

Negative Information of Corporate Social Responsibility, Financial Performance and Accounting Quality

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Using Taiwanese high-tech industries as a sample, this study examines the effect of financial constraints and financial performance on corporate social responsibility (CSR) performance and the effect of CSR performance on accounting quality. Adopting CSR penalties as a proxy variable of CSR performance, this study finds that low financial leverage or high operating cash flow and return on assets may lead to a company receiving fewer CSR penalties. We also use the provision of a CSR report to measure CSR performance and then investigate how CSR affects accounting quality. The results indicate that companies that publish CSR reports have superior accounting quality than those that do not.

JEL Codes: G32, M48, Q51 and Q56

1. Introduction

To reduce costs and maximize profits, some firms take the advantage of legal loopholes or sometimes violate laws and regulations. In recent years, negative headlines have caused the public to question whether firms take their corporate social responsibility (CSR) seriously. The Financial Supervisory Commission of Taiwan proposed that starting from 2015, companies listed on the Taiwan Stock Exchange or Taipei Exchange in food, financial, and chemical industries, as well as those with a paid-in capital of more than NT\$10 billion, must prepare an annual CSR report (CSRRpt). Compiling a CSRRpt motivates firms to examine whether they meet their corporate citizenship obligations and to respond to issues raised by stakeholders.

Increasing numbers of publicly listed companies in Taiwan are voluntarily providing CSRRpts and other nonfinancial performance information. More pertinence is gradually being attached to corporate governance, and CSR is constantly being promoted by the government to tackle relevant sustainable management issues. However, whether a firm's CSR performance is stronger if it provides a CSRRpt and the effect exerted by corporate financial performance on CSR remain unclear. These questions are the motivation for this study.

Kim, Park, and Wier (2012) indicate that socially responsible companies are less likely to conduct earnings management through the manipulation of discretionary accruals and that company ethics encourage managers to provide investors with high-quality, transparent financial reports. By contrast, McWilliams, Siegel, and Wright (2006) argue that when managers have the power to decide whether their firm's social responsibility has been fulfilled, they may consider their self-interest first and take advantage of their decision-making power rather than honestly balancing the interests of the firm and its stakeholders.

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Firms engage in CSR activities to fulfill their CSR, but these activities may incur costs, which reduce earnings and lead to poor corporate performance, and thereby deteriorate agency problems between shareholders and regulatory authorities. Whether firms that fulfill their CSR are more likely to engage in earnings management or report high-quality accounting information to investors remains a question.

Feng, Chen, and Tang (2018) indicate that both the short-run and long-run economic performance is positively affected by CSR, which leads to sustainable financial development. We therefore expect that the firms with better CSR performance are generally believed that they are less likely to receive CSR-related penalties. This study regards penalties for failing CSR as a proxy variable for CSR performance. Relevant information is collected about publicly listed companies in high-tech industries to determine the effect of financial performance on CSR penalties of a firm. The operating cash flow and return on assets are used to measure financial performance.

Generally, socially responsible companies are less likely to perform earnings management, and company ethics encourage managers to provide investors with high-quality, transparent financial reports. When firms receive CSR penalties, their earnings decrease because their reputation is damaged or because they are required to pay substantial fines. In situations where management bonuses and rewards are calculated on the basis of earnings, managers probably undertake earnings management through manipulating discretionary accrual, thereby resulting in financial statements of relatively poor accounting quality. This study uses discretionary accrual as a proxy variable of earnings quality and CSRRpt as an alternative proxy of CSR to determine whether companies are less likely to perform earnings management if they voluntarily disclose CSR report. The effect of firms' voluntary disclosure of CSR report on accounting quality is thus examined.

The findings reveal that low financial leverage (Lever) and high OCF and ROA may lead to a firm receiving fewer CSR penalties, which thus leads to stronger CSR performance. Under using CSRRpt as a CSR variable, we find that the financial statements of a firms that disclose CSR report have better accounting qualities than those of firms that do not.

Most studies on CSR have investigated the effect of CSR on financial performance. Firms that have favorable financial performance tend to have positive CSR performance. This study considers the opposite perspective and examines the effect of financial performance on CSR penalties. If firms have favorable financial performance, then the likelihood of them receiving CSR penalties is low. In addition to providing a novel perspective on CSR, this study suggests a causal relationship between financial performance and CSR.

