



Environmental, Social and Governance (ESG) and Corporate Financial Performance: Moderating Effects of Financial Slack

Nur Isna Inayati^{1,2*}, Ika Yustina Rahmawati^{1,3}, Tiara Pandansari^{1,3}, Ira Hapsari^{1,3}, Alfina Nur Ramadhani

¹ Faculty of Economics and Bussines, Universitas Muhammadiyah Purwokerto, Indonesia

² Faculty of Economics and Bussines, Universitas Sebelas Maret Surakarta, Indonesia

³ Faculty of Economics and Bussines, Universitas Jenderal Soedirman, Indonesia

*Corresponding Author

Info Article

History Article:

Submitted: September 9,
2024

Revised: September 12, 2024

Accepted: February 5, 2025

Keywords:

environmental, social,
governance, financial slack,
corporate financial
performance

Abstract

This study explores the impact of ESG (environmental, social, governance) on company financial performance, particularly in manufacturing companies. In addition, this research also seeks to analyze whether high financial slack can strengthen the relationship between ESG, both collectively and separately, and the company's Return on Assets (ROA). The population focused on this study consists of 635 manufacturing companies operating in Indonesia, with a sample of 446 companies listed on the Indonesia Stock Exchange (IDX). The data used comes from annual and sustainability reports from 2018 to 2022. To analyze the data, this study employs linear regression analysis, including calculating coefficients, p-values, and R-squared. The study results show that the environmental, social, and governance variables do not have a significant relationship with the company's ROA, indicating that although ESG is considered important, its implementation in practice may not yet provide the expected impact on financial performance. Additionally, high financial slack was found not to strengthen the relationship between ESG and ROA, suggesting that more significant financial resources do not always guarantee improved sustainable performance. The implications of this study highlight the importance of companies effectively managing ESG aspects and financial resources to achieve sustainability. These findings also provide theoretical insights into the role of financial slack in the relationship between ESG and financial performance, emphasizing that companies need to be more proactive in integrating sustainability practices into their business strategies.

JEL Classification: G32, M14, Q56

How to Cite: Inayati, N.I., Rahwamati, I.Y., Pandansari, T., Hapsari, I., & Ramadhani, A.N. (2025). Environmental, Social and Governance (ESG) and Corporate Financial Performance: Moderating Effects of Financial Slack. *Maksimum: Media Akuntansi Universitas Muhammadiyah Semarang*, 15(1), 110-120.

DOI: 10.26714/MKI.15.1.2025.110-120

Copyright © 2025 Authors. This work is licensed under a Creative Commons Attribution-Non-Commercial No Derivatives 4.0 International License (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Introduction

Efforts to achieve a sustainable development path that can meet the needs of current generations without compromising the welfare of future generations is not a new challenge. In recent years, climate change and, more generally, the transition towards a sustainable development model have become increasingly important. According to the European Central Bank's guidelines on sustainable finance, a company aims to develop values while adhering to related ideals, such as fair remuneration for employees, respect for ethical and social values, and environmental conservation. Therefore, companies not only care about economic issues but also social and environmental issues (Maas & Reniers, 2014).

ESG criteria incorporate environmental, social, and governance factors into investment and business decision-making processes, and they involve conditions relevant to traditional financial metrics when analyzing investments or valuing companies. These conditions may include metrics such as carbon emissions, water use, employee diversity, employment practices, board diversity, executive compensation, and others. Thus, ESG criteria provide quantitative and qualitative information about a company's sustainability practices and their potential impact on various stakeholders (Khalil & Khalil, 2022; Uyar et al., 2023).

In 2010, an oil spill occurred in the Gulf of Mexico, which eventually became known as the Deep Water Horizon Oil Spill, where the tragedy claimed 11 lives and injured 17 other people. This incident ultimately sparked conversations about implementing an ESG framework for all organizations (Sandifer et al., 2021). In these incidents, affected communities felt no one was holding BP accountable, and there were still no ESG-related metrics to demonstrate that the company had operated against internally established ethical standards. Therefore, to increase transparency, the Sustainability Accounting Standards Board (SASB) was established in 2011 to provide standards for sustainable disclosure of financial information. Based on the 2022 Environmental Performance Index, Indonesia's environmental conservation is the lowest globally and in the Asia Pacific.

