

Environmental, Social and Governance (ESG) and Firm Performance: Empirical Evidence from India

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By

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DECLARATION

I hereby declare that the work reported in the Ph.D. thesis entitled “**Environmental, Social and Governance (ESG) and Firm Performance: Empirical Evidence from India**” submitted to Delhi School of Management, Delhi Technological University, is an authentic record of my work carried out under the supervision of Dr. Archana Singh and Dr. Deepali Malhotra. I have not submitted this work elsewhere for any other degree or diploma. I am fully responsible for the contents of my Ph.D.

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CERTIFICATE

This is to certify that the work embodied in the thesis entitled “**Environmental, Social and Governance (ESG) and Firm Performance: Empirical Evidence from India**” is done by Priyanka Aggarwal as a Full-time scholar in the Department of Delhi School of Management, Delhi Technological University and is the original work carried out by her under our supervision.

This work is based on original research, and the matter embodied in this thesis has not been submitted earlier for the award of any degree or diploma to the best of our knowledge and belief.

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ABSTRACT

India, as the world's fifth-largest economy and home to over 1.4 billion people, faces unprecedented sustainability challenges while pursuing rapid economic growth. Recent regulatory developments, including SEBI's mandatory Business Responsibility and Sustainability Reporting (BRSR) framework and the Companies Act 2013's CSR provisions, have positioned India at the forefront of emerging market ESG integration (Bergman et al., 2019). Despite this regulatory momentum, India ranks 120 out of 165 countries on Sustainable Development Goals progress (Sultana, 2021), revealing a critical implementation gap between policy intent and ground reality. Furthermore, while global ESG research has proliferated, emerging markets—particularly India—remain significantly underexplored, with existing literature predominantly focusing on developed economies (Alshehhi et al., 2018). This geographic concentration creates a substantial knowledge gap, as institutional differences in emerging markets may fundamentally alter ESG-performance relationships compared to Western contexts. Against this backdrop, the present study addresses critical research gaps identified through systematic literature review. First, despite extensive scholarly attention, the ESG-firm performance relationship remains inconclusive, with evidence suggesting positive (Kim & Li, 2021), negative (Saygili et al., 2022), and neutral (Chen et al., 2021) associations. Second, limited research investigates mediating and moderating mechanisms explaining when, how, and why ESG affects performance (Duque-Grisales & Aguilera-Caracuel, 2019; Gao et al., 2019). Third, most studies focus on aggregate ESG scores rather than dissecting individual Environmental, Social, and Governance pillars, despite each potentially exerting unique influences (Dong et al., 2022; Zhou et al., 2022; Paolone et al., 2021). Fourth, prior research employs either accounting-based or market-based performance measures, but rarely integrates both perspectives comprehensively (Carnini Pulino et al., 2022; Richard et al., 2009). Fifth, ESG research predominantly relies on regression analysis, while mixed-method approaches capitalizing on qualitative and quantitative strengths remain unexplored (Dawadi et al., 2021; Malina et al., 2011). Lastly, the geographic concentration in developed markets leaves emerging economies underrepresented in ESG discourse (Sultana et al., 2018). To address these gaps, this comprehensive study

investigates the relationship between ESG practices and firm performance among NIFTY 500 companies in India from FY 2015 to FY 2023, employing a sequential mixed-methods approach. The research encompasses three distinct yet interconnected analytical phases: text mining analysis of sustainability reports from 269 companies to examine ESG behavioral patterns, panel data regression modeling to establish empirical relationships between ESG dimensions and performance metrics, and qualitative case studies with ESG professionals from 11 top-performing firms to explore implementation strategies and challenges. The text mining analysis conducted using Orange software with a minimum 1,000-occurrence frequency threshold applied to over 200,000 keyword instances, reveals that Governance dominates ESG discourse, followed by Social and Environmental dimensions, indicating Indian corporations' emphasis on transparency, oversight mechanisms, and stakeholder engagement. The quantitative analysis examines relationships between ESG performance—measured through standardized Bloomberg ESG scores (Tamimi & Sebastianelli, 2017; Shaikh, 2022)—and three dimensions of corporate outcomes: financial performance (revenue growth, profit margins, ROA, ROE, ROCE), market performance (Tobin's Q, P/E ratio, P/B ratio, EV/EBITDA), and shareholder value creation (EVA, MVA). Addressing the mechanisms gap, the study incorporates moderating variables (financial slack, internationalization, board gender diversity) and mediating variables (operational efficiency, innovation, risk management) to understand when and how ESG initiatives translate into performance improvements. Empirical findings demonstrate that ESG impacts are highly contextual, with substantial heterogeneity across ESG components, performance metrics, and industry classifications. Consumer non-cyclical industries consistently exhibit the most positive ESG-performance relationships, while basic materials sectors face inherent implementation challenges, thereby explaining previous contradictory findings through sectoral analysis. Individual component analysis—examining Environmental, Social, and Governance pillars separately—reveals that Governance and Social dimensions exert stronger influence on firm performance compared to Environmental factors (Cek & Eyupoglu, 2020; Paolone et al., 2021), potentially reflecting India's position on the Environmental Kuznets Curve where environmental investments have not yet reached the turning point for positive financial returns (Vasanth et al., 2015;

Alam & Adil, 2019). Financial slack emerges as a significant moderator in five industries, while internationalization demonstrates complex moderation patterns with positive effects in four industries but negative effects in three sectors (Duque-Grisales & Aguilera-Caracuel, 2019). Board gender diversity positively moderates relationships in technology, consumer non-cyclical, and utilities sectors (Zhu & Chen, 2024; Romano et al., 2020). Operational efficiency shows the strongest mediation effects, positively mediating across six sectors (Wang et al., 2025; Iazzolino et al., 2023), while innovation and risk mediation reveal sector-specific patterns (Tang, 2022; He et al., 2023). The qualitative case study analysis, employing reflexive thematic analysis through NVivo 14 on semi-structured interviews with ESG professionals, yields seven major themes: organizational understanding and perspective of ESG, environmental practices and climate disclosures, social impact and community initiatives, governance structures and board composition, barriers to strategic ESG adaptation, mitigation strategies for ESG implementation, and emerging opportunities in ESG evolution. The findings reveal a significant evolution from compliance-driven approaches toward strategic integration where sustainability creates shared value for stakeholders (Cornell & Shapiro, 2020; Zumente & Bistrova, 2021). Despite sophisticated implementation approaches, persistent barriers include data management challenges (fragmented data, varying formats, manual processes) and supply chain control issues. Successful firms deploy technological solutions (AI, blockchain, enterprise systems), systematic stakeholder engagement, and capacity building mechanisms to overcome these challenges. This research makes several theoretical contributions by demonstrating how Indian firms adapt global ESG frameworks to local institutional contexts, revealing the differential impacts of individual ESG pillars on various performance dimensions through disaggregated analysis (addressing the aggregate score limitation identified by Dong et al., 2022), and identifying critical moderating and mediating mechanisms that influence the ESG-performance nexus. Methodologically, the study advances ESG research by employing a comprehensive 13-indicator performance framework spanning financial metrics (seven indicators), market measures (four indicators), and value-based metrics (two indicators), thereby addressing the narrow measurement approach prevalent in prior literature (Alshehhi et al., 2018; Rothaermel, 2017). The sequential mixed-

methods design provides both breadth through quantitative patterns and depth through qualitative implementation insights, responding to calls for methodological pluralism in ESG research (Malina et al., 2011; Leech & Onwuegbuzie, 2010). Practical implications include sector-specific implementation guidelines for corporate managers recognizing that optimal ESG strategies vary by industry context, evidence-based insights for investors seeking sustainable portfolio construction that accounts for sectoral heterogeneity, and policy recommendations for regulatory standardization balancing uniformity with sectoral flexibility. The study's social impact extends beyond corporate boardrooms, as documented ESG integration in workforce wellbeing, community development, and inclusive growth initiatives suggests that sustainable business practices can create virtuous cycles where corporate profitability aligns with social welfare, contributing to India's broader sustainable development goals and potentially accelerating progress from its current 120th global ranking (Sultana, 2021). By providing comprehensive empirical evidence from India's emerging market context, this research fills a critical geographic gap in ESG literature while offering actionable insights for stakeholders navigating the complex landscape of sustainable business practices in developing economies.

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LIST OF ABBREVIATIONS

Abbreviation	Full Form of Abbreviation
ESG	Environmental, Social and Governance
CSR	Corporate Social Responsibility
E	Environmental
S	Social
G	Governance
GRI	Global Reporting Initiative
IFRS	International Financial Reporting Standards
CDP	Carbon Disclosure Project
SASB	Sustainability Accounting Standards Board
TCFP	Task Force on Climate-related Financial Disclosures
S&P Global	Standard & Poor's Global
MSCI	Morgan Stanley Capital International
UN	United Nations
MCA	Ministry of Corporate Affairs
SEBI	Securities and Exchange Board of India
BRR	Business Responsibility Reporting
BRSR	Business Responsibility and Sustainability Reporting
EU	European Union
NVGs	National Voluntary Guidelines
PwC	PricewaterhouseCoopers
ROA	Return on Assets
ROE	Return on Equity
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization

EVA	Economic Value Added
MVA	Market Value Added
ROCE	Return on Capital Employed
P/E	Price-to-Earnings Ratio
P/B	Price-to-Book Value Ratio
EV	Enterprise Value
CMIE	Centre for Monitoring Indian Economy
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
TCCM	Theory–Context–Characteristics–Methodology
EM	Expectation Maximization
BN-TAN	Bayesian Network Classifiers with Tree Augmented Naïve Bayes
PLS	Partial Least Squares
NSE	National Stock Exchange
SDGs	Sustainable Development Goals
CEO	Chief Executive Officer
CFO	Chief Financial Officer
ROIC	Return on Invested Capital
NOPAT	Net Operating Profit After Tax
NLP	Natural Language Processing
NBFCs	Non-Banking Financial Companies
HTML	HyperText Markup Language
URL	Uniform Resource Locator
NIFTY	National Stock Exchange Fifty
HDFC	Housing Development Finance Corporation
COVID	Coronavirus disease
ITC	India Tobacco Company
Co	Company

MMTC	Metals and Minerals Trading Corporation of India
ONGC	Oil and Natural Gas Corporation
ICICI	Industrial Credit and Investment Corporation of India
SBI	State Bank of India
HDFC	Housing Development Finance Corporation
LIC	Life Insurance Corporation of India
HCL	Hindustan Computers Limited
NTPC	National Thermal Power Corporation
GAIL	Gas Authority of India Limited
JSW	Jindal South West
IT	Information Technology
AI	Artificial Intelligence
ISO	International Organization for Standardization
SOPs	Standard Operating Procedures
SAP	Systems, Applications & Products in Data Processing
ERP	Enterprise Resource Planning

CHAPTER 1

INTRODUCTION

The opening chapter discusses the concept of Environmental, Social and Governance (ESG) and firm performance. The chapter goes on to outline the purpose and rationale of the study and the research approach employed to fulfill these objectives. The chapter concludes with an overview of the work carried out in each chapter of the thesis.

1.1 Background of the study

The global business environment has undergone a revolutionary transformation, with businesses shifting their focus from individualistic financial objectives to broader ESG objectives (Zumente & Bistrova, 2021; Zhou et al., 2022; Jinga, 2022). The transformation is a paradigm shift in the definition and assessment of business success of corporations from financial to include sustainability and social contributions. The exceptional expansion of industrial and service sectors has imposed excessive pressure on environmental resources and social infrastructure, leading to a transformation in the business environment (Sadiq et al., 2022). Recent global events such as unprecedented weather and the COVID-19 pandemic have further highlighted the vulnerability of the business environment worldwide and initiated further controversy as to the ESG parameters (Habib, 2023; Boffo & Patalano, 2020; Liu et al., 2023). Over the last ten years, ESG factors have increased exponentially from peripheral concerns to core pillars of corporate strategy and stakeholder engagement (Almnadheh et al., 2025; Yoo, 2025; Wong et al., 2023). ESG integration has been accepted as a core aspect of long-term value creation, risk management and corporation legitimacy (Cornell & Shapiro, 2020; Zumente & Bistrova, 2021). ESG was initially initiated by the United Nation in 2004 based on the report "Who Cares Wins". ESG principles revolve around the strategy that firms, investors, and policymakers have pursued in terms of sustainable development and responsible business. ESG frameworks help organisations navigate their impact on the environment, society, and internal governance, with increasing evidence supporting the relationship between the application of ESG practices and financial performance as well as risk management. Corporate sustainability risks have been increasingly in

the spotlight (Kell, 2022; Ferriani & Natoli, 2020) and encompass transition risks of moving towards a low-carbon economy, physical asset risks from climate events, and reputational risks (Farnham, 2021). Increasing importance on ESG is because there has been rising awareness among companies and investors on the financial consequences of sustainability-related opportunities and risks (Gibson & Krueger, 2017; Boffo & Patalano, 2020; Park & Jang, 2021; Minkkiinen et al., 2022)

1.1.1 ESG Concept and Measurement

ESG framework has become a cornerstone in promoting sustainable development globally. Despite the growing literature on ESG, till date, there hasn't been any unanimity and agreement relating to ESG concept (Boffo & Patalano, 2020; Atz et al., 2022; Whelan & Atz, 2021). Initially proposed in 2004, ESG principles have evolved to address the interconnectedness of environmental, social, and governance issues, influencing both corporate strategies and investment decisions worldwide (Li et al., 202; Kazantsev & Goncharova, 2024). ESG is a valuation technique that incorporates environmental, social, and governance issues into investment decisions. It allows financial analysts to interpret corporate responsibility factors as market signals, transforming responsible investment from a moral endeavour into a speculative valuation practice (Leins et al., 2021). The ESG concept originated from the broader sustainable development goals set by the United Nations, aiming to balance current and future needs while considering limited resources. The evolution of ESG can be divided into two main stages: the initial formation of sustainable development concepts from 1987 to 2004, and the subsequent introduction and widespread recognition of ESG principles from 2004 onwards (Kazantsev & Goncharova, 2024). ESG investing has evolved from Corporate Social Responsibility (CSR), shifting focus from external corporate impacts to the financial implications of ESG issues for investors (Macneil & Esser, 2021). ESG is a method for assessing the extent to which a corporation pursues social purposes beyond its responsibility to maximise profits for the benefit of its shareholders (Peterdy, 2022). The ESG perspective emphasises social objectives beyond the traditional financial objectives of the

companies and has a great impact not just in production but more importantly on supply chain, resources allocation, marketing channels, and customer networking within and across global markets (Drempetic et al., 2020). The three-factor ESG has been considered salient in the entire society, including policymakers and social activists, but has become particularly critical in the area of investment (Al-Shaer & Zaman, 2019; Benlemlih et al., 2018). ESG metrics have been derived from reports and news articles, evaluating the company in different sustainability and social impact aspects (Benlemlih et al., 2018; Drempetic et al., 2020; Friede et al., 2015; van Duuren et al., 2016). Thus, the information on corporate non-financial practices can be summarized through ESG pillars. Each component plays a distinct role in assessing a company's operations and its broader impact on society and the environment. Environmental component focuses on a company's impact on the natural environment. It includes factors such as climate change, carbon emissions, resource usage, waste management, and energy efficiency. Environmental indicators are crucial for long-term performance as they address cumulative issues like carbon emissions that can erode long-term sustainability (Giese et al., 2020; Yang et al., 2023). The social component examines a company's relationships with its employees, suppliers, customers, and communities. It includes issues like labor practices, human rights, community engagement, and customer satisfaction. While social indicators have shown varying significance in financial performance, they are essential for social recognition and sustainable development (Yang et al., 2023; Liu et al., 2022; Robert et al., 2021). Governance involves the internal systems of practices, controls, and procedures a company adopts to govern itself, make effective decisions, comply with the law, and meet the needs of external stakeholders. Governance indicators are often the most significant in the short term due to their immediate impact on event risks like fraud, which can affect stock prices (Lopez-de-Silanes et al., 2024; Giese et al., 2020). Figure 1.1 gives an overview of some of the popular the E, S and G factors that are considered. Proponents of ESG-style management typically pitch it as something revolutionary and novel. Yet, they rarely cite the long history of its antecedent theories, including “CSR”, “corporate social performance”, “socially responsible

investing”, “stakeholder capitalism”, “shared value creation”, the “triple bottom line” and “impact investing” among others. The only thing that has remained constant throughout the lengthy history of ESG and its forerunner concepts, in both academic literature and business research, has been the discontent voiced by management, finance, and economics experts about the confusion they engender regarding ESG. It is more accurate to state that the several iterations have yet to point in any clear direction, despite the fact that proponents of the system insist that its long history is one of incremental refinement and advancement toward a better system. Thus, despite the longstanding, substantial, and increasing academic interest in why firms might conduct ESG, reflecting its significance to practitioners, government, and communities more broadly, the field remains fragmented (Carroll & Shabana, 2010; Aguinis & Glavas, 2012; Mattingly, 2015; Huang, 2019).

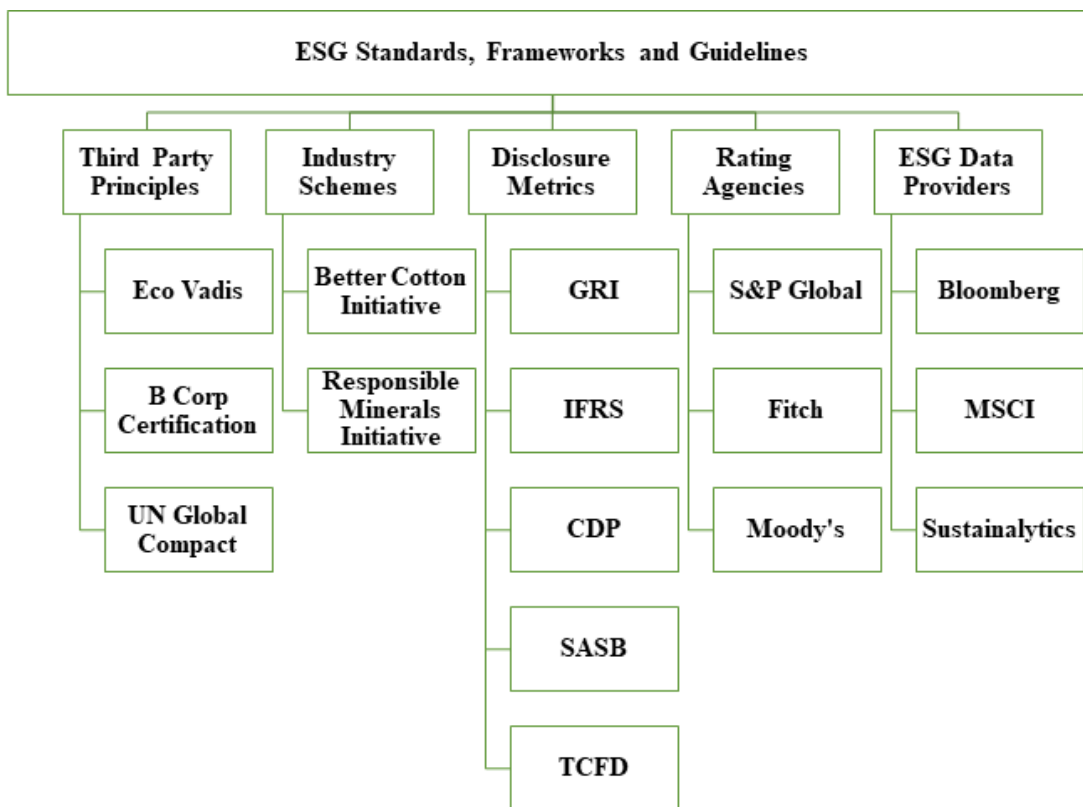
ESG scores are increasingly used to evaluate the sustainability and ethical impact of companies. However, the measurement of ESG scores is complex and often inconsistent, leading to challenges in their application and interpretation. There are various ESG standards, guidelines, and frameworks that businesses can follow to ensure transparency, accountability, and sustainability (see Figure 1.2). These can be categorised into third-party principles, industry schemes, disclosure metrics, rating agencies, and ESG-exclusive data providers. Third-party principles, such as EcoVadis, B Corp certification, and the United Nations Global Compact, help businesses commit to established sustainability guidelines through external audits or certifications. Industry schemes, like the Better Cotton Initiative and Responsible Minerals Initiative, offer sector-specific ESG frameworks that companies can adopt to align with best practices. To enhance comparability and consistency of ESG reporting, organisations utilise disclosure metrics such as GRI, IFRS, CDP, SASB, and TCFD. Credit rating agencies such as S&P Global, Fitch and Moody's, besides these, also give ESG ratings based on the risk exposure of a firm relative to its industry counterparties. Besides these, independent ESG data providers such as Bloomberg, MSCI and Sustainalytics offer specialised ESG ratings and analysis to help investors

and stakeholders assess corporate sustainability efforts. For our research, we will utilise Bloomberg ESG scores because they are among the most diversified and used in the market. Bloomberg gathers ESG information from publicly available releases and reports from companies, hence making it transparent and credible. Furthermore, its extensive coverage of several industries and geographies makes it a good candidate for ESG performance benchmarking. Bloomberg's ESG scores are the collective measure of a company's sustainability initiatives, incorporating a wide range of environmental, social, and governance issues. The scores are employed to measure firms' disclosure and transparency procedures, with higher scores indicating higher transparency and potentially higher firm value (Machmuddah & Wardhani, 2020; Tamimi & Sebastianelli, 2017; Yu et al., 2018). Using the data from Bloomberg ensures that we have an objective, data-based framework for measuring ESG performance, which is significant for our research



Source: Author's Contribution

Figure 1.1: Environmental, Social and Governance Factors



Source: Author's Contribution

Figure 1.2: ESG Standards, Frameworks and Guidelines

1.1.2 Firm Performance

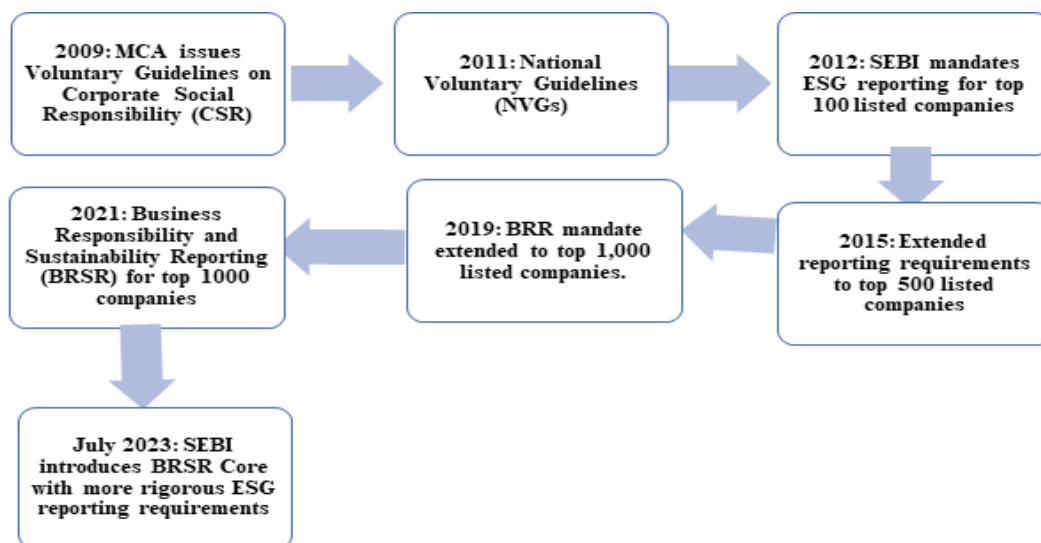
Firm performance measurement is a critical aspect of strategic management, providing insights into a company's efficiency, effectiveness, and overall success. In an increasingly complex and competitive business environment, firms must continuously assess their performance to adapt and thrive. This involves using various models and metrics to evaluate different dimensions of performance, ensuring alignment with strategic goals and improving decision-making processes (Selvam et al., 2016). In spite of its relevance, there is hardly any consensus about its definition, dimensionality and measurement, which limits advances in research. Freeman (1984) defined firm performance as “the total value created by the firm through its activities, which is the sum of the utility created for each of a firm's legitimate stakeholders”. Profitability and Growth are traditional measures of financial performance often assessed using financial ratios such as Earnings Before Tax-to-Equity Ratio and Net Profit Margin, which are crucial for predicting firm performance (Delen et al., 2013;

Santos & Brito, 2012). Firm performance can be defined and measured in terms of profitability, growth, market value, total return on shareholder, economic value added, customer satisfaction, and based on the stakeholders' expectations (Carroll, 2004). Selvam et al., 2016 identified the following determinants for firm performance: profitability performance, growth performance, market value performance, customer's satisfaction, employee's satisfaction, environmental performance, environmental audit performance, corporate governance performance and social performance. Rothaermel (2017) developed a model of firm performance considering three standard performance dimensions – accounting profitability, shareholder value and economic value, as well as integrating the balanced scorecard and triple bottom line frameworks. In this study, we measure firm performance through financial performance, market performance and shareholder value creation (Rothaermel, 2017; Cornell & Damodaran, 2020; Carroll, 2004).

1.1.3 Timeline of ESG Regulations in India

India's ESG reporting landscape has undergone a remarkable transformation over the past decade and a half, progressing from voluntary guidelines to mandatory comprehensive reporting (see Figure 1.3). The journey began in 2009 with the Ministry of Corporate Affairs' (MCA) initial voluntary guidelines on CSR, followed by the National Voluntary Guidelines in 2011 that established an initial reporting framework. By 2012, SEBI took a significant step by mandating Business Responsibility Reports (BRR) reporting for the top 100 listed companies, focusing on ESG reporting (Chakrabarti & Gupta, 2023). The filing requirement of BRRs was increasingly made compulsory for the top 500 listed companies in 2015 and top 1000 listed companies in 2019 (Varottil, 2023; Dayanandan et al., 2023). SEBI launched Business Responsibility and Sustainability Reporting (BRSR) in 2021 in place of BRR for top 1,000 listed companies with more stringent ESG disclosure norms (Varottil, 2023). The compulsory phase of full reporting began in July 2023 with the launch of SEBI's BRSR Core with more stringent ESG reporting norms. It is being rolled out in phases: top 150 companies in 2023-2024, top 250 companies in 2024-2025, and then covering top 500 companies by 2026-2027 (Rebello, 2025; SEBI, 2023). This phase-by-phase roll-out is an indication of India's incremental approach to

the holistic ESG transparency and accountability of its business environment. The progression is a reflection of India's strategic response to sustainability, fueled by international investor expectations, climate change imperatives, and the imperative of transparent corporate action. This process of regulation is a part of India's wider commitment to sustainable development, in line with worldwide efforts such as the UN Sustainable Development Goals and in preparation for international challenges such as the EU's Carbon Border Adjustment Mechanism. The framework not only seeks to encourage corporate transparency but also prepares Indian business houses to compete on an even level in an internationally aware marketplace. Key drivers include the mitigation of climate vulnerabilities, the promotion of social inclusivity, and the establishment of good governance practices. As the process of regulation continues to evolve, ESG is becoming increasingly important as a consideration in India's economic strategy, attracting in global capital and the shaping of responsible business conduct.



Source: Author's Contribution

Figure 1.3: Timeline of ESG regulations in India

1.2 Rationale of the Study

The metrics against which organisations are evaluated have changed immensely. Globally, there has been an increasing acknowledgment of the material financial and economic consequences of ESG, with numerous international agencies and financial

authorities studying ESG and firm performance related topics, including regulation and supervision. Commitment to transformation and sustainability is essential for any organisation to develop into a resilient enterprise. Organisations must recognise that to cultivate resilience and enhance stakeholder engagement, it is essential to prioritise the integration and establishment of ESG frameworks that include a robust corporate governance structure, sustainable procurement, diversity and inclusion, support for local enterprises, and awareness of future resource utilisation. According to a survey conducted by PwC of 325 investors in September 2021, the majority of the investors, the majority of whom were self-identified active asset managers, expressed commitment to ESG goals in their investing and as a priority for their portfolio companies (PricewaterhouseCoopers, 2021). The Global Sustainability Study 2021, executed by the international strategy and pricing consultant Simon-Kucher & Partners, uncovers substantial global paradigm shifts in consumer perceptions of sustainability. Globally, 85 percent of people indicate that they have shifted their purchase behaviour towards being more sustainable in the past five years (Simon-Kucher & Partners, 2021). Thus, companies nowadays are subject to non-financial evaluation and assessed based on their contribution to the ESG mechanisms, in addition to their financial performance. Many companies have started believing that they have more than one responsibility; still, the dominant view is that their responsibility is value creation for shareholders. Therefore, it is motivating to see how companies undertaking ESG activities are performing in financial terms. However, despite the growing literature in this field, the association between ESG and firm performance remains ambiguous. The impact of ESG disclosure on corporate performance is the central issue that requires further examination. Addressing this issue is critically important for both companies and stakeholders, including suppliers, consumers, and investors, who rely on the firm for its sustainability. This study seeks to determine whether ESG initiatives enhance business performance by examining the association between ESG activities and corporate performance. This study will analyse financial performance, market performance, and shareholder value generation as measures for corporate performance (Rothaermel, 2017; Cornell & Damodaran, 2020; Carroll, 2004). The relationship between ESG and corporate financial performance is complex and reliant on various frequently neglected aspects.

Consequently, we analyse the mediating and moderating variables that may influence the fundamental relationship between ESG and corporate performance to explore the mechanisms impacting these two variables. The study also aims to analyse the ESG behaviour of companies. Companies face a challenge in allocating scarce resources among their many interconnected sustainability goals (Ortas et al., 2015), necessitating a more ESG focused approach. Thus, due to the composite nature of ESG concept and its varying consequences, it may be challenging for companies to decide which ESG dimensions to be given more importance. Our study focuses on the ESG behaviour of the companies and the changes in its trends. Furthermore, we do not find any all-inclusive study that employs both individual components of ESG pillars as well as the cumulative ESG score on the firm performance. Among all the studies, a great part of the extant literature has focused on the overall ESG score impact on firm's performance, without analysing the single ESG pillars (Dong et al., 2022; Zhou et al., 2022; Chen et al., 2021; Eliwa et al., 2021; Feng & Wu, 2021; Kabir Hassan et al., 2021; Reber et al., 2021). Each pillar may influence the organisation in a unique manner and to varying degrees. Cek and Eyupoglu (2020) state that the social and governance pillars have a favorable effect on the firm's economic success. This is mostly attributable to the fact that, as time goes on, value is created for shareholders. Similarly, Paolone et al., 2021 discovers that the governance pillar has a significantly stronger effect on a company's market success compared to the other two pillars. This conclusion suggests that the mechanisms behind the association between ESG and company success must be further understood. Consequently, it appears that the collective knowledge of the relationship between ESG disclosure and company performance would benefit from an approach that considers not just the influence of the ESG score as a whole, but also the impact of the individual pillars. Therefore, our study intends to provide additional empirical evidence in this debate by including all three pillars of ESG as well as the overall ESG score by employing a sample of "Nifty 500" companies in India during FY 2015 to FY 2022. One of the major reasons for selecting Indian companies is the fact that there is lack of studies on ESG and firm performance in developing economies.

1.3 Objectives of the Study

This study aims to capture the trends in ESG practices and firm performance among NIFTY 500 companies in India. Primarily, the purpose is to examine ESG behaviour in relation to various performance measures including financial performance, market performance, and shareholder value creation. We have considered both moderating and mediating effects in this relationship. The moderating variables include financial slack, internationalisation, and board gender diversity. Additionally, the study incorporates mediating variables such as innovation, operational efficiency, and risk. The study also helps in identifying ESG behavior of companies through text mining and is finally complemented with sustainability managers interviews through case study. Through this comprehensive framework, the research provides valuable insights into how ESG practices influence corporate performance in the Indian context, while accounting for important organisational factors that may strengthen, weaken, or explain these relationships.

The research focuses on achieving the following specific objectives:

1. To study the ESG behaviour of select NIFTY 500 companies.
2. To investigate the relationship between ESG and financial performance of select NIFTY 500 companies.
3. To investigate the relationship between ESG and market performance of select NIFTY 500 companies.
4. To determine the impact of ESG on shareholder's value creation of select NIFTY 500 companies.
5. To develop a case study on the companies scoring highest on ESG.

1.4 Formulation of hypothesis

The existing financial literature has identified numerous factors that impact firm performance across various dimensions. Firm performance is widely acknowledged as a multidimensional construct encompassing operational effectiveness, corporate reputation, and organisational survival (Richard et al., 2009). Among these

dimensions, the financial component—representing the fulfillment of a firm's economic goals—has received the most scholarly attention due to its quantifiable nature and direct relevance to stakeholder interests (Carnini Pulino et al., 2022). Financial performance measures offer concrete and comparable measures that enable stakeholders to evaluate a company's position and level of performance in objective terms, accounting for their pervasiveness in empirical studies. Cornell and Damodaran (2020) have systematically grouped the drivers of firm financial value into four basic levers: growth lever, profitability lever, investment efficiency lever and risk lever. These levers offer a unified framework for conceptualising the way operational choices translate into financial consequences. In recent years, a body of research has sought to create links between ESG factors and these financial performance drivers. As extensive efforts have been made to research, studies have produced mixed results, with evidence pointing to neutral (Chen et al., 2021), positive (Kim & Li, 2021), and negative associations (Saygili et al., 2022). This inconsistency reflects the complexity of the ESG-performance relationship and identifies a glaring gap in our knowledge of the underlying mechanisms that could drive the relationship. Our research seeks to fill this gap by examining the specific channels through which ESG factors drive specific dimensions of firm performance. Financial performance can be quantified in terms of various metrics that capture various dimensions of a firm's economic activity. Standard measures include profit-based measures (operating profit margin, net profit margin), return measures (return on assets, return on equity, return on capital employed), productivity measures, market share measures, sales growth, and investment return (Choiriyah et al., 2021; Chen et al., 2021; Kim & Li, 2021; Pirtea et al., 2021; Baran et al., 2022). Each of these measures captures something unique about a firm's operational efficiency, profitability, and capacity to utilise resources. The relationship between ESG factors and these measures of financial performance has been explored in numerous studies, albeit with mixed success. Buallay et al. (2021) concluded that there is a significant positive relationship between ESG performance and Return on Assets (ROA), which suggests that ESG initiatives can enhance operational efficiency and asset utilisation. However, the same study established no significant relationship between ESG and Return on Equity (ROE), which suggests that ESG value may not necessarily manifest as improved returns for

shareholders. This contradiction suggests that ESG initiatives may have differential impacts on differential dimensions of financial performance through differential mechanisms. Liu et al. (2021) further underscored the multidimensional nature of the ESG-performance relationship by establishing differential correlations that vary by setting. Their finding that financial technology positively moderates this relationship suggests that a firm's technological capability may determine the scope of its ability to translate ESG initiatives into financial benefits. Furthermore, Carnini Pulino et al. (2022) provided robust evidence of a positive relationship between ESG disclosure and firm performance—defined in terms of Earnings Before Interest and Taxes (EBIT)—using a ten-year panel analysis of Italian listed companies. This finding is consistent with the hypothesis that ESG initiatives may be transparently reported to establish stakeholder trust and, in turn, financial performance. We employ a broad array of these indicators—such as revenue growth, margins, return ratios, and investment efficiency—to account for the multidimensional character of financial performance and to choose the financial performance measures most responsive to ESG initiatives.

The association of ESG disclosure and market performance has been the subject of intense research in the last few years. Market-based measures of performance are an external perspective of the extent to which a firm is capable of creating value from the investor's and other market participant's vantage point. Tobin's Q (market value to replacement cost), stock return, Jensen's alpha (risk-adjusted return), and Sharpe ratios (return per unit of risk) are most widely accepted measures (Tsai & Wu, 2021; Atan et al., 2018; Saxena & Singh, 2016; Dong et al., 2022; Zhou et al., 2022; Chen et al., 2021; Nekhili et al., 2021; Deng & Cheng, 2019). Alshehhi et al. (2018) referred to Tobin's Q, Jensen's alpha, and Sharpe ratios as the most common market-based measures used in ESG research since they are well suited to the context of capturing the investor's perception of firm value. Empirical evidence is that ESG certification and enhanced ESG performance can significantly impact market valuations through a reduction in the cost of capital for the firm and sound investor confidence. This is quantified in terms of a significant increase in Tobin's Q, i.e., investors value such firms more that adopt good ESG practices.

Surprisingly, this phenomenon is found in both emerging and developed markets, which implies that the value-enhancing role of ESG is not specific to economic environments and governance systems. This cross-culture similarity gives credence to the strategic value of ESG activities in international capital markets. Fatemi et al. (2018) examined this relationship with a more sophisticated two-stage model on 403 US firms over the six-year period (2006-2011). The evidence supports the hypothesis that ESG activities and their transparent disclosure have positive impacts on market performance. The authors argued that ESG disclosure is a differentiation mechanism whereby superior-performing companies differentiate themselves from their poorer-performing counterparts and thereby minimise the problem of adverse selection in capital markets. This theoretical argument is in line with signalling theory, which argues that ESG disclosure is a credible signal of managerial quality and future performance. Yu et al. (2018) took this line of literature forward by studying nearly 2,000 large-cap companies across 47 countries, both emerging and developed economies. Their empirical findings record that market forces increasingly incentivise companies to disclose ESG data as well as the mandatory financial data. Further, they validated that transparency in ESG significantly raises Tobin's Q by minimising information asymmetry between managers and investors and agencies' costs. This mechanism is how ESG disclosure is translated into real-world market value even in the absence of direct financial returns on ESG initiatives. This literature also is a two-way relationship between ESG disclosure and the performance of the market (Sharma et al., 2020; Tsai & Wu, 2021). Superior-performing companies disclose more ESG data, possibly due to increased resource availability, increased intensity of stakeholder pressure, or signalling strategy incentives. This two-way relationship is a potential virtuous cycle whereby superior market performance provides room for wider ESG disclosure, leading to further superior market performance. Our research tries to explore this potential two-way-ness in the Indian context, which fills a critical gap in emerging markets literature. In order to comprehensively assess the impact of ESG performance on market valuation, we employ a number of complementary metrics: Tobin's Q captures overall market-to-book, Price-to-Earnings captures expectations of growth, Price-to-Book Value captures premium above asset values, and Enterprise Value to EBITDA multiple captures valuations of operating efficiency. All these

metrics capture the general state of how ESG affects different aspects of market perception and investor valuation models.

While maximising shareholder value remains a primary corporate objective, with many companies tracking progress through stock price performance and dividend growth (Miralles-Quiros et al., 2019; Ibrahim, 2019), market-based measures are inherently susceptible to factors beyond management control. Stock prices fluctuate due to changing investor expectations, macroeconomic conditions, competitive dynamics, and market sentiment, often obscuring the true economic value created by management actions. This recognition has prompted executives, board members, and investors to seek alternative measures of value creation that are more insulated from market volatility and more directly linked to management decisions. Economic Value Added (EVA) has emerged as a prominent alternative framework that measures economic profit after accounting for the full cost of capital and adjusting for key accounting distortions. Developed and trademarked by Stern Stewart & Co., EVA is widely regarded as a more accurate reflection of a company's true profit (Stewart, 1991) because it incorporates the opportunity cost of capital employed. The conceptual foundation of EVA lies in the residual income concept, which posits that wealth creation occurs only when revenues sufficiently cover both operating costs and capital costs (Kaur and Narang, 2009). By explicitly accounting for capital costs, EVA addresses a significant limitation of traditional accounting metrics that often ignore the opportunity cost of invested capital. As an internal performance measure applied year-over-year, EVA effectively captures the value added (or destroyed) by management decisions and reflects their success in enhancing shareholder investment value. Complementing EVA, Market Value Added (MVA) serves as another important technique for shareholder value analysis. MVA measures the difference between a company's market value and the book value of invested capital, essentially capturing the premium (or discount) that investors assign to a firm relative to its accounting value. MVA is particularly relevant when share prices exhibit significant volatility, as it helps financial managers and investors identify whether valuation changes affect specific industries or the broader market. Despite growing interest in both ESG and value-based management, surprisingly few studies have explored the relationship

between ESG initiatives and long-term shareholder value creation as measured by EVA and MVA. This research gap is particularly significant given the inherent long-term orientation of both ESG investments and value creation metrics. Gómez-Bezares et al. (2016) addressed this gap through empirical research and reached the counterintuitive conclusion that companies integrating sustainability into their core business strategies typically achieve higher MVA but lower EVA. This finding suggests that while investors assign higher market valuations to sustainability leaders (reflected in higher MVA), these companies may experience short-term economic profit challenges (reflected in lower EVA) due to the substantial investments required for comprehensive ESG integration. Our study uses EVA and MVA to measure shareholder's value creation. Together, EVA and MVA provide a more comprehensive assessment of sustainable value creation than traditional accounting metrics or short-term market movements. By focusing on these value-based metrics, we seek to establish a more direct connection between ESG initiatives and sustainable economic value creation. This approach addresses a significant gap in the existing literature and provides more actionable insights for corporate leaders seeking to justify ESG investments in value creation terms.

This study also addresses the moderating and mediating mechanisms by which the ESG–firm performance relationship is influenced. The evidence indicates that internationalisation and financial slack can moderate the ESG–performance relationship, at times strengthening and weakening the relationship depending on situation and stage of firm lifecycle (Duque-Grisales & Aguilera-Caracuel, 2019; Gao et al., 2019). Board gender diversity is a complex moderator with positive impacts in some situations but zero or negative impacts in others, often relying on board composition and risk of the firm (Aulia et al., 2025; Al-Shaer et al., 2025; Yasin, 2025; Gonzalez-Ruiz & Duque-Grisales, 2022). For mediators, innovation is generally found to have mediating impact on the ESG–performance relationship, with ESG activities having an impact on the quality and quantity of innovation, which in turn affects the performance of the firm (Tang, 2022; Wan et al., 2023; Sun & Zhang, 2025; Sahu et al., 2025; Wang & Wang, 2024; Zhou et al., 2023). Operational efficiency and credit risk also emerge as prominent mediators, although the evidence

is weak and context-dependent (Lee & Na, 2024; Gao et al., 2019; Wan et al., 2023). The mediating impact of systematic risk is uncertain, with some studies indicating little or no impact (Biju et al., 2025).

This study examines the relationship between ESG activities and firm performance across NIFTY 500 companies in India from FY 2015 to FY 2022. Our research addresses critical gaps in existing literature by: (1) investigating both aggregate ESG scores and individual E, S, and G pillars' impact on financial performance (revenue growth, profit margins, ROA, ROE, ROCE), market performance (Tobin's Q, PE ratio, P/B ratio, EV/EBITDA), and shareholder value creation (EVA, MVA) and (2) identifying key moderating variables (financial slack, internationalisation and board gender diversity) and mediating mechanisms (operational efficiency, innovation and risk) that influence this relationship. Previous studies have yielded inconsistent findings, with evidence suggesting neutral (Chen et al., 2021), positive (Kim & Li, 2021), and negative links (Saygili et al., 2022), largely due to failure in identifying underlying mechanisms that drive the ESG-performance relationship. Based on the systematic literature review, we formulate alternative hypotheses examining the relationship between ESG performance and financial performance (Buallay et al., 2021; Carnini Pulino et al., 2022; Chen et al., 2021), market performance (Fatemi et al., 2018; Yu et al., 2018; Tsai & Wu, 2021), and shareholder value creation (Gómez-Bezares et al., 2016). All hypotheses are tested using moderating variables (financial slack, internationalisation and board gender diversity) and mediating variables (operational efficiency, innovation and risk). Our comprehensive approach explores when and how ESG initiatives translate into performance improvements, providing actionable insights for corporate leaders in emerging markets where institutional differences may significantly alter ESG outcomes compared to developed markets. By focusing on the understudied Indian context and employing a multidimensional framework, this research aims to substantiate the business case for corporate ESG investments while advancing theoretical understanding of sustainable value creation in emerging economies. Throughout the study, both the cumulative ESG score and the individual Environmental, Social, and Governance components are analysed to provide a more granular understanding of their respective impacts on firm

performance. In accordance with the above objectives, the study attempts to test the following alternate hypotheses:

H1: There exists relationship between Financial Performance of a company and ESG scores.

H1a: There exists relationship between Financial Performance of a company and Environmental scores.

H1b: There exists relationship between Financial Performance of a company and Social Scores.

H1c: There exists relationship between Financial Performance of a company and Governance scores.

H2: There exists relationship between Market Performance of a company and ESG scores.

H2a: There exists relationship between Market Performance of a company and Environmental scores.

H2b: There exists relationship between Market Performance of a company and Social Scores.

H2c: There exists relationship between Market Performance of a company and Governance scores.

H3: There exists relationship between Shareholder's value creation and ESG scores.

H3a: There exists relationship between Shareholder's value creation and Environmental scores.

H3b: There exists relationship between Shareholder's value creation and Social Scores.

H3c: There exists relationship between Shareholder's value creation and Governance scores.

H4: Financial Slack moderates the relationship between ESG scores and firm performance.

H5: Internationalisation moderates the relationship between ESG scores and firm performance.

H6: Board Gender Diversity moderates the relationship between ESG scores and firm performance.

H7: Innovation mediates the relationship between ESG scores and firm performance.

H8: Operational Efficiency mediates the relationship between ESG scores and firm performance.

H9: Credit Risk mediates the relationship between ESG scores and firm performance.

H10: Systematic Risk mediates the relationship between ESG scores and firm performance.

*There will be respective null hypotheses for the hypotheses mentioned above.

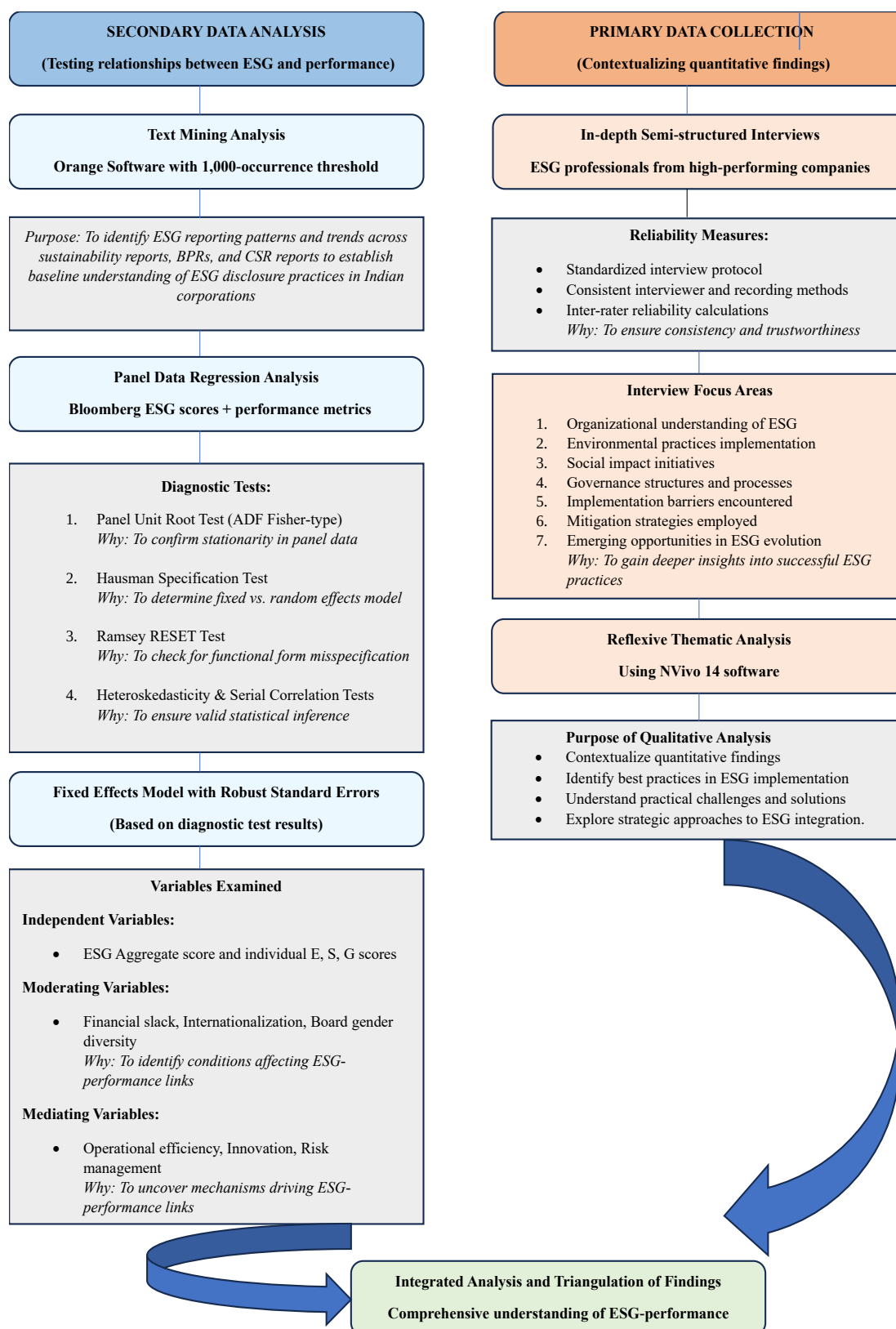
Note:

- For the Financial Performance hypotheses (H1-H1c), financial performance is measured through seven key indicators: revenue growth, profitability ratios (operating and net profit margins), return metrics (ROA, ROE, ROCE), investment efficiency.
- For the Market Performance hypotheses (H2-H2c), market performance is measured through four key indicators: Tobin's Q, Enterprise Multiple, P/E and P/B ratios.
- For the Shareholder's value creation hypotheses (H3-H3c), shareholder's value creation is measured through two key indicators: EVA and MVA.
- For the moderating and mediating hypotheses (H4-H10), firm performance is measured through thirteen key indicators: revenue growth, profitability ratios (operating and net profit margins), return metrics (ROA, ROE, ROCE), investment efficiency, market valuation measures (Tobin's Q, Enterprise Multiple, P/E and P/B ratios), and value-added metrics (EVA and MVA), providing comprehensive coverage of financial, and market performance dimensions.

The above-mentioned hypotheses have been elaborated in chapter no. 3 (research methodology).

1.5 Research Design

Our research design incorporates both secondary and primary data to provide a comprehensive understanding of ESG behaviour and performance of NIFTY 500 companies from FY2015 to FY2023, employing a sequential mixed-methods approach. For secondary data, we first conducted text mining analysis of sustainability documents from 269 companies using Orange software, applying a 1,000-occurrence frequency threshold to identify ESG reporting patterns. We then employed panel data regression models to examine relationships between ESG performance (using Bloomberg ESG scores) and three dimensions of corporate outcomes: financial performance (revenue growth, profit margins, ROA, ROE, ROCE), market performance (Tobin's Q, P/E ratio, P/B value, EV/EBITDA), and shareholder value creation (EVA, MVA). The model incorporated control variables (firm size, age, leverage), moderating variables (financial slack, internationalisation, board gender diversity), and mediating variables (operational efficiency, innovation, risk management), with data from Bloomberg, CMIE Prowess Database, and Ministry of Corporate Affairs filings. To ensure validity, we conducted diagnostic tests including panel unit root tests, Hausman specification tests, Ramsey RESET tests, heteroskedasticity tests, and serial correlation tests, which guided our use of fixed effects estimation with robust standard errors. For primary data, we conducted in-depth semi-structured interviews with ESG professionals from high-performing companies, implementing standardised protocols and calculating inter-rater reliability (Killan et al., 2020; Engström et al., 2016), with thematic analysis performed using NVivo 14. This integrated methodological approach enables us to identify ESG reporting patterns, establish linkages between ESG practices and corporate performance, understand differential impacts of individual ESG components, reveal contextual challenges and opportunities, and provide evidence-based insights for corporate leaders and policymakers in the Indian market context. Figure 1.4 depicts the methodology used in the study to test various hypotheses.



Source: Author's Contribution

Figure 1.4: Research methodology flow diagram

establishing the significance of ESG in contemporary corporate practices and outlining the study's objectives and scope. Chapter 2, "Theoretical Underpinnings and Systematic Literature Review on ESG and Firm Performance," establishes the theoretical foundation while identifying critical research gaps through comprehensive literature analysis. Chapter 3, "Research Methodology," details the mixed-methods approach employed in the study, describing the NIFTY 500 sample selection criteria, outlining primary and secondary data collection procedures, defining variables and measurements, and explaining the analysis techniques used for each research objective. Chapter 4, "ESG Behaviour Analysis of NIFTY 500 Companies," employs advanced text mining techniques to analyse sustainability reports, examining word frequencies and thematic patterns, tracking the evolution of ESG reporting practices from 2015-2023, and comparing ESG implementation across different sectors through computational text analysis. Chapter 5, "ESG Impact on Financial Performance, Market Performance and Shareholders Value Creation of Select NIFTY 500 Companies," presents comprehensive panel data regression results examining ESG's influence on multiple performance dimensions, while also analysing the roles of moderating variables (financial slack, internationalisation, board gender diversity) and mediating variables (operational efficiency, innovation, risk) in these relationships. Chapter 6, "Case Study Analysis," provides qualitative insights through in-depth interviews with ESG professionals from 11 top-performing companies, exploring implementation challenges, best practices, and strategic approaches to ESG integration in Indian corporations. Finally, Chapter 7, "Conclusion, Future Scope and Social Impact," synthesises key findings from all research phases, discusses theoretical and practical implications, acknowledges research limitations, suggests future research directions, and outlines the potential social impact of effective ESG implementation in the Indian corporate landscape.

CHAPTER 2

THEORETICAL UNDERPINNINGS AND SYSTEMATIC LITERATURE REVIEW ON ESG AND FIRM PERFORMANCE

This chapter explores the theoretical foundations underpinning the relationship between ESG practices and firm performance. Section 2.1 examines key theories that explain this relationship, including stakeholder theory, legitimacy theory, good management theory, and slack resource theory, which collectively form a comprehensive framework illustrating how ESG behaviour influences various performance dimensions. Section 2.2 presents a systematic literature review of 203 articles using the PRISMA protocol, bibliometric analysis, and TCCM framework. The bibliometric analysis reveals publication trends, country contributions, productive journals, influential publications, and keyword co-occurrence patterns across five main clusters: theories explaining ESG-performance relationships, impact studies, sustainable finance, integrated reporting, and innovation's role. The TCCM analysis systematically examines theoretical foundations, research contexts, characteristics of variables studied, and methodologies employed. Section 2.3 identifies significant research gaps, including inconsistent definitions, inconclusive results, limited exploration of moderating and mediating factors, and the need for more diverse methodological approaches and emerging market studies.

2.1 Theoretical Underpinnings

The development of theoretical underpinnings in the context of ESG and firm performance have significantly improved. In order to understand how the concept of ESG emerged in management theory, an important historical trend regarding social responsibility needs to be discussed. The positive influence of incorporating ESG for organizations is consistent with the stakeholder theory (Freeman, 1984; Donaldson & Preston, 1995), where companies will strive to maintain stakeholder relations by meeting their needs for the organisations long-term interests. Freeman (1999) advocated the stakeholder theory, which proposes that a firm's prime objective is to be

engage to all stakeholders (customers, employees, society, government, investor, regulators) and not limited to shareholder wealth maximisation, which was also the prime goal of the finance literature (Battisti et al., 2019; Jensen, 2001). This broader perspective of stakeholder engagement boosts integrated CSR practices in the early days (Belyaeva et al., 2020; Rey-Martí et al., 2016) and ESG practices in the modern world. Another theory that monopolises the study on the importance of ESG and firm performance relationship is legitimacy theory (Tavares & Dias, 2018; Scherer & Palazzo, 2007). The legitimacy theory states that companies disclose sustainability information to stakeholders to reiterate an organisation's commitment towards society in support of the stakeholder theory. According to the legitimacy theory, firms' ESG disclosures enable the firm's commitment towards society and generate a sustainable pool of profit. Firms and stakeholders believe that these investments generate long-term benefits (Behl, et al., 2021). In simple terms, firms require legitimacy to sustain their long-term viability. According to Suchman, 1995, legitimacy means "a broad assumption or perception that an entity's behaviours are acceptable, reasonable, or relevant within some socially constructed system of standards, values, assumptions, and definitions". Firms involved in disputes have their organisational legitimacy questioned when they are viewed as lacking acceptable credibility (Palazzo & Scherer, 2006). Another important theory that explains the relationship between ESG and firm performance is good management theory. According to good management theory (Waddock & Graves, 1997), if stakeholders perceive a company to have a good corporate social performance, it will lead to an improvement of the company's reputation among its main stakeholders (Daszynska-Zygadlo et al., 2020; Vural-Yavas, 2021, Brogi & Lagasio, 2018; Isaksson & Woodside, 2016). In turn, the company will find it easier to achieve better financial performance. Furthermore, some studies have introduced the idea of a virtuous circle, where sustainability, i.e., ESG is both a predictor and consequence of firm performance (Qureshi et al., 2021). Slack resource theory (McGuire et al., 1988) posits that companies can afford to be more socially responsible if they have a history of strong financial performance. This notion is supported by research showing a correlation between a company's financial success and its commitment to social and environmental responsibility (Waddock & Graves, 1997; Zaid et al., 2020). This led to the hypothesis that good ESG

performance is cause and effect of good firm performance in a virtuous circle (Qureshi et al., 2021). Figure 2.1 is the theoretical model for this research into ESG and firm performance. Stakeholder Theory (Freeman, 1984; Donaldson & Preston, 1995) explains how firms manage all stakeholders other than shareholders, and Legitimacy Theory (Tavares & Dias, 2018; Scherer & Palazzo, 2007) explains how ESG disclosures reaffirm a firm's commitment to society. Good Management Theory (Waddock & Graves, 1997) explains how good corporate social performance generates reputation with stakeholders, equating to improved financial outcomes. Slack Resource Theory (McGuire et al., 1988) illustrates how financial success pays for ESG investment, and a virtuous circle in which ESG is both predictor and outcome of firm performance (Qureshi et al., 2021).

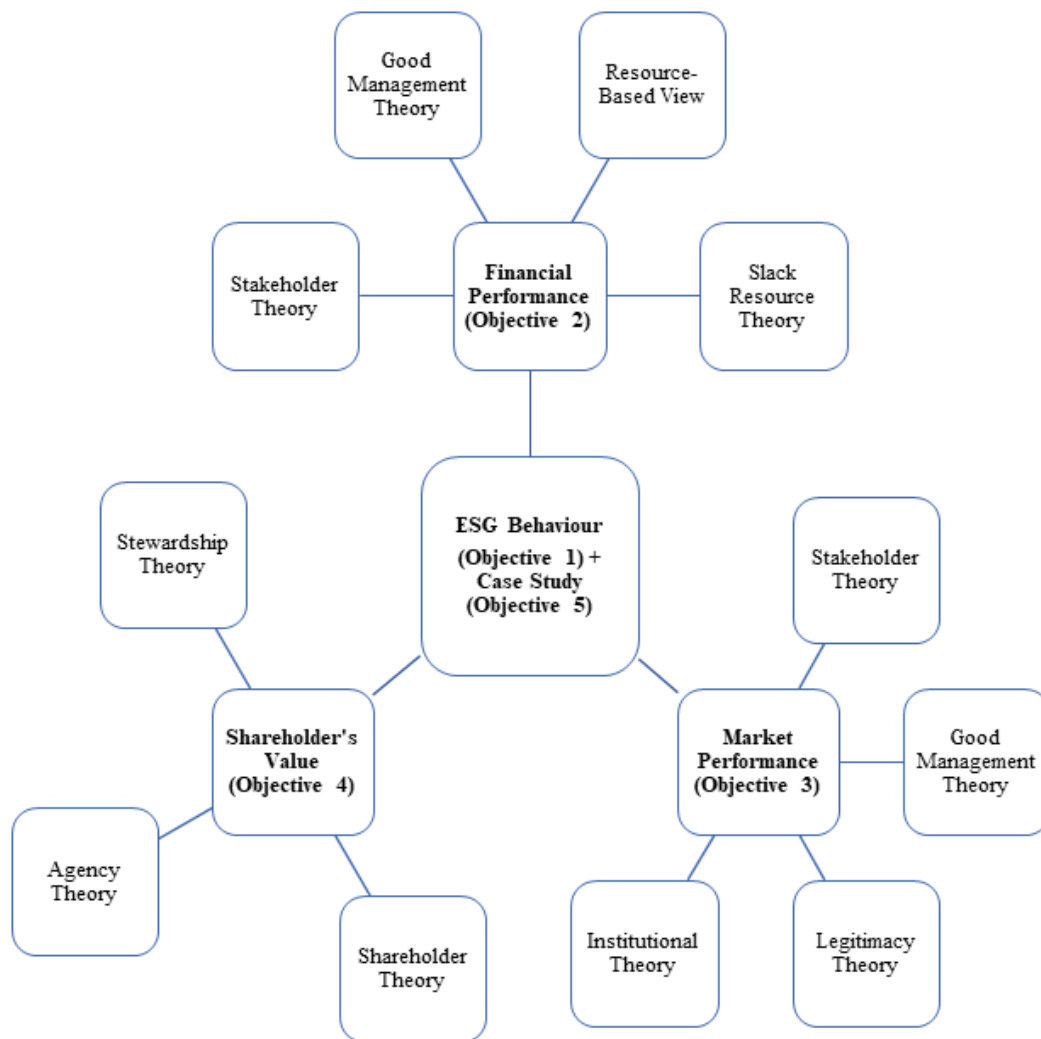


Figure 2.1: Theoretical framework

Agency Theory addresses potential conflicts between managers and shareholders in ESG implementation, while Stewardship Theory suggests managers act as responsible stewards of corporate resources. Shareholder Theory emphasises balancing shareholder interests with broader stakeholder concerns. The Resource-Based View explains how organisational capabilities contribute to competitive advantage through ESG initiatives, while Institutional Theory explains how firms respond to external pressures regarding ESG practices, affecting market positioning.

2.2 Systematic Literature Review

Over the years ESG and firm performance has received increasing attention from the scholars, exploring whether it is beneficial or a costly affair for firms to invest in ESG activities. Following the systematic review of literature, it appears that the majority of research articles on ESG and firm performance can be classified into two categories: (i) corporate-focused studies, i.e., those articles whose main focus was on ESG and financial or market-based measures of performance like Return on Assets, Return on Invested Capital, Earnings Per Share, Return on Equity, Tobin's Q, etc. (Barman, 2018; Bodhanwala & Bodhanwala, 2018; Brogi & Lagasio, 2018; Xie et al., 2018; Bhaskaran et al., 2020; Zahid et al., 2020; Yu et al., 2018; Buchanan et al., 2018; Cek & Eyupoglu, 2020) and (ii) investor-focused studies, i.e., those articles whose main focus was on ESG investing, portfolio investments, returns to investors (Ur Rehman et al., 2016; Chauhan and Kumar, 2018; Daugaard, 2019; Alessandrini & Jondeau, 2021). Our study will focus on corporate focused studies. Most of the past researches render us with an inconclusive view with regard to the impact of incorporating ESG issues on the firm's performance, with studies suggesting a positive (Alshehhi et al., 2018; Busch & Friede, 2018), negative (Nollet et al., 2016; Duque-Grisales & Aguilera-Caracuel, 2019) or a neutral (Garcia-Castro et al., 2009; Jha & Rangarajan, 2020) relationship. Fried et al. (2015) did a meta-analysis of over 2200 individual studies testing the ESG and financial performance and found a positive association in 90% of the cases in the long-run. Whelan & Atz, 2021 predicted that a study with an inferred long-term emphasis is 76% more likely to find a positive or neutral result for ESG and firm performance relationship, all other things being equal. The impact of ESG on firm value can vary by sector and region. For instance, high-ranked ESG companies in the US show positive economic profits,

although they may also be associated with underinvestment or stagnation in certain sectors. In contrast, governance-focused ESG practices are linked to value-creating growth companies (Chakraborty et al., 2024). In China, ESG practices have been shown to increase the domestic value-added rate of exports, particularly in large firms and specific regions (Yue & Li, 2024).

We use the systematic literature review (SLR) method (Tranfield et al., 2003) to ensure a systematic, replicable, transparent and analytical process that increases the reliability of the findings. For the systematic review of 203 articles, a 3-step methodology comprising PRISMA protocol, bibliometric analysis and Theory-Context-Characteristics-Methodology (TCCM) has been adopted. A systematic literature review provides a state-of-the-art understanding of the underlying research stream, identifies research gaps, and provides future research avenues (Paul & Criado, 2020).

At the *first stage*, the study employs PRISMA protocol (Figure 2.2) to systematically select research articles from Web of Science database. Web of Science is considered the greatly reputable resource for bibliometric investigations because it is free of bias toward any publisher (Falagas et al., 2007), as well as further, ensures the inclusion of the most influential journals (Kullenberg & Kasperowski, 2016). We identified the combination of the following keywords that we searched in the title, abstract and keywords – (“ESG” OR “Environment Social Governance” OR “Environmental Social Governance” OR “Sustainability Reporting”) AND (“Financial Performance” OR “Firm Value” OR “Firm Performance” OR “CFP” OR “Corporate Performance” OR “Economic”). The time period parameter was left open-ended, and we received publications over thirteen years (2010–2022). Using the above-mentioned inclusion criteria, we obtained 446 research publications. The next step in the PRISMA procedure is to define the criteria for evaluating the selected publications. This screening approach allowed us to exclude 431 publications by assessing the title, keywords, abstract, and, in some cases, introduction (where applicable). Our research includes the following exclusion criteria: (i) Documents unrelated to ESG and firm performance (off-topic papers), (ii) Documents not in English, and (iii) Documents not related to management, business, business finance, economics, ethics, or law. Following the filtering procedure, we received 257 research publications. We assessed the fit of each of the 257 articles collected after reading and reviewing all full-text publications, yielding a final sample of 203 articles.

The *second step* involved bibliometric analysis through VOSviewer (version 1.6.8) and Biblioshiny R software. Bibliometric analysis yielded descriptive statistics such as – publication trend, leading countries, three-fields plot, most productive journals, most influential publications, country bibliographic coupling, keyword co-occurrence analysis, WordCloud, and trending topics analysis. Bibliometric analysis can help future researchers and academicians in uncovering and unravelling untapped themes in the underlying field.

The *third step* involved structured review using TCCM framework propounded by Paul & Criado (2020) as well as Paul & Rosado-Serrano (2019). The TCCM framework—Theory, Context, Characteristics, and Methods is a methodical process that is used in systematic literature reviews to synthesise and organise literature findings. It assists reviewers in determining dominant theories, contexts, variables, and methods within a field, and gaps and directions for forthcoming studies are easy to detect (Chakma et al., 2021; Prasanna & Kushwaha, 2025; Mandler et al., 2021).

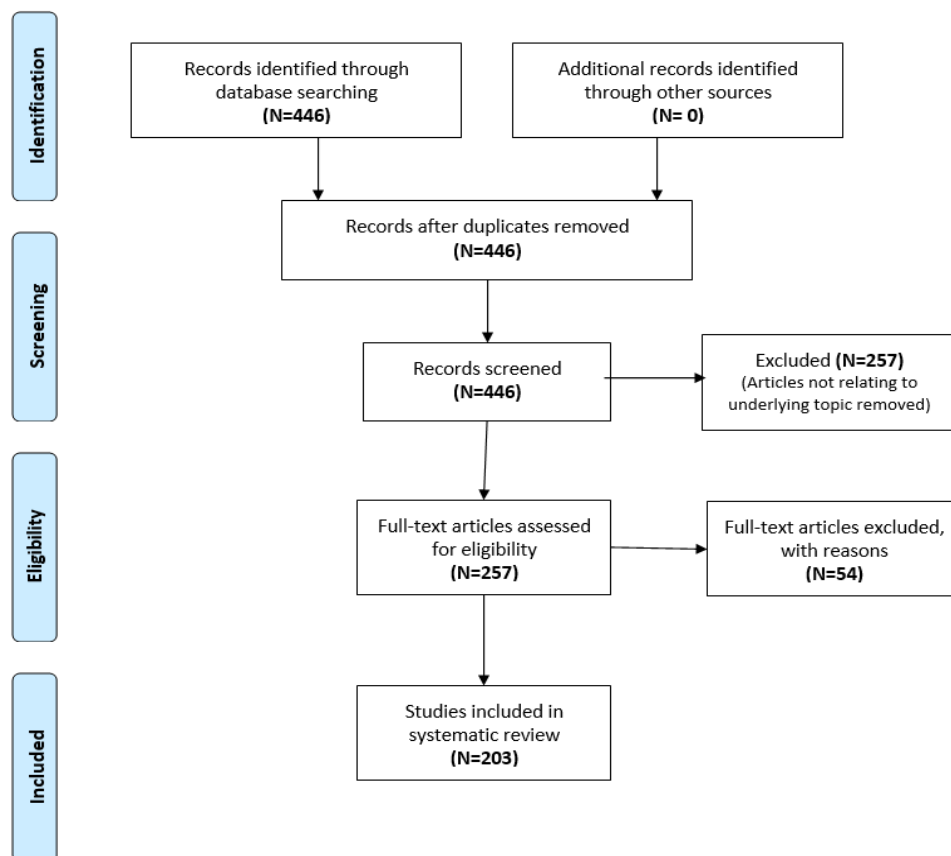


Figure 2.2: Methodology for data collection following PRISMA Guidelines

2.2.1 Descriptive Statistics through Bibliometric Analysis

2.2.1.1 Publication Trend

The Figure 2.3 illustrates the publication trend of research articles focused on the relationship between ESG and firm performance from 2010 to 2022. The findings reveal a consistent upward trajectory in the number of published research articles in this domain. This upward trend in publications reflects the growing significance and relevance of this field of study.

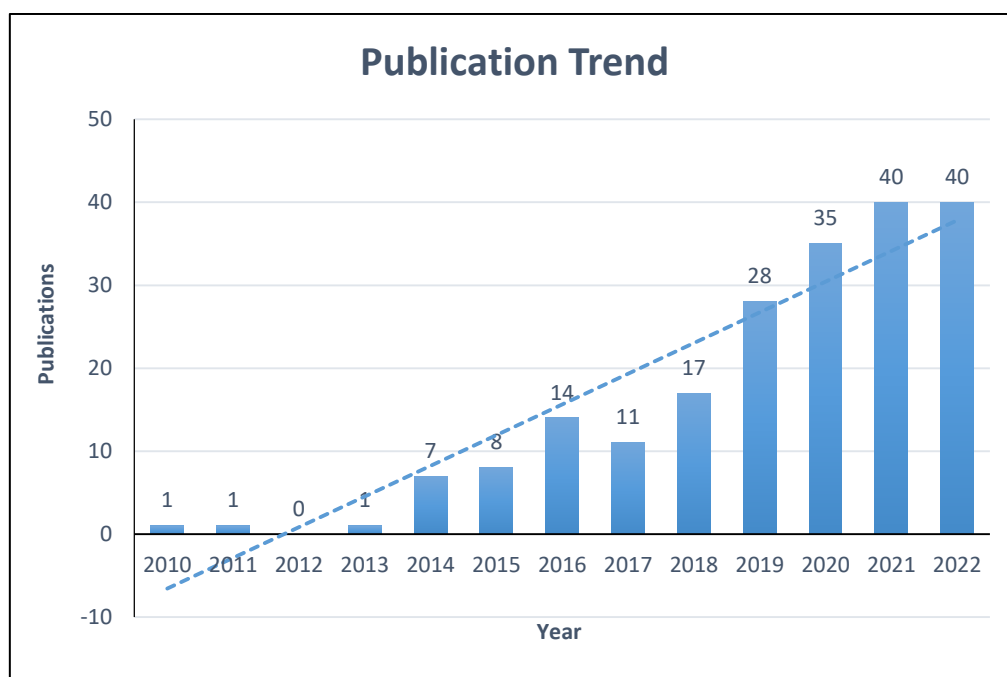


Figure 2.3: The current state of publishing of ESG and Firm Performance research

2.2.1.2 Most Productive Regions and Countries

The research on ESG and firm performance has witnessed significant contributions from various countries. The analysis of country scientific production between 2010 and 2022, as depicted in Figure 2.4, highlights the top 10 countries actively publishing research in this field. The United States, England, France, Australia, and Italy emerge as the leading countries in terms of the number of articles published. It is important to note that these countries primarily represent industrialised and developed nations. However, it is crucial to recognise the potential contributions that developing nations such as India can make to the research stream.

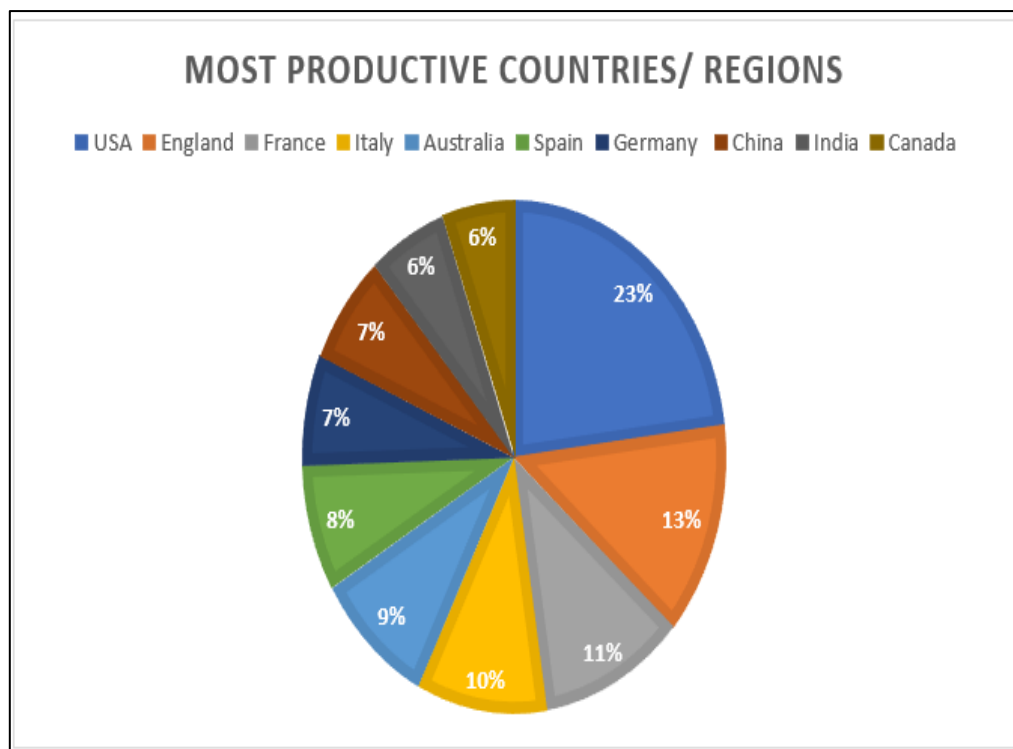


Figure 2.4: Country scientific production

2.2.1.3 Three-fields plot

Figure 2.5 presents a Sankey diagram illustrating the relationships between three elements: keywords, countries, and journals. The diagram uses grey linkages to depict the connections among these elements. It starts with the keywords, followed by the countries, and finally the names of the journals. The size of the boxes representing each element is proportional to the frequency of occurrences, indicating the number of papers associated with that specific element. Based on the Figure 2.5, it is evident that the United States has the highest number of publications in the domain. Scholars from the United States are particularly focused on researching the "social element of ESG," "sustainable development," and the relationship between "ESG and financial performance." The second most contributing country in this field is the United Kingdom, followed by France. These countries also play a significant role in advancing research and knowledge in the area of ESG and firm performance.

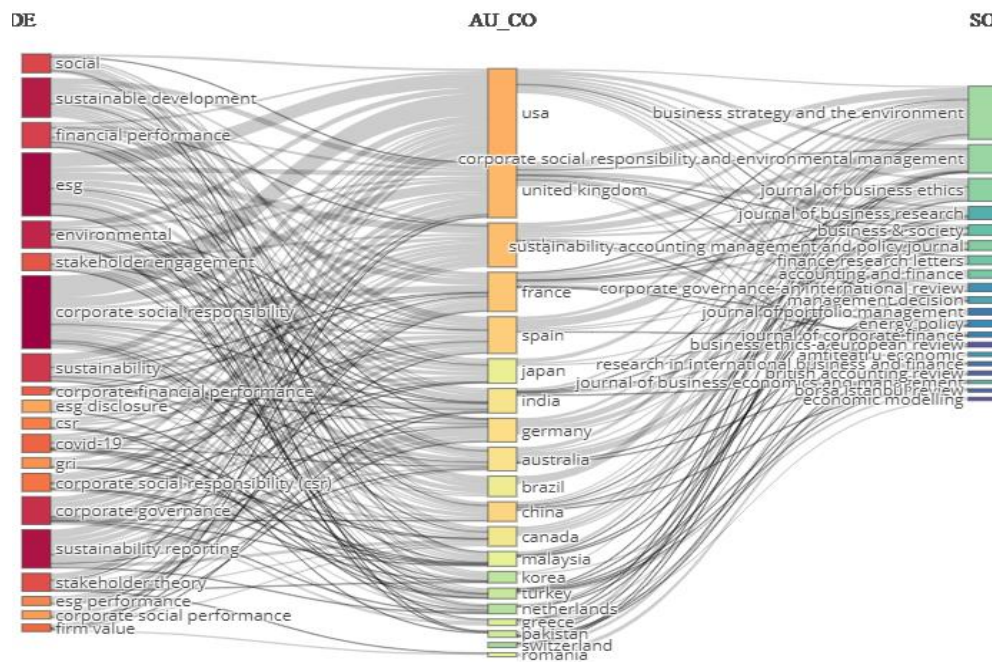


Figure 2.5: Three-fields Plot (Keywords, Countries and Journals)

2.2.1.4 Most Productive Journals

The 203 items extracted from the Web of Science database appeared in 88 journals. The journals with the most ESG and firm performance publications are listed in Table 2.1. Business Strategy and the Environment has the most published and referenced papers, with 935 citations.

Table 2.1: Most Productive Journals

Journals	Documents	Citations
Business Strategy and the Environment	27	935
Journal Of Business Ethics	17	934
Corporate Social Responsibility And Environmental Management	21	592
British Accounting Review	2	374
Accounting Organizations And Society	1	352
Economic Modelling	2	240
Organization Science	1	217
Business & Society	4	183
Sustainability Accounting Management And Policy Journal	9	173
Management Decision	4	159

Source: Author's compilation

2.2.1.5 Most Influential Publications

Citation is widely recognised as an important metric for measuring the impact of an article and a journal within the scientific community (Svensson, 2010). This study utilises citation metrics to explore the most influential articles on ESG and firm performance. Figures 2.6 and 2.7 present lists of the most influential publications based on global and local citations, respectively. Global citation measures the total number of citations that a document has received from the entire database, in this case, Web of Science. All the articles listed in these figures have accumulated at least 30 citations since their publication. Global citation reflects the overall impact of a document, which often includes citations from various disciplines. In contrast, local citation calculates the number of citations that a paper has received from other papers in the same collection. It calculates the power of the paper within the collections that were studied (Aria & Cuccurullo, 2017). That is, global citation calculates citations from a global perspective across disciplines, while local citation calculates citations within a discipline of study. In order to calculate the power of papers within a discipline, the developers of Biblioshiny for Bibliometrix developed an algorithm that takes into account local citations.

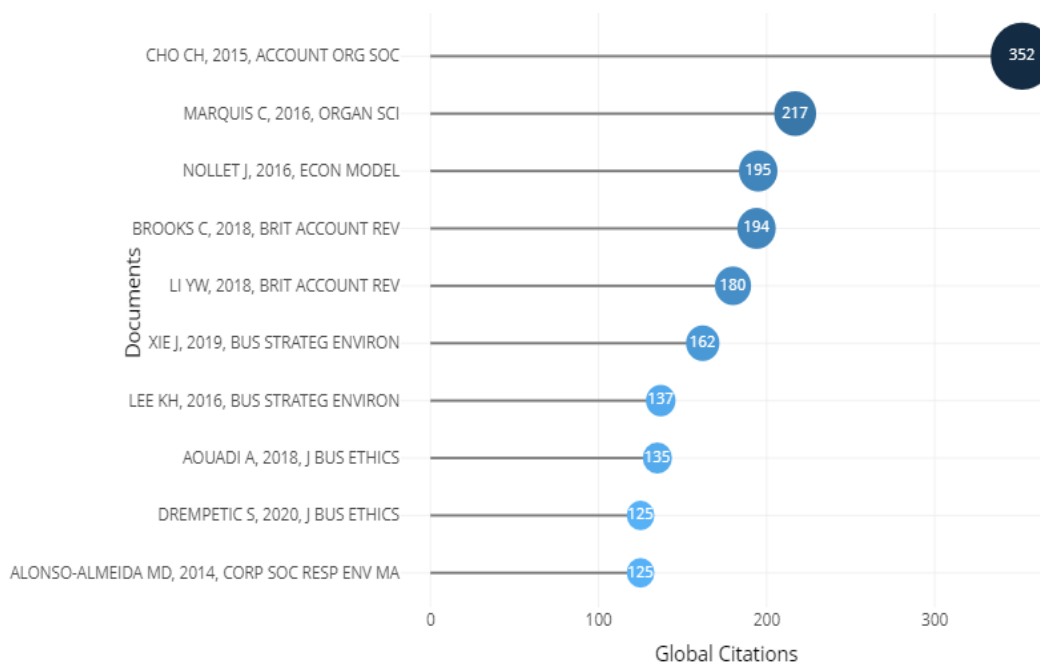


Figure 2.6: Most influential publications (Based on Global Citations)

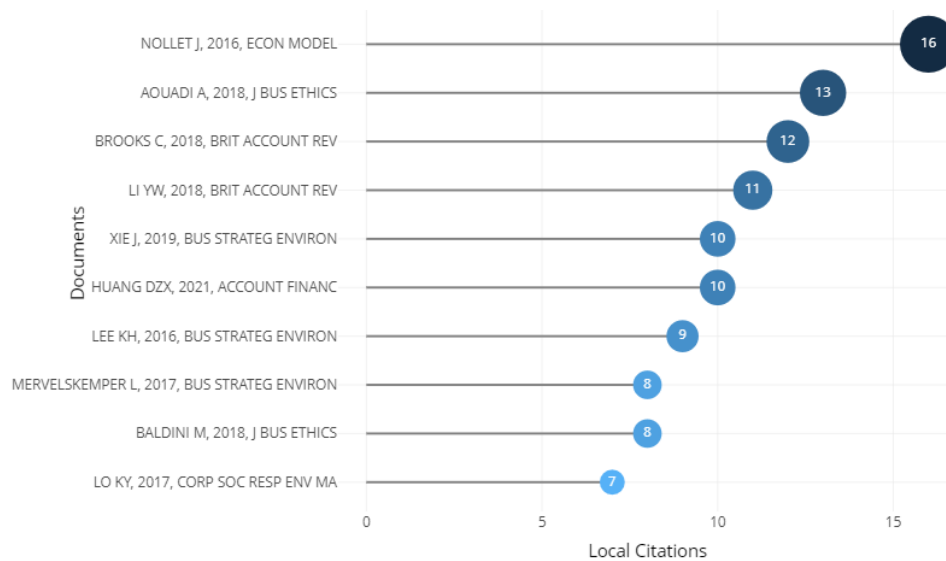


Figure 2.7: Most influential publications (Based on Local Citations)

From this research, the most influential paper as per global citations is "Organized hypocrisy, organizational façades, and sustainability reporting" by Charles H. Cho, Matias Laine, Robin W. Roberts, and Michelle Rodrigue. This article, published in *Accounting, Organizations and Society* in 2015, has received 352 citations. Furthermore, the most locally cited publication is "Corporate social responsibility and financial performance: A non-linear and disaggregated approach" by Joscha Nollet, George Filis, and Evangelos Mitrokostas. This publication stands out in terms of citations within a specific field of study.

2.2.1.6 Countries Bibliographic Coupling

A bibliographic coupling is built to better understand networking amongst ESG and firm performance publishing countries. In terms of countries, bibliographic coupling happens when a manuscript from two nations refers to the third manuscript in their journals (Jarneving, 2007). This demonstrates how numerous regions utilise identical publications and emphasise a similar subject in their publications (Jarneving, 2007). Figure 2.8 illustrates bibliographic coupling across countries engaged in research on ESG and company performance. Five documents from each country were selected for data analysis. Three distinct coalitions have evolved, each comprising nations confronting analogous difficulties. Figure 2.8's "green" cluster demonstrates how countries such as the United States, Spain, Italy, France, and Germany are confronting

similar challenges. In Figure 2.8, the 'red' cluster signifies that developing nations, including China and India, are confronting analogous challenges.

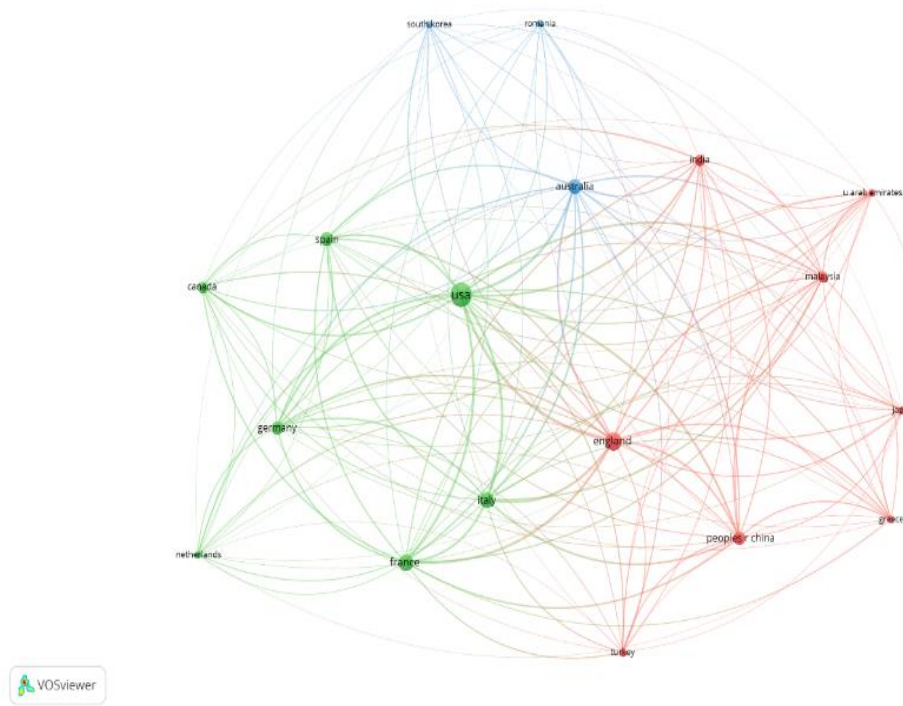


Figure 2.8: Bibliographic Coupling of countries

2.2.1.7 Keywords Co-occurrence Analysis

The keyword co-occurrence analysis is used for mapping the thematic development of the ESG and firm performance field, because keywords are great pointers of the central focus or content of an article. Bibliometric Co-occurrence analysis of Keywords using VosViewer helped in identifying major themes and clusters as well as future research directions (Figure 2.9). The primary themes identified in the underlying literature were divided into the following categories: (1) Theories explaining ESG and Firm performance relationship; (2) Impact of ESG on Firm performance & various stakeholders; (3) Sustainable Finance; (4) Integrated Reporting; (5) Role of Innovation in determining ESG and Firm performance relationship (Table 2.2).

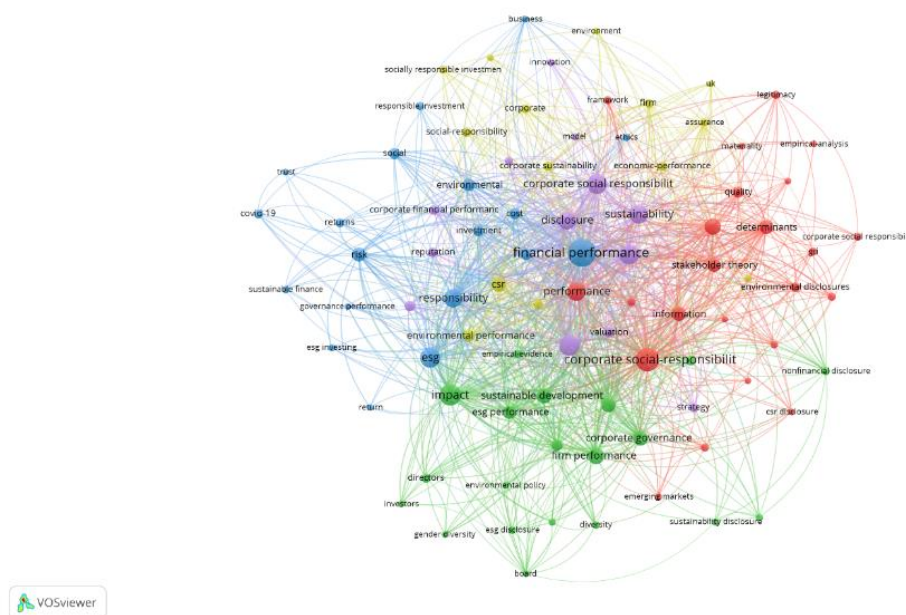


Figure 2.9: Keywords Co-occurrence analysis

Table 2.2: Keywords Co-occurrence analysis

Clusters	Colour	Important items (VOSviewer)	Cluster Name
Cluster 1	Red	Corporate Social Responsibility, CSR Disclosure, Determinants, Earnings Management, Emerging Markets, Legitimacy Theory, Stakeholders Theory, Information Asymmetry, Transparency, Ownership, Performance, Institutional Theory	Theories explaining ESG and Firm performance relationship
Cluster 2	Green	Board, Corporate Governance, Directors, Diversity, ESG performance, ESG disclosure, Impact, Investors, Firm Performance, Stakeholder Impact	Impact of ESG on Firm performance & various stakeholders
Cluster 3	Blue	ESG investing, COVID-19, Financial performance, Responsible investment, Return, Risk, Sustainable Finance	Sustainable Finance
Cluster 4	Yellow	Integrated Reporting, Assurance, Corporate Sustainability, Socially Responsible Investment, Social- Responsibility	Integrated Reporting
Cluster 5	Purple	Corporate Financial Performance, Corporate Social Performance, Governance, Innovation, Management, Model, Reputation, Strategy, Sustainability, Valuation	Role of Innovation in determining ESG and Firm performance relationship

Cluster 1: Theories explaining ESG and Firm performance relationship

The link between ESG practices and firm performance has gained increasing attention from scholars and practitioners alike. The ESG framework, a broad and dynamic notion that encompasses corporate governance, sustainability and corporate social responsibility has its roots in stakeholders' theory. The stakeholder theory posits that companies that are more aware of their ESG performance are more likely to gain the support of stakeholders like customers, employees, and the general public (Freeman, 1984). Huang (2019) discusses some important theories, including stakeholder theory, which suggests that businesses must consider the interests of all stakeholders, agency theory, which focuses on the impact of managers and shareholders on ESG decisions, and legitimacy theory, which argues that companies may engage in ESG activities to maintain their social license to operate. Based on resource-based theory, Dong et al. (2022) found that diverse board is bound to make better decisions with the assistance of better peers and colleagues, thereby resulting in better boards based on their experience and qualifications. Based on this perspective, board diversity is bound to enhance firm performance. The resource-based view assumes that the internal capacities and resources of an organisation are the most significant drivers of competitive advantage and overall performance enhancement (Zahid et al., 2020; Garcia & Orsato, 2020; Nirino et al., 2021; Zhou et al., 2022). According to Saygili et al. (2022), a company's capability to create sustainable wealth depends on the quality of its relationship with different sets of stakeholders. According to Zhou et al., 2022, sustainable development theory and resource-based theory justify the relationship between sustainable development, ESG performance, financial performance, and company market value. Amongst the several theoretical frameworks, stakeholder theory and resource-based view are the two leading theories (Freeman, 1984; Donaldson & Preston, 1995).

Cluster 2: Impact of ESG on firm performance & various stakeholders

ESG practices have emerged at the forefront of interest in how firms are evaluated by investors, regulators, and other stakeholders. The dominant finding of recent research is that good ESG performance and disclosure will be partnered with improved firm performance, increased firm value and positive spillover effects for other stakeholders.

The vast majority of research establishes a positive association between ESG performance and financial performance metrics such as profitability (ROA, ROE), firm value (Tobin's Q), and credit ratings. The impact is stronger for large firms and firms with high stakeholder engagement or high top management commitment (Aydogmus et al., 2022; Ho et al., 2024; Kim & Li, 2021). Most research suggests that ESG can positively impact long-term firm performance since it allows firms to better manage risk, access capital, and compete globally (Wong et al., 2021; Bhaskaran et al., 2020; Zahid et al., 2020; Atif & Ali, 2021). In a study by Wong et al. (2021), it is found that ESG certification creates value for a firm by reducing its cost of capital and increasing its Tobin's Q, resulting in reduced costs of capital and improved firm valuation for firms that pursue ESG certification. Furthermore, a study by Xie et al. (2018) found that ESG activities have a non-negative relationship with corporate financial performance, and transparency regarding ESG information has a positive association with corporate efficiency. Firms with good ESG practices have better labour productivity and innovation and benefit employees (Cabaleiro-Cerviño & Mendi, 2024). ESG activities propel corporate sustainability, innovation, and social value through the alignment of firm interests with broader societal objectives (Liu et al., 2023; Jiang, 2024). Higher ESG scores are linked to reduced default and regulatory risk, ensuring long-term strategic stability (Jiang, 2024). Reported ESG enhances stakeholders' confidence and can offset the negative impacts of vulnerabilities (Pulino et al., 2022; Fatemi et al., 2017). Moreover, companies with strong ESG policies have happier and more productive employees, improved public image, and are more attractive to investors and stakeholders due to their socially responsible approach (Pfajfar et al., 2022). These findings indicate the importance of ESG policies in enhancing corporate sustainability and improving stakeholder relations.

Cluster 3: Sustainable Finance

In recent years, sustainable finance has gained traction, with companies, investors, and governments recognising the significance of ESG investing and its potential to contribute to a better future (Busch et al., 2016; Abdi et al., 2022; Li et al., 2025).

Sustainable finance is reshaping the financial sector by integrating social, environmental, and ethical considerations into investment decisions (Kumar & Sinha, 2025; Shah, 2024; Zairis et al., 2024). The field has evolved from ethical exclusions to comprehensive ESG integration, driven by regulatory changes, investor demand and global sustainability goals (Dovbiy et al., 2022). This approach aims to align financial activities with sustainable development goals, reduce risks and foster long-term economic resilience. Sustainable finance practices include ecological bonds, impact investing and socially responsible investing, among others (Gao et al., 2024). ESG investing considers the non-financial performance and current operations, management, and corporate governance of a company over the long term. In addition, potential hazards such as climate change and human rights violations are considered (Almeyda & Darmansya, 2019). According to Liang & Renneboog (2020), businesses can implement sustainable finance practices by integrating ESG factors into their corporate management and financial decision-making processes. This includes internalising externalities such as pollution and being accountable to shareholders as well as a broader group of stakeholders including employees, customers and suppliers. Sustainable finance provides investors with the potential to achieve higher returns by selecting investments with strong ESG credentials. Past research suggest that sustainable practices and ESG integration can help in reducing financial and reputational risks, improving green innovation and supporting long-term value creation (Wang et al., 2023). Instruments like green bonds and ESG-linked loans are key drivers for channeling capital toward sustainable projects and economic growth (Huang, 2024; Roy, 2023).

Cluster 4: Integrated Reporting

Integrated reporting involves considering the ESG aspects of a company's activities along with financial performance (Soriya & Rastogi, 2022; Lee & Suh, 2022). Integrated reporting brings together financial, ESG, and CSR disclosures, providing a holistic view of how organisations create value and manage risks related to environmental, social and governance issues (Sun, 2024; Rabaya & Saleh, 2021; Santamaria et al., 2021). Companies use CSR initiatives—such as stakeholder

engagement and environmental policies—to address and reduce ESG and reputational risks, with a strong correlation between identified risks and CSR actions in integrated reports (Karwowski & Raulinajtys-Grzybek, 2021). Integrated reporting encourages businesses to be transparent, accountable, and to be held to a higher standard of ethical behaviour (Dyczkowska et al., 2022). Adoption of integrated reporting strengthens the positive link between ESG disclosure and competitive advantage, as stakeholders better understand the integration of sustainability into business models (Rabaya & Saleh, 2021). Literature also suggests that CSR and ethical behavior, mediated by high-quality integrated reporting, are associated with a lower implicit cost of equity for ESG-focused firms (Chouaibi et al., 2024). It can further help businesses reduce risks and build trust with stakeholders, as well as demonstrate their commitment to sustainability and ethical practices. Integrated reporting is also useful for investors and other stakeholders, as it gives them valuable information about a company's operations, performance, and financial health (Esch et al., 2019; Petcharat & Zaman, 2019). Integrated reporting of ESG and financial data can help businesses be more successful in the long run. It allows them to identify areas for improvement and plan for the future. It also helps them develop strategies for mitigating risks and creating value for all stakeholders. The effectiveness of integrated reporting depends on the quality and depth of ESG and CSR integration, not just compliance or superficial reporting (Mbarek, 2025; Shapsugova, 2023; Maniora, 2017). There is a call for harmonised ESG reporting standards and regulatory frameworks to ensure consistency and comparability (Maniora, 2017; Del Gesso & Lodhi, 2024). Firms must embed ESG and CSR into core strategies and avoid greenwashing, prioritising transparency and ethical accountability for sustainable outcomes (Mbarek, 2025; Shapsugova, 2023).

Cluster 5: Role of Innovation in determining ESG and Firm performance relationship

A useful tool to promote sustainable businesses is innovation (Geissdoerfer et al., 2018; De Santis & Presti, 2018). Innovation represents the tool most companies use to initiate their sustainable change path, addressing earnings management, corporate social responsibility, accountability and transparency (Secundo & Lombardi, 2020; Cook et al., 2019; Graafland & Noorderhaven, 2020). Scholars have long recognised

the potential of ESG to be a lever of innovation and competitive differentiation (Husted & de Jesus Salazar, 2006) because firms that engage in ESG tend to adopt a broader perspective and develop closer relationships with stakeholders, they are better able to identify new opportunities (Tantalo & Priem, 2014). The mediating effect of innovation is stronger in certain contexts: privately-owned firms, mature firms, and those in sustainable industries benefit more. External shocks (e.g., COVID-19) and firm size also influence the strength of this relationship (Lee, 2025; Chen et al., 2024; Lei & Tu, 2024). Innovation plays a crucial mediating and amplifying role in the relationship between ESG performance and firm performance. Research consistently shows that firms integrating innovation with ESG strategies achieve better financial, sustainability, and competitive outcomes (Chouaibi et al., 2021; Zhou et al., 2023; Chen et al., 2024). The innovation capacity of firms can be measured through research and development expenditures or technological output, such as patents or patent applications (Broadstock et al., 2020; Surroca et al., 2009). Digital and technological innovation strengthens the impact of ESG on both innovation quality and firm performance, especially in non-manufacturing, digitised, and low-competition industries (Huang et al., 2023; Zhang et al., 2024). The importance of innovation in determining a company's success has been emphasised by a number of previous studies (Przychodzen & Przychodzen, 2015; Zanjirchi et al., 2019). The implementation of numerous ESG activities necessitates the development of current innovation capabilities or drives the creation of new capabilities, which may be another way in which ESG may boost the firm's innovativeness.

2.2.1.8 Word Cloud

Figure 2.10 is a representation of the words that featured most frequently in the articles about ESG and firm performance. The word cloud displays words in sizes according to their frequency of occurrence. The location of the words is somewhat random; however the dominant words are placed in the centre to make them more noticeable due to their large size. The most often occurring keyword was "impact," followed by "management" and "governance."



Figure 2.10: Visualization of the words that appeared most frequently in the papers

2.2.1.9 Trending Topics

Figure 2.11 shows the study of the annual hierarchical organisation of themes covered by scholars in the ESG and firm performance field. In 2016, socially responsible investment was the most discussed topic. In 2018, sustainability and sustainability reporting were the most trending topics. Currently, more and more companies and investors are paying attention to ESG factors and firm performance since these have been the most discussed topics since 2020.

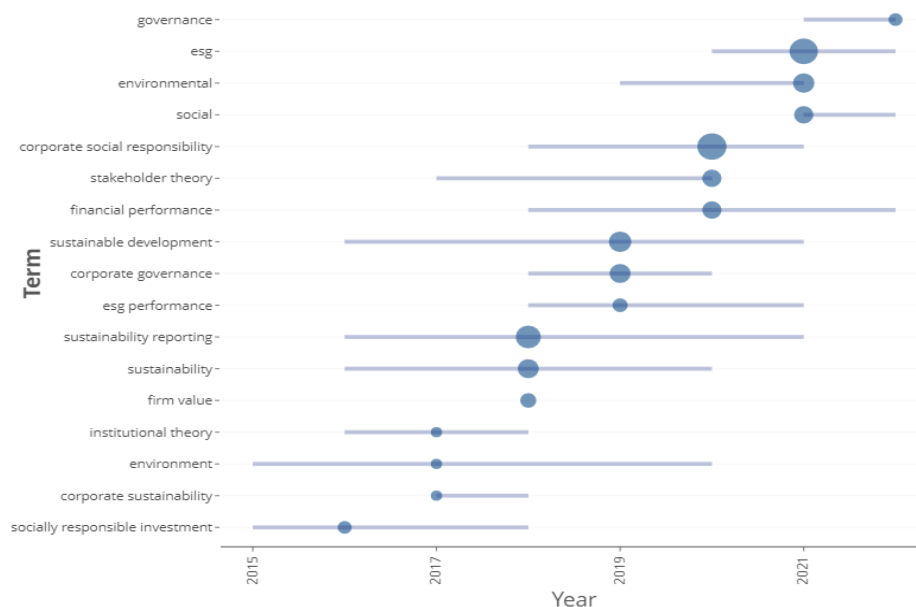


Figure 2.11: Trending topics

2.2.2 TCCM Analysis

2.2.2.1 Theory

Considerable progress has been made in the field of ESG and firm performance research, with stakeholder theory and legitimacy theory emerging as dominant theoretical perspectives (Donaldson & Preston, 1995; Tavares & Dias, 2018) (Table 2.3). Stakeholder theory emphasises prioritising the interests of all stakeholders, challenging the traditional focus on shareholder wealth maximisation (Freeman, 1999; Battisti et al., 2022; Jensen, 2001). Legitimacy theory highlights the importance of organisations conforming to societal norms and expectations to maintain their social license to operate (Suchman, 1995). Other theories supporting the ESG and firm performance relationship include stewardship theory, institutional theory, slack resource theory, good management theory and information asymmetry theory (Hernandez, 2007; Claassen & Ricci, 2015). Stewardship theory views management as custodians of organisational assets, aiming to safeguard stakeholder interests. Stewardship theory supports the view that ESG has a positive impact on firm value and profitability, especially with strong governance and stakeholder focus (Kim & Li, 2021; Velte, 2019). Institutional theory suggests that maintaining corporate legitimacy offers economic and non-economic benefits. Firms adopt ESG to gain legitimacy and meet societal expectations, which can yield economic benefits. Institutional environments (e.g., legal systems, culture) mediate ESG's financial impact; positive in supportive contexts (Shin et al., 2022; Lei & Yu, 2023). Good management theory suggests that strong social performance enhances a company's reputation and improves financial performance. According to the past studies, there is a positive, significant link between ESG and financial performance, especially in firms with high transparency and strong management (Bruna et al., 2022; Lei & Yu, 2023; Shin et al., 2022). Slack Resource theory proposes that financially robust companies allocate more resources to ESG initiatives, positively influencing their financial performance. While multiple studies demonstrate that financial slack facilitates ESG investments by providing companies with the capital necessary to pursue sustainability initiatives, the evidence regarding whether this slack actually strengthens the connection between ESG activities and financial performance remains inconclusive (Chams et al., 2021; Gao et al., 2023; Singh et al., 2023).

On the other hand, scholars who rely on agency and trade-off theory argue that sustainability efforts may be viewed as an example of corporate resource misallocation (Nguyen, 2020). Agency theory, for example, considers the existing conflict of interest within the firm between management and shareholders, positing that resource allocation to ESG initiatives is likely to be in conflict with shareholder value (Tang, 2022; Singh et al., 2023; Duque-Grisales & Aguilera-Caracuel, 2019). Trade-off theory argues there is a certain trade-off between satisfying ESG commitments and achieving ‘optimal’ financial results in the short-run. This hypothesis resonates with the general belief that expenditures on ESG commitments negatively affect financial performance. Studies show there are substantial trade-offs, especially in the case of capital expenditure and environmental initiatives. Firms often need to choose between short-term productivity-boosting capital investments and long-term environmental sustainability that does not provide a short-term financial payback (Yu et al., 2024; Salem et al., 2024; Singh et al., 2023; Duque-Grisales & Aguilera-Caracuel, 2019).

Table 2.3: Theories used to explain ESG-Firm Performance relationship

Theory	Articles (%)	Explanation	Examples
Stakeholder Theory	47%	Stakeholder theory is an ethical concept that encompasses the consequences of business decisions, trends, profits, and their overall impact on various stakeholders, which include shareholders, employees, financiers, government, customers, suppliers, and others.	(Saygili et al., 2022; Linnenluecke, 2022; Li et al., 2021; Huang, 2022; Hassan et al., 2021; Sepulveda-Alzate et al., 2021; Garzón Jiménez & Zorio-Grima, 2021; Nekhili et al., 2021; Kim & Lee, 2020; Xie et al., 2019; Garcia-Blandon et al., 2019)
Legitimacy Theory	16%	Legitimacy theory states that organizations continuously try to ensure that they carry out activities in accordance with societal boundaries and norms.	(Eliwa et al., 2021; Sepulveda-Alzate et al., 2021; Garzón Jiménez & Zorio-Grima, 2021; Shakil et al., 2021; Giannarakis et al., 2014)
Agency Theory	14%	Agency theory examines the relationship between principals and agents, focusing on conflicts of interest and mechanisms to align their interests and reduce agency costs.	(Dong et al., 2022; Garzón Jiménez & Zorio-Grima, 2021; Melis & Rombi, 2021; Nekhili et al., 2021; Shahbaz et al., 2020; Araissi et al., 2016)
Institutional Theory	9%	Institutional theory suggests that organisations conform to externally established rules, norms, laws, and sector-specific best practices in order to align their processes with the institutional environment.	(Eliwa et al., 2021; Sepulveda-Alzate et al., 2021; Melis & Rombi, 2021; Araissi et al., 2016; Li et al., 2021)

Theory	Articles (%)	Explanation	Examples
Good Management Theory	7%	If company is performing social activities, it will lead to increased reputation of the company among its stakeholders, ultimately leading to good financial performance (Waddock & Graves, 1997).	(Daszynska-Zygadlo et al., 2020; Isaksson & Woodside, 2016)
Theory of Asymmetric Information	5%	Asymmetric information arises when there is an imbalance in the amount or quality of information held by different parties involved in a transaction. In the context of ESG, the theory of asymmetric information pertains to the uneven distribution of information regarding a company's ESG practices and performance between the company itself and its stakeholders. This means that one party may possess more comprehensive or superior information about the company's ESG efforts, creating a disparity in knowledge and understanding among the involved parties.	(Garzón Jiménez & Zorio-Grima, 2021)
Slack Resource Theory	5%	Under the slack resource theory, a company should have a good financial position to contribute to ESG activities.	(Chen et al., 2021; Chams et al., 2021; Qureshi et al., 2021)
Resource Based View	5%	According to the resource-based view (RBV) theory, organizations possess diverse resources and capabilities that serve as the primary drivers for establishing sustainable competitive advantages.	(Zahid et al., 2020 ; Garcia & Orsato, 2020; Nirino et al., 2021 ; Zhou et al., 2022)
Trade-Off Theory	5%	The trade-off theory posits that implementing sustainability practices incurs additional costs, leading to a reduction in profitability. Companies that allocate resources to sustainability activities are likely to experience lower profits. Therefore, there is a trade-off between ESG initiatives and financial profitability.	(Qureshi et al., 2021; Buallay et al., 2021; Chen et al., 2021)
Stewardship Theory	4%	Stewardship theory asserts that managers, as stewards of a company, have a responsibility to protect and enhance shareholders' wealth through firm performance while considering the interests of other stakeholders.	(Tilba, 2022; Garzón Jiménez & Zorio-Grima, 2021; Zhou et al., 2022)
Theory of Firm	2%	The theory of the firm is a fundamental concept in microeconomics that posits the primary motive of companies is profit maximisation. According to this theory, businesses operate with the goal of generating the highest possible financial returns. This notion highlights the fundamental nature of profit maximisation	(Huang, 2022)

Theory	Articles (%)	Explanation	Examples
		as a key driver behind the establishment and continued existence of firms.	
Impression Management Theory	2%	According to impression management theory, individuals and organisations have the ability to strategically choose which aspects of their identity to present in different situations. In essence, impression management involves efforts to ensure that the image perceived by others accurately reflects the intended impression. Organisations may engage in impression management strategies to enhance their reputation and gain stakeholder support in relation to their ESG practices.	(Reber et al., 2022)
Corporate Culture Theory	2%	Corporate Culture Theory is an approach that focuses on the role of organisational culture in shaping the behavior, values, norms, and practices within a company.	(Yoon et al., 2021)
Managerial Opportunism Hypothesis	2%	The Managerial Opportunism Hypothesis posits that senior executives prioritise their personal interests over those of shareholders and other stakeholders, thereby causing harm or detriment to these individuals or groups.	(Qureshi et al., 2021)
Negative Synergy Theory	2%	Negative synergy in the ESG realm could refer to situations where the integration of ESG practices within an organisation does not lead to improved outcomes or value creation.	(Qureshi et al., 2021)
Theory of Planned Behaviour (TPB)	2%	TPB is a psychological theory that helps in predicting human behaviours on various factors like human attitude and its control on surrounding.	(Sultana et al., 2018)
Financial Theory	2%	According to financial theory, the primary objective of firms is to maximise the wealth of shareholders. Firms are advised to find a harmonious equilibrium between maintaining adequate liquidity within the company and actively engaging in ESG practices.	(Chan et al., 2017)
No Theory	30%		(Jitmaneeroj et al., 2016; Busch et al., 2016; Limkriangkrai et al., 2017)

2.2.2.2 Context

In the field of ESG and firm performance research, it is required to explain the various settings in which these studies are carried out. Countries and industries chosen can

affect the outcomes as well as the research findings generalisability. Table 2.4 shows the findings concerning countries researched in the ESG and firm performance area. The analysis shows that a majority of the reviewed studies were carried out in the United States of America (23%) and Europe (18%). Thus, the review inferred that the motives for higher ESG and firm performance relationship literature has been conventionally associated with advanced economies only (Cheng et al., 2013). Nevertheless, emerging markets, although a common source of businesses across the globe, have yet to find substantial place in the existing ESG and firm performance literature (Baughn et al., 2007; Dobers & Halme, 2009; Chauhan & Kumar, 2018; Daugaard, 2019). Besides, the analysis shows that most of the reviewed studies were carried out in one country, lacking a broader international scope. There are scarce studies that possesses a multi-country analysis (Eliwa et al., 2021; Hassan et al., 2021; Sepulveda-Alzate et al., 2021; Buallay et al., 2021; Miralles-Quiros et al., 2019).

Table 2.4: Countries investigated in the reviewed articles

Country	Articles (%)	Examples
United States of America	23%	(Tilba, 2022; Hassan et al., 2021; Reber et al., 2021; Kim & Lee, 2020; Qureshi et al., 2021; Melis & Rombi, 2021; Miralles-Quiros et al., 2019; Chan et al., 2017; Eliwa et al., 2021; Sepulveda-Alzate et al., 2021; Reber et al., 2021; Garzón Jiménez & Zorio-Grima, 2021; Shakil et al., 2021)
Europe	18%	(Buallay et al., 2021; Melis & Rombi, 2021; Nirino et al., 2021; Miralles-Quiros et al., 2019; Lagasio & Cucari, 2019; Isaksson & Woodside, 2016; Girerd-Potin et al., 2012; Profitlich et al., 2021; Eliwa et al., 2021)
Latin America	9%	(Sepulveda-Alzate et al., 2021; Garzón Jiménez & Zorio-Grima, 2021; Duque-Grisales & Aguilera-Caracuel, 2021; Martinez-Ferrero et al., 2020; Lagasio & Cucari, 2019)
China	7%	(Dong et al., 2022; Zhou et al., 2022; Chen et al., 2021; Buallay et al., 2021)
Africa	5%	(Hassan et al., 2021; Daszynska-Zygadlo et al., 2020; Lagasio & Cucari, 2019)
Japan	4%	(Miralles-Quiros et al., 2019)
India	2%	(Buallay et al., 2021)
Korea	2%	(Yoon et al., 2021)
No specific country	33%	(Jitmaneeroj et al., 2016; Busch et al., 2016)

The problem of data collecting and data comparison in the cross-national analysis might be a likely source. Due to the fact that the findings of the study in one country cannot be compared to each other, they can offer only tentative indications. Moreover, in terms of industries, most of the studies considered non-financial listed companies (Dong et al., 2022; Saygili, et al., 2022; Eliwa et al., 2021; Hassan et al., 2021; Melis & Rombi, 2021) while there were few exceptions (Daszynska-Zygadlo et al., 2020; Shakil et al., 2021; Miralles-Quiros et al., 2019)

2.2.2.3 Characteristics

The studies reviewed assessing the impact of ESG on firm performance have examined a variety of variables concerning ESG and firm performance. According to Table 2.5, ESG is considered as the independent variable (Dong et al., 2022; Zhou et al., 2022; Chen et al., 2021; Eliwa et al., 2021; Hassan et al., 2021; Reber et al., 2021; Yoon et al., 2021; Kim & Lee, 2020; Buallay et al., 2021; Daszynska-Zygadlo et al., 2020). Some studies also explore moderating effects, where other factors such as board diversity, financial slack and international diversification can help or inhibit firm performance (Qureshi et al., 2019; Waddock & Graves, 1997; Duque-Grisales & Aguilera-Caracuel, 2021) (Table 2.6). A small number of studies consider mediating influences such as committees for corporate social responsibility, customer loyalty, stakeholder engagement, employee relations, innovation, operational efficiency, risk management, sales and marketing, media attention, and supplier relations (Martinez-Ferrero et al., 2020; Vishwanathan et al., 2019; Atz et al., 2022; Whelan & Atz, 2021). The dependent variable in most studies is corporate financial performance, measured through indicators like return on assets, competitive advantage and corporate reputation (Dong et al., 2022; Saygili et al., 2022; Zhou et al., 2022; Chen et al., 2021; Daszynska-Zygadlo et al., 2020) (Table 2.7). While integrating ESG practices can lead to positive effects such as cost reduction and improved product quality, not all studies consistently show a direct improvement in corporate profitability due to the high costs associated with sustainability goals (Chen et al., 2015; Buallay, 2019).

