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The impact of earnings opacity on corporate social responsibility: insights from Vietnamese listed firms

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Abstract

Purpose – This paper studies the association between earnings opacity and corporate social responsibility disclosures of firms listed on the Vietnamese Stock Exchange.

Design/methodology/approach – We utilize a dataset comprising a sample of all listed Vietnamese firms for the period of 2014–2022. Data regarding corporate social responsibility information are gathered manually. Following Dechow *et al.* (1995), Kothari *et al.* (2005) and Bhattacharya *et al.* (2003), earnings opacity is measured by using three proxies, including abnormal accruals, earnings smoothing and loss avoidance. Our hypothesis was tested via ordinary least squares (OLS) regressions. To address endogeneity problems, we use the two-stage instrumental variable method (IV-2SLS) as well as the generalized method of moments (GMM) to ensure the robustness of our results.

Findings – We find that earnings opacity is positively related to corporate social responsibility disclosures. Cross-sectional analyses indicate that managers of firms disguise their opportunistic behaviour by disclosing more information about corporate social responsibility. The evidence also shows that firms experience long-run underperformance when having higher earnings opacity and greater sustainability disclosures. Our results remain robust even after correcting for endogeneity using the IV approach and the GMM method.

Practical implications – Evidence from this study can serve as a warning signal to the investment community, highlighting that some methods aimed at enhancing a firm's corporate social responsibility disclosures might be used to obstruct other unethical activities. Moreover, the results of this study can help regulators gain a better comprehension of firms' reporting patterns concerning corporate social responsibility initiatives. It should not only reform the corporate social responsibility regulation but also impose stronger litigation for firms to enhance the quality of corporate social responsibility disclosures.

Originality/value – We are the first to present evidence regarding the relationship between earnings opacity and corporate social responsibility disclosure in Vietnam.

Keywords Corporate social responsibility, Earnings opacity, Firm performance, Vietnam

Paper type Research paper

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1. Introduction

There has been an increasing interest among stakeholders (i.e. employees, customers, suppliers, investors and the government) in the corporate social responsibility (CSR hereafter) activities of firms. Thus, several firms have put effort into disclosing more CSR information to respond to the greater concern of the stakeholders. Firms fulfilling their responsibilities to the environment, employees and society can acquire multiple advantages by building good images for societal interest groups. However, there are two opposing views about the managerial purposes of engaging in CSR initiatives. On the one hand, CSR disclosures can enhance the transparency of financial reporting by providing more credible information about firms' commitment to ethical behaviour (Kim *et al.*, 2012; Almahrog *et al.*, 2018). On the other hand, CSR disclosures are used as managerial entrenchments (Prior *et al.*, 2008). With this argument, CRS information is applied to disguise managerial opportunistic behaviour in financial reporting. Although previous empirical studies attempted to study the relationship between CSR and earnings quality, the results were mixed. Moreover, most studies mainly focus on using samples in the context of developed countries. In this study, we do not aim to reconcile the opposing results about CSR disclosures and earnings quality, but we examine the association between CSR disclosures and earnings opacity in the context of Vietnam. In this paper, earnings opacity means that managers of firms pursue their self-interest objectives by distorting earnings information. Accordingly, the earnings of firms do not reflect the true underlying performance of firms. We follow previous studies to measure earnings opacity by capturing three attributes of earnings such as abnormal accruals, earnings smoothing and earnings benchmark beating (Dechow *et al.*, 1995; Bhattacharya *et al.*, 2003).

Vietnam is a developing country in the Southeast Asian region where financial transparency is still far from the developed market (La Porta *et al.*, 2000). Hence, Vietnam has low financial transparency due to weak legal enforcement and corporate governance that makes earnings opaque. Moreover, in developed countries like the USA or the UK, firms comply with international standards such as GRI in reporting CSR information that provides complete criteria for CSR disclosures. In Vietnam, although the government issued Circular 155/2015/TT-BTC effective on 1/1/2016 and Circular 96/2020/TT-BTC effective on 1/1/2021 to require all listed firms to disclose CSR information in annual reports or separate reports, the quality of CSR information is questionable.

Our study contributes to the literature in different ways. First, we extend previous research by providing empirical evidence about the relationship between CSR and earnings opacity by using Vietnamese-listed firms. In recent years, Vietnam has made contributions to the global economy and supply chains; hence, understanding the quality of earnings in financial reporting can help capital investment in the future. Secondly, prior studies mostly focused on examining the relationship between accrual earnings management and CSR using Vietnamese data. We differ from these studies by analysing earnings opacity that captures three attributes of earnings information (i.e. abnormal accrual, earnings smoothing and earnings benchmark beatings). Moreover, most studies in Vietnam use samples of firms that apply Circular No. 155/2015-TT/BTC to measure CSR information. Despite the mandatory inclusion of greenhouse gas (GHG) emissions data in sustainability reports, there exists a notable absence of research on CSR reporting among listed firms in Vietnam, particularly within the framework of implementing Circular No. 96/2020-TT/BTC, replacing Circular No. 155/2015-TT/BTC. As a result, our research aims to illuminate the examination of corporate social responsibility within the Vietnamese context, specifically considering the latest updates outlined in the Circular. Finally, our study provides empirical evidence of mixed results about the association between CSR information and the quality of financial reporting. Our study indicates that in the Vietnamese context, where there is weak legal enforcement, the relationship between CSR disclosures and earnings quality is opposite to the results of studies conducted in developed countries where legal enforcement and corporate governance are considered stronger (see Kim *et al.*, 2012; Gao and Zhang, 2015).

