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THE VALUE RELEVANCE OF SUSTAINABILITY REPUTATION: EVIDENCE FROM INDONESIA

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ABSTRACT

This research aims to investigate whether the value relevance of firms with good sustainability reputation is higher than firms without such reputation. An empirical analysis performed within the period of 2011 to 2015 on a total sample of 99 firms. Ohlson price model and assisted by multiple regression to solve the research question. We use two models to answer the hypothesis. First model, we focus on the coefficients of BV and NI to determine whether the firm has sustainability reputation or not. Later, the two groups of firms will be set into two separate regressions to minimize the bias. Then, adjusted R2 as the explanatory power of independent variables from two separate regressions will be compared to determine whether the reputation of the corporate sustainability can improve the value relevance of the company. Results affirm that the value relevance on earnings and book value of firms with sustainability reputation is higher than firms without such reputation. With the findings of this study may draw the attention of regulators and the Indonesia Stock Exchange, for deliberating whether CSR should be mandated.

INTRODUCTION

Nowadays, companies are the first to be indicted of all societal problems, such as global warming, human right issues, corruption, health, and safety. Therefore, firms' communication to their stakeholders becomes challenging and complex. Stakeholders are demanding transparency information not only financial information but also non-financial information which can affect companies' performance. Investors also consider the social responsibility of the company and add value to the company that has a reputation for sustainability. Watts and Holme (1999) at the World Council for Sustainable Development defined "Corporate Social Responsibility as a continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as of the local community at large."

The debate on the effect of Corporate Sustainability Report (CSR) to firm performance is not new but still overwhelming. Pivato, Misani and Tencati (2008) studied the relationship between CSR and firm financial performance. Companies which conducted CSR activities were rewarded by the market in economic and financial terms (Carroll & Shabana, 2010). According to the Global Reporting Initiatives (GRI, 2011), sustainable reports include companies' economic performance, as well as the social performance which provides comprehensive details of the non-financial aspects. Today, companies prepare not only the financial statement but also sustainable reports. The Indonesian government requires companies to conduct and report on corporate social responsibility regarding financial, social and environmental based on UU No.40 Year 2007 article 66 clause 2.

There was a study conducted by Cheung (2011) on the Dow Jones Sustainability World Index in the US stock market in the period 2002 to 2008. Based on research, the stock of companies included in DJSI, the company has a corporate sustainability report, good corporate governance and business ethics tend to increase in stock returns, while companies that are not included in DJSI decline in the rate of return on its shares. Bad news or images tend to increase volatility for Indonesian market (Triady, 2016). However, only small numbers of companies in Indonesia stated their corporate sustainability activities in a separate report. Others still stated their corporate sustainability activities in annual financial statements. There are also companies that are reluctant to Corporate Social Responsibility (CSR). The reason was CSR would increase the cost of the company.

The remainder of the paper is organized as follows. A number of literature reviews are provided in section 2, followed by sample and model in section 3. Results are to be discussed in section 4 and pursued by the conclusion in the last section.

LITERATURE REVIEW

Corporate social performance drives to a better revenue and profit growths (Preston and O'bannon (1997). Pava and Krausz (1996) emphasized companies which have met social-responsibility criteria have generally been shown to have better financial performance than others. Those financial improvements were due to the increased reputation (Orlitzky, 2000). Positive effects of CSP on financial performance are also found in Waddock and Graves (1997) and Griffin and Mahon (1997).

This is also supported by research from Cheung (2011), Doh, Howton and Howton (2010) and Robinson, Kleffner and Bertels (2011) on some indices regarding sustainability efforts concluded that investors appreciate and add value to the company conducting CSR and investors know that the company has been conducting business sustainability should create and publish corporate sustainability report.

However, the findings on the relationship between CSR and company performance study still inconsistent and recurrent. Based on Brammer, Brooks and Pavelin (2006) and Boyle, Higgins and Rhee (1997) found a negative relationship between corporate social performance (CSP) and corporate financial performance (CFR). It was because CSP enhanced companies' cost.

