

*Research Article*

## The Influence of Corporate Social Responsibility, Green Accounting, Intellectual Capital, and Firm Size on Financial Performance with Good Corporate Governance as a Moderating Variable

(An Empirical Study of Mining Companies Listed on the Indonesia Stock Exchange, 2020–2024)

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**Abstract:** This study aims to determine and analyze the effect of Corporate Social Responsibility, Green Accounting, Intellectual Capital, and Firm Size on Financial Performance with Good Corporate Governance as a moderating variable. This study was conducted on mining companies listed on the Indonesia Stock Exchange (IDX) for a five-year period, namely 2020–2024. The study population consisted of 34 mining companies, with the sampling method using purposive sampling, resulting in 33 companies as research samples. The information used was derived from secondary sources, namely annual reports and sustainability reports. Multiple linear regression and Moderated Regression Analysis (MRA) were used to analyze the data, with the assistance of EViews software. The results showed that Corporate Social Responsibility had a positive and significant effect on Financial Performance. Green Accounting and Intellectual Capital also had a positive and significant effect on Corporate Social Responsibility. Meanwhile, Firm Size had a positive but insignificant effect on Financial Performance. The results of the moderation test indicate that Good Corporate Governance is unable to moderate the influence of CSR, Green Accounting, Intellectual Capital, or Firm Size on Financial Performance. This finding suggests that increasing social responsibility, implementing green accounting, and managing intellectual capital can improve the financial performance of mining companies, but their effectiveness has not been strengthened by corporate governance mechanisms.

**Keywords:** Corporate Social Responsibility; Firm Size; Good Corporate Governance; Green Accounting; Intellectual Capital.

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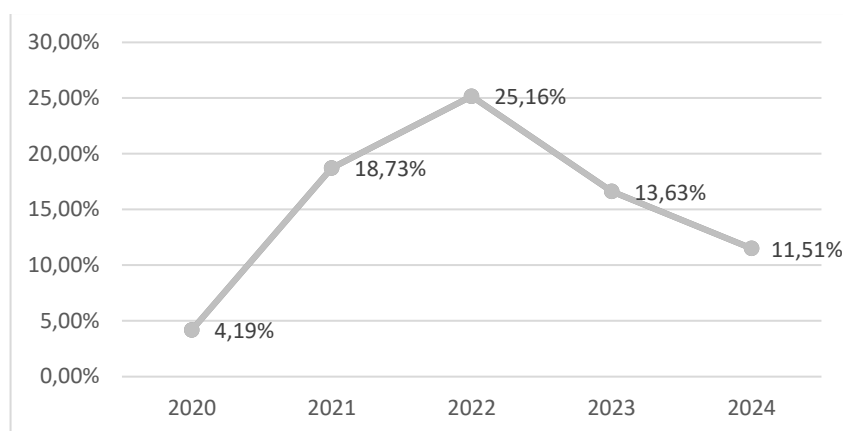
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### 1. Introduction

The mining sector is a strategic sector that plays a vital role in the Indonesian economy. In addition to being a major contributor to the country's foreign exchange through the export of coal, nickel, copper, and gold, this sector also contributes significantly to job creation and regional development. According to data from the Ministry of Energy and Mineral Resources (ESDM, 2024), the mining sector's contribution to national Gross Domestic Product (GDP) reached more than 6% and continues to show an increasing trend until 2024, especially after the downstreaming policy and the ban on raw ore exports were implemented. However, the economic growth generated by mining activities often faces a dilemma between environmental sustainability, social responsibility, human resource efficiency, and good corporate governance.

Mining companies in Indonesia operate in a challenging business environment, primarily due to fluctuating global commodity prices, demands for compliance with environmental

regulations, and social pressures from communities surrounding their operations. Therefore, a mining company's financial performance is influenced not only by internal factors such as production efficiency and capital management, but also by its ability to manage social responsibility, environmental reporting, and good corporate governance (GCG) practices.



**Figure 1.** Average ROA of Mining Companies in 2020-2024.

The average ROA of mining companies fluctuated from 2020 to 2024. The average ROA of mining companies in 2020 was 4.19%, then increased to 18.73% in 2021. In 2022, the average ROA increased to 25.16% and decreased again to 13.63% in 2023. Then the average ROA decreased again to 11.51% in 2024. This means the company's performance is still in its early stages and that investors should be prepared for ROA fluctuations when deciding whether or not to put money into the business. Global economic circumstances, energy commodity prices, and the efficiency of sustainability and governance policies considerably impact the financial success of Indonesian mining businesses, as seen by these ROA swings.

The decline in financial performance after 2022 coincided with falling global coal and nickel prices, rising exploration costs, and tightening environmental policies following the COP26 and COP28 conferences, which required companies to be more environmentally friendly. This situation confirms that non-financial factors such as Green Accounting, Corporate Social Responsibility (CSR), Intellectual Capital (IC), and corporate governance have a significant impact on the sustainability of mining companies' financial performance.

