

Earnings Management, Corporate Social Responsibility and Governance Structure: Further evidence from Egypt

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Abstract:

This study investigates the relationship between earnings management and corporate social responsibility disclosure (CSR). In addition, it investigates whether the joint effect of corporate governance and CSR impacts earnings management practices in an emerging capital market, Egypt. Using a sample of non-financial firms listed in the Egyptian stock exchange for the period 2012–2017, we find evidence of the opportunistic hypothesis of corporate social responsibility. Firms use corporate social responsibility reporting to mask earnings management. Our findings show a significant role of board independence in constraining earnings management. Moreover, board independence moderates the positive relationship between CSR and earnings management. However, other governance factors do not alleviate earnings management. Furthermore, we find that institutional ownership is positively related to discretionary accruals supporting the notion of the passive role of institutional investors in developing countries.

Keywords: earnings management; corporate social responsibility; corporate governance; Egypt; audit committee; ownership structure; board characteristics; developing countries.

1. Introduction:

Financial reporting quality attracts the attention of all parties in the business environment. However, accounting standards allow the flexibility that may motivate managers to manipulate earnings. On the other hand, disclosure in general and corporate social responsibility disclosure (CSR) in particular are important tools that managers may use to signal their ethical commitment and contribution to the economic and social development. Managers decide about both aspects, earnings management (EM) and corporate disclosure. As the choices, motives, and values of managers affect their decisions regarding the extent of CSR and EM practices, there is an ongoing debate about the link between EM and CSR. Additionally, it is argued that corporate governance plays an important role in limiting EM practices. However, the joint effect of corporate governance and corporate disclosure on EM has been ignored in prior studies (Katmon and Al Farooque, 2017). The current study investigates the EM and CSR relationship and the joint effect of CSR and corporate governance on EM in an emerging capital market, namely Egypt.

Theoretically, agency theory, information asymmetry and positive accounting theory explain why managers behave discretionarily and manipulate earnings. Managers exercise discretion in accounting choices to mislead stakeholders regarding firm performance or to influence contractual outcomes (Healy and Wahlen 1999). Managing earnings opportunistically affects stakeholders and damages the firm reputation and its value (Zahra et al. 2005, Martínez-Ferrero et al., 2016). High quality disclosure and effective corporate governance are recommended mechanisms to reduce information asymmetry and mitigate EM (Kothari, 2019; Rezaee and Tuo, 2019; Katmon and Al Farooque 2017; Khalil and Ozkan, 2016; Sun et al., 2010).

Due to the growing global public awareness on CSR, many firms have been criticized for creating social and environmental problems (Hussainey et al., 2011). Progressively, managers recognize the implied social contract with stakeholders and the role of CSR in creating a positive image, establishing social links with employees and local communities, in addition to enhancing reputation (Almahrog et al., 2018). Prior studies provide evidence that the benefits of CSR include lower equity costs (Dhaliwal et al., 2011), forward favorable analysts' recommendations (Ioannou & Serafeim, 2015), and higher analyst forecast accuracy (Dhaliwal, et al., 2012). While firms engaging in CSR activities are expected to provide transparent and reliable financial information (Kim et al., 2012), CSR reporting can be used as an entrenchment

technique to achieve the self-interests of managers by distorting income information (Choi et al., 2013).

Prior studies examine the relationship between EM and CSR. The evidence is mixed. Some studies find a positive association between EM and CSR showing that firms with higher EM levels turned to corporate social responsibility activities to cover opportunistic management behaviour and to avoid the potential negative impact of EM (Muttakin et al., 2015; Martínez-Ferrero et al., 2016; Gargouri et al., 2010; Prior et al., 2008). However, other studies provide contradicting evidence suggesting that firms with strong commitments to CSR are less likely to participate in earnings management (Almahrog et al., 2018; Alsaadi et al., 2017; Cho and Chun 2016; Hong and Andersen 2011; Chih et al., 2008; Kim et al., 2012; Choi et al., 2013).

Concerning corporate governance, prior studies investigate the impact of corporate governance on earnings management (Xie et al., 2003; Davidson et al., 2005; Peasnell et al. 2005; Rashidah and Fairuzanana, 2006; Khalil and Ozkan, 2016). Most of these studies focus on board and audit committee characteristics. While there is no agreement on specific governance factors to limit earnings management, it is widely accepted that effective governance constrain earnings management. Recently, Katmon and Al Farooque (2017) indicate that prior studies failed to examine the joint effect of internal governance factors and disclosure quality on EM. They investigate such effect in the UK and report a significant negative association between EM and disclosure quality. However, they find an insignificant relationship between corporate governance and EM, suggesting an outperformance of disclosure over internal governance factors in deterring earnings management.

Our study aims to investigate whether CSR is associated with earnings management practices in the Egyptian context. Moreover, it examines the impact of both corporate governance and CSR on EM. Specifically, we test the optimal and opportunistic hypotheses of CSR using a sample of nonfinancial firms listed in the Egyptian stock exchange for the period 2012-2017. The results indicate a positive relationship between CSR and EM supporting the opportunistic hypothesis of CSR. This suggests that firms use CSR reporting to mask EM practices in emerging capital markets such as Egypt. Additionally, the findings show a significant impact of board independence in constraining EM. Moreover, board independence as a governance tool is a moderating factor of the CSR-EM link. However, other governance factors do not alleviate EM practices. Moreover, we find that institutional ownership is positively related to

EM supporting the notion of the passive role of institutional investors in developing countries.

The study contributes to the literature in several ways. Firstly, to the best of our knowledge, this is the first study to investigate the CSRD - EM relationship in the Middle East and North Africa (MENA) region, in general, and Egypt, in particular. Secondly, we combine research in the areas of CSR, corporate governance and EM. The study examines the joint effect of corporate governance and CSRD on EM practices. It provides new empirical evidence that board independence outperform disclosure and other governance factors in constraining EM. Board independence mitigates the opportunistic use of CSRD. Thirdly, this study is a response to the call for more research examining the context-specific nature of CSR disclosure in developing countries (Belal et al., 2013, Ali et al., 2017) and, particularly, middle east countries (Jamali et al., 2008; Al-Abdin et al., 2018).

Our findings have important implications for policymakers, investors and stakeholders of CSRD and corporate governance. The results suggest that CSRD and EM are positively related. Therefore, socially responsible investors should take caution as firms tend to cover their EM practices by increasing their CSR disclosure. Moreover, the results recommend capital market authorities and regulators in developing countries pay more attention to the implementation of corporate governance codes and to the role of institutional investors. The remainder of this paper is set out as follows: section 2 highlights the Egyptian context; section 3 presents the related literature and formulation of hypotheses; section 4 outlines the research methodology and results of the study; section 5 is the conclusion.

