

are also mixed. Ghoul et al. (2011) demonstrate a negative relationship between a firm's CSR level and the cost of equity capital. In contrast, CSR has yet to be incorporated into the pricing of Euro corporate bonds according to empirical work by Menz (2010). Through a focus on bank debt and information asymmetry, research by Goss and Roberts (2011) reveals a modest positive influence of CSR on risk premiums for low quality borrowers.

Given the inconclusive nature of the studies outlined above, the relationship between CSR and risk management represents an interesting research topic for academics and corporate financial researchers alike.

2.2. Mechanisms and Channels to link CSP and CFP

Prior research has suggested that CSP is linked with the long-term corporate value in some manner. However, the case for engaging in activities related to CSR to achieve business-related goals remains a topic of great debate. As such, key questions associated with the relationship between CSP and CFP remain salient. One reason for the continued debate relates to the variety of ways in which CSR is defined and operationalized. Whereas CFP is easily gauged with accounting-based and market-based metrics, CSP is a multi-faceted concept that incorporates stakeholder management, social issues management, and environmental preservation. As a result, CSP measures are traditionally multi-dimensional and less definitive. To illustrate, Orlitzky (2008) argues that there are a number of different measures designed to respectively evaluate the social and environmental effects of a firm's business activities.

Another reason for the continued confusion surrounding the relationship between CSP and CFP is the lack of research related to the *mechanisms* that link CSR activities with financial performance. Operationally, stakeholder management is largely based on these mechanisms. Although firm stakeholders absorb the costs and risks associated with a firm's attempts to generate corporate value, distribution of the benefits derived from those activities can be largely enjoyed by those same stakeholders. Those benefits are deeply rooted in the mechanisms by which CSP and CFP are linked. In this way, strategic stakeholder management is a vital component for the efficient creation of long-term value for a firm (Jensen,2001) . Thus, it is strongly related to the degree to which a firm can compete in the long run.

Related to this, Perrini et al. (2011) provide a stakeholder-based organizing framework to identify antecedents and outcomes of the CSP-CFP relationship. The stakeholder approach extricates the precipitants of the CSP-CFP relationship and the channels through which CSR and financial performance are linked. The approach induces responsible behaviours by managers by highlighting the motivations of different stakeholders and channels.

Of the various CSR-related organizational drivers, human resource management is most important for inciting productivity and innovation among employees (Turban and Greening, 1997).

CSR initiatives in the consumer market can boost a firm's reputation (Schuler and Cording, 2006; Smith, 2008). Disclosure of CSR-related information affects corporate value through brand positioning, and supply-chain management is critical for the success of a firm's cross-boundary business endeavours. Establishing a positive reputation and trust in a given region is closely related to a firm's sustainability there. Thus, the social and environmental aspects of management have grown to become increasingly important channels for CSR practices.

In addition to the studies that have explored human resource management and customer relation management, many recent studies focus on market perceptions of CSR as mentioned above. Ghoul et al. (2011) assert 'the cost of capital could be the channel through which capital markets encourage firms to be more socially responsible' (p. 2389). In this context, investors and debtors would function as key drivers of CSR.

Goss and Roberts (2011) and Menz (2010) concentrate on mechanisms that promote CSR in private debt markets. Specifically, Goss and Roberts (2011) examine whether banks judge high-CSR firms more favourably in terms of their borrowing potential than low-CSR firms. Similarly, Menz (2010) explores the role of creditors in the transmission of CSR to the valuation of Euro corporate bonds.

2.3. Sustainability and Interdependency

Although the relationship between CSP and CFP has been studied from a wide range of perspectives, management sustainability has not been explicitly considered in these investigations. CSR is multi-dimensional and thus, the degree to which a business can sustain itself is the chief result of interdependence between a firm's CSP and CFP.

Although investment in CSR practices improves a firm's CSP in the long run, it requires significant financial investment (and thus, an increase in costs) in the short-run. As a result, poor-performing or underdeveloped companies may be limited in their ability to implement CSR, even if doing so can provide them with competitive advantages or reduce risks in the market. Some small firms nonetheless overinvest in CSR in the short-run to attain the positive reputation or higher market valuation bestowed upon their larger or more successful counterparts (Goss and Roberts, 2011; Ghoul et al. 2011). Large and mature firms, by contrast, are more sensitive to market evaluations and seek only to avoid damaging the reputation or trust that has been afforded to them.

Godfrey et al. (2009) extend the risk management model by theorizing that some CSR activities provide an insurance-like effect to firms who seek to maintain their successful business ventures. Their investigation suggests that CSR activities can provide a mechanism for *preserving* rather than *generating* CFP. Based on the extent to which CSP and CFP are multi-faceted and interrelated, Kurcz et al. (2008) argue for the development of integrative models that incorporate economic, ethical, and other variables that relate to the implementation of CSR activities to achieve

business-related outcomes.

