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Determinants of CSR and its Economic Consequences

기업의 사회적 책임과 그 경제적 귀결

서울대학교 대학원

박 청 은

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Determinants of CSR and its Economic Consequences

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Determinants of CSR and its Economic Consequences

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Determinants of CSR and its Economic Consequences

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Abstract

Corporate Social Responsibility has traits that are innately qualitative, as it addresses beyond what sheer numerical figures would portray in financial statements. In the advanced economy, firms comprehensively respond to the society with upscale CSR performance rather than a simple reporting of profits. This paper ventures into the determinant of CSR and how CSR affects firm economic performances. By incorporating major financial accounts within empirical analysis, the dynamics of CSR in terms of concrete financial factors are manifest, and in this way we look into the determining mechanisms of accounting measures. Observing Tobin's Q and portions of foreign equity holders renders economic consequences of CSR-practicing firms visible. Using a large sample of Korean firms for the period of 2003-2009, we find that large firms, R&D oriented firms, and good performing firms are more likely to invest in CSR while financially distressed firms reduce investment in CSR. Further, we find that

foreign institutional investors invest in firms with greater CSR investment and the market positively reacts to CSR.

Keywords: Corporate social responsibility; Economic consequences; firm value; Tobin's q; Foreign equity investments

1. Introduction

The goal of this paper is to examine the determinants of CSR (Corporate Social Responsibility) and its economic consequences among Korean firms. CSR is the firms' various performances with the notion of betterment in terms of corporate soundness, business justice, and creation of the advanced earth society. Practicing of CSR performances demonstrate the philosophies of firms and further, the potential of management as the value increasing agent in the business market. Because CSR is qualitative in nature, quantitative measures to estimate CSR has often been fractional at best, and the value-increasing aftermaths of CSR also remains in the hazy domain of studies.

Nevertheless, firms are increasingly adhering to social causes and corporate aspiration to align the firms' products and services with the best there can be is generating many good examples of CSR in various industries. Indeed nowadays, exaggerated advertisements and aloof hearsays no longer represent the true value of companies. Accordingly, business frauds, window dressing, bogus agenda, and misunderstanding of consumers' interests are detrimental to the conglomerates and just the fact that the investor relation materials of companies look nice show little about how well the company is functioning in terms of social responsibility and justice. This forms another adequate foundation for the corporate social responsibility being at the center of business performances.

In spite of this, it is surprising that even in advanced economies the business ethics and justice are neglected more often than what common sense would estimate and the high-end traits of business are wholly conspicuous when qualitative foundation of CSR rationale reinforces the corporate performance. Now CSR is a luxury, and Louis Vuitton may brand itself to be the best all the more as the consumers align CSR performances with willingness to buy more bags (A Louis Vuitton bag with a side of CSR, Forbes, [July, 2010]). In 2004, Gucci brought forth its environmental efforts with the Corporate Responsibility Policy by claiming that Gucci would save 1,400 tons of paper and optimize its logistics utilizing less polluting vehicles. Today, the production of Gucci shoes, ready-to-wear, silks, leather goods and fine jewelry are CSR certified (SA 8000).¹

Various prior literatures exist for portraying CSR performance in corporate settings. From the classical but often-refuted assertion of Friedman that corporations are for profits CSR literature have evolved into many versions. Prior literatures suggest motley paths in describing CSR. In a common sense description, while social responsibility entails preconceptions or biases, parts of literatures suggest that CSR

¹ On practicing CSR, Frida Giannini, Gucci's Creative Director stated, "Nothing is sacrificed creatively when you work with environmentally friendly materials." Gucci's current new packaging is better for the world. The Forest Stewardship Council can certify that no paper that is used by Gucci comes from an endangered forest. The fresh approach to recycling will include in future the use of other biodegradable materials, such as corn, bamboo and cotton. Patrizio di Marco, President and CEO of Gucci, said "The world's leading brands are rightly judged today, not just on the quality of their products and services, but also on the way they act in the community and towards the environment. Since 2004 Gucci has volunteered for assessment to qualify for the certification of Corporate Social Responsibility across its entire supply chain." (*Gucci Online Boutique*)

encompasses categories of social activities for developed countries mostly, across ethical, economic, legal, and volitional domains (Carroll [1999]). Firms no longer afford to overlook CSR as it is not a “hypocritical window-dressing,” but rather a detective tool to capture window-dressors. Beforehand literatures view CSR regarding externalities from industry (Hackston and Milne [1996]), customers (Vogel [2005]), activist groups (den Hond and de Bakker [2007]), litigation (Dawkins and Lewis [2003]), and communities (Boehm [2005]). Complex characteristics of CSR may bring aspects that are as diverse as its complexity but mainly business people are compromised by how exercising social good would promote the higher level of profits and thus reap more money. A simple look at Walmart with the social responsibility policy would provide three aims of full supply from renewable energy, generating zero waste, and selling more products that sustain people and the environment (Time Business, [2012]).

Still, CSR is somewhat of vague traits as most of the descriptions on CSR are quite partial at best and often times, the positive, negative, or even mixed indications are provided for coefficient analyses of a few geographic regions. For example, stating that the varying levels of orientation does not correlate with performances, Aupperle, Carroll, and Hatfield [1985] spoke of no relation between social responsibility and profitability.

Nevertheless, literatures centers around how CSR affects the corporate performance while not much is explained in terms of determinants of CSR. While multifarious sides including studious and practical parties started to argue benefits of

CSR, still the influences have a few solid foundations, especially from the viewpoints from CSR conducting companies (Lo and Sheu [2003]). Obviously, studies focusing on clarifying factors that bring about CSR are not enough to complete the wedge in studies that tend to be skewed to a number of directional points due to the vagueness. This paper looks forward to bridging the extant gap in current archives by adding determinants of CSR in the recent sense, and the relation between CSR and firm value, while regressing financial accounts, market valuation terms, and foreign equity investment variable estimates.

As the fast-paced dynamics and abundant financial transactions abound, the Korean market, where domestic investors have an edgy, foreign equity investors are at a disadvantage due to stock prices moving more in the direction of trade value of foreign equity investors than of domestic investors (Choe, Kho, and Stultz [2005]). This explains why foreign investors buy at higher prices and sell at lower prices.² As foreign equity investors are at disadvantages in the domestic market, to derive reliable rates of return along with proper valuation, foreign investors may look for plausible proxies, besides mere stock price forecasts, that the invested companies are sound, thus being able to render profitable equity investments with less volatility. In this sense, CSR firms may draw more portions of foreign equity holdings, as the disadvantaged foreign investors in the domestic market depends upon the proxies that buffer the

² Choe, Kho, and Stultz (2005) explain the edgy of domestic investors over foreign equity investors controlling for firm characteristics and market conditions, the effect is more prominent for domestic institutions, than to domestic individual investors.

volatile price movements with the qualitative corporate merits.

Conducting multivariate analysis upon multidimensional regression settings, we find that corporate intangible assets, firm size, profitability, dividend payouts, and research performances are significant determinants of CSR for firms in Republic of Korea. Consequently, two economic consequences, firm valuation and portion of foreign equity investors, are influenced by CSR performances at a great magnitude in the domestic market rendering statistically significant findings. In other words, we find that foreign institutional investors invest in firms with greater CSR investment and the market positively reacts to CSR.

Comprehensively, this paper sheds light on our understanding of CSR investment in Korean firms.

