1. Introduction

During the last few decades, the corporate world has been predisposed by the growing awareness on CSR and become more conscientious on how they generate and expend profits. Currently, firms are more concerned about their ethical and moral behaviour, and their relationship with relevant societal interest groups (Held 1970). It has been accepted that firms can gain multiple advantages through building a positive image among the stakeholders, and in establishing social bonds with employees and the local community, which generates reputational gains (Branco and Rodrigues 2006; Fombrun et al. 2000; Gray et al. 1988; Orlitzky et al. 2003). In practice, those companies who implement CSR activities are bound to provide transparent and reliable financial information (Kim et al. (2012) and demonstrate a commitment to ethical and accountable behaviour (Jones 1995). However, there is an argument that CSR can be used as an entrenchment mechanism to achieve managers' self-interest objectives by distorting earnings information (Choi et al. 2013; McWilliams et al. 2006).

Since earning management (EM) is perceived in the literature as an ethical issue, several studies have attempted to explore whether EM and CSR are related. However, several studies have found that EM and CRS are negatively related Alsaadi et al. (2017); Chih et al. (2008); Cho and Chun (2016); Choi et al. (2013); Christensen (2016); García-Sánchez and García-Meca (2017); Gras-Gil et al. (2016); Kim et al. (2012); and Martínez-Ferrero et al. (2016), broadly indicate that firms with strong commitment to CSR are less likely to engage in EM. On the other hand Gargouri et al. (2010); Jo Hoje and Harjoto (2011); Muttakin et al. (2015); Prior et al. (2008); and Scholtens and Kang (2013) found positive relationship between EM and CSR and suggest that firms with a higher level of EM resort to CSR activities to disguise managerial opportunistic behaviour. Given that the empirical findings remain inconclusive, more research is needed to understanding how CSR initiatives can impact corporate reporting quality by reducing EM practice (Chih et al. 2008; Gras-Gil et al. 2016; Grougiou et al. 2014). Accordingly, this study attempts to fill this gap by shedding more light on this issue. Moreover, prior research on this topic has primarily focused on the US (Sun et al. 2010), we believe that our study fills this gap of the existing literature by examining the effects of CSR activities on EM in the UK. Thus, the aim of this study is to explore the impact of CSR on EM using a sample of non-financial FTSE 350 UK companies during the period 2008 – 2010. Particularly, this study investigates whether the level of CSR affects the magnitude of discretionary accruals as proxy for EM. Unlike the previous studies, we use multiple measurements to capture the level of CSR: content analysis and disclosure index. We measure EM based on discretionary accruals using cross-sectional version of Kothari et al. (2005) model. Our results suggest that companies with a higher commitment to CSR activities are less likely to manage earnings through accruals. Besides, we found that firms with higher level of community (COM), employees (EMP), environment (ENV), and products (PRO) are less likely to engage in EM via accruals. However, there is no evidence has been detected on the levels of CUS and OTH and the EM.

This paper contributes to the literature in several ways. First, unlike prior research (e.g. Bozzolan et al. 2015; Grougiou et al. 2014; Kim et al. 2012; Martínez-Ferrero et al. 2015; Martínez-Ferrero et al. 2016; Prior et al. 2008), we use manual measurement for the CSR. Prior research on the impact of CSR on EM has used exclusively CSR scores provided by CSR score indices (e.g. SiRi ranking index; KLD ranking index; FTSE4Good Global). Already existing indices criticized for not provide enough information about their methodologies (e.g., Kostyuk et al. 2013; Mitchell et al. 2004) and not being fully grounded in the theoretical development of CSR (e.g., Gond and Crane 2010; Mattingly and Berman 2006; Rowley and Berman 2000). The manual measurement employed in this study for CSR (disclosure index/content analysis) is considered to provide a more detailed and precise measure (Haniffa and Cooke 2005; Hassan and Harahap 2010). To the best of our knowledge, such manual measures have not been employed in joint studies of CSR and EM. Second, the majority of studies in this area are conducted in the context of US (e.g. Grougiou et al. 2014; Kim et al. 2012; Yip et al. 2011). Although the UK and the US share some common features, there are differences in many ways that could affect the inferences of such research (Toms and Wright 2005). For example, US companies are required to disclose more detailed information about corporate social activities and corporate governance than are UK firms (Lennox 2003). Another area of divergence is the notion of EM practice. In this regard, (Brown and Higgins 2001) indicate that the extent to which US managers manage earnings is significantly higher than by their counterparts in the UK. For these considerations, the present study has a strong incentive to shed more light on the potential impact of CSR on EM in the context of the UK.

The remainder of the paper is organised as follows. Section 2 reviews the literature and relevant theoretical perspectives on CSR and EM. Section 3 outlines the methodology and Section 4 report main empirical findings and their consistency with our framework. Section 5 concludes.

2. EM and CSR – Differing Perspectives

In order to explain the link between CSR and EM, previous studies have suggested two perspectives. According to the first one, firms with strong commitments to CSR are less likely to manage earnings since they do not hide unfavourable earnings realisations and, therefore, conduct no EM (Chih et al. 2008). Since EM is perceived as an irresponsible act with CSR principles, Choi et al. (2013) argue that firms with strong commitment to CSR are more prone to act in a responsible way when reporting their financial statements. Likewise, Kim et al. (2012) point out that companies that expend their efforts and resources in designing CSR programmes and implement these programmes to address the ethical interests of stakeholders follow more transparent and reliable financial reporting and less likely to manage earnings. Inversely, the managerial opportunism perspective suggests that managers who manage earnings may strategically use CSR information to disguise their opportunistic behaviour (Prior et al. 2008). According to Prior et al. (2008), managers

who engage in EM may resort to CSR to deal with stakeholders' activism and vigilance (Prior et al. 2008). In line with this argument, Choi et al. (2013) argue that managers who act in pursuit of private benefits by distorting earnings information are able to entrench themselves through engaging in CSR activities.

The empirical study's findings reflected these contradictory perspectives. For instance, the studies of Alsaadi et al. (2017); Chih et al. (2008); Cho and Chun (2016); Choi et al. (2013); Christensen (2016); García-Sánchez and García-Meca (2017); Gras-Gil et al. (2016); Kim et al. (2012); and Martínez-Ferrero et al. (2016) found that EM is negatively related to CSR suggesting that firms with strong commitment to CSR are less likely to engage in EM. On the other hand, Gargouri et al. (2010); Jo Hoje and Harjoto (2011); Muttakin et al. (2015); Prior et al. (2008); and Scholtens and Kang (2013) have found EM and CSR are positively related, suggesting that firms with a higher level of EM resort to CSR activities to disguise managerial opportunistic behaviour. These contradictory results provide the motivation to look further and shed more light on the association between EM and CSR. Furthermore, the study contributes to the need for financial transparency and accountability, which may induce managers to produce high quality financial reports.

Stakeholder theory offers a beneficial foundation for research into the connection between EM and CSR. According to this theory, CSR is seen as obligatory for the firm to discharge wider accountability norms by providing information to relevant stakeholders (Buhr 2001; Guay et al. 1996). Stakeholder theory is about groups and individuals who can affect or be affected by the organization, and how the organizations manage those groups and individuals (Freeman 1984). The theory further views that organizations have a duty and obligation to a wider range of stakeholders (Buhr 2001; Guay et al. 1996) and the managers decisions need to incorporate the interests of all stakeholders (Grougiou et al. 2014). However, this perspective provides a prescription for how managers can undertake strategies to manage and treat their various stakeholders; it does not have a direct role in predicting managerial behaviour in practice (Deegan 2002). Since the firm is perceived as a multilateral set of relationships amongst stakeholders, Grougiou et al. (2014) indicate that since mangers attempt to attend a multilateral set of stakeholders objectives, the information asymmetry between mangers and stakeholder is high. The existence of information asymmetry provides managers an opportunity to practise EM. Further to this, Hoque (2006) argues that managers manipulate earnings to improve their private interests at the expense of other stakeholders. Moreover, Grougiou et al. (2014); and Sun et al. (2010) illustrate that companies that engage in CSR to negotiate diverse stakeholders interests are inadvertently expected to practise EM. Thus one can assume a positive relationship between EM and CSR in the stakeholder theory framework.

