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#### **Article**

Corporate social responsibility and earning management: Evidence from listed Vietnamese companies

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# ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

# Corporate social responsibility and earning management: Evidence from listed Vietnamese companies

Ngoc Mai Tran<sup>1</sup>, Manh Ha Tran<sup>3\*</sup> and Thuy Duong Phan<sup>2</sup>

Abstract: The purpose of this paper is to examine the association between corporate social responsibility (CSR) and earning management of listed Vietnamese companies. Both accrual earning management (AEM) and real earning management (REM) are calculated on yearly basis from 2016–2020. Information on CSR is extracted from the top 100 sustainable businesses announced by Vietnam Chamber of Commerce and Industry (VCCI). Using Feasible Generalized Least Squares (FGLS) method, this study finds negative relationship between CSR and earning management. High socially responsible firms are less likely to engage in earning manipulation, for both AEM and REM. In other words, these firms are less likely to obscure true economic performance by changing accounting methods or altering the real business transactions. The study is the first to examine the impact of CSR on both AEM and REM in the context of Vietnam. It also provides important implications for shareholders, stakeholders and related authorities using CSR as a sign of quality of reported financial information.

Subjects: Business, Management and Accounting; Management Accounting; Corporate Social Responsibility & Business Ethics

Keywords: corporate social responsibility; CSR; earning management

Subjects: M14; M4

#### 1. Introduction

Earning management (EM) is a series of activities used to manipulate the reported earning in financial statement. It arises due to the flexible principles that allow managers to use their discretions in report earnings. When the firms do not achieve financial expectations such as earnings, revenues, debt covenant, profitability, they can employ the flexibility to manipulate the accounting numbers. Managers can also make changes in credit policy, advertising, maintenance,

#### **PUBLIC INTEREST STATEMENT**

The article examines the relationship between "being good" and quality of financial report among listed companies in Vietnam from 2016 to 2020. In this study, firms that receive CSR award are considered "good" while the quality of accounting information is measured by earning management. Using different measures of earning management, the study shows negative relationship between CSR and earning management. High socially responsible firms are less likely to engage in earning management. In other words, these good firms are less likely to obscure the true economic performance through changing accounting methods or altering the real business transactions. Financial information on these firms, therefore, are fair and meaningful to users such as shareholders, potential investors and other related parties.







recruitment and development expenditure to mislead the public about the economic performance of the companies (Schipper, 1989). Apart from these undeniable benefits, when EM exceeds a certain level, accounting information becomes unreliable and unfair. EM seriously destroy the quality of financial report, mislead investors, creditors, suppliers, and other stakeholders in their decisions (Dechow & Skinner, 2000; Healy & Wahlen, 1999).

Vietnam has emerged as a rapid growth country and promising destination for investors globally. The GDP growth is about 5–7 percent during recent years. Especially even suffered from the unprecedented and ongoing COVID-19 pandemic, the economy growth is still maintained. There is a strong rise in capital adjustment, share purchase by foreign investors (Ministry of Planning and Investment). For that reason, examining quality of accounting information and earning management becomes inevitable.

To identify drivers of earning management, there has been a number of studies examines the impact of board attributes and firm's fundamentals. Prior literatures also examine the association between corporate social responsibility (CSR) and earning management. CSR has become popular these days all over the world. In Vietnam, the implementation of corporate social activities has made a great progress, from charity orientation to a more strategic approach. Billions of Vietnamese Dong has been spent each year to contribute to the wide society. However, the implementation and benefit of CSR has not been well recognized within business community and investors in Vietnam. There have not been so many studies on the role of CSR to the firm in general as well as corporate's earning management level in Vietnam. Even in the developed countries, the impact of CSR on this financial reporting measurement is inconsistent (Gaio et al., 2022).

