

Investors' Reaction To Csr Disclosure: Evidence From Indonesia

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Abstract

Penelitian ini bermaksud mengetahui bagaimana reaksi investor pasar modal terhadap pengungkapan tanggung jawab sosial perusahaan pada perusahaan-perusahaan publik yang tercatat di Bursa Efek Indonesia (BEI). Selain melihat ukuran pengungkapan CSR secara agregat, studi ini juga menggunakan ukuran pengungkapan CSR secara disgregat, yang meliputi empat dimensi (pemberdayaan masyarakat, produk, hubungan dengan karyawan, dan lingkungan hidup). Berdasarkan informasi yang diungkapkan dalam laporan tahunan 2008 dan 2009, sampel studi ini terdiri dari perusahaan-perusahaan yang bergerak dalam sektor-sektor industri high-profile. Hasil pengujian empiris menunjukkan bahwa pengungkapan CSR secara agregat tidak direspons oleh investor secara signifikan, namun masing-masing dimensi CSR mendapat respons yang berbeda-beda. Investor cenderung bereaksi positif terhadap pengungkapan terkait pemberdayaan masyarakat dan lingkungan hidup, sedangkan reaksi negatif terdapat pada pengungkapan terkait hubungan karyawan. Karena perusahaan-perusahaan yang lebih besar memiliki tingkat visibilitas yang tinggi, studi ini juga meneliti apakah ukuran perusahaan berperan signifikan dalam menjelaskan reaksi pasar terhadap pengungkapan CSR.

Keywords: *Corporate social responsibility, disclosure, Indonesia, market reaction, stock returns*

INTRODUCTION

Within the corporate social responsibility (CSR) approach, a business should respect for ethics, community, people, and the environment in its efforts to improve its competitive advantages in the market. To do so, it should utilize its economic resources to contribute to meeting the interests of both internal and external stakeholders.

CSR practices now emerge as an important part in a company's business activities due to growing demands from stakeholders towards the company to actively engage in such practices (Chapple and Moon, 2005). Taking into account the global contemporary economic landscape, which has seen the shifts of economic power from the government to the corporate

sector, companies are expected to have an increasing responsibility in addressing various social problems (Tsoutsoura, 2004). Even though the involvement in CSR activities bears some costs to companies, such practices can also be associated with a series of benefits, such as enhanced reputation and stable earnings growth.

There is still no consensus among researchers regarding the appropriate method to measure a company's involvement in CSR activities. Some studies employ relatively subjective indicators such as perception of a particular group of community (e.g. Heinze, 1976) or ratings issued by a particular institution (e.g. Preston and O'Bannon, 1997; Brammer et al., 2006). An extensive body of research employs official corporate disclosures (such as annual reports) to measure a company's CSR practices, even though such documents may be subject to impression management and subjective bias (Tsoutsoura, 2004). As Garcia-Sanchez (2008) explains, companies probably choose to legitimize that they have engaged in CSR through the disclosure of information in publicly-available documents about actions they have carried out. Previous studies, particularly within the context of developed countries, demonstrate that the amount of information about CSR activities disclosed in the annual report has increased significantly over time (Gray et al., 2001). As summarized by Haniffa and Cooke (2005), the increase in corporate social disclosure may be associated with increases in legislation, activities of pressure groups, ethical investors, awards, media interest, societal awareness, and politics.

When a corporation is publicly-listed on

a stock exchange, it becomes subject to greater visibility and various demands from an increasing number of stakeholders. Information disclosed in a publicly-listed firm's official reports, hence, also becomes subject to particular reactions from the existing or potential investors. Taking into account the efficient market hypothesis, when the capital market has a strong or semi-strong form of efficiency, all publicly-available information about perceived firm value will be reflected in a firm's share price in the market. In terms of CSR disclosure, Mackey et al. (2007) contend that "semi-strong efficiency, in particular, implies that if firms engage in specific socially responsible activities in a public way, current and potential equity holders will be aware of both the nature of these activities and their impact on the present value of a firm's future cash flows and will, on average, adjust their valuation of a firm's equities accordingly" (pp. 819-820). While developed capital markets have been associated with a relatively stronger form of efficiency, their emerging counterparts tend to demonstrate market efficiency in a weaker form (Karemera et al., 1999; Ojah and Karemera, 1999). However, there has been recent empirical evidence suggesting that emerging capital markets are mostly becoming more efficient over time.

Studies on CSR disclosure, within the context of both developed and emerging markets, have largely focused on firm characteristics that determines the level of disclosure (e.g. Cowen et al., 1987; Roberts, 1992; Hackston and Milne, 1996; Haniffa and Cooke, 2005). An extensive body of empirical studies have also examined the association between

CSR practices with accounting-based performance (e.g. Cochran and Wood, 1984; Simpson and Kohers, 2002) or market-based performance (e.g. Brammer et al., 2006; Murray et al., 2006). However, very little attention has been devoted into the market reaction on CSR disclosure, and the existing studies have been conducted mainly in the US context. Such studies are pioneered by Belkaoui (1976), Ingram (1978), and Anderson and Frankle (1980). Other studies from outside the US, among others, include Patten (1990) and Parsa and Deng (2008), which employ data from South Africa and the UK, respectively.

The present study investigates the market reaction to the disclosure of CSR using the setting of an economy associated with a weaker form of capital market efficiency. The result of this study, hence, extends the existing literature that mainly focuses on such an issue in developed economies. Indonesia provides an interesting setting due to its economic significance; the country is the largest economy in Southeast Asia and the eighteenth-largest in the world. The country has an emerging capital market that attracts portfolio investments from various parts of the world. Further, the latest version of the country's Corporation Act, enacted in 2007, has also encouraged Indonesian companies to actively engage in CSR activities. As such, it is considered important to investigate whether and how investors react to the information on CSR activities disclosed by publicly-listed companies in their annual reports.