Since the engagement with CSR is one of the management strategies to endorse firm's legitimacy (Grougiou et al. 2014), we looked into the views of legitimacy theory on our central issue. Legitimacy theory is perceived as a generalised perception that the

actions of any entity are desirable within some socially constructed system of norms, values, beliefs and definitions (Suchman 1995, p.574), argues that an organisation activities must be legitimate in the eyes of society if it is to be allowed to continue its operations. Hence, if a company loses its legitimacy, society may revoke its contract and prevent it from continuing its operations (Deegan and Rankin 1996; Guthrie and Parker 1989). Various strategies that firms can adopt in order to maintain their legitimacy within the society in which they operate, and all these strategies can be involved to make social disclosure as a means of showing that firms are conforming to society's expectations (Dowling and Pfeffer 1975). Although a firm may choose CSR to maintain or increase perceptions of its legitimacy (Patten 1992), it may use this as a means of anticipating or avoiding social pressure as well as enhancing the firm's image or reputational status (Gray et al. 1988). In terms of EM, García-Sánchez and García-Meca (2017); and Sun et al. (2010) indicate that managers who manipulate earnings tend to realise that CSR can be used to maintain the firm's legitimacy, specifically with social and political stakeholders. Thus the CSR is seen as a means of informing stakeholders on the wider interests of the firm and of its accountability which prompts the firm to behave in a socially responsible manner.

It is also possible that managers would be involved in activities that could indirectly harm the company and stakeholders except managers. The separation of ownership and management of a company, together with existence conflicts problem and information asymmetry, could create serious problems because mangers are more concerned about their job security, rewards, ability to remain in power, and to maximize their own wealth (Morris 1987). This incites us to explore the relationship between EM and CSR in the framework of an agency theory. Agency problems occur and conflicts arise between managers and owners when the managers act for their own benefits rather than optimizing the firms' value from the stakeholders' viewpoint (Watts and Zimmerman 1986). Information asymmetry occurs when managers have superior access to the information as compared to the owners (Fields et al. 2001). While managers work in the firm every day and are knowledgeable about all business transactions and affairs, stakeholders, on the other hand, depend on periodic sources of information, such as annual and interim reports to enable them to valuate firm's value. Thus, information asymmetry will be higher if the quality of information is low. Managers could undertake opportunistic EM to achieve their objectives, which in turn, increasing firm's agency cost. Since agency relationships suffer from the problems of conflict of interest and information asymmetry, an optimal solution should be discovered to control such problems. Several solutions have introduced in the literature to solve firm's agency problems. For example, Watts and Zimmerman (1986) argue that the transparency and accountability system is one of the solutions that should be put in place in order to avoid agency problems. Given that financial transparency and accountability are vital to CSR, a closure investigation of EM (agency cost) and CSR is required Chih et al. (2008). Jo and Kim (2007) argue that EM occur less in companies that disclose more information on their social activities, because when the information transparency is increased, it is expected that the

information asymmetry between managers and investors will be decreased, which will enable investors to detect EM. Likewise, Eisenhardt (1989) states that "….since information systems inform the principal about what the agent is actually doing, they are likely to curb agent opportunism because the agent will realize that he or she cannot deceive the principal" (p. 60). Similarly, Shleifer (2004) argue that manipulation of earnings occurs less often in corporations with a strong commitment to CSR. In addition, Chih et al. (2008) state that a strong commitment to CSR principles prevent managers from using their opportunistic discretion over earnings.

Finally, in terms of the signalling theory, Gray (2007) illustrates that firms with high-quality information tend to use CSR as an alternative to the classical financial reporting, while low-quality information companies choose non-disclosure, consistent with constrained accounting information. In addition, Gray (2007) argues that the quality of company reports is a signal to investors and financial markets that managers are able to control social risks within the company. Likewise, Sun et al. (2010) indicate that corporate environment disclosure as a part of CSR is a signal to investors and other powerful and economic stakeholders that the company is actively taking part in CSR and that its market value is in good condition. According to signalling theory, a company discloses information to reduce information asymmetry and to signal to investors that it is performing better than its competitors (Álvarez et al. 2008; Miller 2002). However, Hughes (1986) states that the credibility of information provided by a firm is an essential element in ensuring lower information asymmetry. Given that EM is more likely occurs when information asymmetry is high, signalling theory assumes that CSR information is used as a means to reduce the information symmetry (agency problem) between companies and their investors. Therefore, based on the notion that CSR information is a useful tool for reducing information asymmetry, prior studies predicted a negative association between CSR information and information asymmetry (Brown et al. 2004; Coller and Yohn 1997; Heflin et al. 2005; Welker 1995), which indicates a negative relationship between EM and CSR.

Given that increasing the level of CSR performance is a possible solution to constrain EM through decreasing information asymmetry and conflicts between managers and shareholders, the present study employs agency theory to explain the potential relationship between CSR and EM.

H1: "There is a negative relationship between the level of EM and CSR".

The main previous hypothesis is developed to determine the association between the total CSR performance and EM. In order to test the association between the CSR sub-themes (i.e. community (COM), employee (EMP), environment (ENV), products and services (PRO), customers (CUS), and others (OTH)) and EM, further six sub-hypotheses are developed as follows:

H1a: "There is a negative relationship between the level of EM and COM sub-score".
H1b: "There is a negative relationship between the level of EM and EMP sub-score".
H1c: "There is a negative relationship between the level of EM and ENV sub-score"
H1d: "There is a negative relationship between the level of EM and PRO sub-score".
H1e: "There is a negative relationship between the level of EM and CUS sub-score"
H1f: "There is a negative relationship between the level of EM and OTH sub-score"

3. Research Design

3.1 Measurement of Earnings Management

Discretionary accruals are commonly used to estimate EM in the literature. Similar to other previous studies (e.g., Dechow et al. 1995; Jones 1991; Kothari et al. 2005), we measure EM based on discretionary accruals using cross-sectional version of the modified Jones model (Dechow et al. 1995) due to its superior specification and less restrictive data (DeFond and Jiambalvo 1994). Following Kothari et al. (2005), we include return on assets (ROA, a proxy for performance) as an independent variable in the modified Jones model to control for the impact of firm financial performance on accruals.

For each year and industry, we estimate the following model:

$$TA_{it}/A_{it-1} = \propto_1 (1/A_{it-1}) + \propto_2 (\Delta REV_{it}/A_{it-1} - \Delta REC_{it}/A_{it}) + \propto_3 (PPT_{it}/A_{it-1}) + \propto_4 ROA_{it} + \varepsilon_{it} \quad (1)$$

Where TA_{it} is total accruals measured as the difference between earnings before extraordinary items and cash flow from operations, deflated by beginning total assets for firm i in year t. A_{it-1} is the total assets at the beginning of the year for firm i in year t. ΔREV_{it} is the change in revenue between year t-1 and year t for firm i in year t, deflated by beginning total assets. ΔREC_{it} is the change in receivables between year t-1 and year t for firm i in year t, deflated by beginning total assets. PPT_{it} is the gross property, plant, and equipment for firm i in year t, deflated by beginning total assets. In our analyses, we use the absolute value of discretionary accruals (AB_DA) rather than signal discretionary accruals, as we are focused on capturing the extent of EM rather than the direction of EM since the later can involve either income-increasing or income-decreasing (Gavious et al. 2012; Klein 2002).

3.2 Measurement of Corporate Social Responsibility

Consistent with prior studies, we have used CSR disclosure as an indicator for CSR (Lanis and Richardson 2012; Wibowo 2012). Following Haniffa and Cooke (2005), we use two types of measures to cupture the level of CSR disclosure, which are, content analysis and disclosure index. Content analysis is used to measure the length of CSR disclosure (CSRL), while the score of CSR disclosure items is measured by CSR disclosure index (CSRI). The reason of using the two mehothds is to captuter the extent and the verity of CSR diaclosure (Haniffa and Cooke 2005).