Regarding the relationship between the CSR and market value, many kinds of research have been conducted on the value relevance of CSR. This study analyzed the influence of Earnings and Book Value on the share price for companies with the sustainability reputation and companies without such reputation. The basic idea of this research is derived from the signaling theory by Spence (1973) and resource-based theory (Barney, 1991). As indicated, the company with sustainability leadership creates a good reputation signal. And, constructed on resource-based theory, the reputation of sustainability leadership is an intangible resource that can improve the firms' projected cash flows and/or diminish the fluctuated cash flow (Robinson et al. 2011). Firms with a good sustainability leadership can enhance relations with external parties such as investors, bankers, suppliers, customer, and competitors. A good sustainability reputation might be able to facilitate the long-term and complicated stakeholder management that, in turn, to enrich the firm's proficiency in outperforming the competitors (Schnietz & Epstein, 2005).

This study applied the theory of Ohlson (1995) that explained the value relevance of the company with and without reputation on business sustainability. The value relevance explains that the Earning per Share and Book Value per Share affects the Share Price. Various research on value relevance related to accounting information have been conducted such as Collins and Porras (1997), King and Langli (1998), Barth, Beaver and Landsman (2001), Beaver (2002), Carnevale et al. (2012) and also Kargin (2013) that mentions the value relevance is the ability of information in the financial statements to provide value of a company which can be measured through information presented in the financial statements and stock prices.

Also, value relevance has been correlated to nonfinancial performance such as corporate social responsibility. Several studies have been conducted regarding the value relevance of sustainability leadership across the country. Bewley (2005) found the relation between reported environmental and market value in USA and Canada. The similar is also discovered in Spanish context by Moneva and Cuellar (2009). Semenova, Hassel and Nilsson (2010) conducted a related research in Sweden and supported the finding. Likewise, Schadewitz and Niskala (2010) disclosed that responsibility reporting is an essential factor of market value since the report is a firm's communication instrument to lessen the asymmetric information. Lourenço, Callen, Branco and Curto (2014) who confirmed that net income of firms with a good reputation has higher market value in US companies.

On the contrary, a number of studies have found the opposite outcome, where Hassel, Nilsson and Nyquist (2005) attained a negative relationship between market value and environmental performance since environmental concerns are considered to be costly resulting a negative impact on accounting earnings. A similar study also by Jones et al. (2007) found that there is a negative relation in general. Additionally, numerous study also asserts that there is no relationship between market return and sustainability disclosure (Murray, Boyaci, & Kersten, 2006; Moneva and Ortas, 2008; Carnevale et al., 2012).

This paper replicates the research conducted by Lourenço et al. (2014) who found that net income of firms with sustainability reputation has higher market value compare to firms without such reputation.

Given the works of literature above, there is one hypothesis can be derived:

H_1: Does the reputation of the corporate sustainability can improve the relevancy value of the company?

MATERIALS AND METHODS

Sample selection

The analysis relies on companies listed on Indonesia Stock Exchange in 2011 to 2015. However, this paper only focuses on (1) Companies that publish complete annual financial reports; (2) Companies use Rupiah currency in financial statements. Secondly, the sample will be classified into two groups, companies that have a reputation for sustainability leadership and companies without such reputation. The companies with reputation are those involved in the SRI-KEHATI Index persistently from 2011 to 2015. The companies without sustainability reputation are those who have never been involved in the SRI-KEHATI Index.

Wherein, SRI-KEHATI Index only includes firms that perform corporate governance consistently and have high concern for the environment, society, and good ethics in business.

Based on the criteria set, there are 147 companies fulfill the criteria. Afterward, some outlier is eliminated and sample down to 99 firms which eight firms include in SRI-KEHATI index and the rest are not the SRI-KEHATI companies.

$$P_{it} = \alpha_0 + \beta_1 BV_{jt} + \beta_2 NI_{jt} + \varepsilon_{jt} \qquad \text{(eq. 1)}$$

Model

To assess whether the reputation of the corporate sustainability can improve the relevancy value of the company, Ohlson Price Model has been used for this study.

Where,

P_{it} = The share price of i in year t

BV_{jt} = Book Value per share *i in year t*

NI_{jt} = Net operating Income per share *i in year t*

ε_{it} = the disturbance idiom

In order to explore whether the value relevance is higher for the firms with sustainability reputation, the new equation is deployed which allows the coefficients of BV and NI to differ by whether the firm has sustainability reputation or not. Also, in the equation, some control variables (Size and Leverage) have been added.

$$P_{it} = \alpha_0 + \beta_1 BV_{jt} + \beta_2 NI_{jt} + \beta_3 SKI + \beta_4 SKI \times BV_{jt} + \beta_5 SKI \times NI_{jt} + \beta_6 Size_{jt} + \beta_7 Lev_{jt} + \varepsilon_{jt} \quad \text{(eq. 2)}$$

Where, SKI is a dummy variable which presumes the value 1 if the firm is incorporated in the SRI-KEHATI consistently during the period, and 0 if the firm had never been incorporated in the SRI-KEHATI during the time frame.

