 percent, and 20 versus 27 percent for *AB_CFO*, *AB_PROD*, *AB_EXP*, and *COMBINED_RAM*, respectively).

¹⁹ These results contradict those in Prior et al. (2008) that find a positive relation between CSR and earnings management for regulated firms.

TABLE 3
Multiple Regression of Accrual-Based Earnings Management on CSR

	<i>ABS_DA</i> Coefficient (t-stat)	<i>Positive_DA</i> Coefficient (t-stat)	<i>Negative_DA</i> Coefficient (t-stat)
<i>CSR_SCORE</i>	-0.008 (-3.12)***	-0.007 (-2.13)**	0.008 (3.01)***
<i>COMBINED_RAM</i>	0.126 (2.74)***	0.115 (2.06)**	-0.130 (-2.90)***
<i>SIZE</i>	-0.021 (-3.04)***	-0.022 (-2.58)**	0.023 (2.99)***
<i>MB</i>	-0.001 (-1.76)*	-0.001 (-2.24)**	0.001 (0.88)
<i>ADJ_ROA</i>	0.045 (1.25)	0.015 (0.56)	-0.079 (-1.24)
<i>BIG4</i>	-0.061 (-1.62)	-0.048 (-1.25)	0.073 (1.57)
<i>LEV</i>	0.009 (0.29)	0.044 (0.96)	0.024 (0.57)
<i>EO</i>	0.001 (0.05)	0.011 (0.78)	0.006 (0.19)
<i>RD_INT</i>	0.004 (2.50)**	0.001 (0.62)	-0.005 (-5.27)***
<i>AD_IND_INT</i>	0.109 (0.71)	0.279 (1.39)	-0.093 (-0.69)
<i>GOVERNANCE</i>	-0.027 (-2.67)***	-0.023 (-2.68)***	0.029 (1.83)*
<i>FIRM_AGE</i>	-0.020 (-1.96)*	-0.003 (-0.34)	0.037 (2.18)**
<i>ADMIRE</i>	-0.018 (-1.03)	-0.022 (-1.53)	0.013 (0.53)
Industry dummies	included	included	included
Adj. R ²	0.185	0.153	0.215
n	18,160	8,311	9,849

*, **, *** Indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests. Variables are defined in Appendix B.

All test statistics and significance levels are calculated based on the standard errors adjusted by a two-dimensional cluster at the firm and year levels.

that CSR firms manage their earnings less using accruals and are more transparent in their financial reporting, supporting the *transparent financial reporting* hypothesis.

The Relation between CSR and Real Activities Manipulation

Table 4 reports the results of multiple regression analyses using measures of real activities manipulation. Again, all test statistics and significance levels are based on the standard errors adjusted by a two-dimensional cluster at the firm and year levels.

For the regressions of *AB_CFO*, *AB_EXP*, and *COMBINED_RAM*, the estimated coefficient for *CSR_SCORE* is positive and significant ($p = 0.02, 0.02, \text{ and } < 0.01$, respectively). As well,

TABLE 4
Multiple Regression of Real Activities Manipulation on CSR
(n = 18,160)

	<i>AB_CFO</i> Coefficient (t-stat)	<i>AB_PROD</i> Coefficient (t-stat)	<i>AB_EXP</i> Coefficient (t-stat)	<i>COMBINED_RAM</i> Coefficient (t-stat)
<i>CSR_SCORE</i>	0.005 (2.48)**	-0.013 (-6.92)***	0.007 (2.29)**	0.025 (5.79)***
<i>ABS_DA</i>	0.258 (3.08)***	-0.030 (-0.75)	0.109 (0.81)	0.397 (2.72)***
<i>SIZE</i>	0.010 (1.11)	0.025 (4.41)***	-0.065 (-6.76)***	-0.080 (-3.94)***
<i>MB</i>	0.001 (1.72)*	-0.001 (-2.01)**	-0.001 (-1.16)	0.000 (0.43)
<i>ADJ_ROA</i>	0.237 (3.21)***	-0.119 (-2.88)***	-0.013 (-1.18)	0.342 (6.83)***
<i>BIG4</i>	0.003 (0.27)	-0.020 (-1.27)	0.057 (1.42)	0.080 (1.81)*
<i>LEV</i>	-0.003 (-0.27)	0.014 (0.61)	0.006 (0.13)	-0.016 (-0.25)
<i>EO</i>	-0.005 (-0.39)	0.021 (2.15)**	0.012 (0.62)	-0.014 (-0.39)
<i>RD_INT</i>	-0.004 (-2.65)***	0.002 (1.77)*	0.002 (0.82)	-0.004 (-2.25)**
<i>AD_IND_INT</i>	0.013 (0.27)	-0.012 (-0.59)	-0.170 (-1.62)	-0.144 (-1.10)
<i>GOVERNANCE</i>	0.003 (0.56)	0.010 (1.13)	-0.009 (-0.95)	-0.016 (-0.86)
<i>FIRM_AGE</i>	-0.026 (-3.44)***	0.016 (2.25)**	0.005 (-0.53)	-0.04 (-3.23)***
<i>ADMIRE</i>	-0.024 (-1.41)	-0.021 (-1.28)	0.088 (3.57)***	0.085 (2.50)**
Industry dummies	Included	Included	Included	Included
Adj. R ²	0.151	0.082	0.031	0.147

*, **, *** Indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

Variables are defined in Appendix B.

All test statistics and significance levels are calculated based on the standard errors adjusted by a two-dimensional cluster at the firm and year levels.

CSR_SCORE is negatively and significantly associated with the abnormal production variable, *AB_PROD* ($p < 0.01$). Given that higher (lower) levels of abnormal operating cash flows, abnormal expenses, and overall real activities manipulation (abnormal production) indicate more conservative operating decisions, these findings indicate that CSR firms engage in earnings management less by manipulating real operating activities.