Table 2.5: Independent variables investigated in the reviewed articles

Characteristics / Variables	Articles (%)	Examples
Environmental Social Governance Composite Scores	37%	(Zhou et al., 2022; Chen et al., 2021; Eliwa et al., 2021; Hassan et al., 2021; Reber et al., 2021; Yoon et al., 2021; Kim & Lee, 2020; Daszynska-Zygadlo et al., 2020; Pirtea et al., 2021; Nekhili et al., 2021; Shahbaz et al., 2020; Miralles-Quiros et al., 2019; Minutolo; Nekhili et al., 2021)
Environmental Social & Governance Scores (Individually)	9%	(Yoon et al., 2021; Kim & Lee, 2020; Buallay et al., 2021; Shahbaz et al., 2020; Limkriangkrai et al., 2017)
Board Diversity	5%	(Shahbaz et al., 2020; Dong et al., 2022; Martinez-Ferrero et al., 2020)
Tobin's Q	4%	(Chams et al., 2021; Qureshi et al., 2021)
Financial Leverage	4%	(Giannarakis et al., 2014)
Percentage of Women Directors	4%	(Shakil et al., 2021; Araissi et al., 2016)
Free Cash Flows	2%	(Chams et al., 2021)
Market-to-book Ratio	2%	(Qureshi et al., 2021)
Book Value Per Share of Stocks	2%	(Miralles-Quiros et al., 2019)
Earnings Per Share	2%	(Miralles-Quiros et al., 2019)
Return on Equity	2%	(Qureshi et al., 2021)
Return on Assets	2%	(Qureshi et al., 2021)
Chief Financial Officer Compensation	2%	(Profitlich et al., 2021)
Director's Liability and other related variables	2%	(Melis & Rombi, 2021)
Corporate Controversies	2%	(Nirino et al., 2021)
Religiosity	2%	(Terzani & Turzo, 2020)
Materiality/ Immateriality of ESG	2%	(Kim & Lee, 2020)
Corporate Social Irresponsibility Coverage	2%	(Kolbel et al., 2017)
Altman's Z Score	2%	(Chan et al., 2017)
CEO Duality	2%	(Giannarakis et al., 2014)
Greenhouse Gas Emissions	2%	(Giannarakis et al., 2014)
KZ Index	2%	(Chan et al., 2017)

Table 2.6: Moderating and Mediating variables investigated in the reviewed articles

Characteristics / Variables - Moderating	Articles (%)	Examples
Total Quality Management	2%	(Chams et al., 2021)
Environmental Social Governance Composite Scores	2%	(Qureshi et al., 2021)
Environmental Social & Governance Scores (Individually)	2%	(Qureshi et al., 2021)
Financial Slack	2%	(Duque-Grisales & Aguilera-Caracuel, 2021)
Geographical International Diversification	2%	(Duque-Grisales & Aguilera-Caracuel, 2021)
ESG Controversies	2%	(Shakil et al., 2021)
Franchising Strategy	2%	(Kim & Lee, 2020)
Employee Board Representation	4%	(Nekhili et al., 2021)
Characteristics / Variables - Mediating	Articles (%)	Examples
CSR Committee	2%	(Martinez-Ferrero et al., 2020)
Economic Policy Uncertainty	2%	(Vural-Yavas, 2020)

Table 2.7: Dependent variables investigated in the reviewed articles

Characteristics / Variables	Articles (%)	Examples
Return on Assets	21%	(Saygili, et al., 2022; Chen et al., 2021; Kim & Lee, 2020; Buallay et al., 2021; Daszynska-Zygadlo et al., 2020; Pirtea et al., 2021; Shahbaz et al., 2020; Miralles-Quiros et al., 2019; Xie et al., 2019)
Tobin's Q	19%	(Dong et al., 2022; Saygili, et al., 2022; Zhou et al., 2022; Chen et al., 2021; Daszynska-Zygadlo et al., 2020; Nekhili et al., 2021; Shahbaz et al., 2020; Kim & Lee, 2020; Miralles-Quiros et al., 2019; Xie et al., 2019)
Environmental Social Governance Composite Scores	14%	(Profitlich et al., 2021; Chams et al., 2021; Shakil et al., 2021; Martinez-Ferrero et al., 2020; Shahbaz et al., 2020; Giannarakis et al., 2014)
Environmental Social & Governance Scores (Individually)	7%	(Chams et al., 2021; Shahbaz et al., 2020; Giannarakis et al., 2014)
Return on Equity	5%	(Buallay et al., 2021; Pirtea et al., 2021)
Cost of Debt	4%	(Eliwa et al., 2021)
Stock Returns	4%	(Limkriangkrai et al., 2017; Araissi et al., 2016)
Return on Net Assets	2%	(Chen et al., 2021)
Return on Invested Capital	2%	(Chen et al., 2021)

Characteristics / Variables	Articles (%)	Examples
Market Risks - Total Market Risk, Idiosyncratic Risk, Systematic Risk	2%	(Hassan et al., 2021)
Volatility - Total Volatility, Idiosyncratic Volatility	2%	(Reber et al., 2021)
Degree of Tax Avoidance - BTD (Difference between net income and taxable income)	2%	(Yoon et al., 2021)
Customised Credit Rating Scale	2%	(Kim & Lee, 2020)
Compensation - Total compensation, Performance based compensation	2%	(Melis & Rombi, 2021)
Financial Risk	2%	(Kolbel et al., 2017)
Corporate Financing decisions	2%	(Limkriangkrai et al., 2017)
EBIT	2%	(Pirtea et al., 2021)
Stock Prices	2%	(Miralles-Quiros et al., 2019)
Corporate Efficiency	2%	(Xie et al., 2019)
Investment Decision	2%	(Sultana et al., 2018)
Corporate Social Responsibility	2%	(Chan et al., 2017)
Not Specified	2%	(Nirino et al., 2021)

2.2.2.4 Methodology

Table 2.8 and 2.9 gives an overview of research approach and research methods employed in the articles. The review indicates that more than 80% of the studies are based on quantitative approaches (Daszynska-Zygadlo et al., 2020; Pirtea et al., 2021; Shakil et al., 2021; Martinez-Ferrero et al., 2020; Terzani & Turzo, 2020; Nekhili et al., 2021; Shahbaz et al., 2020; Kim & Lee, 2020; Miralles-Quiros et al., 2019; Minutolo et al., 2019). Moreover, limited research has employed qualitative methodologies (Table 2.8). Qualitative research emphasises the exploration and understanding of phenomena using methods including interviews, observations, and textual analysis. Qualitative methods offer comprehensive insights into the experiences, perspectives, and contexts related to the relationship between ESG and firm performance. Their limited application in the reviewed studies indicates a predominance of quantitative methods in this field. Table 2.9 outlines the primary analytical research methods utilized in the examined articles. The review indicates that regression analysis, especially multiple regression, is the most commonly utilized method.

Table 2.8: Research approach used in the reviewed articles

Research Approach	Articles (%)	Examples
<i>Quantitative</i>		
Secondary Data	81%	(Linnenluecke, 2022; Profitlich et al., 2021; Chen et al., 2021; Eliwa et al., 2021; Hassan et al., 2021; Sepulveda-Alzate et al., 2021; Chams et al., 2021; Reber et al., 2021; Yoon et al., 2021; Kim & Lee, 2020; Qureshi et al., 2021; Garzón Jiménez & Zorio-Grima, 2021; Buallay et al., 2021; Melis & Rombi, 2021)
Survey (Primary)	2%	(Isaksson & Woodside, 2016)
Mix (Both Primary and Secondary)	2%	(Cubas-Díaz & Martínez Sedano, 2018)
<i>Qualitative</i>		
Primary Data	4%	(Khemir, 2019; Eccles et al., 2020)
Secondary Data	12%	(Tilba, 2022; Li et al., 2021; Lagasio & Cucari, 2019; Busch et al., 2016; Gillan et al., 2021; Huang, 2022)

Table 2.9: Research methods used in the reviewed articles

Research Method	Articles (%)	Examples
Linear Regression	7%	(Zhou et al., 2022; Buallay et al., 2021; Melis & Rombi, 2021; Xie et al., 2019)
Multiple Regression	26%	(Profitlich et al., 2021; Kim & Lee, 2020; Daszynska-Zygadlo et al., 2020; Duque-Grisales & Aguilera-Caracuel, 2021; Daszynska-Zygadlo et al., 2020; Pirtea et al., 2021; Shakil et al., 2021; Martinez-Ferrero et al., 2020; Kim & Lee, 2020; Miralles-Quiros et al., 2019; Minutolo et al., 2019; Kolbel et al., 2017)
Generalised Method of Moments	9%	(Dong et al., 2022; Garzón Jiménez & Zorio-Grima, 2021; Nekhili et al., 2021)
Panel Vector Autoregressive Model	4%	(Chen et al., 2021; Qureshi et al., 2021)
Pooled Ordinary Least Squares Regression	9%	(Eliwa et al., 2021; Hassan et al., 2021; Yoon et al., 2021; Nirino et al., 2021)
Logistic Regression	5%	(Melis & Rombi, 2021; Chan et al., 2017)
Principal Component Analysis	5%	(Sepulveda-Alzate et al., 2021; Terzani & Turzo, 2020; Girerd-Potin et al., 2012)
Structural Equation Modelling	4%	(Pirtea et al., 2021)
Distributed Lag Regression Methodology	2%	(Chams et al., 2021)
Regression Residual	2%	(Reber et al., 2021)
Pearson correlation	2%	(Garcia-Blandon et al., 2019)
Kruskal-Wallis and Mann-Whitney tests	2%	(Garcia-Blandon et al., 2019)
Data Envelopment Analysis	2%	(Xie et al., 2019)

Research Method	Articles (%)	Examples
Non-Parametric Regression	2%	(Xie et al., 2019)
Expectation Maximization (EM) clustering and the Bayesian Network classifiers with Tree Augmented Naïve Bayes (BN-TAN) Partial Least Square (PLS)	2%	(Jitmaneeroj et al., 2016)
Fama and French 3-factor model in realized	2%	(Araissi et al., 2016)
Hausman- Taylor	2%	(Saygili, et al., 2022)
Conceptual Papers	12%	(Tilba, 2022; Gillan et al., 2021; Khemir, 2019; Eccles et al., 2020; Lagasio & Cucari, 2019; Busch et al., 2016)

2.3 Research Gaps

- ***To begin***, there has not been any consistency with regard to the definitions of ESG and firm performance (Atz et al., 2022; Whelan & Atz, 2021; Gillan et al., 2021; Friede et al., 2015). It is thus imperative for management researchers to arrive at a unanimous and a common definition to render us with comparable analysis and understanding relating to ESG-firm performance relationship.
- ***Secondly***, despite the growing set of literature, there has been inconclusive results with regarding the ESG and firm performance relationship, with studies suggesting a positive, negative or a neutral relationship.
- ***Thirdly***, there is a scarcity of research that has investigated the mediating and moderating variables that influence the relationships between ESG and company performance.
- ***Fourthly***, the majority of the research that has been done has concentrated on the overall ESG score rather than dissecting the individual ESG pillars. It's possible that each pillar will have a distinct kind of impact on the company, as well as a varying degree of that impact.
- ***Fifthly***, a large variety of variables for measuring firm performance have been proposed in prior literature. Both accounting and market-based measures have been used to measure firm performance. However, traditional accounting measures consider only historical aspects of firm performance. Moreover, they

are subject to bias from managerial manipulation and differences in accounting procedures. To overcome this, some researchers prefer market-based measures of performance. Market returns have several advantages over accounting-based measures: they are (1) less susceptible to differential accounting procedures and managerial manipulation and (2) represent investors' evaluations of a firm's ability to generate future economic earnings rather than past performance. However, problems exist with stock market-based measures as sole concentration on investors' evaluations may not be sufficient. Therefore, this study has tried to incorporate both accounting and market-based measures.

- ***Sixthly***, the frequently employed methodology to analyse ESG and firm performance is regression analysis. However, the other methods remain unexplored in the area of ESG and firm performance studies. Future research can also integrate mixed-method approaches to better understand the relationship. Mixed method allows researchers to capitalize on the strength of both qualitative and quantitative approaches and help in addressing the problem with sufficient depth and breadth (Dawadi et al., 2021; Malina et al., 2011; Leech & Onwuegbuzie, 2010). We feel that a mixed-method approach will help to explain the underlying topic with adequate depth and breadth, as ESG and firm performance is a relatively under-explored study area.
- ***Lastly***, the existing literature on motivations for enhanced ESG and firm performance has primarily focused on advanced economies. In contrast, emerging markets, which significantly contribute to global business, have not yet established a substantial presence in the current ESG discourse. These unexplored and underexplored areas present researchers with opportunities to make significant contributions to the underlying research stream.

All these gaps offer a vital opportunity for researchers to make a significant contribution to the related research stream. This research aims to fill the gaps in the existing literature by providing a holistic assessment of the ESG practices of firms concerning corporate performance metrics, including financial metrics, market-based metrics, and shareholders' value enhancement. A case study is also being developed.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter presents the comprehensive research methodology designed to investigate the relationship between ESG practices and firm performance in Indian companies. Section 3.1 defines the research questions exploring ESG behaviour, its prominence in corporate discourse, temporal trends and impacts on financial performance, market performance and shareholder value creation. Section 3.2 outlines the research objectives focused on studying ESG behaviour, examining ESG and firm performance relationships across multiple dimensions and developing a case study on leading ESG performers. Section 3.3 introduces the conceptual model linking ESG with firm performance based on theoretical underpinnings. Section 3.4 details the sample selection from NIFTY 500 companies, study period (FY15-FY23) and data collection methodology combining primary sources (sustainability reports, interviews) with secondary sources (databases, regulatory filings). Sections 3.5-3.7 present the study's hypotheses, variable operationalization (dependent, independent, control, moderating, and mediating variables) and sophisticated data analysis techniques employing text mining, panel regression and multi-case study approach.

3.1 Research Questions

The study is guided by the following research questions:

1. What is the ESG behaviour of Indian companies?
2. How prominent are ESG-related discussions within earnings call transcripts/sustainability reports of Indian companies?
3. How has the volume of discussions about ESG evolved over time?
4. Have the Environmental, Social, and Governance factors all undergone similar trends, or have certain aspects gained in popularity compared to others?

5. How does ESG and its individual constituents affects a firm's financial performance?
6. How does ESG and its individual constituents affects a firm's market performance?
7. Does ESG lead to shareholder's value creation?
8. How do stakeholders respond to the company's ESG practices?

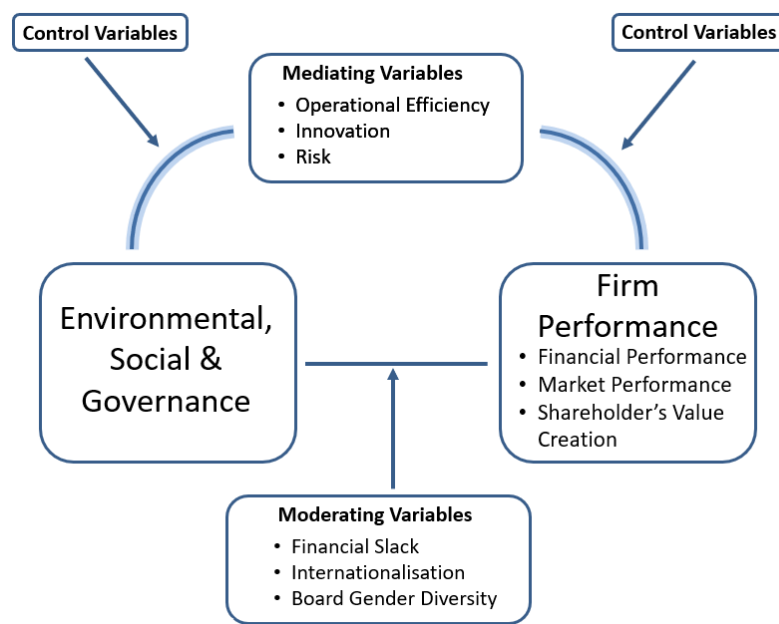
3.2 Research Objectives

To address the research questions, the study aims to achieve the following objectives:

1. To study the ESG behaviour of select NIFTY 500 companies.
2. To investigate the relationship between ESG and financial performance of select NIFTY 500 companies.
3. To investigate the relationship between ESG and market performance of select NIFTY 500 companies.
4. To determine the impact of ESG on shareholder's value creation of select NIFTY 500 companies.
5. To develop a case study on the company scoring highest on ESG.

3.3 Conceptual Model

The research framework is developed based on a comprehensive literature review, identifying key themes related to ESG behaviour, ESG-financial performance linkages, ESG-market performance interactions and ESG-driven shareholder value creation. The study proposes a holistic framework that integrates these elements to explore their interdependencies. Figure 3.1 presents the conceptual model, depicting linkages between ESG themes and firm performance.



Source: Author's contribution

Figure 3.1: Conceptual Model

3.4 Sample and Data collection

3.4.1 Sample

The study focuses on companies listed in the NIFTY 500 index, which represent approximately 92.29% of free-float market capitalization and 85.85% of total turnover on the National Stock Exchange (NSE) (Nifty 500 Index, 2025). The sample selection is based on companies that have been issuing ESG or sustainability related disclosures since 2015, with the availability of both dependent and independent variables required for the analysis. The final sample size will be determined based on these constraints, ensuring a robust dataset for the study. Despite the global traction of ESG research, emerging economies remain underexplored in existing literature. India presents a compelling case for ESG analysis due to increasing ESG adoption following regulatory mandates, lagging Sustainable Development Goals (SDGs) progress, ranking 120 out of 165 countries (Sultana, 2021) and growing investor pressure (especially from institutional investors) for ESG compliance (Mulchandani et al., 2022; Marshall et al., 2022). In India, strong ESG performance is generally linked to better financial outcomes, lower risk, and greater innovation, though effects differ by sector and ESG component. The market is evolving, with regulatory changes and investor awareness gradually

strengthening the ESG-performance nexus. As India transitions towards sustainability-driven corporate strategies, examining the ESG-performance nexus in this market is both timely and relevant.

3.4.2 Period of the Study

The period of the study is taken as FY15-FY23. We selected FY15 as the starting point since the review of literature indicates that the linkages between ESG and firm performance has gained traction during this period. Furthermore, the enactment of the Companies Act 2013 led to increased participation of companies in ESG practices. Corporate Social Responsibility (CSR) was integrated into the Indian corporate framework with the enactment of the legislation under section 135. The compulsory aspect of CSR within the Indian framework has led to considerable engagement, with companies dedicating their resources to socially impactful initiatives, primarily as a result of the stringent CSR requirements outlined in section 135.

3.4.3 Data collection sources

This study involved both primary and secondary sources of data, employing a blend of qualitative and quantitative methods to ensure a comprehensive analysis of ESG behaviours of companies and their impact on firm performance.

3.4.3.1 Primary Sources

Interviews were conducted with senior management personnel and ESG professionals, including Directors, Vice Presidents, ESG Heads, and Assistant Managers to gather qualitative insights on the motivations and perceptions behind the adoption and implementation of ESG practices. The interviews provided first-hand perspectives on corporate ESG strategies and their impact.

3.4.3.2 Secondary Sources

Sustainability reports for companies from FY 2015 to 2023 were collected and analysed to understand the ESG behaviour of companies. To extract relevant data, specific keywords were used to identify and collect ESG-related documents, including sustainability reports, ESG reports, corporate responsibility reports, BRR (Business

Responsibility Reports), BRSR (Business Responsibility and Sustainability Reports), and CSR (Corporate Social Responsibility) reporting.

Quantitative data was collected from the Bloomberg Database (ESG scores and financial metrics), the CMIE Prowess Database (firm-specific financial details), and the Ministry of Corporate Affairs (regulatory filings).

These primary and secondary data sources provided a robust foundation for analysing ESG behaviour and its impact on firm performance over the period from FY 2015 to FY 2023.

3.5 Hypotheses Developed

Table 3.1 shows the hypotheses developed.

Table 3.1: Hypotheses developed

Hypotheses	Description
H1	There exists relationship between Financial Performance of a company and ESG scores.
H1a	There exists relationship between Financial Performance of a company and Environmental scores.
H1b	There exists relationship between Financial Performance of a company and Social Scores.
H1c	There exists relationship between Financial Performance of a company and Governance scores.
H2	There exists relationship between Market Performance of a company and ESG scores.
H2a	There exists relationship between Market Performance of a company and Environmental scores.
H2b	There exists relationship between Market Performance of a company and Social Scores.
H2c	There exists relationship between Market Performance of a company and Governance scores.
H3	There exists relationship between Shareholder's value creation and ESG scores.
H3a	There exists relationship between Shareholder's value creation and Environmental scores.
H3b	There exists relationship between Shareholder's value creation and Social Scores.
H3c	There exists relationship between Shareholder's value creation and Governance scores.
H4	Financial Slack moderates the relationship between ESG scores and firm performance.
H5	Internationalization moderates the relationship between ESG scores and firm performance.

Hypotheses	Description
H6	Board Gender Diversity moderates the relationship between ESG scores and firm performance.
H7	Innovation mediates the relationship between ESG scores and firm performance.
H8	Operational Efficiency mediates the relationship between ESG scores and firm performance.
H9	Credit Risk mediates the relationship between ESG scores and firm performance.
H10	Systematic Risk mediates the relationship between ESG scores and firm performance.

*There will be respective null hypotheses for the hypotheses mentioned above.

Note:

- For the Financial Performance hypotheses (H1-H1c), financial performance is measured through seven key indicators: revenue growth, profitability ratios (operating and net profit margins), return metrics (ROA, ROE, ROCE), investment efficiency.
- For the Market Performance hypotheses (H2-H2c), market performance is measured through four key indicators: Tobin's Q, Enterprise Multiple, P/E and P/B ratios.
- For the Shareholder's value creation hypotheses (H3-H3c), shareholder's value creation is measured through two key indicators: EVA and MVA.
- For the moderating and mediating hypotheses (H4-H10), firm performance is measured through thirteen key indicators: revenue growth, profitability ratios (operating and net profit margins), return metrics (ROA, ROE, ROCE), investment efficiency, market valuation measures (Tobin's Q, Enterprise Multiple, P/E and P/B ratios), and value-added metrics (EVA and MVA), providing comprehensive coverage of financial, and market performance dimensions.

3.6 Variables for the Study

The literature consistently highlights a suite of accounting-based and value-based metrics such as revenue growth, profitability ratios, investment efficiency and market-based indicators as essential for assessing firm performance and value creation

(Ramezani et al., 2002; Narang & Kaur, 2014; Yaman & Kurtlar, 2022). Modern research increasingly emphasizes value-based measures like Economic Value Added and Market Value Added for their ability to capture the true economic profit and market perception of value creation, often outperforming traditional accounting ratios in explaining shareholder returns (Venanzi, 2010; Sandoval, 2011). The study employs the following variables to be used in investigating the ESG and firm performance relationship.

3.6.1 Dependent Variables

Table 3.2 presents the dependent variables employed in the study, categorized into three main types: financial performance (including growth, profitability, and investment efficiency metrics), market performance (including Tobin's Q, price ratios, and enterprise multiple) and shareholder value creation measures (Economic Value Added and Market Value Added). Each variable is defined with its specific measurement formula and supported by relevant academic references.

Table 3.2: Dependent variables

Type of Variable	Name	Measurement	Formula	References
Dependent Variable	Financial Performance	Growth measured using Growth in Revenues	$(\text{Current Period Revenue} - \text{Prior Period revenue}) / \text{Prior period revenue}$	(Cornell & Damodaran, 2020; Venanzi, 2010)
		Profitability measured using: Operating Profit Margin	Operating Profit Margin = Operating income divided by revenues	(Saygili, et al., 2022; Chen et al., 2021; Kim & Lee, 2020; Buallay et al., 2021; Daszynska-Zygadlo et al., 2020; Pirtea et al., 2021; Shahbaz et al., 2020; Minutolo et al., 2019; Aouadi & Marsat, 2016)
		Net Profit Margin	Net Profit Margin = Net profits divided by revenues	
		Return on Assets (ROA)	ROA = Net profits divided by total assets	
		Return on Equity (ROE)	ROE = Net income divided by shareholders' equity	
		Return on Capital Employed (ROCE)	ROCE = Earnings before Interest and taxes (EBIT) divided by capital employed	

Type of Variable	Name	Measurement	Formula	References
		Investment Efficiency measured using Return on Invested Capital (ROIC)	ROIC= Net Operating Profits After Tax (NOPAT) divided by invested capital	(Hai et al., 2022; Cornell & Damodaran, 2020; Allman & Won, 2021)
	Market Performance	Tobin's Q	Tobin's Q= Market value of a company divided by total assets	(Fuente et al., 2022; Aouadi & Marsat, 2016; Dong et al., 2022; Saygili, et al., 2022; Zhou et al., 2022; Buallay et al., 2021; Daszynska-Zygadlo et al., 2020; Nekhili et al., 2021; Shahbaz et al., 2020; Minutolo et al., 2019)
		Price-to-earnings ratio (P/E)	P/E= Market (current) value per share divided by earnings per share (EPS)	(Pyles, 2020; Bodie et al., 2018; Kaiser, 2020)
		Price-to-Book Value ratio (P/B)	P/B= Market price per share divided by the book value per share	(Aouadi & Marsat, 2016; Qureshi et al., 2021; Naimy et al., 2021)
		Enterprise Multiple	Enterprise Value divided by Earnings before interest, taxes and dividends (EBIDTA)	(Kaczmarek, 2024; Sandoval, 2011)
	Shareholder Value Creation	Economic Value Added (EVA)	Economic Value Added = NOPAT – (WACC * capital invested) where NOPAT is Net Operating Profit After Taxes and WACC is Weighted average cost of capital	(Tripathi et al., 2024; Venanzi, 2010; Gómez-Bezares et al., 2016; Kaur & Singh, 2020; Sandoval, 2011)
		Market Value Added (MVA)	MVA = Market Value (Total no. of shares * market share price) – Book value of Equity	(Gallant, n.d.; Venanzi, 2010; Sandoval, 2011)

Source: Author's compilation

3.6.2 Independent Variables

ESG disclosure and individual scores of environmental (E), social (S) and governance (G) are used as independent variables (Cheng et al., 2013; Sassen et al., 2016). We used Bloomberg's ESG scores for measuring ESG disclosure by select NIFTY 500

Indian firms. Higher ESG disclosure and strong individual E, S, and G scores are generally associated with improved firm performance, but the impact of each pillar can vary by context and industry. Bloomberg ESG scores evaluate over 120 aspects across environmental, social and governance categories, including climate change, resource management, diversity, board structure and more (Tamimi & Sebastianelli, 2017; Shaikh, 2022; Machmuddah & Wardhani, 2020). The scores are primarily based on the quantity and quality of ESG information companies disclose in their reports, not on external audits or direct performance outcomes (Yu & Luu, 2021). Higher Bloomberg ESG disclosure scores are associated with increased firm value, as they reduce information asymmetry and agency costs for investors (Tamimi & Sebastianelli, 2017; Yu & Luu, 2021). Bloomberg ESG scores allow for benchmarking across countries and industries, highlighting leaders and laggards in ESG transparency and performance (Shaikh, 2022).

Table 3.3 illustrates the summary of independent variables of the study.

Table 3.3: Independent variables

Type of Variable	Name	Measurement	References
Independent Variable	ESG score (ESG)	Bloomberg Score	(Cheng et al., 2013; Sassen et al., 2016; Dong et al., 2022; Zhou et al., 2022; Chen et al., 2021; Eliwa et al., 2021; Hassan et al., 2021; Yoon et al., 2021; Kim & Lee, 2020; Buallay et al., 2021; Daszynska-Zygadlo et al., 2020; Pirtea et al., 2021; Nekhili et al., 2021)
	Environmental ‘E’ Score	Bloomberg Score	(Chams et al., 2021; Shahbaz et al., 2020; Giannarakis et al., 2014)
	Social ‘S’ Score	Bloomberg Score	(Chams et al., 2021; Shahbaz et al., 2020; Giannarakis et al., 2014)
	Governance ‘G’ Score	Bloomberg Score	(Chams et al., 2021; Shahbaz et al., 2020; Giannarakis et al., 2014)

Source: Author’s compilation

3.6.3 Control Variables

The regression models control for following variables consistent with prior research (Wahba & Elsayed, 2015; Maqbool & Zameer, 2018; Platonova et al., 2016; Barnett & Salomon, 2012; Trumpp and Guenther, 2015; Velte, 2017). Table 3.4 illustrates the control variables of the study.

Table 3.4: Control variables

Type of Variable	Name	Measurement	References
Control Variable	Firm Size	Natural logarithm of total assets	(Bruna et al., 2022; Aouadi & Marsat, 2016; Wahba & Elsayed, 2015; Velte, 2017; Zhou et al., 2022; Profitlich et al., 2021; Eliwa et al., 2021; Hassan et al., 2021; Chams et al., 2021; Kim & Lee, 2020; Jha & Rangarajan, 2020)
	Firm Age	Difference between the current year from Year of incorporation	(Bruna et al., 2022; Aouadi & Marsat, 2016; Wahba & Elsayed 2015; Zhou et al., 2022; Jha & Rangarajan, 2020)
	Industry type	Sector defined on the basis of Bloomberg Industry Classification	(Jha & Rangarajan, 2020)
	Leverage Ratio	Total Debt / Total Assets	(Kim & Lee, 2020; Habermann & Fischer, 2021; Dong et al., 2022; Profitlich et al., 2021; Eliwa et al., 2021)
	Capital Intensity	Capital expenditures/ Book Value of Assets	(Aouadi & Marsat, 2016; Maqbool & Zameer, 2018; Trumpp and Guenther, 2015; Bruna et al., 2022)
	Cash Flow	Net cash flow/ Sales	(Clarkson et al., 2008; Bruna et al., 2022)
	Total Market Value	Market Capitalisation	(Bruna et al., 2022; Chen & Xie, 2022)

Source: Author's compilation

3.6.4 Moderating Variables

Based on the systematic review, our study will consider the moderating effects of three variables, namely, financial slack, internationalisation and board gender diversity for analysing the ESG and firm performance relationship in the Indian context. Table 3.5 illustrates the moderating variables of the study. Financial slack—excess resources available to a firm—enables greater investment in ESG initiatives. Firms with higher financial slack tend to have better ESG disclosure and performance,

as they can allocate resources to sustainability without compromising core operations. Conversely, lower financial slack is linked to weaker ESG outcomes, as resource constraints limit ESG engagement. Board gender diversity generally enhances ESG performance. A higher proportion of women on boards is associated with improved ESG scores, especially when a critical mass (at least three women) is present. Gender-diverse boards can also mitigate negative effects of ESG controversies and strengthen the positive impact of ESG disclosure on firm performance (Aulia et al., 2025; Al-Shaer et al., 2025; Yadav & Prashar, 2022; Zhu & Chen, 2024; Romano et al., 2020). However, the effect can vary by context and is sometimes influenced by other factors such as board independence or CEO duality (Pandey et al., 2022; González-Ruiz & Duque-Grisales, 2022; Romano et al., 2020; Kampooowale et al., 2024). While direct evidence on internationalisation as a moderator is limited, studies with global samples suggest that the positive effects of financial slack and board gender diversity on ESG performance are observed across different regions and industries. Regional differences and stakeholder engagement can influence how board gender diversity shapes the ESG–performance link (Al-Shaer et al., 2025; Tran et al., 2024; Odriozola et al., 2024). However, the strength and direction of these moderating effects can vary by region, industry, and firm characteristics, with some studies highlighting the importance of contextual factors such as institutional environment, firm risk and stakeholder engagement (Aulia et al., 2025). Overall, the literature underscores the importance of resource availability and diverse governance structures in driving sustainable and responsible business practices.

Table 3.5: Moderating variables

Type of Variable	Name	Measurement	References
Moderating Variable	Financial Slack	Current Assets / Current Liabilities	(Duque-Grisales & Aguilera-Caracuel, 2019; Kraatz & Zajac, 2001)
	Internationalisation	$\sum_{i=1}^n P_{ij} \times \left(\ln \frac{1}{P_{ij}} \right)$ Where P_i is sales percentage in a specific region i, and $\ln \frac{1}{P_{ij}}$ represents the weight given to a region.	(Duque-Grisales & Aguilera-Caracuel, 2019; Cherkasova & Nenuzhenko, 2022; Capar et al., 2015)
	Board Gender Diversity	Percentage of women directors in a company	(Zhu & Chen, 2024; Jiang et al., 2020; Tariah, 2019)

Source: Author's compilation

3.6.5 Mediating Variables

Based on the systematic review, our study will consider the mediating effects of three variables, namely, operational efficiency, innovation and risk while analysing the relationship between ESG and firm performance in the Indian context. Table 3.6 illustrates the mediating variables of the study. Multiple studies demonstrate that strong ESG performance enhances both the quantity and quality of corporate innovation, including R&D intensity and patent value. ESG-driven firms tend to outperform others in innovation outcomes, labour productivity and survival rates. The positive effect is attributed to improved resource allocation, reduced agency problems, and better internal governance, which foster an environment conducive to innovation (Lin & Li, 2024; Zhang et al., 2024; Li & Li, 2024). ESG performance is positively associated with improved operational efficiency. Firms with higher ESG scores benefit from enhanced economies of scale, better resource utilization, and more effective business operations. These improvements in efficiency are robust across different industries and measurement methods, suggesting that ESG initiatives can directly contribute to more efficient firm operations (Wang et al., 2025; Iazzolino et al., 2023). ESG performance significantly reduces various forms of firm risk, including credit risk, default risk, and systematic risk. This risk reduction is achieved by lowering environmental penalties, easing financing constraints, and enhancing corporate reputation. The effect is particularly pronounced under conditions of environmental uncertainty and is supported by both empirical and systematic review evidence (Wang et al., 2025; Iazzolino et al., 2023; He et al., 2023; Du et al., 2024; Nian & Said, 2025). Furthermore, several studies highlight that the mediating effects of innovation, operational efficiency, and risk are interconnected. For example, ESG-driven innovation not only boosts firm performance but also mitigates downside risk, while improved operational efficiency can further reduce exposure to financial and operational risks (Lin & Li, 2024; Nian & Said, 2025).

Table 3.6: Mediating variables

Type of Variable	Name	Measurement	References
Mediating Variable	Innovation	Research and Development Expenditure divided by sales	(Atz et al., 2022; Broadstock et al., 2020; Surroca et al., 2009; Ruggiero & Cupertino, 2018; Whelan & Atz, 2021; Capar et al., 2015)
	Operational Efficiency	Operating Expenses plus Cost of Goods sold divided by Total Revenue	(Abd-Elmageed et al., 2020; Ye et al., 2021; Atz, 2021; Whelan & Atz, 2021)
	Risk	Credit Risk (Default Risk) and Systematic Risk (Beta)	(Tepe et al., 2022)

Source: Author's compilation

3.7 Data Analysis Techniques

Table 3.7 presents the research objectives aligned with their corresponding data analysis techniques. For studying ESG behaviour, text mining was applied to sustainability reports from 269 companies, while the relationships between ESG and performance measures were investigated using panel data regression models with appropriate controls and moderators. For case study development, qualitative multi-case methodology with semi-structured interviews was employed, analysing data through reflexive thematic analysis to explore key ESG implementation practices.

Table 3.7 : Research objectives along with proposed data analysis technique

S. No.	Research Objectives	Data Analysis Technique
1	To study the ESG behaviour of select NIFTY 500 companies.	The research methodology employed advanced text mining techniques to analyse ESG behaviour across NIFTY 500 companies, focusing on sustainability reports from FY 2015 to FY 2023. A comprehensive sample of 269 companies across ten sectors was systematically collected and processed using Orange software's natural language processing capabilities. The analysis utilized a rigorous preprocessing framework, applying a minimum 1,000-occurrence frequency threshold to extract meaningful insights across environmental, social, and governance dimensions. Innovative visualization techniques, including word cloud generation and frequency analysis, were implemented to reveal complex patterns in corporate sustainability reporting. The methodology combined computational techniques with expert-driven categorization, ensuring robust and nuanced insights into the evolution of ESG reporting practices in the Indian corporate landscape.

S. No.	Research Objectives	Data Analysis Technique
2	To investigate the relationship between ESG and financial performance of select NIFTY 500 companies.	The study employs a comprehensive panel data methodology to investigate the relationship between ESG performance and firm performance among NIFTY 500 companies using a fixed effects panel regression model. The research design incorporates multiple dependent variables including financial performance metrics, market performance indicators, and value creation measures, with ESG disclosure score as the key independent variable. The analysis systematically controls for firm-specific characteristics such as size, age, leverage, and capital intensity, while also introducing moderating variables like financial slack, internationalization, and board gender diversity. Utilizing Stata for econometric analysis, the model accounts for industry-specific characteristics and temporal variations through a sophisticated regression specification. The methodology aims to provide a nuanced understanding of ESG performance's impact on various dimensions of corporate outcomes, leveraging both cross-sectional and temporal data variations.
3	To investigate the relationship between ESG and market performance of select NIFTY 500 companies.	
4	To determine the impact of ESG on shareholder's value creation of select NIFTY 500 companies.	
5	To develop a case study on companies scoring highest on ESG.	The research employed a qualitative multi-case study methodology using semi-structured in-depth interviews with ESG professionals from 11 top-performing NIFTY 500 companies. Purposive sampling was used to select firms ranked highest in ESG performance, with interviews conducted over two months and audio-recorded with participant consent. Data was analyzed using reflexive thematic analysis via NVivo 14, following Braun & Clarke's six-phase approach, which involved systematic coding, theme generation, and comprehensive interpretation of ESG implementation practices. The methodology focused on exploring seven key thematic areas: organizational understanding, environmental practices, social impact, governance structures, implementation barriers, mitigation strategies, and emerging opportunities in ESG evolution. The research design ensured methodological rigor through independent transcript verification, expert review of categorizations, and maintaining transparency in the analytical process.

Source: Author's compilation

CHAPTER 4

ESG BEHAVIOR ANALYSIS OF NIFTY 500 COMPANIES

The ESG reporting patterns of 269 NIFTY 500 firms are examined in this chapter using text mining of sustainability reports as a foundational approach. The companies' fiscal years range from 2015 to 2023. With the use of the text mining method using "Orange" software, we were able to spot trends, sector-specific patterns, and overall patterns in ESG reporting. Here is a rundown of how Indian companies talk about their sustainability efforts.

4.1 Sample

Using data collected from the NIFTY 500 index, this study examines the sustainability reports of 269 companies (making up 54% of the index) across eight years, beginning in 2015 and ending in 2023. Companies that consistently reported ESG information during the research period were the subject of this study. A more in-depth examination over a longer time frame was the goal of this study. The majority of the information was collected from the firms' websites, such as the investor relations, sustainability, and corporate governance sections. Various formats of reports were included in the study: Business Responsibility and Sustainability Reports (BRSR), sustainability reports, integrated reports, ESG reports, CSR reports, and Business Responsibility Reports (BRR). A comprehensive picture of the Indian business climate is provided by this sectoral distribution. These enterprises are distributed over 10 different sectors, as seen in Table 4.1.

Table 4.1: Sectoral distribution of companies

Sector	No. of companies	Representative Companies	Description
Basic Materials	36	EID Parry India, Hindalco Industries, Tata Chemicals, Vedanta	Includes companies engaged in manufacturing chemicals, fertilizers, metals, and industrial materials essential for infrastructure and industrial development.
Communications	11	Bharti Airtel, Vodafone Idea, Indus Towers, Tata Communications	Companies providing telecommunication services, mobile networks, broadband, and related infrastructure.

Sector	No. of companies	Representative Companies	Description
Consumer Cyclical	37	Aditya Birla Fashion, Apollo Tyres, Maruti Suzuki, Titan Co	Businesses that cater to consumer demand fluctuations, including automobiles, fashion, and discretionary spending.
Consumer Non-Cyclical	49	Adani Ports, Britannia Industries, Dabur, ITC, Hindustan Unilever	Companies that produce essential consumer goods like food, beverages, pharmaceuticals, and personal care products.
Diversified	1	3M India, MMTC, Larsen & Toubro	Conglomerates with a diverse portfolio spanning multiple industries such as engineering, infrastructure, and technology.
Energy	6	Coal India, Indian Oil, ONGC, Reliance Industries	Companies involved in the exploration, production, refining, and distribution of oil, gas, and renewable energy sources.
Financial	50	Axis Bank, Bajaj Finance, ICICI Bank, SBI, HDFC Bank, LIC Housing	Banks, non-banking financial companies (NBFCs), investment firms, and other financial service providers.
Industrial	51	Bharat Forge, Bharat Electronics, Siemens, Thermax, Engineers India	Companies in engineering, manufacturing, defence, and infrastructure development.
Technology	16	Infosys, Tata Consultancy Services, Wipro, Tech Mahindra, HCL Technologies	Businesses engaged in software development, IT services, AI, and digital transformation.
Utilities	12	Adani Power, NTPC, Tata Power, GAIL India, JSW Energy, Torrent Power	Companies providing essential services such as electricity generation, natural gas supply, and renewable energy solutions.

4.2 Research Methodology

Text mining technique is employed that utilizes NLP and machine learning algorithms to extract useful insights from the data. Text mining supports the detection of characteristics within large document sets and indicates related topics by analyzing content. This supports revealing meaningful contexts that would be challenging to detect manually, enabling more in-depth and informative analysis of large document sets (Park, 2023; Ning et al., 2021).

Orange software was the core software that was used for text preprocessing, data filtering, and keyword examination. Orange supports a visual programming philosophy centred on intuition, interactivity, and visualizations to make it simple for users to create analytical workflows (Pretnar et al., 2017). Orange text add-on offers

text mining, visualization and embedding modules using deep learning. This facilitates easy handling, preprocessing and analyzing effectively text data, revealing hidden trends and model evaluation (Pretnar et al., 2017). Orange has text preprocessing methods like document vectorization, stopwords removal, stemming, and lemmatization, which are required to analyze text in an effective manner (Novak, 2016). Orange offers a visual programming environment that is convenient to use in creating data analysis workflows with a drag-and-drop tool (Thakur, 2023; Shastri, 2020).

Word clouds facilitate a quick and appealing way of gaining an initial understanding of qualitative data; they can offer confirmation of themes, patterns, or insights by providing the most frequently used words and/or phrases and are useful in both preliminary analysis and naturalistic studies with confirmatory tests of results (Vilela et al., 2020; McNaught & Lam, 2010). The visualization can be a lead to detailed analysis, allowing researchers to quickly choose the key themes and concepts (DePaolo & Wilkinson, 2014; Cidell, 2010).

In order to do statistical analysis, recognize trends, and preprocess sustainability reports, the text mining capabilities of the well-known Orange program, which is proficient in natural language processing, were used. Through the use of the software's visual programming interface, it is possible to create processes in a straightforward and expedient manner without the need to write a significant amount of code. The use of deep learning within the program makes it feasible to analyze the semantic linkages that exist between ESG concepts in an implicit environment. First came the process of validating and importing the data, next came the process of preparing and analyzing the text, and lastly came the process of visualizing the results and developing the analytical report. The use of a hybrid strategy offers a number of benefits. Among them are the following: making difficult text analysis accessible to those who just have a fundamental understanding of programming, giving researchers greater discretion in the process of analysis, and creating findings that are dependable and of high quality. Taking everything into consideration, these qualities made it possible to conduct an analytically sound and comprehensive analysis of the various methods of sustainability reporting.

4.2.1 Text mining using Orange

Figure 4.1 gives an overview of the steps followed for text mining using Orange.

Stage 1: Document Import and Organization

To begin, we methodically selected 269 NIFTY 500 firms, making sure to include those whose sustainability reports extended from 2015 to 2023. We searched each company's website for reports in the areas pertaining to investor relations, sustainability, and corporate governance. Reports on business responsibility, CSR, sustainability, ESG, and a plethora of other formats were also included in the compilation. For optimal administration and retrieval, a hierarchical file system is the way to go. The primary directory was split into ten subcategories according to Bloomberg's classification scheme. They are all unique to different sectors of the economy. The next step was to organize the company files by fiscal year after using the sector folders to produce individual files. The sustainability reports were organized and included in the Orange program using a disciplined manner.

Stage 2: Corpus Viewer Implementation

After each report was brought into Orange's Corpus Viewer, it was carefully checked to make sure that the text extraction and formatting were correct. It was necessary for researchers to finish this step before moving on to more in-depth analysis since it helped them find any problems that could have existed with the character encoding, document structure, or content integrity.

Stage 3: Text Preprocessing Implementation

Within the framework of the research methodology, the phase of text preprocessing that was both technically challenging and of crucial importance was the transformation of the raw text of the documents into standard forms that could be analyzed. The first step in this multi-stage procedure consisted of doing fundamental cleansing in order to guarantee that all of the publications were consistent with one another. For the purpose of achieving a more uniform depiction of characters, we progressively eliminated accents and diacritical markings and converted all of the text to use lowercase letters. Because of this, we were able to circumvent issues with case sensitivity. Through the

processing of HTML components and the removal of URLs, which did not contribute anything positive to the investigation, we were able to get text content that was clear. In order to conduct a more in-depth analysis of the text, tokenization was used to disassemble the text into its component elements, also known as tokens. Lemmatization algorithms took a number of different forms of words (such as "reporting," "reported," and "reports") and transformed them into the word "report." In addition to this, they reduced the tokens to their most fundamental forms. For the frequency analysis to be accurate, this normalization was considered to be very necessary. When it came to improving the quality of the text corpus, the filtering step included the use of a wide variety of various techniques. Words such as "the," "and," and "of" were removed from the available vocabulary in order to avoid having an excessive number of stopwords. For the purpose of dealing with ESG and financial keywords that were often used but did not contribute to the study, we also compiled a stopwords list for the domain. The use of regular expressions was a conscious option that was made in order to guarantee that all patterns, numbers, and special characters that are exclusive to a certain industry are treated in the same manner.

Stage 4: Analysis and visualization

After the preprocessing step, the analysis phase employed a three-track analytical strategy to look into ESG reporting trends in depth. We could see that various sorts of organizations have distinct ESG reporting objectives and trends by splitting down the 10 industrial sectors into their own groups. In addition, we used a time-series technique to examine the reporting environment from 2015 to 2023. Lastly, we put together the results from all the years and sectors in the dataset to uncover general overall trends and insights. Word clouds were generated that transformed pre-processed text data into visual representations highlighting key themes and patterns in sustainability reports. This process involved careful technical configuration to ensure meaningful results, including implementation of a minimum frequency threshold of 1000 occurrences to focus on significant terms. Visualization parameters were meticulously adjusted, with size and color attributes optimized for visual clarity and interpretability. Separate word clouds were generated for each sector, temporal frame, and overall corpus, enabling detailed comparative analysis of sector-specific,

temporal, and overall reporting patterns. Each word cloud was systematically documented, including detailed records of generation parameters and analytical context to ensure research reproducibility and methodological transparency.

Stage 5: Data Table Creation

The data table creation stage involved organizing the processed textual data into structured, analyzable formats. This phase was crucial for enabling quantitative analysis of the qualitative data extracted from sustainability reports. Statistical summaries were generated for different analytical levels, including sector-wise comparisons, temporal trends, and ESG component analysis. These tables formed the foundation for subsequent statistical analysis and pattern identification.

Stage 6: Data Export and Documentation

The final stage focused on preserving the processed data and ensuring research reproducibility. All processed data was exported in multiple formats to ensure accessibility and long-term usability. The author created comprehensive documentation of the entire analysis process, including detailed descriptions of methodological decisions, processing parameters, and analytical procedures. The documentation included workflow diagrams, processing logs, and detailed descriptions of any modifications or special handling procedures implemented during the analysis. This thorough documentation ensured that the research process was transparent and reproducible while also providing valuable context for interpreting the results.

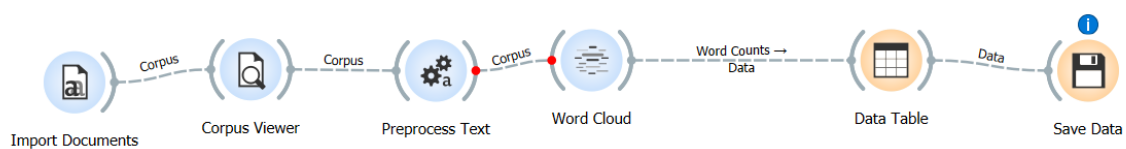


Figure 4.1: Text Mining using Orange

4.2.2 Analytical Framework

The analytical strategy operated at three distinct levels, each providing unique insights into ESG reporting practices. The sector-wise analysis involved detailed examination

of each of the ten sectors individually, allowing for the identification of sector-specific reporting patterns and priorities. The temporal analysis spanning from 2015 to 2023 provided crucial insights into the evolution of ESG reporting practices. This longitudinal examination revealed how companies adapted their reporting approaches over time, responding to changing regulatory requirements and stakeholder expectations. The aggregate analysis phase synthesized findings across all reports, enabling the identification of overarching patterns and trends. This comprehensive examination facilitated the recognition of cross-sectoral trends and common reporting themes, providing insights into broader ESG reporting practices within the Indian corporate landscape.

4.2.3 Visualization Methods

The research utilized sophisticated visualization techniques to represent findings effectively. Word clouds served as powerful tools for visualizing term frequencies, with separate visualizations generated for sector-specific patterns and temporal trends. These visualizations enabled intuitive understanding of dominant themes and patterns in ESG reporting. Frequency distribution visualizations included component-wise frequency charts, sector-specific distributions, and temporal trend visualizations. These visual representations facilitated clear communication of findings and enabled effective pattern identification across different analytical dimensions. Additionally, bar graphs depicting the top 15 keywords were generated at three analytical levels: sector-wise, year-wise, and overall aggregate analysis. Furthermore, pie charts were created for Environmental (E), Social (S), and Governance (G) components, specifically analyzing keywords with frequencies exceeding 1,000 occurrences to determine which ESG component receives greater emphasis in corporate reporting. This comprehensive analytical framework ensured thorough examination of ESG reporting practices while maintaining methodological rigor throughout the research process. The integration of multiple analytical techniques and visualization methods provided rich insights into ESG reporting behaviors among NIFTY 500 companies.

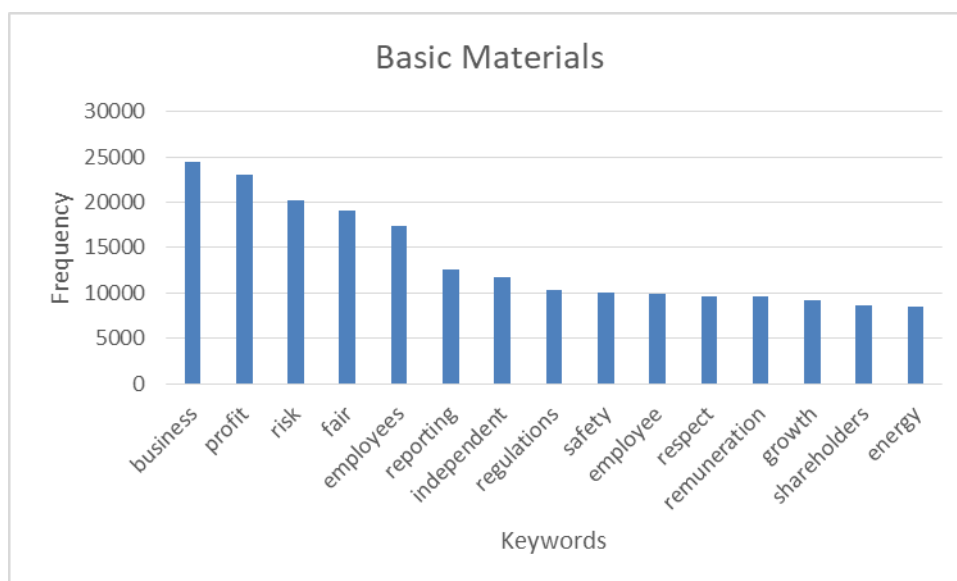


Figure 4.3: High-Frequency ESG Terms in the Basic Materials Sector

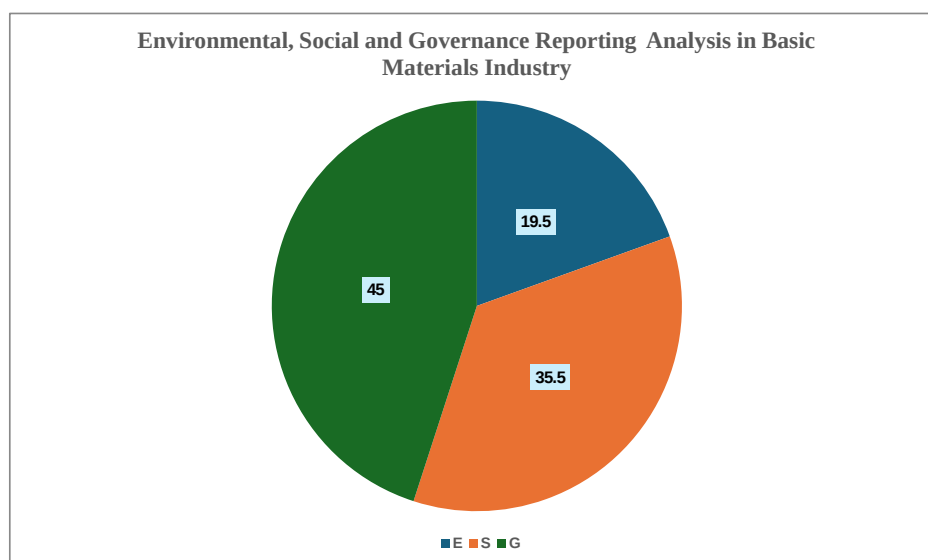


Figure 4.4: ESG Component Distribution in the Basic Materials Sector

4.3.1.2 Communications

Figure 4.7 shows that governance is the most important part of ESG reporting in the communications industry, making up 48% of all ESG-related words. Social factors make up the second most common group, making over 36% of ESG reporting words (Figure 4.7). The social category is very focused on issues relating to the workforce, with "Employees" appearing 3,344 times and "employee" appearing 2,809 times. As

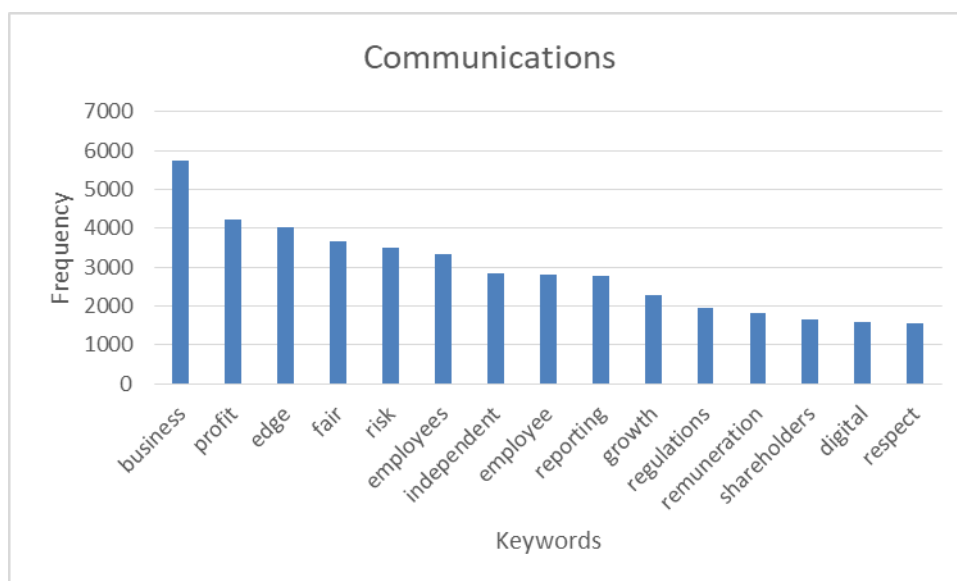


Figure 4.6: High-Frequency ESG Terms in the Communications Sector

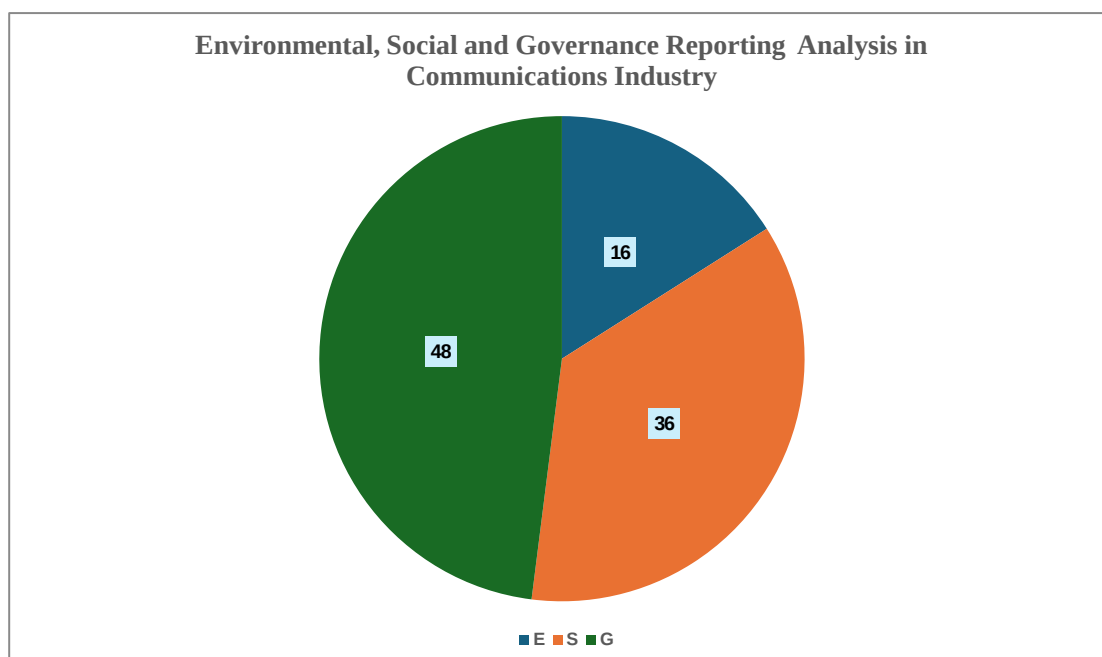


Figure 4.7: ESG Component Distribution in the Communications Sector

4.3.1.3 Consumer Cyclical

In Figure 4.8, we provide the findings of an investigation of the ESG reporting patterns of firms operating in the consumer cyclical category of the NIFTY 500. As can be shown in Figure 4.10, governance is responsible for the highest proportion of

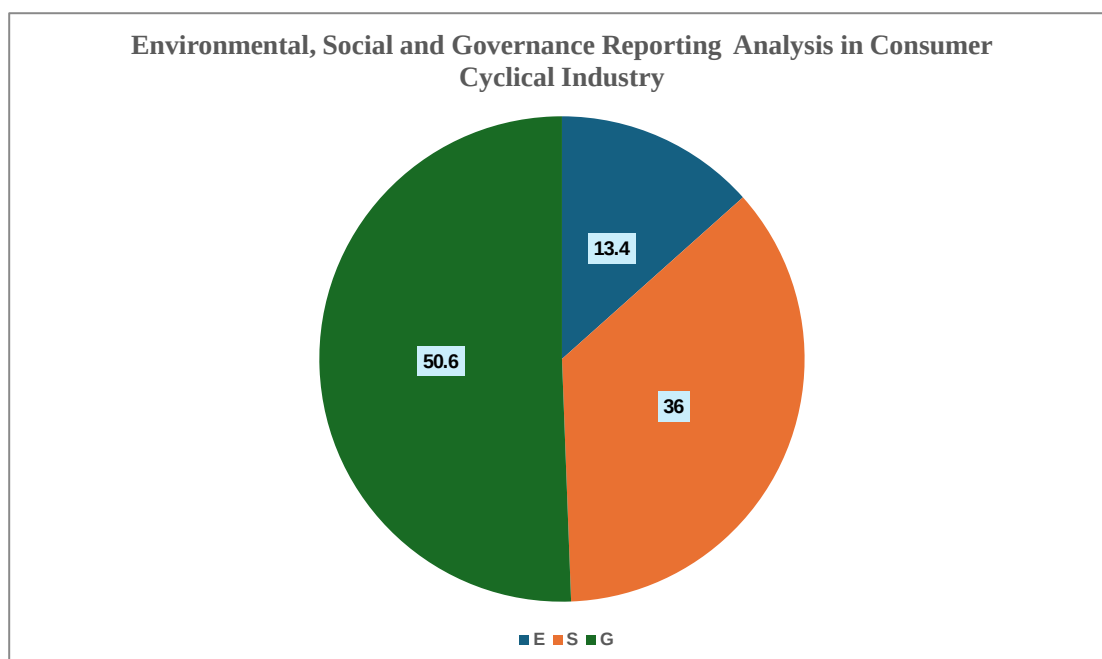


Figure 4.10: ESG Component Distribution in the Consumer Cyclical Sector

4.3.1.4 Consumer, Non-Cyclical

The examination of ESG reporting terms within the consumer non-cyclical sector of the NIFTY 500 firms, as shown in Figure 4.11, indicates the most substantial ESG reporting trends among all sectors analyzed to date, characterized by significantly elevated absolute frequencies across all categories. Governance is the most important thing, making up an amazing 58.7% of all ESG keywords, as seen in Figure 4.13. This focus is especially clear in the large number of times important phrases like "business" (31,363 times), "profit" (27,807 times), and "fair" (24,612 times) are used, as shown in Figure 4.12. This shows that the sector is very serious about managing risks and following the rules. Social factors make up the second biggest group of ESG reporting words, accounting for 29.8% of the total (Figure 4.13). The industry pays a lot of attention to personnel issues, as seen by the fact that the word "employees" appears 20,497 times. Health and safety become very important, with health-related words appearing 11,012 times and safety-related words appearing 8,125 times. The industry also displays a strong commitment to social responsibility via CSR efforts, which are mentioned 8,963 times in the study. As Figure 4.13 shows, environmental reporting makes up 11.5% of all ESG words, which is the smallest percentage of the three categories. The phrases "energy" (8,134 times) and

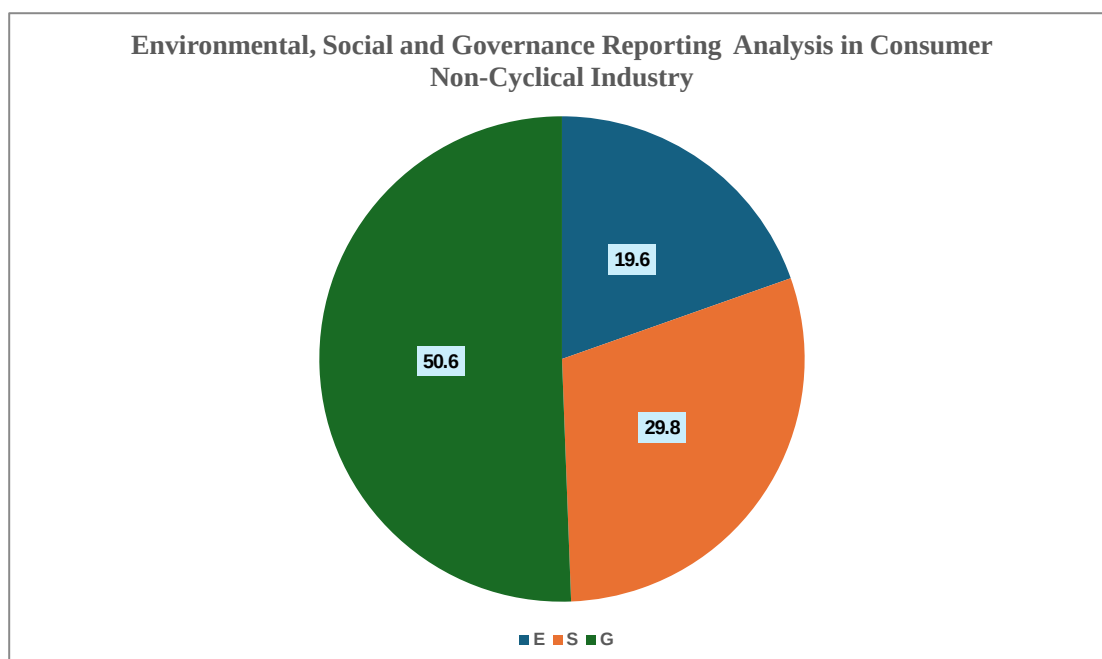


Figure 4.13: ESG Component Distribution in the Consumer Non-Cyclical Sector

4.3.1.5 Diversified

Figure 4.14 shows that the investigation of ESG reporting terms in the Diversified sector of NIFTY 500 businesses shows a very balanced distribution of sustainability communications, which sets it apart from other sectors. Governance makes up 36.6% of all ESG words, as seen in Figure 4.16. The most common phrase is "global," which appears 3,282 times, followed by "business" (2,275) and "risk" (1,402), as shown in Figure 4.15. This percentage is much lower than the 58.7% for the consumer non-cyclical sector, which means that ESG reporting is done in a more spread-out way. Figure 4.16 shows that 34.9% of ESG reporting phrases are about social issues. This shows that human capital and the health of the workforce are very important. There are 2,569 mentions of "employees," 1,637 mentions of "safety," and 1,523 mentions of "health." The industry shows a lot of interest in developing its staff via "training" (1,262 times) and keeping good connections with "Suppliers" (1,161 times). This percentage is higher than the 29.8% for the consumer non-cyclical sector, which shows that social responsibility is more important. Environmental factors make up 28.5% of all ESG terms, which is the greatest percentage of environmental factors among the industries that were looked at (see Figure 4.16). "Sustainability" is the most common word, with 2,852 uses. "Energy" (1,924), "environmental" (1,855), and

"emissions" (1,349) are also quite common. The industry pays a lot of attention to climate-related concerns, with the word "climate" appearing 1,015 times. Figure 4.14's frequency visualization shows this comparative distribution across all ESG components even more clearly.



Figure 4.14: Frequency Visualization in the Diversified Sector

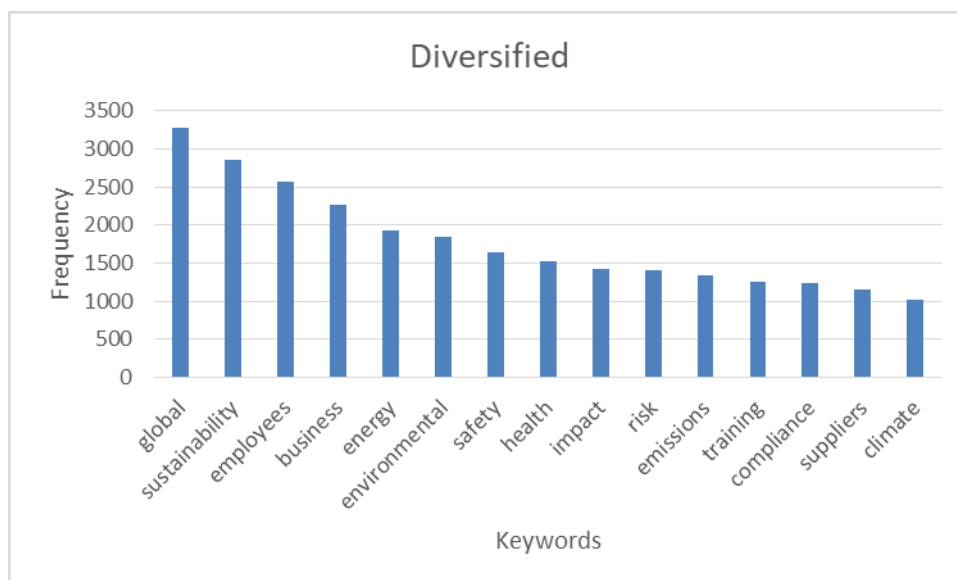


Figure 4.15: High-Frequency ESG Terms in the Diversified Sector

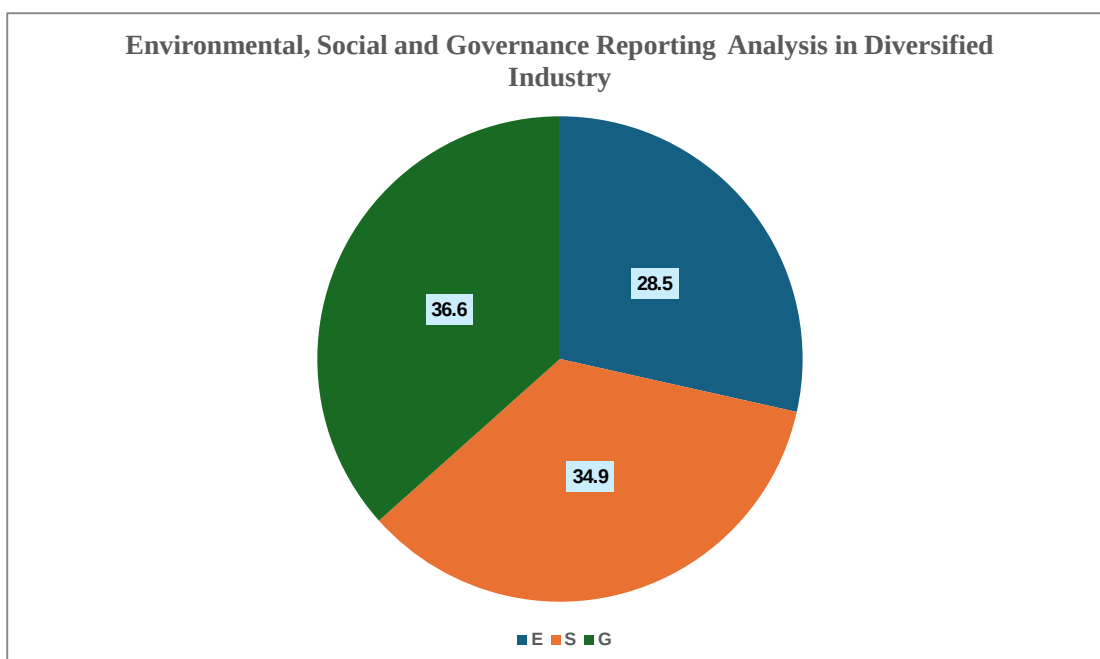


Figure 4.16: ESG Component Distribution in the Diversified Sector

4.3.1.6. Energy

The analysis of ESG reporting terms in the energy sector of NIFTY 500 companies is shown in Figure 4.17. At 45.6% of all ESG phrases, governance is the most prevalent category, indicating a strong trend in sustainability communications (Figure 4.19). Environmental reporting accounts for a significant portion of sustainability communications, including 23.2% of all ESG terms (Figure 4.19). In terms of total frequency, "energy" ranks second with 6,862 instances, while "sustainability" comes in at 3 with 3,309 occurrences. This sector seems to be environmentally conscious and dedicated to sustainable practices, as it makes extensive use of terms associated with environmental management. When compared to other industries, the energy sector gives a lot more weight to operational aspects and safety protocols. The increasing number of terms relating to renewable energy and climate change indicates a growing dedication to reducing energy use and improving environmental conditions.



4.3.1.7. Financial

Figure 4.20 and Figure 4.21 show the ESG communication patterns of the financial sector and "risk" is the most common phrase. The prevalence of risk-related language indicates the sector's primary emphasis on risk management and assessment, which are integral to the main functions of financial institutions. The word "compliance" shows up 11,952 times, which shows how strict the rules are for banks and other financial organizations and how important it is for them to follow them. "Respect" and "CSR" show that the industry cares a lot about company principles and social responsibility. The words "guidelines" (10,040 times) and "responsibility" (9,111 times) show even more how the industry is organized when it comes to governance and accountability. "Digital" stands out because it shows how important digital transformation is becoming in the financial services industry. The word "tribal" implies that there is some interest in indigenous communities or tribal development, but not as often as there is in other ESG categories. This distribution pattern shows that the financial sector's major focus is on managing risk and following the rules, but they also care a lot about the well-being of their employees, doing business in an ethical way, and being responsible as a company. The large number of digital transformation phrases also shows that the field is moving towards technical progress and new ideas, as seen in Figure 4.22.



Figure 4.20: Frequency Visualization in the Financial Sector

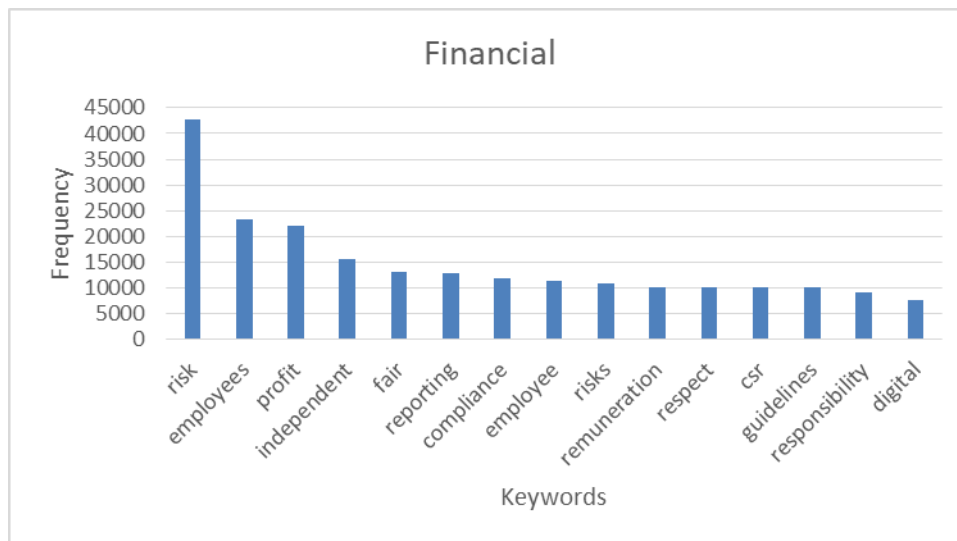


Figure 4.21: High-Frequency ESG Terms in the Financial Sector

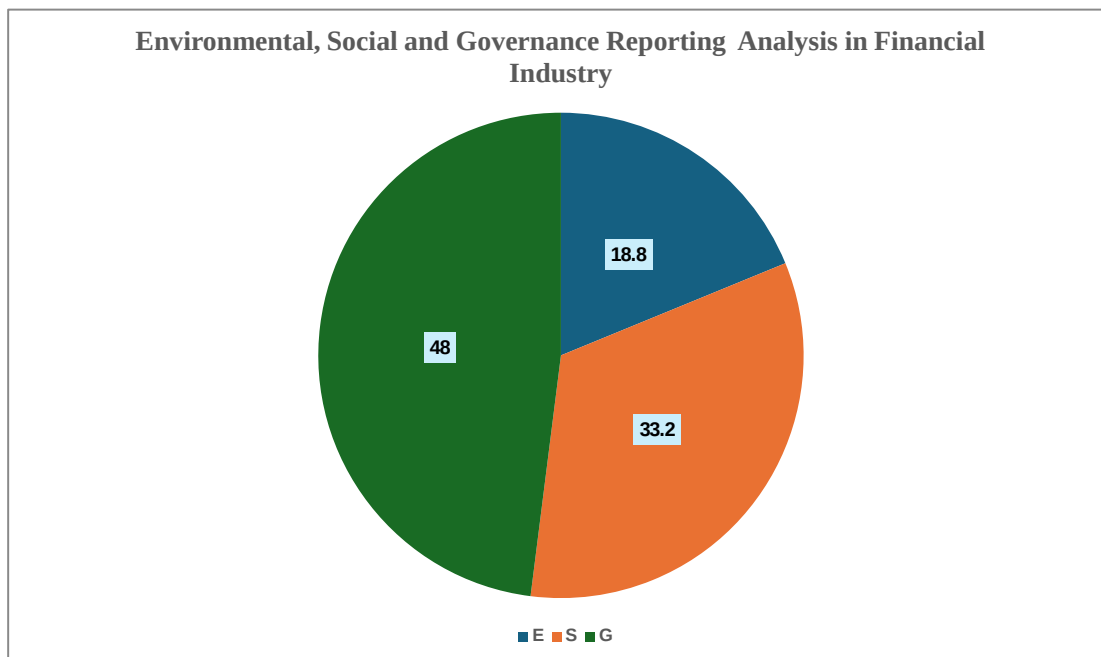


Figure 4.22: ESG Component Distribution in the Financial Sector

4.3.1.8. Industrial

Figure 4.25 demonstrates that 46.2% of all ESG keywords are related to governance, while Figure 4.23 and Figure 4.24 illustrates that a full pattern of sustainability communication is revealed by the research of ESG reporting words in the industrial sector of NIFTY 500 companies. When compared to other sectors, the industrial

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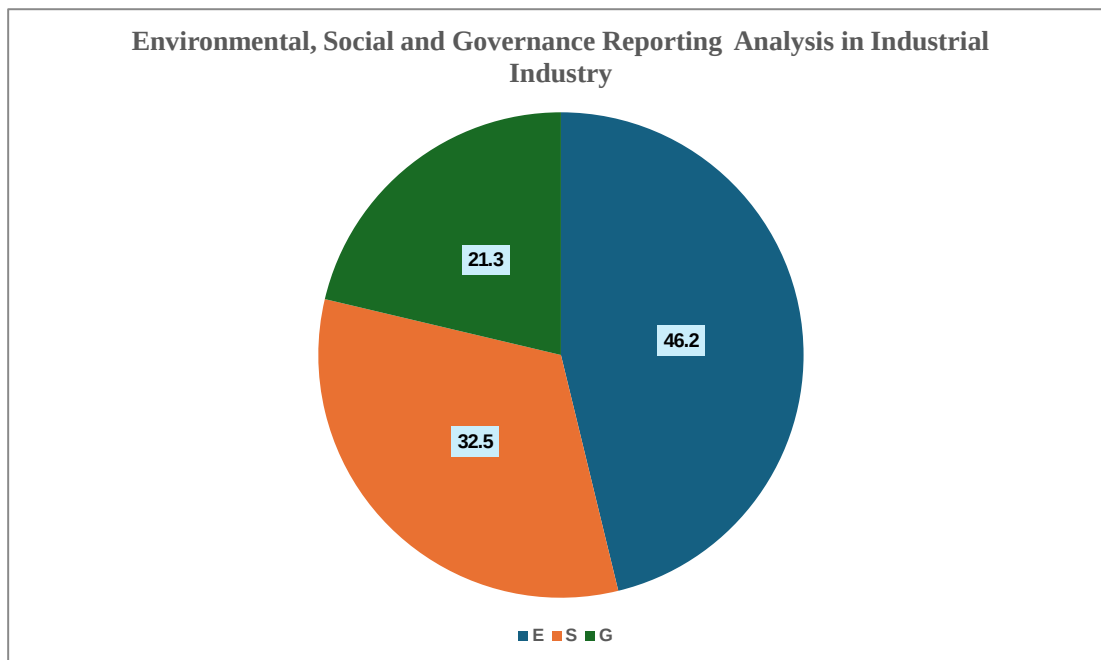


Figure 4.25: ESG Component Distribution in the Industrial Sector

4.3.1.9. Technology

Figure 4.28 shows that governance has the biggest share of ESG terms in the technology sector of NIFTY 500 firms, with 48.5% of the total. The industry pays a lot of attention to developing talent via "education" and has good interactions with stakeholders, as shown by "shareholders." The frequent use of the term "remuneration" shows that companies are paying close attention to how they pay their employees. Figure 4.26 and Figure 4.27 show that "sustainability" is a prominent emphasis area. Environmental concerns make up 20.3% of all ESG keywords. Figure 4.26's frequency visualization shows this comparative distribution across all ESG components even more clearly. The industry has a considerable focus on digital transformation, as shown by the fact that "digital" is among the top keywords (Figure 4.27). "Intellect" and "independent" show that intellectual capital and governance independence are also important. The fact that "global" and "regulations" are so common shows that the industry works internationally and follows the rules. The technology sector has a few differences from the industrial sector, especially when it comes to its focus on digital assets and intellectual property. The sector's ESG reporting shows that it is knowledge-based, with a lot of focus on innovation, digital transformation, and developing intellectual capital.



Figure 4.26: Frequency Visualization in the Technology Sector

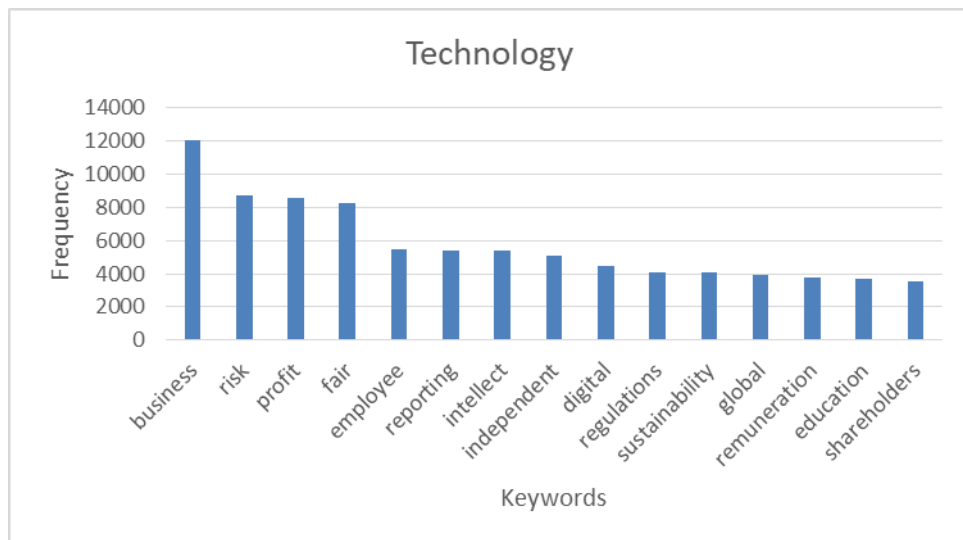


Figure 4.27: High-Frequency ESG Terms in the Technology Sector

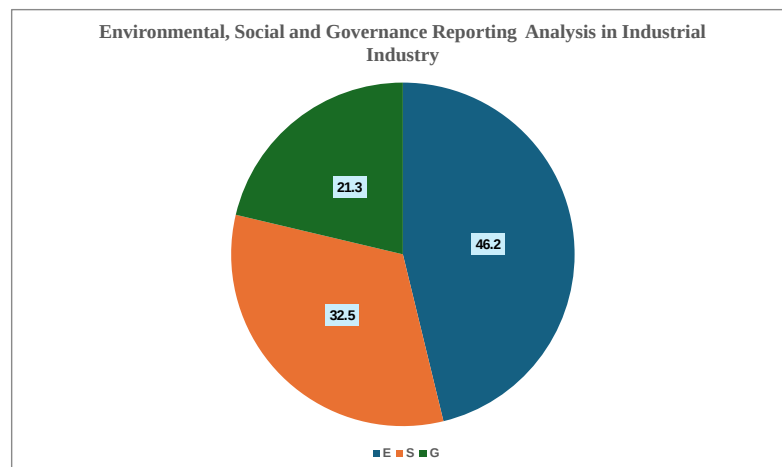


Figure 4.28: ESG Component Distribution in the Technology Sector

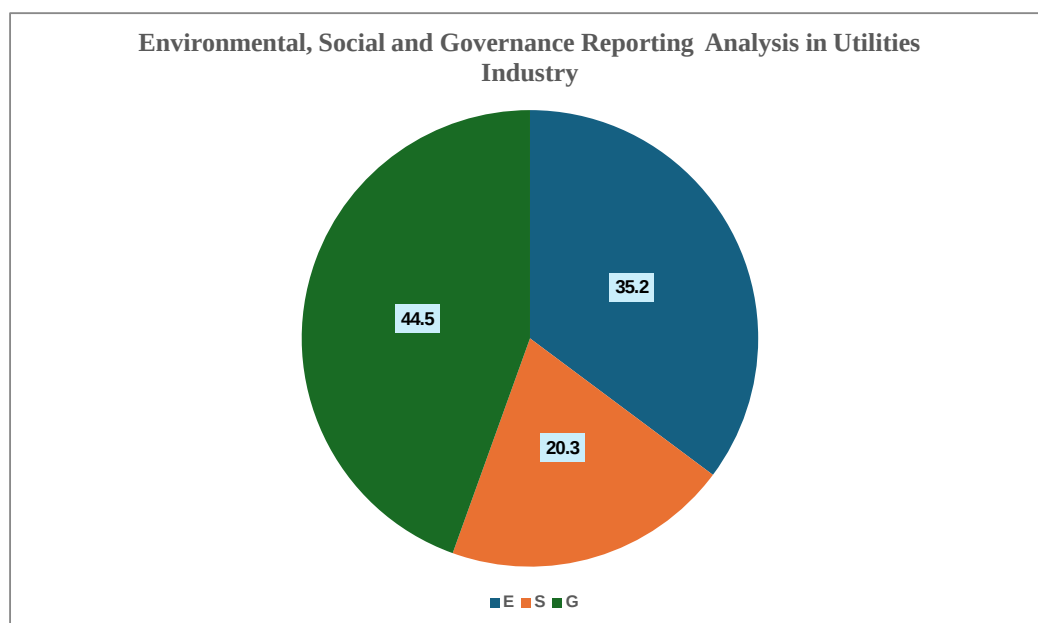


Figure 4.31: ESG Component Distribution in the Utilities Sector

4.3.2 Temporal Analysis

4.3.2.1 FY 2015

Figure 4.32 shows that Indian firms have a definite hierarchy of importance when it comes to corporate reporting priorities based on the examination of ESG reports for FY 2015. Governance concerns made up the majority of mentions, accounting for 47.5% of all ESG references (Figure 4.34). worries about the environment came in third place with 19.3 percent of the vote, while worries about society came in second place with 33.2 percent of the vote. The data shown in Figure 4.33 indicates that the topics of business, profit, and risk were the ones that were mentioned the most often in the context of governance. The fact that this is the case makes it abundantly evident that the major focus was put on both the management of operations and the financial performance of the organisation. Furthermore, the terms "remuneration" and "reporting" were among those that were well accepted by respondents. In light of the fact that corporate reporting included a social component, it became abundantly evident that employee management was of the highest relevance. Furthermore, protecting people's health and safety was of the highest importance. When it comes to the communication that takes place inside companies, environmental issues are only addressed in a limited capacity. The word "energy" was the environmental phrase that

was used the most often, followed by the phrase "sustainability." Within the context of the fiscal year 2015, this distribution pattern illustrates that Indian enterprises were only beginning to become aware of how significant environmental concerns were. With that being stated, they continue to put a large level of priority on governance and operational difficulties, with social obligations coming in at a close second of importance.



Figure 4.32: Frequency Visualization in FY 2015

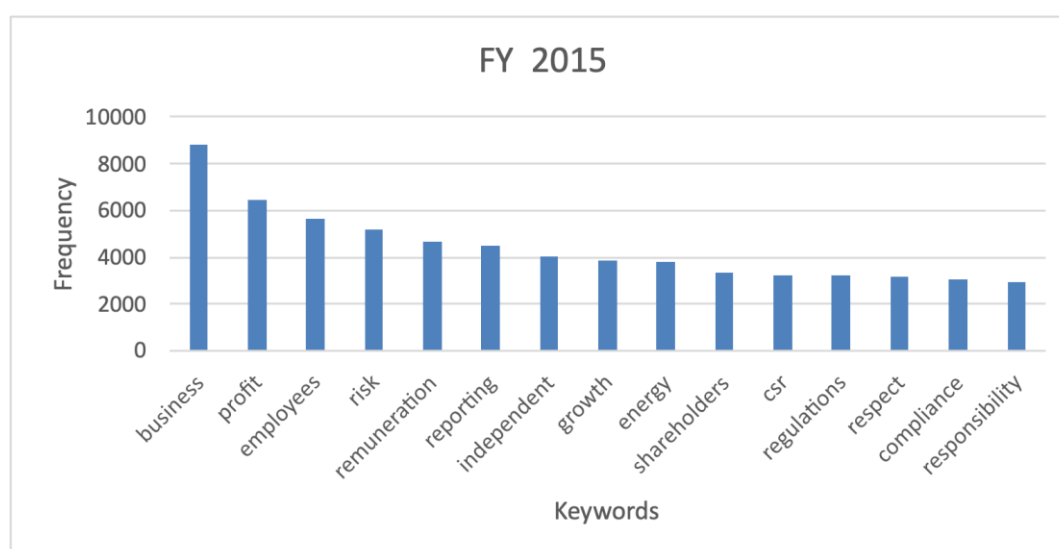


Figure 4.33: High-Frequency ESG Terms in FY 2015

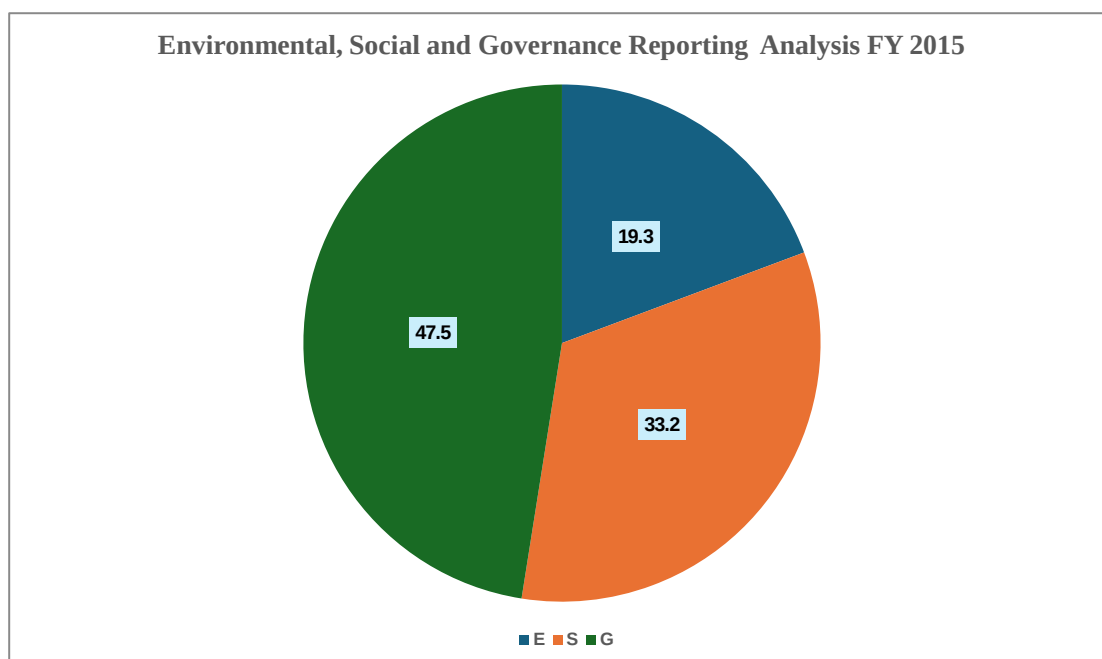


Figure 4.34: ESG Component Distribution in FY 2015

4.3.2.2 FY 2016

In Figure 4.35, we see an examination of the changes in ESG reporting for FY 2016. This research sheds light on significant shifts that have occurred in the corporate communication goals of Indian companies. Concerns about governance remained to occupy a more favorable position, although concerns regarding social issues continued to decrease to a certain extent (Figure 4.37). Regarding the quantity of risk-related communication that was present in the governance domain, there was a considerable change that took place. There was a significant change that occurred when the idea of "fair" became a more cited term. This shift reflected a higher emphasis on ethical business practices that are carried out by firms. As companies began to put a greater emphasis on the well-being of their workforce, the concept of CSR grew more significant, and the importance of health and safety increased as well (Figure 4.36).



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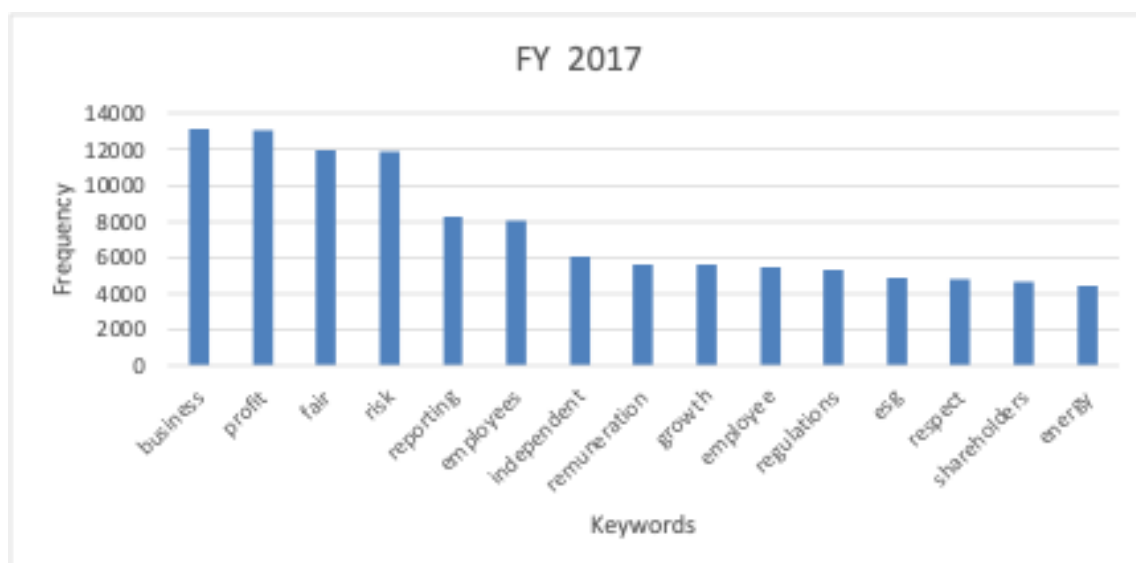


Figure 4.39: High-Frequency ESG Terms in FY 2017

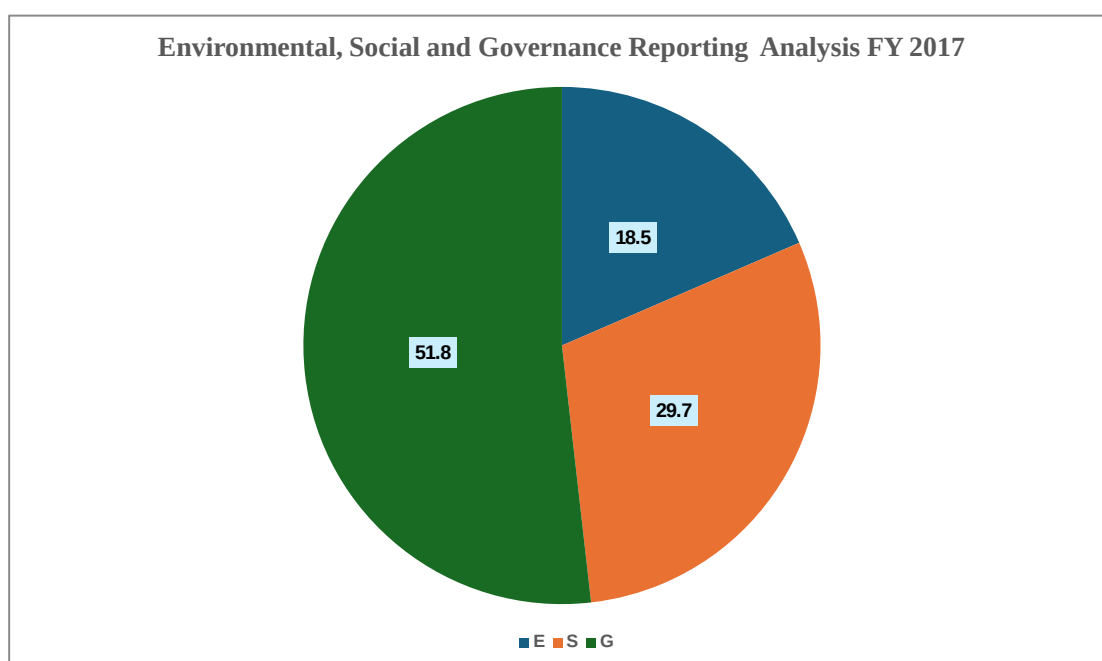


Figure 4.40: ESG Component Distribution in FY 2017

4.3.2.4 FY 2018

Figure 4.41 shows that governance-related terms are clearly the most common in the FY 2018 ESG reporting analysis. The term "employees" was the one that was used the most often in the social component. It is clear that human resource management and workforce-related problems are of utmost significance, as seen by the extensive use of



Figure 4.41: Frequency Visualization in FY 2018

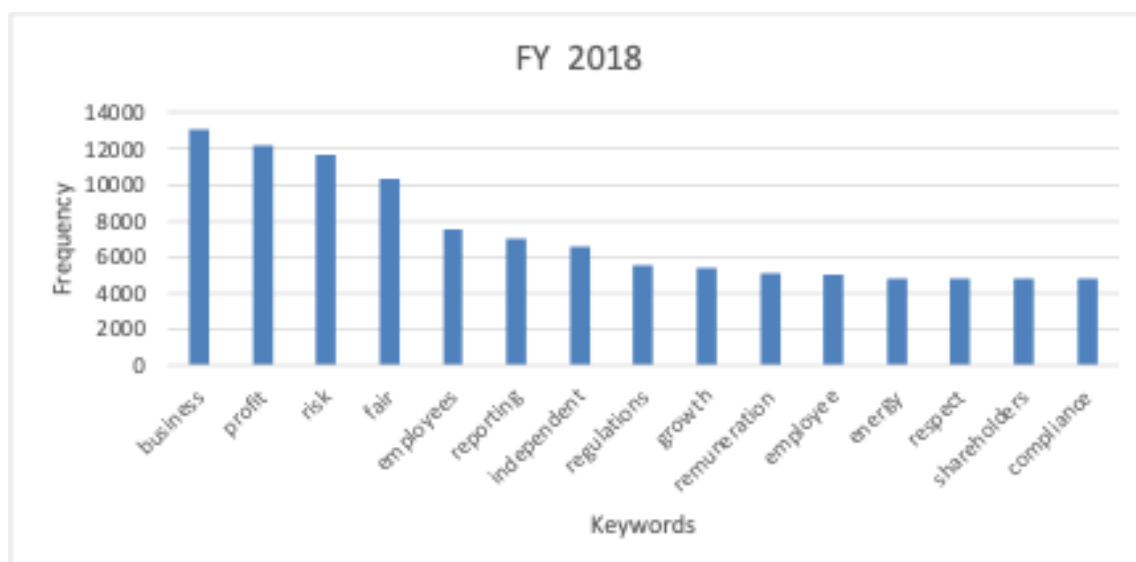


Figure 4.42: High-Frequency ESG Terms in FY 2018



Figure 4.43: ESG Component Distribution in FY 2018

4.3.2.5 FY 2019

ESG reporting patterns for the fiscal year 2019 are shown in Figure 4.44 to Figure 4.46. Governance remains the most important aspect of ESG reporting; businesses demonstrated a strong emphasis on core business and risk management. In the area of environmental reporting, which had the lowest number of ESG keywords, energy-related terms had the greatest mentions. The emergence of new terminology in the FY 2019 filing period demonstrates the evolution of business priorities and challenges, with COVID-related mentions and references to digital transformation, illustrating companies' interest in recognizing new challenges and opportunities.



Figure 4.44: Frequency Visualization in FY 2019

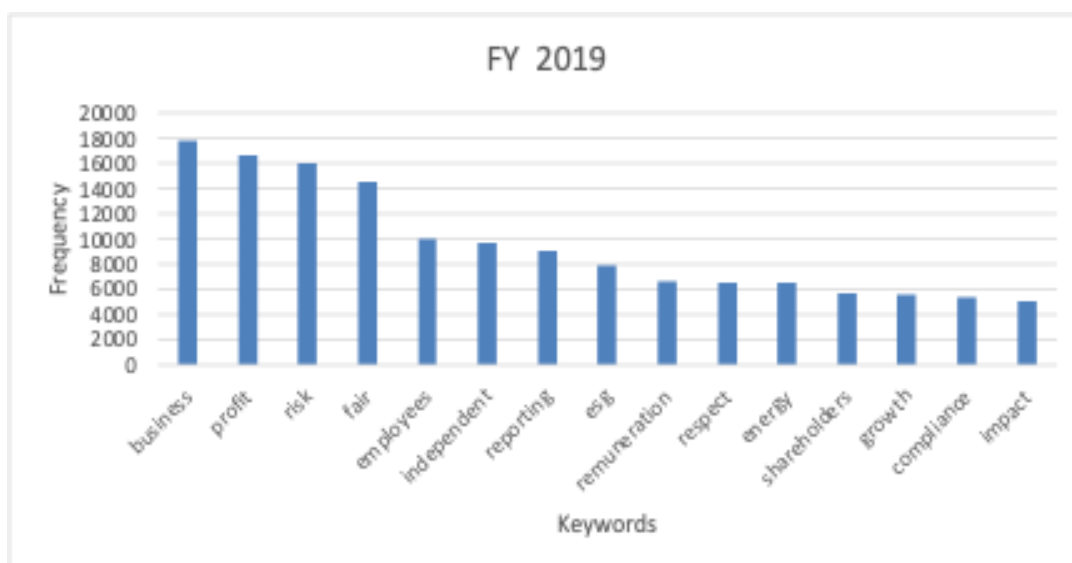


Figure 4.45: High-Frequency ESG Terms in FY 2019

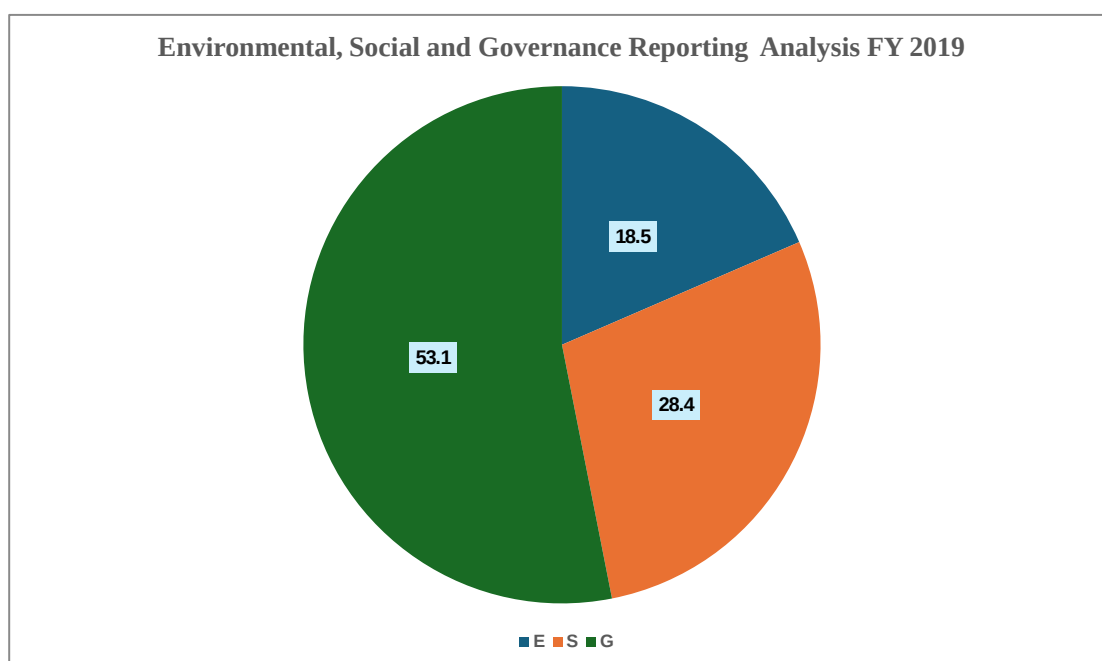


Figure 4.46: ESG Component Distribution in FY 2019

4.3.2.6 FY 2020

Figure 4.47 shows significant changes in the ESG reporting patterns in FY 2020 caused by the worldwide pandemic. Figure 4.49 demonstrates that governance still makes up the largest part of ESG components, with 53.8%. Social elements come next

with 28.7%, and environmental aspects come last with 17.5%. Organizations demonstrated that they were paying greater attention to risk management and business resilience in the governance space, which is the most significant component of ESG reporting. There has been an increase in the usage of risk-related phrases, which demonstrates how companies are coping with the uncertainties brought on by the pandemic and attempting to maintain the stability of their operations. The rapidity with which companies responded to the disaster is seen by the proliferation of pandemic-specific phrases such as "COVID" and the increased intensity of their emphasis on health-related words. There are a lot of terms relating to CSR and stakeholder engagement, which demonstrates that individuals are still focused on their bigger social responsibilities even when circumstances are difficult. Despite the fact that environmental reporting's overall proportion has decreased somewhat, it has continued to place a strong emphasis on resource management and sustainability initiatives. The frequency visualization that is shown in Figure 4.47 exhibits this comparative distribution across all ESG components in an even more evident manner. As a result of worries connected to pandemics, there has been an increased emphasis placed on digital transformation and technological adaption, which is indicative of the fast progress of prevalent trends.



Figure 4.47: Frequency Visualization in FY 2020

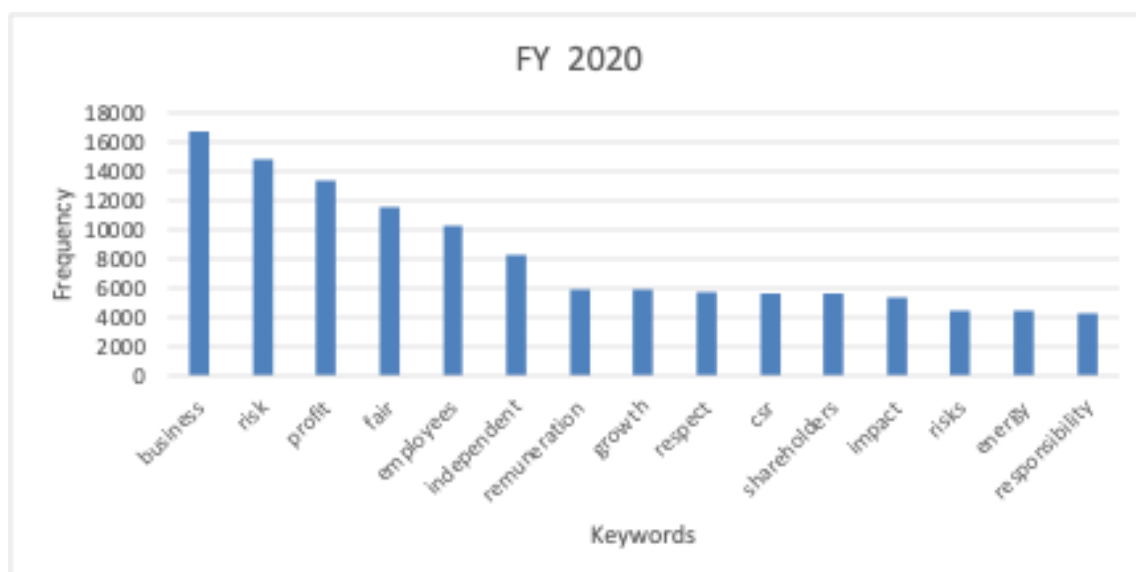


Figure 4.48: High-Frequency ESG Terms in FY 2020

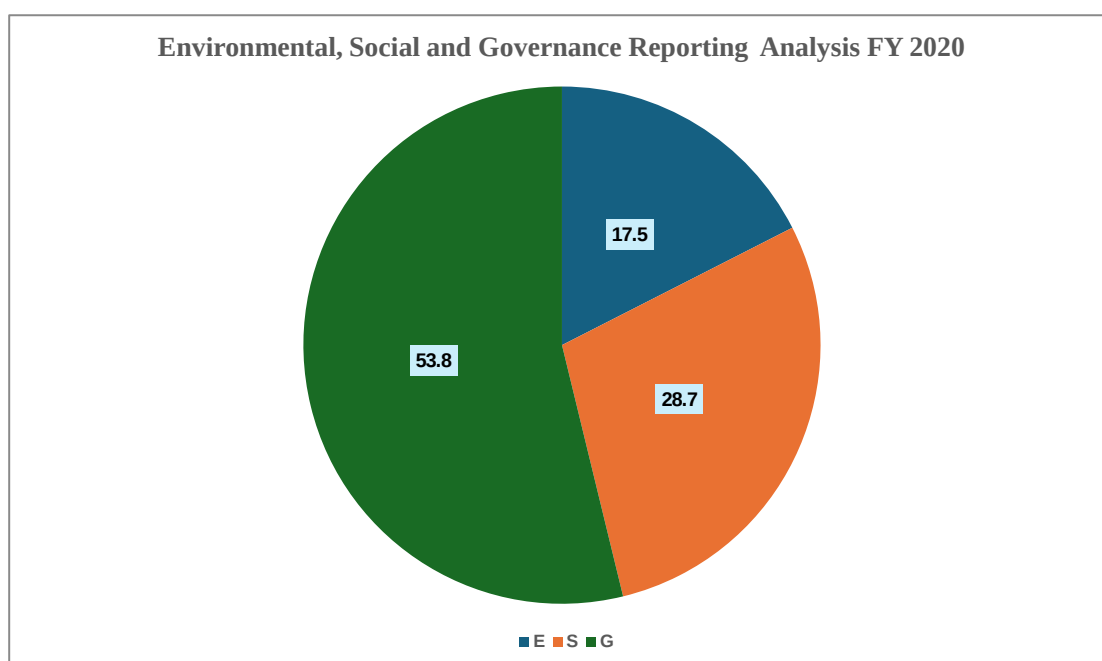


Figure 4.49: ESG Component Distribution in FY 2020

4.3.2.7 FY 2021

The ESG reporting study for the fiscal year 2021, which is shown in Figure 4.50, demonstrates that the ESG practices of companies are continually evolving. The consolidation of governance institutions, the upholding of social obligations, and the implementation of strategic environmental actions are testaments to this. According to

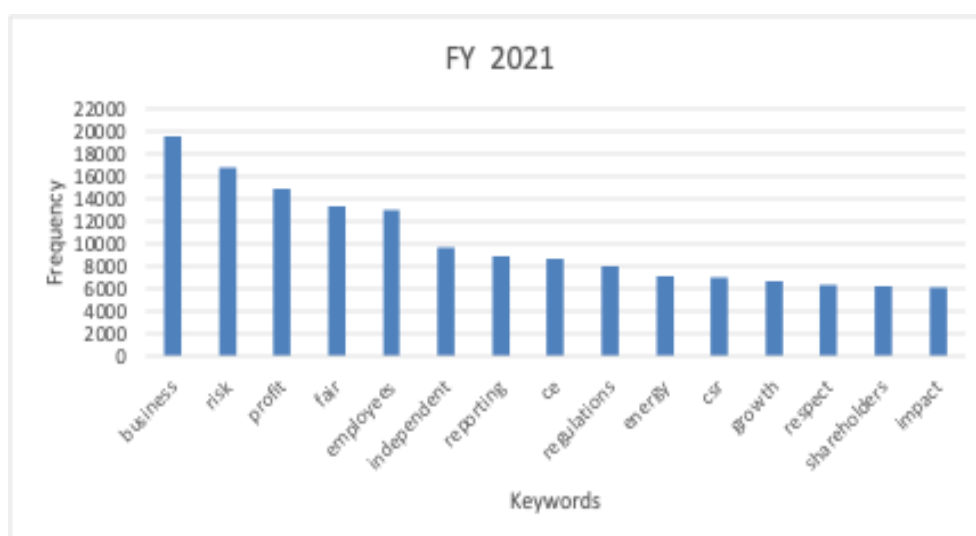


Figure 4.51: High-Frequency ESG Terms in FY 2021

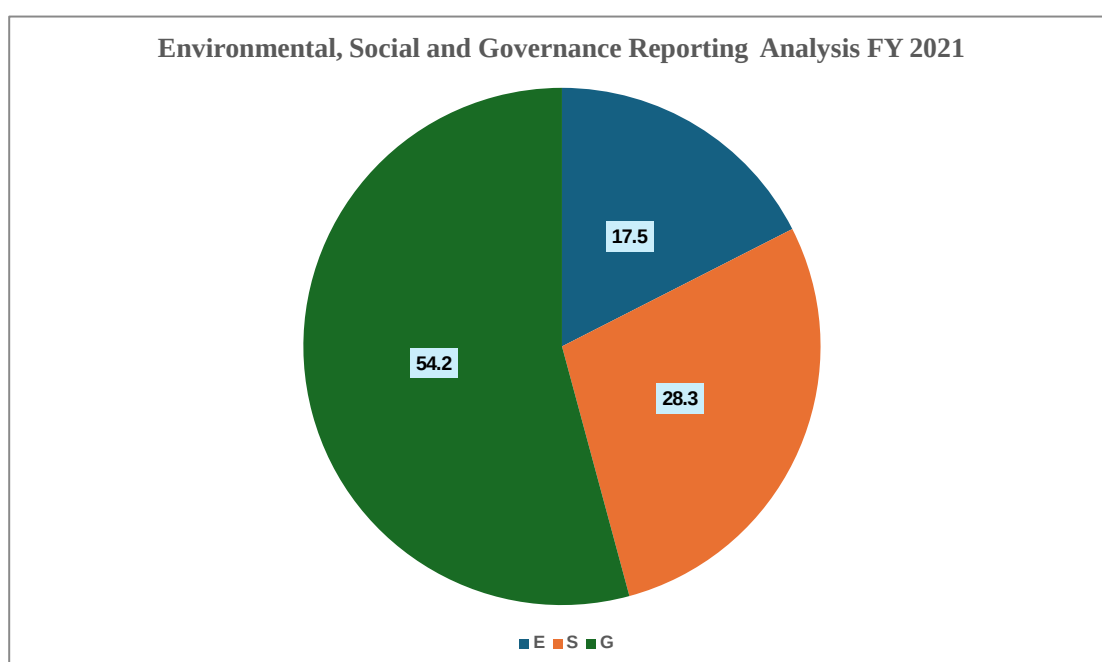


Figure 4.52: ESG Component Distribution in FY 2021

4.3.2.8 FY 2022

Figure 4.53 illustrates the findings for the FY 2022. It indicates a mature approach to corporate responsibility and sustainability, with some noticeable adjustments in priority areas compared to the previous year. Even though it showed a modest reduction from FY 2021, governance remained the most important aspect of the environmental, social, and governance landscape. As shown in Figure 4.55,



Figure 4.53: Frequency Visualization in FY 2022

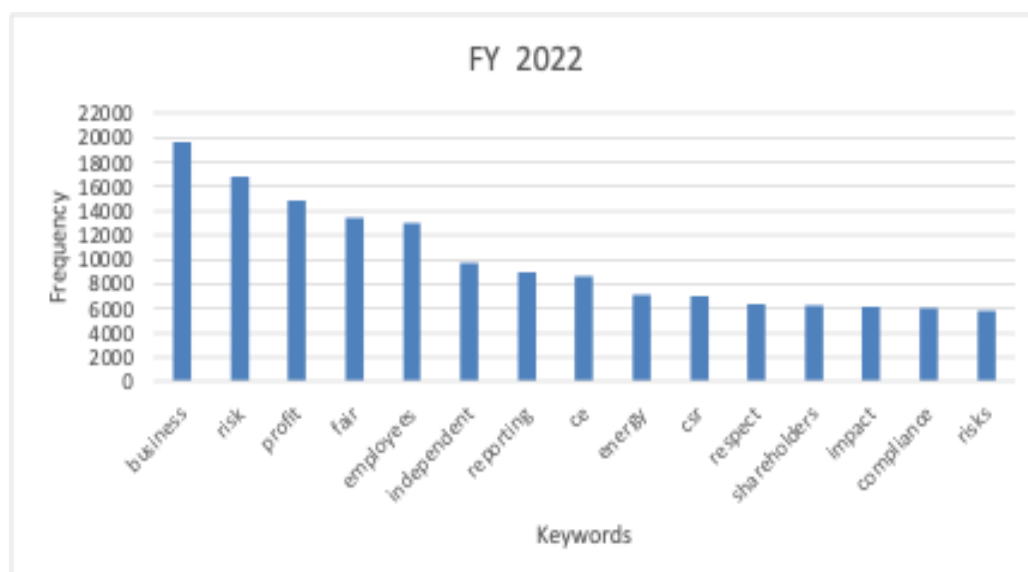


Figure 4.54: High-Frequency ESG Terms in FY 2022

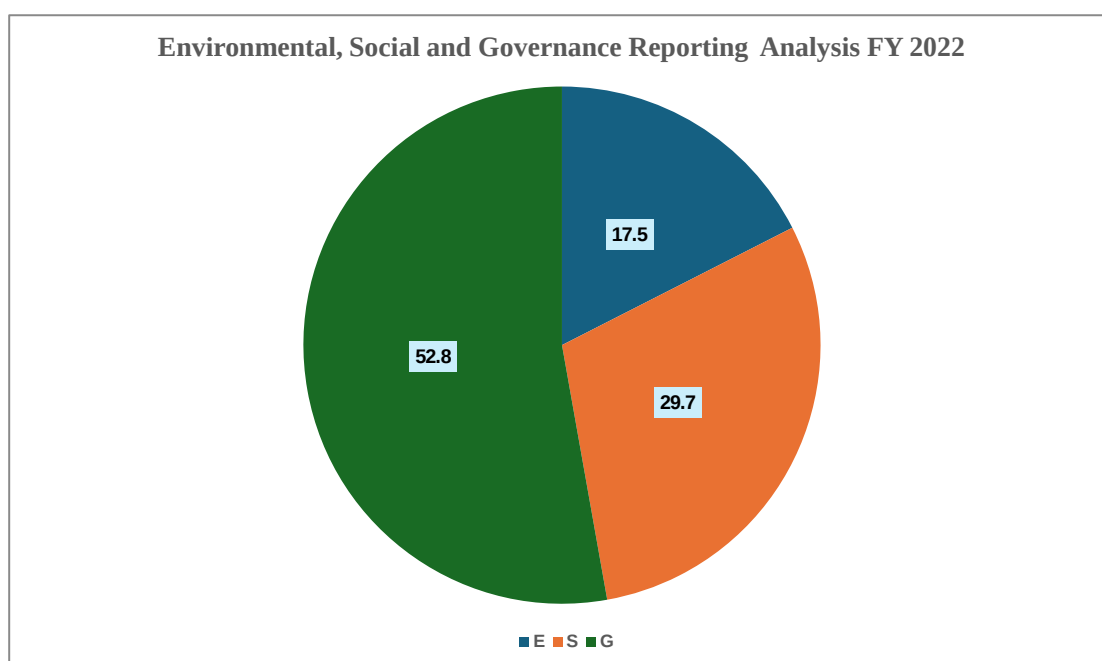


Figure 4.55: ESG Component Distribution in FY 2022

4.3.2.9 FY 2023

According to the findings of the ESG research for the fiscal year 2023, which are shown in Figure 4.56, businesses are still adjusting their strategies and goals in relation to sustainability. It continued to be concerned primarily with governance. Operating business operations continued to be the word that was used the most often,

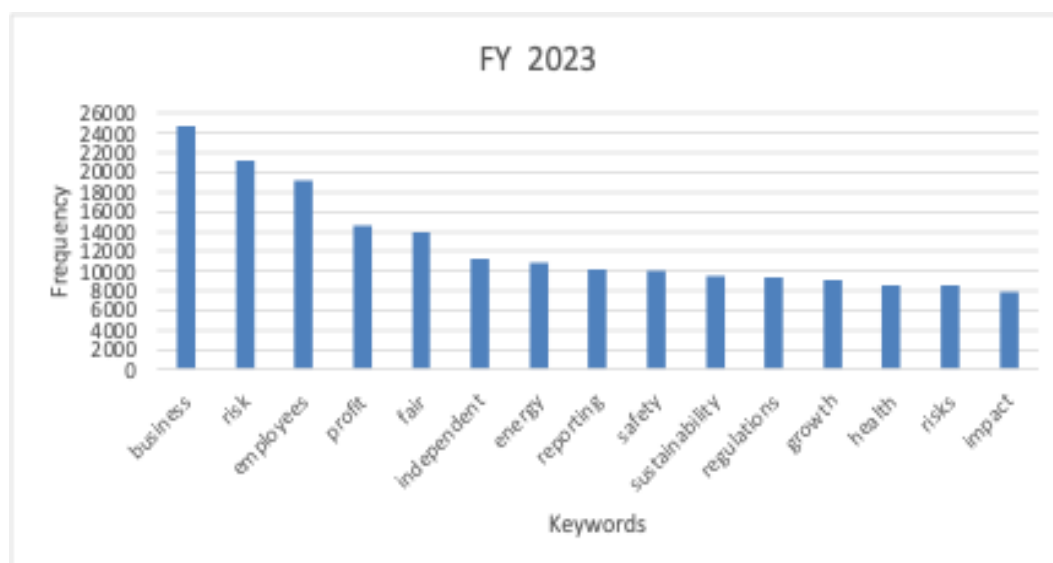


Figure 4.57: High-Frequency ESG Terms in FY 2023

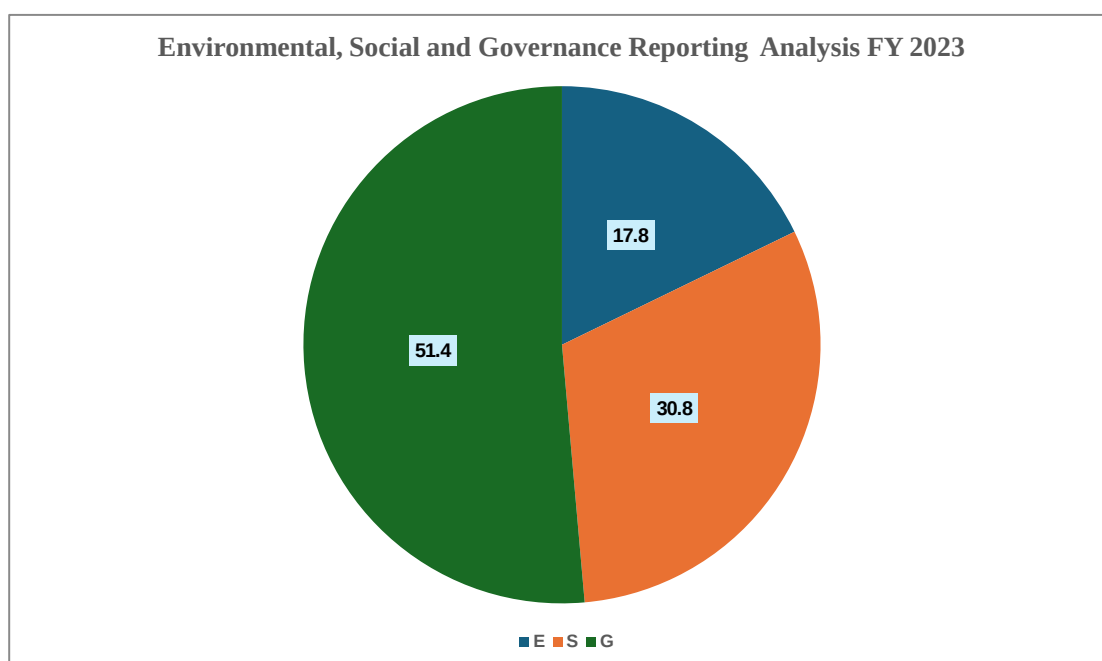


Figure 4.58: ESG Component Distribution in FY 2023

4.3.3 Aggregate

The holistic analysis of ESG reporting trends for 269 Nifty firms during FY 2015–2023 (represented in Figure 4.59) indicates a captivating evolution in the course of India’s corporate sustainability efforts. Based on analysis of 200,000-plus occurrences of keywords in sustainability reports, this study shows a deep evolution from the mere



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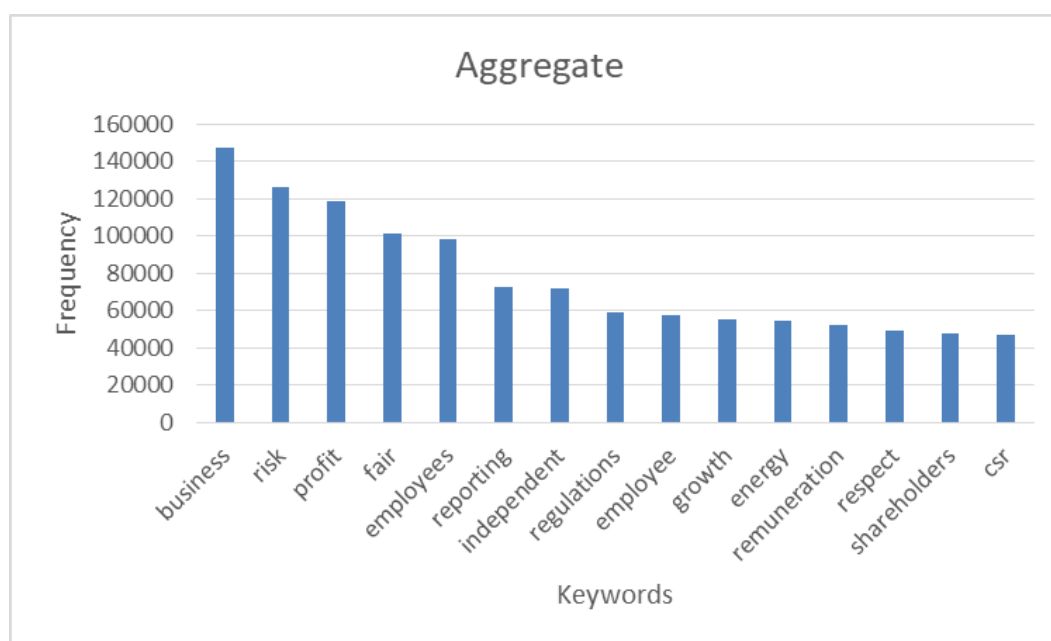


Figure 4.60: High-Frequency ESG Terms in FY 2015-23

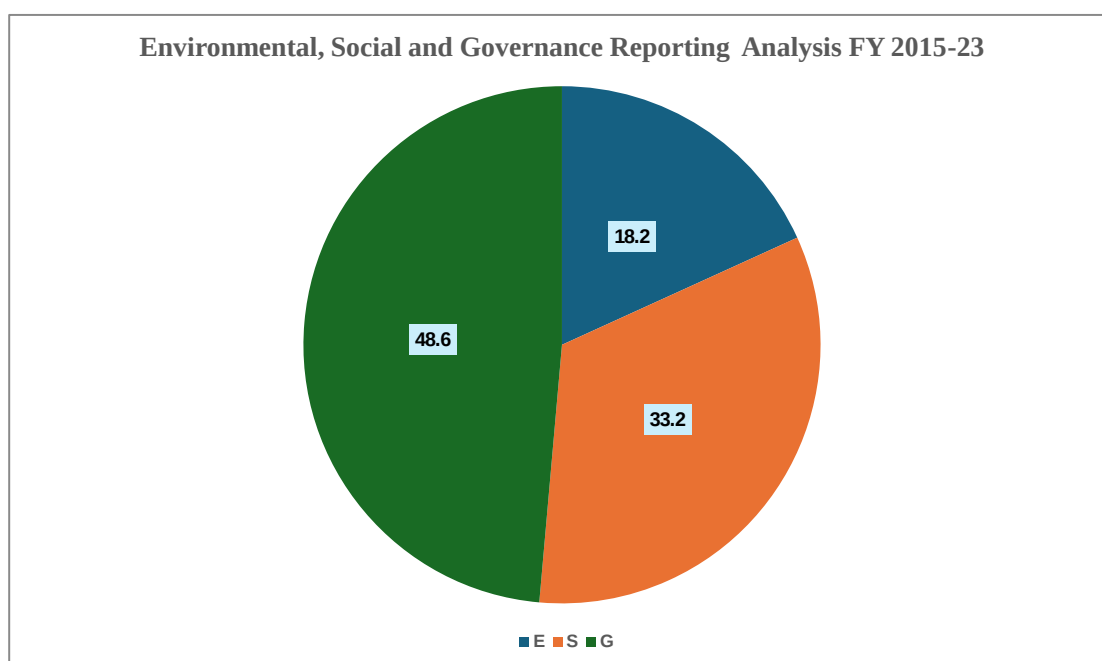


Figure 4.61: ESG Component Distribution in FY 2015-23

The frequency visualization in Figure 4.59 further illustrates this comparative distribution across all ESG components. The presence of terms like "emissions," "climate," and "renewable" suggests a growing recognition of climate-related risks

and opportunities, though perhaps not yet at the same level of emphasis as seen in Western markets.