The remainder of this paper is structured in the following manner. The next section reviews the existing literature and develops

research hypotheses. This is followed by Section 3, which describes data and methodology employed in this study. Empirical results are presented and further discussed in Section 4. Finally, Section 5 concludes the paper.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Theoretical review

There are a number of theories that can explain CSR disclosure. Most studies on CSR have acknowledged that legitimacy theory appears to be the main motivation for companies to disclose information on CSR. Guthrie et al. (2004) explain that legitimacy theory is based on the notion that a "social contract" exists between an organisation and the environment in which the organisation operates. Based on the "social contract", the organisation will undertake various efforts to ensure that it has conducted its business within the norms and expectations of its respective society. In terms of CSR disclosure, a company would voluntarily provide information about its activities if management determines that certain information is demanded by the environment in which the company operates (De Villiers and Van Staden, 2006). However, other studies suggest that such legitimacy is possibly subject to different interpretations from the organisation's environment due to differences in culture, ideology, and political system (Gray et al., 1995).

CSR reporting may also be explained using stakeholder theory. Under this theory, the activities and behaviour of a company may be influenced by various stakeholder groups that have interests, including shareholders,

employees, customers, suppliers, creditors, the government, and the local community (Deegan, 2006). Companies will disclose information to their stakeholders due to their moral obligations and/or "pressures" from a particular group of their stakeholders. However, stakeholders' expectations are likely to vary between countries, leading to different practices in CSR reporting. Further, under institutional theory, institutions are less likely to change than other structures and, hence, provide stability and meaning to social behaviour (Scott, 1995). As suggested by Waldman et al. (2006), each company has its own institutionalized values, resulting in a particular level of CSR information disclosed in the company's reports.

When a company is listed on a stock exchange, information disseminated by the company becomes subject to reaction from the market to a particular extent. Referring to the efficient market hypothesis, a market is considered efficient when asset prices fully reflect all available information from historical, public, and private sources (Fama, 1991). In the semi-strong form of market efficiency, asset prices reflect both historical and public information. Further, when the market efficiency is weak, asset prices only reflect historical information. In a weak-form efficient market, investors are unlikely to make systematic nonzero profit by relying on past information. In other words, successive returns tend to be independent and follow random walks in such a market.

Empirical studies have suggested that the strong form of market efficiency is not found in any market. Even though the

U.S. capital markets are often regarded as the most efficient markets in the world, Copeland et al. (1994) contend that there is substantial evidence that the country's capital markets, in overall, are semi-strong efficient. In their investigation on 15 emerging capital markets, Karemera et al. (1999) suggest that most of the emerging markets are weak-form efficient. This result is supported many other studies examining individual markets. Worthington and Higgs (2005) examines ten emerging markets (including Indonesia) and five developed markets in the Asia-Pacific region. They find that all of the markets are weak-form efficient. Nevertheless, employing a bulk of emerging markets in Asia and Latin America, Cajueiro and Tabak (2004) confirm that emerging capital markets are increasingly efficient over time for most countries being examined.

Previous studies and hypothesis

Empirical studies examining capital market responses to social disclosure are still relatively limited and mostly conducted within the U.S. context. In their conceptual paper, Richardson et al. (1999) propose that disclosure of CSR information can have an impact on capital market processes. Such disclosure is also proposed to have cash flow consequences for the company and influence the discount rate used by investors in valuing the stream of cash flows.

The pioneer study is the one conducted by Belkaoui (1976). He studies investors' reaction to pollution disclosure in the U.S. capital market and reports a positive market reaction to firms that provide evidence of responsible pollution control procedures compared to those that could

not demonstrate such a responsibility. This positive reaction is also documented by Anderson and Frankle (1980). In contrast, Shane and Spicer (1983) find a generally negative reaction to the release of externally-produced environmental information. Ingram (1978) observes that the market does not significantly react to social disclosure made by companies, but the reaction is a function of the industry to which the company belongs and the types of social information being reported. Examining the U.S. cotton textile industry regarding the disclosure of the financial impact of new environmental standards, Freedman and Stagliano (1991) document the occurrence of a negative investor revaluation, leading to declining stock returns.

Further, Griffin and Sun (2012) investigate shareholders' response to companies' voluntary disclosures about greenhouse gas emissions made through the CSR newswire service, an organisation that claims to be the global leader in climate change disclosure. They find that the voluntary green disclosure provide shareholders with positive returns. They also indicate that the shareholders of smaller firms with lower public information availability benefit the most from such green disclosure, since those shareholders find fewer channels and less access to competing information. Using externally-produced information on environmental, social, and governance issues of U.S. firms, Capelle-Blancard and Petit (2011) find that firms facing negative events tend to experience a decline in their share price around the day of announcement.

Empirical evidence from outside the U.S. is very rare. An earlier study is conducted by Patten (1990), who examines capital market reaction to the 1977 disclosures that certain U.S. companies doing business in South Africa had signed the Sullivan Principles, a code of equal economic opportunities for non-white workers in South Africa. Even though his results on share price data are inconclusive, there is a significant trading volume reaction associated with the information disclosure. A later South African study is conducted by Arya and Zhang (2009) who find a positive market reaction to CSR announcements during the period of changes in the institutional environment.

In the aftermath of the incidence of Union Carbide's chemical leak in Bhopal, India, during December 1984, Blacconiere and Patten (1994) report a significant negative reaction towards other firms in the chemical industry. However, firms with a higher level of environmental disclosure in their reports prior to the catastrophe are found to experience a less negative reaction than their peers. Parsa and Deng (2008), using a sample of U.K. firms listed on the London Stock Exchange, show an overall positive market reaction to the announcement of social information. Employing data of French companies listed in the CAC40 index, Damak-Ayadi (2011) investigates the stock market response to the Alpha-Etudes reports, which report assessment on the quality and the conformity of social information in the annual report to applicable regulations. She indicates a positive market reaction following media coverage about the reports.

There are also a number of studies, yet limited, conducted within the Indonesian context. Those studies demonstrate inconclusive results. Cheng and Christiawan (2011) report a positive association between CSR disclosure and abnormal returns, where their sample consists of IDX's listed firms from three industrial sectors. Based on a sample of manufacturing firms, Meliana (2011) also confirms such a positive association. However, Dahlia (2010) provides evidence that the abnormal return is not significantly associated with the extent of CSR disclosure.