The remainder of this paper is organized as follows. Section 2 presents a literature review and our hypotheses. Section 3 explains the research design, research periods, sampling criteria, and variable definitions and proposes empirical models used in this study. Section 4 summarizes empirical findings. Finally, the conclusion and our suggestions are presented in Section 5.

2. Literature Review and Hypothesis

Regarding the effect of financial performance on CSR, Waddock and Graves (1997) use ROA, return on equity, and return on sales to measure financial performance and reveal that financial performance is positively correlated with CSR. Therefore, the theory of resource

slack is supported. Strong financial performance provides companies with more freedom to invest in social responsibility activities that increase their CSR performance.

McKendall, Sánchez, and Sicilian (1999) and Molloy, Erekson, and Gorman (2002) report that because companies with large Leverage (i.e., financial constraints) have excessive debt and thus cannot easily borrow money, with most funds being used to repay debts, they are unable to fulfill their CSR or invest in environmental protection and CSR resources. Blondell, Griffith, and Reenen (1999) indicate that investors can discover a company's operating profits and liability repayments from their cash flow, as detailed in the firm's financial statements. In addition to evaluating whether a company can respond in real time and repay debts according to debt contracts in unexpected events, cash flow can be used to assess the feasibility of a company's planning and the implementation of investment strategies. A company must have sufficient funds if it has to perform CSR activities.

Godfrey (2005) reports that firms' charitable activities can produce positive moral capital with the local community and stakeholders. This moral capital, similar to intangible assets such as reputation, provides shareholders with a type of protection similar to insurance, and this protection is beneficial to shareholders. Baron (2008) concludes that financial and CSR performances are affected by the general environment. In a favorable economic environment, the financial performance of companies with sound management capacity is positively correlated with the companies' social spending. Bénabou and Tirole (2010) suggest that if a company is responsible and has assumed its CSR, the company is more easily recognized by the public. Borghesi, Houston, and Naranjo (2014) report that investment in CSR hinges on managers' opinions regarding company ethics and reputation. Larger companies, with higher OCF or advertisement spending, have higher CSR performance. By contrast, companies with many institutional investors are less likely to invest in CSR because the investors doubt whether the company's investment in CSR activities increases value for shareholders.

This study expects that when a company's debt level is high, it cannot easily obtain new loans. Most of such a company's funds are used to repay loans; thus, investment in environmental protection related to CSR is delayed, resulting in poor CSR performance. Additionally, when a company's financial performance indicators, such as OCF and ROA, derived from operating activities are poor, suggesting poor profitability, the company's strategy necessarily concentrates on sales and production. For example, advertising or price cutting are used to stimulate sales, improve yield, and reduce costs. The company's fund also focuses on investment in sales and production. Therefore, investment in equipment for preventing or remedying the pollution caused by the company's activities and the maintenance of existing equipment are delayed, leading to poor CSR performance.

To verify the effect of both the financial constraints and financial performance of a firm on its CSR penalties, this study proposes the following hypotheses:

- H1a: The higher a company's financial leverage is, the more likely it is to receive CSR's negative penalty information.
- H1b: The lower a company's operating cash flow is, the more likely it is to receive CSR's negative penalty information
- H1c: The lower a company's return on assets is, the more likely it is to receive CSR's negative penalty information

Gelb and Strawser (2001) report that firms with higher CSR awareness publish more transparent financial statements. Xie, Davidson III, and DaDalt (2003) indicate that sound corporate governance effectively curbs DAs. According to Atkins (2006), the public generally believes that it is firms' social responsibility to provide the investing public with highly transparent financial statements. Therefore, firms that attach importance to CSR are less likely to engage in earnings management and are more likely to provide stakeholders with highly reliable and transparent financial statements.

Dhaliwal, Li, Tsang, and Yang (2011) report that when a company has high equity capital costs, the company tends to voluntarily reveal its annual CSR activities, and that satisfactory CSR performance contributes to a reduction in the cost of equity capital. Dhaliwal, Radhakrishnan, Tsang, and Yang (2012) conclude that the issuance of a CSRRpt reduces the prediction errors of securities analysts, with the correlation particularly strong in countries with low information transparency. Choi, Lee, and Park (2013) report that without considering business groups' property and equity structures, the CSR performance and earnings management of companies are negatively correlated.