Companies practice CSR when they acknowledge and address the negative social and environmental effects of their business operations. In the context of the mining industry, implementing CSR is not only a moral obligation, but also a legal obligation as stipulated in Law Number 40 of 2007 concerning Limited Liability Companies and Financial Services Authority (OJK) Regulation Number 51/POJK.03/2017 concerning Sustainable Finance. Good CSR reporting can improve reputation, investor trust, and good relations with the surrounding community, which ultimately has a positive impact on financial performance (Freeman, 1984).

Several studies, such as Safitri et al. (2025) and Okterianda et al. (2025), found that "Green Accounting had no significant effect on financial performance, while other studies, such as Priamita et al. (2025), showed the opposite result". The difference in the results of these studies indicates the existence of other factors that moderate the relationship between these variables, one of which is Good Corporate Governance. This study is important because it simultaneously tests four independent variables: CSR, Green Accounting, Intellectual Capital, and Firm Size on financial performance with GCG as a moderating variable in Indonesian mining companies for the period 2020–2024. This study is also expected to provide practical contributions to company management in designing business sustainability strategies, as well as provide theoretical contributions to enrich the literature on financial accounting and corporate governance.

## 2. Literature Review

### Stakeholder theory

A Stakeholder theory, written by Freeman (1984), laid the groundwork for stakeholder theory. According to this school of thought, a company's capacity to satisfy the demands and expectations of different parties having a stake in the company's operations (stakeholders) is more important than the company's attempts to maximize profits for shareholders. Workers, citizens, communities, investors, vendors, and the natural world are all considered stakeholders. So, it's not enough for businesses to only think about making money; they also need to think about how their actions will affect society and the environment.

Stakeholder theory is especially applicable to mining businesses in this context because to the sector's substantial social and environmental implications, including the exploitation of natural resources, pollution, and changes to ecosystems. Businesses must practice Green Accounting and CSR to be transparent about their impact on the environment and their efforts to improve society if they want to keep their stakeholders happy. Through CSR, companies can demonstrate their commitment to community welfare and environmental sustainability, while Green Accounting allows companies to report environmental costs and benefits in a measurable and accountable manner (Clarkson, 1995).

In addition, GCG is a key component of stakeholder theory since it promotes justice, independence, accountability, and openness in the workplace, which in turn balances the interests of all stakeholders. Meeting stakeholder expectations has a favorable effect on a company's financial performance since it improves the company's reputation and public confidence. (Donaldson & Preston, 1995). Thus, stakeholder theory explains that social responsibility, environmental reporting, and good corporate governance are complementary strategies for achieving business sustainability and improving long-term financial performance.

### Legitimacy Theory

According to Brown & Deegan (1998), legitimacy theory explains that a company's survival depends on public acceptance of its activities. The more a company adheres to societal norms and rules, the greater its chances of acceptance and survival. To continue operating and growing, companies need to gain legitimacy from society. Making information publicly available is one approach to establishing credibility. This helps the public understand what the company does and how it conducts its business (Brown & Deegan, 1998).

In the context of mining companies, legitimacy theory explains why companies need to disclose CSR and implement Green Accounting. Mining activities are often associated with issues of environmental damage, air and water pollution, and overexploitation of natural resources. To reduce social pressure and gain public trust, companies must demonstrate their responsibility for environmental impacts through transparent social and environmental reporting (Deegan, 2002). This reporting is not simply a form of compliance but also a communication strategy to gain legitimacy from society, demonstrating that the company's activities remain within acceptable social norms and values.

Furthermore, the implementation of Good Corporate Governance (GCG) is also an important tool in strengthening corporate legitimacy. By implementing GCG principles,

companies demonstrate a commitment to transparent and accountable governance, thereby strengthening public trust in their integrity and business ethics. The legitimacy gained through the implementation of CSR, Green Accounting, and GCG will create a positive image and enhance the company's reputation, ultimately contributing to improved financial performance (Suchman, 1995; O'Donovan, 2002). Thus, legitimacy theory explains the relationship between a company's social and environmental activities and financial results, resulting in increased trust and support from the wider community.

### **Resource-Based View**

Strategic management and organizational performance have been greatly impacted by the Resource-Based View (RBV) theory. Wernerfelt (1984) first up the idea in his paper "A Resource-Based View of the Firm," and Barney (1991) expanded on it more methodically. Both the company's external market position and its internal resources define its competitive edge, according to Barney (1991). The core tenet of this idea is that in order for businesses to gain and maintain a competitive edge, they must identify and make the most of resources that are special, uncommon, difficult to replicate, and non-substitutable.

