

## The Impact of ESG Practices on Financial Performance: Empirical Evidence from Indian Companies

Dr. Aditi Dwivedi<sup>1</sup>, Rekha Jain<sup>2\*</sup>, Shivani Raina<sup>3</sup>, Dr. Nandani Sharma<sup>4</sup> and Dr. Payal Sharma Upadhyay<sup>5</sup>

<sup>1</sup>Assistant Professor, Engineering College, Jhalawar

<sup>2</sup>Department of Computer Applications, Manipal University, Jaipur

<sup>3</sup>Assistant Professor, Taxila Business School, Jaipur

<sup>4</sup>Associate Professor, Poddar Management and Technical Campus, Jaipur

<sup>5</sup>Principal, Poddar Management and Technical Campus, Jaipur

<sup>2</sup>Orcid id: 0000-0002-5009-8400, <sup>3</sup>Orcid id: 0009-0006-8717-1874, <sup>4</sup>Orcid id: 0009-0007-8657-7669 and

<sup>5</sup>Orcid id: 0009-0004-4620-8621

Cite this paper as:

Aditi Dwivedi, Rekha Jain, Shivani Raina, Nandani Sharma and Payal Sharma Upadhyay (2024). The Impact of ESG Practices on Financial Performance: Empirical Evidence from Indian Companies. *Frontiers in Health Informatics*, 13(3), 7172-7180

### ABSTRACT

Historically, the primary factor used to determine wise investment choices has been a company's worldwide financial performance. However, in addition to financial indications, various non-financial elements have also become part of investors' and fund managers' thinking over the past 20 years. There is little doubt that the hint points to the governance, social, and environmental (ESG) elements. Focus is being placed on long-term sustainable wealth maximization targets that take ESG factors into account. It is well known that environmental, social, and governance (ESG) aspects pose risks to businesses and can distort financial results. Numerous studies have been carried out to investigate the correlation between ESG practices and a company's financial performance (FP). However, the majority of research investigations have been conducted abroad, and reports of the relationships between these two elements have produced a variety of contradictory results.

The main goal of this essay is to investigate how ESG practices affect FP for businesses on both an individual and group level. ESG practices have been proxied by ESG scores computed by CRISIL (Credit Rating and Information Services India Limited). The financial performance (FP) of 200 carefully chosen Indian enterprises across various sectors has been represented by Tobin's  $Q$ , a market-based indicator, return on capital employed, and return on assets, accounting indicators. The other variables that have been chosen for control include the company's size, industry it operates in, and financial leverage. Financial data for 2020–21 was extracted using the PROWESS database. The data analysis began with descriptive statistics, summarizing key variables such as RO\_CE, RO\_A, ESG scores (overall and by environmental, social, and governance dimensions), firm size, and leverage. Measures like mean, median, standard deviation, and skewness provided insights into the data's distribution and variability. Following this, a correlation matrix was constructed to explore the relationships between financial performance indicators and ESG scores, as well as sectoral variables like NOI\_EC, NOI\_FIN, and NOI\_FMCG. This helped identify key correlations and interdependencies between financial and ESG factors.

The results indicate a noteworthy correlation between environmental, social, and governance (ESG) practices and the financial performance of corporations. Governance procedures are determined to be the most significant ESG component. It clarifies the idea that an entity's goodwill among stakeholders and financial returns are enhanced by implementing good ESG practices. The analysis's findings are significant enough for regulators to choose the necessary framework to increase adherence to these practices, in addition to

*investors, managers, and other stakeholders of the organization who are focused on increasing profits.*

**Keywords:** *ESG Component, Investment Choices and Financial Performance*

## 1. INTRODUCTION

Three separate and important pillars can be identified: Environmental (E), Social (S), and Corporate Governance (G). For the purpose of evaluating an entity's non-financial performance, each of them is made up of smaller factors. A company's detrimental impact on climate change, such as that of the mining, paper, and cigarette industries, is typically included in the "E" factor. It is evaluated using environmental data or disclosures by an entity about how resources are used and how it affects biodiversity. Examples of these disclosures include efforts to reduce pollution, minimize carbon emissions, recycle waste, use water and energy efficiently, and reduce waste output. These concerns have forced companies to implement more environmentally friendly practices, such as pursuing all possible steps to achieve zero carbon emissions, in order to preserve the environment and resources for future generations.

