

# **Do Japanese Capital Markets Respond to the Publication of Corporate Social Responsibility Reports?**

Nila Firdausi Nuzula<sup>1</sup> and Masanori Kato<sup>2</sup>

*As of November 2010, Japan was recorded as the third largest country in the number of CSR reports registered on Global Reporting Initiatives (GRI) website. This paper attempts to examine the reaction of Japan's capital market toward CSR reports by conducting an event study on 96 publication events of CSR reports. The positive value of the average abnormal returns during the event period over 2005-2010 represents a favorable reaction toward the publication of CSR reports. The statistical significance of the event study was supported by Wilcoxon Signed-Rank Test.*

**Field of Research:** Corporate Social Responsibility, Share Prices, Event study

## **1. Introduction**

Information about social and environmental activities of Japanese companies is abundantly available in recent years in corporate websites as downloadable pdf-version of Corporate Social Responsibility (CSR) reports. Since most of the reports in Japan are prepared under Global Reporting Initiative (GRI) Sustainability Reporting Guideline, GRI has approved 66 CSR reports released by Japanese companies in 2008. Its number had risen 35% to 89 reports in 2009. (GRI 2010). As the use of CSR terminology just started in 2003 prominently, it provides remarkable description about involvement of the Japanese companies toward ethics and social responsibility agendas. This growth has placed Japan as the third largest country in the world that publish CSR reports after the US and Spain according to GRI.

Particularly in Japan, there are two business related bodies which actively enhancing companies to utilize and incorporate CSR: Japan Association of

---

<sup>1</sup> Doctoral student at Ritsumeikan Asia Pacific University, Japan  
and a lecturer at University of Brawijaya, Indonesia

All correspondences should be addressed to [nilanu09@apu.ac.jp](mailto:nilanu09@apu.ac.jp)

<sup>2</sup> Professor at Ritsumeikan Asia Pacific University, Japan

## Nuzula & Kato

Corporate Executive (*Keizei Doyukai*) and *Nippon Keidanren* (Japan Business Federation). In 2003, *Keizei Doyukai* regards CSR as the most important elements for companies to build trust. Similarly, *Nippon Keidanren* in 2005 creates guideline for companies to deal with stakeholders and CSR issues. Certainly, CSR has been a fashion in Japanese business society in the recent years.

The increasing number of the companies' involvement and disclosure in social and environment activities apparently is being considerably reaction of firms toward the proliferation of foreign investors in Japan financial markets. Tokyo Stock Exchange (TSE) noted that in 2008 foreigners market capitalization reached to 23.5%, as the second largest investors after financial institutions which arrive at 32% (TSE 2009). Interestingly the capitalization has been raised to be 26% in 2009. In the same year, TSE also recorded that 44.9% trading volume has been created by this investors. It seems that investment trend in Western which takes more account of CSR agenda has dispersed into Japan and conveyed a demand for Japanese companies to adopt this schema.

From investors' perspective, corporate efforts to accomplish CSR agendas were not futile. They provide reward for companies which make a commitment to comply with new CSR standards (Arya & Zhang 2009). A belief that the adoption of CSR could add economic value of the firms has emerged among investors (Petersen & Vredenburg 2009). From company's view, in other side, attempts to disclose firm's activities in the investing community are aimed to either attain financial benefit or to stave off potential risks are perceived worthwhile, especially if the activities are seen as of strategic nature rather than mere philanthropic purposes. Investing in a social responsibility programs may incur expenses, but it helps maximizing the company's market value (Mackey et al. forthcoming publication).

However, there has been no previous study which examined the reaction of the capital market to the CSR report publications particularly in Japan case. The research question of this study is: do Japanese markets react toward the publication of CSR reports. The result shows that the Japan's financial markets moderately assign positive reaction of the reports along with the presence positive abnormal returns during the 19 days event window rather than in 3 days event period.

This paper proceeds as follows. First section explains reason to examine Japanese financial markets reaction toward the publication of CSR reports. Second section presents literature review and prior studies particularly on aspects for disclosing

companies' activities in social and environmental concerns. It also comprises analysis of some previous studies on market reaction toward corporate social disclosure which gives general background of hypothesis developing. Third section presents the data and the application of event study, while the fourth explains and discusses the result of hypothesis testing. The paper is finalized by concluding remarks in section five.