By using the sample of Vietnamese-listed firms as an emerging market setting from 2014 to 2022, we find that higher disclosure of CSR information by firms is positively associated with greater earnings opacity. While in developed countries like the USA and the UK, managers of firms disclose more CSR information as substantives, in emerging markets like Vietnam, CSR disclosures are applied as a symbolic purpose to camouflage managerial opportunism. The findings imply that when managers of firms manipulate earnings, they have a tendency to disclose more CSR information to gain support from stakeholders. Hence, CSR activities are considered as an entrenchment mechanism when earnings are opaque due to managerial opportunism. We further find that firms with high CSR disclosures and earnings opacity experience future firm underperformance. The evidence implies that firms using CSR disclosures to greenwash managerial opportunism do not credibly signal future firm performance.

In the next section, we will delve into the examination of existing literature and the formulation of hypotheses in Section 2. This will be succeeded by an exploration of the research design in Section 3. Section 4 is dedicated to unveiling the outcomes of this paper. Subsequently, in Section 5, we will conduct robustness testing. The final section serves as the conclusion.

2. Literature review and hypothesis development

2.1 Information asymmetry and earnings opacity

Jensen and Meckling (1976) show that under the agency theory, there is separation of ownership and control between managers and shareholders that creates conflicts of interest and information asymmetry. Agency problems occur when managers of firms pursue their own self-interest without optimizing the firms' values from the viewpoint of stakeholders. Higher information asymmetry results in lower quality accounting information when managers of firms get hold of superior private information in comparison to shareholders (Fields *et al.*, 2001). Previous studies show that with the conflicting interests between managers and shareholders, managers of firms engage in earnings management opportunistically, thus creating distortions of financial statements. Consequently, with the high information asymmetry as well as interest conflicts, the quality of accounting information is lower or earnings are opaquer.

2.2 Legitimacy theory and corporate social responsibility

Recent studies show the application of the legitimacy theory to explain the CSR disclosure of a firm. Under the legitimacy theory, firm establishes and maintains its legitimacy by engaging in CSR practices. Indeed, a firm voluntarily discloses CSR activities when managers of firms are aware that these disclosures are expected from the community (e.g. Cormier and Gordon, 2001; Deegan, 2002). According to this theory, there are two viewpoints differentiating two strategies of CSR disclosures as substantive (i.e. transform actions to conform social expectations) or symbolic (i.e. no transform any actions but use symbols to conform social actions) (see Deegan, 2002). With the first legitimacy strategy, managers of a firm communicate more credibly the private information of firms by disclosing more CSR information (as substantive). In contrast, with the second legitimacy strategy, managers of firms attempt to meet or change stakeholders' expectations by providing more CSR information without disclosing CSR disclosures credibly (as symbolic). The second line of viewpoint can be applied to explain the positive relationship between earnings opacity and CSR disclosures. Indeed, when managers of firms opportunistically manage earnings that emphasize greater earnings opacity, they are aware that CSR initiatives can be used as a channel to maintain their legitimacy status and avoid legitimacy crises if society realizes managers' opportunistic behaviour.

2.3 Empirical evidence on earnings opacity and corporate social responsibility

As shown in the paper by Bhattacharya *et al.* (2003), earnings opacity means that reported earnings of firms fail to reflect underlying performance, resulting in a lack of informative earnings information. Accordingly, lower accounting quality emphasizes a higher level of earnings opacity (see Picur, 2004). Indeed, under the high information asymmetry between managers of firms and outside stakeholders, poor accounting quality (i.e. earnings opacity) is exacerbated (Diamond and Verrecchia, 1991). With this view, earnings opacity is similar to earnings management that is used by managers of firms to alter reported earnings or change contractual outcomes (Healy and Wahlen, 1999).

Recent studies have increased concern about the relationship between earnings quality and CSR disclosures. The prior empirical evidence shows mixed results about this association. On the one hand, according to signalling theory, CSR is applied to reduce information asymmetry between a firm and an outside stakeholder (Brown *et al.*, 2004). Therefore, Gray (2007) shows that firms use less earnings management when engaging in CSR initiatives. Additionally, Kim *et al.* (2012) present that US firms with high CSR disclosures have higher-quality earnings information. Similarly, Gao and Zhang (2015) provide empirical evidence that the CSR of US firms is positively associated with earnings quality. Furthermore, firms with higher CSR activities have smoother earnings to signal their firm value. On the other hand, other studies provide empirical evidence about the association between CSR practices and the pursuit of managers' self-interest (e.g. McWilliams *et al.*, 2006). In fact, when managers have opportunistic incentives to manage earnings, CSR disclosures are used to conceal their misconduct behaviour (see Prior *et al.*, 2008). With this argument, CSR practice is applied as an entrenchment strategy. Hemingway and Maclagan (2004) show that managers pursue their own self-interest, driven by CSR initiatives. In this line of viewpoint, Choi *et al.* (2013) argue that managers of firms manipulating earnings disguise their opportunistic behaviour by disclosing more CSR information.

The two opposing views about the relationship between CSR disclosures and earnings quality raise an unanswered question among academic researchers. Our study does not try to reconcile two contradictory views of CSR and earnings quality. However, our objective is to investigate the association between CSR and earnings opacity in the context of Vietnam.