Content analysis which has been widly used in previous literature as a powerful tool to explore corporate disclosures (Aljifri and Hussainey 2007; Aribi and Gao 2010; Hussainey et al. 2003), was utilized to gathering and exploring CSRL in the sample of this study. In content analysis, the selection of recording units such as sentences, words, line, a group of words, pages, paragraph or a whole document are needed. This research uses word as a recording unit since words are considered more reliable as a unit of analysis compared to longer alternatives (Al-Najjar and Abed 2014; Hackston and Milne 1996). Furthermore, Ng (1985) argued that using portion of pages and sentences may be inappropriate because column sizes, print sizes, and page sizes may differ from one annual report to another. Thus, to overcome these problems the current study uses number of words.

Although slection and deveolpment of disclosure categories into which content units can be classified is an essential element of content analysis (Haniffa and Cooke 2005), the literature does not provide a clear reference to the categories of CSR disclosure. Gray et al. (1995b, p.81) provide four major categories of CSR disclosure (i.e. community, employees, natural environment, and customers). However, Deegan et al. (2002); Hall (2002); Haniffa and Cooke (2002); Othman et al. (2011); and Rizk et al. (2008) have argued that "energy", "products and services", "value-added statement", and "others" should be added to the main themes to encompass most of the themes and subthems of CSR disclosure. The "others" them is added to capture any elements that represent CSR disclosure but fall outside the main and added themes (Gray et al. 1995b). Before conducting a pilot study, decision rules (see Appendix B) were established based on the studies by Hackston and Milne (1996); and Gray et al. (1995b), in order to classify which CSR items are to be disclosed under which them and subthem. The pilot study process commenced with the downloading of 50 annual reports for the period 2008-2010 (around 17 annual reports per year and 5 per industry). In the second stage, these reports were reviewed independently by two researchers followed by a third experienced academic who discussed the ambiguities raised in the review. The final researsh instrument was constructed to comprises 59 subcategories included within six main themes: environment (ENV), employees (EMP), community development (COM), customers (CUS), products and services (PRO), and others (OTH) (see Appendix A).

Similar to the previous studies (Haniffa and Cooke 2005; Othman et al. 2011; Rizk et al. 2008), an equally-weighted dichotomous approach based on categorical coding is applied in this study to score the disclosure items and develop the disclosure index (CSRI). According to this approach, all items included in index checklist are equally valued regardless of their importance or relevance to any particular user group (Chau and Gray 2002). A dichotomous procedure was conducted whereby an item of disclosure was awarded a "1" point if the item of the relevant disclosure included in

the checklist was disclosed, and a "0" point if it was not disclosed. The corporate social disclosure index (CSRI) for each company is estimated as follows:

$$\mathrm{CSRI_{jit}} = \frac{\sum_{j=1}^{nj} X_{jt}}{n_{jit}}$$

Where
CSRI = total score of CSR disclosure;
X = takes 1 if an item is disclosed and 0 otherwise;
n = the number of items expected, where n ≤ 59;
j, i and t = the category j for firm i in year t;
So that 0 ≤ CSRI ≤ 1.

Reliability and validity refer to a measuring procedure, which provides the same results on repeated tries (Aribi and Gao 2010). In this study, special considerations were given to reliability and validity. To enhance validity, our checklist themes were carefully developed from prior studies. In addition, the items validity of the initial checklist were reviewed independently by two researchers followed by a third experienced academic who discussed the ambiguities raised in the review. The final checklist includes 59 items included within six main themes of CSR disclosure. To ensure the reliability of the research, the authors and one independent researchers analysed 50 randomly selected annual reports. Then, the results from the two researchers were compared. However, given that the final research instrument was generally agreed by all researchers, the differences in the compliance scores from the researchers were insignificant.

3.3 Empirical Models

To test the relation between EM and CSR, we estimate the following models:

$$Abs\_DA_{it} = \alpha_0 + \alpha_1 CSRI_{it} + \alpha_2 BRDEF_{it} + \alpha_3 AUDEF_{it} + \alpha_4 SIZE_{it} + \alpha_5 OCF_{it} + \alpha_6 LVEG_{it} + \alpha_7 ROA_{it} + \alpha_8 MB_{it} + \alpha_9 LOSS_{it} + \sum_{k=1}^{n-1} \propto_k INDUSTRY_i^k + \sum_{Y=2008}^{2010} \omega_y YEAR_i^y + \varepsilon_{it} \quad (2)$$

$$Abs\_DA_{it} = \alpha_0 + \alpha_1 CSRL_{it} + \alpha_2 BRDEF_{it} + \alpha_3 AUDEF_{it} + \alpha_4 SIZE_{it} + \alpha_5 CFO_{it} + \alpha_6 LVE_{it} + \alpha_7 ROA_{it} + \alpha_8 MB_{it} + \alpha_9 Loss_{it} + \sum_{k=1}^{n-1} \propto_k INDUSTRY_i^k + \sum_{Y=2008}^{2010} \omega_y YEAR_i^y \varepsilon_{it} \quad (3)$$

Where Abs_DA_{it} is the absolute value of discretionary accruals for firm i in year t, $CSRI_{it}$ is CSR index for firm i in year t, $CSRL_{it}$ is CSR length for firm i in year t. $BRDEF_{it}$ is board of director's effectiveness for firm i in year t that takes 1 if 50 per cent or more of members on the board of directors are independent and at least a sample median of them are financial experts, 0 = if otherwise. $AUDEF_{it}$ is an audit committee effectiveness for firm i in year t that takes 1 if all the members on the audit committee are independent and at least a sample median of them are financial experts,

0 = if otherwise. $SIZE_{it}$ is the natural logarithm of total assets for firm i at at the year-end t, OCF_{it} is net cash flow from operation divided by the total assets for firm i in year t, $LVEG_{it}$ is Long-term debt divided by total assets for firm i in year t, ROA_{it} is net income divided by total assets for firm i in year t, MB_{it} is market to book ratio for firm i in year t, and $LOSS_{it}$ is a dummy varaible for firm i in year t that takes 1 if the firm net income is negative, 0 = otherwise. INDUSTRY is a dummy variable according to Industry Classification Benchmark (ICB) and YEAR is a dummy variable that indicate fiscal years.

We used the variables to control the potential effect of corporate governance and firm-specific factors that may influence the extent of EM. With regarding corporate governance effect, the study includes $BRDEF_{it}$ and $AUDEF_{it}$ to control its impact on the association between EM and CSR. We have also included several other control varaibles in the regression model to control for firm-specific characteristics that may affect the level EM. These corntrol variables are: $SIZE_{it}$ is measured as the natural logartim of total assets for firm i in year t, CFO_{it} is net cash flow from operation divided by total assets, ROA_{it} is return on assets, $LVEG_{it}$ is financial levearge measured as total liabilities scaled by total assets, MB_{it} is market to book value, and $LOSS_{it}$ is a dummy variable take one if the firm i reported negative net income in year t; and zero otherwise.

Previous studies suggest that the above firm-specific characterstics are useful to predict EM (Chih et al. 2008; Hong and Andersen 2011; Kim et al. 2012). SIZE is included in the regression to control for a firm size on the EM. There is no agreement in the literature regarding the impact of firm size on EM. For example, Watts and Zimmerman (1990) argue that larger companies are more likely to preform downloaded EM. On the other hand, Richardson (2000) indicates that the market pressure is greater for larger companies because they are subject to close scrutiny by investors, thus they more likely to adopt aggressive accounting policies which lead to manage EM upwards. Therefore, firm size can be negative or positive associated with EM. OCF
was included to control for the differences of performance across firms within different industries and economic activity on EM. We expect that firms with a high cash flow performance are less likely to engage in income-increasing EM (Dechow et al. 1995). ROA is proxy for firm financial performance. It expected the firms with higher financial performance tend to manage earnings downwards (Watts and Zimmerman 1990). LEVG is used as proxy for debt covenant violation (Elayan et al. 2008). The findings of the impact of LEVG on EM were mixes (Dechow and Skinner 2000; DeFond and Jiambalvo 1994; Watts and Zimmerman 1990). Therefore, financial leverage can be negative or positive associated with EM. MB is included to control for a firm growth. It is expected that firms with high growth tend to manage discretionary accruals upwards due to they are under the greatest pressure to adopt aggressive accounting policies to report increased earnings (Chih et al. 2008). LOSS is included to control for financial condition of the firm and expected that firms that

faced financial problems tend to engage in income-decreasing EM (Healy 1985). Given that the extent of EM may differ over time and across industries, we control for time and industry potential effect. INDUSTRY is a dummy variable according to Industry Classification Benchmark (ICB) and YEAR is a dummy variable that indicate fiscal years.