ESG scores have emerged as an important pillar for developing sustainable strategies influencing a company's financial performance (Eccles & Strohle, 2018). Research by Lee and Isa (2022) found a positive relationship between applying ESG criteria and financial performance, thus showing that ESG criteria can increase company value. In addition, we found evidence that disclosure of ESG criteria can improve the relationship with corporate sustainability performance. Based on research (H. Liu et al., 2022; Naeem et al., 2022), it is clear that ESG influences company performance. Another study conducted by Pickwick and Sewelén (2021); Junius et al. (2020) has different results, namely that ESG does not affect company performance. In particular, there are no consistent conclusions regarding the impact of ESG on company performance.

Apart from the relationship between ESG scores and FP, research shows that other factors can strengthen or weaken this relationship, such as financial slack in research Duque-Grisales and Aguilera-Caracuel (2021) explaining that financial slack influences ESG disclosure and financial performance so that financial slack becomes a positive moderation of the relationship between ESG and financial performance.

This research makes several important contributions. First, previous studies have mainly focused on the impact of ESG on company performance in Indonesia. Second, this research represents an important advance in the International Business literature on multinational corporations, as it applies the resource-based view and institutional theory to analyze the influence of ESG scores and the individual impact of each sub-factor (E–S–G) on outcomes company performance, contributing coherence to the study of multinational companies in Indonesia.

This research is structured as follows. This section first discusses the theoretical framework and the two theories used to develop the hypothesis. Next, the sample, data and methodology used are explained. Finally, the study reports the results and discusses the main findings and conclusions.

Literature Review

Stakeholder Theory

Stakeholder theory states that a company must not only operate for its benefit but also provide benefits to other stakeholders. The pioneer of this theory was (Freeman, 1984), who argued that the company's responsibility is to all stakeholders, not only to shareholders. A company's sustainability depends on the support of all stakeholders, so the company's activities are to seek legitimacy. Stakeholders demand more environmental, social and governance sustainability disclosures as non-financial information in business decision-making (Hassan et al., 2021). Incorporating ESG considerations into corporate decision-making can help companies create long-term value for all stakeholders. By considering the needs and interests of all stakeholders, a company can improve its reputation, reduce risks and improve its long-term financial performance.

Research on the relationship between social environment and governance (ESG) and corporate financial performance (CFP) has become increasingly prominent in recent years, especially in the context of stakeholder theory (Chouaibi & Zouari, 2024). Stakeholder theory can provide a valuable framework for understanding how ESG issues affect a company's relationships with various stakeholders. Company stakeholders are individuals or groups who can influence or be affected by the company's actions, decisions and performance (Mahmood et al., 2018). Companies are responsible to their shareholders and other stakeholders such as employees, customers, suppliers, creditors and the wider community.

ESG Disclosure

Information regarding a company's ESG can be obtained through annual reports, sustainability reports, financial reports, company websites, external data providers and other resources (Manita et al., 2018). ESG refers to how companies and investors integrate environmental, social and governance issues into their business models. Using indicators and research methods, ESG Rating Agencies examine a company's business performance and sustainability. ESG Score is one of the primary references for companies, financial markets and academics in assessing corporate sustainability (Gillan et al., 2021).

The practice of ESG principles can be seen in Financial Services Authority Regulations (2017) concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers and Public Companies. The main concern of POJK Number 51/POJK.03/2017 is to create sustainable development that can ensure and maintain economic stability and a national economic system that prioritizes balance between environmental, social and economic aspects. The first criterion that must be met in implementing ESG is Environment. This means that companies must always be aware of the impact of their activities on the environment, focusing on how company activities can be carried out in an environmentally friendly manner. The next criterion is Social. This means that, from a social perspective, the company can establish social relationships with affected communities and institutions related to the company. It also includes a company's relationships with its employees, consumers, clients, and communities. Corporate governance includes how a company builds and manages its business through a good organizational structure and quality leadership. This criterion needs to consider several aspects: company policies, company standards, culture, disclosure, information, audit processes and compliance. This good governance must be implemented in all divisions or departments within a company.