4.4 Discussion

An assessment of the trends in ESG disclosure across the NIFTY 500 companies finds a wide range of patterns in sustainability reporting, as well as a large amount of variation in the themes and reporting aims. Based on the overall distribution, it seems that governance is the highest priority area, followed by social and environmental concerns. Industry sectors that are subject to a significant amount of regulation, such as the financial and consumer non-cyclical sectors, continue to place a greater focus on governance that is in accordance with the regulations that they are required to adhere to. Once again, the financial sector excels, particularly when it comes to the reporting of risk, which is far more prevalent than in other sectors. There is a greater degree of consistency in social reporting across industries, with communications and consumer cyclicals being in the forefront. Both digital transformation and risk management are areas of concentration for the service sector, which includes industries such as banking, technology, and communications. Some of the most significant developments in various industries include the following: governance issues continue to be of utmost significance, particularly in regulated industries; digital transformation is gaining importance (primarily in service sectors); sustainability and climate reporting are receiving more attention; stakeholder management issues are being incorporated into all key markets; and environmental, social, and governance disclosure is becoming more balanced. Notwithstanding the fact that many industries have their own distinct ESG reporting characteristics that correspond to the way in which they do business, these trends demonstrate that the NIFTY 500 firms are gradually moving towards more comprehensive sustainability reporting.

CHAPTER 5

ESG IMPACT ON FINANCIAL PERFORMANCE, MARKET PERFORMANCE AND SHAREHOLDERS VALUE CREATION OF SELECT NIFTY 500 COMPANIES

This chapter probes into the empirical evidence on the association of ESG and company performance considering NIFTY 500 firms to understand how sustainability practices result in business success. It utilizes a fixed effects panel data regression model to analyze the impact of ESG performance on corporate's financial performance, market value and shareholder value creation. This relationship is examined in the presence of moderating (financial slack, internationalization, and board diversity) and mediating factors (innovation, operational efficiency, and risk management). By employing ESG combined and individual E/S/G components, this study offers managerial implications to corporate strategy implementers, investors and policymakers.

5.1 Research Methodology

We apply a fixed effects panel data regression model (with the time fixed-effects by industry) to investigate the ESG effect on firm performance. There are multiple dependent variables used in the model to represent different dimensions of firm performance. Financial indicators are growth in sales, operating profit margin, net profit margin, return on assets (ROA), return on equity (ROE), return on capital employed (ROCE) and investment efficiency which is measured through return on invested capital (ROIC). Market performance is reflected by Tobin's Q, enterprise multiple, Price-to-Earnings (P/E) ratio and Price-to-Book Value (P/B) ratio. Economic value added (EVA) and Market value added (MVA) are used to measure shareholder value. The model is expressed as a function, where dependent variables reflect performance of the firm and the ESG disclosure score serves as the independent variable. The model systematically accounts for a number of categories of control variables in order to control for firm-specific characteristics, which may affect the ESG-performance relationship. These are firm size, firm age, leverage ratio, capital intensity, cash flow by sales market capitalization. The model adds greater

depth to the analysis by including moderating variables that could impact upon both the strength and direction of the ESG-performance relationship. These comprises financial slack, internationalization and board gender diversity. These moderators are especially important as they enable us to better grasp the situational circumstances in which there would be varying implications of ESG performance for a firm's outcomes. The model also incorporates mediating mechanisms by which ESG performance may affect firm consequences. These mediating factors are innovation, operational efficiency, and risk. The addition of these mediating variables enables investigation into the indirect channels through which ESG performance influences firm outcomes, so offering a more subtle understanding of underlying drivers at play. The regression equation is implemented using the Stata command "by Industry_n, sort: xtreg DEPENDENT VARIABLE ESG_DISCLOSURE_SCORE Intotalassets firmage_ TOT_DEBT_TO_TOT_EQY capitalintensity cashflowbysale TOT_MKT_VAL financialslack Internationalisation NUMBER_OF_WOMEN_DIRECTORS_ON_BRD rdbysales opefficiency_ BB_3Y_DEFAULT_PROB UNLEVERED_BETA i.Years, fe". This specification permits industry-specific analysis and at the same time controlling for time fixed effects, thus capturing both industry-specific traits and temporal fluctuations that may affect the association between ESG and firm performance.

5.1.2 Sample

The focus is on the companies included in the NIFTY 500 Index, which has a share of more than 85.85% of NSE turnover and approximately 92.29 percent at free-float market capitalization (NIFTY 500 Index, 2025). The sample selection is based on companies that have been issuing ESG or sustainability related disclosures since 2015, with the availability of both dependent and independent variables required for the analysis. The final sample size will be determined based on these constraints, ensuring a robust dataset for the study. Despite the global traction of ESG research, emerging economies remain underexplored in existing literature. A case in point is India as a country taken for ESG analysis, given its growing adoption of ESG through regulatory mandates, slow pace in working toward the SDGs, rank 120 out of 165 countries (Sultana, 2021) and increased investor pressure to attend to its ESG

concerns. The ESG-performance link in the Indian market is increasingly pertinent and timely, considering India's recent move towards a sustainability – focused corporate strategy. Specifically, out of the 500 companies comprising the index, only 277 companies had consistently reported ESG metrics that were captured in the Bloomberg database during the study period, representing approximately 55.4% of the original index constituents. These firms are drawn from nine separate industries: Basic Materials, Communications, Energy, Industrial, Utility, Consumer Non-cyclical, Consumer Cyclical Financial and Services. In covering the full spectrum of India's business sector as well as companies, these sectors allow strong cross-industry comparisons for ESG performance impact. The model employs financial data and operational ratios extracted from the Bloomberg database and Prowess, with the Bloomberg ESG disclosure score being the leading measure to assess sustainability performance of firms. There were brief verification checks on reliability and validity in the data collection process. The sample was cleaned of firms showing erratic reporting behaviour or for having ESG information and/or key financial metrics highly under-reported.

5.1.2 Diagnostic Tests

To validate the panel data, several diagnostic tests were performed. We tested for endogeneity, stationarity, heteroskedasticity, functional form and autocorrelation. The findings were that robust standard error fixed effects model was appropriate, and environmental social governance aspects are exogeneous (Table 5.1). This comprehensive testing approach ensures the validity and reliability of our findings regarding the relationship between ESG performance and firm outcomes.

Table 5.1: Diagnostic Tests for Panel Data Analysis

Test	Purpose	Null Hypothesis (H ₀)	Alternative Hypothesis (H ₁)	Implementation	Results	Implication
Augmented Dickey-Fuller (ADF) Fisher-type unit root test	Examine stationarity of panel series	All panels contain unit roots	At least one panel is stationary	'asdoc xtunitroot fisher' command	Rejected H ₀ (p < 0.05)	Panel series are stationary; no need for data transformation
Hausman specification	Determine appropriate panel	Random effects model is	Fixed effects model is	'hausman' command with	Rejected H ₀ (p <	Fixed effects specification is

Test	Purpose	Null Hypothesis (H ₀)	Alternative Hypothesis (H ₁)	Implementation	Results	Implication
test	model structure	appropriate	appropriate	'sigmamore' option	0.05)	appropriate; unobserved heterogeneity is correlated with regressors
Ramsey RESET test	Check for functional form misspecification	Model has no omitted variables	Model has omitted variables	'resetxt' command	Failed to reject H ₀ (p > 0.05)	Model specification is appropriate; no significant omitted variable bias
Modified Wald Test	Test for heteroskedasticity	Homoskedasticity exists	Heteroskedasticity exists	'xttest3' command	Rejected H ₀ (p < 0.05)	Heteroskedasticity present; robust standard errors needed
Wooldridge test	Check for autocorrelation	No first-order autocorrelation	First-order autocorrelation exists	'xtserial' command	Failed to reject H ₀ (p > 0.05)	No significant serial correlation; standard error estimates are valid
Durbin-Wu-Hausman test	Examine potential endogeneity	ESG variables can be treated as exogenous	ESG variables are endogenous	'ivreg' command followed by 'estat endogenous'	Failed to reject H ₀ (p > 0.05)	ESG measures can be treated as exogenous; fixed effects regression estimates are valid

5.1.3 Hypotheses Tested

The present study examines the complex relationship between ESG and firm outcomes across multiple dimensions of corporate success. Drawing upon stakeholder theory, resource-based view, and legitimacy theory, this research investigates whether and how ESG initiatives translate into tangible business results for select Indian companies listed in the NIFTY 500 index. To provide a comprehensive understanding of the ESG-performance nexus, the study develops a multi-layered hypothesis framework that examines both direct relationships and the moderating and mediating mechanisms that influence these relationships. The following hypotheses are formulated to test these relationships empirically, with each hypothesis accompanied by its corresponding null hypothesis assuming no significant relationship between the variables.

- H1: There exists relationship between Financial Performance of a company and ESG scores.*
- H1a: There exists relationship between Financial Performance of a company and Environmental scores.*
- H1b: There exists relationship between Financial Performance of a company and Social Scores.*
- H1c: There exists relationship between Financial Performance of a company and Governance scores.*
- H2: There exists relationship between Market Performance of a company and ESG scores.*
- H2a: There exists relationship between Market Performance of a company and Environmental scores.*
- H2b: There exists relationship between Market Performance of a company and Social Scores.*
- H2c: There exists relationship between Market Performance of a company and Governance scores.*
- H3: There exists relationship between Shareholder's value creation and ESG scores.*
- H3a: There exists relationship between Shareholder's value creation and Environmental scores.*
- H3b: There exists relationship between Shareholder's value creation and Social Scores.*
- H3c: There exists relationship between Shareholder's value creation and Governance scores.*
- H4: Financial Slack moderates the relationship between ESG scores and firm performance.*
- H5: Internationalisation moderates the relationship between ESG scores and firm performance.*

H6: Board Gender Diversity moderates the relationship between ESG scores and firm performance.

H7: Innovation mediates the relationship between ESG scores and firm performance.

H8: Operational Efficiency mediates the relationship between ESG scores and firm performance.

H9: Credit Risk mediates the relationship between ESG scores and firm performance.

H10: Systematic Risk mediates the relationship between ESG scores and firm performance.

*There will be respective null hypotheses for the hypotheses mentioned above.

Note:

- For the Financial Performance hypotheses (H1-H1c), financial performance is measured through seven key indicators: revenue growth, profitability ratios (operating and net profit margins), return metrics (ROA, ROE, ROCE), investment efficiency.
- For the Market Performance hypotheses (H2-H2c), market performance is measured through four key indicators: Tobin's Q, Enterprise Multiple, P/E and P/B ratios.
- For the Shareholder's value creation hypotheses (H3-H3c), shareholder's value creation is measured through two key indicators: EVA and MVA.
- For the moderating and mediating hypotheses (H4-H10), firm performance is measured through thirteen key indicators: revenue growth, profitability ratios (operating and net profit margins), return metrics (ROA, ROE, ROCE), investment efficiency, market valuation measures (Tobin's Q, Enterprise Multiple, P/E and P/B ratios), and value-added metrics (EVA and MVA), providing comprehensive coverage of financial, and market performance dimensions.

5.1.4 Variables Used

5.1.4.1 Dependent Variables

Table 5.2 presents the dependent variables employed in the study, categorised into three main types: financial performance (including growth, profitability, and investment efficiency metrics), market performance (including Tobin's Q, price ratios, and enterprise multiple), and shareholder value creation measures (Economic Value Added and Market Value Added). Each variable is defined with its specific measurement formula and supported by relevant academic references.

Table 5.2: Dependent variables

Type of Variable	Name	Measurement	Formula	References
Dependent Variable	Financial Performance	Growth measured using Growth in Revenues	$(\text{Current Period Revenue} - \text{Prior Period revenue}) / \text{Prior period revenue}$	Cornell & Damodaran, 2020; Venanzi, 2010
		Profitability measured using: Operating Profit Margin	Operating Profit Margin = Operating income divided by revenues	Saygili, et al., 2022; Chen et al., 2021; Kim & Lee, 2020; Buallay et al., 2021; Daszynska-Zygadlo et al., 2020; Pirtea et al., 2021; Shahbaz et al., 2020; Minutolo et al., 2019; Aouadi & Marsat, 2016
		Net Profit Margin	Net Profit Margin = Net profits divided by revenues	
		Return on Assets (ROA)	ROA = Net profits divided by total assets	
		Return on Equity (ROE)	ROE = Net income divided by shareholders' equity	
		Return on Capital Employed (ROCE)	ROCE = Earnings before Interest and taxes (EBIT) divided by capital employed	
Dependent Variable	Market Performance	Investment Efficiency measured using Return on Invested Capital (ROIC)	ROIC = Net Operating Profits After Tax (NOPAT) divided by invested capital	Hai et al., 2022; Cornell & Damodaran, 2020; Allman & Won, 2021
		Tobin's Q	Tobin's Q = Market value of a company divided by total assets	Fuente et al., 2022; Aouadi & Marsat, 2016; Dong et al., 2022; Saygili, et al., 2022; Zhou et al., 2022; Buallay et al., 2021; Daszynska-Zygadlo et al., 2020; Nekhili et al., 2021; Shahbaz et al., 2020;

Type of Variable	Name	Measurement	Formula	References
				Minutolo et al., 2019
		Price-to-earnings ratio (P/E)	$P/E = \text{Market (current) value per share} / \text{earnings per share (EPS)}$	Pyles, 2020; Bodie et al., 2018; Kaiser, 2020
		Price-to-Book Value ratio (P/B)	$P/B = \text{Market price per share} / \text{the book value per share}$	Aouadi & Marsat, 2016; Qureshi et al., 2021; Naimy et al., 2021
		Enterprise Multiple	Enterprise Value divided by Earnings before interest, taxes and dividends (EBIDTA)	Kaczmarek, 2024; Sandoval, 2011
	Shareholder Value Creation	Economic Value Added (EVA)	Economic Value Added = NOPAT – (WACC * capital invested) where NOPAT is Net Operating Profit After Taxes and WACC is Weighted average cost of capital	Tripathi et al., 2024; Venanzi, 2010; Gómez-Bezares et al., 2016; Kaur & Singh, 2020; Sandoval, 2011
		Market Value Added (MVA)	$MVA = \text{Market Value (Total no. of shares * market share price)} - \text{Book value of Equity}$	Gallant, n.d.; Venanzi, 2010; Sandoval, 2011

Source: Author's compilation

5.1.4.2 Independent Variables

Table 5.3 illustrates the summary of independent variables of the study.

Table 5.3: Independent variables

Type of Variable	Name	Measurement	References
Independent Variable	ESG score (ESG)	Bloomberg Score	Cheng et al., 2013; Sassen et al., 2016; Dong et al., 2022; Zhou et al., 2022; Chen et al., 2021; Eliwa et al., 2021; Hassan et al., 2021; Yoon et al., 2021; Kim & Lee, 2020; Buallay et al., 2021; Daszynska-Zygadlo et al., 2020; Pirtea et al., 2021; Nekhili et al., 2021
	Environmental 'E' Score	Bloomberg Score	Chams et al., 2021; Shahbaz et al., 2020; Giannarakis et al., 2014
	Social 'S' Score	Bloomberg Score	Chams et al., 2021; Shahbaz et al., 2020; Giannarakis et al., 2014
	Governance 'G' Score	Bloomberg Score	Chams et al., 2021; Shahbaz et al., 2020; Giannarakis et al., 2014

Source: Author's compilation

5.1.4.3 Control Variables

The regression models control for following variables consistent with prior research (Wahba & Elsayed, 2015; Maqbool & Zameer, 2018; Platonova et al., 2016; Barnett & Salomon, 2012; Trumpp and Guenther, 2015; Velte, 2017). Table 5.4 illustrates the control variables of the study.

Table 5.4: Control variables

Type of Variable	Name	Measurement	References
Control Variable	Firm Size	Natural logarithm of total assets	Bruna et al., 2022; Aouadi & Marsat, 2016; Wahba & Elsayed, 2015; Velte, 2017; Zhou et al., 2022; Profitlich et al., 2021; Eliwa et al., 2021; Hassan et al., 2021; Chams et al., 2021; Kim & Lee, 2020; Jha & Rangarajan, 2020
	Firm Age	Difference between the current year from Year of incorporation	Bruna et al., 2022; Aouadi & Marsat, 2016; Wahba & Elsayed 2015; Zhou et al., 2022; Jha & Rangarajan, 2020
	Industry type	Sector defined on the basis of Bloomberg Industry Classification	Jha & Rangarajan, 2020
	Leverage Ratio	Total Debt / Total Assets	Kim & Lee, 2020; Habermann & Fischer, 2021; Dong et al., 2022; Profitlich et al., 2021; Eliwa et al., 2021
	Capital Intensity	Capital expenditures/ Book Value of Assets	Aouadi & Marsat, 2016; Maqbool & Zameer, 2018; Trumpp and Guenther, 2015; Bruna et al., 2022
	Cash Flow	Net cash flow/ Sales	Clarkson et al., 2008; Bruna et al., 2022
	Total Market Value	Market Capitalisation	Bruna et al., 2022; Chen & Xie, 2022

Source: Author's compilation

5.1.4.4 Moderating Variables

Based on the systematic review, our study will consider the moderating effects of three variables, namely, financial slack, internationalisation and board gender diversity for analysing the ESG and firm performance relationship in the Indian context. Table 5.5 illustrates the moderating variables of the study.

Table 5.5: Moderating variables

Type of Variable	Name	Measurement	References
Moderating Variable	Financial Slack	Current Assets / Current Liabilities	Duque-Grisales & Aguilera-Caracuel, 2019; Kraatz & Zajac, 2001
	Internationalisation	$\sum_{i=1}^n P_{ij} \times \left(\ln \frac{1}{P_{ij}} \right)$ Where P_i is sales percentage in a specific region i, and $\ln \frac{1}{P_{ij}}$ represents the weight given to a region.	Duque-Grisales & Aguilera-Caracuel, 2019; Cherkasova & Nenuzhenko, 2022; Capar et al., 2015
	Board Gender Diversity	Percentage of women directors in a company	Zhu & Chen, 2024; Jiang et al., 2020; Tariah, 2019

Source: Author's compilation

5.1.4.5 Mediating Variables

Based on the systematic review, our study will consider the mediating effects of three variables, namely, operational efficiency, innovation and risk while analysing the relationship between ESG and firm performance in the Indian context. Table 5.6 illustrates the mediating variables of the study.

Table 5.6: Mediating variables

Type of Variable	Name	Measurement	References
Mediating Variable	Innovation	Research and Development Expenditure divided by sales	Atz et al., 2022; Broadstock et al., 2020; Surroca et al., 2009; Ruggiero & Cupertino, 2018; Whelan & Atz, 2021; Capar et al., 2015
	Operational Efficiency	Operating Expenses plus Cost of Goods sold divided by Total Revenue	Abd-Elmageed et al., 2020; Ye et al., 2021; Atz, 2021; Whelan & Atz, 2021
	Risk	Credit Risk (Default Risk) and Systematic Risk (Beta)	Tepe et al., 2022

Source: Author's compilation

5.2 Findings

The results of regression analysis highlight the varying relationships between ESG and firm performance across different sectors. Tables 5.7 to 5.240 present the results mapping the impact of ESG combined and individual scores on various firm performance variables across industries, with the detailed regression outputs for each industry provided in the Appendix 1 for ease of reference. Tables 5.241 to 5.266 summarize the regression results obtained for each industry. Subsequently, Tables 5.267 to 5.292 extend the analysis to capture the differential effects of ESG on firm performance in the pre- and post-COVID periods, which are presented in the Appendix 2.

5.2.1 Impact of ESG on Financial Performance

The analysis of ESG disclosure and financial performance across nine industries reveals a complex, heterogeneous, and largely industry-contingent relationship. Financial performance was assessed through a multi-dimensional framework comprising growth (revenue growth), profitability (operating and net profit margins), return measures (ROA, ROE, ROCE), market valuation (Tobin's Q, Enterprise Multiple, P/E, P/B), and value-added metrics (EVA, MVA). This comprehensive lens allows for understanding not only the direct effects of ESG but also the moderating and mediating mechanisms shaping these relationships.

Tables 5.7–5.15 report the results of the regression analysis of overall ESG score on revenue growth by industry, revealing considerable heterogeneity in relationships. As may be seen from Table 5.8, the communications sector was the only sector with a relatively positive ESG effect. Consistent with the same, the impact of disaggregated ESG analysis (see tables 5.16–5.24), the changes in social disclosure have been positive for both the communication sector and consumer cyclical sector. This is consistent with the stakeholder theory because business that deal directly with customers could gain a competitive advantage by managing effective relationships with stakeholders as it increase brand reputation and foster customer retention. On the base of multiple studies (De Jong et al., 2020; Luu et al., 2022; Bicakcioglu-Peynirci & Morgan, 2021; Zhang et a., 2017), it can be concluded that moderating variables financial slack and internationalization have a significant negative impact on growth

in revenues, since the excess resources may reduce the urgency or efficiency needed for rapid revenue expansion. Board gender diversity shows significant positive moderating effects only in technology (refer to table 5.14). This is consistent with agency theory, which argues that boards with diversified perspectives and experience are more likely to monitor and make strategic decisions. This in turn reduces agency costs, and better aligns management decisions with those of the shareholder and this is particularly true for sectors that are innovation dependent. Mediating variables demonstrate varying mechanisms. For instance, operational efficiency adds negatively to basic materials, consumer non-cyclical and industrial; innovation only leads negative frictions for energy; systematic risk shows positive nudging effect on technology, consumer cyclical, consumer non-cyclical and industrial, while credit risk significantly negatively mediates only in technology (see the table 5.14).

For operating profit margins, tables 5.25-5.33 demonstrate that the combined ESG score is not significantly related to performance in any industry, while tables 5.34-5.42 show disaggregated analysis reveals social disclosure as the most consistent positive driver (Dogan & Basar, 2025). Multiple studies find that the combined ESG score does not have a significant impact on operating profit margins or broader profitability measures in most industries. This is supported by large-sample analyses in both European and global contexts, where the aggregate ESG score fails to show a robust, significant relationship with profitability metrics such as ROA or operating profit margin (Makridou et al., 2023; Musa et al., 2024; Baran et al., 2022). Financial slack positively moderates ESG–profitability relationships in basic materials (refer to table 5.25) and utilities (refer to table 5.33). Tables 5.43-5.51 present similar trends for net profit margins, with the combined ESG score showing no direct impact across industries, while tables 5.52-5.60 reveal social disclosure as the strongest positive driver in consumer cyclical, non-cyclical, energy, and technology sectors. Furthermore, the comprehensive profitability analysis confirms operational efficiency as the dominant negative mediating channel in seven of nine industries. According to tables 5.61-5.78, there are stark industry variations across sectors, with the overall score of ESG significantly forecasting ROA positively in consumer non-cyclical and negatively in utilities. Social disclosure score also enhances ROA in consumer non-

cyclical industries (refer to tables 5.70-5.78). The overall ESG score did not achieve any statistical importance in the return on equity study in any one specific industry (refer to tables 5.79-5.87). On the flip side, social transparency substantially raises ROE in consumer non-cyclical businesses. ROCE analysis in tables 5.97-5.105 and 5.106-5.114 demonstrates combined ESG disclosure shows no significance overall, with tables 5.251-5.252 providing industry-wide summaries.

Analysis of ESG and investment efficiency presented in tables 5.115-5.123 produces largely insignificant combined effects across industries, while tables 5.124-5.132 show decomposed results where environmental disclosure negatively influences basic materials but positively affects energy and industrials. Operational efficiency persists as a negative mediator across industries, while innovation shows mixed impacts—positive in utilities but negative in industrials. Institutional theory explains these divergent effects as reflecting industry-specific institutional pressures, where environmental regulations impose compliance costs on extractive industries while creating opportunities for efficiency gains in energy and industrial sectors through green technologies. According to the results of the ESG and investment efficiency study in tables 5.115-5.123, the combined effects across industries are largely insignificant. According to tables 5.124-5.132, environmental disclosure negatively impacts the basic materials but positively impacts the energy and industrials. Operational efficiency persists as a negative mediator across industries, while innovation shows mixed impacts—positive in utilities but negative in industrials. Institutional theory explains these divergent effects as reflecting industry-specific institutional pressures, where environmental regulations impose compliance costs on extractive industries while creating opportunities for efficiency gains in energy and industrial sectors through green technologies.

Overall, these results allow understanding that ESG does not affect financial performance the same way. Instead, the impact is heterogeneous, highly dependent on certain sectors, and closely related to more profound mechanisms, such as operational efficiency, innovation, and risk perception. Social disclosure remains to be the only ESG component that constantly contributes added value, particularly in sectors where consumers interact with companies directly and require high technology integration (Qiu et al., 2016; Sampong et al., 2018; Aditya & Hasnawati, 2025; Diab, 2018). Environmental and governance disclosure exhibit varying influences and are often

unreliable components. Most importantly, the consistent negative effect of operational efficiency suggests that the resources dedicated to ESG goals take a toll on short-term financial results, and while improving reputation and overall resilience, simultaneously undermine financial performance in the short run in some sectors (Qiu et al., 2016; Rahimi, 2025).

5.2.2 Impact of ESG on Market Value

The regression analysis of Tobin's Q in tables 5.133-5.141 shows that largely, the combined ESG disclosure score in all industries generally remains statistically insignificant. Further, tables 5.142-5.150 offer disaggregated results that provide pivotal insights: while environmental and governance score stay statistically negative for basic materials and utilities respectively; social disclosure is positive for basic materials and industrial sector. However, the moderating variables show significant coefficients. Specifically, financial slack negatively moderates across the consumer non-cyclical industry in table 5.136, which means that financial resources in excess do not meaningfully contribute to firm value in the industry. Internationalization is significant at a positive level across the communications industry in table 5.134, which means that industry players' global strategies enhance market valuation. Meanwhile, board gender diversity is significantly negative in the financial industry in table 5.138, which means that this variable does not meaningfully affect the performance in the sector, which is supported by potential idiosyncrasy of the financial sector dynamics or the peculiar design of diversity practices in the industry. According to literature, board gender diversity can be negative or insignificant in direct Tobin's Q models, especially in sector-specific settings, but the broader literature shows that women directors often enhance firm value indirectly through ESG disclosure/performance and more consistently when boards reach a critical mass of female representation (Nguyen et al., 2023; Alodat et al., 2023; Omenihu et al., 2025). Finally, the mediating variables offer insights into the crucial performance pathways as presented in tables 5.133-5.141. Innovation is not statistically significant in any industry, which suggests that the long-term dynamics are necessary to observe the effects of the R&D investments on market valuation. Meanwhile, operational efficiency consistently demonstrates significant negative effects across consumer cyclical, consumer non-cyclical, communications, and industrial sectors, indicating potential efficiency-profitability trade-offs. Risk factors show mixed results, with

credit risk being significant only in financial services with negative effects, while systematic risk shows significant positive effects in the basic materials, industrial, and technology sectors, suggesting that market participants may reward higher systematic risk exposure with premium valuations in these capital-intensive and innovation-driven industries.

For enterprise value multiples, tables 5.151-5.159 show the combined ESG score has significant positive effects in energy and significant negative effects in industrials, while tables 5.160-5.168 reveal among individual components, governance emerges as most influential with significant positive effects in the energy and financial sectors. Financial Slack shows significant positive moderating effects in the basic materials industry (Table 5.151) and negative effects in the financial sector (refer to table 5.156), while board gender diversity demonstrates positive moderating effects in consumer non-cyclical (Table 5.154) but negative effects in industrial sector (Table 5.157), and internationalization remains largely insignificant across most sectors. Regarding mediating variables, operational efficiency has strong positive mediation in consumer cyclical industries, while systematic risk positively mediates ESG effects in basic materials and negatively in energy and technology.

For price-to-earnings ratio analysis, tables 5.169-5.177 show limited significant effects with only the financial sector displaying a significant negative relationship, while tables 5.178-5.186 reveal disaggregated environmental disclosure negatively impacts P/E ratios in basic materials and financials. Tables 5.259-5.260 summarize these patterns, indicating market participants selectively price ESG factors into valuations depending on industry-specific drivers. Tables 5.187-5.195 of the price-to-book ratio study reveal that there are no substantial combined ESG effects. On the other hand, tables 5.196-5.204 illustrate that environmental disclosure has a negative influence on values in basic commodities and energy, summarized in tables 5.261-5.262.

In summary, the findings contribute to establishing that the ESG–market performance link is entirely contingent not only on the industry context but also on the valuation measures. While the combined ESG scores have little direct effect on market performance and can only be established as significant in energy and industrial sectors for enterprise values and financial sectors for P/E ratios, the disaggregated ESG

components display a more complex pattern: Governance disclosure emerges as the most influential factor with significant positive effects in the energy and financial sectors' enterprise valuations; environmental disclosure shows consistent negative effects in resource-intensive industries (basic materials, energy) for P/B ratios; and social disclosure exhibits sector-specific impacts ranging from positive effects in basic materials and industrial sectors (Tobin's Q) to negative effects in consumer non-cyclical and technology industries (P/E ratios). Moderating and mediating variables display highly heterogeneous, industry-specific evidence with only systematic risk and operational efficiency emerging as the universally critical performance pathways, while the mediating influence of innovation is surprisingly limited across all valuation measures.

5.2.3 Impact of ESG on Shareholder's Value Creation

The investigation of ESG metrics impact on shareholder value, measured through EVA and MVA aspects, reveals a demonstrates a complex, varied, and sector-specific approach. While the combined ESG disclosure score often shows limited or negligible impacts, disaggregated scores as well as moderating and mediating mechanisms provide deeper insights into value creation.

Tables 5.205 through 5.213 report the combined effect of ESG score on EVA, while 5.214 through 5.222 show decomposed patterns. For EVA, the combined ESG score does not have statistically significant effects in any of the nine industries. Environmental disclosure significantly enhances EVA only in the industrial sector, while social disclosure contributes positively in consumer cyclical and marginally in consumer non-cyclical industries but reduces EVA in industrials. Governance disclosure also shows selective value-enhancing potential, with significant positive effects in industrials. These findings highlight that while ESG in aggregate may not directly drive EVA, individual components, particularly social and governance initiatives, can foster or erode shareholder value depending on industry context. Financial slack is uniformly and statistically significant negative moderator in consumer non-cyclical, industrial, and technology industries. This indicates that too many resources create a lack of discipline in deployment and, therefore, do not create value. Among the mediating variables,

innovation is uniformly insignificant, while operational efficiency emerges as the most decisive pathway. In multiple industries, including communications, consumer cyclical, consumer non-cyclical, energy, and industrials, inefficiencies substantially erode EVA, underscoring the importance of aligning ESG initiatives with cost-effective operations. Risk factors show industry-specific mediation: systematic risk enhances EVA in industrials and technology, reflecting higher growth potential in risk-exposed firms, while credit risk is significant only in financials, consistent with investor sensitivity to default probability in this sector.

Tables 5.223-5.231 illustrate the cumulative impact of ESG score on MVA, whereas tables 5.232-5.240 provide disaggregated findings. The results for MVA indicate a more pronounced and distinct array of effects. The aggregated ESG score markedly enhances shareholder value in the energy sector while diminishing it in consumer non-cyclicals, indicating contrasting investor anticipations about ESG in resource-centric vs consumer-focused companies. Disaggregated, environmental disclosure markedly improves MVA in the energy sector, affirming the value attributed to sustainability in carbon-intensive industries. Governance is identified as the most influential factor, yielding significant positive impacts in the energy sector while generating considerable negative effects in consumer non-cyclical, technology, and utilities sectors. This paradox indicates that whereas enhancements in governance are esteemed in some sectors, they may denote inefficiency or excessive bureaucratization in others. Moderating variables indicate structural conditioning. Financial slack continuously imposes substantial negative impacts in the basic materials, consumer non-cyclical, and financial sectors, suggesting that excessive resources may undermine ESG discipline and reduce market value generation. Internationalization positively moderates communications, indicating that worldwide exposure enhances the shareholder value of ESG activities in network-driven industries. Board gender diversity is relevant solely in the industrials sector, where it adversely influences the links between ESG and MVA, highlighting distinct cultural and structural impediments within the industry. Mediating processes offer further explanatory insight. Innovation has a detrimental mediating impact in energy but a beneficial one in utilities, indicating differing sectoral abilities to convert R&D into

market value. Operational efficiency has varied outcomes: favorable mediation in consumer cyclical, technology, and utilities sectors, and unfavorable in consumer non-cyclical. This suggests that whereas operational excellence might augment shareholder value in certain industries, efficiency constraints may conflict with ESG expenditures in others. Systematic risk exerts a detrimental influence in the energy sector, although credit risk remains inconsequential across all businesses.

Finally, aggregating EVA and MVA results, governance emerges as the single most critical determinant of EVA and MVA, particularly among energy and industrial sectors. Social disclosure emerges as the second most important determinant of EVA and MVA, especially in industries that are consumer-oriented. Environmental disclosure demonstrates industry-specific value creation, strongly rewarded in energy and industrials but penalized in resource-heavy or regulated utilities. Financial slack proves the most critical moderator, consistently weakening the ESG–shareholder value link, while operational efficiency remains the dominant mediating channel, frequently negative for EVA but positive for MVA depending on industry. Thus, these findings prove that ESG and shareholder value generation is a sector-specific phenomenon.

5.2.4 ESG Impact on Firm Performance: Pre-COVID vs Post-COVID Analysis

The study also make a comparison between the pre- and post-COVID performance to identify which industries were more flexible and resilient. The examination of pre-COVID performance as well as post-pandemic recovery trends was essential in order to get a full picture of the adaptability of sectors and the changes that have occurred in their structures. The regression analysis reported in the tables 5.267-5.292 reveals that there was a significant shift in the link between ESG disclosure ratings and the financial performance of firms. Referring to tables 5.269-5.270, operating margins moved from being considerably negative before to the implementation of COVID to being positive following the implementation of COVID. Tables 5.271-5.272 show that the net profit margins, which had been relatively negative in the past, have now entered the positive territory. Over the course of the previous several years, there has been a consistent rise in the returns on assets (5.273–5.274), equity (5.277–5.276),

and capital employed (5.277–5.278). A number of contradicting patterns were discovered by market value measurements. It is seen in tables 5.283 and 5.284 that the impact on enterprise value went from being extremely favorable to being negative. Tables 5.291–5.292 illustrate the turnaround from a positive market value added to a negative market value added. If we look at statistics that belong to specific industries, we can see that the consumer non-cyclical sector is the most ESG strong. There was a positive association between the price-to-book ratios and the increase of sales in this industry throughout the two time periods that were relevant to the study. The persistent need for necessities, the steadfastness of customers in their commitment to environmentally responsible companies, and the viability of ESG supply chains were the major factors that contributed to this accomplishment. The most significant shift was in the utilities sector, which went from experiencing negative growth effects to experiencing positive growth impacts along with persistent gains in profitability (Remo-Diez et al., 2023; Boldeanu et al., 2022; Morea et al., 2025; Fometescu et al., 2024). On the other hand, ESG costs in the manufacturing sector have been steadily climbing over the course of the past several years, and the energy sector has failed to fulfill expectations in every respect. A trade-off between growth and profitability was clearly seen in the information technology business, which witnessed increased sales growth coupled by decreasing margins. Despite the difficulties associated with revenue growth, the banking industry demonstrated ESG benefits in terms of net profitability. In spite of the difficulties brought forth by the epidemic, they were successful in their efforts to manage risk, establish a compliance infrastructure, and win the trust of stakeholders. It was especially alarming to discover how poorly the information technology industry performed. This was going to be a rude awakening for the information technology sector when it comes to the widespread misunderstandings that surround the digital revolution. The cost of talent reached levels that were unsustainable, valuation bubbles broke prior to the COVID conference, and competitive moats were undermined as a result of extensive competition. The increases in profit were greater than the increases in sales. For example, after COVID, sales growth in the information technology industry was marginally higher than it had been before COVID. However, profitability in the sector suffered tremendously, with operating and net profit margins falling dramatically and

market prices suffering as a result of Tobin's Q plummeting. In both eras, the return measures were quite disappointing. Despite the fact that digital transformation was beneficial to customers and society as a whole, it did not necessarily result in improved financial outcomes for information technology companies. This is a paradox in the field of technology. Although ESG investments are essential for regulatory compliance and social license to operate, they directly hurt short-term financial performance in a sector that is already experiencing margin compression from intense competition. The structural problem is caused by growth imperatives and the high costs of ESG compliance in areas like as data protection, content moderation, and sustainable computing infrastructure. This is the reason why this is the case.

5.3 Discussion

It is crucial to extrapolate that the impact of ESG on firm performance varies massively with the time frame, the classification of an industry, performance indicators, and the ESG variables per se. Consumer non-cyclical industries consistently demonstrated the most robust positive ESG-performance relationships across multiple metrics. Multiple elements that are interconnected are responsible for the success of the industry. In the first place, the consistent demand for critical items shields these companies from the oscillations that occur in the stock market. Two, well-established environmental, social, and governance supply chains transform sustainability commitments into measurable operational advantages. Finally, the growing demand from customers for brands that are responsible results in direct premiums in income. The sector's resilience became particularly evident during COVID-19, when it maintained positive performance across both pre- and post-pandemic periods, transforming into a defensive fortress when crisis struck. Governance disclosure scores and enterprise value multiples created considerable positive coefficients for industrial and energy sectors. The energy sector's shift from a combined negative impact of ESG on MVA before COVID to a more neutral to slight positive after the epidemic indicates that markets still see ESG as a necessity of risk management for carbon-intensive businesses. Conversely, the basic materials sector

illustrated adverse ESG-performance associations along numerous indicators. Due to high costs of environmental regulation, it can be affirmed that there are structural hurdles to the application of ESG concepts in resource extraction firms, since environmental compliance is an unprofitable endeavor in the short run. The technology paradox also emerged, and it contradicts the currently prevailing narratives that seem digital transformation had only had a positive effect on the world. The revenues growth post-COVID actually did increase, but the sector experienced a severe profitability deterioration, including the operating and net profit margins contraction and the market valuation slump and the return metrics remained constantly negative across the two periods. The technology sector revealed a striking paradox that contradicts popular narratives of digital transformation as universally beneficial. Despite modest improvements in revenue growth post-COVID, the sector experienced severe profitability deterioration with operating and net profit margins declining significantly, market valuations suffering, and return metrics remaining consistently negative across both periods. This underperformance stems from multiple converging pressures: pre-COVID valuation bubbles burst as growth expectations normalized; competitive moats eroded under intense rivalry and low barriers to entry in software markets; talent acquisition and retention costs exploded to unsustainable levels; and ESG compliance costs in data privacy, content moderation, algorithmic transparency, and sustainable computing infrastructure directly conflicted with growth imperatives. The technology paradox highlights that while digital transformation benefited users and society broadly, it didn't necessarily translate to superior financial performance for technology companies themselves, particularly when ESG investments, though necessary for regulatory compliance and social license to operate, undermined short-term margins in a sector already facing compression from intense competition. The decomposition of ESG into environmental, social, and governance dimensions reveals critical differential impacts that are obscured in aggregate analyses. The most critical factor was governance disclosure, which positively affected enterprise valuations in energy and financial sectors and MVA in energy and industrial sectors but negatively affected consumer non-cyclical, technology, and

utilities MVA sectors. Social disclosure was the second in the magnitude and consistency, delivering reliable impact on performance, particularly in consumer-facing sector. In particular, social initiatives had significant positive effects on operating margins and net margins in consumer cyclical, non-cyclical, energy, and technology sectors, while their effects have translated on ROA and ROE only for the consumer non-cyclical sector. This pattern undoubtedly reflects the increasing importance of stakeholder capitalism rather than mere shareholder value creation. Environmental disclosure exhibited the most industry-contingent effects, showing strong positive impacts in energy and industrial sectors (particularly for EVA and MVA) where environmental stewardship addresses material risks and regulatory pressures, but significant negative effects in basic materials and resource-intensive industries where compliance costs dominate benefits. This pattern aligns with Environmental Kuznets Curve (EKC) theory, suggesting that Indian firms may still be in the ascending phase where environmental investments impose net costs before reaching the inflection point for positive financial returns (Vasanth et al., 2015; Alam & Adil, 2019; Arora, 2020; Hossain et al., 2023). The modest financial impact of environmental factors—despite their growing importance for long-term sustainability reflects several structural realities in the Indian context: substantial upfront capital requirements with longer payback periods; benefits like risk mitigation and brand enhancement remaining largely intangible and difficult to quantify in traditional financial metrics; India's evolving environmental regulatory landscape creating uncertainty around compliance costs; and price-sensitive markets limiting immediate financial rewards for environmental stewardship.

The moderating effects of financial slack, internationalization, and board gender diversity varied across industries. Financial slack emerged as a critical but double-edged moderator, showing significant positive effects in basic materials but significant negative effects in consumer non-cyclical, industrial, technology, and financial sectors. This negative moderation pattern supports agency theory predictions that excess resources can lead to managerial complacency, overinvestment in

symbolic ESG initiatives, and weakened performance discipline (Duque-Grisales & Aguilera-Caracuel, 2019; Uyar et al., 2023). The consistent negative slack effects across multiple sectors and both EVA and MVA metrics suggest that ESG investments are most value-enhancing when firms face resource constraints that force disciplined capital allocation and operational integration rather than treating ESG as a discretionary expenditure enabled by surplus cash. Internationalization revealed complex, sector-dependent moderation patterns with positive effects in communications, energy, financial, and basic materials industries—where global exposure amplifies ESG benefits through access to international capital markets, enhanced reputation with multinational stakeholders, and knowledge spillovers—but negative effects in industrial and consumer cyclical sectors where international operations may increase ESG compliance complexity and coordination costs without offsetting benefits. Board gender diversity similarly demonstrated sector-specific moderation, positively moderating ESG-performance relationships in technology, consumer non-cyclical, and utilities (where diverse perspectives enhance stakeholder engagement and risk oversight) but negatively moderating in basic materials, energy, financial, and industrial sectors, potentially reflecting entrenched organizational cultures, structural barriers to effective diversity integration, or tokenistic appointments that fail to translate into substantive governance improvements.

The mediating variables revealed critical performance transmission mechanisms through which ESG initiatives translate (or fail to translate) into financial outcomes. Operational Efficiency emerged as the dominant mediating channel, though with sharply contrasting directions across industries. The variable demonstrated significant negative mediation for profitability metrics (operating margins, net margins) across seven of nine industries, indicating widespread efficiency-ESG trade-offs where sustainability initiatives impose short-term operational costs, process complexity, or resource diversions that reduce immediate financial performance. This negative efficiency mediation was particularly pronounced in basic materials, communications, consumer non-cyclical, energy, and industrial sectors. However, operational

efficiency showed positive mediation for certain market valuations (enterprise multiples in consumer cyclical) and value-added metrics (MVA in consumer cyclical, technology, utilities), suggesting that while ESG may strain operational efficiency in the short term, markets may reward firms that successfully integrate ESG into core operations as a signal of long-term competitive advantage and management quality. Innovation demonstrated surprisingly limited mediating influence across nearly all performance metrics and industries, remaining statistically insignificant for revenue growth, profitability, return measures, market valuations (Tobin's Q, P/E, P/B), and enterprise value multiples. This suggests that ESG investments do not consistently translate into innovation premiums or that R&D-driven innovation operates on longer time horizons not captured in annual financial metrics. Risk factors revealed nuanced mediating mechanisms with distinct patterns across systematic and idiosyncratic risk dimensions. Systematic risk showed significant positive mediation in basic materials, industrial, technology, and financial sectors, particularly for market valuation metrics (Tobin's Q, P/B ratios, enterprise multiples), suggesting that market participants reward higher systematic risk exposure with premium valuations in capital-intensive and innovation-driven industries where ESG initiatives may increase operational complexity and market sensitivity. Conversely, systematic risk exhibited significant negative mediation in energy and communications sectors, indicating that ESG may serve as a risk mitigation mechanism in these industries. Credit Risk demonstrated more limited but targeted mediation effects, showing significant negative mediation in consumer non-cyclical and financial services (consistent with investor sensitivity to default risk) but significant positive mediation in technology sector, potentially reflecting market tolerance for financial leverage in high-growth, intangible-asset-intensive firms.

Analysis of both pre-COVID baseline performance and post-pandemic recovery patterns provided comprehensive insights into sectoral adaptability and structural changes. Consumer non-cyclical emerged as the undisputed champion, achieving the remarkable feat of posting positive performance across most of the key metrics,

transforming into a true defensive fortress when crisis struck. Financial services, drawing from their painful 2008 crisis experience, combined with unprecedented government support and accelerated digital transformation, demonstrated remarkable resilience, proving that institutional memory and adaptive capacity matter more than initial vulnerability. The most shocking revelation came from the technology sector's dramatic underperformance. Despite widespread digital transformation narratives, technology companies faced a harsh reality check as pre-COVID valuation bubbles burst, competitive moats eroded under intense rivalry, talent costs exploded to unsustainable levels and revenue growth failed to translate into proportional profit increases. This technology paradox highlighted that while digital transformation benefited users and society broadly, it didn't necessarily translate to superior financial performance for technology companies themselves. COVID-19 served as a catalyst transforming ESG from operational cost centres to value drivers in resilient sectors while exposing structural transition costs in capital-intensive industries. The market simultaneously normalised early ESG premiums as operational benefits became more apparent. These findings demonstrate that ESG's relationship with financial performance is neither uniform across industries nor static over time.

These findings carry significant implications for both academic understanding and managerial practice. Theoretically, the results challenge instrumental stakeholder theory's prediction of universal ESG-performance alignment, instead supporting contingency perspectives that emphasize fit between ESG strategies and industry contexts. The heterogeneity across sectors, components, and time periods invalidates one-size-fits-all ESG frameworks and calls for mid-range theories that specify boundary conditions for ESG value creation.

Table 5.241: Regression Results Summary: ESG Combined Score impact on Growth in Revenues across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Score	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship
Financial Slack	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically significant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship
Innovation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship
Operational Efficiency	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship
Systematic Risk	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship

Table 5.242: Regression Results Summary: E, S, G impact on Growth in Revenues across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship
Social Disclosure	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Governance Disclosure	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship
Financial Slack	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically significant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship
Innovation (R&D/Sales)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship
Operational Efficiency	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship
Systematic Risk	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship

Table 5.243: Regression Results Summary: ESG Combined Score impact on Operating Profit Margin across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Disclosure Score	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Financial Slack	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship
Internationalisation	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Board Gender Diversity	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Innovation (R&D/Sales)	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship
Operational Efficiency	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically significant Negative relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Credit Risk	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Systematic Risk (Beta)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.244: Regression Results Summary: E, S, G impact on Operating Profit Margin across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Social Disclosure	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship
Governance Disclosure	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Financial Slack	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship
Internationalisation	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Board Gender Diversity	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Innovation (R&D/Sales)	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Operational Efficiency	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship
Credit Risk (Default Prob)	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Systematic Risk (Beta)	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship

Table 5.245 Regression Results Summary: ESG Combined Score impact on Net Profit Margin across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Disclosure Score	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship
Financial Slack	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Internationalisation	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Board Gender Diversity	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Innovation (R&D/Sales)	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship
Operational Efficiency	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically significant Negative relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Credit Risk (Default Prob)	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Systematic Risk (Beta)	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship

Table 5.246: Regression Results Summary: E, S, G impact on Net Profit Margin across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship
Social Disclosure	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically significant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship
Governance Disclosure	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Financial Slack	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Internationalisation	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Board Gender Diversity	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Innovation (R&D/Sales)	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Operational Efficiency	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship
Credit Risk (Default Prob)	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Systematic Risk (Beta)	Statistically insignificant Positive relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship

Table 5.247: Regression Results Summary: ESG Combined Score impact on Return on Assets across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Disclosure Score	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Negative relationship
Financial Slack	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship
Internationalisation	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship
Board Gender Diversity	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Innovation (R&D/Sales)	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship
Operational Efficiency	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Credit Risk (Default Prob)	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Systematic Risk (Beta)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.248: Regression Results Summary: E, S, G impact on Return on Assets across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship
Social Disclosure	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship
Governance Disclosure	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship
Financial Slack	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship
Internationalisation	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship
Board Gender Diversity	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Innovation (R&D/Sales)	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship
Operational Efficiency	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Credit Risk (Default Prob)	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Systematic Risk (Beta)	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship

Table 5.249: Regression Results Summary: ESG Combined Score impact on Return on Equity across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Disclosure Score	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship
Financial Slack	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship
Internationalisation	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship
Board Gender Diversity	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Innovation (R&D/Sales)	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Operational Efficiency	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Credit Risk (Default Prob)	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship
Systematic Risk (Beta)	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship

Table 5.250: Regression Results Summary: E, S, G impact on Return on Equity across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship
Social Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Governance Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship
Financial Slack	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Innovation (R&D/Sales)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship
Operational Efficiency	Statistically significant	Statistically significant	Statistically significant	Statistically significant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically significant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship
Credit Risk (Default Prob)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Systematic Risk (Beta)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.251: Regression Results Summary: ESG Combined Score impact on Return on Capital Employed across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Disclosure Score	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship
Financial Slack	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship
Internationalisation	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship
Board Gender Diversity	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship
Innovation (R&D/Sales)	Statistically insignificant Negative relationship	Not Included Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Not Included Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Operational Efficiency	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Credit Risk (Default Prob)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship
Systematic Risk (Beta)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.252: Regression Results Summary: E, S, G impact on Return on Capital Employed across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship
Social Disclosure	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Governance Disclosure	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Financial Slack	Statistically insignificant Positive relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship
Internationalisation	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship
Board Gender Diversity	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Innovation (R&D/Sales)	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship
Operational Efficiency	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Credit Risk (Default Prob)	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship
Systematic Risk (Beta)	Statistically insignificant Positive relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship

Table 5.253: Regression Results Summary: ESG Combined Score impact on Investment Efficiency across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Score	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship
Financial Slack	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant
	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship
Board Gender Diversity	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship
Innovation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship
Operational Efficiency	Statistically significant	Statistically insignificant	Statistically significant	Statistically significant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Credit Risk	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship
Systematic Risk	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.254: Regression Results Summary: E, S, G impact on Investment Efficiency across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship
Social Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Governance Disclosure	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship
Financial Slack	Statistically insignificant	Statistically significant	Statistically significant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship
Innovation	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship
Operational Efficiency	Statistically significant	Statistically insignificant	Statistically significant	Statistically significant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship
Systematic Risk	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.255: Regression Results Summary: ESG Combined Score impact on Tobin's Q across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Score	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship
Financial Slack	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Innovation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Operational Efficiency	Statistically insignificant	Statistically significant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship
Systematic Risk	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.256: Regression Results Summary: E, S, G impact on Tobin's Q across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship
Social Disclosure	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship
Governance Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship
Financial Slack	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Innovation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship
Operational Efficiency	Statistically insignificant	Statistically significant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship
Systematic Risk	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.257: Regression Results Summary: ESG Combined Score impact on Enterprise Value Multiple across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Score	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Financial Slack	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship
Internationalisation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship
Innovation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship
Operational Efficiency	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship
Systematic Risk	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship

Table 5.258: Regression Results Summary: E, S, G impact on Enterprise Value Multiple across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship
Social Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Governance Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship
Financial Slack	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Internationalisation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Innovation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship
Operational Efficiency	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship
Systematic Risk	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship

Table 5.259: Regression Results Summary: ESG Combined Score impact on Price-to-Earnings Ratio across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Score	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Financial Slack	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship
Innovation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship
Operational Efficiency	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship
Systematic Risk	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.260: Regression Results Summary: E, S, G impact on Price-to-Earnings Ratio across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Social Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship
Governance Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Financial Slack	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Innovation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Operational Efficiency	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship
Systematic Risk	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.261: Regression Results Summary: ESG Combined Score impact on Price-to-Book Ratio across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Score	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship
Financial Slack	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Innovation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Operational Efficiency	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship
Systematic Risk	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.262: Regression Results Summary: E, S, G impact on Price-to-Book Ratio across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically significant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship
Social Disclosure	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically significant Negative relationship	Statistically insignificant Positive relationship
Governance Disclosure	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically significant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically significant Negative relationship
Financial Slack	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically significant Negative relationship	Statistically insignificant Negative relationship
Internationalisation	Statistically significant Positive relationship	Statistically significant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Negative relationship	Statistically insignificant Positive relationship	Statistically insignificant Positive relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Innovation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Operational Efficiency	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Systematic Risk	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.263: Regression Results Summary: ESG Combined Score impact on Economic Value added across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Score	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship
Financial Slack	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship
Innovation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship
Operational Efficiency	Statistically insignificant	Statistically significant	Statistically significant	Statistically significant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Credit Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship
Systematic Risk	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.264: Regression Results Summary: E, S, G impact on Economic Value added across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure Score	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship
Social Disclosure Score	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship
Governance Disclosure Score	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship
Financial Slack	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Innovation (R&D/Sales)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship
Operational Efficiency	Statistically insignificant	Statistically significant	Statistically significant	Statistically significant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Credit Risk (3Y Default)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship
Systematic Risk (Beta)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.265: Regression Results Summary: ESG Combined Score impact on Market Value added across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
ESG Disclosure Score	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship
Financial Slack	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Innovation (R&D/Sales)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Operational Efficiency	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Credit Risk (3Y Default)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Systematic Risk (Beta)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship

Table 5.266: Regression Results Summary: E, S, G impact on Market Value added across industries

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Environmental Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Social Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship
Governance Disclosure	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically significant
	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Financial Slack	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship
Internationalisation	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship
Board Gender Diversity	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship

Variables	Basic Materials	Communications	Consumer Cyclical	Consumer Non-cyclical	Energy	Financial	Industrial	Technology	Utilities
Innovation (R&D/Sales)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship
Operational Efficiency	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant
	Negative relationship	Negative relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship	Negative relationship	Positive relationship	Positive relationship
Credit Risk (3Y Default)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Negative relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Positive relationship
Systematic Risk (Beta)	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically significant	Statistically insignificant	Statistically insignificant	Statistically insignificant	Statistically insignificant
	Positive relationship	Positive relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Negative relationship	Positive relationship	Negative relationship

CHAPTER 6

CASE STUDY

The chapter aims to provide a multi-case study on the implementation of ESG practices in select Indian NIFTY 500 firms. In Chapter 5, we discussed empirical connections of ESG to corporate performance indicators in various industries. Conversely, this study utilizes an interpretivist qualitative approach in order to achieve understanding of the underlying processes, challenges, and interventions that shape ESG-firm performance relationships. This chapter aims to provide key insights into managers' understanding of the intention, interpretation, and implementation of ESG. We did this through in-depth interviews with ESG experts and corporate leaders of 11 successful Indian companies.

6.1 Research Methodology

6.1.1 Research Approach

The current study adopts an interpretivist qualitative research method to explore ESG implementation practices of select NIFTY 500 companies. By using interpretivism, it acknowledges that managerial cognition and behavior are socially constructed according to individual experiences as well as the organizational context and industry contingencies. A qualitative methodology is especially useful, as it provides contextualized knowledge on how decision-makers perceive and reflect on ESG in relation to a diversity of dimensions, such as environmental policy, social responsibility activities, or corporate governance. This approach is particularly important at a time when the rules regulating Indian companies are still evolving and the shape BRSR compliance requirements will ultimately take remains malleable. This research approach also acknowledges that the organizational reality is a social construct of realities with their own dimensions consisting of tangible (e.g., by means of carbon emission monitoring, board diversity metrics) and intangible (e.g., brand reputation, engagement strategies for all stakeholders) elements through which ESG-integration practices can be developed. As Corbin et al. (2014) point out, qualitative

forms of research appear to work particularly well when studying phenomena that are laden with complexity and for which there has been little previous research. The nuanced relationship between managerial decision-making and ESG performance among firms in India is such a complex phenomenon that the most effective way of addressing it would be qualitative inquiry. The research is designed to be a qualitative multi-case study involving selected Indian NIFTY 500 firms in order to offer rich and contextual insights on the adoption of ESG. The study employs a qualitative multi-case study research design targeting select Indian NIFTY 500 firms to provide rich, contextual insights into ESG implementation. Since multiple case study research design is unique in dealing with a broad range of evidence such as interviews, observations, documents, and artifacts, it is considered a comprehensive logical research approach (Eisenhardt, 1989). The multi-case study research design is most appropriate to learn "how" and "why" the ESG adoption occurs as well as how managers respond (Yin, 2009; Eisenhardt & Graebner, 2007). McClunie-Trust et al. (2022) contend that the case study approach augments research capacities and inspires individuals globally to utilize technology for beneficial results. Multi-case studies enhance comprehension of the subject matter by incorporating additional observations; however, they do not invariably progress towards a quantitative methodology (Stewart, 2012). To enhance our comprehension of ESG phenomena, we conducted semi-structured interviews with Indian experts and senior management. Some researchers (Booth and Booth, 1994; Gerson, 2020; Longhurst, 2009) have posited that qualitative interviews may yield "new information." Researchers can explore complex ideas, emotions, and behaviors more deeply because of the flexibility this technique offers (Longhurst, 2009; Boyce et al., 2006). Semi-structured interviews permit a more conversational tone, and analyses are derived from participants' unsolicited remarks (Coviello & Jones, 2004). Following (Coviello & Jones, 2004) methodological guidelines, this study focused on interviewing directors and managers of select NIFTY 500 firms who possess detailed knowledge of their organizations' sustainability reporting practices, challenges, and strategic responses.

6.1.2 Sample and Data Collection

Consistent with the phenomenological approach, the study employed purposive sampling to select the respondents (Mukherjee, 2020; Teddlie & Yu, 2007). The case firms were selected based on the following criteria: (i) firms ranked highest on ESG scores within the NIFTY 500 according to Bloomberg scores (as of March 31, 2023) and (ii) firms that have consistently maintained ESG reporting for a minimum of nine consecutive years, demonstrating sustained commitment to sustainability practices (FY 2015 to FY 2023). As such, in selection of the case firms, there is no consensus among the researchers with respect to the number of cases to be studied (Patton, 1990). Thus, in order to decide the number of cases to be studied, directions were ascertained from various noted researchers on qualitative research. Eisenhardt (1989) suggests that for any qualitative research, the number of cases between four to ten is enough to generate a theory and its empirical grounding is likely to be convincing. Further, Miles & Huberman (1994) suggest that the number of case studies shall not exceed 12, since, beyond this it is difficult to effectively assimilate the quantity of qualitative data. Based on the above discussion, managers and ESG experts of the top hundred NIFTY 500 Indian firms based on Bloomberg ESG ranking were approached, and responses were received from 11 firms. Table 6.1 presents the characteristics of the eleven selected case firms.

Table 6.1: Characteristics of the Case Firms

S.No.	Name of the Company	Designation of the Interviewee	ESG Ranking (Bloomberg Score)	Industry
1	Case Firm A	Vice President ESG	36	Communications
2	Case Firm B	Assistant Manager	12	Technology
3	Case Firm C	Assistant Manager	16	Energy
4	Case Firm D	Assistant Manager	56	Financial
5	Case Firm E	Manager	31	Energy
6	Case Firm F	HR Manager	1	Utilities
7	Case Firm G	Manager	25	Utilities
8	Case Firm H	Manager	30	Consumer Cyclical
9	Case Firm I	Director	67	Financial
10	Case Firm J	Manager	17	Industrial
11	Case Firm K	Assistant Manager	57	Consumer Cyclical

6.1.3 Setting and Procedure

The interviews were conducted over a period of 2 months during September and October 2024. The interviews were conducted on weekends in order to ensure the availability and suitability of the participants. The interviewer gave a brief description about the purpose of the study at the beginning of each interview. Further, the participants were assured that the interviews will be used only for research purposes and their anonymity and confidentiality will be maintained. In order to promote open discussion, the participants were informed that there are no right or wrong answers. All the interviews were audio-recorded after seeking permission from the participants.

The interview questions were open-ended and semi-structured, giving an unobstructed way for various themes to emanate. This interview method enabled participants to express freely the dynamics of their businesses and also allowed the interviewer to seek clarification by asking follow-up and probing questions. All the interviews were conducted in the English language. On average, the duration of each interview was 45 minutes to 1 hour 15 minutes.

The semi-structured interviews began with a series of broad questions that covered a wide variety of issues to help the participants understand the concepts of sustainability and ESG practices. One of the first things managers were asked about is, “How do you define sustainability or ESG, and what difference does that make in terms of how you think about the work?” In this manner, the researchers would be able to identify and understand participants’ baseline thoughts and feelings on sustainability before asking for more specialized questions. The semi-structured interview allowed for flexibility in that the discussion could be adapted to match what the respondent said. If the person being interviewed said something that piqued the interviewer’s interest, they shifted to another topic in order to cover more ground. Other questions were added in addition to the initial ones in order to further comprehend the influence of environmental, social, and governance issues on financial performance. To further understand how environmental, social, and governance aspects affect financial performance, other questions were asked in answer to the original ones. Someone asked, "Can you give examples of how ESG initiatives have directly impacted your organization's bottom line?"

The interview protocol was framed to identify ESG-related practices in a sequential structure, from landscape-level to detail-level mechanisms. The first part of the interview questions pertained to the generic questions related to the background of the ESG experts or managers. they have had with the company and the involvement in ESG (e.g., uptake or training of ESG). The discussion then moved on to specific preview topics, such as the data collection and reporting criteria for ESG as well as the technology that will support sustainability agendas. For example, questions such as “How does your company strategically communicate about sustainability in order to ensure transparency and accountability to stakeholders?” sought to reveal the best practices that companies use for reporting on ESG. Then came specific questions on E, S, and G of ESG standards. Environmental questions centred on issues the organization was witnessing and their response to Scope 1, 2 & 3 emissions. On the social side, issues were raised around employee well-being, diversity and community engagement. Governance related questions seemed to revolve around the understanding of corporate governance systems, leadership influence on sustainability performance and board diversity driving ESG innovation. The insights gave an overview on the emerging trends, challenges and opportunities faced by Indian companies in the implementation of ESG-related policies

6.1.4 Reliability Test

In order to guarantee the reliability of the study, we used a standard protocol where same questions were asked by the same interviewer and recorded using the same software. We additionally computed the inter-coder reliability to compare the readings of the interview interpretation where more than one coder co-reads transcripts (Svedbo Engström et al., 2018; Conway et al., 1995; Cole, 2023).

6.1.5 Validity Testing

Several strategies were used to ensure the validity of the study. First, two researchers performed an independent review of interview transcripts in order to minimize research bias and enhance data accuracy (Da Cruz et al., 2023). Cross-checking of interview data against secondary data, such as ESG reports and relevant news articles,

helped ensure triangulation (Quintao et al., 2020; Yin, 2013). Contextual validity was improved by selecting companies with a long and stable ESG reporting history where firms were taken from different industries. Collectively, these steps enhanced content, construct and contextual validity of the study.

6.1.6 Analysis Method

In order to achieve the objectives for this case study, the study design used a reflexive thematic analysis. The qualitative data obtained from the interviews of eleven ESG experts or managers identified in Nifty 500 companies were analyzed by applying the Reflexive Thematic Analysis method. As outlined by Braun and Clarke (2020), reflexive thematic analysis is an approach to interpreting qualitative data that is accessible and theoretically accommodating, where patterns or themes can be discerned across the range of issues related to the whole dataset itself. The reflexive thematic analysis was carried out using NVivo by this study and is a commonly used software for qualitative research. Reflexive thematic review is purposefully flexible and does not start with a pre-specified theory. This flexibility meets researchers' requirements and can be adapted to their own research, but the approach is still rigorous. Six stages are involved in this process: familiarization with the data, generating codes, searching for themes, reviewing themes, defining and naming themes, and writing the report. This scaffolded-yet-flexible approach allows individuals to develop reviews that are rich and nuanced (Campbell et al., 2021; Trainor & Bundon, 2020).

First Step: The researcher familiarized themselves with the data by transcribing the interview transcripts. Interviews were audio-recorded with participant consent, allowing for precise documentation of the responses. The recordings were transcribed using Otter.ai software, which facilitated the initial transcription process. To ensure accuracy and avoid researcher bias, the transcripts were reviewed independently by two researchers. Each transcript was carefully checked word-by-word for any discrepancies or errors, and corrections were made as necessary. This process of independent verification ensured that the final transcripts reflected the interviewees' exact responses, providing a reliable data set for analysis.

Second Step: After familiarizing themselves with the data, the researcher proceeded to the second step of reflexive thematic analysis, which is generating initial codes (Figure 6.1). 176 initial codes were generated.

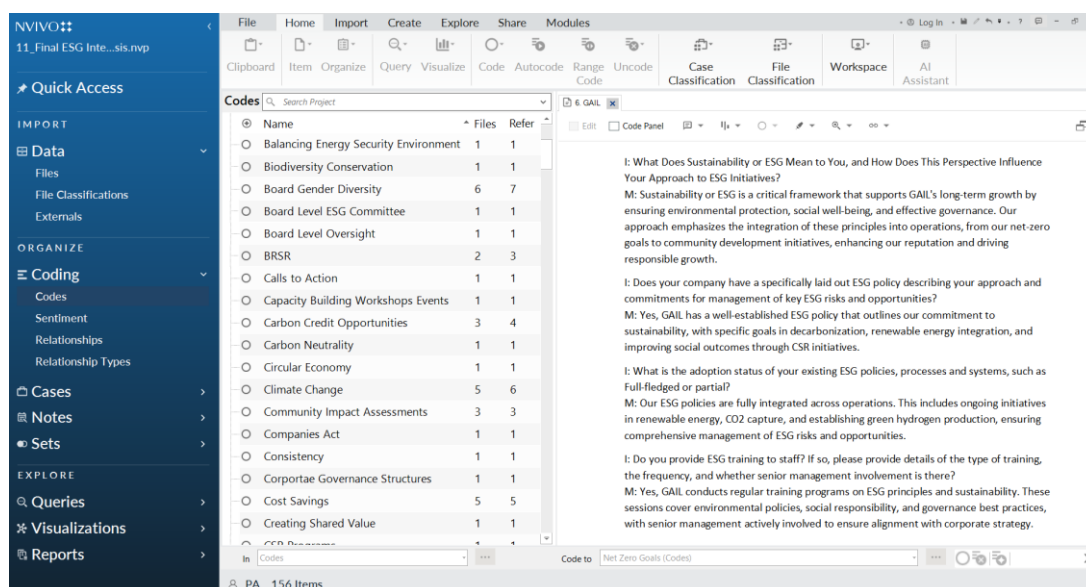


Figure 6.1: Generating Initial Codes using NVivo Software

Third Step: After the initial codes had been generated, the researcher took time to review the codes and explore emerging patterns and relationships in the codes. Related codes were subsequently grouped together to generate initial themes, which represented the third step of the reflexive thematic analysis process.

Fourth Step: The fourth step of reflexive thematic analysis included reviewing the initial themes and revising the themes in a way that they answered the research questions related to the study.

Fifth Step: The fifth step of the reflexive thematic analysis process included coming up with the final names of every theme in a way that related to the research questions and the research objectives. The final themes that emerged in the research are shown in the table 6.2 below. The codebook for the same has been presented in appendix for reference.

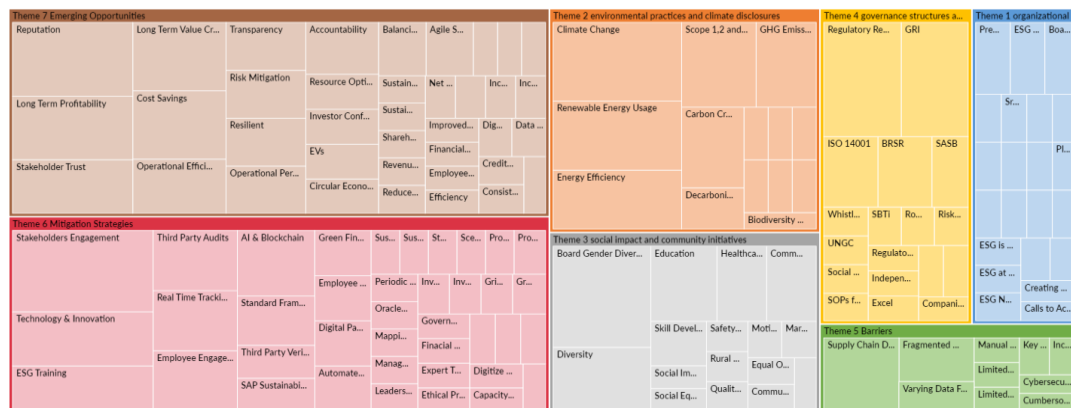
Table 6.2: Final Themes emerging from the NVivo analysis

Themes	Files	References
Organizational understanding and perspective of ESG	8	25
Environmental practices and climate disclosures	9	43
Social impact and community initiatives	9	35
Governance structures and board composition	8	34
Barriers to strategic ESG adaptation	7	17
Mitigation strategies for ESG implementation	9	76
Emerging opportunities in ESG evolution.	11	80

Sixth Step: The sixth and final stage of the reflexive thematic analysis process involved producing the report. The report represented the different codes and how they came together to form themes that answered the research questions posed in the study. The report also included excerpts representing the statements of different interviewed participants as evidence of different codes and themes.

6.2 Findings

The analysis yielded seven major themes. These include – Theme 1: Organisational Understanding and Perspective of ESG; Theme 2: Environmental Practices and Climate Disclosures; Theme 3: Social Impact and Community Initiatives; Theme 4: Governance Structures and Board Composition; Theme 5: Barriers to Strategic ESG Adaptation; Theme 6: Mitigation Strategies for ESG Implementation; and Theme 7: Emerging Opportunities in ESG Evolution. Figure 6.2 presents a snapshot view of the seven themes emerging through the analysis.

**Figure 6.2: Snapshot view of seven themes (Source: NVivo)**

Theme 1: Organizational Understanding and Perspective of ESG

The thematic map for Theme 1 shows how businesses comprehend ESG (Figure 6.3). The ESG framework, which helps us reach economic and ecological sustainability, focuses on how well we can fulfil the needs of modern businesses without losing sight of the needs of future generations and civilizations. The following are the most important subthemes related to the organizational perspective on ESG: “Meeting present needs without compromising the future,” “ESG Policy,” and “Board Level Oversight” and “Senior management leads by example.” Even Furthermore, the paradigm recognizes that ESG factors are more than just a way to meet legal requirements; they are deeply strategic and include both ethical and profitable business practices. This is evident in how it connects concepts like "Shared Prosperity for All" with "Planetary Boundaries," suggesting that business success must be achieved within environmental limits. The inclusion of SDGs (Sustainable Development Goals) and a holistic approach indicates recognition of global sustainability frameworks and the need for comprehensive solutions rather than piecemeal efforts.

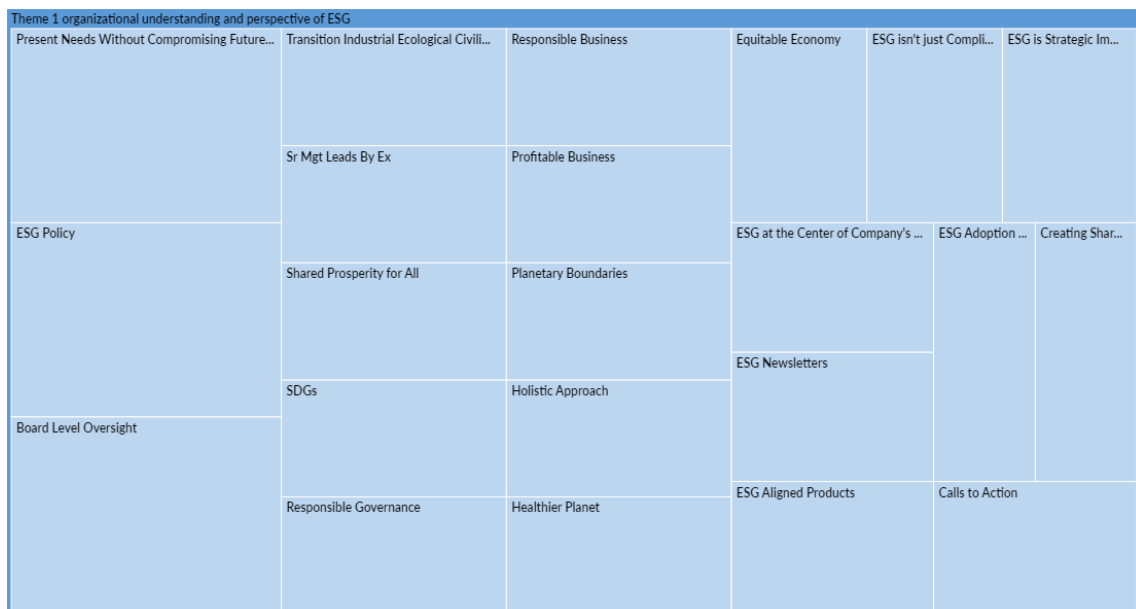


Figure 6.3: Tree Map Showing Theme 1 (Source: NVivo)

Theme 2: Environmental Practices and Climate Disclosures

Theme 2 reveals several interconnected key areas within environmental practices and climate disclosures, organized into four major categories: climate change initiatives, operational efficiency, environmental stewardship, and specific environmental targets (Figure 6.4). Climate change comes out as a clear priority, with the renewables sector taking the lead. These findings indicate that businesses are placing greater importance on the move to renewable energy, possibly due to tightening regulation and increasing stakeholder demand for climate action. The operational aspect is represented through "Energy Efficiency" and emissions-related keywords, including both "GHG Emissions" and "Scope 1, 2 and 3 Emissions." This holistic approach to emissions accounting is indicative that companies are implementing increasingly nuanced and detailed means of quantifying their climate impact. In particular, the incorporation of Scope 3 emissions hints at an increasing acceptance of the expanded corporate responsibility for supply-chain and end-use impacts. Environmental Stewardship represented by a constellation of closely connected concepts: "Waste Reduction," "Stewardship," and "Regular Assessments." The appearance of "Carbon Credit Opportunities" as a top keyword indicates an increasing concern with market-based solutions for climate change.

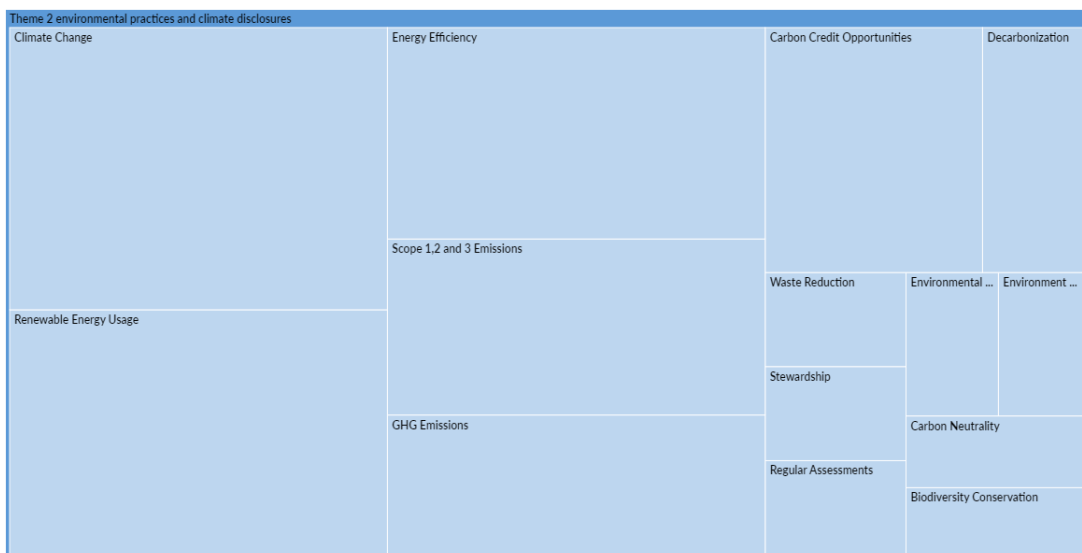


Figure 6.4: Tree Map Showing Theme 2 (Source: NVivo)

Theme 3: Social Impact and Community Initiatives

Thematic analysis of Theme 3 has identified three main aspects for social impact and community engagement: organizational diversity and inclusion, community engagement and development, and human capital development (Figure 6.5). Organizational diversity and inclusion became a greater issue of interest with an explicit focus on board gender diversity and equal opportunity. The concept of community engagement is expressed through subthemes like "Community Impact Assessments," "Community Development," and CSR Programs." This group of keywords illustrates an institutionalized orientation to the relations with the community, including not only the organization's implementation of programs but also evaluation and measurement of outcomes for local communities. The theme "Rural Livelihood" in particular suggests emphasis on vulnerable or marginalized populations. Human capital formation was identified as a third critical dimension that includes "Education," "Skill Development," and "Quality Learning Opportunities." The inclusion of "Motivating Employees" here indicates that companies consider employee engagement as part of their social impact strategy. The presence of "Motivating Employees" within this context suggests that organizations view employee engagement as integral to their social impact strategy. "Safety Performance" appears as a distinct element, indicating its importance in the overall social responsibility framework. These findings reflect a mature approach to social impact where organizations are moving beyond traditional corporate philanthropy to more strategic, measured, and comprehensive approaches to creating positive social change.

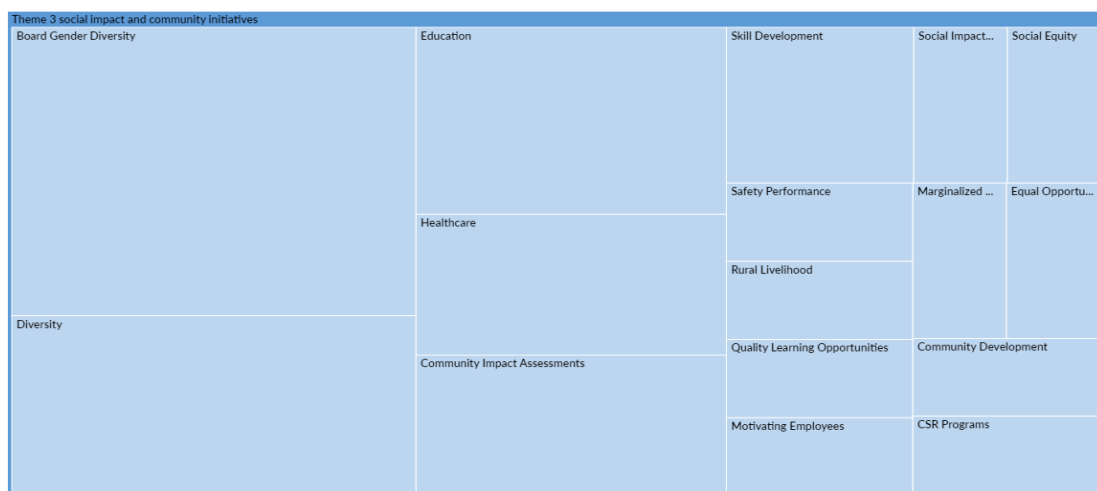


Figure 6.5: Tree Map Showing Theme 3 (Source: NVivo)

Theme 4: Governance Structures and Board Composition

The analysis of Theme 4 reveals four major dimensions of governance: regulatory compliance frameworks, standardization initiatives, internal control mechanisms, and corporate oversight structures. Regulatory compliance emerges as a fundamental component, evidenced by "Regulatory Requirements" and "Regulatory Foresight" as key elements. The presence of specific frameworks such as GRI (Global Reporting Initiative), ISO 14001, BRSR (Business Responsibility and Sustainability Report), and SASB (Sustainability Accounting Standards Board) indicates a comprehensive approach to regulatory adherence and standardization. The inclusion of UNGC (United Nations Global Compact) suggests alignment with international governance principles. Internal control and oversight mechanisms form a significant cluster, comprising "Robust Internal Controls," "Risk Committee," and "Whistle Blowing." This grouping indicates a strong focus on risk management and organizational transparency. The presence of "Independent & Women" suggests a focus on role of independent and women directors on the board. The diversity of frameworks mentioned (GRI, SASB, BRSR, ISO 14001) suggests that organizations are adopting multiple complementary standards to ensure comprehensive governance coverage.

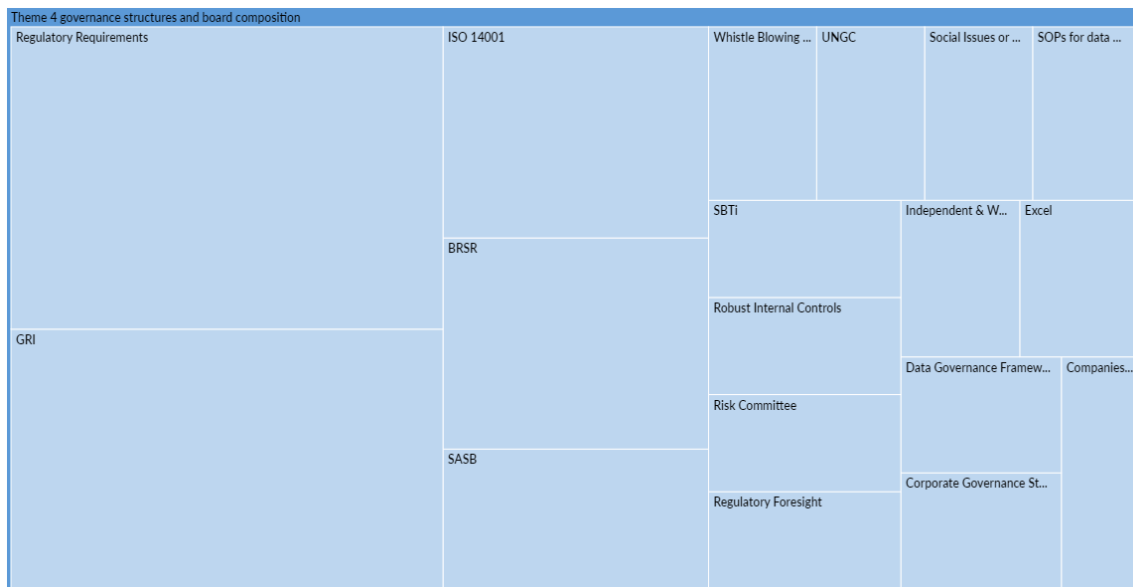


Figure 6.6: Tree Map Showing Theme 4 (Source: NVivo)

Theme 5: Barriers to Strategic ESG Adaptation

The breakdown of theme 5 yields a number of key obstacles to strategic ESG alignment with three general categories of clustering: data management challenges, operational restrictions, and systemic barriers (Figure 6.7). Data management challenges stand as a prominent obstacle with various interlinked issues. "Fragmented Data" and "Varying Data Formats" are underlying issues of collecting and standardizing data (Thomas et al., 2024). These are also compounded by "Manual Data Process" needs, implying a failure to automate and standardize processing of ESG data (Li et al., 2024). That "inconsistency of data" is named as a standalone barrier, implying that even when data are gathered, their reliability and comparability continue to be problematic. Combined, these data-based barriers imply that organizations are finding it difficult with the basic job of gathering and processing ESG information in consistent and reliable terms. Operational constraints are brought out under "Supply Chain Disruptions" and "Limited Control Value Chain" (Agrawal et al., 2024). These constraints reflect that organizations have limited capabilities in driving ESG initiatives outside their immediate operations. The existence of "Limited Audit Readiness" reflects that organizations are challenged with authenticating and confirming their ESG practices, especially along extended supply chains. The identification of these barriers shows that ESG implementation is not just an issue of internal policy but needs coordination and control over intricate operational networks.

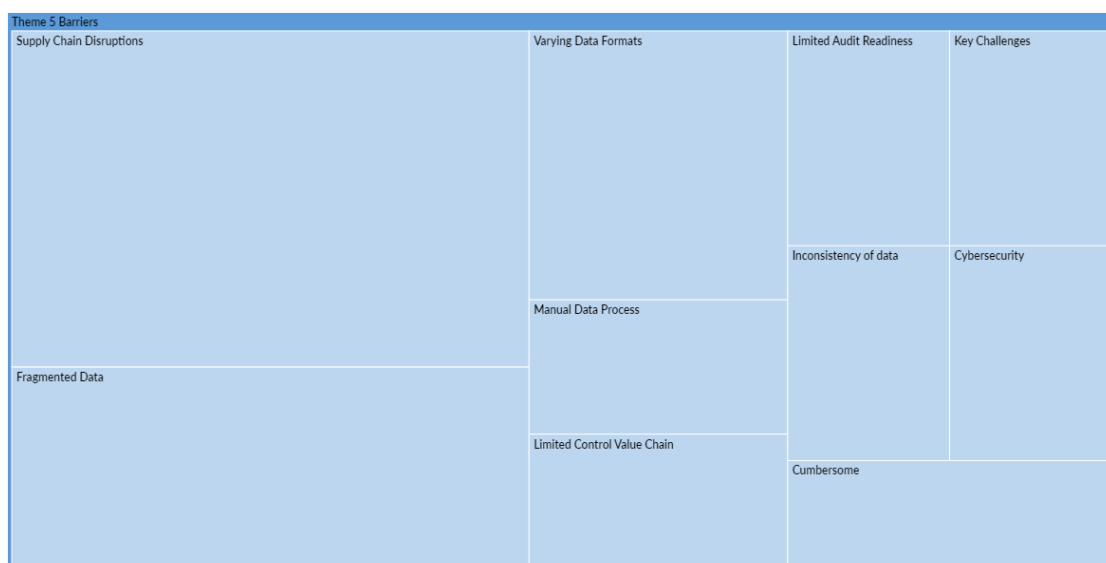


Figure 6.7: Tree Map Showing Theme 7 (Source: NVivo)

1. *Journal of the American Medical Association*, 1997; 277: 1039-1043.

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Theme 7: Emerging Opportunities in ESG Evolution

The analysis of Theme 7 (see Figure 6.9) reveals multiple interconnected opportunities emerging from ESG evolution, categorized into four core dimensions: value creation, operational optimization, stakeholder engagement, and sustainability development (Pasupuleti, 2025; Zumente & Bistrova, 2021). Opportunities for value creation are oriented toward long-term financial results through avenues of "Long-Term Value Creation" and "Long Term Profitability," and short-term benefits in terms of cost reduction and operational effectiveness, showing that ESG activities are value creators and not cost drivers (Lin, 2024). Opportunities for operational improvement exist in resource optimization, efficiency gains, and circular economy approaches, with risk avoidance and organizational resilience as optimal gains. Sustainability opportunities involve environmental leadership aspirations such as net zero carbon targets, UN SDG alignment, technology innovation in sustainable finance, and inclusive economy approaches. Cross-cutting themes involve transparency, accountability, data precision, and strategic pace agility (Alhazemi, 2025).

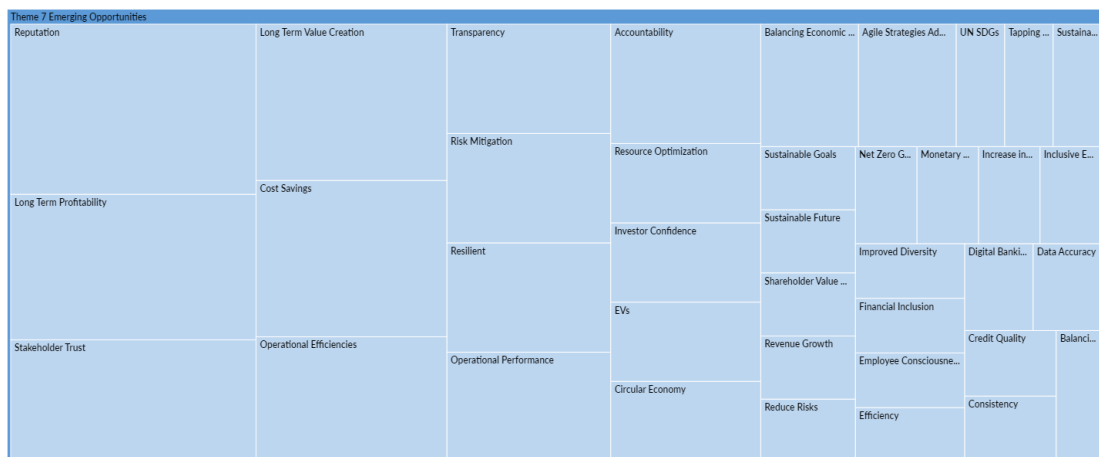


Figure 6.9: Tree Map Showing Theme 7 (Source: NVivo)

Content Analysis

The thematic analysis of eleven case firms shows that Indian companies see sustainability as an important part of their business, not just an afterthought. Companies show a transition from conventional CSR practices to holistic ESG integration, with varied but complementary views. This finding aligns with Carroll's

pyramid of CSR, which suggests that organizations have ethical and philanthropic responsibilities along with the basic legal responsibilities (Carroll, 2004). This perspective also reflects Dyllick & Hockerts' (2002) concept of corporate sustainability, emphasizing the integration of environmental limits with business operations. For Case Firm, sustainability means *"conducting profitable business within planetary boundaries." It requires an ethos understood across all levels of an organization to foster innovation and create eco-efficient solutions.* Case Firm D demonstrates a stakeholder-centric approach: *"At....., sustainability and ESG are integral to our purpose statement - 'Banking that leads to a more inclusive and equitable economy, a thriving community, and a healthier planet.....For us, ESG isn't just a compliance requirement but a strategic imperative that guides our business decisions."* Case Firm K is concerned with the balance between economic development, environmental care, and social responsibility with intergenerational equity. This maturity of insight indicates a material change in the way Indian businesses think about sustainability, with ESG treated as an imperative of strategy and not just a regulatory obligation. Firms showed different degrees of sophistication in their environmental surveillance and disclosure practices. Most firms have set up systems for measuring environmental indicators, especially greenhouse gas emissions. Case Company C documented extensive monitoring strategies, indicating that they *"monitor and report GHG emissions as per regulatory frameworks like BRSR and India's PAT (Perform, Achieve, Trade) scheme, using advanced emission monitoring systems."* The study showed that although all companies monitor Scope 1 and 2 emissions, the methodology for Scope 3 emissions is different. Governance was a key theme, with companies having formal ESG monitoring structures in place. Case Firm A indicated having *"a Board-level ESG Committee and a Management Council dedicated to ESG."* Board diversity was also mentioned as a significant consideration, with companies such as Case Firm A indicating that *"30% of the directors are women."* Further, the study determined a number of shared obstacles in implementing ESG – Case Firm A pointed out data collection as an issue, citing *"predominantly manual data processes with limited audit readiness and detailing the process as "perceived as cumbersome, even for internal metrics like safety."* Technology uptake emerges as a primary facilitator, with Case Firm B observing that *"AI and blockchain*

can enhance data accuracy, automate reporting, and improve transparency." The study also identified a number of shared opportunities that companies saw. Case Firm C pointed to opportunities in *"renewable energy, green hydrogen, and digital ESG solutions."* Case Firm B, among others, noted that *"a strong ESG framework needs adaptive policies, integrated technology, and engaged stakeholders."*

6.3 Discussion

The ESG integration practices of a few selected NIFTY 500 corporations unveil seven broad themes regarding initiatives towards the environment, pursuits behind social causes, corporate governance mechanisms, organizational learning, implementation challenges, mitigation measures, and forthcoming opportunities thereof. The findings suggest that Indian firms have already made some progress by cracking down on ESG; they also, however, need to get their act together in managing data, involving stakeholders, and building a flexible governance framework if they want to sustain sustainable goals over the long term. The analysis identifies several themes which challenge traditional paradigms of ESG and bring new ways of thinking about ESG closer to the fore. It is established that theme 1 is new or ‘cutting edge’ when it synthesizes “Planetary Boundaries” thinking and “Shared Prosperity for All” to frame ESG as a strategic imperative rather than mere compliance. Theme 5 contributes some valuable insight of a practical nature, where the barriers such as "limited control over the value chain" and "cybersecurity" are highlighted—themes scarcely touched upon in theoretical domains. Theme 6 is distinct with its integrated view of technology and its focus on AI and blockchain as integral to ESG success. Theme 7 is noteworthy, as it redefines ESG as a value driver where sustainability programs are demonstrably tied to long-term profitability and competitive advantage, rather than cost centers. ESG as a move from “box-ticking exercise” to competitive advantage indeed embodies how business is done in the 21st century. This study offers a contribution to the ESG evolutionary process and presents implications for managers as they seek their way through the maze of sustainable business practice in an increasingly connected, coconscious world. The study identified major data management challenges, including data fragmentation and heterogeneous formats, emphasizing the immediate need for standardization of reporting standards. Policymakers ought to

establish explicit, consistent, and flexible ESG regulation that provides clarity across the board and gives it a chance to succeed. Based on the results, the research lists manual data systems processing and fragmented information among the leading barriers and proposes leveraging automation such as AI, blockchain, and enterprise software solutions like SAP. Effective execution requires strong leadership commitment in place in the form of ESG committees and board-level attention. The company will need to develop an integrated stakeholder engagement plan that includes employee training and partnering with its supply chain in order to avoid losing control of the value chain. The study calls for further research on sector-specific, cross-country, and long-term effects of ESG adoption on organizational performance. Research in the following areas is recommended: the changing role of technology in adopting ESG, the efficacy of various regulation designs, and organizational change processes in the context of ESG.

CHAPTER 7

CONCLUSION, FUTURE SCOPE AND SOCIAL IMPACT

7.1 Conclusion

A comprehensive analysis of ESG behavior of NIFTY 500 companies over the period of FY 2015-2023 uncovers the remarkable journey of corporate sustainability practices in India. Firstly, ESG reporting shifted from meeting mandates to strategic integration, and governance remained the most well-documented domain. Secondly, the social dimensions, notably the employee and CSR categories, are growing in importance, implying greater human capital considerations. Thirdly, the environmental component is more focused on energy and climate consciousness. The empirical findings reveal that the influence of ESG on firm performance is largely dependent on the context, with broad variations observed not just across ESG individual scores but also in relation to performance metrics and the industry group. Consumer non-cyclical industries consistently demonstrated the most positive ESG-performance relationships across multiple metrics. Conversely, the basic materials sector consistently exhibited negative ESG-performance relationships, potentially reflecting the inherent challenges of implementing ESG practices in resource-intensive industries. The individual component analysis reveals that governance and social dimensions exert a stronger influence on firm performance compared to environmental factors across most sectors examined in the study. Environmental factors, while increasingly important for long-term sustainability and regulatory compliance, exhibit more modest short-term financial impacts across the sample due to several key factors. Environmental investments typically require substantial upfront capital with longer payback periods, while benefits like risk mitigation and brand reputation enhancement remain largely intangible and difficult to quantify in traditional financial metrics. Additionally, India's evolving environmental regulatory landscape creates uncertainty around compliance costs, and the price-sensitive nature of Indian markets limits immediate financial rewards for environmental stewardship. Financial slack emerged as a significant moderator impacting ESG and firm performance relationships in basic materials, consumer cyclical, utilities,

communications, and technology sectors. Internationalization demonstrated complex moderation patterns, with positive effects in the communications, energy, financial, and basic materials industries, but negative effects across the industrial, consumer-cyclical, and financial sectors. Board gender diversity positively moderated relationships in technology, consumer non-cyclical, and utilities, while showing negative moderation in basic materials and energy industries. Innovation mediation effects were positive in the technology, financial, and utilities sectors but negative in the energy, consumer cyclical, and industrial industries. Operational efficiency showed the strongest mediation effects, positively mediating across consumer cyclical, consumer non-cyclical, industrial, technology, utilities and energy sectors, though negative effects were observed in basic materials and communications. Risk mediation revealed majorly positive effects in the consumer cyclical, consumer non-cyclical, industrial, technology, basic materials, and financial industries, while negatively mediating in the communications and energy sectors. Analysis of both pre-COVID baseline performance and post-pandemic recovery patterns provided comprehensive insights into sectoral adaptability and structural changes. Consumer non-cyclical emerged as the undisputed champion, achieving the remarkable feat of posting positive performance across most of the key metrics, transforming into a true defensive fortress when crisis struck. Financial services, drawing from their painful 2008 crisis experience, combined with unprecedented government support and accelerated digital transformation, demonstrated remarkable resilience, proving that institutional memory and adaptive capacity matter more than initial vulnerability. The most shocking revelation came from the technology sector's dramatic underperformance. Despite widespread digital transformation narratives, technology companies faced a harsh reality check as pre-COVID valuation bubbles burst, competitive moats eroded under intense rivalry, talent costs exploded to unsustainable levels and revenue growth failed to translate into proportional profit increases. This technology paradox highlighted that while digital transformation benefited users and society broadly, it didn't necessarily translate to superior financial performance for technology companies themselves. Table 7.1 presents the results of hypothesis testing, demonstrating that all hypotheses examining the relationship between ESG scores and firm performance were partially accepted across select NIFTY 500 companies, with

varying impacts across different industries.. The case study analysis yielded seven major themes—Theme 1: Organizational Understanding and Perspective of ESG; Theme 2: Environmental Practices and Climate Disclosures; Theme 3: Social Impact and Community Initiatives; Theme 4: Governance Structures and Board Composition; Theme 5: Barriers to Strategic ESG Adaptation; Theme 6: Mitigation Strategies for ESG Implementation; and Theme 7: Emerging Opportunities in ESG Evolution. The case study reveals a significant evolution in how Indian corporations conceptualize and implement ESG practices, demonstrating a shift from compliance-driven approaches to strategic integration where sustainability is viewed as conducting profitable business within planetary boundaries and creating shared prosperity for all stakeholders. This mature understanding aligns with global frameworks like the triple bottom line and shared value creation, representing a departure from India's traditional focus on mandatory CSR spending. These findings offer theoretical contributions by showing how Indian firms adapt global ESG frameworks to local conditions while demonstrating the interconnected nature of ESG challenges and opportunities. From a practical perspective, they highlight the importance of integrated strategies addressing data challenges, leveraging technology, and engaging stakeholders, while suggesting that policymakers should focus on standardizing reporting frameworks and supporting both technological infrastructure and human capability development. The dominance of governance-oriented content over limited environmental content shows necessity for evenly balanced regulatory attention on ESG dimensions. Prevalent data management issues among organizations show necessity for uniform ESG reporting frameworks balancing standardization with sectoral needs. Policymakers should also facilitate ESG-oriented financial product development and rating mechanisms to improve market efficiency. The transition from compliance-oriented to strategically embedded ESG strategies proves that managers must consider ESG as strategic opportunity and not as regulatory burden. Sector-specific ESG impact variations indicate investors must pursue differentiated strategies by portfolio holdings. Sophisticated risk assessment tools are necessary to navigate the intricate web of relationships between ESG factors and performance metrics. Long-term investment horizons are necessary for ESG benefits to be realized, especially for companies showing true sustainability change.

Table 7.1 Summary of Hypothesis Testing Results on ESG Impact Across NIFTY 500 Companies

Hypotheses	Description	Accept/Reject	Industries with Significant Impact
H1	There exists relationship between Financial Performance of a company and ESG scores.	Partially Accepted	Communications, Consumer non-cyclical, Industrial, Energy, Financial
H1a	There exists relationship between Financial Performance of a company and Environmental scores.	Partially Accepted	Energy, Industrial, Basic Materials, Communications, Utilities
H1b	There exists relationship between Financial Performance of a company and Social Scores.	Partially Accepted	Consumer cyclical, Consumer non-cyclical, Industrial, Communications, Energy, Technology
H1c	There exists relationship between Financial Performance of a company and Governance scores.	Partially Accepted	Consumer cyclical, Industrial, Communications,
H2	There exists relationship between Market Performance of a company and ESG scores.	Partially Accepted	Energy, Industrial, Financial
H2a	There exists relationship between Market Performance of a company and Environmental scores.	Partially Accepted	Energy, Financial, Basic Materials
H2b	There exists relationship between Market Performance of a company and Social Scores.	Partially Accepted	Basic Materials, Industrial, Consumer non-cyclical, Technology
H2c	There exists relationship between Market Performance of a company and Governance scores.	Partially Accepted	Utilities, Energy, Financial
H3	There exists relationship between Shareholder's value creation and ESG scores.	Partially Accepted	Energy, Consumer non-cyclical
H3a	There exists relationship between Shareholder's value creation and Environmental scores.	Partially Accepted	Energy, Industrial
H3b	There exists relationship between Shareholder's value creation and Social Scores.	Partially Accepted	Industrial, Consumer cyclical
H3c	There exists relationship between Shareholder's value	Partially	Industrial, Energy, Consumer non-cyclical, Technology,

	creation and Governance scores.	Accepted	Utilities
H4	Financial Slack moderates the relationship between ESG scores and firm performance.	Partially Accepted	Basic Materials, Consumer non-cyclical, Financial, Industrial, Technology, Communications, Consumer cyclical, Utilities
H5	Internationalization moderates the relationship between ESG scores and firm performance.	Partially Accepted	Communications, Technology, Basic Materials, Energy, Financial
H6	Board Gender Diversity moderates the relationship between ESG scores and firm performance.	Partially Accepted	Industrial, Financial, Consumer non-cyclical, Consumer cyclical, Technology, Basic Materials, Energy
H7	Innovation mediates the relationship between ESG scores and firm performance.	Partially Accepted	Financial, Consumer cyclical, Utilities, Technology
H8	Operational Efficiency mediates the relationship between ESG scores and firm performance.	Partially Accepted	Consumer non-cyclical, Technology, Communications, Consumer cyclical, Energy, Industrial, Basic Materials, Utilities
H9	Credit Risk mediates the relationship between ESG scores and firm performance.	Partially Accepted	Consumer non-cyclical, Financial, Technology, Basic Materials
H10	Systematic Risk mediates the relationship between ESG scores and firm performance.	Partially Accepted	Energy, Industrial, Technology, Basic Materials, Communications, Financial

7.2 Future Scope

From an academic perspective, the geographic scope is limited to the selected NIFTY 500 companies in India that may affect the wider applicability of the findings to other markets or, specifically, smaller firms operating in completely different and less regulated environments. In addition, the FY 2015-2022 timeframe, while providing a great opportunity for longitudinal research, might be seen as extremely short for evaluating the long-term ESG effects that could emerge over a decade or more. Furthermore, the data quality issues inherent in emerging markets often affects the consistency and reliability of ESG reporting, especially considering the changes in reporting practices during the relatively short time frame of the study. Additionally, the focus on quantifiable financial and operational performance metrics may not fully capture broader ESG value creation such as, including but not limited to improved stakeholder relationships, risk reductions, and reputation benefits that have delayed or

indirect performance impact. However, the findings and limitations of this study suggest some promising academic research directions. Cross-country comparative studies may be initiated to explore how ESG-performance relationships differ across markets with various levels of regulation and cultural differences. Extended longitudinal analysis, precisely 15-20 years, may provide a clearer understanding of the ESG cycle and long-term value of investments. Investigation of digital transformation's impact on ESG implementation and measurement could provide insights into technology-enhanced sustainability practices. Creating more comprehensive ESG metrics, especially industry-specific ones, may give a better understanding from the perspectives of various industries. Future research may also validate the findings using alternative ESG rating providers, such as Refinitiv, MSCI, or Sustainalytics, to examine the robustness and consistency of the ESG–firm performance relationship. Comparative analyses across multiple ESG databases may further provide insights into the implications of rating heterogeneity on empirical findings. Stakeholder-centric research examining ESG impacts from stakeholders involved, such as employees, customers, and communities, will also provide a broader coverage beyond the investor returns. Future research may also examine how major policy shocks, such as demonetization, influence ESG adoption, disclosure quality, and corporate resilience across industries. Additionally, longitudinal and firm-level studies can investigate whether firms with stronger ESG practices were better able to withstand liquidity disruptions and recover from policy-induced spillover effects. Analysis of regulatory impact variations and geopolitical risk resilience could inform policy development and strategic planning. Future research may further examine how the qualitative attributes of women directors, such as their experience, tenure, educational background, and professional expertise, influence the effectiveness of board gender diversity in strengthening the relationship between ESG performance and firm performance. Such analysis would provide a more nuanced understanding of the role of board diversity in corporate decision-making and value creation

7.3 Social Impact

The aforementioned research findings have profound implications not only corporate boardrooms but for a wide variety of stakeholders, encompassing India's socioeconomic landscape. This study on ESG and firm performance has the potential

to revolutionize the way in which businesses engage with the stakeholders, therefore ushering in a new era of social and economic advancement that is equitable and sustainable over the long term. The evolution from compliance-driven CSR to strategic ESG integration represents a fundamental paradigm shift in how Indian corporations conceptualize their social contract with stakeholders. This transition signals a move away from viewing social responsibility as a regulatory obligation toward embracing it as a core business imperative. The emphasis on employee welfare, coupled with significant attention to health and safety measures revealed in this study, indicates that Indian corporations are increasingly recognizing human capital as their greatest asset. This recognition carries important social implications, including improved working conditions for millions of workers across NIFTY 500 companies who stand to benefit from enhanced workplace environments, better safety protocols, and more comprehensive health provisions. Companies demonstrating strong social performance through fair wages, workplace safety initiatives, employee development programs, and diversity and inclusion policies create positive spillover effects throughout their value chains. The strategic focus on social factors encourages companies to invest in long-term employee development rather than short-term cost optimization, potentially leading to more stable employment, better career progression opportunities, and improved quality of life for employees and their families through better compensation practices, work-life balance initiatives, and comprehensive well-being programs. The social dimensions of ESG particularly impact employee welfare, community development, and labor practices across Indian corporates. For society and communities, corporate social responsibility initiatives embedded within ESG frameworks address pressing developmental challenges including education, healthcare, skill development, environmental conservation, and poverty alleviation. Companies with strong social commitments contribute to community capacity building, support local entrepreneurship, and participate in infrastructure development. These initiatives create positive externalities that enhance social well-being, reduce regional inequality, and strengthen the social fabric of communities where companies operate. The research demonstrates that companies integrating strong social practices into their business models create inclusive growth models that benefit not just shareholders but broader stakeholder ecosystems. Furthermore, this

research shows that ESG factors are positively linked to financial performance, extending the notion that sustainable business models might create wealth over extended periods. When profits are in harmony with social well-being, firms are encouraged to undertake social ventures. Corporations benefit from community engagement, while firms sustain their performance through increased social resilience. This evidence can help shift corporate mindsets from viewing social investments as costs to recognizing them as strategic opportunities, potentially leading to increased voluntary social spending and innovation in social impact initiatives. The positive moderation effects of board gender diversity identified in several sectors underscore the social value of inclusive governance structures, providing empirical support for policies and initiatives aimed at increasing women's representation in corporate leadership. Enhanced board diversity brings varied perspectives to strategic decisions, potentially leading to more holistic consideration of stakeholder interests and more equitable corporate policies, while serving as visible examples that challenge traditional gender stereotypes and encourage women's participation across professional domains. Based on the empirical findings of this research, policymakers might be able to create better frameworks to incentivize corporate activities that are socially responsible. Similarly, sector-specific patterns of ESG impacts might help identify different ways of making regulations more effective and easier to implement. Tailored policy interventions will therefore consider industry-specific barriers and opportunities. The finding that governance dominates over environmental content in current reporting practices highlights the need for more balanced regulatory attention across all ESG dimensions, ensuring comprehensive social and environmental protection. Local communities, for example, stand to benefit from increased employment, better infrastructure, and social services when businesses demonstrate initiatives to integrate ESG issues into their plans. The need for inclusive growth is a prominent focus for businesses, evidenced by the fact that the case study focuses on the involvement of underrepresented groups. The study provides evidence of ESG linked financial performance which ensures that both individual and institutional investors can make improved choices. A long-term emphasis on creating value for society encourages companies to consider the impacts of their actions on future generations and promoting more responsible business practices. Firms concentrating

on long-term sustainability are more likely to invest in expanding safety to social and environmental hazards, which is excellent both for society and the firm. Such an orientation compels a firm to adopt healthy relationships with other stakeholders instead of exploiting them. This study provides powerful evidence for the Indian corporate giants to embrace socially responsible practices by integrating ESG factors, which can improve corporate performance and yield societal advantages. The broader social implications include promotion of systemic change, leading to sustainable capitalism in India. As one of the world's fastest-growing major economies continuously struggling with major development issues including poverty, inequality, climate change, and resource scarcity, India requires business models that balance economic growth with social and environmental sustainability. This research provides empirical evidence that ESG-focused practices are compatible with financial success, thereby legitimizing the business case for sustainability. By demonstrating that governance and social practices yield measurable financial benefits, the study encourages wider ESG adoption throughout the Indian corporate sector, contributing to more responsible, inclusive, and sustainable economic development that benefits all stakeholders across generations.

