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Does CSR Assurance Affect the Relationship between CSR Performance and Financial Performance?

Jintae Kim ¹, Kangho Cho ²  and Cheong K. Park ^{3,*}¹ Da Vinci College, Chung-Ang University, Gyeonggi-do 17546, Korea; jtkim0811@cau.ac.kr² Whitman School of Management, Syracuse University, Syracuse, NY 13244, USA; kcho05@syr.edu³ School of Business, Woodbury University, Burbank, CA 91504, USA

* Correspondence: kevin.park@woodbury.edu; Tel.: +1-818-394-3317

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Abstract: In this study, we investigate the effect of assurance service of corporate social responsibility (CSR) reports on the relationship between CSR performance and firms' financial performance. Specifically, we question whether firms having their CSR performance assured to benefit from such assurance services. Theory suggests that investors apply a lower discount rate when valuing firms if information from the firms is credible. Using a sample of 5040 large U.S. companies, we find that the CSR performance is positively associated with the firms' financial performance on average and that there is a significant effect of CSR assurance service on the relationship between CSR performance and firms' financial performance. This implies that firms having their CSR reports assured by external experts experience much higher financial performance than firms without such assurance service. Our findings are consistent with the prior studies and support our argument with regard to the CSR assurance service. The findings have implications for firms considering CSR assurance and accounting professionals for their opportunities.

Keywords: CSR assurance; CSR performance; financial performance

1. Introduction

Corporate social responsibility (CSR) has been critical to the sustainability of organizations by adding value to the organizations. In his influential article, [1] addresses the following statement.

"The Social Responsibility of Business Is to Increase Its Profits"

—Milton Friedman (A Nobel laureate), *The New York Times*, 1970

As Friedman [1] predicted several decades ago, the sustainability of firms stems from not only the profitability of their goods and services but also firms' engagements with our society as a whole. Accordingly, CSR activities or performance are critical elements of firms' sustainability as investors expect more CSR engagements from firms. Since Friedman [1], a number of academic studies have examined the relationship between CSR activities and firms' financial performance. These studies have focused on whether CSR activities maximize the value of shareholders or just wasting firms' resources. In general, accounting researchers have addressed important findings about the determinants of CSR, consequences of CSR, the role of assurance (i.e., audit) in the CSR disclosure, and the relationship between CSR performance and firms' financial performance [2]. Although there exists the theory supporting the positive relationship between CSR and financial performance, the findings in prior empirical studies show somewhat mixed evidence on the relationship between CSR performance and firms' financial performance. The inconsistency of prior studies encourages our research questions: Is there a positive relationship between CSR performance and firms' financial

performance? Does assurance of CSR reports affect the relationship between CSR performance and firms' financial performance?

Even though the prior studies provide limited evidence, we examine this issue for three reasons. First, theoretical and other empirical research supports the notion that CSR performance leads to higher performance in the capital market. Graham, Harvey and Rajgopal [3] indicate that about 39% of their survey respondents agree or strongly agree that voluntary disclosure of information (i.e., CSR or Bad news) reduces firms' cost of capital, which in turn improves the value of the firms. LaFond and Watts [4] argue that increasing the information flow to information users outside improves firm value by reducing the discount rate applied to the firm value by investors when there exists information asymmetry between managers and investors. Thus, this study confirms the predictions by existing theory and some empirical studies.

Second, in the information perspective, the findings in prior studies may be attributable to correlate omitted variables. International Auditing and Assurance Standards Board (IAASB) addresses that the objective of an assurance service is to improve the quality and credibility of the information flow to information users for their decision making [5]. In particular, Pflugrath, Roebuck and Simnett [5] suggest that information is more reliable when it is audited by third-party experts. Therefore, firms having their CSR performance assured by external experts may benefit from higher firm value because the investors apply the rate based on the credible (or assured) information provided by firms [6]. Furthermore, Chow [7] argues that agency costs drive managements' incentives to have their financial statements assured. Consistent with this view, Abdel-Khalik [8] finds that larger companies have more incentives to demand assurance, and Blackwell, Noland and Winters [9] find an assurance to be an effective means to control the organizations. Thus, we would expect that there is a positive effect of CSR assurance on the relationship between CSR performance and financial performance.

Additionally, inferences in prior studies are based on non-standardized disclosures of CSR (i.e., KLD database and/or CSR index). As Timbate and Park [10] address, there may be measurement errors of CSR activities or CSR performance. Given the criticisms from other studies, it is important to investigate corroborative evidence from alternative measures of CSR performance. We collect the CSR performance score published by a reputable organization (Thomson Reuters) to examine our research question. The firm-year based measures of CSR performance allows us to test various models after controlling other firm characteristics at a firm-year level.