We obtain these results after controlling for accrual-based earnings management. The coefficient on the accrual-based earnings management variable, *ABS_DA*, is positive and significant ($p < 0.01$) for *AB_CFO* and *COMBINED_RAM*, consistent with Cohen et al. (2008). Turning to control variables, in the *COMBINED_RAM* regression, the coefficients on the *SIZE*, *RD_INT*, and

FIRM_AGE variables are negative and significant ($p < 0.01$, $= 0.03$, and < 0.01 , respectively), indicating that larger firms, firms with high R&D intensity, and older firms are more likely to engage in real activities manipulation. In contrast, *ADJ_ROA* and *ADMIRE* are positively associated with *COMBINED_RAM*, suggesting that firms with better earnings performance and those listed as *America's Most Admired Companies* are less likely to engage in real activities manipulation.

Taken together, this evidence supports the contention that CSR firms manage their earnings using real activities manipulation less than non-CSR firms, consistent with the *transparent financial reporting* hypothesis.

Analyses Using AAERs

Dechow et al. (1996) investigate the motivation of earnings management based on AAERs. We identify AAERs through the SEC website and a LexisNexis search over the period from 1996 through February 2011.²⁰ It frequently takes several years for a reporting violation to be published in an AAER. Our analysis is based on the alleged GAAP violation periods. That is, we match the violation period with the fiscal year for our sample observations rather than the year in which the AAER is filed. We identify 376 (225) observations that are subject to AAERs (AAERs against CEO/CFO). If CSR firms are more conservative in making financial reporting decisions, then they are less likely than other firms to be subject to SEC enforcements.

Panel A of Table 5 reports sample frequencies of AAERs by our CSR versus non-CSR firms, where CSR firms are defined as those with positive CSR scores. When we examine the incidence of AAERs, 272 non-CSR firms are subject to AAERs, as compared to 104 CSR firms. A χ^2 test result is only marginally significant ($p = 0.10$). In contrast, when we examine the incidence of AAERs against the CEO/CFO, the number of CSR firms that are subject to the AAERs is much smaller than that of non-CSR firms (54 versus 171). The difference is statistically significant ($\chi^2 = 6.01$; $p = 0.01$). This finding supports the notion that CSR firms are less likely than non-CSR firms to be subject to AAERs against the CEO/CFO, supporting the *transparent financial reporting* hypothesis.

Panel B of Table 5 tabulates the results of logistic regressions predicting the likelihood of a firm being subject to AAERs. We find no significant results when we use all AAERs. In contrast, when we restrict the dependent variable to AAERs against the CEO/CFO, the coefficient on *CSR_SCORE* is negative and significant ($p = 0.02$). This evidence indicates that CSR firms are less likely to be subject to AAERs against their executives. We interpret this result to mean that traits of firm executives are important and closely related to opportunistic accounting decisions that prompt AAERs. For Tables 3–5, collinearity diagnostics indicate no variable with a variance inflation factor (VIF) greater than 2.5 or tolerance less than 0.4, suggesting that multicollinearity is not a concern.²¹

Analyses Based on Individual KLD Ratings Categories

Prior literature (e.g., Turban and Greening 1997; Trébuq and Russ 2005; Mattingly and Berman 2006) examine both aggregated and disaggregated subscores from KLD data as a proxy for CSR. In further analysis, we construct a CSR score measure for each of five qualitative screening categories of community (*CSR_COM*), diversity (*CSR_DIV*), employee relations (*CSR_EMP*), environment (*CSR_ENV*), and product (*CSR_PROD*). We then examine the relation between CSR

²⁰ AAERs issued earlier than September 1995 are not publicly available on the SEC website.

²¹ As a rule of thumb, a variable whose VIF is greater than 10 may merit further investigation. We also run regressions excluding influential observations that have Cook's D greater than $4/n$, where n is the number of observations. Our results are qualitatively the same after excluding outliers.

TABLE 5

The Relation between Earnings Management and CSR Based on the Incidence of AAERs

Panel A: Sample Frequency of AAERs: CSR versus Non-CSR Firms

AAER

			CSR	Non-CSR
AAER	Yes	n (percent)	104 (27.66%)	272 (72.34%)
	No	n (percent)	5,625 (31.63%)	12,159 (68.37%)

	<u>Chi-Square</u>	<u>p-value</u>
Chi-Square	2.69	0.101
Likelihood Ratio Chi-square	2.75	0.097

AAER against CEO/CFO

			CSR	Non-CSR
AAER	Yes	n (percent)	54 (24.00%)	171 (76.00%)
	No	n (percent)	5,675 (31.64%)	12,260 (68.36%)

	<u>Chi-Square</u>	<u>p-value</u>
Chi-Square	6.01	0.014
Likelihood Ratio Chi-Square	6.32	0.012

Panel B: Logistic Regression Analysis (n = 18,160)

	<u>AAER Coefficient (Z-stat)</u>	<u>AAER against CEO/CFO Coefficient (Z-stat)</u>
CSR_SCORE	-0.054 (-1.24)	-0.143 (-2.43)**
ABS_DA	-0.015 (-0.13)	0.027 (0.23)
COMBINED_RAM	0.018 (0.32)	0.042 (0.50)
SIZE	0.214 (2.23)**	0.223 (2.08)**
MB	0.019 (3.81)***	0.023 (3.43)***
ADJ_ROA	0.009 (0.02)	0.191 (0.46)
BIG4	-0.009 (-0.02)	0.159 (0.32)

(continued on next page)

TABLE 5 (continued)

	<i>AAER</i> Coefficient (Z-stat)	<i>AAER against CEO/CFO</i> Coefficient (Z-stat)
<i>LEV</i>	-0.199 (-0.51)	0.228 (0.51)
<i>EO</i>	-0.199 (-0.87)	-0.084 (-0.23)
<i>RD_INT</i>	0.001 (0.07)	0.008 (1.37)
<i>AD_IND_INT</i>	0.383 (1.50)	0.425 (1.79)*
<i>GOVERNANCE</i>	-0.4464 (-3.94)***	-0.437 (-2.94)***
<i>FIRM_AGE</i>	-0.281 (-2.59)**	-0.221 (-1.87)*
<i>ADMIRE</i>	0.348 (1.59)	0.067 (0.19)
Industry dummies	Included	Included
Max-Rescaled R ²	0.063	0.092
Likelihood Ratio	-1,714.12	-1,099.48

*, **, *** Indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

In Panel A, a firm is defined as a CSR firm if the firm has a positive net score of CSR ratings, measured as total strengths minus total concerns, based on KLD's five social rating categories: community, diversity, employee relations, environment, and product; and a non-CSR otherwise.