Chih et al. (2008), Hong and Andersen (2011), Kim et al. (2012), and Dimitropoulos (2022) evidence a negative relationship between CSR and EM. They point that highly socially responsible firms are associated with less EM. Other strand of studies document positive relationship: high level of CSR implementation arises from manager's motivation to mask their private benefits or true performance of the firms (Choi & Byun, 2018; Habbash & Haddad, 2019).

We contribute to the literature by providing further evidence on the association between CSR and EM in case of Vietnam using the up-to-dated dataset. Both accrual EM and real EM are employed to evaluate the level of each manipulation in Vietnam as well as their relationship with the social contributions.

The findings are in line with the literature showing the negative relationship between the CSR and EM. CSR orientations are believed to discourage EM. These firm's managers are less likely to use judgment in financial statement or alter the operations to mislead the stakeholders about the firm's performance. In other words, investors do not need to worry about the quality of financial reporting when considering investments in these high socially responsible firms.

#### 2. Literature review

CSR has become popular these days all over the world, especially in the developed countries. It has been conveyed under different terminologies such as social issues, society and business, stakeholders' management, social responsibility, public policy. Firms are believed to carry out CSR due to the following aspects: economics, politics, social integrations and ethics (Frederick, 1987; Garriga & Melé, 2004; Parsons, 1961).

Under the instrumental theories, CSR is considered as a tool of achieving firms' economic targets, or a mere instrument for profits (Garriga & Melé, 2004). Firms only carry out an investment if it brings economic advantages, otherwise it should be dismissed (Friedman, 1970). In contrast, the integrative theories highly evaluate the interaction between firms and society and the integration of social demands in the business model (Carroll, 1991). The content of corporate



responsibility depends on social demand each period, orients toward public issues (Preston and Post, 1975 & 1981; toward stakeholder (Mitchell et al., 1997; Ogden & Watson, 1999; Rowley, 1997); toward corporate social performance (Carroll, 1979). Ethical theory focuses on the principles that ethical requirements are the right things to do. Socially responsible firms therefore have to balance the interests of stakeholders while consider ethics as a central (Carroll, 1979; Donaldson & Preston, 1995; Phillips et al., 2003). As for the political theory, a business is an entity in society and must use this social power responsibly (Davis, 1967; Wood, 2002). If a firm does not use this power, other groups will step in to putting the firm at risk losing position (Davis, 1960).

Apart from these theoretical frameworks, there has been a number of empirical studies on the impact of CSR from different perspectives. Islam et al. (2021), Park (2019), Saeidi et al. (2015) and Zhang et al. (2020) focus on the relationship between CSR and customer satisfaction, firm's reputation. Chen and Zhang (2021), El Ghoul et al. (2011) consider the cost of capital. Gelb and Strawser (2001), Weber and Saunders-Hogberg (2020), and Chang et al. (2019) examine the financial efficiency and firm's value.

When it comes to the relationship between CSR and earning quality, the results are mixed in developed countries. Chih et al. (2008) examine the 1993–2002 period at international level and find that firms engaged in CSR are less likely to manage earning. Different countries with different accounting standards, different levels of protection and different features experience different management practices (Leuz et al., 2003; Reinhart Forest et al., 2008). Hong and Andersen (2011) evidence that U.S. firms engage in CSR are less likely to use earning manipulation. Dimitropoulos (2022) employs EU database with a variety of CSR proxies, supports the view that socially responsible firms are associated with less discretion in financial reporting, less income smoothing and higher reporting quality. Kim et al. (2012), Chiang et al. (2015) support the hypothesis due to the motivation of ethical values. Scholtens and Kang (2013) suggest that firms having better performance on CSR are related to lower earing management level. In their study, the magnitude of impact is related to investor protection as well as legal enforcement. Their findings are consistent with Chih et al. (2008), Prior et al. (2008) in developed countries and Kim and Yi (2006), Liu and Lu (2007), and Charoenwong and Jiraporn (2009) for Asian countries.