2. Hypothesis Development

2.1. Determinants of CSR

Firms are profit generating entities, and the seemingly incongruent goals of care for society and assigning more amounts in income accounts are better elaborated when we venture into determinants of CSR. Managing companies are aligned with various interest parties such as creditors, stakeholders, and managers. As such, several components reach to CSR, which means studies require encompassing view on the latent determinants. Is the socially sound the financially sound? What do financial

statements tell about the firms in terms of corporate social responsibility? From which point of financial traits does the CSR performance start to emerge or become a viable option? Casually glancing at exaggerated or truncated showcases of corporate statements would not sufficiently tell what firms do.

Despite its potentials for abundant sources for study, little postulation exists for what factors may reach to higher CSR points besides the sheer implications on the effects of CSR on corporate performances. The consensus arching various empirical papers demonstrates no definite correlation, fragmentary and transient at best to describe firms in domestic markets. McWilliams and Siegel [2000] studied precisely the neutral impact on corporate financials when controlled for R&D investments, noting misspecified regression in prior literature without R&D variables. Martin and Moser [2011] explains that costly and non-profitable green investments offsets the cost effects on financial statements as shareholders tend to bear the loss, a partial delineation still.³

Addressing the endogeneity problem in many cross-firm empirical studies, Hong, Kubik, and Scheinkman [2011] models spending on goodness when companies are in financial constraints. Around the technology bubble, Campello and Graham [2007] illustrated how the ease of financial constraints boosts the level of investments of non-technology firms. To buttress the reasoning, Hong's paper provides for the

³ Potential investors are more likely to focus on societal benefits of green investments rather than costs to the company. Moser also demonstrates that 'investors react less favorably to no report than to both disclosure that a green investment was made and to disclosure that no green investment was made'.

evidence that relaxation of financial constraints following the dot-com bubbles during 1996-2000 increased the CSR scores for the previously constrained dot-com companies. In their reasoning, firms exercise goodness after it has generated positive output. Financially-less constrained firms indeed have higher goodness scores, using both the measures of corporate goodness and all financial constraint measures. Following Baker et al. [2003], the variable KZ score for each firm/year as linear combination observes the cash flow, cash dividends, cash balances, leverage, and Tobin's Q. However, the formula developed in Hong's paper lacks the full-fledged consideration for liquidity in that the regression formula merely addresses the financial constraints at a glance, while this study cannot rule out the possibility that the literature would be meticulously complete when liquidity in a universal sense may be defined as the determinants of CSR among other plausible variables.

Empirically, a step change for the current CSR movement is that firms tend to take a holistic view. Alternatively, Moser [2012] postulates that by considering both the shareholder and non-shareholder factors in the CSR studies theories may be made more plausible. In accordance with this move, Unilever's the Sustainable Living Plan assumes that the foregone paradigm of CSR focusing on a number of categories are not as valid a scheme as before, and while the firm sees difficulty of getting shareholders a broader picture, it seems that markets progressively takes CSR performances into account to avoid Friedman-esque misunderstanding. (Unilever's Paul Polman: challenging the corporate status quo). In that sense, considering the pace of change and globalization in the Korean market economy, finding out statistical interpretation on

various determinants would contribute to the CSR studies.

As there are many independent variables that together contribute to the higher CSR scores, various elements stretch over the empirical elaboration while the complexities in domestic market since the 1956 launch of Seoul stock market are not properly ventured into in the form of explicable analysis. Naturally, corporate social responsibility panorama shifts the focus on shareholders to a broader scope of interest parties while the value pie does not necessarily shrink in the market (Becchetti and Ciciretti [2009]). With the dynamics of the domestic market that sees unceasing innovation and challenges it seems imperative that we require the updated empirical consideration of various variables.

Translucent and loftier quality in financial accounting betters the firm economic performances through a governance role and improves investment efficiency (Bushman and Smith [2001]). As CSR forms an investment paradigm that critically improves the investment efficiency in corporate settings of CSR firms, we expect that more clarification as to the financial accounting determinants depict the higher efficacy in CSR, thus higher CSR points.

2.2. Economic Consequences

Valuation and CSR

In an advanced society CSR is the value-loaded corporate performance. To answer how that is the case in a competitive markets that express performance in

quantitative jargons, Lo and Sheu [2007] specified “Corporate Social Responsibility” as a business approach that promotes long-term equity holder value by enfolded opportunities and managing risk from economic, environmental and social dimensions (Dow Jones Sustainability Indexes). Shah, Morgan, and Rochlin [2006] explained that firms will not participate in CSR if it doesn’t augment the value. Expensing on CSR rewards companies since it reduces the litigation fees, judicial tests, and cost of capital. The rational market works to quantitatively respond to the qualitatively sound performance for community when companies exert efforts on corporate social performance. From earnings management perspective, CSR is again a good maneuver for raising ethical and sound financial corporate performance since CSR practicing firms are less inclined to earnings manipulation and polishing of discretionary accruals (Kim et al.[2012]).

Dhaliwal et al. [2011] examines the cost of equity and social performances. Firms with high cost of equity upon initiating the socially sound performances tend to be equipped with the lower cost of capital in the subsequent year. Also, socially justice-minded firms tend to raise more equity capitals. Finally, CSR performances attract more analyst coverage with less analyst forecast errors and dedicated institutional investors.⁴ Also, McDermott [2011] clarified that the higher quality financial reportings tend to increase the CSR efficiency as it assuages the agency problem by curbing managers from participating in activities that caters to private interests. In sum,

⁴ Plumlee [2010] examines the environmental disclosure quality and firm value. Voluntary disclosure is negatively associated with firm value when it is subjective.

high quality financial reporting aids the shareholder interests, thus providing the channel for CSR efficacy.⁵

Barber [2006] mentions social activism that shareholders and investors urge corporations to add to the socially responsible scores while agency costs may harm shareholders' or investors' portions. According to Barber, this explains for why companies are constantly working on socially responsible campaigns while the current literatures are not definitive as to the exact efficacy of CSR upon the financial performance of firms. Suggesting how the costs may actually boost the value, Pava and Krausz [1996] devised hypotheses with empirical finding that firms perceived as socially-responsible work as well as or better than their counterparts that do not engage in costly social activities. Becchetti and Ciciretti [2009] demonstrated that socially responsible firms show risk adjusted returns not significantly less than control firms, but with less risks in the market. Heinkel et al. [2001] showed that non-ethical firms are endowed with higher cost of capital. Thus, adhering to the right way avoids the unnecessarily high cost of capital influencing the free cash flow amounts. Lambert, Leuz, and Verrecchia [2005] briefed that more informing of corporate performances influences the cost of capital. Information contrives either cost of capital or business volition. Choe et al. [2010] measured stakeholder-weighted CSR and verified that CSR is important in terms of CFP (Corporate Financial Performances), which adds up to the

⁵ According to McDermott [2011], absent investment efficiency, managers tend to over-invest that harms the shareholder interests and value rather than increasing the aggregate corporate pie. The over-investment usually is a form of managerial entrenchment.

value.

Ethical investments require balanced view upon the accountability and verification of environmental and societal performances of firms. Taking Tobin's q ⁶ as the proxy for firm market value, Lo and Sheu [2003] found that corporate sustainability is strongly associated with market value.⁷ The result shows robustness on control variables (size, ability to access financial markets, leverage, profitability, sales growth, investment growth, industrial diversification, credit quality, industry effects and time effects). Attenuating the potential endogeneity problem by lagging independent variables found no significant implications, which bolsters that corporate sustainability increases market value. Still, the result is subject to the limits in plausibility as variables lack the quick asset perspectives.