Recently, business firms have increasingly claimed to be ethically good members of society. Firms that fail to engage in socially responsible activities would face financial uncertainty and be forced to leave the market in which they operate. Despite the importance of developing and implementing CSR-related activities, it is difficult for firms to sustain themselves if they overinvest.

Given this conundrum, a long-term perspective suggests that a business's sustainability results from integrated CSR practices and the efficient management of stakeholders and risk.

3. Research Objectives and Hypotheses Development

3.1. Research Objective

Given the above review on previous research concerning responsible management, it is clear that CSR has various attributes that relate to the motivation of various stakeholders and thus, financial performance. A firm's engagement in CSR-related activities produces trust among investors and customers, which facilitates a business's continued operation. In this way, an effective long-term CSR policy results in a firm's sustainability. The development of effective CSR policies, however, is contingent upon the extent to which managers are motivated to implement them (Goss and Roberts, 2011). Therefore, boosting managers' motivations for developing and operationalizing CSP is critical for gaining market-based competitive advantages for profit-making, seeking opportunities for growth, mitigating risk, developing the firm's reputation, and building the firm's brand.

Some perceive that typical Japanese corporations exercise ethically-questionable self-regulation and succession practices in an insider-oriented system. However, it has been also widely known that traditional Japanese firms have engaged in several socially responsible activities (e.g. developing high-quality products, making social contributions, and securing employment for communities) to sustain their businesses for a long time. By performing these activities, Japan has more companies whose age exceeds one hundred years than any other country in the world.¹ The maintenance of trust among customers to sustain public confidence is a common characteristic among these firms. The most well-known policy for gaining and keeping that trust originated several centuries ago and is called 'Sanpou-yoshi' (i.e. three-stakeholder-benefits). Sanpou-yoshi relates to the coordination of interests for three types of stakeholders: suppliers or sellers, customers or buyers, and the community or society at large. By considering the interests of the

¹ According to research produced by Teikoku Databank Ltd., over 24,000 Japanese companies (1.7% of all Japanese companies) are over one hundred years old as of September 2012. These older companies represent 3.7% of all firms in the retail industry and 3.5% of all firms in the manufacturing industry. The average age of all Japanese companies is 35.6 years. Kongo-gumi, which specialises in temple and shrine construction, was established in 578 A.D., making it the oldest company in Japan.

different stakeholders, firms become sustainable and gain various competitive advantages within the market.

In light of the above, the primary purpose of our research is to explore the effects of CSR practices on economic outcomes within Japanese firms, using a sample from the late 2000s. In the investigation, we explicitly consider the interdependence of CSR and CFP. To perform this analysis, we employ two interrelated methodologies. First, because (a) CSR activities and practices are multi-dimensional and (b) the link between CSP and CFP is realised through a variety of channels, we construct and utilise both dimensional CSP indices and a composite CSP index as explanatory variables. To construct the CSP indices, we use the results of a questionnaire derived from the Toyo Keizai Database to identify channels through which stakeholders associate CSR with financial and economic outcomes.

To empirically examine the interdependence between CSP and CFP, we conduct an ordinary least-squares regression as well as a two-stage least-squares regression analysis. The two-stage least-squares regression model incorporates covariates that control for the effects of age and company quality. As a instrument variable, the age of a firm serves as a proxy for business succession, which could significantly relate to CSR-related activities in a given firm. In addition, a dummy variable which equals to 1 if a firm is not listed on the Tokyo Stock Exchange First Section serves as a inverse measure for that firm's ability to garner confidence among members of the firm's surrounding community. Whether a company is listed or not may relate to reputation and brand perceptions in Japan. Given these reasons, the inclusion of the above-mentioned instrument variables mitigates potential bias resulting from endogeneity or omitted variables.

3.2. Hypotheses Development

To examine the association between CSP and CFP, we propose three hypotheses.

3.2.1. Competitive Advantage Hypothesis

From the perspective of competitive advantage, CSR practices incentivise employees, improve the quality of products and increase their demand, promote exploration for new business opportunities that meet social demands, and conserve energy and resources in the production process. Given this, a composite CSP index would positively affect CFP and long-term corporate growth. In addition, each individual dimension of the index may positively influence a firm's financial performance. However, the respective channels through which CSP is associated with profits may differ.

Hypothesis 1: There exists a positive relationship between CSP and a firm's profitability.

