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## **The relationship between corporate social responsibility disclosure and earnings management: is it a complement mechanism or a substitute mechanism?**

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**Abstract:** Prior literature has provided inconclusive results concerning the relationship between corporate social responsibility disclosure (CSRD) and earnings management (EM). This study examines the relation between CSRD and EM. For this study, 479 annual reports of publicly listed Indonesian companies were selected as the sample. The two-stage least square (2SLS) method was employed to test the relationship between CSRD and EM. Our findings suggest that companies that have high CSRD are less likely to manage earnings. Moreover, our findings suggest that the relationship between CSRD and EM can be viewed as a substitute mechanism. This study contributes to the accounting literature by examining the relationship between CSRD and EM in the setting of an emerging country.

**Keywords:** corporate social responsibility; CSR; earnings management; real activity; disclosure; two-stage least square; 2SLS; Indonesia.

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## 1 Introduction

A company is required to generate profits; however, it also has a responsibility to the communities and environment where it operates. To maintain continuity of operations, most of company in the world engaged in corporate social responsibility (CSR) activities. The main principle of CSR is that company is committed to conducting its business in a sustainable way. In particular, how companies account for the impact of its business activities to stakeholders with a transparent and ethical behaviour. One way to be responsible is to provide stakeholders with information regarding the company's CSR activities through disclosure. Disclosure has an important function in providing financial reports. In providing the information, it requires companies to be more transparent.

Ideally, corporate social responsibility disclosure (CSR D) is considered to be an accountability tool that provides transparent and reliable information to all stakeholders (Kim et al., 2012). However, in engaging in and providing CSR information, companies may also have opportunistic incentives (McWilliams and Siegel, 2000; Pyo and Le, 2013). If managers engage in and disclose CSR activities based on opportunistic incentives, then they are likely to mislead stakeholders about the value of the firm and its

financial performance (Kim et al., 2012). Hemingway and Maclagan (2004) argue that managers may participate in CSR activities to cover the corporation's illicit activities, one of the illicit activity is earnings management (EM) practices (Grougiou et al., 2014).

Prior studies have provided mixed conclusions regarding the relationship between CSRD and EM. Some researchers have argued that CSRD has a negative relationship with EM (see for example, Chih et al., 2008; Hong and Andersen, 2011; Kim et al., 2012; Scholtens and Kang, 2013; Litt et al., 2014; Martínez-Ferrero et al., 2015a; Muttakin et al., 2015; Gras-Gil et al., 2016; Almahrog et al., 2018). Choi et al. (2013) argue that company which actively involved in CSR activities will provide more transparent financial information. This view is motivated by the company's commitment to maintaining long-term relationships with stakeholders rather than maximise short-term profit. However, CSRD could also be used as a tool to cover up EM practices. Prior studies found that EM is positively associated with CSRD (see for example, Prior et al., 2008; Choi et al., 2013). Prior et al. (2008) argued that managers that have incentives to manage earnings tend to be more aggressive in the disclosure of CSR activities in order to maintain their reputation. Choi et al. (2013) argued that, to maintain the success of a business, managers that perform EM will invest more of their funds in CSR activities to keep their opportunistic behaviour from being detected – while maintaining the company's legitimacy.

The relation between CSRD and EM might be endogenous, raising doubts about the explanation of causality. Thus, there is room for this study to further examine the relationship of these two variables. The objective of this study is to examine the interrelationship between CSRD and EM. Specifically, this study examines:

- 1 whether CSRD can limit the practice of EM
- 2 whether firms that managed their earnings will disclose more about CSR activities.