2. The Egyptian context

Egypt is an Arabian country and one of the Middle East and North Africa countries (MENA) that plays an influential role in its region. The Egyptian Stock Exchange (EGX) is the first stock exchange to be established in the MENA region. Egypt has a diversified economy and is classified as a lower middle-income country. Both the French and Anglo American laws affect the regulations in Egypt. The company law was established based on the French civil law, while other laws and rules including the capital market law and corporate governance rules were based mainly on the Anglo-American concepts (Abdelfattah and Hussainey, 2019).

Accounting practices in Egypt tend to be less transparent and more conservative due to some cultural and institutional factors. Egypt has a secretive culture, high-risk avoidance, and long power distance. Similar to other developing countries, it is characterized by concentrated

ownership, lack of shareholder activism, weak investor protection, and inactive external governance mechanisms. To attract direct foreign investment, several initiatives and reforms have been implemented in Egypt to promote transparency and corporate governance (Samaha and Dahawy, 2010). The Egyptian Institute of Directors (EIoD) was established in 2003 as the first institute in the region to spread awareness of corporate governance. However, the World Bank report in 2004 identified two areas of weakness in corporate governance practices in Egypt, board responsibilities and disclosure and transparency. The report highlighted the lack of rules governing members' independence, the dominance of role duality and the slow adoption of audit committees. The first version of the Egyptian corporate governance code was voluntary and issued in 2005 as guidelines set for the best practices of corporate governance. Then, the EIoD issued a manual for audit committees in 2007. The second version of the Egyptian code of corporate governance issued in 2011 with the "comply or explain" approach. It provides a definition of an independent board member. Focusing on implementation issues, the second wave of corporate governance started in Egypt by two main changes, enforcing some corporate governance rules through the listing rules in 2014 and 2015 and issuing the third version of the Egyptian code of corporate governance in 2016 (Abdelfattah 2018). It is expected that these developments will enhance the enforcement power of the EGX in addition to improving transparency and governance quality.

Additionally, Egypt paid attention to CSR activities and started an initiative to promote the sustainability concept among listed companies. The EGX was the first stock exchange in the MENA region to focus on sustainability and issue an index comprising the 30 best-performing stocks according to environmental, social and corporate governance issues (ESG index). While this index focuses only on the top 30 companies, it promotes the concept of CSR among listed companies. In addition to the relatively low level of CSR disclosure, Rizk et al. (2008) highlight the wide variation of CSR reporting by Egyptian companies. Recently, El-Bassiouny et al. (2018) find that the stakeholder information strategy that uses one-way models to inform stakeholders about their CSR activities without allowing feedback or interaction from stakeholders is dominant in Egypt for CSR communication. As such, the Egyptian context provides a unique setting to study the relationship between EM and both CSR and corporate governance.

3. Literature review and Hypotheses Development

3.1 Corporate social responsibility disclosure and earnings management

EM negatively affects financial reporting quality (Kinney et al., 2004) and limits the ability of evaluating and predicting firm performance (Lev et al., 2010). It is considered an unethical behaviour if earnings are managed to delude investors (Kaplan 2001). EM occurs when managers exercise discretion over accounting figures (Leuz et al., 2003). Generally, accounting standards and reporting

flexibility provide a wide space for judgement and discretion. For example, managers can use discretionary accruals as a tool to manage earnings. However, information asymmetry is a key issue in the business environment. Without enough information, investors will not be able to assess and link managers' behaviour with firm performance. The higher the level of information asymmetry, the higher the possibility of earnings management (Richardson, 2000; Jo and Kim, 2007). As such, higher disclosure quality is a good mechanism that helps in mitigating the problems of information asymmetry in general and limiting earnings management in particular (Lapointe-Antunes et al., 2006). However, managers take both decisions of disclosure and earnings management. Therefore, they have the incentive to use disclosure level in achieving some targets such as correcting undervalued capital markets, promoting their performance and having flexibility in practicing earnings management (Verrecchia, 1990; Richardson, 2000).

Theoretically, two contradictory hypotheses have been discussed in EM and disclosure literature, ethical hypothesis and opportunistic hypothesis. The ethical hypothesis assumes that managers are ethically motivated when they decide about financial reporting and social responsibility. If a stakeholder believes that the earnings is managed, or the firm has no social responsibility, the company may lose its reputation and market value. Kim et al. (2012) provide evidence of this behaviour using a US sample. Firms with high CSR scores were found to provide investors with more transparent financial information. Similarly, Hong and Andersen (2011) conclude that firms engaged in CSR are less likely to manage their earnings. In Malaysia, Ibrahim et al. (2015) report that firms offering Islamic products did not participate in corporate social responsibility to hide EM practices.

On the other hand, it is also possible for managers to take opportunistic actions by using CSR as a shielding strategy to mitigate the negative impact of EM. This suggests a positive relationship between CSR and EM. The opportunistic hypothesis has been documented in the literature (Gargouri et al., 2010; Prior et al., 2008; Hemingway and Maclagan, 2004; Paten and Trompeter, 2003). Firms are found to utilize CSR to direct stakeholders' attention away from some misconduct in behaviour. In a cross-country study, Martínez -Ferrero et al. (2016) report the possibility of using CSR activities to mask EM. They find the shielding effect of CSR works well in civil law countries while highlighting the moderating role of institutional and legal factors in common law countries. Mutakin et al. (2015) provide evidence of opportunistic behaviour in Bangladesh, where CSR is positively related to EM practices. They indicate that the majority of prior studies investigating the CSR-EM link focus more on developed economies, while few studies investigate this relationship in emerging economies that suffer from weak legal environment and poor supervision.

It may be noticed that differences in cultural, legal and institutional factors affect EM practices in different countries (Leuz et al., 2003; Reinhardt et al., 2008). The Egyptian context has unique characteristics that affect CSR activities and EM practices. Egypt has a secretive culture and risk avoidance behaviour that may provide more pressure on managers to pursue opportunistic behaviour. On the other hand, the recent regulatory changes in Egypt that aim to increase transparency and strengthen investor protection accompanied with the high expectation of CSR after the Egyptian revolution may provide incentives to managers to act ethically and reduce EM practices. Given the inconsistent evidence from previous studies and the recent changes in Egypt, the relationship between corporate social responsibility and earnings management has a complex impact, which makes it difficult to draw clear conclusions about the nature of the relationship. Therefore, we test for the relationship between CSR disclosure and EM using the following hypothesis:

H1 There is a relationship between CSR disclosure and earnings management.

3.2 Corporate governance characteristics and earnings management

Corporate governance concern is to ensure that firms are accountable to their stakeholders and act in a socially responsible way (Solomon, 2013). In this regard, the structure and composition of a board of directors affect the governance effectiveness in general and the monitoring role of the board of directors in particular. However, corporate governance in developing countries faces unique challenges that are different from those in developed countries; for example weak investor protection, concentrated ownership, ineffective board structures, and inactive external governance mechanisms (Ntim et al., 2019). Prior studies indicate that internal corporate governance mechanisms can restrict EM practices. However, the evidence from EM literature is mixed.