2.4 Corporate social responsibility in the context of Vietnam

Vietnam, a Southeast Asian country, is one of the five nations most severely affected by climate change. With awareness of the importance of dealing with climate change, the Vietnamese government has made a dedication to implement policies as well as measures to adapt to the effects of climate change. In detail, at the 26th United Nations Climate Change Conference of the Parties (COP26) Summit, the Vietnamese government committed to achieving net-zero emissions by the year 2050. Moreover, with the driving demand of society for sustainability reports, the Vietnamese Ministry of Finance issued Circular No. 96/20220-TT/BTC, replacing Circular No. 155/2015-TT/BTC. The new Circular shares the same requirements as the previous Circular that mandates listed firms covering aspects such as resource management, energy, water consumption, compliance with environmental standards, policies related to employees, responsibilities towards the local community and activities in the green capital market. In addition, the prominent difference in the new Circular is that it mandates listed firms to disclose information about GHG emissions in their sustainability reporting. Although the information on GHG emissions is mandatedly in sustainability reporting, there is a lack of study on CSR reporting among listed firms in Vietnam, particularly in the context of implementing Circular No. 96/2020-TT/BTC. Consequently, our study will shed light on studying corporate social responsibility using the latest updated Circular in the context of Vietnam.

In the Vietnam context, there are mixed results for the relationship between CSR and earnings quality. Dang *et al.* (2021) showed a negative association between CSR and the earnings quality of Vietnamese-listed firms. Moreover, Khuong *et al.* (2023) prove the negative relationship between real earnings management and CSR information. In contrast, Tran *et al.* (2022) prove that Vietnamese 100 sustainable firms that disclose CSR information do not engage in accrual earnings management or real earnings management.

Leuz *et al.* (2003) document that countries like Vietnam with weak legal enforcement and investor protection have lower earnings quality. Therefore, in the context of Vietnam, it is considered that the quality of accounting information is low that gives higher levels of earnings opacity. Consequently, consistent with the legitimacy theory, when firms have high opaque earnings due to managerial opportunism, their managers are likely to engage in CSR activities to maintain their firm's legitimacy. From the above argument, we formulate our hypothesis as follows:

H1. There is a positive relationship between earnings opacity and CSR disclosures in the context of Vietnam.

3. Research methodology

3.1 Sample selection

To test our hypotheses, we selected a sample of all nonfinancial firms listed on the Vietnam Stock Exchange between 2014 and 2022. We use the Widata database to collect financial information. As for CSR information, we manually collect it from annual reports or corporate social reports on each firm's web page. We remove industries with fewer than eight observations each year when conducting cross-sectional regressions to calculate abnormal accruals. Additionally, we eliminated observations with incomplete data. To address extreme values, all continuous variables are winsorized at the 1st and 99th percentiles. We apply the Global Industry Classification Standard (GICS) to classify industries in this paper. Table 1 (in the Online Appendix) illustrates sample selection distribution by year and industry.

3.2 Earnings opacity measures

In this study, we apply three measures of earnings opacity. The first measure of reporting opacity relies on Hutton *et al.* (2009), Kim and Zhang (2014), calculated as the absolute discretionary accruals using the cross-sectional modified Jones model by Dechow *et al.* (1995) (ABS_DAC_MJ) and Kothari *et al.* (2005) model (ABS_DAC_K). Indeed, this measure can capture both income-increasing and income-decreasing accruals (see Warfield *et al.*, 1995; Klein, 2002). The following regression equation is estimated for the same industry and fiscal year by using the cross-sectional modified Jones model.

$$\frac{AC_{it}}{A_{it-1}} = \alpha_0 + \beta_1\left(\frac{1}{A_{it-1}}\right) + \beta_2\left(\frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}}\right) + \beta_3\left(\frac{PPE_{it}}{A_{it-1}}\right) + \varepsilon_{it} \quad (1)$$

where AC_{it} is the total accruals of firm i in year t, which is calculated as income before extraordinary items minus operating cash flows; ΔREV_{it} is change in revenue of firm i from year t to t−1; ΔREC_{it} is the change in net receivables of firm i in year t scaled by total assets in year t−1; PPE_{it} is gross property, plant, equipment of firm i in year t; A_{t-1} is total asset in year t−1.

The residual from Equation (1) above represents discretionary accruals, denoted as $DAC\_MJ_{it.}$

In addition, we also apply the performance-matched model by Kothari *et al.* (2005) to estimate discretionary accruals.

$$\frac{AC_{it}}{A_{it-1}} = \alpha_0 + \beta_1\left(\frac{1}{A_{it-1}}\right) + \beta_2\left(\frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}}\right) + \beta_3\left(\frac{PPE_{it}}{A_{it-1}}\right) + \beta_4 ROA_{it} + \varepsilon_{it} \quad (2)$$

where ROA_{it} is returns on assets of firm i in year t. The residual from Equation (2) above represents discretionary accruals, denoted as DAC_K_{it}.

The second measure of earnings opacity is loss avoidance. Burgstahler and Dichev (1997) and Bhattacharya *et al.* (2003) indicate that firms that beat/meet earnings benchmarks have incentives to manage earnings. Accordingly, the relationship between earnings and firm performance is abstruse, hence the increasing earnings opacity of firms beating earnings benchmarks. Loss avoidance behaviour is measured by taking the number of firms with small positive (negative) earnings with net income scaled by lagged total assets between 0 and 1% (or between 0 and −1 percent).

