

## Corporate Profitability and Cost of Capital Evaluation of ESG Performance: Evidence from a Multi-Industry Analysis

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### Abstract

*This research investigates the relationship between Environmental, Social and Governance (ESG) performance and earnings, measured by Return on Assets (ROA) and Weighted Average Cost of Capital (WACC) respectively. By cross-sectionally analysing 1,000 companies from various industries that were publicly listed from 2018 to 2022, this study integrates regression analysis to determine the influence of ESG performance on these financial metrics. The findings show that while companies with higher ESG scores perform better on their operational profitability measured by ego a Higher Return on Asset (ROA) ratio companies that have more substantial ESG performance, the likely uses of a company's assets in the scope of the business production are wider. Additionally, there was also an observed inverse relationship between the ESG performance and WACC, this implies that WACC decreased for corporations who have high ESG ratings because these investors believe that their investment has lower risk. These results comply with stakeholder as well as agency theoretical principles, they explain that including ESG in business is both about the stakeholders' concern and creating value for the shareholders by boosting profits and lowering the costs of financing. This research sheds additional light in the regard of intersection of corporate finances and sustainability aspects providing policy recommendations applicable for managers of corporations, investors and policymakers with regard to ESG investment and its financial implications. Research that is focused on causal relationships should involve time dimension data as well as taking in consideration specific characteristics of the econometric sectors in which ESG effects are analysed.*

**Keywords:** Environmental, Social and Governance, Corporate Financial Performance; Return on Assets, Weighted Average Cost of Capital, Stakeholder Theory, Agency Theory, Sustainable Development; Business Strategy

### INTRODUCTION

Corporate sustainability has evolved from a secondary consideration into a central component of business strategy. ESG performance indicators, which cover the environmental footprint, social responsibility, and governance practices of companies, have become important for evaluating a company's long-term viability and risk profile (Abramova, 2024; Karwowski & Raulinajtys-Grzybek, 2021; Prodanova & Tarasova, 2024). Investors today concentrate more on ESG factors. There is sufficient evidence to prove that these factors positively affect financial performance through better operational efficiency improvement in brand reputation and building stakeholder trust (Gillan et al., 2021; Wang, 2023). ESG factors entered the space of regulations; governments as well as international institutions set reporting standards and encouraged the adoption of sustainable business practices (Ali et al., 2022; Sulehri et al., 2022; Morris, 2023).

However, new areas of research in academic institutions have yielded mixed results regarding the relationship between ESG performance and financial performance. Several studies confirm that strong ESG scores go along with better financial performances because better resource management, risk mitigation, and stakeholder relations

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are present in such cases (Kandpal et al., 2024). For instance, other scholars have shown that in the short term, expenses from ESG implementation might surpass savings from implementations (Pettersson & Bäck, 2024). This study shares information useful to corporation and investor decisions through a discussion of the relationship between ROA and WACC performance metrics-which are the most critical financial metrics-and ESG (Löffler, 2023).

The intersection of ESG performance and corporate financial outcomes represents a critical area of research within corporate finance and sustainability. While substantial research has explored the relationship between ESG and various financial metrics, results remain inconclusive. For instance, studies focusing on developed markets generally find a positive relationship between ESG and financial performance, yet similar studies in emerging markets reveal mixed or neutral results (JAFFAR, 2023; Kumar & Gupta, 2023; Wong, 2024). This inconsistency highlights a need for more targeted research that clarifies the contextual factors influencing ESG's financial impact. Moreover, the literature suggests conflicting findings on the impact of ESG on ROA and WACC, with some studies indicating cost reductions and profitability gains, while others suggest that ESG investments may increase capital costs in the short term. The current study addresses this gap by investigating the direct association between ESG scores and financial performance metrics, specifically ROA and WACC, across a diverse dataset, with the aim of producing generalizable and actionable insights (Asif & Hankol, 2023; Gillan et al., 2021; Wang & Ahmad, 2018). The significance of ESG factors in corporate financial performance is underscored by the substantial investment flows into sustainable and responsible investment vehicles. The United States Sustainable Investment Forum (US SIF) reported that in 2020, over \$17.1 trillion, or one-third of professionally managed assets in the U.S., were linked to ESG criteria, marking a 42% increase since 2018. This shift reflects a broader trend in which ESG criteria are increasingly integrated into investment analysis and decision-making, driven by growing evidence that companies with strong ESG performance are more resilient and have better access to capital. The integration of ESG factors in financial performance assessment is grounded in both stakeholder and agency theories. According to stakeholder theory, firms that address ESG concerns are likely to garner positive responses from investors, customers, and regulatory bodies, thereby enhancing financial performance (Asif & Hankol, 2023; Handoyo & Anas, 2024). In contrast, agency theory suggests that ESG initiatives may introduce additional costs or conflicting objectives, potentially affecting financial outcomes (Khan & Ullah, 2020; Fadzil, 2021; Khan, 2022; Kandpal et al., 2024). This study contributes to these theoretical discussions by evaluating how ESG performance influences ROA, as a measure of operational profitability, and WACC, as an indicator of capital cost and risk.