Similarly, the letter "S" represents an organization's social or workplace values, such as protecting women workers and other stakeholders and promoting gender diversity. By corporate citizenship and philanthropy, it basically refers to how the business maintains its relationships with customers, suppliers, employees, and the community. Stated differently, an organization that practices social responsibility engages in many socio-economic endeavors via its Corporate Social Responsibility (CSR) programs and places a strong emphasis on contributing back to the community.

The most crucial component, the "G" factor, serves as the benchmark for evaluating a business. It determines if the business is open and honest in all of its dealings with all of its constituents, including customers, employees, minority shareholders, and investors. It talks about the duties and standards of business ethics that the board of directors upholds. Information on governance is available about the integrity of management, the level of independence in operation, the makeup of the board, and shareholder relations. It also takes into account how well and how often corporations disclose information, as well as how closely they follow different voluntary and required standards.

These three non-financial factors are seen to be interconnected, notwithstanding their growing importance. They frequently overlap when one of them is the focus of attention. For instance, the examination of the cigarette business reveals how it affects society and the environment. Thus, these three variables are taken into account collectively. Put otherwise, the term ESG refers to a company's overall attention to social, environmental, and governance factors. The corporation may also view ESG scores—which are generated from publicly available data or disclosures provided by businesses—as "intangible assets." Numerous stakeholders, particularly investors, utilize these scores to assess how businesses are affecting societal resources and sustainability.

These days, it is acknowledged that the outdated method of evaluating investments based solely on financial criteria needs to be revised. The economy would be strengthened overall and a firm's resilience to shocks connected to global sustainability would be increased if ESG considerations were incorporated into financial indicators used to evaluate a firm's worth. The relationship between sustainability and the financial system has been the subject of heated debates thanks to this school of thought. The COVID-19 pandemic was a wake-up call that highlighted the necessity for businesses to be risk-resilient—a crucial but difficult demand.

Businesses must strive for inclusive and sustainable growth, be financially successful and profitable, and act as good stewards of the environment and social communities. Businesses face mounting pressure to act responsibly since they don't function in a vacuum; they have an effect on the lives of people they serve as well as the environment and workforce. A company's commercial practises have an impact on society as well as on the company itself. This is the fundamental cause of the increased significance of assessing a business's financial success in conjunction with its sustainable, ethical, and responsible activities.

Strong ESG standards have been found to benefit businesses in the long run. Companies with high ESG practice scores have benefited from enhanced operating efficiency and market expansion as a result of reduced risk and cheaper capital expenditures, according to research by Kotsantonis, Pinney, and Serafeim (2016). These businesses could be referred to as "responsible companies." Maintaining a "balance" between the two categories of metrics is the core goal of becoming ESG-compliant, not swapping out financial indicators for non-financial ones. An effective argument has been made for businesses and politicians to broaden, develop, and execute their visions and plans on ESG elements by the increasing awareness of these issues among stakeholders. Investment analysts are also incorporating sustainability into their decision-making procedures more and more, paying attention to less evident concerns including labor practices, greenhouse gas emissions, and stakeholder engagement procedures in addition to stated figures. Wang and Sarkis (2013) discovered a favorable correlation between supply chain management and the financial performance of US businesses as it relates to social and environmental factors.

ESG has changed how fund managers and businesses in India approach risk management while making investment decisions. Concerned parties are observing how companies handle the hazards brought on by climate change, social responsibility, and moral leadership. They assume that businesses that adhere to ethical standards face fewer hazards from these three factors. Because of this, a growing number of ESG issues are brought up and covered at shareholder meetings. These days, institutional investors prioritize long-term investment horizons over short-term profits, emphasizing risks and rewards. A higher emphasis on Corporate Social Performance has been found by Sassen, Hinze, and Hardeck (2016) to have decreased both overall and idiosyncratic risk in European corporations.

Corporate fundraising as well as consumer and investment management now depend heavily on the formal integration of ESG into company methodologies, procedures, and operations. ESG disclosures are another tool that businesses may utilize to expand their consumer base through marketing. ESG has become a major factor in investing decision-making, according to Amel-Zadeh and Serafeim (2018), who also note that the number of ESG funds and their funding have increased significantly.

