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Mandatory Disclosure of Corporate Social Responsibility and the Quality of Earnings Management

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Abstract: Using the exogenous shock caused by the mandatory corporate social responsibility (CSR) information disclosure policy in 2008, this paper examines the impact of mandatory CSR information disclosure on the earnings management activities of listed firms in China from the perspective of external corporate regulation based on the Difference-in-Differences (DID) method. The results show that mandatory CSR information disclosure can significantly improve the quality of firms' earnings management. The mechanism analysis shows that the policy's enhancement of the effectiveness of external regulation by regulators and the media played an important role in curbing firms' earnings management activities. The heterogeneity analysis shows that the inhibitory effect of mandatory CSR disclosure policy on firms' earnings management activities is better in firms with lower analyst coverage and lower institutional ownership. The study further extends the mechanism of the impact of mandatory CSR disclosure on firms' earnings management activities, and provides practical guidance on how to improve the quality of firms' earnings management and enhance the efficiency of corporate governance.

Keywords: mandatory CSR information disclosure; DID; earnings management; external supervision effectiveness

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1. Introduction

With the escalating prevalence of corporate social responsibility (CSR) reporting worldwide in recent years, the economic implications of CSR information disclosure have emerged as a focal point of concern and scrutiny among scholars in the CSR-related field. Current research in this area predominantly revolves around a few key questions and perspectives. For example, can the disclosure of CSR information effectively improve the information asymmetry between enterprises and the outside world, and in what ways can the disclosure of CSR information influence the economic behavior of enterprises? In comparison to developing nations, developed countries in Europe and America have made significant strides in establishing robust CSR frameworks. Consequently, prior studies investigating the impact of CSR information disclosure have heavily relied on enterprise data from Western developed countries. Through the study of corporate data in the European and American regions, numerous scholars have found that the disclosure of CSR information can bring various benefits to a firm's development. For example, it can effectively mitigate agency conflicts between the firms and external stakeholders [1], reduce the cost of financing and tax expenditures of firms [2,3], and improve the efficiency of firms' investment and economic performance [4,5]. However, studies in recent years have also pointed out that that the consequences of CSR disclosure are closely related to a country's level of economic development, institutional environment and cultural background. The implementation of the same CSR policy can lead to drastically different economic outcomes in different economic entities [6]. Therefore, as a representative of an emerging country, China's unique economic system may make CSR disclosures have different economic consequences and have important research value.

The earnings management of enterprises has long been a prominent subject of investigation in the domains of accounting and investment. In general, as entities responsible for information disclosure, enterprises may engage in selective disclosure of their operational information to maximize their own interests [7]. This practice gives rise to the issue of information asymmetry between external investors and the enterprise, subsequently affording leeway for short-term-oriented management to manipulate profits. Consequently, the problem of information asymmetry between enterprises and external parties is often regarded as a significant catalyst for earnings management activities [8]. A substantial body of empirical research indicates that CSR information disclosure can effectively complement corporate accounting information [1,7], thereby enhancing the transparency of enterprise information and exerting an impact on earnings management activities [8]. However, research indicates that voluntary disclosure under different motives may have contrasting effects on earnings management [8]. Therefore, previous studies focusing on voluntary CSR information disclosure have yielded inconclusive results due to endogeneity issues arising from disclosure motives [9]. Unlike the predominantly voluntary disclosure approach in Western countries, the Chinese government adopted a mandatory CSR information disclosure approach for some companies in 2008. Specifically, in December 2008, the Shanghai Stock Exchange and Shenzhen Stock Exchange introduced mandatory CSR information disclosure policies, mandating listed companies in the governance sector, overseas listed companies, financial enterprises, and all companies in the Shenzhen 100 Index to disclose CSR reports alongside their annual reports beginning in 2008. This policy not only outlined specific standards and disclosure requirements but also encompassed over 20% of Chinese-listed companies for the first time. Prior to the policy's implementation, less than 3% of Chinese listed companies had voluntarily disclosed information pertaining to CSR activities [10]. Therefore, the introduction of mandatory CSR information disclosure policies marked a formal initiation of CSR information disclosure in China [11].

In order to effectively alleviate the endogeneity problem in the relevant research settings, some scholars set up quasi-natural experiments using the exogenous shock of the enactment of China's mandatory CSR disclosure policy and examined the effect of mandatory CSR disclosure on the corporate information environment by combining the Difference-in-Differences (DID) method. For instance, Jiang et al. (2022) [3] found that the policy can effectively and efficiently help Chinese firms avoid taxes and improve their operating costs, although at the expense of the government's tax revenue to some extent, and Makosa et al. (2020) [4] found that the policy can significantly curb firms' overinvestment and improve their investment efficiency. Regarding earnings management, Wang et al. (2018) [11] discovered that mandatory CSR information disclosure can effectively enhance the quality of financial reports for regulated enterprises, consequently curbing managerial earnings management activities. However, other scholars have argued that firms may disclose CSR information as a means to divert attention from negative news, potentially exacerbating the problem of information asymmetry [12,13], which, in turn, may lead to increased earnings management. Moreover, beyond its impact on overall information transparency, the disclosure of CSR information can directly or indirectly alter the efficacy of external regulatory constraints on corporate misconduct [14]. Unfortunately, existing literature has primarily examined the relationship between CSR information disclosure and earnings management from the perspective of information asymmetry, and only considers the internal effects of firms such as management efficiency and financing constraints [9,11,15], while neglecting in-depth studies of the effects of external regulatory constraints on earnings management.

Building upon previous research, this study utilizes data from listed companies spanning 2006 to 2013 and employs a PSM-DID design to further investigate the impact of mandatory CSR information disclosure policies on the quality of earnings management and the role played by external regulations in this regard.

Compared to previous studies, the innovation and contribution of this article lies in: (1) Unlike previous research [9,10], this paper uses mandatory corporate information disclosure in China and adopts the PSM-DID research design to better mitigate potential endogeneity issues that may affect the research findings. (2) Building on previous research [8,10,11], our study extends the impact pathway of mandatory CSR information disclosure on corporate earnings management quality by introducing external regulatory and media scrutiny as forms of supervisory constraints. In doing so, it provides a new perspective for future research in CSR-related fields. (3) By examining the heterogeneity effects of indicators such as analyst coverage and institutional ownership ratio in the above relationships, our research further clarifies the impact mechanism of CSR information disclosure on earnings management, providing direct empirical evidence for government departments on how to drive corporate management efficiency in the future.