## **2. Literature Review**

### **2.1 Corporate Social and Environmental Disclosure**

As the prominence of CSR among academicians in the 1980s and 1990s, debate about the importance social disclosure is also achieved its importance in the decades. The issue of CSR arouses a phenomenal discussion due to the intensifying demand and social expectation concerning the role of corporations to society, as well as the emerging environmental awareness. Then much more managers seize public relations benefits by producing social reports as an effort to convey a feature of corporate responsiveness to societal concerns (Owen and O'Dwyer 2009).

Within legitimacy approach, disclosing voluntary activities is aimed to fulfill external interest and expectation about how businesses should be operated (Hooghiemstra 2000). The motivation behind the disclosure is to confirm their adherence to such norms and expectation to avoid detriments of their future profitability and survival. The content of its disclosure would be either a set of information on what firm has done or a solid response to the discrediting event as an attempt to mitigate a negative impact. Thus, releasing publications in which a company can describe a variety of social and environmental activities will benefit to enhance firm's reputation. Good social reputation allows firms to improve relations with stakeholders such as employees, investors, customers, and suppliers. As such company's disclosure on social responsibility activities would be perceived as positive image by stakeholders.

Epstein and Freedman (1994) confirmed that shareholders demand companies to report ethics, employee relations, community involvement, product safety and quality, and firm's environmental activities. Information on product improvements and fair business practices are perceived as important input for institutional investors' decisions (Teoh & Shiu 1990). The investors show interest in the companies which disclose their social and environmental attainment and have

## Nuzula & Kato

positive investment willingness to those which release CSR report (Smith et al. 2010). The use of such voluntary documents as additional information to enhance investment decision making is now possible due to the improved reliability of the documents. The self-laudatory statements are also attenuated because of the necessity of auditing and third party reviewing (Holder-Webb et al. 2009).

Under voluntary disclosure assumption, disclosure of social and environmental activities can be viewed from the capital market transaction hypothesis and the litigation cost hypothesis (Bujaki and McConomy 2002). Capital market transaction hypothesis argued that managers provide voluntary disclosure to reduce information asymmetry between the managers and investors. Along with the reduction of information asymmetry, the cost of capital would be decreased as well. While under the litigation cost hypothesis, the threat of litigation can encourage firms to increase voluntary disclosure. Both hypotheses are consistent with theoretical research which suggests that firm will voluntarily disclose information when the benefits of disclosure outweigh the associated costs.

Aforementioned about the reliability of nonfinancial reporting as source for investment is substantial. As the form of this sustainability report is varied, appropriate framework such as the Sustainability Reporting Guidelines released by the Global Reporting Initiative has contributed to enhance its reliability (Enderle 2004). GRI approach stands beyond traditional reporting since they emphasize to communicate three aspects: economic, social and environmental information. It implies that the guideline encourages companies to adopt social and environment agenda and to adjust their business strategy to address for multi-stakeholder instead of to the exclusive focus on shareholder merely.

Willis (2003) notified that social and environmental information reported by companies using the guidelines is significant for stock screening. Since the improvement of the guidelines is sustained persistently, the reliability and comparability might be proliferated also. Then the reports would be beneficial for investors as it provides qualitative information that usually encountered in financial reporting. Thus, the CSR report is one of the voluntary disclosures which have important roles for reducing information asymmetry and for the functioning of an efficient capital market (Healy & Palepu 2001). It implies that investors use the reports for evaluating how corporate managers deal with social and environmental issues. If the firm's socially responsible activities are perceived positive an increase of firm's stock performance may take place.

### 2.2 Prior Studies on Financial Market Reaction

Empirical research of the relationship between firms' social and environmental activities and its financial performance that use secondary data is dominated by three types: event study, regression and portfolio studies (Jacobs et al. 2010). Portfolio studies attempt to give answer whether the return on a portfolio of firms with good environmental performance outperforms the market, while regression analyses determine long term relationship between environmental performance and accounting-based measures of firm performance. And, event study estimates the impact of particular company announcements related to environmental events either positive or negative news, to financial market performance. In accordance with the purpose of research, this study examines market reaction to the publication of Japanese CSR reports by applying event study.

