



How Does ESG Score and Board Structure Affect Financial Performance? Evidence from ESG Sector Leaders IDX Kehati

Arifa Rizki Syaputra¹, Raden Aswin Rahadi²

^{1,2} School of Business and Management, Institut Teknologi Bandung, Jl. Ganesha No 10, Bandung, 40132, West Java, Indonesia

ABSTRACT: The rise of sustainable investing, an investing strategy considering ESG (environmental, social, governance) factor of the company has spread worldwide, including in Indonesia. Recent phenomena of minimum percentage of woman on board in state-owned enterprise policy by Indonesia Ministry of State-Owned Enterprise and the new two ESG themed index which consists of state-owned enterprise has intrigued to assess the relationship between board structure towards financial performance of the companies. One of the index is “ESG Sector Leaders IDX KEHATI“ which comprises of stocks with an ESG performance assessment above their industrial average value. Using ROA and ROE as the dependent variable and ESG and board structure variables and firm size, asset to equity ratio, and firm age as control variables. It is found that ESG has negative non-significant relationship towards both ROA and ROE. Board independence and board gender diversity has positive significant effect towards both ROA and ROE.

KEYWORDS: Board structure, ESG, Financial performance, Index, ROA, ROE.

INTRODUCTION

Customers, employees, public interest groups, and government regulators have paid increasing attention over the past decade to the environmental, social, and governance (ESG) performance of companies. The term sustainable investing became popular as it is considered is an investing strategy that considers environmental, social, and corporate governance (ESG) factors. Companies ESG direction is governed by the firm's board of directors, who are responsible for establishing efficient structures for monitoring and managing the firm's operations. Responding to the phenomena, recently Kehadiran Yayasan Keanekaragaman Hayati Indonesia (KEHATI) has released two ESG themed index which one of the index is “ESG Sector Leaders IDX Kehati” containing stocks with an ESG performance assessment above their industrial average value. On the other hand, Indonesia Ministry of State-Owned Enterprise set a new target after successfully reach the target of 15 percent female board members presence in state owned enterprise. For the next year (2023), the target minimum percentage of female board members in state owned enterprise is 25 percent. based on those events, it is very interesting to analyze the relationship of ESG and board structure to financial performance of “ESG Sector Leaders IDX Kehati” considering companies measurement of success is financial performance which ultimately will rise the price of the index.

ESG and FINANCIAL PERFORMANCE

ESG and its three components had a positive effect on the financial performance (ROA) of 412 companies in Germany [26]. In addition, there is a correlation between corporate social responsibility (CSR) practices and the financial success of companies in European nations [21]. The financial return of businesses with a greater CSR presence is greater. On the other hand, corporate social responsibility disclosure has a negative impact on the three models (ROA, ROE, and Tobin's Q), and that corporate governance disclosure has a negative impact on financial and operational performance (ROA and ROE) This may be due to the fact that businesses that participate in socially responsible initiatives incur higher economic costs and have inferior operational and financial performance [8]. Additionally, there is numerous negative correlations between financial performance metrics (ROA and ROE) and ESG scores in Australia. [5].

BOARD SIZE AND FINANCIAL PERFORMANCE

The board is accountable for tracking, disciplining, and expelling underperforming management teams in order to guarantee that top management serve shareholder interests. [11]. In corporations, the board of directors plays a crucial role as an internal



mechanism and is deemed as a substantial judgment body on behalf of shareholders [16]. The association between board size and firm performance has been researched extensively. Empirical studies can be divided into two groups: those who support for smaller boards and those who urge for larger boards. Larger boards advocate argues that CSR impact on financial performance is increased by larger board by providing tracking tools and more consultation and doing effective CSR [21]. Larger boards are believed by supporting investors to deliver more supervised accounting structures and it will reduce borrowing costs [2].

BOARD INDEPENDENCE AND FINANCIAL PERFORMANCE

Since the fall of numerous large corporations such as Enron and WorldCom, the majority of organizations are now aware of the crucial roles played by independent directors [10]. Particularly effective in enhancing firms' CSR commitments and governance pillars is an independent board of directors. This may entail appointing independent directors to boards in order to strengthen the governance structure, which enables long-term value creation and serves the interests of shareholders [24]. In addition, there is evidence that independent directors have an overall beneficial impact on the operating performance of Chinese companies [15]. Moreover, evidence from India and China confirmed that board independence has positive impact on firm value [23]. As a performance indicator for corporations, the positive impact of independent directors on technical efficiency [24].

