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Corporate social responsibility disclosure and financial transparency: Evidence from India

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ABSTRACT

Disclosures are expected to foster financial transparency and improve the quality of information available to investors. Previous research has examined the role of non-financial disclosures in achieving this goal. Corporate social responsibility (CSR) disclosure has been widely employed as representative of non-financial disclosure. Recent legislation in some countries mandating non-financial disclosure makes this debate even more pertinent. We investigate the role of CSR disclosure in financial transparency in India, where mandatory CSR disclosure is required for firms to meet the thresholds set by the Companies Act 2013. Our investigation straddles mandatory disclosure regime and considers different classes of investors. Our findings suggest that CSR disclosure improves financial transparency during mandatory disclosure regime. We also find that ownership by the retail investors strengthens the association between CSR disclosure and financial transparency. However, we fail to document any significant effects of ownership by the institutional investors on the association between CSR disclosure and financial transparency.

1. Introduction

Financial transparency refers to the true reflection of the economic performance of a firm through reporting earnings numbers in its financial statements. Firms are held accountable for financial transparency through legal, regulatory, and accounting policies that aim to ensure investors are informed and protected. Chih et al. (2008) note that a firm's financial transparency is not only important to its shareholders, but also to its other stakeholders such as employees, customers, and communities because by mitigating information asymmetry, highly transparent financial information can protect outsiders from exploitation by the information advantage of insiders. Financial transparency is highly important to regulators, investors and financial-report users, which motivates researchers to identify its drivers and correlated factors. While past studies focus on assessing the drivers of financial transparency from an agency, institutional, and signaling conceptual lenses (Leuz et al., 2003; Koh, 2007; Peasnell et al., 2005), few studies examine how firms' social obligations are associated with financial transparency.

Previous research suggests that firms' social obligations encompass economic, legal, ethical, and discretionary responsibilities. Theories such as stakeholder management and corporate citizenship suggest that firms are not only obligated to undertake corporate social responsibility (CSR), but are also expected to disclose information on CSR activities to improve transparency in financial

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reporting. Atkins (2006) argues that highly transparent financial disclosure can also be an element of a firm's social responsibility. Thus, it can be expected that firms undertaking CSR to match the ethical stance of stakeholders will provide greater transparency in their financial reports. However, an alternate argument coming from a classical principal–agent perspective is that managers may utilize CSR disclosure opportunistically (Prior et al., 2008), using information on CSR activities to mask other opportunistic behaviors. Therefore, the association between CSR disclosure and financial transparency remains a largely empirical issue.

There is limited empirical evidence on the association between CSR disclosure and financial transparency. The few past studies exploring the association between CSR disclosure and earnings management, which is an indicator of the low level of financial transparency, have documented mixed findings. For example, Prior et al. (2008) report a positive association between CSR engagement and the level of earnings management, suggesting managerial opportunistic behavior. Similarly, Chih et al. (2008) report a high level of earnings aggressiveness in socially responsible firms. However, other studies (e.g., Kim et al., 2012; Chih et al., 2008) reveal that firms that are more committed to CSR activities engage less in opportunistic behaviors and report true economic performance. In a recent study, Qian et al. (2015) find that firms that are actively engaged in philanthropic giving have higher levels of financial transparency. Most previous studies on CSR activities and financial transparency have been undertaken in the context of developed economies. Further, these studies have used the extent of CSR disclosure to measure CSR performance and have generally ignored assessing CSR in terms of the quality of disclosures, which when considered together provide a more comprehensive assessment of CSR performance (Katmon et al., 2017). Our study aims to address these gaps by assessing the association between CSR disclosure, in terms of both extent and quality, and financial transparency using data from Indian public-listed firms covering a four-year period (2014–2017).

One of the major limitations of past studies is that they have generally assumed that CSR is undertaken voluntarily by an entity, while in fact, the approach toward CSR may be purely voluntary or may be reactive and obligatory due to regulatory pressure (Aguinis and Glavas, 2012; De Villers and Alexander, 2014). Previous research suggests that it is unlikely that voluntary CSR disclosure would reliably inform the investors and other stakeholders about the CSR activities and performance because there is potential for ‘green washing’ emanating from self-reporting (Mobus, 2005). Tilt (1994) contends that voluntary CSR disclosure suffers from selectivity concerns and lack of independent verification. Because of the self-reporting nature, there is lack of visibility of substantive outcome of voluntary CSR disclosure. Mandatory CSR disclosure, on the other hand, could potentially limit the chance of ‘green washing’ by making substantive outcome of the disclosure more visible to the investors and stakeholders. It could enhance the reliability of reported information as the regulators are involved in compliance monitoring and non-compliance enforcement. In this study, we therefore explore whether there is any association between a firm's CSR disclosure and financial transparency during a mandatory CSR setting.

Previous research has also documented that ownership structure plays a role in CSR disclosure (e.g., Barnea and Rubin, 2010; Paek et al., 2013; Li and Zhang, 2010; Dam and Scholtens, 2012). Jiambalvo et al. (2002) suggest that institutional owners are sophisticated investors who are better equipped than general shareholders to predict future firm performance. Presumably, such investors base their predictions on the information available to them. Institutional investors lay greater emphasis on current profitability than do other investors (Jiambalvo et al., 2002). De Villiers and Van Staden (2010) observe that institutional investors also have access to private information about the firm. Thus, it can be expected that institutional investors will leverage their informational advantage to augment their returns from future profitability.

Unlike institutional investors, retail investors own shares for their personal accounts. Retail investors typically trade in much smaller amount and tend to trade less frequently than institutional investors do. They are less sophisticated compared to the institutional investors. They have seldom access to the corporate boardroom and have little or no influence over important corporate affairs such as disclosure practices. Retail investors therefore experience greater agency costs compared to institutional investors. Any kind of mandatory disclosure regulation such as mandatory CSR disclosure requirement could reduce agency costs for the retail investors and provide information that is more transparent and reliable. However, institutional investors have greater influence within the firm through private channels. They could get access to CSR related information including compliance with the regulation, reliability of information disclosed, CSR strategies, etc. through their own private networks. We therefore contend that they do not need to rely on CSR disclosure and consequently mandatory CSR disclosure may not have any impact on the information environment from their perspective. Since we contend that mandatory CSR disclosure may have different implication for different groups of investors, namely retail and institutional investors, from the perspective of information transparency, our study also examines the effect of ownership by different investor groups on the association between CSR disclosure and financial transparency.

The contextual background for our study is the Indian corporate environment, which constitutes a unique research setting for several reasons. First, recently the Indian Government has mandated through the Companies Act 2013 that Indian listed companies provide CSR disclosure subject to the fulfilment of certain conditions. Schedule VII of the Companies Act 2013 provides a list of activities that qualify for CSR status for purposes of the mandate. Second, there has been pressure by socially responsible investors and other stakeholders placed on firms in emerging economies to adopt a business-model approach to CSR that links CSR to firm value creation (Narwal and Singh, 2013). Third, from the perspective of government, CSR-related activities are considered critical in enabling countries such as India to foster economic development and social equity (Timane and Tale, 2012). Furthermore, there has been significant growth in the listing of Indian companies on international stock exchanges (Jackling and Johl, 2009). This development has been accompanied by a drive to attract more foreign direct investment as a means of promoting economic development which has necessitated an approach to corporate operations through providing more transparent disclosures. However, given the weak legal environment in India, from investors' perspective, it is important to understand CSR-related activities and their effect on reported financial information because CSR disclosure can be used to enable managerial opportunistic behavior. Although some studies explore the issue of CSR disclosure in emerging markets (e.g., Qian et al., 2015; Khan et al., 2013; Muttakin et al., 2015;

Katmon et al., 2017), these studies have generally been non-empirical and have considered a voluntary CSR-disclosure regime. While these studies examine possible links between corporate social performance and corporate financial performance (e.g., Mishra and Suar, 2010; Tyagi, 2013), it seems that no studies explored the association between financial transparency and CSR disclosure in India. Our study bridges this gap in the literature in the Indian context.

Using a dataset of top 100 non-financial companies (by market capitalization) listed on the Bombay Stock Exchange (BSE) over the four-year period from 2014 to 2017, this study examines the association between CSR disclosure and financial transparency. We find that CSR disclosure improves financial transparency. This suggests that firms practicing CSR will also be financially transparent because of ethical ethos. Furthermore, mandatory disclosure is likely to improve ethical dimension through scrutiny by the regulators. We also find that the positive association between CSR disclosure and financial transparency is stronger when firms have ownership by the retail investors. Retail investors are typically unsophisticated investors without having any access to the management and control over the information environment. Thus, they are likely to experience 'green washing' if CSR disclosures are presented on a voluntary basis. However, mandatory CSR regulation improves the information environment for the retail investors through compliance monitoring and non-compliance enforcement by the regulators. Our study also fails to document any significant effects of ownership by the institutional investors on the association between CSR disclosure and financial transparency. This implies that mandatory disclosure does not significantly affect the information environment of institutional investors who have access to private information of the firm.

Our examination of the CSR disclosure on financial transparency differs from and extends prior research in a number of ways. First, although mandatory CSR-disclosure regimes exist in several countries around the world including Denmark, Philippines, Indonesia, and Malaysia, the mandate in India is different from these countries and merits special attention from the researchers since it mandates both CSR expenditure and disclosure, whereas in the other countries, CSR disclosure is mandated only if CSR expenditure is incurred. Our study is therefore based on the Indian context where there is a paucity of research on the effect of CSR disclosure on financial transparency. To the best of our knowledge, our paper is the first to provide recent evidence on the effect Indian CSR disclosure on financial reporting transparency.

Second, unlike previous studies, we also extend the literature by examining the effect of a mandatory regime on the association between CSR disclosure and financial transparency. This contrasts with Chih et al. (2008) and Gelb and Strawser (2001) who explore the effect of CSR disclosure practices in the context of voluntary regimes. Third, our focus is not only on the extent of CSR disclosure, but also on the quality of CSR disclosure which we measure using an index.[1] Our measures of CSR disclosure, which are continuous variables, are also different from Chih et al. (2008) who classified the constituents in the FTSE4Good index as CSR companies, whereas the constituents in the FTSE All-World Developed index but not in the FTSE4Good Index as Non-CSR companies using just a dummy variable.

Fourth, we recognize that the effect of CSR disclosure on financial transparency could be influenced by ownership by different investor groups, namely, retail investors and institutional investors. In particular, we contend ownership by informed investors such as institutional shareholders have greater access to the private information through their personal networks. They are less likely to rely on CSR disclosures presented by a firm regardless whether the disclosure is voluntary or mandatory disclosure. Consequently, they are less likely to have any impact on the transparency of information environment of the disclosures provided by the firms. Retail investors, on the other hand, do not have access to the private information and are more likely to experience an opaque information environment when disclosures are presented on a voluntary basis. Since the regulators regularly scrutinize mandatory disclosure, which is typically presented in a standardized form could improve the transparency of the information environment. Thus, we contribute to the literature by exploring how ownership by differentially informed investors could influence the effect of CSR disclosure on financial transparency.

The remainder of this paper is organized as follows. Section 2 discusses the institutional background. Section 3 presents the literature review and develops the hypotheses. Section 4 sets out the study's methodology and discusses sample selection and model specification. Section 5 presents the results. Section 6 summarizes the major themes covered.

2. Institutional environment

The World Bank's gross domestic product (GDP) rankings for 2014 place India ninth among 194 reported countries (World Development Indicators Database, World Bank). Forecast GDP growth (as at December 2014) for South East Asia, Brazil, Russia, India, China and South Africa (BRICS) nations, estimates India to outperform all other nations in these groups. The BSE, India's premier stock exchange (which had an equity market capitalization of US$1625.19 billion in 2014, representing approximately 79% of GDP) is the tenth largest stock exchange in the world (by market capitalization). The BSE lists > 5000 companies that represent various sectors of the economy.

In 2012, the Stock Exchange Board of India (SEBI) mandated the inclusion of Business Responsibility Reports (BRR) in the audited accounts of the top 100 companies (by market capitalization). SEBI's mandate was closely followed by the Companies Act 2013, which mandated Indian firms to meet prescribed criteria to conduct and disclose CSR activity. Both the BRR and the Companies Act 2013 mandated that CSR disclosure be included in audited annual reports. The latter being more prescriptive of the two mandates specifies the data that must be disclosed as well as the presentation format to be used in the reports.

Corporate ownership in India is a mix of diverse outsider ownership and concentrated insider ownership, and similar to most

[1] Details are provided in Section 4.2.2.

developing markets, family-owned businesses and groups dominate the corporate roster. The influx of foreign companies, post-liberalization in the early 1990s, has not necessarily diluted the influence of large industrial families because they are invariably contractually integral to the host-country operations. India's diversity in corporate ownership presents an opportunity to determine the influence of mandatory CSR disclosure on different owner groups.