The resources referred to in the RBV are not only physical or financial assets, but also include non-physical resources such as managerial capabilities, technology, information, reputation, and intellectual capital. Barney (1991) divides company resources into three main categories: physical capital resources such as facilities, equipment, and technology; Human capital resources, such as employee skills, knowledge, experience; and organizational capital resources, including organizational structure, corporate culture, and control systems. These three types of resources, if managed well, will generate efficiency and added value for the company, ultimately improving financial performance.

### **Financial Performance**

The performance of an organization is one measure of how well it accomplishes its objectives. (Pertiwi & Pratama, 2012). Company effectiveness is measured by management's ability to make appropriate decisions to achieve its goals. Meanwhile, company efficiency is measured by the ratio of revenue to expenses, namely, how much optimal revenue the company can generate for a given set of expenses. Company performance also indicates the utility the company generates for all its stakeholders. As a company's performance improves, stakeholder satisfaction with the company also increases. Thus, a company's performance is indicative of how well it manages and controls its resources to accomplish its profit-generating objective.

### **Corporate Social Responsibility**

One way for businesses to show they care about the community and the environment is via CSR initiatives. CSR concerns various stakeholders, from consumers and shareholders to the government. This issue arises from the belief that a company's existence is inseparable from its environment. Therefore, every action a company takes will impact the environment. CSR centers on the idea that businesses have a duty to society and the environment in addition to their financial obligations, such as maximization of profits to ensure the survival of the company. Companies that put profit above everything else will not be able to flourish in the long run. A company's value is affected by its level of corporate social

responsibility, which is a notion that is vital to a company's business ethics. The public, directors, and investors see a firm more favorably when it reveals more information about its corporate social responsibility initiatives in its annual report. (Maulida, Novius & Mukhlis, 2023).

### **Green Accounting**

The term green accounting refers to a method of keeping financial records that takes into consideration the societal and environmental impacts of a business. This approach aims to address environmental issues and is the first step in addressing them. By implementing green accounting, companies are encouraged to improve their ability to mitigate the environmental problems they face. By factoring in the cost-benefit and associated impact factors, environmental accounting aims to make environmental management more efficient. (Hamidi, 2019). The implementation of environmental accounting in Indonesia is still suboptimal, and many companies operate without considering potential environmental impacts.

### **Intellectual Capital**

According to Brooking (1996) cited in Forte et al. (2019), intellectual capital is the sum of a company's market intangible assets, human-centered IP, and the infrastructure that allows it to function. An organization's intellectual capital consists of its knowledge, applied experience, organizational technology, customer connections, and professional abilities, as stated by Edvinsson and Malone (1997) in Forte et al. (2019). These assets provide the firm a competitive edge in the market. Thus, it is reasonable to say that a company's intellectual capital consists of its knowledge and the power to think critically; this asset does not have a physical form and is considered intangible. Having intellectual capital allows the company to gain an advantage over its competitors and enjoy additional benefits.

### **Firm Size**

Size of the firm is a way to quantify how big a business is. In Khoeriyah (2020), Brigham and Houston state that firm size is a way to gauge how big a corporation is based on metrics like total assets, total sales, profit, and tax burden. According to Setiawan et al. (2021), a mature corporation has a substantial total asset base. Assets are a good indicator of a company's size. Larger companies are considered to be in better condition (Ramdhonah et al., 2019). Greater assets indicate a company's relatively long and stable future. A larger company makes it easier to obtain funding, both internally and externally. Properly managed funding sources can increase investor interest in the company.

### **Good Corporate Governance**

Corporate governance, according to Cadbury (1992) cited in Rashid (2008), is associated with increasing shareholder value by efficient use of business assets. Corporate governance is a system that regulates and safeguards the market interests of different stakeholders, as stated by Morin and Jarrell (2001) in Rashid (2008). An organization's stakeholders include its consumers, workers, investors, government, and society at large. The goal of good corporate governance is to maximize shareholder value in a way that is lawful, ethical, and sustainable (Murthy, 2006 in Shil, 2008). In order to guarantee that different stakeholder

groups get the values they need, good corporate governance is crucial for any business. The division of labor between a company's controlling shareholders and its residual claim holders highlights the significance of corporate governance (Epps & Cereola, 2008 in Chaghadari & Chaleshtori, 2011).