CSR disclosure in the annual report seems to represent companies' transparency in reporting their engagement in CSR activities, which may be positively viewed by investors. However, given contradicting results from prior studies, such disclosure may also contain "bad news" that brings about potential negative impacts on shareholders' interests, resulting in a negative reaction. Hence, we posit that there is a significant market reaction to the aggregate CSR disclosure, but we do not predict the direction. The first hypothesis is formulated as follows:

H1: There is a significant influence of the aggregate CSR disclosure on shareholder returns.

Interestingly, a number of recent studies consider an alternative approach instead of merely employing the aggregate CSR measure. Those studies disaggregate various aspects within CSR to assess the impact that each aspect has on shareholder returns. Brammer et al. (2006) state that "CSR is multi-faceted and these various

aspects may have differential impacts depending on the nature of the firm's business" (p. 101). They contend that the disaggregated measures will enable researchers to investigate the influence of the various aspects of CSR on stock returns, as well as to examine whether there are any differences between those aspects. Additionally, Manescu (2009) argues that it is reasonable to determine that not all aspects of CSR are equally important to investors, leading to the need to look into the influence of each aspect separately.

Based on a sample of firms in the U.K., Brammer et al. (2006) examine the association between corporate social performance and stock returns. In addition to the aggregate CSR performance, they examine the influence of three CSR dimensions, namely the environment, employment, and community activities. While they find that the composite social performance indicator has no significant association with stock returns, each dimension impacts on stock returns differently. A higher score of environmental performance has a negative and significant effect on stock returns, and no significant associations are found for other two dimensions. In her study, Manescu (2009) investigates the relation between CSR performance and stock returns employing data of U.S. firms listed in the S&P 500 and Domini Social Index 400. She uses six disaggregated measures of CSR, namely community, diversity, employee, environment, human, and product. Her study provides evidence that the reaction of investors to the aggregate CSR performance is positive in the earlier sample period, but the reaction turns negative in the later

sample period; leading to indication that the shift in market reactions may be due to increasing availability of CSR information. Additionally, the study finds that the environmental factor appears to be the main driver of shareholder returns.

It is important to note that both Brammer et al. (2006) and Manescu (2009) employ CSR performance indicator provided by independent research institutions. To the best of our knowledge, there is no any prior research that employs disaggregated CSR components in evaluating the association between CSR reporting and shareholder returns. Hence, the present study is intended to fill this gap. In addition to the aggregate CSR disclosure formulated in Hypothesis 1, we consider four dimensions as adopted by Branco and Rodrigues (2008) and Saleh et al. (2010), namely community involvement, product, employee relation, and the environment. Similar to the previous hypothesis, we do not predict the direction of the impacts of these four dimensions on shareholder returns. Based on this proposition, Hypotheses 2 to 5 are formulated as follows:

H2: There is a significant influence of the disclosure of community involvement information on shareholder returns.

H3: There is a significant influence of the disclosure of product information on shareholder returns.

H4: There is a significant influence of the disclosure of employee relation information on shareholder returns.

H5: There is a significant influence of the disclosure of environmental information on shareholder returns.

DATA AND METHODS

Sample and data

Our sample comprises listed firms on the Indonesia Stock Exchange (IDX) that operate in the so-called "high-profile" industries. We base our classification, whether an industry is considered high- or low-profile, on the industry classifications employed by the IDX. We only include firms in the high-profile industries since their operation is subject to greater public visibility, political exposure, and environmental sensitivity (Roberts, 1992; Newson and Deegan, 2002). Relatively similar to Adler and Milne (1997), the sectors of finance, trade, and property are considered low-profile industries, thereby those sectors are not included in the sample. To capture the recent development, the sample period employed in the present study is the period of 2008-2009. The period appears to be the most recent when this study is initially conducted. After eliminating firms with incomplete data required for the study, we obtain 117 firm-year observations, consisting of 53 and 64 firms for the financial years 2008 and 2009, respectively.

We employ the 2008 and 2009 annual reports as a source of information in collecting data on the level of CSR disclosure as Botosan (1997) argues that the annual report is considered the principal medium for a firm to convey detailed financial and non-financial information. The sample firms' annual reports are downloadable from the IDX's website. We also refer to the IDX's website to obtain data regarding the date of annual report publication, while data on share prices surrounding the publication date are obtained from *Yahoo! Finance*.

We also include a number of financial accounts and ratios as control variables in our models, which are obtained from the *IDX Factbook*.

Econometric model and variable measurement

The regression models below are specified to conduct hypothesis testing. Since this study employs an unbalanced panel data set, a series of tests are required to determine the most appropriate estimation technique. Equation (1) is employed to test Hypothesis 1, while Hypotheses 2 to 5 are tested using Equation (2). Three control variables are also included in both models, namely firm size, leverage, and the market-to-book ratio.

$$CAR = \alpha + \beta_1 CSRDI + \beta_2 SIZE + \beta_3 LEV + \beta_4 MTB + \varepsilon$$

$$CAR = \alpha + \beta_1 COMDI + \beta_2 PRODI + \beta_3 EMPDI + \beta_4 ENVDI + \beta_5 SIZE + \beta_6 LEV + \beta_7 MTB + \varepsilon$$

CAR is cumulative abnormal returns; *CSRDI* is CSR disclosure index; *SIZE* is the firm size; *DER* is debt-to-equity ratio; *MTB* is market-to-book ratio; *COMDI* is community involvement disclosure index; *PRODI* is product disclosure index; *EMPDI* is employee relation disclosure index; *ENVDI* is environmental disclosure index; *SIZE* is firm size; *LEV* is leverage; and *MTB* is the market-to-book ratio.

CAR is defined to be the sum of abnormal returns within the event window. In this study, similar to DeBondt and Thaler (1985), we employ the market-adjusted model, where the abnormal return is calculated by deducting the market equity return from a firm's equity return. Hence, the formula to

calculate the abnormal return is:

$$AR_{it} = R_{it} - R_{mt}$$

where R_{it} is the return for stock i on day t , while R_{mt} is the return for the market on day t . The market is proxied by the Stock Composite Index of the IDX. For the purpose of an event study, McWilliams and Siegel (1997) recommend the use of short window lengths to minimize the influence of other factors on the association being examined. However, the use of a too-short window (for example, the day before and the day after a particular event) is also considered problematic since there may be possibilities of information leaks or lagged reaction from investors (Arya and Zhang, 2009). Following Godfrey et al. (2009), this study employs a seventeen-day window, which consists of eight days before the annual report publication date, the publication date itself, and eight days following the publication date.

