ESG Challenges: How Green Performance Change the Game for Company‘s Market Performance

Ayu Dwiny Octary[1], Syaharani Noer Fathia[2], Rona Majidah[3]

{ayu.dwiny@feb.unila.ac.id[1], syaharani.noer@feb.unila.ac.id[2], rona.majidah@feb.unila.ac.id[3]}

Accounting Department, Faculty of Economic and Business, University of Lampung[1,2,3]

Abstract. This study aims to fill the gap in the literature by examining the impact of green performance on market value. The research intends to prove whether a high green performance affects high market performance on the stock exchange. Based on signaling theory, companies that effectively manage and disclose their environmental performance can send positive signals to investors, potentially enhancing trust and market value. The Ministry of Environment launched an industrial performance rating evaluation program in environmental management called PROPER. In a 2011 press release, the Ministry of Environment explained that PROPER is an environmental compliance program for companies that is made public, allowing the community to assess companies' performance in reducing negative environmental impacts based on the PROPER ratings they achieve. As outlined in the PROPER regulation issued by the Minister of Environment through Regulation No. 5 of 2011, the ratings are classified as follows: Gold (5), Green (4), Blue (3), Red (2), and Black (1).. These independent variables will be tested for their influence on the market value, measured by company’s value, to provide evidence that companies incurring costs to reduce environmental impact can still achieve profitability. Therefore, it is hoped that companies can contribute to environmental issues and global warming.

Keywords: PROPER, green investment, market value.

1 Introduction

The economic challenges presented during the global economic crisis were among the largest faced by companies worldwide, thus raising management's awareness of the importance of sustainable and resilient business strategies to withstand shocks. In this context, environmental disclosure and performance are increasingly capturing global attention as indicators of corporate sustainability, potentially influencing company market value. Referring to Law No.32 of 2009 concerning environmental protection and management, sustainable business development is consciously and systematically conducted to integrate economic, social, and environmental aspects into development strategies. The goal is to ensure environmental sustainability and maintain the safety, welfare, and quality of life for current and future generations.

During the crisis, most companies faced significant economic pressures, making it challenging to maintain their market value, a primary focus for corporate survival. According to Khan et al [1], companies with good environmental management and disclosure are better able to handle market uncertainties and garner investor support. Similarly, Nguyen et al. [2] explain that a company's commitment to sustainability can serve as a positive signal to the market, reflecting stability and growth potential.

ICEBE 2024, September 04-05, Shah Alam, Malaysia

DOI 10.4108/eai.4-9-2024.2353810

In Indonesia, a survey conducted by the Central Bureau of Statistics (BPS) revealed that 82.85% of companies faced revenue reductions, while 6.78% halted operations as a result of the global economic crisis. Similarly, the Financial Services Authority (OJK) highlighted the crisis's considerable global repercussions, which also affected the Indonesian Composite Index (IHSG). Transaction volume sharply declined from 36,534,971,048 in 2019 to 27,495,947,445 in 2020, indicating investor concern over market conditions during the crisis.

The relationship between corporate environmental performance and its impact on shareholder value has garnered increasing attention from researchers in recent years [3], [4], [5], [6], [7]. Investors view announcements of environmental performance positively, leading to abnormal returns [8], while they often respond consistently to unfavorable information regarding corporate environmental performance [9], [10]. Environmental performance positively and significantly influences corporate reputation [11]. However, Hassel et al. [12] concluded that environmental performance information does not always hold significant importance for investors in decision-making. Additional research is required to explore the effect of environmental performance on market value. [4], particularly because the majority of studies have focused on this relationship under normal economic conditions.

This study seeks to address the empirical gap concerning the impact of environmental performance on investor evaluations during Indonesia's economic crisis. Its objective is to examine the effect of environmental disclosure and performance on market value. By providing empirical evidence on the strategic importance of environmental sustainability in the context of a global crisis, this research aims to contribute to the existing literature and offer practical insights for companies and stakeholders in managing environmental risks, challenges, and opportunities.

2 Literature Review

2.1 Signalling Theory

Signaling theory was first introduced by Michael Spence in 1973. This theory explains that the sender of information, such as company management, delivers data and information that represent the company's current state to investors (receiver) [13]. These signals serve to reduce information asymmetry between the company's internal parties and external investors. According to Brigham & Houston [14], signaling theory helps interpret how management's view of the company's potential for improvement in the future can influence prospective investors' reactions to the company. Investors use these signals to make more informed investment decisions.