3.2.1 Board characteristics and earnings management

The board of directors can influence decisions and operations, investment and financial activities, and internal control mechanisms. Previous literature has revealed the effect of board independence on reducing the managerial opportunism (Fama & Jensen 1983; Dechow et al., 1996; Peasnell et al., 2005). According to agency theory, independent members play a better monitoring role compared to non-independent members, as they do not pursue their own interests. Peasnell et al. (2005) find that a high percentage of independent directors in the UK

could limit income-increasing discretionary accruals. Klein (2002) report a negative association between earnings management and board independence in the US. However, some other studies report an insignificant association between board independence and EM (e.g., Katmon and Al Farooque 2017).

Board size as an important feature can influence the monitoring capabilities of the board. There is no agreement on the impact of board size. While larger boards provide more diversity and expertise that may support the monitoring role and enhance the board effectiveness, such boards are criticized for the poor communication and coordination in addition to the free rider problem. Previous studies provide mixed evidence of the effect of board size on EM. There is evidence of a positive association between board size and EM in Malaysia (Rashidah and Fairuzanana, 2006) and Hong Kong (Ching et al., 2006), suggesting that larger boards have fewer monitoring responsibilities than smaller boards. On the other hand, some studies show a negative relationship between board size and earnings management (Xie et al., 2003).

Separation of the role of Chief Executive Officer and Chairman is an important element of corporate governance to avoid excessive power concentration. The combination of this role weakens the effectiveness of control functions, which increases agency cost (Kim et al., 2012). CEO duality becomes a problem if there is a difference between the interests of the CEO and shareholders (Roodposhti & Chashmi 2010). Several empirical studies have examined the relationship between CEO duality and earnings management. However, the evidence is mixed. Roodposhti and Chashmi (2010) find a negative relation between the role duality and earnings management in Iran. On the other hand, many studies find that role duality is insignificantly associated with EM (Davidson et al., 2005; Hashim & Devi 2008; Bedard et al., 2004; García-Meca & Sánchez-Ballesta 2009).

Board meeting frequency is a good indicator of board effectiveness in discussing various problems facing the company. It is argued that a larger number of meetings provides directors with sufficient time to fulfill their responsibilities and duties, consider shareholders interest, and subsequently improve firm performance (Karamanou and Vafeas (2005). Prior studies indicate that boards with greater meetings play a strong monitoring function that reduces the fraud likelihood and limits the opportunistic managerial behaviour (Chen et al., 2006; Xie et al., 2003). However, Katmon and Al Farooque (2017) do not find significant impact of board meetings on earnings management practices.

Based on the above discussion, we test the impact of board characteristics on EM practices in the Egyptian context as per the following hypothesis:

H2 There is a relationship between board characteristics and earnings management.

H2.1 There is a negative relationship between board size and earnings management.

H2.2 There is a negative relationship between board independence and earnings management.

H2.3 There is a negative relationship between board meetings and earnings management.

H2.4 There is a positive relationship between role duality and earnings management.

3.2.2 Audit Committee Effectiveness and Earning Management

The audit committee is an important mechanism of corporate governance. Audit committees play an important role not only in constraining the opportunistic managerial behaviour but also in monitoring the relationship with external auditors. Therefore, a properly functioning audit committee is critical to improving effective oversight of the financial reporting process and achieving high quality financial control (Zhou and Chen, 2004). The role and responsibilities of audit committees have been widely accepted by various stakeholders to improve the image of good corporate governance (Lin et al., 2006). Therefore, previous studies argued that the existence of an audit committee might be a key factor affecting the company's earnings management.

The audit committee size may reflect the availability of resources to the committee (Lin et al., 2006). Prior studies provide evidence that the size audit committee is negatively associated with earnings management, which means that a large number of audit committee members can play a role in limiting EM practices and enhancing the quality of financial reporting (Yang & Krishnan 2005; Lin et al., 2006). However, some prior studies find no significant association between audit committee size and earnings management (Xie et al., 2003; Abbott et al., 2004; Mohamed & Aiman 2014; Katmon and Al Farooque, 2017).

Effective audit committees meet regularly to ensure that the financial reporting process works correctly, so a proactive and well-functioning audit committee can prevent earnings management (Zhou and Chen, 2004). Xie et al. (2003) believe that the frequency of meetings of an audit committee is related to the current level of free discretionary accruals and that a more active audit committee will demonstrate more effective supervision. Charitou et al. (2007) find that an audit committee consisting entirely of independent directors and attending annually

more than two meetings is negatively correlated to earnings management.

Audit committee financial expertise helps assess the committee's capabilities, since financial complexity is often required to identify financial irregularities, such as earnings management. Xie et al. (2003) believe that independent directors with accounting or financial backgrounds may be more familiar with various forms of earnings manipulation. Previous literature suggests that the presence of at least one member with financial expertise in the audit committee helps mitigate financial irregularities (Abbott et al., 2004). Audit committees with relevant financial expertise can restrict management behaviour by reducing EM (Xie et al., 2003; Charitou et al., 2007). Like other emerging markets, audit committee as a governance tool in Egypt is still at a relatively early stage. Here, we test the following hypothesis:

H3: There is a relationship between the audit committee and earnings management.

H3.1 There is a negative relationship between audit committee size and earnings management.

H3.2 There is a negative relationship between the number of audit committee meetings and earnings management.

H3.3 There is a negative relationship between audit committee financial expertise and earnings management.

3.3 Ownership structure and earnings management

The firm's ownership structure is an important controlling mechanism that may affect managerial opportunism. Agency theory suggests that the controlling of institutional ownership can be a meaningful mechanism of governance, the efficient monitoring hypothesis. Institutional ownership plays an effective role in controlling management discretion and improving capital market information capabilities (Almazan et al., 2005; Ferreira & Matos 2008). In addition, institutional investors have the opportunity, resources and ability to monitor and control managers. Therefore, effective monitoring shows that institutional ownership is associated with better monitoring of management activities, which reduces the ability of managers to manipulate earnings (Kazemian and Sanusi, 2015, Shleifer & Vishny 1997). In this case, previous studies have shown that the role of institutional investors in companies can be estimated by the level of participation (Hsu & Petchsakulwong 2010; Hadani et al., 2011). As such, the efficient monitoring hypothesis predicts an inverse relationship between earnings management activities and institutional ownership. However, prior studies highlight that institutional investors do not play an active role in developing countries (Uddin and Choudhury, 2008 and Khan et al., 2013).