The third measure of earnings opacity is earnings smoothing. In fact, Leuz *et al.* (2003) document that earnings are smoothed to obscure the volatility of a firm's economic performance. Thus, firms with earnings smoothing fail to increase the informativeness of underlying firm performance. Consequently, earnings smoothing increases earnings opacity (see Bhattacharya *et al.*, 2003). Following Leuz *et al.* (2003) and Bhattacharya *et al.* (2003), we measure earnings smoothing by calculating the correlation between accruals and changes in cash flow, which are scaled by the prior year's assets. Cash flow is calculated by deducting accruals from operating earnings. The more negative the correlation, the greater the likelihood that earnings smoothing occurs.

3.3 Corporate social responsibility measures

Based on Circular No. 96/20220-TT/BTC, we use the 18 categories shown in Appendix 2, in which there are two items of effect on the environment, seven items of management of raw materials, two items of compliance with the law on environmental protection, six items of policies related to employees, and one green capital market activity item. To measure CSR disclosures, we manually analyse these activities shown in a separate section of annual reports (i.e. Section 6 – "Report the enterprise's impact on the environment and society"). Following previous studies (e.g. Branco and Rodrigues, 2008), we employ a scoring methodology. The CSR disclosure indexes for firm i in year j are formulated as follows:

$$CSRI_{i,t} = \frac{\sum_{1}^{k} CSR_{i,t}}{N} \quad (3)$$

where

N: maximum number of items that a firm discloses CSR.

CSR: total disclosure score of firm i in year t.

Table 2 (in the Online Appendix) shows that there is a maximum number of items of 18 (e.g. items 1 to 18). Each item of CSR disclosed is coded as 1. On the other hand, firms do not disclose any item among the 18 items encrypted as 0.

3.4 Empirical model

To test our main hypothesis about the association between earnings opacity and corporate social responsibility, we use the regression model below:

$$\begin{aligned}\text{EARNINGS}_{\text{OPACITY}it} = {} & \beta_0 + \beta_1 \text{CSRI}_{it} + \beta_2 \text{ROA}_{it-1} + \beta_3 \text{LEV}_{it-1} + \beta_4 \text{M/B}_{it-1} + \beta_5 \text{SIZE}_{it-1} \\ & + \beta_6 \text{AGE}_{it-1} + \beta_7 \text{BIG4}_{it} + \beta_8 \text{DUAL}_{it} + \beta_9 \text{LOSS}_{it} \\ & + \Sigma_k \beta_k \text{YEAR}_{\text{DUMMY}it} + \Sigma_i \beta_j \text{INDUSTRY}_{\text{DUMMY}it} + \varepsilon_{it} \end{aligned} \quad (4)$$

where

EARNINGS_OPACITY = the absolute value of discretionary accruals (ABS_DAC_MJ), also known as signed discretionary accruals, and is calculated using the cross-sectional modified Jones model. This model is adjusted for performance to account for the impact of a firm's financial performance on its accruals (ABS_DAC_K). The result is a measure of the magnitude of a firm's discretionary accruals, regardless of the sign (positive or negative) of those accruals. The second measure of EARNINGS_OPACITY is earnings smoothing (SMOOTHING). The third measure is earnings avoidance loss (LOSS_AVOIDANCE).

ROA_{it-1} = Return on assets, calculated as firm i's net income in year t−1 divided by lagged total assets; LEVit−1 = Financial leverage of firm i, calculated as total debts in year t−1 divided by lagged total assets

M/B_{it-1} = Market to book ratio of firm i, measured as market capitalization relative to book value of equity

SIZE_{it-1} = Natural logarithm of firm i's lagged total assets, a measure of firm size

AGE_{it-1} = Age of firm i, calculated as number of years firms appear in database

BIG4_{it} = 1 if firm i is audited by one of the Big Four auditors in year t, and 0 otherwise

DUAL_{it} = CEO duality of firm i, set as 1 if the CEO also serves as the chairperson, and 0 otherwise

LOSS_{it-1} = 1 if firm i has negative operating income in both years t−1 and t−2, and 0 otherwise.

In Equation (4), to avoid the issues of omitted variables, we control variables that affect earnings opacity based on previous studies. This study considers key factors that influence earnings opacity, including incentives for earnings management. It controls variables related to earnings performance, firm size, growth prospects, corporate governance and litigation risks.

To measure financial risk, it includes leverage (LEV) as control variables. Previous research has shown leverage's association with discretionary accruals, especially for firms approaching debt covenant violations (DeFond and Jiambalvo, 1994). High leverage is also linked to financial distress. Moreover, firms have incentives to manage earnings to improve performance and may use earnings management to achieve this (DeFond and Park, 1997; Hansen, 2010). Hence, to account for the possibility of firms manipulating earnings to enhance their performance, I control for firm performance by using return on assets (ROA). Barth *et al.* (1999) and Skinner and Sloan (2002) show that firms with more promising growth prospects have a stronger desire to manipulate profits, and markdown accounting is their preferred method to accomplish this. Thus, we use the market to book ratio (M/B) as a control variable in the main regression model. Additionally, larger firms may have higher reputation costs when engaging in earnings management since they have better control over their businesses than smaller firms (Lev and Nissim, 2006). Hence, I also control for firm size (SIZE) as a control variable. Additionally, we incorporate an indicator variable (BIG4) in the regressions to

