



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

ZHAOYAN GU

*CUHK Business School,
CHINESE UNIVERSITY OF HONG KONG*

KEIICHI KUBOTA

*Graduate School of
Strategic Management,
CHUO UNIVERSITY*

HITOSHI TAKEHARA[†]

*Graduate School of
Business and Finance,
WASEDA UNIVERSITY*

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.

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[†] Corresponding Author. *Address:* Graduate School of Business and Finance, Waseda University, 1-6-1 Nishiwaseda, Shinjyuku-ku, Tokyo, 169-8050, Japan. *Phone:* +81-35286-8419, *E-mail:* takehara@waseda.jp.

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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. Since Kim et al. (2012), several studies have investigated the relation between CSR awareness and earnings quality. However, most previous studies have used U.S. data, and therefore, less is known about the relation between earnings quality and CSR in Japan.

Earnings quality is considered to be useful for both investors and firms making long-term strategic decisions (Schipper and Vincent, 2003; Francis et al., 2008). 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 Yaari, 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 contribute to the ongoing debate on the relation between CSR and earnings quality in the following two ways. First, we examine the relation between comprehensive CSR and earnings quality to confirm the robustness of the results presented by Kim et al. (2012), using Japanese data. Second, we examine the extent to which the two types of CSR defined in Harjoto and Jo (2015), namely normative and compliant CSR, affect the earnings quality of Japanese firms differently. Considering the financial constraints on these firms, we anticipate that the positive association between normative CSR and earnings quality is more robust compared with that between

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), Herrmann et al. (2003), Pan (2009), and Guo et al. (2012) in different contexts from that in the present study.

compliant CSR and earnings quality. In fact, we find that normative CSR improves the earnings quality of Japanese firms even 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.

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

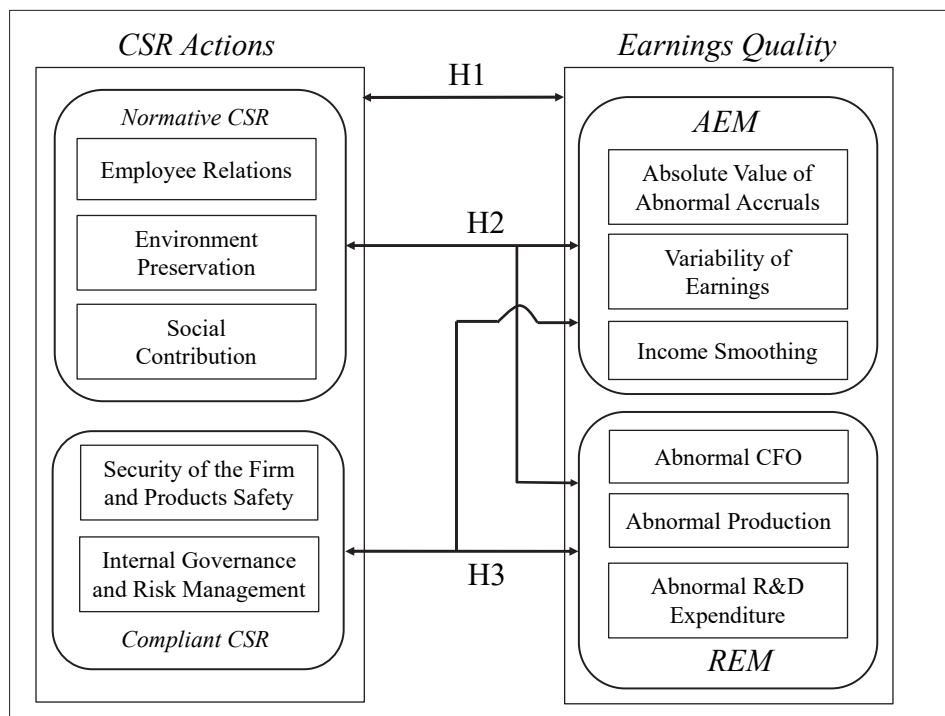
Suto and Takehara (2016) constructed CSP dimensional indices from the results of a survey conducted by Toyo Keizai Inc. By using these indices, they examined the relation between CSP and financial performance and found that CSR activities reduce firms' financial risk. Ajward and Takehara (2014) showed 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 social 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, or to be the subject of SEC investigations. Yip et al. (2011) showed that earnings management and CSR reporting are related, finding that this relation is complementary in the oil and gas industry, while it is substitutive in the food industry. McDermott (2011) analyzed the relationship between the KLD score (based on Kinder–Lydenberg–Domini CSR data) 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 (2013) 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 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 real activities-based earnings management (REM) measures (H2 and H3).