3. Literature review and hypothesis development

Prior literature on financial transparency focuses on the use of earnings to communicate the actual economic performance of a firm. Thus, earnings management occupies center stage in discussions about financial transparency (Chih et al., 2008; Hunton et al., 2006). Using a United States (US) sample of 18,160 firm-year observations, Kim et al. (2012) explore whether earnings quality is associated with CSR disclosure. The authors find that firms practicing CSR are less inclined to engage in earnings management. In particular, they find that firms engaged in CSR activities are less likely to pursue aggressive earnings management or real-activities management. They also find that these firms are less likely to be subject to investigations by the US Securities and Exchange Commission (SEC).

Hong and Andersen's (2011) US study uses a CSR index derived from netting off strengths and concerns recorded in the KLD database for non-financial firms. They consider positive scores to indicate socially responsible firms and zero or negative scores to indicate less socially responsible firms. They find that socially responsible firms demonstrate higher quality accruals and lower activity-based earnings management. Similarly, Laksmana and Yang (2009) use a sample of US companies ranked by *Business Ethics Magazine* as the Best Corporate Citizens (BCC), and find that earnings of BCC firms are more persistent, predictable, and smooth.

Yip et al. (2011) examine whether CSR disclosure is related to earnings management in a sample of US publicly listed food and oil and gas companies. They find a negative relationship in the oil and gas industry and a positive relationship in the food industry between CSR disclosure and earnings management. The authors conclude that the relationship between CSR disclosure and earnings management is context specific and influenced by the political environment of a firm, rather than by ethical considerations.

Using a sample of 258 firms in ten developed countries, Salewski and Zülch (2013) find that firms with a higher level of CSR are more likely to engage in earnings management and report bad news in a less timely fashion. These authors argue that firms may report more CSR activities for opportunistic reasons such as management's self-interest. In contrast, using a sample of 593 firms from 26 countries for the period 2002–2004, Prior et al. (2008) find a positive relationship between CSR and earnings management. They argue that managers who manipulate earnings for private benefit have incentives to engage in CSR activities because such activities provide a powerful tool for avoiding stakeholder pressure.

In addition, the findings of Chih et al. (2008) suggest that the type of relationship between CSR and earnings management depends on which earnings-management proxies are used. When earnings management is measured by earnings smoothing and earnings-losses avoidance, an increase in CSR disclosure moderates earnings smoothing and earnings-losses avoidance. However, when earnings management is measured by earnings aggressiveness, an increase in CSR disclosure increases earnings aggressiveness. Chih et al. (2008) refer to this as the multiple-objectives hypothesis, which suggests that socially responsible firms may manage earnings to mask their rent-seeking activities from outsiders. Finally, Chih et al. (2008) note that there can be no relationship between CSR disclosure and earnings management if earnings management is driven by institutional factors unrelated to CSR.

Based on previous research we contend that CSR disclosure is intended by the managers to demonstrate the manner in which the firm discharges its obligations under the social contract. Firms conducting business as per the social contract on the basis of trust and cooperation have an incentive to demonstrate a commitment to ethical behavior. Socially responsible firms that expend effort and resources in choosing and implementing CSR practices to meet ethical expectations under the social contract are less likely to provide information that is not financially transparent and does not reflect true economic performance. Therefore, it can be expected that a firm that practices CSR will also demonstrate financial transparency as part of its ethical ethos. However, past studies have examined the association between CSR disclosure and earnings management and or earnings quality using voluntary disclosure regimes. Since voluntary CSR disclosure lacks independent verification, it could be unreliable and might suffer from selectivity concern (Tilt,1994). Self-reported voluntary disclosure therefore could result in ‘green washing’. The regulators for compliance monitoring and non-compliance enforcement, on the other hand, closely scrutinize mandatory CSR disclosure. It could therefore present the substantive outcome of CSR disclosures to the investors and stakeholders in a more visible form and mitigate the chance of ‘green washing’. Accordingly, we contend that mandatory disclosure is likely to improve ethical dimension through scrutiny by the regulators resulting in transparent information environment.

Thus, the first hypothesis is proposed:

H1. Financial transparency is positively associated with CSR disclosure.

Not all investors have the same degree of informedness. For example, insiders, institutional investors, and analysts tend to have more information than other market participants. The existence of information asymmetry among investors results from institutional investors' superior ability to gather information about the firm (Shleifer and Vishny, 1986) and/or retail investors' inferior cognitive or processing ability (Merton, 1987).

Retail investors are typically unsophisticated investors ((Li et al., 2017). Given the high free-riding cost of monitoring, unsophisticated investors are typically not interested in being actively involved in monitoring the management. Further, the distance in communication between retail investors and management poses a challenge to retail investors in obtaining access to insider information. They cannot influence the information environment as the institutional investors do. When CSR disclosures are provided on a voluntary basis, it is unlikely that retail investors would be able to assess the credibility of such disclosures. Because of self-

reporting nature, managers could therefore use voluntary CSR disclosures for 'green washing' (Mobus, 2005). Thus, voluntary CSR disclosures could provide noisy signals and are less likely to improve information environment for the retail investors. Frijns et al. (2018) posit that retail investors are likely to have high disagreement due to dissimilar interpretations of noisy signals. It follows that low disagreement would result from a common interpretation by investors. Therefore, any security-related regulation often aims to protect the interests of retail investors, and retail investors are likely to be the beneficiaries of security-related regulation. For example, mandatory CSR disclosure introduced by the Indian Company Act 2013 could enhance the credibility of reported information as the regulators are involved in compliance monitoring and non-compliance enforcement. It could potentially mitigate the possibility of 'green washing' by making substantive outcome of the disclosure more visible to the retail investors. Furthermore, common interpretation is facilitated by standardized presentation of similar data – which is the usual consequence of mandatory disclosure requirements. Common interpretation implies that available data reveals the same underlying trends and information to its users. That in turn implies that the transparency of firm level data improves with mandatory disclosures. Given that mandatory CSR disclosure regulation ensures a minimum level of disclosure by all relevant firms, it can be contended that mandatory CSR disclosure will ensure a higher level of information transparency for retail investors. Thus, the hypothesis two is proposed:

H2. The positive association between CSR disclosure and financial transparency will be stronger for ownership by retail investors.

Roychowdhury (2006) argues that institutional investors can influence the information environment of a firm. Ajinkya et al. (2005) posit that institutional owners may have an adverse influence on firm disclosures. This could be resultant their reluctance to forego the privileges of private information and benefits. Conceivably, therefore, the presence of large institutional investors can force management to avoid reporting losses. However, such institutional investors can be sophisticated and are able to impute the long-term benefits of current actions. In this case, institutional investors will be against a firm's opaque financial reporting, particularly if they anticipate that such actions will lead to loss of firm value in the long term (Roychowdhury, 2006).

Zang (2012) documents that institutional investors constrain earnings management to an extent. The author states that this constraint is more on the use of real-activities management than the use of accruals. Givoly et al. (2010) report similar findings in their study of 538 firms in the US. Jiambalvo et al. (2002) argue that institutional investors are closer to management due to their voting powers. De Villiers and Van Staden (2010) find that institutional investors also have access to private information about the firm, which may result from their proximity to senior management. Macintosh (1993) notes that management often consult institutional investors about the firm's future plans before informing the public. In this case, it is likely that institutional investors will have prior knowledge of matters being disclosed. Consequently, it is possible that CSR reports disseminated in response to mandatory requirements contain no information that is not already known to institutional investors.

It can be contended that in a voluntary CSR disclosing regime, institutional owners with proximity to senior management can influence the nature and quality of CSR disclosure. Thus, to further their objectives, they may influence the generation of opaque financial disclosure to increase the informational disadvantage of retail investors (Ajinkya et al., 2005). However, under a mandatory CSR disclosing regime, the extent of this influence should be curtailed (Mitrione et al., 2014). Therefore, the ability of institutional investors to encourage opaque financial disclosure is less likely under a mandatory regime. Further, institutional investors may not need to rely on CSR disclosure for compliance with the regulation since they may have compliance information through other sources using private channels. Ajinkya et al. (2005) find that though regulation may reduce the ability of firms to communicate private information to selected investors, the reduction is not significant. This implies that mandatory disclosure need not significantly affect the information environment of institutional investors who have access to private information. Thus, the hypothesis three is proposed:

H3. There is no significant impact of ownership by institutional investors on the association between CSR disclosure and financial transparency.

4. Research design

4.1. Sample and data

This study utilizes a sample of top 100 non-financial and non-state-owned Indian companies (by market capitalization) listed on the BSE. The focus on large companies is mainly due to the likelihood of them being affected most by the mandate. Prior research has employed a similar size (e.g., De Klerk and De Villiers, 2012; Murray et al., 2006). The sample is drawn from the ProwessIQ database maintained by the Centre for Monitoring Indian Economy Pvt. Ltd. (CMIE). Financial and ownership data are collected through ProwessIQ. CSR disclosure data are hand collected from annual reports of the companies, and stand-alone CSR/sustainability reports where available (accessing the BSE website).

Data spanning four years (2014–2017) are downloaded for 400 firm-year observations. Exclusion of some companies due to incomplete data results in a final sample of 363 observations. The commencement year of this study is 2014 because the passing of the Companies Act 2013 led to mandatory CSR disclosure from 1 April 2014.

Table 1 depicts the distribution of data points across industries. The sample consists of 12 industries with a reasonably equitable share of firm-year observations in each. The highest number of observations is from the engineering services, and the construction and building materials industry, while the lowest number of observations is from the media and publishing industry.

Table 1
Industry wise sample distribution.

Industry	Observations
Chemicals	16
Computer Software and Services	26
Consumer Products and Tobacco	52
Drugs and Healthcare	48
Electrical utilities waterworks, supply, gas, and telecommunications	40
Engineering Services, Construction and Building Materials	54
Industrial Manufacturing, Textile and Automobiles	32
Iron, Steel and Metals	24
Machinery and Industrial Equipment	21
Media and Publishing	12
Oil and Petroleum	15
Others	23
Total	363

This table lists the sample consists of industries listed on BSE from 2014 to 2017.

4.2. Model specification

To test H1, this study adapts Qian et al. (2015) and employs the following regression equation:

$$FINTPY = \beta_0 + \beta_1 CSRD + \beta_2 BIG4 + \beta_3 BIND + \beta_4 SIZE + \beta_5 MTB + \beta_6 LEV + \beta_7 AGE + \beta_8 INDUS + \beta_9 YEAR + \varepsilon \quad (1)$$

To test H2, following regression equation is used.

$$FINTPY = \beta_0 + \beta_1 CSRD + \beta_2 OWNR + \beta_3\, CSRD * OWNR + \beta_4 BIG4 + \beta_5 BIND + \beta_6 SIZE + \beta_7 MTB + \beta_8 LEV + \beta_9 AGE + \beta_{10} INDUS + \beta_{11} YEAR + \varepsilon \quad (2)$$

To test H3, following regression equation is used.

$$FINTPY = \beta_0 + \beta_1 CSRD + \beta_2 OWNI + \beta_3\, CSRD * OWNI + \beta_4 BIG4 + \beta_5 BIND + \beta_6 SIZE + \beta_7 MTB + \beta_8 LEV + \beta_9 AGE + \beta_{10} INDUS + \beta_{11} YEAR + \varepsilon \quad (3)$$

In the above models, the dependent variable financial transparency (FINTPY) is proxied by earnings aggressiveness (EA), earnings smoothing (ES), and loss avoidance (LA). Although most of the prior research uses abnormal accruals as a proxy for financial transparency, they are also recognized to be a noisy proxy (Menon and Williams, 2004). We therefore use parsimonious proxies of financial transparency which are consistent with the previous studies (Qian et al., 2015; Chih et al., 2008). Following Qian et al. (2015), financial transparency is considered the opposite of financial opacity. All of the three proxies are measures of opaque financial reporting. Therefore, lower levels of earnings aggressiveness, earnings smoothing, and loss avoidance are considered to indicate a higher level of financial transparency. Details of the variables and the expected directions of the coefficients are provided below.

4.2.1. Dependent variables

As previously discussed we use three proxies of financial transparency: earnings aggressiveness (EA), earnings smoothing (ES), and loss avoidance (LA). We follow Qian et al. (2015) and use the following measure for earnings aggressiveness (EA).

$$EA = (\Delta TA - \Delta CL - \Delta CASH + \Delta STD - DEP + TP)/LTA \quad (4)$$

Where *EA* is earnings aggressiveness, ΔTA is change in total assets, ΔCL is change in total current liability, ΔSTD is change in short term debt, DEP is depreciation and amortization expense, *TP* is tax payable and *LTA* is lagged total assets.

We follow previous research (Myers et al., 2007; Leuz et al., 2003) and use the following measure to estimate earnings smoothing (ES).

$$ES = STDNI/STDOCF \quad (5)$$

Where *ES* is earnings smoothing, *STDNI* is standard deviation of net income, *STDOCF* is standard deviation of cash flow from operations (Myers et al., 2007; Leuz et al., 2003).