Using the data from Thomson Reuters, we conduct empirical tests on a large U.S. sample from 2006 to 2016. The sample consists of a total of 5040 firm-year observations and includes the letter scales of CSR performance score from A+ to D-. We employ both the market value of firms and Tobin's Q as dependent variables, then estimate the Ordinary Least Square (OLS) regression. Consistent with prior studies supporting a positive relationship between CSR performance and financial performance, we find that CSR performance is positively associated with firms' financial performance on average. We also find that the positive relationship between CSR performance and firms' financial performance increases when the firms have their CSR reports audited. These findings imply that investors reflect information in CSR performance and that the reflection increases in the presence of assurance service for such information.

The findings in this study contribute to the literature in two folds. First, our results support the view by prior studies addressing that CSR performance maximizes the shareholders' value. Second, our results indicate that there is an important role of assurance services of CSR information in valuing such performance. Therefore, the firms having their CSR performance assured by external experts experience higher financial performance than other firms without such assurance for their CSR performance.

The remainder of the paper is structured as follows: Section 2 presents the literature review and hypothesis development. Section 3 describes our sample and test procedures. Section 4 presents descriptive statistics and main results. Section 5 summarizes the paper and presents our conclusions.

2. Literature Review and Hypothesis Development

2.1. CSR and Financial Performance

There has been a substantial increase in CSR research that focuses on the relationship between corporate social performance (CSP) and corporate financial performance (CFP) since Friedman [1]. In his influential article, [1] addresses that corporate social responsibility can improve the financial performance of firms by satisfying stakeholders' expectations. With this view, for instance, about 92% of the largest 250 companies in the world provide the CSR report for their investors in 2015, and the number of reports is growing [11]. This trend continues as companies believe that the initiatives in CSR activities and disclosures of such information are beneficial for the companies. The academic researchers also support this view by showing that the initiatives in CSR can improve various aspects of companies' performance, including customer satisfaction, company reputation, and financial performance [12].

The theory behind the prior studies examining the relationship between CSR and CFP is the stakeholder theory. The stakeholder theory generally supports that firms can improve the value of stakeholders by engaging in CSR activities [13]. Hilman and Keim [14] support this argument by addressing the relations between management and stakeholders such as employees, suppliers, and customers. The better relations with stakeholders have firms to create intangible assets which in turn leads to better financial performance. Even though there are several different viewpoints of the relationship between CSR and CFP [15], a numerous number of studies provide evidence supporting this stakeholder theory, the most widely accepted theory in the literature.

Waddock and Graves [16] argue that firms benefit from CSR activities because the benefits of CSR activities exceed the related costs. Using both accounting and capital market measures of firm performance, Baird, Geylani and Roberts [17] also provide evidence that there is a positive relationship between firms' CSR performance and financial performance. Jensen [18] also argues that, in Stakeholder theory, managers always make judgments for the organization better off. Critics also argue that there are many aspects of CSR engagements with stakeholders, thus that not all the aspects of CSR engagements positively affect the improved financial performance. Nevertheless, Hilman and Keim [14] provide evidence that CSR, constructed by stakeholder management, is positively associated with shareholder value, constructed by financial performance after teasing out the factors of social issue participation. In sum, the relationship between CSR performance and financial performance is supported by the existing theory. Accordingly, this drives us to the following hypothesis:

Hypothesis 1. *There is a positive relationship between CSR performance and firms' financial performance.*

2.2. The Effect of Assurance Service on the Relationship between CSR Performance and Financial Performance

Corporate Social Responsibility reporting is a potentially valuable source of information for investors because it provides additional information regarding firms' economic and social sustainability that goes beyond traditional financial reporting. However, at the same time, CSR reporting raises many concerns about the credibility of information due to the nature of voluntary disclosure of CSR reporting. International Auditing and Assurance Standards Board (IAASB) addresses that the objective of an assurance service is to improve the quality and credibility of the information flow to information users for their decision making [5]. Thus, there is a number of studies investigating what demands the assurance service and whether or not the companies benefit from the assurance service.

One stream of research focuses on the demand for assurance service for voluntary disclosure. [7] is the first prominent study to investigate the voluntary adoption of assurance service for financial reporting and argue that agency costs drive managements' incentives to have their financial statements assured. Abdel-Khalik [8], Blackwell, Noland and Winters [9] also address that the demand for assurance stems from the need to mitigate information asymmetry with stakeholders. Consistent with

this view, Abdel-Khalik [8] finds that larger companies have more incentives to demand assurance, and [9] finds an assurance to be an effective means to control the organizations.

