How do Normative and Compliant CSR Affect the Earnings Quality of Japanese Firms?

Abstract

This study investigates the empirical relation between the corporate social performance (CSP) and earnings quality of public firms in Japan. To investigate this query, we adopt several measures including accruals-based earnings management (AEM) measures and real activities-based earnings management (REM) measures. In general, the comprehensive measurement of the CSP of Japanese firms is positively associated with earnings quality, suggesting that corporate social responsibility (CSR) activities may improve the earnings quality of Japanese firms. However, a more detailed investigation using CSP dimensional indices reveals a number of in-depth findings. First, before controlling for financial performance, normative CSR is more strongly associated with the AEM measures, whereas compliant CSR is more strongly associated with the REM measures. Second, after controlling for financial performance in the regression analysis, the regression slopes of the compliant CSR dimensions are no longer statistically significant, implying the existence of a spurious correlation between compliant CSR and earnings quality. Finally, the slopes of the normative CSR dimensions remain significant even after controlling for financial performance. Overall, these results indicate that the managers of firms that show high normative CSR values tend to avoid adopting AEM and REM measures and that those firms that are conscious of CSR are more likely to gain investor confidence.

1. Introduction

While earnings quality is a financial measure used to report a firm's financial performance to investors and other outside stakeholders, corporate social responsibility (CSR) is a business approach that aims to deliver a range of economic, social, and environmental benefits to all stakeholders. However, according to the current body of research, the relation between earnings quality and the attainment of CSR by firms is unclear. Given these mixed views, in this study we empirically investigate the relation between the earnings quality and corporate social performance (CSP) of Japanese listed firms.

Earnings quality is considered to be useful for both investors and firm making long-term strategic decisions (Schipper and Vincent, 2003; Francis et al., 2006). For example, earnings quality rises when there is less fluctuation in earnings series (Trueman and Titman, 1988). Earnings management, which may be detrimental to the attainment of earnings quality, is usually conducted by the extensive use of accounting accruals (Healy and Wahlen, 1999). The magnitude of accruals, particularly abnormal accruals, can serve to highlight a lack of earnings quality.[1] Earnings management has also been labeled real activities-based earnings management (REM) by Roychowdhury (2006), Cohen et al. (2008), and Cohen and Zarowin (2010).[2] However, REM behavior may amplify earnings variability (Ronen and Yarri, 2008). Indeed, Jensen et al. (2004) emphasized that firms ought to seek long-run goals instead of satisfying short-term objectives (e.g., quarterly profits) in order to satisfy analysts' expectations. Firms that pursue long-term goals tend to pay attention to CSR and sustainability, with the aim of building corporate reputation in the long run.

In this study, we use the five CSP dimensions developed by Suto and Takehara (2016): (1) employee relations, (2) environmental preservation, (3) social contributions, (4) firm security and product safety, and (5) internal governance and risk management. Suto and Takehara (2016) constructed these CSP indices on the basis of a stakeholder management approach, with each CSP dimension corresponding to an important group of stakeholders. However, by imposing similar criteria to those proposed by Harjoto and Jo (2015), we reclassify these five CSP dimensions into two groupings, namely normative CSR and compliant CSR. We find that normative CSR improves the earnings quality of Japanese firms after controlling for financial performance, whereas compliant CSR is not significantly associated with earnings quality. Our finding is crucial because the firm can signal earnings quality to investors only through the normative CSR channel.

[1] In Japanese firms, the existence of these so-called accruals effects has been confirmed by Chung et al. (2004) and Kubota et al. (2010), which reverse within several months of the end of the fiscal year.

[2] The effects of real earnings management have been explored by Mande et al. (2000), Hermann et al. (2003), Pan (2009), and Guo et al. (2012) in different contexts from that in the presented study.

The remainder of the paper is organized as follows. We review related studies in Section 2 and develop the research hypotheses in Section 3. In Section 4, we explain the CSP dimensional indices, several earnings quality measures, and the other financial variables used in this study. The two-stage portfolio formation approach and regression models employed are also described. In Section 5, we present the results of the correlation analyses and of the portfolio formation approach. In Section 6, we report the results of the regression analyses. Finally, we conclude in Section 7.

2. Earnings Quality and CSR

Suto and Takehara (2016) constructed CSP dimensional indices from the results of a survey conducted by Toyo Keizai Inc. By using these indices, they examined the relation between CSP and financial performance and found that CSR activities reduce firms' financial risk. These authors also developed a statistical model to estimate the CSP of firms that did not respond to the survey. Ajward and Takehara (2014) showed that higher CSP alleviates financial constraints in firms, while Aoi et al. (2015) compared the performance of Japanese public family and non-family firms based on these CSP indices and concluded that the performance of family firms is worse than that of non-family firms in Japan.

On the relation between CSP and earnings quality, Kim et al. (2012) found that socially responsible firms are less likely to manage earnings through discretionary accruals, to manipulate real operating activities, and to be the subject of SEC investigations. Yip et al. (2011) showed that earnings management and CSR reporting are related, findings that this relation is complementary for the oil and gas industry, while it is substitutive in the food industry. McDermott (2011) analyzed the relationship between KLD score and financial reporting quality as well as investment behavior, emphasizing the role of private benefits for firm managers. Outside the United States, Scholtens and Kang (2012) reported that Asian firms with relatively high CSR engage in less earnings management.[3]

In this study, we reclassify the five dimensions of CSR in Suto and Takehara (2016) into normative CSR and compliant CSR. Harjoto and Jo (2015) defined compliant CSR as CSR actions required (or desired) by law, whereas normative CSR actions are voluntary (or discretionary), with firms only taking such actions to provide the means for human subsistence or enhance quality of life (Ulrich, 2008). Further, Harjoto and Jo (2015) showed the different impacts of compliant CSR and normative CSR on analysts' forecast dispersion, stock return volatility, and the cost of capital. Hence, these two distinct types of CSR actions are expected to affect earnings quality differently. Figure 1 illustrates the scope of our research, showing

[3] Their sample is limited to only 16 firms in Japan.

that in addition to examining the overall relation between CSP and earnings quality (H1), we investigate the differential impacts of normative and compliant CSR actions on accruals-based earnings management (AEM) measures and REM measures (H2 and H3).

