Is GCG Strengthening the Influence Between Sustainability Reporting to Financial Performance?

(A study in IDX companies)

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Abstract—This study investigates the sustainability reporting differences between banks and nonbanks sample firms and examines the effect of Good Corporate Governance (GCG) in strengthening the influence between Sustainability Reporting (SR) to firm financial performance. The GCG proxied by the Corporate Governance Perception Index (CGPI). The independent-sample t-test implemented to analyze the differences. The results report evidence that there are differences in sustainability reporting between the bank and nonbank, in economic and social dimensions, and also in CGPI. The average score of the sustainability reporting index in banks is better than nonbank, while the average rating of CGPI nonbank is higher than bank sample firms. The multiple regressions implemented in investigating the effect of GCG in strengthening the influence between SR to financial performance. The empirical evidence shows that GCG enhances the relationship between Sustainability Reporting (SR) to firm performance in the economic dimension only. The result suggests that the better GCG, the stronger the relationship.

Keywords—sustainability reporting, GCG index, firm performance, bank, non-bank

I. INTRODUCTION

A Sustainability Reporting (SR) is a report published by a company or organization about the economic, environmental, and social impacts caused by its everyday activities [1]. GRI also explains that the organization’s values and governance model are presented in SR and demonstrates the link between its strategy and its commitment to a sustainable global economy [1]. When policy linked to the involvement of a sustainable global economy, then there will be a positive relationship between sustainability to firm financial performance.

Some studies give empirical evidence that more companies published sustainability reporting [2,3] (among others). KPMG International reported Corporate Responsibility (CR) reporting in 4100 companies comprises of 100 largest companies in 41 countries and four areas, Americas, Europe, Asia Pacific, and the Middle East & Africa, and the CR reporting growing were marked [2]. Bednárová et al., identifies factors influencing the environmental disclosure and environmental performance of the top 100 Fortune Global companies [3]. The empirical results show that the companies that follow the GRI standards to report their environmental performance comprise 66% of the largest global companies.

There is no single argument of empirical evidence regarding the relationship between sustainability performance and financial performance. Some studies support the arguments that sustainability increase firm performance [4-10], but some studies do not support [4,11,12]. Caesaria et al., investigate the effect of SR on the Firm’s performance [5]. The samples comprise of 44 listed companies in the Indonesia Stock Exchange (IDX) that using GRI-G4 guidelines. The results indicated that economics, environment, and social aspects have a significant positive influence on the companies performance. Ching et al., investigate the effect of SR quality to Corporate Financial Performance (CFP) among the firms listed on Corporate Sustainability Index (ISE) and to examine the quality of information disclosed in their SR [4]. Ching et al., found that there is no association between accounting and market-based variables and the reporting quality [4].

As described in the previous section, that the organization’s values and governance model are presented in SR [1]. This study predicts that governance (Good Corporate Governance, GCG) could strengthen the relationship between SR and firm financial performance. Corporate governance involves a set of relationships between a company’s management, its board, its shareholders, and other stakeholders. GCG should facilitate effective monitoring and proper incentives for the board and
management to pursue objectives that are in the interests of the company and its shareholders [13]. While studies in SR and performance show the many results, studies in Good Corporate Governance (GCG) find the mixed results as well.

Some studies reinforce the argument that GCG has a positive association with firm performance, the better the GCG, the better the performance [14-18]. Other studies reinforce that the better the GCG, the better the quality of financial reporting [19-21]. If the better GCG, the higher the quality of reporting, then based on this argument, this study investigates the effect of GCG in strengthening the influence between sustainability reporting to firm financial performance. The samples comprised of banks and nonbanks listed in IDX, and then this study also analyze the SR differences between banks and nonbanks sample firms.

II. LITERATURE REVIEW

This section describes GRI and the relationship between the GCG, SR, and firm performance. The proposed hypothesis is at the end of the literature review.

A. Global Reporting Initiative (GRI)

According to GRI, the GRI Standards that designed to enhance the worldwide comparability, intended to be used by organizations to report about their effects on the economy, the environment, and society [1]. The GRI Standards comprises of universal standards and topics specific standards. The global standards include GRI101 (Foundation), GRI 102 (General Disclosure), and GRI103 (Management Approach). The topic-specific rules comprise of GRI 200 (Economic topics), GRI 300 (Environmental issues), and GRI 400 (Social issues).