### 3. Research Method

#### Operational Definitions of Variables

##### *Corporate Social Responsibility*

Companies and other commercial entities engage in corporate social responsibility when they strive to meet their social obligations and aid in the advancement of sustainable economic growth in a way that is equitable to society, the environment, and the bottom line.

$$CSRI_j = \frac{\sum X_{ij}}{n_j}$$

##### *Green Accounting*

Green accounting is an accounting approach that incorporates costs related to a company's operational activities that impact the environment and society.

$$EA_j = \frac{\sum X_{ij}}{n_j}$$

##### *Intellectual Capital*

Intellectual capital is an intangible asset owned by a company that contributes to its competitive advantage and value.

$$VAIC^{TM} = VACA + VAHU + STVA$$

##### *Firm Size*

A firm size may be determined by looking at its total assets, sales, profit, tax burden, and other metrics.

$$\text{Firm Size} = \ln (\text{Total Assets})$$

##### *Financial Performance*

A company's financial performance is the end result of an examination that shows how well it did in managing its finances according to the rules and laws. It shows how a business's finances were doing over a certain time. It is important for investors and plays a vital role in supporting investment decisions and influencing stakeholder perceptions and concerns regarding corporate governance.

$$ROA = (\text{Net Profit})/(\text{Total Assets})$$

##### *Good Corporate Governance*

Good Corporate Governance is a policy framework that regulates a company's business activities with the goal of generating profit, maintaining good relationships with stakeholders, and ensuring corporate sustainability through the implementation of good governance principles.

$$\text{Independent Board of Commissioners} = \frac{\sum \text{Independent Board of Commissioners}}{\sum \text{Total Board of Commissioners}} \times 100\%$$

### 4. Results and Discussion

#### *Selecting the Best Model*

Model selection in this study used the Chow, Hausman, and LM tests to determine whether the model was Fixed Effects, Random Effects, or Common Effects.

**Table 1.** Model Selection Results with Chow Test.

Redundant Fixed Effects Tests			
Pool: POOL_OLS			
Test period fixed effects			
Effects Test	Statistic	d.f.	Prob.
Period F	0.883063	(4,151)	0.4757
<b>Period Chi-square</b>	<b>3.815294</b>	<b>4</b>	<b>0.4316</b>

The Chow test results table in the output above shows that the Prob value is 0.4757 for Period F and 0.4316 for Period Chi-square, and these probability values are greater than 0.05. As a result, the Fixed Effect model seems to be an excellent choice for estimating.

**Table 2.** Model Selection Results with the Hausman Test.

Correlated Random Effects - Hausman Test			
Pool: POOL_OLS			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
<b>Cross-section random</b>	<b>11.071714</b>	<b>8</b>	<b>0.1977</b>

According to the output's Hausman test results table, the Random Effect model is likewise effective for estimate, as the probability value of 0.1977 is larger than alpha 0.05 ( $0.1977 > 0.05$ ).

**Table 3.** Model Selection Results with LM Test.

Test	Statistic	d.f.	Prob.
<b>Breusch-Pagan LM</b>	<b>642.8022</b>	<b>528</b>	<b>0.0004</b>
Pesaran scaled LM	3.532794		0.0004
Pesaran CD	0.848804		0.3960

The LM results table above shows that the LM test probability value of 0.0004 is less than the alpha value of 0.05 ( $0.0004 < 0.05$ ), thus concluding that the Common Effects model is also less suitable for estimation.

Conclusion regarding model selection: The Random Effects model, as the accepted model, has the highest AdjR2 value (0.813329) compared to the Fixed Effects model (0.812764) and the Common Effects model (0.778663). Therefore, the Random Effects model is more suitable for estimation and analysis.

**Table 4.** MRA Regression Results of Random Effect Model.

Variabel	Koefisien Regresi	Standart Error	t-statistik	Sig.
Konstanta	-157,2603	30,22498	-5,202990	0,0000
CSR	2,433963	0,259143	9,392364	0,0000
EA	12,95481	5,582117	2,320770	0,0216
IC	0,001788	0,000119	14,98805	0,0000
FS	0,337844	0,669389	0,504705	0,6145
GCG	1,223281	0,285054	4,291408	0,0000
CSR*GCG	0,003249	0,003044	1,067277	0,2875
EA*GCG	0,005608	0,085773	0,065381	0,9480
IC*GCG	1,33E-06	1,63E-06	0,814639	0,4165
FS*GCG	0,007788	0,009183	0,848064	0,3977
<b>R<sup>2</sup></b> : 0,824				
<b>Adj. R<sup>2</sup></b> : 0,813				
<b>F-statistik</b> : 80,394, Sig = 0,000.				
<b>N</b> : 165				

Based on Table 4. the mathematical results of the MRA regression analysis can be written as follows:

$$\text{ROA} = -157.2603 + 2.433963 \text{ CSR} + 12.95481 \text{ EA} + 0.001788 \text{ IC} + 0.337844 \text{ FS} + 1.223281 \text{ GCG} + 0.003249 \text{ CSR*GCG} + 0.005608 \text{ EA*GCG} + 1.33\text{E-}06 \text{ IC*GCG} + 0.007788 \text{ FS*GCG} + e$$

**Table 5.** Hypothesis t-Test Results.

Variabel	t-statistik	Sig.
CSR-ROA	9,392364	0,0000
EA-ROA	2,320770	0,0216
IC-ROA	14,98805	0,0000
FS-ROA	0,504705	0,6145
CSR*GCG-ROA	1,067277	0,2875
EA*GCG-ROA	0,065381	0,9480
IC*GCG-ROA	0,814639	0,4165
FS*GCG-ROA	0,848064	0,3977

Based on Table 5. the results of the hypothesis testing can be concluded as follows:

- 1) The Effect of Corporate Social Responsibility (CSR) on Financial Performance (ROA)  
Based on the data processing, the Sig.t value was obtained = 0.0000 < Level of Significance = 0.05, “so Ho is rejected or Ha is accepted, indicating a positive and significant effect of Corporate Social Responsibility (CSR) on Financial Performance (ROA)”.