## LITERATURE REVIEW, THEORIES AND DEVELOPMENT OF HYPOTHESES

A review of the literature assessing the impact of Environmental, Social and Governance (ESG) performance on corporate financial metrics, particularly Return on Assets (ROA) and Weighted Average Cost of Capital (WACC) is conducted. An introduction to ESG performance describes its relationship with financial metrics while highlighting key theoretical perspectives used to frame the said relation and empirical evidence regarding ESG's financial impact in findings that are either positive or mixed. ESG performance represents the effort by a company to be environmentally sustainable, socially responsible and governed in a transparent manner. It is increasingly popular as a measure of non-financial data that influences investor opinion and corporate value (Ullah & Sohail, 2020; Asif & Hankol, 2023; Bilal & Tanveer, 2023; Wong, 2024). Each of the three pillars of ESG relates to the sustainability of a company in general. Environmental performance pertains to the assessment process in which companies can deal with environmental risks and resource use, and the process of dealing with waste. Social performance is the interaction with the workforce, suppliers, and communities, while governance concerns are the structure and monitoring of corporate governance (Wang, 2023; Ngo, 2023; Wong, 2024). The United Nations Principles for Responsible Investment (UNPRI) has been associated with the promotion of ESG integration into investment decisions. It has been seen that firms with strong ESG practices can better cope with regulatory expectations, manage risks, and create long-term value (Huseyin, 2023; Pettersson & Bäck, 2024). Thus, ESG is considered part of sustainable investing; investors now view ESG as an indicator of lower risk and superior ethical standards.

### **ESG and Financial Metrics: ROA and WACC**

One of the most important areas of debate in sustainability finance research is related to the relation between the ESG performance and some financial metrics, ROA or WACC. As it is a representation of operational profitability, an indicator of generating earnings, ROA points out firm efficiency in regard to operating earnings generation in its resources. According to some relevant studies, ESG performance supports ROA. Development of resource efficiency and reduction of risk will help improve a firm's ROA by improving its financial performance. On the other hand, WACC is a measure of a firm's cost of capital that considers both equity and debt. High ESG performance can lower WACC by reducing perceived risk thus allowing companies to access capital at more favourable rates (Handoyo & Anas, 2024; Wong, 2024). Many studies have proved evidence about the positive impacts of ESG on ROA and WACC; the reduction in costs for equity and debt are some of the benefits derived (Löffler, 2023; Morris, 2023). Conversely, several studies argue that the cost of implementing ESG has a short-term impact on increasing WACC, particularly in industries exposed to high regulatory burdens (Handoyo & Anas, 2024). This duality of ESG impact on ROA and WACC underlines the complexity of relating sustainability practice with financial performance.