In contrast, greater proportion of independent directors suggests the board will be less influenced by management [3]. There is strong but insignificant correlation between board independence and operating performance. Numerous studies [22,6,9] have demonstrated, however, that board independence has no positive (explicit and broad) relationship with business success as measured by efficiency, Tobin Q, and profitability [20]

BOARD GENDER DIVERSITY AND FINANCIAL PERFORMANCE

As a result of countries that have lately implemented recommendations and mandatory rules to raise the percentage of women on the boards of listed firms, there has been a rise in board gender diversity [19]. Resource dependency theory and agency theory as the two most prominent management theories in the literature on gender diversity [17]. Boards with greater diversity reflect a desirable set of resources and may improve economic outcomes [12]. In addition, board gender diversity has a positive effect on firm financial performance, as measured by ROA, ROE, and Return On Sales (ROS) [13]

However, the positive impact on financial performance appears unambiguous and highly significant when three or more women are appointed to the board compared to lower levels of female board representation [7]. Furthermore, minimum two of female board has positive impact to firm performance. This may be due to greater representation of women is expected to contribute a different perspective, as well as more comprehensive thinking in the decision-making process, which is crucial for firms' strategic decision making and for ensuring their long-term performance [14].

DATA COLLECTION AND LIMITATIONS

This study collects data from Refinitiv ESG dataset. Due to data limitations, out of 48 "ESG Sector Leaders KEHATI" firms, only 26 firms data is available range five years from 2016 to 2020 since Refinitiv. ESG dataset only available to the year of 2020. The financial data and board structure data is hand collected from company's annual report and financial report.

REGRESSION MODEL

Model 1 :

$$Y = \beta_0 + \beta_1 ESGSCORE + \beta_2 BSIZE + \beta_3 BIND + \beta_3 BGD + \beta_3 FSIZE + \beta_3 AERATIO + \beta_3 FAGE + \varepsilon$$

Model 2 :

$$Y = \beta_0 + \beta_1 ENV + \beta_1 SOC + \beta_1 GOV + \beta_2 BSIZE + \beta_3 BIND + \beta_3 BGD + \beta_3 FSIZE + \beta_3 AERATIO + \beta_3 FAGE + \varepsilon$$



VARIABLES

Table 1.

Dependent	
ROA	Net income divided by total assets [8]
ROE	Net income divided by shareholder’s equity [8]
Independent	
ESG Score	A measurement of company level of sustainability [18]
Board Size	The total number of board members at the end of the fiscal year [3]
Board Independence	Percentage of independent board members divided by the total number of board members [3]
Board Gender Diversity	Percentage of female on the board [3,4]
Control	
Firm Size	Natural logarithm of total assets [25]
Asset to Equity Ratio	The ratio of total assets divided by stockholders
Firm Age	The age of the firm since established [1]

This study harness Pooled OLS Regression model as it is appropriate if distinct sample is chosen for each year/month/period of the panel data [27]. In addition, robust regression is added since it’s useful for identifying outliers and avoid heteroscedasticity, multiple examples are shown in which all outliers are recognized with a single pass of a robust estimator. The models utilized ROA and ROE separately as dependent variable. The first and second model difference is the first model harness ESG score as the independent variable. Meanwhile, the second model separate each ESG variable (environment, social and governance)

RESULTS

Table 2.

Variables	Results					
	ROA			ROE		
	Coefficient	p-values	VIF	Coefficient	p-values	VIF
Independent						
ESG Score	-0.001	0.67	1.37	-0.006	0.463	1.37
Board Size	-0.001	0.5	2.18	0.005	0.526	2.18
Board Independence	.227*	0.04	1.16	1.08**	0.007	1.16
Board Gender Diversity	.313***	0	1.23	.819***	0	1.23
Control						
Firm Size	-3.34E-08	0.32	3.01	-1.84E-07	0.256	3.01
Asset to Equity Ratio	-0.002	0.41	1.81	0.02	0.411	1.81
Firm Age	0	0.07	1.37	.003*	0.014	1.37



Table 3.