Studies in SR compliance show mixed results. Some studies found that more companies published sustainability reporting [2,3], but Peiris and Rizwan see the opposite direction [22]. Peiris and Rizwan examines the extent and nature of sustainability reporting among Public Listed Companies (PLC) in the Hotel & Travel Industry in Sri Lanka and investigates its compliance against the Global Reporting Initiative (GRI), and the commonly reported aspects within the Social and Environmental spheres [22]. Peiris and Rizwan finds that most firms, when reporting on sustainability, do not comply with the GRI framework, and the firms produce non-compliant SR, which are not in line with the structure. Only five companies (out of the 35 companies) studied, comply with the GRI framework [22].

The SR also could be analyzed in a more specific area. Cantele et al., examines the Italian water utilities. The results show a low level of disclosure on the sustainability indicators suggested by the main sustainability reporting guidelines (Global Reporting Initiative, (GRI), and Sustainability Accounting Standard Board (SASB)) [23]. The results also give information that most companies tend to disclose only qualitative information and fail to inform about some material aspects of water management such as water recycled, network resilience, water sources, and effluent quality.

B. SR, GCG, and Firm Performance

As explored in the previous section, some empirical studies reinforce the arguments that sustainability increase firm performance [5-10] but some studies do not support [4,11,12].

Some studies analyzed the GCG and quality reporting and found that the better the GCG, the better the quality of financial reporting [19-21]. Kasim examines GCG, and Internal Audit and its influence on the financial reporting quality and its implications to Return of the Shares [21]. The study found that the quality of financial reporting determined by the proper implementation of adequate corporate governance in a company (among other things).

GCG rating could decrease the asymmetric information between companies and investors [17], and the application of Corporate Governance is one form to minimize agency conflicts that occur between investors and management, so that information produced by companies indicates the quality information [19]. The higher the quality of financial reporting will decrease agency problems and will increase firm performance. The hypothesis in this study is that GCG is strengthening the influence between SR and firm financial performance.

III. METHODS

The comparison of the SR and GCGI between banks and nonbanks analyzed by implementing an independent sample t-test, and regression analysis implemented to test the hypothesis. Samples, variables, and regression model described as follows.

A. Sample

The samples comprise of banks and nonbanks listed in IDX in 2011-2018. Purposive sampling implemented in the sample selection based on the criteria banks and nonbanks listed in IDX that published sustainability reporting and has GCG index (CGPI) in 2011-2018.

B. Variables

Variables in this study are profitability measured by Return on Equity (ROE) as the financial performance indicator, GCG Index, and Sustainability Reporting Index (SRI) as a total average of the three dimensions of SRI comprises of the economic aspect, environment dimension, and social dimension.

The three-dimension index developed base on GRI guidelines support on content analysis and coded to obtain the sustainability disclosure index. The range of the score is between 1 to 5 (from Not Applied, Bit Applied, Partially Applied, Almost Applied, and Fully Applied. Four formulas implemented in SRI computations are as follows.

1) Economic dimension

\[
SRDI_{ec} = \frac{n}{k}
\]  
(1)
Where:
\[ SRDI_{ec} = SR \text{ Disclosure Index economic dimension} \]
\[ n = \text{total score in economic dimension} \]
\[ k = \text{total item of economic dimension} \]

2) Environment dimension

\[ SRDI_{env} = \frac{n}{k} \]  

Where:
\[ SRDI_{env} = SR \text{ Disclosure Index environment dimension} \]
\[ n = \text{total score in environment dimension} \]
\[ k = \text{total item of environment dimension} \]

3) Social dimension

\[ \text{ROE} = \beta_0 + \beta_1 \text{SRDI}_{ec} + \beta_2 \text{CGPI} + \beta_3 \text{Ln}_{TA} + \beta_4 \text{Dummy} + \epsilon \]  
\[ \text{ROE} = \beta_0 + \beta_1 \text{SRDI}_{env} + \beta_2 \text{CGPI} + \beta_3 \text{Ln}_{TA} + \beta_4 \text{Dummy} + \epsilon \]  
\[ \text{ROE} = \beta_0 + \beta_1 \text{SRDI}_{soc} + \beta_2 \text{CGPI} + \beta_3 \text{Ln}_{TA} + \beta_4 \text{Dummy} + \epsilon \]  
\[ \text{ROE} = \beta_0 + \beta_1 \text{SRDI}_{ec} + \beta_2 \text{CGPI} + \beta_3 \text{Ln}_{TA} + \beta_4 \text{Dummy} + \beta_5 \text{SRDI}_{ec} \times \text{CGPI} + \epsilon \]  
\[ \text{ROE} = \beta_0 + \beta_1 \text{SRDI}_{env} + \beta_2 \text{CGPI} + \beta_3 \text{Ln}_{TA} + \beta_4 \text{Dummy} + \beta_5 \text{SRDI}_{env} \times \text{CGPI} + \epsilon \]  
\[ \text{ROE} = \beta_0 + \beta_1 \text{SRDI}_{soc} + \beta_2 \text{CGPI} + \beta_3 \text{Ln}_{TA} + \beta_4 \text{Dummy} + \beta_5 \text{SRDI}_{soc} \times \text{CGPI} + \epsilon \]  

