Environmental, Social, Governance (ESG) Performance and Capital Structure: The Role of Good Corporate Governance

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Abstract

**Objective:** The purpose of this study is to investigate the impact of Environmental, Social, and Governance (ESG) performance on capital structure, using good corporate governance (GCG) as a moderating variable.

**Design/Methods/Approach:** The sample comprises companies listed on the IDX outside the financial sector that issued financial and sustainability reports between 2017 and 2021. The Global Reporting Initiative (GRI) index measures ESG performance, the capital structure is measured by leverage, and the moderating variable of good corporate governance is measured by independent commissioner proportion. The data are analyzed using the OLS regression technique.

**Findings:** According to the estimation results, ESG performance positively affects the capital structure of non-financial enterprises. Furthermore, good corporate governance does not moderate the relationship between environmental, social, governance, and capital structure.

**Originality/Value:** By focusing on ESG performance and capital structure as evaluated in emerging countries, this study adds to existing research on environmental and social performance and its impact on capital structure. Furthermore, GCG is included as a moderating variable in this study.

**Practical/Policy implication:** Based on the findings, it is suggested that firm executives take steps to expand their ESG practices. This ensures sustainability and increases investor and creditor confidence, resulting in more efficient funding sources for the company.

**Keywords:** ESG, Environmental, Social, Governance, Capital structure, Good corporate governance.

**JEL Classification:** M42, M48

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1. Introduction

Environmental and societal issues have become a crucial research trend in business and investment. According to the Financial Times Lexicon, ESG is a generic term used in capital markets by investors to evaluate corporate behavior and predict future financial performance (Shaikh, 2022). With the Paris Agreement intending to encourage environmental, social, and governance (ESG) performance, firms have a continuing ESG investment in publishing their ESG performance. ESG aims to create a sustainable environment, more excellent governance, decreased information asymmetry, and a low cost of capital (Raimo et al., 2021). ESG disclosure results from the company’s greenhouse emission policy and the need for environmental sustainability to shape investment and financing decisions. ASEAN member countries like Indonesia, Malaysia, the Philippines, Singapore, and Thailand are increasingly oriented toward ESG standards and opportunities to pursue sustainable activities relating to green building development, social impact, and transparency across company boards. ASEAN governments are gradually expressing an interest in affordable and sustainable housing through green initiatives in order to address the region’s infrastructure deficit (Adenye et al., 2022). As a result, sustainability performance challenges are still evolving, one of which is related to the company’s capital structure.

Companies can obtain funding from internal and external sources to meet funding needs. The grant from internal sources includes retained earnings, depreciation, and amortization. Meanwhile, funding from external sources is divided into debt and equity financing (Wisudanto & Sugianto, 2014). The company’s optimal capital structure (combination of debt and equity) is an essential strategic key to the company’s competitiveness and profitability. Bai & Ho (2022) raised the issue of COVID-19 and corporate social performance (CSP) concerning the company’s debt level. They discovered that, prior to COVID, CSP proxied by environmental, social, and disclosure ratings had a beneficial impact on company debt levels by decreasing financial restrictions and enhancing stakeholder participation. During the pandemic, however, CSP became more expensive and highlighted more managerial agency issues for enterprises, weakening the link. The study has implications for capital structure. Other studies, such as Bae et al. (2019), contend that CSR can help firms avoid bankruptcy. CSP can benefit companies by increasing trust between companies and stakeholders (Hong & Liskovich, 2016; Lins et al., 2017). However, other research suggests that companies prioritizing social aspects, particularly stakeholders, tend to avoid risks, particularly employee orientation (Črnigoj & Mramor, 2015). The first factor causing this is due to less diversified human capital. Because employee human resources cannot be varied, organizations tend to limit company risk once employees can influence management strategy, according to Črnigoj & Mramor (2015). The second factor that causes this is due to creditors’ attention to default conditions. Campello et al. (2015) found that companies with labor organizations have to incur higher financial costs because creditors think companies will have an increased risk of incurring high costs. Therefore, Črnigoj & Mramor (2015) argue that companies prioritizing social aspects, especially employees, will have relatively low leverage. Berk et al. (2010) also stated that companies that pay attention to employee benefits have stronger risk aversion.

