Sustainability Practices and Financial Performance: An Empirical Evidence from Indonesia

Ainia P. A Kusuma, and Deddy P. Koesrindartoto

Abstract**—**Corporate sustainability contributes directly to business value. Sustainability also becoming among important issues in managing profitability and financial performance of firms. Some of earlier research has succesfully connecting dot. Therefore, the phenomena should be observed anywhere in the world, not only in developed country but also developing countries. The study aims to find the empirical evidence the correlation between sustainability practices and financial performance in Indonesia companies. ESG (Environmental, Social, Governance) indicator will be used to the level of sustainability practices of the companies. Meanwhile financial performance is measured with set of financial ratios especially in profitability.

Keywords**—**Sustainability Reporting, Financial Performance, Non Financial Companies, Indonesia

I. Introduction

HUMAN activity causing the environmental degradation. Large population growth, rising resource use, no environmental accounting, and poverty are the primarily caused of climate change, pollution, and several other world problems. The ecosystems and the planet as a whole have changed dramatically because of supporting the growth of population. The scientists fear that the outcome cannot be good without immediate actions to reduce the human impact on the environment. Therefore, human activity requires the integrated system to reduce it. One of solution is encourage the business actors to concern more into the effect of their business activity for the environment.

The efforts to reducing the impact of business activity for the environment is presented by company through their annual report or non financial report. According to estimates of some analysts, there are more than 1,900 institutions worldwide producing non-financial reports [1]. The firms which have non financial report, well known as sustainability report, enables to be more tranparent in communicating to public about their business activity related to non-financial management and performance aspect [2]. [3] own five year study of companies that consistently report non financial data versus those that don't suggest a correlation between sustainability reporting and improved performance in the food, beverage, and consumer product areas.

In Indonesia, there are some competitions relating to sustaibility and corporate social responsibility awards. Indonesia Sustainability Reporting Awards (ISRA) is the annualy event which held since 2004. This event aims to promote and enhance the quality and quantity of sustainability reporting in Indonesia, and to honor those companies which have developed and published sustainability reports [4]. While, Indonesian CSR awards is the competition which held by Indonesian Social Ministry and Corporate Forum for Community Development (CFCD) to ensuring business leadership and its commitment toward sustainable development.

For the result, this study expected to express the existence impact of sustainability practices to the financial performance for empirical evidence in Indonesia. To be more precise, sustainability should give positive impact to financial performance.

II. Prepositions

The propositions are explored in this paper :

P1. Publicly listed non financial companies in Indonesian Stock Exchange have high levels of sustainability disclosure

P2. Publicly listed non financial companies, which provide sustainability reports, have better financial performance than those companies, which do not.

P3. There is strong relationship between the extent of sustainability practices and financial performance in Indonesian companies.

References to Parts I, II, and III below refer to *P1, P2,* and *P3,* respectively.

III. Data And Research Method

This section discuss about the sample selection of companies and the sample composition. It also details the measurement used to represent the profitability ratios and equity valuation, as well as the methods used in the analysis.

A. Sample Selection

There are 58 companies which selected from the Index LQ 45 listed in 2010 to 2012. There are two type of secondary data. There are annually financial report and sustainability report Data of financial report are obtained from official website of the company and Indonesia Stock Exchange

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www.idx.co.id. While data for sustainability practices are obtained from range of available documents such as sustainability reports, annual reports, and corporate websites

Those samples used in Part I and Part II of the analysis. In Part II of the analysis, there are also two groups which divided from the samples, namely companies which provide sustainability report (R), and those which did not (NR). In Part III of the analysis, it provides the sample which used for the regression analysis to show the existence impact of sustainability practices to the financial performance.

B. Method

Part 1. The corporate information regarding to the indicator of sustaibability which taken from the range of document are used in this part to obtain insights into the level of sustainability performance of the companies. The guidelines for sustainability reporting is adapted from the Financial Services Council (FSC) and Australian Council of Super Investors (ACSI) (2011). There are 68 items within nine domains which taken from many resources and deemed to be most important to institutional investor. Those are climate change, environmental management, environmental efficiency, other environmental matters, health and safety, human capital, corporate conduct, stakeholder management, and corporate governance [5]. In order to get the sustainability score of each companies, those domain is cross-checked againts the disclosures which provides in the report. A rating value of 0 or 1 was adopted; 0 to mean absence while 1 to mean presence of information provided by the companies.