2. Literature Review and Research Hypothesis

2.1. Mandatory CSR Information Disclosure and Earnings Management

Asymmetric information can give rise to conflicts within the principal-agent relationship, leading managers to engage in earnings manipulation for their personal gain. Managers may, for instance, manipulate performance indicators to minimize political costs, avoid breaching debt agreements, or enhance financial flexibility, thereby distorting the true economic position of the company [16]. Consequently, prior research has predominantly examined earnings management through the lens of information asymmetry. Within the realm of CSR research, CSR information is often considered to be used to improve the information transparency of firms [1,7,11]. Therefore, a number of scholars have also examined the relationship between CSR information disclosure and earnings management. However, some scholars, based on their study of corporate data from developed countries with voluntary CSR information disclosure, have found that the impact of CSR information disclosure on earnings management may be difficult to define, primarily due to the heterogeneous motivations for disclosure among different enterprises. For instance, research has revealed that well-governed enterprises are motivated to enhance their reputation by disseminating more CSR information externally [14], while poorly governed enterprises may selectively disclose CSR information to shift stakeholders' attention and thereby conceal their earnings management activities [17,18]. Therefore, conducting research based on voluntarily disclosed CSR information by companies inevitably faces the challenge of endogeneity arising from disclosure motivations, which can lead to differentiated research findings [8]. For instance, Yip et al. (2011) [9] have asserted that the impact of voluntary disclosure of CSR information on earnings management generally relies on the specific characteristics of the firm. Their study reveals a negative association between CSR information disclosure and earnings management activities in the oil and gas industry, whereas a positive association is observed in the food industry. Similarly, Li et al. (2023) [18] conducted a study that also found selective voluntary disclosure enables managers to strategically leverage the tenor of CSR in order to engage in either aggressive or conservative management of earnings.

In contrast to selective disclosure by companies under voluntary disclosure rules, mandatory CSR disclosure policies not only define the content and format of CSR information, but also provide standardised disclosure metrics. This significantly enhances the normative, comparability and identifiability aspects of mandatory CSR information, thereby adding greater value to corporate information [11], which will undoubtedly further reduce the manipulative space for managerial earnings discretion, as its mandatory nature undermines the instrumental purpose of corporate CSR disclosure for managerial earnings management. Moreover, the mandatory nature of the policy reduces the purposiveness of corporate CSR disclosure, thereby reducing the likelihood of managerial use of CSR disclosure as a tool for earnings management and mitigating the interference of endogeneity issues on the research findings. Thus, based on information asymmetry theory and agency theory, it is argued that the implementation of mandatory CSR information policies can effectively increase information transparency for firms subject to disclosure requirements, which in turn helps to reduce managers' earnings management activities. Accordingly, this study proposes the following hypotheses:

H1: *The implementation of a mandatory CSR information policy significantly reduces the earnings management activities of disclosing firms relative to non-disclosing firms.*

2.2. Mandatory CSR Information Disclosure, External Supervision Constraints, and Earnings Management

In mandatory CSR reporting, companies are required to disclose not only information directly related to economic performance, but also information related to the operation and management of the company, such as upstream and downstream customer satisfaction, shareholder relations, creditor relations and environmental externalities. Therefore, according to stakeholder theory, mandatory CSR reporting will undoubtedly draw the attention of government regulators and other stakeholders to the company [14], which in turn will help to increase the effectiveness of external scrutiny of corporate non-compliance [11]. In addition, according to the theory of organisational legitimacy, the operational development of a company must comply with legitimacy requirements, as failure to do so can lead to regulatory sanctions and public condemnation [19]. Research suggests that the disclosure of CSR information enables stakeholders to more accurately assess the integrity and ethical standards of corporate managers [20]. As a result, companies that attempt to engage in non-compliant activities will undoubtedly face increased scrutiny regarding the legitimacy of their operations. For example, Chen et al. (2018) [11] argue that mandatory disclosure of CSR information significantly reduces information costs for regulators, thereby effectively increasing their regulatory efficiency and increasing the likelihood that corporate violations will be detected and punished. Since profit manipulation is usually a major focus of regulatory investigations [21], the attractiveness of mandatory CSR information disclosure to regulators will undoubtedly lead to more stringent monitoring of corporate earnings management activities. In summary, given that mandatory CSR information disclosure can effectively enhance the supervisory and monitoring efficiency of regulators, we expect that firms with mandatory disclosure are more likely to be detected and penalised by regulators when they engage in earnings management activities than non-disclosing firms. Based on this, the following hypothesis is proposed:

H2: *Compared to non-disclosing firms, the enforcement of mandatory CSR information policies increases the likelihood of regulatory authorities detecting and implementing corresponding penalties for the earnings management activities of disclosing firms.*

Furthermore, the role of the media has received widespread attention from scholars in studies related to information asymmetry and corporate reputation governance [22]. Research shows that as public awareness of social welfare and environmental protection continues to rise, CSR information has gradually become a focus of the media [14], which undoubtedly increases the media exposure of companies disclosing CSR information. As an external mechanism of corporate governance, the media not only serves to monitor and constrain corporate misconduct [23], but also performs an information intermediation function by mining and disseminating internal corporate information to other stakeholder groups, thereby facilitating information dissemination and governance monitoring [24]. Studies have shown that firms' earnings manipulation usually attracts media attention and coverage [21], which may negatively affect firms' reputation and future development [10,14]. Therefore, according to the impression management theory, the media exposure that the mandatory disclosure of CSR information brings to firms under the role of reputation mechanism may enhance managers' management of the firm's image [11,14], which helps to curb earnings management activities. Therefore, the disclosure of mandatory CSR information may potentially restrain the management's willingness for earnings management due to the increased media exposure it brings to the companies, consequently leading to a reduction in earnings management activities. Based on this, we expect that the enforcement of mandatory CSR information disclosure policies can strengthen external constraints on earnings management activities by increasing media attention on companies subject to disclosure requirements. Accordingly, the following hypothesis is proposed:

H3: *Mandatory CSR disclosure policies may discourage earnings management activities by increasing the media attention paid to firms that are required by regulation to disclose, compared to firms that do not disclose CSR information.*

3. Research Design

3.1. Sample Selection

The initial sample for this study comprised non-financial companies listed on the A-share market from 2006 to 2013. The sample was further refined through the following steps: (1) Exclusion of companies with abnormal trading listings, such as ST, ST*, and PT. (2) Exclusion of companies that voluntarily disclose CSR information, focusing only on companies obligated to disclose (experimental group) and companies that do not disclose (control group). (3) Exclusion of companies with missing financial data. After applying these criteria, the final dataset consisted of 8527 observations, including 2078 observations in the experimental group and 6449 observations in the control group. To address potential sample selection bias, propensity score matching (PSM) was employed to create comparable experimental and control groups prior to the announcement of the policy. Specifically, referring to Chen et al. (2018) [11], this paper uses data from firms in the pre-mandatory CSR disclosure policy period, i.e., 2006–2008. The experimental and control groups were subjected to a nearest neighbor matching method, allowing for replacement, with a maximum ratio of 1:3, to ensure comparability between the groups. The matching process incorporated several covariates, namely market value (Mv), revenue growth rate (Growth), return on equity (Roe), cash holdings (Cash), and asset-liability ratio (Lev). A caliper of 0.25 was set to ensure the appropriate matching. After the matching process, we obtain a panel of 5328 firm-year observations consisting of 253 firms in the experimental group and 544 firms in the control group, while ensuring that the mean difference of each covariate between the experimental group and the control group is less than 5%.

