

Corporate Social Responsibility and Earnings Quality

Ni Xu

Nanjing University of Science and Technology, Jiangsu, China

1755519885@qq.com

Abstract. This paper takes A-share listed companies in Shanghai and Shenzhen stock exchanges from 2010 to 2019 as samples, and empirically tests the impact of corporate social responsibility on accounting earnings quality by using the least-squares method, fixed effects, and probit regression. The results show that companies that actively undertake social responsibilities and have a higher level of corporate social responsibility performance will participate less in earnings management, have higher earnings quality, and are less likely to be announced in violation of regulations.

Keywords: Corporate Social Responsibility; Earnings Quality; Earnings Management.

1. Introduction

Corporate Social Responsibility (CSR) is an issue of increasing concern, as investors, customers, and other stakeholders demand greater transparency in all aspects of the business, and reporting on CSR activities is also increasingly universal. Attitudes towards corporate social responsibility have changed dramatically over the past few decades as stakeholders place greater emphasis on socially responsible behavior. Article 5 of the "Company Law of the People's Republic of China" stipulates that companies engaged in business activities must abide by laws and regulations, abide by social ethics and business ethics, be honest and trustworthy, accept the supervision of the government and the public, and assume social responsibilities. Social responsibility is gradually being valued by enterprises.

Enron's financial scandal is a sign of serious corruption of business ethics. Transparent and high-quality accounting earnings information is what stakeholders need, which is also the social responsibility enterprises need to fulfill. Therefore, will companies that actively fulfill their social responsibilities conduct fewer earnings management and thus improve earnings quality? This is a common concern of all stakeholders. This paper then uses three different earnings management proxy variables: (1) accrual item earnings management level (2) real earnings activity management level composite index (3) whether the company has been announced in violation of regulations. Many scholars at home and abroad have researched corporate social responsibility. Carroll proposed the most widely accepted model to describe corporate social responsibility, including economic, legal, ethical, and corporate discretionary responsibilities [1]. Servaes and Tamayo pointed out that if a company engages and promotes CSR activities consistent with its reputation, it can increase the value of the company, and companies with poor reputation are unlikely to gain any direct benefits from participating in CSR (in terms of shareholder value creation) [2]. Research by Cheng, Ioannou, and Serafeim show that better CSR performance is associated with higher stakeholder engagement, and companies with better CSR performance are more likely to publicly disclose their CSR activities, thereby becoming more transparent and accountable, greater transparency reduces information asymmetry between companies and investors [3]. Cucari, Falco, and Orlando analyzed the impact of corporate governance variables on ESG information disclosure and found that there is a significant positive correlation between ESG disclosure and independent directors [4]. Flammer and Caroline conducted an empirical study on the causal relationship between corporate social responsibility and financial performance and found that adopting CSR activities can significantly increase shareholder value [5]. Hou and Chieh Tse examined the relationship between corporate social responsibility (CSR) and corporate financial performance in Taiwan and found that companies with a sense of social responsibility can achieve better financial performance than those that do not pursue CSR initiatives, and the characteristics of the board of directors have an impact on the relationship between CSR and performance [6].