- 2) The Effect of Green Accounting (EA) on Financial Performance (ROA)  
Based on the data processing, the Sig.t value was obtained =  $0.0216 < \text{Level of Significance} = 0.05$ , so  $H_0$  is rejected or  $H_a$  is accepted, indicating a positive and significant effect of Green Accounting (EA) on Financial Performance (ROA).
- 3) The Effect of Intellectual Capital (IC) on Financial Performance (ROA)  
Based on the data processing results, the Sig.t value was obtained =  $0.0000 < \text{Level of Significance} = 0.05$ , “so  $H_0$  is rejected or  $H_a$  is accepted, indicating a positive and significant effect of Intellectual Capital (IC) on Financial Performance (ROA)”.
- 4) The Effect of Firm Size (FS) on Financial Performance (ROA)  
Based on the data processing results, the Sig.t value was obtained =  $0.6145 > \text{Level of Significance} = 0.05$ , “so  $H_0$  is rejected or  $H_a$  is accepted, indicating a positive, but insignificant, effect of Firm Size (FS) on Financial Performance (ROA)”.
- 5) The Moderating Effect of CSR and Good Corporate Governance (GCG) on Financial Performance (ROA)  
Based on the data processing results, the Sig.t value was obtained =  $0.2875 > \text{Level of Significance} = 0.05$ , “so  $H_0$  is rejected or  $H_a$  is accepted, meaning that there is a positive, but insignificant, effect of CSR moderation with Good Corporate Governance (CSR\_GCG) on Financial Performance (ROA)”.
- 6) The Moderating Effect of IC and Good Corporate Governance (GCG) on Financial Performance (ROA)  
Based on the data processing results, the Sig.t value was obtained =  $0.9480 > \text{Level of Significance} = 0.05$ , “so  $H_0$  is rejected or  $H_a$  is accepted, meaning that there is a positive, but insignificant, effect of IC moderation with Good Corporate Governance (IC\_GCG) on Financial Performance (ROA)”.
- 7) The Moderating Effect of EA with Good Corporate Governance (GCG) on Financial Performance (ROA)  
Based on the data processing results, the Sig.t value was obtained =  $0.4165 > \text{Level of Significance} = 0.05$ , “so  $H_0$  is rejected or  $H_a$  is accepted, meaning that there is a positive, but insignificant, effect of EA Moderation with Good Corporate Governance (EA\_GCG) on Financial Performance (ROA)”.
- 8) The Moderating Effect of FS with Good Corporate Governance (GCG) on Financial Performance (ROA)  
Based on the data processing results, the Sig.t value was obtained =  $0.3977 > \text{Level of Significance} = 0.05$ , “so  $H_0$  is rejected or  $H_a$  is accepted, meaning that there is a positive, but insignificant, effect of FS Moderation with Good Corporate Governance (FS\_GCG) on Financial Performance (ROA)”.

### ***CSR Has a Significant Positive Effect on Financial Performance***

The results of the MRA regression analysis using the Random Effects model indicate that “Corporate Social Responsibility has a positive and significant impact on Financial Performance”. This means that if Corporate Social Responsibility increases, Financial Performance will also experience a significant improvement. This study's findings align with those of Dewi & Narayana (2020), Monica & Pranyoto (2024); Rizal et al. (2025), and Madubuko et al. (2025), which show that “Corporate Social Responsibility has a positive impact on Financial Performance”.

Corporate social responsibility practices are implemented by mining companies in environmental management, which arises from operations related to the company. According to

Hanif et al. (2020), corporate social responsibility is implemented to contribute by maintaining the alignment of the triple bottom line (economic, social, and environmental). To address environmental issues, green accounting is crucial as a form of corporate concern by allocating funds for environmental management. Corporate social responsibility can influence a company's financial performance, encouraging environmental actions as part of its obligations (Pondrinal, 2021). Socially responsible companies have a positive public image. A positive image encourages investors to invest and motivates loyal consumer purchases (Faisal et al., 2018).