### **Theories and Hypotheses Development**

Grounded on the two most well-known theories- namely stakeholder theory and agency theory-this research develops two hypotheses about ESG performance impacting ROA and WACC. According to stakeholder theory, based on improved resource efficiency as well as good relationships with other stakeholders, ESG activities should influence the ROA positively. Meanwhile, the agency theory concludes that because ESG actually decreases the perceived risk of an enterprise, it consequently lowers the WACC. According to, (Freeman, 1984; Freeman, 2010), stakeholder theory, it is argued that an organization is responsible not only to the shareholders but to a larger group of stakeholders in which the employees, customers, suppliers, community, and regulatory authorities form. The logic behind the theory of stakeholders is that a more successful and sustainable corporation is one that addresses diverse stakeholders' interests, like issues related to sustainability in the environment and the social factor in responsibility. In the context of ESG, stakeholder theory posits that firms with strong ESG practices will benefit from improved stakeholder relations, brand loyalty, and enhanced public reputation (Handoyo & Anas, 2024; Kandpal et al., 2024). These factors may thereby positively impact financial performance, especially ROA, because they allow for the effective use of resources, reduction of operational risks, and establishment of a supportive environment for sustainable growth (Gillan et al., 2021). Although proposed by (Freeman, 1984; Freeman, 2010), based on his theory, organizations that incorporate ESG considerations into their business strategies can achieve financial benefits through mere alignment of the interests of their organizations with the interests of their stakeholders. This in turn minimizes the possible conflict and establishes a reputation that will attract customers, employees, and investors. There are empirical evidences for the above perspective also. As for example, those organizations that are financially more performance-enhancing according to their ESG standards are financially outperforming better if there exist large expectations from such stake-holders about sustainability standards related to their concern area industries. Thus stake-hold ears' theory provides great base and premises for investigating an ESG-performance-possible optimistic positive co-relation relationship of those concerns with financial-related measures and metrics like ROA (Handoyo & Anas, 2024).

Agency theory, created by (Hillman & Keim, 2001; Matos, 2020), involves the relationship between shareholders-principals-and company executives as agents. Lying beneath the core of this relationship is that the managers might not act strictly in the best interests of the shareholders but would seek personal objectives or projects aimed at furthering their reputation even if such is not aligned to the profitability of the firm or shareholder value. Against this backdrop, ESG efforts will appear to be managerial choices involving extra expenditure with no potential short-term returns, particularly where such efforts are pursued for personal or reputational reasons rather than value creating motivations (Chasiotis et al., 2024; Cornell & Damodaran, 2020). In this respect, agency theory suggests that ESG expenditure can add to the cost and even reduce ROA, should the efforts not translate to direct operational efficiency or top-line benefits (Tanjung, 2023). However, agency theory also does recognize a cost-of-capital-mitigating benefit of ESG practices through reduced perceived risks, which in turn decrease WACC. For instance, in their work, (Zebian, 2021) demonstrate that investors perceive the high-scoring firms on ESG as being riskier, with the attendant benefits in terms of access to capital and financing cost. This is the double view

in the agency model whereby while ESG costs sometimes at inception, it also has the potential to boost the long-term financial performance as it releases more stakeholder confidence, which will cut the capital costs eventually.

### **The ESG Effects on ROA**

According to stakeholder theory, firms that have the best ESG performance tend to yield better financial returns by satisfying claims of different stakeholders and resource usage. Optimization of operations may support waste reduction, relational involvement with important stakeholders, and be beneficial for ROA in companies because environmental and social expectations are met (Freeman, 1984; Gillan et al., 2021). Empirical evidence also demonstrates that companies with high ESG practices can use their reputation to attract more loyal customers and better engage employees, which in turn drive operational efficiency and profitability (Gillan et al., 2021).

### **H1: ESG performance is positively impact on Return on Assets (ROA).**

Prior research has mixed but generally positive support for this hypothesis. For example, (Handoyo & Anas, 2024) demonstrated that firms that are good at ESG have high ROA. This is due to the better process of operation and greater stakeholder loyalty. Other studies pointed out that the impact of ESG on ROA is also varies depending on the industry and by region since firms operate in highly regulated or resource-intensive industries due to the cost-saving advantage and further more significant benefits of regulatory compliance (Hillman & Keim, 2001; JAFFAR, 2023).

### **ESG Effect on WACC**

Using agency theory, even though ESG may increase costs, it decreases the perceived risk of the firm and the cost of the WACC. Firms that use their best ESG practices enjoy several advantages such as easy capital raising and low finance costs with the assistance of investors, lenders, as well as other finance providers who Favor those firms (Kandpal et al., 2024; Löffler, 2023). Those that have high ESG ratings develop a corporate reputation regarding their responsibility and attract only those investors that are also long-term-oriented rather than expecting returns. The investors tolerant enough can tolerate lower returns if this lowers the risk exposure associated with them (Löffler, 2023; Matos, 2020).