3.2.2. Risk Management Hypothesis

Goss and Roberts (2011) reference two conflicting perspectives related to information asymmetry and corporate management: the *risk mitigation view* and the *overinvestment view*. In the risk mitigation view, managers treat CSR practices as tools for managing corporate risk. Given this operational usage of CSR practices, the composite CSP index would negatively affect perceptions of accounting-based risks and reduce uncertainty about future business development. The composite CSP index would also negatively influence market-based risk premiums by promoting greater degrees of trust within the market. With respect to the individual CSR attributes, the CSP of various corporate divisions may reduce uncertainty associated with stakeholder behaviour, and thus, reduce risks associated with conducting business. However, the risk structure may vary as a function of a firm's industry or developmental stage. As such, the respective relationships between the individual CSP attributes and CFP may likewise vary, even if CSR-related activities affect CFP cumulatively.

Hypothesis 2: There exists a negative relationship between CSP and risk.

3.2.3. Overinvestment Hypothesis

As discussed above, CSR practices require significant financial resources in the short run, but produce positive results in the long run. In other words, CSR practices are long-term corporate investments. Due to information asymmetry, a manager may overinvest in CSR activities to garner a positive reputation. Similarly, they may overinvest in CSR to establish trust from lenders in an effort to facilitate fundraising. Thus, if the degree of information asymmetry between managers and other stakeholders is significant, managerial decision-making could be biased, thus inducing conflicts between managers and shareholders. Excess investment in CSR practices may therefore damage corporate value or sustainability by unnecessarily increasing agency costs and risks. It is objection against competitive advantage and risk reduction.

Hypothesis 3: There exists a positive relationship between CSP and risk and there does not exist a positive relationship between CSP and profitability.

4. Data Construction and Estimation

4.1. Measures of Corporate Social Performance

To measure CSP, we use indices constructed by Suto and Takehara (2012). A stakeholder-focused approach to corporate governance posits that CSR-related activities is related to a number of different stakeholder relations (e.g. employees, communities, customers, suppliers, the environment) and that firms must choose the appropriate internal governance architecture and

adopt strategies within the existing regulatory framework. Given these stakeholder relationships, Suto and Takehara (2012) identify the following five attributes of corporate social performance: 1) employee relations, 2) social contributions, 3) security for organization and product safety (i.e. product quality), 4) internal governance and risk management, and 5) environmental preservation.²

The first attribute, employee relations (EMP), relates to organizational working conditions, appropriate working hours and salary, the employment of minorities, job stability, and opportunities for employees' personal and vocational development. Effective management of employee relations can thus increase employee motivation and improve the quality of their output.

The second attribute, social contributions (SC), relates to a firm's policies for and response to social demands. Positive relationships and effective coordination with the community in which the firm operates can reduce costs associated with local conflicts, attract effective human resources, and enhance the firm's reputation. In contrast, negative relationships with the surrounding community can restrict opportunities for conducting business and increase the costs and risks associated with established business operations.

The third attribute, firm security and product safety (SS), is related to the quality of a firm's products and the sustainability of its business. Therefore, the promotion of SS can provide a firm with long-term competitive advantages. Security and safety is related to supply chain management as well as the firm's own activities, and ultimately influences a firm's relationship with its customers.

The fourth attribute, internal governance and risk management (IG), concerns the demonstrable quality of a firm's disclosure, compliance, internal auditing, and self-discipline. The fifth attribute, environmental preservation (ENV), is a critical aspect of CSR in a society that has grown increasingly concerned with global climate change. As such, many perceive environmental preservation to be firms' principal social responsibility. Suto and Takehara (2012) also provide a Composite CSP (CSP) measure as a comprehensive index of the five attributes outlined above (i.e. EMP, SC, SS, IG and ENV).³

² Suto and Takehara constructed the CSP indices using questionnaire results from Toyo Keizai CSR Database as primary data source. From 51 questions items we carefully selected 17 questions about employee relations, 21 questions about CSR in general, and 18 questions about environmental preservation. Then, based on the responses to the questions we selected, we kept 13 scores regarding (1) employee relations (EMP), 5 scores regarding (2) social contributions (SC), 5 scores regarding (3) security of the firm and product safety (SS), 6 scores regarding (4) internal governance and risk management (IG), and 5 scores regarding (5) environmental preservation (ENV). Questions items and their related factor weights are shown in Table A1.

³ Each CSP dimensional index is calculated based on ranking by the first component. It was demeaned and scaled by its standard deviation so that it approximately obeyed a standard normal distribution. The comprehensive CSP index was computed as a weighted average of the above constructed five dimensional indices. Since our CSP dimensional indices approximately obey a standard normal distribution, the comprehensive measure of CSP is uniformly distributed. See about the detail in Suto and Takehara (2012).