Deriving CSR scores from CLSA measures in Asian emerging markets, Cheung, Tan, Ahn, and Zhang [2009] also has shown a positive association between CSR and CFP. However, this paper begets limited implications in that CLSA measure considers merely firm disclosure policies and doesn't incorporate firm performance or improvements. Additionally, in regards to CFP, Chun and Kim [2011] incorporated ROA and Tobin's Q as proxies for corporate financial performance. However, ROA as a measure for financial outcomes has the shortcomings in the sense that it is more of a

⁶ The perfect capital market assumption begets the notion that the price of security is the best unbiased estimate, and Fama [1970] studies on tobin's q in regards to valuation for elucidating efficient market behaviors.

⁷ The sample was limited to a geographic region, and the scope of industry excluded financial arena.

static measure on balance sheet compared to what Tobin's Q gauges with its consideration encompassing market values, equities, and creditors' portion.⁸ Prior literatures are not consistent in describing CSR and Tobin's Q as the measure of CSR lacks compendious standards and variables used are just conveniently described in a specified direction. Higher market valuation is more plausible when corporate cost of equity is low, and CSR practicing firms than non-CSR firms tend to be assigned with lower cost of equity capital (Dhaliwal et al [2011]). Following Dhaliwal et al (2011), we generate the following hypothesis.

Hypothesis 1. Corporate Social Responsibility scores are positively associated with firm value

CSR and the Portion of Foreign Equity Investments

In the Korean corporate environment, foreign portions of equity in domestic companies gained substantial attention as the phenomenal events such as Carl Icahn's attempt towards the shares of KT&G spurred the debate on the issue of foreign holders in Korea.

Foreign equity holders infuse investments in the Korean market, and they put in the management role or dividends in their asset baskets. In any case, the volition towards social soundness in Korea may not directly address their interests except when

⁸ Chun [2010] wielded lagged variables of leverage, assets, industry dummy to assess peculiar characteristics contingent on KSIC (Korean Standard Industrial Classification), and error terms.

CSR rewards foreign equity holders through substantial amounts of dividends. Naturally, as the business expands enough to encompass the globe, today's investors are not limited to domestic shareholders, and the composition of shareholders within corporations may influence the way the business scheme unfolds. The prior literatures have elaborated on paradigms that shareholders influence management customs. For example, shareholder structural composition alters firm-level decisions in terms of R&D (Baysinger et al. [1991]) or capital structure (Chaganti and Damanpour [1991]). While satiating the financial aims, managers tend to avoid riskiness in investments, such as R&D innovation (Hayes and Abernathy [1980], Hoskisson and Hitt [1988], Hoskisson, Hitt, and Hill [1991]). In the midst of this complexity is the superiority in internal capital, which in this way makes a stark contrast to external capital. For example, Williamson [1975] favored the multidivisional (M-form) conglomerates incorporating big equity markets to a mediocre or 'miniature' capital market.

Given the significance of the existence of valid equity holders, how internal capital investors invest in companies is a matter worth considering, and besides buying stocks, corporate social activities can make an option in the form of "investment" (McWilliams and Siegel [2001]).⁹ Certainly, as companies are engaged in business around the globe, taking the foreign investor variable into account would create the

⁹ The McWilliams and Siegel elaborate the CSR as an investment and acknowledge further that empirical studies are needed. Input for socially sound activities, they assume, are special equipment, machinery, and real estate devoted to CSR (Capital), purchase of inputs from suppliers who are socially responsible (materials and services), staff to implement CSR policies (Labor), which explains why CSR is an investment.

clearer statement of CSR. Chapple and Moon [2005] remarked that globalization promotes CSR engagement in Asia, but some antisocial behaviors arise in western investments scheme (Davis and Kim [2007]).

The earlier statistics by the Bank of Korea in 2009 specified that capital supplies to domestic firms are quite from the EU (32.9%) and the U.S. (20.2%). While Brancato [1997], Chapple and Moon [2005] assumed that countries apt to pursue active CSR, that foreign shareholders from these countries are likely to show similar behavior doesn't have much solid grounds, which implies that it needs further stoical yet designable exploration.

Jeon et al.[2011] found that foreign investors with substantial share possessions (more than 5%) increase payout ratio, and this is one criterion for CSR in Korea. Add to this, with the financial crisis looming over the corporate business in late 1990's, the formerly superficial attention towards the society shifted the degree of activism upwards for the case of domestic companies (Choi and Aguilera [2009]). After surveying countries in Europe, North America, and Asia, Welford [2005] noted that the profound development in economy may also indicate the higher level of corporate social responsibility and the tradition of democracy contributes to heightening the CSR scores. Nonetheless, assuming that foreign investors can possibly force Korean firms to establish transparent corporate governance and consequently encourage them to engage in CSR to some extent (Oh, Chang, and Martynov [2011]) are of weak foundation as it makes an obscure addendum upon what is already a cluster of non-substantial elements or complex mechanisms.

Siegel and Vitaliano [2007] regard CSR investments as a way for companies to create business edge and signal their credits. If this depicts management right, foreign shareholders incorporate the CSR activities of companies to gauge if those entities are reputable.

However, the skepticism that arises as the implausible discretionary setting of supposed correlation between CSR and the portion of foreign shareholders leaves space for disquisition. With the mounting roles of conglomerates in the corporate world, the more plausible assertion should be that foreign investors look for companies with sound CSR scores as CSR performance emerges as the proxy for the management quality. Concurring with this thought, this paper assumes that Firms with higher CSR scores have more portions of foreign shareholders.

The present financial laws state that disclosure is comprised of special disclosures for current and future investors, and as for the reports of big shareholdings, the proportion usually refers to over 5 % of shares. The term 5% is an often cited proportion, as the public purchase of securities which the outside market purchase of securities retroactive up to 6 months since the day of purchase from more than 10 investors consists of the summed up amounts of over 5 % of securities that the designated party as well as investors in special relations have (Financial Law Article 133, Clause 3). Dedicated institutional investors are more likely to play monitoring and governance roles (Bushee [1998]). Superior CSR performances attract dedicated equity investors who act on monitoring and governance roles with broader investment horizons (Dhaliwal et al. [2011]). Embracing the global business environment this

study explores the influence of CSR upon foreign ownership among other institutional ownerships in the domestic market. We generate the following hypothesis:

Hypothesis 2. Corporate Social Responsibility scores are positively associated with foreign institutional investors' equity holdings.

3. Research Design and Data

3.1. Research Design

To depict corporate social responsibility using financial accounts, we create regression formula that considers both the practical and classical sides of financial firm performances. This paper assumes control variables to be the potential determinant variables of CSR. Interestingly enough, statistically illustrating complex mechanism of CSR requires consideration for control variables many prior literatures fragmentarily have tested in the regression. Prior papers estimate the effects of CSR on the market pricing through various regression phrases, which normally entails regressing of ROE, Company Size, Assets, Revenues, and Leverage. However, since the market also incorporates intangible aspects of management, the gap arising from endogeneity in formulaic tests should be ameliorated by specifically setting the intangible assets as an independent variable in the formula. Stepping further from that on, this paper incorporates control variables such as liquidity measures to contribute to reinforcing

the explicatory power through statistical means.