Legitimacy theory proposes the need for companies to be recognized by the public. To achieve this, companies must demonstrate their responsibility through Corporate Social Responsibility (CSR). Information disclosure can become a global trend when companies implement environmental management to create a quality environment (Afifah & Syafruddin, 2021). Corporate responsibility through improved environmental performance and the application of sustainability theory are seen as good news for market participants and investors. Investors believe that companies have a long-term perspective. This is believed to increase stakeholder interest in collaborating with the company, as this can have long-term impacts on financial performance (Bahri & Cahyani, 2016). Companies with sustainable corporate social responsibility are considered to have superior corporate reputations and financial performance, and tend to have higher market value, according to investors (Lee & Kwon, 2019). According to legitimacy theory, which is based on the concept of a social compact, a company's ability to stay in business is directly related to how well it follows society rules and regulations. The incorporation of CSR practices into business operations is one of the preexisting corporate social contracts in Indonesia. Consequently, businesses reveal their stances on a range of social and environmental concerns in order to project a favorable image and preserve their credibility. Legitimacy instruments, such as yearly reports, are used for this purpose. (Uwuigbe et al., 2018). According to legitimacy theory, extensive CSR disclosure will have a positive impact on all stakeholders (Lindawati et al., 2021). Shareholders and stakeholders will feel more secure putting their money into the business as a result. Naturally, this will have an effect on financial results.

### ***Green Accounting Has a Significant Positive Effect on Financial Performance***

The results of the MRA regression analysis using the Random Effects model indicate that "Green Accounting has a positive and significant effect on Financial Performance". This means that if Green Accounting improves, Financial Performance will also experience a significant improvement. These results align with those of Ramadhani et al. (2022), Endiana et al. (2020), Priamita et al. (2023), and Dewi & Narayana (2020), which showed that "Green Accounting has a positive effect on Financial Performance". Implementing green accounting is crucial for companies. Environmental aspects are currently attracting increasing attention due to the rise in environmental issues (Wireza, 2020). Similar to legitimacy theory, this allows for the formation of public perception and trust in a company. This impact can influence capital and profits, potentially improving financial performance for investors and consumers (Bahri & Cahyani, 2016).

Based on legitimacy theory, to improve a company's long-term financial performance, it requires legitimacy from the community in which it operates. A company's financial performance is measured from the perspective of stakeholders for corporate assessment. Companies that are environmentally conscious and consider the environment an integral part of their business plans to achieve sustainable corporate performance recognize that these efforts build a positive reputation among stakeholders and investors. In this regard, companies are willing to allocate budgets to incorporate environmental aspects into their operations rather than avoid them. The increasing adoption of sustainable environmental accounting by companies will be reflected in increased disclosure of environmental information, thus helping companies improve their environmental performance. This will positively contribute to improving the company's financial performance.

According to stakeholder theory, companies that maintain good relationships with stakeholders tend to increase the overall value and effectiveness of the organization. Furthermore, legitimacy theory emphasizes that companies must consider not only the interests of investors but also the interests of society.

### ***Intellectual Capital Has a Significant Positive Effect on Financial Performance***

The results of the MRA regression analysis using the Random Effects model indicate that "Intellectual Capital has a positive and significant effect on Financial Performance". This

means that if Intellectual Capital increases, Financial Performance will also experience a significant improvement. These results align with research by Dancakova (2024), Hanifah (2023), and Rohayu (2018), which showed that “Intellectual Capital has a positive effect on Financial Performance”. Companies rely heavily on intellectual capital, an intangible asset, as a strategic fuel. A company may get a leg up in the market by making the most of its intellectual capital. For the simple reason that it may boost the company's long-term success and image among investors if handled properly. (Ulum, 2017). Intellectual capital consists of intangible assets owned by a company, such as the knowledge, skills, and experience of employees, information systems, and relationships with customers and business partners. Optimizing intellectual capital management can contribute to improved Financial Performance or profitability, as well as strengthen the company's overall financial performance. Companies with solid intellectual capital, including a competent workforce, effective business processes, and reliable information systems, tend to have superior financial performance.

Stakeholder theory states that a company fulfills ethical requirements if management effectively manages its resources, particularly in generating financial performance. The term value added is used to describe the process by which a corporation makes full use of its resources, including its human capital, tangible assets, and structural capital. A company's financial performance is an indicator of its profitability and its capacity to provide value to its owners. In the mining sector, optimal intellectual capital management can drive operational efficiency, reduce production costs, and increase innovation in natural resource exploration and processing technology. This aligns with the RBV proposed by Barney (1991), which states that unique, difficult-to-imitate resources such as knowledge, expertise, and technology can be key determinants of company performance.