Finally, we use loss avoidance *(LA)* as our third proxy of financial transparency. Consistent with previous research *LA* is a dummy variable that equals 1 if the profitability is between 0 and 2%, and 0 otherwise (Carey and Simnett, 2006; Menon and Williams, 2004).

4.2.2. Independent variables

CSR disclosure (CSRD) is measured as a composite of the extent (CSR_E), and quality (CSR_QL) of CSR disclosure is measured using an index that follows previous research (e.g., Muttakin and Subramaniam, 2015; Khan et al., 2013). In addition to data from

annual reports and stand-alone reports of companies, CSR measures employed by regulations specific to India (e.g., Companies Act, 2013) are included in the index. The index consists of eight categories (community focus, environmental focus, employee focus, health and medicine, government sponsored schemes, value added information, disclosure governance, and product/service) and altogether 42 items (see Appendix).

Extent of CSR disclosure index (CSR_E) is measured by employing an adaptation of the method used by Huang et al. (2014). In particular, any form of CSR disclosure is given a value of 1, while the absence of any form of CSR disclosure is given a value of 0. Since there are 42 items under eight categories, the maximum a company can score is 42, and scores are calculated as a ratio of the total scored by a company to the maximum score.

For quality of CSR disclosure index (CSR_QL), we adapt the rating schema employed by Cormier et al. (2010) and Katmon et al. (2017) to score the quality of CSR disclosure. That is, a score of 0 is given when no disclosure is made by the company for the item in the index, and a score of 1 is assigned when the company provides only a generic description of its CSR programs in that year. A score of 2 is given when a company discloses a quantity (non-monetary value) in a year, and a score of 3 is given when a company discloses the monetary value of their CSR programs. Since there are 42 items under eight categories, the maximum a company can score is 126 (42×3), and scores are calculated as a ratio of the total scored by a company to the maximum score.

Retail ownership (OWNR) is the percentage of shares owned by the retail investors. Institutional ownership (OWNI) is the percentage of shares owned by the institutional investors.

We will expect a negative and significant coefficient for the CSR variables in Eq. (1). In Eq. (2), our key variables are the interaction terms between CSR variables and ownership by the retail investors. We will expect larger negative (more negative) and significant coefficients for the interaction terms in Eq. (2). In Eq. (3), our key variables are the interaction terms between CSR variables and ownership by the institutional investors. We will expect insignificant coefficients for the interaction terms in Eq. (3).

4.2.3. Control variables

Firm size (SIZE) is defined as the natural logarithm of total assets (Qian et al., 2015). Larger firms are expected to attract greater attention and therefore will strive to be seen as less opaque in their transactions. Leverage (LEV) is defined as the ratio of book value of debts to book value of total assets (Muttakin and Subramaniam, 2015). Higher debt can incentivize increased transparency due to the presence of important stakeholders (creditors). Conversely, it can incentivize increased opacity to avoid scrutiny of covenant default risk.

Firm age (AGE) is defined as the natural log of number of years since inception (Muttakin and Subramaniam, 2015). Older firms can be expected to strive to leverage their tenure as evidence of society's faith in them to act as responsible citizens. A negative association is predicted between firm age and financial opacity. Big 4 auditor (BIG4) is a dummy variable that equals 1 if the auditor is a Big 4 auditors or an affiliate, and 0 otherwise (Kim et al., 2012). It is expected that big 4 firms provide greater independence from clients ensuring that they can enforce greater transparency. Market to book (MTB) ratio is measured as the market value of equity scaled by the book value of equity (Qian et al., 2015). The coefficient is expected to be negatively associated with the proxies of financial transparency. Board independence (BIND) is the percentage of independent outside board members (Qian et al., 2015). Klein (2002) finds that boards with a majority of independent directors are negatively associated with financial opacity. This study also uses dummy variables for industry and year.

5. Results

5.1. Descriptive statistics

Table 2 presents descriptive statistics. The average firm size is 11.97 which is comparable to the average firm size of a 12.30 reported in a previous Indian study by Muttakin and Subramaniam (2015). The average leverage ratio is 0.174 which is consistent with the average leverage ratio reported by Jackling and Johl (2009). The average firm age in the sample is approximately 43 years which is consistent with Muttakin and Subramaniam (2015) who document an average firm age of 40 years for their sample of Indian firms. The average score for the extent of CSR disclosure is 0.496, and 0.327 for quality of CSR disclosure. Muttakin and Subramaniam (2015) documented an average CSR disclosure score of 0.32 for their study whereas Khan et al. (2013) documented an average score of 0.23 for a sample of Bangladeshi firms. The average market to book ratio is 5.58, which is consistent with that of Jackling and Johl (2009) who reported an average market to book ratio of 4.84.

Table 3 presents the correlation matrix. The extent of CSR disclosure (CSR_E) has a negative and significant association with earnings aggressiveness and income smoothing whereas, the quality of CSR disclosure (CSR_QL) has a negative and significant association with all three measures of financial transparency. Big 4 (BIG4) audit firms appear to significantly and negatively affect the client firm's propensity to produce opaque financial reports by resorting to loss avoidance (LA). The association of the Big 4 auditors with the other two measures of financial transparency is not significant. Board independence (BIND) does not seem to have a significant influence on any of the measures of financial transparency. Firm size (SIZE) is negatively and significantly associated with all three measures of financial transparency. This implies that larger firms are less inclined to produce opaque financial reports. Market to book ratio is negatively associated with loss avoidance (LA) but positively associated with earnings aggressiveness. Leverage (LEV) is negatively associated with earnings aggressiveness but positively associated with loss avoidance. The age of the

Table 2
Descriptive statistics.

Variables	N	Mean	Median	Std dev	Q1	Q3
Earnings Aggressiveness	363	0.040	0.005	0.158	−0.045	0.086
Income Smoothing	363	1.265	0.738	1.449	0.319	1.440
Loss Avoidance	363	0.066	0	0.249	0	0
CSR_E	363	0.496	0.524	0.140	0.429	0.595
CSR_QL	360	0.327	0.349	0.103	0.254	0.397
OWNR	363	0.437	0.451	0.219	0.268	0.617
OWNI	363	0.296	0.272	0.132	0.195	0.385
Big4	363	0.369	0	0.483	0	1
BIND	363	0.529	0.500	0.095	0.500	0.571
SIZE	363	11.970	11.885	1.091	11.068	12.794
Total Assets (in millions)	363	308,000	145,000	556,000	64,100	360,000
MTB	363	5.578	3.720	5.234	1.479	7.949
LEV	363	0.174	0.113	0.191	0.004	0.296
AGE (Natural log)	363	3.577	3.526	0.607	3.091	4.094
AGE(Year)	363	42.645	34	25.095	22	60

This table shows summary statistics for the CSR disclosure and other variables used in this paper. The sample consists of firms listed on the BSE from 2014 to 2017 and includes 363 observations. The financial and corporate governance data is collected from ProwessIQ database and CSR disclosure data is hand collected from the annual reports of the companies. Earnings Aggressiveness: Scaled accruals [calculated as (Δ total current assets – Δ total current liabilities – Δ cash + Δ short term debt – depreciation + tax payable)/ Lagged total asset]; Earnings smoothing: standard deviation of net income divided by the standard deviation of cash flow from operations; Loss avoidance in current year: Net Income scaled by Total Assets; CSR_QL_{it}: Score of the quality of CSR disclosure; CSR_E_{it}: Score of the extent of CSR disclosure; $OWNR_{it}$ is the percentage of shares owned by the retail investors. $OWNI_{it}$ is the percentage of shares owned by the institutional investors. $BIG4_{it}$: indicator variable set to 1 if auditor is one of the Big 4 or their affiliate and zero otherwise; $BIND_{it}$: percentage of independent outside board members; $SIZE_{it}$: firm size (defined as the natural logarithm of total assets; MTB_{it}: market to book value measured as market value of equity scaled by the book value of equity; LEV_{it}: leverage (ratio of book value of debts to book value of total assets); AGE_{it}: firm age (natural log of number of years since inception). All financial variables are winsorized at the 1% and 99% levels.

firm has a significant and negative association with loss avoidance, suggesting that older firms may have reputational concerns that prevent them from producing opaque financial reports.[2]

5.2. Regression results

Table 4 presents the results of the regressions used to test H1. In models 1, 3, and 5 (2, 4, and 6), the associations between extent of CSR disclosure (quality of CSR disclosure) and financial transparency are measured using earnings aggressiveness, earnings smoothing, and loss avoidance, respectively.

In models 1 and 2, the extent (CSR_E) and quality (CSR_QL) of CSR disclosure demonstrate significantly negative associations with earnings aggressiveness at the 5% level. In models 3 and 4, the association between earnings smoothing and extent of CSR disclosure (CSR_E) and quality (CSR_QL) of CSR disclosure are negative and significant at the 10% and 5% level, respectively. Finally, in models 5 and 6, a similar kind of association is documented at the 5% and 10% level between loss avoidance and the extent (CSR_E) and quality (CSR_QL) of CSR disclosure, respectively.

Qian et al. (2015) find similar associations between different measures of financial transparency and corporate philanthropic giving. In fact, firms that actively engage in CSR behave responsibly not only toward their general stakeholders, but also toward their shareholders. Therefore, firms practicing CSR are ethical and socially responsible citizens that provide transparent financial disclosures. Furthermore, mandatory disclosure is likely to improve ethical dimension through scrutiny by the regulators. Thus, the negative and significant associations of extent (CSR_E) and quality (CSR_QL) of CSR disclosure with different measures of financial transparency support H1, i.e. financial transparency is positively associated with CSR disclosure during mandatory CSR disclosure regime.

Consistent with the findings of Klein (2002), board independence (BIND) is found to be negatively associated with different measures of financial transparency. Market to book (MTB) does not have any significant association with the different proxies of financial transparency. Leverage (LEV) has a significantly positive (negative) association with loss avoidance (earnings aggressiveness). This supports prior literature (e.g., Leuz et al., 2003; Chih et al., 2008). Firm age (AGE) shows significantly negative association with earnings smoothing.

Panel A of Table 5 presents the results of the regressions used to test H2. Our key variable of interest is the interaction term between the extent (quality) of CSR disclosure and ownership by the retail investors. The interaction variables are CSR_E*OWNR and CSR_QL*OWNR. We document that that the interactions of retail ownership groups (OWNR) with the extent of CSR disclosure and the quality of CSR disclosure (CSR_E*OWNR and CSR_QL*OWNR, respectively) are negative and significantly associated with earnings

[2] None of the variables have a VIF value in excess of 10 (Neter et al., 1983) which suggest that multicollinearity is not a problem in interpreting the regression results.

Table 3
Correlation of coefficients.

Variables	Earnings aggressiveness	Income smoothing	Loss avoidance	CSR_E	CSR_QL	OWNR	OWNI	BIG4	BIND	SIZE	MTB	LEV	AGE
Earnings Aggressiveness	1												
Income Smoothing	0.009	1											
Loss Avoidance	−0.171	−0.057	1										
CSR_E	−0.190***	−0.111*	−0.036	1									
CSR_QL	−0.172***	−0.126**	−0.040*	0.960***	1								
OWNR	−0.106*	−0.001	0.242	−0.143**	−0.158***	1							
OWNI	0.080	0.058	−0.146	0.191**	0.219**	−0.378**	1						
BIG4	0.031	−0.025	−0.127**	0.155**	0.147***	−0.213***	0.140**	1					
BIND	−0.047	0.013	−0.035	−0.058	−0.085	0.156**	−0.087	−0.004	1				
SIZE	−0.169***	−0.134**	−0.153**	0.403***	0.447***	0.033	0.042	0.144**	0.030	1			
MTB	0.236***	−0.001	−0.228**	−0.054	−0.081	−0.186***	−0.020	0.040	−0.084	−0.471***	1		
LEV	−0.119**	−0.020	0.224***	−0.037	−0.044	0.293***	−0.197***	−0.035	0.034	0.352***	−0.377***	1	
AGE	−0.010	0.012	−0.146**	0.268***	0.293***	−0.411***	0.320***	0.190***	−0.097**	−0.028	0.148**	−0.284***	1

The correlation matrix between all the variables used in the model is shown in this table. The sample consists of firms listed on the BSE from 2014 to 2017 and includes 363 observations. Earnings Aggressiveness: Scaled accruals [calculated as (Δ total current assets – Δ total current liabilities – Δ cash + Δ short term debt – depreciation + tax payable)/ Lagged total asset]; Earnings smoothing: standard deviation of net income divided by the standard deviation of cash flow from operations; Loss avoidance in current year: Net Income scaled by Total Assets; CSR_QL_{it}: Score of the quality of CSR disclosure; CSR_E_{it}: Score of the extent of CSR disclosure; $OWNR_{it}$ is the percentage of shares owned by the retail investors; $OWNI_{it}$ is the percentage of shares owned by the institutional investors; $BIG4_{it}$: indicator variable set to 1 if auditor is one of the Big 4 or their affiliate and zero otherwise; $BIND_{it}$: percentage of independent outside board members; $SIZE_{it}$: firm size (defined as the natural logarithm of total assets; MTB_{it}: market to book value measured as market value of equity scaled by the book value of equity; LEV_{it}: leverage (ratio of book value of debts to book value of total assets); AGE_{it}: firm age (natural log of number of years since inception). All financial variables are winsorized at the 1% and 99% levels. *, **, *** = statistically significant at < 0.10, 0.05.