As an emerging country, Indonesia represents an interesting case when exploring the practices of CSRD and EM. First, Indonesian companies, for some time now, have been facing a number of factors exposing them to CSR practices. These include the issues of poverty alleviation, health and safety of the environment, pollution, deforestation, social and political insecurity and the high needs for direct foreign investment [Djajadikerta and Trireksani, (2012), p.22]. Second, Indonesia is the first country that obligates company to implement and report CSR activities. The social and environmental problems have triggered the government to set regulations related to social and environmental activities. Therefore, Indonesian Government released the new legislations, namely Company Law Number 40 (2007) and Government Regulation Number 47 (2012). These regulations require companies running their business activities in the field and/or related to the natural resources to implement social and environmental responsibility (Article 74, paragraph 1). Any company that does not perform this obligation will be sanctioned in accordance with the provisions of the legislation (Article 74, paragraph 3). Prior studies show that CSR practices in Indonesia has been growing (Siregar and Bachtiar, 2010; Cahaya et al., 2015). However, in term of CSR disclosure practices is still low (Rusmanto and Williams, 2015; Joseph et al., 2016; Amran et al., 2017). Third, in the context of financial reporting's transparency, a survey by the Asian Development Bank (ADB) in 2014 concluded that disclosure and transparency were poorly implemented by some Indonesian publicly listed companies (PLCs). Though corporate governance

performance improved significantly in 2013 compared to 2012, the performance was still unsatisfactory compared to other ASEAN countries (Asian Development Bank, 2014). The results of this study are expected to contribute in a theoretical and practical related to how CSRD practices may affect EM practices in the context of developing countries.

This study contributes to the literature in several ways. First, the research provides further evidence on the interrelationship between CSRD and EM practices in an emerging country. Most previous studies on this topic have been conducted in developed countries, such as the USA (Hong and Andersen, 2011; Yip et al., 2011; Grougiou et al., 2014) or the UK (Sun et al., 2010; Almahrog et al., 2018). Some studies have even used international data (Chih et al., 2008; Prior et al., 2008; Surroca and Tribó, 2008; Kim et al., 2012; Scholtens and Kang, 2013; Litt et al., 2014; Martínez-Ferrero et al., 2014, 2015b). Second, this study contrasts with these previous studies in terms of the measurement variables of CSRD. These prior studies used the CSR index issued by international rating agencies such as KLD or SiRi ranking index (Almahrog et al., 2018). This study measures the CSRD index using a content analysis method with an unweighted index approach. This technique is considered far less subjective than a weighted index and is more relevant to all companies (Cooke, 1989, 1993).

Third, this study examines the simultaneous relationship between CSRD and EM. By examining the simultaneous relationship, it can reduce the potential bias in the estimation and misinterpretation of the results by clarifying whether CSRD determines EM practices or vice versa. Finally, most prior studies have viewed the relationship between CSRD and EM through the agency theory lens. This study employs the stakeholder-agency theory (SAT). Agency theory has been widely used in the literature to explain the relationship between disclosure and EM. The main focus of agency theory is explaining the relationship between the agent and the stockholders. However, the nature of contractual relationships between firms and stakeholders, such as in the CSRD and EM context has not been explored [Hill and Jones, (2002), p.131]. Thus, this study can provide additional insights into how SAT explains the relationship between CSRD and EM.

The research questions to be answered are, first, does the extent of CSRD influence EM? Second, does EM influence the extent of CSRD? Finally, are the relationship between CSRD and EM complement or substitute mechanism?

## **2 Literature review**

### *2.1 Stakeholder-agency theory*

SAT was derived from stakeholder theory and agency theory. Hill and Jones (2002) proposed this paradigm to help explain: certain aspects of firms' strategic behaviours, the relationships between the structure of management and stakeholder contracts, the form taken by institutional structures that monitor and enforce contracts between managers and other stakeholders, the evolutionary process that shapes management-stakeholder contracts and the institutional structures that police those contracts. SAT not only considers a firm to be a nexus of contracts between a shareholder but it also encompasses the implicit and explicit contractual relationship between all stakeholders [Hill and Jones, (2002), p.132]. Furthermore, they explain that, in terms of SAT, managers have a unique

role model (which is not only the agent of the firm's principal but also the agent of other stakeholder). The agency theory has explained that the principal hires the manager to conduct duties and rewards the manager when the duties are completed. In this case, however, the manager is only hired by the firm. Despite that, there is an association between the stakeholder-agent relationship and the principal-agent relationship, which involves an implicit and explicit contract to accommodate different interests [Hill and Jones, (2002), p.134]. Managers not only have a relationship or association with the business owners or shareholders but also with other stakeholders in the company [Prior et al., (2008), p.162]. In the context of SAT, CSR activities are seen as an effort to maintain the company's good relations with stakeholders, such as shareholders, employees, customers, suppliers and communities.