With regard to managerial ownership, there are two contradictory effects: the incentive alignment effect and the management entrenchment effect (Teshima and Shuto, 2008). According to agency theory, a higher percentage of managerial ownership may help in reducing the conflict of interests between managers and shareholders (Jensen & Meckling 1976; Fama & Jensen 1983). This alignment effect indicates that opportunistic management behaviour decreases as managerial ownership increases. On the other hand, it was argued that higher levels of managerial ownership are related to more opportunistic behaviour by managers (Morck et al., 1988). This entrenchment effect suggests a positive relationship between managerial ownership and EM practices. Empirically, some prior studies have found a negative relation between managerial ownership and earnings management (Warfield et al., 1995; Klein 2002; Alves 2012). On the other hand, Lennox (2005) and Teshima and Shuto (2008) recommend that, as managerial ownership increases, earnings management will increase. Having said that, Peasnell et al. (2005), Habbash (2010) and Al-Zyoud (2012) did not find a significant relationship between managerial ownership and earnings management.

Small shareholders are not interested in monitoring because they assume all monitoring costs, but only share a small part of income (Alves, 2012). Jensen and Meckling (1976) and Shleifer and Vishny (1997) suggest that large shareholders play an important role in firms' internal control, as the extent of their participation motivates them to actively monitor firm management to protect their significant investments, efficient monitoring hypothesis. Therefore, block-holders may reduce agency costs by increasing monitoring and mitigating the free-rider problem. It is expected that block-holders effectively monitor the behaviour of management, and so reducing the scope of management's opportunism to participate in earnings management. Thus, according to the efficient monitoring hypothesis, block-holder ownership limits earnings management (Dechow et al., 1996). Based on the above discussion, we test the following hypothesis:

H4: There is a relationship between ownership structure and earnings management.

H4.1 There is a relationship between institutional ownership and earnings management.

H4.2 There is a negative relationship between managerial ownership and earnings management.

H4.3 There is a negative relationship between block-holder ownership and earnings management.

4. Research Methodology

4.1. Sample and data collection

It is assumed that most active firms on a stock exchange are more readily attracting the interest of investors and more likely to disclose more information and to apply the best practice of corporate governance (Ghazali and Weetman, 2006). Therefore, the sample of our study encompasses the 100 most active firms in the Egyptian Exchange (EGX) according to trading value as per the EGX100 index. The top 100 firms constitute the main driver for the Egyptian Exchange, representing 94% of trading value, 97% of trading volume and 89% of number of trades in the main market during 2017 (EGX annual report, 2017). The EGX launched the first sustainability index in the MENA region (S&P/EGX ESG) in March 2010. The S&P/EGX ESG evaluates the environmental, social and governance aspects in the EGX100 firms to rank the top 30 firms. However, due to the political instability after the Egyptian revolution in January 2011, we decided to examine our sample for six years, starting from 2012 until 2017.

We started with an initial sample of 100 firms for six years (600 observations). Following prior studies (e.g. Khlif and Samaha, 2016 and Astami et al., 2018), we exclude financial firms due to their unique characteristics and regulations. Moreover, we excluded industries with less than six firms for the purposes of measuring earnings management (Katmon and Al Farooque, 2017). Firms selected in the final sample had to be listed on the EGX for the whole period of study from 2012 till 2017 and their annual reports over the same period available. After excluding firms with missing data, our final sample ended with 88 firms and 528 firm-year observations. Table (1) presents the distribution of our sample by sectors. To test the research hypotheses, we collected the annual reports of selected firms from their websites. Data-stream has been used to collect financial data while corporate governance and ownership structure have been collected from the disclosure reports available on the EGX website.

Insert Table (1) here

4.2. Research Model

To examine the impact of social responsibility disclosure and corporate governance on earnings management practices, we developed the following model:

$$\begin{aligned}DACC = & \beta_0 + \beta_1 CSR D + B_2 Bsize + B_3 Bind + B_4 Dual + B_5 Bmeet \\ & + \beta_6 ACsize + B_7 ACFi + \beta_8 ACmeet + B_9 Inst + B_{10} Mang \\ & + B_{11} Bloc + \beta_{12} Fsiz + \beta_{13} ROA + B_{14} Growth \\ & + \beta_{15} Big4 + B_{16} YCapint + B_{17} Lev + \varepsilon\end{aligned}$$

Where *DACC* is the absolute value of discretionary accruals for firm *i* in year *t*, *CSR D* is the

CSR disclosure score for firm i in year t and $Bsize$ is board size of firm i in year t . $Bind$ is board independence, $Dual$ is role duality, $Bmeet$ is the number of board meetings during the year. $ACsize$ is audit committee size, $ACFin$ is the percentage of audit committee members with financial expertise, $ACmeet$ is the number of audit committee meetings. $Inst$ is institutional ownership, $Mang$ is managerial ownership, $Block$ is block-holder ownership. $Fsize$ is firm size, ROA is the profitability ratio, $Growth$ is the change in sales, $Big4$ is auditor type, $Capint$ is capital intensity ratio, and Lev is leverage ratio of firm i in year t .

Measurement of Variables

Dependent variable. The dependent variable is earnings management captured by discretionary accruals (DACC). Prior studies employed a number of models to estimate dictionary accruals (e.g. Jones, 1991; Dechow et al., 1995; Kasznik, 1999; Kothari et al., 2005). However, the modified Jones model (Dechow et al., 1995) is dominant in the EM literature (Chowdhury, et al., 2018, Katmon and Al Farooque, 2017; Alqatamin et al., 2017; Khalil and Ozkan, 2016; Muttakin et al. 2015; Mouselli et al., 2012). Following prior studies, we decided to conduct our main analysis using the modified Jones model as per Dechow et al. 1995. Then we employed the performance-matched discretionary accrual model of Kothari et al. (2005) as an additional analysis for robustness checking. As the study investigates the magnitude of EM, it uses the absolute value of discretionary accruals to capture the effects of income increasing and income decreasing (Li and Kuo, 2017). The following equation has been used to estimate the discretionary accruals, cross sectional version. Total accruals have been calculated by subtracting operating cash flow from earnings before extraordinary items.

Modified Jones Model (Dechow et al., 1995)

$$TA_{it}/A_{it-1} = \alpha_1 [1/A_{it-1}] + \alpha_2 [(\Delta REV_{it} - \Delta REC_{it}) / A_{it-1}] + \alpha_3 [PPE/A_{it-1}] + \epsilon_{it}$$

Kothari Model (Kothari et al., 2005)

$$TA_{it}/A_{it-1} = \alpha_1 [1/A_{it-1}] + \alpha_2 [(\Delta REV_{it} - \Delta REC_{it}) / A_{it-1}] + \alpha_3 [PPE/A_{it-1}] + \alpha_4 ROA_{it} + \epsilon_{it}$$

Where:

TA_{it}	= Total Accruals of firm i in year t ;
A_{it-1}	= Total assets of firm i in year t ;
ΔREV_{it}	= Change in revenue of firm i in year t ;
ΔREC_{it}	= Change of receivables of firm i in year t ;
PPE_{it}	= Property plant and equipment of firm i in year t .
ROA_{it}	= Return on assets of firm i in year t .