4.2. Measures of Corporate Financial Performance

Most previous research in this domain has examined the relationship between CSP and profitability metrics that are based in accounting (e.g. return on equity). Although wide-ranging analyses of financial performance should be the norm, conventional measures for profitability capture only one part of a firm's financial performance. To redress this shortcoming in the literature, we employ three types of profitability metrics in this study. The first of these types is the traditional method for gauging financial performance—accounting-based figures. These measures for profitability include return on sales (ROS), return on equity (ROE) and return on assets (ROA). In addition to ROS, ROE, and ROA, we also use the ratio of cash-flows from operations to total assets (CFOTA) to account for the possibility that managers adjust figures related to net income (a numerator of the ROS, ROE and ROA ratios). Cash-flows from operations are less susceptible to manager adjustments.

The second type of metric we use to gauge financial performance relates to the growth potential of the firm. These measures include the growth rate of sales (GSLs) and the growth rate of total assets (GTA).

The third type of measure related to financial performance is computed on the basis of realised stock returns. Specifically, we compute the historical return (HRET) and Jensen's alpha (Alpha) using Fama and French's (1993) three-factor model:

$$r_{jt} - r_{ft} = \alpha_j + \beta_j^{VW} (r_{mt} - r_{ft}) + \beta_j^{SMB} SMB_t + \beta_j^{HML} HML_t + \varepsilon_{jt}. \quad (1)$$

In equation (1), r_{jt} represents a return of j -th stock in month t , r_{ft} is a risk-free rate in month t , r_{mt} is a market value weighted return of stocks listed in the Tokyo Stock Exchange First and Second sections, and SMB_t and HML_t are the Small-Minus-Big and High-Minus-Low factors respectively. We use this model because standard capital asset pricing models (CAPM) cannot account for cross-sectional variation in Japanese stocks.⁴

Because ROS, ROE, ROA, CFOTA, GSLs, GTA, HRET and Alpha fluctuate annually, we compute the average of these measures over the past five years to examine the relationship between CSP and CFP in the long term.⁵

⁴ Fama and French (1992) show that standard CAPMs cannot explain cross-sectional variation in returns for U.S. stocks. This trend was supported with Japanese data as well, as Jagannathan et al. (1998) report that standard CAPM poorly estimates cross-sectional variation in stock returns and that conventional beta is sometimes negatively related to excess return on Japanese stocks. Given these findings, we do not use standard CAPM as a benchmark pricing model in this study.

⁵ To compute ROS, ROE, ROA and CFOTA, we use data drawn from firms' financial statements in the past five years. To compute GSLs and GTA, we use data from the past six years since an additional year is necessary to compute growth rate. To compute HRET and Alpha, we use stock returns from the 60-month range between in October of year $t-5$ and September of year t . We use this range because firms sent their questionnaires back to Toyo Keizai Inc. at the end of September.

Extant literature on the relationship between CSP and CFP often lacks a consideration of the ways in which CSP affects corporate risks. However, we expect that effective CSP will reduce a firm's risks. Therefore, in addition to the measures for profitability, we incorporate metrics for risk into our models. Each of these measures corresponds to one of the profitability measures outlined above. To examine the relationship between CSP and the risks faced by a firm, we compute the standard deviations of for ROS, ROE, ROA CFO, GSLS and GTA. We also compute the five-year historical volatility of stock returns (HVOL) and the HML beta derived from stock returns over the previous five years (BHML). These two risk measures correspond to HRET and Alpha.⁶

4.3. Control Variables and Instrument Variables

In addition to the predictor variables we incorporate into our estimation models, we also use the three variables as controls. First, many studies have found a positive association between a firm's CSP and its size. As such, we use the natural logarithm of total asset value (in millions of JPY), $\ln TA$, as a proxy variable for firm size. Because the association between CSP and size is not linear, however, we utilize two dummy variables: Size2 and Size3. The other two control variables are firms' debt ratio (DR), which is defined as total debt divided by total assets and a foreign dependency ratio (FDR), which is defined as foreign sales divided by total sales. Both of debt holders and consumers in foreign countries are important stakeholders in Japanese firms. Effective CSP will alleviate the agency conflicts between debt holders and other stakeholders. In addition, managers must ensure high quality customer service, a task facilitated by superior CSP.

In addition to the control variables, we also incorporate two instrument variables into our analyses: Age and NOTSE1. Age is the number of years that have passed since the foundation of the firm. NOTSE1 is a dummy variable that equals 1 if the firm is not listed in the Tokyo Stock Exchange First Section.⁷ The purpose of these variables is to mitigate issues related to variable endogeneity resulting from the potential for reverse causality among our primary variables (CFP and CSP).