Other strand of literature documents the positive relation between CSR and the reporting quality. Prior et al. (2008) argue the implementation of earning management and the employment of CSR to compensate stakeholders for their actions. Kim et al. (2012), Choi and Byun (2018), Buertey et al. (2020), and Habbash and Haddad (2019) support the finding by political theory. CSR are employed to window-dress true economic conditions of firms; mask private benefits of managers therefore provide positive association between CSR and EM. Jordaan et al. (2018), Grougiou et al. (2014) employ the agency problems which arise from separation between manager and shareholders to explain the positive relationship between CSR and EM.

Given the inconsistent results from the previous studies, it is unclear to draw the conclusion about the corporate's earning quality and CSR. This study, therefore, are employed to examine the relationship between CSR and earning management in Vietnam. Specifically, we examine how the CSR shaping the relation between socially oriented activities and the reporting of income in Vietnam. The hypothesis is therefore as follows:

H1: CSR awarded firms are less likely to engage in accrual earning management.

H2: CSR awarded firms are less likely to engage in real earning management



#### 3. Methodology

#### 3.1. Data and sample

Financial information has been collected from Fiinpro database while CSR information has been extracted from the VCCI website. Due to the unavailability of data, our sample includes 200 companies during 2016–2020 period. A wide range of industries have been included in the research, including real estate, communication, information technology, consumer staples, materials, healthcare, energy, industrials and utilities. Financial sectors are excluded from this list.

#### 3.2. CSR measurement

CSR is dummy variable, get value of 1 if companies being awarded as socially responsible firms and 0 otherwise. Information on this award is extracted from the VCCI website. This award information is public annually, calculated depending on four main criteria. The first criterion is firm performance, measure stability in income, contribution through program on community development and social problems. The employment, waste and green energy is also considered in this criterion. The second criteria accounts for the sustainable development, customer satisfaction and communication. The last two criterion examine environmental, social and labour indicators. All these measurements coincide with the definition of CSR thus they are used to proxy for the CSR.

Firm gets value of 1 if they are in the top 100 sustainable businesses. These firms are considered as "good firm". This dummy proxy, on the one hand, solve the problem of no CSR score available in Vietnam. On the other hand, the proxy aims to illustrate the relationship between being recognized as "good" and the level of earning management.

#### 3.3. Earning management (EM) measurement

EM arises when managers use judgment in presenting and structuring operations to obtain the desired level of earnings (Healy & Wahlen, 1999). It can be measured by accrual earning management (AEM) and real earing management (REM). AEM employs accounting techniques to achieve the desired level of earning while REM are achieved by a series of operational activities to adjust the sales or expenses (Yun et al., 2019). This study employs both measurements to evaluate the relationship between CSR and EM.

## 3.3.1. Accrual earning measurement (AEM)

To measure AEM, we consider the different models such as Standard Jones (Jones, 1991), Modified Jones model (Dechow et al., 1995), Modified Jones model with return on assets (Kothari et al., 2005).

3.3.1.1. Standard Jones model (*Jones*, 1991). It considers discretionary accruals as a means of earning management and defines the discretionary accruals as the difference between current total accruals and the normal ones. First, normal accruals are estimated using the following equation:

$$\frac{\textit{TA}_t}{\textit{A}_{t-1}} = \alpha_o + \alpha_1 \left(\frac{1}{\textit{A}_{t-1}}\right) + \alpha_2 \left(\frac{\Delta \textit{Rev}_t}{\textit{A}_{t-1}}\right) + \alpha_3 \left(\frac{\textit{PPE}_t}{\textit{A}_{t-1}}\right) + \varepsilon_t \tag{1}$$

in which:

 $TA_t$ : total accruals in year t, calculated using equation (2)

 $\Delta Rev_t$ : changes in revenue, calculated as revenues year t less revenues year t-1