Some previous event studies focused on market response toward firms' performance in environmental activities (for examples: Jacobs et al. 2010; Lorraine et al. 2004; Takeda & Tomozawa 2008; Klassen & McLaughlin 1996). Their studies used events related to the environmental issues, either good issues (for example the announcement of good environmental performance, inclusion into sustainability index and the attainment of environmental awards or ranking), or bad news (for example the publication of polluter list or exclusion from sustainability index). Meanwhile, others attempted to determine response of financial market to social activities of company. Their findings confirmed the existence of positive reaction of investors toward news or announcement which mean abnormal returns in firms' stock price have been generated.

However, no study has been conducted to examine market response toward the releasing of social and environmental reports by firms. This study addressed to fill the lack of knowledge about the market reaction to the publication of CSR report. Since some previous papers studied about the market reaction for firms' news or announcement which need short time response, this paper offers distinctive reaction from financial market. It might be arisen due to the massiveness of the CSR reports physically. Thus, different nature and characteristic between social and environmental announcement and CSR reports, capital market may have a certain mode of reaction to the reports.

Moreover, as presumed above, investors use the reports for evaluating some extent of how managers deal with social and environmental issues. Positive perceived of

## Nuzula & Kato

firm's socially responsible activities may indicate to the increase of firm's stock performance. Providing socially oriented information allows the sharpening of the firm's stock prices and returns and therefore it will be in line with the role of modern management. These previous studies rationalize the following hypothesis tested in this paper:

H<sub>0</sub> 1: The financial markets do not react to the publication of CSR reports in a short time after the releasing date.

H<sub>0</sub> 2: The financial markets positively react to the publication of CSR reports in a longer time after the releasing date.

### 3. Data and Methodology

To examine the Japanese market reaction to CSR reports, this paper applied an event study. The event study helps to assess the impact on the share prices caused by changes in corporate policy through the occurrence of 'abnormal' stock price effect associated with an unanticipated event (Carrant and Moran 2007). This paper investigates the occurrence of positive market reaction for the firm's stock around the time of CSR report publication. The positive market reaction means that the actual stock price exceeds the expected stock price on and around the date of issuing CSR report.

Since the Nippon Keidanren, the influential business association, has issued CSR matrix as an essential guideline for Japanese companies to comply with social and environmental issues within Japan area, thus the authors choose CSR reports released the companies during 2005-2010 as the sample period. The authors examined those samples and the firm's website to select appropriate CSR reports which have precise information regarding the date of the publication. From this step the authors recognized 96 CSR reports released by 34 Japanese companies examined as sample in this study.

To test the hypotheses, the authors set 2 event windows. The first hypothesis is tested by using 3 days event window, consists of 1 day before the issuing CSR reports, the day when companies release CSR reports, and 1 day after the date.

And for the second one, 19 days event window is applied. It includes the day of issuing CSR reports, 9 days before and 9 days after. These event windows will allow

## Nuzula & Kato

the authors to recognize how the investors in the financial market award the reasonably dense CSR reports.

Particularly in term of the length of event window, Currant & Moran (2007) argued that event range need to be larger than the specific period of interest to capture any leak in information prior to the day of the announcement, as well as to deal with late responses to the news. It is worthy to note, however, that referring to the efficient market principle the wealth impacts of an event could be reflected in the stock price immediately and that the length of horizon should be set in a short horizon for better stock price observation (Jacobs et al. 2010). Compare to previous study, the length of event windows in this study are moderate. Lorraine et al. (2004) which studied market response toward environmental awards calculate unexpected returns from day  $t-10$  to day  $t+10$ . Bogeia et al. (2008) set 19 trading days as event window, and mostly event studies applied three trading days as event window (for example Jacobs et al., 2010; Takeda and Tomozawa, 2008) for examining short social and environmental announcements.