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APPENDIX 1

DETAILED REGRESSION RESULTS FOR IMPACT OF ESG ON VARIOUS FIRM PERFORMANCE METRICS ACROSS INDUSTRIES

Table 5.7 Stata Regression Results: The Effect of ESG Combined Score on Growth in Revenues in the Basic Materials Industry
: Industry_n = Basic Materials

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.126	.223	-0.57	.572	-.566	.314	
Intotalassets	14.266	7.327	1.95	.053	-.192	28.725	*
firmage_	2.257	1.12	2.02	.045	.048	4.467	**
TOT_DEBT_TO_TOT_EQY	-.012	.004	-3.24	.001	-.019	-.005	***
capitalintensity	78.872	35.335	2.23	.027	9.147	148.596	**
cashflowbysale	-21.603	13.491	-1.60	.111	-48.224	5.018	
TOT_MKT_VAL	0	0	1.62	.107	0	0	
financialslack	-2.949	1.442	-2.05	.042	-5.795	-.104	**
Internationalisation	-.392	.131	-2.99	.003	-.651	-.133	***
NUMBER_OF_WOMEN_DIVERD	-.498	3.024	-0.17	.869	-6.466	5.47	
rdbsales	32.96	45.806	0.72	.473	-57.427	123.346	
opefficiency_	-98.156	13.159	-7.46	0	-124.121	-72.191	***
BB_3Y_DEFAULT_PROB	29.122	78.377	0.37	.711	-125.534	183.778	
UNLEVERED_BETA	.082	.083	0.98	.327	-.082	.246	
2015b	0	.	.	.	.	.	
2016	-13.218	4.244	-3.12	.002	-21.592	-4.843	***
2017	-10.718	3.92	-2.73	.007	-18.454	-2.982	***
2018	-5.233	3.839	-1.36	.175	-12.808	2.342	
2019	-7.673	3.746	-2.05	.042	-15.066	-.281	**
2020	-24.571	4.561	-5.39	0	-33.571	-15.572	***
2021	-23.474	5.019	-4.68	0	-33.379	-13.57	***
2022o	0	.	.	.	.	.	
Constant	-158.447	64.68	-2.45	.015	-286.076	-30.818	**
Mean dependent var	11.594		SD dependent var		21.013		
R-squared	0.509		Number of obs		242		
F-test	9.332		Prob > F		0.000		
Akaike crit. (AIC)	1990.617		Bayesian crit. (BIC)		2063.885		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.8 Stata Regression Results: The Effect of ESG Combined Score on Growth in Revenues in the Communications Industry**: Industry_n = Communications**

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	3.778	1.698	2.22	.037	.246	7.309	**
Intotalassets	-1.404	18.822	-0.07	.941	-40.547	37.739	
firmage_	2.416	4.847	0.50	.623	-7.664	12.496	
TOT_DEBT_TO_TOT_EQY	.238	.176	1.36	.19	-.127	.603	
capitalintensity	-361.668	235.978	-1.53	.14	-852.412	129.075	
cashflowbysale	145.237	71.648	2.03	.056	-3.763	294.236	*
TOT_MKT_VAL	0	0	-0.36	.719	0	0	
financialslack	-9.189	4.344	-2.12	.047	-18.223	-.155	**
Internationalisation	-4.387	1.309	-3.35	.003	-7.108	-1.666	***
NUMBER_OF_WOMEN_DIRECTORS	-4.006	8.791	-0.46	.653	-22.288	14.275	
o	0	.	.	.	.	.	
oefficiency_	133.564	99.491	1.34	.194	-73.338	340.466	
BB_3Y_DEFAULT_PROB	104.294	214.909	0.48	.632	-342.634	551.223	
UNLEVERED_BETA	-.861	.693	-1.24	.228	-2.302	.58	
2015b	0	.	.	.	.	.	
2016	-29.077	11.497	-2.53	.02	-52.986	-5.167	**
2017	-30.47	13.954	-2.18	.04	-59.489	-1.451	**
2018	-30.975	14.526	-2.13	.045	-61.185	-.766	**
2019	-12.072	13.567	-0.89	.384	-40.286	16.142	
2020	-50.286	19.134	-2.63	.016	-90.077	-10.494	**
2021	-32.403	20.157	-1.61	.123	-74.322	9.517	
2022o	0	.	.	.	.	.	
Constant	-266.539	176.857	-1.51	.147	-634.334	101.256	
Mean dependent var	9.698		SD dependent var	28.730			
R-squared	0.775		Number of obs	50			
F-test	3.804		Prob > F	0.001			
Akaike crit. (AIC)	435.462		Bayesian crit. (BIC)	473.703			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.9 Stata Regression Results: The Effect of ESG Combined Score on Growth in Revenues in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.216	.392	0.55	.581	-.556	.989	
Intotalassets	1.824	10.158	0.18	.858	-18.227	21.875	
firmage_	1.119	1.813	0.62	.538	-2.46	4.698	
TOT_DEBT_TO_TOT_EQY	.034	.047	0.71	.479	-.06	.127	
capitalintensity	-.09	57.809	-0.00	.999	-114.201	114.022	
cashflowbysale	1.402	31.58	0.04	.965	-60.934	63.738	
TOT_MKT_VAL	0	0	1.18	.241	0	0	
financialslack	-.154	3.064	-0.05	.96	-6.204	5.895	
Internationalisation	-.651	.13	-5.02	0	-.907	-.395	***
NUMBER_OF_WORKING_DAYS	4.64	3.142	1.48	.142	-1.562	10.841	
rdbysales	-522.52	372.887	-1.40	.163	-1258.574	213.534	
operational_	-6.134	23.835	-0.26	.797	-53.184	40.915	
BB_3Y_DEFAULT_PROB	-162.835	115.617	-1.41	.161	-391.056	65.385	
UNLEVERED_BETA	.16	.061	2.64	.009	.04	.279	***
2015b	0	.	.	.	.	.	
2016	-2.674	5.557	-0.48	.631	-13.642	8.295	
2017	-3.009	5.081	-0.59	.555	-13.038	7.021	
2018	-8.063	4.978	-1.62	.107	-17.89	1.764	
2019	-9.501	4.778	-1.99	.048	-18.932	-.07	**
2020	-28.373	5.315	-5.34	0	-38.864	-17.882	***
2021	-34.082	6.33	-5.38	0	-46.577	-21.587	***
2022o	0	.	.	.	.	.	
Constant	-55.328	81.848	-0.68	.5	-216.889	106.234	
Mean dependent var	11.618	SD dependent var	23.167				
R-squared	0.336	Number of obs	236				
F-test	4.317	Prob > F	0.000				
Akaike crit. (AIC)	2036.431	Bayesian crit. (BIC)	2109.171				

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.10 Stata Regression Results: The Effect of ESG Combined Score on Growth in Revenues in the Consumer Non-cyclical Industry

: Industry_n = Consumer Non-cyclical

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.106	.168	0.64	.526	-.224	.436	
Intotalassets	-2.845	4.944	-0.57	.565	-12.578	6.888	
firmage_	.057	.254	0.22	.823	-.443	.557	
TOT_DEBT_TO_TOT_EQY	.016	.041	0.39	.701	-.065	.096	
capitalintensity	-1.847	30.983	-0.06	.953	-62.841	59.148	
cashflowbysale	7.238	12.864	0.56	.574	-18.088	32.563	
TOT_MKT_VAL	0	0	2.09	.037	0	0	**
financialslack	-2.695	1.617	-1.67	.097	-5.878	.489	*
Internationalisation	.052	.067	0.78	.439	-.08	.184	
NUMBER_OF_WOMEN_DIRECTORS	1.401	1.515	0.93	.356	-1.58	4.383	
rdbysales	-61.551	57.966	-1.06	.289	-175.664	52.563	
opefficiency_	-81.874	20.979	-3.90	0	-123.173	-40.575	****
BB_3Y_DEFAULT_PROB	-41.953	105.446	-0.40	.691	-249.537	165.63	
UNLEVERED_BETA	.187	.05	3.73	0	.089	.286	****
2015b	0	.	.	.	.	.	
2016	-8.517	3.15	-2.70	.007	-14.719	-2.315	****
2017	-6.501	3.489	-1.86	.064	-13.369	.368	*
2018	-7.556	3.998	-1.89	.06	-15.427	.315	*
2019	-3.882	4.484	-0.87	.387	-12.711	4.946	
2020	-9.949	4.985	-2.00	.047	-19.762	-.135	**
2021	-17.726	5.797	-3.06	.002	-29.138	-6.313	****
2022	-5.637	6.563	-0.86	.391	-18.558	7.283	
Constant	108.65	57.132	1.90	.058	-3.821	221.121	*
Mean dependent var		9.717		SD dependent var		13.702	
R-squared		0.214		Number of obs		351	
F-test		3.570		Prob > F		0.000	
Akaike crit. (AIC)		2733.575		Bayesian crit. (BIC)		2818.512	

**** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.11 Stata Regression Results: The Effect of ESG Combined Score on Growth in Revenues in the Energy Industry**: Industry_n = Energy**

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.527	1.073	0.49	.627	-1.678	2.733	
Intotalassets	19.859	66.907	0.30	.769	-117.671	157.389	
firmage_	5.041	6.746	0.75	.462	-8.827	18.908	
TOT_DEBT_TO_TOT_EQY	.065	.155	0.42	.679	-.254	.384	
capitalintensity	671.422	235.637	2.85	.008	187.063	1155.781	***
cashflowbysale	-149.463	74.031	-2.02	.054	-301.636	2.709	*
TOT_MKT_VAL	0	0	-0.25	.806	0	0	
financialslack	-10.265	8.537	-1.20	.24	-27.812	7.283	
Internationalisation	-.057	1.034	-0.06	.956	-2.183	2.068	
NUMBER_OF_WOMEN_DI~D	-7.842	6.523	-1.20	.24	-21.249	5.566	
rdbysales	-29811.926	10201.896	-2.92	.007	50782.222	8841.629	***
opefficiency_	-145.239	142.076	-1.02	.316	-437.28	146.801	
BB_3Y_DEFAULT_PROB	-37.962	861.355	-0.04	.965	-1808.502	1732.579	
UNLEVERED_BETA	2.511	1.267	1.98	.058	-.094	5.116	*
2015b	0	.	.	.	.	.	
2016	-7.893	11.952	-0.66	.515	-32.46	16.675	
2017	-3.122	11.24	-0.28	.783	-26.226	19.982	
2018	1.225	11.706	0.11	.917	-22.837	25.288	
2019	1.286	11.055	0.12	.908	-21.438	24.01	
2020	-70.956	18.737	-3.79	.001	-109.471	-32.441	***
2021	-22.962	23.025	-1.00	.328	-70.291	24.368	
2022o	0	.	.	.	.	.	
Constant	-279.075	693.81	-0.40	.691	-1705.221	1147.071	
Mean dependent var		8.337			SD dependent var	28.623	
R-squared		0.760			Number of obs	55	
F-test		4.111			Prob > F	0.000	
Akaike crit. (AIC)		484.479			Bayesian crit. (BIC)	526.633	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.12 Stata Regression Results: The Effect of ESG Combined Score on Growth in Revenues in the Financial Industry

: Industry_n = Financial

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-1.819	2.162	-0.84	.406	-6.2	2.562	
Intotalassets	85.814	29.784	2.88	.007	25.466	146.162	***
firmage_	-6.931	5.587	-1.24	.223	-18.252	4.389	
TOT_DEBT_TO_TOT_EQY	-.439	.168	-2.62	.013	-.779	-.099	**
capitalintensity	161.319	294.659	0.55	.587	-435.718	758.355	
cashflowbysale	19.03	12.676	1.50	.142	-6.655	44.714	
TOT_MKT_VAL	0	0	-0.08	.934	0	0	
financialslack	-1.154	1.434	-0.81	.426	-4.061	1.752	
Internationalisation	-1.756	.854	-2.06	.047	-3.487	-.026	**
NUMBER_OF_WOMEN_DIRECTORS	-2.765	11.625	-0.24	.813	-26.32	20.79	
rdbysales	87.163	1400.877	0.06	.951	-2751.283	2925.609	
opefficiency_	23.605	32.396	0.73	.471	-42.035	89.245	
BB_3Y_DEFAULT_PROB	223.367	297.731	0.75	.458	-379.893	826.628	
UNLEVERED_BETA	-.002	.817	-0.00	.998	-1.657	1.652	
2015b	0	.	.	.	.	.	
2016	.082	19.009	0.00	.997	-38.434	38.597	
2017	-5.902	20.416	-0.29	.774	-47.269	35.466	
2018	6.767	20.564	0.33	.744	-34.899	48.434	
2019	12.513	22.657	0.55	.584	-33.395	58.421	
2020	-35.003	28.121	-1.25	.221	-91.983	21.976	
2021	3.996	29.694	0.14	.894	-56.17	64.162	
2022o	0	.	.	.	.	.	
Constant	-628.264	314.503	-2.00	.053	-1265.508	8.98	*
Mean dependent var		9.914	SD dependent var		36.715		
R-squared		0.438	Number of obs		69		
F-test		1.442	Prob > F		0.143		
Akaike crit. (AIC)		689.283	Bayesian crit. (BIC)		736.200		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.13 Stata Regression Results: The Effect of ESG Combined Score on Growth in Revenues in the Industrial Industry

: Industry_n = Industrial

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.134	.266	0.50	.614	-.389	.658	
Intotalassets	11.599	7.426	1.56	.119	-3.021	26.218	
firmage_	1.865	1.086	1.72	.087	-.274	4.003	*
TOT_DEBT_TO_TOT_EQY	.056	.063	0.89	.372	-.068	.18	
capitalintensity	58.544	42.24	1.39	.167	-24.612	141.699	
cashflowbysale	-18.326	11.759	-1.56	.12	-41.476	4.824	
TOT_MKT_VAL	0	0	-1.71	.088	0	0	*
financialslack	-2.954	1.817	-1.63	.105	-6.531	.623	
Internationalisation	.276	.138	2.00	.047	.004	.549	**
NUMBER_OF_WOMEN_DIRECTORS	-2.328	2.39	-0.97	.331	-7.033	2.376	
rdbysales	-382.607	270.284	-1.42	.158	-914.705	149.491	
opefficiency_	-180.617	17.824	-10.13	0	-215.707	-145.527	***
BB_3Y_DEFAULT_PROB	-15.505	77.003	-0.20	.841	-167.098	136.088	
UNLEVERED_BETA	.283	.094	3.02	.003	.098	.468	***
2015b	0	.	.	.	.	.	
2016	-7.108	3.891	-1.83	.069	-14.767	.552	*
2017	-7.181	3.637	-1.97	.049	-14.341	-.021	**
2018	-4.668	3.537	-1.32	.188	-11.63	2.295	
2019	-1.513	3.573	-0.42	.672	-8.547	5.522	
2020	-23.131	4.137	-5.59	0	-31.274	-14.987	***
2021	-27.325	4.353	-6.28	0	-35.894	-18.756	***
2022o	0	.	.	.	.	.	
Constant	-30.214	67.776	-0.45	.656	-163.641	103.214	
Mean dependent var		11.298	SD dependent var		24.618		
R-squared		0.490	Number of obs		365		
F-test		13.156	Prob > F		0.000		
Akaike crit. (AIC)		3069.763	Bayesian crit. (BIC)		3151.661		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.14 Stata Regression Results: The Effect of ESG Combined Score on Growth in Revenues in the Technology Industry

: Industry_n = Technology

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.39	.298	-1.31	.198	-.991	.212	
Intotalassets	2.799	10.115	0.28	.783	-17.599	23.197	
firmage_	2.144	1.486	1.44	.156	-.853	5.142	
TOT_DEBT_TO_TOT_EQY	.254	.168	1.52	.136	-.084	.592	
capitalintensity	91.98	85.488	1.08	.288	-80.423	264.382	
cashflowbysale	-40.063	33.089	-1.21	.233	-106.793	26.666	
TOT_MKT_VAL	0	0	-1.05	.298	0	0	
financialslack	-4.052	1.446	-2.80	.008	-6.969	-1.135	***
Internationalisation	.044	.046	0.96	.341	-.049	.137	
NUMBER_OF_WOMEN_DIRECTED	3.876	1.707	2.27	.028	.433	7.318	**
rdbysales	-224.932	194.767	-1.16	.255	-617.718	167.854	
opefficiency_	-2.585	9.303	-0.28	.782	-21.346	16.176	
BB_3Y_DEFAULT_PROB	-504.038	177.314	-2.84	.007	-861.627	-146.45	***
UNLEVERED_BETA	.087	.022	4.06	0	.044	.131	***
2015b	0	.	.	.	.	.	
2016	4.575	3.588	1.27	.209	-2.662	11.811	
2017	-1.866	3.547	-0.53	.601	-9.02	5.287	
2018	-12.645	3.659	-3.46	.001	-20.023	-5.266	***
2019	-2.38	3.568	-0.67	.508	-9.576	4.817	
2020	-9.555	4.388	-2.18	.035	-18.404	-.707	**
2021	-16.431	4.395	-3.74	.001	-25.294	-7.567	***
2022o	0	.	.	.	.	.	
Constant	-51.475	86.204	-0.60	.554	-225.323	122.373	
Mean dependent var		11.858	SD dependent var			11.454	
R-squared		0.746	Number of obs			80	
F-test		6.303	Prob > F			0.000	
Akaike crit. (AIC)		534.623	Bayesian crit. (BIC)			584.645	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.15 Stata Regression Results: The Effect of ESG Combined Score on Growth in Revenues in the Utilities Industry

: Industry_n = Utilities

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.703	3.146	-0.22	.824	-7.031 5.625	
Intotalassets	46.638	84.273	0.55	.583	-122.897 216.174	
firmage_	8.259	10.916	0.76	.453	-13.701 30.218	
TOT_DEBT_TO_TOT_EQY	.941	.333	2.83	.007	.272 1.61	***
capitalintensity	-250.639	542.32	-0.46	.646	-1341.646 840.368	
cashflowbysale	72.219	80.142	0.90	.372	-89.005 233.444	
TOT_MKT_VAL	0	0	-1.73	.09	0 0	*
financialslack	-6.553	28.574	-0.23	.82	-64.036 50.929	
Internationalisation	-.982	2.72	-0.36	.72	-6.454 4.489	
NUMBER_OF_WOMEN_DIRECTORS	-5.527	13.08	-0.42	.675	-31.84 20.786	
rdbysales	-18782.015	17020.107	-1.10	.275	-53022.054 15458.025	
opefficiency_	131.827	151.285	0.87	.388	-172.519 436.173	
BB_3Y_DEFAULT_PROB	-187.607	751.761	-0.25	.804	-1699.955 1324.742	
UNLEVERED_BETA	1.576	1.326	1.19	.241	-1.092 4.244	
2015b	0	.	.	.	.	
2016	-12.73	32.3	-0.39	.695	-77.709 52.249	
2017	-2.494	33.391	-0.07	.941	-69.669 64.681	
2018	47.186	31.5	1.50	.141	-16.183 110.556	
2019	-4.948	28.054	-0.18	.861	-61.385 51.489	
2020	-35.632	29.833	-1.19	.238	-95.649 24.385	
2021	-41.393	27.845	-1.49	.144	-97.41 14.623	
2022o	0	.	.	.	.	
Constant	-1000.466	855.267	-1.17	.248	-2721.041 720.108	
Mean dependent var		16.578		SD dependent var		68.394
R-squared		0.417		Number of obs		82
F-test		1.684		Prob > F		0.049
Akaike crit. (AIC)		910.399		Bayesian crit. (BIC)		960.940

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.16 Stata Regression Results: The Effect of E, S, G on Growth in Revenues in the Basic Materials Industry

: Industry_n = Basic Materials

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.01	.173	0.06	.954	-.332	.351	
SOCIAL_DISCLOSURE_~E	.007	.298	0.02	.981	-.58	.595	
GOVNCE_DISCLOSURE_~E	-.332	.259	-1.28	.203	-.844	.18	
Intotalassets	14.061	7.347	1.91	.057	-.437	28.56	*
firmage_	2.42	1.138	2.13	.035	.175	4.666	**
TOT_DEBT_TO_TOT_EQY	-.013	.004	-3.36	.001	-.02	-.005	***
capitalintensity	75.83	35.489	2.14	.034	5.796	145.864	**
cashflowbysale	-20.523	13.552	-1.51	.132	-47.266	6.221	
TOT_MKT_VAL	0	0	1.51	.133	0	0	
financialslack	-2.946	1.458	-2.02	.045	-5.824	-.068	**
Internationalisation	-.383	.134	-2.86	.005	-.647	-.118	***
NUMBER_OF_WOMEN_DI~D	-.57	3.03	-0.19	.851	-6.55	5.41	
rdbysales	36.109	45.966	0.79	.433	-54.599	126.817	
opefficiency_	-96.872	13.305	-7.28	0	-123.127	-70.616	***
BB_3Y_DEFAULT_PROB	45.077	81.346	0.55	.58	-115.45	205.604	
UNLEVERED_BETA	.09	.084	1.07	.285	-.075	.255	
2015b	0	.	.	.	.	.	
2016	-13.18	4.252	-3.10	.002	-21.57	-4.79	***
2017	-10.637	3.963	-2.68	.008	-18.458	-2.817	***
2018	-4.541	3.999	-1.14	.258	-12.433	3.351	
2019	-6.92	3.892	-1.78	.077	-14.601	.761	*
2020	-24.305	4.693	-5.18	0	-33.565	-15.045	***
2021	-23.817	5.051	-4.71	0	-33.785	-13.849	***
2022o	0	.	.	.	.	.	
Constant	-146.142	66.191	-2.21	.029	-276.762	-15.523	**
Mean dependent var		11.594	SD dependent var		21.013		
R-squared		0.513	Number of obs		242		
F-test		8.518	Prob > F		0.000		
Akaike crit. (AIC)		1992.733	Bayesian crit. (BIC)		2072.979		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.17 Stata Regression Results: The Effect of E, S, G on Growth in Revenues in the Communications Industry

: Industry_n = Communications							
SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~ E	1.266	.735	1.72	.101	-.273	2.805	
SOCIAL_DISCLOSURE_~E	1.786	1.023	1.75	.097	-.355	3.927	*
GOVNCE_DISCLOSURE_~ E	-3.417	1.709	-2.00	.06	-6.993	.159	*
Intotalassets	.207	16.409	0.01	.99	-34.138	34.552	
firmage_	6.345	4.415	1.44	.167	-2.895	15.585	
TOT_DEBT_TO_TOT_EQY	.486	.175	2.78	.012	.12	.851	**
capitalintensity	-289.19	207.444	-1.39	.179	-723.375	144.994	
cashflowbysale	130.278	62.382	2.09	.05	-.29	260.846	*
TOT_MKT_VAL	0	0	-1.67	.112	0	0	
financialslack	-5.954	4.306	-1.38	.183	-14.967	3.059	
Internationalisation	-4.218	1.147	-3.68	.002	-6.62	-1.817	***
NUMBER_OF_WOMEN_DI ~D	-6.745	7.69	-0.88	.391	-22.841	9.35	
o	0	.	.	.	.	.	
opefficiency_	137.509	87.388	1.57	.132	-45.397	320.414	
BB_3Y_DEFAULT_PROB	99.718	186.57	0.53	.599	-290.779	490.214	
UNLEVERED_BETA	-.623	.633	-0.98	.338	-1.948	.703	
2015b	0	.	.	.	.	.	
2016	-33.463	10.154	-3.30	.004	-54.715	-12.211	***
2017	-37.134	12.875	-2.88	.01	-64.082	-10.186	**
2018	-27.386	14.167	-1.93	.068	-57.039	2.267	*
2019	-14.134	13.067	-1.08	.293	-41.483	13.216	
2020	-57.512	18.109	-3.18	.005	-95.415	-19.608	***
2021	-30.192	17.537	-1.72	.101	-66.898	6.513	
2022o	0	.	.	.	.	.	
Constant	-26.125	173.589	-0.15	.882	-389.451	337.2	
Mean dependent var		9.698		SD dependent var		28.730	
R-squared		0.847		Number of obs		50	
F-test		4.993		Prob > F		0.000	
Akaike crit. (AIC)		420.286		Bayesian crit. (BIC)		462.350	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.18 Stata Regression Results: The Effect of E, S, G on Growth in Revenues in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.309	.187	1.65	.101	-.061	.678	
SOCIAL_DISCLOSURE~E	-.738	.327	-2.25	.025	-1.385	-.092	**
GOVNCE_DISCLOSURE~E	.747	.365	2.04	.042	.026	1.467	**
Intotalassets	4.347	9.975	0.44	.664	-15.344	24.038	
firmage_	1.077	1.795	0.60	.549	-2.466	4.621	
TOT_DEBT_TO_TOT_EQY	.028	.048	0.57	.57	-.068	.123	
capitalintensity	-37.713	57.942	-0.65	.516	-152.096	76.671	
cashflowbysale	12.675	31.223	0.41	.685	-48.963	74.313	
TOT_MKT_VAL	0	0	1.09	.278	0	0	
financialslack	.146	3.003	0.05	.961	-5.782	6.074	
Internationalisation	-.643	.127	-5.04	0	-.894	-.391	***
NUMBER_OF_WOMEN_DIRECTORS	5.279	3.105	1.70	.091	-.852	11.409	*
rdbysales	-406.303	366.829	-1.11	.27	-1130.46	317.854	
opefficiency_	-5.379	23.369	-0.23	.818	-51.511	40.754	
BB_3Y_DEFAULT_PROB	-198.582	113.753	-1.75	.083	-423.142	25.978	*
UNLEVERED_BETA	.178	.06	2.99	.003	.061	.296	***
2015b	0	.	.	.	.	.	
2016	-2.9	5.443	-0.53	.595	-13.645	7.844	
2017	-2.077	4.983	-0.42	.677	-11.914	7.761	
2018	-9.051	4.882	-1.85	.066	-18.689	.587	*
2019	-12.041	4.751	-2.53	.012	-21.42	-2.662	**
2020	-30.612	5.29	-5.79	0	-41.055	-20.17	***
2021	-35.893	6.242	-5.75	0	-48.216	-23.571	***
2022o	0	.	.	.	.	.	
Constant	-125.565	83.813	-1.50	.136	-291.019	39.89	
Mean dependent var		11.618		SD dependent var		23.167	
R-squared		0.371		Number of obs		236	
F-test		4.533		Prob > F		0.000	
Akaike crit. (AIC)		2027.433		Bayesian crit. (BIC)		2107.101	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.19 Stata Regression Results: The Effect of E, S, G on Growth in Revenues in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.012	.119	-0.10	.923	-.246	.223	
SOCIAL_DISCLOSURE~E	.055	.161	0.34	.732	-.261	.371	
GOVNCNCE_DISCLOSURE~E	.237	.243	0.97	.33	-.241	.714	
Intotalassets	-3.144	4.971	-0.63	.528	-12.931	6.643	
firmage_	.064	.255	0.25	.801	-.438	.566	
TOT_DEBT_TO_TOT_EQY	.016	.041	0.39	.699	-.065	.097	
capitalintensity	-1.756	31.081	-0.06	.955	-62.945	59.433	
cashflowbysale	7.312	12.897	0.57	.571	-18.077	32.702	
TOT_MKT_VAL	0	0	2.06	.04	0	0	**
financialslack	-2.639	1.638	-1.61	.108	-5.864	.586	
Internationalisation	.047	.068	0.70	.484	-.086	.181	
NUMBER_OF_WOMEN_DI~D	1.373	1.522	0.90	.368	-1.622	4.369	
rdbysales	-59.849	58.361	-1.02	.306	-174.745	55.046	
opefficiency_	-79.072	21.297	-3.71	0	-121	-37.145	****
BB_3Y_DEFAULT_PROB	-40.134	105.681	-0.38	.704	-248.187	167.918	
UNLEVERED_BETA	.188	.05	3.74	0	.089	.287	****
2015b	0	.	.	.	.	.	
2016	-8.403	3.161	-2.66	.008	-14.625	-2.181	****
2017	-6.627	3.5	-1.89	.059	-13.517	.262	*
2018	-7.903	4.025	-1.96	.051	-15.827	.021	*
2019	-4.367	4.525	-0.96	.335	-13.277	4.542	
2020	-10.457	5.026	-2.08	.038	-20.352	-.561	**
2021	-18.053	5.82	-3.10	.002	-29.51	-6.596	****
2022	-5.873	6.582	-0.89	.373	-18.83	7.084	
Constant	93.898	59.626	1.58	.116	-23.486	211.282	
Mean dependent var		9.717		SD dependent var		13.702	
R-squared		0.217		Number of obs		351	
F-test		3.284		Prob > F		0.000	
Akaike crit. (AIC)		2736.443		Bayesian crit. (BIC)		2829.102	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.20 Stata Regression Results: The Effect of E, S, G on Growth in Revenues in the Energy Industry

: Industry_n = Energy

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.306	.493	0.62	.54	-.711	1.324	
SOCIAL_DISCLOSURE~E	-.42	1.104	-0.38	.707	-2.699	1.859	
GOVNCE_DISCLOSURE~E	.221	.738	0.30	.767	-1.302	1.745	
lntotalassets	11.895	70.879	0.17	.868	-134.392	158.182	
firmage_	6.289	7.326	0.86	.399	-8.83	21.409	
TOT_DEBT_TO_TOT_EQY	.055	.178	0.31	.759	-.312	.422	
capitalintensity	697.118	250.272	2.79	.01	180.583	1213.654	**
cashflowbysale	-142.918	77.73	-1.84	.078	-303.344	17.509	*
TOT_MKT_VAL	0	0	-0.18	.86	0	0	
financialslack	-9.222	9.355	-0.99	.334	-28.529	10.085	
Internationalisation	-.082	1.071	-0.08	.94	-2.293	2.129	
NUMBER_OF_WOMEN_DI~D	-8.161	6.764	-1.21	.239	-22.12	5.799	
rdbysales	-27070.818	11489.549	-2.36	.027	-50784.081	-3357.555	**
opefficiency_	-118.966	164.051	-0.72	.475	-457.55	219.619	
BB_3Y_DEFAULT_PROB	42.395	904.565	0.05	.963	-1824.535	1909.325	
UNLEVERED_BETA	2.158	1.475	1.46	.156	-.887	5.202	
2015b	0	.	.	.	.	.	
2016	-9.237	12.787	-0.72	.477	-35.628	17.153	
2017	-3.302	12.629	-0.26	.796	-29.368	22.763	
2018	-.701	13.388	-0.05	.959	-28.333	26.931	
2019	.713	12.255	0.06	.954	-24.581	26.006	
2020	-69.875	19.537	-3.58	.002	-110.198	-29.552	***
2021	-28.502	25.566	-1.12	.276	-81.267	24.263	
2022o	0	.	.	.	.	.	
Constant	-242.372	733.163	-0.33	.744	-1755.546	1270.802	
Mean dependent var	8.337		SD dependent var		28.623		
R-squared	0.763		Number of obs		55		
F-test	3.520		Prob > F		0.001		
Akaike crit. (AIC)	487.639		Bayesian crit. (BIC)		533.808		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.21 Stata Regression Results: The Effect of E, S, G on Growth in Revenues in the Financial Industry

: Industry_n = Financial

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.121	.94	-0.13	.898	-2.029	1.787	
SOCIAL_DISCLOSURE~E	-2.978	1.576	-1.89	.067	-6.177	.222	*
GOVNCE_DISCLOSURE~E	.801	1.996	0.40	.691	-3.252	4.854	
Intotalassets	67.083	31.249	2.15	.039	3.644	130.522	**
firmage_	-2.796	6.323	-0.44	.661	-15.633	10.041	
TOT_DEBT_TO_T_EQY	-.391	.168	-2.33	.026	-.732	-.05	**
capitalintensity	138.436	291.046	0.48	.637	-452.419	729.292	
cashflowbysale	19.556	12.525	1.56	.127	-5.871	44.982	
TOT_MKT_VAL	0	0	0.11	.914	0	0	
financialslack	-1.832	1.517	-1.21	.235	-4.911	1.247	
Internationalisation	-1.77	.907	-1.95	.059	-3.612	.071	*
NUMBER_OF_WORKMEN_DI~D	-4.858	11.554	-0.42	.677	-28.313	18.597	
rdbysales	-320.704	1417.488	-0.23	.822	-3198.357	2556.95	
opefficiency_	12.591	32.794	0.38	.703	-53.985	79.167	
BB_3Y_DEFAULT_PROB	81.436	304.879	0.27	.791	-537.501	700.373	
UNLEVERED_BETA	-.239	.824	-0.29	.774	-1.911	1.434	
2015b	0	.	.	.	.	.	
2016	-5.035	19.298	-0.26	.796	-44.212	34.143	
2017	-1.004	20.947	-0.05	.962	-43.528	41.52	
2018	7.096	20.992	0.34	.737	-35.519	49.711	
2019	15.544	22.863	0.68	.501	-30.871	61.959	
2020	-33.923	27.777	-1.22	.23	-90.313	22.468	
2021	1.023	29.397	0.04	.972	-58.655	60.702	
2022o	0	.	.	.	.	.	
Constant	-632.859	313.66	-2.02	.051	-1269.623	3.905	*
Mean dependent var	9.914		SD dependent var	36.715			
R-squared	0.483		Number of obs	69			
F-test	1.488		Prob > F	0.125			
Akaike crit. (AIC)	687.482		Bayesian crit. (BIC)	738.866			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.22 Stata Regression Results: The Effect of E, S, G on Growth in Revenues in the Industrial Industry

: Industry_n = Industrial

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.06	.156	0.39	.7	-.246	.367	
SOCIAL_DISCLOSURE~E	-.322	.266	-1.21	.227	-.846	.202	
GOVNCE_DISCLOSURE~E	.71	.26	2.73	.007	.198	1.222	***
Intotalassets	14.364	7.411	1.94	.054	-.227	28.955	*
firmage_	1.805	1.089	1.66	.098	-.338	3.949	*
TOT_DEBT_TO_TOT_EQY	.045	.063	0.73	.468	-.078	.169	
capitalintensity	64.95	41.889	1.55	.122	-17.517	147.418	
cashflowbysale	-15.928	11.688	-1.36	.174	-38.938	7.082	
TOT_MKT_VAL	0	0	-1.96	.051	0	0	*
financialslack	-3.473	1.81	-1.92	.056	-7.036	.09	*
Internationalisation	.275	.137	2.00	.046	.005	.545	**
NUMBER_OF_WOMEN_DI~D	-2.009	2.369	-0.85	.397	-6.673	2.654	
rdbsales	-280.666	270.838	-1.04	.301	-813.871	252.538	
opefficiency_	-184.077	17.685	-10.41	0	-218.895	-149.259	***
BB_3Y_DEFAULT_PROB	-31.809	76.512	-0.42	.678	-182.44	118.823	
UNLEVERED_BE TA	.275	.093	2.95	.003	.091	.458	***
2015b	0	.	.	.	.	.	
2016	-7.89	3.862	-2.04	.042	-15.493	-.287	**
2017	-6.731	3.607	-1.87	.063	-13.833	.371	*
2018	-5.303	3.509	-1.51	.132	-12.212	1.605	
2019	-2.766	3.571	-0.77	.439	-9.796	4.265	
2020	-24.832	4.139	-6.00	0	-32.98	-16.684	***
2021	-28.464	4.336	-6.56	0	-37.001	-19.927	***
2022o	0	.	.	.	.	.	
Constant	-96.437	71	-1.36	.176	-236.216	43.341	
Mean dependent var		11.298		SD dependent var		24.618	
R-squared		0.505		Number of obs		365	
F-test		12.595		Prob > F		0.000	
Akaike crit. (AIC)		3063.050		Bayesian crit. (BIC)		3152.747	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.23 Stata Regression Results: The Effect of E, S, G on Growth in Revenues in the Technology Industry**: Industry_n = Technology**

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.026	.148	-0.18	.86	-.326	.273	
SOCIAL_DISCLOSURE~E	-.127	.231	-0.55	.585	-.593	.339	
GOVNCE_DISCLOSURE~E	-.66	.416	-1.59	.12	-1.5	.18	
Intotalassets	1.81	10.172	0.18	.86	-18.733	22.354	
firmage_	1.885	1.605	1.17	.247	-1.356	5.127	
TOT_DEBT_TO_TOT_EQY	.284	.172	1.65	.106	-.063	.63	
capitalintensity	75.862	91.213	0.83	.41	-108.346	260.07	
cashflowbysale	-32.351	33.7	-0.96	.343	-100.409	35.707	
TOT_MKT_VAL	0	0	0.01	.994	0	0	
financialslack	-3.767	1.487	-2.53	.015	-6.77	-.765	**
Internationalisation	.046	.047	0.98	.332	-.048	.14	
NUMBER_OF_WOMEN_DI~D	4.447	1.786	2.49	.017	.841	8.053	**
rdbysales	-283.246	208.776	-1.36	.182	-704.878	138.386	
opefficiency_	-.456	9.639	-0.05	.962	-19.923	19.011	
BB_3Y_DEFAULT_PROB	-508.999	179.309	-2.84	.007	-871.12	-146.877	***
UNLEVERED_BETA	.09	.022	4.14	0	.046	.134	***
2015b	0	.	.	.	.	.	
2016	4.834	3.604	1.34	.187	-2.445	12.114	
2017	-.027	3.86	-0.01	.994	-7.823	7.769	
2018	-10.664	3.965	-2.69	.01	-18.671	-2.657	**
2019	-.778	3.791	-0.20	.838	-8.435	6.879	
2020	-7.72	4.682	-1.65	.107	-17.175	1.735	
2021	-15.657	4.515	-3.47	.001	-24.774	-6.539	***
2022o	0	.	.	.	.	.	
Constant	1.429	96.731	0.01	.988	-193.922	196.78	
Mean dependent var		11.858	SD dependent var		11.454		
R-squared		0.756	Number of obs		80		
F-test		5.775	Prob > F		0.000		
Akaike crit. (AIC)		535.288	Bayesian crit. (BIC)		590.075		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.24 Stata Regression Results: The Effect of E, S, G on Growth in Revenues in the Utilities Industry

: Industry_n = Utilities

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	1.083	1.516	0.71	.479	-1.971	4.137	
SOCIAL_DISCLOSURE~E	-.891	2.516	-0.35	.725	-5.959	4.176	
GOVNCE_DISCLOSURE~E	-6.006	3.91	-1.54	.132	-13.882	1.87	
Intotalassets	80.065	90.893	0.88	.383	-103.002	263.132	
firmage_	6.395	10.918	0.59	.561	-15.595	28.384	
TOT_DEBT_TO_T_EQY	.858	.335	2.56	.014	.183	1.533	**
capitalintensity	-195.108	557.208	-0.35	.728	-1317.383	927.167	
cashflowbysale	59.528	82.3	0.72	.473	-106.232	225.288	
TOT_MKT_VAL	0	0	-1.97	.055	0	0	*
financialslack	-10.064	28.695	-0.35	.727	-67.858	47.73	
Internationalisation	.108	2.825	0.04	.97	-5.583	5.798	
NUMBER_OF_WORKMEN_DI~D	-1.343	13.266	-0.10	.92	-28.061	25.376	
rdbysales	-35388.052	19846.236	-1.78	.081	-75360.424	4584.319	*
opefficiency_	32.226	167.58	0.19	.848	-305.298	369.75	
BB_3Y_DEFAULT_PROB	100.109	771.371	0.13	.897	-1453.513	1653.731	
UNLEVERED_BETA	1.702	1.321	1.29	.204	-.958	4.362	
2015b	0	.	.	.	.	.	
2016	-14.424	32.135	-0.45	.656	-79.148	50.299	
2017	1.919	33.416	0.06	.954	-65.384	69.222	
2018	52.572	31.759	1.66	.105	-11.394	116.537	
2019	3.266	28.369	0.12	.909	-53.873	60.404	
2020	-29.301	29.931	-0.98	.333	-89.584	30.982	
2021	-39.876	28.023	-1.42	.162	-96.316	16.565	
2022o	0	.	.	.	.	.	
Constant	-816.097	938.71	-0.87	.389	-2706.756	1074.561	
Mean dependent var		16.578		SD dependent var		68.394	
R-squared		0.449		Number of obs		82	
F-test		1.666		Prob > F		0.052	
Akaike crit. (AIC)		909.847		Bayesian crit. (BIC)		965.201	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.25 Stata Regression Results: The Effect of ESG Combined Score on Operating Profit Margin in the Basic Materials Industry**: Industry_n = Basic Materials**

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.07	.049	-1.41	.16	-.167	.028	
Intotalassets	-.431	1.626	-0.27	.791	-3.64	2.778	
firmage_	.479	.249	1.93	.056	-.012	.969	*
TOT_DEBT_TO_TOT_EQY	-.001	.001	-0.86	.391	-.002	.001	
capitalintensity	-7.417	7.843	-0.95	.346	-22.894	8.06	
cashflowbysale	3.224	2.995	1.08	.283	-2.685	9.133	
TOT_MKT_VAL	0	0	3.14	.002	0	0	***
financialslack	1.366	.32	4.27	0	.735	1.998	***
Internationalisation	.021	.029	0.72	.475	-.037	.078	
NUMBER_OF_WOMEN_DIRECTORS	-1.56	.671	-2.32	.021	-2.885	-.235	**
rdbysales	.865	10.168	0.09	.932	-19.198	20.928	
opefficiency_	-10.53	2.921	-3.61	0	-16.293	-4.767	***
BB_3Y_DEFAULT_PROB	-46.546	17.397	-2.68	.008	-80.875	-12.218	***
UNLEVERED_BETA	.03	.018	1.62	.106	-.006	.066	
2015b	0	.	.	.	.	.	
2016	-.384	.942	-0.41	.684	-2.242	1.475	
2017	-.011	.87	-0.01	.99	-1.728	1.706	
2018	-.015	.852	-0.02	.986	-1.697	1.666	
2019	1.345	.832	1.62	.107	-.296	2.986	
2020	1.33	1.012	1.31	.191	-.667	3.328	
2021	-.866	1.114	-0.78	.438	-3.065	1.332	
2022o	0	.	.	.	.	.	
Constant	4.294	14.357	0.30	.765	-24.036	32.623	
Mean dependent var	16.545		SD dependent var		9.883		
R-squared	0.423		Number of obs		242		
F-test	6.598		Prob > F		0.000		
Akaike crit. (AIC)	1262.089		Bayesian crit. (BIC)		1335.356		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.26 Stata Regression Results: The Effect of ESG Combined Score on Operating Profit Margin in the Communications Industry

: Industry_n = Communications

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.11	.17	-0.65	.522	-.463	.242	
Intotalassets	.735	1.88	0.39	.7	-3.174	4.644	
firmage_	.304	.484	0.63	.537	-.703	1.311	
TOT_DEBT_TO_TOT_EQY	0	.018	0.02	.984	-.036	.037	
capitalintensity	-36.915	23.565	-1.57	.132	-85.922	12.092	
cashflowbysale	2.203	7.155	0.31	.761	-12.676	17.083	
TOT_MKT_VAL	0	0	0.14	.892	0	0	
financialslack	-.329	.434	-0.76	.456	-1.232	.573	
Internationalisation	.017	.131	0.13	.895	-.254	.289	
NUMBER_OF_WOMEN_DIRECTORS	.672	.878	0.77	.452	-1.153	2.498	
o	0	.	.	.	.	.	
opefficiency_	-84.066	9.935	-8.46	0	-104.728	-63.404	***
BB_3Y_DEFAULT_PROB	4.488	21.461	0.21	.836	-40.144	49.12	
UNLEVERED_BETA	.025	.069	0.37	.718	-.119	.169	
2015b	0	.	.	.	.	.	
2016	1.901	1.148	1.66	.113	-.487	4.288	
2017	1.874	1.393	1.35	.193	-1.024	4.772	
2018	2.163	1.451	1.49	.151	-.854	5.179	
2019	2.51	1.355	1.85	.078	-.307	5.328	*
2020	2.006	1.911	1.05	.306	-1.968	5.98	
2021	.233	2.013	0.12	.909	-3.953	4.419	
2022o	0	.	.	.	.	.	
Constant	72.014	17.661	4.08	.001	35.285	108.743	***
Mean dependent var	21.498		SD dependent var		13.808		
R-squared	0.931		Number of obs		50		
F-test	14.982		Prob > F		0.000		
Akaike crit. (AIC)	205.067		Bayesian crit. (BIC)		243.307		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.27 Stata Regression Results: The Effect of ESG Combined Score on Operating Profit Margin in the Consumer Cyclical Industry**: Industry_n = Consumer Cyclical**

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.045	.048	0.93	.356	-.051	.141	
lntotalassets	4.208	1.258	3.35	.001	1.726	6.691	***
firmage_	-.879	.225	-3.92	0	-1.323	-.436	***
TOT_DEBT_TO_TOT_EQY	-.006	.006	-0.97	.333	-.017	.006	
capitalintensity	-14.861	7.158	-2.08	.039	-28.99	-.732	**
cashflowbysale	11.358	3.91	2.90	.004	3.64	19.076	***
TOT_MKT_VAL	0	0	3.09	.002	0	0	***
financialslack	.627	.379	1.65	.1	-.122	1.376	
Internationalisation	-.011	.016	-0.69	.488	-.043	.021	
NUMBER_OF_WOMEN_DIVERD	.032	.389	0.08	.935	-.736	.8	
rdbysales	-1.985	46.17	-0.04	.966	-93.122	89.152	
opefficiency_	-18.282	2.951	-6.20	0	-24.107	-12.456	***
BB_3Y_DEFAULT_PROB	-4.641	14.316	-0.32	.746	-32.899	23.617	
UNLEVERED_BETA	-.001	.007	-0.09	.929	-.015	.014	
2015b	0	.	.	.	.	.	
2016	-.021	.688	-0.03	.976	-1.379	1.337	
2017	-.391	.629	-0.62	.535	-1.633	.85	
2018	-.058	.616	-0.09	.926	-1.274	1.159	
2019	.92	.592	1.55	.122	-.248	2.088	
2020	-.193	.658	-0.29	.77	-1.492	1.106	
2021	-.619	.784	-0.79	.431	-2.166	.928	
2022o	0	.	.	.	.	.	
Constant	14.597	10.134	1.44	.152	-5.407	34.602	
Mean dependent var	10.747	SD dependent var	6.547				
R-squared	0.418	Number of obs	236				
F-test	6.130	Prob > F	0.000				
Akaike crit. (AIC)	1050.452	Bayesian crit. (BIC)	1123.193				

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.28 Stata Regression Results: The Effect of ESG Combined Score on Operating Profit Margin in the Consumer Non-cyclical Industry

: Industry_n = Consumer Non-cyclical

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.026	.016	1.59	.114	-.006	.058	
Intotalassets	.779	.479	1.63	.105	-.165	1.723	
firmage_	.002	.025	0.07	.94	-.047	.05	
TOT_DEBT_TO_TOT_EQY	-.006	.004	-1.50	.136	-.014	.002	
capitalintensity	.407	3.005	0.14	.892	-5.508	6.323	
cashflowbysale	-1.86	1.248	-1.49	.137	-4.316	.596	
TOT_MKT_VAL	0	0	0.35	.725	0	0	
financialslack	-.136	.157	-0.87	.386	-.445	.173	
Internationalisation	-.001	.007	-0.09	.93	-.013	.012	
NUMBER_OF_WOMEN_DIRECTORS	.447	.147	3.04	.003	.158	.736	***
rdbysales	5.266	5.622	0.94	.35	-5.801	16.333	
opefficiency_	-89.843	2.035	-44.16	0	-93.848	-85.837	***
BB_3Y_DEFAULT_PROB	2.373	10.226	0.23	.817	-17.759	22.505	
UNLEVERED_BETA	.007	.005	1.36	.176	-.003	.016	
2015b	0	.	.	.	.	.	
2016	.494	.306	1.62	.107	-.107	1.096	
2017	.096	.338	0.28	.776	-.57	.763	
2018	-.249	.388	-0.64	.521	-1.013	.514	
2019	-.437	.435	-1.00	.316	-1.293	.419	
2020	-.642	.483	-1.33	.186	-1.593	.31	
2021	-.767	.562	-1.36	.174	-1.874	.34	
2022	-.976	.637	-1.53	.126	-2.229	.277	
Constant	82.329	5.541	14.86	0	71.422	93.237	***
Mean dependent var	18.696	SD dependent var	9.282				
R-squared	0.904	Number of obs	351				
F-test	123.815	Prob > F	0.000				
Akaike crit. (AIC)	1095.647	Bayesian crit. (BIC)	1180.584				

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.29 Stata Regression Results: The Effect of ESG Combined Score on Operating Profit Margin in the Energy Industry**: Industry_n = Energy**

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.023	.058	0.40	.695	-.096	.142	
Intotalassets	-7.279	3.612	-2.02	.054	-14.704	.146	*
firmage_	1.034	.364	2.84	.009	.286	1.783	***
TOT_DEBT_TO_TOT_EQY	.012	.008	1.43	.166	-.005	.029	
capitalintensity	3.019	12.721	0.24	.814	-23.129	29.168	
cashflowbysale	-4.861	3.997	-1.22	.235	-13.076	3.355	
TOT_MKT_VAL	0	0	0.33	.745	0	0	
financialslack	.591	.461	1.28	.211	-.356	1.538	
Internationalisation	-.117	.056	-2.09	.046	-.232	-.002	**
NUMBER_OF_WOMEN_DIVERD	-1.123	.352	-3.19	.004	-1.847	-.399	***
rdbysales	731.586	550.752	1.33	.196	-400.501	1863.674	
opefficiency_	-92.613	7.67	-12.07	0	-108.379	-76.848	***
BB_3Y_DEFAULT_PROB	36.623	46.501	0.79	.438	-58.96	132.206	
UNLEVERED_BETA	-.009	.068	-0.13	.895	-.15	.132	
2015b	0	.	.	.	.	.	
2016	.295	.645	0.46	.651	-1.031	1.621	
2017	.252	.607	0.41	.681	-.995	1.499	
2018	.981	.632	1.55	.133	-.318	2.28	
2019	.333	.597	0.56	.582	-.894	1.559	
2020	-.31	1.012	-0.31	.762	-2.389	1.769	
2021	-1.124	1.243	-0.90	.374	-3.679	1.431	
2022o	0	.	.	.	.	.	
Constant	146.434	37.456	3.91	.001	69.443	223.425	***
Mean dependent var	10.586		SD dependent var		7.122		
R-squared	0.948		Number of obs		55		
F-test	23.530		Prob > F		0.000		
Akaike crit. (AIC)	163.384		Bayesian crit. (BIC)		205.538		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.30 Stata Regression Results: The Effect of ESG Combined Score on Operating Profit Margin in the Financial Industry

: Industry_n = Financial

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.184	.697	-0.27	.793	-1.597	1.228	
lntotalassets	11.922	9.601	1.24	.222	-7.532	31.376	
firmage_	-1.312	1.801	-0.73	.471	-4.961	2.337	
TOT_DEBT_TO_TOT_EQY	-.03	.054	-0.55	.586	-.139	.08	
capitalintensity	36.557	94.989	0.39	.703	-155.909	229.024	
cashflowbysale	-6.558	4.086	-1.61	.117	-14.838	1.722	
TOT_MKT_VAL	0	0	1.47	.151	0	0	
financialslack	-.215	.462	-0.47	.645	-1.152	.722	
Internationalisation	-.683	.275	-2.48	.018	-1.241	-.125	**
NUMBER_OF_WOMEN_DIRECTORS	-3.496	3.748	-0.93	.357	-11.089	4.097	
rdbysales	-317.11	451.6	-0.70	.487	-1232.139	597.92	
opefficiency_	-6.763	10.443	-0.65	.521	-27.923	14.397	
BB_3Y_DEFAULT_PROB	11.963	95.98	0.13	.901	-182.51	206.436	
UNLEVERED_BETA	.059	.263	0.23	.823	-.474	.593	
2015b	0	.	.	.	.	.	
2016	.613	6.128	0.10	.921	-11.804	13.029	
2017	1.433	6.582	0.22	.829	-11.903	14.769	
2018	2.343	6.629	0.35	.726	-11.089	15.776	
2019	-1.563	7.304	-0.21	.832	-16.363	13.236	
2020	10.833	9.065	1.20	.24	-7.535	29.202	
2021	4.402	9.572	0.46	.648	-14.994	23.797	
2022o	0	.	.	.	.	.	
Constant	-50.177	101.386	-0.50	.624	-255.606	155.251	
Mean dependent var		26.572		SD dependent var		17.937	
R-squared		0.550		Number of obs		69	
F-test		2.260		Prob > F		0.009	
Akaike crit. (AIC)		533.060		Bayesian crit. (BIC)		579.976	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.31 Stata Regression Results: The Effect of ESG Combined Score on Operating Profit Margin in the Industrial Industry**: Industry_n = Industrial**

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.036	.043	-0.85	.396	-.12	.048	
Intotalassets	4.678	1.193	3.92	0	2.33	7.026	***
firmage_	-.443	.175	-2.54	.012	-.787	-.1	**
TOT_DEBT_TO_TOT_EQY	-.023	.01	-2.26	.025	-.043	-.003	**
capitalintensity	-5.527	6.785	-0.81	.416	-18.884	7.831	
cashflowbysale	.971	1.889	0.51	.608	-2.748	4.689	
TOT_MKT_VAL	0	0	-0.38	.706	0	0	
financialslack	-.48	.292	-1.65	.101	-1.055	.094	
Internationalisation	.002	.022	0.11	.915	-.041	.046	
NUMBER_OF_WOMEN_DIRECTORS	.414	.384	1.08	.282	-.341	1.17	
rdbysales	-35.07	43.415	-0.81	.42	-120.54	50.4	
opefficiency_	-66.17	2.863	-23.11	0	-71.806	-60.533	***
BB_3Y_DEFAULT_PROB	-14.955	12.369	-1.21	.228	-39.305	9.395	
UNLEVERED_BETA	.037	.015	2.44	.015	.007	.067	**
2015b	0	.	.	.	.	.	
2016	-1.225	.625	-1.96	.051	-2.455	.005	*
2017	-.028	.584	-0.05	.961	-1.178	1.122	
2018	.016	.568	0.03	.977	-1.102	1.135	
2019	.302	.574	0.53	.599	-.828	1.432	
2020	.407	.664	0.61	.54	-.901	1.715	
2021	-.547	.699	-0.78	.435	-1.923	.83	
2022o	0	.	.	.	.	.	
Constant	43.246	10.887	3.97	0	21.814	64.679	***
Mean dependent var	12.070		SD dependent var		7.970		
R-squared	0.735		Number of obs		365		
F-test	37.966		Prob > F		0.000		
Akaike crit. (AIC)	1734.839		Bayesian crit. (BIC)		1816.737		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.32 Stata Regression Results: The Effect of ESG Combined Score on Operating Profit Margin in the Technology Industry

: Industry_n = Technology

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.066	.072	0.91	.368	-.08	.211	
lntotalassets	1.585	2.451	0.65	.521	-3.358	6.529	
firmage_	.093	.36	0.26	.798	-.634	.819	
TOT_DEBT_TO_TOT_EQY	-.03	.041	-0.73	.472	-.111	.052	
capitalintensity	7.574	20.719	0.37	.716	-34.209	49.358	
cashflowbysale	10.228	8.019	1.27	.209	-5.945	26.4	
TOT_MKT_VAL	0	0	-1.80	.079	0	0	*
financialslack	.045	.351	0.13	.898	-.662	.752	
Internationalisation	-.004	.011	-0.33	.746	-.026	.019	
NUMBER_OF_WOMEN_DIVERD	.023	.414	0.06	.955	-.811	.858	
rdbysales	-100.338	47.204	-2.13	.039	-195.533	-5.143	**
opefficiency_	.413	2.255	0.18	.856	-4.134	4.96	
BB_3Y_DEFAULT_PROB	30.888	42.974	0.72	.476	-55.777	117.553	
UNLEVERED_BETA	.003	.005	0.64	.527	-.007	.014	
2015b	0	.	.	.	.	.	
2016	-.361	.87	-0.41	.68	-2.115	1.393	
2017	-1.579	.86	-1.84	.073	-3.313	.155	*
2018	-1.82	.887	-2.05	.046	-3.608	-.031	**
2019	-1.094	.865	-1.26	.213	-2.838	.651	
2020	-2.988	1.063	-2.81	.007	-5.132	-.843	***
2021	-1.132	1.065	-1.06	.294	-3.28	1.017	
2022o	0	.	.	.	.	.	
Constant	-4.255	20.892	-0.20	.84	-46.389	37.878	
Mean dependent var	17.896		SD dependent var		8.455		
R-squared	0.435		Number of obs		80		
F-test	1.653		Prob > F		0.058		
Akaike crit. (AIC)	307.849		Bayesian crit. (BIC)		357.871		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.33 Stata Regression Results: The Effect of ESG Combined Score on Operating Profit Margin in the Utilities Industry

: Industry_n = Utilities

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.126	.091	1.39	.172	-.057	.309	
Intotalassets	2.084	2.435	0.86	.396	-2.814	6.982	
firmage_	-.517	.315	-1.64	.107	-1.152	.117	
TOT_DEBT_TO_TOT_EQY	-.008	.01	-0.88	.384	-.028	.011	
capitalintensity	-17.994	15.668	-1.15	.257	-49.514	13.526	
cashflowbysale	1.606	2.315	0.69	.491	-3.052	6.264	
TOT_MKT_VAL	0	0	0.19	.847	0	0	
financialslack	2.027	.826	2.46	.018	.366	3.687	**
Internationalisation	.038	.079	0.48	.631	-.12	.196	
NUMBER_OF_WOMEN_DIRECTORS	.526	.378	1.39	.17	-.234	1.286	
rdbysales	482.596	491.721	0.98	.331	-506.619	1471.81	
opefficiency_	-89.902	4.371	-20.57	0	-98.694	-81.109	***
BB_3Y_DEFAULT_PROB	10.052	21.719	0.46	.646	-33.64	53.745	
UNLEVERED_BETA	-.001	.038	-0.02	.987	-.078	.076	
2015b	0	.	.	.	.	.	
2016	1.48	.933	1.59	.119	-.397	3.357	
2017	-.892	.965	-0.93	.36	-2.833	1.049	
2018	-.399	.91	-0.44	.663	-2.23	1.431	
2019	-.123	.81	-0.15	.88	-1.753	1.508	
2020	-.015	.862	-0.02	.987	-1.749	1.719	
2021	.304	.804	0.38	.707	-1.314	1.923	
2022o	0	.	.	.	.	.	
Constant	75.086	24.709	3.04	.004	25.378	124.795	***
Mean dependent var	23.372		SD dependent var		15.690		
R-squared	0.962		Number of obs		82		
F-test	59.541		Prob > F		0.000		
Akaike crit. (AIC)	329.144		Bayesian crit. (BIC)		379.685		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.34 Stata Regression Results: The Effect of E, S, G on Operating Profit Margin in the Basic Materials Industry**: Industry_n = Basic Materials**

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.007	.038	-0.18	.859	-.082	.069	
SOCIAL_DISCLOSURE~E	-.012	.066	-0.18	.858	-.142	.118	
GOVNCEDISCLOSURE~E	-.106	.057	-1.85	.065	-.22	.007	*
Intotalassets	-.488	1.626	-0.30	.765	-3.697	2.722	
firmage_	.527	.252	2.09	.038	.03	1.024	**
TOT_DEBT_TO_TOT_EQY	-.001	.001	-1.09	.276	-.003	.001	
capitalintensity	-8.293	7.856	-1.06	.293	-23.796	7.211	
cashflowbysale	3.531	3	1.18	.241	-2.389	9.452	
TOT_MKT_VAL	0	0	2.98	.003	0	0	***
financialslack	1.369	.323	4.24	0	.732	2.006	***
Internationalisation	.023	.03	0.78	.436	-.035	.082	
NUMBER_OF_WOMEN_DI~D	-1.581	.671	-2.36	.02	-2.905	-.257	**
rdbysales	1.78	10.175	0.17	.861	-18.3	21.86	
opefficiency_	-10.174	2.945	-3.45	.001	-15.986	-4.362	***
BB_3Y_DEFAULT_PROB	-42.104	18.008	-2.34	.02	-77.639	-6.568	**
UNLEVERED_BETA	.032	.019	1.74	.083	-.004	.069	*
2015b	0	.	.	.	.	.	
2016	-.373	.941	-0.40	.692	-2.23	1.484	
2017	.017	.877	0.02	.985	-1.714	1.748	
2018	.193	.885	0.22	.828	-1.554	1.94	
2019	1.57	.862	1.82	.07	-.13	3.271	*
2020	1.417	1.039	1.36	.174	-.633	3.467	
2021	-.961	1.118	-0.86	.391	-3.168	1.245	
2022o	0	.	.	.	.	.	
Constant	7.759	14.653	0.53	.597	-21.156	36.674	
Mean dependent var		16.545	SD dependent var		9.883		
R-squared		0.431	Number of obs		242		
F-test		6.118	Prob > F		0.000		
Akaike crit. (AIC)		1262.897	Bayesian crit. (BIC)		1343.143		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.35 Stata Regression Results: The Effect of E, S, G on Operating Profit Margin in the Communications Industry

: Industry_n = Communications

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.061	.083	0.74	.47	-.113	.236	
SOCIAL_DISCL OSURE_~E	-.202	.116	-1.74	.098	-.445	.041	*
GOVNCE_DISC LOSURE_~E	-.055	.194	-0.28	.78	-.46	.35	
Intotalassets	.975	1.86	0.52	.606	-2.918	4.868	
firmage_	.292	.5	0.58	.566	-.755	1.34	
TOT_DEBT_TO_ TOT_EQY	0	.02	0.02	.982	-.041	.042	
capitalintensity	-33.9	23.515	-1.44	.166	-83.117	15.318	
cashflowbysale	2.426	7.071	0.34	.735	-12.374	17.227	
TOT_MKT_VAL	0	0	0.50	.622	0	0	
financialslack	-.055	.488	-0.11	.911	-1.077	.966	
Internationalisatio n	.043	.13	0.33	.747	-.23	.315	
NUMBER_OF_ WOMEN_DI~D	.657	.872	0.75	.461	-1.168	2.481	
o	0	.	.	.	.	.	
opefficiency_	-81.714	9.906	-8.25	0	-102.448	-60.981	***
BB_3Y_DEFAU LT_PROB	5.347	21.149	0.25	.803	-38.918	49.612	
UNLEVERED_B ETA	.055	.072	0.76	.456	-.096	.205	
2015b	0	.	.	.	.	.	
2016	1.75	1.151	1.52	.145	-.659	4.16	
2017	2.64	1.459	1.81	.086	-.415	5.695	*
2018	3.253	1.606	2.03	.057	-.108	6.615	*
2019	3.548	1.481	2.40	.027	.448	6.648	**
2020	3.327	2.053	1.62	.122	-.969	7.624	
2021	.378	1.988	0.19	.851	-3.782	4.539	
2022o	0	.	.	.	.	.	
Constant	70.173	19.677	3.57	.002	28.988	111.358	***
Mean dependent var	21.498		SD dependent var	13.808			
R-squared	0.940		Number of obs	50			
F-test	14.094		Prob > F	0.000			
Akaike crit. (AIC)	202.563		Bayesian crit. (BIC)	244.628			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.36 Stata Regression Results: The Effect of E, S, G on Operating Profit Margin in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.014	.024	-0.60	.546	-.061	.032	
SOCIAL_DISCLOSURE~E	.082	.041	1.98	.05	0	.163	*
GOVNCE_DISCLOSURE~E	.014	.046	0.30	.768	-.077	.105	
Intotalassets	4.086	1.258	3.25	.001	1.603	6.569	***
firmage_	-.915	.226	-4.04	0	-1.362	-.468	***
TOT_DEBT_TO_TOT_EQY	-.003	.006	-0.57	.569	-.016	.009	
capitalintensity	-13.154	7.307	-1.80	.074	-27.579	1.27	*
cashflowbysale	11.079	3.937	2.81	.005	3.306	18.852	***
TOT_MKT_VAL	0	0	3.10	.002	0	0	***
financialslack	.627	.379	1.66	.1	-.121	1.374	
Internationalisation	-.013	.016	-0.83	.409	-.045	.018	
NUMBER_OF_WOMEN_DIRECTORS	-.058	.392	-0.15	.882	-.831	.715	
rdbysales	-8.431	46.26	-0.18	.856	-99.752	82.89	
opefficiency_	-18.522	2.947	-6.29	0	-24.339	-12.704	***
BB_3Y_DEFAULT_PROB	-2.946	14.345	-0.20	.838	-31.265	25.372	
UNLEVERED_BETA	-.001	.008	-0.17	.863	-.016	.014	
2015b	0	.	.	.	.	.	
2016	.023	.686	0.03	.973	-1.331	1.378	
2017	-.464	.628	-0.74	.461	-1.705	.776	
2018	-.003	.616	-0.00	.997	-1.218	1.213	
2019	1.036	.599	1.73	.086	-.147	2.219	*
2020	-.155	.667	-0.23	.816	-1.472	1.162	
2021	-.586	.787	-0.75	.458	-2.14	.968	
2022o	0	.	.	.	.	.	
Constant	17.218	10.569	1.63	.105	-3.647	38.083	
Mean dependent var	10.747		SD dependent var		6.547		
R-squared	0.428		Number of obs		236		
F-test	5.753		Prob > F		0.000		
Akaike crit. (AIC)	1050.097		Bayesian crit. (BIC)		1129.765		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.37 Stata Regression Results: The Effect of E, S, G on Operating Profit Margin in the Consumer Non-cyclical Industry**: Industry_n = Consumer, Non-cyclical**

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.003	.012	-0.25	.807	-.026	.02	
SOCIAL_DISCLOSURE~E	.021	.016	1.34	.182	-.01	.051	
GOVNCE_DISCLOSURE~E	.024	.024	1.02	.307	-.022	.07	
Intotalassets	.764	.481	1.59	.114	-.184	1.712	
firmage_	.002	.025	0.07	.94	-.047	.05	
TOT_DEBT_TO_TOT_EQY	-.006	.004	-1.40	.163	-.013	.002	
capitalintensity	.319	3.01	0.11	.916	-5.607	6.245	
cashflowbysale	-1.826	1.249	-1.46	.145	-4.285	.633	
TOT_MKT_VAL	0	0	0.29	.773	0	0	
financialslack	-.146	.159	-0.92	.359	-.458	.167	
Internationalisation	-.002	.007	-0.23	.818	-.014	.011	
NUMBER_OF_WOMEN_DIRECT	.451	.147	3.06	.002	.161	.741	***
rdbysales	5.09	5.652	0.90	.369	-6.037	16.218	
opefficiency_	-89.646	2.063	-43.46	0	-93.707	-85.585	***
BB_3Y_DEFAULT_PROB	2.528	10.235	0.25	.805	-17.622	22.678	
UNLEVERED_BETA	.007	.005	1.41	.158	-.003	.016	
2015b	0	.	.	.	.	.	
2016	.513	.306	1.68	.095	-.089	1.116	*
2017	.077	.339	0.23	.82	-.59	.745	
2018	-.295	.39	-0.76	.45	-1.062	.472	
2019	-.5	.438	-1.14	.255	-1.363	.363	
2020	-.708	.487	-1.45	.147	-1.666	.251	
2021	-.807	.564	-1.43	.153	-1.917	.303	
2022	-1.001	.637	-1.57	.118	-2.256	.254	
Constant	81.079	5.775	14.04	0	69.71	92.448	***
Mean dependent var		18.696	SD dependent var		9.282		
R-squared		0.905	Number of obs		351		
F-test		112.965	Prob > F		0.000		
Akaike crit. (AIC)		1097.562	Bayesian crit. (BIC)		1190.221		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.38 Stata Regression Results: The Effect of E, S, G on Operating Profit Margin in the Energy Industry

: Industry_n = Energy

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.032	.025	1.28	.214	-.02	.083	
SOCIAL_DISCLOSURE~E	.047	.056	0.85	.403	-.067	.162	
GOVNCE_DISCLOSURE~E	-.057	.037	-1.53	.139	-.134	.02	
Intotalassets	-8.105	3.566	-2.27	.032	-15.464	-.745	**
firmage_	1.121	.369	3.04	.006	.36	1.881	***
TOT_DEBT_TO_TOT_EQY	.02	.009	2.19	.038	.001	.038	**
capitalintensity	-1.223	12.591	-0.10	.923	-27.209	24.762	
cashflowbysale	-5.805	3.91	-1.48	.151	-13.876	2.266	
TOT_MKT_VAL	0	0	0.92	.369	0	0	
financialslack	.848	.471	1.80	.084	-.123	1.82	*
Internationalisation	-.109	.054	-2.03	.054	-.221	.002	*
NUMBER_OF_WOMEN_DI~D	-1.092	.34	-3.21	.004	-1.795	-.39	***
rdbsales	791.371	578.009	1.37	.184	-401.58	1984.322	
opefficiency_	-98.799	8.253	-11.97	0	-115.832	-81.765	***
BB_3Y_DEFAULT_PROB	45.75	45.506	1.00	.325	-48.17	139.67	
UNLEVERED_BETA	.029	.074	0.39	.698	-.124	.182	
2015b	0	.	.	.	.	.	
2016	.557	.643	0.87	.395	-.771	1.884	
2017	.756	.635	1.19	.246	-.555	2.067	
2018	1.48	.674	2.20	.038	.09	2.871	**
2019	.777	.617	1.26	.22	-.495	2.05	
2020	-.116	.983	-0.12	.907	-2.145	1.912	
2021	-.862	1.286	-0.67	.509	-3.517	1.792	
2022o	0	.	.	.	.	.	
Constant	160.605	36.883	4.35	0	84.481	236.729	***
Mean dependent var	10.586		SD dependent var		7.122		
R-squared	0.955		Number of obs		55		
F-test	23.272		Prob > F		0.000		
Akaike crit. (AIC)	158.783		Bayesian crit. (BIC)		204.951		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.39 Stata Regression Results: The Effect of E, S, G on Operating Profit Margin in the Financial Industry

: Industry_n = Financial

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.158	.313	-0.50	.618	-.794	.479	
SOCIAL_DISCL OSURE_~E	.288	.526	0.55	.587	-.779	1.355	
GOVNCE_DISC LOSURE_~E	-.168	.666	-0.25	.802	-1.52	1.184	
Intotalassets	14.508	10.424	1.39	.173	-6.653	35.669	
firmage_	-1.992	2.109	-0.94	.351	-6.274	2.29	
TOT_DEBT_TO_ TOT_EQY	-.037	.056	-0.66	.515	-.15	.077	
capitalintensity	40.387	97.084	0.42	.68	-156.705	237.478	
cashflowbysale	-6.672	4.178	-1.60	.119	-15.154	1.809	
TOT_MKT_VAL	0	0	1.36	.184	0	0	
financialslack	-.141	.506	-0.28	.781	-1.169	.886	
Internationalisatio n	-.663	.303	-2.19	.035	-1.278	-.049	**
NUMBER_OF_ WOMEN_DI~D	-3.161	3.854	-0.82	.418	-10.985	4.663	
rdbysales	-272.035	472.831	-0.57	.569	-1231.933	687.864	
opefficiency_	-5.445	10.939	-0.50	.622	-27.653	16.763	
BB_3Y_DEFAU LT_PROB	32.474	101.698	0.32	.751	-173.985	238.932	
UNLEVERED_B ETA	.098	.275	0.36	.723	-.46	.656	
2015b	0	.	.	.	.	.	
2016	1.135	6.437	0.18	.861	-11.934	14.203	
2017	.485	6.987	0.07	.945	-13.7	14.67	
2018	2.011	7.002	0.29	.776	-12.204	16.226	
2019	-2.225	7.627	-0.29	.772	-17.707	13.258	
2020	10.598	9.266	1.14	.26	-8.212	29.408	
2021	4.704	9.806	0.48	.634	-15.202	24.611	
2022o	0	.	.	.	.	.	
Constant	-52.038	104.628	-0.50	.622	-264.443	160.367	
Mean dependent var		26.572		SD dependent var		17.937	
R-squared		0.557		Number of obs		69	
F-test		1.999		Prob > F		0.023	
Akaike crit. (AIC)		535.971		Bayesian crit. (BIC)		587.356	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.40 Stata Regression Results: The Effect of E, S, G on Operating Profit Margin in the Industrial Industry

: Industry_n = Industrial

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.044	.025	1.77	.078	-.005	.094	*
SOCIAL_DISCLOSURE~E	-.104	.043	-2.43	.016	-.188	-.02	**
GOVNCNCE_DISCLOSURE~E	-.05	.042	-1.19	.236	-.132	.033	
Intotalassets	4.739	1.192	3.98	0	2.393	7.085	***
firmage_	-.365	.175	-2.09	.038	-.71	-.021	**
TOT_DEBT_TO_TOT_EQY	-.025	.01	-2.48	.014	-.045	-.005	**
capitalintensity	-6.49	6.736	-0.96	.336	-19.751	6.771	
cashflowbysale	1.298	1.879	0.69	.49	-2.402	4.998	
TOT_MKT_VAL	0	0	-0.63	.529	0	0	
financialslack	-.528	.291	-1.81	.071	-1.101	.045	*
Internationalisation	-.002	.022	-0.07	.941	-.045	.042	
NUMBER_OF_WOMEN_DIRECTORS	.461	.381	1.21	.227	-.289	1.211	
rdbysales	-46.755	43.551	-1.07	.284	-132.494	38.984	
opefficiency_	-65.826	2.844	-23.15	0	-71.424	-60.227	***
BB_3Y_DEFAULT_PROB	-16.84	12.303	-1.37	.172	-41.061	7.382	
UNLEVERED_BETA	.04	.015	2.67	.008	.011	.07	***
2015b	0	.	.	.	.	.	
2016	-1.295	.621	-2.09	.038	-2.518	-.073	**
2017	.065	.58	0.11	.911	-1.077	1.207	
2018	.098	.564	0.17	.862	-1.013	1.209	
2019	.428	.574	0.75	.457	-.703	1.558	
2020	.499	.666	0.75	.454	-.811	1.81	
2021	-.683	.697	-0.98	.328	-2.056	.689	
2022o	0	.	.	.	.	.	
Constant	42.698	11.417	3.74	0	20.222	65.174	***
Mean dependent var		12.070		SD dependent var		7.970	
R-squared		0.742		Number of obs		365	
F-test		35.550		Prob > F		0.000	
Akaike crit. (AIC)		1728.905		Bayesian crit. (BIC)		1818.602	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.41 Stata Regression Results: The Effect of E, S, G on Operating Profit Margin in the Technology Industry

: Industry_n = Technology

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.026	.035	-0.73	.467	-.096	.045	
SOCIAL_DISCLO SURE_~E	.124	.054	2.29	.027	.015	.233	**
GOVNCE_DISCL OSURE_~E	.047	.098	0.48	.63	-.15	.244	
Intotalassets	1.654	2.385	0.69	.492	-3.163	6.471	
firmage_	-.16	.376	-0.42	.673	-.92	.6	
TOT_DEBT_TO_ TOT_EQY	-.019	.04	-0.47	.638	-.1	.062	
capitalintensity	-5.044	21.387	-0.24	.815	-48.236	38.149	
cashflowbysale	9.303	7.902	1.18	.246	-6.655	25.261	
TOT_MKT_VAL	0	0	-1.35	.184	0	0	
financialslack	.139	.349	0.40	.691	-.565	.843	
Internationalisation	-.001	.011	-0.07	.943	-.023	.021	
NUMBER_OF_W OMEN_DI~D	.102	.419	0.24	.809	-.744	.947	
rdbsales	-66.012	48.953	-1.35	.185	-164.875	32.851	
opefficiency_	-.669	2.26	-0.30	.769	-5.234	3.895	
BB_3Y_DEFAULT T_PROB	42.449	42.044	1.01	.319	-42.46	127.358	
UNLEVERED_BE TA	.004	.005	0.73	.471	-.007	.014	
2015b	0	.	.	.	.	.	
2016	-.378	.845	-0.45	.657	-2.085	1.329	
2017	-2.018	.905	-2.23	.031	-3.846	-.19	**
2018	-1.959	.93	-2.11	.041	-3.837	-.082	**
2019	-1.087	.889	-1.22	.229	-2.882	.709	
2020	-2.767	1.098	-2.52	.016	-4.984	-.55	**
2021	-.819	1.059	-0.77	.444	-2.957	1.319	
2022o	0	.	.	.	.	.	
Constant	-.87	22.681	-0.04	.97	-46.675	44.935	
Mean dependent var		17.896	SD dependent var		8.455		
R-squared		0.492	Number of obs		80		
F-test		1.808	Prob > F		0.032		
Akaike crit. (AIC)		303.224	Bayesian crit. (BIC)		358.011		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.42 Stata Regression Results: The Effect of E, S, G on Operating Profit Margin in the Utilities Industry

: Industry_n = Utilities

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.027	.045	0.61	.547	-.063	.118	
SOCIAL_DISCL OSURE_~E	.062	.075	0.83	.41	-.088	.212	
GOVNCE_DISC LOSURE_~E	.077	.116	0.67	.507	-.156	.311	
Intotalassets	1.645	2.694	0.61	.544	-3.78	7.07	
firmage_	-.506	.324	-1.56	.125	-1.158	.146	
TOT_DEBT_TO_ TOT_EQY	-.008	.01	-0.80	.428	-.028	.012	
capitalintensity	-19.325	16.512	-1.17	.248	-52.583	13.932	
cashflowbysale	1.828	2.439	0.75	.457	-3.084	6.74	
TOT_MKT_VAL	0	0	0.29	.774	0	0	
financialslack	2.029	.85	2.39	.021	.317	3.742	**
Internationalisatio n	.033	.084	0.39	.695	-.136	.202	
NUMBER_OF_ WOMEN_DI~D	.493	.393	1.25	.217	-.299	1.284	
rdbysales	609.394	588.123	1.04	.306	-575.146	1793.935	
opefficiency_	-88.894	4.966	-17.90	0	-98.896	-78.892	***
BB_3Y_DEFAU LT_PROB	8.366	22.859	0.37	.716	-37.674	54.406	
UNLEVERED_B ETA	-.001	.039	-0.04	.97	-.08	.077	
2015b	0	.	.	.	.	.	
2016	1.487	.952	1.56	.125	-.431	3.405	
2017	-.943	.99	-0.95	.346	-2.937	1.051	
2018	-.467	.941	-0.50	.622	-2.363	1.429	
2019	-.177	.841	-0.21	.834	-1.87	1.516	
2020	-.055	.887	-0.06	.951	-1.842	1.731	
2021	.322	.83	0.39	.7	-1.351	1.994	
2022o	0	.	.	.	.	.	
Constant	76.282	27.818	2.74	.009	20.254	132.31	***
Mean dependent var	23.372		SD dependent var		15.690		
R-squared	0.962		Number of obs		82		
F-test	52.079		Prob > F		0.000		
Akaike crit. (AIC)	332.758		Bayesian crit. (BIC)		388.113		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.43 Stata Regression Results: The Effect of ESG Combined Score on Net Profit Margin in the Basic Materials Industry**: Industry_n = Basic Materials**

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.04	.155	-0.26	.798	-.345	.266	
Intotalassets	-13.795	5.084	-2.71	.007	-23.826	-3.764	***
firmage_	1.889	.777	2.43	.016	.356	3.422	**
TOT_DEBT_TO_TOT_EQY	.002	.003	0.75	.453	-.003	.007	
capitalintensity	10.842	24.515	0.44	.659	-37.532	59.215	
cashflowbysale	-17.609	9.36	-1.88	.062	-36.079	.86	*
TOT_MKT_VAL	0	0	0.84	.401	0	0	
financialslack	2.68	1	2.68	.008	.706	4.654	***
Internationalisation	.023	.091	0.25	.8	-.156	.203	
NUMBER_OF_WOMEN_DIRECTORS	-3.142	2.098	-1.50	.136	-7.282	.999	
rdbysales	-11.382	31.78	-0.36	.721	-74.091	51.326	
opefficiency_	-20.603	9.129	-2.26	.025	-38.617	-2.589	**
BB_3Y_DEFAULT_PROB	-79.97	54.377	-1.47	.143	-187.267	27.328	
UNLEVERED_BETA	-.004	.058	-0.06	.951	-.117	.11	
2015b	0	.	.	.	.	.	
2016	2.2	2.944	0.75	.456	-3.61	8.01	
2017	-2.127	2.72	-0.78	.435	-7.494	3.24	
2018	-1.777	2.663	-0.67	.506	-7.032	3.479	
2019	3.545	2.599	1.36	.174	-1.584	8.674	
2020	4.137	3.164	1.31	.193	-2.107	10.381	
2021	.502	3.482	0.14	.885	-6.369	7.374	
2022o	0	.	.	.	.	.	
Constant	80.56	44.874	1.79	.074	-7.987	169.107	*
Mean dependent var		12.591			SD dependent var	14.195	
R-squared		0.143			Number of obs	242	
F-test		1.501			Prob > F	0.021	
Akaike crit. (AIC)		1813.668			Bayesian crit. (BIC)	1886.936	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.44 Stata Regression Results: The Effect of ESG Combined Score on Net Profit Margin in the Communications Industry

: Industry_n = Communications

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-2.558	6.02	-0.42	.675	-15.078	9.962	
Intotalassets	277.025	66.725	4.15	0	138.263	415.787	***
firmage_	-1.954	17.183	-0.11	.911	-37.688	33.78	
TOT_DEBT_TO_TOT_EQY	-1.057	.623	-1.70	.104	-2.352	.238	
capitalintensity	-331.082	836.545	-0.40	.696	-2070.774	1408.609	
cashflowbysale	173.038	253.991	0.68	.503	-355.166	701.242	
TOT_MKT_VAL	0	0	-1.01	.324	0	0	
financialslack	.373	15.4	0.02	.981	-31.653	32.399	
Internationalisation	-4.213	4.639	-0.91	.374	-13.86	5.434	
NUMBER_OF_WOMEN_DIVERD	25.187	31.164	0.81	.428	-39.621	89.995	
o	0	.	.	.	.	.	
opefficiency_	-119.98	352.696	-0.34	.737	-853.451	613.491	
BB_3Y_DEFAULT_PROB	259.986	761.857	0.34	.736	-1324.382	1844.353	
UNLEVERED_BETA	-3.521	2.457	-1.43	.167	-8.63	1.589	
2015b	0	.	.	.	.	.	
2016	23.827	40.757	0.58	.565	-60.932	108.587	
2017	13.856	49.468	0.28	.782	-89.018	116.729	
2018	-13.017	51.497	-0.25	.803	-120.11	94.076	
2019	-63.519	48.095	-1.32	.201	-163.538	36.5	
2020	-103.486	67.831	-1.53	.142	-244.548	37.576	
2021	-74.157	71.458	-1.04	.311	-222.762	74.449	
2022o	0	.	.	.	.	.	
Constant	-2834.689	626.961	-4.52	0	-4138.526	-1530.851	***
Mean dependent var	36.121		SD dependent var	112.862			
R-squared	0.804		Number of obs	50			
F-test	4.526		Prob > F	0.000			
Akaike crit. (AIC)	562.016		Bayesian crit. (BIC)	600.257			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.45 Stata Regression Results: The Effect of ESG Combined Score on Net Profit Margin in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.069	.04	1.70	.091	-.011	.148	*
Intotalassets	2.151	1.047	2.06	.041	.085	4.218	**
firmage_	-.175	.187	-0.94	.351	-.544	.194	
TOT_DEBT_TO_TOT_EQY	-.013	.005	-2.69	.008	-.023	-.004	***
capitalintensity	-23.985	5.958	-4.03	0	-35.745	-12.224	***
cashflowbysale	8.839	3.255	2.72	.007	2.414	15.264	***
TOT_MKT_VAL	0	0	0.56	.579	0	0	
financialslack	1.168	.316	3.70	0	.545	1.792	***
Internationalisation	-.008	.013	-0.60	.55	-.034	.018	
NUMBER_OF_WOMEN_DIVERD	-.088	.324	-0.27	.786	-.727	.551	
rdbysales	-54.423	38.431	-1.42	.159	-130.283	21.437	
opefficiency_	-11.493	2.457	-4.68	0	-16.342	-6.644	***
BB_3Y_DEFAULT_PROB	-7.176	11.916	-0.60	.548	-30.698	16.345	
UNLEVERED_BETA	-.01	.006	-1.55	.123	-.022	.003	
2015b	0	.	.	.	.	.	
2016	.518	.573	0.91	.367	-.612	1.649	
2017	.445	.524	0.85	.397	-.589	1.479	
2018	.542	.513	1.06	.292	-.471	1.555	
2019	.203	.492	0.41	.68	-.769	1.175	
2020	.084	.548	0.15	.878	-.997	1.165	
2021	-.395	.652	-0.61	.545	-1.683	.892	
2022o	0	.	.	.	.	.	
Constant	-3.626	8.436	-0.43	.668	-20.277	13.025	
Mean dependent var	7.673		SD dependent var		5.482		
R-squared	0.375		Number of obs		236		
F-test	5.120		Prob > F		0.000		
Akaike crit. (AIC)	963.854		Bayesian crit. (BIC)		1036.594		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.46 Stata Regression Results: The Effect of ESG Combined Score on Net Profit Margin in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.012	.043	0.27	.786	-.073	.096	
Intotalassets	3.169	1.263	2.51	.013	.683	5.656	**
firmage_	.051	.065	0.79	.432	-.077	.179	
TOT_DEBT_TO_TOT_EQY	-.023	.01	-2.17	.031	-.043	-.002	**
capitalintensity	1.78	7.916	0.23	.822	-13.804	17.364	
cashflowbysale	-.997	3.287	-0.30	.762	-7.468	5.473	
TOT_MKT_VAL	0	0	-1.16	.248	0	0	
financialslack	.457	.413	1.11	.27	-.357	1.27	
Internationalisation	-.023	.017	-1.36	.174	-.057	.01	
NUMBER_OF_WOMEN_DIRECTORS	.785	.387	2.03	.043	.023	1.547	**
rdbysales	2.197	14.811	0.15	.882	-26.959	31.354	
opefficiency_	-75.976	5.36	-14.17	0	-86.528	-65.424	***
BB_3Y_DEFAULT_PROB	-1.851	26.942	-0.07	.945	-54.889	51.187	
UNLEVERED_BETA	.007	.013	0.56	.579	-.018	.032	
2015b	0	.	.	.	.	.	
2016	-.41	.805	-0.51	.611	-1.995	1.174	
2017	.049	.891	0.06	.956	-1.706	1.804	
2018	-1.871	1.022	-1.83	.068	-3.882	.14	*
2019	-1.892	1.146	-1.65	.1	-4.148	.363	
2020	-2.099	1.274	-1.65	.101	-4.606	.409	
2021	-2.474	1.481	-1.67	.096	-5.39	.442	*
2022	-1.849	1.677	-1.10	.271	-5.15	1.453	
Constant	38.621	14.597	2.65	.009	9.884	67.357	***
Mean dependent var	14.207		SD dependent var	8.471			
R-squared	0.522		Number of obs	351			
F-test	14.323		Prob > F	0.000			
Akaike crit. (AIC)	1775.682		Bayesian crit. (BIC)	1860.620			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.47 Stata Regression Results: The Effect of ESG Combined Score on Net Profit Margin in the Energy Industry**: Industry_n = Energy**

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.066	.06	1.10	.281	-.058	.19	
Intotalassets	-3.515	3.761	-0.94	.359	-11.246	4.215	
firmage_	.357	.379	0.94	.356	-.423	1.136	
TOT_DEBT_TO_TOT_EQY	-.003	.009	-0.39	.703	-.021	.015	
capitalintensity	21.315	13.245	1.61	.12	-5.91	48.541	
cashflowbysale	-7.443	4.161	-1.79	.085	-15.997	1.11	*
TOT_MKT_VAL	0	0	-0.19	.853	0	0	
financialslack	.195	.48	0.41	.688	-.791	1.181	
Internationalisation	-.108	.058	-1.86	.075	-.227	.012	*
NUMBER_OF_WOMEN_DIRECTORS	-.349	.367	-0.95	.349	-1.103	.404	
rdbysales	4.087	573.449	0.01	.994	-1174.653	1182.828	
opefficiency_	-67.137	7.986	-8.41	0	-83.552	-50.721	***
BB_3Y_DEFAULT_PROB	-3.963	48.417	-0.08	.935	-103.485	95.56	
UNLEVERED_BETA	-.017	.071	-0.24	.81	-.164	.129	
2015b	0	.	.	.	.	.	
2016	-.799	.672	-1.19	.245	-2.18	.581	
2017	-.727	.632	-1.15	.26	-2.026	.572	
2018	-.286	.658	-0.43	.668	-1.638	1.067	
2019	-.661	.621	-1.06	.297	-1.938	.616	
2020	-.181	1.053	-0.17	.865	-2.346	1.984	
2021	-.253	1.294	-0.20	.847	-2.913	2.407	
2022o	0	.	.	.	.	.	
Constant	102.064	38.999	2.62	.015	21.9	182.228	**
Mean dependent var	8.304	SD dependent var	6.316				
R-squared	0.905	Number of obs	55				
F-test	12.369	Prob > F	0.000				
Akaike crit. (AIC)	167.826	Bayesian crit. (BIC)	209.980				

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.48 Stata Regression Results: The Effect of ESG Combined Score on Net Profit Margin in the Financial Industry

: Industry_n = Financial

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.584	.686	-0.85	.4	-1.974	.805	
Intotalassets	13.401	9.446	1.42	.164	-5.737	32.54	
firmage_	-.545	1.772	-0.31	.76	-4.135	3.045	
TOT_DEBT_TO_TOT_EQY	-.062	.053	-1.17	.25	-.17	.046	
capitalintensity	-118.516	93.447	-1.27	.213	-307.857	70.826	
cashflowbysale	.527	4.02	0.13	.896	-7.618	8.673	
TOT_MKT_VAL	0	0	1.64	.109	0	0	
financialslack	-.549	.455	-1.21	.235	-1.471	.372	
Internationalisation	.217	.271	0.80	.428	-.332	.766	
NUMBER_OF_WOMEN_DIRECTORS	-4.957	3.687	-1.35	.187	-12.427	2.513	
rdbysales	1612.539	444.268	3.63	.001	712.367	2512.71	***
opefficiency_	-9.836	10.274	-0.96	.345	-30.653	10.98	
BB_3Y_DEFAULT_PROB	-112.278	94.421	-1.19	.242	-303.593	79.037	
UNLEVERED_BETA	-.185	.259	-0.71	.481	-.709	.34	
2015b	0	.	.	.	.	.	
2016	.59	6.028	0.10	.923	-11.625	12.805	
2017	6.097	6.475	0.94	.352	-7.022	19.216	
2018	11.033	6.522	1.69	.099	-2.181	24.247	*
2019	4.845	7.185	0.67	.504	-9.714	19.404	
2020	10.841	8.918	1.22	.232	-7.229	28.911	
2021	5.558	9.417	0.59	.559	-13.523	24.639	
2022o	0	.	.	.	.	.	
Constant	-90.906	99.74	-0.91	.368	-292.999	111.186	
Mean dependent var	18.148		SD dependent var	17.627			
R-squared	0.501		Number of obs	69			
F-test	1.859		Prob > F	0.036			
Akaike crit. (AIC)	530.800		Bayesian crit. (BIC)	577.717			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.49 Stata Regression Results: The Effect of ESG Combined Score on Net Profit Margin in the Industrial Industry**: Industry_n = Industrial**

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.06	.045	-1.34	.18	-.149	.028	
Intotalassets	4.399	1.254	3.51	.001	1.93	6.868	***
firmage_	-.455	.183	-2.48	.014	-.816	-.094	**
TOT_DEBT_TO_TOT_EQY	-.039	.011	-3.64	0	-.06	-.018	***
capitalintensity	-13.351	7.133	-1.87	.062	-27.393	.692	*
cashflowbysale	-3.8	1.986	-1.91	.057	-7.709	.11	*
TOT_MKT_VAL	0	0	-0.76	.449	0	0	
financialslack	.365	.307	1.19	.235	-.239	.969	
Internationalisation	.014	.023	0.59	.556	-.032	.06	
NUMBER_OF_WOMEN_DIRECTORS	.278	.404	0.69	.491	-.516	1.073	
rdbysales	16.554	45.643	0.36	.717	-73.301	106.409	
opefficiency_	-44.542	3.01	-14.80	0	-50.468	-38.616	***
BB_3Y_DEFAULT_PROB	-21.852	13.003	-1.68	.094	-47.452	3.747	*
UNLEVERED_BETA	.029	.016	1.83	.068	-.002	.06	*
2015b	0	.	.	.	.	.	
2016	-.293	.657	-0.45	.656	-1.587	1	
2017	-.121	.614	-0.20	.844	-1.33	1.088	
2018	-.879	.597	-1.47	.142	-2.055	.297	
2019	-.837	.603	-1.39	.167	-2.025	.351	
2020	.255	.699	0.36	.715	-1.12	1.63	
2021	-.294	.735	-0.40	.689	-1.741	1.153	
2022o	0	.	.	.	.	.	
Constant	24.325	11.445	2.13	.034	1.794	46.857	**
Mean dependent var	8.500		SD dependent var		6.134		
R-squared	0.557		Number of obs		365		
F-test	17.247		Prob > F		0.000		
Akaike crit. (AIC)	1771.361		Bayesian crit. (BIC)		1853.259		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.50 Stata Regression Results: The Effect of ESG Combined Score on Net Profit Margin in the Technology Industry

: Industry_n = Technology

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.021	.063	0.34	.737	-.105	.148	
Intotalassets	4.586	2.133	2.15	.037	.286	8.887	**
firmage_	-.361	.313	-1.15	.255	-.993	.271	
TOT_DEBT_TO_TOT_EQY	-.061	.035	-1.73	.091	-.132	.01	*
capitalintensity	12.38	18.024	0.69	.496	-23.969	48.73	
cashflowbysale	12.227	6.976	1.75	.087	-1.843	26.296	*
TOT_MKT_VAL	0	0	-2.14	.038	0	0	**
financialslack	.135	.305	0.44	.659	-.48	.75	
Internationalisation	-.005	.01	-0.51	.612	-.025	.015	
NUMBER_OF_WOMEN_DIVERD	-.232	.36	-0.64	.523	-.958	.494	
rdbysales	-107.328	41.065	-2.61	.012	-190.143	-24.512	**
opefficiency_	.723	1.961	0.37	.714	-3.233	4.678	
BB_3Y_DEFAULT_PROB	1.643	37.385	0.04	.965	-73.752	77.037	
UNLEVERED_BETA	-.003	.005	-0.56	.578	-.012	.007	
2015b	0	.	.	.	.	.	
2016	-.684	.757	-0.91	.371	-2.21	.841	
2017	-1.62	.748	-2.17	.036	-3.128	-.111	**
2018	-1.159	.771	-1.50	.14	-2.715	.397	
2019	-1.078	.752	-1.43	.159	-2.595	.439	
2020	-2.133	.925	-2.31	.026	-3.999	-.267	**
2021	-1.394	.927	-1.50	.14	-3.263	.475	
2022o	0	.	.	.	.	.	
Constant	-24.881	18.175	-1.37	.178	-61.535	11.774	
Mean dependent var	14.450		SD dependent var		6.424		
R-squared	0.490		Number of obs		80		
F-test	2.062		Prob > F		0.012		
Akaike crit. (AIC)	285.559		Bayesian crit. (BIC)		335.581		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.51 Stata Regression Results: The Effect of ESG Combined Score on Net Profit Margin in the Utilities Industry

: Industry_n = Utilities

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.046	.164	-0.28	.779	-.376	.284	
lntotalassets	-4.029	4.397	-0.92	.364	-12.876	4.817	
firmage_	.396	.57	0.69	.491	-.75	1.542	
TOT_DEBT_TO_TOT_EQY	-.018	.017	-1.06	.294	-.053	.016	
capitalintensity	-59.224	28.299	-2.09	.042	-116.153	-2.294	**
cashflowbysale	4.228	4.182	1.01	.317	-4.185	12.641	
TOT_MKT_VAL	0	0	1.45	.153	0	0	
financialslack	2.276	1.491	1.53	.134	-.724	5.275	
Internationalisation	.088	.142	0.62	.54	-.198	.373	
NUMBER_OF_WOMEN_DIVERD	.164	.683	0.24	.811	-1.209	1.537	
rdbysales	1287.382	888.119	1.45	.154	-499.282	3074.047	
opefficiency_	-61.487	7.894	-7.79	0	-77.368	-45.606	***
BB_3Y_DEFAULT_PROB	27.242	39.227	0.69	.491	-51.673	106.157	
UNLEVERED_BETA	.011	.069	0.16	.877	-.129	.15	
2015b	0	.	.	.	.	.	
2016	-.16	1.685	-0.10	.925	-3.551	3.23	
2017	-.597	1.742	-0.34	.733	-4.102	2.908	
2018	-.49	1.644	-0.30	.767	-3.797	2.817	
2019	.116	1.464	0.08	.937	-2.829	3.061	
2020	.165	1.557	0.11	.916	-2.967	3.296	
2021	1.746	1.453	1.20	.236	-1.177	4.669	
2022o	0	.	.	.	.	.	
Constant	93.425	44.628	2.09	.042	3.645	183.206	**
Mean dependent var	13.465		SD dependent var		10.836		
R-squared	0.824		Number of obs		82		
F-test	11.034		Prob > F		0.000		
Akaike crit. (AIC)	426.100		Bayesian crit. (BIC)		476.641		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.52 Stata Regression Results: The Effect of E, S, G on Net Profit Margin in the Basic Materials Industry**: Industry_n = Basic Materials**

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.032	.12	-0.27	.79	-.269	.205	
SOCIAL_DISCLOSURE~E	.116	.207	0.56	.576	-.292	.523	
GOVNCE_DISCLOSURE~E	-.208	.18	-1.16	.249	-.564	.147	
Intotalassets	-14.02	5.097	-2.75	.007	-24.079	-3.961	***
firmage_	1.946	.789	2.46	.015	.388	3.504	**
TOT_DEBT_TO_TOT_EQY	.001	.003	0.51	.614	-.004	.006	
capitalintensity	8.875	24.622	0.36	.719	-39.714	57.464	
cashflowbysale	-16.78	9.402	-1.78	.076	-35.334	1.775	*
TOT_MKT_VAL	0	0	0.81	.421	0	0	
financialslack	2.613	1.012	2.58	.011	.616	4.61	**
Internationalisation	.038	.093	0.40	.687	-.146	.221	
NUMBER_OF_WOMEN_DI~D	-3.182	2.102	-1.51	.132	-7.33	.967	
rdbysales	-9.617	31.891	-0.30	.763	-72.549	53.316	
opefficiency_	-19.3	9.231	-2.09	.038	-37.516	-1.084	**
BB_3Y_DEFAULT_PROB	-64.303	56.438	-1.14	.256	-175.676	47.07	
UNLEVERED_BETA	.002	.058	0.03	.977	-.113	.116	
2015b	0	.	.	.	.	.	
2016	2.242	2.95	0.76	.448	-3.579	8.063	
2017	-2.258	2.75	-0.82	.413	-7.684	3.168	
2018	-1.661	2.775	-0.60	.55	-7.136	3.815	
2019	3.739	2.7	1.39	.168	-1.59	9.068	
2020	3.945	3.256	1.21	.227	-2.48	10.369	
2021	.155	3.504	0.04	.965	-6.761	7.07	
2022o	0	.	.	.	.	.	
Constant	91.256	45.923	1.99	.048	.633	181.879	**
Mean dependent var		12.591	SD dependent var		14.195		
R-squared		0.150	Number of obs		242		
F-test		1.423	Prob > F		0.038		
Akaike crit. (AIC)		1815.792	Bayesian crit. (BIC)		1896.038		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.53 Stata Regression Results: The Effect of E, S, G on Net Profit Margin in the Communications Industry

: Industry_n = Communications

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-5.636	2.386	-2.36	.029	-10.63	-.643	**
SOCIAL_DISCL OSURE_~E	5.265	3.318	1.59	.129	-1.68	12.21	
GOVNCE_DISC LOSURE_~E	16.725	5.542	3.02	.007	5.125	28.326	***
Intotalassets	259.641	53.231	4.88	0	148.228	371.054	***
firmage_	-15.42	14.321	-1.08	.295	-45.395	14.555	
TOT_DEBT_TO_ TOT_EQY	-1.946	.567	-3.43	.003	-3.132	-.76	***
capitalintensity	-735.893	672.939	-1.09	.288	-2144.371	672.585	
cashflowbysale	215.625	202.366	1.07	.3	-207.932	639.182	
TOT_MKT_VAL	0	0	-0.35	.729	0	0	
financialslack	-24.454	13.969	-1.75	.096	-53.691	4.784	*
Internationalisatio n	-6.032	3.722	-1.62	.122	-13.821	1.758	
NUMBER_OF_ WOMEN_DI~D	35.726	24.946	1.43	.168	-16.487	87.94	
o	0	.	.	.	.	.	
opefficiency_	-247.971	283.483	-0.88	.393	-841.309	345.367	
BB_3Y_DEFAU LT_PROB	234.695	605.227	0.39	.702	-1032.06	1501.45	
UNLEVERED_B ETA	-5.789	2.054	-2.82	.011	-10.089	-1.489	**
2015b	0	.	.	.	.	.	
2016	46.758	32.938	1.42	.172	-22.183	115.699	
2017	.538	41.766	0.01	.99	-86.879	87.955	
2018	-78.661	45.959	-1.71	.103	-174.853	17.532	
2019	-106.444	42.389	-2.51	.021	-195.165	-17.724	**
2020	-141.692	58.746	-2.41	.026	-264.649	-18.735	**
2021	-89.083	56.889	-1.57	.134	-208.153	29.987	
2022o	0	.	.	.	.	.	
Constant	-3603.79	563.116	-6.40	0	-4782.404	-2425.175	***
Mean dependent var		36.121		SD dependent var		112.862	
R-squared		0.888		Number of obs		50	
F-test		7.173		Prob > F		0.000	
Akaike crit. (AIC)		537.965		Bayesian crit. (BIC)		580.030	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.54 Stata Regression Results: The Effect of E, S, G on Net Profit Margin in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.009	.02	-0.46	.645	-.048	.03	
SOCIAL_DISCL OSURE~E	.094	.034	2.74	.007	.026	.161	***
GOVNCE_DISC LOSURE~E	.026	.038	0.69	.491	-.049	.101	
Intotalassets	2.03	1.041	1.95	.053	-.025	4.084	*
firmage_	-.216	.187	-1.15	.251	-.585	.154	
TOT_DEBT_TO_ TOT_EQY	-.011	.005	-2.11	.037	-.021	-.001	**
capitalintensity	-22.299	6.045	-3.69	0	-34.232	-10.367	***
cashflowbysale	8.602	3.257	2.64	.009	2.171	15.032	***
TOT_MKT_VAL	0	0	0.56	.578	0	0	
financialslack	1.17	.313	3.73	0	.552	1.788	***
Internationalisatio n	-.01	.013	-0.78	.434	-.037	.016	
NUMBER_OF_ WOMEN_DI~D	-.187	.324	-0.58	.565	-.826	.453	
rdbysales	-60.978	38.269	-1.59	.113	-136.524	14.568	
opefficiency_	-11.764	2.438	-4.83	0	-16.576	-6.951	***
BB_3Y_DEFAU LT_PROB	-5.492	11.867	-0.46	.644	-28.918	17.935	
UNLEVERED_B ETA	-.01	.006	-1.65	.101	-.023	.002	
2015b	0	.	.	.	.	.	
2016	.568	.568	1.00	.319	-.553	1.688	
2017	.368	.52	0.71	.48	-.658	1.394	
2018	.598	.509	1.18	.242	-.407	1.604	
2019	.318	.496	0.64	.522	-.66	1.297	
2020	.111	.552	0.20	.841	-.979	1.2	
2021	-.371	.651	-0.57	.57	-1.656	.915	
2022o	0	.	.	.	.	.	
Constant	-1.131	8.744	-0.13	.897	-18.391	16.13	
Mean dependent var	7.673		SD dependent var		5.482		
R-squared	0.393		Number of obs		236		
F-test	4.984		Prob > F		0.000		
Akaike crit. (AIC)	960.587		Bayesian crit. (BIC)		1040.255		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.55 Stata Regression Results: The Effect of E, S, G on Net Profit Margin in the Consumer Non-cyclical Industry

: Industry_n = Consumer Non-cyclical

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.035	.03	-1.17	.244	-.094	.024	
SOCIAL_DISCL OSURE_~E	.091	.04	2.25	.025	.011	.17	**
GOVNCE_DISC LOSURE_~E	-.147	.061	-2.40	.017	-.267	-.027	**
Intotalassets	3.466	1.252	2.77	.006	1.002	5.93	***
firmage_	.04	.064	0.63	.531	-.086	.167	
TOT_DEBT_TO_ TOT_EQY	-.02	.01	-1.90	.058	-.04	.001	*
capitalintensity	.805	7.825	0.10	.918	-14.6	16.21	
cashflowbysale	-.783	3.247	-0.24	.81	-7.175	5.609	
TOT_MKT_VAL	0	0	-1.29	.198	0	0	
financialslack	.283	.412	0.69	.493	-.529	1.095	
Internationalisatio n	-.026	.017	-1.50	.135	-.059	.008	
NUMBER_OF_ WOMEN_DI~D	.864	.383	2.25	.025	.11	1.618	**
rdbysales	-1.988	14.693	-0.14	.892	-30.915	26.938	
opefficiency_	-78.255	5.362	-14.60	0	-88.811	-67.699	***
BB_3Y_DEFAU LT_PROB	-3.068	26.606	-0.12	.908	-55.448	49.312	
UNLEVERED_B ETA	.008	.013	0.65	.518	-.017	.033	
2015b	0	.	.	.	.	.	
2016	-.398	.796	-0.50	.618	-1.964	1.169	
2017	.056	.881	0.06	.95	-1.679	1.79	
2018	-1.791	1.013	-1.77	.078	-3.786	.204	*
2019	-1.773	1.139	-1.56	.121	-4.016	.47	
2020	-1.974	1.265	-1.56	.12	-4.465	.517	
2021	-2.373	1.465	-1.62	.106	-5.258	.511	
2022	-1.732	1.657	-1.04	.297	-4.994	1.53	
Constant	48.579	15.011	3.24	.001	19.026	78.132	***
Mean dependent var		14.207		SD dependent var		8.471	
R-squared		0.538		Number of obs		351	
F-test		13.809		Prob > F		0.000	
Akaike crit. (AIC)		1768.197		Bayesian crit. (BIC)		1860.856	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.56 Stata Regression Results: The Effect of E, S, G on Net Profit Margin in the Energy Industry

: Industry_n = Energy

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.033	.023	1.40	.173	-.015	.081	
SOCIAL_DISCL OSURE_~E	.153	.052	2.92	.007	.045	.261	***
GOVNCE_DISC LOSURE_~E	-.062	.035	-1.77	.089	-.134	.01	*
Intotalassets	-3.4	3.361	-1.01	.322	-10.336	3.536	
firmage_	.287	.347	0.82	.417	-.43	1.003	
TOT_DEBT_TO_ TOT_EQY	.007	.008	0.86	.397	-.01	.025	
capitalintensity	12.609	11.866	1.06	.299	-11.881	37.099	
cashflowbysale	-9.497	3.685	-2.58	.017	-17.103	-1.89	**
TOT_MKT_VAL	0	0	0.40	.69	0	0	
financialslack	.36	.444	0.81	.425	-.556	1.275	
Internationalisatio n	-.095	.051	-1.88	.072	-.2	.009	*
NUMBER_OF_ WOMEN_DI~D	-.268	.321	-0.83	.412	-.93	.394	
rdbysales	-306.367	544.745	-0.56	.579	-1430.666	817.933	
opefficiency_	-78.268	7.778	-10.06	0	-94.321	-62.215	***
BB_3Y_DEFAU LT_PROB	-4.165	42.887	-0.10	.923	-92.681	84.35	
UNLEVERED_B ETA	.078	.07	1.12	.275	-.066	.222	
2015b	0	.	.	.	.	.	
2016	-.296	.606	-0.49	.63	-1.547	.955	
2017	-.094	.599	-0.16	.877	-1.329	1.142	
2018	.586	.635	0.92	.365	-.724	1.896	
2019	-.045	.581	-0.08	.94	-1.244	1.155	
2020	-.098	.926	-0.11	.917	-2.01	1.814	
2021	.836	1.212	0.69	.497	-1.666	3.338	
2022o	0	.	.	.	.	.	
Constant	114.042	34.761	3.28	.003	42.299	185.785	***
Mean dependent var	8.304	SD dependent var	6.316				
R-squared	0.933	Number of obs	55				
F-test	15.280	Prob > F	0.000				
Akaike crit. (AIC)	152.263	Bayesian crit. (BIC)	198.432				

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.57 Stata Regression Results: The Effect of E, S, G on Net Profit Margin in the Financial Industry

: Industry_n = Financial

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.063	.303	0.21	.836	-.551	.677	
SOCIAL_DISCL OSURE_~E	-.42	.507	-0.83	.413	-1.45	.609	
GOVNCE_DISC LOSURE_~E	-.918	.643	-1.43	.162	-2.222	.387	
Intotalassets	13.089	10.058	1.30	.202	-7.331	33.508	
firmage_	.454	2.035	0.22	.825	-3.678	4.586	
TOT_DEBT_TO_ TOT_EQY	-.058	.054	-1.07	.293	-.167	.052	
capitalintensity	-124.593	93.683	-1.33	.192	-314.779	65.592	
cashflowbysale	.888	4.031	0.22	.827	-7.296	9.073	
TOT_MKT_VAL	0	0	1.52	.138	0	0	
financialslack	-.39	.488	-0.80	.429	-1.382	.601	
Internationalisatio n	.066	.292	0.23	.824	-.527	.658	
NUMBER_OF_ WOMEN_DI~D	-5.383	3.719	-1.45	.157	-12.933	2.167	
rdbysales	1701.282	456.264	3.73	.001	775.018	2627.547	***
opefficiency_	-8.296	10.556	-0.79	.437	-29.725	13.134	
BB_3Y_DEFAU LT_PROB	-122.41	98.135	-1.25	.221	-321.634	76.815	
UNLEVERED_B ETA	-.241	.265	-0.91	.371	-.779	.298	
2015b	0	.	.	.	.	.	
2016	2.072	6.212	0.33	.741	-10.538	14.683	
2017	8.488	6.742	1.26	.216	-5.2	22.175	
2018	13.481	6.757	2.00	.054	-.236	27.198	*
2019	6.961	7.359	0.95	.351	-7.98	21.901	
2020	11.588	8.941	1.30	.203	-6.563	29.739	
2021	6.422	9.462	0.68	.502	-12.787	25.632	
2022o	0	.	.	.	.	.	
Constant	-69.771	100.962	-0.69	.494	-274.734	135.192	
Mean dependent var	18.148		SD dependent var		17.627		
R-squared	0.528		Number of obs		69		
F-test	1.777		Prob > F		0.048		
Akaike crit. (AIC)	531.049		Bayesian crit. (BIC)		582.434		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.58 Stata Regression Results: The Effect of E, S, G on Net Profit Margin in the Industrial Industry**: Industry_n = Industrial**