3.4 Data and sample selection

The initial sample of the study is UK FTSE 350 index during the period from 2008-2010. We have restricted the sample period to the immediate aftermath of the financial crisis, since the pressures that it caused, are more likely to lead to more pronounced practices of EM. We have removed regulated, mining, and financial industries from the initial sample due to their unique characteristics and to specific regulations which may affect the results (Arun et al. 2015; Astami et al. 2017; DeFond and Jiambalvo 1994; Klein 2002). Further to this, industries less than six observations were reduced from the initial sample. Firms with missing data were also excluded from the sample. Therefore, the final sample consisted 515 firm-year observations during the period 2008-2010. Table I summarises the distribution of the final sample in accordance to Industrial Classification Benchmark (ICB).Four main resources were used to collect the data, mainly FAME, Thomson One Banker, firms' annual and, if any, corporate social reports. EM and control variables were collected mainly from FAME and Thomson One Banker databases, while CSR information was gathered from firms' annual and corporate social reports. Table I shows the sample distribution by ICB classifications code. The most heavily represented industry is Industrial Goods & Services (31 per cent, ICB code 027), followed by Travel & Leisure (12 per cent, ICB code 057).

Insert table I about here

4. Results

Table II presents the summary of descriptive statistics for all variables. The mean value of the absolute value of discretionary accruals (Abs_DA) is 0.044. This result is comparable with the previous findings of Rajgopal et al. (1999); and Yu (2008), who document that the average value of discretionary accruals in US companies is around 4.6 and 4.9 per cent respectively. The mean value of CSRI and CSRL are 0.367 and 1943.351 respectively. For the corporate governance effectiveness variables, Table II shows that the mean value of board of directors' effectiveness (BRDEF) is 0.256, while the audit committee effectiveness (AUDEF) has an average of 0.609. These results suggest that, on average, 25.6 per cent of UK firms have efficient boards, whereas 60.9 percent have efficient audit committees. Ho-Young (2008) indicates that the proportion of board effectiveness in US companies is 32.65 per cent, whereas the

percentage of audit committee effectiveness is 34.54 per cent. For the control variables, the mean value of cash flow from operation (CFO), financial leverage (LEVG), and return on assets (ROA) are 0.135, 0.599, and 0.084 respectively. In addition, Table II reports that the mean value of company size (SIZE) is 7.292 and the market-to-book ratio (MB) is 2.944. It also reports that 13.6 per cent of our sample firms report losses.

Insert table II about here

Table III presents the pairwise correlations for the variables used in the regression. It shows that the highest correlation is between CSRI and CSRL with a coefficient of 60 per cent and significant at 0.01 level. In order to avoid the multicollinearity problem, the relation between EM and CSR is separately tested for the two measurements of CSR (i.e. number of words and disclosure score). According to Gujarati (2003), the coefficient of ±80 per cent is considered as a begging at which multicollinearity problem might exist and harm the results of the regression analysis. Therefore, the problem of multicollinearity does not exist between the independent variables used in the paper.

Insert table III about here

Following Bozzolan et al. (2015); Cho and Chun (2016); Dimitropoulos and Asteriou (2010); García-Sánchez and García-Meca (2017); and Gras-Gil et al. (2016), the multivariate specifications are estimated using the multiple pooled OLS regression with robust standard error to control the heteroscedasticity and serial dependence problems that may occur in pooled OLS regression analyses (Petersen 2009). Using absolute value of discretionary accruals, Table IV shows that the score of CSR (CSRI) is negatively significant related to EM at ($p < 0.01$), suggesting that firms with a higher score of CSR report lower magnitude of discretionary accruals compared with those firms with a lower score of CSR. Similar results are found when we used the number of words (CSRL) as an alternative measurement of CSR. In particular, Table IV reports that CSRL is negatively significant related to EM at ($p < 0.01$), indicating that firms with higher level of CSR are more likely to engage in lower level of EM. Consistent with H1, this result support the prior research (see e.g. Alsaadi et al. 2017; Chih et al. 2008; Cho and Chun 2016; Choi et al. 2013; Christensen 2016; García-Sánchez and García-Meca 2017; Gras-Gil et al. 2016; Kim et al. 2012; Martínez-Ferrero et al. 2016), suggestion that CSR constrain company ability to manage earnings using accrual based. This perspective is consistent with assumption provided by agency theory, which argues that CSR information is an essential tool to reduce information asymmetry between managers and shareholders when the interests of the two groups conflict.

Insert table IV about here

Further analyses are preformed to examine the rest of our six sub-hypotheses. Therefore, we test the link between EM and individual themes of CSR using disclosure score and content analysis approaches. These themes are: community (COM), employees (EMP), environment (ENV), products (PRO), customers (CUS) and others (OTH). While Panel A of Table V report the results based on the disclosure score approach, Panel B presents the result based on the content analysis approach. As can be seen from Panel A of Table V, there is a negative and significant relationship between EM and COM, EMP, ENV, and PRO at ($p < 0.01$, $p < 0.05$, $p < 0.01$, $p < 0.05$ respectively), suggesting that firms with a high score of COM, EMP, ENV, and PRO are less likely to manage earnings through accruals. However, the study finds there is no relation between EM and CUS and OTH sub-Scores. These results indicate that the level of CUS and OTH does not impact the magnitude of EM.

Panel B of Table V presents the similar results to Panel A of that COM, EMP, ENV, and PRO have a negative and significant effect on the magnitude of EM at ($p < 0.05$, $p < 0.10$, $p < 0.01$, and $p < 0.05$ respectively). With respect to CUS and OTH themes, Panel B shows there is no relation between the themes and EM. The results of Panel A and Panel B of Table V are consistent with sub-hypotheses *H1a* through *H1d,* however rejecting the two sub-hypotheses *H1e* and *H1f.* In sum, our results provide evidence suggesting that CSR information of community, employees, environment and products seems to play an important role in constraining managers ability to manipulate reported

earnings through accruals compared to those information of customers and others (Kim et al. 2012). These results suggest that UK companies disclose a high level of COM, EMP, ENV and PRO information compared with the information of CUS and OTH.

Insert table V about here

The study uses the lagged values of endogenous independent variable (i.e. CSRI and CSRL) as an instrumental variable (IV) to investigate whether or not the simultaneity problem affects the relation between EM and CSR. After controlling for endogeneity, the coefficient of CSRI and CSRL are negatively and significantly related to discretionary accruals as presented in the Table V.I. These results suggest that firms with higher levels of CSR report lower levels of discretionary accruals. Although the level of significance is different between the main and 2SLS regressions, the results of the instrumental variables (IV) 2SLS results are consistent with the main results in Table IV. This implies that the simultaneity problem between CSR and EM does not affect the primary results of CSR on discretionary accruals.

Insert table VI about here

While the main model to detect EM in this study is Kothari et al. (2005) model, we alternatively use the modified Jones (Dechow et al. 1995) model as an alternative measurement for EM to investigate whether it has any effect on the results. The findings are consistent with the main results (see table VII), suggesting that main findings are robust with different measurements of EM.

Insert table VII

Conclusion

In this paper, we investigate the link between EM practices and CSR in the FTSE 350 companies in the UK during the period from 2008-2010. We hypothesise that firms with high level of CSR is more likely to engage in EM. In order to support/or reject the main hypothesis, the study has employed content analysis and disclosure index to measure the level of CSR.

The findings support the main hypothesis that firms with higher level of CSR tend to engage in low magnitude of EM through discretionary accruals. The study further investigates whether CSR sub-themes and EM are related. The results of empirical analysis show that the levels of COM, EMP, ENV and PRO are negatively related to the extent of EM, suggesting that firms with a high level of such information report lower levels of EM. However, there is no evidence of such a relationship between the levels of CUS and OTH and the magnitude of EM, suggesting that the levels of CUS and OTH do not affect the level of EM. In order to test whether the primary findings are consistent and robust to the specifications of different measures, sensitivity analyses are performed, addressed the endogeneity question between EM and CSR. Overall, our results are in line with agency theory and consistent with the long-term perspective, which asserts that firms issuing a high level of CSR information reduce

information asymmetry and enhance relationships with stakeholders rather than simply focusing on increasing profits. Therefore, CSR activities are motivated by managers' incentives to be honest, trustworthy, and ethical.