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

FIGURE 1. RELATION BETWEEN CSP AND EARNINGS QUALITY



3. Hypothesis Development

As discussed in Kim et al. (2012), managers have an incentive to be trustworthy and ethical in their businesses. Thus, 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 the 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:⁴

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. 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 of managers because the evaluation items in

⁴ H1 is identical to the “transparent financial reporting hypothesis” presented in Kim et al. (2012). Thus, we confirm the robustness of their results by using Japanese data.

compliant CSR actions are binding (or nonbinding) targets required by law. For this reason, stakeholders tend to find it rather difficult to assess the true implementation status of normative CSR actions. Then, the measure of normative CSR constructed based on a balanced analysis is considered to be valuable. Indeed, such a normative CSR measure serves as a strong signal from managers to stakeholders and reduces the degree of information asymmetry. 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.⁵ Although ISO standards including ISO9000s are voluntary, the implementation of ISO standards shifts substantial costs to firms. Furthermore, ongoing capital expenditure on CSR activities is required to maintain ISO certification. For this reason, those firms with inferior financial performance might be unable to afford to implement ISO9001. The same holds for many other compliant CSR activities. Even if compliant CSR activities are demanded by the regulations, financially constrained firms will have a spending limit and will reduce (or delay) spending on such CSR activities. On the contrary, financially unconstrained firms will spend more money on compliant CSR activities.

Hence, although we can observe a positive correlation between compliant CSR actions and earnings quality measures, compliant CSR may not always enhance earnings quality. More precisely, we expect both normative and compliant CSR to enhance the quality of accounting earnings. However, some proportion of the positive effects of compliant CSR on earnings quality can be explained by the financial performance of firms. 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 less associated with earnings quality compared with normative CSR.

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.

⁵ ISO9001, a document released by the International Organization for Standardization (ISO), specifies the requirements for a quality management system. The latest version is ISO9001:2015 (see <https://www.iso.org/standard/62085.html>).

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:

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

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 other 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).⁶ Roychowdhury (2006) hypothesized that *ABNPROD* is significantly positive and *ABNEXP* is significantly negative when a firm increases its earnings by adopting REM strategies.

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

⁶ 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*.

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

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.⁷

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 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 *EMP*, *ENV*, and *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 H1.⁸

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. In that case, we expect that firms with lower profitability and/or firms that face tighter financial constraints to have an incentive to increase their cash-flows. Thus, they manage their earnings by using REM strategies. To avoid misleading

⁷ These CSP dimensional indices have been used in several empirical studies of Japanese data (e.g., Ajward and Takehara, 2014; Aoi et al., 2015).

⁸ Harjoto and Jo (2015) reclassified 80 ratings items (in seven qualitative areas) when they constructed their normative and legal CSR measures. In a similar way, we reclassified the five CSR dimensions in Suto and Takehara (2016) into the normative and compliance dimensions.

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 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 ($NOTSE1$); 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 $NOTSE1$, AGE , and $CSPB$ are used as instrumental variables in the two-stage regression analysis.⁹ The two-stage least squares regression model is given as follows:

$$EQ_{j,t} = \alpha + \beta_1 CSP_{j,t} + \beta_2 ROA_{j,t} + \beta_3 LEV_{j,t} + \beta_4 SLSG_{j,t} + \sum_{i=1}^4 \delta_i SizeDummy_{i,j,t} + \sum_{i=1}^8 \eta_i YearDummy_{i+2006,j,t} + \varepsilon_{j,t}. \quad (5)$$

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.¹⁰

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

⁹ These instrumental variables were selected with reference to Schreck (2011), Suto and Takehara (2016), and others.