In the context of capital markets, signals may take the form of financial statements, dividend announcements, and information related to the company’s business strategy. Strong and positive signals indicate that the company has good prospects and can be trusted. Conversely, weak or negative signals can diminish investor confidence and result in a decrease in the company’s stock market value. Therefore, it is essential for companies to carefully manage communication and disclosure of information to ensure that the signals they provide reflect the company’s actual condition and future strategy.

The Ministry of Environment introduced an industrial performance assessment program in environmental management known as PROPER. In a 2011 press release, the Ministry described PROPER as a public compliance initiative enabling communities to assess companies' efforts in reducing negative environmental impacts based on their PROPER ratings. According to Regulation No. 5 of 2011 issued by the Minister of Environment, PROPER ratings are classified into five categories: Gold (5), Green (4), Blue (3), Red (2), and Black (1).

2.2 Market Performance

A company's performance plays a crucial role in determining how investors assess its growth potential and financial stability. The Efficient Market Hypothesis, introduced by Fama [20], asserts that stock prices reflect all publicly available information, including general disclosures and information already known by institutional investors. In this context, information related to environmental performance and disclosure is becoming increasingly important, as it can signal the company's risk management and sustainable growth opportunities.

A study by Khan et al [1] showed that companies that proactively manage and disclose their environmental performance tend to demonstrate stronger overall performance. This is due to increased investor confidence in the company's commitment to managing environmental risks and contributing to long-term sustainability. Additionally, research by wu et al [21] indicates that companies with good environmental practices tend to achieve higher stock price premiums, reflected in their performance.

Company performance not only represents the total value of outstanding shares but also accounts for the market's perception of future profit potential and the risks associated with business operations. Therefore, enhanced transparency in environmental disclosure and performance can strengthen positive market perception and directly impact a company's overall performance.

2.3 The Relationship between Green Performance and Market Performance

The stock market reacts differently to companies that effectively handle operational waste compared to those demonstrating poor environmental performance [22]. Publicly disclosed information acts as a valuable resource for investment decision-making by offering signals to investors. During a press release, investors initially interpret and assess the statement as either a positive signal (favorable information) or a negative signal (unfavorable information). Signaling theory provides insight into why companies are driven to share financial report information with the public..

Environmental performance positively and significantly impacts a company's reputation [11]. Environmental performance represents information that investors may interpret as a positive signal, offering supplementary guidance for investment decisions. Companies achieving higher environmental performance ratings convey to investors that their management is aligned with global sustainability objectives, fostering confidence in the company's long-term potential.

Several prior studies provide consistent evidence with this hypothesis, showing that environmental performance is positively associated with company value. For instance, Clarkson

et al. [23] discovered that companies with lower pollution levels often achieve additional economic advantages, whereas high-polluting companies experience the opposite effect. This finding is supported by similar studies that show corporate environmental performance positively influences company value [4], [24], [25] However, previous studies have not tested this relationship during economic crises, such as the COVID-19 pandemic

H: Green performance impacts a company's market value during a global crisis.

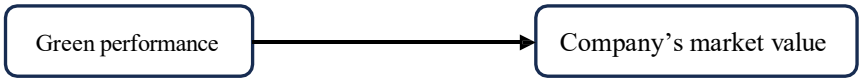

Fig. 1. Research Framework

3 Research Method

This study utilizes data from companies listed on the Indonesia Stock Exchange (IDX) that received environmental management ratings under the PROPER evaluation, assessed and rated by the Ministry of Environment and Forestry during the pandemic period of 2021–2022. The data used is panel data.

This study tests hypotheses H1 and H2, which aim to examine the impact of corporate environmental performance on market value during a global crisis (H1) and the impact of environmental disclosure on market value during a global crisis (H2). Therefore, the empirical model used to test the hypotheses of this study is formulated as follows:

$$MVE = \beta 0 + \beta 1GP + \varepsilon t \quad (1)$$

Where:

MVE : Market Value Equity GP : Green Performance β0 : Constant

4 Discussion

This study aims to examine whether information on corporate environmental performance and environmental disclosure can explain their impact on a company's market value. The analysis considers external factors such as the PROPER rating from the Ministry of Environment and Forestry and internal environmental disclosure that may influence this relationship. Further explanation of the results of the statistical test regarding the impact of each variable can be discussed as follows:

Green Performance on Company Market Value

Based on the results of the PROPER rating test, which has 5 levels of environmental performance evaluation, it shows positive and significant results, meaning that the information regarding the PROPER rating level influences the increase in the company's value. Therefore, Hypothesis 1, which states that "Environmental performance is relevant to company value," is supported. This finding is consistent with the study by Sarumpaet et al. [22], which shows that companies with good environmental performance will positively influence the company's value, especially in companies with superior performance.