#### ***Firm Size Has No Significant Effect on Financial Performance***

The results of the MRA regression analysis using the Random Effects model indicate that “Firm Size has a positive but insignificant effect on Financial Performance”. This means that an increase in Firm Size will result in an insignificant increase in Financial Performance. These results align with those of Priamita et al. (2023), which demonstrated “a positive effect of Firm Size on Financial Performance”. The scale of a company's operations has a significant impact on its bottom line. A firm size is indicative of its resourcefulness since it takes into account factors like total assets, revenue, and staff count. According to Jensen and Meckling (1976), large companies have broader access to both internal and external funding sources and are more capable of cost efficiency and business diversification. This allows large companies to achieve higher levels of profitability compared to smaller companies.

Within the context of the RBV theory, firm size can be interpreted as an indicator of the capacity of its internal resources. Large companies tend to possess more and more diverse resources, such as managerial capabilities, technology, and human capital, which ultimately can increase operational efficiency and result in better financial performance (Barney, 1991). Furthermore, larger companies also have a stronger bargaining position in the market and better relationships with financial institutions, enabling them to face business risks more stably (Penrose, 1959). In the mining industry, firm size plays a strategic role because its operational activities require significant capital investment, complex risk management, and compliance with strict environmental regulations. Larger mining companies generally have better capabilities in managing natural resources, adopting environmentally friendly technologies, and implementing social and environmental responsibilities (Corporate Social Responsibility) more optimally. This positively impacts reputation and public trust, which in turn can increase the company's value and financial performance (Setiawan & Iskandar, 2022).

#### ***GCG Unable to Moderate the Relationship of Independent Variables to Financial Performance***

The results of this study indicate that “Good Corporate Governance (GCG), proxied in this study by the proportion of independent commissioners, is unable to moderate the relationship between Corporate Social Responsibility, Green Accounting, Intellectual Capital, or Firm Size on the financial performance of mining companies”. This occurs because the implementation of GCG in mining companies in Indonesia remains a formality and has not yet effectively functioned as a supervisory mechanism. Although companies have legally complied with the Financial Services Authority's (OJK) regulations on the number of independent commissioners, the oversight role that the board should play is not fully optimal in practice. Many independent commissioners have close relationships with the company's owners or management, thus questioning their independence. When independent commissioners do not

effectively serve as a check and balance for management decisions, their presence fails to strengthen the effects of CSR, Green Accounting, Intellectual Capital, or Firm Size on profitability. In other words, a seemingly sound GCG structure is not sufficiently robust to generate meaningful interactions with sustainability variables and company resources.

Furthermore, the long-term nature of GCG's role means its impact on financial performance is not evident within the relatively short five-year study period (2020–2024). Structural changes in governance, improvements in audit quality, and board effectiveness typically take longer to manifest in financial performance. On the other hand, independent variables such as CSR, Green Accounting, and Intellectual Capital have a direct and immediate impact on financial performance without relying on additional GCG oversight mechanisms. For example, improving the quality of intellectual capital or implementing sound environmental accounting can immediately improve operational efficiency, regardless of the quality of corporate governance. Therefore, even if GCG is present, its influence is not strong enough to change or direct the relationship between these independent variables and ROA.

Furthermore, measuring GCG using only independent commissioners results in very little variation in the data. Almost all mining companies have a relatively similar proportion of independent commissioners, as required by minimum regulations, so inter-company variation is low and not significant enough to have a moderating effect. Ideally, GCG measurement should include several other aspects, such as audit committee effectiveness, external auditor quality, managerial ownership, and the level of information transparency. When GCG measurement is limited, the variable's ability to capture overall governance quality is weakened. This is why the moderating effect of GCG on the relationships between CSR, GA, IC, and Firm Size is not significantly detected in statistical models.

Furthermore, the mining industry has unique characteristics that make the influence of GCG relatively small compared to external factors. The financial performance of mining companies is highly sensitive to fluctuations in global commodity prices, geopolitical conditions, government policies, environmental issues, and the sustainability of operating permits. These external factors have a much greater influence on ROA than internal governance factors. Consequently, even when GCG is implemented, its impact is often mitigated by market dynamics and regulations, which are more dominant in determining mining company profitability. So, it's doubtful that GCG would improve the correlation between sustainability metrics and bottom-line results.

Overall, the inability of GCG to act as a moderating variable indicates that corporate governance in the mining sector still requires significant improvement to function as a real control mechanism. Multiple prior investigations have reached the same conclusion that found that GCG in developing countries tends to be ineffective due to weak oversight quality and low board independence. In other words, the current existence of GCG is not yet mature enough to influence the relationship between CSR, Green Accounting, Intellectual Capital, and Firm Size on profitability, so that its moderating contribution is not visible in this study.

