

Corporate Sustainable Management and Capital Market: Evidence from Data on Korean Firms

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Abstract

This paper analyzes the impact of CSR on the capital market in Korea. Using listed firm data, we found that the creation of a sustainability report that indirectly measures the level of CSR can bring the stock rate of return difference of the capital markets representative market index. First, when a firm that publishes a sustainability report was compared in terms of its market rate of return, it showed a return increase of about 2%. We found that higher returns were gained through the competitive advantage of related business when the firm was actively involved in social responsibility. Second, subdivided by industry, firms belonging to the capital goods industry were found to reach a rate of return higher than that of industry. These firms were noticeable in that they were mainly industries that caused environmental pollution. Third, in an additional analysis, foreign investors were given the sustainability report of financial businesses, which was interpreted as a result of industrial properties. A sustainability report is a comprehensive report on the economic, environmental, and social activities of a firm. Firms must learn that they can gain trust through publishing trustworthy reports while achieving the lasting power of growth from the stakeholders.

Keywords Sustainability report, CSR, Capital market, GRI, Stock return

1. Introduction

Lately, Corporate Social Responsibility (CSR) has been regarded as an essential element in management. Many firms have become involved in CSR activities, and related investments have followed. For example, according to the Social Contribution White Paper (2014) published by the Federation of Korean Industries, the 234 listed firms spent a total of 2.8 trillion won on social investments in 2013. Though this amount represents a 13.6% decrease compared to 2012, the social

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contribution expenditure ratio (social investment/pretax income) showed an increase from 3.37% to 3.76% the following year. This ratio is twice as high as that of Japan, which stood at 1.77%. In addition, more than 70% of the firms surveyed were planning their own form of social contribution, and more than 60% of them had their own complete charge department and budget system. Most of the people in charge of these projects stated that CSR was a business activity to be categorized alongside management strategy. Many of the firms that were socially responsible appeared to grow larger.

The firms that dismissed CSR as a trend, however, are now adapting a change of paradigm. These companies have been showing an interest in social responsibility by creating corporate social contribution teams or operating programs that have gathered supporters from the community.

However, this paradigm shift has been met with some objections. Whether the firms are actually concerned about the problems of society and committed to solving them is a question that has yet to be answered. Ultimately, this is a question of authenticity. Engagement in CSR is often seen as a promotional strategy, which has caused communities to distrust such corporate acts. For example, according to the Research Institute on Social Enterprise and the East Asia Institute (2013), investments in CSR have increased while public trust of corporations has decreased.

In response to the question of why firms engage in social responsibility, studies have claimed as follows. First, an investment in social responsibility can be interpreted as a response to the preference of shift stakeholders and (Barnea and Rubin, 2010) and as an attempt to increase the value of intangible assets (Choi et al., 2009; Brown et al., 2006). As the social activities of firms developed, agencies that evaluate their social responsibility now present a source of pressure for these firms, as they assess CSR performance on a regular basis and disclose these assessment results to the public.

These standards that determine the level of CSR are based on Ten Principles of United Nations Global Compact, International Organization for Standardization's 26000, and the Global Reporting Initiative's (GRI) Sustainability Reporting Guidelines. As the UN Global Compact and the ISO 26000 only provide normative systems, whether organization actually comply is unknown; GRI, on the other hand, is more practical. Companies are thus able to write up their sustainability report by following the GRI guidelines then publishing it. The information contained in a sustainability report usually covers economic, environmental, and social aspects.

The purpose of this study is to examine the impact of domestic sustainability management on the capital market. To this end, we analyze how firms that issue sustainability reports are evaluated in the capital market. Samples were carried out by the empirical study of firms that published sustainability reports with a one-year evaluation period between 2009 and 2014. In the Sustainability Report, Data base provided by KSA (Korea Standards Association) was used, and the

Data Guide was used by financial resources.

This study is organized as follows. Following the introduction, Chapter II provides a survey of background research. In Chapter III, analysis results are summarized, and Chapter IV concludes with some implications of the research.