Table 1. Indicators in the ESG Index include:

Environment	Climate Change	<ol style="list-style-type: none"> 1. Greenhouse Gas (GHG) emissions 2. GHG intensity
	Natural Resources	<ol style="list-style-type: none"> 1. Energy consumption 2. Energy intensity 3. Energy mix 4. Water consumption
	Polution and Waste	<ol style="list-style-type: none"> 1. Environmental regulations, procedures, and processes (PPP)
	Opportunities and Policy	<ol style="list-style-type: none"> 1. Environmental oversight by the board of directors, 2. Environmental oversight by senior management, 3. Climate and environmental investment management and analysis, 4. Corporate responsibility in forestry.
Social	Human Capital	<ol style="list-style-type: none"> 1. CEO salary comparison, 2. Gender pay gap, 3. Employee turnover rate, 4. Gender diversity percentage, 5. Percentage of temporary workers, 6. Non-discrimination PPP, 7. Injury or accident rate, 8. Health and safety standards, 9. Child labor, 10. Human rights PPP,
	Relations	<ol style="list-style-type: none"> 1. Corporate Social Responsibility (CSR) in the community
Governance	Corporate Governance	<ol style="list-style-type: none"> 1. Board diversity, 2. Board independence from external control, 3. Monetary incentives related to sustainability, 4. Collective bargaining protocols and agreements, 5. Third-party code of conduct,
	Corporate Behavior	<ol style="list-style-type: none"> 1. Anti-corruption ethics and legal compliance, 2. ESG reports, 3. Disclosure mechanisms, 4. Independence assurance, 5. Tax transparency,
	Product Responsibility	<ol style="list-style-type: none"> 1. Data Privacy

Corporate Financial Performance

Company financial performance (CFP) can be measured by analyzing and evaluating the company's financial reports. One of the most common approaches to assessing financial performance is financial ratios. CFP is important to business because it is a key indicator of a company's ability to meet its financial obligations and generate profits for its investors. These ratios can provide insight into a company's liquidity, solvency,

profitability and efficiency. One measure of company performance is Return on Assets (ROA), which shows the company's ability to provide benefits from the assets it owns (Jones & Jensen, 2019).

Financial Slack

Financial slack can originate from management policies used to improve environmental sustainability and finance innovation or change, as well as improve the company's response to environmental disturbances within the company (Latham & Braun, 2008). Financial Slack can be a valuable resource for organizations to help achieve organizational goals (Vanacker et al., 1996). A concept called "financial slack" relies on the idea of "financial reserves as a buffer" and "accessible financial resources allow organizations to develop and grow more quickly. Financial slack is the least absorbable form, primarily because it can be wholly divided and separated to allocate various activities (Greve, 2003).

The Influence of ESG on Company Performance

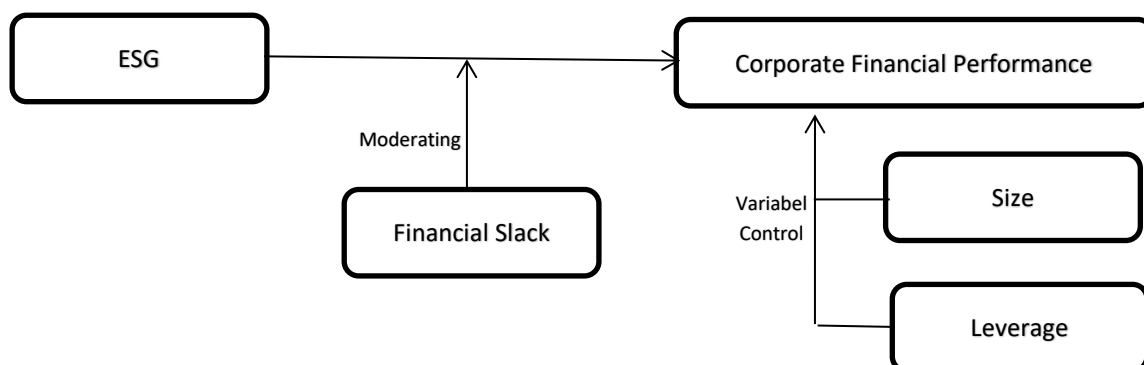
Disclosure of non-financial information is related to the company's sustainability performance. The results of the studies by Velte (2017); Fatemi et al. (2017); Yoon et al. (2018); Buallay (2019); Melinda and Wardhani (2020); and Wong et al. (2021) found a positive and significant relationship between ESG and company financial performance. Due to the increased attention that sustainability initiatives receive from corporate stakeholders, businesses will experience higher demand and more significant growth (Buallay, 2019). Stakeholder theory suggests that a company's commitment to disclosing sustainability information to stakeholders reaffirms the company's commitment to society, which provides long-term benefits (Behl et al., 2022).