3.2. Model Design and Indicator Selection

To assess the impact of mandatory CSR information disclosure policies on earnings management among listed companies in China, we formulated the following difference-in-differences (DID) models:

$$AAEM_{it} = \beta_0 + \beta_1 Treated_i \times Post_t + \sum \beta_i Controls_{it} + \alpha_i + \gamma_t + \varepsilon_{it} \quad (1)$$

$$AREM_{it} = \beta_0 + \beta_1 Treated_i \times Post_t + \sum \beta_i Controls_{it} + \alpha_i + \gamma_t + \varepsilon_{it} \quad (2)$$

In Equations (1) and (2), i and t represent the company and year, respectively. The parameters α and γ correspond to individual and year-fixed effects, respectively. *Treated* is a binary variable, taking the value of 1 for companies obligated to publish CSR reports and 0 otherwise. *Post* is a time dummy variable, assigned the value of 1 for years following the implementation of the mandatory CSR information disclosure policy in 2009, and 0 otherwise [11]. And ε in all the above equations are random disturbance items. As for the dependent variables, this study focuses on the magnitude rather than the direction of earnings management, so our study uses the absolute value of earnings management as the dependent variable, with a larger absolute value indicating a higher degree of earnings management by the firm. Specifically, we adopted the absolute value of accrued earnings management (AAEM) and the absolute value of real earnings management (AREM) to measure the magnitude of earnings management by firms, building upon the frameworks established by Dechow et al. (1995) [25] and Roychowdhury (2006) [26], respectively. Accrued earnings management (AEM) is computed using the modified Jones model [25], which incorporates three key indicators, i.e., abnormal operating cash flow, abnormal production costs, and abnormal discretionary expenses of a firm. AEM captures managerial behavior whereby accounting standards are utilized to mask the true economic condition of the company. On the other hand, real earnings management (REM) is calculated by the real earnings management model proposed by Roychowdhury (2006) [26], who argues that firms can achieve real earnings manipulation by reducing the price of their products to increase the volume of their sales, reducing the cost of sales by producing excess products, and reducing the discretionary spending of the firm.

Moreover, we controlled for several variables, Controls, that may be associated with the degree of earnings management. Following the approach taken by Wang et al. (2018) [8] and Chen et al. (2011) [27], these variables include firm size (Size), corporate leverage ratio (Lev), listing age of firm (Age), nature of ownership (Soe), executive shareholding (Mh), return on assets (Roa), and equity concentration (Top1). Firstly, Size is the natural logarithm of the firm's total assets at the end of the accounting year, which has a significant impact on the firm's cash flow and profitability. Secondly, Lev is the ratio of total liabilities to total assets at the end of the accounting year and is one of the most important indicators of a firm's balance sheet. In addition, Roa is the net profit at the end of the accounting year divided by the total assets at the end of the accounting year, which is an important indicator of a firm's profitability. Mb is the market value of equity at the end of the accounting year divided by the book value of equity. It has also been found that state-owned enterprises are generally more restrained in their earnings management activities. so we also include Soe, the nature of ownership of the enterprise, in the control variables.

Within the regression models specified by Equations (1) and (2), our primary focus lies on the coefficient β_1 of the interaction term $Treated_i \times Post_t$. A significant and negative coefficient would provide support for Hypothesis 1, implying that the mandatory CSR disclosure policy effectively suppresses earnings management activities. Conversely, if the coefficient is not significantly negative, it suggests that the mandatory CSR disclosure policy does not effectively curb earnings management activities.

3.3. Variable Measurement and Data Sources

Regarding the dependent variables in this study, AAEM is defined as total profits minus non-discretionary accruals [25], while AREM is defined as abnormal production costs minus the sum of abnormal operating cash flows and abnormal discretionary expenses [26]. The list of firms disclosing CSR information was obtained from the RKS database, while the control variables are largely consistent with existing studies [10,11], and their detailed data are available from the CSMAR or CNRDS databases. To mitigate the impact of outliers, we applied Winsorize (1%) treatment to all continuous variables. Please refer to Table 1 for the names and definitions of the main variables.

Table 1. Variable Definition.

Variable	Symbol	Definition
Accrued earnings management level	AAEM	Absolute value of the difference between total profit and non-manipulable accrued profit
Real earnings management level	AREM	Absolute value of the abnormal production costs minus the sum of abnormal operating cash flows and abnormal discretionary expenses.
Time dummy variable	Post	Post = 1 (2009–2013), Post = 0 (2006–2008)
Group dummy variables	Treated	Treated = 1 (Experimental Group), Treated = 0 (Control Group)
Firm size	Size	Natural logarithm of total assets
Corporate leverage ratio	Lev	Total liabilities/total assets

Table 1. *Cont.*

Variable	Symbol	Definition
Return on Assets	Roa	Net profit/total assets
Nature of ownership	Soe	The value of state-owned listed companies is 1, otherwise, it is 0
listing age of firm	Age	The Natural logarithm of the year of listing
Shareholding ratio of major shareholders	Top1	The fraction of shares held by the largest shareholders
Management shareholding ratio	Mh	Number of shares held by management to total number of shares

4. Empirical Result Analysis

4.1. Statistical Description Results

Table 2 presents the descriptive statistics. Among the 5328 companies included in the sample from 2006 to 2013, the mean (median) value of AAEM is 0.064 (0.046), ranging from a minimum of 0.001 to a maximum of 0.377, with a standard deviation of 0.061. The mean (median) value of AREM is 0.176 (0.125), with a minimum value of 0.003 and a maximum value of 1.123, and a standard deviation of 0.173. These findings suggest that there are variations in the levels of earnings management among firms, yet they fall within a reasonable range. Regarding the control variables, the mean (median) of firm size (Size) was 21.968 (21.783), with a maximum value of 28.483 and a minimum value of 15.577, indicating that the sample primarily consisted of medium-large sized firms. The mean (median) of corporate leverage ratio (Lev) was 0.493 (0.507), suggesting that the total debt of the sample companies accounted for approximately 50% of their total assets. the mean and median of Roa is 0.037 and 0.033 respectively, indicating that the majority of the sample firms had a return on assets of over 3%. the mean and median of the Top1 variable are 0.365 and 0.352 respectively, indicating that most firms have a high proportion of large shareholders. Other variables exhibited values within a reasonable range and are not further described upon in this context.