2. Background

2.1 The History of GRI¹⁾

In the early 1990s, former Executive Director Dr. Robert Massie and the acting Chief Executive Dr. Allen White of the Coalition for Environmentally Responsible Economies (CERES) pioneered a framework for environmental reporting, which resulted in the Global Reporting Initiative department being set up in 1997. The aim was to create an accountability mechanism to ensure that companies were following the CERES Principles for responsible environmental conduct. Investors were the framework's original target audience.

GRI was founded in Boston, in the United States. Its roots lie in the US non-profit organizations the CERES and the Tellus Institute. The United Nations Environment Programme (UNEP) was also involved in the establishment of GRI.

GRI relocated to Amsterdam, the Netherlands and was formally inaugurated as a UNEP collaborating organization in the presence of then-UN Secretary General Kofi Annan. The second generation of the Guidelines, G2, was unveiled at the World Summit on Sustainable Development in Johannesburg in 2002. GRI was referenced in the World Summit's Plan of Implementation.

Demand for GRI's sustainability reporting guidance was steadily growing, and this demand was further boosted by the launch of the third generation of Guidelines, G3, in 2006. Over 3,000 experts from business, civil society, and the labor movement participated in G3's development, highlighting the true multi-stakeholder approach at the heart of GRI's activities. GRI's outreach was further strengthened by its very first Global Conference on Sustainability and Transparency, entitled "Reporting: A Measure of Sustainability". The conference, held in Amsterdam, attracted 1,150 participants from 65 countries, representing business, financial markets, civil society, labor, government, assurance providers, and municipalities. Roughly half of the participants were from Europe or North America, while 250 originated from 37 developing and emerging market countries. Following the launch of G3 at the Global Conference, GRI began expanding its strategy and Reporting Framework, building powerful alliances. Formal partnerships were entered into with the United Nations Global Compact, the Organization for Economic Co-operation and

1) This section summarizes the contents of the www.globalreporting.org

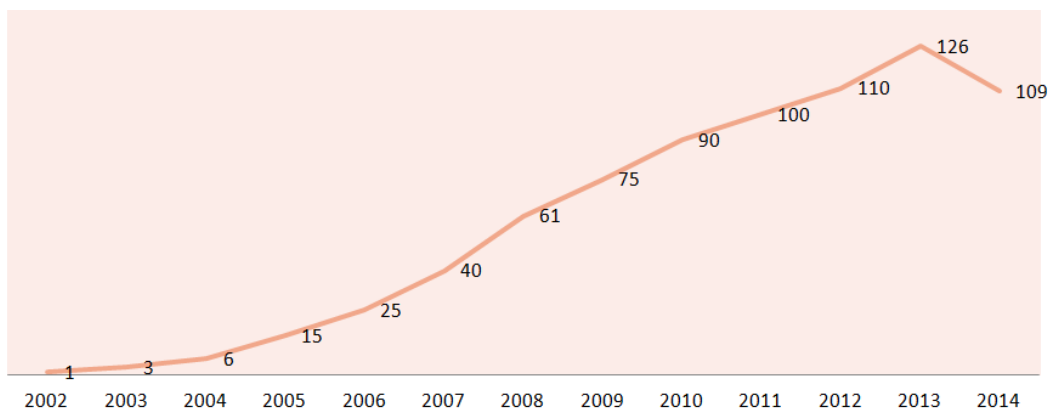
Development, and other organizations.

The fourth global GRI conference, entitled “Information – Integration – Innovation,” gathered together 1,600 delegates from 69 countries. GRI released the fourth generation of its Guidelines, G4, offering Reporting Principles, Standard Disclosures, and an Implementation Manual for the preparation of sustainability reports by organizations of any size or sector. G4 Online was launched a few months later as a free web-based tool presenting the complete content of the G4 Guidelines in a dynamic format for those already familiar with the Reporting Principles and Standard Disclosures. GRI also joined forces with the United Nations Global Compact (UNGC) and the World Business Council for Sustainable Development (WBCSD) to develop private sector guidance that would help companies enhance their sustainability management and reporting with a view to global sustainable development goals and targets. Launched by the UN Secretary-General at the UNGC Leaders Summit in 2013, the Post-2015 Business Engagement Architecture brought together these actors to affirm their mutual collaboration in supporting and empowering business to take action on sustainable development.