Table 4
Association of financial transparency with mandatory CSR disclosure.

	(1) (2)		(3) (4)		(5) (6)	
Variables	Earnings aggressiveness (Extent)	Earnings aggressiveness (Quality)	Income smoothing (Extent)	Income smoothing (Quality)	Loss avoidance (Extent)	Loss avoidance (Quality)
Constant	−0.222*	−0.327**	5.103**	8.337***	0.983	1.748
	(0.071)	(0.011)	(0.036)	(0.000)	(0.816)	(0.681)
CSR_E	−0.112**		−2.331*		−3.176**	
	(0.025)		(0.055)		(0.015)	
CSR_QL		−0.160**		−2.564**		−3.809*
		(0.018)		(0.025)		(0.064)
Big4	−0.028	−0.030	−0.458	−0.455	−0.178	−0.219
	(0.159)	(0.131)	(0.123)	(0.133)	(0.730)	(0.666)
BIND	0.083	0.083	−4.688**	−4.972**	−8.291***	−8.500***
	(0.312)	(0.314)	(0.021)	(0.023)	(0.002)	(0.002)
SIZE	0.024**	0.024**	0.287	0.118	−0.014	−0.069
	(0.021)	(0.019)	(0.215)	(0.522)	(0.967)	(0.842)
MTB	−0.004	−0.004	0.012	0.008	−0.018	−0.021
	(0.123)	(0.128)	(0.756)	(0.841)	(0.863)	(0.843)
LEV	−0.190**	−0.198**	−0.963	−1.208	2.384	2.461*
	(0.030)	(0.027)	(0.449)	(0.335)	(0.115)	(0.094)
AGE	0.003	0.003	−0.861***	−0.899***	0.384	0.325
	(0.860)	(0.842)	(0.005)	(0.005)	(0.277)	(0.353)
Year	Included	Included	Included	Included	Included	Included
Industry	Included	Included	Included	Included	Included	Included
Observations	363	363	363	363	363	363
Adjusted R-squared/ pseudo R2	0.165	0.168	0.136	0.103	0.235	0.229

This table examines the relation between financial transparency and CSR disclosure (extent and quality). The sample consists of firms listed on the BSE from 2014 to 2017 and includes 363 observations. The financial and corporate governance data is collected from ProwessIQ database and CSR disclosure data is hand collected from the annual reports of the companies. Earnings Aggressiveness: Scaled accruals [calculated as (Δ total current assets – Δ total current liabilities – Δ cash + Δ short term debt – depreciation + tax payable)/ Lagged total asset]; Earnings smoothing: standard deviation of net income divided by the standard deviation of cash flow from operations; Loss avoidance in current year: Net Income scaled by Total Assets; CSR_QL_{it}: Score of the quality of CSR disclosure; CSR_E_{it}: Score of the extent of CSR disclosure; $BIG4_{it}$: indicator variable set to 1 if auditor is one of the Big 4 or their affiliate and zero otherwise; $BIND_{it}$: percentage of independent outside board members; $SIZE_{it}$: firm size (defined as the natural logarithm of total assets; MTB_{it}: market to book value measured as market value of equity scaled by the book value of equity; LEV_{it}: leverage (ratio of book value of debts to book value of total assets); AGE_{it}: firm age (natural log of number of years since inception). All financial variables are winsorized at the 1% and 99% levels. *P*-value in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

aggressiveness and loss avoidance at the 5% level. Furthermore, the relevant coefficients are larger, i.e. more negative. It implies that the positive association between CSR disclosure and financial transparency is stronger when firms have higher percentage of ownership by the retail investors. Thus, H2 is supported. Retail investors do not have access to the private information and experience an opaque information environment when disclosures are presented on a voluntary basis. The substantive outcome of CSR disclosure which is presented by different firms in different forms are less likely to be visible. Since the regulators regularly scrutinize mandatory CSR disclosure, which is typically presented in a standardized form, it could improve the transparency of the information environment.

Panel B of Table 5 presents the results of the regressions used to test H3. Our key variable of interest is the interaction term between the extent (quality) of CSR disclosure and ownership by the institutional investors. The interaction variables are CSR_E*OWNI and CSR_QL*OWNI. The interaction of institutional ownership (OWNI) with the extent of CSR disclosure and the quality of CSR disclosure (CSR_E*OWNI and CSR_QL*OWNI, respectively) does not yield any significant association. Our results suggest that the ownership by institutional investors does not have any significant impact on the association between CSR disclosure and financial transparency. Therefore, H3 is supported. This is consistent with the notion that ownership by informed investors such as institutional shareholders have greater access to the private information through their personal networks. They are less likely to rely on CSR disclosures presented by a firm regardless of the fact that the disclosure is mandatory disclosure. Consequently, they are less likely to have any impact on the transparency of information environment of the disclosures provided by the firms.

Among the control variables, firm size (SIZE) (large auditors (Big 4)) has positive (negative) impact on earnings aggressiveness. Leverage (LEV) has negative (positive) and significant association with earnings aggressiveness (loss avoidance). Firm age (AGE) and board independence (BIND) are negatively associated with income smoothing.

5.3. Additional analysis

5.3.1. Alternative measure of financial transparency

To test the robustness of the findings from our original models, we undertake some robustness checks. First, we create an average

Table 5
Effect of retail and institutional investors on the association mandatory CSR disclosure and financial transparency.

Panel A

	(1) (2)		(3) (4)		(5) (6)	
Variables	Earnings aggressiveness (Extent)	Earnings aggressiveness (Quality)	Income smoothing (Extent)	Income smoothing (Quality)	Loss avoidance (Extent)	Loss avoidance (Quality)
Constant	−0.393***	−0.421***	9.578**	8.507***	−1.056	−0.915
	(0.009)	(0.007)	(0.010)	(0.006)	(0.773)	(0.810)
CSR_E	0.134		−2.011		1.453	
	(0.298)		(0.695)		(0.524)	
CSR_QL		0.224		9.462		2.377
		(0.201)		(0.259)		(0.488)
OWNR	0.317**	0.331**	−4.464	4.285	2.229	1.901
	(0.037)	(0.020)	(0.238)	(0.275)	(0.328)	(0.419)
CSR_E*OWNR	−0.534**		4.080		−10.984**	
	(0.045)		(0.659)		(0.019)	
CSR_QL*OWNR		−0.849**		−19.783		−15.217**
		(0.024)		(0.183)		(0.047)
Big4	−0.043**	−0.045**	0.280	0.372	−0.342	−0.439
	(0.032)	(0.020)	(0.636)	(0.513)	(0.465)	(0.340)
BIND	0.076	0.098	−3.906	−6.135*	−1.236	−0.787
	(0.364)	(0.257)	(0.115)	(0.050)	(0.523)	(0.686)
SIZE	0.026**	0.024**	−0.127	−0.250	−0.076	−0.137
	(0.023)	(0.020)	(0.662)	(0.288)	(0.798)	(0.640)
MTB	−0.003	−0.003	−0.027	−0.010	−0.035	−0.050
	(0.259)	(0.239)	(0.560)	(0.821)	(0.575)	(0.396)
LEV	−0.207**	−0.222**	−1.829	−1.592	3.432***	3.567***
	(0.019)	(0.014)	(0.459)	(0.508)	(0.007)	(0.006)
AGE	0.009	0.014	−0.753**	−0.561*	0.133	0.184
	(0.579)	(0.351)	(0.029)	(0.090)	(0.709)	(0.610)
Year	Included	Included	Included	Included	Included	Included
Industry	Included	Included	Included	Included	Included	Included
Observations	363	363	363	363	363	363
Adjusted R-squared/ pseudo R2	0.198	0.220	0.091	0.093	0.190	0.183

Panel B

	(1) (2)		(3) (4)		(5) (6)	
Variables	Earnings Aggressiveness (Extent)	Earnings Aggressiveness (Quality)	Income Smoothing (Extent)	Income Smoothing (Quality)	Loss Avoidance (Extent)	Loss Avoidance (Quality)
Constant	−0.261	−0.278*	6.951**	11.032***	−1.072	−1.130
	(0.107)	(0.078)	(0.031)	(0.008)	(0.810)	(0.800)
CSR_E	−0.060		−1.344		−1.804	
	(0.626)		(0.671)		(0.393)	
CSR_QL		−0.050		−2.091		−2.233
		(0.766)		(0.496)		(0.508)
OWNI	−0.092		−5.116	−5.571	6.332	5.654
	(0.736)		(0.240)	(0.209)	(0.166)	(0.157)
CSR_E*OWNI	−0.094		4.746		−4.050	
	(0.810)		(0.618)		(0.649)	
CSR_QL*OWNI		−0.251		10.826		−4.408
		(0.631)		(0.443)		(0.716)
Big4	−0.042**	−0.042**	0.353	0.404	−0.267	−0.569
	(0.034)	(0.032)	(0.549)	(0.484)	(0.576)	(0.258)
BIND	0.143	0.146	−4.823	−6.718*	−1.734	−6.900***
	(0.148)	(0.141)	(0.137)	(0.055)	(0.403)	(0.002)
SIZE	0.024**	0.023**	−0.010	−0.201	−0.116	0.053
	(0.024)	(0.024)	(0.972)	(0.407)	(0.735)	(0.871)
MTB	−0.005	−0.005	−0.024	−0.033	−0.010	0.018
	(0.140)	(0.138)	(0.667)	(0.563)	(0.887)	(0.782)
LEV	−0.222**	−0.222**	−2.171	−1.768	3.829**	3.695**
	(0.025)	(0.025)	(0.386)	(0.467)	(0.012)	(0.010)
AGE	0.014	0.015	−0.450	−0.353	−0.020	−0.037

(*continued on next page*)

Table 5 (*continued*)

Panel B

	(1) (2)		(3) (4)		(5) (6)	
Variables	Earnings Aggressiveness (Extent)	Earnings Aggressiveness (Quality)	Income Smoothing (Extent)	Income Smoothing (Quality)	Loss Avoidance (Extent)	Loss Avoidance (Quality)
	(0.355)	(0.316)	(0.123)	(0.270)	(0.953)	(0.912)
Year	Included	Included	Included	Included	Included	Included
Industry	Included	Included	Included	Included	Included	Included
Observations	363	363	363	363	363	363
Adjusted R-squared/ pseudo R2	0.212	0.214	0.087	0.082	0.158	0.174

This table examines the relation between financial transparency and CSR disclosure (extent and quality). The sample consists of firms listed on the BSE from 2014 to 2017 and includes 363 observations. The financial and corporate governance data is collected from ProwessIQ database and CSR disclosure data is hand collected from the annual reports of the companies. Earnings Aggressiveness: Scaled accruals [calculated as (Δ total current assets – Δ total current liabilities – Δ cash + Δ short term debt – depreciation + tax payable)/ Lagged total asset]; Earnings smoothing: standard deviation of net income divided by the standard deviation of cash flow from operations; Loss avoidance in current year: Net Income scaled by Total Assets; CSR_QL_{it}: Score of the quality of CSR disclosure; CSR_E_{it}: Score of the extent of CSR disclosure; $OWNR_{it}$ is the percentage of shares owned by the retail investors; $OWNI_{it}$ is the percentage of shares owned by the institutional investors; $BIG4_{it}$: indicator variable set to 1 if auditor is one of the Big 4 or their affiliate and zero otherwise; $BIND_{it}$: percentage of independent outside board members; $SIZE_{it}$: firm size (defined as the natural logarithm of total assets; MTB_{it}: market to book value measured as market value of equity scaled by the book value of equity; LEV_{it}: leverage (ratio of book value of debts to book value of total assets); AGE_{it}: firm age (natural log of number of years since inception). All financial variables are winsorized at the 1% and 99% levels. *P*-value in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

percentile rank based on different measures of financial transparency. Average percentiles are calculated by assigning ranks $(1-100)$ to each of the measures for each year, and then by calculating the average for that measure.

Panel A of Table 6 presents the results of the robustness of the basic model and corresponds to Table 4 of the main results. The variables of interest are CSR_E and CSR_QL. Both CSR_E and CSR_QL display significant (at the 1% level of significance) negative association with financial transparency. This is consistent with our main results reported in Table 4.

Panel B of Table 6 presents the results of the model conducting two-way interactions with CSR disclosure and different ownership groups. Thus, the variables of interest are CSR_E*OWNR, CSR_QL*OWNR, CSR_E*OWNI and CSR_QL*OWNI. Replicating the main tests, interacting both ownership groups with CSR disclosure, we document that CSR_E*OWNR and CSR_QL*OWNR are negative and significantly associated with financial transparency. Furthermore, these coefficients are relatively larger as well. However, the interaction terms (CSR_E*OWNI and CSR_QL*OWNI) between CSR disclosure and institutional investors yield no significant associations with financial transparency.