## *2.2 CSR and EM*

Prior literature has provided inconclusive results concerning the relationship between CSR and EM. Choi et al. (2013) argued that the relationship between CSR and EM can be viewed based on long-term perspective motivation. Evidences support these arguments that CSR is negatively associated with EM. Using a sample of 139 firms in ten Asian countries, Scholtens and Kang (2013) studied how earnings smoothing and earnings aggressiveness are associated with CSR. They used earnings smoothing and earnings aggressiveness as EM indicators and sustainability index FTSE4Good Global Company to measure CSR performance. Their main result suggested that firms with good CSR are less likely to manage earnings. Kim et al. (2012) examined whether firms engage in CSR are likely to provide more transparent financial information. The CSR score released by KLD is used as CSR construct. Based on a sample of 18,160 firm-year observations from 1991 to 2009, they found that CSR firms are less likely to engage in aggressive EM through discretionary accruals and real activities manipulation (RAM). Further, they suggested that CSR firms are prudent in financial reporting to maintain their reputation and financial performance.

Current studies also provided the consistent results that companies engaged more in CSR activities are less likely to manage earnings. For example, Almahrog et al. (2018) investigated the effect of CSR on EM using 503 non-financial FTSE 350 UK companies during the period of 2008–2010. They found that firms with higher level of CSR tend to engage in low magnitude of EM. Their result also concluded that firms using disclosure of CSR activities to reduce information asymmetry with their stakeholder, at the same time to enhance the good relationship with them. A negative relationship between CSR and EM is consistent with Litt et al. (2014), Hong and Andersen (2011), Gras-Gil et al. (2016), Amar and Chakroun (2018) and Chepurko et al. (2018)

In sum, CSR can be used by companies as a medium to meet the stakeholders' expectations for the company's sustainability. By engaging in CSR activities, companies can maintain good relations with stakeholders. Thus, companies that engage in CSR activities have a strong incentive to not engage in EM. Based on the arguments explained above, the first hypothesis:

H1 CSR is negatively associated with EM.

### 2.3 *EM and CSRD*

Some prior studies also have investigated whether EM practices are influenced by level of CSRD. Prior et al. (2008) examined the relationship between EM and CSRD used income smoothing practices for measuring EM based on discretionary accruals. They used a sample of 593 companies from 26 countries. The results of their study found there is a positive relationship between EM and CSRD. Consistent with Prior et al. (2008), Choi et al. (2013) examined the relationship between EM and CSR of 2,042 Korean firms listed on the KOSPI market of the Korea Exchange from 2002 to 2008. They used the absolute value of abnormal discretionary accruals from the modified Jones models to measure EM, while CSR activities are measured by index published by Korea Economic Justice Institute (KEJI). Their result showed that firms have high quality earnings also have better CSR ratings. Based on the stakeholder-agency perspective, EM allows managers to look for their own interests. The consequence of this is that it will not only be detrimental to others (especially the key stakeholders), but it will also have a negative effect on the company's financial performance if EM practices continue for a long time. To avoid the negative consequences of EM practices, managers may adopt CSR practices that can satisfy the various interests of the stakeholders. In this sense, CSR can be viewed as a strategy to meet the demands of stakeholders (Prior et al., 2008). In other words, managers who participate in EM try to compensate for those practices by implementing CSR. Grougiou et al. (2014) noted that companies that engage in EM practices are also more likely to be involved in CSR. Further, they found that firms that participated in EM tended to be more involved in CSR activities, however, the positive relationship between CSRD and EM was not statistically significant.