Currently, Reporting 2025 was a key initiative launched. This 12-month project set out to discover the main issues which would be affecting companies' agendas, and consequently their public reports, by 2025. Thought leaders in various fields would be interviewed on subjects ranging from data technology to society and business development scenarios, and videos and analytical papers would be produced throughout the year to promote an international discussion.

2.2 GRI's in Korea

Figure 1 illustrates the situation of domestic GRI publishing in Korea. Since Samsung SDS



Source: KSA (Korean Standards Association)

Figure 1 Published numbers of domestic Sustainability Report

published a sustainability report in 2002, 761 sustainability reports have been published. Almost each year showed a growth in the number of reports, with the total reports published surpassing 100 in 2011. In 2013, 126 companies published sustainability reports, and in 2014, 109.

Of course, the fact that a firm releases a sustainability report to the public does not imply that a company is engaged in good CSR. The reason for this lack of correlation is that there are no legal regulations in place regarding the publication of a report. Published reports are not required to be audited to ensure the same accuracy expected of accounting reports. However, the fact that this report is being published can mean that an executive is interested in CSR, and a company that publishes a report can be considered to be more motivated to participate in CSR than a company that does not publish one.

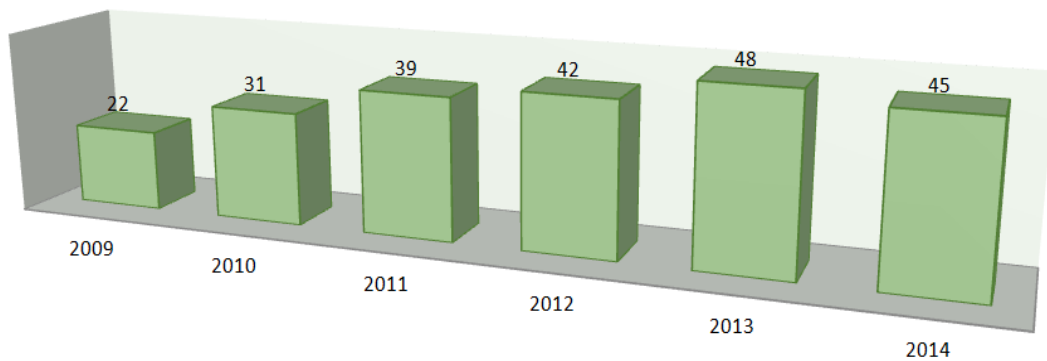
3. Results

3.1 Sample

Figure 2 below arranges the samples of each year. 2013 appeared to have the most sustainability reports submitted by domestic firms, while 2009 had the least. Generally, sustainability reports showed steady growth until 2014, when they appeared to be slowing.

The purpose of this research was to analyze how firms that issued a sustainability report are evaluated in capital markets. In order to do so, samples were carried out by performing empirical analyses of companies that published a sustainability report with a one-year evaluation period between 2009 and 2014. The sustainability reports using the DB offered by the KSA (Korean Standards Association), and the financial resources used the Data Guide.

The analysis method compared the annual rate of return of the year in which the report was



Source: KSA (Korean Standards Association)

Figure 2 Frequency of Firms

published with the rate the following year. For instance, if Company A published a sustainability report in year 2009(t), the return rate of year of that year was compared to the rate the following year 2009(t+1). The reason for this is that the previous year's earnings must be reflected in the sustainability report of that year.

3.2 Analysis Results

3.2.1 Analysis in Return

This study analyzes how firms that issued a sustainability report are evaluated by investors in capital markets.

Technical statistics are summarized in the Table 1. For firms, the average yield was 8.32%. For the market, Perhaps this should be deleted? "Market" means "market" seems a bit unnecessary. the annual rate of return of KOSPI was about 6.50%. Given that firms showed a higher rate of return than that of the industry, the price-earnings ratio of the company that issued a sustainability report can be interpreted as having a higher return than the industrial average.