The other stream of research sheds some light on the benefits of assurance service in the environment of CSR reports. [19] survey shows that about 40% of CSR reports are independently assured by either the accounting profession or experts from outside of accounting. In an international setting, Simnett, Vanstraelen and Chua [20] show that companies seeking to improve the reliability of their CSR reports and build corporate reputation are more likely to have their CSR reports assured by external professionals. The study also finds other factors, like country characteristics, that may affect the demand for assurance service. However, the study does not directly test the benefits of CSR reports assured. In contrast, Casey and Grenier [6] find the benefits of assurance service by examining the credibility of CSR information assured by experts in the area. Although Pflugrath, Roebuck and Simnett [5] provide a direct causal relationship between the assurance and credibility of CSR information in an experimental setting, the study does not present the magnitude of such relationships [21].

Taken together, this is an open empirical question of whether the companies benefit from the assurance service of CSR reports and/or investors perceive the benefits of such assurance. In order to explore the effect of assurance service of CSR reports on the benefits of companies, we develop the following second hypothesis:

Hypothesis 2. *CSR assurance has a positive impact on the relationship between CSR performance and financial performance.*

3. Sample and Research Method

3.1. CSR Performance and Sample

We collect our data from Thomson Reuters. To measure the CSR performance, we use the ESG score from Thomson Reuters as the measure of CSR performance. With the increasing importance of ESG data, Thomson Reuters provides an in-depth analysis of the company's ESG process. Thomson Reuters provides one of the most comprehensive ESG databases in the industry. It covers more than 7000 public companies globally since 2002 [22]. The ESG scores are measured in three different pillars including environmental, governance, and social, then the three pillars are further classified into subcategories (see The Appendix A for further details). A combined score of overall ESG is further presented with the letter scales from A+ to D- for an individual company. Based on the manual of Thomson Reuters, we convert the letter grades into a numeric scale from 0.08 to 1 and assign each observation with these numeric values. It basically provides us a rank difference between grades. For example, D- is converted in 0.83, computed as 1 divided by 12, and A+ is converted into 1, computed as 12 divided by 12 because there are a total of 12 grades from A+ to D-. As the ESG scores are standardized by the way they are measured, it is convenient for us to employ our regression models and interpret the results. Our sample consists of 5040 observations spanning years from 2006 to 2016. We exclude the companies in the financial industry and observations with missing variables for the tests because the high ratio of leverage with financial institutions may bias the findings in the capital market study. Furthermore, financial statements of financial institutions are not the same as those of non-financial firms. For example, the financial firms do not carry certain items like inventory which is commonly used to measure other control variables. Nevertheless, the findings in this study are not qualitatively different from what we find with the financial institutions. The sample sizes vary as we select different test models. We also eliminate the continuous variables with extreme values to avoid any influence from outliers in the test models. Table 1 indicates the sample selection criteria and the sample distribution. Panel A of Table 1 displays the sample selection criteria. Panel B of Table 1 exhibits the distribution of the final sample by year. The number of observations is fairly stable

throughout the years except for 2006. The percentage of observations with CSR audited increases from the beginning of the sample period to 2012, but the number is stable in subsequent years.

Table 1. Sample distribution.

Panel A: Sample Selection Criteria			
CSR Performance scores from Thomson Reuters during the period 2006–2016			6748
Less: Observations without ticker information			(830)
Observations of financial institutes			(458)
Observations without necessary data from Compustat			(420)
Final sample (CSR performance)			5040
Panel B: Sample Distribution by Year			
Year	N	Mean CSR Score	% of Audit
2006	82	0.60	1.21
2007	359	0.56	2.78
2008	449	0.55	4.00
2009	501	0.55	4.79
2010	521	0.57	6.33
2011	528	0.58	7.95
2012	523	0.58	11.85
2013	532	0.58	12.03
2014	531	0.59	12.99
2015	561	0.62	12.29
2016	453	0.62	12.80
Total	5040	0.58	8.92

Notes: The description of variables are as follows: MV is the ratio of market value of a firm over the value of firm's net assets, TOBIN is the ratio of the market value of a firm over the value of the firm's physical asset, CSR is the ESG score from Thomson Reuters, ROA is the ratio of income before extraordinary items over total assets, Size is the natural logarithm of the book value of total assets, Lev is the leverage variable computed as the ratio of the book value of short-term and long-term debt over the book value of equity, BM is the ratio of the book value of equity over the market value of equity, Growth is the sales growth, computed as the ratio of the difference between sales and lagged sales to lagged sales.