Euclidean distances are used to determine the score of sustainability. The representative score show the accurate reflection of the level of consistency in reporting the sustainability practices throughout all domains. As used in distance mapping picture processing [6] and shortest path problem in operation research [7], Euclidean distance is measured by :

$$D(p,q) = \sqrt{(p_1 - q_1)^2 + (p_2 - q_2)^2 + \dots + (p_n - q_n)^2} \quad (1)$$

Where D is the euclidean distance, *p* is the maximum number of items in each respective domain, *q* is the number of disclosures by company, and $n = 9$ represents the total number of domains. The score used for measuring the level of sustainability practices as follows : excellent (0-5), good (5-15), average (15-20), and poor (>20).

Part 2. Based on the basic categories of financial ratios, the one of common used is profitability ratio. As a group, the firm's profits with respect to given level of sales, a certain level of assets or the owner investment are enable to analyzed by these measure [8]. Therefore, those profitability ratio was used to examine the sustainability practices will give positive impact to the firm's profitability or not.There are five ratios which belong to profitability category are used as financial performance indicator.

- Return on Asset (ROA),
- Return on Equity (ROE),
- Return on Invested Capital (ROIC),
- Earnings before Interest Tax, Depreciation, and Amortization (EBITDA) Margin, and
- Net Operating Profit less adjusted Taxes (NOPLAT) Margin

In this part, the analysis of comparison between the financial performance of company which have sustainability disclosure and which do not, are also employed with the independent sample t–test on IBM SPSS Statistic 19. The hypothesis that used in this test are :

H0 : There are no difference between financial indicator in company which have sustainability disclosure and those companies which do not.

H1 : There are significantly difference between financial indicator in company which have sustainability disclosure and those companies which do not.

*Part 3.*The strength of the correlation between the extent of sustainability practices (represented by Sustainability Scores) and firm's profitability is tested for the public companies listed on Index LQ 45 between 2010 to 2012. Sustaibility scores for the three year period 2010 -2012 are obtained from the check listing the sustainability indicator based on the company's report.

Linear regressions are employed in this research to analyze the strength of the relationship among the outcome and explanatory variable as represented by the equation. Regression analysis enable to find the importance of explanatory variable based on the comparison of slope coefficients and confidence interval [9].

In this study, financial indicator is dependent variable which deemed to systematically predicted or rely on some way of explanatory variable. While, the sustainability score is the explanotory variables which thought to independently affect the outcome variable.

Assumption tests are required for all statistical procedures include the linear regression. There are three types of classical assumption test that used in this study. They are, normality test, heteroskedasticity, and multicollinearity. The violation of these assumption maybe enable to not change some substantive research conclusion. But in other cases, it also will undermine meaningful research [10]. Therefore, these assumption is important to do before implementing the regression analysis. The software whuch used for statistical test is IBM SPSS Statistic 19.

Simple linear regressions are employed in this study since there is only one independent variable, which is sustaibility score. The linear relationship netween each financial indicator and sustainability score are expressed by the equation of linear regression.

$$ROA = \beta_0 + \beta_1 Sustainability\ Score \quad (2)$$

$$ROE = \beta_0 + \beta_1 Sustainability\ Score \quad (3)$$

$$ROIC = \beta_0 + \beta_1 Sustainability\ Score \quad (4)$$

$$EBITDA\ Margin = \beta_0 + \beta_1 Sustainability\ Score \quad (5)$$

$$Noplat\ Margin = \beta_0 + \beta_1 Sustainability\ Score \quad (6)$$

Where:

β_0 = intercept coefficient
β_1 = coefficient of independent variable

IV. Results

Part 1 – level of sustainability disclosure

Based on calculation using euclidean distances given by equation 1, the level of sustainability disclosure of publicly listed Indonesian company are enable to measured. The detail of classification for the level sustainability is given in table I. The lower score represent the closer to the expectation of institutional investor. Based on the analysis, the majority of the companies have good level in sustainability disclosure with 43 % and average level in 34 percent. There are only 17 percent of companies success to reach the excellent level for sustainability. However, the analysis also show that anly small number of companies who have poor level in sustainability. There is about 5 percent or 3 out of 58 companies have score higher than 20. The findings here actually most of Indonesian company already practicing the sustainability disclosure but not complete yet as well as guideline. In order to increasing the willingness of Indonesian companies to practicing and reporting the sustainability, the government should not only giving the honour through the corporate performance rating program, but also designing the guideline for sustainability disclosure such as FSC and ACSI.