¹⁰ We conducted Wu-Hausman's test and Sargan's over-identification test before conducting the two-stage least squares regression. The test statistics are available from the authors upon request. In addition, the standard errors were corrected by applying the one-way (Year) cluster-robust method developed by Petersen (2009).

TABLE 1. NUMBER OF SAMPLE FIRMS

| | Consumption Goods | Investment Goods | Services | Transportation | 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 |

Notes: 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.

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 observations and 784 firm samples.

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

TABLE 2. DESCRIPTIVE STATISTICS

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

Notes: The definitions of the variables are summarized in the Appendix.

above-average CSP scores.¹¹ 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.

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 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

¹¹ 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.

TABLE 3 SPEARMAN CORRELATION MATRIX

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 | $\ln TA$ | 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 |

Notes: The definitions of the variables are summarized in the Appendix.

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*.

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 the U-shaped pattern between *ROA* and smoothness and that between *ROA* and *EBEISD* as evidence that firms use accounting accruals to smooth earnings. By contrast, 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 *ROA*3 to *ROA*5. This finding suggests that when *ROA* is sufficiently high as in the *ROA*1 and *ROA*2 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.

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) | |
|------------------------------------|--|--------------------|------------|--------|------------|-------------------|------------|--------|------------|-------------------|------------|
| | | 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 |
| GSP | | 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 |
| ABNCFD | | 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 |
| <i>Panel B. Employee Relations</i> | | | | | | | | | | | |
| ROA Quintile | | ROA1 (Highest ROA) | | ROA2 | | ROA3 (Midium ROA) | | ROA4 | | ROA5 (Lowest ROA) | |
| | | 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 |
| ABNCFD | | 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 |
| <i>Panel C. Environment</i> | | | | | | | | | | | |
| ROA Quintile | | ROA1 (Highest ROA) | | ROA2 | | ROA3 (Midium ROA) | | ROA4 | | ROA5 (Lowest ROA) | |
| | | 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 |
| ABNCFD | | 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 |

(continued on next page)

TABLE 4. (continued)

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

Note: The definitions of the variables are summarized in the Appendix.

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.

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.¹² 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 *NOTSE1*. 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 ($p > 0.1$). Thus, $|ABNAC|$ is negatively correlated with composite CSP even after controlling for financial attributes, although this negative correlation is not statistically significant. 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 -0.165 , -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

¹² Francis et al. (2008) discussed two causality channels, namely governance to earnings quality and earnings quality to governance.

TABLE 5. REGRESSING EARNINGS QUALITY ON CSP

Panel A. Composite CSP

| | ABNAC | EBEISD | Smoothness | ABNCFO | ABNPROD | ABNEXP |
|-------------------------|------------|-----------|------------|-----------|------------|-----------|
| Intercept | 2.981 *** | 1.837 *** | 0.637 *** | -0.282 | 1.573 * | -2.098 * |
| <i>t</i> -value | 13.436 | 14.609 | 14.365 | -0.992 | 1.685 | -1.708 |
| CSP | -0.044 | -0.052 ** | 0.003 | 0.186 * | -1.183 *** | 1.260 *** |
| <i>t</i> -value | -0.669 | -1.988 | 0.197 | 1.684 | -4.490 | 3.799 |
| ROA | -0.040 * | -0.001 | -0.006 | 0.413 *** | -0.773 *** | 0.226 *** |
| <i>t</i> -value | -1.770 | -0.016 | -0.751 | 10.744 | -7.366 | 2.667 |
| LEV | -0.012 *** | 0.002 | 0.004 *** | -0.014 ** | -0.003 | 0.041 ** |
| <i>t</i> -value | -2.886 | 0.947 | 5.768 | -1.981 | -0.175 | 2.134 |
| SLSG | -0.002 | 0.007 | 0.001 | -0.008 ** | 0.067 *** | -0.032 |
| <i>t</i> -value | -0.906 | 1.289 | 0.332 | -2.435 | 2.983 | -1.599 |
| Adjusted R ² | 0.044 | 0.073 | 0.058 | 0.155 | 0.104 | 0.050 |