Scholars at home and abroad have also conducted many studies on the relationship between corporate social responsibility, earnings management, and earnings quality. Chih, Shen, and Kang found that the relationship between corporate social responsibility and earnings quality is affected by earnings management and put forward four hypotheses: avoidance of short-sightedness hypothesis, earnings predictability hypothesis, multiple goals hypothesis, and control hypothesis [7]. Among them, the avoidance of short-sightedness hypothesis believes that companies with good social responsibility awareness have a lower degree of earnings management and have fewer earnings management behavior. The earnings predictability hypothesis believes that companies with better social responsibility performance are more inclined to earnings smoothing. The multiple goals hypothesis is that companies that actively fulfill their social responsibilities may be inclined to earnings management to cover up the damage caused by corporate social responsibility activities to shareholders; the system hypothesis believes that corporate social responsibility has nothing to do with earnings management. Kim, Park, Wier and others found that CSR companies are less inclined to use accrual items or substantial earnings management and provide investors with as much transparent information as possible in financial reports [8]. Feng Jing and Huang Jun took the A-share listed companies in Shanghai and Shenzhen stock exchanges from 2011 to 2013 as samples, and the research shows that the better the corporate social responsibility performance, the stronger the ethical and moral awareness, and the lower the degree of earnings management. And the better the performance of corporate social responsibility, the more investors react to unexpected earnings, and the improvement of corporate social responsibility performance will help curb corporate earnings management [9]. Shi Xianwang, Liang Xiao, and Liu Zheng studied whether companies fulfilling social responsibilities provide higher-quality financial information from the perspective of the accuracy of analysts' profit forecasts so that analysts can more accurately predict the profitability of companies [10]. Huang Heshu and Zhou Ze took 2008-2013 A-share listed companies that voluntarily disclosed social responsibility reports in Shanghai and Shenzhen stock exchanges as samples and introduced contextual factors such as CEO power. The study found that voluntary disclosure of social responsibility information has a significant effect on earnings quality; after further considering the impact of CEO power on the decision-making of voluntary disclosure, it is found that the earnings quality effect of voluntary disclosure of corporate social responsibility information is restricted by the size of CEO power [11]. Liu Aiming and Shi Shuhua studied the impact of corporate social responsibility on financial irregularities by taking A-share listed companies from 2011 to 2019 as samples and found that the higher the degree of corporate social responsibility performance, the lower the probability of financial violations [12]. Some domestic scholars have further distinguished the property rights of companies, and studies have shown that compared with state-owned enterprises, non-state-owned enterprises' social responsibility has a more significant positive impact on earnings quality [10, 13, 14].

If companies disclose CSR for ethical motives, companies that actively disclose CSR will pay more attention to compliance with laws, regulations, and ethics. Therefore, companies that actively disclose CSR are motivated to reduce their own illegal and unethical behaviors. Therefore, it is expected that there will be a negative relationship between corporate social responsibility and earnings management, that is, a positive relationship with earnings quality [8]. This paper proposes the following research hypotheses:

Hypothesis 1:

Corporate social responsibility is positively correlated with earnings quality.

If companies that proactively disclose corporate social responsibility are motivated by ethics, it is expected that these companies will be less likely to be announced in violation of regulations because they are more aware of the negative impact on reputation. Therefore, this paper proposes Hypothesis 2.

Hypothesis 2:

The better the social performance of the company, the lower the probability of being publicized in violation of regulations.

This study contributes to the literature in several ways. First, this study highlights that issues such as ethics can contribute to high-quality financial reporting by firms. Second, the evidence in this paper has important implications for the investment community. If CSR affects managers' discretionary decisions (e.g., earnings management), the findings of this paper can help investors distinguish accurate and transparent financial information from less reliable information. Finally, the evidence from this study can help rule makers and regulators better understand CSR business practices and reporting practices. In the next section, the research design of this paper will be described, the results will be presented in the third section, and the research conclusions of this paper will be presented in the fourth section.

2. Research design

2.1 Sample selection and data sources

This paper takes the listed companies in Shanghai and Shenzhen from 2010 to 2019 as the initial sample. From sample selection, this paper firstly eliminated financial companies, according to the 2012 version of the CSRC industry classification code. The accounting systems and asset results of such companies are special, and the laws and regulations are quite different from other industries. Secondly, this paper excludes ST and *ST listed companies, whose financial status is abnormal, finally excludes companies that lack relevant data after data matching, and finally obtains 5,180 company-year observations. Considering the influence of outliers, the 1% and 99% percentile winsorize methods were used to deal with the relevant variables. The CSR report scoring data used in this article comes from Rankins CSR Ratings (RKS) database, and other data are from the CSMAR database and RESSET database.

2.2 Model construction and variable definition

(1) Corporate Social Responsibility (CSR)

Referring to the research of relevant scholars, this paper uses relevant data of Rankins CSR Ratings (RKS) to measure corporate social responsibility. RKS is an authoritative rating agency for social responsibility in my country [13, 15, 16]. The MCTi system released every year is to quantitatively rate the social responsibility report of the company in the previous year. The reported companies are all companies that voluntarily issue corporate social responsibility reports. The RKS score measures a company's CSR disclosure on a scale of 0 to 100, with the higher the score, the better the CSR performance and disclosure quality. This paper adopts the RKS comprehensive score, i.e., CSR_SCORE, as a surrogate variable for corporate CSR performance.