However, businesses that disregard ESG issues have a greater risk of failing and will probably have trouble raising money in the near future. As a result, more businesses are incorporating ESG principles into their operations and providing relevant data in prospectuses to potential investors. Due to rising knowledge that they are making huge profits and have a social obligation, corporations are under more pressure than ever before. Big businesses have a profound awareness of social and environmental issues and are starting to incorporate these factors into their organizational structures, business plans, and strategies. These corporations' products and services reach billions of people worldwide.

By effectively and efficiently using resources, boosting public image, supporting environmentally friendly practices, fostering improvements in society, ensuring sustainability over the long term, reducing regulatory concerns (such as fines and penalties), and creating possibilities for raising funds at lower costs, the focus on ESG leads to value creation for businesses. Positive correlations between ESG and a company's financial success are anticipated. It has been noted that corporations with significant ESG issues—like labor unrest, oil spills, or CO<sub>2</sub> emissions—often see a decline in their stock prices and returns. Corporates that adopted ESG practices showed less volatility in their stock prices than their U.S. market counterparts in the same industry, according to research by Ashwin Kumar, Smith, Badis, Wang, Ambrosy, and Tavares (2016). Additionally, they learned that the effects of ESG vary by industry. According to Verheyden, Eccles, and Feiner (2016), there is a positive correlation between the inclusion of ESG data in investment decision-making processes and improved risk-adjusted returns.

Regulation has become necessary as ESG has become a crucial factor in investment decision-making, as seen by the growth of ESG funds and the substantial amounts of money they have raised. The Companies Act of 2013, which required businesses to submit data on "Energy Conservation," established the official regulatory basis for ESG disclosures. In 2014, the Corporate Social Responsibility regulations were implemented. 2015

saw listed firms obliged to include information on “possibilities, threats, hazards and concerns” in their annual reports by the Securities and Exchange Board of India (SEBI). To bolster investor confidence and finance ESG-compliant projects like renewable energy, wastewater management, and ecosystem protection, SEBI adopted the "Disclosure Requirements for Issuance and Listing of Green Debt Securities" in 2017. In an effort to improve corporations' ESG-integrated processes, SEBI more recently unveiled the Business Responsibility and Sustainability Reporting (BRSR) framework in June 2021. Although adoption of the framework is now optional, beginning with the fiscal year 2022–2023, it will be required for the top listed firms. Comparing companies is made possible by the BRSR paradigm, which prioritizes both qualitative and quantitative ESG reporting. Regulators have pushed corporations to incorporate ESG into their business processes by enacting these measures, which also serve as mandates.

## 2. LITERATURE REVIEW

Diverse conclusions have been drawn from research on the relationship between non-financial elements measured by Environmental, Social, and Governance (ESG) indicators and financial performance (FP). Some research have found negative or negligible relationships between ESG behaviors and FP, despite the majority of empirical research suggesting a positive linkage. variances in the factors used to proxy financial results and ESG practices, as well as variances in study techniques, can be used to explain disparities in findings.

A number of studies have demonstrated that ESG practices and FP are positively correlated:

1. Chelawat & Trivedi (2016): According to their research, there is a favorable correlation between economic performance and ESG factor performance.
2. Tarmuji, Maelah, & Tarmuji (2016): They produced more proof of the beneficial association between ESG and FP by demonstrating how ESG practices affect economic indices in Malaysia and Singapore.
3. Volte (2017): By examining each component of ESG separately, Volte discovered a favorable correlation between FP and ESG practices as determined by return on assets. Additionally, the study showed that, particularly in German enterprises, governance concerns had a greater influence on FP than environmental and social factors.
4. Garcia, Mendes-Da-Silva, & Orsato (2019): ESG parameters and the financial profile of enterprises were found to be positively correlated in their analysis of the BRICS (Brazil, Russia, India, China, and South Africa) countries. Adopting ESG principles has improved performance, especially for larger organizations.
5. Dalal & Thaker (2019): This study found that in Indian companies listed on the National Stock Exchange, compliance with the ESG pillars rose FP as indicated by both accounting- and market-based measures.
6. Ziolo, Filipiak, Bąk, & Cheba (2019): Their study supported the idea that ESG compliance increases financial performance (FP) and profitability (measured by return on capital employed) in Chinese enterprises.
7. Alareeni & Hamdan (2020): They discovered that the financial performance of American-listed firms was positively impacted by the disclosure of ESG components.
8. Alsayegh, Abdul Rahman, & Homayoun (2020): This study demonstrated how adhering to social and environmental norms together with practicing sound corporate governance enhances the financial viability of Asian businesses.
9. Chouaibi, Chouaibi, & Rossi (2021): They discovered that in the UK and Germany, weak ESG performance tends to lower firm value, but strengthening ESG pillars boosts firm value.
10. The study conducted by Duque-Grisales & Aguilera-Caracuel (2021) found a statistically significant correlation between ESG scores and FP in Latin American multinational corporations.