In determining CSR disclosure made by each firm (*CSRDI*), we use content analysis on information disclosed in the annual report. We construct a comprehensive checklist spanning four dimensions of CSR disclosure, namely community involvement, product, employee relation, and the environment. There are totally 47 disclosure items included in the checklist, which are derived from a number of previous studies, such as Haniffa and Cooke (2005) and Saleh et al. (2010). Similar to Haniffa and Cooke (2002), in scoring items, the approach is essentially dichotomous, where an item scores 1 if disclosed and 0 if it is not, without any penalty for each undisclosed item. Additionally, all items are equally

weighted. The index is calculated using the following formula:

$$CSRDI = \frac{\sum_{i=1}^{n_j} X_{ij}}{n_j}$$

where n_j is the number of items expected to be disclosed by company j ; whereas X_{ij} equals 1 if i th item is disclosed and 0 if i th item is not disclosed. Hence, the *CSRDI* would have the minimum value of 0.00 and the maximum value of 1.00. Such a procedure is also applied in determining the disclosure index for each dimension (*COMDI*, *PRODI*, *EMPDI*, and *ENVDI*).

EMPIRICAL RESULTS AND DISCUSSIONS

Descriptive statistics and correlation analysis

Table 1 reports the descriptive statistics of variables employed in this study. In terms of the market response, it is reported that the cumulative abnormal return surrounding the publication data is 7.75 per cent, on average. The mean and median values of the CSR disclosure index are 0.2993 and 0.2766, respectively; ranging from zero to 0.7234. This seems to indicate that the

Table 1
Descriptive statistics

Note: This table reports the descriptive statistics of variables employed in this study. *CAR* is cumulative abnormal returns during 17 days surrounding the annual report publication date. *CSRDI* is the corporate social responsibility disclosure index. *COMDI* is the community involvement disclosure index. *PRODI* is the product-related information disclosure index. *EMPDI* is the employee relations disclosure index. *ENVDI* is the environmental disclosure index. *SIZE* is the book value of total assets, measured in billions Indonesian Rupiah (IDR). *LEV* is the debt-to-equity ratio. *MTB* is the market value of equity divided by the book value of equity.

Variable	Mean	Median	Standard Deviation	Minimum	Maximum
Dependent variable					
<i>CAR</i>	0.0775	0.0090	0.2521	-0.2938	1.1662
Disclosure index					
<i>CSRDI</i>	0.2993	0.2766	0.1650	0.0000	0.7234
<i>COMDI</i>	0.3496	0.4000	0.2416	0.0000	0.9000
<i>PRODI</i>	0.2279	0.1667	0.2259	0.0000	0.8333
<i>EMPDI</i>	0.3054	0.3182	0.1710	0.0000	0.7727
<i>ENVDI</i>	0.2764	0.2222	0.2693	0.0000	1.0000
Control variables					
<i>SIZE</i> (IDR billion)	8,408	3,719	14,420	62	91,256
<i>LEV</i>	1.7274	0.9000	3.2998	-3.7000	27.0700
<i>MTB</i>	2.4132	1.4100	4.2498	-0.8300	35.4500

With respect to control variables, firm size is defined to be the natural log of the book value of assets. Leverage represents the firm's debt level, which is calculated as the ratio of liabilities to equity. Finally, the market-to-book ratio is calculated as the market value of equity divided by the book value of equity.

level of CSR disclosure among Indonesian listed firms is generally low. When the disclosure index is disaggregated into four dimensions, we find that the community involvement disclosure index demonstrates the highest score at 0.3496. Among the four dimensions, the lowest score goes to product information disclosure, with the

index recorded at 0.2279, on average. Control variables generally show a great range. Firm size, which is proxied by total assets, ranges from Indonesian Rupiah (IDR) 62 billion to IDR 91,256 billion; with the average of IDR 8,408 billion. The average values of the debt-to-equity and market-to-book ratios are recorded at 1.7274 and 2.4132, respectively.

product and employee are found to show no significant correlation. This finding will be further tested in regression analysis. While the four dimensions are positively and significantly correlated each other, in general; it is reported that a significant correlation does not exist between environmental and employee-related disclosures.

Table 2
Correlation matrix

Note: This table reports Pearson correlation coefficients between research variables. *CAR* is cumulative abnormal returns during 17 days surrounding the annual report publication date. *CSRDI* is the corporate social responsibility disclosure index. *COMMI* is the community involvement disclosure index. *PRODI* is the product-related information disclosure index. *EMPDI* is the employee relations disclosure index. *ENVDI* is the environmental disclosure index. *SIZE* is the book value of total assets, measured in billions Indonesian Rupiah (IDR). *LEV* is the debt-to-equity ratio. *MTB* is the market value of equity divided by the book value of equity. *, **, and *** denote statistical significance (two-tailed) at the 10, 5, and 1 per cent levels, respectively.

Variable	<i>CAR</i>	<i>CSRDI</i>	<i>COMMI</i>	<i>PRODI</i>	<i>EMPDI</i>	<i>ENVDI</i>	<i>SIZE</i>	<i>LEV</i>	<i>MTB</i>
<i>CAR</i>	1.000								
<i>CSRDI</i>	0.077	1.000							
<i>COMMI</i>	0.177*	0.821***	1.000						
<i>PRODI</i>	0.000	0.387***	0.173*	1.000					
<i>EMPDI</i>	-0.132	0.885***	0.589***	0.255***	1.000				
<i>ENVDI</i>	0.275***	0.791***	0.619***	0.110	0.549***	1.000			
<i>SIZE</i>	0.016	0.396***	0.373***	-0.011	0.428***	0.238***	1.000		
<i>LEV</i>	-0.124	-0.117	-0.058	-0.200**	-0.033	-0.151	0.080	1.000	
<i>MTB</i>	-0.124	0.028	0.109	-0.042	0.017	-0.020	0.035	0.196**	1.000

The result of correlation analysis between research variables is presented in Table 2. We report that the aggregate CSR disclosure index is not significantly correlated with abnormal returns, providing preliminary support to reject Hypothesis 1. A different result is found when the overall index is disaggregated into four dimensions. The correlation matrix demonstrates that the abnormal return during the event window has a significant correlation with community-related and environmental disclosure indices, both in a positive direction. However, the disclosures of

In terms of control variables, we find that firm size has a positive correlation with the aggregate CSR disclosure, providing a basis to argue that larger firms tend to have higher incentives to disclose information in their corporate annual reports. Such a significant correlation is also found for all dimensions of CSR disclosure, except for product-related information. Additionally, the result of correlation analysis also demonstrates that firms with a higher level of debt tend to disclose more information about products.