Independent Variables. The main independent variable is corporate social responsibility disclosure (CSR). CSR disclosure is measured as a checklist that consists of 54 items. The checklist consists of 6 groups of topics namely: 1) employee information items, 2) products and services items, 3) customer items, 4) human rights items, 5) community involvement/participation items, and 6) environmental issues. The checklist is then evaluated using content analysis with a dichotomous approach - each CSR items disclosed is given the value 1, and 0 if it is not disclosed. Next, each item is summed to obtain the overall value to calculate the CSR disclosure score according to the following formula:

$$CSR_j = \sum X_{ij} / n_j$$

Where:

CSR_j: Corporate Social Responsibility Disclosure Index for company *j*

N_j : Total item for company *j*, n_j ≤ 54

X_{ij} : Content analysis; 1=if item I is disclosed; 0=if item I is not disclosed.

so that, $0 \leq CSR \leq 1$.

In this regard, CSR disclosure is measured by the dummy variable 1 for a company that reports SR, and 0 otherwise.

To test the second hypotheses, four board characteristics are included in the model. These are board size (*Bsize*), board independence (*Bind*), role duality (*Dual*) and board meetings (*Bmeet*) (Ebrahim and Abdelfattah, 2015; Khalil and Ozkan, 2016; Katmon and Al Farooque, 2017). Audit committee effectiveness has been captured by three proxies; audit committee size (*ACsize*), number of meetings (*ACmeet*) and audit committee financial experience (*ACFin*) (Zaman et al. 2011; Khlif and Samaha, 2016; Katmon and Al Farooque, 2017). In addition, ownership structure has been captured using institutional ownership (*Inst*), managerial ownership (*Mang*) and block-holder ownership (*Block*) (Khalil and Ozkan, 2016). Following prior studies, we controlled for a set of firm characteristics that are related to earnings management and CSR disclosure (Almahrog et al.; 2018, Choi et al., 2013). Control variables include firm size (*Fsize*), profitability (*ROA*), Leverage (*Lev*), capital intensity (*Capint*), growth (*Growth*) and auditor type (*Big4*). Appendix (A) summarizes the definition and measurement of the dependent and independent variables examined in the study.

4.3. Results and discussion

Descriptive analysis

Table (2) shows the descriptive statistics for the study variables. The mean absolute value of discretionary accruals estimated using modified Jones model is 0.10, which is comparable to prior studies (0.095 in Khalil and Ozkan (2016)). Using the Kothari model, the mean absolute value is 0.93. The average CSR disclosure is 52.6% and ranges from 30% to 80%. The average board size is about 8 members with minimum 3 and maximum of 19 members. In addition, it is notable that the average of non-executive directors is about 73% which suggests that most of the board members are non-executives. It ranges from 20% to 93%. The mean of role duality is 65% which indicates that most of the active companies have role duality which is dominant in Egypt (Ebrahim and Abdelfattah, 2015). The average size of the audit committee is about 4 members, with an average of 6 meetings annually. The statistics reveal that the mean of audit committee members with financial expertise is 41% and ranges from 0 to 100%. A wide range of each of the three aspects of ownership structure can be noticed; the average of block holders is about 14% and ranges from 0 to 96%, institutional ownership has a mean 47% and ranges from 0 to 96%, and the mean managerial ownership is about 16% and ranges from 0 to 87%. About 36% of firms are audited by one of the Big4, and the leverage average is 47%.

Insert Table (2) here

Correlation matrix

Table (3) presents the correlation matrix among all variables of our model. The table reveals a positive correlation between CSRD and earnings management using accruals (DAMJ). While discretionary accruals is negatively correlated with board independence, size and number of meetings of board and audit committee, it is positively correlated with the financial expertise of the audit committee. All correlation coefficients are below 80%, which indicates that there is no serious multicollinearity (Gujarati & Porter, 2013). The highest coefficient is between blockholder and managerial ownership, 60%. The results of the variance inflation factor (VIF) show the maximum VIF is 2.04 and the mean VIF is 1.47. Moreover, the lowest tolerance coefficient is 0.49. Therefore, there is no an unacceptable level of multicollinearity.

Insert Table (3) here

Regression results:

Table (4) presents the OLS regression results of our model using STATA software. Column (1) in Table (4) examines the relationship between EM and the four board characteristics. Audit committee and ownership structure variables have been added respectively to column (2) and (3) in Table (4). The main model that includes CSRD is presented in column (4). Similar to the prior earnings management studies, the results show a low level of R square, 0.147, 0.153, 0.169 and 0.175, respectively (Muttakin et al.; 2015; Khalil and Ozkan, 2016; Alqatamin et al.; 2017; Almahrog et al.; 2018). The results in Table (4) column (4) show a significant positive association, at $p < 0.1$, between CSR disclosure and the absolute value of discretionary accruals using the modified Jones model. This suggests that firms with a higher level of CSR disclosure are engaging more in earnings management using accruals. Our findings support the opportunistic hypothesis in emerging capital markets such as Egypt. This result is consistent with the evidence from other studies such as Muttakin et al. (2015) in Bangladesh. The findings support our first hypothesis H1.

Insert Table (4) here

Regarding board characteristics, the results from the four columns in Table (4) reveal a significant negative association between board independence and the absolute value of discretionary accruals at $p < 0.01$. Firms with more non-executive directors are less likely to manipulate earnings using accruals. Our findings support agency theory and the monitoring role of non-executives in reducing earnings management. This result is consistent with the evidence provided by Ebrahim (2007). Therefore, we accept H2.2. Contrary to our prediction, the findings indicate that board size is positively associated with EM at $p < 0.1$. Moreover, the results suggest no relationship between earnings management and both the number of board meeting and role duality. Therefore, we cannot find support to accept H2.1, H2.3 and H2.4. These results highlight the free rider problem in firms with a large board size as members depend on each other (Hermalin and Weisbach, 2003). Moreover, the results reflect the importance given to board independence in the second and third versions of the Egyptian code of corporate governance in 2011 and 2016.

For audit committee effectiveness, while the sign of audit committee size is negative, it is not significantly associated with the absolute value of discretionary accruals. The number of audit committee meetings was found to have a marginal negative significant association with

discretionary accruals. This highlights that effective audit committees that hold more meetings during the year play a role in constraining earnings management behaviour. Therefore, we accept H3.2. Interestingly, the results reveal a significant positive association between audit committee financial expertise and the absolute value of discretionary accruals. This result is contradictory to our expectation and the evidence from prior studies (e.g. Abbott et al.; 2004; Dhaliwal et al.; 2010). It suggests that firms with more audit committee financial experience are engaging more in earnings management using discretionary accruals. This means that audit committee financial expertise in emerging markets such as Egypt is not effective in mitigating financial irregularities such as earnings management. This may be a result of the relatively early stage of audit committee as a governance tool in Egypt (Abdelfattah and Hussainey, 2019). Abdel-Meguid et al. (2014) highlight the substitutive and complementary associations between internal corporate governance mechanisms in the Egyptian context. A specific governance mechanism compensates the weakness in another mechanism and reinforces the strength of another governance mechanism. The result highlights the need to focus on the substance of audit committee, not the form in emerging capital markets. This also highlights the potential interaction between independence and financial expertise. As such, we cannot accept H3.1 and H3.3.