H1: ESG performance positively and significantly affects the company's financial performance

Financial Slack Moderates the Influence of ESG on Company Performance

The availability of financial resources is one of the factors that influences a company's capacity to invest in ESG practices (Aguilera-Caracuel et al., 2015; Allouche & Laroche, 2005; Carnahan et al., 2010; Waddock & Graves, 1997). When organizations have resources that can be allocated to other uses, their managers tend to take more innovative actions (Voss et al., 2008), thereby meeting the demands of corporate stakeholders. Therefore, it is important to consider training management to improve ESG performance in a way that genuinely considers stakeholders, improves sustainability, and increases financial success. Collaboration between stakeholders and financial slack can provide a competitive advantage for businesses. Based on (Duque-Grisales & Aguilera-Caracuel, 2021), it is explained that financial slack strengthens the relationship between ESG and company performance.

H2: Financial slack strengthens the influence of ESG on company performance



Method

This research population includes 635 manufacturing companies in Indonesia. The sampling method uses purposive sampling, so this research uses 446 companies on the Indonesia Stock Exchange (BEI). This research uses annual and sustainability reports from 2018 to 2022 as data sources. Companies that do not

disclose ESG information consecutively during the observation year will not be selected as a sample. The dependent variable of this research is financial performance, while the independent variable ESG disclosure score and the moderating variable are financial slack. This research also uses control variables, such as company size and leverage.

Table 2. Operational Definition and Variable Measurement

No	Variable	Operational definition	Variable Measurement
1	CFP	Return on Assets (ROA) is measured by comparing the ratio of profit after tax to total assets at the end	$ROA = (\text{Net Profit after tax} / \text{Total Assets}) \times 100$
2	Score ESG	Environmental, social and governance disclosure scores compiled by the Bloomberg ESG Database	The percentage of the number of items released by the company through the ESG disclosure score on the Bloomberg terminal with a value ranging from 0 to 100.
3	Financial Slack	Financial Slack refers to the level of liquid assets, such as cash without any commitment made for any purpose by an organization (Kraatz & Zajac, 2001)	$Slack_i = \text{current assets} / \text{current liabilities}$ (Duque-Grisales & Aguilera-Caracuel, 2021)
4	Company size	Company size is the number of assets owned by a company	$Company\ Size = \ln(\text{Total Assets})$
5	Leverage	The leverage ratio is measured by comparing total debt with the total assets owned by the company	$Debt\ to\ Asset = \text{Total Debt} / \text{Total Assets}$

Result and Discussion

Descriptive Statistical Test

Descriptive statistical tests provide an overview of the research object, including the minimum and maximum values and the average and standard deviation. The results of descriptive statistical analysis of the variables in this study are presented in Table 3:

Table 3. Descriptive Statistics

Variabel	Mean	Std Dev	Min	Max
ROA	10.82369	104.1388	-52.23906	1041.7
ESG	43.84908	11.5	23.25	73.87
FS	67.63907	425.1653	-2212.675	5414.626
Size	26.35657	5.417908	0	35.22819
Lev	8.040884	70.42868	-7.795063	705.4934

N = 446

ROA = Return on Asset; ESG = Environmental, Social and Governance; FS = Financial Slack; Size = Company Size; Lev = Leverage

Table 3 shows the descriptive statistical analysis results of all variables in the research model. The ESG performance variable has a minimum value of 23.25 and a maximum value of 73.87, with a standard deviation of 11.5. The average ESG value of 43.85 indicates that manufacturing companies have begun to disclose sustainability reports, and the focus on ESG performance values varies. The ROA variable as a company's financial performance has a minimum value of -52.24 and a maximum value of 1041.7 with an

average of 10.82 and a standard deviation value of 104.1388, which means that the variations in the company's financial performance that are observed do not vary.