Good corporate governance is crucial to global competitiveness and influences international companies’ strategic choices (Filatotchev & Wright, 2011). Corporate sustainability performance (CSP) is highly dependent on the quality of GCG because effective GCG implementation will maintain stakeholder trust (Tjahjadi et al., 2021). GCG plays an essential role in improving CSP. By implementing GCG, stakeholder trust in the company’s sustainability performance will increase (Hussain et al., 2018). Strong GCG has five principles: fairness, accountability, responsibility, transparency, and independence (Burak et al., 2016). Gyimah et al. (2021) state that multinational companies with good corporate governance tend to have higher debt levels than companies with weak governments. This is consistent with Chung & Zhang (2011), who state that solid corporate governance can substitute for ensuring investor protection in countries with inadequate legal protection. Those studies contradict Zhou et al. (2021), which shows that corporate governance has a significant negative effect on leverage. This is because corporate governance can deleverage by increasing internal financing or equity.

Based on the phenomenon and previous research, this study will develop research from Bai & Ho (2022), which looks at the effect of CSP on capital structure. The sample used in this study is non-financial companies in Indonesia listed on the Indonesia Stock Exchange. Following Bai & Ho (2022), the capital structure variable as the dependent variable in this study is proxied by the leverage ratio, and the independent variable uses environmental, social, and governance performance (ESG performance). As the main contribution, this study includes good corporate governance as a moderating variable to observe its impact on the relationship between ESG and leverage. The research subjects are companies in specific industries and all types of companies except financial companies. This study adopts ordinary least-squared (OLS) to analyze the data. ESG performance is measured using the Global Reporting Initiative (GRI) index item in the sustainability report. The GRI index is a clear measurement tool and follows global standards. This study contributes to previous studies on environmental and social performance and its effect on capital structure by focusing on ESG performance and capital structure measured by leverage. In addition, this study also includes GCG as a moderating variable as a development of Bai & Ho’s (2022) research.

The first section of this research contains the introduction. Section 2 presents the theory and related literature on ESG performance, good corporate governance, and capital structure. Section 3 provides the empirical model, variable
Sustainability is an important issue that is still developing today. One of the issues related to this is ESG and capital structure. In Shaikh (2022), according to the Financial Times Lexicon, ESG is a broad term used in capital markets by investors to evaluate a company’s behavior and predict its future financial success. ESG ratings are frequently used by analysts and investors to evaluate a company’s financial performance. As a result, Environmental Social Governance (ESG) is a company standard in its investment processes that consists of three concepts or criteria: environmental, social, and governance. A company that incorporates ESG principles into its business and investing processes will also integrate and apply company rules to ensure the long-term viability of these three concepts. As a result, Environmental Social Governance (ESG) is a company standard in its investment processes that includes three concepts or criteria: environmental, social, and governance. A company that integrates ESG principles into its business and investing processes will also integrate and apply company rules to ensure the long-term viability of these three concepts. Capital structure is part of the company’s financial structure which concerns the company’s long-term expenditure as measured by comparing long-term debt with equity. Črnigoj & Mramor (2015) say that the optimal capital structure is the use of a company’s capital structure that will maximize its share price. The higher risk associated with a more significant debt tends to lower the stock price, but the expected higher rate of return is due to the more substantial debt. Capital structure refers to the mix of debt and equity securities in a firm’s long-term financial structure.

The triple bottom line concept shows that companies must prioritize stakeholders’ interests. This theory’s objective for companies is to pay more attention to the environment following the 3Ps, namely people, planet, and profit, which are the basis of the triple bottom line. People indicate that the company must pay attention to labor rights by opposing the exploitation of underage workers, paying wages according to regulations, and caring for the health and education of the workforce. Planet signifies that companies should manage their natural resources well and care about the environmental impact of their activities. Profit indicates that the company must conduct fair and ethical trade. Elkington (1997) said that the triple bottom line has become the basis for measuring the value of corporate success. Based on the triple bottom line, ESG performance done well by the company can help the company’s funding because stakeholders see ESG performance as a guarantee for stakeholders (Bae et al., 2019; Cheng et al., 2014). This also follows sustainability theory, where Meadows et al. (1972) explain that community efforts respond to social priorities to environmental and economic problems. The concept of sustainability is continually evolving and applied to business sustainability. State that business and investment will increase through balancing the needs of current and future stakeholders. The primary assumption of the capital structure trade-off theory is that firms consider capital structure decisions as a trade-off between the benefits of the interest tax shield and the losses from the costs of potential financial distress (Breaie et al., 2011) In trade-off theory, the trade-off in question is between benefits (tax shield) and expenses (bankruptcy). Taking on debt can have both costs and benefits. One potential benefit is the tax shield on interest costs for loans. These interest costs will reduce firms’ taxable income, which is what a tax shield means. Companies will not fund their business with one hundred percent debt because the higher the loan, the higher the financial risk because debt will create financial risk (risk of financial difficulties that lead to bankruptcy risk), which will incur costs. Therefore, it is necessary to determine the optimal point of debt, the point where the benefits and costs are the same. The costs will exceed the benefits if exceeded at that point. The company misses the opportunity if it is less than the optimal point (Pemer et al., 2020)