More recently, Muttakin et al. (2015) provided evidence that managers had managed earnings also provided higher CSRD. The existence of a positive relationship can be explained by the fact that the managers have the purpose of obtaining the support of stakeholders, which reduces the risk of experiencing the negative impact of EM practices (Martínez-Ferrero et al., 2014). From the perspective of opportunistic behaviours, CSR activities may be used by managers as an entrenchment strategy. Under this strategy, the "manager believes that by satisfying stakeholders' interests and projecting an image of social and environmental concern and awareness, he/she can reduce the likelihood of being scrutinised by satisfied stakeholders for his management of earnings" [Prior et al., (2008), p.162]. Thus, the second hypothesis is:

H2 EM is positively associated with CSRD.

## 3 **Research methods**

### 3.1 *Data and sample selections*

This study used a sample of 479 PLCs in the Indonesia Stock Exchange (IDX) during the period from 2012 to 2013. The year 2012 and 2013 were chosen as the current year when the study was conducted. Also, CSRD was collected from companies' annual reports and financial data were gathered from the *Bloomberg* databases. The *Bloomberg* databases provide financial data around the world with high quality, accuracy and consistency. Table 1 presents the sample selection of this study.

**Table 1** Sample selection

<i>Criteria</i>	<i>2012</i>	<i>2013</i>
Total company listed on Indonesia Stock Exchange (IDX)	463	486
Companies include in financial sectors	(102)	(102)
Companies did not provide CSR information in annual reports	(126)	(140)
Total sample = 479	235	244

### 3.2 Variables and measurements

#### 3.2.1 EM

Schipper (1989, p 92) defined EM as “an effort to intervene in the process of preparation of external financial reporting in order to gain personal benefits.” Consistent with Kim et al. (2012), this study used RAM to measure EM practices. RAM also defined as “a deviation from normal operational practice which is driven by the managers’ desire to mislead at least some of the stakeholders in order to believe that the purposes of certain financial reporting has been fulfilled in normal operations” [Roychowdhury, (2006), p.337]. Three measures to detect RAM are: the level of abnormal operating cash flow, abnormal production costs and abnormal discretionary load. Table 2 exhibits the measurement of variables.

#### 3.2.2 CSRD

Guthrie and Matthews (1985) defined CSRD as the provision of information (both financial and non-financial) about an organisation’s interaction with its physical and social environment (including the environment, human resources, products and society) as stated in corporate annual reports or standalone reports. Consistent with previous studies of CSRD, a content analysis method was used to extract the information of environmental impact, labour practices, product responsibility, human rights, product responsibility and social aspects from the reports. The measurements of CSRD were items adopted from the Global Reporting Initiative version G.3.1. There were 74 items (30 environmental items, 14 labour practice items, 11 human rights items, ten social items and nine product responsibility items). Table 2 provides a summary of the measurement of variables. This study employed a disclosure index to measure the extent of CSRD as it enables researcher to better get insights into the level of CSR information communicated by companies. The disclosure index offers a valid and useful method for measuring the extent of CSRD. Joseph and Taplin (2011) found that disclosure index is a more predictable measurement of CSRD than content analysis.

### 3.3 Analysis

A two-stage least square (2SLS) analysis gives a more consistent and efficient estimation than ordinary least squares (OLS). A simultaneous relationship occurs when the endogenous repressor variables are correlated with the error or disturbance. The Hausman specification test was conducted before running the 2SLS analysis.

$$RAM_{i,t} = \beta_0 + \beta_1 CSRD_{i,t} + \beta_2 FIRM_{i,t} + \beta_3 LEV_{i,t} + \beta_4 ROA_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$CSR D_{i,t} = \beta_0 + \beta_1 RAM_{i,t} + \beta_2 FIRM_{i,t} + \beta_3 MTB_{i,t} + \varepsilon_{i,t} \quad (2)$$