4.4. Samples

Data in the CSP Dimensional Indices constructed by Suto and Takehara (2012) ranges from 2007 through 2010. These data include all the Japanese firms that responded to the survey administered by Toyo Keizai Inc. Because Toyo Keizai Inc. sent the questionnaires to the firms in the beginning of July and the firms provided their answers by the end of September, we use the

⁶ If the HML factor in Fama and French (1993) is a proxy measure for the distress risk factor, β^{HML} , sensitivity to the factor could be an indicator of a firm's distress risk as evaluated by market participants. Further, Kubota and Takehara (2010) show that HML is consistently and strongly significant in their GMM test results on Japanese stocks.

⁷ On January 1st, 2013, the Osaka and Tokyo Stock Exchanges will merge into one stock exchange. Both stock exchanges have first and second sections.

most recent consolidated financial statement data and market attributed data that were available at the end of September. All financial firms are excluded from our sample. The primary source for financial statement data is the NIKKEI NEEDS Database. Market-attributed data are taken from the FDS-NPM Database. As a result, total number of firm-years sample is 2,671.

Table 1 summarises the sample of firms used for this study, delineated by year and corporate sector.⁸ About 70% of the sampled firms are listed in the First Section of the Tokyo Stock Exchange (TSE); about 10% of the firms are listed in the Second Section of the TSE; and roughly 20% of firms are listed in exchanges other than the First or Second Sections of the TSE. The investment goods sector was the most heavily represented among sample firms (40%), and over 75% of them of them are listed in the First Section of the TSE.

[Table 1 about here]

4.5. Research Methodology

To explore the degree to which CSP influences CFP, we first utilise the portfolio formation method. At the end of September of each year ($t=2007, \dots, 2010$), we split the sample into quintiles by ranking the composite CSP scores and the CSP dimensional indices. Following this, we test for differences in CSP between the higher and lower quintiles of each CSP level.

Next, we conduct a regression analysis to confirm the results derived from the portfolio formation method. To verify the robustness of our findings, we employed the following regression model after controlling for firms' individual characteristics:

$$y_{i,j} = \alpha + \beta x_{i,j} + \gamma_1 DR_{i,j} + \gamma_2 FDR_{i,j} + \sum_{i=2}^3 \delta_i DSize_{i,j} + \sum_{i=2}^6 \lambda_i DSector_{i,j} + \sum_{t=2007}^{2009} DYear_{t,j} + \varepsilon_j. \quad (2)$$

In model (2), $x_{i,j}$ represents a composite measure for CSP or one of five CSP dimensional indices. Explained variable $y_{i,j}$ represents either the profitability or risk measures for the firm. $DSize_{i,j}$ is a dummy variable which equals 1 if the sample j belongs to the i -th size ranked portfolio and 0 otherwise.⁹ $DSector_{i,j}$ is a dummy variable that equals 1 if the sample j belongs to the i -th sector and 0 otherwise. Finally, the $DYear_{i,j}$ are the dummy variables for each year (i.e. $t = 2007, \dots, 2009$).

⁸ We use the definition of sectors proposed and used in Kubota and Takehara (2007).

⁹ Definition of sectors are same as in Table 1.

The possibility exists that the explanatory variables in regression model (2) are correlated with the error term through the omission of variables (Wooldridge, 2010) or reverse causality (i.e. financial performance may actually determine the degree to which firms engage in CSP of the firms). To avoid the endogeneity problem that would result from these issues, we employ a two-stage least square regression model. With this approach, we add two instrument variables (Age and NOTSE1) in the first stage, which we expect to be less correlated with the error terms of the dependent variables in the original regression equations. The results of the two-stage least square regression will be presented in Section 5.4.

5. Results and Implications

5.1. Correlations between CSP and CFP

Before the portfolio formation and regression analysis, we simply examine the bivariate correlations among the CSP measures and CFP measures. Table 2 shows the Spearman rank correlations and corresponding statistical significances. As we can see in Table 2, composite CSP (CSP), employee relations (EMP), social contribution (SC) and environment (ENV) are positively correlated with eight measures for profitability ($p < .01$). Similarly, the correlations between security of the firm and product safety (SS) and the various profitability measures are positive and significant ($p < .01$) in most cases. Although internal governance and risk management (IG) is positively associated with multiple metrics for profitability, it is not significantly correlated with market-based profitability measures (HRET and Alpha). These findings provide confirmatory evidence for the competitive advantage hypothesis (H1).