Cho, Lee, and Pfeiffer (2013) indicate that both positive and negative CSR performance may reduce information asymmetry, and the influence of negative CSR performance is much stronger than that of positive CSR performance in reducing information asymmetry. However, Kim, Park, and Wier (2012) report that socially responsible companies are less likely to conduct earnings management through manipulating DAs or to become the detecting subjects of the Securities and Exchange Commission. Company ethics also encourage managers to provide investors with high-quality, transparent financial reports. Dhaliwal, Li, Tsang, and Yang (2014) report a negative correlation between the exposure of CSR and the cost of equity capital. Either the disclosure of financial information or CSR activity can be employed to reduce the cost of equity capital.

Matsumura, Prakash, and Vera-Munoz (2014) use carbon emissions and carbon emission reports to study the effect of voluntary information disclosure on company value. They found that when companies voluntarily disclosed carbon emissions, their corporate value dropped by US\$212,000 on average for each ten million tons of carbon emissions reported. Those companies that chose not to disclose their carbon emissions had lower company value than those that did. Therefore, although the capital market may punish companies with high carbon emissions, more severe penalties are received by companies that choose not to disclose their carbon emissions.

The literature indicates that the public often positively evaluates CSR disclosure and that companies that disclose their CSR can raise funds from capital markets at a lower cost, providing no incentive to engage in earnings management. This study expects that because firms fulfilling their CSR are less likely to deceive the public, people tend to evaluate them positively. Under this societal pressure, managers run companies by taking actions compliant with existing social norms, values, and expectations. Additionally, these firms can raise funds from capital markets at a lower cost, thereby removing incentives to conduct earnings management that deceives investors. The transparency and accounting quality of financial statements presented by such responsible companies are high. Accordingly, this study proposes the following hypothesis:

H2: The accounting quality of a company's financial statements is higher if it discloses a CSR report.

3. Research Methodology

3.1 Data and Sample

The research period is from 2008 to 2012. Because calculating accounting quality requires data for the year 2007, the actual sampling period is from 2007 to 2013 (a total of 7 years). Sample companies must be publicly listed in high-tech industries. This study collects negative penalty information of CSR (NFCSR) of sample companies between 2008 and 2012 from corporate governance (CSR database in the Taiwan Economic Journal [TEJ]). The information regarding financial statements from 2007 to 2013 is collected from the Finance DB database of the TEJ. The unadjusted share price (annual) from 2008 to 2012 is collected from the Equity Database of the TEJ. Moreover, this study collects a list of winning companies from selection activities concerning CSR from 2008 to 2012 from the following websites: CommonWealth Magazine, Global Views Monthly, and the Taiwan Institute for Sustainable Energy. The list of companies that uploaded CSR reports from 2008 to 2012 is gathered from the sustainable reporting platform CSRone Reporting.

Sample companies are detailed in Tables 1 and 2. In Table 1, the sample size of the NFCSRs collected is 1,348, whereas the sample number of the discretionary accruals collected is 3,077. Table 2 shows that selected samples are primarily in the electronic components industry.

Table 1 Sample Selection Analysis

Dependent variables	Negative penalty information of CSR(NFCSR) (Hypothesis 1)	Discretionary accruals (Hypothesis 2)
Sample year	2008~2012	2007~2013
Initial sample number	1,704	5,475
Delete invalid sample		
(1)Delete sample firm with incomplete data of operating cash flows in 2007 and 2013 for calculating discretionary accruals needs	0	1,557
(2)Delete sample firm with missing data	356	841
Final sample number	1,348	3,077

Table 2 Industry Analysis

Dependent variables		Negative penalty information of CSR (NFCSR) (Hypothesis 1)		Discretionary accruals (Hypothesis 2)	
Industry code	Industry name	Sample number	Sample ratio	Sample number	Sample ratio
24	Semiconductor	189	14.02	511	16.61
25	Computers and Computing Peripheral Equipments Manufacturing	186	13.80	437	14.20
26	Optoelectronic	195	14.47	407	13.23
27	Correspondence Network	121	8.98	288	9.36
28	Electronic Parts and Components Manufacturing	430	31.90	813	26.42
29	Web-based Channel	79	5.86	179	5.82
30	Information Services	45	3.34	149	4.84
31	Other Electronic	103	7.64	293	9.52
Total sample		1,348	100.00	3,077	100.00

The industrial Classification Code is based on Securities and Futures Bureau in Taiwan.