IV. RESULTS AND DISCUSSIONS

This section describes the statistic descriptive, independent sample t-test, and regression results to test the effect of GCG in strengthening the influence between SR to firm financial performance.

A. Statistic Descriptive

The statistic descriptive depicted in Table 1. Total samples in this study are 53 companies consist of banks and nonbanks listed companies that have SR and CGPI. The social dimension is the highest number of SRI means (4.297), followed by the economic aspect (4.267) and the lowest in the environment (3.612). The minimum number of SRDI_{ec}, SRDI_{env}, SRDI_{soc} are 2.50; 0 and 2.23, respectively. The 0 number mean of SRDI_{env} occurs because there is a sample firm that didn’t disclose the environmental dimension in SR. The maximum number of SRDI_{ec}, SRDI_{env}, and SRDI_{soc} are 5. These suggest that there are sample firms that fully applied in those three dimensions. ROE is the dependent variable, while Total Asset is the proxy of firm size. The Total Asset variable measured in a million rupiah, then in the regression model, the Total Asset transformed to ln. The range of CGPI is 0 to 100. The sample mean of CGPI is 84.77, while the minimum and maximum scores are 67.54 and 93.32. These numbers suggest that most of the sample firm has a high rating of CGPI since the standard deviation is relatively low in the range of 0 until 100 (5.39).

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total_Asset</td>
<td>53</td>
<td>66956</td>
<td>3400177005</td>
<td>121400691.68</td>
<td>507584635.10</td>
</tr>
<tr>
<td>SRDI_{ec}</td>
<td>53</td>
<td>2.50</td>
<td>5.00</td>
<td>4.27</td>
<td>0.77</td>
</tr>
<tr>
<td>SRDI_{env}</td>
<td>53</td>
<td>0.00</td>
<td>5.00</td>
<td>3.61</td>
<td>1.39</td>
</tr>
<tr>
<td>SRDI_{soc}</td>
<td>53</td>
<td>2.23</td>
<td>9.32</td>
<td>84.77</td>
<td>5.39</td>
</tr>
<tr>
<td>CGPI</td>
<td>53</td>
<td>67.54</td>
<td>93.32</td>
<td>84.77</td>
<td>5.39</td>
</tr>
<tr>
<td>N</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
B. Mean Differences in Bank and Nonbank

This section describes the mean differences of SRDI and CGPI in Banks and nonbanks. The results of the independent sample t-test depicted in Tables 2 and 3. Table 3 describes the group statistics. The total number of bank firms is 29, while nonbanks are 24. The mean, standards deviation and standard error mean of the two groups are as in table 2. All of the means of sample banks are higher than the bank except the SRDI_env. The next section explains the result of mean differences analysis.

Table 3 describes the significance of the mean difference between the two groups of samples (bank and nonbank) in each variable. The t value of SRDL_env is 4.72 sig at α 1%, suggests that there is a difference of SRDL_env between the bank and nonbank sample firms. The mean difference is 0.85, and this number indicates that the SRDL_env bank is higher than the nonbank. The t value of SRDL_env is -0.56, not statistically significant; this number suggests that there are no differences of SRDL_env between the bank and nonbank sample firms. The t value of SRDL_soc is 1.71 statistically significant at α10%; this means that there is a difference of SRDL_soc between the bank and nonbank sample firms. The mean difference is 0.34 suggests that the SRDL_soc bank is higher than nonbank sample firms. The t value of CGPI is 3.21, significant at α1%, and this means that there is a difference of CGPI between the bank and nonbank sample firms. The mean difference is 4.35. This number implies that the CGPI of the bank is higher than nonbank sample firms.