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.003	.026	-0.10	.919	-.055	.049	
SOCIAL_DISCL OSURE_~E	-.011	.045	-0.24	.808	-.1	.078	
GOVNCE_DISC LOSURE_~E	-.106	.044	-2.39	.017	-.193	-.019	**
Intotalassets	4.117	1.26	3.27	.001	1.636	6.598	***
firmage_	-.422	.185	-2.28	.023	-.786	-.057	**
TOT_DEBT_TO_ TOT_EQY	-.038	.011	-3.59	0	-.059	-.017	***
capitalintensity	-14.378	7.122	-2.02	.044	-28.4	-.357	**
cashflowbysale	-3.952	1.987	-1.99	.048	-7.864	-.039	**
TOT_MKT_VAL	0	0	-0.68	.496	0	0	
financialslack	.406	.308	1.32	.188	-.2	1.012	
Internationalisatio n	.013	.023	0.54	.591	-.033	.059	
NUMBER_OF_ WOMEN_DI~D	.259	.403	0.64	.521	-.534	1.052	
rdbysales	1.431	46.049	0.03	.975	-89.228	92.089	
opefficiency_	-44.046	3.007	-14.65	0	-49.966	-38.127	***
BB_3Y_DEFAU LT_PROB	-20.704	13.009	-1.59	.113	-46.316	4.907	
UNLEVERED_B ETA	.031	.016	1.96	.051	0	.062	*
2015b	0	.	.	.	.	.	
2016	-.231	.657	-0.35	.725	-1.524	1.062	
2017	-.139	.613	-0.23	.821	-1.347	1.068	
2018	-.782	.597	-1.31	.191	-1.956	.393	
2019	-.657	.607	-1.08	.28	-1.852	.538	
2020	.473	.704	0.67	.502	-.913	1.858	
2021	-.216	.737	-0.29	.77	-1.667	1.236	
2022o	0	.	.	.	.	.	
Constant	31.395	12.072	2.60	.01	7.629	55.16	**
Mean dependent var	8.500		SD dependent var		6.134		
R-squared	0.564		Number of obs		365		
F-test	16.006		Prob > F		0.000		
Akaike crit. (AIC)	1769.632		Bayesian crit. (BIC)		1859.329		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.59 Stata Regression Results: The Effect of E, S, G on Net Profit Margin in the Technology Industry**: Industry_n = Technology**

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.055	.029	-1.89	.066	-.114	.004	*
SOCIAL_DISCL OSURE_~E	.097	.045	2.14	.038	.006	.189	**
GOVNCE_DISC LOSURE_~E	.133	.082	1.63	.112	-.032	.297	
Intotalassets	4.839	1.996	2.42	.02	.808	8.87	**
firmage_	-.535	.315	-1.70	.097	-1.171	.101	*
TOT_DEBT_TO_ TOT_EQY	-.058	.034	-1.71	.095	-.126	.01	*
capitalintensity	4.344	17.897	0.24	.809	-31.8	40.488	
cashflowbysale	9.908	6.612	1.50	.142	-3.446	23.262	
TOT_MKT_VAL	0	0	-2.49	.017	0	0	**
financialslack	.163	.292	0.56	.579	-.426	.752	
Internationalisatio n	-.003	.009	-0.30	.768	-.021	.016	
NUMBER_OF_ WOMEN_DI~D	-.273	.35	-0.78	.44	-.981	.434	
rdbysales	-65.6	40.964	-1.60	.117	-148.329	17.129	
opefficiency_	-.649	1.891	-0.34	.733	-4.469	3.17	
BB_3Y_DEFAU LT_PROB	12.842	35.183	0.36	.717	-58.211	83.894	
UNLEVERED_B ETA	-.003	.004	-0.64	.527	-.011	.006	
2015b	0	.	.	.	.	.	
2016	-.75	.707	-1.06	.295	-2.178	.678	
2017	-2.366	.757	-3.12	.003	-3.895	-.836	***
2018	-1.668	.778	-2.14	.038	-3.239	-.097	**
2019	-1.383	.744	-1.86	.07	-2.886	.119	*
2020	-2.294	.919	-2.50	.017	-4.149	-.439	**
2021	-1.268	.886	-1.43	.16	-3.056	.521	
2022o	0	.	.	.	.	.	
Constant	-32.172	18.98	-1.70	.098	-70.502	6.158	*
Mean dependent var	14.450		SD dependent var		6.424		
R-squared	0.576		Number of obs		80		
F-test	2.532		Prob > F		0.002		
Akaike crit. (AIC)	274.719		Bayesian crit. (BIC)		329.505		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.60 Stata Regression Results: The Effect of E, S, G on Net Profit Margin in the Utilities Industry

: Industry_n = Utilities

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.06	.081	-0.75	.459	-.222	.102	
SOCIAL_DISCLOSURE~E	.016	.134	0.12	.903	-.253	.286	
GOVNCNCE_DISCLOSURE~E	.159	.208	0.77	.447	-.259	.578	
Intotalassets	-5.216	4.828	-1.08	.286	-14.941	4.509	
firmage_	.452	.58	0.78	.44	-.716	1.62	
TOT_DEBT_TO_TOT_EQY	-.016	.018	-0.90	.376	-.052	.02	
capitalintensity	-61.643	29.6	-2.08	.043	-121.261	-2.026	**
cashflowbysale	4.72	4.372	1.08	.286	-4.085	13.526	
TOT_MKT_VAL	0	0	1.57	.123	0	0	
financialslack	2.368	1.524	1.55	.127	-.702	5.438	
Internationalisation	.056	.15	0.37	.711	-.246	.358	
NUMBER_OF_WOMEN_DIRECTORS	.031	.705	0.04	.965	-1.388	1.451	
rdbysales	1808.937	1054.277	1.72	.093	-314.485	3932.359	*
opefficiency_	-58.174	8.902	-6.54	0	-76.104	-40.244	***
BB_3Y_DEFAULT_PROB	18.586	40.977	0.45	.652	-63.946	101.118	
UNLEVERED_BETA	.007	.07	0.10	.923	-.134	.148	
2015b	0	.	.	.	.	.	
2016	-.112	1.707	-0.07	.948	-3.55	3.327	
2017	-.749	1.775	-0.42	.675	-4.324	2.827	
2018	-.679	1.687	-0.40	.689	-4.077	2.719	
2019	-.136	1.507	-0.09	.929	-3.171	2.899	
2020	-.029	1.59	-0.02	.986	-3.231	3.174	
2021	1.72	1.489	1.16	.254	-1.279	4.718	
2022o	0	.	.	.	.	.	
Constant	89.575	49.866	1.80	.079	-10.861	190.011	*
Mean dependent var		13.465		SD dependent var		10.836	
R-squared		0.828		Number of obs		82	
F-test		9.836		Prob > F		0.000	
Akaike crit. (AIC)		428.481		Bayesian crit. (BIC)		483.835	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.61 Stata Regression Results: The Effect of ESG Combined Score on Return on Assets in the Basic Materials Industry

: Industry_n = Basic Materials

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.029	.079	-0.36	.716	-.186	.128	
Intotalassets	-9.643	2.612	-3.69	0	-14.797	-4.489	***
firmage_	1.272	.399	3.19	.002	.485	2.06	***
TOT_DEBT_TO_TOT_EQY	.001	.001	1.07	.288	-.001	.004	
capitalintensity	5.081	12.596	0.40	.687	-19.774	29.936	
cashflowbysale	-4.829	4.809	-1.00	.317	-14.319	4.66	
TOT_MKT_VAL	0	0	1.90	.059	0	0	*
financialslack	1.501	.514	2.92	.004	.487	2.515	***
Internationalisation	.032	.047	0.68	.497	-.06	.124	
NUMBER_OF_WORKING_DAYS	-1.571	1.078	-1.46	.147	-3.699	.556	
rdbysales	-9.52	16.329	-0.58	.561	-41.74	22.701	
opefficiency_	-14.048	4.691	-3.00	.003	-23.303	-4.792	***
BB_3Y_DEFAULT_PROB	-61.685	27.939	-2.21	.029	-116.816	-6.554	**
UNLEVERED_BETA	.034	.03	1.13	.259	-.025	.092	
2015b	0	.	.	.	.	.	
2016	.76	1.513	0.50	.616	-2.225	3.746	
2017	-1.945	1.398	-1.39	.166	-4.703	.813	
2018	-1.667	1.368	-1.22	.225	-4.367	1.033	
2019	1.261	1.335	0.94	.346	-1.374	3.897	
2020	1.111	1.626	0.68	.495	-2.098	4.319	
2021	-1.484	1.789	-0.83	.408	-5.015	2.046	
2022o	0	.	.	.	.	.	
Constant	59.41	23.057	2.58	.011	13.914	104.906	**
Mean dependent var		10.311		SD dependent var		8.556	
R-squared		0.235		Number of obs		242	
F-test		2.768		Prob > F		0.000	
Akaike crit. (AIC)		1491.373		Bayesian crit. (BIC)		1564.641	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.62 Stata Regression Results: The Effect of ESG Combined Score on Return on Assets in the Communications Industry

: Industry n = Communications

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.289	.683	-0.42	.676	-1.71 1.131	
lntotalassets	28.501	7.57	3.77	.001	12.759 44.243	***
firmage_	-.632	1.949	-0.32	.749	-4.686 3.421	
TOT_DEBT_TO_TOT_EQY	-.103	.071	-1.46	.16	-.25 .044	
capitalintensity	-40.805	94.902	-0.43	.672	-238.164 156.555	
cashflowbysale	9.891	28.814	0.34	.735	-50.031 69.813	
TOT_MKT_VAL	0	0	-0.44	.666	0 0	
financialslack	.823	1.747	0.47	.642	-2.81 4.456	
Internationalisation	-.238	.526	-0.45	.655	-1.333 .856	
NUMBER_OF_WOMEN_DIRECTORS	4.267	3.535	1.21	.241	-3.085 11.619	
operational efficiency_	-74.584	40.012	-1.86	.076	-157.793 8.625	*
BB_3Y_DEFAULT_PROB	-44.59	86.429	-0.52	.611	-224.328 135.149	
UNLEVERED_BETA	-.341	.279	-1.22	.235	-.92 .239	
2015b	0	.	.	.	.	
2016	3.243	4.624	0.70	.491	-6.373 12.858	
2017	3.441	5.612	0.61	.546	-8.229 15.112	
2018	.451	5.842	0.08	.939	-11.698 12.6	
2019	-4.162	5.456	-0.76	.454	-15.509 7.185	
2020	-5.618	7.695	-0.73	.473	-21.621 10.385	
2021	-5.316	8.107	-0.66	.519	-22.174 11.543	
2022o	0	.	.	.	.	
Constant	-232.16	71.126	-3.26	.004	-380.074 -84.246	***
Mean dependent var	11.486	SD dependent var	14.888			
R-squared	0.818	Number of obs	50			
F-test	4.956	Prob > F	0.000			
Akaike crit. (AIC)	344.373	Bayesian crit. (BIC)	382.613			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.63 Stata Regression Results: The Effect of ESG Combined Score on Return on Assets in the Consumer Cyclical Industry**: Industry_n = Consumer Cyclical**

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig	
ESG_DISCLOSURE_SCORE	.032	.05	0.64	.52	-.066	.13	
Intotalassets	-1.441	1.286	-1.12	.264	-3.98	1.099	
firmage_	-.163	.23	-0.71	.479	-.616	.29	
TOT_DEBT_TO_TOT_EQY	-.015	.006	-2.41	.017	-.026	-.003	**
capitalintensity	-22.337	7.321	-3.05	.003	-36.789	-7.885	***
cashflowbysale	8.879	3.999	2.22	.028	.984	16.773	**
TOT_MKT_VAL	0	0	2.34	.02	0	0	**
financialslack	.835	.388	2.15	.033	.069	1.601	**
Internationalisation	-.002	.016	-0.14	.886	-.035	.03	
NUMBER_OF_WOMEN_DIRECTORS	.226	.398	0.57	.571	-.559	1.011	
rdbysales	-3.37	47.225	-0.07	.943	-96.589	89.85	
opefficiency_	-13.234	3.019	-4.38	0	-19.193	-7.276	***
BB_3Y_DEFAULT_PROB	-6.23	14.643	-0.42	.671	-35.133	22.674	
UNLEVERED_BETA	0	.008	-0.06	.951	-.016	.015	
2015b	0	.	.	.	.	.	
2016	.514	.704	0.73	.466	-.875	1.904	
2017	.322	.643	0.50	.617	-.948	1.592	
2018	.702	.63	1.11	.267	-.543	1.946	
2019	.814	.605	1.35	.181	-.381	2.008	
2020	-.126	.673	-0.19	.852	-1.454	1.203	
2021	-2.016	.802	-2.51	.013	-3.598	-.433	**
2022o	0	.	.	.	.	.	
Constant	39.416	10.366	3.80	0	18.954	59.877	***
Mean dependent var		8.896	SD dependent var			6.487	
R-squared		0.407	Number of obs			236	
F-test		5.866	Prob > F			0.000	
Akaike crit. (AIC)		1061.114	Bayesian crit. (BIC)			1133.855	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.64 Stata Regression Results: The Effect of ESG Combined Score on Return on Assets in the Consumer Non-cyclical Industry

: Industry_n = Consumer, Non-cyclical

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.091	.04	2.28	.023	.013	.17	**
Intotalassets	-6.656	1.178	-5.65	0	-8.975	-4.337	***
firmage_	.006	.061	0.10	.923	-.113	.125	
TOT_DEBT_TO_TOT_EQY	-.011	.01	-1.10	.272	-.03	.008	
capitalintensity	-12.197	7.382	-1.65	.1	-26.729	2.336	
cashflowbysale	2.514	3.065	0.82	.413	-3.521	8.548	
TOT_MKT_VAL	0	0	-0.02	.981	0	0	
financialslack	.263	.385	0.68	.496	-.496	1.021	
Internationalisation	-.015	.016	-0.91	.362	-.046	.017	
NUMBER_OF_WOMEN_DIRECTORS	1.144	.361	3.17	.002	.433	1.854	***
rdbysales	7.405	13.811	0.54	.592	-19.784	34.594	
opefficiency_	-66.059	4.998	-13.22	0	-75.899	-56.219	***
BB_3Y_DEFAULT_PROB	-.836	25.124	-0.03	.973	-50.296	48.623	
UNLEVERED_BETA	.022	.012	1.82	.069	-.002	.045	*
2015b	0	.	.	.	.	.	
2016	.246	.751	0.33	.744	-1.232	1.723	
2017	.238	.831	0.29	.775	-1.399	1.875	
2018	-.175	.953	-0.18	.854	-2.051	1.7	
2019	.217	1.068	0.20	.839	-1.886	2.321	
2020	.473	1.188	0.40	.691	-1.865	2.811	
2021	.279	1.381	0.20	.84	-2.441	2.998	
2022	2.547	1.564	1.63	.104	-.531	5.626	
Constant	133.369	13.612	9.80	0	106.571	160.166	***
Mean dependent var	12.739		SD dependent var		8.160		
R-squared	0.541		Number of obs		351		
F-test	15.442		Prob > F		0.000		
Akaike crit. (AIC)	1726.642		Bayesian crit. (BIC)		1811.579		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.65 Stata Regression Results: The Effect of ESG Combined Score on Return on Assets in the Energy Industry**: Industry_n = Energy**

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	.073	.072	1.02	.318	-.075 .221	
Intotalassets	-.124	4.48	-0.03	.978	-9.332 9.084	
firmage_	.079	.452	0.17	.863	-.849 1.007	
TOT_DEBT_TO_TOT_EQY	-.03	.01	-2.90	.008	-.051 -.009	***
capitalintensity	27.551	15.776	1.75	.093	-4.877 59.979	*
cashflowbysale	-3.034	4.956	-0.61	.546	-13.222 7.154	
TOT_MKT_VAL	0	0	-1.78	.087	0 0	*
financialslack	.312	.572	0.55	.59	-.863 1.486	
Internationalisation	-.057	.069	-0.83	.415	-.2 .085	
NUMBER_OF_WOMEN_DIRECTORS	.378	.437	0.86	.395	-.52 1.275	
rdbysales	-948.609	683.027	-1.39	.177	-2352.592 455.374	
opefficiency_	-45.21	9.512	-4.75	0	-64.762 -25.657	***
BB_3Y_DEFAULT_PROB	-78.758	57.669	-1.37	.184	-197.297 39.782	
UNLEVERED_BETA	-.042	.085	-0.50	.622	-.217 .132	
2015b	0	.	.	.	.	
2016	-.73	.8	-0.91	.37	-2.375 .915	
2017	.661	.753	0.88	.388	-.886 2.207	
2018	-.355	.784	-0.45	.655	-1.966 1.256	
2019	.424	.74	0.57	.571	-1.097 1.946	
2020	1.217	1.254	0.97	.341	-1.362 3.796	
2021	-.475	1.542	-0.31	.76	-3.644 2.694	
2022o	0	.	.	.	.	
Constant	49.301	46.451	1.06	.298	-46.181 144.783	
Mean dependent var	7.610		SD dependent var	3.759		
R-squared	0.845		Number of obs	55		
F-test	7.068		Prob > F	0.000		
Akaike crit. (AIC)	187.061		Bayesian crit. (BIC)	229.215		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.66 Stata Regression Results: The Effect of ESG Combined Score on Return on Assets in the Financial Industry

: Industry_n = Financial

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.052	.122	-0.43	.673	-.299	.195	
Intotalassets	3.116	1.682	1.85	.072	-.292	6.525	*
firmage_	-.457	.316	-1.45	.156	-1.096	.182	
TOT_DEBT_TO_TOT_EQY	-.013	.009	-1.42	.164	-.033	.006	
capitalintensity	-16.83	16.642	-1.01	.318	-50.549	16.89	
cashflowbysale	.47	.716	0.66	.515	-.98	1.921	
TOT_MKT_VAL	0	0	1.10	.279	0	0	
financialslack	-.093	.081	-1.14	.261	-.257	.072	
Internationalisation	-.025	.048	-0.53	.602	-.123	.072	
NUMBER_OF_WOMEN_DIRECTORS	-.547	.657	-0.83	.41	-1.878	.783	
rdbsales	350.171	79.119	4.43	0	189.862	510.481	***
opefficiency_	-1.906	1.83	-1.04	.304	-5.613	1.801	
BB_3Y_DEFAULT_PROB	-16.114	16.815	-0.96	.344	-50.185	17.957	
UNLEVERED_BETA	-.01	.046	-0.22	.831	-.103	.084	
2015b	0	.	.	.	.	.	
2016	-.138	1.074	-0.13	.899	-2.313	2.037	
2017	.888	1.153	0.77	.446	-1.448	3.224	
2018	1.92	1.161	1.65	.107	-.433	4.273	
2019	1.409	1.28	1.10	.278	-1.184	4.002	
2020	1.807	1.588	1.14	.262	-1.411	5.025	
2021	1.051	1.677	0.63	.535	-2.347	4.449	
2022o	0	.	.	.	.	.	
Constant	-12.015	17.763	-0.68	.503	-48.005	23.975	
Mean dependent var	3.387		SD dependent var	3.234			
R-squared	0.578		Number of obs	69			
F-test	2.530		Prob > F	0.004			
Akaike crit. (AIC)	292.685		Bayesian crit. (BIC)	339.601			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.67 Stata Regression Results: The Effect of ESG Combined Score on Return on Assets in the Industrial Industry**: Industry_n = Industrial**

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.027	.052	0.51	.609	-.076	.129	
Intotalassets	2.802	1.45	1.93	.054	-.053	5.657	*
firmage_	-.569	.212	-2.69	.008	-.986	-.152	***
TOT_DEBT_TO_TOT_EQY	-.037	.012	-2.98	.003	-.061	-.012	***
capitalintensity	1.565	8.234	0.19	.849	-14.644	17.775	
cashflowbysale	-1.291	2.294	-0.56	.574	-5.807	3.224	
TOT_MKT_VAL	0	0	-1.61	.108	0	0	
financialslack	.608	.354	1.72	.087	-.089	1.305	*
Internationalisation	-.021	.027	-0.79	.43	-.074	.032	
NUMBER_OF_WOMEN_DIRECTORS	.245	.466	0.53	.599	-.672	1.162	
rdbysales	-46.672	52.679	-0.89	.376	-150.382	57.037	
opefficiency_	-56.892	3.473	-16.38	0	-63.73	-50.053	***
BB_3Y_DEFAULT_PROB	-8.325	15.011	-0.56	.58	-37.877	21.227	
UNLEVERED_BETA	.054	.018	2.93	.004	.018	.09	***
2015b	0	.	.	.	.	.	
2016	-1.18	.758	-1.56	.121	-2.673	.313	
2017	-1.021	.713	-1.43	.153	-2.425	.382	
2018	-1.073	.689	-1.56	.121	-2.43	.284	
2019	.269	.696	0.39	.7	-1.102	1.639	
2020	-.134	.806	-0.17	.868	-1.721	1.453	
2021	-1.655	.848	-1.95	.052	-3.326	.015	*
2022o	0	.	.	.	.	.	
Constant	55.29	13.239	4.18	0	29.227	81.352	***
Mean dependent var	8.029		SD dependent var	7.110			
R-squared	0.588		Number of obs	364			
F-test	19.459		Prob > F	0.000			
Akaike crit. (AIC)	1870.560		Bayesian crit. (BIC)	1952.400			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.68 Stata Regression Results: The Effect of ESG Combined Score on Return on Assets in the Technology Industry

: Industry_n = Technology

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.016	.074	0.22	.83	-.133	.165	
Intotalassets	-7.114	2.505	-2.84	.007	-12.165	-2.063	***
firmage_	.969	.368	2.63	.012	.227	1.711	**
TOT_DEBT_TO_TOT_EQY	.02	.041	0.48	.631	-.064	.104	
capitalintensity	50.239	21.169	2.37	.022	7.549	92.93	**
cashflowbysale	-7.632	8.193	-0.93	.357	-24.156	8.891	
TOT_MKT_VAL	0	0	-1.63	.111	0	0	
financialslack	-.359	.358	-1.00	.321	-1.081	.363	
Internationalisation	-.001	.011	-0.07	.942	-.024	.022	
NUMBER_OF_WOMEN_DIRECTORS	-.617	.423	-1.46	.152	-1.469	.236	
rdbysales	-131.418	48.229	-2.73	.009	-228.68	-34.156	***
opefficiency_	2.02	2.304	0.88	.386	-2.626	6.665	
BB_3Y_DEFAULT_PROB	-89.552	43.907	-2.04	.048	-178.099	-1.005	**
UNLEVERED_BETA	.006	.005	1.19	.239	-.004	.017	
2015b	0	.	.	.	.	.	
2016	.567	.889	0.64	.527	-1.225	2.359	
2017	-.392	.878	-0.45	.657	-2.164	1.379	
2018	-1.395	.906	-1.54	.131	-3.222	.432	
2019	-.114	.884	-0.13	.898	-1.896	1.668	
2020	-2.606	1.086	-2.40	.021	-4.797	-.415	**
2021	-2.392	1.088	-2.20	.033	-4.587	-.197	**
2022o	0	.	.	.	.	.	
Constant	71.309	21.346	3.34	.002	28.261	114.358	***
Mean dependent var	15.997		SD dependent var	6.275			
R-squared	0.580		Number of obs	80			
F-test	2.966		Prob > F	0.000			
Akaike crit. (AIC)	311.286		Bayesian crit. (BIC)	361.309			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.69 Stata Regression Results: The Effect of ESG Combined Score on Return on Assets in the Utilities Industry**: Industry_n = Utilities**

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig	
ESG_DISCLOSURE_SCORE	-.188	.078	-2.41	.02	-.345	-.031	**
Intotalassets	-1.65	2.091	-0.79	.434	-5.857	2.558	
firmage_	.678	.271	2.50	.016	.133	1.223	**
TOT_DEBT_TO_TOT_EQY	-.007	.008	-0.89	.377	-.024	.009	
capitalintensity	-26.864	13.458	-2.00	.052	-53.939	.21	*
cashflowbysale	1.527	1.989	0.77	.446	-2.474	5.528	
TOT_MKT_VAL	0	0	0.18	.857	0	0	
financialslack	-.138	.709	-0.19	.847	-1.564	1.289	
Internationalisation	-.031	.067	-0.47	.644	-.167	.104	
NUMBER_OF_WOMEN_DIRECTORS	.54	.325	1.66	.103	-.113	1.193	
rdbysales	242.939	422.368	0.57	.568	-606.756	1092.634	
opefficiency_	.484	3.754	0.13	.898	-7.069	8.036	
BB_3Y_DEFAULT_PROB	3.446	18.656	0.19	.854	-34.084	40.976	
UNLEVERED_BETA	-.002	.033	-0.06	.953	-.068	.064	
2015b	0	.	.	.	.	.	
2016	.555	.802	0.69	.492	-1.057	2.168	
2017	.442	.829	0.53	.596	-1.225	2.109	
2018	.329	.782	0.42	.676	-1.243	1.902	
2019	.245	.696	0.35	.726	-1.155	1.646	
2020	1.119	.74	1.51	.137	-.37	2.609	
2021	.308	.691	0.45	.657	-1.082	1.698	
2022o	0	.	.	.	.	.	
Constant	8.779	21.224	0.41	.681	-33.919	51.476	
Mean dependent var		5.501		SD dependent var		4.498	
R-squared		0.448		Number of obs		82	
F-test		1.906		Prob > F		0.020	
Akaike crit. (AIC)		304.210		Bayesian crit. (BIC)		354.751	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.70 Stata Regression Results: The Effect of E, S, G on Return on Assets in the Basic Materials Industry

: Industry_n = Basic Materials

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISCLOSURE~E	-.057	.062	-0.93	.356	-.179 .065	
SOCIAL_DISCLOSURE~E	.117	.106	1.10	.272	-.092 .326	
GOVNCES_DISCLOSURE~E	-.096	.092	-1.04	.301	-.278 .086	
Intotalassets	-9.804	2.615	-3.75	0	-14.965 -4.644	***
firmage_	1.259	.405	3.11	.002	.46 2.058	***
TOT_DEBT_TO_TOT_EQY	.001	.001	0.79	.433	-.002 .004	
capitalintensity	4.273	12.632	0.34	.736	-20.655 29.202	
cashflowbysale	-4.389	4.824	-0.91	.364	-13.909 5.13	
TOT_MKT_VAL	0	0	1.95	.052	0 0	*
financialslack	1.421	.519	2.74	.007	.396 2.445	***
Internationalisation	.044	.048	0.93	.355	-.05 .138	
NUMBER_OF_WOMEN_DIRECTORS	-1.583	1.079	-1.47	.144	-3.711 .546	
rdbysales	-8.999	16.361	-0.55	.583	-41.287 23.288	
operfficiency_	-13.154	4.736	-2.78	.006	-22.499 -3.808	***
BB_3Y_DEFAULT_PROB	-51.202	28.955	-1.77	.079	-108.341 5.938	*
UNLEVERED_BETA	.036	.03	1.20	.231	-.023 .095	
2015b	0	.	.	.	.	
2016	.791	1.513	0.52	.602	-2.196 3.777	
2017	-2.137	1.411	-1.51	.132	-4.921 .647	
2018	-1.871	1.424	-1.31	.191	-4.68 .939	
2019	1.12	1.385	0.81	.42	-1.614 3.854	
2020	.756	1.67	0.45	.651	-2.54 4.052	
2021	-1.722	1.798	-0.96	.339	-5.27 1.826	
2022o	0	.	.	.	.	
Constant	65.875	23.56	2.80	.006	19.382 112.369	***
Mean dependent var	10.311		SD dependent var	8.556		
R-squared	0.243		Number of obs	242		
F-test	2.603		Prob > F	0.000		
Akaike crit. (AIC)	1492.775		Bayesian crit. (BIC)	1573.020		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.71 Stata Regression Results: The Effect of E, S, G on Return on Assets in the Communications Industry**: Industry_n = Communications**

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.485	.309	-1.57	.133	-1.133	.162	
SOCIAL_DISCLOSURE~E	.383	.43	0.89	.385	-.518	1.284	
GOVNCE_DISCLOSURE~E	1.49	.719	2.07	.052	-.015	2.995	*
Intotalassets	27.034	6.905	3.92	.001	12.582	41.486	***
firmage_	-1.86	1.858	-1.00	.329	-5.748	2.029	
TOT_DEBT_TO_TOT_EQY	-.184	.074	-2.50	.022	-.337	-.03	**
capitalintensity	-76.151	87.289	-0.87	.394	-258.85	106.548	
cashflowbysale	13.857	26.25	0.53	.604	-41.084	68.798	
TOT_MKT_VAL	0	0	0.16	.872	0	0	
financialslack	-1.304	1.812	-0.72	.481	-5.096	2.489	
Internationalisation	-.392	.483	-0.81	.427	-1.402	.619	
NUMBER_OF_WOMEN_DI~D	5.216	3.236	1.61	.123	-1.557	11.989	
o	0	.	.	.	.	.	
opefficiency_	-85.118	36.772	-2.31	.032	-162.083	-8.154	**
BB_3Y_DEFAULT_PROB	-46.49	78.506	-0.59	.561	-210.806	117.825	
UNLEVERED_BETA	-.533	.266	-2.00	.06	-1.091	.025	*
2015b	0	.	.	.	.	.	
2016	5.255	4.273	1.23	.234	-3.688	14.197	
2017	2.584	5.418	0.48	.639	-8.755	13.924	
2018	-5.005	5.961	-0.84	.412	-17.482	7.473	
2019	-7.581	5.498	-1.38	.184	-19.089	3.928	
2020	-8.479	7.62	-1.11	.28	-24.428	7.47	
2021	-6.603	7.379	-0.90	.382	-22.048	8.842	
2022o	0	.	.	.	.	.	
Constant	-302.786	73.044	-4.14	.001	-455.668	-149.903	***
Mean dependent var		11.486	SD dependent var		14.888		
R-squared		0.864	Number of obs		50		
F-test		5.746	Prob > F		0.000		
Akaike crit. (AIC)		333.723	Bayesian crit. (BIC)		375.787		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.72 Stata Regression Results: The Effect of E, S, G on Return on Assets in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISCLOSURE~E	-.022	.024	-0.93	.354	-.07 .025	
SOCIAL_DISCLOSURE~E	.081	.042	1.92	.057	-.002 .164	*
GOVNCE_DISCLOSURE~E	.022	.047	0.46	.643	-.071 .115	
Intotalassets	-1.549	1.285	-1.21	.23	-4.086 .987	
firmage_	-.209	.231	-0.91	.366	-.666 .247	
TOT_DEBT_TO_TOT_EQY	-.012	.006	-1.89	.061	-.024 .001	*
capitalintensity	-20.865	7.464	-2.79	.006	-35.6 -6.129	***
cashflowbysale	8.737	4.022	2.17	.031	.796 16.677	**
TOT_MKT_VAL	0	0	2.34	.021	0 0	**
financialslack	.84	.387	2.17	.031	.076 1.604	**
Internationalisation	-.005	.016	-0.30	.763	-.037 .027	
NUMBER_OF_WOMEN_DI~D	.123	.4	0.31	.76	-.667 .912	
rdbsales	-9.427	47.256	-0.20	.842	-102.715 83.861	
opefficiency_	-13.528	3.01	-4.49	0	-19.471 -7.585	***
BB_3Y_DEFAULT_PROB	-4.737	14.654	-0.32	.747	-33.666 24.191	
UNLEVERED_BETA	-.001	.008	-0.12	.905	-.016 .014	
2015b	0	.	.	.	.	
2016	.567	.701	0.81	.42	-.817 1.951	
2017	.246	.642	0.38	.702	-1.021 1.514	
2018	.753	.629	1.20	.233	-.488 1.995	
2019	.914	.612	1.49	.137	-.294 2.123	
2020	-.12	.681	-0.18	.86	-1.466 1.225	
2021	-2.008	.804	-2.50	.013	-3.595 -.421	**
2022o	0	.	.	.	.	
Constant	41.437	10.797	3.84	0	20.123 62.751	***
Mean dependent var	8.896	SD dependent var	6.487			
R-squared	0.419	Number of obs	236			
F-test	5.545	Prob > F	0.000			
Akaike crit. (AIC)	1060.155	Bayesian crit. (BIC)	1139.823			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.73 Stata Regression Results: The Effect of E, S, G on Return on Assets in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.008	.028	-0.29	.772	-.064	.047	
SOCIAL_DISCLOSURE~E	.1	.038	2.63	.009	.025	.175	***
GOVNCES_DISCLOSURE~E	-.045	.057	-0.78	.433	-.158	.068	
Intotalassets	-6.489	1.177	-5.51	0	-8.806	-4.172	***
firmage_	-.001	.06	-0.02	.988	-.12	.118	
TOT_DEBT_TO_TOT_EQY	-.008	.01	-0.87	.385	-.028	.011	
capitalintensity	-12.917	7.357	-1.76	.08	-27.401	1.567	*
cashflowbysale	2.69	3.053	0.88	.379	-3.32	8.7	
TOT_MKT_VAL	0	0	-0.14	.891	0	0	
financialslack	.142	.388	0.37	.714	-.621	.905	
Internationalisation	-.017	.016	-1.07	.286	-.049	.014	
NUMBER_OF_WOMEN_DIRECTORS	1.198	.36	3.33	.001	.489	1.907	***
rdbysales	4.562	13.815	0.33	.741	-22.635	31.759	
operational efficiency	-67.245	5.041	-13.34	0	-77.17	-57.321	***
BB_3Y_DEFAULT_PROB	-1.408	25.016	-0.06	.955	-50.656	47.84	
UNLEVERED_BETA	.023	.012	1.92	.056	-.001	.046	*
2015b	0	.	.	.	.	.	
2016	.277	.748	0.37	.711	-1.196	1.75	
2017	.219	.828	0.26	.792	-1.412	1.85	
2018	-.181	.953	-0.19	.849	-2.057	1.694	
2019	.215	1.071	0.20	.841	-1.894	2.323	
2020	.47	1.19	0.40	.693	-1.872	2.812	
2021	.292	1.378	0.21	.832	-2.42	3.004	
2022	2.591	1.558	1.66	.097	-.477	5.658	*
Constant	138.072	14.114	9.78	0	110.286	165.858	***
Mean dependent var		12.739		SD dependent var		8.160	
R-squared		0.549		Number of obs		351	
F-test		14.422		Prob > F		0.000	
Akaike crit. (AIC)		1724.918		Bayesian crit. (BIC)		1817.577	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.74 Stata Regression Results: The Effect of E, S, G on Return on Assets in the Energy Industry

: Industry_n = Energy

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.035	.033	1.06	.298	-.033	.103	
SOCIAL_DISCLOSURE~E	.021	.074	0.28	.78	-.132	.174	
GOVNCE_DISCLOSURE~E	.006	.05	0.12	.909	-.097	.108	
Intotalassets	-.587	4.756	-0.12	.903	-10.402	9.229	
firmage_	.138	.492	0.28	.781	-.876	1.153	
TOT_DEBT_TO_TOT_EQY	-.028	.012	-2.35	.027	-.053	-.003	**
capitalintensity	26.915	16.792	1.60	.122	-7.742	61.573	
cashflowbysale	-3.154	5.215	-0.60	.551	-13.918	7.61	
TOT_MKT_VAL	0	0	-1.48	.152	0	0	
financialslack	.418	.628	0.67	.512	-.877	1.714	
Internationalisation	-.056	.072	-0.78	.446	-.204	.093	
NUMBER_OF_WOMEN_DI~D	.379	.454	0.83	.412	-.558	1.315	
rdbysales	-858.469	770.905	-1.11	.276	-2449.539	732.602	
opefficiency_	-46.429	11.007	-4.22	0	-69.147	-23.712	***
BB_3Y_DEFAULT_PROB	-73.842	60.693	-1.22	.236	-199.106	51.422	
UNLEVERED_BETA	-.04	.099	-0.40	.691	-.244	.165	
2015b	0	.	.	.	.	.	
2016	-.685	.858	-0.80	.433	-2.455	1.086	
2017	.811	.847	0.96	.348	-.938	2.56	
2018	-.251	.898	-0.28	.782	-2.105	1.603	
2019	.546	.822	0.67	.513	-1.151	2.244	
2020	1.305	1.311	1.00	.329	-1.401	4.01	
2021	-.539	1.715	-0.31	.756	-4.08	3.001	
2022o	0	.	.	.	.	.	
Constant	54.63	49.192	1.11	.278	-46.898	156.159	
Mean dependent var	7.610		SD dependent var		3.759		
R-squared	0.846		Number of obs		55		
F-test	6.008		Prob > F		0.000		
Akaike crit. (AIC)	190.460		Bayesian crit. (BIC)		236.629		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.75 Stata Regression Results: The Effect of E, S, G on Return on Assets in the Financial Industry**: Industry_n = Financial**

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig	
ENVIRON_DISCLOSURE~E	.021	.054	0.39	.702	-.09	.132	
SOCIAL_DISCLOSURE_~E	-.085	.091	-0.93	.359	-.27	.101	
GOVNCE_DISCLOSURE_~E	-.077	.116	-0.66	.512	-.312	.158	
Intotalassets	2.754	1.811	1.52	.137	-.921	6.43	
firmage_	-.269	.366	-0.73	.468	-1.013	.475	
TOT_DEBT_TO_TOT_EQY	-.012	.01	-1.25	.221	-.032	.008	
capitalintensity	-17.933	16.863	-1.06	.295	-52.167	16.301	
cashflowbysale	.521	.726	0.72	.477	-.952	1.994	
TOT_MKT_VAL	0	0	1.06	.295	0	0	
financialslack	-.086	.088	-0.98	.335	-.264	.093	
Internationalisation	-.043	.053	-0.82	.417	-.15	.063	
NUMBER_OF_WOMEN_DI~D	-.633	.669	-0.95	.351	-1.992	.726	
rdbysales	353.374	82.129	4.30	0	186.645	520.104	***
opefficiency_	-1.919	1.9	-1.01	.32	-5.776	1.939	
BB_3Y_DEFAULT_PROB	-19.759	17.665	-1.12	.271	-55.62	16.102	
UNLEVERED_BETA	-.021	.048	-0.43	.67	-.117	.076	
2015b	0	.	.	.	.	.	
2016	-.055	1.118	-0.05	.961	-2.325	2.215	
2017	1.251	1.214	1.03	.31	-1.213	3.715	
2018	2.21	1.216	1.82	.078	-.26	4.679	*
2019	1.707	1.325	1.29	.206	-.982	4.396	
2020	1.913	1.609	1.19	.243	-1.355	5.18	
2021	1.099	1.703	0.65	.523	-2.358	4.557	
2022o	0	.	.	.	.	.	
Constant	-9.642	18.173	-0.53	.599	-46.536	27.252	
Mean dependent var		3.387		SD dependent var		3.234	
R-squared		0.591		Number of obs		69	
F-test		2.302		Prob > F		0.008	
Akaike crit. (AIC)		294.409		Bayesian crit. (BIC)		345.793	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.76 Stata Regression Results: The Effect of E, S, G on Return on Assets in the Industrial Industry

: Industry_n = Industrial

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISCLOSURE~E	.026	.031	0.85	.394	-.034 .087	
SOCIAL_DISCLOSURE~E	-.046	.052	-0.87	.387	-.149 .058	
GOVNCES_DISCLOSURE~E	.049	.051	0.95	.342	-.052 .15	
Intotalassets	3.032	1.465	2.07	.039	.148 5.916	**
firmage_	-.551	.215	-2.57	.011	-.974 -.129	**
TOT_DEBT_TO_TOT_EQY	-.038	.012	-3.08	.002	-.062 -.014	***
capitalintensity	1.78	8.263	0.22	.83	-14.487 18.047	
cashflowbysale	-1.016	2.307	-0.44	.66	-5.557 3.525	
TOT_MKT_VAL	0	0	-1.75	.081	0 0	*
financialslack	.555	.357	1.55	.121	-.148 1.258	
Internationalisation	-.023	.027	-0.83	.405	-.076 .031	
NUMBER_OF_WOMEN_DIRECTORS	.283	.467	0.60	.546	-.637 1.203	
rdbysales	-42.241	53.417	-0.79	.43	-147.406 62.924	
operational efficiency_	-57.057	3.487	-16.36	0	-63.923 -50.191	***
BB_3Y_DEFAULT_PROB	-10.115	15.093	-0.67	.503	-39.83 19.6	
UNLEVERED_BETA	.054	.018	2.93	.004	.018 .09	***
2015b	0	.	.	.	.	
2016	-1.26	.762	-1.66	.099	-2.759 .239	*
2017	-.961	.715	-1.34	.18	-2.37 .447	
2018	-1.098	.692	-1.59	.114	-2.46 .264	
2019	.209	.704	0.30	.767	-1.178 1.595	
2020	-.237	.816	-0.29	.771	-1.844 1.369	
2021	-1.781	.855	-2.08	.038	-3.465 -.098	**
2022o	0	.	.	.	.	
Constant	50.068	14.034	3.57	0	22.439 77.697	***
Mean dependent var	8.029		SD dependent var	7.110		
R-squared	0.590		Number of obs	364		
F-test	17.731		Prob > F	0.000		
Akaike crit. (AIC)	1872.486		Bayesian crit. (BIC)	1962.121		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.77 Stata Regression Results: The Effect of E, S, G on Return on Assets in the Technology Industry

: Industry_n = Technology

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISCLOSURE~E	-.004	.037	-0.10	.924	-.079 .072	
SOCIAL_DISCLOSURE~E	-.003	.058	-0.05	.962	-.12 .115	
GOVNCES_DISCLOSURE~E	.068	.105	0.65	.522	-.144 .279	
lntotalassets	-6.999	2.56	-2.73	.009	-12.169 -1.829	***
firmage_	1.02	.404	2.52	.016	.204 1.835	**
TOT_DEBT_TO_TOT_EQY	.016	.043	0.36	.718	-.072 .103	
capitalintensity	53.15	22.955	2.31	.026	6.79 99.509	**
cashflowbysale	-8.496	8.481	-1.00	.322	-25.624 8.632	
TOT_MKT_VAL	0	0	-1.62	.113	0 0	
financialslack	-.401	.374	-1.07	.29	-1.156 .355	
Internationalisation	-.001	.012	-0.10	.918	-.025 .022	
NUMBER_OF_WOMEN_DIRECTORS	-.692	.449	-1.54	.131	-1.6 .216	
rdbysales	-126.968	52.543	-2.42	.02	-233.081 -20.856	**
op efficiency_	1.844	2.426	0.76	.451	-3.055 6.743	
BB_3Y_DEFAULT_PROB	-89.831	45.127	-1.99	.053	-180.966 1.305	*
UNLEVERED_BETA	.006	.005	1.10	.277	-.005 .017	
2015b	0	.	.	.	.	
2016	.537	.907	0.59	.557	-1.295 2.369	
2017	-.582	.971	-0.60	.553	-2.544 1.38	
2018	-1.624	.998	-1.63	.111	-3.639 .391	
2019	-.308	.954	-0.32	.748	-2.236 1.619	
2020	-2.845	1.178	-2.41	.02	-5.224 -.465	**
2021	-2.509	1.136	-2.21	.033	-4.804 -.215	**
2022o	0	.	.	.	.	
Constant	64.647	24.344	2.66	.011	15.483 113.811	**
Mean dependent var		15.997		SD dependent var		6.275
R-squared		0.584		Number of obs		80
F-test		2.612		Prob > F		0.002
Akaike crit. (AIC)		314.546		Bayesian crit. (BIC)		369.333

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.78 Stata Regression Results: The Effect of E, S, G on Return on Assets in the Utilities Industry

: Industry_n = Utilities

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.09	.038	-2.36	.023	-.167	-.013	**
SOCIAL_DISCLOSURE~E	-.018	.063	-0.28	.778	-.146	.11	
GOVNCEDISCLOSURE~E	-.013	.099	-0.13	.897	-.212	.186	
Intotalassets	-2.511	2.294	-1.10	.279	-7.132	2.109	
firmage_	.694	.276	2.52	.015	.139	1.249	**
TOT_DEBT_TO_TOT_EQY	-.007	.008	-0.79	.435	-.024	.01	
capitalintensity	-29.76	14.063	-2.12	.04	-58.086	-1.435	**
cashflowbysale	1.99	2.077	0.96	.343	-2.194	6.174	
TOT_MKT_VAL	0	0	0.40	.69	0	0	
financialslack	-.153	.724	-0.21	.834	-1.611	1.306	
Internationalisation	-.037	.071	-0.52	.608	-.18	.107	
NUMBER_OF_WOMEN_DIRECTORS	.484	.335	1.45	.155	-.19	1.159	
rdbsales	448.635	500.903	0.90	.375	-560.236	1457.507	
opefficiency_	2.32	4.23	0.55	.586	-6.199	10.839	
BB_3Y_DEFAULT_PROB	1.126	19.469	0.06	.954	-38.087	40.338	
UNLEVERED_BETA	-.003	.033	-0.10	.923	-.07	.064	
2015b	0	.	.	.	.	.	
2016	.561	.811	0.69	.493	-1.072	2.195	
2017	.345	.843	0.41	.684	-1.353	2.044	
2018	.198	.802	0.25	.806	-1.417	1.812	
2019	.164	.716	0.23	.82	-1.278	1.606	
2020	1.06	.755	1.40	.168	-.462	2.581	
2021	.36	.707	0.51	.613	-1.064	1.785	
2022o	0	.	.	.	.	.	
Constant	12.836	23.692	0.54	.591	-34.883	60.554	
Mean dependent var		5.501	SD dependent var			4.498	
R-squared		0.460	Number of obs			82	
F-test		1.741	Prob > F			0.039	
Akaike crit. (AIC)		306.432	Bayesian crit. (BIC)			361.787	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.79 Stata Regression Results: The Effect of ESG Combined Score on Return on Equity in the Basic Materials Industry**: Industry_n = Basic Materials**

RETURN_COM_EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.048	.199	-0.24	.809	-.44	.344	
Intotalassets	-28.342	6.536	-4.34	0	-41.239	-15.446	***
firmage_	2.908	.999	2.91	.004	.937	4.879	***
TOT_DEBT_TO_TOT_EQY	.037	.003	11.32	0	.031	.044	***
capitalintensity	12.781	31.517	0.41	.686	-49.41	74.972	
cashflowbysale	-11.387	12.033	-0.95	.345	-35.132	12.358	
TOT_MKT_VAL	0	0	2.66	.009	0	0	***
financialslack	2.105	1.286	1.64	.103	-.433	4.643	
Internationalisation	.066	.117	0.57	.572	-.165	.297	
NUMBER_OF_WOMEN_DIRECTORS	-4.272	2.698	-1.58	.115	-9.594	1.051	
rdbysales	-11.531	40.857	-0.28	.778	-92.152	69.089	
opefficiency_	-29.939	11.737	-2.55	.012	-53.099	-6.78	**
BB_3Y_DEFAULT_PROB	-138.949	69.909	-1.99	.048	-276.895	-1.003	**
UNLEVERED_BETA	.032	.074	0.44	.663	-.114	.179	
2015b	0	.	.	.	.	.	
2016	.212	3.785	0.06	.955	-7.258	7.681	
2017	-6.174	3.497	-1.77	.079	-13.074	.726	*
2018	-4.647	3.424	-1.36	.176	-11.403	2.11	
2019	2.65	3.342	0.79	.429	-3.944	9.244	
2020	3.219	4.068	0.79	.43	-4.808	11.246	
2021	-2.553	4.477	-0.57	.569	-11.388	6.281	
2022o	0	.	.	.	.	.	
Constant	200.025	57.673	3.47	.001	86.222	313.827	***
Mean dependent var	20.628		SD dependent var		21.092		
R-squared	0.480		Number of obs		241		
F-test	8.302		Prob > F		0.000		
Akaike crit. (AIC)	1928.449		Bayesian crit. (BIC)		2001.630		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.80 Stata Regression Results: The Effect of ESG Combined Score on Return on Equity in the Communications Industry

: Industry_n = Communications

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.43	.798	0.54	.595	-1.228	2.089	
Intotalassets	34.98	8.839	3.96	.001	16.598	53.361	***
firmage_	-1.465	2.276	-0.64	.527	-6.199	3.269	
TOT_DEBT_TO_ TOT_EQY	-.176	.082	-2.13	.045	-.348	-.004	**
capitalintensity	-58.483	110.816	-0.53	.603	-288.937	171.971	
cashflowbysale	8.822	33.646	0.26	.796	-61.148	78.792	
TOT_MKT_VAL	0	0	-0.31	.761	0	0	
financialslack	-.759	2.04	-0.37	.714	-5.001	3.484	
Internationalisation	-1.106	.614	-1.80	.086	-2.383	.172	*
NUMBER_OF_ WOMEN_DIRECTORS	5.814	4.128	1.41	.174	-2.771	14.399	
o	0	.	.	.	.	.	
opefficiency_	-119.277	46.721	-2.55	.019	-216.439	-22.115	**
BB_3Y_DEFAULT_PROB	-125.754	100.922	-1.25	.226	-335.633	84.124	
UNLEVERED_BETA	-.518	.325	-1.59	.127	-1.195	.159	
2015b	0	.	.	.	.	.	
2016	5.998	5.399	1.11	.279	-5.23	17.226	
2017	.95	6.553	0.14	.886	-12.677	14.578	
2018	-4.103	6.822	-0.60	.554	-18.289	10.084	
2019	-8.214	6.371	-1.29	.211	-21.464	5.035	
2020	-9.993	8.985	-1.11	.279	-28.679	8.694	
2021	-6.598	9.466	-0.70	.493	-26.284	13.087	
2022o	0	.	.	.	.	.	
Constant	-261.624	83.053	-3.15	.005	-434.341	-88.907	***
Mean dependent var	16.531		SD dependent var	20.274			
R-squared	0.860		Number of obs	50			
F-test	6.775		Prob > F	0.000			
Akaike crit. (AIC)	359.875		Bayesian crit. (BIC)	398.116			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.81 Stata Regression Results: The Effect of ESG Combined Score on Return on Equity in the Consumer Cyclical Industry**: Industry_n = Consumer Cyclical**

RETURN_COM_EQY	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	.114	.103	1.11	.267	-.088 .317	
Intotalassets	-4.799	2.667	-1.80	.074	-10.063 .466	*
firmage_	-.645	.476	-1.35	.177	-1.584 .295	
TOT_DEBT_TO_TOT_EQY	.01	.012	0.77	.442	-.015 .034	
capitalintensity	-38.875	15.178	-2.56	.011	-68.834 -8.915	**
cashflowbysale	19.258	8.291	2.32	.021	2.892 35.624	**
TOT_MKT_VAL	0	0	1.68	.094	0 0	*
financialslack	1.236	.805	1.54	.126	-.352 2.825	
Internationalisation	-.01	.034	-0.29	.774	-.077 .057	
NUMBER_OF_WOMEN_DIRECTORS	.139	.825	0.17	.866	-1.489 1.767	
rdbysales	-41.825	97.9	-0.43	.67	-235.074 151.424	
opefficiency_	-26.164	6.258	-4.18	0	-38.517 -13.812	***
BB_3Y_DEFAULT_PROB	-60.423	30.355	-1.99	.048	-120.342 -.504	**
UNLEVERED_BETA	-.002	.016	-0.15	.878	-.034 .029	
2015b	0	.	.	.	.	
2016	-.71	1.459	-0.49	.627	-3.59 2.17	
2017	-2.332	1.334	-1.75	.082	-4.965 .302	*
2018	-.545	1.307	-0.42	.677	-3.125 2.035	
2019	.03	1.254	0.02	.981	-2.446 2.506	
2020	-2.008	1.395	-1.44	.152	-4.763 .746	
2021	-3.984	1.662	-2.40	.018	-7.265 -.704	**
2022o	0	.	.	.	.	
Constant	113.706	21.489	5.29	0	71.288 156.123	***
Mean dependent var	17.264		SD dependent var	10.719		
R-squared	0.381		Number of obs	236		
F-test	5.253		Prob > F	0.000		
Akaike crit. (AIC)	1405.214		Bayesian crit. (BIC)	1477.954		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.82 Stata Regression Results: The Effect of ESG Combined Score on Return on Equity in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.19	.112	1.70	.09	-.03	.41	*
Intotalassets	-19.369	3.3	-5.87	0	-25.865	-12.873	***
firmage_	.04	.17	0.23	.815	-.294	.374	
TOT_DEBT_TO_ TOT_EQY	.047	.027	1.73	.084	-.006	.101	*
capitalintensity	-47.415	20.678	-2.29	.023	-88.122	-6.709	**
cashflowbysale	6.538	8.585	0.76	.447	-10.364	23.439	
TOT_MKT_VAL	0	0	-0.96	.336	0	0	
financialslack	-.819	1.079	-0.76	.449	-2.943	1.306	
Internationalisation	-.035	.045	-0.79	.432	-.123	.053	
NUMBER_OF_ WOMEN_DIRECTORS	3.061	1.011	3.03	.003	1.071	5.051	***
rdbsales	11.187	38.685	0.29	.773	-64.97	87.344	
op efficiency_	-112.56	14.001	-8.04	0	-140.122	-84.998	***
BB_3Y_DEFAULT_PROB	-67.903	70.372	-0.96	.335	-206.44	70.634	
UNLEVERED_BETA	.047	.033	1.42	.157	-.018	.113	
2015b	0	.	.	.	.	.	
2016	-.468	2.103	-0.22	.824	-4.607	3.671	
2017	-1.115	2.329	-0.48	.632	-5.699	3.469	
2018	-.356	2.668	-0.13	.894	-5.609	4.898	
2019	1.208	2.993	0.40	.687	-4.684	7.099	
2020	3.1	3.327	0.93	.352	-3.449	9.65	
2021	3.342	3.869	0.86	.388	-4.274	10.959	
2022	8.671	4.38	1.98	.049	.048	17.294	**
Constant	311.916	38.128	8.18	0	236.855	386.976	***
Mean dependent var	22.769		SD dependent var		17.216		
R-squared	0.378		Number of obs		351		
F-test	7.963		Prob > F		0.000		
Akaike crit. (AIC)	2449.689		Bayesian crit. (BIC)		2534.626		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.83 Stata Regression Results: The Effect of ESG Combined Score on Return on Equity in the Energy Industry**: Industry_n = Energy**

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.329	.389	0.85	.406	-.47	1.127	
Intotalassets	-45.023	24.231	-1.86	.075	-94.83	4.785	*
firmage_	4.37	2.443	1.79	.085	-.652	9.392	*
TOT_DEBT_TO_ TOT_EQY	-.029	.056	-0.51	.612	-.144	.087	
capitalintensity	32.71	85.337	0.38	.705	-142.703	208.124	
cashflowbysale	-21.122	26.811	-0.79	.438	-76.233	33.988	
TOT_MKT_VAL	0	0	0.62	.543	0	0	
financialslack	-.213	3.092	-0.07	.946	-6.568	6.142	
Internationalisation	-1.045	.374	-2.79	.01	-1.814	-.275	**
NUMBER_OF_ WOMEN_DIRECTORS	.384	2.362	0.16	.872	-4.471	5.24	
rdbysales	630.084	3694.677	0.17	.866	-6964.434	8224.602	
opefficiency_	-100.55	51.454	-1.95	.062	-206.315	5.214	*
BB_3Y_DEFAULT_PROB	-134.973	311.945	-0.43	.669	-776.185	506.239	
UNLEVERED_BETA	-.358	.459	-0.78	.443	-1.301	.586	
2015b	0	.	.	.	.	.	
2016	-3.58	4.328	-0.83	.416	-12.477	5.317	
2017	2.089	4.071	0.51	.612	-6.278	10.456	
2018	-.442	4.24	-0.10	.918	-9.156	8.273	
2019	1.999	4.004	0.50	.622	-6.231	10.228	
2020	7.249	6.786	1.07	.295	-6.7	21.197	
2021	-5.759	8.339	-0.69	.496	-22.9	11.381	
2022o	0	.	.	.	.	.	
Constant	534.226	251.267	2.13	.043	17.739	1050.713	**
Mean dependent var	22.371		SD dependent var		13.702		
R-squared	0.645		Number of obs		55		
F-test	2.364		Prob > F		0.015		
Akaike crit. (AIC)	372.754		Bayesian crit. (BIC)		414.908		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.84 Stata Regression Results: The Effect of ESG Combined Score on Return on Equity in the Financial Industry

: Industry_n = Financial

RETURN_COM_EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.295	.476	-0.62	.539	-1.259	.669	
Intotalassets	14.056	6.554	2.15	.039	.777	27.335	**
firmage_	-.979	1.229	-0.80	.431	-3.469	1.512	
TOT_DEBT_TO_TOT_EQY	-.042	.037	-1.14	.263	-.117	.033	
capitalintensity	-32.636	64.836	-0.50	.618	-164.007	98.734	
cashflowbysale	1.319	2.789	0.47	.639	-4.332	6.971	
TOT_MKT_VAL	0	0	0.75	.456	0	0	
financialslack	-.261	.316	-0.83	.413	-.901	.378	
Internationalisation	-.074	.188	-0.40	.694	-.455	.306	
NUMBER_OF_WOMEN_DIRECTORS	-.955	2.558	-0.37	.711	-6.138	4.228	
rdbysales	888.195	308.245	2.88	.007	263.632	1512.759	***
opefficiency_	-5.391	7.128	-0.76	.454	-19.834	9.052	
BB_3Y_DEFAULT_PROB	-45.338	65.512	-0.69	.493	-178.078	87.402	
UNLEVERED_BETA	-.087	.18	-0.49	.629	-.451	.277	
2015b	0	.	.	.	.	.	
2016	1.051	4.183	0.25	.803	-7.424	9.526	
2017	4.97	4.492	1.11	.276	-4.132	14.072	
2018	8.1	4.525	1.79	.082	-1.068	17.268	*
2019	4.327	4.985	0.87	.391	-5.774	14.428	
2020	4.304	6.188	0.70	.491	-8.234	16.841	
2021	2.921	6.534	0.45	.657	-10.318	16.16	
2022o	0	.	.	.	.	.	
Constant	-103.162	69.202	-1.49	.145	-243.379	37.055	
Mean dependent var	9.888		SD dependent var		10.901		
R-squared	0.394		Number of obs		69		
F-test	1.205		Prob > F		0.291		
Akaike crit. (AIC)	480.357		Bayesian crit. (BIC)		527.273		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.85 Stata Regression Results: The Effect of ESG Combined Score on Return on Equity in the Industrial Industry

: Industry_n = Industrial

RETURN_COM_EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.041	.09	0.46	.644	-.135	.218	
Intotalassets	3.819	2.502	1.53	.128	-1.107	8.745	
firmage_	-1.044	.365	-2.86	.005	-1.763	-.325	***
TOT_DEBT_TO_TOT_EQY	-.05	.021	-2.37	.019	-.092	-.008	**
capitalintensity	-6.771	14.206	-0.48	.634	-34.738	21.195	
cashflowbysale	-1.822	3.957	-0.46	.646	-9.612	5.968	
TOT_MKT_VAL	0	0	-0.88	.38	0	0	
financialslack	.122	.611	0.20	.842	-1.081	1.325	
Internationalisation	-.015	.047	-0.32	.746	-.107	.077	
NUMBER_OF_WOMEN_DIRECTORS	.242	.804	0.30	.763	-1.34	1.824	
rdbysales	-95.381	90.887	-1.05	.295	-274.309	83.548	
opefficiency_	-82.574	5.993	-13.78	0	-94.372	-70.776	***
BB_3Y_DEFAULT_PROB	-23.687	25.898	-0.92	.361	-74.673	27.298	
UNLEVERED_BETA	.071	.032	2.26	.025	.009	.134	**
2015b	0	.	.	.	.	.	
2016	-2.147	1.308	-1.64	.102	-4.722	.429	
2017	-2.538	1.23	-2.06	.04	-4.959	-.117	**
2018	-2.418	1.189	-2.03	.043	-4.759	-.077	**
2019	-.574	1.201	-0.48	.633	-2.939	1.791	
2020	-.336	1.391	-0.24	.809	-3.074	2.402	
2021	-2.443	1.464	-1.67	.096	-5.324	.438	*
2022o	0	.	.	.	.	.	
Constant	97.866	22.84	4.29	0	52.901	142.832	***
Mean dependent var	14.651	SD dependent var	10.644				
R-squared	0.496	Number of obs	364				
F-test	13.425	Prob > F	0.000				
Akaike crit. (AIC)	2267.607	Bayesian crit. (BIC)	2349.447				

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.86 Stata Regression Results: The Effect of ESG Combined Score on Return on Equity in the Technology Industry

: Industry_n = Technology

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.048	.114	0.42	.678	-.183	.279	
Intotalassets	-14.993	3.884	-3.86	0	-22.826	-7.16	***
firmage_	1.78	.571	3.12	.003	.629	2.931	***
TOT_DEBT_TO_ TOT_EQY	.067	.064	1.04	.305	-.063	.197	
capitalintensity	69.887	32.828	2.13	.039	3.683	136.091	**
cashflowbysale	-15.826	12.706	-1.25	.22	-41.451	9.799	
TOT_MKT_VAL	0	0	-0.56	.58	0	0	
financialslack	-1.513	.555	-2.73	.009	-2.634	-.393	***
Internationalisation	.003	.018	0.18	.86	-.033	.039	
NUMBER_OF_ WOMEN_DIRECTORS	-1.303	.656	-1.99	.053	-2.625	.02	*
rdbysales	-114.268	74.793	-1.53	.134	-265.102	36.565	
opefficiency_	3.459	3.572	0.97	.338	-3.745	10.663	
BB_3Y_DEFAULT_PROB	-177.848	68.09	-2.61	.012	-315.165	-40.53	**
UNLEVERED_BETA	.011	.008	1.34	.188	-.006	.028	
2015b	0	.	.	.	.	.	
2016	2.222	1.378	1.61	.114	-.557	5.001	
2017	.168	1.362	0.12	.902	-2.579	2.915	
2018	-1.712	1.405	-1.22	.23	-4.545	1.122	
2019	-.185	1.37	-0.14	.893	-2.949	2.578	
2020	-2.556	1.685	-1.52	.137	-5.954	.842	
2021	-2.601	1.688	-1.54	.131	-6.005	.803	
2022o	0	.	.	.	.	.	
Constant	144.79	33.103	4.37	0	78.031	211.55	***
Mean dependent var	22.853		SD dependent var		8.299		
R-squared	0.620		Number of obs		80		
F-test	3.507		Prob > F		0.000		
Akaike crit. (AIC)	381.489		Bayesian crit. (BIC)		431.511		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.87 Stata Regression Results: The Effect of ESG Combined Score on Return on Equity in the Utilities Industry**: Industry_n = Utilities**

RETURN_COM_EQY	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.355	.251	-1.41	.164	-.859 .15	
ln total assets	2.628	6.722	0.39	.698	-10.895 16.152	
firm age	.955	.871	1.10	.279	-.797 2.706	
TOT_DEBT_TO_TOT_EQY	-.028	.027	-1.07	.29	-.082 .025	
capital intensity	5.086	43.26	0.12	.907	-81.942 92.113	
cash flow by sale	-2.371	6.393	-0.37	.712	-15.232 10.49	
TOT_MKT_VAL	0	0	0.53	.601	0 0	
financial slack	-.994	2.279	-0.44	.665	-5.579 3.592	
Internationalisation	-.392	.217	-1.80	.077	-.828 .045	*
NUMBER_OF_WOMEN_DIRECTORS	.858	1.043	0.82	.415	-1.241 2.957	
rd by sales	863.317	1357.665	0.64	.528	-1867.953 3594.587	
oper efficiency	20.693	12.068	1.72	.093	-3.584 44.97	*
BB_3Y_DEFAULT_PROB	-31.492	59.967	-0.53	.602	-152.13 89.145	
UNLEVERED_BETA	-.026	.106	-0.24	.81	-.238 .187	
2015b	0	.	.	.	.	
2016	2.46	2.577	0.95	.345	-2.723 7.643	
2017	2.43	2.664	0.91	.366	-2.928 7.788	
2018	2.393	2.513	0.95	.346	-2.662 7.448	
2019	2.656	2.238	1.19	.241	-1.846 7.158	
2020	5.191	2.38	2.18	.034	.404 9.979	**
2021	.544	2.221	0.25	.808	-3.925 5.012	
2022o	0	.	.	.	.	
Constant	-51.48	68.223	-0.76	.454	-188.727 85.767	
Mean dependent var	14.819		SD dependent var	8.238		
R-squared	0.443		Number of obs	82		
F-test	1.868		Prob > F	0.024		
Akaike crit. (AIC)	495.704		Bayesian crit. (BIC)	546.245		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.88 Stata Regression Results: The Effect of E, S, G on Return on Equity in the Basic Materials Industry

: Industry_n = Basic Materials

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.229	.154	-1.49	.138	-.532	.074	
SOCIAL_DISCL OSURE_~E	.438	.264	1.66	.099	-.084	.959	*
GOVNCE_DISC LOSURE_~E	-.17	.23	-0.74	.461	-.625	.284	
Intotalassets	-28.835	6.521	-4.42	0	-41.703	-15.967	***
firmage_	2.758	1.01	2.73	.007	.765	4.751	***
TOT_DEBT_TO_ TOT_EQY	.036	.003	10.87	0	.03	.043	***
capitalintensity	11.533	31.498	0.37	.715	-50.625	73.691	
cashflowbysale	-10.358	12.028	-0.86	.39	-34.094	13.378	
TOT_MKT_VAL	0	0	2.81	.005	0	0	***
financialslack	1.796	1.294	1.39	.167	-.758	4.351	
Internationalisatio n	.108	.119	0.91	.364	-.126	.343	
NUMBER_OF_ WOMEN_DI~D	-4.272	2.689	-1.59	.114	-9.579	1.035	
rdbysales	-11.448	40.797	-0.28	.779	-91.956	69.059	
opefficiency_	-27.295	11.809	-2.31	.022	-50.598	-3.992	**
BB_3Y_DEFAU LT_PROB	-108.483	72.198	-1.50	.135	-250.958	33.992	
UNLEVERED_B ETA	.036	.074	0.49	.627	-.11	.183	
2015b	0	.	.	.	.	.	
2016	.304	3.773	0.08	.936	-7.142	7.751	
2017	-6.959	3.517	-1.98	.049	-13.9	-.018	**
2018	-5.845	3.55	-1.65	.101	-12.849	1.16	
2019	1.652	3.455	0.48	.633	-5.165	8.469	
2020	1.7	4.165	0.41	.684	-6.519	9.919	
2021	-3.257	4.483	-0.73	.469	-12.103	5.59	
2022o	0	.	.	.	.	.	
Constant	217.319	58.733	3.70	0	101.417	333.221	***
Mean dependent var	20.628		SD dependent var		21.092		
R-squared	0.489		Number of obs		241		
F-test	7.741		Prob > F		0.000		
Akaike crit. (AIC)	1928.185		Bayesian crit. (BIC)		2008.335		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.89 Stata Regression Results: The Effect of E, S, G on Return on Equity in the Communications Industry**: Industry_n = Communications**

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.159	.401	-0.40	.696	-.999	.681	
SOCIAL_DISCL OSURE_~E	.55	.558	0.98	.337	-.618	1.718	
GOVNCE_DISC LOSURE_~E	1.081	.932	1.16	.26	-.87	3.032	
Intotalassets	33.94	8.953	3.79	.001	15.201	52.678	***
firmage_	-2.17	2.409	-0.90	.379	-7.212	2.871	
TOT_DEBT_TO_ TOT_EQY	-.223	.095	-2.34	.03	-.423	-.024	**
capitalintensity	-81.391	113.179	-0.72	.481	-318.278	155.495	
cashflowbysale	10.958	34.035	0.32	.751	-60.279	82.194	
TOT_MKT_VAL	0	0	-0.07	.948	0	0	
financialslack	-2.209	2.349	-0.94	.359	-7.126	2.709	
Internationalisatio n	-1.214	.626	-1.94	.067	-2.524	.096	*
NUMBER_OF_ WOMEN_DI~D	6.378	4.196	1.52	.145	-2.403	15.16	
o	0	.	.	.	.	.	
opefficiency_	-127.23	47.678	-2.67	.015	-227.021	-27.439	**
BB_3Y_DEFAU LT_PROB	-127.526	101.791	-1.25	.225	-340.577	85.524	
UNLEVERED_B ETA	-.652	.346	-1.89	.074	-1.375	.071	*
2015b	0	.	.	.	.	.	
2016	7.285	5.54	1.31	.204	-4.31	18.88	
2017	-.142	7.024	-0.02	.984	-14.844	14.56	
2018	-8.123	7.73	-1.05	.306	-24.301	8.055	
2019	-11.008	7.129	-1.54	.139	-25.93	3.914	
2020	-12.681	9.88	-1.28	.215	-33.361	7.999	
2021	-7.46	9.568	-0.78	.445	-27.486	12.566	
2022o	0	.	.	.	.	.	
Constant	-301.304	94.708	-3.18	.005	-499.531	-103.077	***
Mean dependent var		16.531		SD dependent var		20.274	
R-squared		0.871		Number of obs		50	
F-test		6.108		Prob > F		0.000	
Akaike crit. (AIC)		359.697		Bayesian crit. (BIC)		401.761	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.90 Stata Regression Results: The Effect of E, S, G on Return on Equity in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.027	.05	-0.55	.584	-.126	.071	
SOCIAL_DISCL OSURE_~E	.169	.088	1.94	.055	-.003	.342	*
GOVNCE_DISC LOSURE_~E	.08	.098	0.82	.415	-.113	.272	
Intotalassets	-4.969	2.667	-1.86	.064	-10.234	.295	*
firmage_	-.746	.48	-1.55	.122	-1.694	.201	
TOT_DEBT_TO_ TOT_EQY	.015	.013	1.19	.236	-.01	.041	
capitalintensity	-36.647	15.491	-2.37	.019	-67.227	-6.066	**
cashflowbysale	19.24	8.348	2.31	.022	2.761	35.719	**
TOT_MKT_VAL	0	0	1.66	.098	0	0	*
financialslack	1.255	.803	1.56	.12	-.33	2.84	
Internationalisatio n	-.015	.034	-0.45	.655	-.083	.052	
NUMBER_OF_ WOMEN_DI~D	-.069	.83	-0.08	.934	-1.707	1.57	
rdbysales	-51.98	98.072	-0.53	.597	-245.583	141.623	
opefficiency_	-26.782	6.248	-4.29	0	-39.116	-14.449	***
BB_3Y_DEFAU LT_PROB	-58.103	30.412	-1.91	.058	-118.139	1.933	*
UNLEVERED_B ETA	-.003	.016	-0.19	.853	-.034	.029	
2015b	0	.	.	.	.	.	
2016	-.602	1.455	-0.41	.679	-3.475	2.27	
2017	-2.472	1.332	-1.86	.065	-5.102	.158	*
2018	-.458	1.305	-0.35	.726	-3.034	2.119	
2019	.184	1.27	0.14	.885	-2.324	2.691	
2020	-2.054	1.414	-1.45	.148	-4.846	.738	
2021	-4.014	1.669	-2.40	.017	-7.309	-.72	**
2022o	0	.	.	.	.	.	
Constant	116.288	22.407	5.19	0	72.053	160.522	***
Mean dependent var	17.264		SD dependent var		10.719		
R-squared	0.392		Number of obs		236		
F-test	4.955		Prob > F		0.000		
Akaike crit. (AIC)	1404.772		Bayesian crit. (BIC)		1484.440		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.91 Stata Regression Results: The Effect of E, S, G on Return on Equity in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.077	.078	-0.98	.329	-.231	.078	
SOCIAL_DISCL OSURE_~E	.326	.106	3.08	.002	.118	.534	***
GOVNCE_DISC LOSURE_~E	-.252	.16	-1.58	.116	-.566	.063	
Intotalassets	-18.692	3.271	-5.71	0	-25.132	-12.253	***
firmage_	.013	.168	0.08	.938	-.317	.343	
TOT_DEBT_TO_ TOT_EQY	.056	.027	2.06	.041	.002	.109	**
capitalintensity	-50.171	20.451	-2.45	.015	-90.434	-9.909	**
cashflowbysale	7.199	8.486	0.85	.397	-9.507	23.906	
TOT_MKT_VAL	0	0	-1.13	.262	0	0	
financialslack	-1.286	1.078	-1.19	.234	-3.409	.836	
Internationalisatio n	-.044	.045	-1.00	.321	-.132	.043	
NUMBER_OF_ WOMEN_DI~D	3.271	1.001	3.27	.001	1.3	5.242	***
rdbysales	.133	38.402	0.00	.997	-75.468	75.735	
opefficiency_	-117.463	14.014	-8.38	0	-145.051	-89.874	***
BB_3Y_DEFAU LT_PROB	-70.33	69.538	-1.01	.313	-207.23	66.569	
UNLEVERED_B ETA	.051	.033	1.55	.122	-.014	.116	
2015b	0	.	.	.	.	.	
2016	-.364	2.08	-0.17	.861	-4.458	3.73	
2017	-1.172	2.303	-0.51	.611	-5.705	3.362	
2018	-.331	2.648	-0.13	.901	-5.545	4.883	
2019	1.263	2.978	0.42	.672	-4.599	7.126	
2020	3.158	3.307	0.95	.341	-3.353	9.669	
2021	3.439	3.829	0.90	.37	-4.1	10.978	
2022	8.868	4.331	2.05	.042	.342	17.394	**
Constant	331.851	39.234	8.46	0	254.612	409.091	***
Mean dependent var		22.769		SD dependent var		17.216	
R-squared		0.397		Number of obs		351	
F-test		7.829		Prob > F		0.000	
Akaike crit. (AIC)		2442.625		Bayesian crit. (BIC)		2535.284	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.92 Stata Regression Results: The Effect of E, S, G on Return on Equity in the Energy Industry

: Industry_n = Energy

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.233	.173	1.35	.19	-.124	.59	
SOCIAL_DISCL OSURE_~E	.283	.387	0.73	.472	-.515	1.081	
GOVNCE_DISC LOSURE_~E	-.208	.259	-0.80	.43	-.742	.326	
Intotalassets	-49.404	24.83	-1.99	.058	-100.651	1.844	*
firmage_	4.844	2.566	1.89	.071	-.453	10.14	*
TOT_DEBT_TO_ TOT_EQY	.009	.062	0.14	.889	-.12	.137	
capitalintensity	12.7	87.675	0.14	.886	-168.253	193.653	
cashflowbysale	-25.545	27.23	-0.94	.358	-81.746	30.656	
TOT_MKT_VAL	0	0	1.01	.322	0	0	
financialslack	1.097	3.277	0.34	.741	-5.667	7.86	
Internationalisatio n	-1.009	.375	-2.69	.013	-1.784	-.235	**
NUMBER_OF_ WOMEN_DI~D	.524	2.369	0.22	.827	-4.366	5.414	
rdbysales	1028.469	4025.021	0.26	.8	-7278.765	9335.703	
opefficiency_	-130.14	57.47	-2.26	.033	-248.753	-11.528	**
BB_3Y_DEFAU LT_PROB	-86.844	316.887	-0.27	.786	-740.867	567.18	
UNLEVERED_B ETA	-.182	.517	-0.35	.728	-1.248	.885	
2015b	0	.	.	.	.	.	
2016	-2.337	4.479	-0.52	.607	-11.582	6.908	
2017	4.574	4.424	1.03	.312	-4.558	13.705	
2018	1.955	4.69	0.42	.681	-7.725	11.635	
2019	4.175	4.293	0.97	.341	-4.686	13.036	
2020	8.248	6.844	1.21	.24	-5.878	22.374	
2021	-4.675	8.956	-0.52	.606	-23.16	13.81	
2022o	0	.	.	.	.	.	
Constant	605.657	256.842	2.36	.027	75.561	1135.752	**
Mean dependent var	22.371		SD dependent var		13.702		
R-squared	0.673		Number of obs		55		
F-test	2.246		Prob > F		0.023		
Akaike crit. (AIC)	372.259		Bayesian crit. (BIC)		418.428		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.93 Stata Regression Results: The Effect of E, S, G on Return on Equity in the Financial Industry

: Industry_n = Financial

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.048	.212	0.23	.823	-.383	.479	
SOCIAL_DISCL OSURE_~E	-.374	.356	-1.05	.3	-1.097	.348	
GOVNCE_DISC LOSURE_~E	-.298	.451	-0.66	.512	-1.213	.617	
Intotalassets	12.5	7.056	1.77	.085	-1.824	26.825	*
firmage_	-.24	1.428	-0.17	.867	-3.139	2.658	
TOT_DEBT_TO_ TOT_EQY	-.036	.038	-0.96	.343	-.113	.041	
capitalintensity	-36.955	65.718	-0.56	.577	-170.37	96.46	
cashflowbysale	1.512	2.828	0.54	.596	-4.229	7.254	
TOT_MKT_VAL	0	0	0.74	.465	0	0	
financialslack	-.245	.342	-0.72	.478	-.941	.45	
Internationalisatio n	-.14	.205	-0.68	.499	-.556	.276	
NUMBER_OF_ WOMEN_DI~D	-1.295	2.609	-0.50	.623	-6.591	4.001	
rdbysales	894.863	320.068	2.80	.008	245.091	1544.636	***
opefficiency_	-5.574	7.405	-0.75	.457	-20.607	9.459	
BB_3Y_DEFAU LT_PROB	-60.424	68.841	-0.88	.386	-200.179	79.332	
UNLEVERED_B ETA	-.129	.186	-0.69	.492	-.507	.249	
2015b	0	.	.	.	.	.	
2016	1.291	4.358	0.30	.769	-7.555	10.137	
2017	6.357	4.73	1.34	.188	-3.245	15.959	
2018	9.164	4.74	1.93	.061	-.459	18.786	*
2019	5.455	5.163	1.06	.298	-5.025	15.936	
2020	4.703	6.272	0.75	.458	-8.03	17.436	
2021	3.062	6.638	0.46	.647	-10.413	16.537	
2022o	0	.	.	.	.	.	
Constant	-94.541	70.824	-1.34	.191	-238.322	49.24	
Mean dependent var	9.888		SD dependent var		10.901		
R-squared	0.414		Number of obs		69		
F-test	1.123		Prob > F		0.367		
Akaike crit. (AIC)	482.123		Bayesian crit. (BIC)		533.507		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.94 Stata Regression Results: The Effect of E, S, G on Return on Equity in the Industrial Industry

: Industry_n = Industrial

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.066	.053	1.25	.213	-.038	.169	
SOCIAL_DISCL OSURE_~E	-.153	.09	-1.70	.09	-.33	.024	*
GOVNCE_DISC LOSURE_~E	.141	.088	1.61	.11	-.032	.314	
Intotalassets	4.539	2.511	1.81	.072	-.404	9.482	*
firmage_	-.992	.368	-2.69	.008	-1.716	-.267	***
TOT_DEBT_TO_ TOT_EQY	-.055	.021	-2.58	.011	-.096	-.013	**
capitalintensity	-6.051	14.164	-0.43	.67	-33.937	21.834	
cashflowbysale	-.971	3.954	-0.25	.806	-8.756	6.813	
TOT_MKT_VAL	0	0	-1.15	.251	0	0	
financialslack	-.043	.612	-0.07	.944	-1.248	1.162	
Internationalisatio n	-.019	.046	-0.41	.685	-.11	.073	
NUMBER_OF_ WOMEN_DI~D	.358	.801	0.45	.655	-1.219	1.935	
rdbysales	-80.906	91.568	-0.88	.378	-261.182	99.37	
opefficiency_	-83.109	5.978	-13.90	0	-94.879	-71.339	***
BB_3Y_DEFAU LT_PROB	-29.227	25.873	-1.13	.26	-80.165	21.711	
UNLEVERED_B ETA	.072	.032	2.28	.023	.01	.134	**
2015b	0	.	.	.	.	.	
2016	-2.394	1.305	-1.83	.068	-4.965	.176	*
2017	-2.354	1.226	-1.92	.056	-4.768	.06	*
2018	-2.501	1.186	-2.11	.036	-4.836	-.165	**
2019	-.768	1.207	-0.64	.525	-3.144	1.609	
2020	-.665	1.399	-0.47	.635	-3.419	2.09	
2021	-2.833	1.466	-1.93	.054	-5.719	.054	*
2022o	0	.	.	.	.	.	
Constant	81.478	24.057	3.39	.001	34.116	128.84	***
Mean dependent var	14.651	SD dependent var	10.644				
R-squared	0.505	Number of obs	364				
F-test	12.573	Prob > F	0.000				
Akaike crit. (AIC)	2264.846	Bayesian crit. (BIC)	2354.480				

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.95 Stata Regression Results: The Effect of E, S, G on Return on Equity in the Technology Industry**: Industry_n = Technology**

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.065	.056	1.15	.257	-.049	.178	
SOCIAL_DISCL OSURE_~E	-.117	.088	-1.34	.187	-.294	.059	
GOVNCE_DISC LOSURE_~E	.049	.158	0.31	.756	-.269	.368	
Intotalassets	-14.958	3.857	-3.88	0	-22.746	-7.169	***
firmage_	2.141	.609	3.52	.001	.912	3.37	***
TOT_DEBT_TO_ TOT_EQY	.05	.065	0.76	.451	-.082	.181	
capitalintensity	88.317	34.582	2.55	.014	18.476	158.157	**
cashflowbysale	-15.589	12.777	-1.22	.229	-41.392	10.215	
TOT_MKT_VAL	0	0	-0.76	.455	0	0	
financialslack	-1.672	.564	-2.97	.005	-2.81	-.533	***
Internationalisatio n	-.001	.018	-0.04	.967	-.036	.035	
NUMBER_OF_ WOMEN_DI~D	-1.476	.677	-2.18	.035	-2.843	-.109	**
rdbysales	-151.614	79.155	-1.92	.062	-311.471	8.244	*
opefficiency_	4.6	3.655	1.26	.215	-2.781	11.98	
BB_3Y_DEFAU LT_PROB	-192.263	67.983	-2.83	.007	-329.558	-54.969	***
UNLEVERED_B ETA	.01	.008	1.25	.22	-.006	.027	
2015b	0	.	.	.	.	.	
2016	2.212	1.367	1.62	.113	-.548	4.972	
2017	.509	1.464	0.35	.73	-2.447	3.464	
2018	-1.778	1.503	-1.18	.244	-4.814	1.258	
2019	-.395	1.437	-0.28	.785	-3.298	2.508	
2020	-3.074	1.775	-1.73	.091	-6.658	.511	*
2021	-3.104	1.712	-1.81	.077	-6.561	.352	*
2022o	0	.	.	.	.	.	
Constant	133.764	36.674	3.65	.001	59.699	207.829	***
Mean dependent var	22.853		SD dependent var		8.299		
R-squared	0.645		Number of obs		80		
F-test	3.381		Prob > F		0.000		
Akaike crit. (AIC)	380.112		Bayesian crit. (BIC)		434.899		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.96 Stata Regression Results: The Effect of E, S, G on Return on Equity in the Utilities Industry

: Industry_n = Utilities

RETURN_COM_ EQY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.257	.121	-2.13	.038	-.5	-.014	**
SOCIAL_DISCL OSURE~E	.173	.2	0.86	.392	-.23	.576	
GOVNCE_DISC LOSURE~E	-.017	.311	-0.05	.957	-.643	.61	
Intotalassets	-2.053	7.23	-0.28	.778	-16.616	12.51	
firmage_	.989	.869	1.14	.261	-.76	2.738	
TOT_DEBT_TO_ TOT_EQY	-.027	.027	-1.01	.316	-.081	.027	
capitalintensity	-13.183	44.326	-0.30	.768	-102.459	76.094	
cashflowbysale	.379	6.547	0.06	.954	-12.807	13.566	
TOT_MKT_VAL	0	0	0.88	.384	0	0	
financialslack	-1.257	2.283	-0.55	.585	-5.855	3.34	
Internationalisatio n	-.382	.225	-1.70	.096	-.835	.071	*
NUMBER_OF_ WOMEN_DI~D	.647	1.055	0.61	.543	-1.478	2.773	
rdbysales	1595.9	1578.761	1.01	.317	-1583.887	4775.687	
opefficiency_	29.402	13.331	2.21	.033	2.552	56.252	**
BB_3Y_DEFAU LT_PROB	-35.278	61.362	-0.57	.568	-158.868	88.312	
UNLEVERED_B ETA	-.029	.105	-0.28	.783	-.241	.182	
2015b	0	.	.	.	.	.	
2016	2.426	2.556	0.95	.348	-2.722	7.575	
2017	1.934	2.658	0.73	.471	-3.42	7.288	
2018	1.693	2.526	0.67	.506	-3.395	6.782	
2019	2.44	2.257	1.08	.285	-2.105	6.986	
2020	5.045	2.381	2.12	.04	.25	9.841	**
2021	.985	2.229	0.44	.661	-3.505	5.474	
2022o	0	.	.	.	.	.	
Constant	-14.193	74.674	-0.19	.85	-164.594	136.208	
Mean dependent var	14.819		SD dependent var	8.238			
R-squared	0.476		Number of obs	82			
F-test	1.857		Prob > F	0.025			
Akaike crit. (AIC)	494.701		Bayesian crit. (BIC)	550.056			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.97 Stata Regression Results: The Effect of ESG Combined Score on Return on Capital Employed in the Basic Materials Industry**: Industry_n = Basic Materials**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.164	.182	-0.90	.369	-.522	.195	
Intotalassets	-19.301	5.95	-3.24	.001	-31.043	-7.559	***
firmage_	1.521	.909	1.67	.096	-.272	3.315	*
TOT_DEBT_TO_ TOT_EQY	.002	.003	0.51	.609	-.004	.007	
capitalintensity	7.963	28.711	0.28	.782	-48.695	64.621	
cashflowbysale	-15.513	10.953	-1.42	.158	-37.128	6.102	
TOT_MKT_VAL	0	0	2.45	.015	0	0	**
financialslack	.944	1.175	0.80	.423	-1.374	3.263	
Internationalisation	.098	.107	0.92	.357	-.112	.309	
NUMBER_OF_ WOMEN_DI~D	-4.807	2.457	-1.96	.052	-9.655	.041	*
rdbysales	-13.581	37.198	-0.36	.715	-86.986	59.825	
opefficiency_	-27.497	10.691	-2.57	.011	-48.595	-6.399	**
BB_3Y_DEFAULT_PROB	-89.526	63.709	-1.41	.162	-215.248	36.197	
UNLEVERED_BETA	.024	.068	0.36	.721	-.109	.157	
2015b	0	.	.	.	.	.	
2016	-2.295	3.493	-0.66	.512	-9.188	4.598	
2017	-6.084	3.223	-1.89	.061	-12.445	.276	*
2018	-5.077	3.116	-1.63	.105	-11.227	1.072	
2019	1.101	3.041	0.36	.718	-4.9	7.102	
2020	3.25	3.703	0.88	.381	-4.057	10.557	
2021	-1.134	4.075	-0.28	.781	-9.175	6.906	
2022o	0	.	.	.	.	.	
Constant	185.825	52.444	3.54	.001	82.333	289.316	***
Mean dependent var	21.020		SD dependent var		18.221		
R-squared	0.144		Number of obs		239		
F-test	1.497		Prob > F		0.023		
Akaike crit. (AIC)	1867.047		Bayesian crit. (BIC)		1940.053		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.98 Stata Regression Results: The Effect of ESG Combined Score on Return on Capital Employed in the Communications Industry

: Industry_n = Communications

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	3.345	3.873	0.86	.398	-4.733	11.424	
Intotalassets	176.37	43.964	4.01	.001	84.662	268.077	***
firmage_	-5.945	11.129	-0.53	.599	-29.16	17.27	
TOT_DEBT_TO_	-1.423	.407	-3.49	.002	-2.272	-.573	***
TOT_EQY							
capitalintensity	-338.113	541.838	-0.62	.54	-1468.368	792.142	
cashflowbysale	117.853	165.63	0.71	.485	-227.645	463.351	
TOT_MKT_VAL	0	0	-0.49	.632	0	0	
financialslack	-8.334	9.841	-0.85	.407	-28.862	12.194	
Internationalisation	-3.16	2.929	-1.08	.294	-9.27	2.951	
NUMBER_OF_	13.639	19.729	0.69	.497	-27.514	54.793	
WOMEN_DI~D							
o	0	.	.	.	.	.	
opefficiency_	-174.616	223.197	-0.78	.443	-640.197	290.964	
BB_3Y_DEFAU	219.229	484.458	0.45	.656	-791.333	1229.79	
LT_PROB							
UNLEVERED_B	-1.993	1.565	-1.27	.217	-5.256	1.271	
ETA							
2015b	0	.	.	.	.	.	
2016	34.159	26.568	1.29	.213	-21.261	89.578	
2017	8.935	31.337	0.28	.778	-56.432	74.302	
2018	-22.231	32.753	-0.68	.505	-90.552	46.091	
2019	-46.823	30.318	-1.54	.138	-110.066	16.42	
2020	-51.713	43.477	-1.19	.248	-142.403	38.978	
2021	-39.432	45.827	-0.86	.4	-135.025	56.16	
2022o	0	.	.	.	.	.	
Constant	-1735.308	399.251	-4.35	0	-2568.131	-902.484	***
Mean dependent var	29.537		SD dependent var		79.626		
R-squared	0.847		Number of obs		48		
F-test	5.808		Prob > F		0.000		
Akaike crit. (AIC)	496.455		Bayesian crit. (BIC)		533.879		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.99 Stata Regression Results: The Effect of ESG Combined Score on Return on Capital Employed in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

RETURN_ON_CAPITAL~D	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.031	.291	-0.11	.915	-.605 .542	
Intotalassets	-11.68	7.538	-1.55	.123	-26.56 3.199	
firmage_	.2	1.346	0.15	.882	-2.456 2.856	
TOT_DEBT_TO_TOT_EQY	-.013	.035	-0.38	.705	-.083 .056	
capitalintensity	-76.126	42.899	-1.77	.078	-160.806 8.555	*
cashflowbysale	41.83	23.435	1.78	.076	-4.428 88.089	*
TOT_MKT_VAL	0	0	3.31	.001	0 0	***
financialslack	-6.446	2.274	-2.84	.005	-10.935 -1.957	***
Internationalisation	.009	.096	0.10	.923	-.181 .199	
NUMBER_OF_WOMEN_DI~D	3.072	2.331	1.32	.189	-1.53 7.673	
rdbysales	-675.078	276.713	-2.44	.016	-1221.291 -128.866	**
opefficiency_	-47.674	17.688	-2.69	.008	-82.588 -12.759	***
BB_3Y_DEFAULT_PROB	7.92	85.797	0.09	.927	-161.438 177.278	
UNLEVERED_BETA	.019	.045	0.42	.672	-.07 .108	
2015b	0	.	.	.	.	
2016	2.064	4.123	0.50	.617	-6.076 10.203	
2017	4.889	3.77	1.30	.196	-2.554 12.332	
2018	5.473	3.694	1.48	.14	-1.82 12.765	
2019	6.528	3.546	1.84	.067	-.471 13.527	*
2020	4.891	3.944	1.24	.217	-2.894 12.676	
2021	-4.289	4.697	-0.91	.362	-13.562 4.983	
2022o	0	.	.	.	.	
Constant	182.685	60.734	3.01	.003	62.8 302.57	***
Mean dependent var	25.003		SD dependent var		23.530	
R-squared	0.289		Number of obs		235	
F-test	3.472		Prob > F		0.000	
Akaike crit. (AIC)	1888.778		Bayesian crit. (BIC)		1961.430	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.100 Stata Regression Results: The Effect of ESG Combined Score on Return on Capital Employed in the Consumer Non-cyclical Industry

: Industry_n = Consumer Non-cyclical

RETURN_ON_C CAPITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.279	.165	1.69	.092	-.046	.605	*
Intotalassets	-11.664	4.875	-2.39	.017	-21.261	-2.067	**
firmage_	.115	.251	0.46	.646	-.378	.608	
TOT_DEBT_TO_							
TOT_EQY	.029	.04	0.73	.466	-.05	.109	
capitalintensity	-62.571	30.551	-2.05	.041	-122.714	-2.428	**
cashflowbysale	35.451	12.685	2.79	.006	10.479	60.422	***
TOT_MKT_VAL	0	0	0.34	.731	0	0	
financialslack	-4.984	1.595	-3.13	.002	-8.123	-1.845	***
Internationalisation	-.036	.066	-0.54	.59	-.166	.094	
NUMBER_OF_							
WOMEN_DI~D	2.125	1.494	1.42	.156	-.815	5.065	
rdbysales	12.902	57.157	0.23	.822	-99.618	125.423	
opefficiency_	-107.121	20.686	-5.18	0	-147.844	-66.399	***
BB_3Y_DEFAU							
LT_PROB	-190.058	103.974	-1.83	.069	-394.744	14.627	*
UNLEVERED_B							
ETA	.045	.049	0.90	.369	-.053	.142	
2015b	0	.	.	.	.	.	
2016	-.24	3.106	-0.08	.938	-6.355	5.875	
2017	-.19	3.44	-0.06	.956	-6.963	6.582	
2018	1.73	3.943	0.44	.661	-6.031	9.492	
2019	-.777	4.422	-0.18	.861	-9.482	7.928	
2020	-.648	4.915	-0.13	.895	-10.324	9.028	
2021	-1.575	5.716	-0.28	.783	-12.828	9.678	
2022	4.488	6.472	0.69	.489	-8.252	17.228	
Constant	230.729	56.334	4.10	0	119.828	341.629	***
Mean dependent var	31.021		SD dependent var	24.187			
R-squared	0.240		Number of obs	351			
F-test	4.135		Prob > F	0.000			
Akaike crit. (AIC)	2723.705		Bayesian crit. (BIC)	2808.642			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.101 Stata Regression Results: The Effect of ESG Combined Score on Return on Capital Employed in the Energy Industry

: Industry_n = Energy

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.209	.19	1.10	.28	-.18	.599	
Intotalassets	7.89	11.822	0.67	.51	-16.411	32.191	
firmage_	-.493	1.192	-0.41	.683	-2.943	1.958	
TOT_DEBT_TO_TOT_EQY	-.059	.027	-2.14	.042	-.115	-.002	**
capitalintensity	22.104	41.637	0.53	.6	-63.482	107.689	
cashflowbysale	-5.945	13.081	-0.45	.653	-32.834	20.944	
TOT_MKT_VAL	0	0	-1.29	.209	0	0	
financialslack	-1.994	1.508	-1.32	.198	-5.095	1.106	
Internationalisation	-.311	.183	-1.70	.101	-.686	.065	
NUMBER_OF_WOMEN_DIRECTORS	1.34	1.153	1.16	.255	-1.029	3.709	
rdbysales	-3256.953	1802.661	-1.81	.082	-6962.375	448.469	*
opefficiency_	-89.083	25.105	-3.55	.001	-140.686	-37.48	***
BB_3Y_DEFAULT_PROB	-306.976	152.2	-2.02	.054	-619.828	5.876	*
UNLEVERED_BETA	-.168	.224	-0.75	.459	-.629	.292	
2015b	0	.	.	.	.	.	
2016	-.412	2.112	-0.20	.847	-4.753	3.929	
2017	1.196	1.986	0.60	.552	-2.886	5.279	
2018	1.017	2.068	0.49	.627	-3.235	5.268	
2019	3.614	1.953	1.85	.076	-.401	7.629	*
2020	4.137	3.311	1.25	.223	-2.668	10.943	
2021	1.449	4.069	0.36	.725	-6.914	9.812	
2022o	0	.	.	.	.	.	
Constant	16.872	122.595	0.14	.892	-235.126	268.87	
Mean dependent var	17.086		SD dependent var		6.127		
R-squared	0.789		Number of obs		55		
F-test	4.871		Prob > F		0.000		
Akaike crit. (AIC)	293.814		Bayesian crit. (BIC)		335.968		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.102 Stata Regression Results: The Effect of ESG Combined Score on Return on Capital Employed in the Financial Industry

: Industry_n = Financial

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.596	.72	-0.83	.414	-2.07	.878	
Intotalassets	21.6	11.115	1.94	.062	-1.168	44.367	*
firmage_	-.255	1.71	-0.15	.882	-3.758	3.248	
TOT_DEBT_TO_							
TOT_EQY	-.035	.051	-0.68	.501	-.139	.07	
capitalintensity	34.15	85.714	0.40	.693	-141.428	209.728	
cashflowbysale	1.739	4.692	0.37	.714	-7.872	11.349	
TOT_MKT_VAL	0	0	1.76	.09	0	0	*
financialslack	-2.133	.953	-2.24	.033	-4.085	-.182	**
Internationalisation	-.711	.643	-1.11	.278	-2.028	.606	
NUMBER_OF_							
WOMEN_DI~D	-4.608	5.171	-0.89	.381	-15.201	5.985	
o	0	.	.	.	.	.	
opefficiency_	-3.621	11.427	-0.32	.754	-27.028	19.786	
BB_3Y_DEFAU							
LT_PROB	139.313	88.811	1.57	.128	-42.607	321.233	
UNLEVERED_B							
ETA	.086	.274	0.31	.756	-.475	.646	
2015b	0	.	.	.	.	.	
2016	-3.269	6.144	-0.53	.599	-15.854	9.317	
2017	2.474	7.066	0.35	.729	-12	16.948	
2018	10.412	6.024	1.73	.095	-1.928	22.751	*
2019	5.44	6.668	0.82	.421	-8.218	19.098	
2020	-.714	8.439	-0.09	.933	-18	16.571	
2021	9.051	8.851	1.02	.315	-9.079	27.182	
2022o	0	.	.	.	.	.	
Constant	-205.29	114.298	-1.80	.083	-439.419	28.839	*
Mean dependent var	15.136		SD dependent var		14.782		
R-squared	0.596		Number of obs		59		
F-test	2.178		Prob > F		0.021		
Akaike crit. (AIC)	435.114		Bayesian crit. (BIC)		476.665		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.103 Stata Regression Results: The Effect of ESG Combined Score on Return on Capital Employed in the Industrial Industry**: Industry_n = Industrial**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.135	.133	1.01	.312	-.127	.396	
Intotalassets	5.173	3.711	1.39	.165	-2.134	12.48	
firmage_	-1.252	.539	-2.32	.021	-2.314	-.19	**
TOT_DEBT_TO_							
TOT_EQY	-.09	.037	-2.45	.015	-.162	-.018	**
capitalintensity	5.257	21.21	0.25	.804	-36.503	47.017	
cashflowbysale	-6.124	5.842	-1.05	.296	-17.627	5.379	
TOT_MKT_VAL	0	0	-0.43	.664	0	0	
financialslack	-.57	.907	-0.63	.531	-2.356	1.216	
Internationalisation	.002	.068	0.03	.973	-.132	.137	
NUMBER_OF_							
WOMEN_DI~D	.158	1.184	0.13	.894	-2.174	2.489	
rdbysales	-162.435	132.845	-1.22	.223	-423.997	99.127	
opefficiency_	-102.202	8.772	-11.65	0	-119.472	-84.931	***
BB_3Y_DEFAU							
LT_PROB	26.369	41.256	0.64	.523	-54.86	107.598	
UNLEVERED_B							
ETA	.107	.046	2.29	.023	.015	.198	**
2015b	0	.	.	.	.	.	
2016	-3.05	1.927	-1.58	.115	-6.845	.745	
2017	-2.961	1.811	-1.64	.103	-6.528	.605	
2018	-3.242	1.768	-1.83	.068	-6.722	.238	*
2019	-1.113	1.785	-0.62	.533	-4.627	2.401	
2020	-2.217	2.06	-1.08	.283	-6.273	1.839	
2021	-5.387	2.171	-2.48	.014	-9.661	-1.113	**
2022o	0	.	.	.	.	.	
Constant	114.502	33.587	3.41	.001	48.372	180.633	***
Mean dependent var	17.759		SD dependent var		14.339		
R-squared	0.433		Number of obs		356		
F-test	10.169		Prob > F		0.000		
Akaike crit. (AIC)	2487.094		Bayesian crit. (BIC)		2568.467		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.104 Stata Regression Results: The Effect of ESG Combined Score on Return on Capital Employed in the Technology Industry**: Industry_n = Technology**

RETURN_ON_CAPITAL~D	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	.046	.201	0.23	.818	-.359 .452	
Intotalassets	-17.626	6.779	-2.60	.013	-31.339 -3.913	**
firmage_	1.799	1.009	1.78	.082	-.242 3.84	*
TOT_DEBT_TO_TOT_EQY	.143	.123	1.16	.252	-.106 .392	
capitalintensity	113.706	57.645	1.97	.056	-2.892 230.304	*
cashflowbysale	-63.297	23.003	-2.75	.009	-109.825 -16.769	***
TOT_MKT_VAL	0	0	-0.29	.771	0 0	
financialslack	-3.161	.984	-3.21	.003	-5.151 -1.171	***
Internationalisation	.03	.033	0.92	.364	-.036 .096	
NUMBER_OF_WORKING_DAYS	-1.972	1.211	-1.63	.112	-4.422 .478	
rdbysales	-67.007	130.561	-0.51	.611	-331.093 197.078	
opefficiency_	2.264	6.275	0.36	.72	-10.427 14.956	
BB_3Y_DEFAULT_PROB	-305.867	123.044	-2.49	.017	-554.748 -56.986	**
UNLEVERED_BETA	.013	.015	0.91	.37	-.016 .042	
2015b	0	.	.	.	.	
2016	-.716	2.663	-0.27	.789	-6.102 4.669	
2017	-1.249	2.437	-0.51	.611	-6.179 3.68	
2018	-1.41	2.466	-0.57	.571	-6.398 3.578	
2019	.342	2.416	0.14	.888	-4.545 5.228	
2020	-2.38	2.958	-0.81	.426	-8.363 3.603	
2021	-.415	3.061	-0.14	.893	-6.606 5.775	
2022o	0	.	.	.	.	
Constant	198.672	58.767	3.38	.002	79.803 317.54	***
Mean dependent var	33.745	SD dependent var	19.968			
R-squared	0.570	Number of obs	76			
F-test	2.580	Prob > F	0.002			
Akaike crit. (AIC)	444.600	Bayesian crit. (BIC)	493.545			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.105 Stata Regression Results: The Effect of ESG Combined Score on Return on Capital Employed in the Utilities Industry**: Industry_n = Utilities**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.246	.185	-1.33	.19	-.618 .126	
Intotalassets	-.787	4.953	-0.16	.874	-10.752 9.177	
firmage_	.907	.642	1.41	.164	-.384 2.198	
TOT_DEBT_TO_ TOT_EQY	-.017	.02	-0.87	.391	-.056 .022	
capitalintensity	-34.529	31.874	-1.08	.284	-98.652 29.594	
cashflowbysale	-.549	4.71	-0.12	.908	-10.025 8.927	
TOT_MKT_VAL	0	0	1.12	.27	0 0	
financialslack	-1.36	1.679	-0.81	.422	-4.739 2.018	
Internationalisation	-.291	.16	-1.82	.075	-.613 .03	*
NUMBER_OF_ WOMEN_DI~D	1.602	.769	2.08	.043	.056 3.149	**
rdbysales	1954.236	1000.341	1.95	.057	-58.19 3966.661	*
opefficiency_	8.645	8.892	0.97	.336	-9.243 26.532	
BB_3Y_DEFAULT_PROB	41.463	44.184	0.94	.353	-47.424 130.35	
UNLEVERED_BETA	-.057	.078	-0.73	.468	-.214 .1	
2015b	0	.	.	.	.	
2016	1.211	1.898	0.64	.527	-2.608 5.03	
2017	2.27	1.963	1.16	.253	-1.679 6.218	
2018	1.503	1.851	0.81	.421	-2.221 5.228	
2019	.809	1.649	0.49	.626	-2.508 4.126	
2020	2.426	1.753	1.38	.173	-1.102 5.953	
2021	.908	1.637	0.56	.581	-2.384 4.201	
2022o	0	.	.	.	.	
Constant	-8.955	50.267	-0.18	.859	-110.081 92.17	
Mean dependent var	13.638		SD dependent var		8.616	
R-squared	0.477		Number of obs		82	
F-test	2.142		Prob > F		0.008	
Akaike crit. (AIC)	445.614		Bayesian crit. (BIC)		496.155	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.106 Stata Regression Results: The Effect of E, S, G on Return on Capital Employed in the Basic Materials Industry

: Industry_n = Basic Materials

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.322	.139	-2.31	.022	-.596	-.047	**
SOCIAL_DISCL OSURE_~E	.439	.241	1.83	.07	-.036	.914	*
GOVNCE_DISC LOSURE_~E	-.087	.209	-0.42	.678	-.5	.326	
Intotalassets	-19.794	5.912	-3.35	.001	-31.461	-8.127	****
firmage_	1.273	.915	1.39	.166	-.533	3.079	
TOT_DEBT_TO_ TOT_EQY	.001	.003	0.29	.771	-.005	.007	
capitalintensity	7.894	28.566	0.28	.783	-48.483	64.27	
cashflowbysale	-14.829	10.902	-1.36	.175	-36.344	6.686	
TOT_MKT_VAL	0	0	2.71	.007	0	0	****
financialslack	.571	1.179	0.48	.628	-1.755	2.898	
Internationalisatio n	.141	.108	1.31	.192	-.072	.354	
NUMBER_OF_ WOMEN_DI~D	-4.79	2.439	-1.96	.051	-9.603	.023	*
rdbysales	-15.027	36.979	-0.41	.685	-88.007	57.953	
opefficiency_	-25.031	10.714	-2.34	.021	-46.177	-3.886	**
BB_3Y_DEFAU LT_PROB	-62.34	65.517	-0.95	.343	-191.641	66.961	
UNLEVERED_B ETA	.025	.067	0.36	.716	-.108	.157	
2015b	0	.	.	.	.	.	
2016	-2.284	3.467	-0.66	.511	-9.127	4.559	
2017	-7.096	3.233	-2.19	.029	-13.476	-.717	**
2018	-6.792	3.218	-2.11	.036	-13.143	-.44	**
2019	-.41	3.131	-0.13	.896	-6.59	5.77	
2020	1.381	3.776	0.37	.715	-6.07	8.833	
2021	-1.776	4.063	-0.44	.663	-9.794	6.243	
2022o	0	.	.	.	.	.	
Constant	199.449	53.193	3.75	0	94.471	304.428	****
Mean dependent var		21.020		SD dependent var		18.221	
R-squared		0.166		Number of obs		239	
F-test		1.596		Prob > F		0.010	
Akaike crit. (AIC)		1864.726		Bayesian crit. (BIC)		1944.685	

**** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.107 Stata Regression Results: The Effect of E, S, G on Return on Capital Employed in the Communications Industry**: Industry_n = Communications**

RETURN_ON_CAPITAL~D	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISCLOSURE~E	-1.429	1.654	-0.86	.399	-4.904 2.046	
SOCIAL_DISCLOSURE~E	4.661	2.32	2.01	.06	-.213 9.534	*
GOVNCEDISCLOSURE~E	10.45	3.921	2.67	.016	2.213 18.687	**
Intotalassets	172.126	38.372	4.49	0	91.509 252.743	***
firmage_	-14.015	10.273	-1.36	.189	-35.597 7.567	
TOT_DEBT_TO_TOT_EQY	-1.932	.412	-4.69	0	-2.797 -1.067	***
capitalintensity	-503.722	475.492	-1.06	.303	-1502.693 495.249	
cashflowbysale	122.558	144.454	0.85	.407	-180.93 426.045	
TOT_MKT_VAL	0	0	-0.05	.96	0 0	
financialslack	-22.386	9.89	-2.26	.036	-43.164 -1.608	**
Internationalisation	-4.219	2.581	-1.63	.12	-9.642 1.204	
NUMBER_OF_WOMEN_DI~D	19.919	17.362	1.15	.266	-16.557 56.394	
o	0	.	.	.	.	
opefficiency_	-253.043	197.084	-1.28	.215	-667.101 161.015	
BB_3Y_DEFAULT_PROB	178.821	422.321	0.42	.677	-708.442 1066.084	
UNLEVERED_BETA	-3.313	1.444	-2.29	.034	-6.346 -.28	**
2015b	0	.	.	.	.	
2016	49.132	23.736	2.07	.053	-.735 99	*
2017	2.101	29.009	0.07	.943	-58.845 63.048	
2018	-56.414	31.858	-1.77	.094	-123.344 10.517	*
2019	-70.739	29.32	-2.41	.027	-132.338 -9.139	**
2020	-76.848	41.307	-1.86	.079	-163.631 9.935	*
2021	-44.029	39.958	-1.10	.285	-127.978 39.92	
2022o	0	.	.	.	.	
Constant	-2161.015	397.466	-5.44	0	-2996.06 -1325.97	***
Mean dependent var		29.537		SD dependent var		79.626
R-squared		0.895		Number of obs		48
F-test		7.322		Prob > F		0.000
Akaike crit. (AIC)		482.156		Bayesian crit. (BIC)		523.322

*** $p < .01$, ** $p < .05$, * $p < .1$

Cyclical Industry

Table 5.108 Stata Regression Results: The Effect of E, S, G on Return on Capital Employed in the Consumer

: Industry_n = Consumer Cyclical

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.154	.142	1.09	.279	-.126	.434	
SOCIAL_DISCL OSURE_~E	-.386	.248	-1.56	.121	-.875	.103	
GOVNCE_DISC LOSURE_~E	-.001	.276	-0.00	.997	-.546	.544	
Intotalassets	-10.99	7.547	-1.46	.147	-25.889	3.909	
firmage_	.398	1.358	0.29	.77	-2.283	3.079	
TOT_DEBT_TO_ TOT_EQY	-.026	.037	-0.71	.481	-.098	.046	
capitalintensity	-85.78	43.84	-1.96	.052	-172.325	.766	*
cashflowbysale	43.418	23.624	1.84	.068	-3.219	90.055	*
TOT_MKT_VAL	0	0	3.31	.001	0	0	***
financialslack	-6.442	2.272	-2.84	.005	-10.927	-1.957	***
Internationalisatio n	.021	.096	0.22	.825	-.169	.212	
NUMBER_OF_ WOMEN_DI~D	3.577	2.35	1.52	.13	-1.061	8.215	
rdbysales	-638.68	277.551	-2.30	.023	-1186.594	-90.767	**
opefficiency_	-46.328	17.681	-2.62	.01	-81.232	-11.423	**
BB_3Y_DEFAU LT_PROB	-1.66	86.068	-0.02	.985	-171.567	168.247	
UNLEVERED_B ETA	.023	.045	0.50	.617	-.066	.112	
2015b	0	.	.	.	.	.	
2016	1.816	4.118	0.44	.66	-6.313	9.945	
2017	5.3	3.77	1.41	.162	-2.143	12.743	
2018	5.162	3.694	1.40	.164	-2.131	12.454	
2019	5.87	3.595	1.63	.104	-1.226	12.967	
2020	4.675	4.002	1.17	.244	-3.226	12.576	
2021	-4.478	4.723	-0.95	.344	-13.801	4.846	
2022o	0	.	.	.	.	.	
Constant	167.791	63.408	2.65	.009	42.617	292.966	***
Mean dependent var		25.003		SD dependent var		23.530	
R-squared		0.300		Number of obs		235	
F-test		3.297		Prob > F		0.000	
Akaike crit. (AIC)		1888.956		Bayesian crit. (BIC)		1968.527	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.109 Stata Regression Results: The Effect of E, S, G on Return on Capital Employed in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.158	.117	1.35	.178	-.072	.387	
SOCIAL_DISCL OSURE_~E	.107	.157	0.68	.497	-.203	.417	
GOVNCE_DISC LOSURE_~E	-.366	.238	-1.54	.125	-.834	.102	
Intotalassets	-10.94	4.872	-2.25	.026	-20.532	-1.347	**
firmage_	.095	.25	0.38	.704	-.397	.587	
TOT_DEBT_TO_ TOT_EQY	.031	.04	0.76	.448	-.049	.11	
capitalintensity	-63.303	30.463	-2.08	.039	-123.275	-3.33	**
cashflowbysale	35.436	12.64	2.80	.005	10.551	60.321	***
TOT_MKT_VAL	0	0	0.36	.718	0	0	
financialslack	-5.187	1.606	-3.23	.001	-8.348	-2.026	***
Internationalisatio n	-.029	.066	-0.43	.667	-.159	.102	
NUMBER_OF_ WOMEN_DI~D	2.223	1.491	1.49	.137	-.713	5.159	
rdbysales	7.332	57.201	0.13	.898	-105.28	119.944	
opefficiency_	-113.626	20.874	-5.44	0	-154.72	-72.533	***
BB_3Y_DEFAU LT_PROB	-194.13	103.58	-1.87	.062	-398.047	9.787	*
UNLEVERED_B ETA	.043	.049	0.87	.383	-.054	.14	
2015b	0	.	.	.	.	.	
2016	-.443	3.098	-0.14	.886	-6.542	5.655	
2017	.048	3.43	0.01	.989	-6.705	6.801	
2018	2.419	3.945	0.61	.54	-5.348	10.185	
2019	.19	4.435	0.04	.966	-8.542	8.922	
2020	.365	4.927	0.07	.941	-9.334	10.063	
2021	-.911	5.704	-0.16	.873	-12.14	10.318	
2022	4.991	6.451	0.77	.44	-7.708	17.691	
Constant	263.804	58.44	4.51	0	148.753	378.855	***
Mean dependent var		31.021		SD dependent var		24.187	
R-squared		0.252		Number of obs		351	
F-test		3.988		Prob > F		0.000	
Akaike crit. (AIC)		2722.347		Bayesian crit. (BIC)		2815.006	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.110 Stata Regression Results: The Effect of E, S, G on Return on Capital Employed in the Energy Industry

: Industry_n = Energy

RETURN_ON_CAPITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.184	.08	2.29	.031	.018	.35	**
SOCIAL_DISCLOSURE~E	-.104	.18	-0.58	.568	-.476	.267	
GOVNCE_DISCLOSURE~E	-.06	.12	-0.50	.624	-.308	.189	
lntotalassets	2.419	11.551	0.21	.836	-21.421	26.259	
firmage_	.265	1.194	0.22	.826	-2.199	2.729	
TOT_DEBT_TO_TOT_EQY	-.045	.029	-1.56	.133	-.105	.015	
capitalintensity	23.732	40.786	0.58	.566	-60.445	107.91	
cashflowbysale	-5.213	12.667	-0.41	.684	-31.357	20.931	
TOT_MKT_VAL	0	0	-0.72	.477	0	0	
financialslack	-.932	1.524	-0.61	.547	-4.079	2.214	
Internationalisation	-.305	.175	-1.75	.094	-.665	.056	*
NUMBER_OF_WOMEN_DI~D	1.269	1.102	1.15	.261	-1.006	3.544	
rdbysales	-	1872.398	-1.01	.322	-	1969.873	
opefficiency_	-91.703	26.735	-3.43	.002	-146.88	-36.525	**
BB_3Y_DEFAULT_PROB	-249.932	147.413	-1.70	.103	-554.177	54.313	*
UNLEVERED_BETA	-.237	.24	-0.99	.333	-.734	.259	
2015b	0	.	.	.	.	.	
2016	-.405	2.084	-0.19	.848	-4.706	3.896	
2017	2.285	2.058	1.11	.278	-1.963	6.533	
2018	1.315	2.182	0.60	.552	-3.188	5.818	
2019	4.389	1.997	2.20	.038	.267	8.511	**
2020	5.069	3.184	1.59	.124	-1.502	11.641	
2021	-.418	4.166	-0.10	.921	-9.017	8.181	
2022o	0	.	.	.	.	.	
Constant	66.132	119.48	0.55	.585	-180.463	312.727	
Mean dependent var		17.086		SD dependent var		6.127	
R-squared		0.824		Number of obs		55	
F-test		5.091		Prob > F		0.000	
Akaike crit. (AIC)		288.075		Bayesian crit. (BIC)		334.244	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.111 Stata Regression Results: The Effect of E, S, G on Return on Capital Employed in the Financial Industry**: Industry_n = Financial**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.141	.298	-0.47	.64	-.754	.471	
SOCIAL_DISCL OSURE_~E	-.071	.526	-0.13	.894	-1.153	1.011	
GOVNCE_DISC LOSURE_~E	-.885	.829	-1.07	.296	-2.589	.819	
Intotalassets	20.033	12.25	1.64	.114	-5.147	45.213	
firmage_	-.068	2.093	-0.03	.974	-4.369	4.233	
TOT_DEBT_TO_ TOT_EQY	-.043	.053	-0.80	.432	-.152	.067	
capitalintensity	27.908	87.998	0.32	.754	-152.973	208.789	
cashflowbysale	2.786	5.035	0.55	.585	-7.564	13.137	
TOT_MKT_VAL	0	0	1.80	.084	0	0	*
financialslack	-2.294	1.041	-2.20	.037	-4.434	-.154	**
Internationalisatio n	-.917	.693	-1.32	.198	-2.341	.508	
NUMBER_OF_ WOMEN_DI~D	-4.684	5.282	-0.89	.383	-15.542	6.174	
o	0	.	.	.	.	.	
opefficiency_	-1.371	11.931	-0.12	.909	-25.895	23.154	
BB_3Y_DEFAU LT_PROB	149.357	92.659	1.61	.119	-41.106	339.82	
UNLEVERED_B ETA	.064	.285	0.22	.824	-.522	.65	
2015b	0	.	.	.	.	.	
2016	-1.483	6.564	-0.23	.823	-14.977	12.01	
2017	3.295	7.582	0.44	.667	-12.289	18.88	
2018	11.809	6.61	1.79	.086	-1.779	25.397	*
2019	5.918	7.046	0.84	.409	-8.564	20.401	
2020	.137	8.714	0.02	.988	-17.775	18.049	
2021	9.073	9.038	1.00	.325	-9.506	27.651	
2022o	0	.	.	.	.	.	
Constant	-145.367	137.744	-1.05	.301	-428.503	137.769	
Mean dependent var		15.136		SD dependent var		14.782	
R-squared		0.609		Number of obs		59	
F-test		1.931		Prob > F		0.045	
Akaike crit. (AIC)		437.207		Bayesian crit. (BIC)		482.913	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.112 Stata Regression Results: The Effect of E, S, G on Return on Capital Employed in the Industrial Industry