Studies on ESG and corporate capital structure have focused on different results. According to findings from earlier studies, businesses focusing on social issues, particularly stakeholders, have a greater propensity to minimize risks, particularly those related to employee orientation (Črnigoj & Mramor, 2015). The first factor causing this is due to less diversified human capital. Črnigoj & Mramor (2015) believe that employee human resources cannot be varied; thus, corporations reduce risk when employees influence management strategy. The second factor that causes this is due to creditors’ attention to default conditions. Campello et al. (2015) found that companies with labor organizations have to incur higher financial costs because creditors think companies will have an increased risk of incurring high costs. Therefore, Črnigoj & Mramor (2015) argue that companies prioritizing social aspects, especially employees, will have relatively low leverage. Berk et al. (2010) also stated that companies that pay attention to employee benefits have stronger risk aversion.

Even so, other studies show that sustainability practices positively influence company leverage. Chava (2014) discussed the relationship between environmental issues and the cost of equity and debt. The author notes that companies that cause environmental problems have higher costs of equity and debt. In addition, Chang et al. (2018) add that firms with more significant environmental liabilities, measured using the amount of production-related toxic waste generated by the
firm, show a lower debt-to-asset ratio. Adeneye et al. (2022) find that ESG scores positively relate to book leverage, suggesting that firms increase their debt capital through sustainable practices. Cheng et al. (2014) found that sustainable firms face lower financial constraints and easier access to funding. Bae et al. (2019) claim that CSR acts as insurance that protects stakeholders. Therefore, investment in CSR is considered an insurance premium. This, in turn, can reduce adverse reactions from customers and reduce competitors' incentives to exploit the weak points of highly leveraged companies (Hong & Liskovich, 2016). The statement is under the triple bottom line, where the company's consideration for success is not only on profit but also pays attention to people and the planet. Bai & Ho (2022) stated that companies with suitable CSP will have high debt levels, so companies with good ESG performance will also increase their debt levels. Therefore, based on the statements described above, the first hypothesis of this study is:

**H1:** ESG performance positively affects the company's capital structure.

### 2.2. GCG as a Moderator of the Relationship between ESG Performance and Capital Structure

Corporate Governance is defined in the Preamble to the OECD Principles of Corporate Governance (OECD, 2005) as "the set of relationships between a company’s management, its board, its shareholders, and other stakeholders." Corporate governance also provides a framework for creating business goals, achieving those goals, and evaluating performance. Governance, in a broader sense, governs how the company’s actors (such as shareholders, supervisory boards, management boards, authorities, auditors, and society) affect it. Kusmayadi et al. (2015) state that a good corporate governance system and structure is a corporation system and structure that aims to increase shareholder value and allocate diverse stakeholders such as creditors, suppliers, business associations, consumers, workers, government, and the larger community. Companies will look towards more sustainable operations that are well-governed. CSP is a long-term performance that involves carrying out business activities that improve the community's economic, social, and environmental well-being (Formentini & Tatich, 2016). As a result, Good Corporate Governance is a corporate system and structure aimed at increasing shareholder value and allocating various stakeholders to the company, such as creditors, suppliers, business associations, consumers, workers, government, and the general public. Because of that, good corporate governance plays a vital role in the company's sustainability.