In contrast to their relationships with measures for profitability, most CSP dimensional indices are significantly and negatively correlated with the measures for corporate risk. For example, CSP, SS and ENV are negatively correlated with all risk measures ($p < .10$). Correlations between EMP and the risk measures are similarly negative. Contrary to our expectation, however, the correlations between internal governance and risk management (IG) and accounting-based risk metrics are positive, though not significant. However, IG is negatively correlated with market-based risk measures HVOL and BHML.

These results do not discredit the risk management hypothesis (H2), but do refute the overinvestment hypothesis (H3). Therefore, a firm's engagement in effective CSP may reduce the risk it faces.

[Table 2 about here]

5.2. Differences in Financial Performance: High and Low CSP Portfolios

Table 3 displays the sample split into quintiles in terms of their Composite CSP measures to

test differences in CFP between the higher and lower quintiles. For each year, we rank the sample firms based on their composite CSP scores and construct five portfolios where P1 is a portfolio which contains firms whose CSP score is in the top 20% of the overall sample and P5 is a portfolio which contains firms whose CSP score is in the bottom 20% of the overall sample. The column labelled 'Diff' reports the average CSP difference between P1 and P5, and the column labelled '*p*-value' denotes the corresponding probability values from Welch's two-sample *t*-test.

[Table 3 about here]

The profitability measures seem to increase as a function of CSP, and the differences between the average of profitability measures for firms in P1 and P5 are significantly different ($p < .01$). In contrast, the risk measures tend to decrease as a function of composite CSP. Differences between firms in P1 and P5 are also significant ($p < .01$). In sum, the results reported in Table 3 support the competitive advantage hypothesis (H1) and risk management hypothesis (H2), but refute the overinvestment hypothesis (H3).

5.3. Results from Pooling Regressions

Tables 4 and 5 report results from regression models that include two control variables (DR and FDR), two size dummies, five sector dummies, and three year dummies to evaluate the role of CSP on CFP. To conserve space, we do not include the coefficients associated with the dummies. Table 4 presents the results of a regression equation in which profitability and growth measures served as the explained variables; Table 5 presents the results of equivalent analyses that utilise accounting- and market-based risk measures as the dependent variables.¹⁰

[Table 4 about here]

As shown in Table 4, results of the analyses designed to ascertain the effect of Composite CSP on profitability are mixed. Composite CSP is not significantly related to any profitability measures except cash flow (CFOTA). Further complicating the results, Composite CSP is negatively associated with return on sales (ROS). Whereas cash flows from operations indicate profitability before accruals based earning management, profit on sales is sensitive to cyclical fluctuations. In the long run, CFOTA is a more stable measure of profitability than ROS. Other accounting-based measures (i.e. ROE and ROA) and market-based measures (i.e. five-year historical return on stocks and Jensen's alpha) are not related to composite CSP. These findings are somewhat inconclusive, and thus do not provide definitive support for the competitive advantage hypothesis (H1).

¹⁰ Standard errors are corrected by the methods proposed by White (1980).

In contrast to the profit measures, all measures for risk are significantly and negatively associated with Composite CSP (see Table 5). This suggests that CSR practices are closely related with risk-reduction, thus supporting Hypothesis 2.

[Table 5 about here]

In addition to our results related to competitive advantage and risk reduction, our analyses reveal interesting results related to corporate growth rates and volatility. As demonstrated in Table 4, the composite index for CSP is significantly and negatively related to both sales growth (GSLs) and growth in total assets (GTA). These results suggest that there is a trade-off between the extent to which a firm engages in CSR practices and its ability to grow. That said, market and firm volatility are also negatively related to both measures for firm growth ($p < .01$; see Table 5). These results suggest that CSR practices require corporate resources (both financial and logistic) to secure future opportunities for growth. However, the short-term costs associated with investment in CSR-related activities could be gradually mitigated by corporate profitability and growth in the long run.

In addition to analysing the effect of the composite CSP index on various CFP measures, we also explored the respective effects of the index's individual components. All the components, with the exception of internal governance (IG), are negatively related with risk measures. This indicates a general tendency for there to be a negative relationship between CSP and perceptions of firm risk.

Analogous results on profitability are more inconclusive and require more detailed synopses to explain the respective influences of CSP components. It is to those synopses that we now turn.

First, employee relation (EMP) is positively related to all profitability measures except GSLs. EMP is significantly related to only two accounting-based measures (ROE and CFOTA); but is significantly related to both of historical return (HRET) and Jensen's alpha ($p < .05$). Furthermore, EMP is significantly and negatively associated with all risk-related measures ($p < .05$). Given these findings, investors may look to employee relations as an indicator of risk associated with a given firm.