The findings of our study provide insights for policy makers, executive managers, and academics. Firstly, our study has policy implications for standard setters and regulators to continue improving the guidance and framework to assist companies to provide CSR reports. Secondly, executive managers may understand the function and importance of the CSR in constraining EM and therefore improving financial reporting quality and transparency. Managers may refer to this result when they purpose to persuade investors and perform CSR activities to reduce earning manipulation and increase investors' wealth. Finally, to the academics, the empirical evidence on the effect of CSR on accrual based EM a stepping-stone for future research so that future studies can consider the role of voluntary disclosure to reduce real activity EM to protect investors.

References

Al-Najjar, B., and S. Abed. 2014. The association between disclosure of forward-looking information and corporate governance mechanisms: Evidence from the UK before the financial crisis period. *Managerial Auditing Journal* 29 (7):578-595.

Aljifri, K., and K. Hussainey. 2007. The determinants of forward-looking information in annual reports of UAE companies. *Managerial Auditing Journal* 22 (9):881-894.

Alsaadi, A., M. S. Ebrahim, and A. Jaafar. 2017. Corporate Social Responsibility, Shariah-Compliance, and Earnings Quality. *Journal of Financial Services Research* 51 (2):169-194.

Álvarez, I. G., I. M. G. Sánchez, and L. R. Domínguez. 2008. Voluntary and Compulsory Information Disclosed Online: The Effect of Industry Concentration and Other Explanatory Factors. *Online Information Review* 32 (5):596-622.

Aribi, Z. A., and S. Gao. 2010. Corporate Social Responsibility Disclosure: A Comparison between Islamic and Conventional Financial Institutions. *Journal of Financial Reporting and Accounting* 8 (2):72-91.

Arun, T. G., Y. E. Almahrog, and Z. Ali Aribi. 2015. Female directors and earnings management: Evidence from UK companies. *International Review of Financial Analysis* 39:137-146.

Astami, E. W., R. Rusmin, B. Hartadi, and J. Evans. 2017. The role of audit quality and culture influence on earnings management in companies with excessive free cash flow: Evidence from the Asia-Pacific region. *International Journal of Accounting & Information Management* 25 (1):21-42.

Bozzolan, S., M. Fabrizi, C. A. Mallin, and G. Michelon. 2015. Corporate Social Responsibility and Earnings Quality: International Evidence. *The International Journal of Accounting* 50 (4):361-396.

Branco, M. C., and L. c. L. Rodrigues. 2006. Corporate Social Responsibility and Resource-Based Perspectives. *Journal of Business Ethics* 69:111-132.

Brown, L. D., and N. H. Higgins. 2001. Managing earnings surprises in the US versus 12 other countries. *Journal of Accounting and Public Policy* 20 (4):373-398.

Brown, S., S. A. Hillegeist, and K. Lo. 2004. Conference Calls and Information Asymmetry. *Journal of Accounting and Economics* 37 (3):343-366.

Buhr, N. 2001. Corporate Silence: Environmental Disclosure and the North American Free Trade Agreement. *Critical Perspectives on Accounting* 12 (4):405-421.

Chau, G. K., and S. J. Gray. 2002. Ownership Structure And Corporate Voluntary Disclosure In Hong Kong And Singapore. *The International Journal of Accounting* 37 (2):247-265.

Chih, H.-L., C.-H. Shen, and F.-C. Kang. 2008. Corporate Social Responsibility, Investor Protection, and Earnings Management: Some International Evidence. *Journal of Business Ethics* 79:197-198.

Cho, E., and S. Chun. 2016. Corporate social responsibility, real activities earnings management, and corporate governance: evidence from Korea. *Asia-Pacific Journal of Accounting & Economics* 23 (4):400-431.

Choi, B. B., D. Lee, and Y. Park. 2013. Corporate Social Responsibility, Corporate Governance and Earnings Quality: Evidence from Korea. *Corporate Governance: An International Review* 21 (5):447-467.

Christensen, D. M. 2016. Corporate Accountability Reporting and High-Profile Misconduct. *Accounting Review* 91 (2):377-399.

Coller, M., and T. L. Yohn. 1997. Management Forecasts and Information Asymmetry: An Examination of Bid-Ask Spreads. *Journal of Accounting Research* 35 (2):181-191.

Dechow, P. M., and D. J. Skinner. 2000. Earnings Management: Reconciling the Views of Accounting Academics, Practitioners, and Regulators. *Accounting Horizons* 14 (2):235-250.

Dechow, P. M., R. G. Sloan, and A. P. Sweeney. 1995. Detecting Earnings Management. *The Accounting Review* 70 (2):193-225.

Deegan, C. 2002. -Introduction: The Legitimising Effect of Social and Environmental Disclosures - A Theoretical Foundation. *Accounting, Auditing & Accountability Journal* 15 (3):282-311.

Deegan, C., and M. Rankin. 1996. Do Australian Companies Report Environmental News Objectively? An Analysis of Environmental Disclosures by Firms Prosecuted Successfully by the Environmental Protection Authority. *Accounting, Auditing and Accountability Journal* 19 (2):50–67.

Deegan, C., M. Rankin, and J. Tobin. 2002. An Examination of the Corporate Social and Environmental Disclosures of BHP from 1983-1997: A Test of Legitimacy Theory. *Accounting, Auditing & Accountability Journal* 15 (3):312-343.

DeFond, M. L., and J. Jiambalvo. 1994. Debt Covenant Violation and Manipulation of Accruals. *Journal of Accounting and Economics* 17:145-176.

Dimitropoulos, P. E., and D. Asteriou. 2010. The effect of board composition on the informativeness and quality of annual earnings: Empirical evidence from Greece. *Research in International Business and Finance* 24 (2):190-205.

Dowling, J., and J. Pfeffer. 1975. Organizational Legitimacy: Social Values and Organizational Behavior. *The Pacific Sociological Review* 18 (1):122-136.

Eisenhardt, K. M. 1989. Agency Theory: An Assessment and Review. *The Academy of Management Review* 14 (1):57-74.

Elayan, F. A., J. Li, and T. O. Meyer. 2008. Accounting Irregularities, Management Compensation Structure and Information Asymmetry. *Accounting & Finance* 48 (5):741-760.

Fields, T. D., T. Z. Lys, and L. Vincent. 2001. Empirical Research on Accounting Choice. *Journal of Accounting and Economics* 31:255-307.

Fombrun, C. J., N. A. Gardberg, and M. L. Barnett. 2000. Opportunity Platforms and Safety Nets: Corporate Citizenship and Reputational Risk. *Business and Society Review* 105 (1):85-106.

Freeman, R. E. 1984. *Strategic Management: A Stakeholder Approach*. Boston: Pitman-Ballinge.

García-Sánchez, I.-M., and E. García-Meca. 2017. CSR Engagement and Earnings Quality in Banks. The Moderating Role of Institutional Factors. *Corporate Social Responsibility and Environmental Management* 24 (2):145-158.

Gargouri, R. M., C. Francoeur, and R. Shabou. 2010. The Relationship between Corporate Social Performance and Earnings Management. *Canadian Journal of Administrative Sciences*.

Gavious, I., E. Segev, and R. Yosef. 2012. Female directors and earnings management in high-technology firms. *Pacific Accounting Review* 24 (1): 4-32.

Gond, J.-P., and A. Crane. 2010. Corporate Social Performance Disoriented: Saving the Lost Paradigm? *Business & society* 49 (4):677-703.

Gras-Gil, E., M. Palacios Manzano, and J. Hernández Fernández. 2016. Investigating the relationship between corporate social responsibility and earnings management: Evidence from Spain. *BRQ Business Research Quarterly* 19 (4):289-299.

Gray, R. 2007. Taking a Long View on What We Now Know About Social and Environmental Accountability and Reporting. *Issues in Social & Environmental Accounting* 1 (2):169-198.