To measure the impact of the CSR report publication on firm's share price, the study compares the actual returns of shares during the event windows minus the expected returns during the same period for both hypotheses. Daily stock prices of the Japanese companies were retrieved from *eoI* database. Stock returns were calculated by the growth formula. Expected returns,  $E(R_{jt})$ , that are compared with actual returns were calculated by using the following market model method. This model, proposed by MacKinlay (1997), describes a linear relationship between a stock return and the market return where the stock is traded.

$$E(R_{jt}) = \alpha_j + \beta_j R_{mt} + \varepsilon_{jt}$$

where  $R_{jt}$  is return on stock  $j$  on Day  $t$ ,  $R_{mt}$  is market return on Day  $t$ ,  $\alpha_j$  is intercept of the relation for stock  $j$ ,  $\beta_j$  is the slope of the relationship for stock  $i$  with respect to the market return, and  $\varepsilon_{jt}$  is the error term for stock  $j$  on Day  $t$ .

This study used daily Tokyo Stock Price Index (TOPIX) first section to compute market returns. From the equation above,  $\varepsilon_{jt}$  is the portion of stock  $j$ 's return that cannot be explained by market movement, while  $\beta_j R_{mt}$  is the portion of return attributed to market movements. For examining the first hypothesis, the study estimate  $\hat{\alpha}_j$ ,  $\hat{\beta}_j$ , using ordinary least squares regression over the estimation period

## Nuzula & Kato

of 99 trading days (Day -108 to Day -10), while utilize 107 days (Day -108 to Day -2) to determine expected return for testing the second hypothesis.

The authors then use the formula below to calculate abnormal returns or  $AR_{jt}$  which represents abnormal return for firm  $j$  on day  $t$ .

$$AR_{jt} = R_{jt} - E(R_{jt})$$

The abnormal return is the difference between the actual and expected return of stock individually in daily basis. Then, the mean of abnormal returns across all samples for day  $t$  were calculated by:

$$\overline{AR}_{jt} = \sum_{i=1}^N \frac{AR_{jt}}{N}$$

where  $N$  is the number of samples. To examine the abnormal return generated in day this study analyzed accumulating daily results over a set of sample using the cumulative abnormal return (CAR) by applying this following formula:

$$CAR_i(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_{it}$$

where  $CAR_i$  is the cumulative abnormal return of period  $i$  during the first day of the event window  $t_1$  to  $t_2$ , the last day of the event window respectively. Then, as the final step of event study, this research analyzed the robustness of the result by running the non parametric Wilcoxon Signed Rank on SPSS to test the null hypothesis states that there is no difference between actual returns and expected stock returns.

## 4. Findings and Discussion

As this paper examines two hypotheses, both results are summarized and presented in Table 1. It represents mean and median of AR for 3 days and the 19 days event period. To examine the robustness of the results of non parametric Wilcoxon Signed Rank test are presented as well.



## Nuzula & Kato

**Table 1: Results of the event study**

	3 Days	19 Days
Mean AR	-0.0028	0.0039
Median AR	-0.0015	-0.001
Significance test (Wilcoxon Signed Rank)	0.045	0.001
% AR positive	45.14%	47.1%
CAR	-0.0087 <sup>a</sup>	0.0732 <sup>b</sup>

\*2-tailed & confidence level 95%

<sup>a</sup> at the Day 1

<sup>b</sup> at the Day +9

As described in the table, event study with 3 days of event period apparently suggest to the authors to accept the first null hypothesis which says there is no financial market reaction within a short time of the publication of CSR reports. The data supports this result since the CAR has negative value at the Day 1, as well as mean and median AR which marked negatively. It also reveals the result for 19 days event window. Although there is a small number of positive AR, some indicators such as CAR (0.0732) and Mean AR (0.0039) show positive value. It provides evidence to confirm the second hypothesis that financial markets in Japan grant positive respond of the publication of CSR reports in such a longer time marginally.

The outcome is supported by Wilcoxon's Signed-Rank Test confirms that Japanese financial markets show the appreciation to the publication of CSR reports by the firms in such a longer time. The gestation time required for the CSR report to create abnormal returns in the capital market however appears to be longer than CSR related event cases. It supports an a priori argument that firm's engagement to socially responsible agenda can gradually enhance shareholders value over a long term. It is worthy to point out however that the stock market does not show quick appreciation to the firm's social and environmental activities disclosure immediately after the report is released.

This finding supports previous studies remarkably in term of reaction of financial markets toward firms' social and environmental announcements. Mainly this paper contributes to provide evidence that the markets also react to such a comprehensive disclosure of social and environmental performance released annually by Japanese companies prospectively. Being distinguished with earlier financial market studies that showed quick response, however, this paper confirms the occurrence of

## Nuzula & Kato

positive reaction appears in moderately long time after the day of the issuance. The following explanations may become reasons for the result.