11. López-Toro, Sánchez-Teba, Benítez-Márquez, & Rodríguez-Fernández (2021): They showed a positive correlation between ESG practices and financial ratios in the US pharmaceutical industry, indicating that investing in ESG can be a successful approach.

Notwithstanding these encouraging results, several research has indicated a weak or negative correlation between ESG and FP:

1. Nirino, Santoro, Miglietta, & Quaglia (2021): They discovered evidence of a negative correlation between financial success in European listed firms and corporate disputes pertaining to ESG practices, suggesting that subpar ESG performance might negatively impact a firm's financial outcomes.
2. Landi & Sciarelli (2019): This study found that listed firms in Italy did not exhibit a favorable but statistically significant influence on financial indicators, even when spending increased to comply with ESG guidelines.

The idea that financial performance is positively impacted by ESG compliance is generally supported by the majority of research. Nonetheless, disparities in the results underscore the intricacy of the association, impacted by the dimensions of the organization, the geographical area, the industry, and the particular ESG elements being examined.

### 3. STUDY OBJECTIVES

The following goals are the focus of this study:

- Investigate the extent to which ESG practices implemented by businesses affect financial performance or indicators;
- Educate all interested parties on ESG concerns, the legal environment, and other relevant topics pertaining to Indian businesses of all stripes;
- To support and ease the decision-making process for all parties involved, particularly for investors eager to make wise investments in Indian firms; and
- To expand the field of study on the ESG framework in India.

### 4 PROBLEM STATEMENT

Stakeholders and corporations alike have realized that an organization's financial stability is at risk due to ESG issues. More proof has been provided by the Covid-19 pandemic's result and effects on business. In addition, companies prefer sustainable long-term growth over concentrating just on short-term gains. Therefore, in order to determine whether or not ESG practices have an impact on an entity's financial KPIs, an empirical examination is required. Companies could then be forced to follow these guidelines.

#### 3.4 Research Methodology

The methodology employed in this study is designed to systematically analyze the relationship between environmental, social, and governance (ESG) performance and the financial outcomes of companies. The research utilizes secondary data from reliable sources and employs a structured sampling technique to ensure the relevance and quality of the data analyzed. Statistical methods, including descriptive statistics and correlation analysis, are applied to understand the dynamics between financial performance and ESG scores. This section outlines the data sources, sample selection process, and analytical techniques used to address the research objectives effectively.

##### 3.4.1 Study Period

The empirical analysis conducted to determine the relationship between the underlying variables used data from 2020–21.

### 3.4.2 Data Collection

The study has used data from secondary sources. The "ESG Compendium," released by CRISIL in June 2021, is where the ESG score was gathered. On the other hand, the Centre for Monitoring Indian Economy (CMIE) developed and maintained the PROWESS database, from which the financial information pertaining to the sample period of 200 financially solid enterprises was taken.

### 3.4.3 Selection of Samples

An empirical analysis was conducted on a sample of 200 companies. The ESG score and the availability of financial data for each of the study's specified criteria served as a guide for this selection. Thus, the sample selection process is based on the "judgment sampling" technique.

### 3.4.4. Data Analysis Techniques

**Descriptive Statistics:** The data was first summarized using descriptive statistics to analyze variables like RO\_CE, RO\_A, ESG scores (overall and by dimensions), firm size, and leverage. Key measures such as mean, median, standard deviation, skewness, and kurtosis were calculated to provide insights into the distribution and variability of the data.

**Correlation Matrix Analysis:** A correlation matrix was constructed to explore the relationships between financial performance indicators (e.g., RO\_CE, RO\_A, LEV) and ESG scores (ENV\_S, SOC\_S, GOV\_S). Sectoral variables such as NOI\_EC, NOI\_FIN, and NOI\_FMCG were also included to study how industry sectors interact with financial and ESG performance, identifying key correlations and interdependencies.