[Figure 1 around here]

3. Hypothesis Development

Those firms/managers more conscious about social responsibility tend to be more honest to all types of stakeholders and avoid unethical conduct. As a result, they sustain the credibility of stakeholders by continuing CSR actions. In this case, a comprehensive CSP score, which is an imperfect signal of the degree of social consciousness of managers, is positively correlated with earnings quality measures. In other words, those firms that endeavor to maintain integrity do not manage their earnings in order to deceive their stakeholders. Thus, H1 is proposed as follows:

H1: *A composite measure of CSP is positively associated with earnings quality.*

Next, we consider the interrelations among normative CSR, compliant CSR, AEM, and REM. Typically, stakeholders find normative CSR to be vaguer than compliant CSR. Because stakeholders are less informed about normative CSR actions, the degree of information asymmetry is larger in normative CSR dimensions. By contrast, stakeholders find it relatively easy to access the private information owned by managers because the evaluation items in compliant CSR actions are binding (or nonbinding) targets required by law. Therefore, the managers of firms with high normative CSR scores are honest and ethical (i.e., they do not manage earnings), although their social consciousness is unknown to stakeholders. H2 is thus proposed as follows:

H2: *The accounting earnings of firms with higher normative CSR are less managed by both AEM and REM strategies.*

However, the relation between compliant CSR and earnings quality is more complicated. Since both binding and nonbinding actions are included in compliant CSR activities, there exists a large dispersion of compliant CSR among firms. For example, many Japanese firms have ISO9001 certification, while others do not. Although ISO standards including ISO9000s are voluntary, the implementation of ISO standards

shifts costs to firms. For this reason, firms with inferior financial performance might be unable to afford to implement ISO9001. Hence, although we can observe a positive correlation between compliant CSR actions and earnings quality measures, compliant CSR may not always enhance earnings quality. Therefore, in the empirical analyses, we control for the financial performance of firms, using return on assets (ROA), to investigate this relation. H3 is proposed as follows:

H3: *After controlling for the financial performance of firms, compliant CSR is not associated with earnings quality.*

4. Data and Methodology

4.1. Earnings Quality Measures

Our primary observation period is for the nine fiscal years from 2007 to 2015 for which the CSP dimensional indices constructed by Suto and Takehara (2016) are available. However, to be able to compute the necessary statistics from accounting data, we go back an additional five years. Financial statement and stock price data were extracted from the Nikkei NEEDS Database published by Nikkei Digital Media, Inc.

In this study, we define total accruals (*ACC*) as the difference between earnings before extraordinary items (*EBEI*) and cash-flow from operations (*CFO*). First, we compute *EBEI* from the corresponding items on the income statement and obtain *CFO* directly from the cash-flow statement. Because *EBEI* is equal to (*CFO* + *ACC*) by definition, accruals in this study are computed as *EBEI* – *CFO*.

We decompose total accruals into normal and abnormal components by using the modified Jones model (1) proposed by Dechow et al. (1995). We then estimate the following cross-sectional regression equation separately by each industry for each sample year:

$$\frac{ACC_{j,t}}{TA_{j,t-1}} = \alpha_0 + \alpha_1 \frac{1}{TA_{j,t-1}} + \beta_1 \frac{\Delta ADJREV_{j,t}}{TA_{j,t-1}} + \beta_2 \frac{PPE_{j,t}}{TA_{j,t-1}} + \nu_{j,t}. \quad (1)$$

where $\Delta ADJREV$ is the difference between changes in sales and accounts receivables, *PPE* is property, plant, and equipment measured at net book value, and $v_{j,t}$ is a residual term.

The fitted values from the OLS estimation are used to construct the normal accruals (*NAC*) components, and their residual terms are used as abnormal accruals (*ABNAC*). These abnormal accruals components represent firm-specific accrual components in excess of industry averages.

In addition to the absolute value of abnormal accruals (|*ABNAC*|), we use two another measures of accounting figures-based earnings quality measures: variability and smoothness. The variability of

earnings (*EBEISD*) in this study is defined as the standard deviation of earnings before extraordinary items (*EBEI*) over the past five years. The "smoothness" measure is a ratio of the standard deviation of *EBEI* to the standard deviation of *CFO*.

As for our REM measures, we follow the method employed by Roychowdhury (2006); moreover, the data construction method is almost identical. First, by conducting cross-sectional regressions for every industry and year, we compute abnormal cash-flows from operations (*ABNCFO*), which are defined as a residual term from the following regression model:

$$\frac{CFO_{j,t}}{TA_{j,t-1}} = \alpha_0 + \alpha_1 \frac{1}{TA_{j,t-1}} + \beta_1 \frac{SLS_{j,t}}{TA_{j,t-1}} + \beta_2 \frac{\Delta SLS_{j,t}}{TA_{j,t-1}} + \varepsilon_{j,t}. \quad (2)$$

We also compute two additional REM measures, namely abnormal production (*ABNPROD*) and abnormal R&D expenditures (*ABNEXP*), by employing regression models (3) and (4) proposed by Roychowdhury (2006).[4] Roychowdhury (2006) hypothesized that *ABNPROD* is higher and *ABNEXP* is lower for a firm sample with unusually low profit.

$$\frac{PROD_{j,t}}{TA_{j,t-1}} = \alpha_0 + \alpha_1 \cdot \frac{1}{TA_{j,t-1}} + \beta_1 \frac{SLS_t}{TA_{j,t-1}} + \beta_2 \frac{\Delta SLS_{j,t}}{TA_{j,t-1}} + \beta_3 \frac{\Delta SLS_{t-1}}{TA_{j,t-1}} + \varepsilon_{j,t}. \quad (3)$$

$$\frac{DISEXP_{j,t}}{TA_{j,t-1}} = \alpha_0 + \alpha_1 \cdot \frac{1}{TA_{j,t-1}} + \beta_1 \frac{SLS_{t-1}}{TA_{j,t-1}} + \varepsilon_{j,t}. \quad (4)$$

4.2 CSP Dimensional Indices

A stakeholder-focused approach to corporate governance emphasizes that CSR activities can be linked to different stakeholders (e.g., employees, the environment, communities, customers, suppliers) and that firms are required to choose the appropriate architecture of internal governance and adopt strategies under the existing regulatory framework. Given these stakeholder relationships, Suto and Takehara (2016) defined the following five CSP dimensions: 1) employee relations, 2) environmental preservation, 3) social contributions, 4) firm security and product safety, and 5) internal governance and risk management.[5]

The first dimension, employee relations (*EMP*), which includes workplace conditions, can enhance employee quality and motivation (Turban and Greening, 1997). Appropriate working hours and wages, minority employment, job stability, safe working conditions, and skills development are all related to the

[4] By using equations (2) and (3) of Roychowdhury (2006), we computed two additional REM measures: abnormal cost of goods sold and abnormal inventory growth. However, the Pearson correlation between abnormal production (*ABNPROD*) and abnormal cost of goods sold in our pooled sample was high at 0.916. Thus, we decided not to use these two measures and focus instead on *ABNPROD*.