Table 2. Summary statistics.

Variable	Obs	Mean	Min	Median	Max	SD
AAEM	5328	0.064	0.001	0.046	0.377	0.061
AREM	5328	0.176	0.003	0.125	1.123	0.173
Post	5328	0.688	0.000	1.000	1.000	0.463
Treated	5328	0.244	0.000	0.000	1.000	0.429
Size	5328	21.968	15.577	21.783	28.482	1.299
Lev	5328	0.493	0.007	0.507	0.849	0.186
Top1	5328	0.365	0.022	0.352	0.758	0.149
Age	5328	2.210	0.000	2.303	3.091	0.576
Roa	5328	0.037	−0.247	0.033	0.181	0.049
Mh	5328	0.012	0.000	0.000	0.391	0.050
Soe	5328	0.349	0.000	0.000	1.000	0.477

4.2. Correlation Analysis

Prior to conducting the regression analyses specified by Equations (1) and (2), it is imperative to investigate the potential issue of multicollinearity among the variables, as it directly impacts the validity of the fundamental regression results presented in this study. Table 3 shows the Pearson correlation coefficients among the variables in our regression analyses. It can be seen that AAEM and AREM are highly correlated, with a correlation coefficient of 0.448. The significantly negative coefficient between Treated and AAEM (AREM) indicates that firms with mandatory CSR reporting tend to have more restrained earnings management activities throughout the sample period 2003–2013. Furthermore, it is evident that the magnitudes of the correlation coefficients among the control variables are all below 0.4, implying the absence of a significant multicollinearity issue within the underlying regression model.

Table 3. The correlation matrix.

Variable	AAEM	AREM	Post	Treated	Size	Lev	Top1	Age	Roa	Mh	Soe
AAEM	1										
AREM	0.448 ***	1									
Post	0.025 **	0.047 ***	1								
Treated	−0.037 ***	−0.022 **	−0.034 ***	1							
Size	0.008	0.019 *	0.174 ***	0.464 ***	1						
Lev	0.093 ***	0.017	−0.027 **	0.074 ***	0.397 ***	1					
Top1	0.021 *	0.054 ***	0.019 *	0.167 ***	0.309 ***	0.073 ***	1				
Age	−0.040 ***	−0.098 ***	−0.163 ***	0.126 ***	0.495 ***	0.347 ***	0.186 ***	1			
Roa	0.029 ***	0.162 ***	0.058 ***	0.154 ***	0.072 ***	−0.385 ***	0.106 ***	−0.271 ***	1		
Mh	0.014	0.015	0.109 ***	−0.120 ***	−0.151 ***	−0.186 ***	−0.098 ***	−0.084 ***	0.090 ***	1	
Soe	−0.018	−0.045 ***	−0.392 ***	0.089 ***	0.091 ***	0.080 ***	0.146 ***	0.191 ***	−0.047 ***	−0.171 ***	1

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

4.3. Dynamic Trend Test

The coherence of earnings management trends between the experimental and control groups prior to policy implementation is a crucial prerequisite for conducting DID estimation. Therefore, we first conduct a dynamic trend analysis. Figures 1 and 2 show the changes in AAEM and AREM for both the experimental and control groups from 2006 to 2013. In both figures, the vertical axis represents the level of earnings management, while the horizontal axis represents time (year). From Figures 1 and 2 we can see that prior to the policy implementation, the two groups of companies had similar trends in the level of earnings management (both AAEM and AREM). However, after the implementation of the policy, there were notable differences in the trends of AAEM and AREM between the two groups. Specifically, from 2009 onwards, the experimental group companies experienced a significantly steeper decline in the level of accrued earnings management and real earnings management compared to the control group companies. Thus, the results of this dynamic analysis largely fulfil the requirements for conducting the DID estimation.

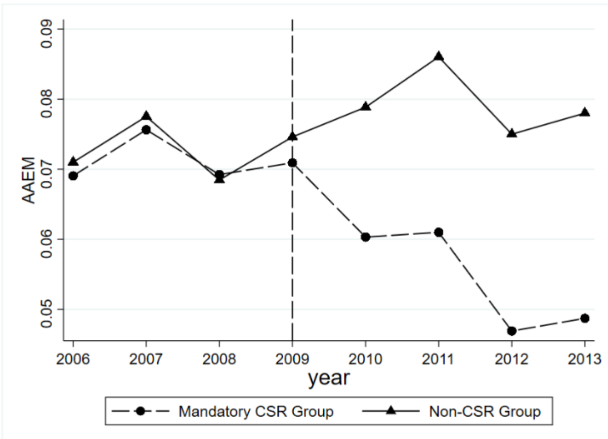

Figure 1. Dynamic trends in AAEM.

4.4. Benchmark Regression Results

Table 4 presents the regression results for Equations (1) and (2). In column (1), without the inclusion of control variables, the findings reveal a significant coefficient of −0.018 for the interaction term $Treated_i \times Post_t$, at a significance level of 1%. In column (2), after controlling for various variables associated with earnings management, the coefficient for the interaction term remains significant at the 1% level, with a value of −0.019. This indicates that after the implementation of the policy, there was a significant reduction in the level of accrued earnings management (AAEM) in the experimental group compared to the control group. Similarly, in columns (3) and (4), it can be seen that the regression coefficients of the interaction terms are significantly negative at the level of 1% (−0.066 and −0.060, respectively), regardless of whether or not the control variables are included in the regression. These results highlight that the policy implementation significantly diminishes the level of real earnings management (AREM) for the experimental group firms in comparison to the control group. Therefore, the results in Table 4 illustrate that the implementation of a mandatory CSR disclosure policy is effective in limiting the earnings management activities of firms in the experimental group, testing Hypothesis 1.

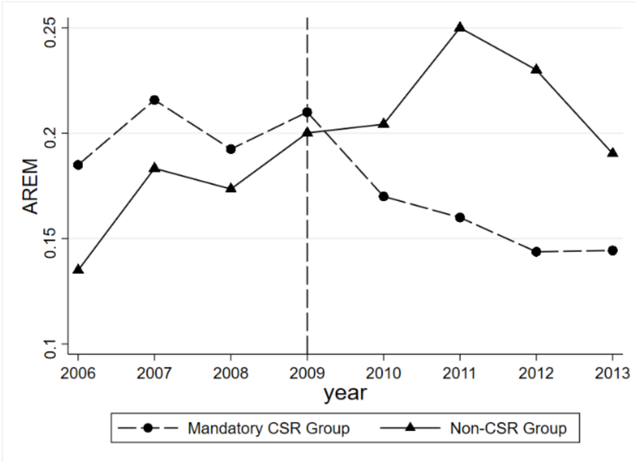

Figure 2. Dynamic trends in AREM.

Table 4. Benchmark regression results.