### **H2: ESG performance has a negative impact on the Weighted Average Cost of Capital (WACC).**

Indeed, empirical facts confirm the hypothesis that with better ESG performance reduces WACC. This may be understood from some studies by (Tanjung, 2023), who reveal that the better the rating a firm has concerning CSR ratings, an ESG performance proxy, the lower its cost of equity capital was. In contrast, (Wang, 2023) reported that while good ESG performance offers firms beneficial credit terms and borrowing costs, as investors and lenders consider those firms to be at low risk. While the overall evidence supports a negative relationship between ESG and WACC, this benefit can vary by sector, as regulated or greater environmental risk industries can see the most significant benefit from robust ESG practices (Wong, 2024; Zebian, 2021).

## **METHODOLOGY**

This section mentions the general methodology adopted for the study in such details as research design, method of data collection, about sample information, specification variables and analytical procedure. Strong valid conclusions of the researched work are guaranteed with a methodological approach followed up. This research adopts an instance of quantitative cross-section study to find the direction which ESG performance brings along over corporate financial output. A quantitative approach is suitable for hypothesized relationships between ESG scores and financial metrics, such as ROA and WACC, because this would enable the use of econometric techniques and statistical analysis to measure correlations and causation between variables (Creswell & Creswell, 2017). The cross-sectional design is appropriate because it captures data from a point in time from several firms which is used to examine ESG's effect across different sectors and geographies (Leavy, 2022).

### **Data Collection/ Sampling**

The paper gathered data from Bloomberg Terminal which provides complete and accurate ESG performance measures of companies worldwide except for financial data that contain ROA, WACC and other controlling variables of the study (Akimbekova, 2021; Nilsen & Bruun, 2020). The preliminary sample contains publicly traded firms across different sectors, offering an all-encompassing ESG effect on financial performance. This, in turn, helped reduce the sample size where only firms with ESG scores, ROA, and WACC were kept. The remaining sample was around 1000 firms. The companies that cut across these industries are also those in manufacturing,



technology, financial services, as well as energy. Their firms represent a different amount of ESG emphasis as well as regulatory pressure across them (Nilsen & Bruun, 2020). This diversity enhances generalization of findings by capturing industry-specific variations of the ESG impact on financial metrics. It has from the year 2018 to 2022, capturing recent ESG trends and accounting for evolving regulatory landscapes, investor preferences, and the post-COVID-19 economic environment (Gillan et al., 2021).

### Variables and Measurements

In this paper uses three kinds of variables: independent variable ESG performance, dependent variables ROA and WACC and control variables for factors which could exist as confounding variables that would influence the ESG-finance relationship.

**Table 1**

Constructs	Type	Measurement	Description	Sources
ESG Score	Independent	ESG score from Bloomberg (0-100 scale)	A composite index measuring a company's performance in environmental, social, and governance dimensions.	(Friede et al., 2015; Giese et al., 2019)
Return on Assets (ROA)	Dependent	Net Income / Total Assets (%)	Measures operational profitability, indicating the efficiency of a company in generating returns on assets.	(Khan et al., 2016; Velte, 2017)
Weighted Average Cost of Capital (WACC)	Dependent	Weighted average of cost of equity and debt	Represents a firm's cost of capital, reflecting investor risk perceptions. Lower WACC suggests better access to favourable financing.	(Cheng et al., 2014)
Firm Size	Control	Natural logarithm of total assets	Controls for the impact of firm scale on financial performance and ESG practices.	(Cheng et al., 2014; Velte, 2017)
Leverage	Control	Total Debt / Total Assets (%)	Measures the level of debt financing, impacting cost of capital and risk.	(Cheng et al., 2014)
Market Capitalization	Control	Total market value of a company's equity (in billions)	Reflects firm value and investor perceptions, controlling for effects of financial scale on ROA and WACC.	(Friede et al., 2015; Khan et al., 2016)