3.2. Financial Performance

We use two stock-based proxies of firms' financial performance. Two measures are the market value of the firm and Tobin's Q. The first measure of firms' financial performance is the market value of the firm (MV). The market value of the firm is calculated by the market value of a firm divided by the value of the firm's net assets. MV for firm *i* in year *t* is computed as:

$$MV_{i,t} = (\text{the stock price of the firm} * \text{number of shares outstanding}) / (\text{book value of total assets} - \text{cash and marketable securities})$$

The second measure of firms' financial performance is Tobin's Q (TOBIN). Tobin's Q is calculated as the market value of a firm divided by the value of the firm's physical asset. The ratio shows how the capital market values the firm's existing assets. The measure captures investors' perception of firms' potential to generate future earnings [23,24]. We follow [25] and compute Tobin's Q for firm *i* in year *t* as follows:

$$TOBINQ = (\text{market value of equity} + \text{preferred stock} + \text{short-term liabilities} + \text{book value of long-term debt}) / (\text{book value of total assets})$$

For the robustness of our results, we employ three different time periods of the dependent variable in the test models.

3.3. Test Models

To test our hypotheses, we employ the Ordinary Least Square models (OLS). We regress the variables of firms' financial performance on the CSR performance, the variables of audit, and other control variables. The following two equations indicate both our basic regression model (1) and the extended model (2):

$$\text{Financial Performance}_{i,t} = \alpha_0 + \alpha_1 \text{CSR} + \alpha_2 \text{ROA} + \alpha_3 \text{SIZE} + \alpha_4 \text{LEV} + \alpha_5 \text{BM} + \alpha_6 \text{GROWTH} + \text{Year Dummy} + \text{Industry Dummy} + \varepsilon_{i,t} \quad (1)$$

$$\text{Financial Performance}_{i,t} = \beta_0 + \beta_1 \text{CSR} + \beta_2 \text{AUDIT} + \beta_3 \text{CSR} * \text{AUDIT} + \beta_4 \text{ROA} + \beta_5 \text{SIZE} + \beta_6 \text{LEV} + \beta_7 \text{BM} + \beta_8 \text{GROWTH} + \text{Year Dummy} + \text{Industry Dummy} + \varepsilon_{i,t} \quad (2)$$

where CSR is the ESG score from Thomson Reuters, AUDIT is an indicator variable equal to one if firm's CSR report is audited by external professional and zero otherwise, CSR*Audit is an interaction term, computed as CSR multiplied by Audit, ROA is the ratio of income before extraordinary items over total assets, SIZE is the natural logarithm of the book value of total assets, LEV is the leverage variable computed as the ratio of the book value of short-term and long-term debt over the book value of equity, BM is the ratio of the book value of equity over the market value of equity, GROWTH is the sales growth, computed as the ratio of the difference between sales and lagged sales to lagged sales. We control for year and industry effect by including Year Dummy and Industry Dummy.

In equation (1), α_1 captures the main effect of CSR performance on firms' financial performance. Higher (lower) CSR denotes higher (lower) CSR performance. If the CSR performance drives better financial performance, we would expect a positive and statistically significant coefficient on α_1 . In order to examine the effect of audit on the relationship between CSR performance and financial performance, we augment the first equation by adding AUDIT and the interaction term between CSR and AUDIT (CSR*AUDIT) in equation (2). Our variable of interest is CSR*AUDIT. We expect that the coefficient on CSR*AUDIT is statistically significant and positive if there is a positive effect of assurance service on the relationship between CSR performance and firms' financial performance. We report the statistical significance (i.e., t-value) based on the White heteroscedasticity-corrected standard error [26].

4. Results

4.1. Descriptive Statistics

The descriptive statistics are presented in Table 2. The final number of observations is 5040 except for the sub-sample with dependent variables in the future period (MV1, MV2, TOBIN1, TOBIN2). We extend our test models by adding two dependent variables in the future period. MV1 (MV2) is the firm's one (two) year ahead value in the market and TOBIN1 (TOBIN2) is the firm's one (two) year ahead measure of Tobin's Q. Due to the intangible nature of CSR performance, we may not be able to perceive the instantaneous effect of CSR performance on financial performance. Accordingly, we employ future measures of financial performance for the robustness of our results. The means of MV, MV1, and MV2 are 1.77, 1.79, and 2.08, respectively. The average number increases as we extend the period to measure the dependent variables, but the distribution of variables is quite similar when reporting the median, 25 percentiles, and 75 percentiles. In contrast, the averages of TOBIN, TOBIN1, and TOBIN2 are relatively stable at around 1.65. The mean of CSR score is 0.59 with a standard deviation of 0.18, which implies that the sample is normally distributed in the variable of CSR performance. We control for several other determinants of financial performance. Regarding the control variables, we include the measures for the firm's profitability, size, capital structure, and the rate of growth. The mean ROA is 0.067 indicating that the firms in our sample are profitable. SIZE reports the mean of 8.95, and this shows that the firms in our sample are relatively large because our sample coverage belongs to S&P 1500 in the U.S. The statistics of other control variables are fairly similar to those reported in other studies.