Panel B. Employee Relations

| | ABNAC | EBEISD | Smoothness | ABNCFO | ABNPROD | ABNEXP |
|-------------------------|------------|------------|------------|------------|------------|-----------|
| Intercept | 3.063 *** | 1.907 *** | 0.651 *** | -0.006 | -0.198 | -0.191 |
| <i>t</i> -value | 18.345 | 13.827 | 13.219 | -0.031 | -0.188 | -0.159 |
| EMP | -0.160 *** | -0.165 *** | -0.007 | 0.135 | -0.842 *** | 0.878 *** |
| <i>t</i> -value | -3.622 | -10.662 | -0.480 | 1.002 | -3.390 | 2.682 |
| ROA | -0.039 * | 0.000 | -0.006 | 0.413 *** | -0.768 *** | 0.220 ** |
| <i>t</i> -value | -1.790 | 0.005 | -0.745 | 10.663 | -7.118 | 2.558 |
| LEV | -0.011 *** | 0.003 | 0.004 *** | -0.015 ** | 0.006 | 0.031 * |
| <i>t</i> -value | -2.880 | 1.270 | 5.794 | -2.190 | 0.285 | 1.664 |
| SLSG | -0.003 | 0.007 | 0.001 | -0.008 *** | 0.068 *** | -0.034 |
| <i>t</i> -value | -1.082 | 1.159 | 0.299 | -2.705 | 2.847 | -1.594 |
| Adjusted R ² | 0.045 | 0.081 | 0.056 | 0.152 | 0.092 | 0.037 |

Panel C. Environment

| | ABNAC | EBEISD | Smoothness | ABNCFO | ABNPROD | ABNEXP |
|-------------------------|------------|------------|------------|------------|------------|-----------|
| Intercept | 3.179 *** | 1.873 *** | 0.640 *** | -0.035 | -0.456 | -0.500 |
| <i>t</i> -value | 15.145 | 12.143 | 13.830 | -0.173 | -0.389 | -0.372 |
| ENV | -0.245 ** | -0.128 *** | 0.003 | 0.151 | -0.584 | 1.077 * |
| <i>t</i> -value | -2.079 | -3.307 | 0.139 | 1.107 | -1.273 | 1.958 |
| ROA | -0.043 * | -0.002 | -0.006 | 0.415 *** | -0.780 *** | 0.239 *** |
| <i>t</i> -value | -1.920 | -0.071 | -0.755 | 10.656 | -7.127 | 2.691 |
| LEV | -0.013 *** | 0.002 | 0.004 *** | -0.015 ** | 0.002 | 0.037 * |
| <i>t</i> -value | -2.979 | 0.839 | 5.718 | -2.132 | 0.077 | 1.950 |
| SLSG | -0.002 | 0.008 | 0.001 | -0.009 *** | 0.073 *** | -0.039 * |
| <i>t</i> -value | -0.785 | 1.315 | 0.329 | -2.688 | 2.864 | -1.715 |
| Adjusted R ² | 0.047 | 0.073 | 0.058 | 0.150 | 0.086 | 0.031 |

(continued on next page)

TABLE 5. (continued)

Panel D. Social Contribution

| | <i>ABNAC</i> | <i>EBEISD</i> | <i>Smoothness</i> | <i>ABNCFO</i> | <i>ABNPROD</i> | <i>ABNEXP</i> |
|-------------------------------|--------------|---------------|-------------------|---------------|----------------|---------------|
| <i>Intercept</i> | 3.011 *** | 1.732 *** | 0.669 *** | 0.047 | 0.290 | -0.910 |
| <i>t-value</i> | 15.072 | 14.887 | 16.063 | 0.214 | 0.306 | -0.821 |
| <i>SC</i> | -0.104 | -0.013 | -0.020 | 0.081 | -1.134 * | 1.345 ** |
| <i>t-value</i> | -0.987 | -0.299 | -0.824 | 0.499 | -1.666 | 2.046 |
| <i>ROA</i> | -0.040 * | 0.000 | -0.006 | 0.413 *** | -0.774 *** | 0.227 *** |
| <i>t-value</i> | -1.775 | -0.014 | -0.757 | 10.721 | -7.447 | 2.739 |
| <i>LEV</i> | -0.012 *** | 0.003 | 0.004 *** | -0.015 ** | 0.000 | 0.037 ** |
| <i>t-value</i> | -2.936 | 1.056 | 5.723 | -2.171 | 0.017 | 2.043 |
| <i>SLSG</i> | -0.003 | 0.008 | 0.001 | -0.009 ** | 0.068 *** | -0.033 |
| <i>t-value</i> | -0.975 | 1.344 | 0.275 | -2.574 | 2.756 | -1.510 |
| <i>Adjusted R²</i> | 0.043 | 0.071 | 0.055 | 0.151 | 0.096 | 0.042 |