5.3.2. Endogeneity controls

Previous studies on CSR (Cui et al., 2018; Jo and Harjoto, 2012; Ioannou and Serafeim, 2015) suggest that a firm's CSR disclosure could be an endogenous variable. To alleviate the endogeneity concerns driven by simultaneity and reverse causality, we use the instrumental variable (IV) two-stage least squares regression approach to examine the effect of CSR on financial transparency. We follow previous studies by Nguyen et al. (2019), Harjoto and Jo (2015) and Barnea and Rubin (2010) in applying an instrumental-variable approach. IV approach requires to find a variable or variables known as instrumental variable(s) that influence the first stage, but does not influence the second-stage dependent variable. For this approach the more highly correlated the IV is with the first stage dependent variable, the more precise the estimates will be. However, it is to be acknowledged that the challenge in instrumental-variable techniques is to find an appropriate instrumental variable that is correlated with CSR disclosure but unrelated to the measures of financial transparency (Cai et al., 2011). Following the previous literature, this study employs two instrumental variables for CSR. The first instrument is the industry average of CSR (e.g. Nguyen et al., 2019; Benlemlih and Bitar, 2018; El Ghoul et al., 2011; Harjoto and Jo, 2015). Harjoto and Jo (2015) argue that firm-level CSR is closely related to its industry norm, as captured by its industry-average CSR. However, it is unlikely that industry average CSR is linked to the level of financial transparency of a firm. The second instrument is a 2-year lagged CSR disclosure differential, consistent with Nguyen et al. (2019) and Cui et al. (2018).

We report first-stage regression results in Table 7. The first stage reports positive and significant coefficients for both instrumental variables. Previous research suggests that an F-statistic of the joint significance of the instruments with a value larger than 10 indicates the strength of the instruments (Staiger and Stock, 1997). The instrumental-relevance test presents an *F*-value of 92.05 for model 1 and an *F*-value of 75.50 for model 2 of Table 7, confirming the relevance of the selected instruments.

The second stage models are reported in Table 8. In panel A we explore the impact of predicted value of CSR disclosure on financial transparency. We find that both predicted value of extent of CSR disclosure (PCSR_E) and predicated value of quality of CSR disclosure (PCSR_QL) display significant and negative associations with earnings aggressiveness at the 5% level of significance and 10% level of significance respectively. We also find that predicted values of both extent and quality of CSR disclosure are negative and significantly associated with loss avoidance at the 5% level. However, we fail to document any significant association for the predicated value of CSR variables with income smoothing. Furthermore, the significant coefficients of the interaction terms are

Table 6
Association of financial transparency with mandatory CSR disclosure: Alternative proxy of financial transparency.

Panel A

	(1)	(2)
Variables	Average Percentile (Extent)	Average Percentile (Quality)
Constant	22.370*	20.752*
	(0.070)	(0.094)
CSR_E	−17.328***	
	(0.004)	
CSR_QL		−22.199***
		(0.007)
BIG4	−4.951***	−5.002***
	(0.005)	(0.005)
BIND	−16.433*	−16.556*
	(0.079)	(0.076)
SIZE	2.918***	2.802***
	(0.004)	(0.005)
MTB	0.203	0.220
	(0.329)	(0.290)
LEV	2.119	1.502
	(0.702)	(0.787)
AGE	−0.899	−0.768
	(0.539)	(0.602)
Year	Included	Included
Industry	Included	Included
Observations	363	363
Adjusted R-squared	0.082	0.079

Panel B

	(1)	(2)	(3)	(4)
Variables	Average Percentile (Extent)	Average Percentile (Quality)	Average Percentile (Extent)	Average Percentile (Quality)
Constant	11.606	9.134	25.390*	26.308*
	(0.418)	(0.529)	(0.091)	(0.074)
CSR_E	0.423		−22.249*	
	(0.975)		(0.061)	
OWNR	26.267*	35.528***		
	(0.052)	(0.007)		
CSR_E*OWNR	−47.962*			
	(0.074)			
OWNI			1.825	8.129
			(0.930)	(0.678)
CSR_E*OWNI			5.201	
			(0.896)	
CSR_QL		15.656		−23.389
		(0.398)		(0.194)
CSR_QL*OWNR		−99.635**		
		(0.011)		
CSR_QL*OWNI				−12.904
				(0.823)
Big4	−5.932***	−6.073***	−6.005***	−6.089***
	(0.001)	(0.001)	(0.001)	(0.001)
BIND	−16.689*	−19.096**	−17.468*	−18.431**
	(0.068)	(0.040)	(0.058)	(0.047)
FSIZE	2.544**	2.480**	2.495**	2.213**
	(0.018)	(0.017)	(0.025)	(0.037)
MTB	0.241	0.266	0.191	0.159
	(0.256)	(0.213)	(0.395)	(0.489)
LEV	−1.470	−0.763	−0.211	1.876
	(0.810)	(0.898)	(0.974)	(0.765)
AGE	0.011	0.611	−0.464	0.222
	(0.994)	(0.685)	(0.757)	(0.880)
Year	Included	Included	Included	Included
Industry	Included	Included	Included	Included
Observations	363	363	363	363
Adjusted R-squared	0.154	0.145	0.148	

(*continued on next page*)

Table 6 (*continued*)

Panel B				
	(1)	(2)	(3)	(4)
Variables	Average Percentile (Extent)	Average Percentile (Quality)	Average Percentile (Extent)	Average Percentile (Quality)
				0.127

The above table presents regression results for the association between financial transparency and CSR disclosure. Financial transparency has been measured using alternative proxy. Panel A presents the regression results of the relation between financial transparency (alternative proxy) and mandatory CSR disclosure (extent and quality). Panel B presents the regression results of retail and institutional investors on the association of mandatory CSR disclosure (extent and quality) and financial transparency (alternative proxy).The sample consists of firms listed on the BSE from 2014 to 2017 and includes 363 observations. The financial and corporate governance data is collected from ProwessIQ database and CSR disclosure data is hand collected from the annual reports of the companies. Earnings Aggressiveness: Scaled accruals [calculated as (Δ total current assets – Δ total current liabilities – Δ cash + Δ short term debt – depreciation + tax payable)/ Lagged total asset]; Earnings smoothing: standard deviation of net income divided by the standard deviation of cash flow from operations; Loss avoidance in current year: Net Income scaled by Total Assets; CSR_QL_{it}: Score of the quality of CSR disclosure; CSR_E_{it}: Score of the extent of CSR disclosure; $BIG4_{it}$: indicator variable set to 1 if auditor is one of the Big 4 or their affiliate and zero otherwise; $BIND_{it}$: percentage of independent outside board members; $SIZE_{it}$: firm size (defined as the natural logarithm of total assets; MTB_{it}: market to book value measured as market value of equity scaled by the book value of equity; LEV_{it}: leverage (ratio of book value of debts to book value of total assets); AGE_{it}: firm age (natural log of number of years since inception). All financial variables are winsorized at the 1% and 99% levels. P-value in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 7
First-stage least-squares regression to address endogeneity concern.

	(1)	(2)
Variables	CSR_E	CSR_Q
Constant	−0.095	−0.111*
	(0.295)	(0.066)
IND_CSR_E	0.450***	
	(0.003)	
L_CSR_E	0.539***	
	(0.000)	
IND_CSR_Q		0.456***
		(0.002)
L_CSR_Q		0.599***
		(0.000)
Big4	0.015	−0.002
	(0.223)	(0.857)
BIND	−0.003	−0.039
	(0.963)	(0.347)
SIZE	0.008	0.012**
	(0.309)	(0.028)
MTB	0.001	0.001
	(0.358)	(0.303)
LEV	−0.068*	−0.085***
	(0.083)	(0.003)
AGE	0.003	0.005
	(0.714)	(0.514)
Year	Included	Included
Industry	Included	Included
Observations	363	363
Adjusted R-squared	0.484	0.517
First-stage weak instrument test (F-value)	92.05	75.50

This table represents first-stage least-squares regression. The sample consists of firms listed on the BSE from 2014 to 2017 and includes 363 observations. The financial and corporate governance data is collected from ProwessIQ database and CSR disclosure data is hand collected from the annual reports of the companies. $IND\_CSR\_E_{it}$: Industry-median score of the extent of CSR disclosure; $IND\_CSR\_Q_{it}$: Industry-median score of the quality of CSR disclosure; $L\_CSR\_E_{it}$: 2 year lagged CSR_E; $L\_CSR\_Q_{it}$: 2 year lagged CSR_Q; $BIG4_{it}$: indicator variable set to 1 if auditor is one of the Big 4 or their affiliate and zero otherwise; $BIND_{it}$: percentage of independent outside board members; $SIZE_{it}$: firm size (defined as the natural logarithm of total assets; MTB_{it}: market to book value measured as market value of equity scaled by the book value of equity; LEV_{it}: leverage (ratio of book value of debts to book value of total assets); AGE_{it}: firm age (natural log of number of years since inception). All financial variables are winsorized at the 1% and 99% levels. *P*-value in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 8
Second stage models using 2SLS.

Panel A: Association of financial transparency with CSR disclosure

	(1) (2)		(3) (4)		(5) (6)	
Variables	Earnings Aggressiveness (Extent)	Earnings Aggressiveness (Quality)	Income Smoothing (Extent)	Income Smoothing (Quality)	Loss Avoidance (Extent)	Loss Avoidance (Quality)
Constant	−0.132	−0.245**	7.251***	5.608**	5.028	6.597
	(0.228)	(0.036)	(0.000)	(0.024)	(0.275)	(0.154)
PCSR_E	−0.106**		−2.413*		−3.197**	
	(0.026)		(0.064)		(0.042)	
PCSR_Q		−0.143*		−1.674		−4.025**
		(0.056)		(0.291)		(0.048)
Big4	−0.022	−0.024	0.268	0.262	0.178	0.140
	(0.118)	(0.120)	(0.484)	(0.422)	(0.729)	(0.782)
BIND	0.070	0.073	−3.830*	−3.669**	−7.835***	−7.715***
	(0.374)	(0.334)	(0.062)	(0.022)	(0.004)	(0.004)
SIZE	0.015*	0.018**	−0.100	0.025	−0.570	−0.649
	(0.100)	(0.047)	(0.521)	(0.895)	(0.152)	(0.105)
MTB	−0.002	−0.002	−0.026	−0.022	0.034	0.002
	(0.253)	(0.217)	(0.543)	(0.564)	(0.748)	(0.980)
LEV	−0.141**	−0.147***	0.849	0.737	2.388*	2.527*
	(0.012)	(0.001)	(0.417)	(0.425)	(0.079)	(0.099)
AGE	−0.010	−0.011	−0.314	−0.418	0.258	0.260
	(0.393)	(0.371)	(0.185)	(0.121)	(0.519)	(0.529)
Year	Included	Included	Included	Included	Included	Included
Industry	Included	Included	Included	Included	Included	Included
Observations	363	363	363	363	363	363
Adjusted R-squared/ pseudo R2	0.152	0.155	0.075	0.081	0.216	0.249

Panel B: Effect of ownership by retail investors on the association between CSR disclosure and financial transparency

	(1) (2)		(3) (4)		(5) (6)	
Variables	Earnings Aggressiveness (Extent)	Earnings Aggressiveness (Quality)	Income Smoothing (Extent)	Income Smoothing (Quality)	Loss Avoidance (Extent)	Loss Avoidance (Quality)
Constant	−0.270**	−0.286**	8.577***	7.931**	3.971	5.080
	(0.046)	(0.036)	(0.008)	(0.013)	(0.377)	(0.395)
PCSR_E	0.126		−5.019		4.938	
	(0.334)		(0.338)		(0.221)	
PCSR_Q		0.274		9.069		4.919
		(0.197)		(0.325)		(0.445)
OWNR	0.097*	0.100*	−2.249	−1.927	−2.164	−2.451
	(0.087)	(0.080)	(0.245)	(0.306)	(0.103)	(0.108)
PCSR_E *OWNR	−0.561*		11.569		−18.350**	
	(0.052)		(0.260)		(0.035)	
PCSR_Q *OWNR		−1.027**		−19.252		−23.065*
		(0.022)		(0.277)		(0.090)
Big4	−0.042**	−0.043**	0.303	0.340	−0.120	−0.187
	(0.034)	(0.026)	(0.601)	(0.557)	(0.801)	(0.684)
BIND	0.075	0.075	−4.430*	−4.391*	−6.331**	−7.482**
	(0.382)	(0.378)	(0.091)	(0.096)	(0.011)	(0.010)
SIZE	0.019*	0.020*	−0.134	−0.128	−0.165	−0.146
	(0.092)	(0.079)	(0.607)	(0.628)	(0.644)	(0.693)
MTB	−0.003	−0.003	−0.036	−0.001	−0.031	−0.023
	(0.245)	(0.272)	(0.434)	(0.982)	(0.669)	(0.752)
LEV	−0.197**	−0.209**	−1.368	−1.902	3.361**	3.589***
	(0.029)	(0.022)	(0.581)	(0.468)	(0.021)	(0.009)
AGE	0.010	0.011	−0.719**	−0.659**	−0.227	−0.348
	(0.539)	(0.505)	(0.024)	(0.032)	(0.482)	(0.339)
Year	Included	Included	Included	Included	Included	Included
Industry	Included	Included	Included	Included	Included	Included
Observations	363	363	363	363	363	363
Adjusted R-squared/ pseudo R2	0.183	0.190	0.090	0.092	0.215	0.206