The financial slack variable has a minimum value of -2212.675 and a maximum value of 5414.626 with an average of 67.63907 and a standard deviation value of 425.1653, meaning that the variations in financial slack observed do not vary. The control variable company size has a minimum value of 0 and a maximum value of 35.22819 with a standard deviation value of 5.417908. The average value of company size is 26.35657, indicating that the size of manufacturing companies varies. The leverage control variable has a minimum value of -7.795063 and a maximum value of 705.4934 with an average of 8.040884 and a standard deviation value of 70.42868, which means that the variations in leverage observed do not vary.

Correlation Test

The correlation test is a statistical technique for measuring the strength of the relationship between two variables. Table 4 shows the correlation matrix between variables in this research model.

Table 4. Correlation Analysis

	ROA	ESG	FS	SIZE	LEV
ROA	1.0000				
ESG	0.0190	1.0000			
FS	-0.0163	-0.0091	1.0000		
SIZE	-0.1254	0.0075	0.1500	1.0000	
LEV	0.9990	0.0202	-0.0161	-0.1266	1.0000

N = 446

ROA = Return on Asset; ESG = Environmental, Social and Governance; FS = Financial Slack; Size = Company Size; Lev = Leverage; *significance level at 5% ; **significance level at 10%.

ROA (Return on Asset): This variable shows a high positive correlation of 0.9990 with LEV (Leverage). This suggests that ROA and LEV are almost perfectly correlated in this dataset. Given that ROA is typically an indicator of company profitability and LEV represents the degree of financial leverage, this high correlation may indicate that firms with high leverage tend to have high ROA, or your dataset might have an issue with data quality or collinearity.

The correlation between ESG and other variables is generally low. This indicates that ESG scores have minimal linear relationships with this sample's ROA, FS, SIZE, and LEV. The significant correlation here is between FS and SIZE (0.1500), indicating a weak positive relationship where larger firms may have more financial slack. Size has weak negative correlations with ROA and LEV and a weak positive correlation with FS. LEV (Leverage): Besides its strong correlation with ROA.

Regression Analysis

Table 5 presents the regression results in this study as follows:

Variable	(1)	(2)
ESG	-0.0111628 (0.493)	-0.0111628 (0.493)
Size	-0.0414608 (0.428)	-0.0414608 (0.428)
Lev	1.477257 (0.000)*	1.477257 (0.000)*
R-Squared (within)	0.9427	
Wald Chi2	92803.55	
Prob>chi2	0.0000	
N of obs	446	

*ESG = Environmental, Social and Governance; Size = Ukuran Perusahaan; Lev = Leverage; *significance level at 5% ; **significance level at 10%.*

The coefficient for ESG is -0.0111628, with a p-value of 0.493. This indicates that ESG has a minimal, adverse effect on the dependent variable and is not statistically significant (p-value > 0.05). Thus, ESG does not significantly influence the outcome variable in this model. The coefficient for Size is -0.0414608 with a p-value of 0.428. This suggests that Size also has a small negative effect on the dependent variable, and this effect is not statistically significant (p-value > 0.05). Therefore, Size does not significantly impact the outcome variable in this model. The coefficient for Leverage is 1.477257 with a p-value of 0.000. This indicates that Leverage has a significant positive effect on the dependent variable (p-value < 0.05). The positive coefficient suggests that as Leverage increases, the dependent variable is also expected to increase. R-Squared (within): 0.9427. This value indicates that approximately 94.27% of the variation in the dependent variable is explained by the independent variables included in the model. This is a very high R-squared, suggesting a good fit of the model to the data. Wald Chi2: 92803.55 with a p-value of 0.0000. The Wald Chi2 statistic tests the joint significance of all coefficients in the model. A p-value of 0.0000 indicates that the model is statistically significant overall, meaning that the independent variables collectively impact the dependent variable.