In Panel B, dependent variable is *AAER*, where *AAER* is an indicator variable that takes a value of 1 if the firm is subject to the SEC enforcement actions, and 0 otherwise. Other variables are defined in Appendix B.

In Panel B, all test statistics and significance levels are calculated based on the standard errors adjusted by a two-dimensional cluster at the firm and year levels.

subscores and financial reporting behavior. Specifically, we construct a net score for each category by subtracting total concerns from total strengths. We then re-estimate the multiple regression and logit models. Table 6 presents those results.

As shown in Panel A of Table 6, the coefficients on *CSR_COM*, *CSR_EMP*, *CSR_ENV*, and *CSR_PROD* are negative and significant ($p = 0.01$, < 0.01 , $= 0.05$, and < 0.01 , respectively) in the *ABS_DA* regressions. The coefficient on *CSR_DIV* is statistically insignificant. As expected, the coefficients on *CSR_COM*, *CSR_DIV*, and *CSR_EMP* are positive and significant ($p < 0.01$, 0.01 , and $= 0.02$, respectively) in the *COMBINED_RAM* regressions. The coefficients on CSR scores in other categories are insignificant. In sum, evidence suggests that CSR in community, employee relations, environment, and product categories seem to play an important role in constraining a firm's earnings management through accruals, while CSR in community, diversity, and employee relations components have a similar effect in the case of real activities manipulation.

Panel B of Table 6 summarizes the results of the analysis with *AAERs* filed against the CEO/CFO of a firm. We observe a significant and negative association between *AAER* and three components of CSR, *CSR_COM*, *CSR_EMP*, and *CSR_PROD* ($p = 0.08$, 0.02 , and 0.03 , respectively), indicating that firms with positive CSR scores in community, employee relations, and product components are less likely to be subject to SEC enforcement actions against their executives. The coefficients on CSR score are negative but insignificant for CSR in the diversity and environment categories.

TABLE 6
Relationship between Earnings Management and CSR by Individual KLD Ratings Categories

Panel A: Results Based on ABS_DA and RAM (n = 18,160)

	ABS_DA		COMBINED_RAM	
	Coeff. (t-stat)	Coeff. (t-stat)	Coeff. (t-stat)	Coeff. (t-stat)
CSR_SCORE				
CSR_COM	-0.030 (-2.50)**		0.084 (4.24)***	
CSR_DIV	0.006 (0.84)		0.058 (5.41)***	
CSR_EMP		-0.020 (-2.62)***		0.021 (2.32)**
CSR_ENV				0.020 (1.61)
CSR_PROD				
				-0.017 (-1.58)
COMBINED_RAM	0.126 (2.74)***	0.125 (2.72)***	0.396 (2.71)***	0.395 (2.70)***
ABS_DA			0.396 (2.72)***	0.396 (2.70)***
Control variables		Included		Included
Industry dummies		Included		Included
Adj. R ²	0.185	0.185	0.146	0.144

(continued on next page)

TABLE 6 (continued)

Panel B: Results Based on AAERs (n = 18,160)

	AAER Against CEO/CFO			
	Coefficient (Z-stat)	Coefficient (Z-stat)	Coefficient (Z-stat)	Coefficient (Z-stat)
CSR_SCORE				
CSR_COM	-0.316 (-1.74)*			
CSR_DIV	-0.161 (-1.54)			
CSR_EMP		-0.222 (-2.41)**		
CSR_ENV			-0.114 (-0.71)	
CSR_PROD				-0.390 (-2.19)**
ABS_DA	0.033 (0.27)	0.048 (0.42)	0.028 (0.23)	0.023 (0.19)
COMBINED_RAM	0.028 (0.32)	0.037 (0.45)	0.025 (0.29)	0.019 (0.22)
Control variables	included	included	included	included
Industry dummies	included	included	included	included
Max-Rescaled R ²	0.085	0.086	0.087	0.089
Likelihood Ratio	-1,107.58	-1,106.45	-1,105.42	-1,103.36

*, **, *** Indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

CSR_COM is net score of CSR ratings for the community category. CSR_DIV is net score of CSR ratings for the diversity category. CSR_EMP is net score of CSR ratings for the employee relation category. CSR_ENV is net score of CSR ratings for the environment category. CSR_PROD is net score of CSR ratings for the product category. The net score of KLD's social ratings for each category is measured as total strengths minus total concerns within each category. Other variables are defined in Appendix B. All test statistics and significance levels are calculated based on the standard errors adjusted by a two-dimensional cluster at the firm and year levels.

Analysis Based on Total Strengths and Concerns

Mattingly and Berman (2006) contend that although it is common practice to aggregate “strengths” and “concerns” for a single CSR measure, each domain can represent distinct constructs. Mattingly and Berman (2006) find that total KLD environmental strengths and total KLD environmental concerns are positively correlated, suggesting that aggregation might cloak important differences. For instance, a firm with five strengths and five concerns is surely different from a firm with one strength and one concern, a distinction that may be lost in summing strengths and concerns (Chatterji et al. 2009). Therefore, we conduct further analysis by decomposing CSR scores into total strengths and total concerns. Table 7 presents the results.