[5] These CSP dimensional indices have been used in several empirical studies of Japanese data (e.g., Ajward and Takehara, 2014; Aoi et al., 2015).

employee relations variable. The second dimension, environmental preservation (*ENV*), is a pillar of CSP in a society that is increasingly concerned with climate change. The third dimension, social contributions (*SC*), is related to a firm's policy for and response to social demands. Good relationships and coordination with the surrounding community can reduce the costs associated with local conflicts, attract human resources, and enhance corporate reputation. On the contrary, negative relationships with the surrounding community can narrow business perspectives and increase the costs and risks associated with business operations. These three dimensions, namely employee relations (*EMP*), environmental preservation (*ENV*), and social contributions (*SC*), are classified as normative CSR. Hence, they serve as a signal to stakeholders about the social consciousness of firms/managers.

The fourth dimension, firm security and product safety (*SS*), is related to the quality of a firm's products and the sustainability of its business. Therefore, it provides competitive advantage in the long-term by affecting a firm's relationships with its customers. The fifth dimension, internal governance and risk management (*IG*), is related to the quality of disclosure, compliance, internal auditing, and self-disciplining that a firm demonstrates. These last two dimensions are classified as compliant CSR. Finally, Suto and Takehara (2016) also defined a composite CSP (*CSP*) measure as a comprehensive index of the above five dimensions (*EMP*, *ENV*, *SC*, *SS*, *IG*). We use this comprehensive measure of CSP to test H1.

4.3. Portfolio Formation Method and Regression Model

Suto and Takehara (2016) pointed out the statistically significant relation between social performance and financial performance in Japan. Hence, we expect that firms with lower profitability and/or firms that face tighter financially constraints have an incentive to increase their cash-flows. Thus, they manage their earnings by using REM strategies. To avoid misleading interpretations from the results of the univariate correlation analysis, we adopt the two-stage sequential portfolio formation method in this study.

To control for the correlation between financial performance, measured by ROA, and earnings quality, we first rank sample firms based on their ROA and construct ROA-ranked quintile portfolios at the end of September for each year of the study period. Second, each of these five ROA-ranked quintile portfolios are subdivided into five groups based on their dimensional CSP scores. As a result, we obtain 25(=5×5) ROA- and CSP-ranked portfolios. Since the five CSP-ranked quintile portfolios in the same ROA quintile are almost at the same ROA level, we are able to investigate the CSP–earnings quality relation after eliminating the effects of ROA on earnings quality.

In addition to the two-stage portfolio formation, we also conduct multivariate cross-sectional regression analysis, using the following control and instrumental variables:

- Natural logarithm of total assets (in million of Japanese yen) (ln*TA*);
- *ROA*, which we must control for when testing H3;
- Leverage ratios, computed as non-current liabilities over total assets (*LEV*);
- Sales growth rates of the past five years (*SLSG*) (Lakonishok et al., 1994)
- Firm age, defined as number of years from foundation date (*AGE*);
- Dummy variable that equals 1 if the firm is not listed on the Tokyo Stock Exchange First Section *(NOTSE*1); and
- Lagged one-year value of composite CSP (*CSPB*).

Note that ln*TA*, *LEV*, and *SLSG* are measures of financial constraints, financial stability, and future growth, respectively, whereas *NOTSE*1, *AGE*, and *CSPB* are used as instrumental variables in the two-stage regression analysis. The two-stage least squares regression model is given as follows:

$$\begin{aligned} EQ_{j,t} = \; & \alpha + \beta_1 CSP_{j,t} + \beta_2 ROA_{j,t} + \beta_3 LEV_{j,t} + \beta_4 SLSG_{j,t} \\ & + \sum_{i=1}^{4} \delta_i SizeDummy_{i,j,t} + \sum_{i=1}^{8} \eta_i YearDummy_{i+2006,j,t} + \varepsilon_{j,t}. \end{aligned} \tag{5}$$

In model (5), the dependent variable $EQ_{j,t}$ is one of six earnings quality measures, while $CSP_{j,t}$ is the composite CSP measure or one of the CSP dimensional indices.[6]

4.4. Sample and Descriptive Statistics

Table 1 reports the number of sample firms for which the CSP dimensional indices and accounting figures between 2007 and 2015 were available. We report the number of observations at the aggregated sector level, where the sector classification schemes are based on Kubota and Takehara (2007).

The first to ninth rows report the number of sample firms in each sector for each year. On average, we have more than 500 firm observations every year, with the largest number in the investment goods and consumption goods and services industries. The 10th to 12th rows list the number of firms belonging to each section of the Tokyo Stock Exchange and the other stock exchanges in Japan. The final row denotes the total number of firms. The majority of our sample comes from the Tokyo Stock Exchange First Section. By adding the number of firms in 2007–2015 at the bottom of the table, we have 4,742 firm-year

[6] We conducted Hausman's test and Sargan's over-identification test before conducting the two-stage least squares regression. In addition, the standard errors were corrected by applying the one-way (Year) cluster-robust method.

observations and 784 firm samples.

[Table 1 around here]

Table 2 reports the descriptive statistics of the variables used in the subsequent analyses. The median and mean of the absolute value of abnormal accruals (|*ABNAC*|) are 1.979% and 2.776% with a standard deviation of 2.648%. Variability (*EBEISD*) has a median value of 1.493% and a mean value of 1.991%. Smoothness has a median value of 0.531 and a mean value of 0.648.