Regression analysis

In examining the market reaction to CSR disclosure, we employ regression analysis. The results are presented in Table 3. Before running regressions, the models are tested to make sure that they do not suffer from multicollinearity, heteroskedasticity, and autocorrelation problems. Multicollinearity problems seem not to exist because correlation coefficients between explanatory variables are reported below 0.80. To deal with potential heteroskedasticity and autocorrelation problems, we employ *t*-statistics based on robust standard errors. Since the present study uses a panel data set, the Chow and Hausman tests are conducted to determine the appropriate estimation technique. The results of the two tests support the random-effects method.

In Model (1) of Table 3, which reports the regression of CAR on the CSR disclosure index, we fail to find a significant association between the two variables; therefore Hypothesis 1 is not supported. This implies that the market tends not to react significantly to the aggregate CSR disclosure. This result is consistent with Cellier and Chollet (2011) who also document similar results based on a sample of European companies. Since CSR practices comprise several different components, the aggregation could lead to confounding effects due to different reactions to each component (Galema et al., 2008; Cellier and Chollet, 2011). Additionally, Galema et al. (2008) also argue that difficulties in finding the significant impact of CSR on stock returns may be explained by the use of aggregate measures of CSR. In their study on corporate governance rating,

Ertugrul and Hegde (2009) find that the aggregate score demonstrates a relatively poor predictive power. Accordingly, Model (1) has an insignificant value of *F*-statistic, suggesting that the aggregate CSR disclosure has a poor predictive power in explaining variability in investors' reaction.

Employing the disaggregated measures of CSR, Model (2) examines how each dimension influences abnormal returns. Similar to results provided by Brammer et al. (2006) and Manescu (2009), it is also revealed that each component of CSR leads to different market reactions. Positive reactions are found for community-related and environmental disclosures, while a negative reaction is reported for the disclosure of employee-related information. Differently, there is no significant influence of product-related information disclosure on shareholders' returns. Overall, our findings suggest that disaggregated measures of CSR disclosure tend to be more powerful than the aggregated one.

Supporting Hypothesis 2, *COMDI* is significant and positive. Particular groups of investors may be attracted to companies that actively contribute to local communities (Schwab and Thomas, 1998). Cox et al. (2004) also contend that community involvement activities carried out by a firm contribute to attracting long-term investors. Further, as suggested by Brammer et al. (2006), a firm's engagement in funding community projects may strengthen brand images and consumer loyalty, leading to good perception among investors. On the other hand, *PRODI* is found to be insignificant, providing no support for

Hypothesis 3. It seems that the disclosure of product information, which is perceived by the company as useful information for stakeholders, is considered neither favourably nor unfavourably by investors. As Benston (1997) contends, if investors cannot identify how a particular product

advantageous perception may boost firm value in the market. However, our result reports that such information is deemed relatively unfavourable by investors. This finding is consistent with that reported by Brammer et al. (2006) and Manescu (2009).

Table 3
Regression results

Note: This table reports the random-effects regressions of cumulative abnormal returns on CSR disclosure, using both aggregated and disaggregated measures. *CSRDI* is the corporate social responsibility disclosure index. *COMDI* is the community involvement disclosure index. *PRODI* is the product-related information disclosure index. *EMPDI* is the employee relations disclosure index. *ENVDI* is the environmental disclosure index. *SIZE* is the book value of total assets, measured in billions Indonesian Rupiah (IDR). *LEV* is the debt-to-equity ratio. *MTB* is the market value of equity divided by the book value of equity. The *t*-statistics are reported based on robust standard errors. *, **, and *** denote statistical significance (two-tailed) at the 10, 5, and 1 per cent levels, respectively.

	Model (1)		Model (2)	
	Coefficient	<i>t</i> -statistic	Coefficient	<i>t</i> -statistic
Intercept	-0.027	-0.307	0.080	0.924
<i>CSRDI</i>	0.012	0.100		
<i>COMDI</i>			0.218 **	2.051
<i>PRODI</i>			0.034	0.338
<i>EMPDI</i>			-0.732 ***	-3.177
<i>ENVDI</i>			0.359 ***	2.675
<i>SIZE</i>	0.017	1.183	0.008	0.613
<i>LEV</i>	-0.009 **	-2.612	-0.004	-0.861
<i>MTB</i>	-0.007	-1.416	-0.007 *	-1.845
<i>R</i> ²	0.038		0.233	
Adjusted <i>R</i> ²	0.004		0.184	
<i>F</i> -statistic	1.103		4.743 ***	
Prob. <i>F</i> -statistic				

is different from others, such information may become meaningless for them.

Hypothesis 4 is also supported, since a negative and significant association is found between employee-related information disclosure and abnormal returns surrounding the annual report publication date. A higher level of employee disclosure partly indicates the firm's awareness to transparently disclose its employee-related policies, thereby indicating that the firm will be able to attract and maintain good employees (McGuire et al., 1988). This

Finally, supporting Hypothesis 5, environmental disclosure is positively associated with shareholders' return surrounding the event date. Hence, this implies that investors value a higher level of environmental information disclosure, which represents the firm's concern on environmental issues. Due to recent development, including environmental degradation and global warning, investors seem to put increasingly serious concerns on environmental aspects relating to a firm's business operation. Ullmann (1985)

suggests that awareness of environmental issues can be expected to minimize potential costs due to lawsuits against the firm. These concerns may lead to investors' appreciation to the firm's intention to disclose its environmental management and policies in the annual report.

liquidity, and wider coverage from analysts (Brammer and Pavelin, 2004; Haniffa and Hudaib, 2006; Artiach et al., 2009). The results are displayed in Table 4. We employ the interaction term between the disclosure index (using both aggregated and disaggregated measures) and firm size.