PPEt: gross fixed assets, plant, and equipment in time t

 $A_{t-1}$ : total assets in year t-1

 $\varepsilon_t$ : residuals or error term in year t

Total accrual  $TA_t$  is estimated using the balance sheet method:

$$TA_t = (\Delta CA_t - \Delta Cash_t) - \Delta CL_t - DEP_t$$
 (2)

In which:

 $\Delta CA_t$ : change in current assets in year t

 $\Delta Cash$ : change in cash and cash equivalent in year t

 $\Delta CL_t$ : change in current liabilities at time t

DEP<sub>t</sub>: depreciation and amortization expense at time t

All the variables in equation (1) are scaled by lagged total asset to reduce heteroscedasticity. Revenues are included in the equation (1) to control for the economic condition of the firm. Grossed property, plant and equipment are added to control for the normal depreciation expense (Jones, 1991). Once the coefficients are obtained, the residuals will be used as an earning management, defined as:

$$u_{it} = \frac{TA_t}{A_{t-1}} - \left[ \alpha_o + \alpha_1 \left( \frac{1}{A_{t-1}} \right) + \alpha_2 \left( \frac{\Delta Rev_t}{A_{t-1}} \right) + \alpha_3 \left( \frac{PPE_t}{A_{t-1}} \right) \right]$$
(3)

3.3.1.2. Modified Jones model (Dechow et al., 1995). Proposed modified version of the Standard Jones (1991) model which accounted for the credit policy. He argues that companies' sales may be managed by credit policy (Dechow et al., 1995) thus short term debt could be included in the model to have a more accurate measure of earning management. Therefore, calculation of earning management in modified version is as follows.

First, total accruals which account for the short-term debt are estimated:

$$TA_{t} = (\Delta CA_{t} - \Delta Cash_{t}) - (\Delta CL_{t} - \Delta STD_{t}) - DEP_{t}$$
(4)

In which,

 $\Delta STD_t$ : change in short term debt at time t

Secondly, normal accruals ( $\textit{NDA}_t$ ) have been calculated using predicted value of the following equation:

$$\frac{TA_t}{A_{t-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2 \left(\frac{\Delta Rev_t - \Delta Rec_t}{A_{t-1}}\right) + \alpha_3 \left(\frac{PPE_t}{A_{t-1}}\right) + \varepsilon_t \tag{5}$$

With  $\triangle Rec_t$ : change in account receivables at time t

Discretionary accruals in the modified Jones (Dechow et al., 1995) are the residuals of the above equation (5), represent the difference between the total accruals and the non-discretionary accruals after adjusting for the credit policy.

$$u_{it} = \frac{TA_t}{A_{t-1}} - \left[\alpha_0 + \alpha_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2 \left(\frac{\Delta Rev_t - \Delta Rec_t}{A_{t-1}}\right) + \alpha_3 \left(\frac{PPE_t}{A_{t-1}}\right)\right] \tag{6}$$

3.3.1.3. Modified Jones model with return on asset (Kothari et al., 2005). The modified version of the Modified Jones with return on asset is proposed by Kothari et al. (2005) to account for the impact of past performance. The total accrual is similar to the modified Jones (Dechow et al., 1995) but return on asset has been included in the regression. We regress the scaled total accruals on

the following variables:

$$\frac{TA_t}{A_{t-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2 \left(\frac{\Delta Rev_t - \Delta Rec_t}{A_{t-1}}\right) + \alpha_3 \left(\frac{PPE_t}{A_{t-1}}\right) + \alpha_4 (ROA_{t-1}) + \varepsilon_t$$
(7)

With  $ROA_{t-1}$  is the return on total assets at time t.

Similar to the previous method, the residuals of regression (7) are considered as a measure of accrual earning management.

Absolute value of earning management from the Jones (1991), modified Jones (1995) and modified Jones with ROA ratio (Kothari et al., 2005) have been employed to represent the earing management level. The higher the absolute value of EM, the greater is earning management level or the lower the quality of the financial report.