Table 2. Descriptive Statistics.

Variable	N	Mean	Std Dev	25th Pct	Median	75th Pct
MV	5040	1.779	1.997	0.671	1.191	2.112
MV1	4797	1.798	2.607	0.664	1.185	2.107
MV2	4275	2.086	7.728	0.647	1.180	2.114
TOBIN	5040	1.655	1.170	0.912	1.318	1.985
TOBIN1	4797	1.649	1.127	0.916	1.322	1.992
TOBIN2	4275	1.662	1.111	0.926	1.342	2.011
CSR	5040	0.585	0.180	0.420	0.580	0.750
ROA	5040	0.067	0.077	0.030	0.062	0.102
SIZE	5040	8.959	1.281	8.016	8.807	9.866
LEV	5040	1.866	31.666	0.289	0.596	1.094
BM	5040	0.455	0.355	0.234	0.379	0.593
GROWTH	5040	0.058	0.205	-0.022	0.047	0.122

Notes: The description of variables are as follows: MV is the ratio of market value of a firm over the value of firm's net assets, TOBIN is the ratio of the market value of a firm over the value of the firm's physical asset, CSR is the ESG score from Thomson Reuters, ROA is the ratio of income before extraordinary items over total assets, Size is the natural logarithm of the book value of total assets, Lev is the leverage variable computed as the ratio of the book value of short-term and long-term debt over the book value of equity, BM is the ratio of the book value of equity over the market value of equity, Growth is the sales growth, computed as the ratio of the difference between sales and lagged sales to lagged sales.

4.2. Correlations

Table 3 displays the correlations among the variables. It presents both Pearson and Spearman correlations. The table shows that two market-based measures of financial performance are correlated with each other, and thus that two variables confirm the validity of being used as dependent variables (MV and TOBIN) in this study. For our variables of interest, the Pearson correlation between the CSR performance and the market value of firms indicates a negative and somewhat significant relationship before we control for other variables. However, the negative correlation between variables becomes statistically insignificant when we measure the Spearman correlations. As reported in previous studies, the relationship between CSR performance and financial performance in these preliminary statistics is not conclusive, and we need to take further statistical assessments to reach a meaningful contribution [27]. The correlations of other variables are signed as expected and consistent with those reported in previous studies.

Table 3. Correlations.

	MV	MV1	MV2	TOBIN	TOBIN1	TOBIN2	CSR	ROA	SIZE	LEV	BM	GROWTH
MV		0.60	0.16	0.91	0.77	0.70	-0.07	0.51	-0.30	-0.02	-0.41	0.25
MV1	0.88		0.5	0.57	0.91	0.81	-0.02	0.32	-0.20	-0.02	-0.28	0.12
MV2	0.73	0.81		0.15	0.42	0.92	0.01	0.07	-0.07	-0.01	-0.07	0.01
TOBIN	0.95	0.83	0.69		0.86	0.79	-0.06	0.57	-0.31	-0.01	-0.52	0.24
TOBIN1	0.85	0.95	0.79	0.86		0.89	-0.04	0.49	-0.31	-0.03	-0.48	0.16
TOBIN2	0.8	0.88	0.95	0.79	0.89		-0.04	0.48	-0.32	-0.02	-0.45	0.15
CSR	-0.01	-0.01	-0.02	-0.06	-0.04	-0.04		0.02	0.57	-0.02	-0.09	-0.09
ROA	0.71	0.62	0.53	0.57	0.49	0.48	0.02		-0.18	-0.03	-0.41	0.28
SIZE	-0.35	-0.33	-0.31	-0.31	-0.31	-0.32	0.57	-0.18		0.01	0.1	-0.12
LEV	-0.47	-0.42	-0.38	-0.01	-0.03	-0.02	-0.02	-0.03	0.01		-0.03	0.03
BM	-0.74	-0.65	-0.53	-0.52	-0.48	-0.45	-0.09	-0.41	0.10	-0.03		-0.14
GROWTH	0.24	0.18	0.19	0.24	0.16	0.15	-0.09	0.28	-0.12	0.03	-0.14	

Notes: The description of variables are as follows: MV is the ratio of market value of a firm over the value of firm's net assets, TOBIN is the ratio of the market value of a firm over the value of the firm's physical asset, CSR is the ESG score from Thomson Reuters, ROA is the ratio of income before extraordinary items over total assets, Size is the natural logarithm of the book value of total assets, Lev is the leverage variable computed as the ratio of the book value of short-term and long-term debt over the book value of equity, BM is the ratio of the book value of equity over the market value of equity, Growth is the sales growth, computed as the ratio of the difference between sales and lagged sales to lagged sales.