account for potential differences in earnings management practices among firms audited by the Big 4 audit firms (Becker *et al.*, 1998; Francis *et al.*, 1999). This variable distinguishes firm audited by one of the Big 4 auditors from those audited by non-Big 4 firms. I also add firm age (AGE) as a control variable since Alves (2023) proves that younger firms have lower earnings quality. In addition, Cohen *et al.* (2008) indicate that firms just meet/beat earnings benchmarks and manage earnings to avoid reporting a loss. I include the variable LOSS as a control variable. Alves (2023) shows that firms with a Chief Executive Officer (CEO) serving both the roles of a manager and a chairman have lower earnings quality. Therefore, I include CEO duality (DUAL) as a control variable in the main regression equation.

4. Results and discussion

4.1 Descriptive statistics and correlations

Table 3 (in the Online Appendix) presents the descriptive statistics for the chosen variables. The medians of discretionary accruals using the modified Jones model and the performance match model are 0.049 and 0.045, respectively. Next, the findings show that the mean and median of earnings smoothing are 0.355 and 0.402, respectively. Moreover, the mean and median of CSRI were 0.221 and 0.167, respectively. On average, it is observed that firms possess a return on assets (ROA) of 4.8%, a growth rate of 6.7% and a level of financial leverage of 49.3%.

Table 4 (in the Online Appendix) shows the Pearson correlation of the selected variables. In detail, the two measures of absolute discretionary accruals (ABS_DAC_MJ and ABS_DAC_K) are positively correlated with the measure of firms meeting/beating earnings benchmarks (AVOIDANCE_LOSS). Moreover, earnings smoothing and earnings benchmark beating are positively correlated with corporate social responsibility (CSRI), as expected. Furthermore, most correlation coefficients among independent variables are negligible, and the variance inflation factors (VIF) fall within the range of 1.02–1.88, suggesting that multicollinearity is not a significant issue.

4.2 The association between earnings opacity and corporate social responsibility

Table 1 shows the multiple regression of the relationship between earnings opacity and CSR. We report results by using three measures of earnings opacity: firms avoiding loss (AVOIDANCE_LOSS), earnings smoothing (SMOOTHING) and the absolute value of discretionary accruals (ABS_DAC). We find that the coefficients using all measures of earnings opacity on CSRI are positively significant. In particular, the coefficients of AVOIDANCE_LOSS, SMOOTHING and ABS_DAC_MJ on CSRI are 0.066, 0.116 and 0.244, significant at 5 and 1% levels, respectively. The results are consistent with our hypothesis that, with greater earnings opacity, managers of firms are likely to use more CSR activities to obscure their opportunistic behaviour.

4.3 Additional analysis

The relationship between CSR and future performance is moderated by discretionary accruals.

In additional analysis, as shown in Table 2, we examine the relationship between CSR disclosures and future firm performance mediated by discretionary accruals. We present the findings using the absolute magnitude of discretionary accruals (ABS_DA), along with both positive and negative discretionary accruals (DAC_POSITIVE and DAC_NEGATIVE). The measure of firm performance is adjusted by size and industry return on assets (ADJ_ROA) that is calculated as net income before extraordinary items divided by total assets. Moreover, Barber and Lyon (1996) indicate that firms can experience mean reversion of ROA. Accordingly, we adopt industry- and size-adjusted subsequent ROAs to measure future

	AVOIDANCE_LOSS$_{it}$	SMOOTHING$_{it}$	ABS_DAC$_{it}$ ABS_DAC_MJ$_{it}$	ABS_DAC_K$_{it}$
CSRI$_{it}$	0.066**	0.116***	0.244***	0.216**
	[2.411]	[3.558]	[2.861]	[2.557]
ROA$_{it-1}$	−1.458***	0.273*	−1.387***	−1.057**
	[−10.149]	[1.917]	[−3.485]	[−2.512]
LEV$_{it-1}$	−0.074*	−0.054	−0.733***	−0.741***
	[−1.817]	[−1.235]	[−6.514]	[−6.564]
M/B$_{it-1}$	−0.040**	0.035**	0.496***	0.468***
	[−2.570]	[2.239]	[10.589]	[10.041]
SIZE$_{it-1}$	−0.022***	−0.016***	−0.292***	−0.276***
	[−4.678]	[−2.737]	[−14.954]	[−14.294]
AGE$_{it-1}$	0.007***	0.004	0.011*	0.011*
	[3.508]	[1.344]	[1.911]	[1.900]
BIG4$_{i,t}$	−0.004	−0.017	0.038	0.022
	[−0.293]	[−0.912]	[0.892]	[0.530]
DUAL$_{it}$	0.000	−0.056***	−0.054	−0.072*
	[0.012]	[−2.740]	[−1.407]	[−1.884]
LOSS$_{it}$	0.045	0.033	0.674**	0.597**
	[0.520]	[0.376]	[2.268]	[2.025]
Constant	0.758***	0.716***	9.808***	9.346***
	[5.946]	[4.624]	[17.096]	[16.404]
Observations	3,246	2,152	3,246	3,246
Year/Industry dummies	YES	YES	YES	YES
Adj. R^2	0.136	0.0390	0.260	0.257
F-value	20.93***	5.274***	34.31***	39.29***