Table 1 Summary Statistics (return of rate)

Variables	Firms	Market
Mean	8.32	6.50
Median	-0.19	-1.00
Minimum Value	-68.23	-44.81
Maximum Value	245.52	109.63
Standard Deviation	45.54	25.99
N	227	

Table 2 Result on rate of return (view industry)

Sector	① Firm	② Industry	① - ②	N
Machinery	-16.73	-7.33	-9.39	12
Electronics	13.28	17.61	-4.32	31
Transportation Apparatus	8.85	11.96	-3.11	18
Finance	-1.37	0.04	-1.41	25
Telecom	6.40	5.37	1.03	11
Service	12.45	10.60	1.85	29
Construction	-8.14	-11.88	3.74	12
Electricity & Gas	11.06	6.08	4.98	13
Chemistry	17.93	7.55	10.38	45
Transport Warehouse	15.20	3.47	11.73	12

Table 2 analyzes the difference between the stock rate of return for each firm. In the analysis, 6 of the 13 firms with an income higher than the industry average return of rate were shown to gain an excess earning rate. Transport warehouse, Chemical, Electricity and Gas, and Construction were shown in order of size, representing most of the capital goods industry. The fact that these firms represent sectors that cause pollution is significant in that when such companies are managed with their stakeholders in mind, they were highly regarded in the capital market. Furthermore, investors can be seen as being compensated as these firms work harder to reduce environmental costs. In contrast, the earnings rates in the machinery, electronics, transportation apparatus, and finance industries appeared to be reduced.

3.2.2 Results on annual rate of return

Table 3 lists the distribution of the stock rate of return. I'm not sure if this is what you wanted to say, but I had to rephrase this sentence. 2009 and 2010 show a rate of 10%, which was high compared to that of industry. 2009 showed a rate of return of 9.08%, higher than the KOSPI that year, and So not 10%, as mentioned in the previous sentence? 2010 showed a rate of 17.41%. With the exception of 2013, the ratio decreased in 2011, 2012, and 2014. These figures were interpreted as follows. In the past, the stock price could have a premium, as few companies published a sustainability report. However, since the potential for developing the company through sustainability reports could not be emphasized to the investors, it was analyzed that sustainability reports did not have a significant impact on the share price.

3.3 Robustness Results

This study also examines whether the publication of a sustainability report is related to foreign ownership. According to previous studies, the notion of increasing foreign ownership was supported as doing so could increase corporate value by effectively reducing the agency problems of management. Foreign investors also tend to invest in firms with high firm value due to the

Table 3 Result on annual rate of return

YEAR	① Firm	② Market	① - ②	N
2009	58.73	49.65	9.08	22
2010	39.29	21.88	17.41	31
2011	-21.48	-10.66	-10.82	39
2012	3.63	9.42	-5.79	42
2013	5.52	0.72	4.8	48
2014	-5.62	-4.76	-0.86	45

Table 4 Foreign Ownership industrial differences

Category	① Firm	② Industry	① - ②	N
Electronics	32.61	45.50	-12.89	31
Machinery	11.94	23.20	-11.26	12
Transport Warehouse	12.83	16.58	-3.76	12
Electricity & Gas	19.36	21.26	-1.90	13
Service	26.10	27.67	-1.57	29
Telecom	41.86	43.13	-1.27	11
Construction	23.33	22.61	0.72	12
Chemistry	28.93	27.25	1.67	45
Transportation Apparatus	37.58	35.49	2.09	18
Finance	51.54	30.86	20.68	25

retention of advanced investment systems (Park et al., 2004). Park et al. (2004) have claimed that foreign ownership raises management transparency based on the fact that companies with high foreign investor ownership have low executive private consumption when this consumption, calculated as the sum of entertainment expenses and secret expenses, is contrasted to sales. This study used the previous analysis method to analyze how foreign ownership has changed after a firm begins to publish a sustainability report.

The results are as follows. First, compared to the industrial average, the electronics sector shows the lowest rate, as a negative difference appeared in the machine, distribution, steel metal, transport warehouse, food, electricity, gas, and telecommunications sectors. At this point, the publication of a sustainability report showed a tendency to decrease mainly under foreign ownership. Meanwhile, finance, transport equipment, chemicals, and construction appear to show an increase under foreign ownership. It was discovered that foreign investors demonstrate noticeable interest in such companies. Additionally, the finance sector seemed to show a significant difference, as this sector is associated with the need for high ethical standards and corporate social responsibility.

4. Conclusion

This paper analyzed the impact of CSR on the capital market in Korea. Using listed firm data, we found that the publishing of a sustainability report that can indirectly measure the level of Same question as before. What is the object?CSR can bring the stock rate of return difference of the capital markets representative market index. The results are as the follows.