#### 3.3.2. Real earning management (REM)

We follow Roychowdhury (2006) in estimating real earning management. The manipulations are under different types such as overproducing, cutting discretionary expenses or selling, general and administration costs (SGA).

Abnormal cash flow from operations are residuals of the following equation:

$$\frac{\mathsf{CFO}_t}{\mathsf{A}_{t-1}} = \alpha_\mathsf{o} + \alpha_1 \left(\frac{1}{\mathsf{A}_{t-1}}\right) + \alpha_2 \left(\frac{\mathsf{Sales}_t}{\mathsf{A}_{t-1}}\right) + \alpha_3 \left(\frac{\Delta \mathsf{Sales}_t}{\mathsf{A}_{t-1}}\right) + \varepsilon_t \tag{8}$$

With  $CFO_t$  is cash flow from operation at time t

Sales<sub>t</sub> and  $\Delta Sales_t$  are the annual sales and changes in annual sales, respectively.

Similarly, the abnormal discretionary expenses are residuals of:

$$\frac{DISX_t}{A_{t-1}} = \alpha_o + \alpha_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2 \left(\frac{\Delta Sales_t}{A_{t-1}}\right) + \varepsilon_t \tag{9}$$

With DISX is the discretionary expenditure, including R&D cost, advertising and SGA expense. However, due to the unavailability of R&D cost and advertising in financial report of Vietnamese companies, we use SGA expense to represent for the discretionary cost.

As for the manipulation through overproduction, we take the residuals of equation:

$$\frac{\textit{PROD}_t}{\textit{A}_{t-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{\textit{A}_{t-1}}\right) + \alpha_2 \left(\frac{\textit{Sales}_t}{\textit{A}_{t-1}}\right) + \alpha_3 \left(\frac{\Delta \textit{Sales}_t}{\textit{A}_{t-1}}\right) + \alpha_4 \left(\frac{\Delta \textit{Sales}_{t-1}}{\textit{A}_{t-1}}\right) + \varepsilon_t \tag{10}$$

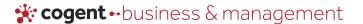
With  $PROD_t$  represent the cost of good sold (COGS) in year t.

We follow Zang (2012) calculating real earning management (REM1) as sum of residuals from discretionary expense (equation (9)) multiplied by -1 and the residual from production regression (equation (10)). Another measure of real earning management (REM2) is calculated using an aggregate measure of abnormal operating cash flow, abnormal production and abnormal discretionary expenditures (Gaio et al., 2022).

Table 1 below show summary of variables calculation

#### 3.4. Regression model

$$\textit{EM}_{\textit{i},t} = \beta_0 + \beta_1 \textit{CSR}_{\textit{i}t} + \beta_2 \textit{Growth}_{\textit{i}t} + \beta_3 \textit{Size}_{\textit{i}t} + \beta_4 \textit{Lev}_{\textit{i}t} + \beta_5 \textit{Age}_{\textit{i}t} + \beta_6 \textit{MB}_{\textit{i}t} + \beta_7 \textit{ROA}_{\textit{i}t}$$



Following Roychowdhury (2006) and Bozzolan et al. (2015), this study employs several control variables that reflect firm's characteristics. They are growing opportunities (Growth), profitability index (ROA), firm's size (SIZE), capital structure (LEV), market to book value (MB). Firm's age is also included in the model (Age).

To examine the relationship between CSR and earning management, descriptive statistics, pairwise correlation and regression have been employed. First, F statistic and Breusch-Pagan LM test are carried out to test the fixed, random effect over pooled OLS regression. Then fixed and random effect together with Hausman are applied to make inference. If there is a problem of heteroskedasticity and autocorrelation, FGLS will be used.

#### 4. Empirical analysis and discussion

#### 4.1. Descriptive statistics of the data

The Table 2 below shows the descriptive statistics of the variables including the number of observations, mean, minimum, maximum value.