Panel E. Security and Safety

| | <i>ABNAC</i> | <i>EBEISD</i> | <i>Smoothness</i> | <i>ABNCFO</i> | <i>ABNPROD</i> | <i>ABNEXP</i> |
|-------------------------------|--------------|---------------|-------------------|---------------|----------------|---------------|
| <i>Intercept</i> | 2.864 *** | 1.788 *** | 0.674 *** | -0.084 | -0.332 | -0.216 |
| <i>t-value</i> | 16.086 | 12.824 | 15.057 | -0.481 | -0.407 | -0.224 |
| <i>SS</i> | 0.013 | -0.068 ** | -0.029 | 0.220 | -0.792 | 0.980 |
| <i>t-value</i> | 0.105 | -2.298 | -1.487 | 1.559 | -1.029 | 1.245 |
| <i>ROA</i> | -0.040 * | 0.000 | -0.006 | 0.412 *** | -0.768 *** | 0.220 *** |
| <i>t-value</i> | -1.768 | -0.004 | -0.727 | 10.698 | -7.390 | 2.727 |
| <i>LEV</i> | -0.012 *** | 0.002 | 0.004 *** | -0.014 ** | 0.000 | 0.038 ** |
| <i>t-value</i> | -2.757 | 0.938 | 5.611 | -2.034 | 0.015 | 2.077 |
| <i>SLSG</i> | -0.002 | 0.007 | 0.000 | -0.008 * | 0.068 *** | -0.033 |
| <i>t-value</i> | -0.840 | 1.265 | 0.215 | -1.950 | 2.796 | -1.515 |
| <i>Adjusted R²</i> | 0.044 | 0.072 | 0.053 | 0.156 | 0.096 | 0.042 |

Panel F. Int. Gov. and Risk Mng.

| | <i>ABNAC</i> | <i>EBEISD</i> | <i>Smoothness</i> | <i>ABNCFO</i> | <i>ABNPROD</i> | <i>ABNEXP</i> |
|-------------------------------|--------------|---------------|-------------------|---------------|----------------|---------------|
| <i>Intercept</i> | 2.907 *** | 1.730 *** | 0.668 *** | 0.239 * | -1.165 * | 0.757 |
| <i>t-value</i> | 17.499 | 12.432 | 15.490 | 1.847 | -1.651 | 0.931 |
| <i>IG</i> | -0.037 | -0.018 | -0.031 | -0.108 | -0.014 | 0.089 |
| <i>t-value</i> | -0.335 | -0.423 | -1.340 | -1.131 | -0.020 | 0.134 |
| <i>ROA</i> | -0.040 * | 0.000 | -0.006 | 0.413 *** | -0.771 *** | 0.223 *** |
| <i>t-value</i> | -1.750 | -0.011 | -0.733 | 10.669 | -7.324 | 2.705 |
| <i>LEV</i> | -0.012 *** | 0.003 | 0.004 *** | -0.016 ** | 0.004 | 0.034 * |
| <i>t-value</i> | -2.702 | 1.014 | 5.327 | -2.258 | 0.197 | 1.921 |
| <i>SLSG</i> | -0.002 | 0.008 | 0.000 | -0.010 *** | 0.073 *** | -0.039 |
| <i>t-value</i> | -0.952 | 1.324 | 0.213 | -3.169 | 2.739 | -1.607 |
| <i>Adjusted R²</i> | 0.043 | 0.071 | 0.053 | 0.148 | 0.085 | 0.028 |

Notes: The dependent variables are the various measures of accounting quality and the definitions of all the variables are explained in the Appendix. *, **, 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.

decisions to outside stakeholders 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 social contributions (*SC*) in Panel D, the slope coefficients of *ABNPROD* and *ABNEXP* have slopes of -1.134 ($p < 0.1$) and 1.345 ($p < 0.05$), respectively. This means that the lower the *SC* score, the less earnings are managed by real activities-based strategies. By contrast, there is no significant correlation between *SC* and AEM. Recall that *SC* is strongly correlated with the REM measures and is close to compliant CSR in Table 4. By integrating the results in Tables 4 and 5, *SC* in Japan may fall into an intermediate category between normative CSR and compliant CSR.