## 4. DATA ANALYSIS AND RESULTS

Key research variables employed in the empirical analysis are characterized by the descriptive statistics in Table 1. The study shows that there is a large amount of variability in the data, as shown by the skewness and kurtosis measurements, means, and standard deviations. The majority of the variables, with the exception of leverage (LEV), have mean values that are quite distant from zero, and the standard deviations do not cluster around a single number, indicating that the distribution may not be as normal as it might be.

With a mean ESG score of 57.25, businesses often do better than moderately in terms of environmental, social, and governance elements. This shows that corporate India is becoming more aware of these non-financial factors. Governance (GOV\_S) receives the highest score of the three pillars, 67.46, indicating that compliance with strong governance procedures is given priority, probably as a result of the legal frameworks that mandate these activities. On the other hand, with a significant dispersion and the lowest environmental score (ENV\_S) of 48.09, it is clear that more persistent work is required to improve green management practices. The combined figures highlight a complicated picture of business performance, with governance at the forefront and environmental programs needing greater strategic attention and dedication.

**Table 1: Summary of Descriptive Statistics of Variables**

	RO CE	RO A	LTOB Q	ESG S	ENV S	SOC S	GOV S	SIZE A	LEV
<b>Mean</b>	11.908	14.575	0.262	57.249	48.094	53.731	67.459	5.232	0.224
<b>Standard Error</b>	0.882	0.62	0.045	0.531	0.906	0.618	0.563	0.052	0.014
<b>Median</b>	9.248	13.443	0.423	56.001	47.499	54.001	69.001	5.052	0.136
<b>Standard Deviation</b>	12.466	8.752	0.647	7.491	12.793	8.72	7.955	0.753	0.241
<b>Sample Variance</b>	155.372	76.618	0.419	56.129	163.633	76.018	63.266	0.569	0.066
<b>Kurtosis</b>	14.701	0.244	0.791	0.145	-0.268	-0.327	0.589	0.189	1.146
<b>Skewness</b>	2.591	0.789	-1.012	0.27	0.289	-0.235	-0.683	0.822	1.257
<b>Range</b>	124.317	43.807	3.293	42.001	63.999	42.999	42.999	3.697	1.231
<b>Minimum</b>	-28.216	-1.895	-1.692	36.999	21.999	29.001	39.999	3.959	0.001
<b>Maximum</b>	96.1	41.911	1.6	79.001	86.001	71.999	83.001	7.658	1.231

**Table 2: Correlation Matrix of variables**

	RO CE	RO A	TOB Q	ESG S	ENV S	SOC S	GOV S	SIZE A	LEV	NOI EC	NOI FIN	NOI FMCG	NOI IT	NOI MM	NOI OP
RO CE	1.00														
RO A	0.83	1.00													
TOB Q	0.49	0.54	1.00												
ESG S	0.06	-0.07	-0.09	1.00											
ENV S	0.18	-0.19	-0.23	0.88	1.00										
SOC S	0.16	-0.14	-0.38	0.70	0.58	1.00									
GOV S	0.23	0.23	0.33	0.65	0.25	0.27	1.00								
SIZE A	0.38	-0.42	-0.76	0.43	0.48	0.61	-0.02	1.00							
LEV	0.47	-0.35	-0.61	0.20	0.24	0.34	-0.14	0.55	1.00						
NOI EC	0.07	-0.13	0.15	0.06	0.04	0.13	0.02	-0.10	-0.22	1.00					
NOI FIN	0.35	-0.38	-0.66	0.42	0.48	0.51	-0.01	0.59	0.58	-0.23	1.00				
NOI FMCG	0.36	0.27	0.28	0.08	0.06	0.3	0.09	-0.23	-0.15	-0.17	-0.17	1.00			
NOI IT	0.07	0.19	0.12	0.24	0.26	0.16	0.14	-0.11	-0.13	-0.1	-0.14	-0.10	1.00		
NOI MM	0.05	0.05	-0.05	0.20	0.18	0.05	-0.16	0.08	0.02	-0.12	-0.14	-0.10	-0.08	1.00	
NOI OP	0.08	-0.08	-0.04	0.08	0.07	0.03	-0.11	0.04	0.11	-0.12	-0.14	-0.10	-0.09	0.02	1.00
NOI RE	0.12	-0.13	-0.02	0.19	0.13	0.22	-0.1	-0.07	-0.14	-0.15	-0.11	-0.09			

The correlation matrix for the variables chosen for the study is shown in Table 2. The investigation finds a number of important connections. The robust positive correlation of 0.83 between RO\_CE and RO\_A suggests that companies with greater returns on capital employed also typically have higher returns on assets. In a similar vein, TOB\_Q exhibits somewhat positive correlations with RO\_CE (0.49) and RO\_A (0.54), indicating a connection between market valuation and profitability.