As the correlated omitted variables incur regression errors, various control variables are designed to enter the formulaic strings. Based on the notion in Hong, Kubik, and Scheinkman [2011], common yet plausible control variables measuring financial performances are utilized in this paper. That includes the previously noted ROA, Company Size, and Leverage. To avoid the random assigning of control variables without regards to the qualitative nature of CSR, we also include intangible assets and focus more into the qualitative assets side of firms thus including Current Ratio, Sales Growth, and R&D variables as in McWilliams and Siegel [2000] as control variables. This paper discusses the following control variables: TOTAL is the total CSR scores of sample firms. INTANGIBLE is the intangible assets of sample firms. Incorporated in intangible assets are corporate intellectual property (items such as copyrights, trademarks, patents, business methodologies), goodwill and brand recognition, commonplace examples of intangible assets. A natural flow of thought would be that firms with more intangible assets tend to be in CSR performance more as firms exert efforts to exercise the best. MARKETCAP is the magnitude of market capitalization in the stock market. Various prior literature include firm sizes as control variables and market capitalization in many senses is a good proxy for corporate size as it measures the scope of management at the stock market level. This paper assumes that more market capitalization is associated with higher CSR scores. CURRENTR refers to the corporate liquidity. This paper predicts the positive estimate for liquidity assuming that more liquid firms have sufficient flexibility to act on CSR performances.

Variable ROA is the profitability ratio of return on assets that looks at the profitability of CSR practicing firms. SG is the sales growth rate which in this paper takes part in depicting the dynamics of management status across the lapses of time, we incorporate SG variable. LEV measures the financial structure of sample firms to look into how CSR may be influencing debt and equity level. Cost of equity capital tends to increase in the leverage ratio (Fama and French [1992]). This paper includes dividend dummy to see whether firms pay out dividends since the dividend amounts may redundantly capture size effects, and SRND is the R&D expenditures scaled by assets. KZ is a financial constraints measure (Baker et al. [2003]). We create the regression formula for determinants of CSR as following:

$$\begin{aligned} \text{TOTAL}_{i,t} = & \beta_0 + \beta_1 \text{INTANGIBLE}_{i,t} + \beta_2 \text{SIZE}_{i,t} + \beta_3 \text{CURRENTR}_{i,t} + \beta_4 \text{ROA}_{i,t} \\ & + \beta_5 \text{SG}_{i,t} + \beta_6 \text{LEV}_{i,t} + \beta_7 \text{DividendDummy}_{i,t} + \beta_8 \text{KZ}_{i,t} + \beta_9 \text{SRND}_{i,t} + \varepsilon \end{aligned}$$

This paper conducts comprehensive research analysis to elucidate what factors play a part in composing CSR scores. To filter out spurious variables in providing firm valuation analysis, 2SLS test decomposes the several control variables, remove colinearity, and stabilizes the error term analysis. Because there are already secondary materials published via other academic institutions, clichéd mimicking is not required for consideration in this paper. 2SLS analysis formula is based on equations by Choi, Kwak, and Choe [2010]. As McWilliams and Siegel [2000] found a neutral impact on corporate financials when controlled for R&D investments, we assume including R&D prevents the overstatement of analysis (Theil [1971]), while removing

endogeneity by demonstrating value creating role of R&D in the second stage formula. Plus, in terms of profit motivation, Lev et. al [2009] state that corporate responsibility is positively aligned with sales, since the corporate soundness increases demand. By this reasoning, we incorporate sales growth $SG_{i,t}$ and lagged sales growth $SG_{i,t-1}$ considering the significance of sales and the time horizon span of CSR.

We conduct three first stage regressions to test for 2SLS analysis, and create the three second stage regressions each corresponding to the three first stages.

1st stage Equation 1-1:

$$TOTAL_{i,t} = \beta_0 + \beta_1 TOTAL_{i,t-1} + \beta_2 ROA_{i,t} + \beta_3 DividendDummy_{i,t} + \varepsilon$$

1st stage Equation 1-2:

$$TOTAL_{i,t} = \beta_0 + \beta_1 TOTAL_{i,t-1} + \beta_2 DividendDummy_{i,t} + \varepsilon$$

1st stage Equation 1-3:

$$TOTAL_{i,t} = \beta_0 + \beta_1 TOTAL_{i,t-1} + \beta_2 ROA_{i,t} + \varepsilon$$

2nd stage Equation 2-1:

$$Q_{i,t} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 SG_{i,t} + \beta_3 SG_{i,t-1} + \beta_4 SRND_{i,t} + \varepsilon$$

Oh, Chang, and Martynov [2011] attempt to regress firm age, log of sales, return on assets, foreign shareholdings, leverage, institutional ownership, and managerial ownership. However, institutional managerial doesn't cast statistical significance as it is not of concern for collected materials of foreign shareholdings in Korea whether the equity possession is of managerial ownership or institutional ownership. Years of business operation is irrelevant as it is an outmoded discussion terms, and quite not in the domain as to financial qualities of firms. This paper tests both sides of foreign equity holdings and corporate social responsibility, and clarifies

that proportion of foreign ownership is dependent on CSR. It differentiates from the prior literature by placing foreign equity holding as the dependent variable determined by CSR performances. $\ln SALES$ represents the log of sales. All other variables in the following formula are described in Appendix 1.¹⁰ We expect that the sound societal performance on the side of corporations tend to upgrade the composition of foreign equity holdings.

$$FHOLDING_{i,t} = \beta_0 + \beta_1 \ln SALES_{i,t} + \beta_2 ROA_{i,t} + \beta_3 TOTAL_{i,t} + \beta_4 LEV_{i,t} + \varepsilon$$

3.2. Data

All our samples are the data of 200 Korean firms listed on KRX (Korean Stock Exchanges) of six years from 2003 to 2009, and the final sample consists of 2,970 firm year observations.

The CSR ratings overhauling social responsibility performance in the East Asian economy may be diverse, but we use the comprehensiveness in the KEJI index that makes it an adequate social responsibility term for the key fabrication in the Korea business market. The reliability of the KEJI Index is manifest for its 20-year-long history of publication since its inception in 1991 for business morale as well as its extensive usage. For the data on portion of foreign shareholders over the 5% holdings¹¹,

¹⁰ The appendix to this paper demonstrates the variables considered in the empirical analysis and also the specific traits of CSR measures.

¹¹ This paper gratefully acknowledges that data on foreign investors in the domestic market is provided by Jinha Park (Ph.D., Seoul National University) and Daehyun Kwon (Ph.D., Seoul

manually collected business reports from the data in TS-2000 and data from KIS-Value while the classification of institutional and individual investors are not provided. Prior studies on foreign equity holdings are nearly about whether foreign investors over the 5% holdings exists, and the purpose of foreign investors whether it be a simple possession or management participation is uniformly to accost fulfilling returns from investments (Kwon and Park, [2012])

Following Choi, Kwak, and Choe [2010] and Kim and Chun [2011], the study wields a proxy supplied by Korea Economic Justice Institute (KEJI) index. The index is the Korean version of the CEP index in the US, the Corporate Responsibility Index in Australia, and the Asahi Foundation index of Japan. The setting comes from the fact that the index is the only multidimensional-measure available in Korea, and the CSR ratings are officially KEJI Index. Currently, its independent rating system checking the multidimensional corporate social activities scores companies in the seven categories of soundness, fairness, contribution to society, consumer protection, environmental protection, employee satisfaction, and economic contribution. The index was devised by the Citizen's Coalition for Economic Justice, and the KEJI annually announces the Economic Justice Winners. Qualitative assessment is by surveying the top 10% firms and the top 20% firms for respective Korean SIC-based industry based on the KEJI index scores. The KEJI publishes yearly scores of top 200 companies in the brochure leaflets. Details of KEJI index is described in Appendix 2.

National University).

4. Empirical Results

We start empirical analysis by generating descriptive statistics. Included are control variables to be tested throughout models in the paper. For each variable the coefficient, t-statistic, and p-value are provided. Plus, computed R-square values and 95% intervals are featured for convenience. Table 1, Table 2, and Table 3 provide descriptive statistics, correlation matrix, and pairwise correlation matrix. The mean value (standard deviation) of MARKETCAP is 1381560 (6396995) and of Q is 0.0029902 (.0049297). TOTAL CSR scores have mean value (standard deviation) of 47.40804 (2.496819), FHOLDING 14.24978 (18.59063), and CURRENTR 2.076692 (2.257338). The relatively wide standard deviations of control variables suggest that these variables are of traits that are greatly contingent upon the business circumstances and performances.