**Table 2** Summary of the measurement of variables

<i>Variable</i>	<i>Measurement</i>
CSR D	<p>CSR D index = number of items disclosed divided by total items. The GRI G3.1 version is used as disclosure items. Of six themes, only five categories are used (economic theme was excluded). The score 1 will be given if item disclosed and 0 if not disclosed.</p> <p>Following Haniffa and Cooke (2002), the formula of the index is as follows:</p> $CSR D_j = \frac{\sum_{i=1}^{nj} X_{ij}}{nj}$ <p> <i>CSR D<sub>j</sub></i>      corporate social responsibility disclosure for firm <i>j</i>  <i>nj</i>              number of items expected for <i>j</i><sup>th</sup> firm, <i>nj</i> ≤ 74  <i>X<sub>ij</sub></i>            1 if <i>i</i><sup>th</sup> item disclosed, 0 if <i>i</i><sup>th</sup> item not disclosed  0 ≤ <i>I<sub>j</sub></i> ≤ 1 </p>
RAM	$CFO_t / A_{t-1} = \alpha_0 + \alpha_1 (1/A_{t-1}) + \beta_1 (S_t / A_{t-1}) + \beta_2 (\Delta S_t / A_{t-1}) + \varepsilon_t \quad (1)$ $COGS_t / A_{t-1} = \alpha_0 + \alpha_1 (1/A_{t-1}) + \beta_1 (S_t / A_{t-1}) + \varepsilon_t \quad (2)$ $\Delta INV_t / A_{t-1} = \alpha_0 + \alpha_1 (1/A_{t-1}) + \beta_1 (\Delta S_t / A_{t-1}) + \beta_2 (\Delta S_{t-1} / A_{t-1}) + \varepsilon_t \quad (3)$ $PROD_t / A_{t-1} = \alpha_0 + \alpha_1 (1/A_{t-1}) + \beta_1 (S_t / A_{t-1}) + \beta_2 (\Delta S_t / A_{t-1}) + \beta_3 (\Delta S_{t-1} / A_{t-1}) + \varepsilon_t \quad (4)$ $DISEXP_t / A_{t-1} = \alpha_0 + \alpha_1 (1/A_{t-1}) + \beta_1 (S_{t-1} / A_{t-1}) + \varepsilon_t \quad (5)$ $RAM = AB\_CFO - AB\_PROD + AB\_DISEXP \quad (6)$ <p> <i>CFO<sub>t</sub></i>          firm's operational cashflow on year <i>t</i>  <i>A<sub>t-1</sub></i>          firm's total asset on previous year  <i>S<sub>t</sub></i>              firm's net sales on year <i>t</i>  <i>ΔS<sub>t</sub></i>          firm's change in net sales on year <i>t</i>  <i>ε<sub>t</sub></i>              firm's abnormal operational cashflow on year <i>t</i> (AB_CFO)  <i>COGS<sub>t</sub></i>       cost of goods sold on year <i>t</i>  <i>ΔINV<sub>t</sub></i>       changes in inventory on year <i>t</i>  <i>PROD<sub>t</sub></i>       cost of production on the year <i>t</i>  <i>ε<sub>t</sub></i>              abnormal production cost (AB_PROD)  <i>DISEXP<sub>t</sub></i>     discretionary load on the year <i>t</i> (sum of RnD expenses, advertising expenses and sales expenses and administration)  <i>ε<sub>t</sub></i>              abnormal discretionary load (AB_DISEXP) </p>
FIRM	Market value of equity
LEV	Long-term debt divided by total assets
ROA	Earnings after tax divided by total assets
MTB	Market value of equity divided by book value of equity

Notes: CSR D = corporate social responsibility disclosure; RAM = real activities manipulation; FIRM = firm size; LEV = leverage; ROA = return on assets; MTB = market-to-book of equity ratio.

#### 4 Findings

Table 3 presents the descriptive statistics of the 479 sample companies. The CSR index's mean is 13.4% with a minimum value of 1.3% and a maximum value of 94.7%. This mean indicates that the extent of companies' CSR is still low. With respect to the RAM variable, the maximum (minimum) value is 2.633 (−2.458). The mean (minimum; maximum) of RAM is 0.000 (−2.458; 2.633); this indicates that, on average, firms do not seem to engage in RAM. The descriptive statistics of the control variables are as follows: The mean (standard deviation) firm size was 28.017 (2.063), suggesting that most firms are relatively large; the leverage was 0.166 (0.178), suggesting that most firms are low in debt; the ROA was 0.050 (0.513), indicating that most firms are low in profitability and the market-to-book (MTB) equity ratio was 3.162 (8.926) indicating that most firms are low performance in market value of equity.