For the REM measures, the median and mean of abnormal cash-flows from operations (*ABNCFO*) are 0.168% and 0.130%, respectively. The median of abnormal production (*ABNPROD*) is positive at 0.771%, while the mean is -1.045%, suggesting a negative skew. Finally, in the case of abnormal R&D expenditures (*ABNEXP*), the median is -0.909% and the mean is 1.050%.

Next, the means of the CSR scores of *CSP*, *EMP*, *ENV*, *SC*, *SS*, and *IG* are 0.529, 0.326, 0.305, 0.212, 0.226, and 0.145, respectively. Note that in Suto and Takehara (2016) all the CSP dimensional indices are normalized so that they approximately obey a standard normal distribution, and thus we find that our sample belongs to the group of firms with somewhat above-average CSP scores.[7] Finally, for the control variables, the means are 11.720 (log in million Japanese yen) for firm size, 2.499% for ROA, 17.510% for leverage, and 1.174% for sales growth. The mean firm age is 66 years, suggesting that relatively long-living firms responded to the CSR questionnaire survey.

[Table 2 around here]

5. Results from the Portfolio Formation Method

5.1. Correlation Analysis Results

Before interpreting the results of the two-stage portfolio formation analysis, we check the simple correlation among the variables. Panel A of Table 3 presents the Spearman rank correlations among the measures of earnings quality, while Panel B shows the correlations between the measures of earnings quality and CSP indices. The lower numbers in each cell are the *p*-values. Panel A shows that the correlation between the absolute value of abnormal accruals and earnings variability (*EBEISD*) is 0.129 ($p<0.01$), while that between the variability and smoothness measures is 0.694 ($p<0.01$). This finding

[7] Because we need to compute the time series of accounting measures by using five years of data before our testing period, new firms are not included in our sample, which may create some bias.

suggests that Japanese firms tend to smooth their earnings by using accounting accruals. Of the REM measures, *ABNCFO* is negatively (positively) correlated with *ABNPROD* (*ABNEXP*), while the Spearman correlation between *ABNPROD* and *ABNEXP* is very low at -0.849.

Next, we detect the relationships between the REM and AEM measures. The third column from the right shows that *ABNCFO* is positively correlated with |*ABNAC*| with an estimated correlation of 0.007 as well as with *EBEISD* with an estimated correlation of 0.069, which seems to be reasonable. *ABNPROD* is negatively correlated with *EBEISD* and smoothness, and *ABNEXP* is positively related with *EBEISD* and smoothness. These results indicate that these two types of earnings quality measures, AEM and REM, affect the attainment of CSR in different ways.

Panel B reports the correlations of these earnings quality measures with the other variables. |*ABNAC*| is negatively correlated with *CSP* with a coefficient of -0.046 and the variability measure (*EBEISD*) is negatively correlated with *CSP* with a coefficient of -0.049, which implies that both lower abnormal accruals and lower variability enhance composite CSP, suggesting that earnings quality is positively related to CSP.

We also find that the correlations of |*ABNAC*| with employee relations (*EMP*) and with environmental preservation (*ENV*) are significant (-0.071 and -0.063, respectively), which suggests that firms with lower abnormal accruals pay more attention to these CSP dimensions. As for earnings variability, its correlation with *ENV* is negative and significant at -0.093. In other words, the more firms are concerned about protecting the environment, the lower are their earnings variations.

For the REM measures, we find that *ABNCFO* and *ABNEXP* are positively related to *CSP* and that *ABNPROD* is negatively correlated to *CSP* (p<0.01). These results show that real cash-flow effects influence the level of CSP (Kanodia, 2006). Specifically, lower abnormal expenditures and higher abnormal cash-flows can enhance CSP, as can lower abnormal production costs.

For each CSP dimension, all REM measures are significantly related to *SS* (firm security and product safety) and *IG* (internal governance and risk management) as shown in the fifth and sixth columns from the left. Compliant CSR and *ROA* are more strongly associated with the REM measures. The Spearman correlation between *ROA* and *ABNCFO* is high at 0.359 and that between *ROA* and *ABNPROD* is -0.261. Although the correlation analysis reported in Table 3 is just a preliminary one, the findings demonstrate the need for an alternative analysis that controls for *ROA*.

[Table 3 around here]

5.2. Results from the Two-Stage Portfolio Formation

Table 4 shows the results obtained by employing the two-stage portfolio formation method. In the first stage, we constructed ROA-ranked quintile portfolios, each of which was subdivided into five CSP-ranked groups in the second stage. Table 4 shows the averages of the ROA, CSP, and earnings quality measures of the highest and lowest CSP portfolios. We also conducted Student *t*-tests under the null hypothesis of no difference between the highest and lowest CSP portfolios. Panels A to F of Table 4 highlight the U-shaped pattern between the ROA and AEM measures, while the REM measures are a monotonically decreasing function of ROA. We interpret this finding is evidence that firms use AEM strategies to smooth earnings, whereas they use REM strategies to increase earnings.

Panel A shows the relations among the ROA, composite CSP, and earnings quality measures. In most cases, the AEM measures of the lowest CSP portfolios are higher than those of the highest CSP portfolios. For the REM measures, *ABNCFO* and *ABNEXP* (*ABNPROD*) are higher in the higher (lower) CSP portfolios. Overall, the results in Panel A support H1, confirming that comprehensive CSP is positively associated with earnings quality.

Panels B to D show the relation between normative CSR and earnings quality. For *EMP* (employee relations, Panel B) and *ENV* (environmental preservation, Panel C), the differences in the AEM measures between the high *EMP* (or *ENV*) portfolios and low *EMP* (or *ENV*) portfolios are statistically significant in many cases. By contrast, the differences in the REM measures are significant only in ROA3 to ROA5. This finding suggests that when ROA is sufficiently high as in the ROA1 and ROA2 portfolios, firms have insufficient incentives to increase their cash-flows. As a result, *EMP* and *ENV* are not associated with REM in these high ROA portfolios. This finding lends support to H2, namely that the earnings of firms with superior normative CSR are less managed.