Variable	(1)	(2)	(3)	(4)
	AAEM	AAEM	AREM	AREM
Treated × Post	−0.018 *** (−4.05)	−0.019 *** (−4.00)	−0.066 *** (−5.94)	−0.060 *** (−4.58)
Size		0.027 *** (4.18)		0.078 *** (3.59)
Lev		0.073 *** (3.21)		0.146 *** (2.77)
Top1		−0.000 (−0.07)		0.003 ** (2.48)
Age		−0.026 *** (−2.77)		−0.085 *** (−3.12)
Roa		0.124 ** (2.44)		0.648 *** (6.22)
Mh		0.063 (0.85)		0.085 (0.43)
Soe		0.002 (0.79)		0.018 *** (2.62)
Constant	0.072 (55.32)	−0.538 *** (−3.88)	0.203 (55.18)	−1.679 *** (−3.34)
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	5328	5328	5328	5328
Adj. R^2	0.002	0.022	0.003	0.038

Note: figures in () are t value; *** and ** indicate significance at the 1% and 5% levels, respectively.

In terms of the regression results for the control variables, Size and Lev are significantly and positively correlated with the dependent variable, suggesting that larger and more indebted firms in our sample are more willing to engage in earnings management activities.

In contrast, a firm's initial public offering (IPO) age exhibits a significant and negative association with the dependent variable, indicating that within our study sample, firms with a longer history of being listed tend to demonstrate a diminished inclination towards earnings management.

4.5. Robustness Test

This study employs the following three methods to assess the robustness of the results: (1) Conducting regressions on the entire sample of firms before implementing propensity score matching (PSM); (2) Considering that the experimental group consists of firms listed in either the "SSE Corporate Governance Index" or the "SZSE 100 Index" which generally possess larger sizes and market values. To further attenuate the potential influence of sample self-selection on the regression results, we adopt a strategy employed in the study conducted by Chen et al. (2018) [11], whereby we constrain the size and market value of the control group firms to fall within the observed range of values exhibited by the experimental group firms. (3) To eliminate potential interference from other policies on the findings of this study (such as the release of Chines new accounting standards for enterprises in 2007), this study assumes 2007 as the year of policy implementation and conducts a placebo test using a sample of enterprises from 2006 to 2008.

Table 5 presents the results of the robustness tests. In columns (1) and (2), the regression coefficients for the interaction term remained consistent at −0.011 and −0.047, respectively, and were significant at the 1% level. These results indicate that the findings were robust when using the entire sample for regression analysis, supporting the reliability of the results. Likewise, in columns (3) and (4), the coefficients for the interaction term were −0.018 and −0.061, respectively, and remained significant at the 1% level, even after controlling for the size and market capitalization of the control group firms. This further strengthens the robustness of the findings, as it confirms that the observed effects were not influenced by variations in firm size and market capitalization. In columns (5) and (6), the coefficients for the interaction term in the placebo tests were not statistically significant. This implies that there was no significant change in the level of earnings management for the experimental group firms compared to the control group around 2007, suggesting that other macroeconomic shocks during that period had limited influence on the research results.

Table 5. Robustness tests.

Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Full Sample Test		**Limited Size and Market Value**		**Placebo Test**	
	AAEM	**AREM**	**AAEM**	**AREM**	**AAEM**	**AREM**
Treated × Post	−0.011 ** (−2.40)	−0.047 *** (−3.58)	−0.018 *** (−3.86)	−0.061 *** (−4.59)	−0.010 (−1.32)	−0.024 (−1.26)
Size	0.012 ** (2.54)	0.040 ** (2.16)	0.023 *** (3.88)	0.077 *** (3.60)	0.070 *** (4.70)	0.140 *** (2.91)
Lev	0.068 *** (3.95)	0.110 ** (1.99)	0.078 *** (3.54)	0.140 *** (2.66)	−0.008 (−0.24)	−0.031 (−0.40)
Top1	0.000 (0.29)	0.002 (1.39)	0.000 (0.28)	0.003 ** (2.57)	0.001 (0.92)	0.002 (0.93)
Age	−0.029 *** (−2.66)	−0.069 ** (−2.16)	−0.027 *** (−2.93)	−0.086 *** (−3.22)	−0.084 *** (−4.02)	−0.056 (−1.19)
Roa	0.123 *** (2.98)	0.681 *** (4.51)	0.122 ** (2.47)	0.654 *** (6.26)	−0.141 ** (−2.23)	0.351 ** (2.24)

Table 5. *Cont.*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
	Full Sample Test		Limited Size and Market Value		Placebo Test	
	AAEM	AREM	AAEM	AREM	AAEM	AREM
Mh	−0.011 (−0.13)	−0.120 (−0.77)	0.061 (0.82)	0.083 (0.42)	0.044 (0.44)	0.137 (0.84)
Soe	0.002 (0.68)	0.016 ** (2.03)	0.002 (0.57)	0.019 *** (2.70)	0.017 ** (2.14)	0.062 ** (2.03)
Constant	−0.234 ** (−2.24)	−0.806 ** (−2.12)	−0.464 *** (−3.53)	−1.656 *** (−3.32)	−1.407 *** (−4.60)	−2.920 *** (−2.85)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	8527	8527	5019	5019	2059	2059
Adj. R^2	−0.011 **	−0.047 ***	−0.018 ***	−0.061 ***	−0.010	−0.024

Note: figures in () are t value; *** and ** indicate significance at the 1% and 5% levels, respectively.

Overall, the robustness tests consistently support the main findings, providing additional assurance regarding the reliability and validity of the study's conclusions.

4.6. Mechanism Analysis

4.6.1. Supervision and Constraint Effectiveness of Regulatory Authorities

In the theoretical analysis section, this study posits that mandatory CSR information disclosure contributes to reducing the information acquisition costs for regulatory authorities and enhances the effectiveness of their enforcement supervision. Consequently, in this context, we anticipate that firms engaged in earnings management are more likely to be detected and subjected to corresponding penalties by regulatory bodies. To empirically verify the effectiveness of mandatory CSR report issuance in augmenting the supervisory constraints imposed by regulatory agencies, this study constructs a dummy variable, denoted as Punish, indicating whether firm *i* received regulatory sanctions from the securities exchange regarding its accounting information disclosure in year *t*. Subsequently, we test Hypothesis 2 by constructing a linear probability model (Probit) as follows:

$$\begin{aligned} Punish_{it} = \beta_0 + \beta_1 Treated_i \times Post_t \times AAEM + \beta_2 Treated_i \times Post_t + \beta_3 Post_t \times AAEM + \\ \beta_4 Treated_i \times AAEM + \beta_5 Treated_i + \beta_6 Post_t + \sum \beta_i Controls_{it} + \varepsilon_{it} \end{aligned} \tag{3}$$

$$\begin{aligned} Punish_{it} = \beta_0 + \beta_1 Treated_i \times Post_t * AREM + \beta_2 Treated_i \times Post_t + \beta_3 Post_t \times AREM + \\ \beta_4 Treated_i \times AREM + \beta_5 Treated_i + \beta_6 Post_t + \sum \beta_i Controls_{it} + \varepsilon_{it} \end{aligned} \tag{4}$$