Table 6 presents the regression results in this study as follows:

Variable	(1)	(2)
ESG - FS	-8.87 (0.938)	-8.87 (0.938)
Size	0.0652431 (0.389)	0.0652431 (0.389)
Lev	1.478405 (0.000)*	1.478405 (0.000)*
R-Squared (within)	0.9434	
Wald Chi2	86088.75	
Prob>chi2	0.0000	
N of obs	446	

*ESG = Environmental, Social and Governance; FS = Financial Slack; Size = Company Size; Lev = Leverage; *significance level at 5% ; **significance level at 10%.*

ESG - FS: The coefficient is -8.87, with a p-value of 0.938. This indicates that the variable (ESG minus FS) has a significant adverse effect on the dependent variable but is not statistically significant (p-value > 0.05). This suggests that ESG and FS, when considered together in this manner, do not have a meaningful impact on the dependent variable in this model. The coefficient for Size is 0.0652431 with a p-value of 0.389. This suggests that Size has a small positive effect on the dependent variable, but this effect is not statistically significant (p-value > 0.05). Thus, Size does not significantly influence the outcome variable in this model. The coefficient for Leverage is 1.478405 with a p-value of 0.000. This indicates that Leverage has a statistically significant positive effect on the dependent variable (p-value < 0.05). The positive coefficient suggests that as Leverage increases, the dependent variable is also expected to increase. R-Squared (within): 0.9434. This value indicates that approximately 94.34% of the variation in the dependent variable is explained by the independent variables included in the model. This is a very high R-squared, suggesting an excellent fit of the model to the data. Wald Chi2 and p-value: Wald Chi2: 86088.75 with a p-value of 0.0000. The Wald Chi2 statistic tests the joint significance of all coefficients in the model. A p-value of 0.0000 indicates that the model is statistically significant overall, meaning that the independent variables collectively impact the dependent variable.

The results show that companies with good ESG policies do not necessarily have better financial performance, primarily if they are not supported by adequate financial management (Uyar et al., 2023; Habib & Hossain, 2013; M. T. Lee et al., 2023). Meanwhile, Leverage emerged as an important factor affecting financial performance, suggesting that firms with higher debt levels can utilize loans to increase profits, although this also poses more significant risks (Fu et al., 2024; Bissoondoyal-Bheenick et al., 2023; P. Liu et al., 2022). Overall, these findings suggest the need for companies to be more proactive in integrating ESG practices into their business strategy and financial management to achieve better performance. The results of this study align with stakeholder theory, which says that companies need to integrate environmental, social, and governance factors into their strategy to meet stakeholder expectations that ultimately create long-term value. This is consistent with research (Rahman et al., 2023; Junius et al., 2020; Latham & Braun, 2008; and Abdillah et al., 2023).

Conclusions and Recommendations

The results of this study conclude that leverage has a significant impact on financial performance. This indicates that companies with higher leverage tend to have better financial performance. Meanwhile, the ESG and FS variables do not significantly impact financial performance. Although companies may have financial reserves, this does not enhance the positive impact of ESG practices on performance. Furthermore, the regression model used has a very high R-squared value, indicating that the model effectively explains variations in finances.

These findings imply that companies in Indonesia may need to consider other factors, such as leverage, to improve financial performance. At the same time, implementing ESG practices should be reassessed to find more effective ways. This study contributes to the existing literature by providing insights into the relationship between ESG, financial slack, and financial performance in the Indonesian context. It highlights the need for a more in-depth approach to evaluating the impact of ESG.

References

- Abdillah, P., Regytha, S., & Gunawan, A. (2023). Does Financial Slack Moderate Effect of Environmental, Social, and Governance (ESG) on Firm Performance? *Economics and Digital Business Review*, 4(2), 379–390.
- Aguilera-Caracuel, J., Guerrero-Villegas, J., Vidal-Salazar, M. D., & Delgado-Márquez, B. L. (2015). International Cultural Diversification and Corporate Social Performance in Multinational Enterprises: The Role of Slack Financial Resources. *Management International Review*, 55(3), 323–353. <https://doi.org/10.1007/s11575-014-0225-4>
- Allouche, J., & Laroche, P. (2005). A Meta-analytical investigation of the relationship between corporate social and financial performance. *Revue de Gestion Des Ressources Humaines*, 57(March), 18–41.
- Behl, A., Kumari, P. S. R., Makhija, H., & Sharma, D. (2022). Exploring the relationship of ESG score and firm value using cross-lagged panel analyses: case of the Indian energy sector. *Annals of Operations Research*, 313(1), 231–256. <https://doi.org/10.1007/s10479-021-04189-8>
- Bissoondoyal-Bheenick, E., Brooks, R., & Do, H. X. (2023). ESG and firm performance: The role of size and media channels. *Economic Modelling*, 121(December 2021), 106203. <https://doi.org/10.1016/j.econmod.2023.106203>
- 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>
- Carnahan, S., Agarwal, R., & Campbell, B. (2010). The Effect of Firm Compensation Structures on the Mobility and Entrepreneurship of Extreme Performers. *Business*, 920(October), 1–43. <https://doi.org/10.1002/smi>
- Chouaibi, Y., & Zouari, G. (2024). The mediating role of real earnings management in the relationship between CSR practices and cost of equity: evidence from European ESG data. *EuroMed Journal of Business*, 19(2), 314–337. <https://doi.org/10.1108/EMJB-12-2021-0183>
- Duque-Grisales, E., & Aguilera-Caracuel, J. (2021). Environmental, Social and Governance (ESG) Scores and Financial Performance of Multinationals: Moderating Effects of Geographic International Diversification and Financial Slack. *Journal of Business Ethics*, 168(2), 315–334. <https://doi.org/10.1007/s10551-019-04177-w>