However, the tendency we find in *EMP* and *ENV* is not observed in *SC* (social contributions). The correlations between *SC* and the AEM measures are unclear, while those between *SC* and the REM measures are very strong. These trends between *SC* and the earnings quality measures are thus similar to those between compliant CSR and earnings quality. In Panel E for *SS* (firm security and product safety) and Panel F for *IG* (internal governance and risk management), the differences in the REM measures between high *SS*/*IG* and low *SS*/*IG* portfolios are statistically significant in most cases. This finding implies that although firms are not coerced to invest in philanthropic activities, many large Japanese companies may feel pressured to do so. Furthermore, investors understand firms' social contributions and expenditure because they are simple metrics. In that sense, social contributions are close to compliant CSR in Japan. Hence, we find a strong association between compliant CSR and REM measures, thereby

rejecting H3. However, in the two-stage portfolio formation method, we only controlled for the ROA of the firms, which means that we should not form a conclusion on H3 at this stage.

[Table 4 around here]

6. Regression Analysis Results

CSP, as the independent variable in the regression equations, may be correlated with the error terms because of the presence of endogeneity (Wooldridge, 2010). If this were the case, the management decisions revealed in their earnings management behavior may actually determine the level of the CSR of their firms instead.[8] Because we do not know *a priori* whether firms with higher earnings quality are more socially conscious, firms with higher CSP may pay attention to earnings quality or firms with stronger internal control, higher reliability of accounting numbers, and higher accountability may attain a higher level of CSP emanating from their management decisions. To address these concerns, we employ a two-stage least squares regression, with the following three instrumental variables introduced into the first-stage regression: one-year lagged CSP, firm age, and *NOTSE*1. Table 5 reports the results from the cross-sectional regressions for several measures of earnings quality regressed on the alternative CSP measures and the control variables.

In the composite CSP result shown in Panel A, we find that the estimated regression coefficient for |*ABNAC*| is -0.044 (n.s.), suggesting that the higher the level of composite CSP, the lower is |*ABNAC*|. The coefficient for *EBEISD* is -0.052 (p<0.05). As for the REM measures, *ABNPROD* has negative and significant coefficients (p<0.01), whereas *ABNCFO* and *ABNEXP* have positive and significant coefficients (p<0.1 and p<0.01, respectively). These results reconfirm the previous results for the various earnings quality measures, thereby supporting H1.

Panel B shows the results for employee relations (*EMP*). The coefficient for |*ABNAC*| has an estimate of -0.160 (p<0.01). Further, the slopes for *EBEISD, ABNPROD*, and *ABNEXP* are -0.143, -0.842, and 0.878, respectively (p<0.01).

For environmental preservation (*ENV*) in Panel C, the coefficients for |*ABNAC*| and *EBEISD* have slopes of -0.245 (p<0.05) and -0.128 (p<0.01), respectively, implying that the lower the *ENV* score, the lower is earnings quality. On the contrary, the REM measures offer weaker explanatory power for this CSP dimension, perhaps because they are more related to firms' disclosure decisions to outside stakeholders

[8] Francis et al. (2006) discussed two causality channels, namely governance to earnings quality and earnings quality to governance.

including current stockholders. Overall, these findings support H2, namely that the earnings of firms with superior normative CSR are less managed by pursuing AEM and REM strategies.

For the compliant CSR dimensions (*SC*, *SS*, *IG*), none of the coefficients reported in Panels D to F is statistically significant. Indeed, although we find a significant relation between compliant CSR and the AEM measures in Table 4, when we control for the firm size effects (ln*MV*), financial credibility (*LEV*), future growth (*SLSG*), and year effects in addition to financial performance (*ROA*), we cannot find any clear relation between compliant CSR and earnings quality. In sum, these observations support H3.

[Table 5 around here]

7. Conclusion

In this study, we investigated the empirical relation between CSP and the earnings quality of public firms in Japan, using data for the nine fiscal years from 2007 to 2015. Overall, we found that CSP is negatively associated with both the AEM and the REM measures, suggesting that CSR activities may improve the earnings quality of Japanese firms. However, a more detailed investigation using five CSP dimensional indices reveals the different effects of normative and compliant CSR on earnings quality. Before controlling for financial performance, we showed that normative CSR is more strongly associated with the AEM measures, whereas compliant CSR is more strongly associated with the REM measures. However, after controlling for financial performance in the pooled regression analysis, the regression slopes for the compliant CSR dimensions are no longer statistically significant. This finding suggests that a large part of the positive association between compliant CSR and earnings quality can be explained by financial performance. By contrast, the slopes of the normative CSR scores remain statistically significant even after controlling for financial performance. Overall, the presented results indicate that the managers of firms that have normative CSR values tend to avoid adopting AEM and REM measures and that those firms that are conscious about social responsibility are more likely to gain investor confidence through their CSR actions. Thus, the normative CSR scores analyzed in this study provide supplementary signals to investors when they are evaluating the earnings quality of Japanese firms.

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Figure 1. Relation between CSP and Earnings Quality