Agency theory (Jensen & Meckling, 1976) explains the link between CSP, GCG, and sustainability theory (Meadows et al., 1972). Agency theory describes the board's role as essential to the GCG structure and mechanism. Agency theory states that shareholders as principals and management agents have different interests (Chams & García-Blandón, 2019). The theory presumes that firms can reduce agency conflict and information asymmetry by providing detailed information about their sustainable practices, resulting in reduced debt costs and easier access to debt financing (Cheng et al., 2014). GCG has an essential role in addressing conflicts between principals and agents. Regarding corporate sustainability, agency theory emphasizes that board mechanisms that implement social sustainability will benefit the company (Chams & García-Blandón, 2019). Therefore, companies implementing good corporate governance will increase sustainability-related activities, which in this study is ESG performance. Meadows et al. (1972) describe sustainability theory in a book that there are community initiatives to respond to social objectives on issues relating to the environment and the economy. The concept of sustainability is currently being developed and applied in the context of corporate sustainability. Pemer et al. (2020) stated that business and investment will increase through balancing the needs of current and future stakeholders. Sustainability theory underlies the critical role of the Board of Commissioners in implementing GCG, which can balance economic, social, and environmental activities to achieve CSP.

Previous research on GCG has had mixed results, such as by Zhou et al. (2021), who found that corporate governance significantly negatively affects leverage. Corporate governance can achieve the deleveraging effect by increasing internal funding or equity. Furthermore, Zhou et al. (2021) also stated that corporate governance has a negative and significant effect on the leverage of state-owned companies but has no significant impact on leverage in non-state-owned companies. This means that GCG does not affect the leverage of private companies (not government-owned). This is because companies in China, as a developing country, are still improving the quality of their governance, so companies focus on improving governance. In addition, China has not paid much attention to critical areas of corporate governance (Liu et al., 2012).

Other research states that corporate sustainability performance (CSP) is highly dependent on the quality of GCG because effective GCG implementation will maintain stakeholder trust (Tjahjadi et al., 2021). GCG plays a vital role in improving CSP. By implementing GCG, stakeholder trust in the company’s sustainability performance will increase (Hussain et al., 2018). Strong GCG has five principles: fairness, accountability, responsibility, transparency, and independence (Burak et al., 2016). Chang et al. (2014) argue that the quality of corporate governance determines the manager’s approach to rebalancing the debt ratio towards the target capital structure. Research by Gyimah et al. (2021) states that multinational companies with good corporate governance tend to have higher debt levels than companies with weak governance. This is consistent with Chung & Zhang (2011), who state that solid corporate governance can serve as a substitute for ensuring investor protection in countries with weak legal protection for investors. Suppose multinational companies have higher
agency costs from debt that prevent the use of higher leverage, and international governance can reduce agency conflicts. In that case, good corporate governance reduces the complexity and cost of monitoring by bondholders (Gyimah et al., 2021). Good corporate governance will make it easier for companies to get better access to funding and cause companies to use higher debt. From previous research, GCG can be a moderator for the influence of ESG performance and the company’s capital structure because GCG plays a positive role in CSP and can give companies better access to funding, increasing the company’s leverage. Based on the statements described above, the second hypothesis of this study is:

**H2**: GCG strengthens the influence of ESG performance on the company’s capital structure.

### 3. Method

#### 3.1. Data and sample

This study employs a quantitative approach to estimate the relationship between ESG performance, capital structure, and moderating variables of good corporate governance. The control variables in this study, namely firm age, dividend policy, and profitability as measured by ROA. Table 1 presents the detailed operational definitions of the variables. The sampling technique uses a purposive sampling method by taking samples from the population based on specific criteria, namely non-financial companies listed on the Indonesia Stock Exchange (IDX) in 2017-2021, publishing annual reports in 2017-2021, and publishing sustainability reports in 2017-2021.

**Table 1. Variable definitions**

<table>
<thead>
<tr>
<th>No.</th>
<th>Variables</th>
<th>Measurement</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>ESG Performance</strong></td>
<td>Content analysis on the sustainability report part of the environmental, social, and governance aspects with the formula: ESG = ΣDisclosed items / Total disclosure items</td>
<td>Sustainability Report</td>
</tr>
<tr>
<td>2.</td>
<td><strong>Capital Structure (Leverage)</strong></td>
<td>Debt ratio = total debt/total assets</td>
<td>Annual Report</td>
</tr>
<tr>
<td>3.</td>
<td><strong>Good Corporate Governance (GCG)</strong></td>
<td>Independent Commissioner = total independent commissioners / total company commissioners</td>
<td>Annual Report</td>
</tr>
<tr>
<td>4.</td>
<td><strong>Firm Age (AGE)</strong></td>
<td>Natural logarithm (ln) of company age</td>
<td>Annual Report</td>
</tr>
<tr>
<td>5.</td>
<td><strong>Dividend Policy (DIV)</strong></td>
<td>Dummy with a score of 0 if no dividend is paid and 1 if the dividend is paid.</td>
<td>Annual Report</td>
</tr>
</tbody>
</table>