Regarding ownership structure, the results of table (4) column (4) show a significant negative association at $p < 0.1$, between block-holders and EM. This implies that firms with a higher percentage of block-holders have a lower magnitude of EM using discretionary accruals. This result is consistent with the evidence from prior studies (Khalil and Ozkan, 2016). Hence, we accept H4.3. However, the findings show a positive association between both institutional ownership and EM; thus, we cannot accept H4.1. This may be explained by the notion of dealing with institutional investors as a homogeneous group while they are not (Zouari and Rebai, 2009; Lin and Manowan, 2012). Our findings support the argument of prior studies that the impact of institutional investors in developing countries is almost absent (Uddin and Choudhury, 2008 and Khan et al., 2013). This result is consistent with prior studies in Egypt that find the impact of institutional investors is secondary and almost lacking (El-Bassiouny and El-Bassiouny, 2019). Moreover, Sourial and Amico (2015) highlight that the role of institutional investors remains passive in the Egyptian capital market and call for more steps to encourage local institutional investors to be more active. For managerial ownership, the results suggest that managers with higher ownership engage more in earnings management. This result supports the management entrenchment effect. It does not support our hypothesis; therefore we cannot

accept H4.2. As for control variables, two points can be noticed. The first is the significant negative association at $p < 0.01$ between firm size and EM. Larger firms are less likely to manipulate earnings using discretionary accruals. This can be explained by the public pressure, litigation risk and political intrusion (Xie et al., 2003; Khalil and Ozkan, 2016). The second is the positive association between auditor type and EM which is contradicting the evidence from prior studies. However, this may be consistent with Abdel-Meguid et al. (2014) who find a negative relation between auditor type (Big4) and audit committee functionality in Egypt. Moreover, this may reflect the case of low litigation risk that an auditor may face in Egypt (Khalil and Ozkan, 2016).

Insert Table (5) here

4.4. Additional Analyses

For robustness checks, several additional analyses have been conducted. Firstly, we used a different measure for our dependent variable using the performance-matched discretionary accrual model of Kothari et al. (2005), the absolute value of discretionary accruals. The new results of OLS regression are presented in table (5) column (1). The results of the Kothari model support our main results. CSR disclosure was found to be associated positively with the absolute value of discretionary accruals. Other significant independent variables in column (4) Table (4) were also significant in Table (5) column (1), except for the number of audit committee meetings and the percentage of block-holders. Secondly, to investigate whether the corporate governance mechanisms reduce the negative impact of using CSRD to mask EM, we create interaction variables between CSRD and each of the three significant internal governance mechanisms. The results in Table (5) column (2) indicate that the interaction variable between board independence and CSRD is negatively significant at $p < 0.1$. This suggests that board independence as a governance mechanism plays a role in mitigating the CSR opportunistic behaviour. Firms with more independent boards are less likely to use CSRD to mask EM practices. The results show that the other two interaction variables are insignificant, suggesting no role of board size and the audit committee financial expertise on the CSRD-EM relationship. While the interaction variable between board independence and CSRD is significantly negative, the board independence was insignificant. Therefore, we decide to classify our sample into two subsamples using the median of board independent, low and high independent. The regression results are presented in Table (5) column (3) and (4), respectively. The results support the regression of the interaction variables. As shown in column (3), CSRD is positively associated with EM at $p < 0.01$ suggesting that firms with low independent boards are more likely to engage with CSR activities to reduce the potential

negative impacts of EM. On the other hand, column (4) Table (5) shows insignificant relationship between CSRD and EM practices. Thirdly, as the additional analysis confirms the positive relationship between audit committee financial expertise and EM, we add another variable to get more insights; the interaction between audit committee financial expertise and board independence. Table (6) column (1) presents the results that show a negative association of the added interaction variable. This suggests that firms with higher board independence mitigate the positive relationship between audit committee financial expertise and EM using discretionary accruals. Our findings clarify the importance of real independence on the board of directors in emerging capital markets. The results also support the recent version of the Egyptian corporate code, issued 2016, that provides a detailed definition of the independent director to support the second wave of corporate governance in Egypt (Abdelfattah, 2018). Fourthly, we divided our sample into two sub-samples according to direction of discretionary accruals; positive or income increasing and negative or income decreasing. Column (2) and (3) in Table (6) present the findings from regressions. The results show that CSRD is positively associated at $p < 0.1$ and 0.05 , respectively, with both directions income increasing and decreasing earnings management. Fifthly, we repeated the regression of our models using the natural logarithm of CSRD and found no significant differences from our reported results. Finally, we recognize that the issue of endogeneity is a concern when assessing the CSR-EM relationship. There is a potential reverse causality between the two variables. Firms decide their CSR activities and corporate governance mechanisms based on a number of factors that may also affect EM practices. To address this concern, we carried out the Two-Stage Least Square (2SLS) to control for endogeneity problem between CSRD and EM. Following prior studies (e.g., Consoni et al., 2017; Palacios-Manzano et al., 2019; Gavana et al., 2017; Almahrog et al., 2018), we used lagged values of endogenous independent variable (CSRD) as an instrumental variable. We started by employing the Hausman test to detect the existence of endogeneity. The results confirm the endogeneity bias ($P = 0.0161$), suggesting that our main results may be misleading. Therefore, we performed the 2SLS approach using lagged CSRD as instrumental variable. The 2SLS results, presented in table (6) column (4), are largely similar to those reported in Table (4) column (4). The CSRD is significant and positively associated with EM as indicated in the main analysis. Therefore, our results are robust and not strongly affected by potential endogeneity problems.

Insert Table (6) here

5. Conclusion

This study uses a sample from Egypt to test the optimal and opportunistic hypotheses of CSR disclosure in emerging capital markets. Specifically, it investigates the effect of CSRD, board characteristics, audit committee effectiveness and ownership structure on earnings management using discretionary accruals. While prior studies provide evidence of a negative relationship between disclosure quality and earnings management practices in developed countries, the case in emerging capital markets is different due to institutional and cultural differences. The study starts by investigating the relationship between CSRD and EM measured by the absolute value of discretionary accruals. Then the study hypothesizes that a strong board and effective audit committee can constrain accrual earnings management.