Table 4 provides the results from our main tests for Hypothesis 1 and Hypothesis 2. We run the Ordinary Least Square (OLS) regression model to test our hypotheses. We regress two market-based dependent variables on CSR score and other control variables including ROA, SIZE, LEV, BM, and GROWTH. Table 4 presents the basic regression model and augmented regression model with the interaction term of CSR*AUDIT. The first three columns of Table 4 report the results of the effect of CSR on financial performance. Unlike the results in the correlation table, the results indicate a positive and statistically significant relationship between CSR performance and financial performance after controlling other factors. When taking MVs as dependent variables, the coefficients on CSR are 0.367, 0.641, and 0.715, respectively. We interpret the results as there is a strong positive relationship between CSR performance and financial performance. The magnitude of coefficients become even higher as we extend our model from concurrent financial performance to the two-year-ahead financial performance. This suggests the notion that CSR performance, as an intangible asset, is beneficial for the firms in the long-run. With respect to Hypothesis 1, the findings in the first three columns of Table 4 present evidence that there is a strong positive relationship between CSR performance and financial performance. This supports Hypothesis 1. The results of the control variables are consistent with prior studies. In particular, the profitability (ROA) and growth (GROWTH) measures are positively related to the measures of financial performance. SIZE, LEV, and BM are negatively related to the dependent variables. We interpret this as large firms (SIZE) are poorly performed in the market and firms with high leverage (LEV) and the book value of equity are not as good as peer groups in the capital market.

Table 4. Regression Results (DV: MVs).

	MV	MV1	MV2	MV	MV1	MV2
Intercept	4.697 (27.23 ***)	4.876 (28.75 ***)	4.745 (27.43 ***)	4.826 (27.31 ***)	5.033 (28.90 ***)	4.887 (27.58 ***)
CSR	0.367 (2.35 **)	0.641 (4.19 ***)	0.715 (4.60 ***)	0.194 (1.20)	0.445 (2.79 ***)	0.51 (3.19 ***)
AUDIT				−0.892 (−1.71 *)	−1.194 (−2.35 **)	−1.364 (−2.66 ***)
CSRxAUDIT				1.466 (2.23 **)	1.864 (2.91 ***)	2.060 (3.20 ***)
ROA	8.849 (26.52 ***)	6.900 (20.58 ***)	6.922 (20.00 ***)	8.804 (26.40 ***)	6.854 (20.47 ***)	6.869 (19.87 ***)
SIZE	−0.352 (−15.88 ***)	−0.375 (−17.17 ***)	−0.371 (−16.61 ***)	−0.360 (−16.07 ***)	−0.383 (−17.37 ***)	−0.377 (−16.72 ***)
LEV	−0.001 (−2.16 **)	−0.016 (−4.48 ***)	−0.011 (−3.12 ***)	−0.001 (−2.18 **)	−0.016 (−4.45 ***)	−0.011 (−3.09 ***)
BM	−1.323 (−18.84 ***)	−1.298 (−18.39 ***)	−1.178 (−16.37 ***)	−1.293 (−18.79 ***)	−1.293 (−18.35 ***)	−1.174 (−16.34 ***)
GROWTH	0.926 (8.07 ***)	0.278 (2.43 **)	0.062 (0.54)	0.934 (8.14 ***)	0.286 (2.50 **)	0.069 (0.60)
Firm Fixed Effect	Included	Included	Included	Included	Included	Included
Industry Fixed Effect	Included	Included	Included	Included	Included	Included
Adj R ²	0.364	0.316	0.311	0.366	0.319	0.314
Nobs	5040	4797	4275	5040	4797	4275

Notes: All regressions include year fixed effects. *, **, and *** represent significance levels of 10 percent, 5 percent, and 1 percent, respectively. The description of variables are as follows: CSR is the ESG score from Thomson Reuters, Audit is an indicator variable equal to one if firm's CSR report is audited by external professional and zero otherwise, CSR*Audit is an interaction variable, computed as CSR multiplied by Audit, ROA is the ratio of income before extraordinary items over total assets, Size is the natural logarithm of the book value of total assets, Lev is the leverage variable computed as the ratio of the book value of short-term and long-term debt over the book value of equity, BM is the ratio of the book value of equity over the market value of equity, Growth is the sales growth, computed as the ratio of the difference between sales and lagged sales to lagged sales. We report the *t*-value based on the White heteroscedasticity-corrected standard error [26].