First, when a firm that publishes a sustainability report was compared in terms of its market rate of return, it showed a return increase of about 2%. We found that higher returns were gained

through the competitive advantage of related business when the firm was actively involved in social responsibility. Second, subdivided by industry, firms belonging to the capital goods industry were found to obtain a rate of return higher than the industry average rate of return. These firms were noticeable in that they were mainly industries that caused environmental pollution. Third, in an additional analysis, foreign investors were given the sustainability report of financial businesses, which was interpreted as a result of industrial properties.

When the results of this report are taken into consideration, domestic investors seemed to respond with an interest in environmental management. Thus, if a domestic firm thoroughly fulfills the requirements of the environmental with the management of stakeholders in mind, it is expected to achieve a higher rate of return. Although social responsibility is a topic that has gained a great deal of attention recently, the social engagement of these firms seem far from the embodiment of a pure form of social responsibility and closer to a strategy of business promotion. As demonstrated in this study, the trend of firms publishing a sustainability report decreased, and, overall, the proportion of firms that do publish is still comparatively low, which shows that the social activities of domestic firms are insufficient.

A sustainability report is a comprehensive report on the economic, environmental, and social activities of a firm. Firms must learn that they can gain trust through publishing trustworthy reports while achieving the lasting power of growth from the stakeholders.

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References

- Barnea, A. and A. Rubin, 2010, Corporate social responsibility as a conflict between shareholders, *Journal of Business Ethics* 97, 71-86.
- Brown, W. O., E. Helland and J. K. Smith, 2006, Corporate philanthropic practices, *Journal of Corporate Finance* 12, 855-877.
- Choi, Y. Y., H. S. Lee and C. S. Hong, 2009, Corporate social responsibility and firm value, *Korean Management Review* 38, 407-432(In Korean).
- FKI, 2014, CSR issue paper, The Federation of Korean Industries, South Korea. (In Korean).
- Park, K. S., E. J. Lee and H. S. Jang, 2004, The impact of the presence of major stockholder on Korean corporate governance, *Asian Review of Financial Research* 17, 163-201.
- Shin, H. H., S. C. Lee and J. H. Jang, 2004, External monitoring subject, *Asian Review of Financial Research* 17, 655-682(In Korean).
- Research Institute for Social Enterprise, East Asia Institute, 2013, CSR Monitor, The 4 big dilemmas of Korea CSR in public opinion, South Korea(In Korean).

Sub-Table 1 Categories and Measuring Element of the GRI

Category	Economy	Environment	Society			
Subcategory			Labor practices Decent Work	Human rights	Social	Product Liability
Measuring Element	Economic Achievement	Raw Materials	Employment	Investment	Local Community	Customer Health and Safety
	Market Position	Energy	Labor Relations	Prohibition of Discrimination	Anti-corruption	Product & Service Labeling
	Indirect Economic Effects	Water	Industry Safety Health	Association & Freedom of collective bargaining	Public Policy	
	Procurement Practices	Biodiversity	Education and training	Child labor	Competitive inhibitory actions	
		Emission	Diversity and Equal Opportunity	Forced labor	Compliance	
		Wastes and Waste Water	Equality of male and female pay	Security Practices	Impact on society from suppliers	
		Products & Services	Supplier labor practices assessment	Native rights assessment	Grievance Procedure on Social Impact	
		Compliance	Labor Practices Grievance Procedure			
		Shipping (Transport)		Supplier Human Rights Assessment		
		Synthesis		Human Rights Grievance Procedure		
		Supplier Environmental Assessment				
		Environmental Grievance Procedure				