Note(s): All test statistics and significance levels are computed using standard errors adjusted through a two-dimensional clustering approach at both the firm and year levels (Petersen, 2008). All variables are defined in Appendix 1. ***, ** and * denote statistical significance at the 1, 5 and 10% confidence levels, respectively. This table presents OLS regression results of Equation (4) as below

$$EARNINGS_{OPACITY\,it} = \beta_0 + \beta_1 CSRI_{it} + \beta_2 ROA_{it-1} + \beta_3 LEV_{it-1} + \beta_4 M/B_{it-1} + \beta_5 SIZE_{it-1} + \beta_6 AGE_{it-1} + \beta_7 BIG4_{it} + \beta_8 DUAL_{it} + \beta_9 LOSS_{it} + \sum_k \beta_k YEAR_{DUMMY\,it} + \sum_j \beta_j INDUSTRY_{DUMMY\,it} + \varepsilon_{it}$$

Source(s): The table is created by authors

Table 1.
Multiple regression of earnings opacity on CSR

operating firm performance. In detail, adjusted ROA is the difference between ROA and median ROA for all firms in the same year, industry, and similar size, with total assets ranging between 70 and 130%, respectively (e.g. Barber and Lyon, 1996; Loughran and Ritter, 1997; Mikkelson *et al.*, 1997).

Table 2 shows the results using the modified Jones model to measure DAC (DAC_MJ). The variable of interest is the interaction between corporate social responsibility and discretionary accruals (CSRI x DAC). The negative and significant interaction variables (CSRI x DAC_MJ and CSRI x DAC_POSITIVE_MJ), with coefficients of −0.013 and −0.012, are significant at the 1 and 5% levels, respectively. Moreover, the estimated coefficient of (CSRI x DAC_NEGATIVE_MJ) is positive and significant at the 5% level. As presented in Table 3, the results using the performance-matched model are consistent with the findings in Table 2. The results indicate that managers of firms engaging in accrual earnings management prefer disclosing greater CSR information to mislead stakeholders about the future performance of firms.

5. Robustness checks

To avoid potential endogeneity issues, particularly those arising from unobserved omitted variables, which could bias our results, we address the issue of unobserved omitted variables

	ABS_DAC_MJ$_{it}$	ADJ_ROA$_{it+1}$ DAC_Positive_MJ$_{it}$	DAC_Negative_MJ$_{it}$
CSRI$_{it}$	−0.001	−0.004	0.005
	[−0.129]	[−0.580]	[0.581]
DAC_MJ$_{it}$	0.001	−0.001	−0.005*
	[0.927]	[−0.391]	[−1.943]
CSRI$_{it}$ x DAC_MJ$_{it}$	−0.013***	−0.012**	0.017**
	[−3.090]	[−2.209]	[2.481]
ROA$_{it}$	0.492***	0.462***	0.566***
	[24.860]	[19.685]	[14.468]
SALES_GROWTH$_{i,t}$	−0.005***	−0.004*	−0.006*
	[−2.760]	[−1.935]	[−1.937]
M/B$_{it}$	0.016***	0.021***	0.010***
	[7.357]	[7.424]	[3.009]
Z_SCORE$_{it}$	−0.000	0.000	−0.004*
	[−0.506]	[0.201]	[−1.864]
DUAL$_{it}$	−0.002	−0.004	−0.000
	[−0.916]	[−1.143]	[−0.091]
SIZE$_{it}$	−0.001	−0.002**	−0.001
	[−1.511]	[−2.117]	[−0.690]
AGE$_{it}$	0.001	0.001	0.000
	[1.261]	[1.567]	[0.580]
Constant	0.016	0.051	−0.003
	[0.651]	[1.590]	[−0.065]
Observations	2,467	1,470	997
Year/Industry dummies	YES	YES	YES
Adjusted R^2	0.315	0.336	0.270
F-value	68.32***	45.47***	23.39***

Note(s): All test statistics and significance levels are computed using standard errors adjusted through a two-dimensional clustering approach at both the firm and year levels (Petersen, 2008). All variables are defined in Appendix 1. ***, ** and * denote statistical significance at the 1, 5 and 10% confidence levels, respectively. This table presents OLS regression results of Equation (5) as below

$$ADJ\_ROA_{it+1} = \beta_0 + \beta_1 CSRI_{it} \text{ x } ABS\_DAC\_MJ_{it} + \beta_2 ROA_{it} + \beta_3 SALES\_GROWTH_{i,t} + \beta_4 M/B_{it} + \beta_5 Z\_SCORE_{it} + \beta_6 DUAL_{it} + \beta_7 SIZE_{it} + \beta_8 AGE_{it} + \sum_k \beta_k YEAR_{DUMMY\,it} + \sum_j \beta_j INDUSTRY_{DUMMY\,it} + \varepsilon_{it}$$

Source(s): The table is created by authors

Table 2. Accrual earnings management, corporate social responsibility and future performance using the modified Jones model

by employing an instrumental variable approach. In particular, we use the lagged value of the industry-average CSR as an instrumental variable (e.g. Cai *et al.*, 2011). As shown in Table 8 (Online Appendix), the results stay consistent with our main findings. In addition, even though we anticipate that earnings management influences CSR, we do not disregard the possibility of the opposite relationship. Thus, it is essential to consider endogeneity concerns. Accordingly, to solve the issue of this reverse causality, we also employ the two-step GMM. Indeed, the results obtained using the two-step GMM differ significantly because this model better addresses endogeneity and incorporates lagged values. The results are qualitatively unchanged (Table 9 in Online Appendix).