This positive and significant result supports signaling theory, which suggests that information is responded to positively or negatively by the market. Information regarding the company's PROPER rating receives a positive response from investors, thus influencing an increase in company value. This result also aligns with the study by [26], which states that clearly disclosed environmental performance is positively correlated with an increase in market value. This research also shows that companies with higher PROPER ratings will positively influence changes in company value. Similarly, the study by Yu & Xiao [27] found a significant positive relationship between composite ESG performance and company value, supporting stakeholder theory. The effect of this increase is significant for companies that are not subject to major pollution monitoring.

Clarkson et al. [28] state that environmental performance information is used by investors to obtain information about environmental liabilities that are not recorded. Environmental disclosure has transformed into important information for corporate sustainability, and currently, investors and society collaborate to focus on the environment. Therefore, if companies want to align with investors and society, they must transform and increase their attention to global environmental issues.

5 Conclusion

The primary aim of this study is to analyze the impact of green performance, measured by the PROPER rating from the Ministry of Environment and Forestry, and environmental disclosure in sustainability reports on company value for companies listed on the Indonesia Stock Exchange during the period of 2021-2022. Based on the research findings, it can be concluded that both environmental disclosure and environmental performance have a positive and significant effect on company value. Investors respond positively to information regarding the PROPER rating and the company's environmental disclosure, which in turn can increase the company's market value. The results of this study are consistent with previous research. Currently, environmental information has become a critical element for corporate sustainability due to increasing attention from investors and society towards environmental issues. Therefore, companies need to demonstrate their commitment to environmental issues in order to align with the expectations of investors and society.

The findings of this study indicate that green performance are important and can help maintain company value during a global crisis. The global crisis, which presents significant challenges to the economy worldwide, including in Indonesia, can be managed by companies committed to environmental sustainability. This strengthens the literature that a company's commitment to

sustainability can serve as a positive signal to the market, indicating the company's stability and growth potential.

References

[1] M. Khan, G. Serafeim, and A. Yoon, "Corporate Sustainability: First Evidence on Materiality." [Online]. Available: http://ssrn.com/abstract=2575912Electroniccopyavailableat:https://ssrn.com/abstract=2575912Electroniccopyavailableat:http://ssrn.com/abstract=2575912

[2] H. A. Nguyen and T. T. G. Dang, "Accounting reform and value relevance of financial reporting from non-financial listed firms on the Vietnam stock market," *Cogent Business and Management*, vol. 10, no. 2, 2023, doi: 10.1080/23311975.2023.2220193.

[3] A. Banerjee, P. Niehaus, and T. Suri, "Universal Basic Income in the Developing World," *Review in Advance first posted on*, 2019, doi: 10.1146/annurev-economics.

[4] J. Endrikat, "Market Reactions to Corporate Environmental Performance Related Events: A Meta-analytic Consolidation of the Empirical Evidence," *Journal of Business Ethics*, vol. 138, no. 3, pp. 535–548, Oct. 2016, doi: 10.1007/s10551-015-2598-0.

[5] N. Muhammad, F. Scrimgeour, K. Reddy, and S. Abidin, "The Impact of Corporate Environmental Performance on Market Risk: The Australian Industry Case," *Journal of Business Ethics*, vol. 132, no. 2, pp. 347–362, Dec. 2015, doi: 10.1007/s10551-014-2324-3.

[6] M. E. Porter and C. Van Der Linde, "Toward a New Conception of the Environment-Competitiveness Relationship," 1995.

[7] D. Williamson, G. Lynch-Wood, and J. Ramsay, "Drivers of environmental behaviour in manufacturing SMEs and the implications for CSR," in *Journal of Business Ethics*, Sep. 2006, pp. 317–330. doi: 10.1007/s10551-006-9187-1.

[8] P. L. Yadav, S. H. Han, and J. J. Rho, "Impact of Environmental Performance on Firm Value for Sustainable Investment: Evidence from Large US Firms," *Bus Strategy Environ*, vol. 25, no. 6, pp. 402–420, Sep. 2016, doi: 10.1002/bse.1883.

[9] B. W. Jacobs, V. R. Singhal, and R. Subramanian, "An empirical investigation of environmental performance and the market value of the firm," *Journal of Operations Management*, vol. 28, no. 5, pp. 430–441, Sep. 2010, doi: 10.1016/j.jom.2010.01.001.