## 5. Comparison

The results of this thesis indicate that “Corporate Social Responsibility (CSR), Green Accounting, and Intellectual Capital have a positive and significant influence on the financial performance of mining companies”. Firm Size, on the other hand, has no significant effect, and Good Corporate Governance (GCG) fails to moderate the overall relationship between variables. Compared with previous research, there are several similarities and differences that reflect the unique characteristics of the mining sector in Indonesia. The finding that CSR significantly influences ROA is consistent with numerous previous studies, such as those by Dewi and Narayana (2020) and Anggraeni and Murti (2024), which assert that CSR implementation can enhance legitimacy, reputation, and stakeholder trust, thus positively impacting profitability. This similarity suggests that CSR is indeed a crucial factor for companies facing high levels of social and environmental risk, particularly in the mining industry. In other words, this thesis strengthens the argument that CSR is not merely a moral obligation but also a sustainability strategy with financial impact.

However, regarding the Green Accounting variable, this study's results differ from some previous studies, such as Safitri et al. (2025), which found that “Green Accounting had no effect on profitability”. This difference may be due to the different research sectors. In the mining sector, which is highly vulnerable to environmental issues, environmental accounting is a crucial instrument for minimizing operational risks, managing waste, avoiding regulatory penalties, and maintaining good relationships with surrounding communities. Therefore, the

thesis's finding that Green Accounting has a significant impact reinforces the view that mining companies have a greater incentive to manage environmental costs seriously. This distinguishes the mining sector from other sectors, such as trade or services, which may experience less environmental pressure.

Meanwhile, the finding that “Intellectual Capital has a significant impact and is even the most dominant variable is consistent with several previous studies”, such as Priamita et al. (2023) and Wicaksono (2021), which emphasize the importance of intellectual capital in creating added value for companies. Mining companies have high operational complexity, requiring quality human resources, strong organizational systems, and effective business relationships to increase productivity and efficiency. This consistent finding suggests that intellectual capital plays a significant role in building long-term competitive advantage, consistent with the Resource-Based View (RBV) perspective. Therefore, this thesis strengthens empirical evidence that investment in human resources and structural capital is a strategic factor in improving financial performance.

An interesting difference emerged in the Firm Size variable. This study found that firm size had no significant effect on financial performance, in contrast to several previous studies, such as those by Putra and Nuryanto (2021) and Wulandari and Mulyani (2022), which found that larger firms had higher profitability due to easier access to funding and operational stability. However, this thesis's findings align with other studies, such as those by Hidayah (2020), which showed that larger firms are not always more efficient due to higher agency costs, bureaucracy, and operational burdens. In the mining sector, companies with large assets often have higher operational, licensing, and environmental conservation costs, so size does not always reflect profit-generating ability. This suggests that the effect of firm size is highly dependent on the industry context.

The most interesting aspect is the finding that Good Corporate Governance was unable to moderate the relationship between CSR, Green Accounting, Intellectual Capital, and Firm Size on ROA. This finding differs from research that suggests GCG plays a significant role in enhancing the effectiveness of these variables, such as the study by Putra and Nuryanto (2021), which found that GCG strengthens the influence of company size on profitability. However, this thesis's findings align with other studies, such as those by Rahimah (2020), which assert that GCG implementation in Indonesia is often formalized and has not been effectively implemented as an effective control mechanism. In the context of mining companies, weak board independence, lack of information transparency, and suboptimal oversight are the main reasons why GCG cannot perform its moderating function. Therefore, this thesis's findings provide an important contribution to the literature, demonstrating that GCG has not been able to function as a balancing factor between sustainability variables.

## 6. Conclusions

Based on the results of a study conducted on 33 mining companies listed on the Indonesia Stock Exchange for the 2020–2024 period, it can be concluded that “non-financial factors such as Corporate Social Responsibility (CSR), Green Accounting, and Intellectual Capital have a significant influence on a company's financial performance, as measured by Return on Assets (ROA)”. CSR has been shown to positively contribute to company profitability by enhancing legitimacy, reputation, and stakeholder trust, thereby strengthening operational sustainability. Green Accounting also has a significant influence, indicating that companies that transparently manage and report environmental costs can reduce risks and improve cost efficiency. Intellectual Capital is the variable with the strongest influence in this study, highlighting the importance of human capital, structural capital, and relational capital as strategic resources capable of increasing company productivity and efficiency. Conversely, Firm Size does not significantly influence ROA, indicating that company size does not always reflect profit-generating ability, primarily due to the high operational costs and bureaucratic complexity of large companies in the mining sector.

Furthermore, this study also concluded that Good Corporate Governance (GCG), as measured by the proportion of independent commissioners, was unable to moderate the relationship between CSR, Green Accounting, Intellectual Capital, and Firm Size on financial performance. This condition illustrates that the implementation of GCG in Indonesian mining companies is still not optimal to function as an effective oversight mechanism. Low board independence, weak internal supervision, and the tendency for GCG implementation to be formal are the main reasons why this variable fails to strengthen the influence of the

independent variables on ROA. Therefore, this study confirms that improving the financial performance of mining companies does not only depend on sustainability strategies and intellectual capital management, but also requires a real strengthening of corporate governance to be able to provide added value in the long term.

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