The forecasting result of this model is as follow. In the event that the coefficient of the interaction variable of SKI with BV and NI are significant, it can be stated that sustainable reputation can explain the relationship of accounting measures (BV and NI) with the market value. It is also expected that if the value relevance for the firms with reputation is higher than the firms without it, so $\beta 4 > 0$ and $\beta 5 > 0$.

Furthermore, since companies are not specifically grouped separately between with and without reputation for sustainability leadership, the possibility of self-selection bias is introduced when comparing the value relevance of these two groups of companies. To minimize the bias, the two group of firms will be set into two separate regression. The regression model consists of two equations that can be specified as follows:

$$P_{it} = \alpha_0 + \beta_1 BV_{jt} + \beta_2 NI_{jt} + \beta_3 Size_{jt} + \beta_4 Lev_{jt} + \varepsilon_{jt} \quad (eq\ 3)$$

$$P_{it} = \alpha_0 + \beta_1 BV_{jt} + \beta_2 NI_{jt} + \beta_3 Size_{jt} + \beta_4 Lev_{jt} + \varepsilon_{jt} \quad (eq\ 4)$$

Equation 3 will be run for firms which included in SRI-KEHATI Index and equation 4 for firms which never been included in the index during the time frame. Then, adjusted R2 as the explanatory power of independent variables will be compared to determine whether the reputation of the corporate sustainability can improve the value relevance of the company.

RESULTS AND DISCUSSIONS

Descriptive statistics

Table 1. Results of Descriptive Statistics

	Mean	Median	Max	Min	STDEV
All firms					

Price	794.386	440.000	12475.000	31.250	1235.980
BV	618.633	364.000	6881.000	-668.000	810.407
NI	0.132	0.050	3.311	-0.473	0.364
Size	20845.410	2241.000	910063.000	100.000	81357.880
LEV	1.972	1.020	16.450	-2.760	2.591
SKI firms					
Price	3248.540	2169.160	12475.000	710.000	3032.385
BV	1378.000	945.500	6772.000	145.000	1326.561
NI	0.280	0.193	1.142	-0.095	0.293
Size	103198.800	11989.500	910063.000	1737.000	247408.800
LEV	2.358	1.645	7.810	0.250	2.198
Non SKI firms					
Price	578.636	400.000	3936.000	31.250	543.167
BV	551.875	340.000	6881.000	-668.000	712.869
NI	0.119	0.044	3.311	-0.473	0.367
Size	13605.550	1917.000	238849.000	100.000	35972.100
LEV	1.938	0.990	16.450	-2.760	2.622

Table 1 introduces the descriptive statistics for the whole sample-test as well as for the sub-tests of 8 firms with sustainable reputation and 91 firms without it. By comparing the two groups of firms, it is found that group of a firm with the reputation have higher means and median. Descriptive statistics for all data indicates the distribution of raw data is normal and also surpasses the entire classical assumption test.

The study uses Eviews 9 to conduct the cross-section random effects regression in analyzing the influence of independent variables on the dependent variable.

Regression Results

Table 2 Regression Result of Equation 2

$P_{IT} = A_0 + B_1BV_{JT} + B_2NI_{JT} + B_3SKI + B_4SKI \text{ X } BV_{JT} + B_5SKI \text{ X } NI_{JT} + B_6SIZE_{JT} + B_7LEV_{JT} + E_{JT}$

INDEPENDENT VARIABLES	Coefficient	t-stat
INTERCEPT	454.544**	7.275
BV	0.143**	3.316
NI	191.678*	2.026
SKI	587.734*	2.572
SKI X BV	0.625**	5.230
SKI X NI	3201.801**	5.811
SIZE	0.002*	2.195
LEV	-2.031	-0.149
N	495	