Positive values of TOTAL in Table 2 with the variables including Q (0.1717), INTANGIBLE (0.1657), ROA (0.2359), CURRENTR(0.0382), and SG (0.0601) portray the significant correlation, while the negative correlation coefficient with LEV (-0.0028) and KZ (-0.1705) provides for the corroborative explanation that non-performing-responsibilities are positively contingent on leverage and financial constraints. As expected, FHOLDING and TOTAL is positively correlated (0.3144). In Table 3, the pairwise correlation is tabulated rendering the explicatory power of

TOTAL upon control variables. Coefficient values of TOTAL with other variables are all positive, though the negative figures are present in KZ (-0.1723). Observed pairwise correlation with FHOLDING with SG (-0.0076) and KZ (-0.2318) is negative while it is positive with variables else.

4.1. Determinants of CSR

We begin the regression analysis and in Table 4 are the multivariate regression results for determinants of CSR. In Column 2, we observe significantly positive coefficient estimates (p-value) of INTANGIBLE at 10.65834 (0.042). The t-values in column 4 present the significantly higher figures for INTANGIBLE (2.04), SIZE (7.66), and SRND (4.15), respectively. In column 5, p-values exhibit most of the variables to be statistically significant (<0.01). Specifically for intangible assets, the coefficient estimate is exceedingly high, indicating that intangible assets primarily determine the corporate social responsibility performances. Deemed along with p-value (0.003), the coefficient demonstrates that CSR is more likely for firms with more intangible assets and general corporate soundness from business management perspectives.

The classic control variables such as firm size, return on assets, leverage, and R&D also exhibit positive coefficients, with p-value at significance. Consistent with leverage theories, coefficient LEV is -1.811875, indicating that higher CSR scores are correlated with more portions of equity capital within corporate financial structure. Results are controlled for year fixed effects. KZ coefficient estimates are also negative

(-0.5146844 (0.068), which together with LEV provide that CSR is more of a luxury as it is invigorated by more equities with less financial constraints. We find that large firms, R&D oriented firms, and good performing firms are more likely to invest in CSR while financially distressed firms reduce investment in CSR. As a whole, higher CSR scores are garnering of corporate effectiveness measured in variables that attest to managerial efficacy.

Table 1
Descriptive Statistics

Variable	N	Mean	Std. Dev.	Min	Max
ASSET	2970	1.84e+09	6.11e+09	7653163	1.07e+11
EQUITY	2970	9.80e+08	4.01e+09	-2.47e+09	8.00e+10
CURRENTA	2970	6.08e+08	1.72e+09	3484552	3.62e+10
CURRENTL	2970	5.19e+08	1.46e+09	528685	2.50e+10
MARKETCAP	2933	1381560	6396995	456	1.55e+08
Q	2933	.002902	.0049297	1.63e-06	.1323173
INTANGIBLE	2746	3.28e+07	2.09e+08	-2.13e+08	3.60e+09
TOTAL	1308	47.40804	2.496819	43.1	58.11
FHOLDING	2888	14.24978	18.59063	0	257.46
NETINCOME	2970	1.06e+08	5.80e+08	-4.72e+09	1.32e+10
ROA	2970	.0436289	.100105	-2.083147	.967772
lnSALES	2970	19.69845	1.583636	14.51177	25.44399
DIVIDEND	2970	1.93e+07	7.62e+07	0	1.11e+09
DividendDummy	2970	.7996633	.4003197	0	1
SRND	2970	.006704	.013786	0	.1655682
CURRENTR	2970	2.076692	2.257338	.0601771	40.01734
LEV	2962	.1204285	.1228665	.0002016	3.388105
SG	2950	1.113915	.4022604	.0332498	14.10559
ISG	2570	1.097592	0.296266	0.0332498	6.461175
KZ	2924	-.1983933	.7554681	-11.11819	3.293256

Table 2
Correlation Matrix

	ASSET	EQUI TY	CURRE NTA	CURRE NTL	MARKET CAP	Q	INTANGIBL ES	NETINCOM E	ROA	CURRENT R	LEV	SG	KZ
ASSET	1.0000												
EQUITY	0.9612	1.0000											
CURRENTR	0.9301	0.8522	1.0000										
CURRENTL	0.8449	0.6914	0.9211	1.0000									
MARKETCAP	0.8836	0.9314	0.8286	0.6626	1.0000								
Q	0.0275	0.0728	0.0156	-0.0446	0.1160	1.0000							
INTANGIBLE	0.4595	0.4120	0.4020	0.3771	0.3645	-0.0010	1.0000						
NETINCOME	0.8825	0.9236	0.8324	0.6670	0.9427	0.0960	0.3713	1.0000					
ROA	0.0997	0.1379	0.1045	0.0314	0.1747	0.3153	0.0597	0.2444	1.0000				

CURRENTR	-0.1127	-0.0634	-0.1101	-0.1750	-0.0536	0.6236	-0.0667	-0.0520	0.1537	1.0000			
LEV	0.1821	0.0775	0.1522	0.2022	0.0329	-0.2797	0.1561	0.0306	-0.2342	-0.2934	1.0000		
SG	0.0438	0.0204	0.0752	0.0884	0.0265	-0.0141	-0.0115	0.0511	0.1501	-0.1212	0.0753	1.0000	
KZ	0.0651	0.0069	0.0429	0.0993	-0.0412	-0.4559	-0.0019	-0.0441	-0.4701	-0.3392	0.5900	0.0094	1.0000
TOTAL	0.3184	0.3004	0.3365	0.2773	0.3102	0.1717	0.1657	0.3188	0.2359	0.0382	-0.0028	0.0601	-0.1705
FHOLDING	0.3162	0.3009	0.3273	0.2707	0.2849	0.2125	0.1870	0.3014	0.1661	0.0646	0.0436	-0.0108	-0.3002
DividendDumm	0.0487	0.0457	0.0505	0.0306	0.0412	0.0616	-0.0006	0.0437	0.1461	0.0283	-0.0816	0.0360	-0.1997
SRND	0.1472	0.1750	0.1164	0.0827	0.2129	0.1919	0.0944	0.1886	0.0431	0.0753	0.0027	0.0099	0.0153

Table 2
Correlation Matrix (Cont.)