(*continued on next page*)

Table 8 (*continued*)

Panel C: Effect of ownership by institutional investors on the association between CSR disclosure and financial transparency

	(1) (2)		(3) (4)		(5) (6)	
Variables	Earnings Aggressiveness (Extent)	Earnings Aggressiveness (Quality)	Income Smoothing (Extent)	Income Smoothing (Quality)	Loss Avoidance (Extent)	Loss Avoidance (Quality)
Constant	−0.230*	−0.240*	6.362**	6.479**	0.616	−0.101
	(0.089)	(0.077)	(0.031)	(0.033)	(0.866)	(0.976)
PCSR_E	−0.147		−1.827		−2.319	
	(0.193)		(0.643)		(0.403)	
PCSR_Q		−0.145		−4.960		−1.488
		(0.420)		(0.181)		(0.687)
OWNI	−0.160	−0.163	−1.041	−0.863	4.926**	4.984**
	(0.238)	(0.230)	(0.743)	(0.780)	(0.013)	(0.010)
PCSR_E *OWNI	0.219		5.842		−1.301	
	(0.506)		(0.621)		(0.899)	
PCSR_Q *OWNI		−0.016		22.493		−4.868
		(0.976)		(0.191)		(0.699)
Big4	−0.040**	−0.042**	0.354	0.379	−0.295	−0.309
	(0.046)	(0.037)	(0.543)	(0.514)	(0.549)	(0.540)
BIND	0.128	0.126	−5.025	−5.001	−0.358	0.117
	(0.198)	(0.206)	(0.122)	(0.121)	(0.872)	(0.957)
SIZE	0.022*	0.022**	−0.048	−0.063	−0.357	−0.369
	(0.052)	(0.044)	(0.853)	(0.811)	(0.225)	(0.193)
MTB	−0.005	−0.005	−0.014	−0.009	0.015	−0.009
	(0.131)	(0.135)	(0.811)	(0.875)	(0.852)	(0.888)
LEV	−0.210**	−0.212**	−1.884	−1.916	3.725**	4.108***
	(0.038)	(0.034)	(0.479)	(0.458)	(0.010)	(0.002)
AGE	0.008	0.008	−0.510	−0.553*	−0.081	−0.000
	(0.639)	(0.618)	(0.111)	(0.097)	(0.826)	(0.999)
Year	Included	Included	Included	Included	Included	Included
Industry	Included	Included	Included	Included	Included	Included
Observations	363	363	363	363	363	363
Adjusted R-squared/ pseudo R2	0.179	0.182	0.083	0.085	0.167	0.169

This table represents two-stage least-squares regression in the the effect of retail and institutional investors on the association mandatory CSR disclosure The sample consists of firms listed on the BSE from 2014 to 2017 and includes 363 observations. The financial and corporate governance data is collected from ProwessIQ database and CSR disclosure data is hand collected from the annual reports of the companiesEarnings Aggressiveness: Scaled accruals [calculated as (Δ total current assets – Δ total current liabilities – Δ cash + Δ short term debt – depreciation + tax payable)/ Lagged total asset]; Earnings smoothing: standard deviation of net income divided by the standard deviation of cash flow from operations; Loss avoidance in current year: Net Income scaled by Total Assets; $PCSR\_E_{it}$: predicated value of the extent of CSR disclosure; $PCSR\_Q_{it}$: predicated value of the quality of CSR disclosure; $OWNR_{it}$ is the percentage of shares owned by the retail investors; $OWNI_{it}$ is the percentage of shares owned by the institutional investors; $BIG4_{it}$: indicator variable set to 1 if auditor is one of the Big 4 or their affiliate and zero otherwise; $BIND_{it}$: percentage of independent outside board members; $SIZE_{it}$: firm size (defined as the natural logarithm of total assets; MTB_{it}: market to book value measured as market value of equity scaled by the book value of equity; LEV_{it}: leverage (ratio of book value of debts to book value of total assets); AGE_{it}: firm age (natural log of number of years since inception). All financial variables are winsorized at the 1% and 99% levels. P-value in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

significantly larger. In panel B, we explore the effect of ownership by the retail investor on the association between predicted value of CSR disclosure and financial transparency. We find that the interaction term of predicted value of extent of CSR disclosure and retail investor (PCSR_E*OWNR) and the interaction term of predicted value quality of CSR disclosure and retail investor (PCSR_QL*OWNR) display significant and negative associations with earnings aggressiveness at the 10% level of significance and 10% level of significance respectively. We also find that interaction variables PCSR_E*OWNR and PCSR_QL*OWNR are negative and significantly associated with loss avoidance at 10% level of significance and 5% level of significance respectively. Again, we fail to document any significant association for the interaction variables with income smoothing. Finally, in panel C we explore the effect of ownership by the institutional investor on the association between CSR disclosure and financial transparency. We fail document any significant association for the interaction variables with different measures of financial transparency. Overall, although we document relatively weaker findings for income smoothing after addressing the issue of endogeneity, our results are qualitatively similar for earnings aggressiveness and loss avoidance.

5.3.3. Change analysis

To control for unobservable time variant variables, we use a change analysis.[3] We report the results in Table 9. In panel A, our

[3] We cannot perform change analysis for loss avoidance since it is a dummy variable.

Table 9
Change Analysis.

Panel A: Association of financial transparency with CSR disclosure

	(1) (2)		(3) (4)	
Variables	ΔEarnings Aggressiveness (Extent)	ΔEarnings Aggressiveness (Quality)	ΔIncome Smoothing (Extent)	ΔIncome Smoothing (Quality)
Constant	−0.079***	−0.074***	0.560**	0.639**
	(0.000)	(0.001)	(0.030)	(0.015)
ΔCSR_E	−0.186**		−3.744***	
	(0.034)		(0.006)	
ΔCSR_QL		−0.295**		−4.323***
		(0.021)		(0.001)
Big4	−0.116	−0.124	−2.092	−2.127
	(0.270)	(0.233)	(0.366)	(0.359)
ΔBIND	−0.104*	−0.118*	−0.342	−0.058
	(0.093)	(0.062)	(0.696)	(0.946)
ΔSIZE	0.001	0.001	0.037*	0.035*
	(0.750)	(0.758)	(0.075)	(0.088)
ΔMTB	−0.027	−0.048	2.989**	2.708*
	(0.833)	(0.713)	(0.043)	(0.066)
ΔLEV	0.083	0.072	2.984	2.314
	(0.662)	(0.697)	(0.579)	(0.662)
ΔAGE	0.265	0.187	−2.887***	−2.971***
	(0.434)	(0.575)	(0.000)	(0.000)
Observations	363	363	363	363
Adjusted R-squared	0.075	0.077	0.049	0.038

Panel B: Effect of ownership by retail investors on the association between CSR disclosure and financial transparency

	High CSR_E	Low CSE_E	High CSR_Q	Low CSE_Q	High CSR_E	Low CSE_E	High CSR_Q	Low CSE_Q
Variables	ΔEarnings Aggressiveness (Extent)	ΔEarnings Aggressiveness (Extent)	ΔEarnings Aggressiveness (Quality)	ΔEarnings Aggressiveness (Quality)	ΔIncome Smoothing (Extent)	ΔIncome Smoothing (Extent)	ΔIncome Smoothing (Quality)	ΔIncome Smoothing (Quality)
Constant	−0.034	0.012	−0.040	0.021	0.398	0.744	0.798*	0.260
	(0.269)	(0.790)	(0.234)	(0.621)	(0.270)	(0.136)	(0.055)	(0.553)
Δ OWNR	−0.263***	0.203	−0.280***	0.100	1.102	−2.089	1.127	−1.155
	(0.002)	(0.265)	(0.002)	(0.515)	(0.256)	(0.291)	(0.319)	(0.465)
Big4	−0.007	−0.005	0.003	−0.029	−0.311	0.048	−0.490	0.115
	(0.805)	(0.921)	(0.938)	(0.482)	(0.376)	(0.927)	(0.241)	(0.786)
ΔBIND	0.087	0.008	0.005	0.017	−3.313	−1.194	−2.830	−1.128
	(0.672)	(0.972)	(0.980)	(0.935)	(0.164)	(0.608)	(0.275)	(0.593)
ΔSIZE	0.565***	0.218	0.470***	0.331***	−0.109	−0.594	−0.220	−0.603
	(0.000)	(0.111)	(0.001)	(0.007)	(0.937)	(0.687)	(0.897)	(0.627)
ΔMTB	−0.001	−0.008**	−0.000	−0.008**	0.040	0.036	0.041	0.037
	(0.696)	(0.011)	(0.936)	(0.011)	(0.255)	(0.278)	(0.302)	(0.214)
ΔLEV	0.121	−0.725**	0.183	−0.687**	0.085	7.608**	0.458	6.459**
	(0.563)	(0.022)	(0.419)	(0.017)	(0.972)	(0.027)	(0.871)	(0.028)
ΔAGE	0.002	−0.258	0.391	−0.484	−1.648	1.262	−8.677	7.488
	(0.998)	(0.778)	(0.591)	(0.559)	(0.825)	(0.898)	(0.336)	(0.372)
Observations	206	157	187	176	206	157	187	176
Adjusted R-squared	0.163	0.097	0.125	0.117	0.049	0.045	0.026	0.044

Panel C: Effect of ownership by institutional investors on the association between CSR disclosure and financial transparency

	High CSR_E	Low CSE_E	High CSR_Q	Low CSE_Q	High CSR_E	Low CSE_E	High CSR_Q	Low CSE_Q
Variables	ΔEarnings Aggressiveness (Extent)	ΔEarnings Aggressiveness (Extent)	ΔEarnings Aggressiveness (Quality)	ΔEarnings Aggressiveness (Quality)	ΔIncome Smoothing (Extent)	ΔIncome Smoothing (Extent)	ΔIncome Smoothing (Quality)	ΔIncome Smoothing (Quality)
Constant	−0.035	0.018	−0.043	0.027	0.399	0.706	0.794*	0.238
	(0.272)	(0.699)	(0.212)	(0.538)	(0.270)	(0.158)	(0.057)	(0.588)

(*continued on next page*)

Table 9 (*continued*)

Panel C: Effect of ownership by institutional investors on the association between CSR disclosure and financial transparency

	High CSR_E	Low CSE_E	High CSR_Q	Low CSE_Q	High CSR_E	Low CSE_E	High CSR_Q	Low CSE_Q
Variables	**Δ**Earnings Aggressiveness (Extent)	**Δ**Earnings Aggressiveness (Extent)	**Δ**Earnings Aggressiveness (Quality)	**Δ**Earnings Aggressiveness (Quality)	**Δ**Income Smoothing (Extent)	**Δ**Income Smoothing (Extent)	**Δ**Income Smoothing (Quality)	**Δ**Income Smoothing (Quality)
Δ OWNI	0.234	0.110	0.283	0.157	−0.236	0.466	0.605	−0.366
	(0.364)	(0.703)	(0.321)	(0.559)	(0.953)	(0.900)	(0.899)	(0.909)
Big4	−0.012	−0.009	0.001	−0.034	−0.285	0.060	−0.456	0.121
	(0.699)	(0.857)	(0.968)	(0.425)	(0.417)	(0.909)	(0.277)	(0.777)
ΔBIND	0.077	−0.032	−0.010	0.010	−3.290	−0.721	−2.803	−0.864
	(0.714)	(0.883)	(0.963)	(0.962)	(0.168)	(0.753)	(0.282)	(0.679)
ΔSIZE	0.609***	0.224	0.520***	0.326***	−0.282	−0.674	−0.346	−0.574
	(0.000)	(0.103)	(0.000)	(0.008)	(0.837)	(0.649)	(0.840)	(0.645)
ΔMTB	−0.001	−0.008**	−0.000	−0.007**	0.041	0.035	0.042	0.036
	(0.657)	(0.014)	(0.902)	(0.013)	(0.246)	(0.307)	(0.291)	(0.239)
ΔLEV	0.152	−0.697**	0.224	−0.655**	0.044	7.590**	0.480	6.356**
	(0.484)	(0.031)	(0.338)	(0.024)	(0.986)	(0.029)	(0.866)	(0.032)
ΔAGE	−0.030	−0.431	0.326	−0.629	−1.738	2.874	−8.419	8.582
	(0.964)	(0.635)	(0.661)	(0.443)	(0.817)	(0.768)	(0.352)	(0.301)
Observations	206	157	187	176	206	157	187	176
Adjusted R-squared	0.125	0.091	0.083	0.116	0.017	0.038	0.021	0.041