3.2 Definition of Variables

Negative penalty information of corporate social responsibility

This indicates whether the publicly traded companies in high-tech industry have NFCSRs. On the basis of sample companies in the corporate governance (CSR database in the TEJ), the following are four situations in which the sample companies were fined by relevant authorities for violating relevant laws and regulations.

(1) Issues of environmental protection and safety

The issues include pollution, violation against industrial and public safety, and other events in the companies' operations. For instance, the companies were punished by relevant authorities or fined due to exposure in news media because they discharged waste gas and waste water that caused pollution, because insufficient safety facilities or systems were established in the working environment and hence jeopardized the operational safety of their employees, or because of other events against public safety or consumer safety.

(2) Issues of announced information

The companies were fined by relevant authorities because they failed to announce the information that should have been announced or to announce the information on time.

(3) Labor relations

The companies were fined by relevant authorities or fined due to exposure by news media in case of labor disputes or violations of labor rights or other events.

(4) Other violations of laws or regulations

The companies were punished by relevant authorities or fined due to exposure in news media on account of other violations of laws or regulations that do not fall into the

aforementioned categories.

The negative penalty information of corporate social responsibility (NFCSR) is collected from the CSR database of the TEJ. A total of 414 publicly traded companies in high-tech industry included as the information collect subjects in the database, representing about 55% of the total 751 publicly traded companies in high-tech industry. After the samples that could not be calculated are excluded, finally a total of 325 companies are included as the sample companies. The scope of this study is restricted to the publicly traded companies in high-tech industry included as the information collected subjects in the database.

NFCSR is collected from the CSR database of the TEJ. A total of 414 publicly listed companies in high-tech industries are included as information-collected subjects in the database, representing approximately 55% of the total 751 publicly listed companies in high-tech industries. A total of 325 companies are included as the sample companies after excluding those companies that relevant variable cannot be calculated. The scope of this study is restricted to publicly listed companies in high-tech industries, which are included as information-collected subjects in the database.

From the fines of the sample companies, we find that the relevant authorities primarily referred to the violations of the companies in accordance with the standards and scope provided by relevant laws and regulations when deciding the punishment. An excessively high proportion of fines in the samples were a fixed amount; thus, the degree of influence of NFCSR could not be examined. Therefore, NFCSR is used as a dummy variable. Regarding the issues of environmental protection and safety, labor relations, and other violations of laws or regulations in the CSR database of the TEJ, this variable is set as 1 if a company was punished by relevant authorities for any of the four aforementioned issues. This variable is set as 0 if a company was not punished by relevant authorities for any of the four issues.

NFCSR is detailed in Table 3 in accordance with the aforementioned definitions of dummy variables. This study also lists the number of times the companies were punished by relevant authorities for violations of environmental protection and safety, labor relations, and other violations of laws or regulations.

In Table 3, the samples from 2008 to 2012 totaled 1,348, 209 of which had NFCSR = 1. Regarding the number of fines, most of the companies with NFCSR = 1 were punished because of violations for not announcing information correctly, followed by violations of environmental protection and safety. Moreover, the companies with NFCSR = 1 were punished more than once in a year because of the same problem (such as violations of environmental protection and safety), or because of more than one problem (such as violations of environmental protection and safety and not announcing information correctly). The total number of fines was higher than the sample number of dummy variables.

Table 3 Sample Analysis of CSR's Negative Penalty Information (NFCSR)

NFCSR	Dummy variable sample	Frequency that companies were fined by the authorities				Total
		Environmental protection and safety	Information announcement on time	Labor relations	Other violations against laws or regulations	
2008~2012						
NFCSR=0	1139	0	0	0	0	0
NFCSR=1	209	75	115	3	65	258
Total sample	1348	75	115	3	65	258

Accounting quality (DA)

Francis, LaFond, Olsson, and Schipper (2005) and McNichols (2002) indicate that the measurement of earnings quality proposed by Dechow and Dichev (2002) can be improved by two pertinent factors controlling accruals, namely income growth and property and plant and equipment. Therefore, this paper adopts the method of Rajgopal and Venkatachalam (2011) to measure accounting quality.