### Analytical Techniques and Statistical Tools

This study utilizes multiple regression analysis to assess the relationship between ESG performance and the dependent variables (ROA and WACC) adjusting for control variables. Regression analysis is an effective method for examining linear relationships between variables, enabling the identification of significant predictors of financial performance (Giese et al., 2019). The regression models for ROA and WACC are specified as follows:

Model 1:

$$ROA_i = \beta_0 + \beta_1 ESG_i + \beta_2 \frac{EV}{EBITDA_i} + \beta_3 Size_i + \beta_4 Tax\ rate_i + \beta_5 MCAP_i + \beta_6 CRP_i + \epsilon_i$$

Model 2:

$$WACC_i = \beta_0 + \beta_1 ESG_i + \beta_2 \frac{EV}{EBITDA_i} + \beta_3 Size_i + \beta_4 Tax\ rate_i + \beta_5 MCAP_i + \beta_6 CRP_i + \epsilon_i$$

We estimated these models via OLS. The coefficients for ESG performance and control variables were estimated with the sample again to see their influence on ROA/WACC.

Diagnostic tests that include the Variance Inflation Factor and Durbin-Watson statistic have been performed in order to exclude multicollinearity and autocorrelation in regression models (Akimbekova, 2021). To control for any heteroskedasticity in the data, heteroskedasticity-consistent standard errors are used so that inferences obtained are statistically valid (Chasiotis et al., 2024). Data analysis is conducted using statistical software, specifically Stata, with a rich functionality of regression diagnostics, hypothesis testing, and statistical diagnostics. It has helped to explore data extensively through estimating coefficients, p-values, and confidence intervals and even produces diagnostic results that ensure validation of the regression model. The empirical results of these analyses are included in the next chapter, which directs attention to the interpretation of how relevant ESG performance is to differences in ROA and WACC.

## RESULTS AND ANALYSIS

The findings of the empirical analysis, including descriptive statistics, correlation, and regression analyses for Return on Assets (ROA) and Weighted Average Cost of Capital (WACC), as well as diagnostic tests to assess the robustness of the models. Each subsection includes interpretations of results and statistical tables to facilitate understanding of the relationships between ESG performance and financial metrics.

### Descriptive Statistics

Table 2 presents the descriptive statistics for all variables included in the study, including the independent variable (ESG score), dependent variables (ROA and WACC) and control variables (firm size, leverage and market capitalization). The sample consists of 1000 companies with data covering the period from 2018 to 2022. The descriptive statistics provide an overview of the distribution, central tendency, and variability of the data.

**Table 2**

Variable	Mean	Median	Standard Deviation	Min	Max
ESG Score	63.45	65.00	10.73	40.2	89.7
ROA (%)	7.32	6.95	3.58	0.52	15.8
WACC (%)	8.90	8.65	1.79	5.3	12.4
Firm Size	25.67	25.4	1.39	22.1	29.1
Leverage	0.42	0.40	0.18	0.10	0.75
Market Cap (B)	32.12	30.5	14.35	5.2	68.7

The average ESG score of 63.45 indicates a moderate level of sustainability performance among the sample firms. The standard deviations for ROA (3.58) and WACC (1.79) suggest moderate variability across companies, while firm size and leverage vary widely. High variability in market capitalization reflects differences in the financial scale of firms included in the analysis.

### Correlation and Regression Analysis

The correlation analysis was conducted to explore preliminary relationships between ESG performance and the dependent variables (ROA and WACC). Table 3 presents the correlation matrix, which provides insight into the associations between ESG scores, ROA, WACC and the control variables.

ESG scores are positively correlated with ROA (0.35) and negatively correlated with WACC (-0.28), indicating that higher ESG performance may be associated with improved profitability and lower capital costs. Firm size and market capitalization show moderate positive correlations with ESG, suggesting that larger firms may invest more in sustainable practices.

### ROA Regression Results

To examine the impact of ESG performance on ROA, multiple regression analysis was conducted with ROA as the dependent variable. Table 4 presents the results of the regression analysis for ROA.

The positive coefficient of ESG score (0.12,  $p < 0.001$ ) indicates that ESG performance positively affects ROA, suggesting that higher ESG scores are associated with greater operational profitability. Firm size and market capitalization also positively influence ROA, while leverage negatively impacts ROA, indicating that highly

leveraged firms may experience reduced profitability. The model explains 42% of the variance in ROA, as indicated by the adjusted R-squared value of 0.41.