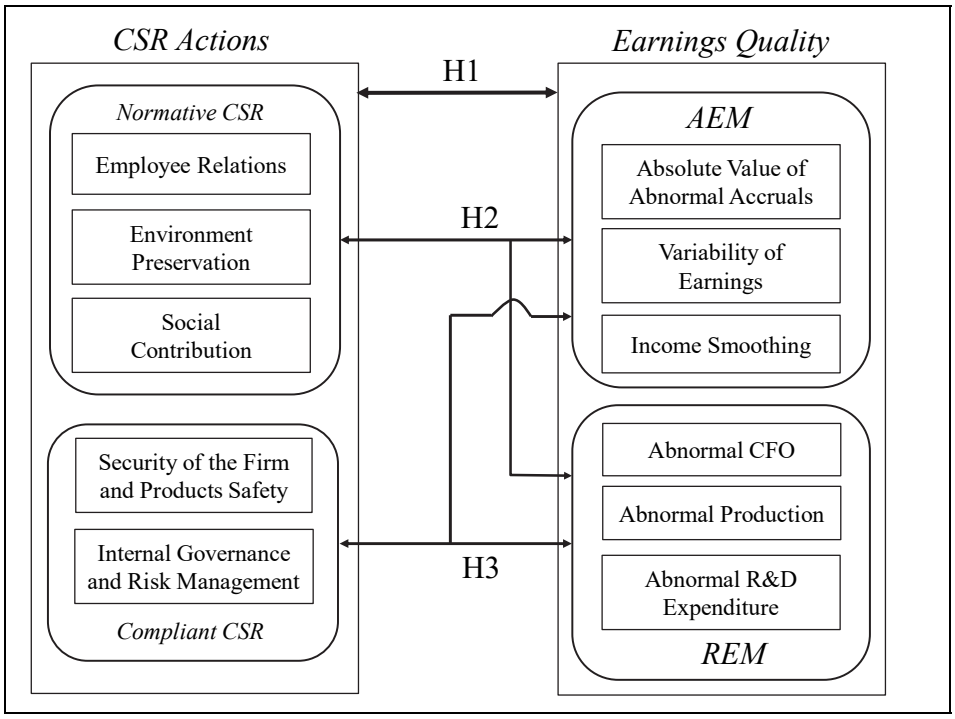

Table 1. Number of Sample Firms

Number of sample firms at the end of September of each year (2007–2015) and number of firms listed on the Tokyo Stock Exchange's First Section (TSE1), Second Section (TSE2), and all other stock exchanges in Japan (Others) are reported. Number of firms in the most upper right four columns is with non-duplicated counting, and a single firm appears a maximum of four times in our sample period. The total firm-years are 4,742.

	Consump-tion Goods	Investment Goods	Services	Transpor-tation	Utility	Real Estate	All Sectors
2007	117	192	79	17	10	10	425
2008	121	208	89	16	11	15	460
2009	122	218	90	15	11	12	468
2010	128	223	96	16	13	14	490
2011	130	226	117	19	11	15	518
2012	135	235	123	20	11	15	539
2013	149	254	135	22	11	16	587
2014	154	279	136	23	11	16	619
2015	153	290	142	24	10	17	636
TSE1	167	291	140	26	13	20	657
TSE2	31	49	31	2	0	0	113
Others	7	21	27	2	0	1	58
Total	199	348	174	29	13	21	784

Table 2. Descriptive Statistics

[Earnings Quality Measures]
|*ABNAC*|: Absolute value of abnormal accruals, *EBEISD* (earnings variability): Standard deviation of earnings before extraordinary items, Smoothness: *EBEISD*/[standard deviation of cash-flows from operations] (in %), *ABNCFO*: Abnormal cash-flows (in %), *ABNPROD*: Abnormal production costs (in %), and *ABNEXP*: Abnormal expenditure (in %).
[CSP Measures]
CSP: Comprehensive measure of CSP, *EMP*: Employee relations, *ENV*: Environmental preservation, *SC*: Social contributions, SS: Firm security and product safety, *IG*: Internal governance and risk management
[Control/Instrumental Variables]
lnTA: Natural logarithm of total assets (in million Japanese yen), *ROA*: Return on assets, *LEV*: Non-current liabilities to total assets, *SLSG*: Growth rate of sales revenue (in %), *Age*: Number of years from foundation.

	1st Qu.	Median	Mean	3rd Qu.	S.D.
|ABNAC|	0.935	1.979	2.776	3.750	2.648
EBEISD	0.880	1.493	1.991	2.572	1.629
Smoothness	0.319	0.531	0.648	0.836	0.479
ABNCFO	-2.471	0.168	0.130	2.539	4.578
ABNPROD	-5.156	0.711	-1.045	5.751	11.935
ABNEXP	-4.641	-0.909	1.050	3.934	10.706
CSP	-0.576	0.751	0.529	1.829	1.592
EMP	-0.455	0.517	0.326	1.273	1.250
ENV	-0.342	0.342	0.305	0.954	0.863
SC	-0.496	0.292	0.212	0.962	1.053
SS	-0.223	0.638	0.226	1.050	1.234
IG	-0.337	0.254	0.145	1.037	1.313
lnTA	10.670	11.600	11.720	12.730	1.469
ROA	0.884	2.206	2.499	4.309	4.228
LEV	6.702	14.480	17.510	25.080	13.767
SLSG	-5.165	1.498	1.174	7.415	15.593
AGE	56.490	65.250	66.740	78.100	21.400

Table 3. Spearman Correlation Matrix

The definitions of the variables are the same as in Table 2.

Panel A. Correlation among Earnings Quality Measures

	|ABNAC|	EBEISD	Smoothness	ABNCFO	ABNPROD	ABNEXP
|ABNAC|	1.000	0.129	-0.106	0.007	-0.015	0.018
p -value		0.000	0.000	0.644	0.312	0.219
EBEISD		1.000	0.694	0.069	-0.087	0.075
p -value			0.000	0.000	0.000	0.000
Smoothness			1.000	0.046	-0.070	0.084
p -value				0.002	0.000	0.000
ABNCFO				1.000	-0.308	0.089
p -value					0.000	0.000
ABNPROD					1.000	-0.849
p -value						0.000

Panel B. Correlation between Earnings Management Measures and CSP/Control Variables

	CSP	EMP	ENV	SC	SS	IG	lnTA	ROA	LEV	AGE	SLSG
|ABNAC|	-0.046	-0.071	-0.063	-0.054	-0.026	-0.003	-0.121	-0.006	-0.108	-0.133	-0.050
(*p* -value)	0.001	0.000	0.000	0.000	0.072	0.839	0.000	0.695	0.000	0.000	0.001
EBEISD	-0.049	-0.063	-0.093	-0.060	-0.003	-0.029	-0.136	0.084	-0.030	-0.115	0.017
(*p* -value)	0.001	0.000	0.000	0.000	0.848	0.046	0.000	0.000	0.042	0.000	0.252
Smoothness	0.052	0.056	0.028	0.032	0.039	-0.034	0.049	-0.001	0.118	0.071	0.003
(*p* -value)	0.000	0.000	0.052	0.028	0.008	0.018	0.001	0.963	0.000	0.000	0.855
ABNCFO	0.094	0.054	0.032	0.078	0.094	0.043	0.068	0.359	-0.124	-0.113	0.055
(*p* -value)	0.000	0.000	0.027	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000
ABNPROD	-0.123	-0.065	-0.040	-0.093	-0.135	-0.058	-0.032	-0.261	0.119	0.054	-0.012
(*p* -value)	0.000	0.000	0.006	0.000	0.000	0.000	0.027	0.000	0.000	0.000	0.412
ABNEXP	0.117	0.064	0.053	0.083	0.138	0.045	0.016	0.055	-0.022	-0.019	-0.027
(*p* -value)	0.000	0.000	0.000	0.000	0.000	0.002	0.280	0.000	0.122	0.183	0.065