(2) Earnings management

This article uses accrual earnings management (AEM) to measure corporate earnings management, that is, the larger the AEM, the larger the earnings management space, and the lower the earnings quality; it is measured by the negative number of the comprehensive index of actual earnings activity management level (COMBINED_RAM). The degree to which the company does not engage in earnings management, that is, the larger the COMBINED_RAM, the higher the quality of the company's earnings.

Accrual earnings management. Referring to the Jones model revised by Dechow, this paper calculates the absolute value AEM of the manipulated accrual profit DA, and takes AEM as the proxy variable of earnings management [17]. The larger the AEM, the higher the degree of enterprise accrual earnings management and the lower the earnings quality. The calculation process of DA is as follows:

$$\frac{TA_{i,t}}{A_{i,t-1}} = \beta_0 \frac{1}{A_{i,t-1}} + \beta_1 \frac{\Delta REV_{i,t}}{A_{i,t-1}} + \beta_2 \frac{PPE_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t}$$

$$NDA_{i,t} = \hat{\beta}_0 \frac{1}{A_{i,t-1}} + \hat{\beta}_1 \frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} + \hat{\beta}_2 \frac{PPE_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t}$$

$$DA_{i,t} = \frac{TA_{i,t}}{A_{i,t-1}} - NDA_{i,t}$$

Among them, TA is the total accrued profit (total accrued profit = operating profit net cash flow from operating activities); NDA is the non-manipulated accrued profit; DA is the manipulated accrued profit. The greater the absolute value, the greater the earnings management space, the lower the quality of accounting information; ΔREV_t is the change in operating income; ΔREC_t is the change in accounts receivable; PPE_t is the net fixed assets in period t; A_{t-1} is the elimination of scale effects, which is the total assets at the end of the period t-1.

True Earnings Management. This paper refers to Dechow to measure the real earnings management level of enterprises [18]. Measure the level of real activity earnings management of an enterprise from three aspects: (1) Abnormal operating cash flow (A_CFO) (2) Abnormal production costs (A_PROD), by manipulating production, such as reducing units by mass production; (3) Abnormal expenses (A_EXP), by manipulating controllable costs such as reducing R&D costs, advertising costs, and maintenance costs. Moreover, enterprises may use the above-mentioned multiple methods to carry out real activity earnings management at the same time. This paper refers to Kim, Park, and Wier to construct a comprehensive index (COMBINED_RAM) that does not carry out real activity earnings management, $COMBINED_RAM = A_CFO - A_PROD + A_EXP$ [8]. The larger the COMBINED_RAM, the less the company will conduct substantial earnings management, and the higher the quality of the company's earnings. Therefore, if companies disclose CSR reports for ethical motives, then CSR_SCORE is expected to be positively correlated with A_CFO, A_EXP, and COMBINED_RAM, and negatively correlated with A_PROD.

In order to verify the above assumptions, this paper constructs the following model.

$$Y_{i,t} = \alpha_0 + \alpha_1 CSR_SCORE_{i,t} + \sum \beta_{i,t} Control\ variable_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$Pr_{i,t}(AFFICHE_{i,t}=1) = \alpha_0 + \alpha_1 CSR_SCORE_{i,t} + \sum \beta_{i,t} Control\ variable_{i,t} + \varepsilon_{i,t} \quad (2)$$

$Y_{i,t}$ is the AEM or A_CFO, A_PROD, A_EXP, and COMBINED_RAM of the company i in year t. See Table.1 for detailed descriptions of variables in the model (1) and model (2).

Table 1. Variable description

	Variable symbol	Variable name	Variable interpretation
Explained variable	AEM	Accrual earnings management level	The absolute value of DA calculated by the Jones model is corrected
	A_CFO	Abnormal operating cash flow	
	A_PROD	Abnormal production costs	
	A_EXP	Abnormal expenses	
	COMBINED_RAM	Without substantial earnings management degree	Take a negative number for the comprehensive index of the management level of real earnings activities
Explanatory variable	CSR_SCORE	Corporate social responsibility score	Rankins CSR Ratings (RKS) report score
Control variable	Ln AGE	Enterprise age	Natural logarithm of years of establishment
	TOP1	The shareholding ratio of the largest shareholder	
	RD	R & D intensity	R & D expenses / operating income
	SIZE	Company scale	Natural logarithm of total assets