In Equations (3) and (4), the variable $Punish_{it}$ takes the value 1 if firm *i* receives regulatory penalties in year *t*, and 0 otherwise. Moreover, $Controls_{it}$ represents a set of control variables at the firm level, consistent with Equations (1) and (2). The error term is denoted by ε_{it}. In the aforementioned equations, our primary focus lies on the regression coefficient β1 of the triple interaction term. A significant positive value of β_1 would indicate that companies subject to mandatory disclosure are more susceptible to detection and penalties by regulatory authorities when engaging in earnings management activities. The regression results are presented in Table 6. It is evident that the coefficients of the triple interaction term in both columns are 1.664 and 2.215, respectively, significant at the 1% level. These findings suggest that mandatory CSR reporting effectively strengthens the supervisory constraints of regulatory agencies on companies obligated to disclose, facilitating the detection and punishment of earnings management activities by these enterprises. The findings presented in Table 6 validate Hypothesis 2.

Table 6. Effectiveness of Regulatory Enforcement Supervision.

Variable	(1)	(2)
	Punish	Punish
Treated × Post × AAEM	1.664 *** (3.23)	
Post × AAEM	0.288 (0.93)	
Treated × AAEM	−4.511 (−0.69)	
Treated × Post × AREM		2.215 *** (4.15)
Post × AREM		0.216 *** (2.69)
Treated × AREM		−0.168 (−0.13)
Treated × Post	−0.112 (−0.28)	−0.005 (−0.92)
Post	0.246 ** (2.21)	−0.015 *** (−2.74)
Treated	−0.071 (−0.20)	0.019 (0.92)
Size	−0.041 (−0.87)	0.000 (1.11)
Lev	0.538 ** (2.41)	−0.010 (−0.67)
Top1	−0.003 (−1.01)	−0.024 (−0.45)
Mb	−0.241 (−1.16)	0.054 (0.73)
Roa	−2.161 *** (−2.99)	−0.003 (−0.74)
Mh	−0.308 (−0.56)	0.330 *** (2.87)
Soe	−0.245 ** (−2.57)	−0.005 (−0.92)
Constant	−1.317 (−1.48)	−0.015 *** (−2.74)
N	5328	5328
Pseudo R^2	0.057	0.060

Note: figures in () are t value; *** and ** indicate significance at the 1% and 5% levels, respectively.

4.6.2. Mandatory CSR Information Disclosure, Media Attention, and Earnings Management

In the digital era, the media plays a dual role as a platform for companies to disseminate information and as a channel for the public to access information. The public's growing demand for CSR information has resulted in increased media scrutiny of companies that disclose CSR reports, intensifying external pressure on these firms [14,28]. This can increase external public pressure on firms and affect their reputations [29], which in turn can lead to effective monitoring and regulation of companies' non-compliant behaviour [10,11]. In light of this, in the theoretical analysis section, we argue that the media, as an external mechanism of firm's governance, can play an effective monitoring intermediary role in the process of CSR disclosure affecting earnings management. Building on this premise, we construct the following model to investigate the mediating effect of media attention on firm's behavior, with media attention (*Media*) serving as the mediating variable:

$$Media_{it} = \beta_0 + \beta_1 Treated_i \times Post_t + \sum \beta_i Controls_{it} + \alpha_i + \gamma_t + \varepsilon_{it} \quad (5)$$

$$AAEM_{it} = \beta_0 + \beta_1 Treated_i \times Post_t + \beta_2 Media_{it} + \sum \beta_i Controls_{it} + \alpha_i + \gamma_t + \varepsilon_{it} \quad (6)$$

$$AREM_{it} = \beta_0 + \beta_1 Treated_i \times Post_t + \beta_2 Media_{it} + \sum \beta_i Controls_{it} + \alpha_i + \gamma_t + \varepsilon_{it} \quad (7)$$

In the aforementioned equations, the mediating variable $Media_{it}$ denotes the level of media attention received by company i in year t. It is measured as the natural logarithm of the number of news articles pertaining to the company in both print newspapers and online media sources [30]. The media coverage data used in this study are sourced from the CNRDS database, which archives news reports from 8 prominent financial newspapers and 20 leading online financial media outlets. Furthermore, $Controls_{it}$ represents a set of enterprise-level control variables, consistent with the formulation in Equation (1). The variables α_i and γ_t correspond to individual and annual fixed effects, respectively, while ε_{it} denotes the error term in the model.

The regression results presented in Table 7 display the findings of Equation (5) in the first column. It is evident that the regression coefficient for the interaction term is 0.095, which is statistically significant at the 5% level. This suggests that the media attention received by the experimental firms increased by 9.5% compared to the control firms following the implementation of mandatory CSR information disclosure policy. The second and third columns provide the regression results for Equations (6) and (7), respectively. Notably, the regression coefficients for the interaction term $Treated_i * Post_t$ in both columns are −0.019 and −0.059, respectively, signifying statistical significance at the 1% level. Moreover, the regression coefficients for $Media_{it}$ are −0.021 and −0.017, respectively, which are also significantly negative at the 1% and 5% levels. Consequently, the results in Table 7 confirm the establishment of the mediating effect of media attention. In summary, the findings in Table 7 demonstrate that mandatory CSR disclosure policies can discourage earnings management activities by increasing the effectiveness of external media scrutiny of companies subject to disclosure requirements, which supports Hypothesis 3.

Table 7. Analysis of the Mediating Effect of Media Attention.

Variable	**(1)**	**(2)**	**(3)**
	AAEM	**AAEM**	**AREM**
Treated × Post	0.095 ** (2.58)	−0.019 *** (−4.00)	−0.059 *** (−4.45)
Media		−0.021 *** (−3.38)	−0.017 *** (−3.60)
Size	0.619 *** (20.04)	0.025 *** (3.98)	0.082 *** (3.58)
Lev	−0.437 *** (−3.98)	0.071 *** (3.18)	0.144 *** (2.73)
Top1	−0.003 * (−1.71)	0.000 (0.07)	0.003 ** (2.48)

Table 7. *Cont.*

Variable	(1)	(2)	(3)
	AAEM	**AAEM**	**AREM**
Age	−1.411 *** (−17.95)	−0.025 *** (−2.61)	−0.094 *** (−3.57)
Roa	0.285 (1.15)	0.124 ** (2.44)	0.654 *** (6.24)
Mh	0.136 (0.52)	0.063 (0.85)	0.084 (0.42)
Soe	0.134 *** (5.36)	0.002 (0.86)	0.019 *** (2.75)
Constant	−10.220 *** (−16.09)	−0.515 *** (−3.72)	−1.750 *** (−3.33)
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
N	5328	5328	5328
Adj. R^2	0.095	0.021	0.039

Note: figures in () are t value; ***, ** and * denote significance at the 1%, 5% and 10% levels respectively.