In the first two columns, we find a significant and positive coefficient on *STRENGTHS* for the regression of *COMBINED_RAM* ($p < 0.01$) but an insignificant coefficient on *STRENGTHS* for *ABS_DA*. This indicates that the higher the KLD strength score, the less likely the firms engage in real activities manipulation. In the third column, *STRENGTHS* is significantly negatively associated with AAERs ($p = 0.02$), indicating that firms with higher strength scores are less likely to be subject to the SEC actions against firms’ CEOs/CFOs.

The last three columns in Table 7 present evidence using total concerns. The coefficient on *CONCERNS* for the *ABS_DA* regression is positive and significant ($p < 0.01$), while *CONCERNS* indicates an insignificant association with *COMBINED_RAM* and AAERs. This evidence suggests that firms with higher CSR concerns scores are more likely to make opportunistic accounting decisions through discretionary accruals. In general, the results reported in Table 7 are consistent with those in Tables 3 through 5, as the strengths score is associated with more conservative financial reporting and the concerns score is associated with more aggressive financial reporting.²² However, it is interesting to note that, while real activities manipulation and AAER incidences are more closely related with CSR strengths, accrual-based earnings management is more attributable to CSR concerns.

Analyses Using Domini 400 Social Index—Matched Sample Approach

Thus far, our research design and main analyses rely on CSR scores constructed from the KLD evaluation of CSR on five social performance dimensions. One stream of prior CSR research (e.g., McWilliams and Siegel 2000) uses inclusion in the Domini 400 Social Index (DSI400) to define CSR firms. We rely on CSR scores for our main tests to avoid any bias that might be introduced in DSI400 construction.²³ Nevertheless, we test the sensitivity of our results by replicating our analyses using the DSI400 designation. For these analyses, firms included in the DSI400 are defined as CSR firms (having passed the “social screen”). We construct a matched-pair sample as a control group. For every CSR firm listed in the DSI400, we identify a matching firm based on industry affiliation (two-digit SIC code), fiscal year, firm size (beginning total assets), and ROA in the previous year. We first restrict the size of matching firms in the same fiscal year and the same two-digit SIC code industry to be within 50 percent to 150 percent of the sample firm and then choose the firm with reported ROA closest to that of the sample firm. We eliminate firms with insufficient data to estimate discretionary accruals, real activities manipulation proxies, and control

²² Trébuq and Russ (2005) find puzzling evidence that both strengths and concerns are negatively associated with accrual-based earnings management.

²³ KLD applies financial screens as well as corporate governance to determine the composite of the Index. KLD also applies exclusionary screens on five dimensions, alcohol, gambling, military contracting, nuclear power, and tobacco. Financial performance and corporate governance, however, are constructs different from CSR. Furthermore, the dimensions used in exclusionary screens are not firms’ discretionary activities and, thus, inappropriate to assess firms’ discretionary CSR performance.

TABLE 7
Relationship between Earnings Management and CSR by Total Strengths and Concerns
(n = 18,160)

	Total Strengths			Total Concerns		
	<i>ABS_DA</i> Coefficient (t-stat)	<i>COMBINED_RAM</i> Coefficient (t-stat)	<i>AAER against CEO/CFO</i> Coefficient (t-stat)	<i>ABS_DA</i> Coefficient (t-stat)	<i>COMBINED_RAM</i> Coefficient (t-stat)	<i>AAER against CEO/CFO</i> Coefficient (t-stat)
<i>CSR_SCORE</i>						
<i>STRENGTHS</i>	0.001 (0.28)	0.40 (7.18)***	-0.242 (-2.31)**			
<i>CONCERNS</i>				0.020 (5.24)***	0.003 (0.46)	0.018 (0.27)
<i>COMBINED_RAM</i>	0.125 (2.70)***		0.057 (0.74)	0.125 (2.72)***		0.021 (0.24)
<i>ABS_DA</i>		0.391 (2.68)***	0.047 (0.39)		0.394 (2.71)***	0.036 (0.30)
Control variables	included	included	included	included	included	included
Industry dummies	included	included	included	included	included	included
Adj. R ²	0.184	0.149		0.187	0.143	
Max-Rescaled R ²			0.096			0.083
Likelihood Ratio			-1,094.61			-1,110.06

, * Indicate statistical significance at the 0.05 and 0.01 levels, respectively, based on two-tailed tests.
STRENGTHS is total strengths of KLD's five social rating categories. *CONCERNS* is total concerns of KLD's five social rating categories. Other variables are defined in Appendix B. All test statistics and significance levels are calculated based on the standard errors adjusted by a two-dimensional cluster at the firm and year levels.

variables, resulting in a sample of 4,623 DSI400 firm year observations and a 4,623 matching control sample. Using 9,246 firm year observations, we re-estimate our empirical models. Table 8 shows descriptive statistics and the results of multivariate analyses.

As shown in Table 8, Panel A, we find smaller (greater) mean and median values of *ABS_DA* and *AB_PROD* (*AB_CFO*, *AB_EXP*, and *COMBINED_RAM*) for DSI400 firms than for control firms. (e.g., mean *ABS_DA* is 0.180 for the DSI400 firms and 0.195 for the control sample and mean value of *COMBINED_RAM* is 0.239 as compared to that of 0.093 for the control sample). The mean and median differences in *COMBINED_RAM* between the two groups are statistically significant ($p < 0.01$), indicating that DSI400 firms are less likely to engage in earnings management through accruals or real activities manipulation, a finding consistent with the *transparent financial reporting* hypothesis.