TABLE I
Level Of Sustainability Disclosure

Level of Sustainability Disclosure	Range of Scale	% of Companies
Excellent	0 – 5	17
Good	6 – 15	43
Average	16 - 20	34
Poor	>20	5

Conclusion on P1: a majority of publicly listed Indonesia companies have level of sustainability disclosure that are good and closer to the expectation of the institutional investor.

Part 2 – Comparative analysis of financial performance

The results of the comparative analysis of the financial performance are shown in table II. Based on the result, all of profitability ratios are equal variances assumed since the value of sig. is higher than 0,05. Then, sig. 2-tailed represents the differences between the groups. Only ROA that has value higher than 0,05 (0,610). It means that there is not significantly difference between company which have sustaibility disclosure and thos companies, which do not. While, another ratios i.e ROE, ROIC, ebitda margin, and noplat margin have value lower than 0,05 that means significantly difference.

TABLE II
Comparative Analysis Of Financial Performance

Profitability Ratio	Sig. 2-tailed	Notes	
ROA	0,610	Equal variances	Not sig. difference
ROE	0,005	Equal variances	Sig. difference
ROIC	0,024	Equal variances	Sig. difference
EBITDA Margin	0,000	Equal variances	Sig. difference
NOPLAT Margin	0,000	Equal variances	Sig. Difference

Conclusion on P2: Publcly listed Indonesian companies, which provide sustainability reports, have significantly difference financial performance than those companies, which do not.

Part 3 – relationship

Linear regressions are used in this study to analyze the extent of relationship between sustainability score and financial ratio. The result are summarised in table III.

TABLE III
Linear Regression Results

Profitability Ratio	Intercept Coefficient	Coefficient of Independent Variable	Coefficient of Determination	T - test
ROA	0,168	-0,006	0,114	
P value		0,009		
T table		2,001		2,713
ROE	0,268	-0,009	0,120	
P value	0,000	0,007		
T table		2,001		2,786
ROIC	0,163	-0,004	0,079	
P value	0,000	0,031		
T table		2,001		2,2212
EBITDA Margin	0,217	-0,007	0,066	
P value	0,000	0,050		
T table		2,001		2,001
NOPLAT Margin	0,167	-0,005	0,057	
T table		2,001		1,848
P value	0,000	0,070		

Based on the statistical result, since the p-value is lower than 0,05 and t test higher than t table, it means that there is positive relationship between sustainability score and the profitability ratios i.e ROA, ROE, ROIC, and EBITDA margin. Unfortunately, this result are not supported with high significancy because there are no coefficient of determination which higher than 0,50 which means lower than 50 % of sustainability performance intake can be explained by those ratios. While for NOPLAT margin, the result shows that there is no positive relationship since the p-value higher than 0,05 and t test smaller than t table.

The Return on Asset (ROA) indicator shows the company's ability in generating profit through the efficient management and use of resource productively [11]. Almost of recent studies use the ROA as their dependent variable and mostly result is positively significant. There are the research which has done by [12]-[19]. Opposite with this result the study of [20] shows that there is no significant relationship related to ROA.

Practising the sustainability means that the firms also concern a lot to the environmental management. It happened because sustainability index have more aspects on environment than social and governance. Such as the guidelines of FSC and ACSI, there are four out of nine domains which related to the environment. While, based on the study of [21], a firm that practicing sustainability might be have higher productivity which obtained from controlling the pollution efficiently. Moreover, a firm that have better financial enable to spend the resource more on cleaner technologies, which is belong to the company's asset. For that reason, there is relationship between sustainability disclosure and return on asset of the firms..

In contrast with ROA, Return on Equity (ROE) used total equity as denominator and reflects the firm performance relative to the shareolder investment. Like as on ROA, improving its sustainability disclosure could maintain the efficiency of the firm, consolidate its financial situation and answer the demands of its shareholders. Then, there is relationship between the sustainability disclosure and ROE. This slightly positive relationship also consistent with the study of [13] and [16]. While, the research has done by [20] still not significant on ROE.