$$TCA_{it} = d_0 + d_1CFO_{it-1} + d_2CFO_{it} + d_3CFO_{it+1} + d_4\Delta REV_{it} + d_5PPE_{it} + e_{it} \quad (1)$$

where TCA_{it} is the total current accruals calculated as $\Delta CA_{it} - \Delta CL_{it} - \Delta Cash_{it} + \Delta STDEBT_{it}$, ΔCA is the change in current assets, ΔCL is the change in current liabilities, $\Delta Cash$ is the change in cash, $\Delta STDEBT$ is the change in debt in current liabilities, and CFO is the cash flow from operations. $\Delta STDEBT$ is the current portion of long-term debt due for payment within the year and other short-term debt included in current liabilities during period t . ΔREV is the change in revenues, PPE is the gross value of property and plant and equipment. All variables are deflated by year-beginning total assets. The residual of Eq. (1) is discretionary accrual. This study uses the absolute value of discretionary accrual (DA) as the measure of accounting quality. When DA is higher (lower), accounting quality is poorer (higher).

The number of companies selected when DAs are calculated and listed based on the industries of the samples is presented in Table 4. As shown in Table 4, when we calculate the DAs of the electronic components industry from 2008 to 2012, the number of samples from that industry in the annual industries is maximal, followed by those from the semiconductor industry.

Table 4 Sample Analysis of Discretionary Accruals

Industrial Classification (Code)	Industry name	No. of firms					Total
		2008	2009	2010	2011	2012	
24	Semiconductor	103	108	112	119	122	564
25	Computers and Computing Peripheral Equipments	91	95	97	97	100	480
26	Manufacturing	86	93	102	111	118	510
27	Optoelectronic Correspondence Network	59	61	62	70	71	323
28	Electronic Parts and Components Manufacturing	167	176	182	189	192	906
29	Web-based Channel	39	39	39	40	40	197
30	Information Services	30	30	30	32	33	155
31	Other Electronic	58	62	65	67	68	320
Total sample		633	664	689	725	744	3455

The industrial Classification Code is based on the Securities and Futures Bureau in Taiwan.

Operating cash flow

The profitability and debt repayments of a company can be assessed from OCF. The company must have sufficient funds to fulfill CSR activities. In this paper, OCF is considered as a measurement of financial performance.

Return on assets

Waddock and Graves (1997) indicate that companies will have relatively slack resources and use slack resources to enhance CSR performance if their financial performance is sound. By taking ROA as a variable for measuring financial performance, they find that financial performance is positively correlated with its influence on CSR. In this paper, ROA is considered as a measurement of financial performance..

Corporate social responsibility report

We include CSRRpt as the variable of CSR. Companies with CSRRpt mean that they are in a list of companies voluntarily disclosing CSRRpt issued by the sustainable reporting platform CSRone Reporting, as well as three lists of awarded enterprises representing CSR, namely the “Corporate Social Responsibility Awards” organized by Global Views Monthly, the “Corporate Citizenship Awards” held by CommonWealth Magazine, and the “Taiwan Corporate Sustainability Awards” held by the Taiwan Institute for Sustainable Energy.

Financial leverage

Because companies with a high degree of financial leverage (Lever) take excessive loans and thus cannot easily borrow money, these companies are unable to fulfill CSR and to invest in environmental protection and resources concerning CSR, because most of their funds are used to repay debts. When exploring the effect of NFCSR on financial performance, this study includes the variable of financial leverage.

Market-to-book ratio and working capital

The higher a company’s market-to-book (MB) ratio is, the more likely the company will use

DA for earnings management. Working capital (WCapital) is used to measure a company's short-term solvency. A larger WCapital suggests that the short-term solvency is better. In case of negative WCapital, the company's normal operation may not be maintained. The company must maintain normal operation before it is able to fulfill CSR. This paper uses WCapital and MB as control variables.

3.3 Empirical Model

This paper uses the following logistic regression model to examine H1a (the higher a company's *Lever* is, the more likely it is to receive NFCSR); H1b (the lower a company's *OCF* is, the more likely it is to receive NFCSR); and H1c (the lower a firm's *ROA* is, the more likely it is to receive NFCSR).

$$NFCSR_{it} = a_0 + a_1Lever_{it} + a_2OCF_{it} + a_3ROA_{it} + a_4MB_{it} + a_5WCapital_{it} + Year_t + u_{it} \quad (2)$$

where *NFCSR* is a dummy variable of NFCSR; *NFCSR* is set as 1 if the companies were fined by relevant authorities for violating laws and regulations and as 0 if they were not fined. *Lever* is measured by dividing a company's long-term debts by its total assets of the beginning-year. *OCF* is divided by the total assets of the beginning-year. *ROA* is a profitability ratio that measures the net income produced by total assets during a year, measured by dividing earnings before interest after taxes by total assets. *MB* is growth opportunity, measured by dividing the market value of stockholders' equity by its book value. *WCapital* is calculated as current assets minus current liabilities and then taking the natural log. *Year* represents the year fixed effect.