Gray, R., R. Kouhy, and S. Lavers. 1995b. Methodological Themes Constructing a Research Database of Social and Environmental Reporting by UK Companies. *Accounting, Auditing & Accountability Journal* 8 (2):78-101.

Gray, R., D. Owen, and K. Maunders. 1988. Corporate Social Reporting: Emerging Trends in Accountability and the Social Contract. *Accounting, Auditing & Accountability Journal* 1 (1):6-20.

Grougiou, V., S. Leventis, E. Dedoulis, and S. Owusu-Ansah. 2014. Corporate social responsibility and earnings management in U.S. banks. *Accounting Forum* 14 (0):1-15.

Guay, W. R., S. P. Kothari, and R. L. Watts. 1996. A Market-Based Evaluation of Discretionary Accrual Models. *Journal of Accounting Research* 34 ((Supplement)):83-105.

Gujarati, D. N., ed. 2003. *Basic Econometrics*. New York: McGraw Hill Book Co.

Guthrie, J., and L. D. Parker. 1989. Corporate Social Reporting: A Rebuttal Of Legitimacy Theory. *Accounting and Business Research* 19 (76):343.

Hackston, D., and M. J. Milne. 1996. Some Determinants of Social and Environmental Disclosures in New Zealand Companies. *Accounting, Auditing & Accountability Journal* 9 (1):77-108.

Hall, J. A. 2002. School of Accountancy An Exploratory Investigation Into The Corporate Social Disclosure Of Selected New Zealand Companies. *Massey university* School of Accountancy (Discussion Paper Series 211).

Haniffa, R. M., and T. E. Cooke. 2002. Culture, Corporate Governance and Disclosure in Malaysian Corporations. *Abacus* 38 (3):317-349.

———. 2005. The Impact of Culture and Governance on Corporate Social Reporting. *Journal of Accounting and Public Policy* 24 (5):391-430.

Hassan, A., and S. S. Harahap. 2010. Exploring corporate social responsibility disclosure: the case of Islamic banks. *International Journal of Islamic and Middle Eastern Finance and Management* 3 (3):203-227.

Healy, P. M. 1985. The Effect of Bonus Schemes on Accounting Decisions. *Journal of Accounting and Economics* 7:85-107.

Heflin, F. L., K. W. Shaw, and J. J. Wild. 2005. Disclosure Policy and Market Liquidity: Impact of Depth Quotes and Order Sizes*. *Contemporary Accounting Research* 22 (4):829-865.

Held, M. 1970. *The Social Responsibilities of Business, Community, 1900-1960*. Ohio: Case Western University Press.

Ho-Young, L. 2008. The Association between Audit Committee and Board of Director Effectiveness and Changes in the Nonaudit Fee Ratio. *Applied Financial Economics* 18 (8):629-638.

Hong, Y., and M. L. Andersen. 2011. The Relationship Between Corporate Social Responsibility and Earnings Management: An Exploratory Study. *Journal of Business Ethics* 104 (4):461-471.

Hoque, Z. 2006. *Methodological Issues in Accounting Research: Theories and Methods* Australia: Spiramus Press Ltd.

Hughes, P. J. 1986. Signalling by Direct Disclosure under Asymmetric Information. *Journal of Accounting and Economics* 8 (2):119-142.

Hussainey, K., T. Schleicher, and M. Walker. 2003. Undertaking large-scale disclosures studies when AIMR-FAF ratings are not available: the case of prices leading earnings. *Accounting & Business Research (Wolters Kluwer UK)* 33 (4):275-294.

Jo, H., and Y. Kim. 2007. Disclosure Frequency and Earnings Management. *Journal of Financial Economics* 84 (2):561-590.

Jo Hoje, and M. Harjoto. 2011. Corporate Governance and Firm Value: The Impact of Corporate Social Responsibility. *Journal of Business Ethics* 103 (3):351-383.

Jones, J. J. 1991. Earnings Management During Import Relief Investigations. *Journal of Accounting Research* 29 (2):193-228.

Jones, T. M. 1995. Instrumental Stakeholder Theory: A Synthesis of Ethics and Economics. *Academy of Management Review* 20 (2):404-437.

Kim, Y., M. S. Park, and B. Wier. 2012. Is Earnings Quality Associated with Corporate Social Responsibility? *The Accounting Review* 87 (3):761-796.

Klein, A. 2002. Audit Committee, Board of Director Characteristics, and Earnings Management. *Journal of Accounting and Economics* 33 (3):375-400.

Kostyuk, A., H. Kostyuk, Y. Mozghovyi, and Y. Kravchenko. 2013. Corporate Social Responsibility index for Ukrainian banks: The essentials for implementation.

Kothari, S. P., A. J. Leone, and C. E. Wasley. 2005. Performance Matched Discretionary Accrual Measures. *Journal of Accounting and Economics* 39 (1):163-197.

Lanis, R., and G. Richardson. 2012. Corporate Social Responsibility and Tax Aggressiveness: An Empirical Analysis. *Journal of Accounting and Public Policy* 31 (1):86-108.

Lennox, C. S. 2003. *Opinion Shopping and the Role of Audit Committees when Audit Firms are Dismissed: The US Experience*: The Institute of Chartered Accountants of Scotland.

Martínez-Ferrero, J., S. Banerjee, and I. M. García-Sánchez. 2016. Corporate Social Responsibility as a Strategic Shield Against Costs of Earnings Management Practices. *Journal of Business Ethics* 133 (2):305-324.

Martínez-Ferrero, J., I. Gallego-Álvarez, and I. M. García-Sánchez. 2015. A Bidirectional Analysis of Earnings Management and Corporate Social Responsibility: The Moderating Effect of Stakeholder and Investor Protection. *Australian Accounting Review* 25 (4):359-371.

Mattingly, J. E., and S. L. Berman. 2006. Measurement of Corporate Social Action: Discovering Taxonomy in the Kinder Lydenburg Domini Ratings Data. *Business & society* 45 (1):20-46.

McWilliams, A., D. S. Siegel, and P. M. Wright. 2006. Corporate Social Responsibility: Strategic Implications. *Journal of Management Studies* 43 (1):1-18.

Miller, G. S. 2002. Earnings Performance and Discretionary Disclosure. *Journal of Accounting Research* 40 (1):173-204.

Mitchell, C., H. Dan, S. Rebecca, K. Allison, S. Jiyun, and K. Kristian. 2004. *Measuring sustainability*. Chapel Hill: University of North Carolina, Kenan-Flagler Business School

Morris, R. D. 1987. Signalling, Agency Theory and Accounting Policy Choice. *Accounting and Business Research* 18 (69):47-56.

Muttakin, M. B., A. Khan, and M. I. Azim. 2015. Corporate social responsibility disclosures and earnings quality: Are they a reflection of managers' opportunistic behavior? *Managerial Auditing Journal* 30 (3):277-298.

Ng, L. W. 1985. Social Responsibility Disclosures of Selected New Zealand Companies for 1981, 1982 and 1983. *Occasional Paper, No. 54* Massey University (Palmerston North).

Orlitzky, M., F. L. Schmidt, and S. L. Rynes. 2003. Corporate Social and Financial Performance: A Meta-analysis. *Organization Studies* 24:403-441.

Othman, S., F. Darus, and R. Arshad. 2011. The Influence of Coercive Isomorphism on Corporate Social Responsibility Reporting and Reputation. *Social Responsibility Journal* 7 (1):118-135.

Patten, D. M. 1992. Intra-Industry Environmental Disclosures in Response to the Alaskan Oil Spill: A Note on Legitimacy Theory. *Accounting, Organizations and Society* 17 (5):471-475.

Petersen, M. A. 2009. Estimating standard errors in finance panel data sets: Comparing approaches. *The Review of Financial Studies* 22 (1):435-480.

Prior, D., J. Surroca, and J. A. Tribó. 2008. Are Socially Responsible Managers Really Ethical? Exploring the Relationship Between Earnings Management and Corporate Social Responsibility. *Corporate Governance: An International Review* 16 (3):160-177.

Rajgopal, S., M. Venkatachalam, and J. J. Jiambalvo. 1999. Is Institutional Ownership Associated with Earnings Management and the Extent to which Stock Prices Reflect Future Earnings? *Working paper* University of Washington.