There are five variables proxied for earning management. The average mean of AEM and REM is about 0.2 and 0.014–0.045, respectively, suggesting the larger level of AEM than REM among Vietnamese listed companies. Regarding the independent variable CSR, the average is 0.131 and in the range from 0 to 1. Leverage ratio has an average of 0.262, with a minimum of 0 and a maximum of 0.761 implying different level of debt among listed firm in this study. Firm size has an average value of 30.179, minimum of 28.132 and maximum of 33.59. As for the market to book ratio, the average of 1.625, the minimum of 0.119 and the maximum of 12.683 shows that even though majority of companies is overvalued, there are still some undervalued companies.

Table 1. Variables calculation		
Variables	Calculation	Abbreviation
Growing opportunities	Growth rate measured by percentage change in sales	Growth
Firm size	Logarithm of total sales	Size
Profitability ratio	Return on total assets	ROA
Capital structure	Debt to total asset ratio	LEV
Market to book value	Market to book value ratio	MB
Firm's age	Logarithm of firm's age	Lage
Earning management	Absolute value of accrual earning management, calculate using Standard Jones (1991) model with year and industry effect, with constant	ABS_AEM1
	Absolute value of accrual earning management, calculate using the modified Standard Jones (1995) model with firm and year effect, with constant	ABS_AEM2
	Absolute value of accrual earning management, calculate using the Kothari (2005) model with firm and year effect, with constant	ABS_AEM3
	Real earning management, follow Zang (2012)	REM1
	Real earning management, follow Gaio et al. (2022)	REM2

Source: Author's compilation



Table 2. Descriptive statistics							
Variable	Obs	Mean	Std. Dev.	Min	Max		
CSR	903	.131	.337	0	1		
growth1	713	.112	.295	558	4.336		
size	893	28.132	1.578	24.102	33.59		
lev	893	.262	.181	0	.761		
mb	893	1.625	1.417	.119	12.683		
roa notax	893	.058	.223	-1.925	2.478		
lage	893	2.662	.371	1.099	3.784		
abs aem1	893	.198	.18	0	1.323		
abs aem2	893	.195	.193	0	2.312		
abs aem3	893	.187	.188	0	2.318		
rem1	893	.014	.309	-1.503	3.873		
rem2	893	.045	.251	-1.777	2.676		

Source: Authors' calculation

Table 3 provides Pearson correlations between the dependent variable abs\_aem1 and the explanatory variables. All correlation coefficients have values less than 0.6 confirming the absence of multicollinearity in the model. Other tables illustrate the correlation when the dependent variables are abs\_aem2, abs\_aem3, rem1, rem2 are in the appendix.

The VIF values in Table 4 are less than 2.5 show low correlation among variables.

#### 4.2. Regression analysis and discussion

After running pooled, fixed and random effect regression, heteroskedasticity is tested. The results show the problem of heteroskedasticity (Appendix 2) thus FGLS is employed. The results of FGLS regression on the sample is as follows:

The regression results are illustrated in Table 5 with 5 columns representing 5 EMs: accrual earning management (abs\_aem1, abs\_aem2, abs\_aem3) and real earning management (rem1, rem2).

As for growth rate (*growth*), our results in all five models suggest that high growth firms have higher income increasing earning management. This finding coincided with Kasznik (1999) about the relationship between the discretionary accruals and growing rate of firm. High growth firms are

Table 3. Pairwise correlations								
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) abs_aem1	1.000							
(2) CSR	-0.096	1.000						
(3) growth	0.127	0.023	1.000					
(4) size	-0.044	0.167	0.094	1.000				
(5) lev	0.024	-0.043	0.095	0.055	1.000			
(6) mb	-0.064	0.113	0.042	0.529	-0.194	1.000		
(7) roa	0.029	-0.089	-0.016	-0.127	-0.100	-0.014	1.000	
(8) lage	-0.034	-0.010	-0.058	-0.061	0.025	-0.111	-0.105	1.000

Source: Authors' calculation



Table 4. Variance inflation factor					
	VIF	1/VIF			
mb	1.54	.649			
size	1.532	.653			
lev debt	1.097	.912			
roa notax	1.045	.957			
CSR	1.033	.968			
lage	1.028	.972			
growth	1.02	.98			
Mean VIF	1.185				

Source: Authors' calculation

able to manage accrual earnings through receivables and real earnings through overproduction. High increase in sales, or high growth rate, has higher EM (McNichols, 2000).