	TOTAL	FHOLDING	DividendDummy	SRND
TOTAL	1.0000			
FHOLDING	0.3144	1.0000		
DividendDummy	0.0623	0.1568	1.0000	
SRND	0.2850	0.0323	-0.1065	1.0000

Table 3
Pairwise Correlation Matrix

	ASSET	EQUITY	CURRENTA	CURRENTL	MARKETCAP	Q	INTANGIBLE
ASSET	1.0000						
	2970						
EQUITY	0.9652	1.0000					
	0.0000						
	2970	2970					
CURRENTA	0.8482	0.7919	1.0000				
	0.0000	0.0000					
	2970	2970	2970				
CURRENTL	0.8485	0.7281	0.9226	1.0000			
	0.0000	0.0000	0.0000				
	2970	2970	2970	2970			
MARKETCAP	0.8321	0.8856	0.8388	0.7126	1.0000		
	0.0000	0.0000	0.0000	0.0000			
	2933	2933	2933	2933	2933		
Q	-0.0003	0.0301	-0.0001	-0.0393	0.0706	1.0000	
	0.9866	0.1031	0.9955	0.0331	0.0001		
	2933	2933	2933	2933	2933	2933	
INTANGIBLE	0.4670	0.4324	0.4691	0.4543	0.4397	- 0.0010	1.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.9592	
	2746	2746	2746	2746	2711	2711	2746

NETINCOME	0.7393	0.8037	0.7931	0.6433	0.9123	0.0616	0.4294
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0008	0.0000
	2970	2970	2970	2970	2933	2933	2746
ROA	0.0422	0.0654	0.0625	0.0229	0.0984	0.1541	0.0433
	0.0216	0.0004	0.0006	0.2130	0.0000	0.0000	0.0232
	2970	2970	2970	2970	2933	2933	2746
CURRENTR	-0.0981	-0.0620	-0.0889	-0.1433	-0.0506	0.6703	-0.0568
	0.0000	0.0000	0.0000	0.0000	0.0061	0.0000	0.0029
	2970	2970	2970	2970	2933	2970	2746
LEV	0.1637	0.0735	0.1285	0.1744	0.0470	- 0.2065	0.0988
	0.0000	0.0001	0.0000	0.0000	0.0110	0.0000	0.0000
	2962	2962	2962	2962	2925	2925	2738
SG	0.0221	0.0082	0.0334	0.0324	0.0153	- 0.0369	0.0003
	0.2297	0.6557	0.0697	0.0781	0.4102	0.0466	0.9869
	2950	2950	2950	2950	2913	2913	2728
KZ	0.0899	0.0307	0.0524	0.1088	-0.0242	- 0.3989	-0.0062
	0.0000	0.0966	0.0046	0.0000	0.1908	0.0000	0.7482
	2924	2924	2924	2924	2924	2924	2702
TOTAL	0.3184	0.2989	0.3375	0.2804	0.3090	0.1695	0.1658
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1308	1308	1308	1308	1306	1306	1227
FHOLDING	0.2639	0.2507	0.2890	0.2588	0.2596	0.1897	0.1890
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2888	2888	2888	2888	2873	2873	2676

DIVIDEND	0.7781	0.8088	0.7597	0.6511	0.8078	0.0540	0.5351
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0034	0.0000
	2970	2970	2970	2970	2933	2933	2746
DividendDummy	0.0634	0.0677	0.0755	0.0588	0.0608	0.0660	0.0198
	0.0005	0.0002	0.0000	0.0014	0.0010	0.0003	0.2992
	2970	2970	2970	2970	2933	2933	2746
SRND	0.1085	0.1314	0.1164	0.0866	0.1871	0.1264	0.1189
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	2970	2970	2970	2970	2933	2933	2746

Table 3
Pairwise Correlation Matrix (Cont.)

	NETINCOME	ROA	CURRENTR	LEV	SG	KZ	TOTAL
NETINCOME	1.0000						
	2970						
ROA	0.1811	1.0000					
	0.0000						
	2970	2970					
CURRENTR	-0.0339	0.0990	1.0000				
	0.0648	0.0000					
	2970	2970	2970				

LEV	-0.0212	-0.3044	-0.1938	1.0000			
	0.2498	0.0000	0.0000				
	2962	2962	2962	2962			
SG	0.0291	0.0793	-0.0669	0.0501	1.0000		
	0.1140	0.0000	0.0003	0.0066			
	2950	2950	2950	2942	2950		
KZ	-0.0650	-0.3827	-0.3128	0.6349	0.0112	1.0000	
	0.0000	0.0000	0.0000	0.0000	0.0000		
	2924	2924	2924	2924	2924	2924	
TOTAL	0.3173	0.2349	0.0347	0.0006	0.0534	-0.1723	1.0000
	0.0000	0.0000	0.2096	0.9819	0.0534	0.0000	
	1308	1308	1308	1305	1308	1302	1308
FHOLDING	0.2522	0.1661	0.0646	0.0436	-0.0076	-0.2318	0.0370
	0.0000	0.0000	0.0005	0.0192	0.6854	0.0000	0.0000
	2888	2888	2888	2980	2868	2864	1283
DIVIDEND	0.8064	0.0941	-0.0425	0.0428	0.0001	-0.0867	0.3458
	0.0000	0.0000	0.0205	0.0200	0.9976	0.0000	0.0000
	2970	2970	2970	2962	2950	2924	1308

Table 3
Pairwise Correlation Matrix (Cont.)

	NETINCOME	ROA	CURRENTR	LEV	SG	KZ	TOTAL
DividendDummy	0.0737	0.2245	0.0577	-0.1386	-0.0582	-0.2622	0.0760
	0.0001	0.0000	0.0016	0.0000	0.0016	0.0000	0.0059
	2970	2970	2970	2962	2950	2924	1308
SRND	0.1637	0.0735	0.1285	0.1744	0.0470	-0.2065	0.0988
	0.0000	0.0001	0.0000	0.0000	0.0110	0.0000	0.0000
	2962	2962	2962	2962	2925	2925	2738

Table 3
Pairwise Correlation Matrix (Cont.)

	FHOLDING	DIVIDEND	DividendDummy	SR ND
FHOLDING	1.0000			
	2888			
DIVIDEND	0.2926	1.0000		
	0.0000			
	2888	2970		
DividendDummy	0.1716	0.1099	1.0000	
	0.0000	0.0000		
	2888	2970	2970	
SRND	0.0590	0.1199	-0.0584	1.0000
	0.0015	0.0000	0.0015	
	2888	2970	2970	2970

Table 4
Regression Results of Determinants of CSR

Variable	Coefficient Estimate	Robust Std. Err.	t-value	p-value	95% Conf. Interval	
INTANGIBLE	10.65834	5.228616	2.04	0.042**	.3748819	20.9418
SIZE	.6918325	.0903549	7.66	0.000***	.5141258	.8695393
CURRENTR	.0826265	.0750912	1.10	0.272	-.0650603	.2303132
ROA	5.342943	2.080185	2.57	0.011**	1.251708	9.434178
SG	-.0180133	.3920241	-0.05	0.963	-.7890326	.753006
LEV	-1.811875	1.567035	-1.16	0.248	-4.893865	1.270115
KZ	-.5146844	.2808243	-1.83	0.068*	-1.067	.037631
DividendDummy	.1195183	.2602363	0.46	0.646	-.3923054	.631342
SRND	38.4209	9.250928	4.15	0.000***	20.2265	54.6153
Cons	32.12678	1.808754	17.76	0.000***	28.56939	35.68418

This table represents the regression results of determinants equation:
 $TOTAL_{i,t} = \beta_0 + \beta_1 INTANGIBLE_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 CURRENTR_{i,t} + \beta_4 ROA_{i,t} + \beta_5 SG_{i,t} + \beta_6 LEV_{i,t} + \beta_7 DividendDummy_{i,t} + \beta_8 KZ_{i,t} + \beta_9 SRND_{i,t} + \varepsilon$
Controlled for year fixed effects. N=1221, where N is the number of observations. $R^2 = 0.3258$, Standard error adjusted for 351 clusters. T-values are coefficients scaled by robust standard errors. ***, **, * represent significance at the 0.01%, 0.5%, 0.1% level, respectively.

4.2. Valuation and CSR

The valuation and CSR model is salient with coefficients supporting hypothesized direction. Table 5 exhibits 2SLS regression analysis with the first stage of regressing CSR scores with lagged CSR scores, return on assets, and dividend dummy (1st Stage Regression 1-1). Consistent with the hypothesis, coefficient estimate (p-value) of TOTAL is 0.000661 (0.000). The z-value TOTAL is observed at 8.42. Column 5 shows that CSR performances influences market valuation at a statistically significant level with p value (< 0.01). Also the positive asset-scaled R&D coefficients ($p < 0.01$) is consistent with the norm in prior literatures that R&D innovation is helping to drive up the market valuation. The negative coefficients of SIZE, SG, and lagged SG indirectly support the relative importance of CSR activities in firm valuation.