#### 3.2. Methodology

This study adopts the OLS method with the common effect model to perform regression. The analysis started with descriptive statistical analysis, classical assumption testing, coefficient of determination test, F test, and hypothesis testing by testing without moderating variables and then with moderating variables. Classical assumption testing consists of normality, multicollinearity, and heteroscedasticity tests. The robustness test was conducted by adding asset tangibility and ROE to the basic model. The hypotheses testing is conducted based on the following empirical model:

**Hypothesis (1):**

\[
LEV_{i,t} = \alpha + \beta_1ESG_{i,t} + \beta_2AGE_{i,t} + \beta_3DIV_{i,t} + \beta_4ROA_{i,t} + \varepsilon_{i,t}
\]  

**Hypothesis (2):**

\[
LEV_{i,t} = \alpha + \beta_1ESG_{i,t} + \beta_2GCG_{i,t} + \beta_3 ESG_{i,t} * GCG_{i,t} + \beta_4AGE_{i,t} + \beta_5DIV_{i,t} + \beta_6ROA_{i,t} + \varepsilon_{i,t}
\]

Description:

\(\alpha\) = Constant

\(LEV_{i,t}\) = Capital Structure proxied by the leverage ratio of the company i in year t

\(ESG_{i,t}\) = ESG performance for the company i year t

\(GCG_{i,t}\) = Good Corporate Governance at company i year t
4. Result and Discussion

Companies with sustainability reports listed on the Indonesia Stock Exchange for 2017-2021 are the population of this study. Based on the sampling criteria, this study obtained 302 observations from non-financial companies over 5 years. Table 2 describes the sample in this study:

Table 2. Sample selection results

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Non-financial companies publish sustainability reports and are listed on the Indonesia Stock Exchange (IDX).</td>
<td>41</td>
<td>43</td>
<td>58</td>
<td>83</td>
<td>108</td>
<td>333</td>
</tr>
<tr>
<td>2</td>
<td>Data on companies with incomplete reports</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>Outlier data</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>7</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>Final Sample</strong></td>
<td>39</td>
<td>42</td>
<td>52</td>
<td>73</td>
<td>96</td>
<td>302</td>
</tr>
</tbody>
</table>

4.1. Descriptive Statistics

A descriptive analysis of the statistical results is presented in Table 3. ESG has a minimum value of 0.032 and a maximum value of 0.947, a mean value of 0.320 which means that the average GRI disclosure of Indonesian companies is still relatively low, then the standard deviation value is 0.173. LEV is worth a minimum of 0.118 and a maximum of 0.961, and the mean value is obtained at 0.510 with a standard deviation of 0.187. GCG has a minimum value of 0.167 and a maximum of 0.833. The mean value obtained is 0.407, which means that the proportion of independent commissioners is low, then the standard deviation is 0.104. Firm age in this study was measured using the formula Ln (firm age). Firm age has a minimum value of 1,386 and a maximum value of 4,682. The mean value obtained is 3,549, and the standard deviation is 0.542. The dividend policy uses a dummy measured with a score of 0 if the company does not pay dividends, then 1 if the company pays dividends. The dividend policy has a minimum value of 0 and a maximum value of 1. The mean value obtained is 0.646, which means that around 60% of companies issue dividends, then the standard deviation value is 0.479. ROA, as measured by net profit/total assets, has a minimum value of -0.251 and a maximum of 0.599, with a mean of 0.047 and a standard deviation of 0.080.

Table 3. Descriptive statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicator</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG Performance</td>
<td>ESG</td>
<td>302</td>
<td>0.032</td>
<td>0.947</td>
<td>0.320</td>
<td>0.173</td>
</tr>
<tr>
<td>Leverage</td>
<td>LEV</td>
<td>302</td>
<td>0.118</td>
<td>0.961</td>
<td>0.510</td>
<td>0.187</td>
</tr>
<tr>
<td>Good Corporate Governance</td>
<td>GCG</td>
<td>302</td>
<td>0.167</td>
<td>0.833</td>
<td>0.407</td>
<td>0.104</td>
</tr>
<tr>
<td>Age</td>
<td>AGE</td>
<td>302</td>
<td>1.386</td>
<td>4.682</td>
<td>3.549</td>
<td>0.542</td>
</tr>
<tr>
<td>Dividend Policy</td>
<td>Dividends</td>
<td>302</td>
<td>0</td>
<td>1</td>
<td>0.646</td>
<td>0.479</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>ROA</td>
<td>302</td>
<td>-0.251</td>
<td>0.599</td>
<td>0.047</td>
<td>0.080</td>
</tr>
</tbody>
</table>