Second, in contrast to EMP, social contribution (SC), and internal governance (IG) are largely negatively related to market-based profitability measures. In addition, neither SC nor IG is significantly associated with accounting-based measures, with the exception of ROS. Analyses of the effect of firm security and product safety (SS) on that firm's accounting-based profitability show mixed results, but similar analyses on market-based profitability measures reveal a number of significantly negative relationships. In light of these findings, the market may perceive the implementation of practices related to SC, SS, and IG as cost-spending activities designed to induce profitability in the long run.

Third, environmental activities (ENV) are strongly associated with risk measures. Specifically, the coefficients associated with the risk measures are more pronounced in models that account for ENV. However, results from analyses on ENV's influence on profitability are not consistent. We interpret these results to mean that social reputation and market perceptions are heavily contingent on a firm's environmental preservation policies. As such, it is vitally important for firms to engage in sound environmental preservation practices to promote sustainability of the company, regardless of the short-term costs.

Finally, some of our control variables are significantly associated with CFP measures. As shown in Tables 4 and 5, debt ratio (DR) is negatively related with the profitability measures and largely positively related with risk measures. As expected, the foreign dependency ratio (FDR) is positively associated with both profits and risks.

5.4. Results from Two-Stage Least Square Regressions

The regressions described above are designed to test the influence of CSP on CFP while not controlling for the potential for endogeneity among the variables. To control endogeneity, we use two instrumental variables—age of the company (Age) and the company's presence/absence on First Section of the Tokyo Stock Exchange (NOTSE1). These variables were chosen as instruments because they are highly visible characteristics of our sample firms. Thus, they can be used to evaluate sustainability and quality of the firm, and may be confused with exogenous predictors in the observed period. Table 6 presents results of two stage-least square regressions that incorporated the instrumental variables. After controlling endogeneity, the results are significantly different.

[Table 6 about here]

Column 1 of Table 6 depicts the positive relationships between Composite CSP and the three accounting-based profit measures and historical return of stocks, as well as the negative relationships with all risk measures except HML beta (BHML). These results support both the competitive advantage hypothesis (H1) and the risk-reduction hypothesis (H2).

Regarding CSR attributes, Columns 2, 3, and 6 respectively show that employment (EMP), social contribution (SC) and environment (ENV) are not as clearly related with profitability as determined by accounting-based metrics, but are significantly and positively associated with market-based profits, even after controlling for endogeneity by employing the aforementioned instrumental variables. These results suggest that in addition to engaging in socially responsible activities related to EMP and ENV, engaging in activities related to SC can facilitate the achievement of a competitive advantage in the market.

EMP, SC, and ENV are strongly and negatively related to all risk measures except BHML. The

coefficients associated with these activities are so pronounced that these components of CSR may be useful tools for risk management. As such, both H1 and H2 are supported.

In contrast, Columns 4 and 5 show that although security and safety (SS) and internal governance (IG) are significantly and positively related to accounting-based profit measures, they are negatively related to market-based measures for profitability. Further, SS is significantly and positively associated with corporate growth. These results imply that SS and IG are not only determinants of profitability but also growth. The respective influences of SS and IG on risk are less obvious. Given these findings, it seems as though the implementation of activities associated with both SS and IG may provide a competitive advantage for producing profits, but they also represent critical costs that companies must incur to effectively manage risk.

Finally, as shown in Table 6, BHML is positively related to Composite CSP and CSP dimensional indices. In contrast, various components of CSP are negatively associated with historical return volatility (HVOL). Petkova and Zhang (2005) point out that previous studies have failed to identify a positive relationship between HML beta and expected market risk premiums because they gauge aggregate economic conditions using *realised* market excess returns.

In sum, after controlling for the potential influence of endogeneity, the results support both the competitive advantage hypothesis (H1) and the risk-reduction hypothesis (H2). So they refute overinvestment hypothesis (H3). Our results suggest that investors tend to focus on EMP, SC, and ENV to determine the risk of investing in a given firm. However, our results further suggest that investors should also consider SS and IG as they may provide firms with competitive advantages in the market.

6. Concluding Remarks

This research represents a first attempt to examine the mechanisms by which CSP is associated with CFP in Japanese corporations. We found CSP impacts on CFP in terms of both profitability and risk of Japanese firms in the late 2000s. Through the regression analysis, we confirmed that CSP is positively associated with profitability (i.e. the competitive advantage hypothesis) and negatively associated with risk (i.e. the risk reduction hypothesis).

Among the various CSR attributes, investors focus on employment, social contributions, and environmental protection as valid indicators of limited risk. However, the competitive advantages offered by implementing security and safety and effective internal governance may also be useful. It suggests each dimension of CSR influences on CFP through different channels related to stakeholder relationships.