The Return on Invested Capital (ROIC) is express how efficiently employs its capital, also reflects the effectiveness of a company in allocating the its money and investing in its operating activity [22]. Essentially ROIC has equal footing with ROA and ROE, which is debt and equity. However, the company would like more profitable when using ROE than ROIC. It because the debt related distortion has been removed in ROIC [23].

The company which have sustainability disclosure have more efficient in allocating the operating cost, might be from reducing the cost due to work accident, because those companies already practising the workplace health and safety, then increasing the percentage of ROIC.

The statistic result of this study which shows slightly positive relationship on ROIC, is supported with the study of [22] but different with the research of 24] which states that there is no correlation between ROIC and sustainability score.

The EBITDA margin measures the firm's profitability based on its cash based operating income divided by the operating revenue. The higher EBITDA margin express that the cash of the company which obtained from the revenue are also high. While, the existence of sustainability practices such as environmental management, workplace health safety, and human capital management might be increasing the level of company's productivity which enable to bring the cash revenue into the higher level. While the existence of stakeholder engagement, corporate governance, and corporate conduct might be increasing the company's reputation and consumer confidence, which also enable to increasing the percentage of EBITDA margin. Therefore, the slightly positive relationship between sustainability practices and EBITDA margin enable to exist, like as the result of [22] studies which shows only 21% of ESG scores intake can be explained by this ratio.

The NOPLAT margin express the profitability ratio which derived from the profit that are generated from the operating activity after making the adjustments for taxes as defined by (1-tax rate). Different with the prior ratios, the statiscally result for NOPLAT margin shows the significance higher than 0,05 with the coefficient of determination 0,057. It means that there is not enough evidence for the existence of relationship between sustainability performance and NOPLAT margin. This result also indicates that the existence of adjusted taxes make the operating profit cannot be affected by the sustainability performance.

Conclusion on P3: There is slightly positive relationship but not too significant between the extent of sustainability practices and financial performance in Indonesian companies.

V. Discussion

Regarding *P1*, the result which shows the majority of Indonesian companies has good level in sustainability disclosure, indicates that publicly listed in Indonesia are faster adopters of sustainability practices. The existence of some competition related to sustainability such as Indonesian Sustainability Reporting Awards (ISRA), Indonesian CSR awards, and Performance Rating Program have succeed to encourage those companies in practising sustainability.

The result of *P2,* which express the existence of difference significantly in profitability ratios of the company report compared with those companies which do not, might be can encourage the company to make it better financially through the sustainability practices. Extending the number of samples would have more strong evidence in comparing the profitability ratio. Unfortunately, this study only compare 19 reporting and non reporting companies due to small number of companies which have sustainability disclosure.

The result of *P3* shows the relationship of sustainability practices and financial performance. The causaliity between higher sustainability performance bring to the higher profitability, or higher profit enable to improve the social responsibility, has been debated [25]. This research is one of the way to bring the direction into clearer answer. The weak relationship which express by the result on *P3*, might because of some reason such as:

- the score of sustainability which not reflects the real practices,
- only small number of stakeholder who are aware with the extent of company's sustainability disclosure, or
- unconsistent the level of sustainability disclosure due to the company not publish it routinely

VI. Conclusion

The study concludes the result based on the following preposition,

*P1:*Publicly listed companies in Indonesia which expected to have high level of sustainability disclosure are good enough. However, the score still required to improve into higher might be with increasing the awareness in the environmental aspect such as climate change, the effect of business activity into the natural habitat, or another environmental matters.

P2: Also in this preposition, mostly the selected ratios except the ROA related to the profitability are significantly different between the companies which have sustainability report and those companies which do not. Unfortunately, with the t-test, there is no further information about the difference, whether higher or lower comparing to another.

P3: Not as expected, the result not express the existence of strong impact of sustainability practices to the financial performance for empirical evidence in Indonesia.

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Appendix
Profitability Ratios Formula

Measure	Formula
Return on Asset (ROA)	$\frac{Net\ Income}{Total\ Asset}$
Return on Equity (ROE)	$\frac{Net\ Income}{Total\ Equity}$
Return on Invested Capital	$\frac{NOPLAT}{Long\ term\ debt + Total\ Equity}$
Earnings before Interest, tax, depreciation, and amortization (EBITDA) margin	$\frac{EBITDA}{Operating\ Revenue}$
Net Operating Profit less adjusted tax (NOPLAT) margin	$\frac{NOPLAT}{Operating\ Revenue}$

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