The coefficients on DEBT are statistically significant and negative. Highly leveraged firms are less likely to engage in the manipulation. Debt can be used to reduce the agency cost as "control hypothesis" for debt creation (Jensen, 1986).

In term of CSR, we find significant coefficients for CSR suggesting the relationship between corporate social activities and earning manipulation. The sign of coefficients for 5 values of EMs are negative, indicating that firms having high level of CSR are associated with lower earning management. In other words, CSR orientation discourages the earning management. This finding is consistent with Kim et al. (2012) and Chiang et al. (2015) supporting the role of ethical values. High CSR involvement firms

	(1)	(2)	(3)	(4)	(5)
VARIABLES	abs_aem1	abs_aem2	abs_aem3	rem1	rem2
CSR	-0.0236**	-0.0328***	-0.0315***	-0.0277**	-0.0394***
	(0.0103)	(0.0101)	(0.0104)	(0.0120)	(0.0128)
growth	0.0983***	0.0658***	0.0440***	0.214***	0.168***
	(0.0152)	(0.0167)	(0.0161)	(0.0170)	(0.0153)
size_mcap	0.00352	0.00943***	0.00828***	0.00416	0.000104
	(0.00365)	(0.00273)	(0.00270)	(0.00352)	(0.00336)
lev_debt	-0.0550**	-0.0786***	-0.0747***	-0.0589**	-0.0616***
	(0.0243)	(0.0243)	(0.0243)	(0.0257)	(0.0231)
mb_m	-0.0112***	-0.00865**	-0.00919***	0.00771*	0.0166***
	(0.00411)	(0.00370)	(0.00356)	(0.00410)	(0.00372)
roa_notax	-0.0119	-0.0442**	-0.0203	0.374***	0.451***
	(0.0172)	(0.0198)	(0.0201)	(0.0358)	(0.0375)
lage	0.0144	0.0505***	0.0482***	0.0227*	0.0372**
	(0.0133)	(0.0125)	(0.0108)	(0.0134)	(0.0152)
Constant	-0.0819	-0.267***	-0.248***	-0.140	-0.250**
	(0.102)	(0.0837)	(0.0819)	(0.111)	(0.123)
Observations	713	713	713	713	713
Number of Id	179	179	179	179	179

Standard errors in parentheses

<sup>\*\*\*</sup> p < 0.01, \*\* p < 0.05, \* p < 0.1

acknowledge risks and costs related to the manipulation from stakeholders (Desai et al., 2006; Palmrose et al., 2004) and from regulatory authorities (Cohen et al., 2008). Because they do not want to be judged badly in terms of credibility and reputation, CSR-award firms are less engaged in the earning management.

The findings support the signalling theory in explaining CSR as a signal tool. The CSR award transmit information within different parties: investors, suppliers, partners, and related authorities. When information asymmetry is reduced, the earning management is decreased, creating the negative relationship between CSR and earning management. It also supports the stakeholder theory: CSR-award firms in Vietnam not only focus on business performance but also the sustainability growth. They invest in CSR to treat their employees and the community. When the long-term performance is improved, the firms are not likely to engage in earning management (Gonçalves et al., 2021).

#### 5. Conclusion

This study examines the relationship between being good firms and earning management of Vietnamese listed firms. In line with the previous study of Desai et al. (2006), Cohen et al. (2008), this study shows negative relationship between CSR and earning management: high socially responsible firms are less likely to manipulate earning.