Table 4. Differences in Earnings Quality between High and Low CSP Firms

ROA Quintile	ROA1 (Highest ROA)			ROA2			ROA3 (Midium ROA)			ROA4			ROA5 (Lowest ROA)		
A. Composite CSP	High	Low		High	Low		High	Low		High	Low		High	Low	
ROA	7.572	7.933		3.729	3.762		2.211	2.180		0.999	0.988		-2.313	-2.406	
CSP	2.491	-1.895	***	2.501	-1.711	***	2.434	-1.891	***	2.453	-1.851	***	2.539	-1.998	***
|ABNAC|	3.151	3.206		2.510	3.002	*	2.871	3.178		2.054	2.708	**	2.818	3.358	
EBEISD	2.366	2.930	*	1.903	1.938		1.652	1.908		1.488	1.707	*	2.223	2.653	
Smoothness	0.743	0.697		0.669	0.542	**	0.619	0.604		0.609	0.605		0.789	0.711	
ABNCFO	3.141	3.299		1.740	0.326	***	0.344	-0.619	*	-0.384	-1.587	**	-1.015	-1.814	
ABNPROD	-9.774	-8.469		-5.869	-0.007	***	-2.163	3.451	***	-0.403	3.035	***	-1.118	0.708	
ABNEXP	5.992	4.067	*	4.836	-0.697	***	2.521	-2.180	***	1.085	-1.487	**	2.947	1.801	
B. Employee Relations	High	Low		High	Low		High	Low		High	Low		High	Low	
ROA	7.431	7.979		3.760	3.705		2.153	2.202		1.002	1.005		-2.043	-2.797	
EMP	1.853	-1.641	***	1.873	-1.430	***	1.810	-1.594	***	1.816	-1.536	***	1.796	-1.650	***
|ABNAC|	2.616	3.170	*	2.368	2.910	***	2.253	3.195	***	1.992	2.886	***	2.829	3.445	
EBEISD	2.151	3.146	***	1.720	1.831		1.471	1.896	**	1.270	1.648	**	2.120	2.937	*
Smoothness	0.766	0.708		0.609	0.523	*	0.671	0.534	***	0.611	0.584		0.709	0.778	
ABNCFO	2.558	2.720		0.848	0.171		-0.097	-0.676		-0.782	-1.552		-1.853	-2.204	
ABNPROD	-8.841	-7.633		-2.707	-0.280		-1.345	2.893	**	1.022	2.886		0.790	1.402	
ABNEXP	5.780	3.860		2.302	-0.052		1.879	-1.654	**	-0.072	-1.104		1.554	1.419	
C. Environment	High	Low		High	Low		High	Low		High	Low		High	Low	
ROA	7.529	8.511	*	3.628	3.774		2.196	2.174		1.059	1.048		-2.392	-2.449	
ENV	1.310	-0.994	***	1.456	-0.849	***	1.483	-0.824	***	1.512	-0.896	***	1.582	-0.922	***
|ABNAC|	2.905	3.467	**	2.420	3.235	***	2.528	3.232	**	2.306	2.579		2.989	3.643	
EBEISD	2.360	3.089	**	1.857	1.898		1.554	1.919	*	1.326	1.717	**	2.127	2.655	
Smoothness	0.767	0.640	**	0.675	0.579	*	0.603	0.612		0.530	0.610		0.786	0.724	
ABNCFO	2.797	3.288		1.379	0.698		0.178	-0.799	*	-0.284	-1.289	**	-1.001	-2.191	**
ABNPROD	-9.074	-10.336		-5.271	-3.133		-2.035	2.536	***	0.041	2.161	**	-0.974	0.216	
ABNEXP	5.593	5.453		4.771	2.709		2.714	-1.141	***	0.918	-0.689	*	2.726	2.702	

Table 4. (Contd.)

ROA Quintile	ROA1 (Highest ROA)			ROA2			ROA3 (Midium ROA)			ROA4			ROA5 (Lowest ROA)		
D. Social Contributions	High	Low		High	Low		High	Low		High	Low		High	Low	
ROA	7.841	7.876		3.659	3.747		2.181	2.189		1.024	0.983		-2.084	-2.189	
CSP	1.602	-1.329	***	1.550	-1.275	***	1.535	-1.319	***	1.584	-1.292	***	1.645	-1.310	***
|ABNAC|	3.091	3.094		2.645	3.119		2.708	3.248	**	2.120	2.688	*	2.887	3.104	
EBEISD	2.253	2.788	**	1.737	1.782		1.537	1.841		1.507	1.681		2.142	2.362	
Smoothness	0.711	0.739		0.649	0.525	**	0.623	0.615		0.620	0.638		0.739	0.758	
ABNCFO	3.122	3.231		1.283	0.300	**	0.422	-0.860	***	-0.258	-1.087		-1.026	-2.136	**
ABNPROD	-9.574	-7.805		-3.550	0.476	***	-1.127	3.508	***	0.418	3.986	***	-0.310	1.368	*
ABNEXP	5.449	3.167	*	2.810	-0.974	***	1.691	-2.017	***	0.201	-2.325	***	2.177	1.362	
E. Security and Safety	High	Low		High	Low		High	Low		High	Low		High	Low	
ROA	7.495	8.336		3.686	3.670		2.183	2.200		1.071	1.030		-2.220	-2.175	
EMP	1.305	-1.761	***	1.282	-1.604	***	1.235	-1.863	***	1.248	-1.611	***	1.256	-1.699	***
|ABNAC|	3.006	3.202		2.797	2.789		2.937	3.083		2.386	2.775		2.832	2.889	
EBEISD	2.544	2.964	**	1.998	1.820		1.704	1.645		1.704	1.562		2.372	2.582	
Smoothness	0.701	0.692		0.627	0.520	**	0.599	0.551		0.596	0.593		0.768	0.742	
ABNCFO	3.539	3.393		1.507	0.203	***	-0.292	-0.982		-0.272	-1.583	***	-1.467	-2.054	
ABNPROD	-10.338	-7.840	**	-6.380	0.607	***	-0.908	4.125	***	0.233	3.578	***	1.352	2.023	
ABNEXP	5.785	3.583	*	5.710	-1.288	***	1.415	-2.780	***	1.194	-2.135	***	0.782	0.861	
F. Int. Gov. and Risk Mng.	High	Low		High	Low		High	Low		High	Low		High	Low	
ROA	7.348	7.762		3.697	3.666		2.202	2.170		0.958	1.015		-2.145	-2.435	
ENV	1.527	-1.710	***	1.464	-1.483	***	1.485	-1.876	***	1.498	-1.702	***	1.477	-1.827	***
|ABNAC|	3.046	3.159		3.074	2.602		3.062	2.881		2.392	2.332		2.962	3.066	
EBEISD	2.182	2.712	**	1.736	1.696		1.589	1.630		1.528	1.558		2.268	2.398	
Smoothness	0.586	0.734	**	0.622	0.544		0.559	0.549		0.547	0.619		0.739	0.755	
ABNCFO	3.177	3.069		1.033	0.505		0.442	-0.635	**	-0.456	-0.793		-1.664	-1.978	
ABNPROD	-10.097	-7.014	**	-2.574	-0.755		-0.266	3.255	***	0.570	2.503	**	0.395	0.509	
ABNEXP	5.341	3.868		1.576	0.140		0.823	-1.727	**	0.183	-1.539	*	1.578	1.760	