6. Conclusions

This paper examines the association between earnings opacity and corporate social responsibility disclosures. By using a sample of all Vietnamese listed firms for the period of 2014–2022, we find that firms with high earnings opacity engage more in corporate social responsibility even when we control for potential endogeneity using the IV approach and the GMM method. This finding implies that managers of firms use corporate social responsibility

	ADJ_ROA$_{it+1}$		
	ABS_DAC_K$_{it}$	DAC_Positive_K$_{it}$	DAC_Negative_K$_{it}$
CSRI$_{it}$	−0.000	0.003	−0.008
	[−0.019]	[0.428]	[−0.767]
DAC_K$_{it}$	0.002	0.000	−0.003
	[1.350]	[0.078]	[−1.281]
CSRI$_{it}$ x DAC_K$_{it}$	−0.014***	−0.014***	0.014*
	[−3.265]	[−2.709]	[1.771]
ROA$_{it}$	0.491***	0.471***	0.538***
	[24.814]	[20.246]	[14.344]
SALES_GROWTH$_{i,t}$	−0.005***	−0.004**	−0.005
	[−2.776]	[−2.256]	[−1.280]
M/B$_{it}$	0.016***	0.012***	0.025***
	[7.352]	[4.757]	[6.330]
Z_SCORE$_{it}$	−0.000	0.001	−0.006***
	[−0.527]	[1.086]	[−2.803]
DUAL$_{it}$	−0.002	−0.003	−0.003
	[−0.926]	[−0.934]	[−0.606]
SIZE$_{it}$	−0.001	−0.001	−0.004***
	[−1.397]	[−0.889]	[−2.676]
AGE$_{it}$	0.001	0.001	0.001
	[1.309]	[1.160]	[0.829]
Constant	0.013	−0.001	0.115***
	[0.521]	[−0.022]	[2.593]
Observations	2,467	1,445	1,022
Year/Industry dummies	YES	YES	YES
Adjusted R^2	0.315	0.321	0.300
F-value	68.33***	41.86***	27.45***

Note(s): All test statistics and significance levels are computed using standard errors adjusted through a two-dimensional clustering approach at both the firm and year levels (Petersen, 2008). All variables are defined in Appendix 1. ***, ** and * denote statistical significance at the 1, 5 and 10% confidence levels, respectively
This table presents OLS regression results of Equation (5) as below
$$\text{ADJ\_ROA}_{it+1} = \beta_0 + \beta_1 \text{CSRI}_{it} \text{ x ABS\_DAC\_K}_{it} + \beta_2 \text{ROA}_{it} + \beta_3 \text{SALES\_GROWTH}_{i,t} + \beta_4 \text{M/B}_{it} + \beta_5 \text{Z\_SCORE}_{it} + \beta_6 \text{DUAL}_{it} + \beta_7 \text{SIZE}_{it} + \beta_8 \text{AGE}_{it} + \sum_k \beta_k \text{YEAR}_{\text{DUMMY}it} + \sum_j \beta_j \text{INDUSTRY}_{\text{DUMMY}it} + \varepsilon_{it}$$
Source(s): The table is created by authors, Kothari *et al.* (2005)

Table 3.
Accrual earnings management, corporate social responsibility and future performance using a performance-matched model

as an entrenchment strategy when they manipulate earnings, giving greater earnings opacity. Moreover, there is a negative relationship between CSR initiatives and long-run performance for firms with high earnings opacity. This result indicates that managers of firms disclose CSR information to mislead investors about future firm performance.

Our study makes different contributions to the existing literature. First, our results solve conflicting results about the relationship between CSR disclosure and earnings quality. Specifically, we provide further evidence that earnings opacity is positively related to CSR disclosures. Our results are consistent with the argument that when managers of firms manipulate earnings for greater earnings opacity, they engage in CSR initiatives to obscure managerial opportunism (e.g. Prior *et al.*, 2008; Hummel and Schlick, 2016). Second, we differ from previous studies (i.e. Prior *et al.*, 2008; Kim *et al.*, 2012) that focused on examining the impact of earnings quality on CSR. We study the different measures of earnings opacity, such as earnings smoothing, avoidance losses and discretionary accruals. Third, we do our analyses with a sample for the period 2014–2022. Moreover, the results of our study indicate that in countries with weak legal enforcement, listed firms with CSR tend to have higher earnings opacity (i.e. earnings smoothing, discretionary accruals and earnings loss avoidance). While most studies about CSR information mainly focus on the sample period

before the year 2021, our study extends the sample period after the year 2021, when the circular 96/2020/TT-BTC, effective on 1/1/2021, requires all listed firms in Vietnam to disclose information about greenhouse gas emissions (CHG).

Our study has policy implications. The results of our study show that managers of firms overinvesting in CSR activities to obscure their opportunistic behaviour in financial reporting causes the deterioration of future firm performance. Accordingly, firms with higher earnings opacity often tend to invest excessively in activities that improve a firm's CSR as a strategy for entrenchment. Thus, although the Vietnamese government has updated policies to require listed firms to disclose more information about environmental effects (i.e. greenhouse gas emissions) in annual reporting, instead of encouraging the intended behaviour, these policies may prompt managers with opportunistic incentives to excessively invest in inefficient CSR initiatives. In Vietnam, where there is low earnings quality and weak corporate governance, one of solutions is that the government should enforce regulations on corporate governance to establish a board subcommittee tasked with monitoring the CSR activities of firms. Another measure is that the government should promote the Global Reporting Initiative (GRI) (i.e. the most widely used framework for reporting) as guidelines for regulating listed firms to disclose CSR information.