: Industry_n = Industrial

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.195	.077	2.54	.012	.044	.346	**
SOCIAL_DISCL OSURE_~E	-.333	.131	-2.54	.012	-.591	-.075	**
GOVNCE_DISC LOSURE_~E	.217	.129	1.68	.095	-.038	.471	*
Intotalassets	6.517	3.692	1.76	.079	-.752	13.785	*
firmage_	-1.093	.539	-2.03	.044	-2.153	-.032	**
TOT_DEBT_TO_ TOT_EQY	-.097	.036	-2.69	.008	-.169	-.026	***
capitalintensity	5.459	20.959	0.26	.795	-35.809	46.728	
cashflowbysale	-4.464	5.782	-0.77	.441	-15.848	6.921	
TOT_MKT_VAL	0	0	-0.84	.401	0	0	
financialslack	-.89	.9	-0.99	.324	-2.662	.883	
Internationalisatio n	-.008	.067	-0.12	.903	-.141	.125	
NUMBER_OF_ WOMEN_DI~D	.382	1.169	0.33	.744	-1.919	2.684	
rdbysales	-152.031	132.618	-1.15	.253	-413.154	109.092	
opefficiency_	-102.768	8.677	-11.84	0	-119.853	-85.684	***
BB_3Y_DEFAU LT_PROB	12.823	40.912	0.31	.754	-67.733	93.38	
UNLEVERED_B ETA	.111	.046	2.41	.017	.02	.201	**
2015b	0	.	.	.	.	.	
2016	-3.46	1.904	-1.82	.07	-7.209	.29	*
2017	-2.551	1.79	-1.43	.155	-6.075	.973	
2018	-3.308	1.748	-1.89	.06	-6.751	.134	*
2019	-1.298	1.776	-0.73	.466	-4.794	2.199	
2020	-2.623	2.05	-1.28	.202	-6.66	1.414	
2021	-6.17	2.154	-2.87	.005	-10.411	-1.93	***
2022o	0	.	.	.	.	.	
Constant	86.158	35.027	2.46	.015	17.189	155.127	**
Mean dependent var		17.759		SD dependent var		14.339	
R-squared		0.454		Number of obs		356	
F-test		9.968		Prob > F		0.000	
Akaike crit. (AIC)		2478.005		Bayesian crit. (BIC)		2567.129	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.113 Stata Regression Results: The Effect of E, S, G on Return on Capital Employed in the Technology Industry**: Industry_n = Technology**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.162	.1	1.63	.113	-.04	.363	
SOCIAL_DISCL OSURE_~E	-.192	.158	-1.21	.234	-.512	.129	
GOVNCE_DISC LOSURE_~E	-.283	.282	-1.00	.323	-.855	.289	
Intotalassets	-18.04	6.646	-2.71	.01	-31.506	-4.573	**
firmage_	2.137	1.073	1.99	.054	-.038	4.312	*
TOT_DEBT_TO_ TOT_EQY	.11	.125	0.88	.384	-.143	.363	
capitalintensity	131.145	59.295	2.21	.033	11.002	251.288	**
cashflowbysale	-55.575	22.887	-2.43	.02	-101.947	-9.202	**
TOT_MKT_VAL	0	0	0.40	.692	0	0	
financialslack	-3.191	.987	-3.23	.003	-5.191	-1.19	***
Internationalisatio n	.031	.032	0.95	.346	-.035	.096	
NUMBER_OF_ WOMEN_DI~D	-2.084	1.244	-1.68	.102	-4.604	.436	
rdbysales	-165.127	137.016	-1.21	.236	-442.748	112.493	
opefficiency_	5.554	6.356	0.87	.388	-7.325	18.433	
BB_3Y_DEFAU LT_PROB	-321.816	120.58	-2.67	.011	-566.136	-77.497	**
UNLEVERED_B ETA	.015	.014	1.02	.312	-.014	.044	
2015b	0	.	.	.	.	.	
2016	-.259	2.613	-0.10	.922	-5.553	5.035	
2017	.603	2.605	0.23	.818	-4.676	5.881	
2018	-.235	2.613	-0.09	.929	-5.53	5.059	
2019	1.15	2.487	0.46	.646	-3.888	6.188	
2020	-1.877	3.117	-0.60	.551	-8.193	4.439	
2021	-1.12	3.077	-0.36	.718	-7.354	5.115	
2022o	0	.	.	.	.	.	
Constant	215.614	65.546	3.29	.002	82.806	348.423	***
Mean dependent var		33.745		SD dependent var		19.968	
R-squared		0.610		Number of obs		76	
F-test		2.632		Prob > F		0.002	
Akaike crit. (AIC)		441.073		Bayesian crit. (BIC)		494.680	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.114 Stata Regression Results: The Effect of E, S, G on Return on Capital Employed in the Utilities Industry**: Industry_n = Utilities**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISC LOSURE~E	-.173	.09	-1.93	.06	-.354 .008	*
SOCIAL_DISCL OSURE_~E	.057	.149	0.38	.703	-.243 .357	
GOVNCE_DISC LOSURE_~E	.104	.231	0.45	.656	-.362 .569	
Intotalassets	-3.588	5.376	-0.67	.508	-14.415 7.239	
firmage_	.968	.646	1.50	.141	-.333 2.268	
TOT_DEBT_TO_ TOT_EQY	-.014	.02	-0.72	.474	-.054 .026	
capitalintensity	-43.602	32.955	-1.32	.192	-109.978 22.773	
cashflowbysale	.924	4.868	0.19	.85	-8.879 10.728	
TOT_MKT_VAL	0	0	1.41	.166	0 0	
financialslack	-1.384	1.697	-0.82	.419	-4.802 2.034	
Internationalisatio n	-.314	.167	-1.88	.067	-.651 .022	*
NUMBER_OF_ WOMEN_DI~D	1.41	.785	1.80	.079	-.17 2.99	*
rdbysales	2674.089	1173.784	2.28	.028	309.967 5038.21	**
opefficiency_	14.781	9.911	1.49	.143	-5.182 34.743	
BB_3Y_DEFAU LT_PROB	32.744	45.622	0.72	.477	-59.143 124.632	
UNLEVERED_B ETA	-.062	.078	-0.79	.434	-.219 .096	
2015b	0	.	.	.	.	
2016	1.238	1.901	0.65	.518	-2.59 5.066	
2017	1.951	1.976	0.99	.329	-2.029 5.932	
2018	1.075	1.878	0.57	.57	-2.708 4.858	
2019	.515	1.678	0.31	.761	-2.865 3.894	
2020	2.208	1.77	1.25	.219	-1.358 5.773	
2021	1.057	1.657	0.64	.527	-2.281 4.395	
2022o	0	.	.	.	.	
Constant	2.194	55.519	0.04	.969	-109.627 114.015	
Mean dependent var		13.638		SD dependent var		8.616
R-squared		0.499		Number of obs		82
F-test		2.036		Prob > F		0.012
Akaike crit. (AIC)		446.090		Bayesian crit. (BIC)		501.445

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.115 Stata Regression Results: The Effect of ESG Combined Score on Investment Efficiency in the Basic Materials Industry**: Industry_n = Basic Materials**

RETURN_ON_I NV_CAPI~L	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.056	.075	-0.75	.457	-.204	.092	
Intotalassets	-5.17	2.466	-2.10	.037	-10.036	-.303	**
firmage_	.487	.377	1.29	.198	-.257	1.23	
TOT_DEBT_TO_							
TOT_EQY	-.001	.001	-0.54	.591	-.003	.002	
capitalintensity	-8.881	11.893	-0.75	.456	-32.349	14.587	
cashflowbysale	6.385	4.541	1.41	.161	-2.575	15.345	
TOT_MKT_VAL	0	0	3.42	.001	0	0	***
financialslack	.369	.485	0.76	.448	-.588	1.327	
Internationalisation	.036	.044	0.82	.413	-.051	.123	
NUMBER_OF_							
WOMEN_DI~D	-2.321	1.018	-2.28	.024	-4.329	-.312	**
rdbysales	-8.023	15.418	-0.52	.603	-38.445	22.4	
opefficiency_	-12.048	4.429	-2.72	.007	-20.787	-3.309	***
BB_3Y_DEFAU							
LT_PROB	-68.224	26.38	-2.59	.01	-120.279	-16.17	**
UNLEVERED_B							
ETA	.056	.028	2.01	.046	.001	.112	**
2015b	0	.	.	.	.	.	
2016	-1.498	1.428	-1.05	.296	-4.317	1.32	
2017	-2.729	1.32	-2.07	.04	-5.333	-.125	**
2018	-3.101	1.292	-2.40	.017	-5.651	-.552	**
2019	-1.178	1.261	-0.94	.351	-3.667	1.31	
2020	-.267	1.535	-0.17	.862	-3.296	2.762	
2021	-2.658	1.689	-1.57	.117	-5.992	.675	
2022o	0	.	.	.	.	.	
Constant	57.986	21.77	2.66	.008	15.028	100.944	***
Mean dependent var	13.844		SD dependent var	11.455			
R-squared	0.271		Number of obs	242			
F-test	3.347		Prob > F	0.000			
Akaike crit. (AIC)	1463.583		Bayesian crit. (BIC)	1536.851			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.116 Stata Regression Results: The Effect of ESG Combined Score on Investment Efficiency in the Communications Industry

: Industry_n = Communications

RETURN_ON_I NV_CAPI~L	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	2.844	1.716	1.66	.112	-.725	6.414	
Intotalassets	-19.965	19.024	-1.05	.306	-59.529	19.598	
firmage_	1.566	4.899	0.32	.752	-8.622	11.755	
TOT_DEBT_TO_							
TOT_EQY	-.611	.178	-3.44	.002	-.98	-.242	***
capitalintensity	-168.845	238.514	-0.71	.487	-664.861	327.171	
cashflowbysale	-4.543	72.417	-0.06	.951	-155.143	146.057	
TOT_MKT_VAL	0	0	2.16	.042	0	0	**
financialslack	-4.224	4.391	-0.96	.347	-13.355	4.907	
Internationalisation	-.319	1.323	-0.24	.812	-3.07	2.431	
NUMBER_OF_							
WOMEN_DI~D	-4.036	8.885	-0.45	.654	-22.514	14.442	
o	0	.	.	.	.	.	
opefficiency_	-85.809	100.56	-0.85	.403	-294.934	123.317	
BB_3Y_DEFAULT_PROB	-62.673	217.219	-0.29	.776	-514.404	389.057	
UNLEVERED_BETA	-.19	.701	-0.27	.789	-1.647	1.267	
2015b	0	.	.	.	.	.	
2016	9.345	11.621	0.80	.43	-14.822	33.511	
2017	-17.463	14.104	-1.24	.229	-46.794	11.868	
2018	-14.956	14.683	-1.02	.32	-45.49	15.578	
2019	-6.248	13.713	-0.46	.653	-34.765	22.269	
2020	21.745	19.34	1.12	.274	-18.474	61.964	
2021	11.254	20.374	0.55	.587	-31.116	53.624	
2022o	0	.	.	.	.	.	
Constant	183.613	178.758	1.03	.316	-188.133	555.36	
Mean dependent var	4.112		SD dependent var	30.229			
R-squared	0.785		Number of obs	50			
F-test	4.025		Prob > F	0.001			
Akaike crit. (AIC)	436.531		Bayesian crit. (BIC)	474.771			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.117 Stata Regression Results: The Effect of ESG Combined Score on Investment Efficiency in the Consumer Cyclical Industry**: Industry_n = Consumer Cyclical**

RETURN_ON_I NV_CAPI~L	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.088	.071	1.24	.216	-.052	.228	
lntotalassets	-3.784	1.842	-2.06	.041	-7.42	-.149	**
firmage_	-.671	.329	-2.04	.043	-1.32	-.022	**
TOT_DEBT_TO_ TOT_EQY	-.008	.009	-0.89	.373	-.025	.009	
capitalintensity	-18.763	10.481	-1.79	.075	-39.452	1.926	*
cashflowbysale	9.776	5.725	1.71	.09	-1.526	21.078	*
TOT_MKT_VAL	0	0	3.16	.002	0	0	***
financialslack	.852	.556	1.53	.127	-.245	1.948	
Internationalisation	-.029	.024	-1.22	.224	-.075	.018	
NUMBER_OF_ WOMEN_DI~D	.503	.57	0.88	.379	-.622	1.627	
rdbysales	47.954	67.605	0.71	.479	-85.494	181.402	
opefficiency_	-17.812	4.321	-4.12	0	-26.342	-9.282	***
BB_3Y_DEFAULT_PROB	-20.974	20.962	-1.00	.318	-62.351	20.403	
UNLEVERED_BETA	-.001	.011	-0.09	.93	-.023	.021	
2015b	0	.	.	.	.	.	
2016	-.295	1.007	-0.29	.77	-2.284	1.693	
2017	-1.715	.921	-1.86	.064	-3.533	.104	*
2018	-.83	.903	-0.92	.359	-2.612	.951	
2019	.464	.866	0.54	.593	-1.246	2.174	
2020	-.711	.964	-0.74	.462	-2.613	1.192	
2021	-2.625	1.148	-2.29	.023	-4.891	-.36	**
2022o	0	.	.	.	.	.	
Constant	93.309	14.839	6.29	0	64.018	122.601	***
Mean dependent var	12.539		SD dependent var		8.463		
R-squared	0.421		Number of obs		236		
F-test	6.210		Prob > F		0.000		
Akaike crit. (AIC)	1230.449		Bayesian crit. (BIC)		1303.189		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.118 Stata Regression Results: The Effect of ESG Combined Score on Investment Efficiency in the Consumer Non-cyclical Industry

: Industry_n = Consumer Non-cyclical

RETURN_ON_I NV_CAPI~L	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.037	.088	0.42	.672	-.135	.21	
Intotalassets	-20.82	2.585	-8.05	0	-25.909	-15.731	***
firmage_	-.063	.133	-0.47	.637	-.324	.199	
TOT_DEBT_TO_TOT_EQY	.023	.021	1.10	.273	-.019	.065	
capitalintensity	-55.956	16.201	-3.45	.001	-87.849	-24.063	***
cashflowbysale	5.524	6.727	0.82	.412	-7.718	18.766	
TOT_MKT_VAL	0	0	0.16	.874	0	0	
financialslack	-1.062	.846	-1.26	.21	-2.727	.602	
Internationalisation	.007	.035	0.19	.849	-.062	.076	
NUMBER_OF_WOMEN_DIRECTORS	2.187	.792	2.76	.006	.628	3.746	***
rdbsales	16.482	30.309	0.54	.587	-43.185	76.15	
opefficiency_	-78.384	10.969	-7.15	0	-99.979	-56.79	***
BB_3Y_DEFAULT_PROB	-23.264	55.136	-0.42	.673	-131.805	85.277	
UNLEVERED_BETA	.016	.026	0.61	.54	-.036	.068	
2015b	0	.	.	.	.	.	
2016	1.314	1.647	0.80	.426	-1.929	4.557	
2017	1.897	1.824	1.04	.299	-1.695	5.488	
2018	4.651	2.091	2.23	.027	.535	8.766	**
2019	6.719	2.345	2.87	.004	2.103	11.335	***
2020	9.292	2.606	3.56	0	4.161	14.424	***
2021	11.164	3.031	3.68	0	5.197	17.131	***
2022	14.123	3.432	4.12	0	7.367	20.879	***
Constant	302.987	29.873	10.14	0	244.179	361.796	***
Mean dependent var	18.152		SD dependent var	15.799			
R-squared	0.402		Number of obs	351			
F-test	8.802		Prob > F	0.000			
Akaike crit. (AIC)	2278.396		Bayesian crit. (BIC)	2363.333			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.119 Stata Regression Results: The Effect of ESG Combined Score on Investment Efficiency in the Energy Industry**: Industry_n = Energy**

RETURN_ON_I NV_CAPI~L	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.125	.294	0.43	.674	-.479	.73	
Intotalassets	-27.231	18.341	-1.49	.15	-64.931	10.47	
firmage_	3.16	1.849	1.71	.099	-.642	6.961	*
TOT_DEBT_TO_							
TOT_EQY	.016	.043	0.37	.717	-.072	.103	
capitalintensity	-8.407	64.594	-0.13	.897	-141.181	124.368	
cashflowbysale	-27.217	20.294	-1.34	.191	-68.931	14.497	
TOT_MKT_VAL	0	0	0.72	.48	0	0	
financialslack	.573	2.34	0.25	.809	-4.237	5.383	
Internationalisation	-.205	.283	-0.72	.476	-.788	.378	
NUMBER_OF_							
WOMEN_DI~D	-1.639	1.788	-0.92	.368	-5.315	2.036	
rdbysales	1827.037	2796.58	0.65	.519	-3921.416	7575.49	
opefficiency_	-99.606	38.946	-2.56	.017	-179.662	-19.551	**
BB_3Y_DEFAULT_PROB	18.436	236.118	0.08	.938	-466.911	503.783	
UNLEVERED_BETA	-.08	.347	-0.23	.819	-.794	.634	
2015b	0	.	.	.	.	.	
2016	-1.967	3.276	-0.60	.554	-8.701	4.768	
2017	1.642	3.081	0.53	.599	-4.691	7.975	
2018	1.573	3.209	0.49	.628	-5.024	8.169	
2019	3.2	3.03	1.06	.301	-3.029	9.429	
2020	3.482	5.136	0.68	.504	-7.076	14.04	
2021	-5.825	6.312	-0.92	.365	-18.799	7.149	
2022o	0	.	.	.	.	.	
Constant	328.649	190.19	1.73	.096	-62.291	719.589	*
Mean dependent var		13.076		SD dependent var		10.501	
R-squared		0.529		Number of obs		55	
F-test		1.461		Prob > F		0.167	
Akaike crit. (AIC)		342.119		Bayesian crit. (BIC)		384.273	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.120 Stata Regression Results: The Effect of ESG Combined Score on Investment Efficiency in the Financial Industry

: Industry_n = Financial

RETURN_ON_I NV_CAPI~L	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.115	.257	-0.45	.656	-.636	.405	
Intotalassets	6.604	3.537	1.87	.07	-.562	13.771	*
firmage_	-.081	.663	-0.12	.904	-1.425	1.264	
TOT_DEBT_TO_TOT_EQY	-.019	.02	-0.95	.346	-.059	.021	
capitalintensity	-2.526	34.992	-0.07	.943	-73.426	68.374	
cashflowbysale	-1.065	1.505	-0.71	.484	-4.115	1.985	
TOT_MKT_VAL	0	0	1.05	.301	0	0	
financialslack	-.105	.17	-0.62	.541	-.45	.24	
Internationalisation	-.097	.101	-0.95	.346	-.302	.109	
NUMBER_OF_WOMEN_DI~D	.005	1.381	0.00	.997	-2.792	2.802	
rdbysales	311.475	166.358	1.87	.069	-25.599	648.548	*
opefficiency_	-5.102	3.847	-1.33	.193	-12.896	2.693	
BB_3Y_DEFAULT_PROB	21.757	35.356	0.61	.542	-49.882	93.396	
UNLEVERED_BETA	.026	.097	0.27	.789	-.17	.223	
2015b	0	.	.	.	.	.	
2016	1.144	2.257	0.51	.615	-3.43	5.718	
2017	3.325	2.424	1.37	.178	-1.587	8.238	
2018	2.512	2.442	1.03	.31	-2.436	7.46	
2019	1.335	2.691	0.50	.623	-4.116	6.787	
2020	-.239	3.339	-0.07	.943	-7.006	6.527	
2021	1.449	3.526	0.41	.683	-5.695	8.594	
2022o	0	.	.	.	.	.	
Constant	-63.226	37.348	-1.69	.099	-138.9	12.449	*
Mean dependent var	6.365		SD dependent var		5.788		
R-squared	0.323		Number of obs		69		
F-test	0.882		Prob > F		0.637		
Akaike crit. (AIC)	395.245		Bayesian crit. (BIC)		442.162		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.121 Stata Regression Results: The Effect of ESG Combined Score on Investment Efficiency in the Industrial Industry**: Industry_n = Industrial**

RETURN_ON_I NV_CAPI~L	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	0	.064	-0.01	.995	-.126	.125	
Intotalassets	4.232	1.778	2.38	.018	.732	7.732	**
firmage_	-.835	.26	-3.22	.001	-1.346	-.325	***
TOT_DEBT_TO_TOT_EQY	-.044	.015	-2.94	.004	-.074	-.015	***
capitalintensity	-3.61	10.093	-0.36	.721	-23.481	16.26	
cashflowbysale	.782	2.811	0.28	.781	-4.753	6.317	
TOT_MKT_VAL	0	0	-1.31	.191	0	0	
financialslack	.004	.434	0.01	.993	-.851	.858	
Internationalisation	-.014	.033	-0.42	.677	-.079	.051	
NUMBER_OF_WOMEN_DIRECTORS	.253	.571	0.44	.658	-.871	1.377	
rdbysales	-146.045	64.576	-2.26	.025	-273.175	-18.914	**
opefficiency_	-74.378	4.258	-17.47	0	-82.761	-65.996	***
BB_3Y_DEFAULT_PROB	-24.6	18.401	-1.34	.182	-60.826	11.626	
UNLEVERED_BETA	.069	.022	3.09	.002	.025	.114	***
2015b	0	.	.	.	.	.	
2016	-2.559	.929	-2.75	.006	-4.388	-.729	***
2017	-1.621	.874	-1.86	.065	-3.341	.099	*
2018	-1.228	.845	-1.45	.147	-2.892	.435	
2019	.798	.854	0.93	.351	-.883	2.478	
2020	.722	.988	0.73	.466	-1.224	2.667	
2021	-1.739	1.04	-1.67	.096	-3.786	.308	*
2022o	0	.	.	.	.	.	
Constant	73.826	16.228	4.55	0	41.878	105.775	***
Mean dependent var	11.319		SD dependent var		8.635		
R-squared	0.625		Number of obs		364		
F-test	22.797		Prob > F		0.000		
Akaike crit. (AIC)	2018.798		Bayesian crit. (BIC)		2100.638		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.122 Stata Regression Results: The Effect of ESG Combined Score on Investment Efficiency in the Technology Industry

: Industry_n = Technology

RETURN_ON_I NV_CAPI~L	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.035	.102	0.35	.73	-.17	.241	
Intotalassets	-18.758	3.46	-5.42	0	-25.736	-11.78	***
firmage_	2.178	.508	4.28	0	1.152	3.203	***
TOT_DEBT_TO_ TOT_EQY	.045	.057	0.78	.438	-.071	.16	
capitalintensity	75.273	29.246	2.57	.014	16.294	134.253	**
cashflowbysale	-20.26	11.32	-1.79	.081	-43.088	2.568	*
TOT_MKT_VAL	0	0	-0.84	.403	0	0	
financialslack	-1.532	.495	-3.10	.003	-2.53	-.535	***
Internationalisation	.007	.016	0.43	.668	-.025	.039	
NUMBER_OF_ WOMEN_DI~D	-.917	.584	-1.57	.124	-2.095	.261	
rdbysales	-68.888	66.63	-1.03	.307	-203.26	65.485	
opefficiency_	1.79	3.182	0.56	.577	-4.628	8.208	
BB_3Y_DEFAULT_PROB	-141.765	60.66	-2.34	.024	-264.097	-19.434	**
UNLEVERED_BETA	.017	.007	2.28	.027	.002	.032	**
2015b	0	.	.	.	.	.	
2016	1.971	1.228	1.61	.116	-.505	4.447	
2017	.177	1.213	0.15	.885	-2.27	2.624	
2018	-2.298	1.252	-1.84	.073	-4.823	.226	*
2019	-.606	1.221	-0.50	.622	-3.068	1.855	
2020	-2.968	1.501	-1.98	.054	-5.996	.059	*
2021	-2.191	1.504	-1.46	.152	-5.223	.842	
2022o	0	.	.	.	.	.	
Constant	172.759	29.491	5.86	0	113.285	232.232	***
Mean dependent var	19.390		SD dependent var		8.127		
R-squared	0.706		Number of obs		80		
F-test	5.166		Prob > F		0.000		
Akaike crit. (AIC)	362.999		Bayesian crit. (BIC)		413.022		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.123 Stata Regression Results: The Effect of ESG Combined Score on Investment Efficiency in the Utilities Industry

: Industry_n = Utilities

RETURN_ON_I NV_CAPI~L	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.144	.112	-1.29	.203	-.368	.08	
Intotalassets	2.419	2.989	0.81	.422	-3.594	8.432	
firmage_	.441	.387	1.14	.26	-.338	1.22	
TOT_DEBT_TO_TOT_EQY	-.026	.012	-2.18	.034	-.049	-.002	**
capitalintensity	4.615	19.233	0.24	.811	-34.078	43.308	
cashflowbysale	-2.112	2.842	-0.74	.461	-7.83	3.606	
TOT_MKT_VAL	0	0	-0.78	.44	0	0	
financialslack	-1.138	1.013	-1.12	.267	-3.176	.901	
Internationalisation	-.168	.096	-1.75	.087	-.363	.026	*
NUMBER_OF_WOMEN_DIRECTORS	1.08	.464	2.33	.024	.146	2.013	**
rdbysales	365.54	603.62	0.61	.548	-848.788	1579.868	
opefficiency_	4.685	5.365	0.87	.387	-6.109	15.478	
BB_3Y_DEFAULT_PROB	-5.317	26.661	-0.20	.843	-58.953	48.318	
UNLEVERED_BETA	-.023	.047	-0.49	.624	-.118	.071	
2015b	0	.	.	.	.	.	
2016	1.562	1.146	1.36	.179	-.743	3.866	
2017	1.112	1.184	0.94	.352	-1.27	3.494	
2018	.514	1.117	0.46	.647	-1.733	2.762	
2019	-.135	.995	-0.14	.893	-2.136	1.867	
2020	1.729	1.058	1.63	.109	-.399	3.858	
2021	.046	.988	0.05	.963	-1.94	2.033	
2022o	0	.	.	.	.	.	
Constant	-31.714	30.332	-1.05	.301	-92.734	29.307	
Mean dependent var	8.658		SD dependent var		5.261		
R-squared	0.503		Number of obs		82		
F-test	2.382		Prob > F		0.003		
Akaike crit. (AIC)	362.769		Bayesian crit. (BIC)		413.310		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.124 Stata Regression Results: The Effect of E, S, G on Investment Efficiency in the Basic Materials Industry

: Industry_n = Basic Materials

RETURN_ON_CAPIT AL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOS URE~E	-.322	.139	-2.31	.022	-.596	-.047	**
SOCIAL_DISCLOSUR E_~E	.439	.241	1.83	.07	-.036	.914	*
GOVNCE_DISCLOSU RE_~E	-.087	.209	-0.42	.678	-.5	.326	
Intotalassets	-19.794	5.912	-3.35	.001	-31.461	-8.127	***
firmage_	1.273	.915	1.39	.166	-.533	3.079	
TOT_DEBT_TO_TOT _EQY	.001	.003	0.29	.771	-.005	.007	
capitalintensity	7.894	28.566	0.28	.783	-48.483	64.27	
cashflowbysale	-14.829	10.902	-1.36	.175	-36.344	6.686	
TOT_MKT_VAL	0	0	2.71	.007	0	0	***
financialslack	.571	1.179	0.48	.628	-1.755	2.898	
Internationalisation	.141	.108	1.31	.192	-.072	.354	
NUMBER_OF_WOME N_DI~D	-4.79	2.439	-1.96	.051	-9.603	.023	*
rdbysales	-15.027	36.979	-0.41	.685	-88.007	57.953	
opefficiency_	-25.031	10.714	-2.34	.021	-46.177	-3.886	**
BB_3Y_DEFAULT_P ROB	-62.34	65.517	-0.95	.343	-191.641	66.961	
UNLEVERED_BETA	.025	.067	0.36	.716	-.108	.157	
2015b	0	.	.	.	.	.	
2016	-2.284	3.467	-0.66	.511	-9.127	4.559	
2017	-7.096	3.233	-2.19	.029	-13.476	-.717	**
2018	-6.792	3.218	-2.11	.036	-13.143	-.44	**
2019	-.41	3.131	-0.13	.896	-6.59	5.77	
2020	1.381	3.776	0.37	.715	-6.07	8.833	
2021	-1.776	4.063	-0.44	.663	-9.794	6.243	
2022o	0	.	.	.	.	.	
Constant	199.449	53.193	3.75	0	94.471	304.428	***
Mean dependent var		21.020		SD dependent var		18.221	
R-squared		0.166		Number of obs		239	
F-test		1.596		Prob > F		0.010	
Akaike crit. (AIC)		1864.726		Bayesian crit. (BIC)		1944.685	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.125 Stata Regression Results: The Effect of E, S, G on Investment Efficiency in the Communications Industry**: Industry_n = Communications**

RETURN_ON_CAPITAL~D	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISCLOSURE~E	-1.429	1.654	-0.86	.399	-4.904 2.046	
SOCIAL_DISCLOSURE~E	4.661	2.32	2.01	.06	-.213 9.534	*
GOVNCEDISCLOSURE~E	10.45	3.921	2.67	.016	2.213 18.687	**
Intotalassets	172.126	38.372	4.49	0	91.509 252.743	***
firmage_	-14.015	10.273	-1.36	.189	-35.597 7.567	
TOT_DEBT_TO_TOT_EQY	-1.932	.412	-4.69	0	-2.797 -1.067	***
capitalintensity	-503.722	475.492	-1.06	.303	-1502.693 495.249	
cashflowbysale	122.558	144.454	0.85	.407	-180.93 426.045	
TOT_MKT_VAL	0	0	-0.05	.96	0 0	
financialslack	-22.386	9.89	-2.26	.036	-43.164 -1.608	**
Internationalisation	-4.219	2.581	-1.63	.12	-9.642 1.204	
NUMBER_OF_WORKING_MEN~D	19.919	17.362	1.15	.266	-16.557 56.394	
o	0	.	.	.	.	
opefficiency_	-253.043	197.084	-1.28	.215	-667.101 161.015	
BB_3Y_DEFAULT_PROB	178.821	422.321	0.42	.677	-708.442 1066.084	
UNLEVERED_BETA	-3.313	1.444	-2.29	.034	-6.346 -.28	**
2015b	0	.	.	.	.	
2016	49.132	23.736	2.07	.053	-.735 99	*
2017	2.101	29.009	0.07	.943	-58.845 63.048	
2018	-56.414	31.858	-1.77	.094	-123.344 10.517	*
2019	-70.739	29.32	-2.41	.027	-132.338 -9.139	**
2020	-76.848	41.307	-1.86	.079	-163.631 9.935	*
2021	-44.029	39.958	-1.10	.285	-127.978 39.92	
2022o	0	.	.	.	.	
Constant	-2161.015	397.466	-5.44	0	-2996.06 -1325.97	***
Mean dependent var		29.537		SD dependent var		79.626
R-squared		0.895		Number of obs		48
F-test		7.322		Prob > F		0.000
Akaike crit. (AIC)		482.156		Bayesian crit. (BIC)		523.322

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.126 Stata Regression Results: The Effect of E, S, G on Investment Efficiency in the Consumer Cyclical Industry**: Industry_n = Consumer Cyclical**

	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
RETURN_ON_CAPITAL_~D							
ENVIRON_DISCLOSURE~E	.154	.142	1.09	.279	-.126	.434	
SOCIAL_DISCLOSURE~E	-.386	.248	-1.56	.121	-.875	.103	
GOVNCESURE~E	-.001	.276	-0.00	.997	-.546	.544	
Intotalassets	-10.99	7.547	-1.46	.147	-25.889	3.909	
firmage_	.398	1.358	0.29	.77	-2.283	3.079	
TOT_DEBT_TO_TOT_EQY	-.026	.037	-0.71	.481	-.098	.046	
capitalintensity	-85.78	43.84	-1.96	.052	-172.325	.766	*
cashflowbysale	43.418	23.624	1.84	.068	-3.219	90.055	*
TOT_MKT_VAL	0	0	3.31	.001	0	0	****
financialslack	-6.442	2.272	-2.84	.005	-10.927	-1.957	****
Internationalisation	.021	.096	0.22	.825	-.169	.212	
NUMBER_OF_WORKING_MEN_DI~D	3.577	2.35	1.52	.13	-1.061	8.215	
rdbysales	-638.68	277.551	-2.30	.023	-1186.594	-90.767	**
opefficiency_	-46.328	17.681	-2.62	.01	-81.232	-11.423	**
BB_3Y_DEFAULT_PROB	-1.66	86.068	-0.02	.985	-171.567	168.247	
UNLEVERED_BETA	.023	.045	0.50	.617	-.066	.112	
2015b	0	.	.	.	.	.	
2016	1.816	4.118	0.44	.66	-6.313	9.945	
2017	5.3	3.77	1.41	.162	-2.143	12.743	
2018	5.162	3.694	1.40	.164	-2.131	12.454	
2019	5.87	3.595	1.63	.104	-1.226	12.967	
2020	4.675	4.002	1.17	.244	-3.226	12.576	
2021	-4.478	4.723	-0.95	.344	-13.801	4.846	
2022o	0	.	.	.	.	.	
Constant	167.791	63.408	2.65	.009	42.617	292.966	****
Mean dependent var	25.003		SD dependent var	23.530			
R-squared	0.300		Number of obs	235			
F-test	3.297		Prob > F	0.000			
Akaike crit. (AIC)	1888.956		Bayesian crit. (BIC)	1968.527			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.127 Stata Regression Results: The Effect of E, S, G on Investment Efficiency in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.158	.117	1.35	.178	-.072	.387	
SOCIAL_DISCL OSURE_~E	.107	.157	0.68	.497	-.203	.417	
GOVNCE_DISC LOSURE_~E	-.366	.238	-1.54	.125	-.834	.102	
Intotalassets	-10.94	4.872	-2.25	.026	-20.532	-1.347	**
firmage_	.095	.25	0.38	.704	-.397	.587	
TOT_DEBT_TO_ TOT_EQY	.031	.04	0.76	.448	-.049	.11	
capitalintensity	-63.303	30.463	-2.08	.039	-123.275	-3.33	**
cashflowbysale	35.436	12.64	2.80	.005	10.551	60.321	***
TOT_MKT_VAL	0	0	0.36	.718	0	0	
financialslack	-5.187	1.606	-3.23	.001	-8.348	-2.026	***
Internationalisatio n	-.029	.066	-0.43	.667	-.159	.102	
NUMBER_OF_ WOMEN_DI~D	2.223	1.491	1.49	.137	-.713	5.159	
rdbysales	7.332	57.201	0.13	.898	-105.28	119.944	
opefficiency_	-113.626	20.874	-5.44	0	-154.72	-72.533	***
BB_3Y_DEFAU LT_PROB	-194.13	103.58	-1.87	.062	-398.047	9.787	*
UNLEVERED_B ETA	.043	.049	0.87	.383	-.054	.14	
2015b	0	.	.	.	.	.	
2016	-.443	3.098	-0.14	.886	-6.542	5.655	
2017	.048	3.43	0.01	.989	-6.705	6.801	
2018	2.419	3.945	0.61	.54	-5.348	10.185	
2019	.19	4.435	0.04	.966	-8.542	8.922	
2020	.365	4.927	0.07	.941	-9.334	10.063	
2021	-.911	5.704	-0.16	.873	-12.14	10.318	
2022	4.991	6.451	0.77	.44	-7.708	17.691	
Constant	263.804	58.44	4.51	0	148.753	378.855	***
Mean dependent var		31.021		SD dependent var		24.187	
R-squared		0.252		Number of obs		351	
F-test		3.988		Prob > F		0.000	
Akaike crit. (AIC)		2722.347		Bayesian crit. (BIC)		2815.006	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.128 Stata Regression Results: The Effect of E, S, G on Investment Efficiency in the Energy Industry

: Industry_n = Energy

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.184	.08	2.29	.031	.018	.35	**
SOCIAL_DISCL OSURE_~E	-.104	.18	-0.58	.568	-.476	.267	
GOVNCE_DISC LOSURE_~E	-.06	.12	-0.50	.624	-.308	.189	
Intotalassets	2.419	11.551	0.21	.836	-21.421	26.259	
firmage_	.265	1.194	0.22	.826	-2.199	2.729	
TOT_DEBT_TO_ TOT_EQY	-.045	.029	-1.56	.133	-.105	.015	
capitalintensity	23.732	40.786	0.58	.566	-60.445	107.91	
cashflowbysale	-5.213	12.667	-0.41	.684	-31.357	20.931	
TOT_MKT_VAL	0	0	-0.72	.477	0	0	
financialslack	-.932	1.524	-0.61	.547	-4.079	2.214	
Internationalisatio n	-.305	.175	-1.75	.094	-.665	.056	*
NUMBER_OF_ WOMEN_DI~D	1.269	1.102	1.15	.261	-1.006	3.544	
rdbysales	-1894.568	1872.398	-1.01	.322	-5759.008	1969.873	
opefficiency_	-91.703	26.735	-3.43	.002	-146.88	-36.525	***
BB_3Y_DEFAU LT_PROB	-249.932	147.413	-1.70	.103	-554.177	54.313	
UNLEVERED_B ETA	-.237	.24	-0.99	.333	-.734	.259	
2015b	0	.	.	.	.	.	
2016	-.405	2.084	-0.19	.848	-4.706	3.896	
2017	2.285	2.058	1.11	.278	-1.963	6.533	
2018	1.315	2.182	0.60	.552	-3.188	5.818	
2019	4.389	1.997	2.20	.038	.267	8.511	**
2020	5.069	3.184	1.59	.124	-1.502	11.641	
2021	-.418	4.166	-0.10	.921	-9.017	8.181	
2022o	0	.	.	.	.	.	
Constant	66.132	119.48	0.55	.585	-180.463	312.727	
Mean dependent var		17.086		SD dependent var		6.127	
R-squared		0.824		Number of obs		55	
F-test		5.091		Prob > F		0.000	
Akaike crit. (AIC)		288.075		Bayesian crit. (BIC)		334.244	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.129 Stata Regression Results: The Effect of E, S, G on Investment Efficiency in the Financial Industry**: Industry_n = Financial**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISC LOSURE~E	-.141	.298	-0.47	.64	-.754 .471	
SOCIAL_DISCL OSURE_~E	-.071	.526	-0.13	.894	-1.153 1.011	
GOVNCE_DISC LOSURE_~E	-.885	.829	-1.07	.296	-2.589 .819	
Intotalassets	20.033	12.25	1.64	.114	-5.147 45.213	
firmage_	-.068	2.093	-0.03	.974	-4.369 4.233	
TOT_DEBT_TO_ TOT_EQY	-.043	.053	-0.80	.432	-.152 .067	
capitalintensity	27.908	87.998	0.32	.754	-152.973 208.789	
cashflowbysale	2.786	5.035	0.55	.585	-7.564 13.137	
TOT_MKT_VAL	0	0	1.80	.084	0 0	*
financialslack	-2.294	1.041	-2.20	.037	-4.434 -.154	**
Internationalisatio n	-.917	.693	-1.32	.198	-2.341 .508	
NUMBER_OF_ WOMEN_DI~D	-4.684	5.282	-0.89	.383	-15.542 6.174	
o	0	.	.	.	.	
opefficiency_	-1.371	11.931	-0.12	.909	-25.895 23.154	
BB_3Y_DEFAU LT_PROB	149.357	92.659	1.61	.119	-41.106 339.82	
UNLEVERED_B ETA	.064	.285	0.22	.824	-.522 .65	
2015b	0	.	.	.	.	
2016	-1.483	6.564	-0.23	.823	-14.977 12.01	
2017	3.295	7.582	0.44	.667	-12.289 18.88	
2018	11.809	6.61	1.79	.086	-1.779 25.397	*
2019	5.918	7.046	0.84	.409	-8.564 20.401	
2020	.137	8.714	0.02	.988	-17.775 18.049	
2021	9.073	9.038	1.00	.325	-9.506 27.651	
2022o	0	.	.	.	.	
Constant	-145.367	137.744	-1.05	.301	-428.503 137.769	
Mean dependent var		15.136		SD dependent var		14.782
R-squared		0.609		Number of obs		59
F-test		1.931		Prob > F		0.045
Akaike crit. (AIC)		437.207		Bayesian crit. (BIC)		482.913

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.130 Stata Regression Results: The Effect of E, S, G on Investment Efficiency in the Industrial Industry**: Industry_n = Industrial**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.195	.077	2.54	.012	.044	.346	**
SOCIAL_DISCL OSURE_~E	-.333	.131	-2.54	.012	-.591	-.075	**
GOVNCE_DISC LOSURE_~E	.217	.129	1.68	.095	-.038	.471	*
Intotalassets	6.517	3.692	1.76	.079	-.752	13.785	*
firmage_	-1.093	.539	-2.03	.044	-2.153	-.032	**
TOT_DEBT_TO_ TOT_EQY	-.097	.036	-2.69	.008	-.169	-.026	***
capitalintensity	5.459	20.959	0.26	.795	-35.809	46.728	
cashflowbysale	-4.464	5.782	-0.77	.441	-15.848	6.921	
TOT_MKT_VAL	0	0	-0.84	.401	0	0	
financialslack	-.89	.9	-0.99	.324	-2.662	.883	
Internationalisatio n	-.008	.067	-0.12	.903	-.141	.125	
NUMBER_OF_ WOMEN_DI~D	.382	1.169	0.33	.744	-1.919	2.684	
rdbysales	-152.031	132.618	-1.15	.253	-413.154	109.092	
opefficiency_	-102.768	8.677	-11.84	0	-119.853	-85.684	***
BB_3Y_DEFAU LT_PROB	12.823	40.912	0.31	.754	-67.733	93.38	
UNLEVERED_B ETA	.111	.046	2.41	.017	.02	.201	**
2015b	0	.	.	.	.	.	
2016	-3.46	1.904	-1.82	.07	-7.209	.29	*
2017	-2.551	1.79	-1.43	.155	-6.075	.973	
2018	-3.308	1.748	-1.89	.06	-6.751	.134	*
2019	-1.298	1.776	-0.73	.466	-4.794	2.199	
2020	-2.623	2.05	-1.28	.202	-6.66	1.414	
2021	-6.17	2.154	-2.87	.005	-10.411	-1.93	***
2022o	0	.	.	.	.	.	
Constant	86.158	35.027	2.46	.015	17.189	155.127	**
Mean dependent var		17.759		SD dependent var		14.339	
R-squared		0.454		Number of obs		356	
F-test		9.968		Prob > F		0.000	
Akaike crit. (AIC)		2478.005		Bayesian crit. (BIC)		2567.129	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.131 Stata Regression Results: The Effect of E, S, G on Investment Efficiency in the Technology Industry**: Industry_n = Technology**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.162	.1	1.63	.113	-.04	.363	
SOCIAL_DISCL OSURE_~E	-.192	.158	-1.21	.234	-.512	.129	
GOVNCE_DISC LOSURE_~E	-.283	.282	-1.00	.323	-.855	.289	
Intotalassets	-18.04	6.646	-2.71	.01	-31.506	-4.573	**
firmage_	2.137	1.073	1.99	.054	-.038	4.312	*
TOT_DEBT_TO_ TOT_EQY	.11	.125	0.88	.384	-.143	.363	
capitalintensity	131.145	59.295	2.21	.033	11.002	251.288	**
cashflowbysale	-55.575	22.887	-2.43	.02	-101.947	-9.202	**
TOT_MKT_VAL	0	0	0.40	.692	0	0	
financialslack	-3.191	.987	-3.23	.003	-5.191	-1.19	***
Internationalisatio n	.031	.032	0.95	.346	-.035	.096	
NUMBER_OF_ WOMEN_DI~D	-2.084	1.244	-1.68	.102	-4.604	.436	
rdbysales	-165.127	137.016	-1.21	.236	-442.748	112.493	
opefficiency_	5.554	6.356	0.87	.388	-7.325	18.433	
BB_3Y_DEFAU LT_PROB	-321.816	120.58	-2.67	.011	-566.136	-77.497	**
UNLEVERED_B ETA	.015	.014	1.02	.312	-.014	.044	
2015b	0	.	.	.	.	.	
2016	-.259	2.613	-0.10	.922	-5.553	5.035	
2017	.603	2.605	0.23	.818	-4.676	5.881	
2018	-.235	2.613	-0.09	.929	-5.53	5.059	
2019	1.15	2.487	0.46	.646	-3.888	6.188	
2020	-1.877	3.117	-0.60	.551	-8.193	4.439	
2021	-1.12	3.077	-0.36	.718	-7.354	5.115	
2022o	0	.	.	.	.	.	
Constant	215.614	65.546	3.29	.002	82.806	348.423	***
Mean dependent var		33.745		SD dependent var		19.968	
R-squared		0.610		Number of obs		76	
F-test		2.632		Prob > F		0.002	
Akaike crit. (AIC)		441.073		Bayesian crit. (BIC)		494.680	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.132 Stata Regression Results: The Effect of E, S, G on Investment Efficiency in the Utilities Industry**: Industry_n = Utilities**

RETURN_ON_C APITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.173	.09	-1.93	.06	-.354	.008	*
SOCIAL_DISCL OSURE_~E	.057	.149	0.38	.703	-.243	.357	
GOVNCE_DISC LOSURE_~E	.104	.231	0.45	.656	-.362	.569	
Intotalassets	-3.588	5.376	-0.67	.508	-14.415	7.239	
firmage_	.968	.646	1.50	.141	-.333	2.268	
TOT_DEBT_TO_ TOT_EQY	-.014	.02	-0.72	.474	-.054	.026	
capitalintensity	-43.602	32.955	-1.32	.192	-109.978	22.773	
cashflowbysale	.924	4.868	0.19	.85	-8.879	10.728	
TOT_MKT_VAL	0	0	1.41	.166	0	0	
financialslack	-1.384	1.697	-0.82	.419	-4.802	2.034	
Internationalisatio n	-.314	.167	-1.88	.067	-.651	.022	*
NUMBER_OF_ WOMEN_DI~D	1.41	.785	1.80	.079	-.17	2.99	*
rdbysales	2674.089	1173.784	2.28	.028	309.967	5038.21	**
opefficiency_	14.781	9.911	1.49	.143	-5.182	34.743	
BB_3Y_DEFAU LT_PROB	32.744	45.622	0.72	.477	-59.143	124.632	
UNLEVERED_B ETA	-.062	.078	-0.79	.434	-.219	.096	
2015b	0	.	.	.	.	.	
2016	1.238	1.901	0.65	.518	-2.59	5.066	
2017	1.951	1.976	0.99	.329	-2.029	5.932	
2018	1.075	1.878	0.57	.57	-2.708	4.858	
2019	.515	1.678	0.31	.761	-2.865	3.894	
2020	2.208	1.77	1.25	.219	-1.358	5.773	
2021	1.057	1.657	0.64	.527	-2.281	4.395	
2022o	0	.	.	.	.	.	
Constant	2.194	55.519	0.04	.969	-109.627	114.015	
Mean dependent var		13.638		SD dependent var		8.616	
R-squared		0.499		Number of obs		82	
F-test		2.036		Prob > F		0.012	
Akaike crit. (AIC)		446.090		Bayesian crit. (BIC)		501.445	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.133 Stata Regression Results: The Effect of ESG Combined Score on Tobin's Q in the Basic Materials Industry

: Industry_n = Basic Materials

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.014	.017	-0.84	.403	-.048	.019	
Intotalassets	1.146	.562	2.04	.043	.037	2.255	**
firmage_	-.052	.086	-0.60	.547	-.221	.118	
TOT_DEBT_TO_TOT_EQY	0	0	-0.60	.549	-.001	0	
capitalintensity	-5.963	2.711	-2.20	.029	-11.313	-.614	**
cashflowbysale	.097	1.035	0.09	.925	-1.945	2.14	
TOT_MKT_VAL	0	0	1.77	.078	0	0	*
financialslack	.097	.111	0.87	.383	-.122	.315	
Internationalisation	.01	.01	1.03	.304	-.009	.03	
NUMBER_OF_WORKING_DAYS	-.231	.232	-1.00	.32	-.689	.227	
rdbysales	-6.371	3.514	-1.81	.072	-13.306	.564	*
opefficiency_	-1.193	1.01	-1.18	.239	-3.185	.799	
BB_3Y_DEFAULT_PROB	-2.525	6.013	-0.42	.675	-14.39	9.341	
UNLEVERED_BETA_A	.019	.006	2.98	.003	.006	.032	***
2015b	0	.	.	.	.	.	
2016	-.268	.326	-0.82	.412	-.91	.375	
2017	.154	.301	0.51	.609	-.439	.748	
2018	-.278	.295	-0.94	.346	-.859	.303	
2019	-.459	.287	-1.60	.112	-1.026	.108	
2020	-.622	.35	-1.78	.077	-1.312	.069	*
2021	-.131	.385	-0.34	.735	-.891	.629	
2022o	0	.	.	.	.	.	
Constant	-5.896	4.962	-1.19	.236	-15.688	3.896	
Mean dependent var	2.824		SD dependent var		2.420		
R-squared	0.275		Number of obs		242		
F-test	3.405		Prob > F		0.000		
Akaike crit. (AIC)	747.913		Bayesian crit. (BIC)		821.181		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.134 Stata Regression Results: The Effect of ESG Combined Score on Tobin's Q in the Communications Industry

: Industry_n = Communications

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.003	.072	-0.04	.969	-.153	.147	
Intotalassets	-1.68	.798	-2.10	.048	-3.341	-.02	**
firmage_	-.345	.206	-1.68	.108	-.772	.083	
TOT_DEBT_TO_TOT_EQY	-.001	.007	-0.09	.926	-.016	.015	
capitalintensity	-7.256	10.011	-0.72	.477	-28.074	13.563	
cashflowbysale	-2.523	3.039	-0.83	.416	-8.844	3.798	
TOT_MKT_VAL	0	0	4.05	.001	0	0	***
financialslack	.203	.184	1.10	.283	-.18	.586	
Internationalisation	.175	.056	3.15	.005	.059	.29	***
NUMBER_OF_WOMEN_DIRECTORS	.073	.373	0.20	.846	-.702	.849	
o	0	.	.	.	.	.	
opefficiency_	-12.81	4.221	-3.04	.006	-21.588	-4.033	***
BB_3Y_DEFAULT_PROB	-9.483	9.117	-1.04	.31	-28.443	9.476	
UNLEVERED_BETA	.046	.029	1.56	.134	-.015	.107	
2015b	0	.	.	.	.	.	
2016	.085	.488	0.17	.864	-.93	1.099	
2017	.886	.592	1.50	.149	-.345	2.117	
2018	1.026	.616	1.66	.111	-.256	2.307	
2019	.967	.576	1.68	.108	-.23	2.164	
2020	1.879	.812	2.31	.031	.191	3.567	**
2021	1.422	.855	1.66	.111	-.357	3.2	
2022o	0	.	.	.	.	.	
Constant	36.257	7.503	4.83	0	20.655	51.86	***
Mean dependent var	3.118		SD dependent var		1.921		
R-squared	0.802		Number of obs		50		
F-test	4.479		Prob > F		0.000		
Akaike crit. (AIC)	119.455		Bayesian crit. (BIC)		157.695		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.135 Stata Regression Results: The Effect of ESG Combined Score on Tobin's Q in the Consumer Cyclical Industry**: Industry_n = Consumer Cyclical**

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.029	.021	1.34	.182	-.013	.071	
Intotalassets	-1.806	.554	-3.26	.001	-2.899	-.714	***
firmage_	.151	.099	1.53	.128	-.044	.346	
TOT_DEBT_TO_TOT_EQY	.001	.003	0.54	.593	-.004	.006	
capitalintensity	-5.103	3.151	-1.62	.107	-11.323	1.117	
cashflowbysale	1.147	1.721	0.67	.506	-2.251	4.545	
TOT_MKT_VAL	0	0	4.94	0	0	0	***
financialslack	-.038	.167	-0.23	.82	-.368	.292	
Internationalisation	-.001	.007	-0.09	.932	-.015	.013	
NUMBER_OF_WOMEN_DIRECTORS	.22	.171	1.29	.2	-.118	.558	
rdbysales	-15.969	20.324	-0.79	.433	-56.088	24.15	
opefficiency_	-3.408	1.299	-2.62	.009	-5.972	-.843	***
BB_3Y_DEFAULT_PROB	1.412	6.302	0.22	.823	-11.027	13.851	
UNLEVERED_BETA	-.004	.003	-1.15	.251	-.01	.003	
2015b	0	.	.	.	.	.	
2016	-.369	.303	-1.22	.225	-.967	.229	
2017	-.24	.277	-0.86	.388	-.786	.307	
2018	.133	.271	0.49	.625	-.403	.669	
2019	-.138	.26	-0.53	.596	-.652	.376	
2020	-1.071	.29	-3.70	0	-1.643	-.499	***
2021	.143	.345	0.41	.68	-.538	.824	
2022o	0	.	.	.	.	.	
Constant	17.954	4.461	4.03	0	9.148	26.76	***
Mean dependent var	3.804		SD dependent var		3.487		
R-squared	0.378		Number of obs		236		
F-test	5.189		Prob > F		0.000		
Akaike crit. (AIC)	663.168		Bayesian crit. (BIC)		735.909		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.136 Stata Regression Results: The Effect of ESG Combined Score on Tobin's Q in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.012	.02	0.60	.547	-.027	.052	
Intotalassets	-6.139	.592	-10.38	0	-7.304	-4.975	***
firmage_	-.026	.03	-0.85	.397	-.086	.034	
TOT_DEBT_TO_TOT_EQY	.011	.005	2.21	.028	.001	.02	**
capitalintensity	-8.134	3.708	-2.19	.029	-15.433	-.835	**
cashflowbysale	-.808	1.539	-0.53	.6	-3.838	2.223	
TOT_MKT_VAL	0	0	7.59	0	0	0	***
financialslack	-.444	.194	-2.29	.023	-.825	-.063	**
Internationalisation	.004	.008	0.52	.605	-.012	.02	
NUMBER_OF_WOMEN_DIRECTORS	.257	.181	1.42	.158	-.1	.613	
rdbysales	4.921	6.937	0.71	.479	-8.734	18.577	
opefficiency_	-10.797	2.51	-4.30	0	-15.739	-5.855	***
BB_3Y_DEFAULT_PROB	4.265	12.618	0.34	.736	-20.575	29.106	
UNLEVERED_BETA	-.002	.006	-0.36	.721	-.014	.01	
2015b	0	.	.	.	.	.	
2016	.326	.377	0.86	.388	-.416	1.068	
2017	1.451	.418	3.48	.001	.629	2.273	***
2018	2.24	.478	4.68	0	1.298	3.182	***
2019	2.661	.537	4.96	0	1.605	3.718	***
2020	3.003	.597	5.04	0	1.829	4.178	***
2021	4.266	.694	6.15	0	2.901	5.632	***
2022	4.698	.785	5.98	0	3.152	6.244	***
Constant	79.137	6.837	11.57	0	65.678	92.596	***
Mean dependent var	5.160		SD dependent var	4.687			
R-squared	0.455		Number of obs	351			
F-test	10.920		Prob > F	0.000			
Akaike crit. (AIC)	1243.197		Bayesian crit. (BIC)	1328.134			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.137 Stata Regression Results: The Effect of ESG Combined Score on Tobin's Q in the Energy Industry**: Industry_n = Energy**

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.001	.012	-0.11	.913	-.025	.023	
Intotalassets	.693	.724	0.96	.347	-.795	2.18	
firmage_	-.149	.073	-2.04	.051	-.299	.001	*
TOT_DEBT_TO_TOT_EQY	-.003	.002	-1.75	.091	-.006	.001	*
capitalintensity	3.756	2.548	1.47	.153	-1.482	8.994	
cashflowbysale	.918	.801	1.15	.262	-.728	2.564	
TOT_MKT_VAL	0	0	1.17	.253	0	0	
financialslack	.034	.092	0.37	.712	-.155	.224	
Internationalisation	.009	.011	0.82	.418	-.014	.032	
NUMBER_OF_WOMEN_DIRECTORS	.047	.071	0.67	.509	-.098	.192	
rdbysales	-109.292	110.335	-0.99	.331	-336.089	117.506	
opefficiency_	-1.072	1.537	-0.70	.492	-4.23	2.087	
BB_3Y_DEFAULT_PROB	3.487	9.316	0.37	.711	-15.662	22.636	
UNLEVERED_BETA	.014	.014	1.00	.325	-.014	.042	
2015b	0	.	.	.	.	.	
2016	.033	.129	0.26	.798	-.232	.299	
2017	.306	.122	2.52	.018	.056	.556	**
2018	.234	.127	1.85	.076	-.026	.494	*
2019	.296	.12	2.47	.02	.05	.541	**
2020	-.072	.203	-0.36	.724	-.489	.344	
2021	.314	.249	1.26	.219	-.198	.826	
2022o	0	.	.	.	.	.	
Constant	-.108	7.504	-0.01	.989	-15.532	15.316	
Mean dependent var	1.418	SD dependent var	0.523				
R-squared	0.716	Number of obs	55				
F-test	3.285	Prob > F	0.002				
Akaike crit. (AIC)	-13.470	Bayesian crit. (BIC)	28.684				

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.138 Stata Regression Results: The Effect of ESG Combined Score on Tobin's Q in the Financial Industry

: Industry_n = Financial

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	0	.014	0.02	.987	-.029	.029	
Intotalassets	-.054	.199	-0.27	.789	-.456	.349	
firmage_	.038	.037	1.01	.317	-.038	.113	
TOT_DEBT_TO_TOT_EQY	0	.001	-0.15	.883	-.002	.002	
capitalintensity	-.407	1.967	-0.21	.837	-4.392	3.578	
cashflowbysale	.031	.085	0.37	.715	-.14	.203	
TOT_MKT_VAL	0	0	3.22	.003	0	0	***
financialslack	-.017	.01	-1.74	.09	-.036	.003	*
Internationalisation	-.004	.006	-0.67	.505	-.015	.008	
NUMBER_OF_WOMEN_DI~D	-.398	.078	-5.13	0	-.555	-.241	***
rdbysales	6.932	9.35	0.74	.463	-12.012	25.877	
opefficiency_	.408	.216	1.89	.067	-.03	.846	*
BB_3Y_DEFAULT_PROB	-4.472	1.987	-2.25	.03	-8.498	-.445	**
UNLEVERED_BETA	-.002	.005	-0.46	.652	-.014	.009	
2015b	0	.	.	.	.	.	
2016	-.157	.127	-1.24	.225	-.414	.1	
2017	-.264	.136	-1.94	.06	-.54	.012	*
2018	-.1	.137	-0.73	.469	-.378	.178	
2019	-.181	.151	-1.20	.239	-.487	.125	
2020	-.098	.188	-0.52	.604	-.478	.282	
2021	-.168	.198	-0.85	.401	-.57	.233	
2022o	0	.	.	.	.	.	
Constant	.931	2.099	0.44	.66	-3.322	5.184	
Mean dependent var		1.452	SD dependent var		0.601		
R-squared		0.640	Number of obs		69		
F-test		3.292	Prob > F		0.000		
Akaike crit. (AIC)		-2.028	Bayesian crit. (BIC)		44.888		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.139 Stata Regression Results: The Effect of ESG Combined Score on Tobin's Q in the Industrial Industry**: Industry_n = Industrial**

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.016	.012	1.31	.19	-.008	.04	
Intotalassets	-.328	.342	-0.96	.338	-1.001	.345	
firmage_	.157	.05	3.15	.002	.059	.256	***
TOT_DEBT_TO_TOT_EQY	.001	.003	0.50	.619	-.004	.007	
capitalintensity	-3.5	1.944	-1.80	.073	-7.327	.326	*
cashflowbysale	-.077	.541	-0.14	.887	-1.142	.989	
TOT_MKT_VAL	0	0	1.40	.163	0	0	
financialslack	-.078	.084	-0.93	.351	-.243	.087	
Internationalisation	-.006	.006	-0.89	.372	-.018	.007	
NUMBER_OF_WOMEN_DIRECTORS	-.114	.11	-1.04	.299	-.331	.102	
rdbysales	-14.092	12.438	-1.13	.258	-38.579	10.395	
opefficiency_	-1.765	.82	-2.15	.032	-3.38	-.15	**
BB_3Y_DEFAULT_PROB	2.835	3.544	0.80	.424	-4.141	9.812	
UNLEVERED_BETA	.019	.004	4.29	0	.01	.027	***
2015b	0	.	.	.	.	.	
2016	-.466	.179	-2.61	.01	-.819	-.114	**
2017	-.03	.167	-0.18	.857	-.36	.299	
2018	-.21	.163	-1.29	.198	-.53	.11	
2019	-.451	.164	-2.74	.007	-.774	-.127	***
2020	-1.354	.19	-7.11	0	-1.728	-.979	***
2021	-.335	.2	-1.67	.095	-.73	.059	*
2022o	0	.	.	.	.	.	
Constant	.116	3.119	0.04	.97	-6.024	6.257	
Mean dependent var	2.882		SD dependent var		2.050		
R-squared	0.375		Number of obs		365		
F-test	8.235		Prob > F		0.000		
Akaike crit. (AIC)	822.315		Bayesian crit. (BIC)		904.213		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.140 Stata Regression Results: The Effect of ESG Combined Score on Tobin's Q in the Technology Industry

: Industry_n = Technology

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.036	.035	-1.00	.321	-.107	.036	
Intotalassets	-1.9	1.201	-1.58	.121	-4.323	.523	
firmage_	.394	.177	2.23	.031	.038	.75	**
TOT_DEBT_TO_TOT_EQY	-.001	.02	-0.04	.972	-.041	.039	
capitalintensity	7.918	10.154	0.78	.44	-12.559	28.396	
cashflowbysale	-1.808	3.93	-0.46	.648	-9.734	6.118	
TOT_MKT_VAL	0	0	0.99	.327	0	0	
financialslack	-.236	.172	-1.37	.177	-.582	.111	
Internationalisation	.007	.005	1.29	.204	-.004	.018	
NUMBER_OF_WORKING_MEN_DIVIDED	-.119	.203	-0.59	.56	-.528	.29	
rdbysales	4.203	23.134	0.18	.857	-42.451	50.857	
operational_efficiency_	.822	1.105	0.74	.461	-1.407	3.05	
BB_3Y_DEFAULT_PROB	3.994	21.061	0.19	.85	-38.48	46.467	
UNLEVERED_BETA_A	.007	.003	2.88	.006	.002	.013	***
2015b	0	.	.	.	.	.	
2016	.089	.426	0.21	.836	-.771	.948	
2017	-.63	.421	-1.50	.142	-1.48	.219	
2018	-.846	.435	-1.95	.058	-1.722	.03	*
2019	-.849	.424	-2.00	.052	-1.703	.006	*
2020	-1.937	.521	-3.72	.001	-2.988	-.886	***
2021	-.64	.522	-1.23	.227	-1.693	.413	
2022o	0	.	.	.	.	.	
Constant	14.724	10.239	1.44	.158	-5.926	35.373	
Mean dependent var	3.292		SD dependent var		2.121		
R-squared	0.651		Number of obs		80		
F-test	4.016		Prob > F		0.000		
Akaike crit. (AIC)	193.742		Bayesian crit. (BIC)		243.765		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.141 Stata Regression Results: The Effect of ESG Combined Score on Tobin's Q in the Utilities Industry**: Industry_n = Utilities**

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.012	.017	-0.70	.49	-.045	.022	
Intotalassets	-1.306	.449	-2.91	.006	-2.209	-.403	***
firmage_	.01	.058	0.17	.864	-.107	.127	
TOT_DEBT_TO_TOT_EQY	-.003	.002	-1.69	.097	-.007	.001	*
capitalintensity	-1.11	2.888	-0.38	.703	-6.919	4.7	
cashflowbysale	-.535	.427	-1.25	.216	-1.393	.324	
TOT_MKT_VAL	0	0	9.71	0	0	0	***
financialslack	-.014	.152	-0.10	.925	-.321	.292	
Internationalisation	.011	.014	0.75	.455	-.018	.04	
NUMBER_OF_WOMEN_DIRECTORS	.09	.07	1.29	.203	-.05	.23	
rdbysales	96.482	90.636	1.06	.293	-85.853	278.818	
opefficiency_	1.373	.806	1.71	.095	-.247	2.994	*
BB_3Y_DEFAULT_PROB	-3.197	4.003	-0.80	.428	-11.251	4.856	
UNLEVERED_BETA	-.011	.007	-1.61	.114	-.026	.003	
2015b	0	.	.	.	.	.	
2016	.059	.172	0.34	.732	-.287	.405	
2017	-.043	.178	-0.24	.809	-.401	.314	
2018	-.076	.168	-0.45	.652	-.414	.261	
2019	-.131	.149	-0.88	.385	-.432	.17	
2020	-.052	.159	-0.33	.747	-.371	.268	
2021	.146	.148	0.98	.33	-.152	.444	
2022o	0	.	.	.	.	.	
Constant	16.423	4.554	3.61	.001	7.261	25.585	***
Mean dependent var	1.553		SD dependent var		1.044		
R-squared	0.747		Number of obs		82		
F-test	6.926		Prob > F		0.000		
Akaike crit. (AIC)	51.809		Bayesian crit. (BIC)		102.350		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.142 Stata Regression Results: The Effect of E, S, G on Tobin's Q in the Basic Materials Industry

: Industry n = Basic Materials

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.053	.013	-4.16	0	-.078	-.028	***
SOCIAL_DISCLOSURE~E	.083	.022	3.82	0	.04	.126	***
GOVNCNCE_DISCLOSURE~E	-.011	.019	-0.57	.57	-.048	.027	
Intotalassets	1.064	.539	1.97	.05	0	2.127	*
firmage_	-.097	.083	-1.16	.248	-.261	.068	
TOT_DEBT_TO_TOT_EQY	0	0	-1.03	.302	-.001	0	
capitalintensity	-5.951	2.603	-2.29	.023	-11.087	-.814	**
cashflowbysale	.213	.994	0.21	.831	-1.749	2.174	
TOT_MKT_VAL	0	0	2.36	.019	0	0	**
financialslack	.033	.107	0.31	.755	-.178	.245	
Internationalisation	.018	.01	1.85	.066	-.001	.038	*
NUMBER_OF_WOMEN_DIRECTORS	-.225	.222	-1.01	.313	-.663	.214	
rdbysales	-6.631	3.371	-1.97	.051	-13.284	.022	*
opefficiency_	-.767	.976	-0.79	.433	-2.692	1.159	
BB_3Y_DEFAULT_PROB	2.286	5.966	0.38	.702	-9.488	14.06	
UNLEVERED_BETA	.019	.006	3.12	.002	.007	.031	***
2015b	0	.	.	.	.	.	
2016	-.252	.312	-0.81	.42	-.868	.363	
2017	-.013	.291	-0.04	.965	-.586	.561	
2018	-.583	.293	-1.99	.048	-1.162	-.004	**
2019	-.729	.285	-2.55	.012	-1.292	-.165	**
2020	-.955	.344	-2.77	.006	-1.634	-.276	***
2021	-.244	.37	-0.66	.511	-.975	.487	
2022o	0	.	.	.	.	.	
Constant	-3.45	4.855	-0.71	.478	-13.03	6.13	
Mean dependent var		2.824		SD dependent var		2.420	
R-squared		0.342		Number of obs		242	
F-test		4.208		Prob > F		0.000	
Akaike crit. (AIC)		728.239		Bayesian crit. (BIC)		808.485	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.143 Stata Regression Results: The Effect of E, S, G on Tobin's Q in the Communications Industry**: Industry_n = Communications**

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISCLOSURE~E	.005	.038	0.13	.902	-.074 .084	
SOCIAL_DISCLOSURE~E	-.01	.053	-0.18	.857	-.12 .1	
GOVNCES_DISCLOSURE~E	-.009	.088	-0.11	.916	-.193 .174	
Intotalassets	-1.664	.842	-1.98	.063	-3.427 .099	*
firmage_	-.339	.227	-1.50	.151	-.814 .135	
TOT_DEBT_TO_TOT_EQY	0	.009	-0.03	.973	-.019 .018	
capitalintensity	-6.968	10.649	-0.65	.521	-29.256 15.319	
cashflowbysale	-2.534	3.202	-0.79	.439	-9.236 4.168	
TOT_MKT_VAL	0	0	3.44	.003	0 0	***
financialslack	.224	.221	1.01	.324	-.239 .687	
Internationalisation	.176	.059	3.00	.007	.053 .3	***
NUMBER_OF_WOMEN_DIRECTORS	.068	.395	0.17	.865	-.758 .894	
o	0	.	.	.	.	
opefficiency_	-12.669	4.486	-2.82	.011	-22.058 -3.28	**
BB_3Y_DEFAULT_PROB	-9.441	9.577	-0.99	.337	-29.486 10.604	
UNLEVERED_BETA	.048	.033	1.47	.158	-.02 .116	
2015b	0	.	.	.	.	
2016	.069	.521	0.13	.896	-1.022 1.16	
2017	.919	.661	1.39	.18	-.464 2.303	
2018	1.094	.727	1.50	.149	-.428 2.616	
2019	1.024	.671	1.53	.143	-.38 2.428	
2020	1.944	.93	2.09	.05	-.002 3.89	*
2021	1.433	.9	1.59	.128	-.451 3.318	
2022o	0	.	.	.	.	
Constant	36.529	8.911	4.10	.001	17.879 55.18	***
Mean dependent var	3.118		SD dependent var	1.921		
R-squared	0.803		Number of obs	50		
F-test	3.677		Prob > F	0.002		
Akaike crit. (AIC)	123.343		Bayesian crit. (BIC)	165.408		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.144 Stata Regression Results: The Effect of E, S, G on Tobin's Q in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.002	.01	-0.22	.829	-.023	.018	
SOCIAL_DISCLOSURE~E	.031	.018	1.71	.089	-.005	.067	*
GOVNCES_DISCLOSURE~E	.022	.02	1.07	.284	-.018	.062	
Intotalassets	-1.826	.555	-3.29	.001	-2.921	-.731	****
firmage_	.13	.1	1.31	.193	-.067	.328	
TOT_DEBT_TO_TOT_EQY	.003	.003	0.93	.352	-.003	.008	
capitalintensity	-4.874	3.223	-1.51	.132	-11.237	1.489	
cashflowbysale	1.209	1.737	0.70	.487	-2.22	4.637	
TOT_MKT_VAL	0	0	4.90	0	0	0	****
financialslack	-.033	.167	-0.20	.846	-.362	.297	
Internationalisation	-.002	.007	-0.23	.816	-.016	.012	
NUMBER_OF_WOMEN_DIRECTORS	.182	.173	1.05	.293	-.159	.523	
rdbysales	-17.332	20.406	-0.85	.397	-57.615	22.951	
operational efficiency	-3.527	1.3	-2.71	.007	-6.094	-.961	****
BB_3Y_DEFAULT_PROB	1.67	6.328	0.26	.792	-10.822	14.162	
UNLEVERED_BETA	-.004	.003	-1.14	.254	-.01	.003	
2015b	0	.	.	.	.	.	
2016	-.349	.303	-1.15	.251	-.946	.249	
2017	-.263	.277	-0.95	.345	-.81	.285	
2018	.145	.272	0.53	.595	-.391	.681	
2019	-.122	.264	-0.46	.644	-.644	.4	
2020	-1.093	.294	-3.72	0	-1.674	-.513	****
2021	.126	.347	0.36	.717	-.559	.812	
2022o	0	.	.	.	.	.	
Constant	18.065	4.662	3.88	0	8.861	27.268	****
Mean dependent var	3.804		SD dependent var	3.487			
R-squared	0.387		Number of obs	236			
F-test	4.840		Prob > F	0.000			
Akaike crit. (AIC)	663.788		Bayesian crit. (BIC)	743.456			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.145 Stata Regression Results: The Effect of E, S, G on Tobin's Q in the Consumer Non-cyclical Industry

: Industry_n = Consumer Non-cyclical

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.021	.014	1.50	.135	-.007	.049	
SOCIAL_DISCLOSURE~E	-.022	.019	-1.15	.252	-.06	.016	
GOVNCEDISCLOSURE~E	.015	.029	0.50	.616	-.043	.072	
Intotalassets	-6.174	.594	-10.40	0	-7.343	-5.006	***
firmage_	-.024	.03	-0.79	.431	-.084	.036	
TOT_DEBT_TO_TOT_EQY	.01	.005	2.04	.043	0	.02	**
capitalintensity	-7.888	3.711	-2.13	.034	-15.194	-.582	**
cashflowbysale	-.876	1.54	-0.57	.57	-3.907	2.156	
TOT_MKT_VAL	0	0	7.66	0	0	0	***
financialslack	-.406	.196	-2.08	.039	-.791	-.021	**
Internationalisation	.005	.008	0.67	.504	-.011	.021	
NUMBER_OF_WOMEN_DIRECTORS	.24	.182	1.32	.188	-.118	.597	
rdbysales	5.785	6.968	0.83	.407	-7.934	19.503	
oper efficiency_	-10.604	2.543	-4.17	0	-15.61	-5.597	***
BB_3Y_DEFAULT_PROB	4.321	12.618	0.34	.732	-20.52	29.163	
UNLEVERED_BETA	-.003	.006	-0.43	.666	-.014	.009	
2015b	0	.	.	.	.	.	
2016	.306	.377	0.81	.418	-.437	1.049	
2017	1.468	.418	3.51	.001	.645	2.29	***
2018	2.27	.481	4.72	0	1.324	3.216	***
2019	2.701	.54	5.00	0	1.637	3.765	***
2020	3.045	.6	5.07	0	1.864	4.227	***
2021	4.288	.695	6.17	0	2.92	5.656	***
2022	4.702	.786	5.98	0	3.155	6.249	***
Constant	78.661	7.119	11.05	0	64.645	92.676	***
Mean dependent var	5.160		SD dependent var		4.687		
R-squared	0.459		Number of obs		351		
F-test	10.066		Prob > F		0.000		
Akaike crit. (AIC)	1244.505		Bayesian crit. (BIC)		1337.164		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.146 Stata Regression Results: The Effect of E, S, G on Tobin's Q in the Energy Industry

: Industry_n = Energy

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.007	.005	-1.42	.167	-.017	.003	
SOCIAL_DISCLOSURE~E	-.001	.011	-0.10	.922	-.024	.022	
GOVNCES_DISCLOSURE~E	.012	.007	1.67	.109	-.003	.027	
Intotalassets	.962	.705	1.36	.185	-.493	2.417	
firmage_	-.183	.073	-2.50	.019	-.333	-.032	**
TOT_DEBT_TO_TOT_EQY	-.004	.002	-2.49	.02	-.008	-.001	**
capitalintensity	4.303	2.489	1.73	.097	-.834	9.441	*
cashflowbysale	1.03	.773	1.33	.196	-.566	2.625	
TOT_MKT_VAL	0	0	0.50	.625	0	0	
financialslack	-.031	.093	-0.34	.74	-.223	.161	
Internationalisation	.008	.011	0.75	.46	-.014	.03	
NUMBER_OF_WOMEN_DIRECTORS	.045	.067	0.67	.511	-.094	.184	
rdbysales	-155.855	114.285	-1.36	.185	-391.728	80.018	
operational efficiency	-.134	1.632	-0.08	.935	-3.501	3.234	
BB_3Y_DEFAULT_PROB	.612	8.998	0.07	.946	-17.959	19.182	
UNLEVERED_BETA	.01	.015	0.70	.488	-.02	.041	
2015b	0	.	.	.	.	.	
2016	-.003	.127	-0.03	.979	-.266	.259	
2017	.205	.126	1.63	.116	-.055	.464	
2018	.156	.133	1.17	.254	-.119	.43	
2019	.212	.122	1.74	.095	-.04	.463	*
2020	-.126	.194	-0.65	.524	-.527	.275	
2021	.33	.254	1.30	.207	-.195	.855	
2022o	0	.	.	.	.	.	
Constant	-3.47	7.293	-0.48	.638	-18.522	11.581	
Mean dependent var	1.418		SD dependent var	0.523			
R-squared	0.764		Number of obs	55			
F-test	3.528		Prob > F	0.001			
Akaike crit. (AIC)	-19.516		Bayesian crit. (BIC)	26.653			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.147 Stata Regression Results: The Effect of E, S, G on Tobin's Q in the Financial Industry

: Industry_n = Financial

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.002	.007	0.26	.8	-.012	.015	
SOCIAL_DISCLOSURE~E	-.004	.011	-0.37	.712	-.026	.018	
GOVNCESURE~E	0	.014	-0.03	.974	-.029	.028	
Intotalassets	-.081	.217	-0.38	.71	-.522	.359	
firmage_	.047	.044	1.08	.29	-.042	.136	
TOT_DEBT_TOT_EQY	0	.001	-0.07	.944	-.002	.002	
capitalintensity	-.461	2.02	-0.23	.821	-4.562	3.641	
cashflowbysale	.033	.087	0.38	.705	-.143	.21	
TOT_MKT_VAL	0	0	3.13	.003	0	0	***
financialslack	-.017	.011	-1.62	.113	-.038	.004	
Internationalisation	-.004	.006	-0.70	.491	-.017	.008	
NUMBER_OF_WOMEN_DI~D	-.403	.08	-5.02	0	-.565	-.24	***
rdbysales	6.664	9.84	0.68	.503	-13.311	26.64	
opefficiency_	.398	.228	1.75	.089	-.064	.86	*
BB_3Y_DEFAULT_PROB	-4.708	2.116	-2.23	.033	-9.005	-.412	**
UNLEVERED_BETA	-.003	.006	-0.53	.602	-.015	.009	
2015b	0	.	.	.	.	.	
2016	-.159	.134	-1.19	.244	-.431	.113	
2017	-.249	.145	-1.71	.096	-.544	.046	*
2018	-.091	.146	-0.63	.535	-.387	.205	
2019	-.169	.159	-1.07	.293	-.492	.153	
2020	-.094	.193	-0.49	.629	-.485	.298	
2021	-.17	.204	-0.83	.411	-.584	.245	
2022o	0	.	.	.	.	.	
Constant	.998	2.177	0.46	.649	-3.422	5.418	
Mean dependent var		1.452		SD dependent var		0.601	
R-squared		0.642		Number of obs		69	
F-test		2.855		Prob > F		0.001	
Akaike crit. (AIC)		1.591		Bayesian crit. (BIC)		52.975	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.148 Stata Regression Results: The Effect of E, S, G on Tobin's Q in the Industrial Industry

: Industry_n = Industrial

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.003	.007	-0.36	.72	-.017	.012	
SOCIAL_DISCLOSURE~E	.029	.012	2.34	.02	.005	.053	**
GOVNCESURE~E	-.01	.012	-0.85	.397	-.034	.013	
Intotalassets	-.421	.343	-1.23	.22	-1.097	.254	
firmage_	.149	.05	2.96	.003	.05	.248	***
TOT_DEBT_TOT_EQY	.002	.003	0.71	.478	-.004	.008	
capitalintensity	-3.571	1.939	-1.84	.067	-7.387	.246	*
cashflowbysale	-.194	.541	-0.36	.72	-1.259	.871	
TOT_MKT_VAL	0	0	1.67	.096	0	0	*
financialslack	-.056	.084	-0.67	.506	-.221	.109	
Internationalisation	-.005	.006	-0.81	.42	-.018	.007	
NUMBER_OF_WOMEN_DI~D	-.13	.11	-1.19	.235	-.346	.085	
rdbysales	-15.694	12.535	-1.25	.212	-40.371	8.983	
opefficiency_	-1.704	.819	-2.08	.038	-3.315	-.092	**
BB_3Y_DEFAULT_PROB	3.588	3.541	1.01	.312	-3.383	10.56	
UNLEVERED_BETA	.018	.004	4.26	0	.01	.027	***
2015b	0	.	.	.	.	.	
2016	-.433	.179	-2.42	.016	-.785	-.081	**
2017	-.056	.167	-0.34	.736	-.385	.272	
2018	-.201	.162	-1.24	.216	-.521	.119	
2019	-.428	.165	-2.59	.01	-.754	-.103	**
2020	-1.313	.192	-6.86	0	-1.69	-.936	***
2021	-.282	.201	-1.41	.161	-.677	.113	
2022o	0	.	.	.	.	.	
Constant	2.234	3.286	0.68	.497	-4.235	8.704	
Mean dependent var	2.882		SD dependent var		2.050		
R-squared	0.387		Number of obs		365		
F-test	7.791		Prob > F		0.000		
Akaike crit. (AIC)	819.743		Bayesian crit. (BIC)		909.441		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.149 Stata Regression Results: The Effect of E, S, G on Tobin's Q in the Technology Industry

: Industry_n = Technology

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.004	.018	-0.22	.828	-.039	.032	
SOCIAL_DISCLOSURE~E	-.043	.027	-1.59	.12	-.099	.012	
GOVNCNCE_DISCLOSURE~E	.014	.049	0.29	.774	-.085	.114	
Intotalassets	-1.858	1.208	-1.54	.132	-4.297	.581	
firmage_	.489	.191	2.57	.014	.104	.874	**
TOT_DEBT_TO_TOT_EQY	-.006	.02	-0.28	.777	-.047	.035	
capitalintensity	12.836	10.828	1.19	.243	-9.032	34.704	
cashflowbysale	-2.017	4.001	-0.50	.617	-10.097	6.062	
TOT_MKT_VAL	0	0	0.28	.783	0	0	
financialslack	-.283	.176	-1.60	.116	-.64	.073	
Internationalisation	.006	.006	1.10	.278	-.005	.017	
NUMBER_OF_WOMEN_DI~D	-.18	.212	-0.85	.401	-.608	.248	
rdbysales	-2.633	24.785	-0.11	.916	-52.687	47.422	
opefficiency_	1.019	1.144	0.89	.379	-1.292	3.33	
BB_3Y_DEFAULT_PROB	.752	21.287	0.04	.972	-42.238	43.741	
UNLEVERED_BETA	.007	.003	2.75	.009	.002	.012	***
2015b	0	.	.	.	.	.	
2016	.077	.428	0.18	.858	-.787	.941	
2017	-.613	.458	-1.34	.188	-1.539	.312	
2018	-.93	.471	-1.98	.055	-1.881	.021	*
2019	-.953	.45	-2.12	.04	-1.862	-.044	**
2020	-2.123	.556	-3.82	0	-3.245	-1	***
2021	-.785	.536	-1.47	.15	-1.868	.297	
2022o	0	.	.	.	.	.	
Constant	10.293	11.483	0.90	.375	-12.898	33.484	
Mean dependent var		3.292	SD dependent var		2.121		
R-squared		0.666	Number of obs		80		
F-test		3.715	Prob > F		0.000		
Akaike crit. (AIC)		194.324	Bayesian crit. (BIC)		249.110		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.150 Stata Regression Results: The Effect of E, S, G on Tobin's Q in the Utilities Industry

: Industry_n = Utilities

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.002	.008	-0.21	.833	-.017	.014	
SOCIAL_DISCLOSURE~E	.009	.013	0.68	.498	-.017	.035	
GOVNCES_DISCLOSURE~E	-.046	.02	-2.25	.03	-.086	-.005	**
Intotalassets	-1.322	.471	-2.81	.007	-2.271	-.373	****
firmage_	-.003	.057	-0.06	.954	-.117	.111	
TOT_DEBT_TO_TOT_EQY	-.004	.002	-2.08	.044	-.007	0	**
capitalintensity	-1.795	2.888	-0.62	.537	-7.611	4.021	
cashflowbysale	-.468	.426	-1.10	.279	-1.327	.391	
TOT_MKT_VAL	0	0	9.67	0	0	0	****
financialslack	-.06	.149	-0.41	.688	-.36	.239	
Internationalisation	.021	.015	1.41	.167	-.009	.05	
NUMBER_OF_WOMEN_DIRECTORS	.111	.069	1.62	.112	-.027	.25	
rdbysales	4.361	102.847	0.04	.966	-202.783	211.506	
operational efficiency	1.092	.868	1.26	.215	-.657	2.841	
BB_3Y_DEFAULT_PROB	-1.042	3.997	-0.26	.796	-9.093	7.009	
UNLEVERED_BETA	-.011	.007	-1.54	.13	-.024	.003	
2015b	0	.	.	.	.	.	
2016	.043	.167	0.26	.797	-.292	.379	
2017	-.038	.173	-0.22	.829	-.386	.311	
2018	-.075	.165	-0.46	.65	-.407	.256	
2019	-.076	.147	-0.52	.607	-.372	.22	
2020	-.008	.155	-0.05	.958	-.321	.304	
2021	.186	.145	1.28	.206	-.106	.479	
2022o	0	.	.	.	.	.	
Constant	20.298	4.865	4.17	0	10.5	30.096	****
Mean dependent var	1.553		SD dependent var	1.044			
R-squared	0.773		Number of obs	82			
F-test	6.967		Prob > F	0.000			
Akaike crit. (AIC)	46.792		Bayesian crit. (BIC)	102.147			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.151 Stata Regression Results: The Effect of ESG Combined Score on Enterprise Value Multiple in the Basic Materials Industry**: Industry_n = Basic Materials**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	80.341	135.025	0.59	.553	-186.096	346.777	
Intotalassets	-1353.986	4437.614	-0.30	.761	-10110.423	7402.452	
firmage_	466.708	678.13	0.69	.492	-871.398	1804.814	
TOT_DEBT_TO_TOT_EQY	.323	2.233	0.14	.885	-4.084	4.73	
capitalintensity	34744.126	21399.966	1.62	.106	-7482.948	76971.199	
cashflowbysale	-8608.21	8170.578	-1.05	.293	-24730.646	7514.226	
TOT_MKT_VAL	.969	.005	190.03	0	.958	.979	***
financialslack	1951.756	873.267	2.23	.027	228.599	3674.914	**
Internationalisation	-74.029	79.429	-0.93	.353	-230.76	82.703	
NUMBER_OF_WOMEN_DIRECTORS	-1183.502	1831.632	-0.65	.519	-4797.735	2430.731	
rdbysales	-25086.028	27741.56	-0.90	.367	-79826.529	29654.473	
opefficiency_	1325.371	7969.193	0.17	.868	-14399.686	17050.429	
BB_3Y_DEFAULT_PROB	45715.962	47467.361	0.96	.337	-47948.097	139380.02	
UNLEVERED_BETA	124.825	50.388	2.48	.014	25.397	224.253	**
2015b	0	.	.	.	.	.	
2016	306.596	2570.238	0.12	.905	-4765.077	5378.269	
2017	-2349.403	2374.331	-0.99	.324	-7034.506	2335.701	
2018	1437.079	2324.855	0.62	.537	-3150.396	6024.554	
2019	-2513.821	2268.895	-1.11	.269	-6990.875	1963.233	
2020	-3396.618	2762.203	-1.23	.22	-8847.081	2053.846	
2021	-4431.255	3039.904	-1.46	.147	-10429.688	1567.177	
2022o	0	.	.	.	.	.	
Constant	-22679.4	39172.058	-0.58	.563	-99974.912	54616.111	
Mean dependent var	267906.954		SD dependent var		396742.152		
R-squared	0.997		Number of obs		242		
F-test	2925.977		Prob > F		0.000		
Akaike crit. (AIC)	5091.249		Bayesian crit. (BIC)		5164.516		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.152 Stata Regression Results: The Effect of ESG Combined Score on Enterprise Value Multiple in the Communications Industry

: Industry_n = Communications

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-1063.655	1919.369	-0.55	.585	-5055.202	2927.892	
Intotalassets	-14266.839	21272.828	-0.67	.51	-58506.107	29972.43	
firmage_	5238.28	5478.222	0.96	.35	-6154.306	16630.865	
TOT_DEBT_TO_TOT_EQY	198.041	198.542	1.00	.33	-214.849	610.931	
capitalintensity	-150013.85	266702.96	-0.56	.58	-704653.01	404625.31	
cashflowbysale	5015.753	80976.207	0.06	.951	-163383.49	173414.99	
TOT_MKT_VAL	1.028	.046	22.29	0	.932	1.123	***
financialslack	4321.267	4909.699	0.88	.389	-5889.011	14531.544	
Internationalisation	672.845	1478.926	0.46	.654	-2402.751	3748.44	
NUMBER_OF_WOMEN_DIRECTORS	-14630.592	9935.398	-1.47	.156	-35292.383	6031.199	
o	0	.	.	.	.	.	
opefficiency_	-44190.131	112444.64	-0.39	.698	-278031.56	189651.29	
BB_3Y_DEFAULT_PROB	-132041.06	242891.1	-0.54	.592	-637160.75	373078.64	
UNLEVERED_BETA	331.153	783.316	0.42	.677	-1297.842	1960.149	
2015b	0	.	.	.	.	.	
2016	18211.572	12994.016	1.40	.176	-8810.963	45234.107	
2017	18021.308	15770.985	1.14	.266	-14776.25	50818.865	
2018	11857.245	16417.875	0.72	.478	-22285.595	46000.084	
2019	11628.645	15333.375	0.76	.457	-20258.854	43516.143	
2020	28011.193	21625.467	1.29	.209	-16961.428	72983.814	
2021	1569.113	22781.979	0.07	.946	-45808.606	48946.833	
2022o	0	.	.	.	.	.	
Constant	58580.292	199884.5	0.29	.772	-357102.28	474262.87	
Mean dependent var	469167.554		SD dependent var	636917.671			
R-squared	0.987		Number of obs	50			
F-test	87.293		Prob > F	0.000			
Akaike crit. (AIC)	1138.477		Bayesian crit. (BIC)	1176.718			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.153 Stata Regression Results: The Effect of ESG Combined Score on Enterprise Value Multiple in the Consumer Cyclical Industry**: Industry_n = Consumer Cyclical**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	88.91	199.269	0.45	.656	-304.434	482.254	
Intotalassets	3090.793	5169.141	0.60	.551	-7112.75	13294.336	
firmage_	383.349	922.723	0.41	.678	-1438.046	2204.743	
TOT_DEBT_TO_TOT_EQY	-3.277	24.151	-0.14	.892	-50.951	44.396	
capitalintensity	-56156.023	29418.413	-1.91	.058	-114226.03	1913.981	*
cashflowbysale	32281.536	16070.43	2.01	.046	559.569	64003.504	**
TOT_MKT_VAL	.988	.005	204.27	0	.978	.997	***
financialslack	1072.856	1559.483	0.69	.492	-2005.461	4151.173	
Internationalisation	-30.602	65.974	-0.46	.643	-160.831	99.626	
NUMBER_OF_WORKING_DAYS	2902.195	1598.732	1.81	.071	-253.597	6057.987	*
rdbysales	-2776.171	189757.25	-0.01	.988	-377344.45	371792.1	
operational_	48003.341	12129.447	3.96	0	24060.614	71946.069	***
BB_3Y_DEFAULT_PROB	-24095.903	58835.984	-0.41	.683	-140234.25	92042.445	
UNLEVERED_BETA	19.013	30.806	0.62	.538	-41.795	79.822	
2015b	0	.	.	.	.	.	
2016	1541.899	2827.687	0.55	.586	-4039.769	7123.566	
2017	-2352.27	2585.592	-0.91	.364	-7456.059	2751.518	
2018	-876.11	2533.431	-0.35	.73	-5876.936	4124.716	
2019	-3299.265	2431.397	-1.36	.177	-8098.682	1500.152	
2020	-6985.809	2704.634	-2.58	.011	-12324.578	-1647.04	**
2021	-6295.846	3221.323	-1.95	.052	-12654.525	62.834	*
2022o	0	.	.	.	.	.	
Constant	-112862.23	41651.172	-2.71	.007	-195078.89	-30645.564	***
Mean dependent var	319898.841		SD dependent var	431281.293			
R-squared	0.997		Number of obs	236			
F-test	3244.044		Prob > F	0.000			
Akaike crit. (AIC)	4978.041		Bayesian crit. (BIC)	5050.781			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.154 Stata Regression Results: The Effect of ESG Combined Score on Enterprise Value Multiple in the Consumer Non-cyclical Industry

: Industry_n = Consumer Non-cyclical

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	64.389	117.093	0.55	.583	-166.123	294.901	
Intotalassets	-12045.226	3455.198	-3.49	.001	-18847.225	-5243.228	***
firmage_	-112.535	177.548	-0.63	.527	-462.061	236.992	
TOT_DEBT_TO_TOT_EQY	-10.279	28.497	-0.36	.719	-66.378	45.82	
capitalintensity	-25732.503	21653.012	-1.19	.236	-68359.226	16894.22	
cashflowbysale	9848.359	8990.407	1.10	.274	-7850.406	27547.125	
TOT_MKT_VAL	.991	.002	502.20	0	.987	.995	***
financialslack	-734.35	1130.137	-0.65	.516	-2959.169	1490.469	
Internationalisation	30.467	46.872	0.65	.516	-61.807	122.741	
NUMBER_OF_WORKING_MEN_DIVIDED	2462.9	1058.575	2.33	.021	378.96	4546.84	**
rdbysales	-15303.304	40510.184	-0.38	.706	-95052.782	64446.174	
operational efficiency_	3465.186	14661.11	0.24	.813	-25397.083	32327.455	
BB_3Y_DEFAULT_PROB	-149156.64	73692.043	-2.02	.044	-294228.85	-4084.427	**
UNLEVERED_BETA_A	19.394	35.043	0.55	.58	-49.593	88.381	
2015b	0	.	.	.	.	.	
2016	1481.529	2201.704	0.67	.502	-2852.806	5815.864	
2017	1994.342	2438.414	0.82	.414	-2805.988	6794.672	
2018	2594.593	2794.297	0.93	.354	-2906.337	8095.523	
2019	6457.718	3133.992	2.06	.04	288.054	12627.381	**
2020	3940.518	3483.726	1.13	.259	-2917.641	10798.677	
2021	3134.454	4051.337	0.77	.44	-4841.12	11110.029	
2022	5875.232	4586.837	1.28	.201	-3154.543	14905.007	
Constant	126323.32	39927.048	3.16	.002	47721.814	204924.82	***
Mean dependent var	446284.578		SD dependent var	687375.494			
R-squared	0.999		Number of obs	351			
F-test	15647.590		Prob > F	0.000			
Akaike crit. (AIC)	7331.291		Bayesian crit. (BIC)	7416.228			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.155 Stata Regression Results: The Effect of ESG Combined Score on Enterprise Value Multiple in the Energy Industry

: Industry_n = Energy

CURR_ENTP_VAL	Coef.	St.Err.	t-value	P-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	11908.421	4725.421	2.52	.018	2195.179	21621.663	**
Intotalassets	376235.1	294651.32	1.28	.213	-229429.35	981899.55	
firmage_	-54185.285	29709.923	-1.82	.08	-115254.91	6884.336	*
TOT_DEBT_TO_TOT_EQY	-282.677	683.496	-0.41	.683	-1687.623	1122.269	
capitalintensity	880372.82	1037716	0.85	.404	-1252682.9	3013428.5	
cashflowbysale	506494.26	326022.5	1.55	.132	-163654.59	1176643.1	
TOT_MKT_VAL	.93	.011	87.25	0	.908	.952	***
financialslack	-8601.008	37594.55	-0.23	.821	-85877.712	68675.697	
Internationalisation	1291.185	4553.952	0.28	.779	-8069.598	10651.968	
NUMBER_OF_WOMEN_DI~D	-21988.282	28724.837	-0.77	.451	-81033.029	37056.465	
rdbysales	-34403726	44927878	-0.77	.451	-1.268e+08	57946851	
opefficiency_	-707903.23	625683.37	-1.13	.268	-1994013.8	578207.35	
BB_3Y_DEFAULT_PROB	-577612.6	3793300.2	-0.15	.88	-8374852.8	7219627.6	
UNLEVERED_BETA	-15025.908	5581.324	-2.69	.012	-26498.483	-3553.332	**
2015b	0	.	.	.	.	.	
2016	-49417.544	52634.497	-0.94	.356	-157609.3	58774.214	
2017	-21313.911	49498.909	-0.43	.67	-123060.38	80432.554	
2018	-44002.874	51553.24	-0.85	.401	-149972.08	61966.329	
2019	14488.909	48685.161	0.30	.768	-85584.872	114562.69	
2020	-59899.917	82516.845	-0.73	.474	-229515.72	109715.89	
2021	-297192.47	101400.93	-2.93	.007	-505625.07	-88759.862	***
2022o	0	.	.	.	.	.	
Constant	-2562165	3055451.3	-0.84	.409	-8842735	3718405.1	
Mean dependent var	2042727.676		SD dependent var		3401580.133		
R-squared	0.999		Number of obs		55		
F-test	1508.135		Prob > F		0.000		
Akaike crit. (AIC)	1407.405		Bayesian crit. (BIC)		1449.559		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.156 Stata Regression Results: The Effect of ESG Combined Score on Enterprise Value Multiple in the Financial Industry

: Industry_n = Financial

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	4046.501	2303.472	1.76	.087	-620.777	8713.779	*
Intotalassets	100633.72	31730.383	3.17	.003	36341.853	164925.58	***
firmage_	-9269.239	5952.17	-1.56	.128	-21329.481	2791.003	
TOT_DEBT_TO_TOT_EQY	193.601	178.695	1.08	.286	-168.469	555.671	
capitalintensity	221947.18	313916.05	0.71	.484	-414107.15	858001.5	
cashflowbysale	-14144.488	13504.778	-1.05	.302	-41507.767	13218.791	
TOT_MKT_VAL	.67	.08	8.35	0	.507	.833	***
financialslack	-10308.566	1528.124	-6.75	0	-13404.838	-7212.293	***
Internationalisation	1040.295	909.925	1.14	.26	-803.387	2883.977	
NUMBER_OF_WORKING_DAYS	-4944.386	12385.013	-0.40	.692	-30038.806	20150.034	
rdbysales	-399873.47	1492426.8	-0.27	.79	-3423817.4	2624070.5	
opefficiency_	14240.774	34512.948	0.41	.682	-55689.101	84170.648	
BB_3Y_DEFAULT_PROB	-45733.412	317188.34	-0.14	.886	-688418.04	596951.21	
UNLEVERED_BETA	195.629	869.885	0.23	.823	-1566.925	1958.183	
2015b	0	.	.	.	.	.	
2016	-20692.686	20251.139	-1.02	.314	-61725.391	20340.019	
2017	-29079.946	21750.585	-1.34	.189	-73150.817	14990.925	
2018	-3179.81	21908.009	-0.14	.885	-47569.652	41210.032	
2019	-4560.533	24137.81	-0.19	.851	-53468.382	44347.315	
2020	-8701.869	29959.109	-0.29	.773	-69404.789	52001.051	
2021	40825.651	31634.677	1.29	.205	-23272.293	104923.59	
2022o	0	.	.	.	.	.	
Constant	-900094.54	335056.47	-2.69	.011	-1578983.4	-221205.65	**
Mean dependent var	180057.810		SD dependent var		224628.046		
R-squared	0.927		Number of obs		69		
F-test	23.649		Prob > F		0.000		
Akaike crit. (AIC)	1651.290		Bayesian crit. (BIC)		1698.206		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.157 Stata Regression Results: The Effect of ESG Combined Score on Enterprise Value Multiple in the Industrial Industry**: Industry_n = Industrial**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-759.367	326.732	-2.32	.021	-1402.591	-116.143	**
Intotalassets	-9893.515	9122.288	-1.09	.279	-27852.196	8065.165	
firmage_	6348.36	1334.493	4.76	0	3721.197	8975.523	***
TOT_DEBT_TO_TOT_EQY	-146.244	77.387	-1.89	.06	-298.592	6.104	*
capitalintensity	-12257.379	51886.657	-0.24	.813	-114404.55	89889.787	
cashflowbysale	1436.783	14445.098	0.10	.921	-27000.698	29874.264	
TOT_MKT_VAL	.798	.01	80.95	0	.779	.818	***
financialslack	135.157	2231.712	0.06	.952	-4258.323	4528.638	
Internationalisation	-228.048	170.096	-1.34	.181	-562.908	106.812	
NUMBER_OF_WORKING_DAYS	-7895.05	2935.395	-2.69	.008	-13673.843	-2116.256	***
rdbysales	402716.53	332013.79	1.21	.226	-250905.62	1056338.7	
opefficiency_	-24412.492	21895.136	-1.12	.266	-67516.563	18691.579	
BB_3Y_DEFAULT_PROB	12443.123	94589.605	0.13	.895	-173771.61	198657.86	
UNLEVERED_BETA	-32.217	115.347	-0.28	.78	-259.296	194.861	
2015b	0	.	.	.	.	.	
2016	-10393.392	4779.338	-2.17	.031	-19802.282	-984.502	**
2017	-3615.443	4467.676	-0.81	.419	-12410.777	5179.891	
2018	-10895.378	4344.225	-2.51	.013	-19447.678	-2343.078	**
2019	-10762.776	4389.511	-2.45	.015	-19404.229	-2121.322	**
2020	-19753.478	5081.578	-3.89	0	-29757.377	-9749.58	***
2021	-1025.713	5346.99	-0.19	.848	-11552.116	9500.69	
2022o	0	.	.	.	.	.	
Constant	-94410.831	83254.967	-1.13	.258	-258311.52	69489.861	
Mean dependent var	208793.687		SD dependent var		346336.721		
R-squared	0.979		Number of obs		365		
F-test	631.181		Prob > F		0.000		
Akaike crit. (AIC)	8262.587		Bayesian crit. (BIC)		8344.485		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.158 Stata Regression Results: The Effect of ESG Combined Score on Enterprise Value Multiple in the Technology Industry

: Industry_n = Technology

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_S CORE	87.729	413.317	0.21	.833	-745.805	921.262	
Intotalassets	-9170.455	14021.112	-0.65	.517	-37446.723	19105.813	
firmage_	218.908	2060.389	0.11	.916	-3936.263	4374.079	
TOT_DEBT_TO_TOT _EQY	-41.808	232.296	-0.18	.858	-510.278	426.662	
capitalintensity	137101.82	118506.06	1.16	.254	-101888.43	376092.07	
cashflowbysale	69338.917	45868.536	1.51	.138	-23163.802	161841.64	
TOT_MKT_VAL	.996	.002	461.29	0	.991	1	***
financialslack	-345.04	2004.871	-0.17	.864	-4388.248	3698.168	
Internationalisation	.113	63.941	0.00	.999	-128.835	129.061	
NUMBER_OF_WOME N_DI~D	2114.218	2366.48	0.89	.377	-2658.243	6886.68	
rdbsales	-322530.5	269993.21	-1.20	.239	-867023.7	221962.71	
opefficiency_	11149.516	12895.775	0.86	.392	-14857.294	37156.325	
BB_3Y_DEFAULT_P ROB	498037.38	245799.11	2.03	.049	2336.216	993738.53	**
UNLEVERED_BETA	-97.405	29.872	-3.26	.002	-157.649	-37.162	***
2015b	0	.	.	.	.	.	
2016	10029.817	4974.334	2.02	.05	-1.883	20061.518	*
2017	8507.198	4917.079	1.73	.091	-1409.036	18423.432	*
2018	-475.656	5071.858	-0.09	.926	-10704.032	9752.721	
2019	1446.792	4946.676	0.29	.771	-8529.131	11422.716	
2020	-4380.512	6082.367	-0.72	.475	-16646.775	7885.75	
2021	144.783	6092.808	0.02	.981	-12142.535	12432.102	
2022o	0	.	.	.	.	.	
Constant	77642.398	119499.45	0.65	.519	-163351.2	318636	
Mean dependent var	1076723.248		SD dependent var		1817758.948		
R-squared	1.000		Number of obs		80		
F-test	22571.308		Prob > F		0.000		
Akaike crit. (AIC)	1692.118		Bayesian crit. (BIC)		1742.141		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.159 Stata Regression Results: The Effect of ESG Combined Score on Enterprise Value Multiple in the Utilities Industry**: Industry_n = Utilities**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	102.748	1411.683	0.07	.942	-2737.192	2942.687	
Intotalassets	-17079.127	37820.688	-0.45	.654	-93164.538	59006.285	
firmage_	-1103.244	4898.807	-0.23	.823	-10958.372	8751.885	
TOT_DEBT_TO_TOT_EQY	-25.087	149.237	-0.17	.867	-325.314	275.139	
capitalintensity	24711.425	243386.45	0.10	.92	-464918.96	514341.81	
cashflowbysale	-79442.715	35966.599	-2.21	.032	-151798.18	-7087.251	**
TOT_MKT_VAL	.966	.015	65.79	0	.936	.995	***
financialslack	8203.174	12823.434	0.64	.525	-17594.247	34000.595	
Internationalisation	103.309	1220.703	0.09	.933	-2352.429	2559.047	
NUMBER_OF_WORKING_DAYS	7987.104	5869.992	1.36	.18	-3821.796	19796.005	
rdbysales	6147705.3	7638411.4	0.81	.425	-9218796.5	21514207	
operational_	19559.651	67894.726	0.29	.775	-117026.92	156146.22	
BB_3Y_DEFAULT_PROB	640.837	337381.03	0.00	.998	-678082.26	679363.93	
UNLEVERED_BETA	-14.007	595.239	-0.02	.981	-1211.473	1183.459	
2015b	0	.	.	.	.	.	
2016	6664.53	14495.812	0.46	.648	-22497.284	35826.343	
2017	6077.741	14985.629	0.41	.687	-24069.456	36224.939	
2018	-5453.078	14136.795	-0.39	.701	-33892.641	22986.485	
2019	-15480.299	12590.193	-1.23	.225	-40808.5	9847.901	
2020	-24705.104	13388.834	-1.85	.071	-51639.964	2229.757	*
2021	-2063.096	12496.374	-0.17	.87	-27202.559	23076.367	
2022o	0	.	.	.	.	.	
Constant	201605.26	383832.95	0.53	.602	-570567.03	973777.56	
Mean dependent var	661177.650		SD dependent var		811020.698		
R-squared	0.994		Number of obs		82		
F-test	380.105		Prob > F		0.000		
Akaike crit. (AIC)	1911.873		Bayesian crit. (BIC)		1962.414		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.160 Stata Regression Results: The Effect of E, S, G on Enterprise Value Multiple in the Basic Materials Industry**: Industry_n = Basic Materials**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	52.085	104.882	0.50	.62	-154.887	259.057	
SOCIAL_DISCLOSURE~E	-88.932	180.421	-0.49	.623	-444.972	267.109	
GOVNCNCE_DISCLOSURE~E	171.323	157.291	1.09	.278	-139.072	481.719	
Intotalassets	-1169.742	4453.474	-0.26	.793	-9958.142	7618.658	
firmage_	435.972	689.738	0.63	.528	-925.143	1797.088	
TOT_DEBT_TO_TOT_EQY	.793	2.285	0.35	.729	-3.715	5.302	
capitalintensity	36182.481	21512.195	1.68	.094	-6269.273	78634.235	*
cashflowbysale	-9244.17	8214.757	-1.13	.262	-25455.015	6966.676	
TOT_MKT_VAL	.969	.005	187.66	0	.958	.979	***
financialslack	2016.416	884.054	2.28	.024	271.841	3760.99	**
Internationalisation	-86.451	81.253	-1.06	.289	-246.794	73.892	
NUMBER_OF_WORKMEN_DI~D	-1155.76	1836.745	-0.63	.53	-4780.357	2468.837	
rdbysales	-26317.42	27862.622	-0.94	.346	-81300.985	28666.145	
opefficiency_	266.901	8064.87	0.03	.974	-15648.159	16181.962	
BB_3Y_DEFAULT_PROB	33072.51	49308.801	0.67	.503	-64232.536	130377.56	
UNLEVERED_BETA	120.972	50.685	2.39	.018	20.95	220.993	**
2015b	0	.	.	.	.	.	
2016	272.213	2577.128	0.11	.916	-4813.442	5357.867	
2017	-2213.076	2402.287	-0.92	.358	-6953.703	2527.55	
2018	1425.586	2424.199	0.59	.557	-3358.281	6209.454	
2019	-2591.254	2359.326	-1.10	.274	-7247.103	2064.596	
2020	-3175.338	2844.475	-1.12	.266	-8788.572	2437.895	
2021	-4149.317	3061.724	-1.36	.177	-10191.264	1892.63	
2022o	0	.	.	.	.	.	
Constant	-31108.435	40122.116	-0.78	.439	-110284.65	48067.781	
Mean dependent var	267906.954		SD dependent var		396742.152		
R-squared	0.997		Number of obs		242		
F-test	2646.378		Prob > F		0.000		
Akaike crit. (AIC)	5093.790		Bayesian crit. (BIC)		5174.035		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.161 Stata Regression Results: The Effect of E, S, G on Enterprise Value Multiple in the Communications Industry**: Industry_n = Communications**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-440.062	895.995	-0.49	.629	-2315.401	1435.276	
SOCIAL_DISCLOSURE~E	-710.012	1246.176	-0.57	.576	-3318.288	1898.264	
GOVNCE_DISCLOSURE~E	3979.92	2081.532	1.91	.071	-376.776	8336.615	*
Intotalassets	-15947.362	19991.266	-0.80	.435	-57789.562	25894.838	
firmage_	1619.373	5378.506	0.30	.767	-9637.97	12876.716	
TOT_DEBT_TO_TOT_EQY	-30.583	212.846	-0.14	.887	-476.074	414.908	
capitalintensity	-219359.19	252728.95	-0.87	.396	-748326.96	309608.58	
cashflowbysale	18650.031	76000.628	0.25	.809	-140421.11	177721.17	
TOT_MKT_VAL	1.074	.048	22.17	0	.972	1.175	***
financialslack	1114.188	5246.18	0.21	.834	-9866.193	12094.569	
Internationalisation	497.133	1397.726	0.36	.726	-2428.341	3422.607	
NUMBER_OF_WOMEN_DI~D	-12088.88	9368.89	-1.29	.212	-31698.192	7520.433	
o	0	.	.	.	.	.	
opefficiency_	-49717.747	106465.01	-0.47	.646	-272551.57	173116.08	
BB_3Y_DEFAULT_PROB	-128505.87	227299.08	-0.56	.578	-604248.31	347236.57	
UNLEVERED_BETA	87.544	771.54	0.11	.911	-1527.308	1702.397	
2015b	0	.	.	.	.	.	
2016	22382.592	12370.373	1.81	.086	-3508.897	48274.081	*
2017	23560.626	15685.584	1.50	.15	-9269.678	56390.931	
2018	7668.091	17260.262	0.44	.662	-28458.053	43794.235	
2019	12700.18	15919.511	0.80	.435	-20619.74	46020.099	
2020	33624.653	22062.677	1.52	.144	-12553.061	79802.368	
2021	-588.289	21365.22	-0.03	.978	-45306.209	44129.63	
2022o	0	.	.	.	.	.	
Constant	-161942.88	211483.66	-0.77	.453	-604583.27	280697.52	
Mean dependent var	469167.554		SD dependent var		636917.671		
R-squared	0.990		Number of obs		50		
F-test	90.482		Prob > F		0.000		
Akaike crit. (AIC)	1130.807		Bayesian crit. (BIC)		1172.871		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.162 Stata Regression Results: The Effect of E, S, G on Enterprise Value Multiple in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISCLOSURE~E	-52.717	97.456	-0.54	.589	-245.105 139.671	
SOCIAL_DISCLOSURE~E	148.14	170.404	0.87	.386	-188.254 484.534	
GOVNCE_DISCLOSURE~E	195.198	190.024	1.03	.306	-179.929 570.325	
Intotalassets	3139.061	5191.227	0.60	.546	-7108.943 13387.065	
firmage_	199.645	934.195	0.21	.831	-1644.55 2043.84	
TOT_DEBT_TO_TOT_EQY	6.046	25.193	0.24	.811	-43.687 55.779	
capitalintensity	-57433.399	30155.596	-1.91	.059	-116963.58 2096.776	*
cashflowbysale	33801.21	16250.003	2.08	.039	1722.072 65880.349	**
TOT_MKT_VAL	.987	.005	203.73	0	.978 .997	***
financialslack	1146.99	1562.752	0.73	.464	-1938.039 4232.02	
Internationalisation	-39.03	66.342	-0.59	.557	-169.996 91.936	
NUMBER_OF_WOMEN_DI~D	2626.312	1616.128	1.63	.106	-564.087 5816.711	
rdbysales	-4561.046	190913.21	-0.02	.981	-381442.9 372320.81	
opefficiency_	47025.339	12162.051	3.87	0	23016.228 71034.451	***
BB_3Y_DEFAULT_PROB	-24954.195	59201.883	-0.42	.674	-141824.66 91916.269	
UNLEVERED_BETA	20.683	31.028	0.67	.506	-40.57 81.936	
2015b	0	.	.	.	.	
2016	1699.507	2832.613	0.60	.549	-3892.356 7291.369	
2017	-2470.527	2593.507	-0.95	.342	-7590.37 2649.316	
2018	-859.218	2540.893	-0.34	.736	-5875.196 4156.76	
2019	-3380.388	2472.696	-1.37	.173	-8261.738 1500.962	
2020	-7374.412	2753.02	-2.68	.008	-12809.149 -1939.675	***
2021	-6597.949	3248.647	-2.03	.044	-13011.105 -184.793	**
2022o	0	.	.	.	.	
Constant	-118009.49	43619.614	-2.71	.008	-204118.99 -31899.995	***
Mean dependent var	319898.841		SD dependent var	431281.293		
R-squared	0.997		Number of obs	236		
F-test	2944.507		Prob > F	0.000		
Akaike crit. (AIC)	4979.641		Bayesian crit. (BIC)	5059.309		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.163 Stata Regression Results: The Effect of E, S, G on Enterprise Value Multiple in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	11.916	83.39	0.14	.886	-152.253	176.084	
SOCIAL_DISCLOSURE~E	34.093	112.4	0.30	.762	-187.189	255.374	
GOVNCE_DISCLOSURE~E	23.329	169.848	0.14	.891	-311.049	357.707	
Intotalassets	-12039.039	3479.659	-3.46	.001	-18889.414	-5188.664	***
firmage_	-113.117	178.471	-0.63	.527	-464.471	238.238	
TOT_DEBT_TO_TOT_EQY	-9.901	28.787	-0.34	.731	-66.573	46.771	
capitalintensity	-25843.043	21755.661	-1.19	.236	-68673.231	16987.145	
cashflowbysale	9882.226	9027.198	1.10	.275	-7889.544	27653.996	
TOT_MKT_VAL	.991	.002	499.36	0	.987	.995	***
financialslack	-750.052	1146.709	-0.65	.514	-3007.569	1507.465	
Internationalisation	29.735	47.386	0.63	.531	-63.554	123.024	
NUMBER_OF_WORKING_MEN_D	2469.728	1065.11	2.32	.021	372.855	4566.6	**
rdbysales	-15645.312	40851.091	-0.38	.702	-96068.513	64777.889	
opefficiency_	3468.631	14907.245	0.23	.816	-25879.137	32816.4	
BB_3Y_DEFAULT_PROB	-149122.25	73973.128	-2.02	.045	-294752.53	-3491.973	**
UNLEVERED_BETA	19.642	35.223	0.56	.578	-49.701	88.984	
2015b	0	.	.	.	.	.	
2016	1494.582	2212.347	0.68	.5	-2860.847	5850.012	
2017	1982.347	2449.645	0.81	.419	-2840.248	6804.942	
2018	2569.348	2817.365	0.91	.363	-2977.176	8115.871	
2019	6423.34	3167.62	2.03	.044	187.272	12659.407	**
2020	3904.481	3518.337	1.11	.268	-3022.04	10831.002	
2021	3113.782	4073.573	0.76	.445	-4905.827	11133.392	
2022	5865.765	4606.839	1.27	.204	-3203.681	14935.211	
Constant	126054.73	41735.931	3.02	.003	43889.549	208219.91	***
Mean dependent var	446284.578		SD dependent var		687375.494		
R-squared	0.999		Number of obs		351		
F-test	14183.897		Prob > F		0.000		
Akaike crit. (AIC)	7335.269		Bayesian crit. (BIC)		7427.928		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.164 Stata Regression Results: The Effect of E, S, G on Enterprise Value Multiple in the Energy Industry**: Industry_n = Energy**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	1821.423	1749.914	1.04	.308	-1790.222	5433.069	
SOCIAL_DISCLOSURE~E	-4455.864	3917.514	-1.14	.267	-12541.215	3629.487	
GOVNCNCE_DISCLOSURE~E	12137.306	2619.641	4.63	0	6730.633	17543.979	***
Intotalassets	429180.95	251484.22	1.71	.101	-89856.969	948218.86	
firmage_	-57225.643	25992.626	-2.20	.038	-110871.79	-3579.5	**
TOT_DEBT_TO_TOT_EQY	-1279.599	630.829	-2.03	.054	-2581.566	22.368	*
capitalintensity	1552946.5	887984.29	1.75	.093	-279763.03	3385656	*
cashflowbysale	661152.59	275792.23	2.40	.025	91945.402	1230359.8	**
TOT_MKT_VAL	.921	.009	98.78	0	.902	.94	***
financialslack	-33719.347	33191.349	-1.02	.32	-102222.92	34784.23	
Internationalisation	245.322	3800.82	0.07	.949	-7599.185	8089.829	
NUMBER_OF_WORKMEN_DI~D	-27659.018	23997.884	-1.15	.26	-77188.216	21870.179	
rdbysales	-25224686	40765821	-0.62	.542	-1.094e+08	58911833	
opefficiency_	205303.01	582065.54	0.35	.727	-996021.22	1406627.2	
BB_3Y_DEFAULT_PROB	-1208918.5	3209467.4	-0.38	.71	-7832933.6	5415096.7	
UNLEVERED_BETA	-21819.637	5233.95	-4.17	0	-32621.979	-11017.295	***
2015b	0	.	.	.	.	.	
2016	-89450.833	45367.938	-1.97	.06	-183085.66	4183.99	*
2017	-83931.944	44809.413	-1.87	.073	-176414.03	8550.138	*
2018	-116564.23	47503.191	-2.45	.022	-214606	-18522.464	**
2019	-43241.931	43482.446	-0.99	.33	-132985.29	46501.427	
2020	-77089.797	69319.942	-1.11	.277	-220159.13	65979.532	
2021	-362421.91	90708.994	-4.00	.001	-549636.07	-175207.75	***
2022o	0	.	.	.	.	.	
Constant	-4071849.9	2601320	-1.56	.131	-9440710.4	1297010.6	
Mean dependent var	2042727.676		SD dependent var		3401580.133		
R-squared	0.999		Number of obs		55		
F-test	1980.310		Prob > F		0.000		
Akaike crit. (AIC)	1386.797		Bayesian crit. (BIC)		1432.965		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.165 Stata Regression Results: The Effect of E, S, G on Enterprise Value Multiple in the Financial Industry**: Industry_n = Financial**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-635.719	790.232	-0.80	.427	-2239.975	968.537	
SOCIAL_DISCLOSURE~E	1456.275	1325.078	1.10	.279	-1233.776	4146.326	
GOVNCE_DISCLOSURE~E	9225.103	1678.635	5.50	0	5817.293	12632.913	***
Intotalassets	87869.695	26275.185	3.34	.002	34528.234	141211.16	***
firmage_	-15070.538	5316.773	-2.84	.008	-25864.161	-4276.915	***
TOT_DEBT_TO_TOT_EQY	191.302	141.073	1.36	.184	-95.091	477.696	
capitalintensity	259136.77	244722.08	1.06	.297	-237675.46	755948.99	
cashflowbysale	-17049.29	10531.247	-1.62	.114	-38428.859	4330.278	
TOT_MKT_VAL	.706	.063	11.20	0	.578	.834	***
financialslack	-12348.204	1275.288	-9.68	0	-14937.177	-9759.231	***
Internationalisation	2432.216	762.67	3.19	.003	883.913	3980.518	***
NUMBER_OF_WORKING_MEN_D	-2744.065	9714.78	-0.28	.779	-22466.117	16977.986	
rdbysales	-1563211.4	1191873.9	-1.31	.198	-3982844.1	856421.29	
opefficiency_	-9246.306	27574.576	-0.34	.739	-65225.67	46733.058	
BB_3Y_DEFAULT_PROB	-70501.049	256352.92	-0.28	.785	-590925.16	449923.06	
UNLEVERED_BETA	517.683	692.845	0.75	.46	-888.868	1924.234	
2015b	0	.	.	.	.	.	
2016	-38705.115	16226.54	-2.38	.023	-71646.741	-5763.488	**
2017	-47136.056	17612.706	-2.68	.011	-82891.751	-11380.362	**
2018	-25585.116	17650.472	-1.45	.156	-61417.479	10247.247	
2019	-21628.074	19224.44	-1.13	.268	-60655.763	17399.615	
2020	-14718.798	23355.82	-0.63	.533	-62133.634	32696.038	
2021	30330.007	24717.636	1.23	.228	-19849.462	80509.477	
2022o	0	.	.	.	.	.	
Constant	-1099787.3	263736.74	-4.17	0	-1635201.3	-564373.24	***
Mean dependent var	180057.810		SD dependent var	224628.046			
R-squared	0.958		Number of obs	69			
F-test	36.698		Prob > F	0.000			
Akaike crit. (AIC)	1616.828		Bayesian crit. (BIC)	1668.213			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.166 Stata Regression Results: The Effect of E, S, G on Enterprise Value Multiple in the Industrial Industry**: Industry_n = Industrial**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-147.176	193.622	-0.76	.448	-528.364	234.011	
SOCIAL_DISCLOSURE~E	-558.454	330.976	-1.69	.093	-1210.055	93.147	*
GOVNCE_DISCLOSURE~E	-60.022	323.535	-0.19	.853	-696.973	576.928	
Intotalassets	-8704.577	9219.391	-0.94	.346	-26855.012	9445.859	
firmage_	6462.344	1354.534	4.77	0	3795.64	9129.047	***
TOT_DEBT_TO_TOT_EQY	-154.223	77.904	-1.98	.049	-307.594	-.851	**
capitalintensity	-11455.909	52108.032	-0.22	.826	-114042.24	91130.416	
cashflowbysale	2952.58	14539.041	0.20	.839	-25670.776	31575.937	
TOT_MKT_VAL	.797	.01	80.02	0	.777	.816	***
financialslack	-151.889	2251.512	-0.07	.946	-4584.494	4280.716	
Internationalisation	-235.624	170.745	-1.38	.169	-571.774	100.527	
NUMBER_OF_WORKING_MEN_DI~D	-7687.556	2946.676	-2.61	.01	-13488.748	-1886.364	**
rdbysales	421910.8	336911.31	1.25	.212	-241374.54	1085196.1	
opefficiency_	-25156.494	22000.071	-1.14	.254	-68468.557	18155.57	
BB_3Y_DEFAULT_PROB	2738.541	95178.491	0.03	.977	-184641.62	190118.71	
UNLEVERED_BETA	-29.875	115.934	-0.26	.797	-258.118	198.367	
2015b	0	.	.	.	.	.	
2016	-10823.311	4804.003	-2.25	.025	-20281.066	-1365.556	**
2017	-3275.289	4487.406	-0.73	.466	-12109.752	5559.174	
2018	-10999.604	4365.331	-2.52	.012	-19593.736	-2405.472	**
2019	-11031.238	4442.371	-2.48	.014	-19777.04	-2285.436	**
2020	-20255.583	5148.391	-3.93	0	-30391.344	-10119.822	***
2021	-1712.413	5394.362	-0.32	.751	-12332.421	8907.596	
2022o	0	.	.	.	.	.	
Constant	-121268.45	88320.631	-1.37	.171	-295147.38	52610.481	
Mean dependent var	208793.687		SD dependent var	346336.721			
R-squared	0.979		Number of obs	365			
F-test	572.036		Prob > F	0.000			
Akaike crit. (AIC)	8265.071		Bayesian crit. (BIC)	8354.768			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.167 Stata Regression Results: The Effect of E, S, G on Enterprise Value Multiple in the Technology Industry**: Industry_n = Technology**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	7.905	209.975	0.04	.97	-416.148	431.957	
SOCIAL_DISCLOSURE~E	44.07	326.613	0.14	.893	-615.538	703.679	
GOVNCNCE_DISCLOSURE~E	106.134	588.738	0.18	.858	-1082.847	1295.115	
Intotalassets	-9024.092	14394.162	-0.63	.534	-38093.692	20045.508	
firmage_	216.908	2271.292	0.10	.924	-4370.06	4803.876	
TOT_DEBT_TO_TOT_EQY	-44.282	242.821	-0.18	.856	-534.669	446.105	
capitalintensity	137442.47	129069.27	1.06	.293	-123218.21	398103.14	
cashflowbysale	68138.19	47686.448	1.43	.161	-28166.546	164442.92	
TOT_MKT_VAL	.995	.003	345.28	0	.99	1.001	***
financialslack	-370.216	2103.639	-0.18	.861	-4618.602	3878.169	
Internationalisation	.343	66.042	0.01	.996	-133.031	133.717	
NUMBER_OF_WORKMEN_DI~D	2047.175	2526.931	0.81	.423	-3056.067	7150.416	
rdbysales	-309378.63	295426.02	-1.05	.301	-906003.58	287246.31	
opefficiency_	10694.882	13639.696	0.78	.437	-16851.043	38240.808	
BB_3Y_DEFAULT_PROB	500443.88	253728.59	1.97	.055	-11971.391	1012859.2	*
UNLEVERED_BETA	-97.708	30.761	-3.18	.003	-159.83	-35.585	***
2015b	0	.	.	.	.	.	
2016	9991.491	5100.432	1.96	.057	-309.041	20292.022	*
2017	8188.316	5462.124	1.50	.142	-2842.667	19219.299	
2018	-769.402	5610.549	-0.14	.892	-12100.135	10561.331	
2019	1227.147	5365.056	0.23	.82	-9607.803	12062.096	
2020	-4600.523	6624.848	-0.69	.491	-17979.675	8778.629	
2021	84.72	6388.355	0.01	.989	-12816.825	12986.264	
2022o	0	.	.	.	.	.	
Constant	70856.208	136877.25	0.52	.607	-205573.01	347285.43	
Mean dependent var	1076723.248		SD dependent var	1817758.948			
R-squared	1.000		Number of obs	80			
F-test	19575.794		Prob > F	0.000			
Akaike crit. (AIC)	1696.074		Bayesian crit. (BIC)	1750.860			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.168 Stata Regression Results: The Effect of E, S, G on Enterprise Value Multiple in the Utilities Industry**: Industry_n = Utilities**