- Eccles, R. G., & Strohle, J. (2018). Exploring Social Origins in the Construction of ESG Measures. *SSRN Electronic Journal*, 1–36. <https://doi.org/10.2139/ssrn.3212685>
- Fatemi, A., Glaum, M., & Kaiser, S. (2017). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, 38, 45–64. <https://doi.org/10.1016/j.gfj.2017.03.001>
- Fu, C., Yu, C., Guo, M., & Zhang, L. (2024). ESG rating and financial risk of mining industry companies. *Resources Policy*, 88(July 2023), 104308. <https://doi.org/10.1016/j.resourpol.2023.104308>
- Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*, 66(January), 101889. <https://doi.org/10.1016/j.jcorpfin.2021.101889>
- Greve, H. R. (2003). Organizational learning from performance feedback: A behavioral perspective on innovation and change. *Organizational Learning from Performance Feedback: A Behavioral Perspective on Innovation and Change*, January 2003, 1–215. <https://doi.org/10.1017/CBO9780511615139>
- Habib, A., & Hossain, M. (2013). CEO/CFO characteristics and financial reporting quality: A review. *Research in Accounting Regulation*, 25(1), 88–100. <https://doi.org/10.1016/j.racreg.2012.11.002>
- Hassan, A., Elamer, A. A., Lodh, S., Roberts, L., & Nandy, M. (2021). The future of non-financial businesses reporting: Learning from the Covid-19 pandemic. *Corporate Social Responsibility and Environmental Management*, 28(4), 1231–1240. <https://doi.org/10.1002/csr.2145>
- Jones, C. P., & Jensen, G. R. (2019). *Investments : Analysis and Management* (14th Edition). Wiley.
- Junius, D., Adisurjo, A., Rijanto, Y. A., & Adelina, Y. E. (2020). The Impact of ESG Performance to Firm Performance. *Jurnal Aplikasi Akuntansi*, 5(1), 21–41.
- Khalil, M. K., & Khalil, R. (2022). Leveraging Buyers' Interest in ESG Investments through Sustainability Awareness. *Sustainability (Switzerland)*, 14(21), 1–17. <https://doi.org/10.3390/su142114278>
- Latham, S. F., & Braun, M. R. (2008). The performance implications of financial slack during economic recession and recovery: Observations from the software industry (2001-2003). *Journal of Managerial Issues*, 20(1), 30–50.
- Lee, M. T., Raschke, R. L., & Krishen, A. S. (2023). Understanding ESG scores and firm performance: Are high-performing firms E, S, and G-balanced? *Technological Forecasting and Social Change*, 195(May), 122779. <https://doi.org/10.1016/j.techfore.2023.122779>
- Lee, S. P., & Isa, M. (2022). Environmental, social and governance (ESG) practices and financial performance of Shariah-compliant companies in Malaysia. *Journal of Islamic Accounting and Business Research*, 14(2), 295–314. <https://doi.org/10.1108/JIABR-06-2020-0183>
- Liu, H., Wu, K., & Zhou, Q. (2022). Whether and How ESG Impacts on Corporate Financial Performance in the Yangtze River Delta of China. *Sustainability (Switzerland)*, 14(24), 1–17. <https://doi.org/10.3390/su142416584>
- Liu, P., Zhu, B., Yang, M., & Chu, X. (2022). ESG and financial performance: A qualitative comparative analysis in China's new energy companies. *Journal of Cleaner Production*, 379(P1), 134721. <https://doi.org/10.1016/j.jclepro.2022.134721>
- Maas, S., & Reniers, G. (2014). Development of a CSR model for practice: Connecting five inherent areas of sustainable business. *Journal of Cleaner Production*, 64, 104–114. <https://doi.org/10.1016/j.jclepro.2013.07.039>
- Mahmood, Z., Kouser, R., Ali, W., Ahmad, Z., & Salman, T. (2018). Does corporate governance affect sustainability disclosure? A mixed methods study. *Sustainability (Switzerland)*, 10(1). <https://doi.org/10.3390/su10010207>
- Manita, R., Bruna, M. G., Dang, R., & Houanti, L. (2018). Board gender diversity and ESG disclosure: evidence from the USA. *Journal of Applied Accounting Research*, 19(2), 206–224. <https://doi.org/10.1108/JAAR-01-2017-0024>
- Melinda, A., & Wardhani, R. (2020). the Effect of Environmental, Social, Governance, and Controversies on Firms' Value: Evidence From Asia. *International Symposia in Economic Theory and Econometrics*, 27, 147–173. <https://doi.org/10.1108/S1571-038620200000027011>
- Naeem, M., Ullah, H., & Jan, S. (2022). The Impact of ESG Practices on Firm Performance: Evidence From Emerging Countries. *Indian Journal of Economics and Business*, 20(1), 731–750. <http://www.ashwinanokha.com/IJEB.php>
- Pickwick, A., & Sewelén, J. (2021). The Impact of ESG Scores on Firm Performance: A Comparison of the European Market Before and After the 2008 Financial Crisis. 1–108. <https://www.diva-portal.org/smash/record.jsf?pid=diva2:1579382%0Ahttps://www.diva-portal.org/smash/get/diva2:1579382/FULLTEXT01.pdf>
- Rahman, H. U., Zahid, M., & Al-Faryan, M. A. S. (2023). ESG and firm performance: The rarely explored moderation of sustainability strategy and top management commitment. *Journal of Cleaner Production*,