Table 5. Regressing Earnings Quality on CSP

The dependent variables are the various measures of accounting quality and the definitions of all the variables are the same as in Table 2. *, **, and *** correspond to significance levels of 10%, 5%, and 1%, respectively, where standard errors are corrected by using the two-way cluster error correction method.

Panel A.	|ABNAC|		EBEISD		Smoothness		ABNCFO		ABNPROD		ABNEXP	
Intercept	2.981	***	1.837	***	0.637	***	-0.282		1.573	*	-2.098	*
CSP	-0.044		-0.052	**	0.003		0.186	*	-1.183	***	1.260	***
ROA	-0.040	*	-0.001		-0.006		0.413	***	-0.773	***	0.226	***
LEV	-0.012	***	0.002		0.004	***	-0.014	**	-0.003		0.041	**
SLSG	-0.002		0.007		0.001		-0.008	**	0.067	***	-0.032	
Adjusted R^2	0.044		0.073		0.058		0.155		0.104		0.050	
Panel B.	|ABNAC|		EBEISD		Smoothness		ABNCFO		ABNPROD		ABNEXP	
Intercept	3.063	***	1.907	***	0.651	***	-0.006		-0.198		-0.191	
EMP	-0.160	***	-0.165	***	-0.007		0.135		-0.842	***	0.878	***
ROA	-0.039	*	0.000		-0.006		0.413	***	-0.768	***	0.220	**
LEV	-0.011	***	0.003		0.004	***	-0.015	**	0.006		0.031	*
SLSG	-0.003		0.007		0.001		-0.008	***	0.068	***	-0.034	
Adjusted R^2	0.045		0.081		0.056		0.152		0.092		0.037	
Panel C.	|ABNAC|		EBEISD		Smoothness		ABNCFO		ABNPROD		ABNEXP	
Intercept	3.179	***	1.873	***	0.640	***	-0.035		-0.456		-0.500	
ENV	-0.245	**	-0.128	***	0.003		0.151		-0.584		1.077	*
ROA	-0.043	*	-0.002		-0.006		0.415	***	-0.780	***	0.239	***
LEV	-0.013	***	0.002		0.004	***	-0.015	**	0.002		0.037	*
SLSG	-0.002		0.008		0.001		-0.009	***	0.073	***	-0.039	*
Adjusted R^2	0.047		0.073		0.058		0.150		0.086		0.031	

Table 5 (Continued.)

Panel D.	|ABNAC|	EBEISD	Smoothness	ABNCFO	ABNPROD	ABNEXP
Intercept	3.011 ***	1.732 ***	0.669 ***	0.047	0.290	-0.910
SC	-0.104	-0.013	-0.020	0.081	-1.134 *	1.345
ROA	-0.040 *	0.000	-0.006	0.413 ***	-0.774 ***	0.227
LEV	-0.012 ***	0.003	0.004 ***	-0.015 **	0.000	0.037
SLSG	-0.003	0.008	0.001	-0.009 **	0.068 ***	-0.033
Adjusted R^2	0.043	0.071	0.055	0.151	0.096	0.042
Panel E.	|ABNAC|	EBEISD	Smoothness	ABNCFO	ABNPROD	ABNEXP
Intercept	2.864 ***	1.788 ***	0.674 ***	-0.084	-0.332	-0.216
SS	0.013	-0.068 **	-0.029	0.220	-0.792	0.980
ROA	-0.040 *	0.000	-0.006	0.412 ***	-0.768 ***	0.220
LEV	-0.012 ***	0.002	0.004 ***	-0.014 **	0.000	0.038
SLSG	-0.002	0.007	0.000	-0.008 *	0.068 ***	-0.033
Adjusted R^2	0.044	0.072	0.053	0.156	0.096	0.042
Panel F.	|ABNAC|	EBEISD	Smoothness	ABNCFO	ABNPROD	ABNEXP
Intercept	2.907 ***	1.730 ***	0.668 ***	0.239 *	-1.165 *	0.757
IG	-0.037	-0.018	-0.031	-0.108	-0.014	0.089
ROA	-0.040 *	0.000	-0.006	0.413 ***	-0.771 ***	0.223
LEV	-0.012 ***	0.003	0.004 ***	-0.016 **	0.004	0.034
SLSG	-0.002	0.008	0.000	-0.010 ***	0.073 ***	-0.039
Adjusted R^2	0.043	0.071	0.053	0.148	0.085	0.028