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-1.977	671.55	-0.00	.998	-1354.548	1350.594	
SOCIAL_DISCLOSURE~E	1314.286	1114.279	1.18	.244	-929.987	3558.56	
GOVNCNCE_DISCLOSURE~E	-2702.495	1731.927	-1.56	.126	-6190.776	785.786	
Intotalassets	-24560.396	40255.97	-0.61	.545	-105640.08	56519.291	
firmage_	-1977.72	4835.451	-0.41	.684	-11716.819	7761.378	
TOT_DEBT_TO_TOT_EQY	-65.008	148.361	-0.44	.663	-363.822	233.807	
capitalintensity	-47529.683	246785.52	-0.19	.848	-544581.23	449521.86	
cashflowbysale	-71055.922	36450.21	-1.95	.057	-144470.41	2358.57	*
TOT_MKT_VAL	.966	.015	65.30	0	.936	.996	***
financialslack	4683.81	12708.704	0.37	.714	-20912.834	30280.454	
Internationalisation	785.836	1251.279	0.63	.533	-1734.369	3306.042	
NUMBER_OF_WORKMEN_DI~D	9192.94	5875.301	1.56	.125	-2640.523	21026.403	
rdbysales	781404.33	8789827.3	0.09	.93	-16922217	18485025	
opefficiency_	11973.806	74220.726	0.16	.873	-137514.41	161462.02	
BB_3Y_DEFAULT_PROB	144400.59	341637.64	0.42	.675	-543692.95	832494.13	
UNLEVERED_BETA	38.189	584.967	0.07	.948	-1139.996	1216.374	
2015b	0	.	.	.	.	.	
2016	5499.515	14232.622	0.39	.701	-23166.457	34165.487	
2017	5784.067	14799.767	0.39	.698	-24024.195	35592.329	
2018	-6346.191	14065.854	-0.45	.654	-34676.274	21983.892	
2019	-11991.049	12564.66	-0.95	.345	-37297.573	13315.474	
2020	-21898.989	13256.177	-1.65	.105	-48598.301	4800.323	
2021	1322.824	12411.096	0.11	.916	-23674.406	26320.054	
2022o	0	.	.	.	.	.	
Constant	520139.85	415751.21	1.25	.217	-317226.07	1357505.8	
Mean dependent var	661177.650		SD dependent var		811020.698		
R-squared	0.994		Number of obs		82		
F-test	359.273		Prob > F		0.000		
Akaike crit. (AIC)	1909.154		Bayesian crit. (BIC)		1964.508		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.169 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Earnings Ratio in the Basic Materials Industry**: Industry_n = Basic Materials**

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.213	.265	-0.80	.423	-.736	.31	
Intotalassets	32.776	8.66	3.79	0	15.686	49.866	***
firmage_	-2.605	1.32	-1.97	.05	-5.209	-.001	*
TOT_DEBT_TO_TOT_EQY	-.006	.004	-1.33	.186	-.014	.003	
capitalintensity	-44.714	41.64	-1.07	.284	-126.885	37.457	
cashflowbysale	-4.166	15.945	-0.26	.794	-35.632	27.3	
TOT_MKT_VAL	0	0	-0.02	.984	0	0	
financialslack	-2.322	1.699	-1.37	.173	-5.676	1.031	
Internationalisation	-.122	.155	-0.79	.432	-.427	.183	
NUMBER_OF_WOMEN_DIRECTORS	3.758	3.568	1.05	.294	-3.283	10.8	
rdbysales	-18.476	53.98	-0.34	.733	-124.998	88.046	
opefficiency_	22.99	15.577	1.48	.142	-7.75	53.729	
BB_3Y_DEFAULT_PROB	74.79	92.359	0.81	.419	-107.47	257.051	
UNLEVERED_BETA	.223	.098	2.27	.024	.029	.417	**
2015b	0	.	.	.	.	.	
2016	.238	5.003	0.05	.962	-9.635	10.111	
2017	3.835	4.66	0.82	.412	-5.361	13.031	
2018	6.477	4.524	1.43	.154	-2.45	15.404	
2019	-8.283	4.46	-1.86	.065	-17.085	.519	*
2020	-10.432	5.376	-1.94	.054	-21.041	.176	*
2021	-.742	5.921	-0.13	.9	-12.427	10.942	
2022o	0	.	.	.	.	.	
Constant	-208.761	76.572	-2.73	.007	-359.866	-57.655	***
Mean dependent var	25.819		SD dependent var	24.537			
R-squared	0.200		Number of obs	240			
F-test	2.222		Prob > F	0.000			
Akaike crit. (AIC)	2052.596		Bayesian crit. (BIC)	2125.690			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.170 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Earnings Ratio in the Communications Industry

: Industry_n = Communications

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-15.657	16.423	-0.95	.353	-50.161	18.847	
Intotalassets	40.296	147.765	0.27	.788	-270.148	350.739	
firmage_	7.668	36.676	0.21	.837	-69.385	84.721	
TOT_DEBT_TO_TOT_EQY	3.795	2.304	1.65	.117	-1.047	8.636	
capitalintensity	558.702	1785.104	0.31	.758	-3191.664	4309.067	
cashflowbysale	-9.005	558.65	-0.02	.987	-1182.684	1164.675	
TOT_MKT_VAL	0	0	-0.70	.492	-.001	0	
financialslack	35.309	37.333	0.95	.357	-43.126	113.743	
Internationalisation	-3.61	9.71	-0.37	.714	-24.01	16.79	
NUMBER_OF_WOMEN_DIVIDED	6.25	65.254	0.10	.925	-130.842	143.343	
o	0	.	.	.	.	.	
opefficiency_	1459.322	743.763	1.96	.065	-103.266	3021.909	*
BB_3Y_DEFAULT_PROB	-2722.413	1610.883	-1.69	.108	-6106.753	661.928	
UNLEVERED_BETA	-.831	5.26	-0.16	.876	-11.882	10.22	
2015b	0	.	.	.	.	.	
2016	-122.55	95.034	-1.29	.214	-322.209	77.108	
2017	-47.848	105.63	-0.45	.656	-269.768	174.073	
2018	150.652	115.595	1.30	.209	-92.204	393.509	
2019	53.206	102.226	0.52	.609	-161.562	267.974	
2020	-82.678	145.218	-0.57	.576	-387.771	222.414	
2021	-79.973	154.684	-0.52	.611	-404.953	245.007	
2022o	0	.	.	.	.	.	
Constant	-1202.847	1339.318	-0.90	.381	-4016.649	1610.955	
Mean dependent var	71.843		SD dependent var	176.780			
R-squared	0.612		Number of obs	46			
F-test	1.492		Prob > F	0.191			
Akaike crit. (AIC)	583.798		Bayesian crit. (BIC)	620.371			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.171 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Earnings Ratio in the Consumer Cyclical Industry**: Industry_n = Consumer Cyclical**

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.698	.629	1.11	.268	-.543	1.94	
Intotalassets	-28.115	16.047	-1.75	.082	-59.791	3.562	*
firmage_	3.486	2.872	1.21	.227	-2.184	9.156	
TOT_DEBT_TO_TOT_EQY	.282	.075	3.75	0	.134	.43	***
capitalintensity	67.38	91.326	0.74	.462	-112.898	247.659	
cashflowbysale	-22.17	49.911	-0.44	.657	-120.695	76.356	
TOT_MKT_VAL	0	0	2.54	.012	0	0	**
financialslack	1.061	4.841	0.22	.827	-8.495	10.617	
Internationalisation	-.056	.205	-0.27	.787	-.46	.349	
NUMBER_OF_WOMEN_DIRECTORS	15.831	4.963	3.19	.002	6.034	25.629	***
rdbysales	453.037	589.227	0.77	.443	-710.107	1616.181	
opefficiency_	42.797	37.694	1.14	.258	-31.612	117.205	
BB_3Y_DEFAULT_PROB	-175.337	182.644	-0.96	.338	-535.879	185.205	
UNLEVERED_BETA	-.009	.096	-0.10	.923	-.198	.18	
2015b	0	.	.	.	.	.	
2016	-11.865	8.779	-1.35	.178	-29.194	5.465	
2017	-7.173	8.12	-0.88	.378	-23.202	8.857	
2018	-13.262	7.864	-1.69	.094	-28.787	2.262	*
2019	-22.524	7.548	-2.98	.003	-37.424	-7.625	***
2020	-24.818	8.401	-2.95	.004	-41.402	-8.234	***
2021	-4.431	10	-0.44	.658	-24.172	15.309	
2022o	0	.	.	.	.	.	
Constant	106.382	129.5	0.82	.413	-149.253	362.018	
Mean dependent var	47.617		SD dependent var		52.663		
R-squared	0.328		Number of obs		235		
F-test	4.156		Prob > F		0.000		
Akaike crit. (AIC)	2242.507		Bayesian crit. (BIC)		2315.158		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.172 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Earnings Ratio in the Consumer Non-cyclical Industry

: Industry_n = Consumer Non-cyclical

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.123	.357	-0.34	.732	-.826	.58	
lntotalassets	-12.247	10.536	-1.16	.246	-32.99	8.496	
firmage_	.218	.596	0.36	.715	-.955	1.39	
TOT_DEBT_TO_TOT_EQY	.49	.088	5.56	0	.317	.664	***
capitalintensity	37.423	66.273	0.56	.573	-93.053	167.899	
cashflowbysale	2.937	27.432	0.11	.915	-51.07	56.943	
TOT_MKT_VAL	0	0	2.66	.008	0	0	***
financialslack	-.238	3.454	-0.07	.945	-7.037	6.562	
Internationalisation	.152	.143	1.06	.288	-.129	.433	
NUMBER_OF_WOMEN_DIRECTORS	-6.628	3.271	-2.03	.044	-13.068	-.188	**
rdbysales	81.543	123.394	0.66	.509	-161.389	324.475	
opefficiency_	174.7	45.109	3.87	0	85.891	263.508	***
BB_3Y_DEFAULT_PROB	-75.492	225	-0.34	.737	-518.462	367.478	
UNLEVERED_BETA	-.045	.107	-0.42	.673	-.255	.165	
2015b	0	.	.	.	.	.	
2016	4.728	6.789	0.70	.487	-8.638	18.093	
2017	4.21	7.443	0.57	.572	-10.444	18.864	
2018	10.95	8.524	1.28	.2	-5.832	27.731	
2019	3.903	9.576	0.41	.684	-14.95	22.755	
2020	7.205	10.688	0.67	.501	-13.838	28.248	
2021	27.384	12.455	2.20	.029	2.863	51.904	**
2022	16.508	14.062	1.17	.241	-11.176	44.193	
Constant	8.746	121.762	0.07	.943	-230.974	248.466	
Mean dependent var	43.102		SD dependent var	38.092			
R-squared	0.219		Number of obs	347			
F-test	3.621		Prob > F	0.000			
Akaike crit. (AIC)	3225.871		Bayesian crit. (BIC)	3310.556			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.173 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Earnings Ratio in the Energy Industry

: Industry_n = Energy							
PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.508	.288	-1.77	.089	-1.1	.083	*
Intotalassets	-10.736	17.946	-0.60	.555	-47.623	26.152	
firmage_	.056	1.809	0.03	.975	-3.663	3.776	
TOT_DEBT_TO_TOT_EQY	.022	.042	0.53	.602	-.064	.108	
capitalintensity	-1.107	63.202	-0.02	.986	-131.02	128.806	
cashflowbysale	18.645	19.856	0.94	.356	-22.17	59.46	
TOT_MKT_VAL	0	0	2.94	.007	0	0	****
financialslack	.271	2.29	0.12	.907	-4.435	4.978	
Internationalisation	.707	.277	2.55	.017	.137	1.277	**
NUMBER_OF_WOMEN_DIRECTORS	.053	1.749	0.03	.976	-3.543	3.649	
rdbysales	2317.484	2736.312	0.85	.405	-3307.086	7942.055	
opefficiency_	73.147	38.107	1.92	.066	-5.183	151.477	*
BB_3Y_DEFAULT_PROB	-65.124	231.029	-0.28	.78	-540.011	409.763	
UNLEVERED_BETA	.212	.34	0.62	.538	-.487	.911	
2015b	0	.	.	.	.	.	
2016	5.045	3.206	1.57	.128	-1.544	11.635	
2017	6.837	3.015	2.27	.032	.64	13.034	**
2018	2.433	3.14	0.78	.445	-4.021	8.887	
2019	2.444	2.965	0.82	.417	-3.651	8.539	
2020	.217	5.026	0.04	.966	-10.113	10.547	
2021	4.949	6.176	0.80	.43	-7.746	17.643	
2022o	0	.	.	.	.	.	
Constant	100.344	186.091	0.54	.594	-282.172	482.859	
Mean dependent var	12.832		SD dependent var		7.455		
R-squared	0.710		Number of obs		55		
F-test	3.175		Prob > F		0.002		
Akaike crit. (AIC)	339.723		Bayesian crit. (BIC)		381.877		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.174 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Earnings Ratio in the Financial Industry

: Industry_n = Financial

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-9.25	4.51	-2.05	.048	-18.407	-.094	**
Intotalassets	-203.911	57.529	-3.54	.001	-320.701	-87.121	***
firmage_	30.224	11.025	2.74	.01	7.841	52.606	**
TOT_DEBT_TO_TOT_EQY	.071	.34	0.21	.836	-.618	.76	
capitalintensity	-528.931	568.505	-0.93	.359	-1683.058	625.196	
cashflowbysale	37.398	28.379	1.32	.196	-20.214	95.01	
TOT_MKT_VAL	0	0	1.43	.163	0	.001	
financialslack	.358	2.816	0.13	.899	-5.359	6.075	
Internationalisation	-.426	1.656	-0.26	.799	-3.789	2.937	
NUMBER_OF_WOMEN_DIRECTORS	-2.484	23.68	-0.11	.917	-50.558	45.589	
rdbysales	-2557.772	3076.993	-0.83	.411	-8804.401	3688.856	
opefficiency_	56.456	62.412	0.91	.372	-70.246	183.159	
BB_3Y_DEFAULT_PROB	-774.06	587.191	-1.32	.196	-1966.12	418	
UNLEVERED_BETA	7.086	1.866	3.80	.001	3.299	10.874	***
2015b	0	.	.	.	.	.	
2016	-3.146	37.256	-0.08	.933	-78.779	72.487	
2017	-31.536	40.494	-0.78	.441	-113.744	50.671	
2018	-44.334	39.967	-1.11	.275	-125.471	36.803	
2019	-64.166	43.884	-1.46	.153	-153.256	24.924	
2020	-19.111	54.759	-0.35	.729	-130.278	92.057	
2021	74.497	58.653	1.27	.212	-44.576	193.569	
2022o	0	.	.	.	.	.	
Constant	1517.272	607.438	2.50	.017	284.108	2750.437	**
Mean dependent var	49.188		SD dependent var	101.660			
R-squared	0.730		Number of obs	67			
F-test	4.723		Prob > F	0.000			
Akaike crit. (AIC)	756.584		Bayesian crit. (BIC)	802.882			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.175 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Earnings Ratio in the Industrial Industry

: Industry_n = Industrial							
PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.165	.299	-0.55	.582	-.754	.424	
Intotalassets	-9.153	8.309	-1.10	.272	-25.512	7.205	
firmage_	4.764	1.215	3.92	0	2.372	7.156	***
TOT_DEBT_TO_TOT_EQY	.283	.07	4.01	0	.144	.421	***
capitalintensity	-77.246	47.353	-1.63	.104	-170.474	15.982	
cashflowbysale	29.715	13.121	2.27	.024	3.883	55.547	**
TOT_MKT_VAL	0	0	-0.35	.729	0	0	
financialslack	-1.323	2.035	-0.65	.516	-5.329	2.683	
Internationalisation	-.035	.155	-0.22	.823	-.34	.27	
NUMBER_OF_WOMEN_DIRECTORS	.154	2.668	0.06	.954	-5.098	5.406	
rdbysales	300.598	301.43	1.00	.32	-292.854	894.051	
opefficiency_	102.799	21.291	4.83	0	60.881	144.716	***
BB_3Y_DEFAULT_PROB	-46.038	85.892	-0.54	.592	-215.141	123.065	
UNLEVERED_BETA	.114	.106	1.08	.281	-.094	.323	
2015b	0	.	.	.	.	.	
2016	-1.421	4.337	-0.33	.743	-9.959	7.117	
2017	4.387	4.08	1.08	.283	-3.645	12.419	
2018	-.523	3.976	-0.13	.896	-8.35	7.305	
2019	-4.174	4.01	-1.04	.299	-12.068	3.721	
2020	-19.288	4.615	-4.18	0	-28.374	-10.202	***
2021	-1.797	4.877	-0.37	.713	-11.398	7.805	
2022o	0	.	.	.	.	.	
Constant	-187.575	76.225	-2.46	.014	-337.646	-37.505	**
Mean dependent var	36.765		SD dependent var		30.909		
R-squared	0.249		Number of obs		360		
F-test	4.483		Prob > F		0.000		
Akaike crit. (AIC)	3105.978		Bayesian crit. (BIC)		3187.587		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.176 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Earnings Ratio in the Technology Industry

: Industry_n = Technology

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.206	.167	-1.24	.223	-.542	.13	
lntotalassets	-2.641	5.649	-0.47	.643	-14.032	8.751	
firmage_	1.836	.83	2.21	.032	.162	3.51	**
TOT_DEBT_TO_TOT_EQY	-.061	.094	-0.66	.516	-.25	.127	
capitalintensity	-9.819	47.743	-0.21	.838	-106.101	86.464	
cashflowbysale	-8.555	18.479	-0.46	.646	-45.822	28.711	
TOT_MKT_VAL	0	0	1.17	.248	0	0	
financialslack	-.109	.808	-0.14	.893	-1.738	1.52	
Internationalisation	.021	.026	0.83	.413	-.031	.073	
NUMBER_OF_WOMEN_DIRECTORS	-.788	.953	-0.83	.413	-2.711	1.135	
rdbysales	36.942	108.773	0.34	.736	-182.419	256.303	
opefficiency_	3.803	5.195	0.73	.468	-6.674	14.281	
BB_3Y_DEFAULT_PROB	92.079	99.025	0.93	.358	-107.625	291.783	
UNLEVERED_BETA	.038	.012	3.15	.003	.014	.062	****
2015b	0	.	.	.	.	.	
2016	-1.599	2.004	-0.80	.429	-5.64	2.443	
2017	-4.719	1.981	-2.38	.022	-8.714	-.724	**
2018	-4.46	2.043	-2.18	.035	-8.581	-.34	**
2019	-6.599	1.993	-3.31	.002	-10.618	-2.58	****
2020	-11.969	2.45	-4.88	0	-16.911	-7.027	****
2021	-2.556	2.455	-1.04	.304	-7.506	2.394	
2022o	0	.	.	.	.	.	
Constant	-.271	48.143	-0.01	.996	-97.36	96.819	
Mean dependent var	17.914		SD dependent var		8.342		
R-squared	0.732		Number of obs		80		
F-test	5.861		Prob > F		0.000		
Akaike crit. (AIC)	441.415		Bayesian crit. (BIC)		491.438		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.177 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Earnings Ratio in the Utilities Industry**: Industry_n = Utilities**

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-1.052	2.79	-0.38	.708	-6.664	4.56	
Intotalassets	-36.992	74.738	-0.50	.623	-187.345	113.362	
firmage_	-13.361	9.681	-1.38	.174	-32.836	6.114	
TOT_DEBT_TO_TOT_EQY	-.063	.295	-0.21	.832	-.656	.531	
capitalintensity	50.237	480.959	0.10	.917	-917.328	1017.801	
cashflowbysale	13.425	71.074	0.19	.851	-129.557	156.408	
TOT_MKT_VAL	0	0	2.57	.013	0	0	**
financialslack	-9.722	25.341	-0.38	.703	-60.7	41.257	
Internationalisation	.816	2.412	0.34	.737	-4.037	5.669	
NUMBER_OF_WOMEN_DIRECTORS	2.664	11.6	0.23	.819	-20.671	26	
rdbysales	-14993.4	15094.354	-0.99	.326	-45359.324	15372.524	
opefficiency_	135.388	134.168	1.01	.318	-134.522	405.299	
BB_3Y_DEFAULT_PROB	-939.966	666.703	-1.41	.165	-2281.199	401.267	
UNLEVERED_BETA	-.868	1.176	-0.74	.464	-3.234	1.498	
2015b	0	.	.	.	.	.	
2016	-58.711	28.645	-2.05	.046	-116.338	-1.084	**
2017	-57.364	29.613	-1.94	.059	-116.938	2.211	*
2018	-52.965	27.936	-1.90	.064	-109.165	3.235	*
2019	-45.219	24.88	-1.82	.076	-95.27	4.833	*
2020	-10.258	26.458	-0.39	.7	-63.485	42.968	
2021	-16.975	24.694	-0.69	.495	-66.654	32.703	
2022o	0	.	.	.	.	.	
Constant	933.057	758.497	1.23	.225	-592.841	2458.956	
Mean dependent var	26.866	SD dependent var	58.529				
R-squared	0.317	Number of obs	82				
F-test	1.092	Prob > F	0.385				
Akaike crit. (AIC)	890.707	Bayesian crit. (BIC)	941.248				

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.178 Stata Regression Results: The Effect of E, S, G on Price-to-Earnings Ratio in the Basic Materials Industry

Industry_n = Basic Materials							
PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.466	.204	-2.28	.024	-.869	-.062	**
SOCIAL_DISCLOSURE~E	.611	.348	1.75	.081	-.077	1.298	*
GOVNCNCE_DISCLOSURE~E	-.047	.304	-0.16	.877	-.647	.553	
Intotalassets	32.324	8.605	3.76	0	15.342	49.305	***
firmage_	-2.998	1.329	-2.26	.025	-5.62	-.375	**
TOT_DEBT_TO_TOT_EQY	-.007	.004	-1.48	.141	-.015	.002	
capitalintensity	-43.805	41.451	-1.06	.292	-125.611	38	
cashflowbysale	-3.288	15.878	-0.21	.836	-34.624	28.049	
TOT_MKT_VAL	0	0	0.25	.801	0	0	
financialslack	-2.819	1.703	-1.66	.1	-6.18	.543	
Internationalisation	-.062	.157	-0.40	.692	-.371	.247	
NUMBER_OF_WORKMEN_DI~D	3.806	3.543	1.07	.284	-3.186	10.798	
rdbysales	-21.223	53.685	-0.40	.693	-127.171	84.726	
opefficiency_	26.348	15.624	1.69	.093	-4.487	57.183	*
BB_3Y_DEFAULT_PROB	108.577	95.023	1.14	.255	-78.954	296.107	
UNLEVERED_BETA	.222	.098	2.27	.024	.029	.415	**
2015b	0	.	.	.	.	.	
2016	.331	4.967	0.07	.947	-9.473	10.134	
2017	2.507	4.668	0.54	.592	-6.706	11.72	
2018	3.889	4.673	0.83	.406	-5.334	13.112	
2019	-10.475	4.578	-2.29	.023	-19.511	-1.44	**
2020	-13.151	5.485	-2.40	.018	-23.976	-2.326	**
2021	-1.565	5.904	-0.27	.791	-13.218	10.087	
2022o	0	.	.	.	.	.	
Constant	-194.495	77.608	-2.51	.013	-347.658	-41.333	**
Mean dependent var		25.819	SD dependent var		24.537		
R-squared		0.220	Number of obs		240		
F-test		2.259	Prob > F		0.000		
Akaike crit. (AIC)		2050.394	Bayesian crit. (BIC)		2130.449		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.179 Stata Regression Results: The Effect of E, S, G on Price-to-Earnings Ratio in the Communications Industry**: Industry_n = Communications**

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-10.572	7.902	-1.34	.2	-27.323	6.18	
SOCIAL_DISCLOSURE~E	2.638	9.534	0.28	.786	-17.573	22.848	
GOVNCNCE_DISCLOSURE~E	-3.092	15.307	-0.20	.842	-35.543	29.358	
Intotalassets	33.727	152.403	0.22	.828	-289.352	356.806	
firmage_	6.582	39.713	0.17	.87	-77.606	90.769	
TOT_DEBT_TO_TOT_EQY	3.951	2.374	1.66	.116	-1.082	8.985	
capitalintensity	421.991	1840.977	0.23	.822	-3480.705	4324.688	
cashflowbysale	-12.076	573.463	-0.02	.983	-1227.764	1203.612	
TOT_MKT_VAL	0	0	-0.91	.376	-.001	0	
financialslack	22.008	40.843	0.54	.597	-64.574	108.59	
Internationalisation	-4.891	10.047	-0.49	.633	-26.189	16.407	
NUMBER_OF_WORKING_MEN_DI~D	9.121	68.402	0.13	.896	-135.884	154.127	
o	0	.	.	.	.	.	
oefficiency_	1350.937	772.89	1.75	.1	-287.516	2989.391	
BB_3Y_DEFAULT_PROB	-2760.321	1656.77	-1.67	.115	-6272.517	751.875	
UNLEVERED_BETA	-2.346	5.765	-0.41	.689	-14.567	9.875	
2015b	0	.	.	.	.	.	
2016	-117.823	97.809	-1.21	.246	-325.169	89.523	
2017	-79.318	114.156	-0.69	.497	-321.317	162.682	
2018	99.298	128.512	0.77	.451	-173.136	371.732	
2019	3.89	115.41	0.03	.974	-240.769	248.548	
2020	-153.7	163.959	-0.94	.362	-501.278	193.878	
2021	-92.67	159.385	-0.58	.569	-430.55	245.211	
2022o	0	.	.	.	.	.	
Constant	-1227.814	1635.123	-0.75	.464	-4694.119	2238.491	
Mean dependent var		71.843		SD dependent var		176.780	
R-squared		0.636		Number of obs		46	
F-test		1.333		Prob > F		0.277	
Akaike crit. (AIC)		584.785		Bayesian crit. (BIC)		625.015	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.180 Stata Regression Results: The Effect of E, S, G on Price-to-Earnings Ratio in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.519	.301	1.72	.087	-.076	1.115	*
SOCIAL_DISCL OSURE_~E	-.091	.531	-0.17	.864	-1.139	.957	
GOVNCE_DISC LOSURE_~E	-.643	.595	-1.08	.281	-1.818	.532	
Intotalassets	-28.933	16.041	-1.80	.073	-60.602	2.735	*
firmage_	4.333	2.9	1.49	.137	-1.392	10.057	
TOT_DEBT_TO_ TOT_EQY	.244	.078	3.13	.002	.09	.398	***
capitalintensity	81.603	93.181	0.88	.382	-102.353	265.558	
cashflowbysale	-30.968	50.222	-0.62	.538	-130.115	68.178	
TOT_MKT_VAL	0	0	2.64	.009	0	0	***
financialslack	.671	4.829	0.14	.89	-8.862	10.204	
Internationalisatio n	-.022	.205	-0.11	.913	-.427	.382	
NUMBER_OF_ WOMEN_DI~D	16.874	4.996	3.38	.001	7.011	26.736	***
rdbysales	429.684	590.107	0.73	.468	-735.297	1594.665	
opefficiency_	47.22	37.637	1.25	.211	-27.083	121.522	
BB_3Y_DEFAU LT_PROB	-163.059	182.937	-0.89	.374	-524.211	198.093	
UNLEVERED_B ETA	-.021	.096	-0.22	.829	-.21	.169	
2015b	0	.	.	.	.	.	
2016	-12.512	8.754	-1.43	.155	-29.795	4.77	
2017	-6.592	8.113	-0.81	.418	-22.609	9.425	
2018	-13.096	7.851	-1.67	.097	-28.596	2.404	*
2019	-21.582	7.641	-2.83	.005	-36.666	-6.498	***
2020	-22.697	8.508	-2.67	.008	-39.494	-5.9	***
2021	-2.721	10.039	-0.27	.787	-22.539	17.096	
2022o	0	.	.	.	.	.	
Constant	143.776	134.907	1.07	.288	-122.554	410.107	
Mean dependent var	47.617		SD dependent var		52.663		
R-squared	0.341		Number of obs		235		
F-test	3.957		Prob > F		0.000		
Akaike crit. (AIC)	2241.933		Bayesian crit. (BIC)		2321.504		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.181 Stata Regression Results: The Effect of E, S, G on Price-to-Earnings Ratio in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.43	.252	1.71	.089	-.065	.926	*
SOCIAL_DISCLOSURE~E	-.85	.341	-2.49	.013	-1.521	-.179	**
GOVNCNCE_DISCLOSURE~E	.672	.511	1.31	.19	-.335	1.678	
Intotalassets	-13.991	10.479	-1.34	.183	-34.622	6.64	
firmage_	.26	.591	0.44	.66	-.903	1.423	
TOT_DEBT_TO_TOT_EQY	.467	.088	5.32	0	.294	.64	***
capitalintensity	44.88	65.739	0.68	.495	-84.548	174.309	
cashflowbysale	1.292	27.193	0.05	.962	-52.246	54.83	
TOT_MKT_VAL	0	0	2.82	.005	0	0	***
financialslack	1.121	3.462	0.32	.746	-5.694	7.937	
Internationalisation	.184	.143	1.29	.198	-.097	.465	
NUMBER_OF_WORKING_MEN~D	-7.288	3.251	-2.24	.026	-13.689	-.886	**
rdbysales	111.982	122.853	0.91	.363	-129.893	353.857	
opefficiency_	187.317	45.321	4.13	0	98.088	276.546	***
BB_3Y_DEFAULT_PROB	-71.615	223.033	-0.32	.748	-510.728	367.498	
UNLEVERED_BETA	-.057	.106	-0.54	.592	-.266	.152	
2015b	0	.	.	.	.	.	
2016	4.103	6.738	0.61	.543	-9.163	17.37	
2017	4.558	7.385	0.62	.538	-9.982	19.097	
2018	11.385	8.488	1.34	.181	-5.326	28.097	
2019	4.474	9.56	0.47	.64	-14.348	23.295	
2020	7.948	10.666	0.75	.457	-13.052	28.948	
2021	27.747	12.365	2.24	.026	3.403	52.092	**
2022	16.586	13.946	1.19	.235	-10.872	44.044	
Constant	-32.976	125.58	-0.26	.793	-280.22	214.268	
Mean dependent var		43.102		SD dependent var		38.092	
R-squared		0.239		Number of obs		347	
F-test		3.668		Prob > F		0.000	
Akaike crit. (AIC)		3221.034		Bayesian crit. (BIC)		3313.418	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.182 Stata Regression Results: The Effect of E, S, G on Price-to-Earnings Ratio in the Energy Industry

: Industry_n = Energy

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.244	.131	-1.86	.076	-.515	.027	*
SOCIAL_DISCL OSURE~E	-.126	.294	-0.43	.672	-.732	.481	
GOVNCE_DISC LOSURE~E	-.051	.196	-0.26	.798	-.456	.355	
Intotalassets	-7.465	18.86	-0.40	.696	-46.389	31.46	
firmage_	-.371	1.949	-0.19	.851	-4.394	3.652	
TOT_DEBT_TO_ TOT_EQY	.009	.047	0.18	.856	-.089	.106	
capitalintensity	2.055	66.593	0.03	.976	-135.387	139.497	
cashflowbysale	19.179	20.683	0.93	.363	-23.508	61.866	
TOT_MKT_VAL	0	0	2.47	.021	0	0	**
financialslack	-.453	2.489	-0.18	.857	-5.59	4.685	
Internationalisatio n	.697	.285	2.45	.022	.109	1.286	**
NUMBER_OF_ WOMEN_DI~D	.057	1.8	0.03	.975	-3.657	3.772	
rdbysales	1637.375	3057.185	0.54	.597	-4672.345	7947.094	
opefficiency_	80.048	43.651	1.83	.079	-10.044	170.14	*
BB_3Y_DEFAU LT_PROB	-99.704	240.69	-0.41	.682	-596.465	397.056	
UNLEVERED_B ETA	.208	.393	0.53	.601	-.602	1.018	
2015b	0	.	.	.	.	.	
2016	4.801	3.402	1.41	.171	-2.221	11.823	
2017	5.873	3.36	1.75	.093	-1.062	12.809	*
2018	1.836	3.562	0.52	.611	-5.517	9.188	
2019	1.679	3.261	0.52	.611	-5.051	8.409	
2020	-.389	5.199	-0.07	.941	-11.119	10.34	
2021	5.564	6.803	0.82	.421	-8.476	19.604	
2022o	0	.	.	.	.	.	
Constant	64.688	195.083	0.33	.743	-337.943	467.32	
Mean dependent var	12.832		SD dependent var		7.455		
R-squared	0.718		Number of obs		55		
F-test	2.784		Prob > F		0.006		
Akaike crit. (AIC)	342.005		Bayesian crit. (BIC)		388.174		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.183 Stata Regression Results: The Effect of E, S, G on Price-to-Earnings Ratio in the Financial Industry

: Industry_n = Financial							
PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-4.205	2.045	-2.06	.048	-8.365	-.046	**
SOCIAL_DISCLOSURE~E	-4.425	3.049	-1.45	.156	-10.628	1.778	
GOVNCES_DISCLOSURE~E	3.029	3.934	0.77	.447	-4.974	11.032	
Intotalassets	-222.209	60.862	-3.65	.001	-346.033	-98.384	***
firmage_	28.863	12.272	2.35	.025	3.895	53.83	**
TOT_DEBT_TO_TOT_EQY	.089	.345	0.26	.799	-.614	.792	
capitalintensity	-519.871	562.294	-0.93	.362	-1663.867	624.125	
cashflowbysale	33.047	28.157	1.17	.249	-24.238	90.333	
TOT_MKT_VAL	0	0	1.73	.093	0	.001	*
financialslack	-1.587	3.011	-0.53	.602	-7.713	4.538	
Internationalisation	.572	1.787	0.32	.751	-3.065	4.208	
NUMBER_OF_WORKING_DAYS	-2.109	23.433	-0.09	.929	-49.784	45.565	
rdbysales	-3155.046	3070.231	-1.03	.312	-9401.478	3091.385	
opefficiency_	33.605	63.39	0.53	.6	-95.364	162.573	
BB_3Y_DEFAULT_PROB	-842.521	601.117	-1.40	.17	-2065.503	380.462	
UNLEVERED_BETA	7.286	1.86	3.92	0	3.502	11.071	***
2015b	0	.	.	.	.	.	
2016	-16.094	37.641	-0.43	.672	-92.676	60.487	
2017	-37.825	41.156	-0.92	.365	-121.558	45.907	
2018	-57.637	40.655	-1.42	.166	-140.349	25.076	
2019	-72.646	44.313	-1.64	.111	-162.801	17.509	
2020	-25.255	54.378	-0.46	.645	-135.888	85.378	
2021	69.292	58.038	1.19	.241	-48.788	187.372	
2022o	0	.	.	.	.	.	
Constant	1354.106	612.481	2.21	.034	108.005	2600.207	**
Mean dependent var		49.188			SD dependent var	101.660	
R-squared		0.751			Number of obs	67	
F-test		4.529			Prob > F	0.000	
Akaike crit. (AIC)		755.012			Bayesian crit. (BIC)	805.720	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.184 Stata Regression Results: The Effect of E, S, G on Price-to-Earnings Ratio in the Industrial Industry

: Industry_n = Industrial

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.24	.174	-1.38	.17	-.583	.104	
SOCIAL_DISCL OSURE~E	.51	.299	1.70	.09	-.08	1.099	*
GOVNCE_DISC LOSURE~E	-.462	.298	-1.55	.122	-1.048	.125	
Intotalassets	-11.49	8.334	-1.38	.169	-27.899	4.919	
firmage_	4.574	1.224	3.74	0	2.165	6.984	***
TOT_DEBT_TO_ TOT_EQY	.297	.07	4.22	0	.159	.436	***
capitalintensity	-80.404	47.284	-1.70	.09	-173.499	12.691	*
cashflowbysale	26.872	13.112	2.05	.041	1.057	52.687	**
TOT_MKT_VAL	0	0	-0.07	.947	0	0	
financialslack	-.773	2.038	-0.38	.705	-4.785	3.24	
Internationalisatio n	-.019	.154	-0.13	.901	-.323	.285	
NUMBER_OF_ WOMEN_DI~D	-.246	2.659	-0.09	.926	-5.48	4.989	
rdbysales	256.92	303.919	0.84	.399	-341.453	855.294	
opefficiency_	103.944	21.244	4.89	0	62.117	145.771	***
BB_3Y_DEFAU LT_PROB	-28.178	85.788	-0.33	.743	-197.082	140.727	
UNLEVERED_B ETA	.111	.106	1.05	.295	-.097	.319	
2015b	0	.	.	.	.	.	
2016	-.603	4.328	-0.14	.889	-9.123	7.917	
2017	3.686	4.071	0.91	.366	-4.329	11.7	
2018	-.355	3.963	-0.09	.929	-8.158	7.449	
2019	-3.636	4.025	-0.90	.367	-11.561	4.29	
2020	-18.209	4.649	-3.92	0	-27.363	-9.056	***
2021	-.468	4.885	-0.10	.924	-10.086	9.151	
2022o	0	.	.	.	.	.	
Constant	-133.789	80.28	-1.67	.097	-291.849	24.272	*
Mean dependent var		36.765		SD dependent var		30.909	
R-squared		0.263		Number of obs		360	
F-test		4.351		Prob > F		0.000	
Akaike crit. (AIC)		3103.258		Bayesian crit. (BIC)		3192.639	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.185 Stata Regression Results: The Effect of E, S, G on Price-to-Earnings Ratio in the Technology Industry**: Industry_n = Technology**

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.005	.082	-0.06	.953	-.17	.16	
SOCIAL_DISCL OSURE_~E	-.268	.127	-2.11	.041	-.524	-.012	**
GOVNCE_DISC LOSURE_~E	.028	.229	0.12	.903	-.434	.49	
Intotalassets	-2.501	5.594	-0.45	.657	-13.798	8.796	
firmage_	2.399	.883	2.72	.01	.617	4.182	**
TOT_DEBT_TO_ TOT_EQY	-.09	.094	-0.95	.348	-.28	.101	
capitalintensity	19.167	50.16	0.38	.704	-82.133	120.467	
cashflowbysale	-8.885	18.532	-0.48	.634	-46.311	28.542	
TOT_MKT_VAL	0	0	0.45	.658	0	0	
financialslack	-.371	.818	-0.45	.652	-2.022	1.28	
Internationalisatio n	.015	.026	0.60	.554	-.037	.067	
NUMBER_OF_ WOMEN_DI~D	-1.098	.982	-1.12	.27	-3.081	.885	
rdbysales	-13.719	114.811	-0.12	.905	-245.584	218.146	
opefficiency_	5.32	5.301	1.00	.321	-5.385	16.025	
BB_3Y_DEFAU LT_PROB	70.966	98.606	0.72	.476	-128.173	270.105	
UNLEVERED_B ETA	.036	.012	3.05	.004	.012	.061	***
2015b	0	.	.	.	.	.	
2016	-1.637	1.982	-0.83	.414	-5.641	2.366	
2017	-4.373	2.123	-2.06	.046	-8.66	-.086	**
2018	-4.736	2.18	-2.17	.036	-9.139	-.332	**
2019	-7.055	2.085	-3.38	.002	-11.266	-2.844	***
2020	-12.905	2.575	-5.01	0	-18.105	-7.706	***
2021	-3.377	2.483	-1.36	.181	-8.391	1.637	
2022o	0	.	.	.	.	.	
Constant	-21.453	53.194	-0.40	.689	-128.881	85.975	
Mean dependent var	17.914		SD dependent var		8.342		
R-squared	0.750		Number of obs		80		
F-test	5.602		Prob > F		0.000		
Akaike crit. (AIC)	439.612		Bayesian crit. (BIC)		494.398		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.186 Stata Regression Results: The Effect of E, S, G on Price-to-Earnings Ratio in the Utilities Industry

: Industry_n = Utilities

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.356	1.369	0.26	.796	-2.402	3.115	
SOCIAL_DISCL OSURE_~E	-2.272	2.272	-1.00	.323	-6.849	2.305	
GOVNCE_DISC LOSURE_~E	.152	3.532	0.04	.966	-6.961	7.266	
Intotalassets	-10.895	82.092	-0.13	.895	-176.238	154.448	
firmage_	-13.21	9.861	-1.34	.187	-33.071	6.65	
TOT_DEBT_TO_ TOT_EQY	-.055	.303	-0.18	.857	-.664	.555	
capitalintensity	167.963	503.26	0.33	.74	-845.656	1181.581	
cashflowbysale	-3.379	74.332	-0.04	.964	-153.091	146.332	
TOT_MKT_VAL	0	0	2.31	.026	0	0	**
financialslack	-7.109	25.916	-0.27	.785	-59.307	45.089	
Internationalisatio n	.515	2.552	0.20	.841	-4.624	5.655	
NUMBER_OF_ WOMEN_DI~D	3.267	11.981	0.27	.786	-20.864	27.399	
rdbsales	-16663.519	17924.767	-0.93	.358	-52765.852	19438.815	
opefficiency_	94.781	151.356	0.63	.534	-210.065	399.627	
BB_3Y_DEFAU LT_PROB	-974.173	696.689	-1.40	.169	-2377.377	429.03	
UNLEVERED_B ETA	-.87	1.193	-0.73	.47	-3.272	1.533	
2015b	0	.	.	.	.	.	
2016	-58.114	29.024	-2.00	.051	-116.571	.344	*
2017	-54.781	30.181	-1.81	.076	-115.568	6.005	*
2018	-49.149	28.684	-1.71	.094	-106.921	8.624	*
2019	-45.431	25.623	-1.77	.083	-97.037	6.176	*
2020	-10.567	27.033	-0.39	.698	-65.014	43.88	
2021	-20.423	25.309	-0.81	.424	-71.399	30.553	
2022o	0	.	.	.	.	.	
Constant	629.602	847.826	0.74	.462	-1078.007	2337.211	
Mean dependent var		26.866		SD dependent var		58.529	
R-squared		0.330		Number of obs		82	
F-test		1.008		Prob > F		0.485	
Akaike crit. (AIC)		893.146		Bayesian crit. (BIC)		948.501	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.187 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Book Ratio in the Basic Materials Industry**Industry_n = Basic Materials**

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.044	.034	-1.29	.199	-.111 .023	
Intotalassets	2.111	1.116	1.89	.06	-.091 4.313	*
firmage_	-.278	.171	-1.63	.104	-.615 .058	
TOT_DEBT_TO_TOT_EQY	0	.001	0.27	.784	-.001 .001	
capitalintensity	-11.999	5.381	-2.23	.027	-22.618 -1.381	**
cashflowbysale	.953	2.055	0.46	.643	-3.102 5.007	
TOT_MKT_VAL	0	0	2.15	.033	0 0	**
financialslack	-.135	.22	-0.61	.54	-.568 .299	
Internationalisation	.024	.02	1.20	.234	-.016 .063	
NUMBER_OF_WOMEN_DIRECTORS	-.606	.461	-1.31	.19	-1.514 .303	
rdbysales	-9.998	6.976	-1.43	.154	-23.763 3.767	
opefficiency_	-1.9	2.004	-0.95	.344	-5.854 2.054	
BB_3Y_DEFAULT_PROB	-13.723	11.936	-1.15	.252	-37.277 9.83	
UNLEVERED_BETA	.025	.013	2.00	.047	0 .05	**
2015b	0	.	.	.	.	
2016	-1.061	.646	-1.64	.103	-2.336 .215	
2017	-.363	.597	-0.61	.544	-1.541 .815	
2018	-.823	.585	-1.41	.161	-1.976 .331	
2019	-.926	.571	-1.62	.107	-2.051 .2	
2020	-.926	.695	-1.33	.184	-2.297 .444	
2021	-.064	.764	-0.08	.933	-1.573 1.444	
2022o	0	.	.	.	.	
Constant	-.402	9.85	-0.04	.967	-19.839 19.035	
Mean dependent var	4.302		SD dependent var	5.023		
R-squared	0.205		Number of obs	242		
F-test	2.320		Prob > F	0.000		
Akaike crit. (AIC)	1079.755		Bayesian crit. (BIC)	1153.023		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.188 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Book Ratio in the Communications Industry

: Industry_n = Communications

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.001	.113	-0.01	.994	-.237 .235	
Intotalassets	-3.986	1.258	-3.17	.005	-6.601 -1.371	***
firmage_	-.359	.324	-1.11	.28	-1.033 .314	
TOT_DEBT_TO_TOT_EQY	.005	.012	0.42	.677	-.019 .029	
capitalintensity	-42.205	15.766	-2.68	.014	-74.993 -9.418	**
cashflowbysale	6.233	4.787	1.30	.207	-3.722 16.188	
TOT_MKT_VAL	0	0	4.61	0	0 0	***
financialslack	-.143	.29	-0.49	.626	-.747 .46	
Internationalisation	.208	.087	2.38	.027	.026 .389	**
NUMBER_OF_WOMEN_DIRECTORS	.171	.587	0.29	.774	-1.05 1.393	
o	0	.	.	.	.	
opefficiency_	-11.821	6.647	-1.78	.09	-25.644 2.003	*
BB_3Y_DEFAULT_PROB	-14.419	14.358	-1.00	.327	-44.279 15.441	
UNLEVERED_BETA	.095	.046	2.05	.053	-.001 .191	*
2015b	0	.	.	.	.	
2016	-.696	.768	-0.91	.375	-2.293 .902	
2017	-.273	.932	-0.29	.773	-2.212 1.666	
2018	.148	.971	0.15	.88	-1.87 2.167	
2019	.467	.906	0.52	.612	-1.418 2.352	
2020	2.496	1.278	1.95	.064	-.162 5.155	*
2021	.294	1.347	0.22	.829	-2.507 3.095	
2022o	0	.	.	.	.	
Constant	59.675	11.816	5.05	0	35.102 84.248	***
Mean dependent var	5.024	SD dependent var	5.035			
R-squared	0.809	Number of obs	50			
F-test	4.681	Prob > F	0.000			
Akaike crit. (AIC)	164.874	Bayesian crit. (BIC)	203.114			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.189 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Book Ratio in the Consumer Cyclical Industry**: Industry_n = Consumer Cyclical**

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	.065	.045	1.45	.148	-.023 .154	
Intotalassets	-4.391	1.168	-3.76	0	-6.697 -2.086	***
firmage_	.375	.209	1.80	.074	-.036 .787	*
TOT_DEBT_TO_TOT_EQY	.023	.005	4.13	0	.012 .033	***
capitalintensity	-11.865	6.648	-1.78	.076	-24.988 1.257	*
cashflowbysale	4.841	3.632	1.33	.184	-2.328 12.009	
TOT_MKT_VAL	0	0	4.50	0	0 0	***
financialslack	.071	.352	0.20	.841	-.625 .767	
Internationalisation	-.007	.015	-0.48	.634	-.037 .022	
NUMBER_OF_WOMEN_DIRECTORS	.712	.361	1.97	.05	-.001 1.425	*
rdbsales	-20.777	42.881	-0.48	.629	-105.421 63.867	
opefficiency_	-8.222	2.741	-3.00	.003	-13.632 -2.811	***
BB_3Y_DEFAULT_PROB	-26.438	13.296	-1.99	.048	-52.683 -.194	**
UNLEVERED_BETA	-.005	.007	-0.76	.447	-.019 .008	
2015b	0	.	.	.	.	
2016	-1.307	.639	-2.04	.042	-2.568 -.045	**
2017	-1.382	.584	-2.37	.019	-2.535 -.229	**
2018	-.765	.573	-1.34	.183	-1.895 .365	
2019	-1.112	.549	-2.02	.045	-2.196 -.027	**
2020	-2.638	.611	-4.32	0	-3.844 -1.431	***
2021	-.174	.728	-0.24	.812	-1.611 1.263	
2022o	0	.	.	.	.	
Constant	40.09	9.412	4.26	0	21.511 58.669	***
Mean dependent var	6.394		SD dependent var	6.495		
R-squared	0.407		Number of obs	236		
F-test	5.865		Prob > F	0.000		
Akaike crit. (AIC)	1015.567		Bayesian crit. (BIC)	1088.308		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.190 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Book Ratio in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	.007	.074	0.10	.921	-.138 .152	
lntotalassets	-18.02	2.172	-8.29	0	-22.297 -13.743	***
firmage_	-.018	.112	-0.16	.873	-.238 .202	
TOT_DEBT_TO_TOT_EQY	.087	.018	4.86	0	.052 .122	***
capitalintensity	-36.767	13.614	-2.70	.007	-63.568 -9.966	***
cashflowbysale	-.768	5.653	-0.14	.892	-11.896 10.36	
TOT_MKT_VAL	0	0	4.73	0	0 0	***
financialslack	-1.269	.711	-1.79	.075	-2.668 .13	*
Internationalisation	.022	.029	0.76	.448	-.036 .08	
NUMBER_OF_WOMEN_DIRECTORS	1.287	.666	1.93	.054	-.023 2.597	*
rdbysales	10.744	25.47	0.42	.673	-39.397 60.885	
opefficiency_	-18.733	9.218	-2.03	.043	-36.88 -.586	**
BB_3Y_DEFAULT_PROB	-.696	46.333	-0.01	.988	-91.908 90.516	
UNLEVERED_BETA	-.014	.022	-0.64	.523	-.057 .029	
2015b	0	.	.	.	.	
2016	.798	1.384	0.58	.565	-1.927 3.523	
2017	3.919	1.533	2.56	.011	.901 6.937	**
2018	6.634	1.757	3.78	0	3.175 10.092	***
2019	8.598	1.97	4.36	0	4.719 12.477	***
2020	10.232	2.19	4.67	0	5.92 14.544	***
2021	14.01	2.547	5.50	0	8.996 19.025	***
2022	14.006	2.884	4.86	0	8.329 19.684	***
Constant	210.407	25.104	8.38	0	160.987 259.826	***
Mean dependent var	8.892		SD dependent var	11.637		
R-squared	0.342		Number of obs	351		
F-test	6.799		Prob > F	0.000		
Akaike crit. (AIC)	2156.288		Bayesian crit. (BIC)	2241.225		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.191 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Book Ratio in the Energy Industry**: Industry_n = Energy**

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.025	.043	-0.57	.571	-.114 .064	
Intotalassets	1.117	2.709	0.41	.683	-4.452 6.686	
firmage_	-.323	.273	-1.18	.248	-.884 .239	
TOT_DEBT_TO_TOT_EQY	-.006	.006	-0.93	.362	-.019 .007	
capitalintensity	-1.697	9.541	-0.18	.86	-21.31 17.915	
cashflowbysale	7.568	2.998	2.52	.018	1.407 13.73	**
TOT_MKT_VAL	0	0	0.97	.34	0 0	
financialslack	.373	.346	1.08	.291	-.338 1.083	
Internationalisation	.001	.042	0.01	.99	-.086 .087	
NUMBER_OF_WOMEN_DIRECTORS	.472	.264	1.79	.086	-.071 1.015	*
rdbysales	171.589	413.09	0.41	.681	-677.528 1020.707	
opefficiency_	11.04	5.753	1.92	.066	-.785 22.865	*
BB_3Y_DEFAULT_PROB	-14.58	34.878	-0.42	.679	-86.272 57.112	
UNLEVERED_BETA	-.014	.051	-0.27	.789	-.119 .092	
2015b	0	.	.	.	.	
2016	.146	.484	0.30	.765	-.849 1.141	
2017	1.423	.455	3.13	.004	.488 2.359	***
2018	1.023	.474	2.16	.04	.048 1.997	**
2019	1.074	.448	2.40	.024	.154 1.994	**
2020	.475	.759	0.63	.537	-1.084 2.035	
2021	.483	.932	0.52	.609	-1.434 2.399	
2022o	0	.	.	.	.	
Constant	-9.263	28.093	-0.33	.744	-67.01 48.484	
Mean dependent var	2.219	SD dependent var	1.638			
R-squared	0.655	Number of obs	55			
F-test	2.469	Prob > F	0.012			
Akaike crit. (AIC)	131.745	Bayesian crit. (BIC)	173.899			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.192 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Book Ratio in the Financial Industry

: Industry_n = Financial

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.052	.059	-0.89	.382	-.171 .067	
lntotalassets	-.427	.807	-0.53	.6	-2.062 1.208	
firmage_	.284	.151	1.88	.068	-.023 .591	*
TOT_DEBT_TO_TOT_EQY	.015	.005	3.26	.002	.006 .024	****
capitalintensity	.06	7.985	0.01	.994	-16.119 16.24	
cashflowbysale	.49	.344	1.43	.162	-.206 1.186	
TOT_MKT_VAL	0	0	1.49	.144	0 0	
financialslack	-.058	.039	-1.50	.142	-.137 .02	
Internationalisation	-.026	.023	-1.14	.26	-.073 .02	
NUMBER_OF_WOMEN_DIRECTORS	-1.03	.315	-3.27	.002	-1.668 -.392	****
rdbysales	28.665	37.964	0.76	.455	-48.257 105.587	
opefficiency_	1.634	.878	1.86	.071	-.145 3.412	*
BB_3Y_DEFAULT_PROB	-13.031	8.069	-1.62	.115	-29.379 3.318	
UNLEVERED_BETA	-.005	.022	-0.25	.808	-.05 .039	
2015b	0	.	.	.	.	
2016	-.923	.515	-1.79	.081	-1.966 .121	*
2017	-1.001	.553	-1.81	.078	-2.122 .12	*
2018	.364	.557	0.65	.517	-.765 1.494	
2019	-.426	.614	-0.69	.492	-1.67 .818	
2020	-.332	.762	-0.44	.665	-1.877 1.212	
2021	-.25	.805	-0.31	.758	-1.88 1.381	
2022o	0	.	.	.	.	
Constant	-2.051	8.523	-0.24	.811	-19.32 15.219	
Mean dependent var	2.634	SD dependent var	2.318			
R-squared	0.671	Number of obs	69			
F-test	3.780	Prob > F	0.000			
Akaike crit. (AIC)	191.350	Bayesian crit. (BIC)	238.266			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.193 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Book Ratio in the Industrial Industry**: Industry_n = Industrial**

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	.022	.024	0.93	.351	-.025 .07	
Intotalassets	-.137	.669	-0.20	.837	-1.455 1.18	
firmage_	.228	.098	2.33	.021	.035 .42	**
TOT_DEBT_TO_TOT_EQY	.011	.006	1.86	.063	-.001 .022	*
capitalintensity	-6.577	3.806	-1.73	.085	-14.07 .917	*
cashflowbysale	-.438	1.06	-0.41	.68	-2.524 1.648	
TOT_MKT_VAL	0	0	0.73	.467	0 0	
financialslack	-.26	.164	-1.59	.113	-.583 .062	
Internationalisation	-.014	.012	-1.09	.278	-.038 .011	
NUMBER_OF_WOMEN_DIRECTORS	-.163	.215	-0.76	.449	-.587 .261	
rdbsales	-31.98	24.356	-1.31	.19	-79.929 15.969	
opefficiency_	-2.031	1.606	-1.26	.207	-5.193 1.131	
BB_3Y_DEFAULT_PROB	-1.224	6.939	-0.18	.86	-14.884 12.437	
UNLEVERED_BETA	.038	.008	4.50	0	.021 .055	***
2015b	0	.	.	.	.	
2016	-1.134	.351	-3.23	.001	-1.824 -.444	***
2017	-.292	.328	-0.89	.374	-.937 .353	
2018	-.624	.319	-1.96	.051	-1.252 .003	*
2019	-1.076	.322	-3.34	.001	-1.71 -.442	***
2020	-2.695	.373	-7.23	0	-3.429 -1.961	***
2021	-.808	.392	-2.06	.04	-1.581 -.036	**
2022o	0	.	.	.	.	
Constant	-3.42	6.108	-0.56	.576	-15.443 8.604	
Mean dependent var	4.351		SD dependent var	3.870		
R-squared	0.361		Number of obs	365		
F-test	7.746		Prob > F	0.000		
Akaike crit. (AIC)	1312.882		Bayesian crit. (BIC)	1394.779		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.194 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Book Ratio in the Technology Industry

: Industry_n = Technology

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.07	.052	-1.35	.185	-.175 .035	
Intotalassets	-2.854	1.767	-1.62	.114	-6.417 .709	
firmage_	.565	.26	2.18	.035	.042 1.089	**
TOT_DEBT_TO_TOT_EQY	-.01	.029	-0.34	.735	-.069 .049	
capitalintensity	14.021	14.933	0.94	.353	-16.094 44.136	
cashflowbysale	-1.478	5.78	-0.26	.799	-13.134 10.178	
TOT_MKT_VAL	0	0	1.32	.193	0 0	
financialslack	-.796	.253	-3.15	.003	-1.306 -.287	****
Internationalisation	.012	.008	1.44	.156	-.005 .028	
NUMBER_OF_WOMEN_DIRECTORS	-.173	.298	-0.58	.565	-.774 .429	
rdbysales	19.93	34.021	0.59	.561	-48.681 88.54	
opefficiency_	1.587	1.625	0.98	.334	-1.69 4.864	
BB_3Y_DEFAULT_PROB	2.18	30.973	0.07	.944	-60.282 64.642	
UNLEVERED_BETA	.01	.004	2.76	.009	.003 .018	****
2015b	0	.	.	.	.	
2016	.127	.627	0.20	.841	-1.137 1.391	
2017	-.768	.62	-1.24	.222	-2.017 .482	
2018	-1.408	.639	-2.20	.033	-2.697 -.119	**
2019	-1.245	.623	-2.00	.052	-2.502 .012	*
2020	-2.73	.766	-3.56	.001	-4.276 -1.185	****
2021	-1.044	.768	-1.36	.181	-2.592 .505	
2022o	0	.	.	.	.	
Constant	23.839	15.058	1.58	.121	-6.528 54.206	
Mean dependent var	4.242		SD dependent var	3.035		
R-squared	0.699		Number of obs	80		
F-test	4.986		Prob > F	0.000		
Akaike crit. (AIC)	255.451		Bayesian crit. (BIC)	305.474		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.195 Stata Regression Results: The Effect of ESG Combined Score on Price-to-Book Ratio in the Utilities Industry**: Industry_n = Utilities**

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.067	.09	-0.74	.462	-.248 .114	
Intotalassets	-6.676	2.414	-2.77	.008	-11.533 -1.819	***
firmage_	.036	.313	0.12	.909	-.593 .665	
TOT_DEBT_TO_TOT_EQY	-.004	.01	-0.46	.646	-.024 .015	
capitalintensity	-6.277	15.536	-0.40	.688	-37.533 24.978	
cashflowbysale	-3.069	2.296	-1.34	.188	-7.688 1.55	
TOT_MKT_VAL	0	0	11.31	0	0 0	***
financialslack	-.18	.819	-0.22	.827	-1.826 1.467	
Internationalisation	.03	.078	0.39	.699	-.126 .187	
NUMBER_OF_WOMEN_DIRECTORS	.254	.375	0.68	.5	-.499 1.008	
rdbysales	405.792	487.595	0.83	.409	-575.122 1386.706	
opefficiency_	9.024	4.334	2.08	.043	.305 17.743	**
BB_3Y_DEFAULT_PROB	-38.005	21.537	-1.76	.084	-81.331 5.321	*
UNLEVERED_BETA	-.024	.038	-0.62	.538	-.1 .053	
2015b	0	.	.	.	.	
2016	.139	.925	0.15	.882	-1.723 2	
2017	-.567	.957	-0.59	.556	-2.491 1.358	
2018	-.956	.902	-1.06	.295	-2.771 .86	
2019	-1.221	.804	-1.52	.135	-2.838 .395	
2020	.358	.855	0.42	.677	-1.361 2.077	
2021	.129	.798	0.16	.873	-1.476 1.733	
2022o	0	.	.	.	.	
Constant	76.334	24.502	3.12	.003	27.043 125.625	***
Mean dependent var	2.727		SD dependent var		4.531	
R-squared	0.799		Number of obs		82	
F-test	9.323		Prob > F		0.000	
Akaike crit. (AIC)	327.762		Bayesian crit. (BIC)		378.303	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.196 Stata Regression Results: The Effect of E, S, G on Price-to-Book Ratio in the Basic Materials Industry

: Industry_n = Basic Materials

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.122	.025	-4.88	0	-.171	-.072	***
SOCIAL_DISCL OSURE_~E	.171	.043	4.00	0	.087	.256	***
GOVNCE_DISC LOSURE_~E	-.006	.037	-0.15	.879	-.079	.068	
Intotalassets	1.95	1.058	1.84	.067	-.138	4.037	*
firmage_	-.387	.164	-2.36	.019	-.71	-.064	**
TOT_DEBT_TO_ TOT_EQY	0	.001	-0.07	.94	-.001	.001	
capitalintensity	-11.743	5.109	-2.30	.023	-21.824	-1.661	**
cashflowbysale	1.118	1.951	0.57	.567	-2.732	4.968	
TOT_MKT_VAL	0	0	2.88	.005	0	0	***
financialslack	-.271	.21	-1.29	.198	-.685	.143	
Internationalisatio n	.04	.019	2.07	.04	.002	.078	**
NUMBER_OF_ WOMEN_DI~D	-.587	.436	-1.35	.18	-1.447	.274	
rdbysales	-10.794	6.617	-1.63	.105	-23.852	2.264	
opefficiency_	-1.081	1.915	-0.56	.573	-4.86	2.699	
BB_3Y_DEFAU LT_PROB	-4.59	11.71	-0.39	.696	-27.699	18.519	
UNLEVERED_B ETA	.025	.012	2.06	.041	.001	.049	**
2015b	0	.	.	.	.	.	
2016	-1.03	.612	-1.68	.094	-2.238	.178	*
2017	-.728	.571	-1.28	.204	-1.854	.398	
2018	-1.53	.576	-2.66	.009	-2.667	-.394	***
2019	-1.562	.56	-2.79	.006	-2.668	-.456	***
2020	-1.662	.676	-2.46	.015	-2.995	-.329	**
2021	-.282	.727	-0.39	.699	-1.717	1.153	
2022o	0	.	.	.	.	.	
Constant	3.925	9.529	0.41	.681	-14.878	22.729	
Mean dependent var	4.302		SD dependent var	5.023			
R-squared	0.295		Number of obs	242			
F-test	3.387		Prob > F	0.000			
Akaike crit. (AIC)	1054.624		Bayesian crit. (BIC)	1134.870			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.197 Stata Regression Results: The Effect of E, S, G on Price-to-Book Ratio in the Communications Industry**: Industry_n = Communications**

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISCLOSURE~E	.029	.056	0.52	.609	-.089 .147	
SOCIAL_DISCLOSURE~E	-.029	.078	-0.37	.712	-.193 .135	
GOVNCESURE~E	-.185	.131	-1.41	.174	-.458 .089	
Intotalassets	-3.853	1.256	-3.07	.006	-6.481 -1.225	***
firmage_	-.213	.338	-0.63	.536	-.92 .494	
TOT_DEBT_TO_TOT_EQY	.014	.013	1.08	.293	-.014 .042	
capitalintensity	-38.537	15.874	-2.43	.025	-71.761 -5.312	**
cashflowbysale	5.727	4.774	1.20	.245	-4.264 15.719	
TOT_MKT_VAL	0	0	3.65	.002	0 0	***
financialslack	.062	.33	0.19	.853	-.628 .752	
Internationalisation	.222	.088	2.52	.021	.038 .405	**
NUMBER_OF_WOMEN_DIRECTORS	.062	.588	0.11	.917	-1.17 1.294	
o	0	.	.	.	.	
opefficiency_	-10.969	6.687	-1.64	.117	-24.966 3.027	
BB_3Y_DEFAULT_PROB	-14.338	14.277	-1.00	.328	-44.22 15.543	
UNLEVERED_BETA	.113	.048	2.33	.031	.011 .214	**
2015b	0	.	.	.	.	
2016	-.908	.777	-1.17	.257	-2.534 .718	
2017	-.299	.985	-0.30	.765	-2.361 1.763	
2018	.61	1.084	0.56	.58	-1.659 2.879	
2019	.697	1	0.70	.494	-1.396 2.79	
2020	2.614	1.386	1.89	.075	-.287 5.514	*
2021	.422	1.342	0.31	.757	-2.387 3.231	
2022o	0	.	.	.	.	
Constant	68.317	13.283	5.14	0	40.514 96.119	***
Mean dependent var	5.024		SD dependent var		5.035	
R-squared	0.829		Number of obs		50	
F-test	4.394		Prob > F		0.001	
Akaike crit. (AIC)	163.268		Bayesian crit. (BIC)		205.332	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.198 Stata Regression Results: The Effect of E, S, G on Price-to-Book Ratio in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.011	.022	0.50	.618	-.033	.055	
SOCIAL_DISCL OSURE~E	.049	.039	1.27	.204	-.027	.126	
GOVNCE_DISC LOSURE~E	.014	.043	0.33	.743	-.071	.099	
Intotalassets	-4.453	1.177	-3.78	0	-6.776	-2.129	***
firmage_	.366	.212	1.73	.086	-.052	.784	*
TOT_DEBT_TO_ TOT_EQY	.023	.006	4.06	0	.012	.034	***
capitalintensity	-10.978	6.837	-1.61	.11	-24.475	2.519	
cashflowbysale	4.64	3.684	1.26	.21	-2.633	11.913	
TOT_MKT_VAL	0	0	4.48	0	0	0	***
financialslack	.067	.354	0.19	.849	-.632	.767	
Internationalisatio n	-.008	.015	-0.52	.605	-.037	.022	
NUMBER_OF_ WOMEN_DI~D	.68	.366	1.86	.065	-.044	1.403	*
rdbysales	-23.845	43.285	-0.55	.582	-109.295	61.604	
opefficiency_	-8.297	2.757	-3.01	.003	-13.741	-2.854	***
BB_3Y_DEFAU LT_PROB	-25.575	13.423	-1.91	.058	-52.073	.923	*
UNLEVERED_B ETA	-.006	.007	-0.81	.42	-.02	.008	
2015b	0	.	.	.	.	.	
2016	-1.292	.642	-2.01	.046	-2.56	-.024	**
2017	-1.413	.588	-2.40	.017	-2.574	-.252	**
2018	-.739	.576	-1.28	.201	-1.876	.398	
2019	-1.051	.561	-1.88	.062	-2.158	.055	*
2020	-2.603	.624	-4.17	0	-3.835	-1.371	***
2021	-.145	.737	-0.20	.844	-1.599	1.309	
2022o	0	.	.	.	.	.	
Constant	41.588	9.89	4.21	0	22.065	61.112	***
Mean dependent var	6.394		SD dependent var	6.495			
R-squared	0.409		Number of obs	236			
F-test	5.315		Prob > F	0.000			
Akaike crit. (AIC)	1018.731		Bayesian crit. (BIC)	1098.399			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.199 Stata Regression Results: The Effect of E, S, G on Price-to-Book Ratio in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.019	.052	0.35	.723	-.085	.122	
SOCIAL_DISCL OSURE_~E	-.003	.071	-0.04	.966	-.142	.136	
GOVNCE_DISC LOSURE_~E	-.072	.107	-0.68	.499	-.282	.138	
Intotalassets	-17.908	2.185	-8.19	0	-22.21	-13.605	***
firmage_	-.021	.112	-0.18	.854	-.241	.2	
TOT_DEBT_TO_ TOT_EQY	.087	.018	4.81	0	.051	.123	***
capitalintensity	-36.817	13.664	-2.69	.007	-63.717	-9.917	***
cashflowbysale	-.791	5.67	-0.14	.889	-11.953	10.37	
TOT_MKT_VAL	0	0	4.72	0	0	0	***
financialslack	-1.292	.72	-1.79	.074	-2.71	.126	*
Internationalisatio n	.024	.03	0.81	.421	-.035	.083	
NUMBER_OF_ WOMEN_DI~D	1.298	.669	1.94	.053	-.019	2.615	*
rdbysales	10.061	25.657	0.39	.695	-40.449	60.571	
opefficiency_	-19.776	9.363	-2.11	.036	-38.208	-1.344	**
BB_3Y_DEFAU LT_PROB	-1.368	46.459	-0.03	.977	-92.832	90.095	
UNLEVERED_B ETA	-.014	.022	-0.65	.514	-.058	.029	
2015b	0	.	.	.	.	.	
2016	.757	1.389	0.55	.586	-1.978	3.493	
2017	3.965	1.539	2.58	.01	.936	6.994	**
2018	6.759	1.769	3.82	0	3.276	10.243	***
2019	8.774	1.989	4.41	0	4.857	12.69	***
2020	10.416	2.21	4.71	0	6.066	14.767	***
2021	14.129	2.558	5.52	0	9.092	19.166	***
2022	14.093	2.893	4.87	0	8.397	19.789	***
Constant	215.864	26.212	8.23	0	164.26	267.468	***
Mean dependent var		8.892		SD dependent var		11.637	
R-squared		0.343		Number of obs		351	
F-test		6.203		Prob > F		0.000	
Akaike crit. (AIC)		2159.504		Bayesian crit. (BIC)		2252.163	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.200 Stata Regression Results: The Effect of E, S, G on Price-to-Book Ratio in the Energy Industry**: Industry_n = Energy**

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.038	.016	-2.35	.027	-.072	-.005	**
SOCIAL_DISCLOSURE~E	-.043	.037	-1.19	.247	-.119	.032	
GOVNCEDISCLOSURE~E	.065	.024	2.68	.013	.015	.116	**
Intotalassets	2.214	2.344	0.94	.354	-2.623	7.051	
firmage_	-.445	.242	-1.84	.079	-.945	.055	*
TOT_DEBT_TO_TOT_EQY	-.015	.006	-2.47	.021	-.027	-.002	**
capitalintensity	2.739	8.275	0.33	.744	-14.34	19.819	
cashflowbysale	8.541	2.57	3.32	.003	3.236	13.846	***
TOT_MKT_VAL	0	0	0.03	.976	0	0	
financialslack	.057	.309	0.19	.854	-.581	.696	
Internationalisation	-.008	.035	-0.21	.834	-.081	.066	
NUMBER_OF_WOMEN_DI~D	.442	.224	1.98	.06	-.019	.904	*
rdbysales	53.306	379.904	0.14	.89	-730.778	837.39	
opefficiency_	17.709	5.424	3.27	.003	6.514	28.904	***
BB_3Y_DEFAULT_PROB	-26.561	29.91	-0.89	.383	-88.292	35.169	
UNLEVERED_BETA	-.052	.049	-1.06	.3	-.152	.049	
2015b	0	.	.	.	.	.	
2016	-.132	.423	-0.31	.758	-1.004	.741	
2017	.845	.418	2.02	.054	-.017	1.707	*
2018	.481	.443	1.09	.288	-.433	1.394	
2019	.571	.405	1.41	.172	-.265	1.407	
2020	.232	.646	0.36	.723	-1.102	1.565	
2021	.28	.845	0.33	.743	-1.464	2.025	
2022o	0	.	.	.	.	.	
Constant	-26.283	24.242	-1.08	.289	-76.316	23.751	
Mean dependent var		2.219		SD dependent var		1.638	
R-squared		0.774		Number of obs		55	
F-test		3.726		Prob > F		0.001	
Akaike crit. (AIC)		112.619		Bayesian crit. (BIC)		158.788	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.201 Stata Regression Results: The Effect of E, S, G on Price-to-Book Ratio in the Financial Industry**: Industry_n = Financial**

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISCLOSURE~E	-.003	.026	-0.13	.897	-.055 .049	
SOCIAL_DISCLOSURE~E	-.076	.043	-1.77	.086	-.164 .011	*
GOVNCESURE~E	.01	.055	0.18	.857	-.101 .121	
Intotalassets	-.879	.854	-1.03	.311	-2.613 .855	
firmage_	.392	.173	2.27	.029	.042 .743	**
TOT_DEBT_TO_TOT_EQY	.016	.005	3.50	.001	.007 .025	***
capitalintensity	-.543	7.955	-0.07	.946	-16.693 15.607	
cashflowbysale	.506	.342	1.48	.148	-.189 1.201	
TOT_MKT_VAL	0	0	1.64	.11	0 0	
financialslack	-.073	.041	-1.76	.087	-.157 .011	*
Internationalisation	-.028	.025	-1.14	.264	-.078 .022	
NUMBER_OF_WOMEN_DI~D	-1.084	.316	-3.43	.002	-1.725 -.443	***
rdbysales	19.686	38.744	0.51	.615	-58.968 98.34	
opefficiency_	1.383	.896	1.54	.132	-.436 3.203	
BB_3Y_DEFAULT_PROB	-16.525	8.333	-1.98	.055	-33.442 .392	*
UNLEVERED_BETA	-.012	.023	-0.52	.61	-.057 .034	
2015b	0	.	.	.	.	
2016	-1.032	.527	-1.96	.058	-2.103 .039	*
2017	-.862	.573	-1.51	.141	-2.024 .3	
2018	.394	.574	0.69	.496	-.77 1.559	
2019	-.334	.625	-0.53	.596	-1.603 .935	
2020	-.3	.759	-0.40	.695	-1.841 1.241	
2021	-.313	.803	-0.39	.699	-1.944 1.318	
2022o	0	.	.	.	.	
Constant	-1.97	8.573	-0.23	.82	-19.375 15.434	
Mean dependent var	2.634		SD dependent var		2.318	
R-squared	0.693		Number of obs		69	
F-test	3.586		Prob > F		0.000	
Akaike crit. (AIC)	190.728		Bayesian crit. (BIC)		242.112	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.202 Stata Regression Results: The Effect of E, S, G on Price-to-Book Ratio in the Industrial Industry

: Industry_n = Industrial

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSUR E~E	-.001	.014	-0.08	.939	-.029	.027	
SOCIAL_DISCLOSURE_ ~E	.027	.024	1.11	.266	-.021	.075	
GOVNCE_DISCLOSURE _~E	.002	.024	0.08	.937	-.045	.049	
Intotalassets	-.193	.677	-0.28	.776	-1.525	1.14	
firmage_	.217	.099	2.18	.03	.021	.413	**
TOT_DEBT_TO_TOT_E QY	.011	.006	1.94	.054	0	.022	*
capitalintensity	-6.542	3.825	-1.71	.088	-14.073	.989	*
cashflowbysale	-.526	1.067	-0.49	.622	-2.628	1.575	
TOT_MKT_VAL	0	0	0.83	.408	0	0	
financialslack	-.245	.165	-1.48	.14	-.57	.081	
Internationalisation	-.013	.013	-1.03	.302	-.038	.012	
NUMBER_OF_WOMEN_ DI~D	-.176	.216	-0.81	.418	-.601	.25	
rdbysales	-31.965	24.734	-1.29	.197	-80.659	16.728	
opefficiency_	-2.024	1.615	-1.25	.211	-5.204	1.156	
BB_3Y_DEFAULT_PRO B	-.675	6.987	-0.10	.923	-14.431	13.081	
UNLEVERED_BETA	.038	.009	4.44	0	.021	.055	***
2015b	0	.	.	.	.	.	
2016	-1.11	.353	-3.15	.002	-1.805	-.416	***
2017	-.313	.329	-0.95	.343	-.962	.335	
2018	-.626	.32	-1.95	.052	-1.257	.005	*
2019	-1.074	.326	-3.29	.001	-1.716	-.432	***
2020	-2.68	.378	-7.09	0	-3.424	-1.936	***
2021	-.769	.396	-1.94	.053	-1.549	.01	*
2022o	0	.	.	.	.	.	
Constant	-2.233	6.484	-0.34	.731	-14.998	10.532	
Mean dependent var		4.351		SD dependent var		3.870	
R-squared		0.363		Number of obs		365	
F-test		7.043		Prob > F		0.000	
Akaike crit. (AIC)		1315.898		Bayesian crit. (BIC)		1405.596	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.203 Stata Regression Results: The Effect of E, S, G on Price-to-Book Ratio in the Technology Industry**: Industry_n = Technology**

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISC LOSURE~E	-.011	.025	-0.43	.672	-.062 .04	
SOCIAL_DISCL OSURE_~E	-.09	.039	-2.29	.027	-.169 -.011	**
GOVNCE_DISC LOSURE_~E	.052	.071	0.74	.462	-.09 .195	
Intotalassets	-2.726	1.726	-1.58	.122	-6.211 .76	
firmage_	.774	.272	2.84	.007	.224 1.324	***
TOT_DEBT_TO_ TOT_EQY	-.022	.029	-0.75	.459	-.081 .037	
capitalintensity	24.973	15.475	1.61	.114	-6.279 56.224	
cashflowbysale	-2.223	5.717	-0.39	.699	-13.769 9.323	
TOT_MKT_VAL	0	0	0.15	.884	0 0	
financialslack	-.907	.252	-3.60	.001	-1.416 -.397	***
Internationalisatio n	.01	.008	1.20	.236	-.006 .026	
NUMBER_OF_ WOMEN_DI~D	-.323	.303	-1.07	.293	-.935 .289	
rdbysales	7.919	35.42	0.22	.824	-63.612 79.451	
opefficiency_	1.914	1.635	1.17	.248	-1.388 5.217	
BB_3Y_DEFAU LT_PROB	-4.42	30.42	-0.14	.885	-65.855 57.015	
UNLEVERED_B ETA	.01	.004	2.63	.012	.002 .017	**
2015b	0	.	.	.	.	
2016	.093	.612	0.15	.88	-1.142 1.328	
2017	-.804	.655	-1.23	.226	-2.127 .518	
2018	-1.662	.673	-2.47	.018	-3.021 -.304	**
2019	-1.528	.643	-2.38	.022	-2.827 -.229	**
2020	-3.193	.794	-4.02	0	-4.797 -1.588	***
2021	-1.38	.766	-1.80	.079	-2.927 .167	*
2022o	0	.	.	.	.	
Constant	12.444	16.411	0.76	.453	-20.698 45.586	
Mean dependent var	4.242		SD dependent var	3.035		
R-squared	0.727		Number of obs	80		
F-test	4.973		Prob > F	0.000		
Akaike crit. (AIC)	251.449		Bayesian crit. (BIC)	306.235		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.204 Stata Regression Results: The Effect of E, S, G on Price-to-Book Ratio in the Utilities Industry

: Industry_n = Utilities

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSUR E~E	.006	.041	0.15	.884	-.076	.089	
SOCIAL_DISCLOSURE_ ~E	.036	.068	0.53	.6	-.101	.173	
GOVNCE_DISCLOSURE_ ~E	-.312	.106	-2.96	.005	-.525	-.099	***
Intotalassets	-6.333	2.456	-2.58	.013	-11.28	-1.386	**
firmage_	-.057	.295	-0.19	.847	-.651	.537	
TOT_DEBT_TO_TOT_E QY	-.009	.009	-0.95	.347	-.027	.01	
capitalintensity	-9.134	15.056	-0.61	.547	-39.459	21.19	
cashflowbysale	-2.881	2.224	-1.30	.202	-7.36	1.598	
TOT_MKT_VAL	0	0	11.52	0	0	0	***
financialslack	-.462	.775	-0.60	.554	-2.024	1.099	
Internationalisation	.095	.076	1.24	.222	-.059	.248	
NUMBER_OF_WOMEN_ DI~D	.42	.358	1.17	.247	-.302	1.142	
rdbysales	-284.725	536.252	-0.53	.598	-1364.791	795.342	
opefficiency_	6.292	4.528	1.39	.172	-2.828	15.412	
BB_3Y_DEFAULT_PRO B	-23.132	20.843	-1.11	.273	-65.111	18.848	
UNLEVERED_BETA	-.018	.036	-0.50	.623	-.09	.054	
2015b	0	.	.	.	.	.	
2016	.033	.868	0.04	.97	-1.716	1.782	
2017	-.482	.903	-0.53	.596	-2.3	1.337	
2018	-.882	.858	-1.03	.309	-2.611	.846	
2019	-.832	.767	-1.09	.283	-2.376	.712	
2020	.665	.809	0.82	.415	-.964	2.294	
2021	.358	.757	0.47	.639	-1.167	1.883	
2022o	0	.	.	.	.	.	
Constant	98.834	25.364	3.90	0	47.748	149.92	***
Mean dependent var		2.727		SD dependent var		4.531	
R-squared		0.831		Number of obs		82	
F-test		10.028		Prob > F		0.000	
Akaike crit. (AIC)		317.616		Bayesian crit. (BIC)		372.970	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.205 Stata Regression Results: The Effect of ESG Combined Score on Economic Value added in the Basic Materials Industry

: Industry_n = Basic Materials							
WACC_EVA_SPREAD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.001	.098	0.01	.989	-.192	.195	
Intotalassets	-7.064	3.226	-2.19	.03	-13.43	-.699	**
firmage_	.552	.493	1.12	.264	-.42	1.525	
TOT_DEBT_TO_TOT_EQY	-.002	.002	-1.20	.232	-.005	.001	
capitalintensity	-2.524	15.556	-0.16	.871	-33.219	28.172	
cashflowbysale	4.787	5.939	0.81	.421	-6.932	16.507	
TOT_MKT_VAL	0	0	2.88	.004	0	0	***
financialslack	.416	.635	0.66	.513	-.837	1.668	
Internationalisation	.037	.058	0.64	.521	-.077	.151	
NUMBER_OF_WOMEN_DIRECTORS	-.46	1.331	-0.34	.73	-3.087	2.167	
rdbysales	6.445	20.166	0.32	.75	-33.347	46.236	
opecfficiency_	-9.719	5.793	-1.68	.095	-21.15	1.712	*
BB_3Y_DEFAULT_PROB	-5.056	34.504	-0.15	.884	-73.141	63.03	
UNLEVERED_BETA	.06	.037	1.64	.102	-.012	.132	
2015b	0	.	.	.	.	.	
2016	-2.71	1.868	-1.45	.149	-6.396	.977	
2017	.17	1.726	0.10	.922	-3.235	3.576	
2018	-2.751	1.69	-1.63	.105	-6.085	.584	
2019	-1.255	1.649	-0.76	.448	-4.509	2	
2020	-4.424	2.008	-2.20	.029	-8.386	-.462	**
2021	-.692	2.21	-0.31	.754	-5.053	3.668	
2022o	0	.	.	.	.	.	
Constant	57.09	28.474	2.00	.046	.904	113.277	**
Mean dependent var		3.334		SD dependent var		13.397	
R-squared		0.237		Number of obs		242	
F-test		2.792		Prob > F		0.000	
Akaike crit. (AIC)		1593.520		Bayesian crit. (BIC)		1666.788	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.206 Stata Regression Results: The Effect of ESG Combined Score on Economic Value added in the Communications Industry

: Industry_n = Communications

WACC_EVA_SPREAD	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	.296	.204	1.45	.162	-.129 .721	
Intotalassets	-1.727	2.264	-0.76	.454	-6.436 2.982	
firmage_	.086	.583	0.15	.884	-1.127 1.299	
TOT_DEBT_TO_TOT_EQY	-.011	.021	-0.52	.609	-.055 .033	
capitalintensity	-58.713	28.39	-2.07	.051	-117.754 .328	*
cashflowbysale	13.504	8.62	1.57	.132	-4.422 31.43	
TOT_MKT_VAL	0	0	1.38	.181	0 0	
financialslack	-.448	.523	-0.86	.401	-1.535 .639	
Internationalisation	-.292	.157	-1.86	.077	-.62 .035	*
NUMBER_OF_WOMEN_DIRECTORS	-.283	1.058	-0.27	.792	-2.482 1.916	
o	0	.	.	.	.	
opefficiency_	-37.529	11.97	-3.13	.005	-62.421 -12.637	***
BB_3Y_DEFAULT_PROB	17.61	25.856	0.68	.503	-36.159 71.38	
UNLEVERED_BETA	.047	.083	0.56	.579	-.126 .22	
2015b	0	.	.	.	.	
2016	-2.26	1.383	-1.63	.117	-5.137 .616	
2017	-2.065	1.679	-1.23	.232	-5.557 1.426	
2018	-3.141	1.748	-1.80	.087	-6.776 .493	*
2019	.178	1.632	0.11	.914	-3.216 3.573	
2020	-1.955	2.302	-0.85	.405	-6.743 2.832	
2021	-2.769	2.425	-1.14	.266	-7.813 2.274	
2022o	0	.	.	.	.	
Constant	31.425	21.278	1.48	.155	-12.824 75.674	
Mean dependent var	-1.548		SD dependent var	6.510		
R-squared	0.814		Number of obs	50		
F-test	4.829		Prob > F	0.000		
Akaike crit. (AIC)	223.693		Bayesian crit. (BIC)	261.934		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.207 Stata Regression Results: The Effect of ESG Combined Score on Economic Value added in the Consumer Cyclical Industry**: Industry_n = Consumer Cyclical**

WACC_EVA_SPRE AD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.062	.066	0.94	.349	-.069	.194	
Intotalassets	-3.779	1.723	-2.19	.03	-7.18	-.377	**
firmage_	-.497	.308	-1.62	.108	-1.104	.11	
TOT_DEBT_TO_TOT_EQY	-.003	.008	-0.39	.7	-.019	.013	
capitalintensity	-20.478	9.807	-2.09	.038	-39.837	-1.118	**
cashflowbysale	7.453	5.358	1.39	.166	-3.123	18.028	
TOT_MKT_VAL	0	0	1.79	.075	0	0	*
financialslack	.13	.52	0.25	.802	-.896	1.157	
Internationalisation	-.008	.022	-0.36	.718	-.051	.035	
NUMBER_OF_WOMEN_DIV	.502	.533	0.94	.348	-.55	1.554	
rdbysales	-6.174	63.261	-0.10	.922	-131.047	118.699	
opefficiency_	-16.782	4.044	-4.15	0	-24.764	-8.8	***
BB_3Y_DEFAULT_PROB	-2.608	19.615	-0.13	.894	-41.326	36.11	
UNLEVERED_BETA	.004	.01	0.43	.67	-.016	.025	
2015b	0	.	.	.	.	.	
2016	-1.749	.943	-1.86	.065	-3.61	.111	*
2017	-2.6	.862	-3.02	.003	-4.301	-.899	***
2018	-.997	.845	-1.18	.24	-2.664	.671	
2019	.958	.811	1.18	.239	-.642	2.558	
2020	-5.375	.902	-5.96	0	-7.155	-3.595	***
2021	-.921	1.074	-0.86	.392	-3.041	1.199	
2022o	0	.	.	.	.	.	
Constant	76.008	13.886	5.47	0	48.599	103.417	***
Mean dependent var	0.643		SD dependent var		8.026		
R-squared	0.528		Number of obs		236		
F-test	9.573		Prob > F		0.000		
Akaike crit. (AIC)	1199.098		Bayesian crit. (BIC)		1271.839		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.208 Stata Regression Results: The Effect of ESG Combined Score on Economic Value added in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

WACC_EVA_SPRE AD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.089	.076	1.17	.242	-.061	.239	
Intotalassets	-19.634	2.248	-8.73	0	-24.058	-15.209	***
firmage_	-.096	.115	-0.83	.404	-.324	.131	
TOT_DEBT_TO_TOT_EQY	.034	.019	1.81	.071	-.003	.07	*
capitalintensity	-52.976	14.086	-3.76	0	-80.706	-25.247	***
cashflowbysale	6.586	5.848	1.13	.261	-4.928	18.099	
TOT_MKT_VAL	0	0	-0.37	.709	0	0	
financialslack	-1.683	.735	-2.29	.023	-3.13	-.235	**
Internationalisation	.019	.03	0.62	.537	-.041	.079	
NUMBER_OF_WOMEN_DIRECTORS	.917	.689	1.33	.184	-.439	2.273	
rdbysales	8.534	26.353	0.32	.746	-43.345	60.413	
opefficiency_	-65.005	9.537	-6.82	0	-83.781	-46.23	***
BB_3Y_DEFAULT_PROB	19.324	47.938	0.40	.687	-75.049	113.697	
UNLEVERED_BETA_A	-.006	.023	-0.25	.8	-.051	.039	
2015b	0	.	.	.	.	.	
2016	-.933	1.432	-0.65	.515	-3.753	1.887	
2017	2.308	1.586	1.46	.147	-.815	5.43	
2018	4.091	1.818	2.25	.025	.513	7.67	**
2019	6.467	2.039	3.17	.002	2.453	10.48	***
2020	5.177	2.266	2.28	.023	.716	9.638	**
2021	14.978	2.635	5.68	0	9.79	20.166	***
2022	14.209	2.984	4.76	0	8.335	20.083	***
Constant	270.189	25.974	10.40	0	219.056	321.321	***
Mean dependent var	6.201		SD dependent var	14.712			
R-squared	0.467		Number of obs	351			
F-test	11.476		Prob > F	0.000			
Akaike crit. (AIC)	2180.203		Bayesian crit. (BIC)	2265.140			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.209 Stata Regression Results: The Effect of ESG Combined Score on Economic Value added in the Energy Industry**: Industry_n = Energy**

WACC_EVA_SPREAD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.139	.284	0.49	.628	-.444	.722	
Intotalassets	-36.662	17.686	-2.07	.048	-73.016	-.308	**
firmage_	3.841	1.783	2.15	.041	.175	7.506	**
TOT_DEBT_TO_TOT_EQY	.014	.041	0.35	.732	-.07	.099	
capitalintensity	29.791	62.287	0.48	.636	-98.242	157.824	
cashflowbysale	-48.28	19.569	-2.47	.021	-88.504	-8.055	**
TOT_MKT_VAL	0	0	1.16	.258	0	0	
financialslack	-.584	2.257	-0.26	.798	-5.223	4.054	
Internationalisation	-.051	.273	-0.19	.852	-.613	.511	
NUMBER_OF_WORKING_DAYS	-2.543	1.724	-1.48	.152	-6.087	1.001	
rdbysales	-41.465	2696.715	-0.01	.988	-5584.642	5501.712	
opefficiency_	-150.649	37.556	-4.01	0	-227.845	-73.452	***
BB_3Y_DEFAULT_PROB	230.363	227.686	1.01	.321	-237.652	698.379	
UNLEVERED_BETA	.124	.335	0.37	.714	-.565	.813	
2015b	0	.	.	.	.	.	
2016	-1.927	3.159	-0.61	.547	-8.421	4.567	
2017	1.459	2.971	0.49	.627	-4.648	7.566	
2018	.747	3.094	0.24	.811	-5.613	7.108	
2019	1.095	2.922	0.38	.711	-4.912	7.102	
2020	-6.62	4.953	-1.34	.193	-16.8	3.561	
2021	-4.42	6.086	-0.73	.474	-16.931	8.091	
2022o	0	.	.	.	.	.	
Constant	471.298	183.398	2.57	.016	94.318	848.278	**
Mean dependent var		3.501		SD dependent var		9.594	
R-squared		0.605		Number of obs		55	
F-test		1.991		Prob > F		0.041	
Akaike crit. (AIC)		338.119		Bayesian crit. (BIC)		380.273	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.210 Stata Regression Results: The Effect of ESG Combined Score on Economic Value added in the Financial Industry

: Industry_n = Financial

WACC_EVA_SP READ	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.023	.31	-0.07	.941	-.651	.605	
Intotalassets	6.671	4.272	1.56	.127	-1.986	15.327	
firmage_	-.214	.801	-0.27	.791	-1.838	1.41	
TOT_DEBT_TO_TOT_EQY	-.054	.024	-2.26	.03	-.103	-.006	**
capitalintensity	13.314	42.268	0.32	.755	-72.33	98.958	
cashflowbysale	-1.225	1.818	-0.67	.505	-4.909	2.46	
TOT_MKT_VAL	0	0	0.98	.335	0	0	
financialslack	-.085	.206	-0.41	.683	-.502	.332	
Internationalisation	-.219	.123	-1.79	.082	-.467	.029	*
NUMBER_OF_WOMEN_DIRECTORS	-.008	1.668	-0.01	.996	-3.387	3.371	
rdbysales	86.528	200.953	0.43	.669	-320.642	493.697	
opefficiency_	1.575	4.647	0.34	.737	-7.841	10.991	
BB_3Y_DEFAULT_PROB	88.788	42.709	2.08	.045	2.252	175.325	**
UNLEVERED_BETA	.029	.117	0.25	.804	-.208	.267	
2015b	0	.	.	.	.	.	
2016	-.816	2.727	-0.30	.766	-6.341	4.709	
2017	2.124	2.929	0.72	.473	-3.811	8.058	
2018	4.37	2.95	1.48	.147	-1.607	10.347	
2019	-.946	3.25	-0.29	.773	-7.531	5.64	
2020	-5.415	4.034	-1.34	.188	-13.589	2.758	
2021	1.837	4.26	0.43	.669	-6.794	10.468	
2022o	0	.	.	.	.	.	
Constant	-74.657	45.115	-1.66	.106	-166.069	16.754	
Mean dependent var	-4.318		SD dependent var	6.546			
R-squared	0.392		Number of obs	69			
F-test	1.191		Prob > F	0.303			
Akaike crit. (AIC)	421.317		Bayesian crit. (BIC)	468.234			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.211 Stata Regression Results: The Effect of ESG Combined Score on Economic Value added in the Industrial Industry**: Industry_n = Industrial**

WACC_EVA_SP READ	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.055	.059	0.94	.35	-.06	.17	
Intotalassets	1.664	1.635	1.02	.31	-1.555	4.883	
firmage_	-.197	.239	-0.82	.411	-.668	.274	
TOT_DEBT_TO_TOT_EQY	-.039	.014	-2.78	.006	-.066	-.011	***
capitalintensity	-11.775	9.3	-1.27	.207	-30.084	6.534	
cashflowbysale	-.015	2.589	-0.01	.995	-5.113	5.082	
TOT_MKT_VAL	0	0	-1.05	.293	0	0	
financialslack	-.795	.4	-1.99	.048	-1.583	-.008	**
Internationalisation	-.02	.03	-0.66	.511	-.08	.04	
NUMBER_OF_WOMEN_DIRECTORS	.235	.526	0.45	.655	-.801	1.271	
rdbysales	-98.68	59.511	-1.66	.098	-215.836	18.477	*
opefficiency_	-55.312	3.925	-14.09	0	-63.038	-47.586	***
BB_3Y_DEFAULT_PROB	14.645	16.954	0.86	.388	-18.733	48.022	
UNLEVERED_BETA	.051	.021	2.47	.014	.01	.092	**
2015b	0	.	.	.	.	.	
2016	-2.797	.857	-3.27	.001	-4.483	-1.11	***
2017	-.774	.801	-0.97	.335	-2.35	.803	
2018	-.627	.779	-0.81	.421	-2.16	.906	
2019	.872	.787	1.11	.269	-.677	2.421	
2020	-2.994	.911	-3.29	.001	-4.787	-1.201	***
2021	-.003	.958	-0.00	.997	-1.89	1.883	
2022o	0	.	.	.	.	.	
Constant	41.056	14.923	2.75	.006	11.678	70.434	***
Mean dependent var	-0.320		SD dependent var		7.241		
R-squared	0.562		Number of obs		365		
F-test	17.599		Prob > F		0.000		
Akaike crit. (AIC)	1965.044		Bayesian crit. (BIC)		2046.942		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.212 Stata Regression Results: The Effect of ESG Combined Score on Economic Value added in the Technology Industry**: Industry_n = Technology**

WACC_EVA_SPREAD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.042	.101	-0.42	.677	-.246	.161	
Intotalassets	-12.229	3.431	-3.56	.001	-19.148	-5.31	***
firmage_	1.645	.504	3.26	.002	.628	2.661	***
TOT_DEBT_TO_TOT_EQY	-.018	.057	-0.32	.75	-.133	.096	
capitalintensity	47.019	28.997	1.62	.112	-11.459	105.498	
cashflowbysale	10.13	11.224	0.90	.372	-12.505	32.764	
TOT_MKT_VAL	0	0	-1.27	.21	0	0	
financialslack	-2.352	.491	-4.79	0	-3.342	-1.363	***
Internationalisation	-.002	.016	-0.10	.922	-.033	.03	
NUMBER_OF_WOMEN_DIRECTORS	-.693	.579	-1.20	.238	-1.861	.475	
rdbysales	-92.781	66.065	-1.40	.167	-226.014	40.451	
opefficiency_	5.322	3.155	1.69	.099	-1.042	11.685	*
BB_3Y_DEFAULT_PROB	-27.807	60.145	-0.46	.646	-149.101	93.486	
UNLEVERED_BETA	.017	.007	2.29	.027	.002	.031	**
2015b	0	.	.	.	.	.	
2016	-1.398	1.217	-1.15	.257	-3.852	1.057	
2017	-1.225	1.203	-1.02	.314	-3.652	1.201	
2018	-4.037	1.241	-3.25	.002	-6.54	-1.535	***
2019	-.81	1.21	-0.67	.507	-3.251	1.631	
2020	-8.878	1.488	-5.96	0	-11.88	-5.877	***
2021	-3.239	1.491	-2.17	.035	-6.245	-.232	**
2022o	0	.	.	.	.	.	
Constant	104.348	29.24	3.57	.001	45.379	163.317	***
Mean dependent var	7.054		SD dependent var	7.725			
R-squared	0.793		Number of obs	80			
F-test	8.215		Prob > F	0.000			
Akaike crit. (AIC)	361.635		Bayesian crit. (BIC)	411.658			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.213 Stata Regression Results: The Effect of ESG Combined Score on Economic Value added in the Utilities Industry**: Industry_n = Utilities**

WACC_EVA_SPREAD	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	.004	.144	0.03	.977	-.286 .295	
Intotalassets	5.27	3.869	1.36	.18	-2.514 13.054	
firmage_	-.193	.501	-0.38	.702	-1.201 .816	
TOT_DEBT_TO_TOT_EQY	-.02	.015	-1.33	.191	-.051 .01	
capitalintensity	14.895	24.9	0.60	.553	-35.198 64.988	
cashflowbysale	-1.192	3.68	-0.32	.747	-8.594 6.211	
TOT_MKT_VAL	0	0	-0.01	.994	0 0	
financialslack	-.541	1.312	-0.41	.682	-3.18 2.099	
Internationalisation	-.123	.125	-0.98	.331	-.374 .129	
NUMBER_OF_WOMEN_DIND	.381	.601	0.63	.529	-.827 1.589	
rdbysales	-322.917	781.469	-0.41	.681	-1895.029 1249.195	
opefficiency_	8.853	6.946	1.27	.209	-5.121 22.827	
BB_3Y_DEFAULT_PROB	13.127	34.517	0.38	.705	-56.312 82.565	
UNLEVERED_BETA	-.061	.061	-1.00	.325	-.183 .062	
2015b	0	.	.	.	.	
2016	2.954	1.483	1.99	.052	-.03 5.937	*
2017	1.579	1.533	1.03	.308	-1.506 4.663	
2018	2.022	1.446	1.40	.169	-.888 4.932	
2019	1.049	1.288	0.81	.42	-1.543 3.64	
2020	-1.297	1.37	-0.95	.349	-4.053 1.459	
2021	1.608	1.278	1.26	.215	-.964 4.18	
2022o	0	.	.	.	.	
Constant	-65.506	39.269	-1.67	.102	-144.505 13.494	
Mean dependent var	-0.341		SD dependent var		4.434	
R-squared	0.370		Number of obs		82	
F-test	1.377		Prob > F		0.153	
Akaike crit. (AIC)	405.119		Bayesian crit. (BIC)		455.660	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.214 Stata Regression Results: The Effect of E, S, G on Economic Value added in the Basic Materials Industry

: Industry_n = Basic Materials

WACC_EVA_SP READ	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	-.111	.076	-1.46	.145	-.261	.039	
SOCIAL_DISCL OSURE_~E	.204	.131	1.57	.119	-.053	.462	
GOVNCE_DISC LOSURE_~E	-.012	.114	-0.10	.92	-.236	.213	
Intotalassets	-7.254	3.222	-2.25	.026	-13.613	-.895	**
firmage_	.447	.499	0.90	.372	-.538	1.432	
TOT_DEBT_TO_ TOT_EQY	-.002	.002	-1.34	.183	-.005	.001	
capitalintensity	-2.473	15.565	-0.16	.874	-33.188	28.242	
cashflowbysale	5.046	5.944	0.85	.397	-6.683	16.775	
TOT_MKT_VAL	0	0	3.06	.003	0	0	****
financialslack	.269	.64	0.42	.675	-.993	1.531	
Internationalisatio n	.055	.059	0.94	.35	-.061	.171	
NUMBER_OF_ WOMEN_DI~D	-.445	1.329	-0.34	.738	-3.067	2.178	
rdbysales	5.821	20.159	0.29	.773	-33.961	45.603	
opefficiency_	-8.74	5.835	-1.50	.136	-20.255	2.775	
BB_3Y_DEFAU LT_PROB	5.981	35.676	0.17	.867	-64.422	76.384	
UNLEVERED_B ETA	.06	.037	1.64	.102	-.012	.133	
2015b	0	.	.	.	.	.	
2016	-2.674	1.865	-1.43	.153	-6.353	1.006	
2017	-.218	1.738	-0.13	.901	-3.648	3.212	
2018	-3.462	1.754	-1.97	.05	-6.924	-.001	*
2019	-1.885	1.707	-1.10	.271	-5.253	1.484	
2020	-5.198	2.058	-2.52	.012	-9.259	-1.136	**
2021	-.953	2.215	-0.43	.668	-5.324	3.419	
2022o	0	.	.	.	.	.	
Constant	62.672	29.03	2.16	.032	5.386	119.958	**
Mean dependent var	3.334		SD dependent var	13.397			
R-squared	0.248		Number of obs	242			
F-test	2.674		Prob > F	0.000			
Akaike crit. (AIC)	1593.807		Bayesian crit. (BIC)	1674.052			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.215 Stata Regression Results: The Effect of E, S, G on Economic Value added in the Communications Industry

: Industry_n = Communications

WACC_EVA_SPREAD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.183	.096	1.91	.071	-.017	.384	*
SOCIAL_DISCLOSURE~E	.007	.133	0.05	.961	-.272	.285	
GOVNCESURE~E	-.349	.223	-1.57	.134	-.814	.117	
Intotalassets	-1.373	2.138	-0.64	.528	-5.847	3.1	
firmage_	.439	.575	0.76	.455	-.765	1.643	
TOT_DEBT_TO_TOT_EQY	.012	.023	0.53	.605	-.036	.06	
capitalintensity	-49.448	27.023	-1.83	.083	-106.007	7.111	*
cashflowbysale	12.313	8.126	1.51	.146	-4.696	29.321	
TOT_MKT_VAL	0	0	0.68	.507	0	0	
financialslack	.085	.561	0.15	.881	-1.089	1.259	
Internationalisation	-.255	.149	-1.71	.104	-.568	.057	
NUMBER_OF_WOMEN_DI~D	-.549	1.002	-0.55	.59	-2.646	1.547	
o	0	.	.	.	.	.	
opefficiency_	-35.16	11.384	-3.09	.006	-58.986	-11.334	***
BB_3Y_DEFAULT_PROB	17.92	24.304	0.74	.47	-32.948	68.788	
UNLEVERED_BETA	.094	.082	1.14	.269	-.079	.267	
2015b	0	.	.	.	.	.	
2016	-2.794	1.323	-2.11	.048	-5.562	-.025	**
2017	-2.028	1.677	-1.21	.241	-5.538	1.482	
2018	-1.88	1.846	-1.02	.321	-5.743	1.983	
2019	.873	1.702	0.51	.614	-2.69	4.435	
2020	-1.497	2.359	-0.63	.533	-6.434	3.441	
2021	-2.441	2.284	-1.07	.299	-7.223	2.34	
2022o	0	.	.	.	.	.	
Constant	52.064	22.613	2.30	.033	4.735	99.392	**
Mean dependent var		-1.548	SD dependent var			6.510	
R-squared		0.851	Number of obs			50	
F-test		5.175	Prob > F			0.000	
Akaike crit. (AIC)		216.467	Bayesian crit. (BIC)			258.532	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.216 Stata Regression Results: The Effect of E, S, G on Economic Value added in the Consumer Cyclical Industry**: Industry_n = Consumer, Cyclical**