Table 4
Regression results on the role of firm size

Note: This table reports the random-effects regressions of cumulative abnormal returns on the interaction terms between CSR disclosure, using both aggregated and disaggregated measures, and firm size. *FSIZE* is dichotomous, equalling 1 if the firm's book value of total assets is greater than the median value (IDR 3,719 billion) and 0 otherwise. *CSRDI* is the corporate social responsibility disclosure index. *COMDI* is the community involvement disclosure index. *PRODI* is the product-related information disclosure index. *EMPDI* is the employee relations disclosure index. *ENVDI* is the environmental disclosure index. *LEV* is the debt-to-equity ratio. *MTB* is the market value of equity divided by the book value of equity. The *t*-statistics are reported based on robust standard errors. *, **, and *** denote statistical significance (two-tailed) at the 10, 5, and 1 per cent levels, respectively.

	Model (1)		Model (2)	
	Coefficient	<i>t</i> -statistic	Coefficient	<i>t</i> -statistic
Intercept	0.070	0.948	0.081	1.465
<i>FSIZE</i>	0.020	0.193	0.041	0.429
<i>CSRDI</i>	0.096	0.355		
<i>CSRDI * FSIZE</i>	-0.017	-0.051		
<i>COMDI</i>			-0.020	-0.126
<i>PRODI</i>			-0.085	-0.769
<i>EMPDI</i>			-0.464 *	-1.757
<i>ENVDI</i>			0.836 ***	3.321
<i>COMDI * FSIZE</i>			0.412 **	2.038
<i>PRODI * FSIZE</i>			0.194	1.015
<i>EMPDI * FSIZE</i>			-0.392	-0.881
<i>ENVDI * FSIZE</i>			-0.581 *	-1.845
<i>LEV</i>	-0.008	-1.020	-0.003	-0.608
<i>MTB</i>	-0.006	-1.123	-0.007 *	-1.734
<i>R</i> ²	0.031		0.294	
Adjusted <i>R</i> ²	-0.013		0.221	
<i>F</i> -statistic	0.711		3.983 ***	
Prob. <i>F</i> -statistic				

Further analysis: Does firm size matter?

In further analysis, we investigate whether firm size plays an important role in explaining investors' reaction to CSR disclosure. Larger firms in the capital market are generally subject to greater visibility politically, higher stock

Firm size is dichotomous, equaling 1 if the firm's book value of assets is greater than median (IDR 3,719 billion) and 0 otherwise.

In Model (1) of Table 4, the interaction term between *CSRDI* and firm size is insignificant, suggesting that investors'

insignificant reaction to CSR disclosure applies for both larger and smaller firms. In other words, larger size of a firm does not lead to advantageous favourable perception among investors, taking into account the aggregated CSR measure. The explanatory power of Model (1) is very low, with the value of *F*-statistic being insignificant in explaining the variability in abnormal returns.

Additionally, we also employ disaggregated measures of CSR disclosure to investigate the role of firm size in explaining the association between abnormal returns and dimensional indices, and the results are presented in Model (2) of Table 4. The interaction term between *COMDI* and firm size is positive and significant at the 5 per cent level, which suggests that the market's positive reaction to community involvement disclosure is stronger in family-controlled firms. This somehow explains that larger firms are expected to play an active role in community projects and activities. In developing countries where the level of social welfare is relatively lower, awareness among large firms on such issues seems to be perceived as an advantageous factor by the market, leading to a higher level of abnormal returns.

The interaction term between *PRODI* and firm size is insignificant, suggesting that firm size does not play a crucial role in explaining the market's reaction to product-related information disclosure. This again underlines the argument of Benston (1997) that if investors cannot identify how a particular product is different from others, product-related information can go meaningless. The same finding is also

reported for *EMPDI*. While the influence of *EMPDI* on shareholder returns is significantly negative in Table 3, firm size appears not to be a significant determinant in explaining the reaction. Further, this may also suggest that when employee-related information is disclosed by larger firms, the negative reaction can be mitigated.

In Table 3, it has been reported that the market positively reacts to environmental disclosure. Surprisingly, Model (2) of Table 4 reports that the interaction term between *ENVDI* and firm size is negative and significant at the 10 per cent level. This means that the higher the environmental disclosure level of a larger firm, the lower the abnormal returns gained in the market. Larger firms, through its more complex business operations, seem to possess a higher level of environmental impacts. To mitigate the negative environmental impacts, which can impose negative publicity, they may have to undertake a series of complex environmental management system and policies. When such policies are disclosed in the annual report, the market may consider this information relatively unfavourable and, hence, demonstrate a lower level of appreciation.

Given all findings presented above, our results need to be interpreted in caution. As Harrison and Freeman (1999) explain, the basic assumption of event studies is that investors understand how a particular event brings about economic consequences. Further, in Indonesia's capital market that is characterized by a lack of strong-form efficiency, the market may not fully absorb value-relevant information. Hence, stock prices may not immediately adjust

to public information once it is released. These propositions make the use event studies possessing limited application. Based on our empirical analysis, as well as the results of prior studies, it seems to be reasonable to conclude that abnormal stock returns may be somehow *associated* with the level of CSR disclosure. Cajueiro and Tabak's (2004) study suggests that most emerging capital markets tend to be increasingly efficient over time. However, it seems to be inappropriate to state that abnormal returns gained surrounding the publication date is definitely triggered by CSR information disclosed in the annual report.

FINAL REMARKS

Firms' awareness on CSR practices is partly indicated through the disclosure of such information in corporate reports. Information disclosed in the annual report by publicly-listed firms may convey either favourable or unfavourable information for investors, leading to particular reaction and the level of stock returns surrounding the publication date. This study investigates the market's reaction to CSR information disclosed in the annual report. Our sample comprises 117 firm-year observations, which are drawn from "high-profile industry" firms on the IDX that published the 2008 and 2009 annual reports. Instead of merely looking into the aggregate measure of CSR disclosure, we also employ the disaggregated measures considering four dimensions, namely community involvement, product, employee relations, and the environment.