4.2. Effect of ESG Performance on Capital Structure

The regression results based on Equation 1 are presented in Table 4. The results show that the p-value of ESG is 0.017, which means significant at 0.05 level, indicating H0 is rejected and H1 is accepted. This means that there is a significant positive effect of ESG performance variables on corporate leverage. The results are consistent with Cheng et al. (2014), which find that sustainable companies face lower financial constraints and easier access to funding. Bae et al. (2019) claim that CSR acts as insurance that protects stakeholders. Therefore, investment in CSR is considered an insurance premium.
This, in turn, can reduce adverse reactions from customers and reduce competitors’ incentives to exploit the weak points of highly leveraged firms (Hong & Liskovich, 2016) Adeneye et al. (2022) also found that ESG scores are positively associated with book leverage, suggesting that firms increase their debt capital through sustainable practices. This statement follows the triple bottom line where companies consider success not only in profit but also pay attention to people and the planet. The results also follow Cooper & Uzun (2015), who state that companies with high social responsibility will have a lower cost of debt. Their findings indicate that companies that contribute to the welfare of stakeholders will be considered less risky in the eyes of creditors so that companies can get access to support and resources more efficiently and cheaply than other companies.

Table 4. Hypothesis testing results

<table>
<thead>
<tr>
<th>Variables</th>
<th>The dependent variable is the capital structure</th>
<th>GCG Moderation (before interaction variables are entered)</th>
<th>GCG Moderation (after the interaction variable is entered)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG</td>
<td>0.143* (0.017)</td>
<td>0.133* (0.026)</td>
<td>0.223 (0.372)</td>
</tr>
<tr>
<td>GCG</td>
<td>0.182 (0.067)</td>
<td>0.248 (0.223)</td>
<td></td>
</tr>
<tr>
<td>ESG*GCG</td>
<td>-0.001 (0.959)</td>
<td>-0.002 (0.907)</td>
<td>-0.021 (0.711)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.035 (0.118)</td>
<td>-0.028 (0.230)</td>
<td>-0.027 (0.233)</td>
</tr>
<tr>
<td>Dividend</td>
<td>-0.704** (0.000)</td>
<td>-0.712** (0.000)</td>
<td>-0.712** (0.000)</td>
</tr>
<tr>
<td>ROA</td>
<td>0.523 (0.000)</td>
<td>0.452 (0.000)</td>
<td>0.426 (0.000)</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-Square</td>
<td>0.123</td>
<td>0.132</td>
<td>0.133</td>
</tr>
<tr>
<td>N</td>
<td>302</td>
<td>302</td>
<td>302</td>
</tr>
</tbody>
</table>

Notes: **sig. 1%, *sig. 5%
The number in parentheses are p-values

4.3 GCG as a Moderator of the Relationship between ESG Performance and Capital Structure

Estimation results to test the role of GCG are presented in Table 3. The table shows that before the interaction of ESG with GCG is included (ESG*GCG), the significance level of GCG is 0.067 (>0.05) with a coefficient of 0.182. After the interaction variable of ESG with GCG is included, ESG*GCG has a significance level of 0.711 (>0.05), and the coefficient is -0.218; this means that H0 is accepted and H2 is rejected.

These results indicate that GCG failed to become a moderating or predictor variable because the results of both GCG and its interaction variables were insignificant. Previous studies conducted by Zhou et al. (2021) have found that corporate governance has a significant negative effect on leverage. This is because corporate governance can realize the deleveraging effect. After all, it will increase internal financing or equity. Furthermore, Zhou et al. (2021) also stated that corporate governance has a negative and significant effect on the leverage of state-owned companies but has no significant impact on leverage in non-state-owned companies. This means that GCG does not affect the leverage of private companies (not government-owned). This is because companies in China, as a developing country, are still in the stage of improving the quality of their governance, so companies focus on improving governance. In addition, China has not paid much attention to critical areas of corporate governance (Liu et al., 2012). Another study in Indonesia states that GCG in Indonesia still needs to be maximized in its application (Kusumayani & Wirama, 2016). This may make stockholders ignore the company’s GCG operations (Mariani et al., 2016). This may explain why GCG, proxied by the proportion of independent commissioners, cannot increase or diminish the relationship between ESG performance and leverage or become a predictive variable.
4.4. Robustness Test