ADJUSTED R^2	0.558

*** and * indicate Significance at the 0.01 and 0.05 respectively*

Table 2 introduces the regression statistic resulting from equation 2. The coefficients of accounting measures (BV and NI) are statistically significant and positive (0.143 and 191.678 respectively) as expected in relation to market value. The finding also shows that the value relevance is different between firms with reputation and without it. The results reveals that the coefficients of approximate for the interaction terms of SKI with BV and NI are positive and significant (coefficient: SKI x BV = 0.625; p value < 0.01, SKI x NI = 3201.801; p value < 0.01). These results mean that in average the Book Value and Net Income of firms with the reputation has higher value relevance. Where, per a unit change on BV and NI, the projected variation on price is 0.625 and 3201.801 respectively higher compare to the firm without such reputation. As expected, the variable control size is positive associated with the market value while leverage not.

To support the result above and also to minimize the possibility of self-selection bias, the model for equation 3 and 4 will be run. The regression will be run twice to separate the firms with sustainability reputation and firms without such reputation.

Table 3 Regression Result of Equation 3 and 4

	Coefficient	t-stat
EQ. 3 REPUTATION FIRMS		
INTERCEPT	593.093	0.724
BV	1.015*	2.475
NI	3373.579*	2.450
SIZE	-0.000	-0.038
LEV	137.773	0.743
N	40	
ADJUSTED R^2	0.612	
EQ. 4 NON-REPUTATION FIRMS		
INTERCEPT	459.986**	0.000
BV	0.133**	0.000
NI	203.347**	0.007
SIZE	0.003**	0.006
LEV	-9.026	0.422
N	455	
ADJUSTED R^2	0.116	

*** and * indicate Significance at the 0.01 and 0.05 respectively*

The results from the table 3 disclose that there is value relevance for both firms with reputable and non-reputable firms, where it can be seen that the BV and

NI variables are all statistically significant. However, the results also reveal the difference in the relationship between market value and accounting measure for firms with and without sustainability reputation. The estimated coefficients of the accounting measure variables (BV and NI) in the reputation firms are higher than those in the firms without sustainability reputation. Besides, the adjusted R2 for firms with reputation is also higher than firms without such reputation (61.2% and 11.6% respectively).

CONCLUSIONS

A number of studies on the value relevance of sustainability reputation have been conducted, used different methods, and deliver several inconsistent results. This paper examines the value relevance of the sustainability reputation in Indonesia companies using the Ohlson Model and based on the theoretical framework of signaling theory and resource-based theory. Companies that included in SRI-KEHATI Index are perceived as companies with the good reputation for sustainability leadership. The result shows that there is a positive relationship between sustainability leadership and market value. It is observed that firms realize that Sustainability leadership as a signal of a good reputation that can facilitate the relationship with the stakeholders. By showing that firms conduct in conformity to social, environmental and ethical criteria, firms can build a good reputation and affect the value of the firms.

The results of this study confirm previous studies that assert the CSR performance drives to a better revenue (Pava and Krausz (1996); Preston and O'bannon (1997); Waddock and Graves (1997); Griffin and Mahon (1997) and also to increase reputation (Orlitzky, 2000). This research also consistent with the previous research on the value relevance of sustainability leadership, Bewley (2005) who did the research in Canada; Moneva and Cuellar (2009) in Spain; Semenova et al. (2010) in Sweden; Schadewitz and Niskala (2010) who found the sustainability reporting can reduce the asymmetric information in Finland; and Lourenço et al. (2014) in US companies).

Nevertheless, the result of this study differs from the various study conducted by Brammer et al. (2006) and Boyle et al. (1997) who found that CSP enhanced companies' cost. Also, this study is inconsistent with some of the previous studies on value relevance (Hassel et al., 2005; Jones et al., 2007) who found the negative relationship between environmental performance and market value), and (Murray et al., 2006; Moneva and Ortas, 2008; Carnevale et al., 2012) who state that there is no significant relationship between sustainability report and market value).

Overall, this paper provides the further understanding about the importance of sustainability reputation towards value relevance. Based on the perspective that CSR is principally still voluntary in Indonesia, the result of this study may draw the attention of regulators and the Indonesia Stock Exchange, for deliberating whether CSR should be mandated.

Although, a further possible analysis is necessary to confirm this research, by using more sophisticated model and data from various industry would be a promising avenue for future study.

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