Source :www.globalreporting.org

Sub-Table 2 The number of samples in the company by year

Year (No.Comp)	firms Name
2009(22)	STX Engine, Daegu Bank, SK Energy, Coway, Pulmuone, Hyundai Motor, Korean Air and Hanjin, CJ CheilJedang, Korea Gas Corp, Korea Electric Power Corp, LG Electronics, Samsung SDI, Samsung Electronics and Hynix Semiconductor, POSCO, Hyundai Steel , SK Telecom, LG chemical, S-oil, AmorePacific, Honam petrochemical Corporation
2010(31)	Daelim Industrial, Hyundai E & C, STX Engine, STX Heavy Industries and Construction, National Bank, SK Energy, Coway, Pulmuone, Kia Motors, Hyundai Mobis, Hyundai Motor, Korean Air, Asiana, STX Group, Samsung Corporation, Korea Gas Corporation, Korea Electric Power Corporation , LG Electronics, Samsung SDI, Samsung Electronics and Hynix semiconductor, POSCO, Hyundai Steel, KT, SK Telecom, LG Household & Health Care, LG chemical, OCI, S-oil, AmorePacific, Honam petrochemical Corporation
2011(39)	GS E & C, Hyundai E & C, STX Metal, STX Heavy Industries & Construction, Doosan Infracore, POSCO PLANTEC, DGB Financial Group, Kookmin Bank, Hana Bank, SK Energy, Kangwon Land, Coway, Pulmuone, Hyundai Mobis, Hyundai Motor, Korean Air and Asiana Airlines air, Hanjin, STX group, Korea gas Corporation, Korea Electric power Corporation, LG Innotek, LG Electronics, Samsung SDI, Samsung Electronics and Hynix semiconductor, Samsung Heavy Industries, Samsung Securities, Woori investment & Securities, POSCO, KT, SK Telecom, LG Household Health, LG chemical, OCI, S-Oil, Lotte chemical, AmorePacific Corporation
2012(42)	Daewoo E & C, Hyundai, STX Engine, STX Heavy Industries & Construction, Doosan Infracore, Doosan Heavy Industries & Construction, DGB Financial Group, KB Financial Group, Hana Financial Group, SK C & C, SK Innovation, Kangwon Land, Samsung Engineering, Company data, Coway, Pulmuone, Hyundai Mobis, Hyundai, Samsung Heavy Industries, Asiana Airlines, Industrial bank of Korea, Korea gas Corporation, Korea Electric power Corporation, LG display, LG Innotek, LG Electronics, SK Hynix, Samsung SDI, Samsung and Mirae Asset Securities, Samsung Securities, POSCO, KT , SK Telecom, LG Household & Health Care, LG chemical, OCI, S-oil, Lotte chemical corporation, AmorePacific, Hanwha chemical, Honam petrochemical Corporation (Lotte chemical)
2013(48)	Daelim Industrial, Daewoo E & C, Hyundai Engineering and Construction, BS Financial Group, DGB Financial Group, KB Financial Group, Hana Financial Group, Samsung Fire, KC Green Holdings, SK Innovation, Kangwon Land, Samsung Engineering, Coway, Pulmuone, Korea Power Engineering Company, Daewoo Shipbuilding & Marine Engineering, Hyundai Mobis, Hyundai Motor, Korean air, Asiana Airlines, Lotte Shopping, Samsung Corporation, corporate banks, CJ CJ and Lotte Chilsung, Korea gas Corporation, Korea Electric power Corporation, LG display, LG Innotek, LG Electronics, SK Hynix, Samsung SDI, Samsung Electronics, Samsung Heavy Industries, POSCO, KT, LG u +, SK Telecom, LG Hausys, LG chemical, OCI, SK Chemicals, S-oil, Kumho tire, Lotte chemical, Company data, Hanwha chemical, Hyosung Corporation
2014(45)	Daelim Industrial, Daewoo E & C, Hyundai E & C, POSCO Tech, BS Financial Group, DGB Financial Group, KB Financial Group, Hana Financial Group, Samsung Life Insurance, Samsung Fire, KC Green Holdings, Samsung Engineering, Cheil Worldwide, Coway, Pulmuone, Daewoo Shipbuilding & Marine Engineering, Hyundai Mobis, Hyundai, Samsung Heavy Industries, Korean air, Asiana Airlines, LG International, Lotte Shopping, Samsung Corporation, Korea gas Corporation, Korea Electric power Corporation, LG display, LG Innotek, LG Electronics, SK Hynix, Samsung SDI Samsung Electronics, POSCO, Hyundai Steel, LG u +, LG Hausys, LG chemical, OCI, SK Chemicals, S-oil, Kumho tires, Toray chemical, Lotte chemical, AmorePacific, Hanwha chemical Corporation