[10] N. H. J. Lorraine, D. J. Collison, and D. M. Power, "An analysis of the stock market impact of environmental performance information," *Accounting Forum*, vol. 28, no. 1, pp. 7–26, 2004, doi: 10.1016/j.accfor.2004.04.002.

[11] K. Khanifah, U. Udin, N. Hadi, and F. Alfiana, "Environmental performance and firm value: Testing the role of firm reputation in emerging countries," *International Journal of Energy Economics and Policy*, vol. 10, no. 1, pp. 96–103, 2020, doi: 10.32479/ijeep.8490.

[12] L. Hassel, H. Nilsson, and S. Nyquist, "The value relevance of environmental performance," *European Accounting Review*, vol. 14, no. 1, pp. 41–61, Jan. 2005, doi: 10.1080/0963818042000279722.

[13] M. Spence, "JOB MARKET SIGNALING," 1978. doi: 10.1016/B978-0-12-214850-7.50025-5.

[14] E. F. Brigham and J. F. Houston, "Dasar-dasar manajemen keuangan," 2006.

[15] D. D. Bergh, B. L. Connelly, D. J. Ketchen, and L. M. Shannon, "Signalling theory and equilibrium in strategic management research: An assessment and a research agenda,"

Journal of Management Studies, vol. 51, no. 8, pp. 1334–1360, Dec. 2014, doi: 10.1111/joms.12097.

[16] N. Semenova and L. G. Hassel, "On the Validity of Environmental Performance Metrics," *Journal of Business Ethics*, vol. 132, no. 2, pp. 249–258, Dec. 2015, doi: 10.1007/s10551-014-2323-4.

[17] M. Robinson, A. Kleffner, and S. Bertels, "Signaling Sustainability Leadership: Empirical Evidence of the Value of DJSI Membership," *Journal of Business Ethics*, vol. 101, no. 3, pp. 493–505, Jul. 2011, doi: 10.1007/s10551-011-0735-y.

[18] D. M. Keele and S. Dehart, "Partners of USEPA climate leaders: An event study on stock performance," *Bus Strategy Environ*, vol. 20, no. 8, pp. 485–497, Dec. 2011, doi: 10.1002/bse.704.

[19] K. Fisher-Vanden and K. S. Thorburn, "Voluntary corporate environmental initiatives and shareholder wealth," *J Environ Econ Manage*, vol. 62, no. 3, pp. 430–445, Nov. 2011, doi: 10.1016/j.jeem.2011.04.003.

[20] E. F. Fama, "Efficient capital markets," *Journal of finance*, vol. 25, no. 2, pp. 383– 417, 1970.

[21] J. Wu, B. Liu, S. Chang, and K. C. Chan, "Effects of air pollution on accounting conservatism," *International Review of Financial Analysis*, vol. 84, p. 102380, 2022, doi: https://doi.org/10.1016/j.irfa.2022.102380.

[22] S. Sarumpaet, M. L. Nelwan, and D. N. Dewi, "The value relevance of environmental performance: Evidence from Indonesia," *Social Responsibility Journal*, vol. 13, no. 4, pp. 817–827, Jan. 2017, doi: 10.1108/SRJ-01-2017-0003.

[23] P. M. Clarkson, Y. Li, and G. D. Richardson, "The Market Valuation of Environmental Capital Expenditures by Pulp and Paper Companies," 2004.

[24] S. A. Al-Tuwaijri, T. E. Christensen, and K. E. Hughes, "The relations among environmental disclosure, environmental performance, and economic performance: A simultaneous equations approach," *Accounting, Organizations and Society*, vol. 29, no. 5–6, pp. 447–471, Jul. 2004, doi: 10.1016/S0361-3682(03)00032-1.

[25] G. E. Iatridis, "Voluntary IFRS disclosures: Evidence from the transition from UK GAAP to IFRSs," *Managerial Auditing Journal*, vol. 27, no. 6, pp. 573–597, Jun. 2012, doi: 10.1108/02686901211236409.

[26] S. (Charles) Qiu, J. Jiang, X. Liu, M. H. Chen, and X. Yuan, "Can corporate social responsibility protect firm value during the COVID-19 pandemic?," *Int J Hosp Manag*, vol. 93, Feb. 2021, doi: 10.1016/j.ijhm.2020.102759.

[27] X. Su, Y. Xiao, and S. Liu, "Analysis on the Impact of Blockchain Technology on the Accounting Profession," 2022.

[28] P. M. Clarkson, Y. Li, and G. D. Richardson, "The Market Valuation of Environmental Capital Expenditures by Pulp and Paper Companies," 2004.