In table 6, the first stage regression control variables are lagged CSR scores and dividend dummy (1st Stage Regression 1-2). Also in 1st Stage Regression formula 1-2, we expect a positive influence of TOTAL upon Tobin's Q. The coefficient estimate (p-value) of TOTAL is 0.004244 (0.0000) indicating that higher CSR scores robustly raise the market valuation. The z-value is at a high 5.36. Column 2 represents the coefficient estimates of respective control variables with Column 5 representing the p-value at the 2nd stage regression.

Results in Table 7 is created via the first stage regression of total CSR scores by controlling for dividend dummy and lagged CSR scores (1st Stage Regression 1-3). Figures in Column 2 are the coefficient estimates, and it is 0.006646 as to TOTAL. The

p-value is significant with z-value 8.45. The z-value Column 4 depicts the positive figures on TOTAL and SRND, while SIZE, SG, and ISG begetting negative coefficients (z-value) at -0.004234, -0.0003991, -0.0003874 (-5.18, -0.58, -0.53).

We also compose 2SLS analysis of the third 2SLS model in Table 8, year-fixed effects controlled. Consistent with the above results, we tabulate the positive influence of CSR upon the market valuations of firms. The coefficient estimates for TOTAL is 0.0006646, and p-value 0.000. Column 4 is z-value representing the positive values for TOTAL and asset-scaled R&D. Robust standard errors are mild, and coefficient values are negative for SIZE (-0.0004247), SG (-0.0003697), and ISG (-0.0004517), indicating that merely grandiloquent firm scale may not sufficiently buttress the market value of firms though the p-value is observed significant for asset-scaled R&D. This again supports the contention that qualitative firm performance with regard to sound societal performance better enhance how firms are valued. Column 5 report the SRND p-value to be weaker (0.397), and this may due to the grave emphasis usually placed on ordinary development project. .

Table 5
2SLS Analysis of CSR and Tobin's Q (1)

q	Coefficient Estimate	Robust Std. Err.	z-value	p-value	95% Conf. Interval	
TOTAL	.000661	.0000785	8.42	0.000***	.0005072	.0008148
SIZE	-.004215	.0000817	-5.16	0.000***	-.0005817	-.0002614
SG	-.0003981	.0006847	-0.58	0.561	-.0017401	.0009439
ISG	-.0003872	.0007298	-0.53	0.596	-.0018176	.0010431
SRND	.0207504	.0078066	2.66	0.008***	.0054497	.0360511
Cons	-.0197989	.0033626	-5.89	0.000***	-.0263896	-.0132083

This table represents 2SLS regression analysis with 795 observations for two regression formula: $TOTAL_{i,t} = \beta_0 + \beta_1 TOTAL_{i,t-1} + \beta_2 ROA_{i,t} + \beta_3 DividendDummy_{i,t} + \varepsilon$, $Q_{i,t} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 SG_{i,t} + \beta_3 SG_{i,t-1} + \beta_4 SRND_{i,t} + \varepsilon$. Chi-square is 123.47, and $R^2=0.0478$. ***, **, * represent significance at the 0.01%, 0.5%, 0.1% level, respectively.

Table 6

2SLS Analysis of CSR and Tobin's Q (2)

q	Coefficient Estimate	Robust Std. Err.	z-value	p-value	95% Conf. Interval	
TOTAL	.0004244	.0000791	5.36	0.000***	.0002693	.0005795
SIZE	-.0003026	.000008	-3.78	0.000***	-.0004594	-.0001457
SG	-.0003341	.0006646	-0.50	0.615	-.0016367	.0009684
ISG	-.0003788	.0007083	-0.53	0.593	-.001767	.0010094
SRND	.0310427	.0076342	4.07	0.000***	.0160799	.0460055
Cons	-.0110032	.0033599	-3.27	0.001***	-.0175885	-.0044179

This table represent 2SLS regression analysis with 795 observations for two regression formula: $TOTAL_{i,t} = \beta_0 + \beta_1 TOTAL_{i,t-1} + \beta_2 DividendDummy_{i,t} + \varepsilon$, $Q_{i,t} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 SG_{i,t} + \beta_3 SG_{i,t-1} + \beta_4 SRND_{i,t} + \varepsilon$. Chi-square is 84.53, and $R^2=0.1030$. ***, **, * represent significance at the 0.01%, 0.5%, 0.1% level, respectively.

Table 7

2SLS Analysis of CSR and Tobin's Q (3)

q	Coefficient Estimate	Robust Std. Err.	z-value	p-value	95% Conf. Interval	
TOTAL	.0006646	.0000786	8.45	0.000***	.0005106	.0008187
SIZE	-.004234	.0000818	-5.18	0.000***	-.0005837	-.0002631
SG	-.0003991	.0006852	-0.58	0.560	-.001742	.0009439
ISG	-.0003874	.0007303	-0.53	0.596	-.0018187	.0010439
SRND	.0205924	.0078134	2.64	0.008***	.0052785	.0359063
Cons	-.019934	.0033674	-5.92	0.000***	-.026534	-.013339

This table represent 2SLS regression analysis with 795 observations for two regression formula: $TOTAL_{i,t} = \beta_0 + \beta_1 TOTAL_{i,t-1} + \beta_2 ROA_{i,t} + \varepsilon$, $Q_{i,t} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 SG_{i,t} + \beta_3 SG_{i,t-1} + \beta_4 SRND_{i,t} + \varepsilon$. Chi-square is 123.95, and $R^2=0.0465$. ***, **, * represent significance at the 0.01%, 0.5%, 0.1% level, respectively.

Table 8

2SLS Analysis of CSR and Tobin's Q, controlled year fixed effects

q	Coefficient Estimate	Robust Std. Err.	z-value	p-value	95% Conf. Interval	
TOTAL	.0006575	.0001417	4.64	0.000***	.0003797	.0009352
SIZE	-.0004247	.0001286	-3.30	0.001***	-.0006768	-.0001726
SG	.0003697	.0008028	0.46	0.645	-.0012036	.0019431
ISG	-.0004517	.0006448	-0.70	0.484	-.0017155	.0008121
SRND	.0201001	.0237381	0.85	0.397	-.0264257	.066626
Cons	-.020383	.0056633	-3.60	0.000	-.0314829	-.0092831

This table represent 2SLS regression analysis with 795 observations for two regression formula: $TOTAL_{i,t} = \beta_0 + \beta_1 TOTAL_{i,t-1} + \beta_2 DividendDummy_{i,t} + \beta_3 ROA_{i,t} + \varepsilon$, $Q_{i,t} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 SG_{i,t} + \beta_3 SG_{i,t-1} + \beta_3 SRND_{i,t} + \varepsilon$. Chi-square is 113.24, and $R^2=0.0862$, controlled for year-fixed effects. ***, **, * represent significance at the 0.01%, 0.5%, 0.1% level, respectively.