- 404(February), 136859. <https://doi.org/10.1016/j.jclepro.2023.136859>
- Sandifer, P. A., Ferguson, A., Finucane, M. L., Partyka, M., Solo-Gabriele, H. M., Walker, A. H., Wowk, K., Caffey, R., & Yoskowitz, D. (2021). Human health and socioeconomic effects of the deepwater horizon oil spill in the gulf of Mexico. *Oceanography*, 34(1), 174–191. <https://doi.org/10.5670/oceanog.2021.125>
- Uyar, A., Kuzey, C., & Karaman, A. S. (2023). Does aggressive environmental, social, and governance engagement trigger firm risk? The moderating role of executive compensation. *Journal of Cleaner Production*, 398(October 2022), 136542. <https://doi.org/10.1016/j.jclepro.2023.136542>
- Vanacker, T., Collewaert, V., & A., Z. S. (1996). Slack Resources, Firm Performance and The Institutional Context: Evidence From Privately Held European Firms. *Journal of Substance Abuse Treatment*, 13(3), 287–288.
- 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>
- Voss, G. B., Sirdeshmukh, D., & Voss, Z. G. (2008). The effects of slack resources and environmental threat on product exploration and exploitation. *Academy of Management Journal*, 51(1), 147–164. <https://doi.org/10.5465/AMJ.2008.30767373>
- Waddock, S. A., & Graves, S. B. (1997). The Corporate Social Performance-Financial Performance Link. *Strategic Management Journal*, 18(4), 303–319.
- Wong, W. C., Batten, J. A., Ahmad, A. H., Mohamed-Arshad, S. B., Nordin, S., & Adzis, A. A. (2021). Does ESG certification add firm value? *Finance Research Letters*, 39(April 2020), 101593. <https://doi.org/10.1016/j.frl.2020.101593>
- Yoon, B., Lee, J. H., & Byun, R. (2018). Does ESG performance enhance firm value? Evidence from Korea. *Sustainability (Switzerland)*, 10(10). <https://doi.org/10.3390/su10103635>