The next three columns in Table 4 provide the results of the augmented model in which we include the variable of audit (AUDIT) and the interaction term between CSR and audit (CSR*AUDIT). The coefficient of our interest is on CSR*AUDIT. The coefficients on CSR*AUDIT in the augmented model present 1.466, 1.864, and 2.060, respectively for three different MVs. They are all positive and statistically significant at 1% level. This means that the firms having CSR reports audited experience high performance in the capital market. As the coefficients on the interaction term of CSR*AUDIT are positive and significant, the coefficients on CSR are positive and significant as well. This implies that having assurance service gives the firms incremental benefits. Thus the findings in Table 4 support our Hypothesis 2. Our results are still consistent with prior studies examining the positive relationship between CSR performance and financial performance on average. Furthermore, we re-run two models with the different dependent variables (TOBINs) for the robustness of our results. The results reported in Table 5 are fairly consistent with those in Table 4. This supports our earlier finding that CSR performance is positively associated with the financial performance on average [H1] and this relationship is even stronger for firms having their CSR reports audited [H2]. The results imply that investors may fully reflect the assurance service in valuing the firms.

Table 5. Regression Results (DV: TOBINs).

	TOBIN	TOBIN 1	TOBIN 2	TOBIN	TOBIN 1	TOBIN 2
Intercept	3.452 (37.52 ***)	3.631 (37.02 ***)	3.633 (34.53 ***)	3.548 (37.53 ***)	3.742 (37.17 ***)	3.745 (34.77 ***)
CSR	0.195 (2.34 **)	0.385 (4.35 ***)	0.462 (4.89 ***)	0.091 (1.05)	0.261 (2.83 ***)	0.323 (3.29 ***)
AUDIT				−0.336 (−1.20)	−0.485 (−1.65 *)	−0.688 (−2.21 ***)
CSRxAUDIT				0.658 (1.87 *)	0.879 (2.37 **)	1.147 (2.93 ***)
ROA	5.615 (31.44 ***)	4.512 (23.27 ***)	4.400 (20.91 ***)	5.588 (31.32 ***)	4.483 (23.16 ***)	4.362 (20.77 ***)
SIZE	−0.202 (−17.04 ***)	−0.226 (−17.87 ***)	−0.233 (−17.14 ***)	−0.208 (−17.38 ***)	−0.232 (−18.23 ***)	−0.238 (−17.42 ***)
LEV	−0.001 (−1.59)	−0.005 (−2.65 **)	−0.003 (−1.75 *)	−0.001 (−1.61)	−0.005 (−2.62 ***)	−0.238 (−1.71 *)
BM	−1.087 (−28.92 ***)	−1.044 (−25.58 ***)	−0.960 (−21.94 ***)	−1.085 (−28.89 ***)	−1.041 (−25.56 ***)	−1.041 (−21.93 ***)
GROWTH	0.400 (6.51 ***)	0.002 (−0.04)	0.041 (−0.59)	0.406 (6.62 ***)	0.004 (0.07)	−0.034 (−0.49)
Firm Fixed Effect	Included	Included	Included	Included	Included	Included
Industry Fixed Effect	Included	Included	Included	Included	Included	Included
Adj R ²	0.469	0.388	0.363	0.471	0.391	0.366
Nobs	5040	4797	4275	5040	4797	4275

Notes: All regressions include year fixed effects. *, **, and *** represent significance levels of 10%, 5%, and 1%, respectively. The description of variables are as follows: CSR is the ESG score from Thomson Reuters, Audit is an indicator variable equal to one if firm's CSR report is audited by external professional and zero otherwise, CSR*Audit is an interaction variable, computed as CSR multiplied by Audit, ROA is the ratio of income before extraordinary items over total assets, Size is the natural logarithm of the book value of total assets, Lev is the leverage variable computed as the ratio of the book value of short-term and long-term debt over the book value of equity, BM is the ratio of the book value of equity over the market value of equity, Growth is the sales growth, computed as the ratio of the difference between sales and lagged sales to lagged sales. We report the t-value based on the White heteroscedasticity-corrected standard error [26].