Table 5 presents the robustness check by adding ROA and tangibility into the basic model. This result shows that after adding ROE and asset tangibility variables, the ESG variable still has a significant positive result, which means the results are robust to the main regression. Furthermore, testing the GCG as moderation shows that before the interaction of ESG with GCG is included (ESG*GCG), the significance level of GCG is 0.056 (>0.05) with a coefficient of 0.190. The interaction term indicated by ESG*GCG shows consistent results indicating the absence of the moderating role of GCG.

Table 5. Robustness Test Results

<table>
<thead>
<tr>
<th>Variables</th>
<th>The dependent variable is the capital structure</th>
<th>GCG Moderation (before interacting variables)</th>
<th>GCG Moderation (after entering interaction variable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG</td>
<td>0.143*</td>
<td>0.132*</td>
<td>0.230</td>
</tr>
<tr>
<td></td>
<td>(0.017)</td>
<td>(0.028)</td>
<td>(0.361)</td>
</tr>
<tr>
<td>GCG</td>
<td></td>
<td>0.190</td>
<td>0.261</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.056)</td>
<td>(0.198)</td>
</tr>
<tr>
<td>ESG*GCG</td>
<td></td>
<td></td>
<td>-0.237</td>
</tr>
<tr>
<td>Age</td>
<td>0.001</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>(0.961)</td>
<td>(0.992)</td>
<td>(0.983)</td>
</tr>
<tr>
<td>Dividend</td>
<td></td>
<td></td>
<td>-0.025</td>
</tr>
<tr>
<td></td>
<td>(0.143)</td>
<td>(0.293)</td>
<td>(0.292)</td>
</tr>
<tr>
<td>ROA</td>
<td>-1.022**</td>
<td>-1.033**</td>
<td>-1.037**</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>ROE</td>
<td>0.125</td>
<td>0.127*</td>
<td>0.128*</td>
</tr>
<tr>
<td></td>
<td>(0.051)</td>
<td>(0.046)</td>
<td>(0.045)</td>
</tr>
<tr>
<td>Tang</td>
<td>0.013</td>
<td>0.022</td>
<td>0.020</td>
</tr>
<tr>
<td></td>
<td>(0.809)</td>
<td>(0.672)</td>
<td>(0.710)</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>0.432</td>
<td>0.406</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>N</td>
<td>302</td>
<td>302</td>
<td>302</td>
</tr>
</tbody>
</table>

Notes: **sig. 1%, *sig. 5%
Figures in parentheses are probability values.

5. Conclusion

This study examines ESG performance and its impact on the capital structure of non-financial companies in Indonesia. As a development from previous studies, this research also considers good corporate governance as a moderating variable. The sample used is a non-financial company listed on the Indonesia Stock Exchange, which publishes annual reports and sustainability reports for 2017-2021. The samples obtained for this study were 302. This study uses the OLS method in regression and Moderated Regression Analysis (MRA) to regress the moderating variable of good corporate governance.

The results of this study indicate that ESG performance has a significant positive effect on leverage. This is under trade-off theory and the triple bottom line, where sustainable companies face lower financial constraints and easier access to funding. The company’s consideration for success is profit, people, and the planet. GCG does not moderate the relationship between ESG performance and leverage and is also not a predictor variable. This may be because the implementation of GCG still needs to be maximized in Indonesia, so stakeholders pay less attention to areas of corporate governance.
The findings indicate that company executives must expeditiously implement measures to improve their environmental, social, and governance (ESG) practices. This is critical for advancing sustainability and bolstering the confidence of investors and creditors, thereby leading to more advantageous funding prospects for the organization.

This study only uses the proportion of independent commissioners for GCG. Future research should consider other measurements for GCG, such as the Corporate Governance Perception Index (CGPI), commissioner education, and size and education of top management, which can display the quality of GCG more comprehensively. Future research can also consider the speed of adjustment (SOA) to see the effects of capital structure changes in more detail.

**Author Contribution**

Author 1: review and editing, writing and editing, supervision, validation, visualization.

Author 2: conceptualization, writing original draft, data curation, formal analysis, investigation, methodology.

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**Conflict of Interest**

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

**References**