The CSR report has different nature from other social and environmental announcements. The reports are released annually by the firms as stand-alone reports independent from the annual financial reports. It is common that annual publication may elicit in advance responses. Following Teoh and Shiu's (1990) conclusion that investors use the firm's social disclosure on their investment decision, they might anticipate the issuance although in fact firms do not consistently publish the CSR reports on a given date each year. Another characteristic of CSR report is related to the release mechanism. The company may release it on its corporate website in downloadable format and/or send the hard copies to shareholders by mail. The differing time span for delivery may be one of the causes for a slow reaction by the capital market.

The adoption of reporting guidelines allows the reports contain many pages to cover wide explanation about firm's activities related to various stakeholders. In Japan, Nippon Keidanren as an influential business association has released the Corporate Social Responsibility (CSR) Matrix which provides a guide line to Japanese companies to comply with social and environmental issues. Consequently CSR reports tend to be long and investors may need longer time to examine firm's attainment on many forms of social and environmental agenda. It could be an explanation why the response of Japanese financial markets to the issuance of CSR reports is presented relatively in long term after the publication.

The reports also contain variety of firms' statements related to different stakeholders. As the reports are aimed to be utilized by many stakeholders, however, particularly for investors it may evoke a variety of responses among investors who have different backgrounds and interests as well. It may ascent either good or bad evaluation of social and environmental activities by the investors and hence mixed reactions from the investors. Presumably it may be a reason for the scattered abnormal returns appeared within 19 days event window particularly. Certainly the presence of another news or announcement that potentially become noises and influence the movement of share price should be controlled. As this study did not restrain the noise, this becomes limitation of this research.

The small magnitude of the abnormal returns could be explained by the historical position of CSR activities in the Japanese firms. As Takeda and Tomozawa's (2008)

## Nuzula & Kato

suggested the market reaction to environmental news has particularly enhanced in Japan after 2001 when the Ministry of Environment was established and the 2002 ratification of Kyoto Protocol. The awareness of CSR activity has since improved in the Japanese firms and by the current study period starting 2005 the CSR reporting by the Japanese firms had reached a high standard and the capital market had already factored in such reports in the share prices. Therefore the changes from that position would be relatively small.

Findings in this study generally support the argument that stock markets appreciates company's attempts to behave in socially responsible manner (Arya and Zhang 2009, Smith et al. 2010) and shareholders would perceive it as firm's efforts to reduce risks and maintain business sustainability. The shareholder's value increases as a result of firm's commitment to CSR agenda despite it may incur extra expenses. Consequently the number of firms which commit to incorporate CSR agenda on their business strategies is increasing significantly.

### 5. Conclusion

This paper analyzes reaction of financial market of CSR reports in Japan. As the adoption of social and environmental activities is being prominence strategy among companies, and the publishing of CSR reports becomes burgeoning medium to convey firms' performance on these activities, thus scrutinize market reaction of it to be crucial. The authors find that financial markets present positive reaction toward the publication of CSR reports in Japan marginally. Interestingly, the reactions are demonstrated in longer time rather than in short time. Apparently, the nature of CSR Report causes investors need sort of longer time to examine the reports. Hence, the occurrence of abnormal returns in the capital market appears to be delayed compared to other CSR related event cases such as firm's environmental award announcement. The Wilcoxon Signed-Rank test confirmed that the result of the event study was statistically warranted.

This study has a limitation since the presence of another firms' announcements that may have potential effect to yield excess returns were not being handled. Further research is also needed to investigate investors' behavior regarding to some extents social and environmental issues encourage their investment decision compare to the impact of cross-shareholding which predominantly influence stock buying in Japan's case.