Governments and firms have gradually attached importance to the issue of CSR. More companies are willing to disclose CSRRpts to meet stakeholders' expectations. Whether CSR performance is stronger if firms take the initiative to disclose CSRRpt is unknown. This study includes CSRRpt as a control variable when exploring the effect of NCFCSR on financial performance. The empirical model is as follows:

$$NFCSR_{it} = a_0 + a_1Lever_{it} + a_2OCF_{it} + a_3ROA_{it} + a_4CSRRpt_{it} + a_5MB_{it} + a_6WCapital_{it} + Year_t + u_{it} \quad (3)$$

where *CSRRpt* is a dummy variable of CSR report; it is set as 1 if the company was included in the list of companies that disclosed CSRRpts issued by the sustainable reporting platform CSRRone Reporting and won one of the three awards, namely the "Corporate Social Responsibility Award," the "Corporate Citizenship Award," and the "Taiwan Corporate Sustainability Award." It is set as 0 if the company did not disclose a CSRRpt and did not receive any of the aforementioned awards. Apart from *CSRRpt*, the definitions of the remaining variables are the same as that in Model (2). This study also uses the dummy variable of *CSRpt* to proxy CSR and to examine H2 (The accounting quality of a company's financial statements is higher if it discloses a CSRRpt) using the following ordinary least squares regression model:

$$DA_{it} = a_0 + a_1Lever_{it} + a_2OCF_{it} + a_3ROA_{it} + a_4CSRRpt_{it} + a_5MB_{it} + a_6WCapital_{it} + Year_t + u_{it} \quad (4)$$

The definitions of other variables are the same as those in the aforementioned models.

4. Empirical Results

4.1 Descriptive Statistics

The descriptive statistics of the variables are listed in Table 5, which are categorized into two groups of samples. A total of 1,348 samples are listed in the corporate governance (CSR database in the TEJ), which represent the publicly listed companies in high-tech industries whose NFCSR are searched. The total number of samples of publicly listed companies in high-tech industries in terms of DAs is 3,077.

As shown in Table 5, the average NFCSR in the two groups is 0.1550, which is less than 0.5, indicating that the sample number of NFCSR is less than 50%. The average of DA in the two groups is 0.0768 ($n = 1348$) and 0.0776 ($n = 3077$) and has little difference. This suggests that the companies listed in TEJ's corporate governance differ slightly from the overall average of the companies in the high-tech industries.

The average of Lever is 0.0664 ($n = 1348$), which is higher than 0.0505 ($n = 3077$). This indicates that the Lever of the companies listed in TEJ's corporate governance is higher than the overall average of the companies in the high-tech industries. By contrast, the average of OCF is 0.0628 ($n = 1348$), which is less than 0.0731 ($n = 3077$), and that of ROA is 1.6718 ($n = 1348$), which is less than 3.4213 ($n = 3077$). This suggests that the OCF and ROA of the companies listed in TEJ's corporate governance is lower than the overall average of the companies in high-tech industries.

The average of CSRRpt in the two groups is 0.0794 ($n = 1348$) and 0.0601 ($n = 3077$), both of which are less than 0.5. This indicates that less than 50% of the publicly listed companies in high-tech industries are included in the list of enterprises that disclose CSRRpts issued by the sustainable reporting platform CSRone Reporting or won one of the three awards, namely the "Corporate Social Responsibility Award," the "Corporate Citizenship Award," and the "Taiwan Corporate Sustainability Award."

4.2 Analysis of Correlation Coefficients

From untabulated results, the correlation coefficients of all two variables are less than 0.65. NFCSR is positively correlated with Lever, whereas it is negatively correlated with OCF and ROA. This means that NFCSR will be higher if Lever is higher and if OCF and ROA are lower. Conversely, DA is negatively correlated with CSRRpt. This suggests that the accounting quality of financial statements will be lower if a CSRRpt is not disclosed (i.e., CSRRpt = 0).