### Table III. Independent Sample t-Test: The Mean Difference

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Std. Er. Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRDI_ec</td>
<td>Bank</td>
<td>29</td>
<td>4.65</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>Non Bank</td>
<td>24</td>
<td>5.30</td>
<td>0.65</td>
</tr>
<tr>
<td>SRDI_env</td>
<td>Bank</td>
<td>29</td>
<td>3.52</td>
<td>1.79</td>
</tr>
<tr>
<td></td>
<td>Non Bank</td>
<td>24</td>
<td>3.72</td>
<td>0.64</td>
</tr>
<tr>
<td>SRDI_soc</td>
<td>Bank</td>
<td>29</td>
<td>4.45</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>Non Bank</td>
<td>24</td>
<td>4.11</td>
<td>0.51</td>
</tr>
<tr>
<td>CGPI</td>
<td>Bank</td>
<td>29</td>
<td>86.74</td>
<td>3.98</td>
</tr>
<tr>
<td></td>
<td>Non Bank</td>
<td>24</td>
<td>82.39</td>
<td>5.96</td>
</tr>
</tbody>
</table>

Note: ** Equality of Variances based on Levene’s test; *** Equality of Means based on t-test

*** sig. at α1% ** sig. at α5% * sig. at α10%

C. Regression Results

The three regression results without interaction variables summarized in table 4 (ROE as the dependent variable and SRDI each category, CGPI. In Total Asset, and Dummy Variable (1 for bank and 0 for nonbank) as independent variables. Model (4) has 5.02 for F value and statistically significant at α1%, and R2 is 0.543. The independent variables, SRDL_ec, has t value -2.58, is not significant statistically, this result implies that there is no relationship between SRDL_ec and ROE. The t value of CGPI is -1.84, statistically significant at α1%. This number indicates that CGPI influence ROE negatively.

The model (5) has an F value of 4.93 significant at α1% and R2 0.29. The independent variables, SRDL_env, has t value -0.43, not significant statistically, this result implies that there is no impact between SRDL_env and ROE. The t value of CGPI is -1.93, statistically significant at α1%. This number indicates that CGPI influence ROE negatively. The Ln TA variable is statistically positive significant, which means that the higher the TA, the higher the ROE.

The model (6) has an F value of 4.91 significant at α1% and R2 0.29. The independent variables, SRDL_soc, has t value 0.28, not significant statistically, this result implies that there is no impact between SRDL_soc and ROE. The t value of CGPI is -1.95, statistically significant at α10%. This number indicates that CGPI influence ROE negatively. The Ln TA variable is statistically positive significant, which means that the higher the TA, the higher the ROE. All of the dummy variables in the model (4), (5), and (6) are not statistically significant.

### Table IV. Regression Results of ROE as the Dependent Variable

<table>
<thead>
<tr>
<th>ROE (4)</th>
<th>ROE (5)</th>
<th>ROE (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRDL_ec</td>
<td>-2.54</td>
<td>(-0.58)</td>
</tr>
<tr>
<td>SRDL_env</td>
<td>-0.43</td>
<td>(-0.25)</td>
</tr>
<tr>
<td>SRDL_soc</td>
<td>0.28</td>
<td>(0.08)</td>
</tr>
<tr>
<td>CGPI</td>
<td>-1.84****(-3.60)</td>
<td>-1.93****(-3.97)</td>
</tr>
<tr>
<td>LnTA</td>
<td>2.28</td>
<td>(1.83)*</td>
</tr>
<tr>
<td>Dummy</td>
<td>10.99</td>
<td>(1.35)</td>
</tr>
<tr>
<td>R Square</td>
<td>0.543</td>
<td>0.29</td>
</tr>
<tr>
<td>F</td>
<td>5.02***</td>
<td>4.93***</td>
</tr>
</tbody>
</table>

Note: t value in parentheses, *** sig. at α1% ** sig. at α5% * sig. at α10%
The three regression results with interaction variables (SRDI and CGPI) summarized in Table 5 (ROE as the dependent variable and SRDI each category, CGPI, In Total Asset and Dummy Variable (1 for bank and 0 for nonbank) and interaction variables between SRDI and CGPI as independent variables.

Model (7) has an F value of 5.63 significant at α1% and R^2 0.37. The independent variables, SRDI_Ec, have t value -2.49, statistically significant at α1%, this result explains that there is a negative impact between SRDI_ec to ROE. The t value of CGPI is -6.40, statistically significant at α1%. This number suggests that CGPI influence ROE negatively. The t value of interaction variable between SRDI and CGPI (SRDI_Ec*CGPI) is 2.45, statistically significant at α5%. The coefficient that has positive sign suggests that this interaction reduces the negative impact of SRDI and CGPI to ROE. This result indicates that the GCPI could strengthen the relationship between SRDI to ROE. Both control variables, LnTA, and Dummy variables are not statistically significant.