	LEV	Financial leverage	Total liabilities / total assets
	DUALITY	two-position integration	If the chairman and the general manager are one, take 1, otherwise, take 0
	BOARD	Board size	Natural logarithm of the number of directors
	ROA	Net profit margin of assets	Net profit / total asset balance
	BIG4	Are the audit institutions the top four	1 for the four largest audit institutions, otherwise 0
	SOE	Nature of property right	1 for state-owned enterprises, otherwise 0
	OPINION	Audit opinion	The standard audit is 1, otherwise, it is 0
	OUTDIR	The proportion of independent directors	The number of independent directors /board of directors
	MB	Market to book ratio	Market value / total assets
	AFFICHE	Whether the enterprise has been announced in violation of regulations	If the enterprise violates the rules and is announced, take 1, otherwise, it is 0
	Year	Annual factor	Dummy variable, set according to 2010-2019
	Industry	Industry factors	Virtual variable, set according to the industrial classification code of CSRC in 2012

3. Empirical Results and Analysis

3.1 Descriptive Statistics of Main Variables

Table 2. Descriptive statistics of main variables

		Mean value	Median	Skewness	Standard deviation	Kurtosis
Explained variable	AEM	0.0678	0.0452	10.1454	0.0951	185.2652
	A_CFO	0.0029	0.0025	-0.3709	0.0750	7.8837
	A_PROD	0.0011	0.0010	1.0692	0.1130	20.9079
	A_EXP	0.0022	-0.0062	1.8383	0.0623	13.0294
	COMBINED_RAM	0.0041	-0.0019	0.0767	0.1954	9.8380
Explanatory variable	CSR_SCORE	39.9801	37.3900	0.9583	12.2562	3.7980
Control variable	Ln AGE	2.8536	2.9052	-1.1220	0.3393	5.4313
	TOP1	37.5368	36.7800	0.2302	15.8746	2.4031
	RD	2.6204	1.2000	4.5691	4.1677	39.4891
	SIZE	23.2256	23.1177	0.4372	1.4233	2.9651
	LEV	0.4942	0.5068	-0.0826	0.1976	2.7487
	ROA	0.0381	0.0342	-3.2076	0.0638	37.7947
	MB	1.9383	1.5011	4.3841	1.3920	42.4531

Table.2 shows the descriptive statistics of the main research variables in this paper. The results show that during the sample period, the mean value of AEM for accrual earnings management is 0.0678 and the standard deviation is 0.0951, which is similar to the descriptive statistics results of Xu Peng [13]. The average value of COMBINED_RAM is positive, which is 0.0041, indicating that my country's listed companies are more involved in the accrual project earnings management and less involved in real earnings management activities. The mean and median of COMBINED_RAM are quite different, indicating that the degree of real earnings management varies greatly among companies. The explanatory variable CSR_SCORE has a mean of 39.9801 and a median of 37.3900, and the CSR performance of these companies is not very good. To reduce the influence of outliers on

the results, this paper performs 1% and 99% abbreviated processing on continuous variables, that is, the variable value less than 1% quantile becomes the 1% quantile value, and the variable value greater than 99% quantile becomes the 99% quantile value. This article mainly conducts relevant empirical analysis through Eviews 10. To test the impact of corporate social responsibility on earnings quality, this paper uses multiple linear regression and Probit regression to conduct empirical research: use model (1) to regress the related proxy variables of corporate social responsibility and earnings management. This paper use model (2) to test corporate social responsibility and whether liability will reduce the probability of a company being notified by law enforcement.