4.3. CSR and the Portion of Foreign Equity Investments

Thus far, we find evidence that CSR improves firm value. To facilitate further understanding, we examine foreign equity holdings which play an important part in the Korean stock market. Table 9 reports the results. Given FHOLDING as the dependent variable, ROA coefficient estimate (60.64983) in Column 2 of Table 9 substantially supports the notion that foreign equity holders are in for the firm rates of return. Royal and dedicated shareholders attest to the CSR performance at the business platform, which supports the view that foreign equity investors among other institutional investors are attracted by the CSR performance disclosures. The t-values in Column 4

are explicatory in terms of FHOLDING, and it is 3.17 for total with what is the small number of 0.2779381 in Column 3 robust standard errors. The results in Column 5 are significant at the level below 0.01. This reliably supports the regression analysis regarding FHOLDING and TOTAL. The coefficient estimate for TOTAL is 0.8811277 with p-value of 0.0002. This suggests that TOTAL scores are approximately the comprising factors upon foreign shareholdings.

Table 9

Regression Results of Foreign Equity Investments

FHOLDING	Coefficient Estimate	Robust Std. Err.	t-value	p-value	95% Conf. Interval	
lnSALES	5.267695	.5840596	9.02	0.000***	4.119076	6.416314
ROA	60.64983	17.66168	3.43	0.001***	25.91613	95.38352
TOTAL	.8811277	.2779381	3.17	0.002***	.3345312	1.427724
LEV	-3074664	8.413635	-3.65	0.000***	-47.293	-14.20028
Cons	-129.314	13.76825	-9.39	0.000	-156.3908	-102.2372

This table represents regression analysis with 1280 observations for the regression formula:

$$FHOLDING_{i,t} = \beta_0 + \beta_1 \ln SALES_{i,t} + \beta_2 ROA_{i,t} + \beta_3 TOTAL_{i,t} + \beta_4 LEV_{i,t} + \varepsilon$$

. $R^2=0.2887$, controlled for year fixed effects. T-values are coefficients scaled by robust standard errors. ***, **, * represent significance at the 0.01%, 0.5%, 0.1% level, respectively.

5. Conclusion

In this paper, we harnessed financial accounting terms to depict the determinants of CSR that directs the market valuation and foreign investment magnitude. This paper advances from the extant literature archive by conducting multivariate analysis as well as 2SLS regression formula. These meliorations are contributing to CSR studies by comprehensibly analyzing various accounting elements in the presence of other relevant terms, and by linking the qualitative corporate social performance to the substantial quantitative performance of firms with respect to valuation and equity investments. Three-staged 2SLS analysis also facilitates firms' market valuation and CSR performance from multi-dimensional aspects, thus effectively helping to understand the dynamics embedded in CSR dynamics.

Using a large sample of Korean firms for the period of 2003-2009, we find that large firms, R&D oriented firms, and good performing firms are more likely to invest in CSR while financially distressed firms reduce investment in CSR. Further, we find that foreign institutional investors invest in firms with greater CSR investment and the market positively reacts to CSR. All in all, socially good business entities are financially commendable based on a large sample of Korean firms.

We knowledge limitations of the study. Firstly, our model mostly considered dividend dummy to proxy for whether CSR firms pay out dividends, but the relaxation of this setting would construct an analysis with a broader frameset to explore the equity

investment structures (i.e. classification of preferred shares and common shares). Secondly, we utilized the total sides of corporate social activities but the partial consideration for certain categories may be applicable in the future studies contingent on the nature of the study or the industry samples.

The corporate social responsibility model can also be the function of direct indicator on the profitability forecasts as more sophisticated formula for societal performances progressively directs the profitability of firms over the wider horizon. Essentially, how the qualified CSR performances quantitatively enhance the firm profitability is an open area for future studies. We are hoping that future research sheds light on these issues.

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Appendix 1. Variable Terms

Terms	Description	Definition
ASSET	Total Assets	The firm's total asset amounts in financial statements
EQUITY	Total Equity	The firm's total equity amounts in financial statements
CURRENTA	Current Assets	Total current asset amounts of cash, cash equivalents, marketable securities, and inventories
CURRENTL	Current Liabilities	Total amounts of liabilities that normally proceeds in a year
MARKETCAP	Market Capitalization	The firm's corporate magnitude calculated as share price by number of shares outstanding
Q	Tobin's Q	The total market value of the firm divided by the total asset value of the firm
INTANGIBLE	Intangible Assets	The firm's total intangible assets
TOTAL	Total CSR scores	The firm's total CSR scores
FHOLDING	Ratio of Foreign equity Holders	The proportion of foreign equity holders within the firm
NETINCOME	Net Income	The firm's net income amounts for the fiscal year
ROA	Return on Assets	Profitability ratio scaled by firm assets
lnSALES	Log of Sales	Logarithm of the firm's sales amounts for the fiscal year
DIVIDEND	Dividend	The firms dividend amounts paid out
DividendDummy	Dividend Dummy	Dummy equals 1 if the firm pays out dividends, 0 otherwise.
SRND	R&D Expenditures	R&D expenditures scaled by asset amounts
CURRENTR	Current Ratio	The firm's current assets scaled by the current liabilities
LEV	Leverage Ratio	Debt-to-equity ratio
SG	Sales Growth	Growth rate of the firm's sales
ISG	Lagged Sales Growth	Sales growth lagged by a year
KZ	Financial Constraints	Firm's equity dependence as captured by its cash and leverage ratios and productivity

Appendix 2.

KEJI Index Criteria

Criteria	Evaluated Terms	Proxy
Soundness	Soundness in Shareholder Structure	Inside Shareholder Rates
		Independent Manager Status
		Management Inheritance
	Soundness in Investment	Capital Expenditures
Fairness	Soundness in Finance	Riskiness
		Financing on Affiliated Companies
		Certified Insurance on Affiliated Companies
	Fairness	Fair Trade Fair Competition
Contribution to Social Volunteerism	Transparency	Adequacy of Management Reports Outside Shareholders
	Cooperation	Cooperating Firms
	Protection of Minorities	Rates of Employment of Physically Challenged
		Rates of Employment of Females
		Employment Support for Minorities
		Charity
	Society Contribution	Support of Social Welfare

Customer Protection	Protection of Customer Rights	Merchandise Care Service
		Number of Employees on Customer Service
		Customer Service Awards
	Product Quality	Certification of Product Quality
	Advertisement	Advertisement Expenditure Excesses
Environmental Protection	Environment Improvement	Environmental Accounting
		Energy Efficiency
		Environment Investment
	Environment Familiarity	Certification on Environment
	Infringement on Environment	Reports on Contamination
Employees Satisfaction	Workplace Health & Safety	Awards on Terms on Workplace Health & Safety
	Human Capital Investment	Training Expenditures per Employee
		Weights on Training
	Wages and Welfare	Compensation Scheme and Welfare
	Union Management	Union, Union Conflicts
		Programs for Improved Union Relations
		Efforts on Male and Female Equality
	Equal Employment	Number of Females above Associate Levels

	Efforts on Development	R&D Expenditures
		Patents and Inventions
		Profitability, Growth, Equipment
Economic Growth		Investment
Contribution	Management Contributions	Employment Growth Rate
		Tax Payment and Dividend Payout
		Growth in Labor Productivity, Ratio of
		Exports

논문 초록

1. 국문요약(국문초록)

요약(국문초록)

기업(企業)의 사회적 책임은 재무 제표가 제시하는 회계 정보(精報)를 넘어선 고차원적인 精報를 제공한다. 발전된 경제 체제일수록, 기업은 단순한 이익뿐만 아니라 포괄적으로 사회적 책임에 관심을 기울이게 된다. 본 논문은 CSR 활동을 결정짓는 팩터들과 그 기업 경제적 활동에 대한 실증적 분석을 통해서 주요 회계 계정과 기업 가치 평가에 대한 이해와 관심을 높인다.

주요어 : 기업의 사회적 책임

학 번 : 2009-23016