5. Heterogeneity Analysis

The current study has provided initial evidence to support the notion that mandatory disclosure of CSR information can effectively enhance the external regulatory effectiveness of firms and thereby constrain their earnings management activities. However, it is important to note that the effectiveness of such regulatory intervention depends on the underlying condition of increased corporate information transparency [10], otherwise it is not possible to show that CSR information has a significant impact on reducing firms' information acquisition costs and attracting regulatory attention [14]. Therefore, in the heterogeneity analysis section, this paper further examines the impact of mandatory CSR information on the transparency of corporate information.

5.1. Heterogeneity of Analyst Coverage

Extensive empirical research has consistently shown that the disclosure of high-quality CSR information can significantly reduce analysts' information acquisition costs. This, in turn, leads to a reduction in analysts' forecasting errors and increases external awareness of a company's accurate accounting information [1,7]. As a result, some scholars have used analysts' coverage of a firm as a proxy variable to measure a firm's information transparency [10,30]. In this study, we hypothesize that the impact of mandatory CSR information on overall information quality will be more pronounced for firms with lower information transparency, resulting in a stronger deterrent effect on earnings management activities. To test this hypothesis, we divide the sample into two subsamples based on the level of analyst coverage: high coverage and low coverage, using the median analyst coverage as the threshold. Separate regression analyses are then performed for each subsample. The analyst coverage rate, obtained from the CSMAR database, is defined as the natural logarithm of the number of analysts covering a company. The regression results are shown in Table 8.

In Table 8, the regression results for columns (1) and (2) reveal the impact of the interaction term on AAEM in the high and low analyst coverage subsamples, respectively. In column (1), the regression coefficient of the interaction term for the high analyst coverage subsample is −0.006, which is not statistically significant. Conversely, in column (2), the regression coefficient of the interaction term for the low analyst coverage subsample is −0.021, significant at the 1% level. Similarly, in columns (3) and (4), representing subsample regressions, the interaction term coefficients are −0.043 and −0.082, respectively. It can be seen that the coefficient in column (3) (high analyst coverage subsample) is not statistically significant, while the coefficient in column (4) (low analyst coverage subsample) is significantly negative at the 1% level. These findings suggest that mandatory CSR information disclosure has a more pronounced effect in curbing earnings management in the low analyst coverage subsample. Additionally, when the dependent variable remains the same, the coefficient of the interaction term is significantly larger in the low analyst coverage subsample compared to the high analyst coverage subsample. Therefore, referring to Ban (2022) [10], we further compared the statistical variability between the above coefficients using the boostrap method. As can be seen in the last row of Table 8 that the empirical *p*-values for the difference in the interaction term coefficients between column (1) and column (2), as well as between column (3) and column (4), are 0.030 and 0.012, respectively. These results indicate that the disparities in coefficients between the subsamples are statistically significant at the 5% level. Consequently, this study can assert that mandatory CSR information disclosure is more effective in curbing earnings management activities in the subsample characterized by low analyst coverage.

Table 8. Analysis of the heterogeneity of analyst coverage.

Variable	**(1)**	**(2)**	**(3)**	**(4)**
	High Coverage	**Low Coverage**	**High Coverage**	**Low Coverage**
	AAEM	**AAEM**	**AREM**	**AREM**
Treated × Post	−0.006 (−0.68)	−0.021 *** (−3.20)	−0.043 (−1.31)	−0.082 *** (−2.91)
Size	0.022 ** (2.17)	0.010 (1.10)	0.035 (1.56)	0.048 (1.27)
Lev	0.063 *** (3.21)	0.048 (1.43)	0.045 (0.70)	0.180 * (1.77)
Top1	−0.001 (−1.02)	0.000 (0.76)	0.001 (1.29)	0.000 (0.07)
Age	−0.031 ** (−2.17)	−0.007 (−0.43)	−0.032 (−0.91)	−0.051 (−0.74)
Roa	0.198 ** (2.50)	0.055 (1.09)	0.203 (1.27)	0.898 *** (3.46)
Mh	0.096 (1.46)	0.304 (0.92)	−0.056 (−0.61)	0.510 (1.60)
Soe	0.005 (1.38)	−0.002 (−0.44)	0.013 (1.11)	0.026 (1.26)
Constant	−0.414 ** (−2.03)	−0.187 (−0.95)	−0.654 (−1.48)	−0.941 (−1.23)
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	2663	2622	2663	2622
Adj. R^2	0.021	0.010	0.018	0.027
p-value	0.030 ***		0.012 ***	

Note: figures in () are t value; ***, ** and * denote significance at the 1%, 5% and 10% levels respectively. "*p*-values" were used to test for differences in coefficients of Treated × Post between groups and were obtained by bootstrap sampling 1000 times.

In summary, the findings presented in Table 8 indirectly demonstrate that the implementation of mandatory CSR information disclosure policies has the potential to enhance a firm's information quality, improve its external regulatory effectiveness, and subsequently constrain its earnings management activities.

5.2. Heterogeneity in Institutional Shareholding

Given the growing focus on firm's environmental responsibility and environmental performance from stakeholders in recent years [14], the mandatory disclosure of CSR information may have an additional effect of constraining earnings management activities by increasing stakeholder attention towards a company's operations. Previous research has indicated that institutional investors, being significant stakeholders in firms, actively participate in resource allocation, investment decision-making, and corporate governance processes, thereby gaining accurate insights into various aspects of a company's activities [14,31]. In addition, institutional investors, with their superior professional knowledge compared to ordinary individual investors, have the ability to make accurate judgements about a firm's operating conditions and future growth prospects based on the information available to them [14,32]. Therefore, we expect that mandatory CSR information disclosure will further enhance institutional investors' judgement of the true financial information of firms, which in turn will enable institutional investors to detect and intervene and stop earlier when management attempts to manage earnings. Consequently, we propose that in firms with substantial institutional investor ownership, mandatory CSR information disclosure can have a more pronounced impact on improving information transparency and effectively motivate institutional investors to curb earnings management activities. To examine this hypothesis, we conduct a regression analysis using median grouping based on the institutional ownership ratio (IOR) of firms. IOR represents the cumulative ownership percentage of shares held by funds, securities firms, insurance firms, social security funds, QFIIs, and other institutional investors, and this data can be obtained from the CSMAR database. The results of the grouped regression analysis are presented in Table 9.