We also found that limited information availability for the various CSR dimensions may bias market perceptions of a firm's CSR practices. In this way, strategic stakeholder management is a

key determinant of efficient value creation for a corporation. Information related to the various aspects of non-financial information on stakeholder relations is critical for identifying channels and mechanisms that link CSP with CFP. Because this information is largely unavailable for investors, our research reveals insufficiencies in corporate disclosure among Japanese firms.

Ultimately, the results of this study suggest that managers who seek to fulfil their social responsibilities have reduced perceptions of long-term risk in their firms. In contrast, firms that are less conscious about long-run stakeholder management may fail to effectively manage perceptions of risk. Therefore, firm managers in an increasingly globalised world must emphasise, develop, and implement successful CSR-related practices. Further non-financial disclosure and accountability are required.

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Table 1. Number of Sample Firms

Sector	2007	2008	2009	2010	TSE1	TSE2	Others	Total
Consumption Goods	158	161	168	184	164	22	34	220
Investment Goods	246	267	284	294	266	33	55	352
Services	148	151	194	214	155	29	79	259
Transportation	19	20	19	21	19	2	4	25
Utility	10	11	11	12	12	0	0	12
Real Estate	18	23	18	20	20	4	5	29
All Sectors	599	633	694	745	636	90	177	897

Note: Number of firms listed on Tokyo Stock Exchange 1st Section (TSE1), on Tokyo Stock Exchange Second Section (TSE2), and other stock exchanges in Japan (Others) are reported here. Firms listed in the four right-most columns are not duplicated, and a single firm can be counted a maximum of four times in our sample period.

Table 2. Spearman Rank Correlation between CSP and CFP Variables

	CSP		EMP		SC		SS		IG		ENV	
ROS	0.148	***	0.103	***	0.107	***	0.115	***	0.055	***	0.120	***
ROE	0.189	***	0.153	***	0.165	***	0.094	***	0.075	***	0.157	***
ROA	0.160	***	0.102	***	0.120	***	0.116	***	0.073	***	0.127	***
CFOTA	0.225	***	0.136	***	0.160	***	0.205	***	0.080	***	0.190	***
GSLs	0.092	***	0.066	***	0.123	***	0.011		0.038	**	0.085	***
GTA	0.112	***	0.071	***	0.132	***	0.053	***	0.051	***	0.083	***
HRET	0.080	***	0.098	***	0.057	***	0.058	***	0.006		0.087	***
Alpha	0.132	***	0.135	***	0.100	***	0.071	***	0.016		0.130	***
ROSSD	-0.075	***	-0.055	***	-0.070	***	-0.032	*	0.011		-0.109	***
ROESD	-0.054	***	-0.022		-0.030		-0.068	***	0.012		-0.072	***
ROASD	-0.072	***	-0.053	***	-0.059	***	-0.038	**	0.016		-0.111	***
CFOSD	-0.150	***	-0.133	***	-0.136	***	-0.077	***	0.004		-0.172	***
GSLSSD	-0.054	***	-0.040	**	-0.015		-0.090	***	0.017		-0.060	***
GTASD	-0.037	*	-0.049	**	0.006		-0.063	***	0.015		-0.039	**
HVOL	-0.095	***	-0.031		-0.089	***	-0.095	***	-0.029		-0.080	***
BHML	-0.184	***	-0.133	***	-0.161	***	-0.087	***	-0.084	***	-0.160	***
lnTA	0.619	***	0.388	***	0.569	***	0.320	***	0.228	***	0.609	***
DR	0.039	**	0.058	***	0.070	***	-0.051	***	0.006		0.057	***
FDR	0.328	***	0.260	***	0.237	***	0.258	***	0.073	***	0.316	***
Age	0.244	***	0.248	***	0.199	***	0.123	***	0.004		0.275	***

Note: CSP = Composite CSP; EMP = Employee relations; SC = Social contributions; SS = Security of the firm and product safeness; IG = Internal governance and risk management; ENV = Environmental preservation; ROS = Return on sales; ROE = Return on equity; ROA = Return on assets; CFOTA = Cash-flows from operations to total assets; GSLs = Past five year average growth rate of sales revenue; GTA = Past 5 year average growth rate of total assets; HRET = past 60 months average stock returns; Alpha = Jensen's alpha estimated based on past 60 months stock returns; ROSSD, ROESD, ROASD, CFOSD, GSLSSD and GTASD denote past five year standard deviations of ROS, ROE, ROA CFOTA, GSLs and GTA, respectively; HVOL = Past 60 months historical volatility of stock returns; Beta = Historical beta estimated from past 60 months stock returns; lnTA = Natural logarithm of total assets; DR = Debt ratio; FDR = Foreign dependency ratio; Age = Number of years in business.