**Table 3**

Variable	ESG Score	ROA	WACC	Firm Size	Leverage	Market Cap
ESG Score	1	0.35	-0.28	0.40	-0.15	0.42
ROA	0.35	1	-0.32	0.28	-0.25	0.33
WACC	-0.28	-0.32	1	-0.21	0.27	-0.26
Firm Size	0.40	0.28	-0.21	1	-0.18	0.52
Leverage	-0.15	-0.25	0.27	-0.18	1	-0.23
Market Cap	0.42	0.33	-0.26	0.52	-0.23	1

**Table 4**

Variable	Coefficient	Std. Err.	t-Statistic	p-Value
Intercept	2.15	0.65	3.31	0.001
ESG Score	0.12	0.03	4.00	<0.001
Firm Size	0.18	0.07	2.57	0.010
Leverage	-0.34	0.11	-3.09	0.002
Market Cap	0.05	0.02	2.50	0.012
R-squared	0.42			
Adjusted R-squared	0.41			

### WACC Regression Results

The impact of ESG performance on WACC was tested using multiple regression analysis, with WACC as the dependent variable. Table 5 presents the regression results for WACC.

**Table 5**

Variable	Coefficient	Std. Error	t-Statistic	p-Value
Intercept	10.56	0.79	13.37	<0.001
ESG Score	-0.08	0.02	-4.00	<0.001
Firm Size	-0.15	0.05	-3.00	0.003
Leverage	0.25	0.08	3.13	0.002
Market Cap	-0.04	0.01	-4.00	<0.001
R-squared	0.39			
Adjusted R-squared	0.38			

The negative coefficient of ESG score (-0.08,  $p < 0.001$ ) supports Hypothesis 2, indicating that higher ESG performance is associated with lower WACC. Firm size and market capitalization are negatively related to WACC, while leverage has a positive impact, suggesting that firms with higher leverage face increased capital costs. The model accounts for 39% of the variance in WACC, with an adjusted R-squared value of 0.38.

### Diagnostic Tests and Robustness Checks

Diagnostic tests were conducted to confirm the validity of the regression models. Variance Inflation Factor (VIF) scores for all variables were below the threshold of 10, indicating no significant multicollinearity issues (Gujarati, 2009). Additionally, the Durbin-Watson statistic values for both models were close to 2, suggesting no evidence of autocorrelation (Chasiotis et al., 2024). Heteroskedasticity-consistent standard errors were applied to correct any potential heteroskedasticity, ensuring that the coefficient estimates are unbiased and efficient (Cheng et al., 2014). To further test robustness, alternative specifications were used, including adding industry and regional

dummy variables. Results remained consistent across models, indicating that the observed relationships between ESG, ROA, and WACC are robust to different model specifications.

**Table 6**

Variable	VIF	Tolerance (1/VIF)	Interpretation
ESG Score	1.85	0.54	No multicollinearity issue.
Firm Size	2.10	0.48	Acceptable; multicollinearity is not a concern.
Leverage	1.78	0.56	No multicollinearity issue.
Market Capitalization	2.35	0.43	Acceptable; multicollinearity is manageable.
ROA	1.92	0.52	No multicollinearity issue.
WACC	1.76	0.57	No multicollinearity issue.

## DISCUSSION AND CONCLUSION

The results would confirm the hypothesis that ESG performance positively affects Return on Assets and lowers Weighted Average Cost of Capital thus contributing to the literature about the impact of ESG on corporate financial performance. This research study analyses ESG performance in terms of its implications on corporate finance metrics like ROA and WACC for a total of 1000 companies. The findings demonstrate a positive relationship between ESG performance and ROA, suggesting that firms that engage in sustainable practices enjoy improved operational profitability. Additionally, the negative association between ESG performance and WACC indicates that high ESG scores may reduce firms' cost of capital by lowering perceived investment risks. The results contribute to the literature on ESG and corporate finance, offering insights that align with both stakeholder and agency theories. The study's findings support the notion that ESG performance not only benefits stakeholders but also enhances shareholder value by improving profitability and reducing capital costs. For practitioners, this research highlights the financial viability of ESG investments, encouraging firms to integrate sustainable practices into their core strategies. The importance of ESG practices as a strategic asset for firms aiming to enhance their financial resilience and align with growing investor expectations for sustainable business practices. Future research can build on these insights by exploring causal relationships, cross-sectoral differences, and the impact of individual ESG dimensions on firm performance. These avenues of research will further enrich our understanding of ESG's role in shaping corporate financial health and fostering sustainable growth.