Table 9. Analysis of the heterogeneity of institutional ownership.

Variable	(1)	(2)	(3)	(4)
	Low IOR	**High IOR**	**Low IOR**	**High IOR**
	AAEM	**AAEM**	**AREM**	**AREM**
Treated × Post	−0.014 * (−1.87)	−0.038 *** (−2.79)	−0.025 ** (−2.18)	−0.056 *** (−3.42)
Size	0.024 ** (2.44)	0.017 ** (2.23)	0.027 (1.57)	0.062 ** (2.18)
Lev	0.061 ** (2.11)	0.088 *** (4.31)	0.119 *** (2.78)	0.104 (1.63)
Top1	−0.000 (−0.63)	−0.000 (−1.24)	0.000 (0.07)	0.003 * (1.73)
Age	−0.039 *** (−2.65)	−0.011 (−0.82)	−0.083 *** (−2.74)	−0.086 * (−1.91)
Roa	0.050 (0.72)	0.149 *** (2.60)	0.405 *** (4.59)	0.605 *** (3.51)
Mh	0.118 * (1.89)	−0.149 (−0.72)	0.265 ** (1.98)	0.010 (0.02)
Soe	0.004 (1.05)	−0.001 (−0.27)	0.006 (0.64)	0.022 ** (2.02)
Constant	−0.441 ** (−2.19)	−0.334 ** (−2.07)	−0.436 (−1.23)	−1.303 ** (−2.01)
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	2523	2612	2523	2612
Adj. R^2	0.015	0.016	0.020	0.016
p-value	0.000 ***		0.000 ***	

Note: figures in () are t value; ***, ** and * denote significance at the 1%, 5% and 10% levels respectively. "*p*-values" were used to test for differences in coefficients of Treated × Post between groups and were obtained by bootstrap sampling 1000 times.

In columns (1) and (2) of Table 9, when using AAEM as the dependent variable, it can be observed that the coefficients of the interaction terms in both columns are −0.014 and −0.038, respectively, significant at the 10% and 1% levels. In the grouped regression analysis in columns (3) and (4), when using AREM as the dependent variable, the coefficients of the interaction terms are −0.025 and −0.056, respectively, significant at the 5% and 1% levels. This indicates that mandatory CSR disclosure has a significant inhibitory effect on earnings management activities for firms in both lower and higher levels of Institutional Ownership Ratio. Further comparisons reveal that, holding the dependent variable constant, the regression coefficients of the interaction terms for the higher IOR group are significantly larger than those for the lower IOR group. After conducting statistical tests using the bootstrap method to examine the significance of these differences, the empirical *p*-value for the difference in the coefficients of the interaction terms in columns (1) and (2) is 0.000, as is the empirical *p*-value for the difference in the coefficients of the interaction terms in columns (3) and (4). This suggests that the differences in coefficients between the groups are significant at the 1% level. Therefore, these results demonstrate that the implementation of mandatory CSR disclosure policies has a more pronounced inhibitory effect on earnings management activities in firms with higher IOR.

6. Discussion

Building on the existing research on the relationship between CSR information disclosure and earnings management [8,15,18], this study further explores the channels through which CSR information disclosure influences firms' economic behaviour. First, although many studies have discussed the role of CSR information disclosure in corporate development, most of them have only analysed it based on the theory of information asymmetry, focusing on issues related to corporate financial transparency [7,11], agency costs [33,34], and financial constraints [10] that are relevant to internal management, while neglecting the impact of external channels on corporate economic activities. However, our research clearly shows that mandatory CSR information disclosure can effectively strengthen external monitoring of corporate misconduct, especially in curbing earnings management activities, thereby expanding the external channels through which non-financial information disclosure influences corporate economic activities. Therefore, in future research, the study of the relationship between CSR information disclosure and external influence channels can be extended to other economic activities beyond earnings management.

Additionally, this study has certain limitations, which can be improved upon in future research. Firstly, the measurement method used for earnings management in this study is not comprehensive. Although these methods have been widely employed, they still have some limitations and may not fully reflect the quality of earnings management in firms. Therefore, future research can explore alternative approaches for calculating earnings management. Secondly, in addition to the influence channel of external supervisory pressure, future research can further explore the impact of other external factors on earnings management, such as industry competition pressure and environmental performance pressure.

Overall, these findings contribute to the understanding of the role of external oversight and expand the research scope of CSR by investigating its impact on earnings management from a regulatory and media perspective. Nonetheless, there is room for improvement in terms of the measurement of earnings management and the exploration of additional external factors, opening avenues for future research in this field.

7. Conclusions and Policy Implications

Based on data from Chinese listed firms and employing the PSM-DID research method, this paper examines the impact of mandatory CSR disclosure on the magnitude of earnings management. The results of the study show that after the implementation of mandatory CSR disclosure policy, the earnings management activities of disclosing firms decreased significantly compared to non-disclosing firms. This is primarily attributed to the enhancement of external supervision on corporations through the disclosure of CSR information, which strengthens the constraints imposed by regulatory authorities and external monitoring institutions such as the media on earnings management activities. Additionally, our research reveals that the inhibitory effect of mandatory CSR information disclosure on earnings management activities is more pronounced for firms with lower analyst coverage and higher institutional ownership proportions. Based on the conclusions of this study, the following recommendations are proposed:

(1) Our study finds that high-quality CSR information not only reduces the regulatory costs of the regulators, but also facilitates external investors to make a more accurate assessment of a firm's reputation and ethical level, which can effectively constrain self-interested behaviours of the firm's management and inhibit non-compliant activities of the firm. Therefore, for policymakers, it is advisable to formulate targeted policies that require firms to disclose comprehensive non-financial information in order to minimize frictions between firms and external stakeholders, and thus promote the operational efficiency of enterprises.
(2) For firms, proactive efforts should be made to improve the disclosure of both financial and non-financial information. On the one hand, detailed CSR information disclosure can not only convey a friendly corporate image to the outside world, but also enhance the social reputation of the enterprise. On the other hand, high-quality CSR information disclosure can also strengthen communication between enterprises and government regulators, which can help reduce the political risk of enterprises and improve the external operating conditions of enterprises.
(3) Our research underscores the importance of external oversight constraints imposed by regulatory authorities and the media, as key channels for restraining earnings management through mandatory CSR disclosure. Consequently, regulatory authorities should strengthen and refine penalties for non-compliance with information disclosure to prevent misleading disclosure activities by opportunistic firms. In addition, the media, as an important channel through which the public obtains information about corporate activities, should ensure real-time monitoring of various aspects of corporate disclosure practices, expose misreporting and protect investors' interests.

Overall, these recommendations aim to foster an environment of improved corporate governance, transparency, and accountability, which in turn contributes to the effectiveness of mandatory CSR disclosure policies in curbing earnings management activities.

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