Variables	Results					
	ROA			ROE		
	Coefficient	p-values	VIF	Coefficient	p-values	VIF
Independent						
Environmental	0.013**	0.003	2.32	.0416**	0.002	2.32
Social	-.001	0.633	2.76	-.003	0.769	2.76
Governance	-.009*	0.020	2.28	-.0409**	0.004	2.28
Board Size	-.002	0.279	2.21	0.001	0.865	2.21
Board Independence	.355**	0.003	1.29	1.564***	0.000	1.29
Board Gender Diversity	.345***	0.000	1.26	.9486***	0.000	1.26
Firm Size	-9.093e-12	0.743	3.13	-9.01E-08	0.535	3.13
Asset to Equity Ratio	.000	0.082	1.93	1.30E-02	0.580	1.93
Firm Age	.000	0.511	1.66	1.45E-03	0.220	1.66

FINDINGS AND CONCLUSIONS

All model variance inflation factor value below ten indicate there is no multicollinearity in the model. The first model discovered that ESG score has slightly negative non-significant effect towards both ROA and ROE. The second model found that environment disclosure has positive significant effect towards both financial performance measures. It is revealed that, governance disclosure is the main cause that makes “ESG Sector Leaders” firms became negative into financial performance. Governance disclosure incorporate CSR strategy and ESG reporting. This is in line with previous study findings that businesses that participate in socially responsible initiatives incur higher economic costs and have inferior operational and financial performance [8]. Both models show board independence and board gender diversity have positive significant effect into financial performance. Board gender diversity findings are aligning with previous studies that found board gender diversity improve financial performance and economic outcomes [12,13]. Meanwhile board size has negative non-significant effect towards both ROA and ROE in the second model. For the first model, board size has slightly positive non-significant effect towards and slightly positive non-significant effect towards ROA and ROE. Hence, no conclusion of board size relationship with financial performance can be drawn.

In conclusion, ESG score has negative effect towards financial performance and the main cause is governance disclosure which incorporate CSR strategy. Company should pay attention first to their environmental disclosure to ensure the sustainability of the company. Board independence and board gender diversity confirmed to have positive effect into financial performance. Hence, having the presence of independence directors and woman on board is beneficial for company profitability.

STATEMENTS AND DECLARATIONS

The authors declare that no funds, grants, or other support were received during the preparation of this manuscript and the authors have no relevant financial or non-financial interests to disclose. All authors participated in the sequence alignment and drafted manuscript. All authors discussed the results, contributed and approved the final manuscript. On behalf of all authors, the corresponding author states that there is no conflict of interest.