This table examines the relation between change in financial transparency and change in CSR disclosure (extent and quality). The sample consists of firms listed on the BSE from 2014 to 2017 and includes 363 observations. The financial and corporate governance data is collected from ProwessIQ database and CSR disclosure data is hand collected from the annual reports of the companies. **Δ** Earnings Aggressiveness: Scaled accruals [calculated as (Δ total current assets – Δ total current liabilities – Δ cash + Δ short term debt – depreciation + tax payable)/ Lagged total asset]; **Δ** Earnings smoothing: change in standard deviation of net income divided by the standard deviation of cash flow from operations; **Δ** CSR_QL: change in score of the quality of CSR disclosure; **Δ**CSR_E: change in score of the extent of CSR disclosure; **Δ**OWNR is the change in percentage of shares owned by the retail investors; **Δ** OWNI is the change in percentage of shares owned by the institutional investors; BIG4: indicator variable set to 1 if auditor is one of the Big 4 or their affiliate and zero otherwise; **Δ** BIND: is the change in percentage of independent outside board members; **Δ** SIZE: change in firm size (defined as the natural logarithm of total assets; **Δ** MTB: change in market to book value measured as market value of equity scaled by the book value of equity; **Δ**LEV: change in leverage (ratio of book value of debts to book value of total assets); **Δ** AGE: change in firm age (natural log of number of years since inception). All financial variables are winsorized at the 1% and 99% levels. P-value in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

dependent variables are the change in financial transparency between the years, t and t-1 and the independent variables are the change in CSR disclosures between years, t and t-1. All the other control variables are change variables with a lag except dummy variables. We find that change in CSR disclosure variable (ΔCSR_E and ΔCSR_QL) show significant effect on change in different measures of financial transparency. In panel B, we run the change analysis to test the effect of ownership by the retail investors on the association between CSR disclosure and financial transparency. To run this analysis we divide the sample into high CSR disclosure (both extent and quality) and low CSR disclosure groups based on median value. Then we use the change in financial transparency between the years, t and t-1 as the dependent variable and the change in ownership by the retail investors between years, t and t-1 as the independent variables. We find that change in ownership by the retail investor (ΔOWNR) show significant (insignificant) effect on change in earnings aggressiveness for the high (low) CSR disclosing firms. Furthermore, we fail to document any significant results for income smoothing. Finally, in panel C, we report results of the change analysis for testing the effect of ownership by the institutional investors on the association between CSR disclosure and financial transparency. To run this analysis we again divide the sample into high CSR disclosure (both extent and quality) and low CSR disclosure groups. Then we use the change in financial transparency between the years, t and t-1 as the dependent variable and the change in ownership by the institutional investors between years, t and t-1 as the independent variables. We fail to document any significant results for change in ownership by the institutional investors (ΔOWNI). Overall, our results for the change analysis are relatively weaker[4] compared to the main results reported in Tables 4 and 5.

5.3.4. Fixed effect

As part of other additional analyses to address the the possible association between financial transparency and CSR disclosure due to unobserved firm characteristics we use firm fixed effect models and rerun our analysis (Kanapathippillai et al., 2016). The results are reported in different panels in Table 10. Our results remain qualitatively similar to the main findings.

[4] One possible reason could be that we ended up with fewer observations for sub-sample groups in panels B and C.

Table 10
Firm Fixed effect regressions.

Panel A: Association of financial transparency with CSR disclosure

	(1) (2)		(3) (4)		(5) (6)	
Variables	Earnings Aggressiveness (Extent)	Earnings Aggressiveness (Quality)	Income Smoothing (Extent)	Income Smoothing (Quality)	Loss Avoidance (Extent)	Loss Avoidance (Quality)
Constant	−3.846**	−3.587**	26.913*	25.915*	−1.102	0.065
	(0.018)	(0.025)	(0.061)	(0.076)	(0.815)	(0.989)
CSR_E	−0.155		−3.890***		−4.376**	
	(0.155)		(0.008)		(0.048)	
CSR_QL		−0.349**		−3.968*		−5.490*
		(0.041)		(0.078)	(0.048)	(0.064)
Big4	−0.040	−0.058*	−0.442	−0.415	−0.204	−0.138
	(0.231)	(0.071)	(0.310)	(0.343)	(0.767)	(0.841)
BIND	−0.120	−0.181	−4.016*	−4.249**	−4.455	−8.815***
	(0.446)	(0.289)	(0.053)	(0.043)	(0.144)	(0.003)
SIZE	0.250***	0.259***	−0.885	−0.816	−0.008	0.079
	(0.004)	(0.003)	(0.442)	(0.487)	(0.983)	(0.838)
MTB	0.009	0.009	0.006	0.002	−0.081	−0.076
	(0.131)	(0.120)	(0.942)	(0.977)	(0.307)	(0.335)
LEV	−0.081	−0.111	2.495	2.312	4.447**	4.077**
	(0.601)	(0.472)	(0.235)	(0.279)	(0.018)	(0.024)
AGE	0.265	0.187	−2.887***	−2.971***	0.509	0.330
	(0.434)	(0.575)	(0.000)	(0.000)	(0.312)	(0.508)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	No	No
Observations	363	363	363	363	363	363
Adjusted R-squared/ Wald Chi2	0.189	0.180	0.184	0.172	18.35**	22.46**

Panel B: Effect of ownership by retail investors on the association CSR disclosure and financial transparency

	(1) (2)		(3) (4)		(5) (6)	
Variables	Earnings Aggressiveness (Extent)	Earnings Aggressiveness (Quality)	Income Smoothing (Extent)	Income Smoothing (Quality)	Loss Avoidance (Extent)	Loss Avoidance (Quality)
Constant	−3.901**	−3.588**	26.739	27.733	−5.640	−4.584
	(0.016)	(0.024)	(0.561)	(0.542)	(0.351)	(0.423)
CSR_E	0.184		−7.448		3.526	
	(0.356)		(0.234)		(0.451)	
CSR_QL		0.223		−2.156		3.840
		(0.454)		(0.803)		(0.527)
OWNR	0.384	0.399*	−5.827	0.024	7.948	6.069
	(0.100)	(0.079)	(0.474)	(0.997)	(0.114)	(0.170)
CSR_E*OWNR	−0.838**		11.751		−20.592**	
	(0.046)		(0.385)		(0.047)	
CSR_QL*OWNR		−1.291**		0.026		−24.756*
		(0.037)		(0.999)		(0.073)
Big4	−0.057*	−0.057*	−0.830	−0.811	−0.781	−0.753
	(0.077)	(0.074)	(0.393)	(0.406)	(0.274)	(0.274)
BIND	−0.116	−0.096	−3.798	−6.038	−9.752***	−9.319***
	(0.459)	(0.542)	(0.461)	(0.177)	(0.003)	(0.003)
SIZE	0.242***	0.243***	−3.274	−3.457	0.475	0.390
	(0.004)	(0.005)	(0.181)	(0.165)	(0.266)	(0.340)
MTB	0.010*	0.009	−0.033	−0.024	0.000	−0.005
	(0.092)	(0.102)	(0.841)	(0.887)	(1.000)	(0.948)
LEV	−0.076	−0.084	3.312	3.325	4.291**	4.348**
	(0.624)	(0.588)	(0.458)	(0.464)	(0.019)	(0.013)
AGE	0.264	0.178	5.688	5.494	0.003	0.073
	(0.433)	(0.589)	(0.557)	(0.562)	(0.996)	(0.894)
Year	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	No	No
Observations	363	363	363	363	363	363
Adjusted R-squared/ Wald Chi2	0.224	0.234	0.061	0.061	23.75**	24.15**

Panel C: Effect of ownership by institutional investors on the association CSR disclosure and financial transparency

	(1) (2)		(3) (4)		(5) (6)	
Variables	Earnings Aggressiveness (Extent)	Earnings Aggressiveness (Quality)	Income Smoothing (Extent)	Income Smoothing (Quality)	Loss Avoidance (Extent)	Loss Avoidance (Quality)
Constant	−1.534	−1.646	22.087	26.961	−2.373	−2.082
	(0.147)	(0.122)	(0.631)	(0.553)	(0.637)	(0.681)
CSR_E	−0.087		−7.109		−5.377	
	(0.708)		(0.277)		(0.181)	
CSR_QL		−0.253		−5.953		−5.355
		(0.442)		(0.527)		(0.329)
OWNI	−0.332	−0.304	−0.116	1.362	2.650	4.188
	(0.355)	(0.389)	(0.991)	(0.891)	(0.628)	(0.430)
CSR_E*OWNI	−0.138		14.040		0.954	
	(0.842)		(0.469)		(0.939)	
CSR_QL*OWNI		−0.283		12.862		−3.813
		(0.779)		(0.654)		(0.835)
Big4	−0.057*	−0.058*	−0.923	−0.861	−0.267	−0.671
	(0.082)	(0.078)	(0.342)	(0.375)	(0.672)	(0.313)
BIND	−0.143	−0.147	−3.819	−5.667	−2.705	−8.823***
	(0.372)	(0.356)	(0.452)	(0.206)	(0.354)	(0.003)
SIZE	0.152*	0.168**	−3.214	−3.425	0.142	0.315
	(0.069)	(0.048)	(0.191)	(0.170)	(0.694)	(0.396)
MTB	0.009	0.009	−0.006	−0.011	−0.030	−0.002
	(0.116)	(0.115)	(0.971)	(0.948)	(0.671)	(0.981)
LEV	−0.082	−0.094	4.734	4.329	4.829***	4.601***
	(0.607)	(0.553)	(0.296)	(0.346)	(0.005)	(0.006)
AGE	−0.009	−0.017	6.054	5.365	−0.001	−0.040
	(0.835)	(0.703)	(0.529)	(0.569)	(0.998)	(0.940)
Year	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	No	No
Observations	363	363	363	363	363	363
Adjusted R-squared/ Wald Chi2	0.189	0.201	0.066	0.066	21.69**	27.35***

This table examines the relation between financial transparency and CSR disclosure (extent and quality). The sample consists of firms listed on the BSE from 2014 to 2017 and includes 363 observations. The financial and corporate governance data is collected from ProwessIQ database and CSR disclosure data is hand collected from the annual reports of the companies. Earnings Aggressiveness: Scaled accruals [calculated as (Δ total current assets – Δ total current liabilities – Δ cash + Δ short term debt – depreciation + tax payable)/ Lagged total asset]; Earnings smoothing: standard deviation of net income divided by the standard deviation of cash flow from operations; Loss avoidance in current year: Net Income scaled by Total Assets; CSR_QL_{it}: Score of the quality of CSR disclosure; CSR_E_{it}: Score of the extent of CSR disclosure; $OWNR_{it}$ is the percentage of shares owned by the retail investors; $OWNI_{it}$ is the percentage of shares owned by the institutional investors; $BIG4_{it}$: indicator variable set to 1 if auditor is one of the Big 4 or their affiliate and zero otherwise; $BIND_{it}$: percentage of independent outside board members; $SIZE_{it}$: firm size (defined as the natural logarithm of total assets; MTB_{it}: market to book value measured as market value of equity scaled by the book value of equity; LEV_{it}: leverage (ratio of book value of debts to book value of total assets); AGE_{it}: firm age (natural log of number of years since inception). All financial variables are winsorized at the 1% and 99% levels. P-value in parentheses; *** $p < .01$, ** $p < .05$, * $p < .1$.

6. Conclusion

Financial transparency has been defined in different ways that seem to focus on the clarity of the firm-specific information provided by a firm's reported earnings and other financial data (Hunton et al., 2006; Lee et al., 2005). Financial transparency is impeded by many practices that foster opaque financial reporting such as earnings management, earnings smoothing, and loss avoidance (Qian et al., 2015; Yip et al., 2011). There seems to be no research on the association between CSR disclosure and financial transparency in Indian firms. The institutional antecedents of CSR in India mean the current study is significantly different from prior research in this area. Moreover, the present study explores the association between financial transparency and CSR disclosure during mandatory disclosure regimes. It also explores whether there exists any difference during mandatory disclosure regimes in relation to the information content available to different groups of investors.

The findings of the present study suggests that during mandatory disclosure regime CSR disclosure improves financial transparency. We also find that ownership by the retail investor has stronger impact on the positive association between CSR disclosure and financial transparency. However, the ownership by the institutional investors does not have any significant impact on the association between CSR disclosure and financial transparency. During the mandatory disclosure regime although regulation ensures a minimum level of disclosure by all relevant firms, retail investors because of relatively high level of information opacity with the management are more beneficiaries compared to the other investors. Mandatory CSR disclosures are likely to ensure a higher level of information transparency for retail investors through standardized reporting of CSR disclosure, compliance monitoring and non-compliance enforcement by the regulators. However, the absence of an increase in transparency for firms with a high level of ownership by institutional investors under a mandatory CSR disclosure regime is likely because the disclosure of firm-specific

information such owners already possess does not increase financial transparency.