### References

- Arya, B & Zhang, G 2009, 'Institutional reforms and investor reactions to CSR announcements: Evidence from an emerging economy', *Journal of Management Studies*, vol. 46, Issue 7, pp. 1089-1112.
- Bogea, F, Campos, AS & Camino, David 2008, 'Did the creation of ISE created value to companies?', paper presented to XXXII Encontro da ANPAD, Rio de Janeiro 2008, <http://ssrn.com/abstract=1274270>
- Bujaki, M & McConomy, BJ 2002, 'Corporate governance: Factors influencing voluntary disclosure by publicly traded Canadian firms', *Canadian Accounting Perspectives/Perspectives Comptables Canadiennes*, vol. 1, no. 2 – PCC vol. 1, no. 1, pp. 105-39 CAA/ACPC.
- Curran, MM & Moran, D 2007, 'Impact of the FTSE4Good Index on firm price: An event study', *Journal of Environmental Management*, vol. 82, pp. 529-537.
- Enderle, G 2004, 'The ethics of financial reporting, the Global Reporting Initiative and the balanced concept of the firm', in GG Brenkert (ed), *Corporate integrity and accountability*, Sage Publication, Inc., California, pp. 86-99.
- Epstein, MJ & Freedman, M 1994, 'Social disclosure and the individual investor', *Accounting, Auditing & Accountability Journal*, vol. 7, no. 4, pp. 94-109.
- Global Reporting Initiatives (GRI) Reports List 1999-2010, accessed November 2010, <http://www.globalreporting.org>
- Healy, PM & Palepu, KG 2001, 'Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature', *Journal of Accounting and Economics*, vol. 31, pp. 405-440.
- Holder-Webb, L, Cohen JR, Nath, L & Wood, D 2009, 'The supply of Corporate Social Responsibility Disclosure among US Firms', *Journal of Business Ethics*, vol. 84, pp. 497-527.
- Hooghiemstra, R 2000, 'Corporate communication and impression management – New perspectives why companies engage in corporate social reporting', *Journal of Business Ethics*, vol. 27, pp. 55-68.
- Jacobs, BW, Singhal, VR & Subramanian, R 2010, 'An empirical investigation of environmental performance and the market value of the firm', *Journal of Operation Management*,. DOI:10.1016/j.jom.2010.01.001
- Klassen, RD & McLaughlin, CP 1996, 'The impact of environmental management on firm performance', *Management Science*, vol. 42, no. 8, pp. 1199-1214.
- Lorraine, NHJ, Collison DJ & Power, DM 2004, 'An Analysis of the Stock Market Impact of Environmental Performance Information', *Accounting Forum*, vol. 28, pp. 7-26.

## Nuzula & Kato

- Mackey, A, Mackey, TB & Barney, JB Forthcoming publication, 'Corporate social responsibility and firm performance: Investor preferences and corporate strategies', *Academy of Management Review*, accessed December 2010, <http://aomarticles.metapress.com/content/86248g30488w7601/>
- Mackinlay, AC 1997, 'Event studies in economics and finance', *Journal of Economic Literature*, Vol. XXXV, pp. 13-39.
- Owen, DL & O'Dwyer, B 2009, 'Corporate social responsibility: The reporting and assurance dimension', A Crane, A McWilliams, D Matten, J Moon, & D Siegel (eds), *The Oxford Handbook of Corporate Social Responsibility*, Oxford University Press, UK, pp. 384-409.
- Petersen, H & Vredenberg, H 2009, 'Corporate governance, social responsibility and capital markets: exploring the institutional investor mental model', *Corporate Governance*, vol. 9, no. 5, pp. 610-622.
- Smith, JL, Adhikari, A, Tondkar, RH & Andrews, RL 2010, 'The Impact of Corporate Social Disclosure on Investment behavior: A cross-national study', *Journal of Accounting, Public Policy*, vol. 29, pp. 177-192.
- Takeda, F & Tomozawa, T 2008, 'A change in market responses to the environmental management ranking in Japan', *Ecological Economics*, vol. 67, pp. 465-472.
- Teoh, HY & Shiu, GY 1990, 'Attitudes towards corporate social responsibility and perceived importance of social responsibility information characteristics in a decision context', *Journal of Business Ethics*, vol. 9, pp. 71-77.
- Tokyo Stock Exchange (TSE), 2009 Shareownership Survey, accessed January 2011, <http://www.tse.or.jp/english>
- Willis, A 2003, 'The role of the global reporting initiative's sustainability reporting guidelines in the social screening of investments', *Journal of Business Ethics*, vol. 43, Issue 3, pp. 233.