Results from regressions are reported in Table 8, Panel B. We find that *CSR_DSI400* is negatively (positively) associated with *ABS_DA* and the incidence of AAERs against CEO/CFO (*COMBINED_RAM*), indicating that, on average, DSI400 firms manage earnings through accruals or real activities manipulation less than their matched counterparts and are less likely to be the subject of AAERs against their CEO/CFO. Together, results using the DSI400 and a matched control sample are consistent with those using CSR scores, as reported in Tables 3–5.²⁴

Additional Analyses

Analyses of “Suspect Firms”

To provide construct validity for their earnings management proxies, Cohen et al. (2008) conduct additional tests using “suspect firms” (*SUSPECT*) that are likely to manage earnings based on three benchmarks that firms are expected to have incentives to meet: a zero earnings benchmark, non-negative changes in earnings, and analysts’ forecasts. Following Cohen et al. (2008), we examine whether earnings management to meet these benchmarks differs between the CSR and non-CSR firms, where CSR firms are those with positive net total CSR scores.

First, we identify firm-year observations with net income before extraordinary items scaled by total assets that lies in the interval $[0, 0.005)$ as *SUSPECT* firm-years. In the first section of Panel A in Table 9, we report earnings management proxies for both CSR and non-CSR firms that “just” manage earnings (i.e., fall within the interval) to avoid reporting a loss.

Next, we use a second measure of *SUSPECT* firm-years in which the change in net income before extraordinary items scaled by total assets lies in the interval $[0, 0.005)$. The mean and median values of various earnings management proxies for the CSR and non-CSR firms are reported in the second section of Panel A. Finally, we examine the accrual-based earnings management and real activities manipulation that are managed to meet or beat the existing analysts’ consensus forecasts prior to the earnings announcement. We define the analysts’ forecast error (*AFE*) as the difference between actual earnings per share (*EPS*) as reported by the Institutional Brokers’ Estimate System (I/B/E/S) less the consensus forecast of earnings per share. We focus on firm-year observations in which the *AFE* is one cent per share or less. The mean and median values of various earnings management proxies for the CSR and non-CSR firms are presented in the third section of Panel A in Table 9.

²⁴ As a sensitivity test, instead of a matched control sample, we also use all non-DSI400 firms from Compustat for which data are available for discretionary accruals, real activities manipulation proxies, and control variables. Untabulated results show that the coefficient for *CSR_DSI400* in the accrual-based earnings management regression is negative and significant at the 1 percent level. We also find that *CSR_DSI400* is positively (negatively) and significantly associated with *AB_CFO*, *AB_EXP*, and *COMBINED_RAM* (*AB_PROD*) at conventional levels. Together, our findings are consistent with those previously reported in Table 8 and robust when we use all non-DSI400 firms as an alternative control sample.

TABLE 8

Association between Earnings Management and CSR Using Domini 400 Social Index

Panel A: Descriptive Statistics of Variables: DSI400 versus Control Firms

	DSI400 Firms			Control Firms			Difference Tests: p-value	
	n	Mean	Median	n	Mean	Median	t-test	Wilcoxon test
Dependent Variables								
<i>ABS_DA</i>	4,623	0.180	0.062	4,623	0.195	0.071	0.011	< 0.001
<i>DA</i>	4,623	0.001	0.013	4,623	0.014	0.021	0.146	0.018
<i>AB_CFO</i>	4,623	0.113	0.079	4,623	0.108	0.069	0.403	0.006
<i>AB_PROD</i>	4,623	-0.117	-0.090	4,623	-0.052	-0.040	< 0.001	< 0.001
<i>AB_EXP</i>	4,623	-0.030	-0.033	4,623	-0.102	-0.090	< 0.001	< 0.001
<i>COMBINED_RAM</i>	4,623	0.239	0.118	4,623	0.093	-0.001	< 0.001	< 0.001
Other Variables								
<i>CSR_SCORE</i>	4,623	1.510	1.000	4,623	-0.185	0.000	< 0.001	< 0.001
<i>SIZE</i>	4,623	7.327	7.398	4,623	7.298	7.270	0.328	0.011
<i>MB</i>	4,623	3.920	2.683	4,623	3.252	2.438	< 0.001	< 0.001
<i>ADJ_ROA</i>	4,623	0.062	0.047	4,623	0.032	0.044	< 0.001	0.221
<i>BIG4</i>	4,623	0.980	1.000	4,623	0.953	1.000	< 0.001	< 0.001
<i>LEV</i>	4,623	0.162	0.147	4,623	0.197	0.172	< 0.001	< 0.001
<i>EO</i>	4,623	0.035	0.000	4,623	0.049	0.000	< 0.001	< 0.001
<i>RD_INT</i>	4,623	0.037	0.008	4,623	0.042	0.003	0.089	< 0.001
<i>AD_IND_INT</i>	4,623	0.029	0.018	4,623	0.029	0.018	1.000	1.000
<i>GOVERNANCE</i>	4,623	-0.324	0.000	4,623	-0.209	0.000	< 0.001	< 0.001
<i>FIRM_AGE</i>	4,623	3.162	3.296	4,623	2.621	2.639	< 0.001	< 0.001
<i>Age of firm</i> (in years)	4,623	28.790	26.000	4,623	19.790	13.000	< 0.001	< 0.001
<i>ADMIRE</i>	4,623	0.313	0.000	4,623	0.167	0.000	< 0.001	< 0.001
<i>ROA</i>	4,623	0.065	0.067	4,623	0.062	0.066	0.260	0.700

Panel B: Regressions Based on Domini 400 Social Index (n = 9,246)

	<i>ABS_DA</i> Coefficient (t-stat)	<i>COMBINED_RAM</i> Coefficient (t-stat)	<i>AAER against CEO/CFO</i> Coefficient (Z-stat)
<i>CSR_DSI400</i>	-0.034 (-2.85)***	0.145 (5.95)***	-0.907 (-2.26)**
<i>COMBINED_RAM</i>	0.137 (2.67)***		-0.064 (-0.27)
<i>ABS_DA</i>		0.520 (2.43)**	-0.010 (-0.07)
Control variables	included	included	included
Industry dummies	included	included	included
Adj. R ²	0.204	0.162	
Max-Rescaled R ²			0.127
Likelihood Ratio			-417.27

, * Indicate statistical significance at the 0.05 and 0.01 levels, respectively, based on two-tailed tests.