5. Conclusions

In this study, we investigate the effect of assurance service of CSR reports on the relationship between CSR performance and firms' financial performance. The theories and prior studies generally support that CSR performance is a value-enhancing indicator, and thus firms benefit from CSR performance in the capital market. Moreover, in the information perspective, Pflugrath, Roebuck and Simnett [5] argue that information is more reliable when it is audited by third-party experts. Therefore, firms having their CSR performance assured by external experts may benefit from higher firm value [6]. Chow [7] also argues that agency costs drive managements' incentives to have their financial statements assured. Our findings in this study are consistent with our predictions based on the theories and prior studies. We provide some insights in the area of CSR reports and CSR assurance.

Using a sample of 5040 large U.S. companies, we regress the financial performance on CSR performance and other variables of interest. On average, we find that CSR performance is positively associated with the firms' financial performance even after controlling for other confounding factors such as ROA, SIZE, LEV, BM, and GROWTH. We also find that there is a significant role of assurance service for CSR information in the relationship between CSR performance and firms' financial performance. The findings indicate that the coefficients on the interaction term of CSR*AUDIT are five times larger than those on CSR alone, on average. This means that firms having their CSR reports assured by external experts experience much higher financial performance than firms without such assurance service. The results are statistically significant and support the argument of our research question. Our results are consistent with the prior studies viewing CSR performance as value-enhancing activities [28] and the study investigating other effects on the CSR engagement and financial performance [29,30].

To the best of our knowledge, this is the first empirical study examining the effect of CSR assurance on the relationship between CSR performance and firms' financial performance using a large sample. The unique dataset of CSR assurance allows us to investigate our interesting research questions. The study contributes to the literature in two folds. First, our results are consistent with the recommendations by the stakeholder theory that addresses CSR performance is the means of maximizing the shareholder value. Second, our results indicate that there is an important role of assurance services of CSR information in valuing such performance. Therefore, the firms having their CSR performance assured by external experts experience higher financial performance than other firms without such assurance for their CSR performance.

Although this study has valuable contributions to the literature, we realize that our study has limitations and there are calls for future research. First, our sample of large U.S. firms may limit the generalization of the findings to the whole population [31]. Nevertheless, we believe that our sample selection is rational, and we also confirm that firms represent the majority of US companies. The future studies may extend the sample from the U.S. to other countries for the generalization of findings. Second, the percentage of assurance service is relatively low due to the nature of voluntary CSR assurance. Even though the results support our argument in this study, there might be other factors affecting the results. Third, although our results provide empirical evidence in regard to the assurance services, the qualitative characteristics of having assurance services are still unidentified in the literature. Thus, future studies may explore how and why firms have their CSR reports assured and the consequences of having assurance services.

Author Contributions: This study is a joint work of the three authors. J.K. (first author) contributed to the ideas of CSR performance, collection of CSR data, and empirical analysis. K.C. (co-author) contributed to the data analysis, design of research methods, and tables. C.K.P. (corresponding author) participated in developing a research design, writing, and interpreting the analysis. All three authors contributed to the literature review and conclusions.

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Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A

The definition of Category Scores from Thomson Reuters (Source: Thomson Reuters)	
Scores	Definition
TR ESG Resource Use Score	The Resource Use Score reflects a company's performance and capacity to reduce the use of materials, energy or water, and to find more eco-efficient solutions by improving supply chain management.
TR ESG Emissions Score	The Emission Reduction Score measures a company's commitment and effectiveness towards reducing environmental emissions in the production and operational processes.
TR ESG Innovation Score	The Innovation Score reflects a company's capacity to reduce environmental costs and burdens for its customers, thereby creating new market opportunities through new environmental technologies and processes or eco-designed products.
TR ESG Workforce Score	The Workforce Score measures a company's effectiveness towards job satisfaction, a healthy and safe workplace, maintaining diversity and equal opportunities, and development opportunities for its workforce.
TR ESG Human Rights Score	The Human Rights Score measures a company's effectiveness towards respecting the fundamental human rights conventions.
TR ESG Community Score	The Community Score measures the company's commitment towards being a good citizen, protecting public health and respecting business ethics.
TR ESG Product Responsibility Score	The Product Responsibility Score reflects a company's capacity to produce quality goods and services integrating the customer's health and safety, integrity and data privacy.
TR ESG Management Score	The Management Score measures a company's commitment and effectiveness towards following best practice corporate governance principles.
TR ESG Shareholders Score	The Shareholders Score measures a company's effectiveness towards equal treatment of shareholders and the use of antitakeover devices.
TR ESG CSR Strategy Score	The CSR Strategy Score reflects a company's practices to communicate that it integrates the economic (financial), social and environmental dimensions into its day-to-day decision-making processes.

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