3.2 Empirical analysis

Table 3. Corporate social responsibility and accruals earnings management

	(1)	(2)	(3)	(4)	(5)	(6)
	AEM	AEM	AEM	AEM	AEM	AEM
Constant	0.0900*** (24.7394)	0.0993*** (13.4185)	0.1773*** (6.1533)	0.1562*** (5.1261)	0.1919*** (6.5765)	0.1715*** (5.6280)
CSR_SCORE	-0.0006*** (-7.7434)	-0.0004*** (-4.7497)	-0.0004*** (-4.5981)	-0.0003*** (-3.4098)	-0.0003*** (-3.4029)	-0.0002*** (-2.1407)
Ln AGE			0.0057* (1.7851)	0.0149*** (3.9372)	0.0002 (0.0506)	0.0095*** (2.6636)
TOP1			0.0001 (1.4670)	0.0001* (1.8157)	0.0001* (1.8259)	0.0002** (2.1395)
RD			-0.0015*** (-4.4517)	-0.0008** (-2.3802)	-0.0013*** (-3.3741)	-0.0005 (-1.3212)
SIZE			-0.0031*** (-2.8924)	-0.0023** (-2.0282)	-0.0037*** (-3.5393)	-0.0029*** (-2.7001)
LEV			0.0343*** (4.4752)	0.0269*** (3.4844)	0.0183** (2.4734)	0.0109 (1.4619)
OPINION			-0.0432*** (-4.0100)	-0.0451*** (-4.1296)	-0.0480*** (-4.3472)	-0.0496*** (-4.4445)
BIG4			0.0013 (0.4069)	-0.0007 (-0.2248)	0.0024 (0.8004)	0.0004 (0.1352)
ROA			0.0470 (1.4185)	0.0319 (0.9334)	0.0305 (0.9315)	0.0152 (0.4501)
SOE			-0.0039 (-1.5213)	-0.0055** (-2.1138)	-0.0010 (-0.3993)	-0.0027 (-1.0554)
MB			0.0064*** (4.9159)	0.0050*** (3.5127)	0.0058*** (4.3899)	0.0046*** (3.1429)
DUALITY			0.0073** (2.5189)	0.0076*** (2.6544)	0.0064** (2.2426)	0.0068** (2.4450)
OUTDIR			0.0026 (0.1319)	0.0029 (0.1485)	-0.0025 (-0.1374)	-0.0018 (-0.0987)
BOARD			-0.0127** (-2.2880)	-0.0159*** (-2.8705)	-0.0040 (-0.7662)	-0.0067 (-1.2798)
Year	No	Yes	No	Yes	No	Yes
Industry	No	Yes	No	No	Yes	Yes
N	5180	5180	5180	5180	5180	5180
F	59.9604	11.7663	12.7171	10.0286	10.8791	10.1251
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

First, the correlation of relevant variables is tested. The correlation coefficients between the explanatory variables are not very large, there is no multicollinearity between the variables.

Table.3 reports the relationship between corporate social responsibility and accrual earnings management AEM. The regression coefficients of each variable are reported in the table. The newey-west heteroscedasticity consistent t-statistic is reported in parentheses, and the coefficients are marked 1 and 2, 3 stars indicate significance at the 10%, 5%, and 1% significance levels, respectively. The results in Table.3 show that the control and the introduction of control variables for the annual effect and the industry effect are very robust. The coefficient of the explanatory variable CSR_SCORE passes the significance test at least at the 5% significance level. The coefficient of the explanatory variable in the sixth column of Table.3 is -0.0002, which is significantly negative at the 5% significance level, indicating that the better the corporate social responsibility performance, that is, the higher the corporate social responsibility score, the less likely the company will be through accruals. Earnings management, the higher the quality of earnings. Moreover, it is observed that coefficients of MB and DUALITY are significantly positive, that is, companies with high growth opportunities and dual jobs are more likely to participate in accrual earnings management. However, the coefficients of SIZE and OPINION are significantly negative, that is, companies with larger company scale and standard CSR report audit opinions are less inclined to conduct earnings management through accrual items.

In this paper, the DA is divided into 2 samples according to the sign, and the test results are shown in Table.4 The regression coefficients of each variable are reported in the table, and the newey-west heteroscedasticity consistent t-statistic is reported in parentheses. The coefficients are marked with 1, 2, and 3 stars to indicate significance levels of 10%, 5%, and 1%, respectively significantly. The results in Table.4 are still consistent with the above conclusions. The coefficient of the explanatory variable CSR_SCORE in the second column of Table.4 is significantly negative at the 1% significance level, with a value of -0.0004, indicating that companies with better CSR performance are less inclined to apply project earnings management, with high earnings quality.