Richardson, V. J. 2000. Information Asymmetry and Earnings Management: Some Evidence. *Review Quantitative Finance and Accounting* 15 (4):325-347.

Rizk, R., R. Dixon, and A. Woodhead. 2008. Corporate Social and Environmental Reporting: A Survey of Disclosure Practices in Egypt. *Social Responsibility Journal* 4 (3):306-323.

Rowley, T., and S. Berman. 2000. A Brand New Brand of Corporate Social Performance. *Business & society* 39 (4):397.

Scholtens, B., and F.-C. Kang. 2013. Corporate Social Responsibility and Earnings Management: Evidence from Asian Economies. *Corporate Social Responsibility and Environmental Management* 20 (2):95-112.

Shleifer, A. 2004. Does Competition Destroy Ethical Behavior? *The American Economic Review* 94 (2):414-418.

Suchman, M. C. 1995. Managing Legitimacy: Strategic and Institutional Approaches. *The Academy of Management Review* 20 (3):571-610.

Sun, N., A. Salama, K. Hussainey, and M. Habbash. 2010. Corporate Environmental Disclosure, Corporate Governance and Earnings Management. *Managerial Auditing Jornal* 25 (7):679-700.

Toms, S., and M. Wright. 2005. Divergence and Convergence within Anglo-American Corporate Governance Systems: Evidence from the US and UK, 1950–2000. *Business History* 47 (2):267-295.

Watts, R. L., and J. L. Zimmerman. 1986. *Positive Accounting Theory*. New Jersey: Prentice Hall.

———. 1990. Positive Accounting Theory: A Ten Year Perspective. *Accounting Review* 65 (1):131-156.

Welker, M. 1995. Disclosure Policy, Information Asymmetry, and Liquidity in Equity Markets*. *Contemporary Accounting Research* 11 (2):801-827.

Wibowo, A. J. 2012. Interaction between Corporate Social Responsibility Disclosure and Profitability of Indonesia Firms. *International Annual Symposium on Sustainability Science and Management* 9 (11):373-380.

Yip, E., C. V. Staden, and S. Cahan. 2011. Corporate Social Responsibility Reporting and Earnings Management: The Role of Political Costs. *Australasian Accounting Business and Finance Journal* 5 (3):17-34.

Yu, F. 2008. Analyst Coverage and Earnings Management. *Journal of Financial Economics* 88 (2):245-271.

Appendix A: Checklist of CSD Themes

Employee

1. Number of employees
2. Employee's salary
3. Health and safety in the workplace
4. Employee equal opportunities
5. Employee benefits
6. Employee remuneration
7. Employee's satisfaction
8. Profit sharing/bonus scheme policy
9. Employee share ownership
10. Employee education and training
11. Accident in the workplace
12. Other

Community

13. Participation to community activities around the company
14. Community donations/Charity
15. Community health supporting
16. Local community education
17. Participation in government social campaigns
18. Awards related to community achievement
19. Other special community related activities

Products/services

20. Product/service development(research and development)
21. Product safety
22. Product/service quality
23. Others

Customers

24. Customer services
25. Customer compliant
26. Customer satisfaction
27. Others

Environment

28. Materials used
29. Waste
30. Recycling
31. Packaging

32. Water consumption
33. Conservation of natural resources
34. Impact in the environment
35. Designing facilities harmonious with the environment
36. Repairs/Protection to environmental damage
37. Energy consumption
38. Use of waste material for energy production
39. Development of new sources of energy
40. Carbon credits
41. Emission of greenhouse gases
42. Clean Development Mechanisms
43. certified Emission Reduction s
44. Actual environmental policies
45. Environmental goals, targets and objectives
46. Compliance with regulations and requirements
47. Environmental Partnerships
48. Environmental education
49. Environmental research
50. Environmental management
51. ISOs 14.000
52. Environmental auditing
53. Contributions to beautify the environment
54. Wildlife conservation
55. others

Others

56. General health and safety information
57. General disclosure of corporate objectives /policies relating to the social responsibility of the company to the various segments of society
58. Report about the presence of corporate social responsibility committee and its members and activities
59. Information about awards received by the company concerning its social responsibility, or the presence of the company in one, or more, social indexes

Appendix B: Decision Rules for CSD

1. All CSR information must be related to the firms and its activities.
2. All disclosures must be specifically stated, they cannot be implied.
3. If any word has more than one possible classification, the word should be classified as to the activity most emphasized in the word.
4. Any disclosure which is repeated shall be recorded as a CSD word each time it is discussed.
5. All sponsorship activities to be included, no matter how much it is advertised.

Table I: Sample Description: Distribution of Firm-Year Observations by Industry

Industry	CIB code	Number of observations	% of sample
Oil & Gas	005	43	08%
Industrial Goods & Services	027	161	31%
Food & Beverage	035	33	06%
Personal & Household Goods	037	37	07%
Health Care	045	24	05%
Retail	053	75	15%
Media	055	26	05%
Travel & Leisure	057	60	12%
Telecommunications	065	12	02%
Technology	095	44	09%
Total		515	100%

Table II: Descriptive statistics of variables

Variable	Mean	Min	P50	Max	Sd.
Abs_DA	0.044	0.000	0.034	0.300	0.042
CSRI	0.367	0.029	0.373	0.723	0.115
CSRL	1943.351	63.000	1144.500	8450.000	1921.486
BRDEF	0.256	0.000	0.000	1.000	0.437
AUDEF	0.609	0.000	1.000	1.000	0.488
OCF	0.135	-0.135	0.117	0.850	0.104
LEVG	0.599	-0.100	0.596	1.319	0.218
ROA	0.084	-0.544	0.073	1.341	0.117
SIZE	7.295	3.691	7.221	12.223	1.488
LOSS	0.136	0.000	0.000	1.000	0.343
MB	2.944	-0.387	2.269	22.070	3.050

Abs-DA = Absolute value of discretionary accruals using Performance-adjusted model; ***CSRI*** = CSR score; ***CSRL***= CSR length; ***BRDEF*** = Board of directors effectiveness coded as 1 if more than 50% of directors on the board who are not on audit committee are independent, and at least a sample median of directors on the board are financial experts; and 0 otherwise; ***AUDEF*** = Audit committee effectiveness coded as 1 if all the members are independent, and at least a sample median are financial experts; and 0 otherwise; ***OCF*** = Operating cash flow; ***LEVG*** = Financial leverage as measured by total liabilities to total assets ratio; ***ROA*** = Firm performance as measured by net revenue to total assets ratio; ***SIZE*** = Firm size as measured by natural logarithm of total assets; ***LOSS*** = Coded 1 if firm has loss; and 0 otherwise; ***MB*** = Market-to-book ratio.

Table III: Pairwise Correlation Matrix

		A	B	C	D	E	F	G	H	I	J	K
A	Abs_DA	1.000										
B	CSRI	-0.200***	1									
C	CSRL	-0.106**	0.587***	1								
D	BRDEF	-0.104**	0.004	0.042	1.000							
E	AUDEF	-0.040	0.044	0.040	0.107	1.000						
F	OCF	-0.066	-0.006	-0.004	0.002	-0.030	1.000					
G	LEVG	-0.123***	-0.050	0.050	0.030	0.056	-0.002	1.000				
H	ROA	0.011	0.010	-0.020	0.040	-0.007	0.495***	-0.082	1.000			
I	SIZE	-0.080	0.149***	0.059	-0.042	0.064	-0.284***	0.216***	-0.224***	1.000		
J	LOSS	0.199***	-0.002	-0.052	0.053	0.120	-0.037	0.044	-0.061	0.101*	1.000	
K	MB	-0.009	0.042	0.099	-0.028	0.014	0.166***	0.208***	0.150***	-0.111**	0.026	1.000

**** p <0.10, tow-tailed; ** p <0.05, tow-tailed; *** <0.01, tow-tailed***

Abs-DA = Absolute value of discretionary accruals using Performance-adjusted model; ***CSRI*** = CSR score; ***CSRL***= CSR length; ***BRDEF*** = Board of directors effectiveness coded as 1 if more than 50% of directors on the board who are not on audit committee are independent, and at least a sample median of directors on the board are financial experts; and 0 otherwise; ***AUDEF*** = Audit committee effectiveness coded as 1 if all the members are independent, and at least a sample median are financial experts; and 0 otherwise; ***OCF*** = Operating cash flow; ***LEVG*** = Financial leverage as measured by total liabilities to total assets ratio; ***ROA*** = Firm performance as measured by net revenue to total assets ratio; ***SIZE*** = Firm size as measured by natural logarithm of total assets; ***LOSS*** = Coded 1 if firm has loss; and 0 otherwise; ***MB*** = Market-to-book ratio.