The results of our study are subject to several limitations. Our study focuses only on disclosures in corporate annual reports, although it is known that management may use other mechanisms of communication. Therefore, future research may consider disclosures in other media such as in newspapers and on the internet. In addition, CSR engagement may not necessarily translate into the disclosure of this engagement. The CSR-disclosure index developed by this study may not have fully captured firms' CSR engagement. Thus, it cannot be certain that the firms that did not disclose CSR information were not engaged in CSR.

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Appendix

CSR disclosure items

Community focus	Health & medicine
Eradicating extreme hunger and poverty	Combating HIV, AIDS, malaria and other diseases
Promotion of education	GOVERNMENT SPONSORED SCHEMES
Promoting gender equality and empowering women	Contribution to PMNRF or other Central or State Govt approved fund
Employment enhancing vocational skills	Participation in environmental sustainability policy development
Protection of National Heritage, Art & Culture	Membership (Active) of UNGC program
Measures for benefit of armed forces veterans, war widows & their dependants	VALUE ADDED INFORMATION
Promotion of rural, national, Paralympic & Olympic sports	Value added statement
Social business projects	Details of value added activity
Sourcing from small local producers	Existence of policy on ethics, bribery and corruption
Promoting employment of differently abled	Law suits by stakeholders regarding unfair practises, irresponsible advertising, anti-competitive behaviour
ENVIRONMENTAL FOCUS	DISCLOSURE GOVERNANCE
Ensuring environmental sustainability	CSR department
Air pollution control	CSR Board
Waste water treatment	Independent director on CSR Board
Solid waste treatment	Standalone report
Rural development projects	PRODUCT, SERVICE
Slum area development	Product development process - sanitation
Raw material conservation and recycling	Quality awards received
Use of clean technology focusing on renewable energy	
Land reclamation or reforestation	
EMPLOYEE FOCUS	
Employee appreciation	
Employee welfare programs	
Profit sharing schemes	
Health and safety measures	
On the job training	
Training for progress	
Categories of employees trained	
Employee ownership share	
Anti-child labour measures	

References

Aguinis, H., Glavas, A., 2012. What we know and don't know about corporate social responsibility: a review and research agenda. J. Manag. 38 (4), 932–968.
Ajinkya, B.B., Bhojraj, S., Sengupta, P., 2005. The association between outside directors, institutional investors and the properties of management earnings forecasts. J. Account. Res. 43 (3), 343–376.
Atkins, B., November 28, 2006. Is corporate social responsibility responsible? Forbes Magazine. https://www.forbes.com/2006/11/16/leadership-philanthropy-charity-lead-citizen-cx_ba_1128directorship.html.
Barnea, A., Rubin, A., 2010. Corporate social responsibility as a conflict between shareholders. J. Bus. Ethics 97 (1), 71–86.
Benlemlih, M., Bitar, M., 2018. Corporate social responsibility and investment efficiency. J. Bus. Ethics 148 (3), 647–671.
Cai, Y., Jo, H., Pan, C., 2011. Voice or virtue? The impact of corporate social responsibility on executive compensation. J. Bus. Ethics 104, 159–173.
Carey, P., Simnett, R., 2006. Audit partner tenure and audit quality. Account. Rev. 81 (3), 653–676.
Chih, H.L., Shen, C.H., Kang, F.C., 2008. Corporate social responsibility, investor protection and earnings management: some international evidence. J. Bus. Ethics 79 (1–2), 179–198.
Cormier, D., Ledoux, M.J., Magnan, M., Aerts, W., 2010. Corporate governance and information asymmetry between managers and investors. Corporate Govern. 1 (5), 574–589.
Cui, J., Jo, H., Na, H., 2018. Does corporate social responsibility affect information asymmetry? J. Bus. Ethics 148 (3), 549–572.

Dam, L., Scholtens, B., 2012. Does ownership type matter for corporate social responsibility. Corporate Govern. 20 (3), 233–252.
De Klerk, M., De Villiers, C., 2012. The value relevance of corporate responsibility reporting: south African evidence. Meditari Accountancy Res. 20 (1), 21–38.
De Villers, C., Alexander, D., 2014. The institutionalization of corporate social responsibility reporting. Br. Account. Rev. 46 (2), 198–212.
De Villiers, C., Van Staden, C., 2010. Shareholders requirements for corporate environmental disclosures: a cross country comparison. Br. Account. Rev. 42 (4), 227–240.
El Ghoul, S., Guedhami, O., Kwok, C.C., Mishrs, D.R., 2011. Does corporate social responsibility affect the cost of capital? J. Bank. Financ. 35 (9), 2388–2406.
Frijns, B., Huynh, T., Tourani-Rad, A., Westerholm, P., 2018. Institutional trading and asset pricing. J. Bank. Financ. 89, 59–77.
Gelb, D.S., Strawser, J.A., 2001. Corporate social responsibility and financial disclosure: an alternative explanation for increased disclosure. J. Bus. Ethics 33 (1), 1–13.
Givoly, D., Hayn, C.K., Katz, S.P., 2010. Does public ownership of equity improve earnings quality? Account. Rev. 5 (1), 195–225.
Harjoto, M., Jo, H., 2015. Legal vs. normative CSR: differential impact on analyst dispersion, stock return volatility, cost of capital, and firm value. J. Bus. Ethics 128 (1), 1–20.
Hong, Y., Andersen, M.L., 2011. The relationship between corporate social responsibility and earnings management: an exploratory study. J. Bus. Ethics 104 (4), 461–471.
Huang, J., Xu, S., Liu, D., 2014. Empirical study on the effects of corporate social responsibility disclosure in stock liquidity. Adv. Inf. Sci. Serv. Sci. 6 (1), 62–69.
Hunton, J.E., Libby, R., Mazza, C.L., 2006. Financial reporting transparency and earnings management. Account. Rev. 81 (1), 135–157.
Ioannou, I., Serafeim, G., 2015. The impact of corporate social responsibility on investment recommendations: Analysts' perceptions and shifting institutional logistics. Strateg. Manag. J. 36 (7), 1053–1081.
Jackling, B., Johl, S., 2009. Board structure and firm performance: evidence from India's top companies. Corporate Govern. 17 (4), 492–509.
Jiambalvo, J., Rajgopal, S., Venkatachalam, M., 2002. Institutional ownership and the extent to which stock prices reflect future earnings. Contemp. Account. Res. 19 (1), 117–145.
Jo, H., Harjoto, M., 2012. The causal effect of corporate governance on corporate social responsibility. J. Bus. Ethics 106 (1), 53–72.
Kanapathippillai, S., Johi, S., Wines, S., 2016. Remuneration committee effectiveness and narrative remuneration disclosure. Pacific Basin Financ. J. 40, 384–402.
Katmon, N., Mohamad, Z.Z., Norwani, N.M., Al Farooque, O., 2017. Comprehensive board diversity and quality of corporate social responsibility disclosure: evidence from an emerging market. J. Bus. Ethics. https://doi.org/10.1007s/10551-017-3672-6.
Khan, A., Muttakin, M.B., Siddiqui, J., 2013. Corporate governance and corporate social responsibility disclosures: evidence from an emerging economy. J. Bus. Ethics 114 (2), 207–223.
Kim, Y., Park, M.S., Wier, B., 2012. Is earnings quality associated with corporate social responsibility? Account. Rev. 87 (3), 761–796.
Klein, A., 2002. Audit committee, board of director characteristics and earnings management. J. Account. Econ. 33 (3), 375–400.
Koh, P.S., 2007. Institutional investor type, earnings management and benchmark beaters. J. Account. Public Policy 26 (3), 267–299.
Laksmana, I., Yang, Y., 2009. Corporate citizenship and earnings attributes. Adv. Account. 25 (1), 40–48.
Lee, Y.J., Petroni, K., Shen, M., 2005. Cherry picking, disclosure quality, and comprehensive income reporting choices: the case of property-liability insurers. Contemp. Account. Res. 23 (3), 655–692.
Leuz, C., Nanda, D., Wysocki, P.D., 2003. Earnings management and investor protection: an international comparison. J. Financ. Econ. 69 (3), 505–527.
Li, W., Zhang, R., 2010. Corporate social responsibility, ownership structure, and political interference: evidence from China. J. Bus. Ethics 96 (4), 631–645.
Li, W., Rhee, G., Wang, S.S., 2017. Differences in herding: individual vs. institutional investors. Pac. Basin Financ. J. 45, 174–185.
Macintosh, J.G., 1993. The role of institutional and retail Investors in Canadian Capital Markets 31. Osgoode Hall Law J.. 31 (2), 373–472.
Menon, K., Williams, D.D., 2004. Former audit partners and abnormal accruals. Account. Rev. 79 (4), 1095–1118.
Merton, R., 1987. A simple model of capital market equilibrium with incomplete information. J. Financ. 42 (3), 483–510.
Mishra, S., Suar, D., 2010. Does corporate social responsibility influence firm performance of Indian companies. J. Bus. Ethics 95 (4), 571–601.
Mitrione, L., Tanewski, G., Birt, J., 2014. The relevance to firm valuation of research and development expenditure in the Australian health-care industry. Aust. J. Manag. 39 (3), 425–452.
Mobus, J.L., 2005. Mandatory environmental disclosures in a legitimacy theory context. Account. Audit. Account. J. 18 (4), 492–517.
Murray, A., Sinclair, D., Power, D., Gray, R., 2006. Do financial markets care about social and environmental disclosure? Further evidence and exploration from the UK. Account. Audit. Account. J. 19 (2), 228–255.
Muttakin, M.B., Subramaniam, N., 2015. Firm ownership and board characteristics: do they matter for corporate social responsibility of Indian companies. Sustain. Account. Manag. Policy J. 6 (2), 138–165.
Muttakin, M.B., Khan, A., Azim, I., 2015. Corporate social responsibility disclosures and earnings quality: are they a reflection of managers' opportunistic behavior? Manag. Audit. J. 30 (3), 277–298.
Myers, J.N., Myers, L.A., Skinner, D.J., 2007. Earnings momentum and earnings management. J. Acc. Audit. Financ. 22 (2), 249–284.
Narwal, M., Singh, R., 2013. Corporate social responsibility practices in India: a comparative study of MNCs and Indian companies. Social Responsib. J. 9 (3), 465–478.
Neter, J., Wasserman, W., Kutner, M.H., 1983. Applied Linear Regression Models. Irwin, Homewood, IL.
Nguyen, V.H., Agbola, F.W., Choi, B., 2019. Does Corporate Social Responsibility Reduce information asymmetry? Empirical evidence from Australia. Aust. J. Manag. 44 (2), 188–211.
Paek, S., Xia, Q., Lee, S., Song, H., 2013. Does managerial ownership affect different corporate social responsibility dimensions? An empirical examination of US publicly traded hospitality firms. Int. J. Hospit. Manag. 34, 423–433.
Peasnell, K., Pope, P.F., Young, S., 2005. Board monitoring and earnings management: do outside directors influence abnormal accruals? J. Bus. Financ. Account. 32 (7/8), 1311–1346.
Prior, D., Surroca, J., Tribo, J.A., 2008. Are socially responsible managers really ethical? Exploring the relationship between earnings management and corporate social responsibility. Corp. Govern. 16 (3), 160–177.
Qian, C., Gao, X., Tsang, A., 2015. Corporate philanthropy, ownership type, and financial transparency. J. Bus. Ethics. 130 (4), 851–867.
Roychowdhury, S., 2006. Earnings management through real activities manipulation. J. Account. Econ. 42 (3), 335–370.
Salewski, M., Zülch, H., 2013. The Association between corporate social responsibility (CSR) and earnings quality – evidence from European blue chips. J. Account. Audit. 4 (3), 55–96.
Shleifer, A., Vishny, R., 1986. Large shareholders and corporate control. J. Polit. Econ. 94 (3), 461–488.
Staiger, D., Stock, J.H., 1997. Instrumental variables regression with weak instruments. Econometrica 65, 557–586.
Tilt, C.A., 1994. The influence of external pressure groups on corporate social disclosure: some empirical evidence. Account. Audit. Account. J. 7 (4), 47–72.
Timane, R., Tale, T., 2012. A study of corporate social responsibility in India. Int. J. Res. IT Manage. 2 (12), 12–17.
Tyagi, R., 2013. Corporate social performance and corporate financial performance: A link for the Indian firms. Issues Social Environ. Account. 7 (1), 4–29.
Yip, E., Van Staden, C., Cahan, S., 2011. Corporate social responsibility reporting and earnings management: The role of political costs. Austral. Bank. Financ. J. 5 (3), 17–33.
Zang, A.Y., 2012. Evidence on the trade-off between real activities management and accrual based earnings management. Account. Rev. 87 (2), 675–703.