Table 4. Test corporate social responsibility and accrual earnings management by sample

	(1)	(2)	(3)	(4)
	Positive_DA	Positive_DA	Negative_DA	Negative_DA
Constant	0.1174*** (10.9473)	0.1562*** (3.5805)	-0.0661*** (-5.8844)	-0.1719*** (-4.7027)
CSR_SCORE	-0.0005*** (-4.2128)	-0.0004*** (-3.3684)	0.0003*** (3.0955)	-0.0001 (-0.9280)
Ln AGE		0.0035 (0.7532)		-0.0134*** (-2.9640)
TOP1		0.0001 (0.7314)		-0.0003*** (-2.7047)
RD		-0.0009** (-2.0266)		0.0003 (0.6227)
SIZE		-0.0031** (-2.1229)		0.0041*** (2.9603)
LEV		0.0346*** (3.4437)		-0.0033 (-0.3432)
OPINION		-0.0325 (-1.6057)		0.0259** (2.3870)
BIG4		-0.0038 (-0.9655)		-0.0049 (-1.3889)
ROA		0.3748*** (9.0698)		0.2938*** (8.6096)

	(1)	(2)	(3)	(4)
	Positive_DA	Positive_DA	Negative_DA	Negative_DA
SOE		-0.0001		0.0036
		(-0.0444)		(1.1620)
MB		0.0008		-0.0021
		(0.4294)		(-1.1290)
DUALITY		0.0076**		-0.0071**
		(2.0290)		(-1.9917)
OUTDIR		0.0155		0.0214
		(0.6340)		(0.9302)
BOARD		0.0024		0.0165***
		(0.3494)		(2.6492)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
N	2956	2956	2224	2224
F	11.5897	12.6383	9.9089	13.1279
Prob > F	0.0000	0.0000	0.0000	0.0000

Table.5 reports the test results between corporate social responsibility and real activity earnings management. The regression coefficients of each variable are reported in the table, and the newey-west heteroscedasticity consistent t-statistic is reported in parentheses. The coefficients are marked with 1 and 2, 3 stars indicate significance at the 10%, 5%, and 1% significance levels, respectively, and control for the annual effect and industry effect. According to the second column of Table.5, it is found that CSR and abnormal production cost A_PROD are significantly negatively correlated at the 10% significance level, and according to the third column of Table.5, it is found that CSR and abnormal expenses A_EXP are significantly at the 1% significance level. Positive correlation, according to the fourth column of Table.5, it is found that CSR and COMBINED_RAM are significantly positively correlated at the 1% significance level. The results in Table.5 show that companies with better CSR performance have more conservative operating policies, and are not inclined to conduct substantial earnings manipulation, resulting in better earnings quality. The findings are consistent with Kim, Park, and Wier [8]. Moreover, observing the coefficients of control variables, it is found that larger companies are more likely to conduct earnings manipulation through substantial earnings management, while companies audited by the Big Four and those with better financial performance are less likely to conduct substantial earnings management.

Table 5. Corporate social responsibility and real earnings management

	(1)	(2)	(3)	(4)
	A_CFO	A_PROD	A_EXP	COMBINED_RAM
Constant	0.0032	-0.1282**	0.0988**	0.2355**
	(0.0824)	(-2.2473)	(2.4272)	(2.1348)
CSR_SCORE	0.0000	-0.0003*	0.0006***	0.0010***
	(0.1753)	(-1.9177)	(4.4752)	(2.8117)
Ln AGE	-0.0027	0.0108	-0.0039	-0.0178
	(-0.5651)	(1.4807)	(-0.7351)	(-1.2177)
TOP1	-0.0001	-0.0000	0.0001	0.0001
	(-0.6354)	(-0.1296)	(1.3639)	(0.3534)
RD	-0.0003	-0.0032***	0.0017***	0.0047***
	(-0.6252)	(-4.3864)	(2.7700)	(3.2736)
SIZE	0.0005	0.0045**	-0.0072***	-0.0114***
	(0.3454)	(2.1277)	(-4.1802)	(-2.6767)