Despite the compelling findings, the research possesses certain limitations. Our study focuses on quantifying CSR disclosure using the weighting method. We do not consider measuring the quality of sustainability information. Subsequent research should reconsider the subject matter by utilizing the quality of CSR information. Another limitation of our paper is that our research model does not account for the potential for additional variables to interfere with the relationship between earnings management, CSR and financial performance. Other factors such as corporate governance and institutional elements, might moderate the causal connections among the variables in our model. Therefore, future research should take account of these institutional aspects when studying CSR.

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Appendix 1

Table A1.
Variable definitions

$SMOOTHING_{it}$	standard deviation of earnings before extraordinary and discontinued items for the most recent five years divided by standard deviation of cash flow from operating activities for the most recent five years
ABS_DAC_{it}	absolute value of discretionary accruals, also known as signed discretionary accruals, is determined using the modified Jones model and the performance match model, which incorporates return on assets (ROA) as one of its regressors
DAC_MJ_{it}	abnormal accruals, as outlined by Dechow *et al.* (1995), are calculated according to the estimation procedure laid out in Equation (1)
DAC_K	abnormal accruals, as outlined by Kothari *et al.* (2005), are calculated according to the estimation procedure laid out in Equation (2)
LOSS_ AVOIDANCE	firms with small positive earnings (small negative earnings), which is set as 1 if firms with small positive earnings (small negative earnings), 0 otherwise
ADJ_ROA_{it+1}	industry size-adjusted return on assets in year t+1 $ADJ_{ROAit+1} = ROA_{it+1} - MEDIAN_{ROAit+1}$ Where $MEDIAN\_ROA_{it+1}$: median of all firms having ROA with the same industry and similar in size (book value of total assets within 70–130%) in year t+1
$CSRI_{i,t}$	$CSRI_{i,t} = \frac{\sum_{1}^{k} CSR_{i,t}}{N}$ Where N: maximum number of items that a firm discloses CSR CSR: total disclosure score of firm i in year t
$GROWTH_{i,t}$	sales growth, which is sales of firm i in year t minus sales in year t−1, divided by sales in year t−1
$BIG4_{i,t}$	indicator is assigned a value of 1 if firm i undergoes auditing by a Big Four auditor in year t, and it is set to zero otherwise
ROA_{it-1}	returns on assets, which is equal to the net income of firm i in year t−1 divided by total assets
LEV_{it-1}	financial leverage, which is the total debts of firm i in year t−1, divided by total assets
$DUAL_{it}$	indicator variable is set to one when the CEO simultaneously holds the position of chairperson of the board of directors at firm i during year t, and it is set to zero otherwise
$LOSS_{it-1}$	indicator equal to 1 if operating incomes of firm i in both years t−1 and t−2 are negative, and zero otherwise
$SIZE_{it-1}$	firm size, which is log of total assets
AGE_{it-1}	firm age, which is the number of years that firms appear in the database
Z_SCORE_{it}	$= 3.3\,x\,\frac{\text{Net income}_{i,t}}{\text{Total asset}_{i,t-1}} + 1.0\,x\,\frac{\text{SALES}_{i,t}}{\text{Total asset}_{i,t-1}} + 1.4\,x\,\frac{\text{Retained Earnings}_{i,t}}{\text{Total asset}_{i,t-1}} + 1.2\,x\,\frac{\text{Working capital}_{i,t}}{\text{Total asset}_{i,t-1}}$

Source(s): The table is created by authors

Appendix 2

Items	Description		
EN1	Total direct and indirect greenhouse gas emissions	Effect on environment	
EN2	Measures and initiatives to reduce greenhouse gas emissions		
EN3	The total amount of raw materials used for the manufacture and packaging of the products as well as services of the organization during the year	Management of raw materials	
EN4	The percentage of materials recycled to produce products and services of the organization		
EN5	Energy consumption – directly and indirectly		
EN6	Energy savings through initiatives of efficiently using energy		
EN7	The report on energy saving initiatives (providing products and services to save energy or use renewable energy) and the report on the results of these initiatives		
EN8	Water supply and amount of water used		
EN9	Percentage and total volume of water recycled and reused		
EN10	Number of times the firm is fined for failing to comply with laws and regulations on environment	Compliance with the law on environmental protection	
EN11	The total amount to be fined for failing to comply with laws and regulations on the environment		
EN12	Number of employees and average wages of workers	Policies related to employees	
EN13	The average salary of workers		
EN14	Labour policies to ensure the health, safety and welfare of workers		
EN15	The average number of training hours per year, according to the staff and classified staff		
EN16	The skills development and continuous learning programme to support workers employment and career development		
EN17	The community investments and other community development activities, including financial assistance to community service		
EN18	Green capital market activities under the guidance of the State Securities Commission of Vietnam	Report on responsibility for the local community	

Source(s): The table is created by authors

Table A2. Description of corporate social responsibility information disclosure

Online appendix

The appendix for this article can be found online.

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