The ESG\_S score is adversely connected with both RO\_A (-0.07) and TOB\_Q (-0.09), suggesting that there may be a trade-off between ESG success and financial performance. It also shows a minor positive association

with RO\_CE (0.06). ENV\_S and SOC\_S (0.58) and ESG\_S and ENV\_S (0.88) have strong correlations, indicating a close relationship between social and environmental behaviors. The correlation between SIZE\_A and TOB\_Q is negative (-0.76), suggesting that larger companies might have lower market valuations.

## 5. CONCLUSION

The report emphasizes how Environmental, Social, and Governance (ESG) standards are becoming increasingly important in determining how profitable Indian enterprises are. Through an examination of 200 companies over the course of 2020–21, it was discovered that although there was a relatively weak correlation between ESG practices and financial metrics like Return on Assets (ROA) and Tobin's Q (TOB\_Q), individual ESG components, particularly governance, showed a more pronounced positive correlation with financial performance. This implies that good governance procedures can improve financial results, which makes a strong case for businesses to include effective ESG practices.

Furthermore, the study highlights the growing consciousness among Indian enterprises concerning non-monetary aspects and their possible influence on enduring viability. As stakeholders—investors, regulators, and the public at large—become more aware of the significance of ESG practices, firms must implement these frameworks for both compliance and long-term financial success. By highlighting the need for more research to improve knowledge of these links and inform future company strategy, this study adds to the larger conversation on ESG in India.

### 5.1 Limitation of Study

The following could be seen as the study's limitations:

- Analysing panel data may result in different analysis outcomes.
- The data used in the study comes from the year 2020–21, which was unusual for economic activity because of the global Covid-19 pandemic.
- Since the research only uses secondary sources, which have inherent limits, data availability is a big challenge.

### 5.2. Future scope of Research

Although the study is important to a range of stakeholders, it is not thorough enough to address every little detail of ESG-related concerns and how they affect financial performance. Therefore, cross-sectional data based on both primary and secondary sources may be used to conduct more in-depth and inclusive research projects. This analysis offers a basic insight to support future investigations.

## REFERENCES

- Dalal, K. K., & Thaker, N. (2019). ESG and corporate financial performance: A panel study of Indian companies. *IUP Journal of Corporate Governance*, 18(1), 44-59.
- Whelan, T., Atz, U., & Casey Clark, C. F. A. (2021). ESG and Financial Performance. Centre for Sustainable Business, NYU-Stern.
- López-Toro, A. A., Sánchez-Teba, E. M., Benítez-Márquez, M. D., & Rodríguez-Fernández, M. (2021). Influence of ESGC Indicators on Financial Performance of Listed Pharmaceutical Companies. *International Journal of Environmental Research and Public Health*, 18(9), 4556.
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5(4), 210-233.
- Velte, P. (2017). Does ESG performance have an impact on financial performance? Evidence from Germany. *Journal of Global Responsibility*.
- Saygili, E., Arslan, S., & Birkan, A. O. (2021). ESG practices and corporate financial performance: Evidence from Borsa Istanbul. *Borsa Istanbul Review*.

Kotsantonis, S., Pinney, C., & Serafeim, G. (2016). ESG integration in investment management: Myths and realities. *Journal of Applied Corporate Finance*, 28(2), 10-16.

Giese, G., Nagy, Z., & Lee, L. E. (2021). Deconstructing ESG Ratings Performance: Risk and Return for E, S, and G by Time Horizon, Sector, and Weighting. *The Journal of Portfolio Management*, 47(3), 94-111.

Alaye, K., & Hamed, M. (2020). Corporate economic, environmental, and social sustainability performance transformation through ESG disclosure. *Sustainability*, 12(9), 3910.

Nekhili, M., Boukadhaba, A., & Nagati, H. (2021). The ESG–financial performance relationship: Does the type of employee board representation matter? *Corporate Governance: An International Review*, 29(2), 134-161.