**Table 3** Descriptive statistics

<i>Variable</i>	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>SD</i>
CSR	479	.013	.947	.134	.097
RAM	479	−2.458	2.633	.000	.517
FIRM (log)	479	20.086	33.376	28.017	2.063
LEV	479	.000	1.790	.166	.178
ROA	479	−10.900	.620	.050	.513
MTB	479	−54.148	151.236	3.162	8.926

Notes: CSR = corporate social responsibility disclosure; RAM = real activities manipulation; FIRM = firm size; LEV = leverage; ROA = return on assets; MTB = market-to-book equity ratio.

**Table 4** The result of the Hausman test

<i>Variable</i>	<i>Coefficient</i>	<i>t</i>	<i>Sig.</i>
CSR	−12.446	−2.000	.046
FIRM	.219	2.646	.008
LEV	.573	2.160	.031
ROA	.097	2.143	.033
Unstandardised residual	12.148	1.950	.050
F-test = 7.121			
p-value = .000			

Notes: Dependent variable: RAM = real activities manipulation; independent variables: CSR = corporate social responsibility disclosure; FIRM = firm size; LEV = leverage; ROA = return on assets; MTB = market-to-book equity ratio; unstandardised residual.

The purpose of conducting a simultaneous testing was to examine whether the endogenous variable was correlated with the error or disturbance. A simultaneous testing can be carried out after the assumption of Hausman specification is met. Table 4 shows the result of the Hausman test. The results show that the unstandardised residual coefficient is significant at a level of 0.050, which means that there is a simultaneous relationship between RAM and CSR. Thus, the 2SLS method can be used to estimate

the consistency and efficiency. The result shows that the F-value is 7.121 with a significance level of 0.000. Thus, it can be concluded that RAM acts as an endogenous variable.

Table 5 presents the results of the 2SLS. In model (1), the coefficient of the unstandardised predicted value of CSRD is significantly negative (-12.446); this suggests that companies with higher CSRD are more ethical and less likely to participate in the manipulation of accounts. H1 is supported. Therefore, CSRD may be seen as a substitute mechanism rather than a complement mechanism. This finding is consistent with Kim et al. (2012), Hong and Andersen (2011), Cho and Chun (2015) and Choi et al. (2013).

**Table 5** 2SLS: the relation between CSRD and EM

	<i>Model (1)</i>	<i>Model (2)</i>
Constant	-4.571 (-2.997)***	-0.157 (-1.027)
RAM	-	0.060 (0.632)
CSRD	-12.446 (-1.999)**	-
FIRM	0.219 (2.645)***	0.010 (1.940)*
LEV	0.573 (2.159)**	-
ROA	0.097 (2.142)**	-
MTB	-	-0.001 (-1.078)
F-test (p-value)	8.523 (0.000)	14.026 (0.000)
N	479	479
R <sup>2</sup>	0.0670	0.081

Notes: CSRD = corporate social responsibility disclosure; RAM = real activities manipulation; FIRM = firm size; LEV = leverage; ROA = return on assets; MTB = market-to-book of equity ratio.

\*, \*\* and \*\*\* indicate significance at the 0.10, 0.05 and 0.01 levels, respectively (two-tailed).

Model (1): dependent variable is RAM; independent variables are unstandardised predicted value of CSRD, FIRM, LEV and ROA.

Model (2): dependent variable is CSRD; independent variables are unstandardised predicted value of RAM, FIRM and MTB.

**Table 6** The result of the Hausman test

<i>Variables</i>	<i>Coefficient</i>	<i>t</i>	<i>Sig.</i>
ENVDISC	-30.183	-2.539	.046
FIRM	.323	2.403	.017
LEV	.543	2.152	.032
ROA	.239	2.708	.007
Unstandardised residual	29.883	1.979	.048
F-test = 7.099			
p-value = .000			

Notes: Dependent variable: RAM = real activities manipulation; independent variables: ENVDISC = environmental disclosure; FIRM = firm size; LEV = leverage; ROA = return on assets; = MTB = market-to-book equity ratio.