Model (8) has an F value of 3.89 significant at α1% and R^2 0.29. The independent variables, SRDI_Ec, have t value -0.33 and not significant statistically. The t value of CGPI is -1.58, not significant statistically. These results suggest that there is no impact on SRDI and CGPI on ROE. The t value of the interaction variable between SRDI and CGPI (SRDI_Ec*CGPI) is 0.32 and not statistically significant. The result suggests that there is no interaction impact of SRDI and CGPI to ROE. This result indicates that the GCPI could strengthen the relationship between SRDI to ROE. LnTA is statistically significant at α10%, while Dummy variables are not statistically significant.

Model (9) has an F value of 4.08, statistically significant at α1%, and R^2 is 0.30. The independent variables, SRDI_Ec, have t value -0.90, not significant statistically, and this result explains that there no impact between SRDI_ec to ROE. The t value of CGPI is -1.63, not significant statistically. The t value of the interaction variable between SRDI and CGPI (SRDI_Ec*CGPI) is 0.91, not significant statistically. The results suggest that there is no relationship between SRDI and CGPI to ROE, and there is no interaction between both variables either. LnTA and Dummy variables are not statistically significant.

### Table V. Regression Results with Interaction Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROE (7)</th>
<th>ROE(8)</th>
<th>ROE(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRDI_Ec</td>
<td>-111.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-2.49)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRDI_Soc</td>
<td>-12.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-0.33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRDI_En</td>
<td>-6.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-3.32)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CGPI</td>
<td>-2.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.58)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LnTA</td>
<td>1.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dummy</td>
<td>5.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.84)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>9.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.36)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.005</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.004</td>
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</tr>
</tbody>
</table>

### D. Discussion

This study analyzes the effect of GCG in strengthening the influence between sustainability reporting and firm financial performance and also explains the differences between SR and GCG between banks and nonbanks sample firms. More companies that published SR found in some empirical evidence. The SR publications will not only disclosing the companies' contribution to sustainable development but also will strengthen their reputation. The reputation, on the other hand, will increase companies' performance. While some studies confirm the explanation that the better the GCG, the better the quality of financial reporting, it is hypothesized in this study that GCG enhancing the influence between sustainability reporting to firm financial performance.

Three SR indexes (economic, environment & social dimension) and Corporate Governance and Perception Index (CGPI) employed in this study. SR index developed base on content analysis, and this method has subjectivity limitations. The regression models implemented to test the hypothesis.

The results show that only one interaction (out of three the interactions) between the sustainability index and CGPI that statistically significant (model 7). The interaction variable between SRDIeconomic and CGPI is statistically significant at α 5%, while both SRDIeconomic and CGPI have negative signs. The positive sign of interaction coefficient suggests that this interaction reduces the negative impact of SRDI and CGPI to ROE. This result indicates that the GCPI could strengthen the relationship between SRDI to ROE. This study supports the hypothesis that GCG is enhancing the relationship between sustainability reporting and firm financial performance.

This empirical result supports the negative relationship between SR to firm financial performance as in Ching et al. [4], Utami [11] and Sejati and Andri [12]. However, the positive sign of interaction variable between SRDIeconomic and CGPI could reduce the negative association between SRDIeconomic and firm performance. The results of this study did not support the previous studies that found positive association between sustainability and firm financial performance [5-10] and also do not support other studies that found that there is no relationship between sustainability and firm performance [4,11,12].

Employing GCPI as a moderating variable in the influence between SRDI & ROE reduced the negative correlation between SRDI to performance (ROE), even though in the economic dimension only. While other dimensions, environmental and social dimensions, are not supported.
The results of the independent t-test show that there are differences in sustainability reporting between banks and nonbanks in economic and social dimensions (two dimensions out of the three dimensions). Banks' sustainability reporting dimensions are higher than nonbanks.

The regression model shows that only one interaction (out of three interactions) between the sustainability index and CGPI that statistically significant. The positive sign of coefficient suggests that this interaction reduces the negative impact of SRDI and CGPI to ROE. This result indicates that the GCPI could strengthen the relationship between SRDI to ROE, but only supported in the economic dimension. The other two interaction variable, between CGPI and sustainability index social dimension and between CGPI and sustainability index environment dimensions, are not statistically significant.

Subject to data limitation, the three sustainability dimensions separated into three regression models. Further study may employ more data and one regression model for the three aspects of sustainability reporting (economic, social, and environment).

REFERENCES