	(1)	(2)	(3)	(4)
	A_CFO	A_PROD	A_EXP	COMBINED_RAM
LEV	-0.0080	0.0057	0.0353***	0.0246
	(-0.8586)	(0.4323)	(3.5373)	(0.9425)
OPINION	-0.0164*	0.0383***	0.0018	-0.0499**
	(-1.6468)	(3.4360)	(0.2338)	(-2.2436)
BIG4	0.0128***	-0.0213***	0.0188***	0.0538***
	(3.5855)	(-3.2807)	(3.3700)	(4.1694)
ROA	0.4142***	-0.6156***	0.1376***	1.1717***
	(14.0507)	(-13.6126)	(4.1920)	(13.6142)
SOE	-0.0079**	0.0166***	-0.0107***	-0.0339***
	(-2.4682)	(3.1755)	(-2.6054)	(-3.2945)
MB	0.0012	-0.0032	0.0031	0.0076
	(0.7210)	(-1.2386)	(1.6071)	(1.5058)
DUALITY	-0.0001	-0.0065	0.0029	0.0112
	(-0.0380)	(-1.2224)	(0.6929)	(1.0672)
OUTDIR	-0.0005	-0.0017	-0.0035	-0.0070
	(-0.0224)	(-0.0514)	(-0.1258)	(-0.1109)
BOARD	0.0009	-0.0008	0.0018	0.0018
	(0.1353)	(-0.0779)	(0.2360)	(0.0940)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
N	5180	5180	5180	5180
F	11.3784	12.5432	3.9531	14.5565
Prob > F	0.0000	0.0000	0.0000	0.0000

Next, this paper uses model (2), the Probit model, to test whether CSR will reduce the probability of companies being announced in violation of regulations. AFFICHE is a dummy variable, which is 1 if the company's violation is announced, and 0 otherwise. The results are shown in Table.6 The z-statistic is reported in parentheses, and the coefficients are marked with 1, 2, and 3 stars to indicate significance at the 10%, 5%, and 1% significance levels, respectively. From Table.6, it is found that the coefficient of the explanatory variable CSR_SCORE is significantly negative at the 1% significance level, indicating that companies with better CSR performance are less likely to be announced against violations. That is to say, companies conduct CSR reports for ethical motives, have more conservative financial reporting decisions, and are less likely to be announced in violation of regulations. Assumption 2 is verified.

Table 6. Probit regression

	(1)	(2)
	AFFICHE	Average Margin Effect
Constant	0.4997	
	(0.6070)	
CSR_SCORE	-0.0084***	-0.0012***
	(-2.9478)	(-2.9422)
Ln AGE	0.0845	0.0121
	(0.8580)	(0.8579)
TOP1	-0.0023	-0.0003
	(-1.2301)	(-1.2297)
RD	-0.0022	-0.0003
	(-0.2316)	(-0.2316)

	(1)	(2)
	AFFICHE	Average Margin Effect
SIZE	-0.0787**	-0.0113**
	(-2.4922)	(-2.4899)
LEV	0.8643***	0.1240***
	(4.5332)	(4.5214)
OPINION	-0.6212***	-0.0891***
	(-3.9082)	(-3.9154)
BIG4	-0.0917	-0.0132
	(-0.9817)	(-0.9816)
ROA	-1.4910**	-0.2139**
	(-2.5131)	(-2.5120)
SOE	-0.1646***	-0.0236***
	(-2.6145)	(-2.6122)
MB	-0.0251	-0.0036
	(-0.7243)	(-0.7241)
DUALITY	0.2034***	0.0292***
	(2.9623)	(2.9581)
OUTDIR	0.0004	0.0001
	(0.0008)	(0.0008)
BOARD	0.2251	0.0323
	(1.5062)	(1.5057)
Year	Yes	Yes
Industry	Yes	Yes
Correctly classified	91.50%	

4. Conclusions

The quality of financial information disclosure has always been the focus of corporate stakeholders. Companies have a responsibility to disclose high-quality, high-level earnings information. This paper takes the A-share listed companies in Shanghai and Shenzhen from 2010 to 2019 as samples, and empirically tests the impact of corporate social responsibility on earnings management by using the least-squares method, fixed effects, and probit regression. The results show that companies that actively undertake social responsibilities and have a higher level of corporate social responsibility fulfillment have higher earnings quality, conduct earnings management through accrual items less often, and participate in real earnings management less often; A good company is less likely to be illegally announced.

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