Using the aggregate measure, CSR disclosure is not significantly responded

by the market. This finding supports propositions provided in prior studies that the aggregate measures often fail to explain the variability of firm performance surrounding the publication date due to potential confounding effects. In another model, market reaction is examined to each dimension of CSR. It is revealed that cumulative abnormal returns are positively associated with community-related and environmental disclosures, suggesting that these dimensions are deemed advantageous and favourable by investors. In contrast, the market puts less appreciation to the disclosure of employee-related information, while product-related disclosure demonstrates no significant response from the market.

In further analysis, we investigate the role of firm size in explaining investors' reaction to CSR disclosure. Employing the aggregate measure, firm size does not play an important role in explaining the market's reaction. Taking into account dimensional disclosure, a higher level of appreciation is found when a large firm disclose more information regarding community involvement. However, when larger firms disclose more environmental information, we find that the market's reaction tends to be lower. It is important to note that the findings should be interpreted cautiously, since event studies generally assume that market efficiency tends to be strong and that investors understand the economic effects of a particular event.

For investors, our findings may provide them with additional insights in setting expectations regarding stock returns that can be gained surrounding the publication

of the annual report. This study is still subject to a number of limitations. Since we only employ two-year data, future studies are suggested to incorporate a longer time span to provide more reliable insights on how investors react to corporate disclosure. Additionally, our sample size is relatively small, mainly because information on the annual report publication date for many companies cannot be obtained. Finally, since the use of event studies in this research stream is considered of limited application, it is suggested that future research employs additional research methods (e.g. a survey of investor opinions) in assessing investors' reaction to the disclosure of CSR activities in corporate reports.

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References

- Adler, R. W. & Milne, M. J. (1997). Media exposure, company size, industry, and social disclosure practices. Paper presented at the 5th International Perspectives on Accounting (IPA) Conference, Manchester.
- Anderson, J. C. & Frankle, A. W. (1980). Voluntary social reporting: An iso-beta portfolio analysis. *The Accounting Review*, 55, 467-479.
- Arya, B. & Zhang, G. (2009). Institutional reforms and investor reactions to CSR announcements: Evidence from an emerging economy. *Journal of Management Studies*, 46, 1089-1112.
- Artiach, T., Lee, D., Nelson, D., & Walker, J. (2009). The determinants of corporate sustainability performance. *Accounting & Finance*, 50, 31-51.
- Belkaoui, A. (1976). The impact of the disclosure of the environmental effects of organizational behavior on the market. *Financial Management*, 5, 26-31.
- Benston, J. (1997). Voluntary vs. mandated disclosure (an evaluation of the basis for the recommendations of the working group on improved product and adviser disclosure). Report prepared for the New Zealand Business Roundtable, Wellington.
- Blacconiere, W. G. & Patten, D. M. (1994). Environmental disclosures, regulatory costs, and changes in firm value. *Journal of Accounting and Economics*, 18, 357-377.
- Botosan, C. A. (1997). Disclosure level and the cost of equity capital. *The Accounting Review*, 72, 323-349.
- Brammer, S., Brooks, C., & Pavelin, S. (2006). Corporate social performance and stock returns: UK evidence from diaggregate measures. *Financial Management*, 35, 97-116.
- Brammer, S. & Pavelin, S. (2004). Building a good reputation. *European Management Journal*, 22, 704-713.
- Branco, M. C. & Rodrigues, L. L. (2008). Factors influencing social responsibility disclosure by Portuguese companies. *Journal of Business Ethics*, 83, 685-701.
- Cajueiro, D. O. & Tabak, B. M. (2004). The Hurst exponent over time: Testing

- the assertion that emerging markets are becoming more efficient. *Physica A: Statistical Mechanics and its Applications*, 336, 521-537.
- Capelle-Blancard, G. & Petit, A. (2011). Every little helps? ESG news disclosure and stock market reaction. Unpublished working paper, Universite Paris 1, Paris, France.
- Chapple, W. & Moon, J. (2005). Corporate social responsibility (CSR) in Asia: A seven-country study of CSR web site reporting. *Business & Society*, 44, 415-441.
- Cheng, M. & Christiawan, Y. J. (2011). Pengaruh pengungkapan corporate social responsibility terhadap abnormal return. *Jurnal Akuntansi dan Keuangan*, 13, 24-36.
- Chollet, P. & Cellier, A. (2011). The impact of corporate social responsibility rating announcements on European stock prices. Paper presented at the International Conference of the French Finance Association (AFFI), Montpellier.
- Cochran, P. L. & Wood, R. A. (1984). Corporate social responsibility and financial performance. *Academy of Management Journal*, 27, 42-56.
- Copeland, T., Murrin, J., & Koller, T. (1994). *Valuation*, 2nd edition. New York: John Wiley & Sons.
- Cowen, S. S., Ferreri, L. B., & Parker, L. D. (1987). The impact of corporate characteristics on social responsibility disclosure: A typology and frequency-based analysis. *Accounting, Organizations and Society*, 12, 111-122.
- Cox, P., Brammer, S., & Millington, A. (2004). An empirical examination of institutional investor preferences for corporate social performance. *Journal of Business Ethics*, 52, 27-42.
- Dahlia, L. (2010). Pengaruh corporate social responsibility terhadap kinerja perusahaan. *Jurnal Akuntabilitas*, 9.
- Damak-Ayadi, S. (2011). Market reaction to social disclosures produced outside the firm: The French evidence. *International Journal of Accounting, Auditing & Performance Evaluation*, 7, 200-218.
- De Bondt, W. F. M. & Thaler, R. H. (1985). Does the stock market overreact? *The Journal of Finance*, 40, 793-805.
- De Villiers, C. & Van Staden, C. J. (2006). Can less environmental disclosure have a legitimising effect? Evidence from Africa. *Accounting, Organizations & Society*, 31, 763-781.
- Deegan, C. (2006). *Financial accounting theory*. Sydney: McGraw-Hill Irwin.
- Ertugrul, M. & Hegde, S. (2009). Corporate governance ratings and firm performance. *Financial Management*, 38, 139-160.
- Fama, E. F. (1991). Efficient capital markets II. *The Journal of Finance*, 40, 1575-1617.
- Freedman, M. & Stagliano, A. J. (1991). Differences in social-cost disclosures:

- A market test of investor reactions. *Accounting, Auditing & Accountability Journal*, 4, 68-83.
- Galema, R., Plantinga, A., & Scholtens, B. (2008). The stocks at stake: Return and risk in socially responsible investment. *Journal of Banking & Finance*, 32, 2646-2654.
- Garcia-Sanchez, I. M. (2008). Corporate social reporting: Segmentation and characterization of Spanish companies. *Corporate Social Responsibility and Environmental Management*, 15, 187-198.
- Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal*, 30, 425-445.
- Gray, R., Javad, M., Power, D. M., & Sinclair, C. D. (2001). Social and environmental disclosure and corporate characteristics: A research note and extension. *Journal of Business Finance & Accounting*, 28, 327-356.
- Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing & Accountability Journal*, 8, 47-77.
- Griffin, P. A. & Sun, Y. (2012). Going green: Market reaction to CSR newswire services. Unpublished working paper, University of California, Davis.
- Guthrie, J., Petty, R., Yongvanich, K., & Ricceri, F. (2004). Using content analysis as a research method to inquire into intellectual capital reporting. *Journal of Intellectual Capital*, 5, 282-293.
- Hackston, D. & Milne, M. J. (1996). Some determinants of social and environmental disclosures in New Zealand companies. *Accounting, Auditing & Accountability Journal*, 9, 77-108.
- Haniffa, R. & Hudaib, M. (2006). Corporate governance structure and performance of Malaysian listed companies. *Journal of Business Finance & Accounting*, 33, 1034-1062.
- Haniffa, R. M. & Cooke, T. E. (2002). Culture, corporate governance and disclosure in Malaysian corporations. *Abacus*, 38, 317-349.
- Haniffa, R. M. & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy*, 24, 391-430.
- Harrison, J. S. & Freeman, R. E. (1999). Stakeholders, social responsibility, and performance: Empirical evidence and theoretical perspectives. *The Academy of Management Journal*, 42, 479-485.
- Heinze, D. C. (1976). Financial correlates of a social involvement measure. *Akron Business and Economic Review*, 7, 48-51.
- Ingram, R. W. (1978). An investigation of the information content of (certain) social responsibility disclosures. *Journal of Accounting Research*, 16, 270-285.
- Karemera, D., Ojah, K., & Cole, J. A. (1999). Random walks and market

- efficiency tests: Evidence from emerging equity markets. *Review of Quantitative Finance and Accounting*, 13, 171-188.
- Mackey, A., Mackey, T. B., & Barney, J. B. (2007). Corporate social responsibility and firm performance: Investor preferences and corporate strategies. *Academy of Management Review*, 32, 817-835.
- Manescu, C. (2009). Do investors perceive Corporate Social Responsibility as a risk factor? Evidence from an asset pricing analysis. Unpublished working paper, Center for Finance, Gothenburg University, Gothenburg.
- McGuire, J., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. *The Academy of Management Journal*, 31, 854-872.
- McWilliams, A. & Siegel, D. (1997). Event studies in management research: Theoretical and empirical issues. *The Academy of Management Journal*, 40, 626-657.
- Meliana (2011). Pengaruh pengungkapan corporate social responsibility terhadap return saham dengan kecanggihan investor sebagai variabel pemoderasi. Unpublished master thesis, Universitas Gadjah Mada, Yogyakarta.
- Murray, A., Sinclair, D., Power, D., & Gray, R. (2006). Do financial markets care about social and environmental disclosure? Further evidence and exploration from the UK. *Accounting, Auditing & Accountability Journal*, 19, 228-255.
- Newson, M. & Deegan, C. (2002). Global expectations and their association with corporate social disclosure practices in Australia, Singapore, and South Korea. *The International Journal of Accounting*, 37, 183-213.
- Ojah, K. & Karemera, D. (1999). Random walks and market efficiency tests of Latin American emerging equity markets: A revisit. *The Financial Review*, 34, 57-72.
- Parsa, S. & Deng, L. X. (2008). Capital markets' reactions to social information announcements. *International Journal of Accounting and Finance*, 1, 107-120.
- Patten, D. M. (1990). The market reaction to social responsibility disclosures: the case of the Sullivan principles signings. *Accounting, Organizations & Society*, 15, 575-587.
- Preston, L. E. & O'Bannon, D. P. (1997). The corporate social-financial performance relationship: a typology and analysis. *Business & Society*, 36, 419-429.
- Richardson, A. J., Welker, M., & Hutchinson, I. R. (1999). Managing capital market reactions to social responsibility. *International Journal of Management Reviews*, 1, 17-43.
- Roberts, R. W. (1992). Determinants of corporate social responsibility disclosure: An application of stakeholder theory. *Accounting, Organizations and Society*, 17, 595-612.
- Saleh, M., Zulkifli, N., & Muhamad, R. (2010). Corporate social responsibility disclosure and its relation on institutional ownership: Evidence from public listed

- companies in Malaysia. *Managerial Auditing Journal*, 25, 591-613.
- Schwab, S. J. & Thomas, R. S. (1998). Realigning corporate governance: shareholder activism by labour unions. *Michigan Law Review*, 96, 1018-1094.
- Scott, W. R. (1995). *Institutions and organizations*. Thousand Oaks, CA: Sage.
- Shane, P. B. & Spicer, B. H. (1983). Market response to environmental information produced outside the firm. *The Accounting Review*, 58, 521-538.
- Simpson, W. G. & Kohers, T. (2002). The link between corporate social and financial performance: Evidence from the banking industry. *Journal of Business Ethics*, 35, 97-109.
- Tsoutsoura, M. (2004). *Corporate social responsibility and financial performance*. Unpublished working paper, Haas School of Business, University of California at Berkeley.
- Ullmann, A. (1985). Data in search of a theory: A critical examination of the relationships among social performance, social disclosure, and economic performance. *Academy of Management Review*, 10, 540-577.
- Waldman, D. A., Siegel, D. S., & Javidan, M. (2006). Components of CEO transformational leadership and corporate social responsibility. *Journal of Management Studies*, 43, 1703-1725.
- Worthington, A. C. & Higgs, H. (2005). Weak-form market efficiency in Asian emerging and developed equity markets: Comparative tests of random walk behaviour. Unpublished working paper, University of Wollongong, Wollongong.