Table IV: Regression results

	Abs_DA	Abs_DA
ABS_DA	**Coeff.** **(t-stat)**	**Coeff.** **(t-stat)**
Constant	0.103 (6.882)***	0.085 (6.462)***
CSRI	-0.062 (-3.513)***	
CSRL		-0.001 (-2.584)***
BRDEF	-0.010 (-2.606)***	-0.010 (-2.677)***
AUDEF	-0.004 (-0.788)	-0.004 (-0.797)
OCF	-0.047 (-2.122)**	-0.047 (-2.065)**
LEVG	-0.018 (-2.081)**	-0.021 (-2.207)**
ROA	0.012 (0.457)	0.013 (0.473)
SIZE	-0.003 (-2.121)**	-0.002 (-1.814)*
LOSS	0.025 (4.323)***	0.026 (4.370)***
MB	0.001 (1.200)	0.001 (0.814)
Industry	Included	Included

Year	Included	Included
Adj. R^2	0.1176	0.0956
# of Obs.	515	515

**** p <0.10, tow-tailed; ** p <0.05, tow-tailed; *** <0.01, tow-tailed***

Abs-DA = Absolute value of discretionary accruals using Performance-adjusted model; ***CSRI*** = CSR score; ***CSRL***= CSR length; ***BRDEF*** = Board of directors effectiveness coded as 1 if more than 50% of directors on the board who are not on audit committee are independent, and at least a sample median of directors on the board are financial experts; and 0 otherwise; ***AUDEF*** = Audit committee effectiveness coded as 1 if all the members are independent, and at least a sample median are financial experts; and 0 otherwise; ***OCF*** = Operating cash flow; ***LEVG*** = Financial leverage as measured by total liabilities to total assets ratio; ***ROA*** = Firm performance as measured by net revenue to total assets ratio; ***SIZE*** = Firm size as measured by natural logarithm of total assets; ***LOSS*** = Coded 1 if firm has loss; and 0 otherwise; ***MB*** = Market-to-book ratio.

Table V: Regression results

Panel A: Regression results Based on ABS_DA and Sub-Themes Scores						
ABS_DA	**Coeff. (t-stat)**	**Coeff. (t-stat)**	**Coeff. (t-stat)**	**Coeff. (t-stat)**	**Coeff. (t-stat)**	**Coeff. (t-stat)**
Constant	0.091 (6.537)***	0.102 (5.935)***	0.090 (6.697)***	0.089 (6.324)***	0.085 (6.135)***	0.084 (6.454)***
COM_S	-0.019 (-2.242)**					
EMP_S		-0.028 (-2.355)**				
ENV_S			-0.024 (-3.119)***			
PRO_S				-0.029 (-2.069)**		
CUS_S					-0.005 (-0.446)	
OTH_S						-0.002 (-0.125)
BRDEF	-0.010 (-2.639)***	-0.011 (2.723)***	-0.009 (2.488)**	-0.011 (-2.818)***	-0.011 (-2.717)***	-0.010 (-2.681)***
AUDEF	-0.004 (-0.890)	-0.004 (-0.855)	-0.004 (-0.871)	-0.004 (-0.880)	-0.004 (0.866)	-0.004 (-0.888)
Control variables	Included	Included	Included	Included	Included	Included
Industry	Included	Included	Included	Included	Included	Included

Year	Included	Included	Included	Included	Included	Included
Adj. R	0.0945	0.1003	0.1038	0.0956	0.0856	0.086
# of Obs.	515	515	515	515	515	515
Panel B: Regression results Based on ABS_DA and Sub-Themes Quantity						
Constant	0.085 (6.434)***	0.084 (6.368)***	0.085 (6.465)***	0.084 (6.452)***	0.083 (6.319)***	0.087 (6.166)***
COM_L	-0.001 (-2.110)**					
EMP_L		-0.001 (-1.858)*				
ENV_L			-0.001 (-2.727)***			
PRO_L				-0.001 (-3.057)***		
CUS_L					-0.001 (-0.878)	
OTH_L						-0.001 (-1.537)
BRDEF	-0.011 (-2.664)***	-0.011 (-2.732)***	-0.010 (-2.585)***	-0.010 (2.756)***	-0.010 (-2.667)***	-0.011 (-2.390)**
AUDEF	-0.004 (-0.834)	-0.004 (-0.808)	-0.004 (-0.927)	-0.003 (-0.760)	-0.004 (0.813)	-0.008 (-1.409)
Control variables	Included	Included	Included	Included	Included	Included

Industry	Included	Included	Included	Included	Included	Included
Year	Included	Included	Included	Included	Included	Included
Adj. R^2	0.0913	0.0916	0.0988	0.0953	0.0861	0.0883
# of Obs.	515	515	515	515	515	515

Table VI: 2SLS regression results

	Abs_DA	Abs_DA
ABS_DA	**Coeff.** **(t-stat)**	**Coeff.** **(t-stat)**
Constant	0.103 (6.882)***	0.085 (6.462)
CSRI	-0.096 (-2.021)**	
CSRL		-0.001 (-1.954)*
BRDEF	-0.010 (-2.805)***	-0.011 (-2.729)***

AUDEF	-0.004 (-0.758)	-0.003 (-0.561)
OCF	-0.047 (-1.945)*	-0.043 (-1.624)
LEVG	-0.020 (-2.173)**	-0.029 (-2.711)***
ROA	0.016 (0.778)	0.022 (0.841)
SIZE	-0.002 (-1.946)*	-0.001 (-0.231)
LOSS	0.026 (4.263)***	0.026 (4.190)***
MB	0.001 (1.184)	0.001 1.221)
Industry	Included	Included
Year	Included	Included
Adj. R^2	0.115	0.0820
# of Obs.	503	503

Table VII: Robustness regression results

	Abs_DA	Abs_DA
ABS_DA	**Coeff.** **(t-stat)**	**Coeff.** **(t-stat)**
Constant	0.112 (6.155)***	0.097 (6.030)***

CSRI	-0.058 (-2.808)***	
CSRL		- 0.001 (-1.840)*
BRDEF	-0.013 (-2.648)***	-0.014 (-2.540)**
AUDEF	0.006 (1.223)	0.001 (0.170)
OCF	-0.077 (-3.294)***	- 0.077 (-3.250)***
LEVG	-0.021 (-2.329)**	-0.023 (-2.380)**
ROA	0.012 (0.429)	0.015 (0.510)
SIZE	-0.004 (-2.224)**	-0.004 (-2.060)*
LOSS	0.045 (4.686)***	0.047 (4.840)***
MB	0.001 (0.411)	0.001 (0.020)
Industry	Included	Included
Year	Included	Included
Adj. R^2	0.1381	0.1261
# of Obs.	515	515

**** p <0.10, tow-tailed; ** p <0.05, tow-tailed; *** <0.01, tow-tailed***

Abs-DA = Absolute value of discretionary accruals using modified Jones (Dechow et al. 1995) model; ***CSRI*** = CSR score; ***CSRL***= CSR length; ***BRDEF*** = Board of directors effectiveness coded as 1 if more than 50% of directors on the board who are not on audit committee are independent, and at least a sample median of

directors on the board are financial experts; and 0 otherwise; ***AUDEF*** = Audit committee effectiveness coded as 1 if all the members are independent, and at least a sample median are financial experts; and 0 otherwise; ***OCF*** = Operating cash flow; ***LEVG*** = Financial leverage as measured by total liabilities to total assets ratio; ***ROA*** = Firm performance as measured by net revenue to total assets ratio; ***SIZE*** = Firm size as measured by natural logarithm of total assets; ***LOSS*** = Coded 1 if firm has loss; and 0 otherwise; ***MB*** = Market-to-book ratio.