The findings support the opportunistic hypothesis in the Egyptian context. Firms that disclose more CSR information are more likely to engage in earnings management. That said, the monitoring role of independent directors in mitigating earnings manipulation has been supported in the current study. Furthermore, the study shows the role of board independence as a governance mechanism in mitigating the positive relationship between CSRD and EM. However, the frequent board meetings and role duality were insignificant. With regard to audit committee effectiveness, the results suggest that audit committees with more frequent meetings are more effective in monitoring financial reporting and reducing earnings management practices. While the size of audit committee was insignificant, its financial expertise did not play the expected role of reducing earnings manipulation. Thus, there is a need in emerging markets to focus on the substance of the audit committee, not the form. While the study highlights the negative relationship between Block-holders and accrual earnings management, the results call for more attention to the contradictory impact of different types of institutional investors in emerging markets.

The study sheds lights on the applicability of western concepts in developing countries in general. It calls for more effort from regulators and policy makers to enhance the effectiveness of audit committees and the board of directors and to strengthen investor protection. Our study has a number of limitations. While it focuses on accruals earnings management, future research can examine both real earnings management and accruals. There is a need to investigate CSRD with the trade-off between accruals and real earnings management. Future research may investigate the relationship between CSRD and earnings management practices in family and politically connected firms.

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Table (1) Distribution of the final sample by industry:

Sector	number of observations	% of Sample
Real estate	108	20.45
Basic resources	30	5.68
Chemicals	24	4.55
Construction and Materials	84	15.91
Food and beverage	96	18.18
Healthcare and Pharmaceuticals	30	5.68
Industrial Goods, Services and Automobiles	66	12.50
Personal and Household Products	42	7.95
Travel and Leisure	48	9.09
Total	528	100

Table (2): Descriptive Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
DAMJ	528	.1	.102	0	1.013
DAKoth	528	.093	.099	0	1.019
CSRD	528	.526	.089	.3	.8
Bsize	528	8.034	2.77	3	19
Bind	528	.737	.173	.2	.933
Dual	528	.65	.478	0	1
Bmeet	528	9.765	4.37	3	24
ACsize	528	3.473	.837	2	7
ACmeet	528	5.559	3.144	1	17
ACFin	528	.413	.282	0	1
Inst	528	.467	.317	0	.957
Mang	528	.155	.234	0	.871
Block	528	.133	.233	0	.957
Fsize	528	11.21	1.706	7.514	15.981
ROA	528	.033	.109	-.838	.517
Lev	528	.469	.342	.005	4.687
Growth	528	.163	1.62	-.985	20.333
Big4	528	.367	.483	0	1
Capint	528	20.352	138.392	.314	2626.875

Table (3): Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) DACC	1.000																	
(2) CSRD	0.078	1.000																
(3) Bsize	-0.109	-0.083	1.000															
(4) Bind	-0.163	-0.192	0.401	1.000														
(5) Dual	0.043	0.083	-0.004	-0.183	1.000													
(6) Bmeet	-0.069	0.112	-0.105	-0.114	0.153	1.000												
(7) ACsize	-0.082	-0.108	0.225	0.184	0.174	0.230	1.000											
(8) ACmeet	-0.096	0.072	-0.043	-0.071	0.102	0.418	0.340	1.000										
(9) ACFin	0.065	-0.040	-0.391	-0.272	0.072	0.034	-0.125	0.123	1.000									
(10) Inst	0.043	-0.085	-0.066	0.077	-0.017	-0.003	0.025	0.139	0.067	1.000								
(11) Mang	0.098	-0.047	0.103	-0.025	-0.104	-0.195	0.051	-0.235	-0.242	-0.476	1.000							
(12) Block	0.014	0.065	0.006	-0.129	-0.019	-0.104	0.046	-0.117	-0.114	-0.477	0.601	1.000						
(13) Fsize	-0.186	0.132	0.382	-0.023	-0.011	0.031	0.001	0.015	0.009	-0.073	-0.123	-0.090	1.000					
(14) ROA	-0.129	0.029	0.122	0.067	0.012	0.107	0.210	0.129	-0.051	0.064	0.012	0.043	0.150	1.000				
(15) Lev	0.076	0.043	-0.069	-0.190	0.038	0.136	-0.033	0.019	0.096	0.097	-0.146	-0.047	0.112	-0.383	1.000			
(16) Growth	0.240	0.035	-0.064	-0.074	-0.001	0.010	-0.035	-0.030	0.009	-0.059	0.077	0.016	-0.017	-0.049	-0.006	1.000		
(17) Big4	0.010	0.180	0.199	0.055	-0.140	-0.099	-0.074	-0.119	-0.062	-0.002	-0.108	-0.041	0.419	0.072	0.101	-0.032	1.000	
(18) Capint	0.055	-0.059	-0.056	-0.027	-0.077	-0.020	-0.064	-0.043	0.118	0.043	-0.031	-0.024	-0.035	-0.095	-0.005	0.489	-0.086	1.000

Table (4) OLS regression results:

DV = DACC	(1)	(2)	(3)	(4)
CSR				0.0977* (0.0501)
Bsize	0.0016 (0.0015)	0.0028 (0.0017)	0.0025 (0.0017)	0.0029* (0.0017)
Bind	-0.0972*** (0.0283)	-0.0940*** (0.0276)	-0.0929*** (0.0280)	-0.0866*** (0.0274)
Dual	0.0064 (0.0089)	0.0060 (0.0094)	0.0094 (0.0090)	0.0079 (0.0089)
Bmeet	-0.0017* (0.0009)	-0.0010 (0.0009)	-0.0005 (0.0010)	-0.0006 (0.0010)
ACsize		-0.0010 (0.0047)	-0.0025 (0.0043)	-0.0011 (0.0043)
ACmeet		-0.0022* (0.0012)	-0.00196 (0.0012)	-0.0022* (0.0013)
ACFin		0.0247 (0.0165)	0.0308* (0.0171)	0.0352** (0.0171)
Inst			0.0350* (0.0187)	0.0369* (0.0189)
Mang			0.0664*** (0.0248)	0.0695*** (0.0253)
Block			-0.0273 (0.0168)	-0.0307* (0.0174)
Fsize	-0.0146*** (0.0029)	-0.0153*** (0.0030)	-0.0142*** (0.0028)	-0.0146*** (0.0028)
ROA	-0.0592 (0.0547)	-0.0527 (0.0570)	-0.0639 (0.0567)	-0.0652 (0.0570)
Growth	0.0170* (0.0092)	0.0173* (0.0092)	0.0169* (0.0093)	0.0167* (0.0096)
Big4	0.0233** (0.0103)	0.0224** (0.0102)	0.0254** (0.0101)	0.0222** (0.0099)
Lev	0.0150 (0.0129)	0.0144 (0.0133)	0.0128 (0.0133)	0.0132 (0.0132)
Capint	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)
Constant	0.320*** (0.0433)	0.316*** (0.0432)	0.275*** (0.0425)	0.218*** (0.0473)
Year effects	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes
Observations	528	528	528	528
R-squared	0.147	0.153	0.169	0.175

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table (5) additional analysis