The results' findings can be used to support investors and related authorities when making decisions. Investors can consider CSR as a mean of evaluating financial report quality. CSR awarded firms are associated with low earning management thus investor can employ the accounting information to make decisions. Government authority can encourage businesses to take part in CSR to boost the sustainability development as well as improve the quality of financial presentation, create a fair and attractive business environment for investors.

The main limitation of this study is the lack of CSR performance level. In Vietnam, there is no CSR score available. As for the content analysis, due to the limitation of English annual report, the text mining technique has not been applied. Future research employing Vietnamese text mining technique therefore is expected to carry out. Another option which is to read the annual report and double check given marks could be considered too. This method is quite time consuming and somehow bias due to the assessments of each reader.

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#### Note

 Fiinpro is the professional and comprehensive financial database for Vietnam. www.fiinpro.com

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No potential conflict of interest was reported by the author(s).

#### Author statement

Our research has concentrated on CSR in Vietnam. CSR is quite a new concept and has not been popular in the business community in Vietnam. A large proportion of firms in Vietnam carry out CSR for charity purpose rather than incorporate it in the corporate governance. For this reason, we have planned to examine the relationship between CSR and firm performance, earning management and cost of equity, cost of capital. We aim to raise the level of awareness of CSR among businesses, investors, consumers, and the community. This study is one important part of our plan, aiming to provide the relationship between CSR and earning management.

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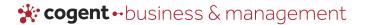
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Appendix 1: Pairwise correlation between different EM and explanatory variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) abs_aem2	1.000							
(2) CSR	-0.085	1.000						
(3) growth1	0.057	0.023	1.000					
(4) size_mcap	-0.057	0.167	0.094	1.000				
(5) lev_debt	0.021	-0.043	0.095	0.055	1.000			
(6) mb_m	-0.037	0.113	0.042	0.529	-0.194	1.000		
(7) roa_notax	-0.009	-0.089	-0.016	-0.127	-0.100	-0.014	1.000	
(8) lage	-0.018	-0.010	-0.058	-0.061	0.025	-0.111	-0.105	1.000
Pairwise cori	elations w	hen EM is Al	os_aem3		1			1
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) abs_aem3	1.000							
(2) CSR	-0.107	1.000						
(3) growth1	0.035	0.023	1.000					
(4) size_mcap	-0.066	0.167	0.094	1.000				
(5) lev_debt	0.035	-0.043	0.095	0.055	1.000			
(6) mb_m	-0.066	0.113	0.042	0.529	-0.194	1.000		
(7) roa_notax	-0.005	-0.089	-0.016	-0.127	-0.100	-0.014	1.000	
(8) lage	0.007	-0.010	-0.058	-0.061	0.025	-0.111	-0.105	1.000
Pairwise cori	relations w	hen EM is Re	em1					
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) rem1	1.000							
(2) CSR	-0.043	1.000						
(3) growth1	0.195	0.023	1.000					
(4) size_mcap	0.017	0.167	0.094	1.000				
(5) lev_debt	0.009	-0.043	0.095	0.055	1.000			
(6) mb_m	0.072	0.113	0.042	0.529	-0.194	1.000		
(7) roa_notax	0.319	-0.089	-0.016	-0.127	-0.100	-0.014	1.000	
(8) lage	-0.043	-0.010	-0.058	-0.061	0.025	-0.111	-0.105	1.000



## Appendix 2: Heteroskedasticity test

Breusch and Pagan Lagrangian multiplier test for random effects

$$abs_aem2[Id,t] = Xb + u[Id] + e[Id,t]$$

Estimated results:

	Var	sd = sqrt(Var)
abs_aem2	.0315422	.1776014
e	.0120948	.1099762
u	.0143568	.11982

Test: Var(u) = 0

 $\frac{\text{chibar2(01)}}{\text{Prob > chibar2}} = 267.73$ 





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