DSI400 Firms are those included in the Domini 400 Social Index in a given year (for having passed the "social screen"). *CSR_DSI400* is an indicator variable that takes a value of 1 if a firm is included in the Domini 400 Social Index in a given year (for having passed the "social screen"), and 0 otherwise. Other variables are defined in Appendix B. In Panel B, all test statistics and significance levels are calculated based on the standard errors adjusted by a two-dimensional cluster at the firm and year levels.

TABLE 9
Earnings Management Activities of *SUSPECT* Firms: CSR versus Non-CSR Firms

Earnings Management Proxy	CSR Firms		Non-CSR Firms		Difference Test: p-value	
	Mean	Median	Mean	Median	t-test	Wilcoxon test
Earnings Management to “Just” Avoid Reporting Losses						
n	54		230			
<i>ABS_DA</i>	0.101	0.042	0.257	0.101	< 0.001	< 0.001
<i>AB_CFO</i>	0.023	0.005	-0.003	0.022	0.450	0.938
<i>AB_PROD</i>	-0.022	-0.044	-0.013	-0.022	0.818	0.960
<i>AB_EXP</i>	0.030	-0.061	-0.188	-0.071	< 0.001	0.065
<i>COMBINED_RAM</i>	0.075	-0.012	-0.178	-0.091	< 0.001	0.007
Earnings Management to Meet or Beat Last Year’s Net Income						
n	522		950			
<i>ABS_DA</i>	0.169	0.062	0.211	0.074	0.001	0.014
<i>AB_CFO</i>	0.107	0.084	0.120	0.066	0.463	0.250
<i>AB_PROD</i>	-0.097	-0.069	-0.053	-0.037	0.002	< 0.001
<i>AB_EXP</i>	-0.070	-0.076	-0.134	-0.087	0.007	0.018
<i>COMBINED_RAM</i>	0.135	0.045	0.039	0.002	0.003	0.012
Earnings Management to “Just” Meet or Beat Analyst Forecasts by One Cent per Share						
n	1,063		1,840			
<i>ABS_DA</i>	0.199	0.076	0.243	0.107	< 0.001	< 0.001
<i>AB_CFO</i>	0.173	0.114	0.133	0.092	0.003	< 0.001
<i>AB_PROD</i>	-0.165	-0.130	-0.108	-0.075	< 0.001	< 0.001
<i>AB_EXP</i>	-0.046	-0.056	-0.109	-0.069	< 0.001	0.040
<i>COMBINED_RAM</i>	0.291	0.174	0.133	0.064	< 0.001	< 0.001

In the first section, firm-year observations where net income before extraordinary items scaled by total assets lies in the interval $[0, 0.005]$ are identified as *SUSPECT* firm-years. In the second section, firm-year observations where change in net income before extraordinary items scaled by total assets lies in the interval $[0, 0.005]$ are identified as *SUSPECT* firm-years. In the third section, firm-year observations where analyst forecast error, defined as actual earnings per share less the consensus forecast of earnings per share, is one cent per share or less are identified as *SUSPECT* firm-years. A firm is defined as a CSR firm if the firm has a positive net score of CSR ratings, measured as total strengths minus total concerns, based on KLD’s five social rating categories: community, diversity, employee relations, environment, and product; and a non-CSR otherwise. Significances of means and medians are evaluated based on the t-test and Wilcoxon test, respectively (p-values for the t-statistic and Z-statistic are two-tailed). Variables are defined in Appendix B.

For all three benchmarks, the *SUSPECT* CSR firms experience significantly lower discretionary accruals (*ABS_DA*) as compared to *SUSPECT* non-CSR firms.²⁵ Similarly, the results from the analysis of real activities manipulation behavior reveal that the *SUSPECT* CSR firms that just managed to meet-or-beat last year’s earnings (second section), as well as those that managed to meet or beat the consensus analyst forecast (third section) have significantly higher levels of *AB_EXP* and *COMBINED_RAM*, and lower levels of *AB_PROD*. This evidence indicates that the *SUSPECT* CSR firms have lower income-increasing real activities manipulation than the *SUSPECT* non-CSR firms. In all three benchmarks, we observe that the number of CSR firms in the

²⁵ Using multinational data, Chih et al. (2008) also show that CSR firms are less likely to engage in earnings loss avoidance.

SUSPECT firm category is fewer than that of non-CSR firms. Overall, these results suggest that CSR firms tend to make less opportunistic accounting decisions in their financial reporting in the face of potential benchmark incentives.

Alternative Measures of Financial Performance as Control Variables

As discussed earlier, financial performance is potentially an alternative explanation for a negative association between CSR and earnings management. We control for the effect of financial performance in several ways. Following [Kothari et al. \(2005\)](#), we estimate accrual-based earnings management after controlling for financial performance (i.e., ROA). We also control for the level of industry-mean-adjusted operating performance in our multivariate analyses. For the analysis with Domini 400 Social Index, to ensure that our results are not driven by different financial performance between CSR and non-CSR firms, we match non-CSR control firms based on operating performance.

In this section, we consider various proxies for corporate financial performance to further rule out economic slack as an alternative explanation for our results. We estimate our regressions including such financial performance proxies as ROA, industry-mean-adjusted ROA, buy-and-hold returns, and buy-and-hold market-adjusted returns. Because CSR is typically a long-term process, we measure various proxies of financial performance in the prior year and over the three-year period ending year $t-1$. Our tabulated results are from regressions controlling for industry-mean adjusted ROA at $t-1$. Untabulated results with seven alternative financial performance measures are similar to our tabulated results. Thus, it is unlikely that our reported results are driven by firms with financial resources that invest in CSR and also engage less in earnings management.