Table 5 Descriptive Statistics

Panel A : H1a, H1b, and H1c (total sample = 1,348)					
Variable	Median	Mean	Std. dev	Minimum	Maximum
NFCSR	0.0000	0.1550	0.3621	0.0000	1.0000
DA	0.0500	0.0768	0.0919	0.0001	1.0599
Lever	0.0212	0.0664	0.0926	0.0000	0.7150
OCF	0.0593	0.0628	0.1916	-5.4626	0.8909
ROA	3.5917	1.6718	11.6801	-48.1511	22.5834
CSRRpt	0.0000	0.0794	0.2704	0.0000	1.0000
MB	1.2157	1.5466	1.4147	0.0979	28.6891
Panel B : H2 (total sample = 3,077)					
Variable	Median	Mean	Std. dev	Minimum	Maximum
DA	0.0501	0.0776	0.1008	0.0000	2.0428
Lever	0.0000	0.0505	0.0805	0.0000	0.7150
OCF	0.0690	0.0731	0.1542	-5.4626	1.1141
ROA	4.9285	3.4213	10.3961	-48.1511	22.5834
CSRRpt	0.0000	0.0601	0.2378	0.0000	1.0000
MB	1.2523	1.5637	1.2540	0.0979	28.6891
Wcapital	13.3846	13.3841	1.4450	4.6728	18.6577

4.3 The Effect of Financial Performance on Negative Penalty Information of CSR

In Model (2) of Table 6, the findings show that Lever is positively correlated with NFCSR, suggesting that the higher a company's Lever is, the more likely it is to receive NFCSR. The empirical results meet our expectations. When a company's debt level is high, its investment in environmental protection and resources concerning CSR will be delayed; hence, the chance that the company is fined by relevant authorities for violation of environmental protection laws and other laws increases. We also find that both OCF and ROA are negatively correlated with NFCSR. This means that the lower a company's OCF and ROA are, the more likely it is to receive NFCSR. The empirical results meet our expectations. Therefore, investing in equipment for preventing and remedying pollution or maintaining existing equipment will be delayed. Consequently, the possibilities that the companies are fined by authorities increase because of violating environmental protection laws and other laws. In summary, these results support hypotheses H1a, H1b, and H1c.

We further control for CSRRpt in the model. In Model (3) of Table 6, we find that Lever is positively correlated with NFCSR, suggesting that the higher a company's Lever is, the more likely it is to receive NFCSR. Both OCF and ROA are negatively correlated with NFCSR, suggesting that the lower a company's OCF and ROA are, the more likely it is to receive NFCSR. The empirical results also support hypotheses H1a, H1b, and H1c. Moreover, CSRRpt is not negatively correlated with NFCSR. This indicates that a company's voluntary disclosure of a CSRRpt does not mean that its chance of having NFCSR is lower (i.e., stronger CSR performance).

Table 6 The Effect of Negative Penalty Information on Finance Performance

$$NFCSR_{it} = a_0 + a_1Lever_{it} + a_2OCF_{it} + a_3ROA_{it} + a_4MB_{it} + a_5WCapital_{it} + Year_t + u_{it} \quad (2)$$

$$NFCSR_{it} = a_0 + a_1Lever_{it} + a_2OCF_{it} + a_3ROA_{it} + a_4CSRRpt_{it} + a_5MB_{it} + a_6WCapital_{it} + Year_t + u_{it} \quad (3)$$

Independent variable: NFCSR	Model (2)		Model (3)	
	Coef.	p value	Coef.	p value
Lever	2.2304	0.0020	2.2298	0.0020
OCF	-0.7503	0.0050	-0.7507	0.0050
ROA	-0.0138	0.0530	-0.0139	0.0550
CSRRpt			-0.0095	0.9770
MB	-0.0222	0.6570	-0.0222	0.6560
Wcapital	0.0863	0.1060	0.0871	0.1580
Year	include	include	include	include
Cont.	-2.0936	0.0060	-2.1038	0.0140
Number of obs	1348		1348	
Wald chi2(7)	48.91		48.96	
Prob> chi2	0.0000		0.0000	
Pseudo R2	0.0403		0.0403	

All of variables' definitions are the same as those in Table 5.