DV = DACC	(1) Kothari	(2) Interactions	(3) Lowind	(4) Highind
CSRD	0.1453*** (0.0479)	0.3952* (0.2051)	0.1994*** (0.0681)	-0.0398 (0.0640)
Bsize	0.0035** (0.0017)	0.0090 (0.0086)	0.00328 (0.00225)	0.00524** (0.00226)
Bind	-0.0895*** (0.0279)	0.144 (0.121)		
Dual	-0.0006 (0.0088)	0.0055 (0.0081)	0.0173 (0.0139)	0.0047 (0.0111)
Bmeet	-0.0007 (0.00097)	0.0006 (0.0008)	0.0006 (0.0013)	0.0004 (0.0012)
ACsize	0.0012 (0.0040)	-0.0011 (0.0044)	-0.0132 (0.0117)	-0.0034 (0.0050)
ACmeet	-0.0019 (0.0012)	-0.0010 (0.0011)	-0.0051* (0.0030)	-0.0013 (0.0017)
ACFin	0.0445*** (0.0170)	-0.0581 (0.0997)	0.0778*** (0.0288)	0.0415 (0.0255)
Inst	0.0461** (0.0193)	0.0330* (0.0181)	0.0710** (0.0331)	0.00130 (0.0187)
Mang	0.0661** (0.0267)	0.0946*** (0.0281)	0.128*** (0.0469)	0.0666* (0.0379)
Block	-0.0240 (0.0182)	-0.0261 (0.0194)	-0.0475 (0.0393)	-0.0324 (0.0213)
Fsize	-0.0114*** (0.0028)	-0.0138*** (0.0031)	-0.0072 (0.0046)	-0.0144*** (0.0041)
ROA	0.1173** (0.0452)	0.125** (0.0506)	0.117 (0.0752)	0.118* (0.0680)
Growth	0.0164* (0.0096)	0.0160* (0.0094)	0.0252*** (0.0095)	0.0059* (0.0035)
Big4	0.012 (0.009)	0.00653 (0.0092)	-0.0239 (0.0249)	0.0186 (0.0117)
Lev	-0.001 (0.011)	-0.0089 (0.0127)	-0.0236 (0.0208)	0.0230 (0.0200)
Capint	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0002 (0.0002)
BsizeCSR		-0.00812 (0.0163)		
BindCSR		-0.428* (0.237)		
AcFinCSR		0.238 (0.196)		
Constant	0.141*** (0.0464)	0.0105 (0.106)	0.0246 (0.0639)	0.205*** (0.0561)
Year effect	Yes	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes	Yes
Observations	528	528	277	251
R-squared	0.164	0.246	0.318	0.222

Table (6) additional analysis

DV: DACC	(1)	(2) POS.DACC	(3) NEG.DACC	(4) 2SLS
CSRD	0.0964* (0.0497)	0.100* (0.0599)	0.193** (0.0810)	0.111*** (0.0426)
Bsize	0.00293 (0.0020)	-0.0042* (0.0022)	0.0092*** (0.0033)	0.0033** (0.0017)
Bind	-0.0032* (0.0483)	0.0134 (0.0347)	-0.136*** (0.0454)	-0.0917*** (0.0279)
Dual	0.0081 (0.0093)	0.0196* (0.0109)	-0.0162 (0.0149)	-0.0001 (0.0088)
Bmeet	-0.0009 (0.0011)	-0.0016 (0.0013)	0.0007 (0.0017)	-0.0006 (0.0009)
ACsize	-0.0014 (0.0058)	-0.0021 (0.0063)	-0.0014 (0.0101)	0.00069 (0.0040)
ACmeet	-0.0029* (0.0016)	-0.0012 (0.0021)	-0.0014 (0.0024)	-0.0018 (0.0012)
ACFin	0.177*** (0.0679)	-0.0129 (0.0214)	0.0649** (0.0258)	0.0429** (0.0169)
Inst	0.0347** (0.0162)	-0.0121 (0.0217)	0.0703*** (0.0243)	0.0454** (0.0188)
Mang	0.0644** (0.0251)	0.0282 (0.0260)	0.0366 (0.0488)	0.0650** (0.0260)
Block	-0.0273 (0.0236)	-0.0747*** (0.0254)	0.0324 (0.0447)	-0.0228 (0.0176)
Fsize	-0.0146*** (0.0030)	0.0032 (0.0035)	-0.0212*** (0.0057)	-0.0113*** (0.0027)
ROA	-0.0662 (0.0441)	0.139*** (0.0498)	0.102 (0.0720)	0.117*** (0.0444)
Growth	0.0163*** (0.0029)	0.0233*** (0.0052)	0.0158*** (0.0037)	0.0165* (0.0093)
Big4	0.0233** (0.0099)	0.0158 (0.0101)	0.0206 (0.0186)	0.0132 (0.0094)
Lev	0.0169 (0.0141)	0.0741*** (0.0199)	-0.0262 (0.0197)	-0.0009 (0.0111)
Capint	-0.0001* (0.0001)	-0.0003 (0.0002)	-0.0001** (0.0001)	-0.0001 (0.0001)
Bind*ACFin	-0.184** (0.0852)			
Constant	0.160*** (0.0598)	0.0023 (0.0675)	0.205** (0.0860)	0.161*** (0.0459)
Year effects	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes
Observations	528	265	263	528
R-squared	0.183	0.210	0.255	0.163

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix (A): Variables Definition

Variables	Full name	Variable Description
DACC	Discretionary accruals	Absolute value of discretionary accruals measured by modified Jones model
CSRD	CSR disclosure	Ratio of the total CSR score awarded to a company to the maximum applicable score that company could obtain.
Inst	Institutional Ownership	Percentage of shares owned by institutions.
Mang	Managerial ownership	Percentage of shares owned by directors.
Block	Block-holder ownership	Percentage of shares owned by the block-holders shareholders whose ownership $\geq 5\%$ of a total number of shares issued.
Bind	Independent Directors	Ratio of independent directors to total board size.
Bsize	Board size	Number of board members.
Dual	Duality in position	Dummy variable; 1 if company's CEO serves as a board chair, 0 otherwise.
Bmeet	Board Frequency Meeting	Number of frequency meeting of Board in a financial year.
ACsize	Audit Committee Size	Number of members of the audit committee members.
ACFin	Audit Committee Expertise	Ratio of audit committee members with accounting or financial expertise to the total number of audit committee members.
ACmeet	Audit Committee Meeting	Number of audit committee meeting during the year.
Fsize	Firm Size	Natural logarithm of book value of total assets
Lev	Firm Leverage	Long-term debts divided by capital equity.
ROA	Firm Profitability.	Ratio of net income to total assets
Big4	Auditor Type	1 if the auditor is one of the Big4, 0 otherwise.
Growth	Firm growth	The change in net sales
Capint	Capital intensity	Ratio of total assets to sales