For the compliant CSR dimensions (*SS*, *IG*), the coefficients reported in Panels E and F are not statistically significant in all cases. 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 the 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.

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 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.

REFERENCES

- AJWARD, A. R., AND H. TAKEHARA. 2014. Superior corporate social performance and financial constraints: The case of Japan. *Global Economy and Finance Journal* 7 (2): 42-58.
- AOI, M., S. ASABA, K. KUBOTA, AND H. TAKEHARA. 2015. Family firms, firm characteristics, and corporate social performance: A study of public firms in Japan. *Journal of Family Business Management* 5 (2): 192-217.

- CHUNG, R., S. HO, AND J-B. KIM. 2004. Ownership structure and the pricing of discretionary accruals in Japan. *Journal of International Accounting, Auditing, and Taxation* 13 (1): 1-20.
- COHEN, D. A., A. DEY, AND T. Z. LYS. 2008. Real and accrual-based earnings management in the pre- and post-Sarbanes-Oxley periods. *The Accounting Review* 83 (3): 757-787.
- COHEN, D. A., AND P. ZAROWIN. 2010. Accrual-based and real earnings management around seasoned equity offerings. *Journal of Accounting and Economics* 50 (1): 2-19.
- DECHOW, P. M., R. G. SLOAN, AND A. P. SWEENEY. 1995. Detecting earnings management. *The Accounting Review* 70 (2): 193-225.
- FRANCIS, J., K. SCHIPPER, AND P. OLSSON. 2008. *Earnings Quality*. Hanover, MA: now Publisher Inc.
- GUO, J., P. HUANG, Y. ZHANG, AND N. ZHOU. 2015. Foreign ownership and real earnings management: Evidence from Japan. *Journal of International Accounting Research* 14 (2): 185-213.
- HEALY, P. M. AND, J. M. WAHLEN. 1999. A review of the earnings management literature and its implications for standard setting. *Accounting Horizons* 13 (4): 365-383.
- HERRMANN, D., T. INOUE, AND W. B. THOMAS. 2003. The sale of assets to manage earnings in Japan. *Journal of Accounting Research* 41 (1): 89-108.
- HARJOTO, M. A., AND H. JO. 2015. Legal vs. normative CSR: Differential impact on analyst dispersion, stock return volatility, cost of capital, and firm value. *Journal of Business Ethics* 128 (1): 1-20.
- JENSEN, M. C., K. J. MURPHY, AND E. G. WRUCK. 2004. Remuneration: Where we've been, how we got to here, what are the problems, and how to fix them. *Harvard NOM Working Paper* No. 04-28.
- KANODIA, C. 2006. *Accounting Disclosure and Real Effects*. Hanover, MA: now Publishers, Inc.
- KIM, Y., M. S. PARK, AND B. WIER. 2012. Is earnings quality associated with corporate social responsibility? *The Accounting Review* 87 (3): 761-796.
- KUBOTA, K., K. SUDA, AND H. TAKEHARA. 2010. Dissemination of accruals information, role of semi-annual reporting, and analysts' earnings forecasts: Evidence from Japan. *Journal of International Financial Management and Accounting* 21 (2): 120-160.
- KUBOTA, K., AND H. TAKEHARA. 2007. Effects of tax rate changes on the cost of capital: The case of Japanese firms. *Finanzarchiv* 63 (2): 163-185.
- LAKONISHOK, J., A. SHLEIFER, AND R. W. VISHNY. 1994. Contrarian investment, extrapolation, and risk. *Journal of Finance* 49 (5): 1541-1578.
- MANDE, V., R. G. FILE, AND W. KWAK. 2000. Income smoothing and discretionary R&D expenditure of Japanese firms. *Contemporary Accounting Research* 17 (2): 263-302.
- MCDERMOTT, K. E. 2011. Financial reporting quality and investment in corporate social responsibility. *Working Paper*, University of North Carolina at Chapel Hill.
- PAN, C. K. 2009. Japanese firms' real activities earnings management to avoid losses. *The Journal of Management Accounting, Japan* 17: 3-23 (in Japanese).
- PETERSEN, M. A. 2009. Estimating standard errors in finance panel data sets: Comparing approaches. *The Review of Financial Studies* 22 (1): 435-480.
- RONEN, J., AND V. YAARI. 2008. *Earnings Management: Emerging Insights in Theory, Practice and The Research*. New York, NY: Springer.
- ROYCHOWDHURY, S. 2006. Earnings management through real activities manipulation. *Journal of Accounting and Economics* 42 (3): 335-370.