REFERENCES

1. Abdi, Y., Li, X., & Càmara-Turull, X. (2022). Exploring the impact of sustainability (ESG) disclosure on firm value and financial performance (FP) in airline industry: the moderating role of size and age. *Environment, Development and Sustainability*, 24(4), 5052-5079.
2. Anderson, R. C., Mansi, S. A., & Reeb, D. M. (2004). Board characteristics, accounting report integrity, and the cost of debt. *Journal of Accounting and Economics*, 37(3), 315–342. <https://doi.org/10.1016/j.jacceco.2004.01.004>
3. Arayssi, M., Jizi, M., & Tabaja, H. H. (2020). The impact of board composition on the level of ESG disclosures in GCC countries. *Sustainability Accounting, Management and Policy Journal*, 11(1), 137–161. <https://doi.org/10.1108/sampj-05-2018-0136>
4. Assenga, M. P., Aly, D., & Hussainey, K. (2018). The impact of board characteristics on the financial performance of Tanzanian firms. *Corporate Governance: The International Journal of Business in Society*, 18(6), 1089–1106. <https://doi.org/10.1108/cg-09-2016-0174>
5. Balatbat, M. C. A., Siew, R. Y. J., & Carmichael, D. (2012). ESG scores and its influence on firm performance: Australian evidence. *School of Accounting Seminar Series*.
6. Bhagat, S., & Black, B. S. (1998). The Non-Correlation Between Board Independence and Long-Term Firm Performance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.133808>
7. Brahma, S., Nwafor, C., & Boateng, A. (2021). Board gender diversity and firm performance: The UK evidence. *International Journal of Finance & Economics*, 26(4), 5704-5719.
8. Buallay, A. (2019). Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector. *Management of Environmental Quality: An International Journal*, 30(1), 98–115. <https://doi.org/10.1108/meq-12-2017-0149>
9. de Andres, P., Azofra, V., & Lopez, F. (2005). Corporate Boards in OECD Countries: size, composition, functioning and effectiveness. *Corporate Governance*, 13(2), 197–210. <https://doi.org/10.1111/j.1467-8683.2005.00418.x>
10. Fuzi, S. F. S., Halim, S. A. A., & Julizaerma, M. (2016). Board Independence and Firm Performance. *Procedia Economics and Finance*, 37, 460–465. [https://doi.org/10.1016/s2212-5671\(16\)30152-6](https://doi.org/10.1016/s2212-5671(16)30152-6)
11. Guest, P. M. (2009). The impact of board size on firm performance: evidence from the UK. *The European Journal of Finance*, 15(4), 385–404. <https://doi.org/10.1080/13518470802466121>
12. Hillman, A. J., Cannella, A. A., & Paetzold, R. L. (2000a). The Resource Dependence Role of Corporate Directors: Strategic Adaptation of Board Composition in Response to Environmental Change. *Journal of Management Studies*, 37(2), 235–256. <https://doi.org/10.1111/1467-6486.00179>
13. Kılıç, M., & Kuzey, C. (2016). The effect of board gender diversity on firm performance: evidence from Turkey. *Gender in Management: An International Journal*, 31(7), 434–455. <https://doi.org/10.1108/gm-10-2015-0088>
14. Lee-Kuen, I. Y., Sok-Gee, C., & Zainudin, R. (2017). Gender diversity and firms' financial performance in Malaysia. *Asian Academy of Management Journal of Accounting and Finance*, 13(1), 41-62.
15. Liu, Y., Miletkov, M. K., Wei, Z., & Yang, T. (2015). Board independence and firm performance in China. *Journal of Corporate Finance*, 30, 223–244. <https://doi.org/10.1016/j.jcorpfin.2014.12.004>
16. Merendino, A., Dibb, S., Meadows, M., Quinn, L., Wilson, D., Simkin, L., & Canhoto, A. (2018). Big data, big decisions: The impact of big data on board level decision-making. *Journal of Business Research*, 93, 67–78.
17. Reddy, S., & Jadhav, A. M. (2019). Gender diversity in boardrooms – A literature review. *Cogent Economics & Finance*, 7(1), 1644703. <https://doi.org/10.1080/23322039.2019.1644703>
18. Refinitiv. (2021, February). *ENVIRONMENTAL, SOCIAL AND GOVERNANCE SCORES FROM REFINITIV*. <https://www.refinitiv.com/en/sustainable-finance/esg-scores#methodology>
19. Reguera-Alvarado, N., de Fuentes, P., & Laffarga, J. (2015). Does Board Gender Diversity Influence Financial Performance? Evidence from Spain. *Journal of Business Ethics*, 141(2), 337–350. <https://doi.org/10.1007/s10551-015-2735-9>
20. Rose, C. (2007). Does female board representation influence firm performance? The Danish evidence. *Corporate Governance: An International Review*, 15(2), 404–413. <https://doi.org/10.1111/j.1467-8683.2007.00570.x>



21. Rossi, M., Chouaibi, J., Chouaibi, S., Jilani, W., & Chouaibi, Y. (2021). Does a Board Characteristic Moderate the Relationship between CSR Practices and Financial Performance? Evidence from European ESG Firms. *Journal of Risk and Financial Management*, 14(8), 354. <https://doi.org/10.3390/jrfm14080354>
22. Terjesen, S., Couto, E. B., & Francisco, P. M. (2015). Does the presence of independent and female directors impact firm performance? A multi-country study of board diversity. *Journal of Management & Governance*, 20(3), 447–483. <https://doi.org/10.1007/s10997-014-9307-8>
23. Thenmozhi, M., & Sasidharan, A. (2020). Does board independence enhance firm value of state-owned enterprises? Evidence from India and China. *European Business Review*.
24. Uribe-Bohorquez, M. V., Martínez-Ferrero, J., & García-Sánchez, I. M. (2018). Board independence and firm performance: The moderating effect of institutional context. *Journal of Business Research*, 88, 28–43. <https://doi.org/10.1016/j.jbusres.2018.03.005>
25. Uyar, A., Kilic, M., Koseoglu, M. A., Kuzey, C., & Karaman, A. S. (2020). The link among board characteristics, corporate social responsibility performance, and financial performance: Evidence from the hospitality and tourism industry. *Tourism Management Perspectives*, 35, 100714. <https://doi.org/10.1016/j.tmp.2020.100714>
26. Velte, P. (2017). Does ESG performance have an impact on financial performance? Evidence from Germany. *Journal of Global Responsibility*, 8(2), 169–178. <https://doi.org/10.1108/jgr-11-2016-0029>
27. Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. MIT Press.

Cite this Article: Arifa Rizki Syaputra, Raden Aswin Rahadi (2022). How Does ESG Score and Board Structure Affect Financial Performance? Evidence from ESG Sector Leaders IDX Kehati. International Journal of Current Science Research and Review, 5(5), 1665-1670