The period of sample is from 2008 to 2012.

4.4 Effect of Corporate Social Responsibility on Accounting Quality

In Model 4 of Table 7, we find that CSRRpt is negatively correlated DA, implying that the companies disclosing CSRRpts are less likely to conduct earnings management through manipulating discretionary accruals (i.e., higher accounting quality). The companies fulfilling CSR have less incentive to conduct earnings management by deceiving their investors through discretionary accruals. These results support H2 and are consistent with prior studies (Atkins, 2006; Gelb and Strawser, 2001; Kim, Park, and Wier, 2012).

On the other hand, when management bonuses and rewards are calculated based on earnings, managers probably undertake earnings management through the manipulation of discretionary accruals, thereby resulting in poor accounting quality. This study further investigates whether companies that receive CSR penalties experience a loss in profit if their reputation is affected or if they are required to pay substantial fines. We adopt the following model to examine the relationship between NFCSR and accounting quality.

$$DA_{it} = a_0 + a_1NFCSR_{it} + a_2Lever_{it} + a_3OCF_{it} + a_4ROA_{it} + a_5CSRRpt_{it} + a_6MB_{it} + a_7WCapital_{it} + Year_t + u_{it} \quad (5)$$

In Model (5) of Table 7, NFCSR is unrelated to DA but CSRRpt is negatively correlated with DA. This means that companies disclosing CSRRpts are less likely to conduct earnings management by manipulating discretionary accrual. The finding is consistent with that in Model (5) and support H2.

Table 7 CSR Report, Negative Penalty Information, and Accounting Quality

$$DA_{it} = a_0 + a_1Lever_{it} + a_2OCF_{it} + a_3ROA_{it} + a_4CSRRpt_{it} + a_5MB_{it} + a_6WCapital_{it} + Year_t + u_{it} \quad (4)$$

$$DA_{it} = a_0 + a_1NFCSR_{it} + a_2Lever_{it} + a_3OCF_{it} + a_4ROA_{it} + a_5CSRRpt_{it} + a_6MB_{it} + a_7WCapital_{it} + Year_t + u_{it} \quad (5)$$

DA Independent variable	Model (4)		Model (5)	
	Coef.	p value	Coef.	p value
Lever	-0.0262	0.1080	-0.0288	0.1790
OCF	-0.0269	0.4980	-0.0657	0.0680
ROA	-0.0005	0.0620	-0.0005	0.1470
CSRRpt	-0.0217	0.0000	-0.0157	0.0260
MB	0.0209	0.0000	0.0172	0.0010
Wcapital	0.0015	0.2500	0.0004	0.8270
NFCSR		x	0.0028	0.6180
Year	-0.0012	0.3140	-0.0010	0.5130
Cont.	0.0354	0.0440	0.0553	0.0390
Number of observations	3077		1348	
F value	7.88		4.08	
Prob> F	0.0000		0.00	
R-squared	0.0695		0.0988	
Adj R-squared	0.0674		0.0934	

All of variables' definitions are the same as those in Table5.

The period of sample is from 2008 to 2012.

5. Conclusions

This study considers the information of companies that were fined by relevant authorities for violating environmental protection laws or other laws and regulations as a proxy variable of CSR performance. First, this study examines the effect of companies' financial constraints and financial performance on NFCSR. Second, we investigate the influence of CSRRpt on accounting quality and the relationship between NFCSR and accounting quality.

The findings show that when Lever is relatively low and when OCF and ROA are relatively high, NFCSR is lower (i.e., stronger CSR performance). Because companies that fulfill CSR are less likely to deceive the public, people tend to positively evaluate such companies. Under this pressure, managers will run their companies by taking actions that are compliant with existing social regulations. When we use CSRRpt as a proxy variable of CSR, the evidences show that companies disclosing CSRRpts have higher accounting quality. However, NFCSR is unrelated to accounting quality.

NFCSR in this study is primarily from the corporate governance (CSR database in the TEJ), but the number of companies included in the database and the number of NFCSRs listed in the database are small. Future study should investigate this problem. Moreover, the measurement of CSRRpt is whether those companies included in the list of companies that voluntarily disclose CSR report issued by the sustainable reporting platform CSRone Reporting or in the three lists of awarded companies representing CSR. Because the government has not established an official platform to force companies to upload and announce CSRRpts, this may result in incomplete data.

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