- SCHRECK, P. 2011. Reviewing the business case for corporate social responsibility: New evidence and analysis. *Journal of Business Ethics* 103: 167-188.
- SCHIPPER, K., AND L. VINCENT. 2003. Earnings quality. *Accounting Horizons*. 17 (Supplement): 97-110.
- SCHOLTENS, B., AND F-C. KANG. 2013. Corporate social responsibility and earnings management: Evidence from Asian economies. *Corporate Social Responsibility and Environmental Management* 20 (2): 95-112.
- SUTO, M., AND H. TAKEHARA. 2016. The link between corporate social performance and financial performance: Empirical evidence from Japanese firms. *International Journal of Corporate Strategy and Social Responsibility*. 1 (1): 4-25.
- TRUEMAN, B., AND S. TITMAN. 1988. An explanation for accounting income smoothing, *Journal of Accounting Research* 26: 127-139.
- TURBAN, D. B., AND D. W. GREENING. 1997. Corporate social performance and organizational attractiveness to prospective employers. *The Academy of Management Journal* 40 (3): 658-672.
- ULRICH, P. 2008. *Integrative economic ethics: Foundations of a civilized market economy*. Cambridge: Cambridge University Press.
- YIP, E., C. VAN STADEN, AND S. CAHAN. 2011. Corporate social responsibility reporting and earnings management: The role of political costs. *Australasian Accounting Business and Finance Journal* 5 (3): 17-34.
- WOOLDRIDGE, J. M. 2010. *Econometric Analysis of Cross Section and Panel Data*. Second Edition: Cambridge, MA: The MIT Press.

APPENDIX: LIST OF THE ABBREVIATIONS USED IN THE TABLES

| Accruals based Earnings Management Measures | |
|--|--|
| $ ABNAC $ | Absolute value of abnormal accruals computed based on the modified Jones model. |
| <i>EBEISD</i> | Past five years Standard Deviation (SD) of Earnings Before Extraordinary Items (EBSI). |
| <i>Smoothness</i> | Measure of income smoothing defined as $EBEISD / (\text{Standard Deviation of CFO})$. |
| Real Activities Based Earnings Management Measures | |
| <i>ABNCFO</i> | Abnormal Cash-Flows from Operations. |
| <i>ABNPROD</i> | Abnormal Production Costs. |
| <i>ABNEXP</i> | Abnormal R&D Expenditures. |
| Corporate Social Performance Measures | |
| <i>CSP</i> | Composite measure of Corporate Social Performance. |
| <i>EMP</i> | Employee Relations (Normative CSR dimension). |
| <i>ENV</i> | Environment Preservations (Normative CSR dimension). |
| <i>SC</i> | Social Contributions (Normative CSR dimension). |
| <i>SS</i> | Security of the Firm and Products Safety (Compliant CSR dimension). |
| <i>IG</i> | Internal Governance and Risk Management (Compliant CSR dimension). |
| Control- and Instrumental Variables | |
| <i>lnTA</i> | Natural logarithm of total assets of the firm. |
| <i>ROA</i> | Return on Assets. |
| <i>LEV</i> | Financial leverage dedined as non-current liabilities to total assets. |
| <i>SLSG</i> | Growth rate of sales revenue. |
| <i>AGE</i> | Number of years from foundation of the firm. |