Model (2) presents the result of the regression with CSRD as the dependent variable. The coefficient of the unstandardised predicted value of RAM is positive but insignificant (0.060), indicating that RAM does not have an effect on the extent of CSRD. Thus, H2 is rejected. Although the results of the Hausman test showed a simultaneous relationship between CSRD and EM, the findings of this study provided empirical evidence that companies with higher disclosed CSR activities are not statistically significantly related to a company's engagement in EM activities. This finding does not support the studies of Choi et al. (2013) and Prior et al. (2008).

**Table 7** 2SLSs: the relation of environmental disclosure and EM

<i>Independent variables</i>	<i>Model (1)</i>	<i>Model (2)</i>
Constant	-7.258 (-2.538)***	-0.085 (-0.585)
RAM	-	0.070 (0.779)
ENVDISC	-30.183 (-1.999)**	-
FIRM	0.323 (2.402)**	0.005 (1.045)
LEV	0.543 (2.151)**	-
ROA	0.239 (2.707)***	-
MTB	-	-0.001 (-0.813)
F-test (p-value)	8.523 (.000)	7.041 (.000)
N	479	479
R <sup>2</sup>	0.067	0.043

Notes: ENVDISC = environmental disclosure; RAM = real activities manipulation; FIRM = firm size; LEV = leverage; ROA = return on assets; MTB = market-to-book of equity ratio.

\*, \*\* and \*\*\* indicate significance at the 0.10, 0.05 and 0.01 levels, respectively (two-tailed).

Model (1): dependent variable is RAM; independent variables are unstandardised predicted value of environmental disclosure, FIRM, LEV and ROA.

Model (2): dependent variable is environmental disclosure; independent variables are unstandardised predicted value of RAM, FIRM and MTB.

#### 4.1 Sensitivity test

The sensitivity analysis was conducted to test whether the result of the 2SLS was consistent; this was done by using another measurement of CSRD (namely environmental disclosure). Table 6 presents the result of the Hausman specification model test. The results show that the unstandardised residual coefficient is significant at a level of 0.048, which means that there is a simultaneous relationship between RAM and environmental disclosure. This finding is consistent with the main analysis.

Table 7 presents the results of the 2SLS analysis. The result is consistent with the main result, which shows that companies with more disclosed environmental information are more likely to not engage in EM.

## 5 Conclusions

This study aimed to examine the relationship between CSR and EM. The result of this study provides empirical evidence that CSR has a negative association with engaging in EM. The result is robust when we retest using another measure of CSR (namely environmental disclosure). Findings of this study have made a significant contribution to the literature in several ways. First, the result of the study supports the application of the SAT to interpret the relationship between CSR and EM. The contract of the relationship is not only between the company and shareholders but also with all of the stakeholders.

Second, our finding supports the hypothesis that companies that participate in CSR are more inclined to meet the demands of their stakeholders by developing a good relationship with them. One of the ways to boost good relations is to maintain the accountability and the quality of financial reporting, which increases the value of the company. Based on the result, it can be concluded that the relationship between CSR and EM acts as substitution mechanism. Overall, the empirical findings of this study are valuable for the further development of insights concerning the relationship between CSR practices and EM behaviour.

This study had several limitations. First, this study did not consider the influence of several variables, such as industry and ownership type. The results of this study may differ as most of Indonesia's companies are owned by families. In addition, the Indonesian Government's regulations for CSR require companies in high-profile industries such as mining to report their CSR activities. Such a regulation may affect companies' motivation for participating in CSR. Although this study had limitations, the results provide implications both in theory as well as for management in practice. The results of this study show that, although a company might participate in more CSR activities, maintaining honesty and trustworthiness in financial reporting is still a priority. It allows a better understanding of social communication by community and business and accounting profession. The findings of this study can be used to consider policy factors that can foster companies to disclose more CSR information without reduce the quality of financial reporting.

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