Analysis of Institutional Investment and Analysts' Coverage as Additional Controls

Prior studies ([Rajgopal et al. 2002](#); [Roychowdhury 2006](#)) suggest that institutional investors constrain earnings management in the firms in which they invest. [Waddock and Graves \(1994\)](#) also find a positive association between institutional ownership and corporate social performance. [Johnson and Greening \(1999\)](#) provide evidence that corporate social performance is positively associated with pension fund equity. These results suggest that institutional ownership significantly influences the firms' accounting decisions and CSR activities. Analyst following is another proxy for the level of monitoring that may influence the CSR firm's earnings management (e.g., [Yu 2008](#)). Institutional investment and analyst following could explain the observed negative association between CSR and earnings management proxies.²⁶ To control for these effects, we conduct regression analyses including two additional controls: institutional holdings and analyst coverage. Including these controls significantly reduces our sample. However, untabulated results reveal that inclusion of two additional variables in our models does not change our results.²⁷

Analysis of an Alternative Measure of Accruals Quality

[Dechow and Dichev \(2002\)](#) propose a measure of accruals quality determined by the extent to which working capital accruals map into operating cash flow realizations. To examine whether our results are robust to this alternative measure of accruals quality, we calculate a measure of accruals

²⁶ We thank an anonymous reviewer for bringing this issue to our attention.

²⁷ Executive compensation may induce managers' opportunistic behaviors ([Cohen et al. 2008](#)). To control for this effect, we replicate our multiple regression analyses including compensation-related control variables (i.e., bonus, stock options, and the aggregate number of shares held by the executive at year-end). We find the results (untabulated) qualitatively unchanged.

quality (AQ) and run regression model (1) by replacing ABS_DA with AQ as the dependent variable.²⁸ This alternative test yields virtually the same results. In untabulated results, we find a significant negative relation between CSR_SCORE and AQ , consistent with those reported in Table 3.

V. CONCLUSIONS

We examine whether CSR firms behave differently in making accounting and operating decisions, thereby delivering more transparent financial information to investors. We hypothesize that CSR firms that expend effort and resources in implementing CSR practices to meet ethical expectations of society are likely to provide more transparent financial information. Alternatively, if managers engage in CSR in pursuit of their self-interest or to conceal the effects of corporate misconduct, they could mislead stakeholders with opportunistic financial reporting.

Our findings support the premise that CSR firms are less likely to engage in aggressive earnings management through discretionary accruals and/or real activities manipulation. We also find evidence that CEOs/CFOs of the CSR firms are less likely to be subject to SEC investigations of GAAP violations as reported in AAERs. Our results suggest that CSR in various dimensions plays an important role in constraining earnings management. Interestingly, we find that, while CSR strengths significantly relate to real activities manipulation and AAERs, accrual-based earnings management appears more attributable to CSR concerns rather than strengths. Taken together, our evidence suggests that CSR firms tend to be more conservative in accounting and operating decisions, providing more transparent financial information, and subcategories of KLD ratings provide distinct implications about firms' financial reporting practices.

Our results hold after we control for alternative determinants of earnings management and CSR and potential substitution between accrual-based earnings management and real activities manipulation. Our results are also robust to the use of DSI400 designation as an alternative proxy for CSR, the use of full control samples, various measures of financial performance, and controls for several other potential confounding factors. The results are also robust to the use of an alternative measure of accruals quality.

Overall, our results are consistent with the *transparent financial reporting* hypothesis, which is in line with the notion that CSR activities are motivated by managers' incentives to be honest, trustworthy, and ethical. To the extent that our results hold after controlling for reputation and financial performance, two other CSR incentives that might explain the negative relation between CSR and earnings management, the evidence in our study lends support to the argument that CSR firms are more prudent in financial reporting to serve the interests of all stakeholders. We consider our findings with regard to financial transparency a first step in a stream that examines issues such as ethics and reputation as factors affecting corporate financial reporting. Further, CSR firms seem to consider the long-term view, which begs the empirical question of CSR firms' longer-term corporate financial performance. We look forward to future research addressing these issues.

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²⁸ We estimate the cross-sectional version of the Dechow and Dichev (2002) model used in Francis et al. (2005) and calculate AQ as the standard deviation of residuals from the following industry-specific regressions: $\Delta WC_t = \alpha_0 + \alpha_1 CFO_{t-1} + \alpha_2 CFO_t + \alpha_3 CFO_{t+1} + \alpha_4 \Delta Rev_t + \alpha_5 PPE_t + \varepsilon_t$, where ΔWC is change in working capital, measured as Δ Accounts Receivable + Δ Inventory – Δ Accounts Payable – Δ Taxes Payable + Δ Other Assets, CFO is cash flow from operations, ΔRev is changes in net sales, and PPE is the current year gross level of property, plant, and equipment.

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APPENDIX A

MEASUREMENT OF EARNINGS MANAGEMENT PROXIES

Discretionary Accruals

Following DeFond and Subramanyam (1998) and Kothari et al. (2005), we use the residuals from the annual cross-sectional industry regression model as estimates of firm i 's discretionary accruals. Following Kothari et al. (2005), we augment the modified Jones model by including ROA_{t-1} to avoid potential misspecification, thereby enhancing the reliability of inferences from

discretionary accrual estimates. Specifically we estimate the following regression:

$$TA_{it}/A_{it-1} = \alpha_0(1/A_{it-1}) + \alpha_1(\Delta REV_{it} - \Delta REC_{it})/A_{it-1} + \alpha_2 PPE_{it}/A_{it-1} + \alpha_3 IBXI_{it-1}/A_{it-1} + \varepsilon_{it}, \quad (\text{A-1})$$

where:

- TA_{it} = total accruals for a firm i at year t ;
- ΔREV_{it} = change in net revenues in year t from year $t-1$;
- ΔREC_{it} = change in net receivables;
- PPE_{it} = gross property, plant, and equipment;
- $IBXI_{it-1}$ = income before extraordinary items at year $t-1$; and
- A_{it-1} = lagged total assets.