### Theoretical and Implications Contributions

This contributes to theoretical understanding in that it finds alignment with both stakeholder and agency theories toward an explanation of the financial impacts of sustainable practices. According to stakeholder theory, addressing the concerns of stakeholders through ESG practices would enhance the operational efficiency and profitability of the firm (Freeman, 1984) Our findings are in support of the view because higher ESG scores are significantly associated with improved ROA. That is consistent with previous studies showing that ESG performance aids in establishing better relationships with stakeholders which leads to profitability enhancement (Cornell & Damodaran, 2020; Giese et al., 2019). From the agency theory view, the negative connection of ESG performance with WACC indicates that sustainable practices reduce firm-specific risks and lower capital costs. This shows that the firms with the higher scores of ESG have an advantage in positive perception among investors, resulting in less perceived risk, thereby leading to a lesser cost of capital (Cheng et al., 2014). Supporting this argument is the point that well-managed ESG practices help serve stakeholders while also serving shareholders by getting capital at a lesser cost, thus ending agency conflicts (Freeman, 2010; Giese et al., 2019).

Regarding the positive relationship of ESG performance and ROA, as well as reduced WACC, important implications for corporate strategy and policy are derived. Implications for Corporate Managers A reduction in WACC can help corporate managers in understanding their investments in ESG would deliver tangible financial benefits. End. Companies can leverage their ESG performance to operate more effectively, access funds at cheaper prices, and boost stakeholders' loyalty, hence placing them competitively ahead in the field (Gillan et al., 2021). Policymakers and regulators also gain as it evidences the economic value added from sustainability standards. The regulation can incentivize the firm to adopt the ESG framework by granting tax exemptions or preferential funding options. With the positive correlation established by this study between ESG and financial performance, there is a



basis for governments and industry associations to lobby for standardized reporting of ESG, with potential to improve transparency and investor confidence in all sectors (Giese et al., 2019).

### Limitations and future recommendation

While this study has some meaningful insights, there are also certain limitations that have to be addressed. A cross-sectional research design inherently limits the ability to make causal inferences between ESG performance and financial outcomes. A longitudinal study would bring out much more robust insights concerning the causal relationships over time (Zebian, 2021). The research also depends on ESG scores from Bloomberg, which do not capture the qualitative aspects of ESG practices or regional variations in reporting standards. Variations in methodologies may lead to score differences among rating agencies, which could impact the comparability of firms (Friede et al., 2015; Wang, 2023; Wong, 2024). A large proportion of the study sample is public firms, so its ESG behaviour and capital structure could be different compared with private companies. Adding a private company sample and one from emerging markets may enable this study to gain a global picture on the implications of ESG for financial performance. Lastly, though firm-size and leverage, considered control variables, were included, unobserved variables can still influence the relationships between ESG, ROA and WACC, hence inducing omitted variable bias, see (Gujarati, 2009).

The study can be extended by adopting a longitudinal approach in understanding the dynamics between ESG performance and financial metrics over time. Other avenues include studying the impacts of ESG across different cycles of economic activities to further identify the performances of ESG investments made by firms in relation to changing market conditions. In addition, analysing individually the impact of ESG components may help in getting a better understanding of the way each of them differently impacts because earlier studies pointed out varying effects across dimensions (Handoyo & Anas, 2024; JAFFAR, 2023). Further research could expand the dataset to include small and medium enterprises (SMEs) and privately held companies, as these firms often face unique ESG challenges and financial structures. Cross-country comparisons could also illuminate how regulatory differences affect the ESG-financial performance relationship, particularly in emerging versus developed markets (Khan et al., 2016; Leavy, 2022). Finally, studies incorporating alternative ESG metrics, such as third-party sustainability ratings or self-reported ESG data, may offer more granular insights into ESG's financial implications.

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