Real Activities Manipulation

Following prior studies (e.g., Roychowdhury 2006; Cohen et al. 2008), sales manipulations are expected to lead to lower current-period operating cash flows. We use Roychowdhury's (2006) model to estimate the normal level of operating cash flows:

$$CFO_t/A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \beta_1(S_t/A_{t-1}) + \beta_2(\Delta S_t/A_{t-1}) + \varepsilon_t, \quad (\text{A-2})$$

where:

- CFO_t = cash flow from operations in year t ;
- A = total assets;
- S = net sales; and
- $\Delta S = S_t - S_{t-1}$.

For every firm-year, abnormal cash flow from operations (AB_CFO) is the residual (i.e., ε_t) from the corresponding industry-year model and the firm-year's sales and lagged assets.

Another measure of real activities manipulation is abnormal production costs. Prior studies (Roychowdhury 2006; Cohen et al. 2008; Badertscher 2011; Zang 2012) define production costs as the sum of $COGS$ and change in inventory during the year, and they express expenses as a linear function of contemporaneous sales. Following these studies, we estimate the following model for normal $COGS$:

$$COGS_t/A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \beta(S_t/A_{t-1}) + \varepsilon_t, \quad (\text{A-3})$$

where $COGS_t$ = the cost of goods sold in year t . Similarly, we estimate the model for normal inventory growth using the following equation:

$$\Delta INV_t/A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \beta_1(\Delta S_t/A_{t-1}) + \beta_2(\Delta S_{t-1}/A_{t-1}) + \varepsilon_t, \quad (\text{A-4})$$

where ΔINV_t is the change in inventory in year t . Following Roychowdhury (2006), Cohen et al. (2008), Badertscher (2011), and Zang (2012), we define production costs as $PROD_t = COGS_t + \Delta INV_t$. Using Equations (A-3) and (A-4), we estimate normal production costs from the following equation:

$$PROD_t/A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \beta_1(S_t/A_{t-1}) + \beta_2(\Delta S_t/A_{t-1}) + \beta_3(\Delta S_{t-1}/A_{t-1}) + \varepsilon_t, \quad (\text{A-5})$$

Abnormal production cost (AB_PROD) is the residual from the model.

The third measure of real activities manipulation is the abnormal discretionary expenses. Following Roychowdhury (2006), Cohen et al. (2008), Badertscher (2011), and Zang (2012), we estimate the normal level of discretionary expenses using the following equation:

$$DISEXP_t/A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \beta(S_{t-1}/A_{t-1}) + \varepsilon_t, \quad (\text{A-6})$$

where $DISEXP_t$ is the discretionary expenses in year t , defined as the sum of R&D, Advertising, and SG&A expenses. For every firm-year, abnormal discretionary expenditure (AB_EXP) is the residual from the model.

Following Cohen et al. (2008), we also construct the combined measures of real activities manipulation by aggregating the three individual real activities manipulation proxies, AB_CFO , AB_PROD , and AB_EXP . Considering the direction of each real activities manipulation components, the combined measure, $COMBINED_RAM$, is calculated as $AB_CFO - AB_PROD + AB_EXP$.

APPENDIX B
Variable Definitions

Variable	Definition
Dependent Variables	
<i>ABS_DA (DA)</i>	absolute value of discretionary accruals (signed discretionary accruals), where discretionary accruals are computed using the modified Jones model including lagged ROA as a regressor;
<i>AB_CFO</i>	level of abnormal cash flows from operations;
<i>AB_PROD</i>	level of abnormal production costs, where production costs are defined as the sum of cost of goods sold and the change in inventories;
<i>AB_EXP</i>	level of abnormal discretionary expenses, where discretionary expenses are the sum of R&D expenses, advertising expenses, and SG&A expenses;
<i>COMBINED_RAM</i>	sum of real activities manipulation proxies, measured as $AB_CFO - AB_PROD + AB_EXP$; and
<i>AAER</i>	an indicator variable that takes a value of 1 if the firm is subject to SEC enforcement actions, and 0 otherwise.
Variables of Interest	
<i>CSR_SCORE</i>	net score of CSR rating, measured as total strengths minus total concerns, based on five social rating categories of KLD ratings data: community, diversity, employee relations, environment, and product; and
<i>CSR_DSI400</i>	an indicator variable that takes a value of 1 if a firm is included in the Domini 400 Social Index in a given year (for having passed the “social screen”), and 0 otherwise.
Control Variables	
<i>SIZE</i>	natural logarithm of the market value of equity (MVE);
<i>MB</i>	market-to-book equity ratio, measured as MVE/BVE, where BVE is the book value of equity;
<i>ADJ_ROA</i>	industry mean-adjusted ROA in the previous year, where ROA is measured as income before extraordinary items, scaled by lagged total assets;
<i>BIG4</i>	an indicator variable that takes a value of 1 if the firm is audited by a Big 4 auditor, and 0 otherwise;
<i>LEV</i>	long-term debt scaled by total assets;
<i>EO</i>	an indicator variable that takes on a value of 1 if the firm has equity offerings in the following year, and 0 otherwise;
<i>RD_INT</i>	R&D intensity, (R&D expense/net sales), for the year;
<i>AD_IND_INT</i>	advertising intensity for the two-digit SIC code industry for the year;
<i>GÖVERNANCE</i>	net score of KLD ratings in the governance category, measured as the number of strengths minus the number of concerns;
<i>FIRM_AGE</i>	natural logarithm of (1 + the number of years since the firm first appears in the CRSP database); and
<i>ADMIRED</i>	an indicator variable that takes a value of 1 if the firm is listed in <i>Fortune’s America’s Most Admired Companies</i> , and 0 otherwise.

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