WACC_EVA_SPREAD	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ENVIRON_DISCLOSURE~E	-.025	.032	-0.78	.434	-.089 .038	
SOCIAL_DISCLOSURE~E	.134	.056	2.38	.019	.023 .245	**
GOVNCEDISCLOSURE~E	-.001	.063	-0.02	.986	-.125 .123	
Intotalassets	-4.017	1.716	-2.34	.02	-7.403 -.63	**
firmage_	-.543	.309	-1.76	.08	-1.153 .066	*
TOT_DEBT_TO_TOT_EQY	0	.008	0.01	.995	-.016 .016	
capitalintensity	-17.079	9.965	-1.71	.088	-36.752 2.593	*
cashflowbysale	6.745	5.37	1.26	.211	-3.856 17.346	
TOT_MKT_VAL	0	0	1.83	.069	0 0	*
financialslack	.121	.516	0.23	.816	-.899 1.14	
Internationalisation	-.011	.022	-0.51	.614	-.054 .032	
NUMBER_OF_WOMEN_DI~D	.363	.534	0.68	.498	-.691 1.417	
rdbysales	-18.235	63.09	-0.29	.773	-142.781 106.311	
opefficiency_	-17.124	4.019	-4.26	0	-25.059 -9.19	***
BB_3Y_DEFAULT_PROB	.718	19.564	0.04	.971	-37.903 39.34	
UNLEVERED_BETA	.003	.01	0.29	.771	-.017 .023	
2015b	0	.	.	.	.	
2016	-1.684	.936	-1.80	.074	-3.532 .164	*
2017	-2.725	.857	-3.18	.002	-4.417 -1.033	***
2018	-.894	.84	-1.06	.289	-2.551 .764	
2019	1.189	.817	1.46	.147	-.424 2.802	
2020	-5.258	.91	-5.78	0	-7.054 -3.462	***
2021	-.823	1.074	-0.77	.444	-2.943 1.296	
2022o	0	.	.	.	.	
Constant	81.598	14.415	5.66	0	53.142 110.054	***
Mean dependent var	0.643	SD dependent var	8.026			
R-squared	0.541	Number of obs	236			
F-test	9.059	Prob > F	0.000			
Akaike crit. (AIC)	1196.556	Bayesian crit. (BIC)	1276.224			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.217 Stata Regression Results: The Effect of E, S, G on Economic Value added in the Consumer Non-cyclical Industry**: Industry_n = Consumer Non-cyclical**

WACC_EVA_SPREAD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.037	.054	-0.68	.496	-.143	.07	
SOCIAL_DISCLOSURE~E	.131	.073	1.80	.072	-.012	.275	*
GOVNCNCE_DISCLOSURE~E	-.016	.11	-0.15	.883	-.233	.201	
Intotalassets	-19.49	2.255	-8.64	0	-23.928	-15.051	***
firmage_	-.104	.116	-0.90	.371	-.331	.124	
TOT_DEBT_TO_TOT_EQY	.037	.019	1.97	.05	0	.073	*
capitalintensity	-53.943	14.096	-3.83	0	-81.694	-26.192	***
cashflowbysale	6.851	5.849	1.17	.243	-4.664	18.365	
TOT_MKT_VAL	0	0	-0.47	.641	0	0	
financialslack	-1.833	.743	-2.47	.014	-3.296	-.37	**
Internationalisation	.014	.031	0.46	.648	-.046	.074	
NUMBER_OF_WOMEN_DI~D	.984	.69	1.43	.155	-.375	2.342	
rdbysales	5.109	26.468	0.19	.847	-46.999	57.217	
opefficiency_	-65.831	9.659	-6.82	0	-84.846	-46.816	***
BB_3Y_DEFAULT_PROB	19.061	47.929	0.40	.691	-75.296	113.418	
UNLEVERED_BETA	-.004	.023	-0.18	.861	-.049	.041	
2015b	0	.	.	.	.	.	
2016	-.857	1.433	-0.60	.55	-3.679	1.965	
2017	2.244	1.587	1.41	.158	-.88	5.369	
2018	3.983	1.825	2.18	.03	.389	7.577	**
2019	6.323	2.052	3.08	.002	2.282	10.363	***
2020	5.026	2.28	2.21	.028	.538	9.514	**
2021	14.902	2.639	5.65	0	9.706	20.098	***
2022	14.2	2.985	4.76	0	8.324	20.076	***
Constant	272.412	27.042	10.07	0	219.176	325.649	***
Mean dependent var		6.201		SD dependent var		14.712	
R-squared		0.471		Number of obs		351	
F-test		10.583		Prob > F		0.000	
Akaike crit. (AIC)		2181.366		Bayesian crit. (BIC)		2274.025	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.218 Stata Regression Results: The Effect of E, S, G on Economic Value added in the Energy Industry

: Industry_n = Energy

WACC_EVA_SPREAD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	.164	.125	1.31	.203	-.094	.423	
SOCIAL_DISCLOSURE~E	.064	.28	0.23	.821	-.515	.643	
GOVNCE_DISCLOSURE~E	-.184	.187	-0.98	.337	-.571	.203	
Intotalassets	-41.465	17.997	-2.30	.03	-78.609	-4.32	**
firmage_	4.433	1.86	2.38	.025	.594	8.273	**
TOT_DEBT_TO_TOT_EQY	.041	.045	0.90	.376	-.052	.134	
capitalintensity	19.604	63.548	0.31	.76	-111.552	150.76	
cashflowbysale	-50.367	19.737	-2.55	.018	-91.102	-9.632	**
TOT_MKT_VAL	0	0	1.59	.125	0	0	
financialslack	.598	2.375	0.25	.803	-4.304	5.501	
Internationalisation	-.029	.272	-0.11	.915	-.591	.532	
NUMBER_OF_WOMEN_DI~D	-2.498	1.717	-1.46	.159	-6.042	1.047	
rdbysales	777.139	2917.372	0.27	.792	-5244.02	6798.298	
opefficiency_	-167.932	41.655	-4.03	0	-253.904	-81.96	***
BB_3Y_DEFAULT_PROB	281.779	229.683	1.23	.232	-192.263	755.821	
UNLEVERED_BETA	.189	.375	0.51	.618	-.584	.963	
2015b	0	.	.	.	.	.	
2016	-1.246	3.247	-0.38	.704	-7.947	5.455	
2017	3.294	3.207	1.03	.315	-3.325	9.912	
2018	2.185	3.4	0.64	.526	-4.831	9.202	
2019	2.623	3.112	0.84	.408	-3.799	9.046	
2020	-5.663	4.961	-1.14	.265	-15.902	4.575	
2021	-4.653	6.492	-0.72	.48	-18.051	8.745	
2022o	0	.	.	.	.	.	
Constant	531.975	186.161	2.86	.009	147.757	916.193	***
Mean dependent var		3.501				9.594	
R-squared		0.641					
F-test		1.948				0.049	
Akaike crit. (AIC)		336.856				383.025	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.219 Stata Regression Results: The Effect of E, S, G on Economic Value added in the Financial Industry**: Industry_n = Financial**

WACC_EVA_SP READ	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.037	.14	0.27	.79	-.246	.321	
SOCIAL_DISCL OSURE_~E	.008	.234	0.03	.975	-.467	.482	
GOVNCE_DISC LOSURE_~E	-.212	.296	-0.71	.48	-.813	.39	
Intotalassets	7.125	4.639	1.54	.134	-2.292	16.543	
firmage_	-.102	.939	-0.11	.914	-2.008	1.803	
TOT_DEBT_TO_ TOT_EQY	-.055	.025	-2.19	.035	-.105	-.004	**
capitalintensity	12.572	43.207	0.29	.773	-75.142	100.287	
cashflowbysale	-1.157	1.859	-0.62	.538	-4.932	2.617	
TOT_MKT_VAL	0	0	0.86	.397	0	0	
financialslack	-.029	.225	-0.13	.897	-.487	.428	
Internationalisatio n	-.253	.135	-1.88	.069	-.526	.02	*
NUMBER_OF_ WOMEN_DI~D	-.046	1.715	-0.03	.979	-3.528	3.436	
rdbysales	118.195	210.43	0.56	.578	-309.001	545.392	
opefficiency_	2.235	4.868	0.46	.649	-7.648	12.119	
BB_3Y_DEFAU LT_PROB	90.466	45.26	2.00	.053	-1.417	182.349	*
UNLEVERED_B ETA	.023	.122	0.19	.851	-.225	.271	
2015b	0	.	.	.	.	.	
2016	-.335	2.865	-0.12	.908	-6.151	5.481	
2017	2.53	3.11	0.81	.421	-3.782	8.843	
2018	4.918	3.116	1.58	.124	-1.408	11.244	
2019	-.549	3.394	-0.16	.872	-7.439	6.342	
2020	-5.276	4.124	-1.28	.209	-13.647	3.096	
2021	2.118	4.364	0.48	.631	-6.742	10.977	
2022o	0	.	.	.	.	.	
Constant	-69.714	46.564	-1.50	.143	-164.244	24.815	
Mean dependent var		-4.318		SD dependent var		6.546	
R-squared		0.401		Number of obs		69	
F-test		1.065		Prob > F		0.426	
Akaike crit. (AIC)		424.249		Bayesian crit. (BIC)		475.633	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.220 Stata Regression Results: The Effect of E, S, G on Economic Value added in the Industrial Industry

: Industry_n = Industrial

WACC_EVA_SP READ	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISC LOSURE~E	.074	.034	2.16	.032	.007	.141	**
SOCIAL_DISCL OSURE~E	-.151	.058	-2.60	.01	-.266	-.037	**
GOVNCE_DISC LOSURE~E	.139	.057	2.44	.015	.027	.251	**
Intotalassets	2.363	1.621	1.46	.146	-.827	5.554	
firmage_	-.139	.238	-0.59	.559	-.608	.329	
TOT_DEBT_TO_ TOT_EQY	-.043	.014	-3.14	.002	-.07	-.016	***
capitalintensity	-11.166	9.16	-1.22	.224	-29.199	6.866	
cashflowbysale	.843	2.556	0.33	.742	-4.189	5.874	
TOT_MKT_VAL	0	0	-1.49	.137	0	0	
financialslack	-.96	.396	-2.42	.016	-1.739	-.181	**
Internationalisatio n	-.024	.03	-0.80	.424	-.083	.035	
NUMBER_OF_ WOMEN_DI~D	.352	.518	0.68	.497	-.668	1.372	
rdbysales	-85.665	59.223	-1.45	.149	-202.258	30.928	
opefficiency_	-55.802	3.867	-14.43	0	-63.415	-48.189	***
BB_3Y_DEFAU LT_PROB	9.123	16.731	0.55	.586	-23.815	42.061	
UNLEVERED_B ETA	.052	.02	2.56	.011	.012	.092	**
2015b	0	.	.	.	.	.	
2016	-3.043	.844	-3.60	0	-4.706	-1.381	***
2017	-.584	.789	-0.74	.46	-2.137	.969	
2018	-.7	.767	-0.91	.362	-2.211	.81	
2019	.695	.781	0.89	.374	-.842	2.233	
2020	-3.305	.905	-3.65	0	-5.087	-1.524	***
2021	-.394	.948	-0.41	.678	-2.26	1.473	
2022o	0	.	.	.	.	.	
Constant	25.141	15.525	1.62	.107	-5.423	55.706	
Mean dependent var	-0.320		SD dependent var		7.241		
R-squared	0.581		Number of obs		365		
F-test	17.128		Prob > F		0.000		
Akaike crit. (AIC)	1953.293		Bayesian crit. (BIC)		2042.991		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.221 Stata Regression Results: The Effect of E, S, G on Economic Value added in the Technology Industry

: Industry_n = Technology							
WACC_EVA_SPREAD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-.043	.05	-0.85	.4	-.144	.059	
SOCIAL_DISCLOSURE~E	-.037	.078	-0.47	.643	-.194	.121	
GOVNCE_DISCLOSURE~E	.178	.141	1.26	.214	-.107	.462	
Intotalassets	-11.876	3.441	-3.45	.001	-18.824	-4.927	***
firmage_	1.794	.543	3.30	.002	.697	2.89	***
TOT_DEBT_TO_TOT_EQY	-.031	.058	-0.54	.592	-.149	.086	
capitalintensity	55.654	30.851	1.80	.079	-6.65	117.958	*
cashflowbysale	7.456	11.398	0.65	.517	-15.563	30.475	
TOT_MKT_VAL	0	0	-1.88	.067	0	0	*
financialslack	-2.478	.503	-4.93	0	-3.493	-1.462	***
Internationalisation	-.003	.016	-0.17	.867	-.035	.029	
NUMBER_OF_WOMEN_D~D	-.922	.604	-1.53	.135	-2.141	.298	
rdbysales	-78.287	70.614	-1.11	.274	-220.894	64.32	
opefficiency_	4.757	3.26	1.46	.152	-1.828	11.341	
BB_3Y_DEFAULT_PROB	-28.383	60.647	-0.47	.642	-150.862	94.096	
UNLEVERED_BETA	.016	.007	2.13	.039	.001	.031	**
2015b	0	.	.	.	.	.	
2016	-1.491	1.219	-1.22	.228	-3.953	.971	
2017	-1.817	1.306	-1.39	.171	-4.454	.819	
2018	-4.744	1.341	-3.54	.001	-7.453	-2.036	***
2019	-1.407	1.282	-1.10	.279	-3.996	1.183	
2020	-9.607	1.583	-6.07	0	-12.805	-6.409	***
2021	-3.592	1.527	-2.35	.024	-6.676	-.508	**
2022o	0	.	.	.	.	.	
Constant	83.969	32.717	2.57	.014	17.897	150.042	**
Mean dependent var		7.054		SD dependent var		7.725	
R-squared		0.802		Number of obs		80	
F-test		7.557		Prob > F		0.000	
Akaike crit. (AIC)		361.842		Bayesian crit. (BIC)		416.628	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.222 Stata Regression Results: The Effect of E, S, G on Economic Value added in the Utilities Industry

: Industry_n = Utilities

WACC_EVA_SPRE AD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLO SURE~E	.004	.072	0.06	.953	-.14	.148	
SOCIAL_DISCLOS URE_~E	-.013	.119	-0.11	.913	-.252	.226	
GOVNCE_DISCLO SURE_~E	.019	.185	0.10	.918	-.353	.391	
Intotalassets	5.409	4.29	1.26	.214	-3.231	14.048	
firmage_	-.187	.515	-0.36	.718	-1.225	.851	
TOT_DEBT_TO_T OT_EQY	-.02	.016	-1.26	.212	-.052	.012	
capitalintensity	15.745	26.297	0.60	.552	-37.219	68.709	
cashflowbysale	-1.302	3.884	-0.34	.739	-9.125	6.521	
TOT_MKT_VAL	0	0	-0.02	.985	0	0	
financialslack	-.511	1.354	-0.38	.708	-3.238	2.217	
Internationalisation	-.128	.133	-0.96	.343	-.396	.141	
NUMBER_OF_WO MEN_DI~D	.376	.626	0.60	.551	-.885	1.637	
rdbysales	-297.88	936.617	-0.32	.752	-2184.323	1588.563	
opefficiency_	8.749	7.909	1.11	.275	-7.18	24.678	
BB_3Y_DEFAULT_ PROB	12.167	36.404	0.33	.74	-61.154	85.488	
UNLEVERED_BET A	-.061	.062	-0.98	.334	-.186	.065	
2015b	0	.	.	.	.	.	
2016	2.963	1.517	1.95	.057	-.092	6.017	*
2017	1.59	1.577	1.01	.319	-1.586	4.766	
2018	2.041	1.499	1.36	.18	-.978	5.06	
2019	1.028	1.339	0.77	.447	-1.669	3.724	
2020	-1.314	1.413	-0.93	.357	-4.159	1.531	
2021	1.575	1.322	1.19	.24	-1.088	4.239	
2022o	0	.	.	.	.	.	
Constant	-68.464	44.301	-1.54	.129	-157.691	20.763	
Mean dependent var		-0.341		SD dependent var		4.434	
R-squared		0.370		Number of obs		82	
F-test		1.201		Prob > F		0.278	
Akaike crit. (AIC)		409.073		Bayesian crit. (BIC)		464.428	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.223 Stata Regression Results: The Effect of ESG Combined Score on Market Value added in the Basic Materials Industry

: Industry_n = Basic Materials							
MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	648.254	549.092	1.18	.239	-435.231	1731.739	
Intotalassets	24291.736	18045.916	1.35	.18	-11317.022	59900.493	
firmage_	-4523.704	2757.668	-1.64	.103	-9965.22	917.812	
TOT_DEBT_TO_TOT_EQY	-.4	9.082	-0.04	.965	-18.32	17.52	
capitalintensity	249.894	87024.684	0.00	.998	-171469.89	171969.68	
cashflowbysale	-5913.26	33226.312	-0.18	.859	-71476.444	59649.923	
TOT_MKT_VAL	.726	.021	35.05	0	.685	.767	***
financialslack	-10146.299	3551.212	-2.86	.005	-17153.659	-3138.939	***
Internationalisation	-72.927	323.005	-0.23	.822	-710.29	564.436	
NUMBER_OF_WOMEN_DIRECTORS	11492.382	7448.479	1.54	.125	-3205.185	26189.95	
rdbysales	-154371.35	112813.28	-1.37	.173	-376978	68235.298	
opefficiency_	-17832.187	32407.364	-0.55	.583	-81779.398	46115.023	
BB_3Y_DEFAULT_PROB	-164517.64	193029.84	-0.85	.395	-545410.07	216374.79	
UNLEVERED_BETA	285.599	204.908	1.39	.165	-118.733	689.93	
2015b	0	.	.	.	.	.	
2016	-6515.354	10452.08	-0.62	.534	-27139.719	14109.012	
2017	14983.101	9655.409	1.55	.122	-4069.25	34035.452	
2018	7232.42	9454.209	0.77	.445	-11422.917	25887.757	
2019	-6918.852	9226.644	-0.75	.454	-25125.152	11287.447	
2020	-24471.005	11232.72	-2.18	.031	-46635.754	-2306.257	**
2021	-13718.28	12362.015	-1.11	.269	-38111.388	10674.829	
2022o	0	.	.	.	.	.	
Constant	-79726.086	159296.32	-0.50	.617	-394054.5	234602.33	
Mean dependent var	148519.838		SD dependent var		214945.605		
R-squared	0.921		Number of obs		242		
F-test	104.814		Prob > F		0.000		
Akaike crit. (AIC)	5770.205		Bayesian crit. (BIC)		5843.473		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.224 Stata Regression Results: The Effect of ESG Combined Score on Market Value added in the Communications Industry**: Industry_n = Communications**

MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-1740.314	3629.945	-0.48	.637	-9289.199	5808.57	
Intotalassets	82195.253	40231.55	2.04	.054	-1470.835	165861.34	*
firmage_	-23119.929	10360.51	-2.23	.037	-44665.788	-1574.069	**
TOT_DEBT_TO_TOT_EQY	-591.235	375.485	-1.58	.13	-1372.1	189.63	
capitalintensity	36645.297	504393.35	0.07	.943	-1012298.1	1085588.7	
cashflowbysale	-92329.199	153143.64	-0.60	.553	-410808.82	226150.43	
TOT_MKT_VAL	.838	.087	9.61	0	.656	1.019	***
financialslack	6469.016	9285.309	0.70	.494	-12840.842	25778.873	
Internationalisation	7248.954	2796.972	2.59	.017	1432.333	13065.575	**
NUMBER_OF_WOMEN_DIRECTORS	26103.216	18790	1.39	.179	-12972.729	65179.161	
o	0	.	.	.	.	.	
opefficiency_	-130605.93	212657.29	-0.61	.546	-572850.98	311639.11	
BB_3Y_DEFAULT_PROB	61710.955	459359.95	0.13	.894	-893580.35	1017002.3	
UNLEVERED_BETA	1096.658	1481.422	0.74	.467	-1984.127	4177.443	
2015b	0	.	.	.	.	.	
2016	49172.259	24574.513	2.00	.058	-1933.238	100277.76	*
2017	102878.25	29826.365	3.45	.002	40850.923	164905.57	***
2018	86107.919	31049.775	2.77	.011	21536.377	150679.46	**
2019	82170.598	28998.75	2.83	.01	21864.397	142476.8	**
2020	83197.739	40898.467	2.03	.055	-1855.279	168250.76	*
2021	60163.124	43085.683	1.40	.177	-29438.459	149764.71	
2022o	0	.	.	.	.	.	
Constant	-292358.32	378025.11	-0.77	.448	-1078504.6	493787.92	
Mean dependent var	407873.197		SD dependent var		596606.504		
R-squared	0.946		Number of obs		50		
F-test	19.532		Prob > F		0.000		
Akaike crit. (AIC)	1202.200		Bayesian crit. (BIC)		1240.440		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.225 Stata Regression Results: The Effect of ESG Combined Score on Market Value added in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical							
MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_S CORE	-9.741	747.635	-0.01	.99	-1485.523	1466.041	
Intotalassets	-129683.14	19394.037	-6.69	0	-167965.69	-91400.595	***
firmage_	18050.535	3461.953	5.21	0	11216.868	24884.202	***
TOT_DEBT_TO_TOT _EQY	250.784	90.614	2.77	.006	71.919	429.65	***
capitalintensity	-325484.08	110374.59	-2.95	.004	-543356.22	-107611.93	***
cashflowbysale	201455.5	60294.452	3.34	.001	82438.232	320472.76	***
TOT_MKT_VAL	.951	.018	52.41	0	.915	.987	***
financialslack	881.458	5851.007	0.15	.88	-10668.043	12430.959	
Internationalisation	25.138	247.528	0.10	.919	-463.465	513.741	
NUMBER_OF_WOME N_DI~D	4332.408	5998.265	0.72	.471	-7507.77	16172.586	
rdbysales	-358031.22	711947.92	-0.50	.616	-1763369.4	1047306.9	
opefficiency_	102801.93	45508.326	2.26	.025	12971.5	192632.36	**
BB_3Y_DEFAULT_P ROB	-100514.11	220746.02	-0.46	.649	-536252.17	335223.95	
UNLEVERED_BETA	-14.452	115.58	-0.13	.901	-242.599	213.695	
2015b	0	.	.	.	.	.	
2016	4030.493	10609.165	0.38	.704	-16911.298	24972.284	
2017	11199.138	9700.852	1.15	.25	-7949.704	30347.979	
2018	13307.377	9505.151	1.40	.163	-5455.162	32069.917	
2019	7706.987	9122.329	0.84	.399	-10299.888	25713.863	
2020	-11200.973	10147.484	-1.10	.271	-31231.436	8829.49	
2021	-10814.984	12086.044	-0.90	.372	-34672.038	13042.069	
2022o	0	.	.	.	.	.	
Constant	454511.79	156270.53	2.91	.004	146044.09	762979.48	***
Mean dependent var	268605.031		SD dependent var		392312.194		
R-squared	0.959		Number of obs		236		
F-test	202.117		Prob > F		0.000		
Akaike crit. (AIC)	5602.147		Bayesian crit. (BIC)		5674.888		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.226 Stata Regression Results: The Effect of ESG Combined Score on Market Value added in the Consumer Non-cyclical Industry

: Industry_n = Consumer Non-cyclical

MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-778.265	285.515	-2.73	.007	-1340.337	-216.192	***
Intotalassets	-37217.16	8425.031	-4.42	0	-53802.91	-20631.409	***
firmage_	4.153	432.927	0.01	.992	-848.12	856.426	
TOT_DEBT_TO_TOT_EQY	82.975	69.485	1.19	.233	-53.815	219.765	
capitalintensity	157742.79	52797.929	2.99	.003	53803.313	261682.26	***
cashflowbysale	-78931.96	21921.886	-3.60	0	-122088	-35775.925	***
TOT_MKT_VAL	.991	.005	205.86	0	.981	1	***
financialslack	-7579.995	2755.686	-2.75	.006	-13004.914	-2155.075	***
Internationalisation	85.427	114.292	0.75	.455	-139.572	310.425	
NUMBER_OF_WOMEN_DIRECTORS	-2914.652	2581.191	-1.13	.26	-7996.057	2166.753	
rdbysales	117179	98778.583	1.19	.237	-77279.276	311637.27	
opefficiency_	-138698.41	35749.125	-3.88	0	-209075.14	-68321.688	***
BB_3Y_DEFAULT_PROB	-16287.028	179688.04	-0.09	.928	-370025.91	337451.86	
UNLEVERED_BETA	-44.196	85.448	-0.52	.605	-212.412	124.019	
2015b	0	.	.	.	.	.	
2016	3224.523	5368.555	0.60	.549	-7344.164	13793.211	
2017	4971.224	5945.741	0.84	.404	-6733.728	16676.176	
2018	6809.732	6813.513	1.00	.318	-6603.538	20223.003	
2019	6064.858	7641.813	0.79	.428	-8979.029	21108.744	
2020	6068.479	8494.592	0.71	.476	-10654.211	22791.169	
2021	7878.609	9878.634	0.80	.426	-11568.747	27325.964	
2022	598.913	11184.379	0.05	.957	-21418.968	22616.793	
Constant	528734	97356.685	5.43	0	337074.92	720393.09	***
Mean dependent var	391855.703		SD dependent var	642295.475			
R-squared	0.995		Number of obs	351			
F-test	2560.880		Prob > F	0.000			
Akaike crit. (AIC)	7957.003		Bayesian crit. (BIC)	8041.940			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.227 Stata Regression Results: The Effect of ESG Combined Score on Market Value added in the Energy Industry

: Industry_n = Energy							
MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	21323.217	6786.404	3.14	.004	7373.563	35272.87	***
Intotalassets	175493.05	423162.9	0.41	.682	-694330.75	1045316.8	
firmage_	-84617.022	42667.846	-1.98	.058	-172322.04	3087.992	*
TOT_DEBT_TO_TOT_EQY	-1247.491	981.601	-1.27	.215	-3265.201	770.219	
capitalintensity	3352382.5	1490313.7	2.25	.033	288998.85	6415766.2	**
cashflowbysale	1066818	468216.57	2.28	.031	104385.09	2029251	**
TOT_MKT_VAL	.789	.015	51.55	0	.757	.82	***
financialslack	-45866.023	53991.338	-0.85	.403	-156846.81	65114.762	
Internationalisation	1934.303	6540.15	0.30	.77	-11509.167	15377.773	
NUMBER_OF_WOMEN_DIRECTORS	-17396.434	41253.117	-0.42	.677	-102193.43	67400.562	
rdbysales	-1.592e+08	64523083	-2.47	.021	-2.918e+08	-26565205	**
opefficiency_	832890.71	898573.92	0.93	.363	-1014154.4	2679935.9	
BB_3Y_DEFAULT_PROB	-9766775.3	5447740.5	-1.79	.085	-20964766	1431215.6	*
UNLEVERED_BETA	-26813.306	8015.607	-3.35	.003	-43289.622	-10336.99	***
2015b	0	.	.	.	.	.	
2016	-72857.224	75590.928	-0.96	.344	-228236.6	82522.153	
2017	5442.208	71087.759	0.08	.94	-140680.77	151565.19	
2018	-59934.206	74038.083	-0.81	.426	-212121.67	92253.254	
2019	162849.28	69919.096	2.33	.028	19128.52	306570.04	**
2020	-34973.17	118506.4	-0.29	.77	-278566.57	208620.23	
2021	-399902.09	145626.75	-2.75	.011	-699242.15	-100562.02	**
2022o	0	.	.	.	.	.	
Constant	-166040.66	4388080.2	-0.04	.97	-9185868.8	8853787.5	
Mean dependent var	1251254.265		SD dependent var	2411982.135			
R-squared	0.997		Number of obs	55			
F-test	507.532		Prob > F	0.000			
Akaike crit. (AIC)	1447.221		Bayesian crit. (BIC)	1489.375			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.228 Stata Regression Results: The Effect of ESG Combined Score on Market Value added in the Financial Industry**: Industry_n = Financial**

MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	1989.471	2775.82	0.72	.478	-3634.874	7613.816	
Intotalassets	-74987.154	38236.981	-1.96	.057	-152462.64	2488.329	*
firmage_	-1791.333	7172.716	-0.25	.804	-16324.635	12741.969	
TOT_DEBT_TO_TOT_EQY	183.508	215.338	0.85	.4	-252.807	619.824	
capitalintensity	111510.36	378287.33	0.29	.77	-654972.57	877993.3	
cashflowbysale	-19954.09	16274.053	-1.23	.228	-52928.453	13020.272	
TOT_MKT_VAL	1.088	.097	11.25	0	.892	1.284	***
financialslack	-23693.537	1841.479	-12.87	0	-27424.729	-19962.346	***
Internationalisation	-1153.151	1096.513	-1.05	.3	-3374.896	1068.595	
NUMBER_OF_WOMEN_DIRECTORS	-3578.556	14924.67	-0.24	.812	-33818.811	26661.699	
rdbysales	-1581761.8	1798462.2	-0.88	.385	-5225792.4	2062268.8	
opefficiency_	26978.518	41590.135	0.65	.521	-57291.1	111248.14	
BB_3Y_DEFAULT_PROB	-625132.56	382230.64	-1.64	.11	-1399605.4	149340.27	
UNLEVERED_BETA	-857.702	1048.262	-0.82	.418	-2981.683	1266.279	
2015b	0	.	.	.	.	.	
2016	-2748.476	24403.815	-0.11	.911	-52195.303	46698.351	
2017	-27385.143	26210.736	-1.04	.303	-80493.138	25722.853	
2018	11318.305	26400.441	0.43	.671	-42174.07	64810.68	
2019	23950.227	29087.483	0.82	.416	-34986.611	82887.066	
2020	36303.107	36102.491	1.01	.321	-36847.487	109453.7	
2021	-3584.307	38121.649	-0.09	.926	-80826.104	73657.49	
2022o	0	.	.	.	.	.	
Constant	855694.16	403762.78	2.12	.041	37593.061	1673795.3	**
Mean dependent var	149240.508		SD dependent var	226064.981			
R-squared	0.927		Number of obs	69			
F-test	23.523		Prob > F	0.000			
Akaike crit. (AIC)	1677.031		Bayesian crit. (BIC)	1723.947			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.229 Stata Regression Results: The Effect of ESG Combined Score on Market Value added in the Industrial Industry

: Industry_n = Industrial							
MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	30.132	359.709	0.08	.933	-678.013	738.278	
Intotalassets	-10991.061	10043.004	-1.09	.275	-30762.317	8780.195	
firmage_	1289.148	1469.184	0.88	.381	-1603.175	4181.471	
TOT_DEBT_TO_TOT_EQY	-51.576	85.197	-0.60	.545	-219.301	116.148	
capitalintensity	2440.329	57123.594	0.04	.966	-110016.59	114897.24	
cashflowbysale	-34126.066	15903.047	-2.15	.033	-65433.752	-2818.38	**
TOT_MKT_VAL	.803	.011	73.94	0	.781	.824	***
financialslack	-2952.259	2456.959	-1.20	.231	-7789.175	1884.657	
Internationalisation	-46.942	187.263	-0.25	.802	-415.6	321.716	
NUMBER_OF_WOMEN_DIRECTORS	-8397.257	3231.665	-2.60	.01	-14759.306	-2035.208	**
rdbysales	-225545.13	365524.06	-0.62	.538	-945137.59	494047.33	
opefficiency_	-25710.21	24105.02	-1.07	.287	-73164.79	21744.369	
BB_3Y_DEFAULT_PROB	-33542.667	104136.57	-0.32	.748	-238552.12	171466.79	
UNLEVERED_BETA	6.878	126.989	0.05	.957	-243.119	256.876	
2015b	0	.	.	.	.	.	
2016	-3797.239	5261.718	-0.72	.471	-14155.771	6561.294	
2017	-2400.021	4918.6	-0.49	.626	-12083.07	7283.029	
2018	-1363.655	4782.689	-0.28	.776	-10779.141	8051.831	
2019	-3592.004	4832.546	-0.74	.458	-13105.642	5921.634	
2020	-11163.934	5594.464	-2.00	.047	-22177.529	-150.339	**
2021	1809.546	5886.663	0.31	.759	-9779.29	13398.383	
2022o	0	.	.	.	.	.	
Constant	91830.495	91657.918	1.00	.317	-88612.749	272273.74	
Mean dependent var	167420.449		SD dependent var	295884.325			
R-squared	0.974		Number of obs	365			
F-test	505.361		Prob > F	0.000			
Akaike crit. (AIC)	8332.781		Bayesian crit. (BIC)	8414.679			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.230 Stata Regression Results: The Effect of ESG Combined Score on Market Value added in the Technology Industry

: Industry_n = Technology

MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-2864.984	1837.457	-1.56	.126	-6570.57 840.601	
Intotalassets	6492.865	62332.745	0.10	.918	-119213.1 132198.83	
firmage_	-3916.64	9159.738	-0.43	.671	-22389.013 14555.732	
TOT_DEBT_TO_TOT_EQY	-1405.933	1032.705	-1.36	.18	-3488.581 676.715	
capitalintensity	1248013.6	526834.65	2.37	.022	185550.22 2310476.9	**
cashflowbysale	-318411.3	203914.76	-1.56	.126	-729644.6 92821.996	
TOT_MKT_VAL	.967	.01	100.79	0	.948 .987	***
financialslack	-17543.084	8912.924	-1.97	.056	-35517.708 431.541	*
Internationalisation	453.577	284.256	1.60	.118	-119.68 1026.835	
NUMBER_OF_WOMEN_DIRECTORS	-20389.879	10520.506	-1.94	.059	-41606.502 826.743	*
rdbysales	-1417775.2	1200291.2	-1.18	.244	-3838393.2 1002842.7	
opefficiency_	121159.44	57329.908	2.11	.04	5542.658 236776.21	**
BB_3Y_DEFAULT_PROB	-67728.258	1092733.1	-0.06	.951	-2271434.5 2135978	
UNLEVERED_BETA	76.652	132.802	0.58	.567	-191.168 344.472	
2015b	0	.	.	.	.	
2016	-15826.39	22114.071	-0.72	.478	-60423.665 28770.886	
2017	-27763.421	21859.536	-1.27	.211	-71847.376 16320.535	
2018	-29827.832	22547.628	-1.32	.193	-75299.458 15643.794	
2019	-16874.036	21991.116	-0.77	.447	-61223.348 27475.277	
2020	-25472.614	27039.983	-0.94	.351	-80003.937 29058.709	
2021	-4422.279	27086.398	-0.16	.871	-59047.208 50202.649	
2022o	0	.	.	.	.	
Constant	171522.17	531250.89	0.32	.748	-899847.34 1242891.7	
Mean dependent var	916471.194		SD dependent var	1616317.959		
R-squared	0.998		Number of obs	80		
F-test	1096.382		Prob > F	0.000		
Akaike crit. (AIC)	1930.826		Bayesian crit. (BIC)	1980.848		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.231 Stata Regression Results: The Effect of ESG Combined Score on Market Value added in the Utilities Industry

: Industry_n = Utilities							
MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-7376.478	5648.392	-1.31	.198	-18739.578	3986.621	
Intotalassets	-369744.52	151327.26	-2.44	.018	-674175.7	-65313.34	**
firmage_	13840.788	19600.992	0.71	.484	-25591.323	53272.898	
TOT_DEBT_TO_TOT_EQY	-1165.276	597.125	-1.95	.057	-2366.536	35.984	*
capitalintensity	-1175264.2	973832.22	-1.21	.234	-3134361.9	783833.58	
cashflowbysale	-174658.39	143908.72	-1.21	.231	-464165.39	114848.62	
TOT_MKT_VAL	.797	.059	13.58	0	.679	.916	***
financialslack	-15490.81	51308.825	-0.30	.764	-118710.85	87729.231	
Internationalisation	2257.917	4884.248	0.46	.646	-7567.923	12083.757	
NUMBER_OF_WOMEN_DIRECTORS	22318.878	23486.875	0.95	.347	-24930.62	69568.375	
rdbysales	63758552	30562634	2.09	.042	2274462.4	1.252e+08	**
opefficiency_	594733.17	271658.8	2.19	.034	48226.154	1141240.2	**
BB_3Y_DEFAULT_PROB	-585280.44	1349921.2	-0.43	.667	-3300971.5	2130410.6	
UNLEVERED_BETA	-394.333	2381.656	-0.17	.869	-5185.606	4396.94	
2015b	0	.	.	.	.	.	
2016	13783.508	58000.308	0.24	.813	-102898.06	130465.08	
2017	9467.125	59960.152	0.16	.875	-111157.14	130091.39	
2018	-61169.929	56563.815	-1.08	.285	-174961.65	52621.79	
2019	-88276.708	50375.586	-1.75	.086	-189619.32	13065.899	*
2020	-84469.527	53571.093	-1.58	.122	-192240.67	23301.612	
2021	-24957.23	50000.203	-0.50	.62	-125544.66	75630.205	
2022o	0	.	.	.	.	.	
Constant	3867502.3	1535783.5	2.52	.015	777904.45	6957100.2	**
Mean dependent var	241839.825		SD dependent var	349929.315			
R-squared	0.863		Number of obs	82			
F-test	14.854		Prob > F	0.000			
Akaike crit. (AIC)	2139.274		Bayesian crit. (BIC)	2189.815			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.232 Stata Regression Results: The Effect of E, S, G on Market Value added in the Basic Materials Industry

: Industry_n = Basic Materials

MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-517.931	423.42	-1.22	.223	-1353.5	317.637	
SOCIAL_DISCLOSURE~E	1409.043	728.382	1.93	.055	-28.331	2846.418	*
GOVNCNCE_DISCLOSURE~E	443.25	635.002	0.70	.486	-809.851	1696.35	
Intotalassets	23346.494	17979.174	1.30	.196	-12133.263	58826.252	
firmage_	-5334.767	2784.549	-1.92	.057	-10829.743	160.208	*
TOT_DEBT_TO_TOT_EQY	-1.254	9.223	-0.14	.892	-19.455	16.946	
capitalintensity	3702.26	86847.148	0.04	.966	-167680.24	175084.76	
cashflowbysale	-5451.719	33163.899	-0.16	.87	-70896.724	59993.286	
TOT_MKT_VAL	.732	.021	35.12	0	.691	.773	***
financialslack	-11044.467	3569.023	-3.10	.002	-18087.51	-4001.425	***
Internationalisation	27.628	328.026	0.08	.933	-619.693	674.949	
NUMBER_OF_WORKMEN_DI~D	11658.388	7415.145	1.57	.118	-2974.516	26291.293	
rdbysales	-161432.98	112484.54	-1.44	.153	-383407.81	60541.852	
opefficiency_	-13188.004	32558.788	-0.41	.686	-77438.893	51062.885	
BB_3Y_DEFAULT_PROB	-113697.24	199065.17	-0.57	.569	-506528.64	279134.17	
UNLEVERED_BETA	277.762	204.622	1.36	.176	-126.036	681.56	
2015b	0	.	.	.	.	.	
2016	-6335.431	10404.155	-0.61	.543	-26866.791	14195.929	
2017	12535.15	9698.301	1.29	.198	-6603.291	31673.592	
2018	2175.322	9786.762	0.22	.824	-17137.688	21488.332	
2019	-11540.353	9524.866	-1.21	.227	-30336.541	7255.835	
2020	-29467.046	11483.467	-2.57	.011	-52128.301	-6805.792	**
2021	-14950.551	12360.523	-1.21	.228	-39342.57	9441.468	
2022o	0	.	.	.	.	.	
Constant	-58402.321	161977.49	-0.36	.719	-378045.61	261240.96	
Mean dependent var	148519.838		SD dependent var		214945.605		
R-squared	0.923		Number of obs		242		
F-test	96.354		Prob > F		0.000		
Akaike crit. (AIC)	5769.226		Bayesian crit. (BIC)		5849.472		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.233 Stata Regression Results: The Effect of E, S, G on Market Value added in the Communications Industry

: Industry_n = Communications							
MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-1094.805	1882.296	-0.58	.568	-5034.496	2844.886	
SOCIAL_DISCLOSURE~E	-11.554	2617.953	-0.00	.997	-5490.992	5467.885	
GOVNCE_DISCLOSURE~E	2096.973	4372.859	0.48	.637	-7055.526	11249.471	
Intotalassets	80056.109	41997.434	1.91	.072	-7845.531	167957.75	*
firmage_	-25229.958	11299.107	-2.23	.038	-48879.262	-1580.654	**
TOT_DEBT_TO_TOT_EQY	-728.474	447.144	-1.63	.12	-1664.357	207.408	
capitalintensity	-19074.53	530930.24	-0.04	.972	-1130324.3	1092175.2	
cashflowbysale	-85228.886	159661.3	-0.53	.6	-419403.82	248946.05	
TOT_MKT_VAL	.857	.102	8.43	0	.644	1.07	***
financialslack	3255.994	11021.118	0.29	.771	-19811.472	26323.459	
Internationalisation	7025.187	2936.327	2.39	.027	879.384	13170.991	**
NUMBER_OF_WOMEN_DI~D	27697.854	19682.063	1.41	.175	-13497.177	68892.884	
o	0	.	.	.	.	.	
opefficiency_	-145019.6	223660.54	-0.65	.524	-613146.48	323107.28	
BB_3Y_DEFAULT_PROB	59769.414	477507.44	0.13	.902	-939665.14	1059204	
UNLEVERED_BETA	812.735	1620.844	0.50	.622	-2579.73	4205.2	
2015b	0	.	.	.	.	.	
2016	52376.151	25987.546	2.02	.058	-2016.407	106768.71	*
2017	102573.27	32952.105	3.11	.006	33603.724	171542.82	***
2018	78450.875	36260.172	2.16	.043	2557.463	154344.29	**
2019	77908.199	33443.536	2.33	.031	7910.072	147906.33	**
2020	80314.311	46349.033	1.73	.099	-16695.331	177323.95	*
2021	58186.732	44883.822	1.30	.21	-35756.188	152129.65	
2022o	0	.	.	.	.	.	
Constant	-415571.6	444282.59	-0.94	.361	-1345465.7	514322.54	
Mean dependent var	407873.197		SD dependent var		596606.504		
R-squared	0.948		Number of obs		50		
F-test	16.385		Prob > F		0.000		
Akaike crit. (AIC)	1205.038		Bayesian crit. (BIC)		1247.103		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.234 Stata Regression Results: The Effect of E, S, G on Market Value added in the Consumer Cyclical Industry

: Industry_n = Consumer Cyclical

MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-96.694	367.331	-0.26	.793	-821.842	628.455	
SOCIAL_DISCLOSURE~E	127.087	642.285	0.20	.843	-1140.847	1395.022	
GOVNCE_DISCLOSURE~E	194.955	716.239	0.27	.786	-1218.972	1608.882	
Intotalassets	-129604.34	19566.753	-6.62	0	-168231.07	-90977.6	***
firmage_	17836.884	3521.164	5.07	0	10885.752	24788.016	***
TOT_DEBT_TO_TOT_EQY	261.553	94.957	2.75	.007	74.099	449.007	***
capitalintensity	-327306.55	113662.35	-2.88	.004	-551687.44	-102925.65	***
cashflowbysale	203321.53	61249.446	3.32	.001	82408.973	324234.09	***
TOT_MKT_VAL	.95	.018	52.03	0	.914	.987	***
financialslack	970.235	5890.319	0.17	.869	-10657.847	12598.316	
Internationalisation	15.429	250.057	0.06	.951	-478.209	509.066	
NUMBER_OF_WOMEN_DI~D	4017.876	6091.503	0.66	.51	-8007.363	16043.116	
rdbysales	-359054.9	719589.31	-0.50	.618	-1779596.5	1061486.7	
opefficiency_	101673.3	45841.155	2.22	.028	11178.257	192168.35	**
BB_3Y_DEFAULT_PROB	-101833.11	223143.5	-0.46	.649	-542340.79	338674.58	
UNLEVERED_BETA	-12.345	116.951	-0.11	.916	-243.219	218.528	
2015b	0	.	.	.	.	.	
2016	4211.427	10676.673	0.39	.694	-16865.397	25288.252	
2017	11070.254	9775.436	1.13	.259	-8227.439	30367.947	
2018	13318.079	9577.124	1.39	.166	-5588.125	32224.283	
2019	7589.885	9320.076	0.81	.417	-10808.88	25988.651	
2020	-11672.336	10376.671	-1.13	.262	-32156.926	8812.254	
2021	-11182.064	12244.788	-0.91	.362	-35354.504	12990.377	
2022o	0	.	.	.	.	.	
Constant	447902.19	164410.87	2.72	.007	123338.61	772465.77	***
Mean dependent var	268605.031		SD dependent var		392312.194		
R-squared	0.959		Number of obs		236		
F-test	181.776		Prob > F		0.000		
Akaike crit. (AIC)	5605.920		Bayesian crit. (BIC)		5685.588		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.235 Stata Regression Results: The Effect of E, S, G on Market Value added in the Consumer Non-cyclical Industry

: Industry_n = Consumer Non-cyclical							
MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-339.79	201.572	-1.69	.093	-736.623	57.043	*
SOCIAL_DISCLOSURE~E	39.897	271.698	0.15	.883	-494.993	574.786	
GOVNCNCE_DISCLOSURE~E	-1104.805	410.562	-2.69	.008	-1913.074	-296.536	***
Intotalassets	-35690.688	8411.142	-4.24	0	-52249.632	-19131.743	***
firmage_	-46.662	431.406	-0.11	.914	-895.969	802.644	
TOT_DEBT_TO_TOT_EQY	93.493	69.584	1.34	.18	-43.496	230.483	
capitalintensity	153962.09	52588.476	2.93	.004	50431.599	257492.58	***
cashflowbysale	-78232.632	21820.831	-3.59	0	-121191.12	-35274.145	***
TOT_MKT_VAL	.991	.005	206.44	0	.981	1	***
financialslack	-8308.656	2771.862	-3.00	.003	-13765.597	-2851.715	***
Internationalisation	83.497	114.544	0.73	.467	-142.004	308.998	
NUMBER_OF_WORKMEN_DI~D	-2580.12	2574.617	-1.00	.317	-7648.746	2488.506	
rdbysales	99123.094	98746.556	1.00	.316	-95278.423	293524.61	
opefficiency_	-151134.88	36034.266	-4.19	0	-222075.23	-80194.518	***
BB_3Y_DEFAULT_PROB	-23378.493	178810.2	-0.13	.896	-375400.63	328643.64	
UNLEVERED_BETA	-41.682	85.141	-0.49	.625	-209.299	125.934	
2015b	0	.	.	.	.	.	
2016	3113.476	5347.756	0.58	.561	-7414.607	13641.559	
2017	5172.468	5921.359	0.87	.383	-6484.862	16829.798	
2018	7591.812	6810.225	1.12	.266	-5815.421	20999.045	
2019	7187.035	7656.872	0.94	.349	-7886.985	22261.056	
2020	7242.284	8504.637	0.85	.395	-9500.723	23985.291	
2021	8711.974	9846.771	0.89	.377	-10673.281	28097.229	
2022	1363.85	11135.798	0.12	.903	-20559.103	23286.803	
Constant	586575.64	100885.42	5.81	0	387963.35	785187.92	***
Mean dependent var	391855.703		SD dependent var		642295.475		
R-squared	0.995		Number of obs		351		
F-test	2362.307		Prob > F		0.000		
Akaike crit. (AIC)	7954.871		Bayesian crit. (BIC)		8047.529		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.236 Stata Regression Results: The Effect of E, S, G on Market Value added in the Energy Industry**: Industry_n = Energy**

MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	6847.823	2775.6	2.47	.021	1119.266	12576.38	**
SOCIAL_DISCLOSURE~E	-6767.381	6213.706	-1.09	.287	-19591.839	6057.077	
GOVNCE_DISCLOSURE~E	14388.79	4155.104	3.46	.002	5813.077	22964.503	***
Intotalassets	126861.36	398887.92	0.32	.753	-696402.83	950125.56	
firmage_	-72643.624	41227.813	-1.76	.091	-157733.65	12446.4	*
TOT_DEBT_TO_TOT_EQY	-2183.102	1000.58	-2.18	.039	-4248.197	-118.006	**
capitalintensity	4206058.1	1408462.9	2.99	.006	1299133.5	7112982.7	***
cashflowbysale	1270506.9	437443.71	2.90	.008	367667.42	2173346.3	***
TOT_MKT_VAL	.783	.015	52.96	0	.753	.814	***
financialslack	-54523.458	52645.959	-1.04	.311	-163179.38	54132.461	
Internationalisation	785.116	6028.614	0.13	.897	-11657.331	13227.563	
NUMBER_OF_WORKMEN_DI~D	-25782.256	38063.883	-0.68	.505	-104342.25	52777.737	
rdbysales	-1.198e+08	64660094	-1.85	.076	-2.533e+08	13633168	*
opefficiency_	1892056.6	923234.51	2.05	.052	-13405.805	3797519	*
BB_3Y_DEFAULT_PROB	-9356312.8	5090648.5	-1.84	.078	-19862895	1150269.4	*
UNLEVERED_BETA	-36521.949	8301.751	-4.40	0	-53655.922	-19387.976	***
2015b	0	.	.	.	.	.	
2016	-121525.54	71959.674	-1.69	.104	-270043.01	26991.925	
2017	-48377.831	71073.777	-0.68	.503	-195066.9	98311.235	
2018	-142219.56	75346.473	-1.89	.071	-297727.04	13287.915	*
2019	108503.34	68969.029	1.57	.129	-33841.744	250848.42	
2020	-36643.051	109950.79	-0.33	.742	-263570.32	190284.22	
2021	-518047.51	143876.71	-3.60	.001	-814994.44	-221100.58	***
2022o	0	.	.	.	.	.	
Constant	-987542.46	4126044.6	-0.24	.813	-9503279.9	7528195	
Mean dependent var	1251254.265		SD dependent var	2411982.135			
R-squared	0.998		Number of obs	55			
F-test	546.492		Prob > F	0.000			
Akaike crit. (AIC)	1437.540		Bayesian crit. (BIC)	1483.708			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.237 Stata Regression Results: The Effect of E, S, G on Market Value added in the Financial Industry

: Industry_n = Financial							
MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	1021.339	1231.991	0.83	.413	-1479.735	3522.413	
SOCIAL_DISCLOSURE~E	1669.315	2065.828	0.81	.425	-2524.539	5863.169	
GOVNCE_DISCLOSURE~E	-2217.463	2617.033	-0.85	.403	-7530.322	3095.396	
Intotalassets	-63111.837	40963.647	-1.54	.132	-146272.46	20048.788	
firmage_	-1932.725	8288.977	-0.23	.817	-18760.244	14894.793	
TOT_DEBT_TO_TOT_EQY	163.223	219.936	0.74	.463	-283.271	609.717	
capitalintensity	110828.25	381527.62	0.29	.773	-663714	885370.5	
cashflowbysale	-19348.675	16418.468	-1.18	.247	-52679.938	13982.588	
TOT_MKT_VAL	1.072	.098	10.90	0	.872	1.271	***
financialslack	-22809.985	1988.205	-11.47	0	-26846.256	-18773.714	***
Internationalisation	-1547.543	1189.021	-1.30	.202	-3961.384	866.299	
NUMBER_OF_WORKMEN_DI~D	-3295.191	15145.576	-0.22	.829	-34042.345	27451.963	
rdbysales	-1068379.2	1858160.2	-0.57	.569	-4840645	2703886.6	
opefficiency_	38559.893	42989.429	0.90	.376	-48713.286	125833.07	
BB_3Y_DEFAULT_PROB	-555851.23	399660.4	-1.39	.173	-1367205	255502.51	
UNLEVERED_BETA	-846.841	1080.163	-0.78	.438	-3039.688	1346.006	
2015b	0	.	.	.	.	.	
2016	4675.18	25297.567	0.19	.854	-46681.611	56031.97	
2017	-24334.103	27458.634	-0.89	.382	-80078.094	31409.888	
2018	17621.948	27517.512	0.64	.526	-38241.571	73485.466	
2019	27534.37	29971.366	0.92	.365	-33310.739	88379.479	
2020	37560.991	36412.288	1.03	.309	-36359.882	111481.87	
2021	737.322	38535.391	0.02	.985	-77493.682	78968.325	
2022o	0	.	.	.	.	.	
Constant	915170.51	411171.94	2.23	.033	80447.096	1749893.9	**
Mean dependent var		149240.508	SD dependent var		226064.981		
R-squared		0.930	Number of obs		69		
F-test		21.172	Prob > F		0.000		
Akaike crit. (AIC)		1678.109	Bayesian crit. (BIC)		1729.493		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.238 Stata Regression Results: The Effect of E, S, G on Market Value added in the Industrial Industry**: Industry_n = Industrial**

MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	-176.902	213.011	-0.83	.407	-596.262	242.458	
SOCIAL_DISCLOSURE~E	434.332	364.12	1.19	.234	-282.521	1151.184	
GOVNCE_DISCLOSURE~E	-102.607	355.933	-0.29	.773	-803.341	598.128	
Intotalassets	-12157.514	10142.623	-1.20	.232	-32125.538	7810.51	
firmage_	1060.248	1490.178	0.71	.477	-1873.5	3993.996	
TOT_DEBT_TO_TOT_EQY	-40.964	85.705	-0.48	.633	-209.695	127.766	
capitalintensity	3292.48	57326.141	0.06	.954	-109566.86	116151.82	
cashflowbysale	-36019.979	15994.984	-2.25	.025	-67509.685	-4530.274	**
TOT_MKT_VAL	.804	.011	73.42	0	.783	.826	***
financialslack	-2616.871	2476.979	-1.06	.292	-7493.358	2259.617	
Internationalisation	-33.598	187.844	-0.18	.858	-403.411	336.214	
NUMBER_OF_WORKMEN_DI~D	-8659.912	3241.757	-2.67	.008	-15042.036	-2277.787	***
rdbysales	-223703.96	370649.68	-0.60	.547	-953410.82	506002.9	
opefficiency_	-25604.156	24203.162	-1.06	.291	-73253.499	22045.186	
BB_3Y_DEFAULT_PROB	-21759.268	104709.68	-0.21	.836	-227903.72	184385.18	
UNLEVERED_BETA	-.483	127.544	-0.00	.997	-251.582	250.615	
2015b	0	.	.	.	.	.	
2016	-3296.882	5285.076	-0.62	.533	-13701.738	7107.974	
2017	-2856.845	4936.776	-0.58	.563	-12575.993	6862.302	
2018	-1403.329	4802.476	-0.29	.77	-10858.079	8051.421	
2019	-3555.47	4887.231	-0.73	.468	-13177.079	6066.139	
2020	-10863.684	5663.952	-1.92	.056	-22014.442	287.073	*
2021	2648.5	5934.554	0.45	.656	-9034.998	14331.999	
2022o	0	.	.	.	.	.	
Constant	116826.77	97165.077	1.20	.23	-74464.432	308117.98	
Mean dependent var	167420.449		SD dependent var		295884.325		
R-squared	0.974		Number of obs		365		
F-test	458.692		Prob > F		0.000		
Akaike crit. (AIC)	8334.740		Bayesian crit. (BIC)		8424.438		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.239 Stata Regression Results: The Effect of E, S, G on Market Value added in the Technology Industry

: Industry_n = Technology							
MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	72.048	738.746	0.10	.923	-1419.879	1563.975	
SOCIAL_DISCLOSURE~E	1104.808	1149.11	0.96	.342	-1215.866	3425.482	
GOVNCE_DISCLOSURE~E	-10499.963	2071.334	-5.07	0	-14683.107	-6316.819	***
Intotalassets	-10887.622	50642.41	-0.22	.831	-113162.04	91386.8	
firmage_	-13791.88	7990.998	-1.73	.092	-29930.027	2346.267	*
TOT_DEBT_TO_TOT_EQY	-646.945	854.307	-0.76	.453	-2372.253	1078.362	
capitalintensity	694768.72	454099.29	1.53	.134	-222303.41	1611840.9	
cashflowbysale	-190476.23	167773.34	-1.14	.263	-529301.37	148348.9	
TOT_MKT_VAL	.999	.01	98.51	0	.979	1.02	***
financialslack	-10302.809	7401.15	-1.39	.171	-25249.735	4644.117	
Internationalisation	536.603	232.352	2.31	.026	67.358	1005.847	**
NUMBER_OF_WOMEN_DI~D	-8024.344	8890.403	-0.90	.372	-25978.877	9930.189	
rdbysales	-1848137.8	1039385.7	-1.78	.083	-3947219.7	250944.15	*
opefficiency_	140240.8	47988.003	2.92	.006	43327.066	237154.54	***
BB_3Y_DEFAULT_PROB	65420.581	892683.23	0.07	.942	-1737389.8	1868230.9	
UNLEVERED_BETA	133.277	108.224	1.23	.225	-85.286	351.84	
2015b	0	.	.	.	.	.	
2016	-11242.281	17944.648	-0.63	.534	-47482.232	24997.671	
2017	-1539.961	19217.174	-0.08	.937	-40349.831	37269.909	
2018	4951.969	19739.372	0.25	.803	-34912.501	44816.439	
2019	13599.129	18875.663	0.72	.475	-24521.045	51719.304	
2020	13642.887	23307.941	0.58	.562	-33428.454	60714.228	
2021	16377.897	22475.896	0.73	.47	-29013.097	61768.891	
2022o	0	.	.	.	.	.	
Constant	1240285.4	481569.82	2.58	.014	267735.4	2212835.4	**
Mean dependent var	916471.194		SD dependent var		1616317.959		
R-squared	0.999		Number of obs		80		
F-test	1519.338		Prob > F		0.000		
Akaike crit. (AIC)	1897.349		Bayesian crit. (BIC)		1952.135		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.240 Stata Regression Results: The Effect of E, S, G on Market Value added in the Utilities Industry

: Industry_n = Utilities

MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENVIRON_DISCLOSURE~E	1230.76	2597.175	0.47	.638	-4000.22	6461.74	
SOCIAL_DISCLOSURE~E	-4017.742	4309.402	-0.93	.356	-12697.324	4661.84	
GOVNCE_DISCLOSURE~E	-19259.786	6698.116	-2.88	.006	-32750.483	-5769.088	***
Intotalassets	-277598.48	155687.34	-1.78	.081	-591168.87	35971.918	*
firmage_	8418.765	18700.791	0.45	.655	-29246.562	46084.092	
TOT_DEBT_TO_TOT_EQY	-1406.324	573.776	-2.45	.018	-2561.968	-250.679	**
capitalintensity	-1035349	954426.87	-1.09	.284	-2957663.4	886965.4	
cashflowbysale	-208424.22	140968.81	-1.48	.146	-492349.98	75501.534	
TOT_MKT_VAL	.772	.057	13.49	0	.656	.887	***
financialslack	-26115.045	49150.084	-0.53	.598	-125108.4	72878.306	
Internationalisation	5466.888	4839.24	1.13	.265	-4279.841	15213.618	
NUMBER_OF_WOMEN_DI~D	34325.739	22722.341	1.51	.138	-11439.406	80090.883	
rdbysales	15983028	33994083	0.47	.641	-52484570	84450626	
opefficiency_	313595.31	287043.81	1.09	.28	-264540.6	891731.23	
BB_3Y_DEFAULT_PROB	253654.57	1321261.3	0.19	.849	-2407502.3	2914811.4	
UNLEVERED_BETA	-29.303	2262.324	-0.01	.99	-4585.856	4527.251	
2015b	0	.	.	.	.	.	
2016	8771.751	55043.737	0.16	.874	-102092.03	119635.53	
2017	21784.693	57237.135	0.38	.705	-93496.814	137066.2	
2018	-46255.692	54398.77	-0.85	.4	-155820.44	63309.056	
2019	-64461.712	48593.001	-1.33	.191	-162333.04	33409.616	
2020	-66088.807	51267.401	-1.29	.204	-169346.65	37169.04	
2021	-19954.22	47999.102	-0.42	.68	-116629.38	76720.934	
2022o	0	.	.	.	.	.	
Constant	4454919.2	1607890.7	2.77	.008	1216461.2	7693377.3	***
Mean dependent var	241839.825		SD dependent var		349929.315		
R-squared	0.882		Number of obs		82		
F-test	15.352		Prob > F		0.000		
Akaike crit. (AIC)	2130.979		Bayesian crit. (BIC)		2186.333		

*** $p < .01$, ** $p < .05$, * $p < .1$

APPENDIX 2

INDUSTRY-WISE REGRESSION RESULTS FOR THE EFFECT OF ESG ON FIRM PERFORMANCE METRICS ACROSS INDUSTRIES (PRE- AND POST-COVID PERIODS)

Table 5.267 Pre-COVID ESG Combined Score impact on Growth in Revenues across industries

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.078	.131	-0.60	.552	-.336	.181	
Intotalassets	-.369	1.322	-0.28	.78	-2.982	2.243	
firmage_	-.109	.054	-2.01	.046	-.217	-.002	**
TOT_DEBT_TO_TOT_EQY	-.012	.003	-4.08	0	-.017	-.006	***
capitalintensity	-.279	29.581	-0.01	.992	-58.759	58.2	
cashflowbysale	-15.184	6.797	-2.23	.027	-28.621	-1.746	**
TOT_MKT_VAL	0	0	0.85	.397	0	0	
financialslack	.426	1.052	0.41	.686	-1.653	2.506	
Internationalisation	.026	.065	0.40	.693	-.104	.155	
NUMBER_OF_WORKING_DAYS	.569	1.837	0.31	.757	-3.063	4.2	
rdbysales	29.08	38.39	0.76	.45	-46.814	104.974	
opefficiency_	-9.958	9.277	-1.07	.285	-28.299	8.382	
BB_3Y_DEFAULT_PROB	101.96	55.715	1.83	.069	-8.185	212.104	*
UNLEVERED_BETA	.932	.412	2.26	.025	.116	1.747	**
Industry: base Beta	0	.	.	.	.	.	
Communications	3.072	6.434	0.48	.634	-9.647	15.792	
Consumer, Cyclical	4.821	4.171	1.16	.25	-3.425	13.067	
Consumer, Non-cyclical	8.569	3.789	2.26	.025	1.079	16.058	**
Diversified	-4.677	14.348	-0.33	.745	-33.042	23.689	
Energy	-11.765	6.913	-1.70	.091	-25.432	1.902	*
Financial	-2.693	7.332	-0.37	.714	-17.187	11.802	
Industrial	-1.255	3.637	-0.35	.731	-8.444	5.935	
Technology	2.093	5.464	0.38	.702	-8.708	12.894	
Utilities	-6.579	6.549	-1.00	.317	-19.525	6.368	
Constant	23.872	16.185	1.47	.142	-8.124	55.868	
Mean dependent var		10.585		SD dependent var		15.536	
R-squared		0.319		Number of obs		165	
F-test		2.878		Prob > F		0.000	
Akaike crit. (AIC)		1356.990		Bayesian crit. (BIC)		1431.532	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.268 Post-COVID ESG Combined Score impact on Growth in Revenues across industries

SALES_GROWTH	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.164	.124	-1.33	.187	-.409	.08	
Intotalassets	-.418	1.317	-0.32	.751	-3.016	2.18	
firmage_	-.049	.045	-1.10	.274	-.138	.039	
TOT_DEBT_TO_TOT_EQY	.061	.024	2.59	.01	.014	.107	**
capitalintensity	-21.018	28.325	-0.74	.459	-76.902	34.866	
cashflowbysale	20.142	6.012	3.35	.001	8.28	32.004	***
TOT_MKT_VAL	0	0	0.08	.934	0	0	
financialslack	-.815	.971	-0.84	.403	-2.731	1.102	
Internationalisation	.068	.071	0.95	.343	-.073	.208	
NUMBER_OF_WORKING_DAYS	-1.07	1.263	-0.85	.398	-3.561	1.422	
rdbysales	-2.868	67.57	-0.04	.966	-136.179	130.443	
opefficiency_	-.091	9.382	-0.01	.992	-18.601	18.419	
BB_3Y_DEFAULT_PROB	-79.471	42	-1.89	.06	-162.336	3.393	*
UNLEVERED_BETA_A	.013	.188	0.07	.944	-.358	.385	
Industry : base Beta's	0	.	.	.	.	.	
Communications	.401	7.001	0.06	.954	-13.411	14.213	
Consumer, Cyclical	-5.339	3.797	-1.41	.161	-12.83	2.153	
Consumer, Non-cyclical	4.302	3.63	1.19	.237	-2.86	11.464	
Diversified	-1.257	14.861	-0.08	.933	-30.577	28.063	
Energy	-7.858	9.624	-0.82	.415	-26.846	11.131	
Financial	-10.709	6.179	-1.73	.085	-22.9	1.481	*
Industrial	-2.566	3.467	-0.74	.46	-9.406	4.273	
Technology	8.002	5.325	1.50	.135	-2.505	18.508	
Utilities	9.777	5.692	1.72	.088	-1.453	21.007	*
Constant	15.581	17.824	0.87	.383	-19.585	50.748	
Mean dependent var		2.512		SD dependent var		15.678	
R-squared		0.260		Number of obs		208	
F-test		2.805		Prob > F		0.000	
Akaike crit. (AIC)		1719.707		Bayesian crit. (BIC)		1799.808	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.269 Pre-COVID ESG Combined Score impact on Operating Profit Margin across industries

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.115	.057	-2.04	.044	-.227	-.003	**
Intotalassets	.851	.572	1.49	.139	-.281	1.982	
firmage_	-.039	.024	-1.64	.103	-.085	.008	
TOT_DEBT_TO_TOT_EQY	0	.001	-0.00	.999	-.002	.002	
capitalintensity	-20.184	12.812	-1.58	.117	-45.511	5.144	
cashflowbysale	9.898	2.944	3.36	.001	4.078	15.717	***
TOT_MKT_VAL	0	0	0.42	.676	0	0	
financialslack	1.113	.456	2.44	.016	.213	2.014	**
Internationalisation	.012	.028	0.44	.663	-.044	.068	
NUMBER_OF_WORKEMPLOYED	-1.906	.796	-2.40	.018	-3.479	-.333	**
rdbysales	1.486	16.627	0.09	.929	-31.383	34.356	
opefficiency_	-47.126	4.018	-11.73	0	-55.069	-39.183	***
BB_3Y_DEFAULT_PROB	-77.132	24.13	-3.20	.002	-124.836	-29.428	***
UNLEVERED_BETA	.008	.179	0.04	.966	-.345	.361	
Industry : base Base	0	.	.	.	.	.	
Communications	-.88	2.787	-0.32	.753	-6.389	4.628	
Consumer, Cyclical	-3.286	1.806	-1.82	.071	-6.858	.285	*
Consumer, Non-cyclical	-.305	1.641	-0.19	.853	-3.549	2.939	
Diversified	-4.987	6.214	-0.80	.424	-17.272	7.298	
Energy	-8.424	2.994	-2.81	.006	-14.343	-2.505	***
Financial	-1.518	3.175	-0.48	.633	-7.795	4.76	
Industrial	-2.748	1.575	-1.74	.083	-5.862	.365	*
Technology	-5.442	2.366	-2.30	.023	-10.12	-.764	**
Utilities	5.259	2.836	1.85	.066	-.348	10.866	*
Constant	52.36	7.01	7.47	0	38.502	66.217	***
Mean dependent var		14.453		SD dependent var		11.110	
R-squared		0.750		Number of obs		165	
F-test		18.426		Prob > F		0.000	
Akaike crit. (AIC)		1080.852		Bayesian crit. (BIC)		1155.395	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.270 Post-COVID ESG Combined Score impact on Operating Profit Margin across industries

OPER_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.015	.062	0.25	.804	-.106	.137	
Intotalassets	-.577	.654	-0.88	.379	-1.867	.714	
firmage_	-.014	.022	-0.61	.543	-.058	.03	
TOT_DEBT_TO_TOT_EQY	.008	.012	0.72	.471	-.015	.032	
capitalintensity	-15.863	14.072	-1.13	.261	-43.627	11.901	
cashflowbysale	-2.037	2.987	-0.68	.496	-7.93	3.856	
TOT_MKT_VAL	0	0	1.52	.129	0	0	
financialslack	2.029	.483	4.20	0	1.077	2.981	***
Internationalisation	-.007	.035	-0.19	.853	-.076	.063	
NUMBER_OF_WOMEN_DIRECTORS	.337	.627	0.54	.592	-.9	1.575	
rdbysales	-29.215	33.569	-0.87	.385	-95.445	37.016	
opefficiency_	-36.181	4.661	-7.76	0	-45.377	-26.985	***
BB_3Y_DEFAULT_PROB	15.893	20.866	0.76	.447	-25.275	57.061	
UNLEVERED_BETA	.018	.094	0.19	.846	-.166	.203	
Industry : base	0	.	.	.	.	.	
Communications	1.162	3.478	0.33	.739	-5.7	8.024	
Consumer, Cyclical	-4.439	1.886	-2.35	.02	-8.161	-.718	**
Consumer, Non-cyclical	.678	1.803	0.38	.707	-2.88	4.236	
Diversified	-4.841	7.383	-0.66	.513	-19.407	9.726	
Energy	-3.132	4.781	-0.65	.513	-12.565	6.302	
Financial	10.618	3.07	3.46	.001	4.562	16.675	***
Industrial	-4.327	1.722	-2.51	.013	-7.725	-.929	**
Technology	-8.925	2.646	-3.37	.001	-14.145	-3.705	***
Utilities	3.013	2.828	1.07	.288	-2.566	8.593	
Constant	48.115	8.855	5.43	0	30.643	65.586	***
Mean dependent var		15.592		SD dependent var		10.053	
R-squared		0.555		Number of obs		208	
F-test		9.997		Prob > F		0.000	
Akaike crit. (AIC)		1428.698		Bayesian crit. (BIC)		1508.799	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.271 Pre-COVID ESG Combined Score impact on Net Profit Margin across industries

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.12	.062	-1.93	.056	-.243	.003	*
Intotalassets	.554	.63	0.88	.38	-.691	1.798	
firmage_	-.027	.026	-1.04	.298	-.078	.024	
TOT_DEBT_TO_TOT_EQY	.002	.001	1.48	.141	-.001	.005	
capitalintensity	-15.72	14.091	-1.12	.266	-43.577	12.137	
cashflowbysale	11.75	3.238	3.63	0	5.35	18.151	***
TOT_MKT_VAL	0	0	1.10	.272	0	0	
financialslack	1.967	.501	3.93	0	.976	2.957	***
Internationalisation	.028	.031	0.91	.366	-.033	.09	
NUMBER_OF_WORKING_DAYS	-1.103	.875	-1.26	.209	-2.833	.626	
rdbysales	19.671	18.287	1.08	.284	-16.481	55.824	
oper efficiency_	-18.359	4.419	-4.15	0	-27.096	-9.623	***
BB_3Y_DEFAULT_PROB	-111.662	26.54	-4.21	0	-164.13	-59.193	***
UNLEVERED_BETA	.099	.196	0.50	.616	-.29	.487	
Industry : base Banks	0	.	.	.	.	.	
Communications	-.844	3.065	-0.28	.784	-6.903	5.216	
Consumer, Cyclical	-2.392	1.987	-1.20	.231	-6.32	1.536	
Consumer, Non-cyclical	1.015	1.805	0.56	.575	-2.553	4.583	
Diversified	-5.206	6.835	-0.76	.448	-18.718	8.306	
Energy	-5.454	3.293	-1.66	.1	-11.964	1.056	*
Financial	16.183	3.493	4.63	0	9.278	23.087	***
Industrial	-.666	1.732	-0.38	.701	-4.091	2.759	
Technology	-1.457	2.603	-0.56	.576	-6.602	3.688	
Utilities	5.335	3.12	1.71	.089	-.832	11.502	*
Constant	21.997	7.71	2.85	.005	6.755	37.238	***
Mean dependent var	10.285		SD dependent var	9.887			
R-squared	0.619		Number of obs	165			
F-test	9.948		Prob > F	0.000			
Akaike crit. (AIC)	1112.266		Bayesian crit. (BIC)	1186.809			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.272 Post-COVID ESG Combined Score impact on Net Profit Margin across industries

PROF_MARGIN	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.064	.065	0.99	.324	-.064	.193	
lntotalassets	-.41	.69	-0.59	.554	-1.771	.952	
firmage_	-.026	.024	-1.10	.272	-.072	.021	
TOT_DEBT_TO_TOT_EQY	-.022	.012	-1.78	.077	-.046	.002	*
capitalintensity	-31.342	14.846	-2.11	.036	-60.631	-2.052	**
cashflowbysale	9.589	3.151	3.04	.003	3.372	15.806	***
TOT_MKT_VAL	0	0	0.46	.647	0	0	
financialslack	1.602	.509	3.15	.002	.598	2.606	***
Internationalisation	-.022	.037	-0.59	.558	-.095	.052	
NUMBER_OF_WOMEN_DIRECTORS	.624	.662	0.94	.347	-.682	1.93	
rdbysales	-36.768	35.414	-1.04	.301	-106.638	33.102	
opefficiency_	-26.191	4.917	-5.33	0	-35.893	-16.49	***
BB_3Y_DEFAULT_PROB	-9.178	22.013	-0.42	.677	-52.609	34.252	
UNLEVERED_BETA	-.018	.099	-0.18	.855	-.213	.177	
Industry : base Banks	0	.	.	.	.	.	
Communications	.96	3.669	0.26	.794	-6.279	8.199	
Consumer, Cyclical	-4.499	1.99	-2.26	.025	-8.425	-.572	**
Consumer, Non-cyclical	-1.599	1.903	-0.84	.402	-5.353	2.154	
Diversified	-5.543	7.789	-0.71	.478	-20.91	9.824	
Energy	-2.85	5.044	-0.57	.573	-12.802	7.102	
Financial	-1.265	3.238	-0.39	.696	-7.655	5.124	
Industrial	-5.411	1.817	-2.98	.003	-8.996	-1.827	***
Technology	-8.104	2.791	-2.90	.004	-13.611	-2.598	***
Utilities	.052	2.983	0.02	.986	-5.834	5.938	
Constant	34.779	9.342	3.72	0	16.348	53.21	***
Mean dependent var		11.353		SD dependent var		9.700	
R-squared		0.469		Number of obs		208	
F-test		7.057		Prob > F		0.000	
Akaike crit. (AIC)		1450.952		Bayesian crit. (BIC)		1531.053	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.273 Pre-COVID ESG Combined Score impact on Return on Assets across industries

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.005	.052	0.10	.923	-.098	.108	
Intotalassets	-2.403	.525	-4.58	0	-3.441	-1.365	***
firmage_	.015	.022	0.71	.48	-.027	.058	
TOT_DEBT_TO_TOTAL_EQY	0	.001	0.25	.807	-.002	.003	
capitalintensity	-10.059	11.749	-0.86	.393	-33.286	13.167	
cashflowbysale	9.061	2.7	3.36	.001	3.724	14.398	***
TOT_MKT_VAL	0	0	4.09	0	0	0	***
financialslack	.465	.418	1.11	.267	-.36	1.291	
Internationalisation	-.035	.026	-1.34	.183	-.086	.017	
NUMBER_OF_WORKING_DAYS	-.819	.73	-1.12	.263	-2.262	.623	
rdbysales	-2.379	15.247	-0.16	.876	-32.522	27.763	
operational_efficiency	-12.394	3.685	-3.36	.001	-19.679	-5.11	***
BB_3Y_DEFAULT_PROB	-49.781	22.128	-2.25	.026	-93.528	-6.035	**
UNLEVERED_BETA	-.009	.164	-0.05	.956	-.333	.315	
Industry : base Base	0	.	.	.	.	.	
Communications	-1.764	2.555	-0.69	.491	-6.816	3.288	
Consumer, Cyclical	.165	1.657	0.10	.921	-3.11	3.44	
Consumer, Non-cyclical	2.58	1.505	1.71	.089	-.395	5.555	*
Diversified	-2.98	5.699	-0.52	.602	-14.246	8.287	
Energy	-2.444	2.746	-0.89	.375	-7.872	2.984	
Financial	-1.788	2.912	-0.61	.54	-7.545	3.968	
Industrial	-1.48	1.444	-1.02	.307	-4.336	1.375	
Technology	1.742	2.17	0.80	.424	-2.548	6.032	
Utilities	-2.893	2.601	-1.11	.268	-8.035	2.249	
Constant	44.765	6.428	6.96	0	32.057	57.473	***
Mean dependent var		9.384		SD dependent var		7.480	
R-squared		0.537		Number of obs		165	
F-test		7.108		Prob > F		0.000	
Akaike crit. (AIC)		1052.273		Bayesian crit. (BIC)		1126.815	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.274 Post-COVID ESG Combined Score impact on Return on Assets across industries

RETURN_ON_ASSET	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.066	.041	1.63	.105	-.014	.146	
Intotalassets	-2.398	.43	-5.58	0	-3.246	-1.549	***
firmage_	-.015	.015	-1.02	.308	-.044	.014	
TOT_DEBT_TO_TOT_EQY	-.031	.008	-3.98	0	-.046	-.015	***
capitalintensity	-7.807	9.251	-0.84	.4	-26.059	10.445	
cashflowbysale	1.539	1.964	0.78	.434	-2.336	5.413	
TOT_MKT_VAL	0	0	6.00	0	0	0	***
financialslack	.371	.317	1.17	.244	-.255	.997	
Internationalisation	-.022	.023	-0.94	.346	-.068	.024	
NUMBER_OF_WOMEN_DIRECTORS	.349	.412	0.85	.399	-.465	1.162	
rdbysales	-37.631	22.069	-1.71	.09	-81.172	5.91	*
opefficiency_	-10.655	3.064	-3.48	.001	-16.701	-4.609	***
BB_3Y_DEFAULT_PROB	-15.355	13.718	-1.12	.264	-42.42	11.709	
UNLEVERED_BETA	-.08	.061	-1.30	.194	-.201	.041	
Industry : base Bas	0	.	.	.	.	.	
Communications	-2.348	2.287	-1.03	.306	-6.859	2.163	
Consumer, Cyclical	-2.069	1.24	-1.67	.097	-4.515	.378	*
Consumer, Non-cyclical	-.813	1.186	-0.69	.494	-3.152	1.526	
Diversified	-1.284	4.854	-0.26	.792	-10.86	8.292	
Energy	.407	3.143	0.13	.897	-5.795	6.608	
Financial	-7.078	2.018	-3.51	.001	-11.059	-3.096	***
Industrial	-4.112	1.132	-3.63	0	-6.346	-1.878	***
Technology	-2.678	1.739	-1.54	.125	-6.11	.753	
Utilities	-.018	1.859	-0.01	.992	-3.686	3.65	
Constant	44.952	5.822	7.72	0	33.466	56.438	***
Mean dependent var		9.466		SD dependent var		6.780	
R-squared		0.578		Number of obs		208	
F-test		10.941		Prob > F		0.000	
Akaike crit. (AIC)		1254.213		Bayesian crit. (BIC)		1334.314	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.275 Pre-COVID ESG Combined Score impact on Return on Equity across industries

RETURN_COM_E QY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSUR E_SCORE	-.022	.142	-0.15	.878	-.302	.258	
Intotalassets	-4.4	1.431	-3.08	.003	-7.229	-1.571	***
firmage_	.063	.059	1.07	.284	-.053	.179	
TOT_DEBT_TO_T OT_EQY	.035	.003	11.30	0	.029	.041	***
capitalintensity	-14.267	32.03	-0.45	.657	-77.588	49.054	
cashflowbysale	20.814	7.36	2.83	.005	6.264	35.363	***
TOT_MKT_VAL	0	0	2.83	.005	0	0	***
financialslack	-1.591	1.139	-1.40	.165	-3.843	.66	
Internationalisation	-.083	.071	-1.16	.246	-.223	.058	
NUMBER_OF_WO MEN_DI~D	-1.326	1.989	-0.67	.506	-5.258	2.606	
rdbysales	-23.573	41.568	-0.57	.572	-105.75	58.603	
opefficiency_	-23.18	10.045	-2.31	.022	-43.038	-3.321	**
BB_3Y_DEFAULT _PROB	-113.198	60.328	-1.88	.063	-232.461	6.066	*
UNLEVERED_BET A	.275	.447	0.62	.539	-.608	1.158	
Industry : base Ba~s	0	.	.	.	.	.	
Communications	-4.475	6.967	-0.64	.522	-18.248	9.298	
Consumer, Cyclical	.727	4.516	0.16	.872	-8.201	9.656	
Consumer, Non- cycl~l	4.954	4.102	1.21	.229	-3.155	13.064	
Diversified	-8.892	15.536	-0.57	.568	-39.606	21.823	
Energy	-3.598	7.485	-0.48	.632	-18.396	11.2	
Financial	-1.098	7.939	-0.14	.89	-16.792	14.596	
Industrial	-4.137	3.938	-1.05	.295	-11.922	3.648	
Technology	-.453	5.916	-0.08	.939	-12.149	11.242	
Utilities	-8.113	7.091	-1.14	.255	-22.131	5.905	
Constant	86.697	17.525	4.95	0	52.052	121.342	***
Mean dependent var	20.541		SD dependent var		21.167		
R-squared	0.570		Number of obs		165		
F-test	8.132		Prob > F		0.000		
Akaike crit. (AIC)	1383.238		Bayesian crit. (BIC)		1457.781		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.276 Post-COVID ESG Combined Score impact on Return on Equity across industries

RETURN_COM_E QY	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSUR E_SCORE	.077	.099	0.78	.436	-.118	.273	
Intotalassets	-4.347	1.051	-4.14	0	-6.42	-2.275	***
firmage_	-.028	.036	-0.78	.436	-.099	.043	
TOT_DEBT_TO_T OT_EQY	-.017	.019	-0.91	.366	-.054	.02	
capitalintensity	4.626	22.601	0.20	.838	-39.964	49.217	
cashflowbysale	1.8	4.797	0.38	.708	-7.665	11.265	
TOT_MKT_VAL	0	0	4.99	0	0	0	***
financialslack	-1.577	.775	-2.03	.043	-3.106	-.048	**
Internationalisation	-.037	.057	-0.66	.512	-.149	.075	
NUMBER_OF_WO MEN_DI~D	.441	1.008	0.44	.662	-1.547	2.429	
rdbysales	-88.718	53.915	-1.65	.102	-195.09	17.653	
opefficiency_	-14.61	7.486	-1.95	.053	-29.379	.16	*
BB_3Y_DEFAULT _PROB	-49.201	33.513	-1.47	.144	-115.32	16.918	
UNLEVERED_BET A	-.21	.15	-1.40	.165	-.506	.087	
Industry : base Ba~s	0	.	.	.	.	.	
Communications	-10.49	5.586	-1.88	.062	-21.511	.531	*
Consumer, Cyclical	-6.038	3.03	-1.99	.048	-12.016	-.06	**
Consumer, Non- cyclical	-2.015	2.896	-0.70	.487	-7.73	3.699	
Diversified	-5.334	11.858	-0.45	.653	-28.73	18.061	
Energy	9.534	7.679	1.24	.216	-5.617	24.686	
Financial	-12.076	4.93	-2.45	.015	-21.803	-2.349	**
Industrial	-7.592	2.766	-2.74	.007	-13.049	-2.134	***
Technology	-8.061	4.249	-1.90	.059	-16.445	.323	*
Utilities	1.223	4.542	0.27	.788	-7.738	10.184	
Constant	84.474	14.222	5.94	0	56.414	112.534	***
Mean dependent var		17.294		SD dependent var		13.354	
R-squared		0.350		Number of obs		208	
F-test		4.311		Prob > F		0.000	
Akaike crit. (AIC)		1625.797		Bayesian crit. (BIC)		1705.898	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.277 Pre-COVID ESG Combined Score impact on Return on Capital Employed across industries

RETURN_ON_CAPITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
ESG_DISCLOSURE_SCORE	-.101	.217	-0.46	.644	-.53	.329
Intotalassets	-3.903	2.202	-1.77	.079	-8.257	.452
firmage_	-.029	.09	-0.33	.745	-.208	.149
TOT_DEBT_TO_TOT_EQY	.003	.005	0.73	.465	-.006	.013
capitalintensity	104.636	48.999	2.14	.034	7.751	201.521
cashflowbysale	26.942	11.304	2.38	.019	4.591	49.293
TOT_MKT_VAL	0	0	2.04	.043	0	0
financialslack	-2.833	1.742	-1.63	.106	-6.277	.612
Internationalisation	-.119	.108	-1.10	.272	-.333	.094
NUMBER_OF_WORKEMPLOYED	.672	3.117	0.22	.83	-5.491	6.835
rdbysales	-74.159	63.66	-1.16	.246	-200.033	51.716
operational_efficiency_	-31.07	16.007	-1.94	.054	-62.721	.581
BB_3Y_DEFAULT_PROB	-298.625	93.017	-3.21	.002	-482.548	-114.701
UNLEVERED_BETA	-.218	.68	-0.32	.749	-1.563	1.127
Industry : base Beta	0	.	.	.	.	.
Communications	-31.433	10.624	-2.96	.004	-52.439	-10.426
Consumer, Cyclical	.002	6.882	0.00	1	-13.605	13.61
Consumer, Non-cyclical	1.55	6.249	0.25	.805	-10.807	13.907
Diversified	-23.268	23.661	-0.98	.327	-70.053	23.516
Energy	-13.872	11.416	-1.22	.226	-36.445	8.7
Financial	-10.111	12.994	-0.78	.438	-35.804	15.583
Industrial	-6.582	6.036	-1.09	.277	-18.517	5.352
Technology	-6.459	9.336	-0.69	.49	-24.919	12.001
Utilities	-8.787	10.833	-0.81	.419	-30.206	12.632
Constant	113.984	27.565	4.14	0	59.48	168.489
Mean dependent var		22.113		SD dependent var		26.151
R-squared		0.349		Number of obs		162
F-test		3.218		Prob > F		0.000
Akaike crit. (AIC)		1494.665		Bayesian crit. (BIC)		1568.768

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.278 Post-COVID ESG Combined Score impact on Return on Capital Employed across industries

RETURN_ON_CAPITAL_~D	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.173	.16	1.08	.282	-.143	.489	
Intotalassets	-2.936	1.708	-1.72	.087	-6.306	.434	*
firmage_	-.113	.058	-1.96	.052	-.227	.001	*
TOT_DEBT_TO_TOT_EQY	-.067	.031	-2.18	.03	-.127	-.006	**
capitalintensity	100.908	36.542	2.76	.006	28.804	173.012	***
cashflowbysale	.917	7.879	0.12	.907	-14.629	16.464	
TOT_MKT_VAL	0	0	1.73	.085	0	0	*
financialslack	-5.043	1.254	-4.02	0	-7.518	-2.568	***
Internationalisation	-.146	.091	-1.59	.113	-.326	.035	
NUMBER_OF_WOMEN_DI~D	2.197	1.63	1.35	.179	-1.019	5.413	
rdbysales	-159.965	86.744	-1.84	.067	-331.125	11.194	*
opefficiency_	-14.771	12.322	-1.20	.232	-39.085	9.543	
BB_3Y_DEFAULT_PROB	-12.548	56.996	-0.22	.826	-125.01	99.915	
UNLEVERED_BETA	-.52	.244	-2.13	.034	-1.001	-.039	**
Industry : base Bas	0	.	.	.	.	.	
Communications	-.56	9.531	-0.06	.953	-19.367	18.246	
Consumer, Cyclical	-2.288	4.879	-0.47	.64	-11.915	7.339	
Consumer, Non-cycl~l	-.008	4.665	-0.00	.999	-9.213	9.197	
Diversified	-9.186	19.085	-0.48	.631	-46.844	28.472	
Energy	-9.065	12.362	-0.73	.464	-33.457	15.328	
Financial	-17.835	8.336	-2.14	.034	-34.283	-1.386	**
Industrial	-9.106	4.492	-2.03	.044	-17.969	-.244	**
Technology	6.234	6.838	0.91	.363	-7.259	19.727	
Utilities	-7.699	7.323	-1.05	.295	-22.148	6.75	
Constant	86.27	22.973	3.76	0	40.941	131.599	***
Mean dependent var		22.915		SD dependent var		20.313	
R-squared		0.275		Number of obs		205	
F-test		2.980		Prob > F		0.000	
Akaike crit. (AIC)		1797.541		Bayesian crit. (BIC)		1877.294	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.279 Pre-COVID ESG Combined Score impact on Investment Efficiency across industries

RETURN_ON_INV _CAPITAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.073	.157	-0.47	.642	-.383	.237	
Intotalassets	-2.564	1.587	-1.62	.108	-5.701	.573	
firmage_	.014	.065	0.21	.835	-.115	.143	
TOT_DEBT_TO_TOT_EQY	.003	.003	0.73	.465	-.004	.009	
capitalintensity	35.846	35.516	1.01	.315	-34.366	106.058	
cashflowbysale	21.221	8.161	2.60	.01	5.088	37.354	**
TOT_MKT_VAL	0	0	1.92	.057	0	0	*
financialslack	-1.375	1.263	-1.09	.278	-3.872	1.121	
Internationalisation	-.112	.079	-1.42	.157	-.267	.044	
NUMBER_OF_WOMEN_DIRECTORS	-1.488	2.205	-0.67	.501	-5.848	2.872	
rdbysales	-49.178	46.091	-1.07	.288	-140.297	41.942	
oper efficiency_	-25.94	11.138	-2.33	.021	-47.96	-3.921	**
BB_3Y_DEFAULT_PROB	-280.723	66.893	-4.20	0	-412.965	-148.481	***
UNLEVERED_BETA	-.004	.495	-0.01	.993	-.983	.975	
Industry : base Beta	0	.	.	.	.	.	
Communications	-31.627	7.725	-4.09	0	-46.899	-16.356	***
Consumer, Cyclical	-1.511	5.008	-0.30	.763	-11.411	8.389	
Consumer, Non-cyclical	-.438	4.549	-0.10	.923	-9.43	8.555	
Diversified	-11.591	17.227	-0.67	.502	-45.648	22.465	
Energy	-9.498	8.3	-1.14	.254	-25.906	6.911	
Financial	-5.703	8.803	-0.65	.518	-23.105	11.699	
Industrial	-5.448	4.366	-1.25	.214	-14.08	3.184	
Technology	-5.487	6.56	-0.84	.404	-18.455	7.482	
Utilities	-7.337	7.863	-0.93	.352	-22.881	8.207	
Constant	79.058	19.432	4.07	0	40.643	117.473	***
Mean dependent var		13.102		SD dependent var		20.006	
R-squared		0.408		Number of obs		165	
F-test		4.231		Prob > F		0.000	
Akaike crit. (AIC)		1417.327		Bayesian crit. (BIC)		1491.870	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.280 Post-COVID ESG Combined Score impact on Investment Efficiency across industries

RETURN_ON_INV _CAPITAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.028	.079	0.35	.725	-.128	.183	
Intotalassets	-4.281	.837	-5.11	0	-5.932	-2.63	***
firmage_	-.001	.029	-0.05	.959	-.058	.055	
TOT_DEBT_TO_TOT_EQY	-.042	.015	-2.79	.006	-.071	-.012	***
capitalintensity	12.571	18.006	0.70	.486	-22.953	48.096	
cashflowbysale	2.919	3.822	0.76	.446	-4.621	10.46	
TOT_MKT_VAL	0	0	6.51	0	0	0	***
financialslack	-1.315	.617	-2.13	.035	-2.533	-.097	**
Internationalisation	-.015	.045	-0.33	.739	-.104	.074	
NUMBER_OF_WOMEN_DIRECTORS	.388	.803	0.48	.629	-1.195	1.972	
rdbysales	-71.606	42.953	-1.67	.097	-156.349	13.138	*
opefficiency_	-10.798	5.964	-1.81	.072	-22.565	.968	*
BB_3Y_DEFAULT_PROB	4.162	26.699	0.16	.876	-48.513	56.838	
UNLEVERED_BETA	-.178	.12	-1.48	.14	-.414	.059	
Industry : base Beta	0	.	.	.	.	.	
Communications	-1.897	4.45	-0.43	.67	-10.677	6.883	
Consumer, Cyclical	-2.265	2.414	-0.94	.349	-7.027	2.497	
Consumer, Non-cyclical	1.019	2.308	0.44	.659	-3.534	5.572	
Diversified	-.941	9.447	-0.10	.921	-19.58	17.697	
Energy	8.623	6.118	1.41	.16	-3.447	20.694	
Financial	-7.807	3.928	-1.99	.048	-15.556	-.058	**
Industrial	-3.648	2.204	-1.66	.1	-7.996	.7	*
Technology	-4.699	3.385	-1.39	.167	-11.378	1.979	
Utilities	1.238	3.618	0.34	.733	-5.901	8.376	
Constant	74.11	11.331	6.54	0	51.755	96.465	***
Mean dependent var		13.459		SD dependent var		11.097	
R-squared		0.403		Number of obs		208	
F-test		5.396		Prob > F		0.000	
Akaike crit. (AIC)		1531.236		Bayesian crit. (BIC)		1611.337	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.281 Pre-COVID ESG Combined Score impact on Tobin's Q across industries

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.013	.023	0.57	.568	-.033	.059	
Intotalassets	-1.109	.234	-4.73	0	-1.572	-.645	***
firmage_	.012	.01	1.22	.223	-.007	.031	
TOT_DEBT_TO_TOT_EQY	0	.001	0.61	.541	-.001	.001	
capitalintensity	-5.97	5.246	-1.14	.257	-16.341	4.402	
cashflowbysale	2.971	1.205	2.46	.015	.588	5.354	**
TOT_MKT_VAL	0	0	3.38	.001	0	0	***
financialslack	-.292	.187	-1.57	.12	-.661	.077	
Internationalisation	-.029	.012	-2.53	.013	-.052	-.006	**
NUMBER_OF_WORKING_DAYS	-.336	.326	-1.03	.304	-.98	.308	
rdbysales	-2.989	6.808	-0.44	.661	-16.449	10.47	
opefficiency_	-3.817	1.645	-2.32	.022	-7.069	-.564	**
BB_3Y_DEFAULT_PROB	-22.098	9.881	-2.24	.027	-41.632	-2.564	**
UNLEVERED_BETA	-.047	.073	-0.64	.525	-.191	.098	
Industry : base Beta	0	.	.	.	.	.	
Communications	.839	1.141	0.74	.463	-1.416	3.095	
Consumer, Cyclical	.642	.74	0.87	.387	-.82	2.105	
Consumer, Non-cyclical	1.856	.672	2.76	.007	.527	3.184	***
Diversified	4.059	2.545	1.60	.113	-.972	9.089	
Energy	-.887	1.226	-0.72	.47	-3.311	1.536	
Financial	.146	1.3	0.11	.911	-2.425	2.716	
Industrial	-.069	.645	-0.11	.915	-1.344	1.206	
Technology	-.586	.969	-0.60	.547	-2.501	1.33	
Utilities	-.85	1.161	-0.73	.465	-3.146	1.446	
Constant	18.184	2.87	6.34	0	12.51	23.859	***
Mean dependent var	3.444		SD dependent var	3.105			
R-squared	0.464		Number of obs	165			
F-test	5.306		Prob > F	0.000			
Akaike crit. (AIC)	786.208		Bayesian crit. (BIC)	860.751			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.282 Post-COVID ESG Combined Score impact on Tobin's Q across industries

TOBIN_Q_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.023	.022	1.05	.296	-.02	.067	
Intotalassets	-1.373	.234	-5.88	0	-1.835	-.912	***
firmage_	.011	.008	1.33	.186	-.005	.026	
TOT_DEBT_TO_TOT_EQY	-.006	.004	-1.32	.189	-.014	.003	
capitalintensity	1.432	5.028	0.28	.776	-8.488	11.351	
cashflowbysale	-.203	1.067	-0.19	.85	-2.308	1.903	
TOT_MKT_VAL	0	0	8.47	0	0	0	***
financialslack	-.15	.172	-0.87	.385	-.49	.19	
Internationalisation	-.019	.013	-1.52	.131	-.044	.006	
NUMBER_OF_WOMEN_DIRECTORS	.257	.224	1.15	.253	-.185	.699	
rdbysales	-25.314	11.993	-2.11	.036	-48.976	-1.651	**
opefficiency_	-.532	1.665	-0.32	.75	-3.818	2.753	
BB_3Y_DEFAULT_PROB	-6.946	7.455	-0.93	.353	-21.654	7.762	
UNLEVERED_BETA	-.034	.033	-1.00	.317	-.099	.032	
Industry : base Base	0	.	.	.	.	.	
Communications	-.062	1.243	-0.05	.961	-2.513	2.39	
Consumer, Cyclical	.515	.674	0.76	.446	-.815	1.844	
Consumer, Non-cyclical	1.827	.644	2.84	.005	.556	3.099	***
Diversified	5.306	2.638	2.01	.046	.101	10.51	**
Energy	-.929	1.708	-0.54	.587	-4.299	2.442	
Financial	.01	1.097	0.01	.993	-2.154	2.173	
Industrial	-.467	.615	-0.76	.449	-1.681	.747	
Technology	-2.267	.945	-2.40	.017	-4.132	-.402	**
Utilities	.084	1.01	0.08	.934	-1.91	2.077	
Constant	16.91	3.164	5.34	0	10.668	23.152	***
Mean dependent var		2.849		SD dependent var		3.364	
R-squared		0.493		Number of obs		208	
F-test		7.786		Prob > F		0.000	
Akaike crit. (AIC)		1000.528		Bayesian crit. (BIC)		1080.629	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.283 Pre-COVID ESG Combined Score impact on Enterprise Value Multiple across industries

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	1011.692	474.865	2.13	.035	72.916	1950.469	**
Intotalassets	-11472.704	4800.754	-2.39	.018	-20963.466	-1981.943	**
firmage_	-.548	197.305	-0.00	.998	-390.607	389.511	
TOT_DEBT_TO_TOT_EQY	4.776	10.358	0.46	.645	-15.702	25.254	
capitalintensity	-15564.948	107455.84	-0.14	.885	-227997.79	196867.89	
cashflowbysale	-14460.458	24690.706	-0.59	.559	-63272.291	34351.376	
TOT_MKT_VAL	.972	.009	112.36	0	.955	.989	***
financialslack	2233.012	3820.635	0.58	.56	-5320.123	9786.146	
Internationalisation	325.264	237.783	1.37	.174	-144.817	795.345	
NUMBER_OF_WORKING_DAYS	1082.899	6672.478	0.16	.871	-12108.133	14273.931	
rdbysales	28731.556	139454.2	0.21	.837	-246959.84	304422.95	
oper efficiency_	-18579.622	33699.88	-0.55	.582	-85201.977	48042.732	
BB_3Y_DEFAULT_PROB	110079.94	202390.24	0.54	.587	-290031.69	510191.57	
UNLEVERED_BETA_A	-447.911	1498.114	-0.30	.765	-3409.58	2513.759	
Industry : base Beta	0	.	.	.	.	.	
Communications	-3124.039	23372.145	-0.13	.894	-49329.169	43081.091	
Consumer, Cyclical	5435.505	15151.761	0.36	.72	-24518.49	35389.499	
Consumer, Non-cyclical	17038.386	13762.387	1.24	.218	-10168.911	44245.683	
Diversified	3394.927	52121.982	0.07	.948	-99646.661	106436.51	
Energy	-105457.74	25112.52	-4.20	0	-155103.47	-55812.006	***
Financial	2543.358	26633.117	0.10	.924	-50108.49	55195.205	
Industrial	6608.798	13210.903	0.50	.618	-19508.252	32725.848	
Technology	26524.488	19847.123	1.34	.184	-12711.914	65760.889	
Utilities	945.222	23788.948	0.04	.968	-46083.897	47974.342	
Constant	88280.35	58792.23	1.50	.135	-27947.861	204508.56	
Mean dependent var		401318.431			SD dependent var	709335.369	
R-squared		0.996			Number of obs	165	
F-test		1416.908			Prob > F	0.000	
Akaike crit. (AIC)		4062.232			Bayesian crit. (BIC)	4136.775	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.284 Post-COVID ESG Combined Score impact on Enterprise Value Multiple across industries

CURR_ENTP_VAL	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	299.092	418.341	0.71	.476	-526.269	1124.453	
Intotalassets	-14601.207	4438.32	-3.29	.001	-23357.748	-5844.667	***
firmage_	-29.1	151.449	-0.19	.848	-327.901	269.7	
TOT_DEBT_TO_T_EQY	54.495	79.463	0.69	.494	-102.281	211.27	
capitalintensity	104320.84	95483.687	1.09	.276	-84062.795	292704.48	
cashflowbysale	-7611.813	20267.007	-0.38	.708	-47597.413	32373.787	
TOT_MKT_VAL	.989	.006	159.75	0	.977	1.001	***
financialslack	3340.896	3274.54	1.02	.309	-3119.576	9801.368	
Internationalisation	-101.744	239.863	-0.42	.672	-574.98	371.491	
NUMBER_OF_WOMEN_DIRECTORS	-2175.266	4256.671	-0.51	.61	-10573.424	6222.893	
rdbysales	138947.44	227776.39	0.61	.543	-310441.83	588336.72	
opefficiency_	13562.435	31626.545	0.43	.669	-48834.858	75959.728	
BB_3Y_DEFAULT_PROB	-91725.071	141582.98	-0.65	.518	-371059.86	187609.72	
UNLEVERED_BETA	297.66	634.681	0.47	.64	-954.528	1549.848	
Industry : base Beta	0	.	.	.	.	.	
Communications	14305.583	23599.601	0.61	.545	-32255.028	60866.193	
Consumer, Cyclical	7210.696	12800.001	0.56	.574	-18042.945	32464.336	
Consumer, Non-cyclical	7353.983	12236.542	0.60	.549	-16787.987	31495.953	
Diversified	-15593.778	50096.825	-0.31	.756	-114431.83	83244.278	
Energy	-432624.22	32443.369	-13.33	0	-496633.06	-368615.39	***
Financial	14276.091	20828.421	0.69	.494	-26817.145	55369.326	
Industrial	-2885.275	11686.129	-0.25	.805	-25941.312	20170.762	
Technology	8277.221	17951.869	0.46	.645	-27140.75	43695.191	
Utilities	-29122.974	19188.02	-1.52	.131	-66979.796	8733.849	
Constant	134146	60085.805	2.23	.027	15600.282	252691.72	**
Mean dependent var		311695.400			SD dependent var	693441.304	
R-squared		0.996			Number of obs	208	
F-test		1852.065			Prob > F	0.000	
Akaike crit. (AIC)		5098.859			Bayesian crit. (BIC)	5178.960	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.285 Pre-COVID ESG Combined Score impact on Price-to-Earnings Ratio across industries

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.598	.532	1.12	.263	-.454	1.65	
Intotalassets	-13.733	5.214	-2.63	.009	-24.041	-3.424	***
firmage_	.675	.218	3.10	.002	.245	1.106	***
TOT_DEBT_TO_TOT_EQY	.001	.011	0.07	.942	-.022	.023	
capitalintensity	-22.366	117.95	-0.19	.85	-255.574	210.841	
cashflowbysale	-83.872	26.783	-3.13	.002	-136.827	-30.917	***
TOT_MKT_VAL	0	0	0.75	.452	0	0	
financialslack	3.928	4.135	0.95	.344	-4.248	12.104	
Internationalisation	-.2	.257	-0.78	.438	-.708	.309	
NUMBER_OF_WORKEMPLOYED	1.75	7.224	0.24	.809	-12.533	16.033	
rdbysales	-46.572	150.859	-0.31	.758	-344.847	251.702	
oper efficiency_	64.085	36.561	1.75	.082	-8.202	136.372	*
BB_3Y_DEFAULT_PROB	-8.685	236.663	-0.04	.971	-476.611	459.24	
UNLEVERED_BETA	-2.123	1.623	-1.31	.193	-5.331	1.086	
Industry : base Base	0	.	.	.	.	.	
Communications	100.901	27.031	3.73	0	47.456	154.347	***
Consumer, Cyclical	43.463	16.393	2.65	.009	11.052	75.875	***
Consumer, Non-cyclical	27.086	15.144	1.79	.076	-2.856	57.027	*
Diversified	61.4	56.399	1.09	.278	-50.111	172.91	
Energy	20.845	27.179	0.77	.444	-32.893	74.584	
Financial	15.908	28.794	0.55	.581	-41.022	72.838	
Industrial	9.71	14.284	0.68	.498	-18.531	37.951	
Technology	13.748	21.523	0.64	.524	-28.807	56.303	
Utilities	81.573	25.727	3.17	.002	30.706	132.44	***
Constant	57.542	63.579	0.91	.367	-68.164	183.248	
Mean dependent var	39.570		SD dependent var	59.791			
R-squared	0.293		Number of obs	163			
F-test	2.503		Prob > F	0.001			
Akaike crit. (AIC)	1786.708		Bayesian crit. (BIC)	1860.958			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.286 Post-COVID ESG Combined Score impact on Price-to-Earnings Ratio across industries

PE_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.084	.253	-0.33	.741	-.582	.415	
Intotalassets	-4.455	2.68	-1.66	.098	-9.744	.833	*
firmage_	.075	.09	0.84	.405	-.103	.253	
TOT_DEBT_TO_TOT_EQY	.174	.048	3.64	0	.08	.268	***
capitalintensity	66.235	56.904	1.16	.246	-46.05	178.52	
cashflowbysale	-9.174	12.263	-0.75	.455	-33.371	15.024	
TOT_MKT_VAL	0	0	2.05	.042	0	0	**
financialslack	-.625	1.955	-0.32	.75	-4.483	3.233	
Internationalisation	-.239	.143	-1.67	.096	-.52	.043	*
NUMBER_OF_WORKING_MEN_DIVIDED	.297	2.549	0.12	.908	-4.734	5.327	
rdbysales	-275.048	147.022	-1.87	.063	-565.155	15.06	*
opefficiency_	22.601	18.944	1.19	.234	-14.781	59.982	
BB_3Y_DEFAULT_PROB	-349.745	86.926	-4.02	0	-521.27	-178.221	***
UNLEVERED_BETA	.015	.383	0.04	.97	-.741	.77	
Industry : base Beta	0	.	.	.	.	.	
Communications	3.777	14.854	0.25	.8	-25.533	33.088	
Consumer, Cyclical	11.389	7.608	1.50	.136	-3.624	26.402	
Consumer, Non-cyclical	19.237	7.276	2.64	.009	4.879	33.594	***
Diversified	42.928	29.784	1.44	.151	-15.842	101.699	
Energy	-13.285	19.301	-0.69	.492	-51.37	24.8	
Financial	24.328	13.599	1.79	.075	-2.507	51.162	*
Industrial	4.771	6.944	0.69	.493	-8.93	18.473	
Technology	-8.49	10.677	-0.80	.428	-29.559	12.579	
Utilities	-16.259	11.413	-1.42	.156	-38.779	6.261	
Constant	55.8	36.287	1.54	.126	-15.802	127.402	
Mean dependent var		27.698		SD dependent var		31.726	
R-squared		0.277		Number of obs		204	
F-test		3.001		Prob > F		0.000	
Akaike crit. (AIC)		1970.217		Bayesian crit. (BIC)		2049.852	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.287 Pre-COVID ESG Combined Score impact on Price-to-Book Ratio across industries

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.016	.056	0.29	.772	-.095	.127	
Intotalassets	-2.033	.568	-3.58	0	-3.155	-.911	***
firmage_	.032	.023	1.37	.174	-.014	.078	
TOT_DEBT_TO_TOT_EQY	.001	.001	0.90	.371	-.001	.004	
capitalintensity	-9.044	12.703	-0.71	.478	-34.157	16.069	
cashflowbysale	5.908	2.919	2.02	.045	.138	11.678	**
TOT_MKT_VAL	0	0	2.87	.005	0	0	***
financialslack	-1.106	.452	-2.45	.016	-1.999	-.213	**
Internationalisation	-.063	.028	-2.23	.028	-.118	-.007	**
NUMBER_OF_WORKING_DAYS	-.574	.789	-0.73	.468	-2.134	.985	
rdbysales	-9.845	16.486	-0.60	.551	-42.436	22.746	
operational_efficiency	-7.689	3.984	-1.93	.056	-15.565	.186	*
BB_3Y_DEFAULT_PROB	-45.029	23.926	-1.88	.062	-92.329	2.27	*
UNLEVERED_BETA	-.032	.177	-0.18	.857	-.382	.318	
Industry : base Beta	0	.	.	.	.	.	
Communications	1.326	2.763	0.48	.632	-4.137	6.788	
Consumer, Cyclical	1.389	1.791	0.78	.439	-2.152	4.93	
Consumer, Non-cyclical	3.504	1.627	2.15	.033	.287	6.72	**
Diversified	4.018	6.162	0.65	.515	-8.163	16.199	
Energy	-2.374	2.969	-0.80	.425	-8.243	3.495	
Financial	.032	3.148	0.01	.992	-6.193	6.256	
Industrial	-.629	1.562	-0.40	.688	-3.716	2.459	
Technology	-2.017	2.346	-0.86	.391	-6.656	2.621	
Utilities	-2.387	2.812	-0.85	.397	-7.947	3.173	
Constant	34.504	6.95	4.96	0	20.764	48.245	***
Mean dependent var	5.896		SD dependent var	6.870			
R-squared	0.358		Number of obs	165			
F-test	3.420		Prob > F	0.000			
Akaike crit. (AIC)	1078.043		Bayesian crit. (BIC)	1152.586			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.288 Post-COVID ESG Combined Score impact on Price-to-Book Ratio across industries

PX_TO_BOOK_RATIO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	.03	.06	0.49	.623	-.089	.148	
Intotalassets	-2.857	.638	-4.48	0	-4.115	-1.599	***
firmage_	.026	.022	1.19	.236	-.017	.069	
TOT_DEBT_TO_TOT_EQY	-.005	.011	-0.48	.633	-.028	.017	
capitalintensity	6.288	13.715	0.46	.647	-20.771	33.348	
cashflowbysale	-.183	2.911	-0.06	.95	-5.927	5.561	
TOT_MKT_VAL	0	0	7.11	0	0	0	***
financialslack	-.758	.47	-1.61	.109	-1.686	.17	
Internationalisation	-.03	.034	-0.88	.383	-.098	.038	
NUMBER_OF_WOMEN_DIRECTORS	.74	.611	1.21	.228	-.467	1.946	
rdbysales	-52.373	32.718	-1.60	.111	-116.925	12.178	
opefficiency_	.125	4.543	0.03	.978	-8.838	9.088	
BB_3Y_DEFAULT_PROB	-16.582	20.337	-0.82	.416	-56.706	23.542	
UNLEVERED_BETA	-.095	.091	-1.04	.298	-.275	.085	
Industry : base Banks	0	.	.	.	.	.	
Communications	1.02	3.39	0.30	.764	-5.668	7.708	
Consumer, Cyclical	1.235	1.839	0.67	.503	-2.392	4.863	
Consumer, Non-cyclical	3.902	1.758	2.22	.028	.434	7.369	**
Diversified	6.286	7.196	0.87	.384	-7.912	20.483	
Energy	-1.849	4.66	-0.40	.692	-11.043	7.345	
Financial	1.1	2.992	0.37	.714	-4.803	7.002	
Industrial	-.729	1.679	-0.43	.664	-4.041	2.583	
Technology	-4.422	2.579	-1.71	.088	-9.51	.665	*
Utilities	.073	2.756	0.03	.979	-5.364	5.511	
Constant	33.315	8.631	3.86	0	16.287	50.343	***
Mean dependent var	4.465		SD dependent var		8.197		
R-squared	0.365		Number of obs		208		
F-test	4.596		Prob > F		0.000		
Akaike crit. (AIC)	1418.014		Bayesian crit. (BIC)		1498.115		

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.289 Pre-COVID ESG Combined Score impact on Economic Value added across industries

WACC_EVA_SPRE AD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSUR E_SCORE	-.038	.111	-0.34	.735	-.258	.182	
Intotalassets	-3.343	1.125	-2.97	.003	-5.567	-1.12	***
firmage_	.051	.046	1.11	.267	-.04	.143	
TOT_DEBT_TO_T OT_EQY	-.002	.002	-0.76	.45	-.007	.003	
capitalintensity	-29.193	25.176	-1.16	.248	-78.965	20.579	
cashflowbysale	18.391	5.785	3.18	.002	6.955	29.828	***
TOT_MKT_VAL	0	0	2.73	.007	0	0	***
financialslack	-1.766	.895	-1.97	.05	-3.536	.004	*
Internationalisation	-.1	.056	-1.80	.074	-.211	.01	*
NUMBER_OF_WO MEN_DI~D	-1.534	1.563	-0.98	.328	-4.625	1.556	
rdbysales	-35.422	32.674	-1.08	.28	-100.016	29.171	
opefficiency_	-22.732	7.896	-2.88	.005	-38.341	-7.123	***
BB_3Y_DEFAULT _PROB	-23.922	47.419	-0.50	.615	-117.667	69.822	
UNLEVERED_BET A	-.076	.351	-0.22	.83	-.77	.618	
Industry : base Ba~s	0	.	.	.	.	.	
Communications	-5.642	5.476	-1.03	.305	-16.467	5.184	
Consumer, Cyclical	-1.974	3.55	-0.56	.579	-8.992	5.044	
Consumer, Non- cycl~l	1.731	3.224	0.54	.592	-4.644	8.105	
Diversified	-3.629	12.212	-0.30	.767	-27.771	20.514	
Energy	-4.84	5.884	-0.82	.412	-16.471	6.792	
Financial	-6.944	6.24	-1.11	.268	-19.28	5.392	
Industrial	-6.563	3.095	-2.12	.036	-12.682	-.444	**
Technology	.175	4.65	0.04	.97	-9.018	9.368	
Utilities	-7.193	5.574	-1.29	.199	-18.212	3.826	
Constant	63.79	13.775	4.63	0	36.559	91.022	***
Mean dependent var		3.247		SD dependent var		13.548	
R-squared		0.352		Number of obs		165	
F-test		3.326		Prob > F		0.000	
Akaike crit. (AIC)		1303.787		Bayesian crit. (BIC)		1378.330	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.290 Post-COVID ESG Combined Score impact on Economic Value added across industries

WACC_EVA_SPREAD	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-.006	.065	-0.09	.93	-.134	.122	
Intotalassets	-2.907	.689	-4.22	0	-4.267	-1.547	***
firmage_	-.003	.024	-0.13	.9	-.049	.043	
TOT_DEBT_TO_TOT_EQY	-.02	.012	-1.60	.111	-.044	.005	
capitalintensity	11.903	14.827	0.80	.423	-17.35	41.157	
cashflowbysale	.816	3.147	0.26	.796	-5.393	7.025	
TOT_MKT_VAL	0	0	7.04	0	0	0	***
financialslack	-1.354	.508	-2.66	.008	-2.357	-.35	***
Internationalisation	-.001	.037	-0.01	.989	-.074	.073	
NUMBER_OF_WOMEN_DIRECTORS	.133	.661	0.20	.841	-1.171	1.437	
rdbysales	-36.634	35.371	-1.04	.302	-106.418	33.15	
opefficiency_	-11.343	4.911	-2.31	.022	-21.033	-1.654	**
BB_3Y_DEFAULT_PROB	22.441	21.986	1.02	.309	-20.936	65.818	
UNLEVERED_BETA	.001	.099	0.01	.989	-.193	.196	
Industry : base Beta	0	.	.	.	.	.	
Communications	-3.077	3.665	-0.84	.402	-10.307	4.153	
Consumer, Cyclical	-4.262	1.988	-2.14	.033	-8.184	-.341	**
Consumer, Non-cyclical	.253	1.9	0.13	.894	-3.495	4.002	
Diversified	-.474	7.779	-0.06	.952	-15.822	14.874	
Energy	5.119	5.038	1.02	.311	-4.821	15.058	
Financial	-7.948	3.234	-2.46	.015	-14.329	-1.567	**
Industrial	-3.267	1.815	-1.80	.073	-6.848	.313	*
Technology	-4.987	2.788	-1.79	.075	-10.487	.513	*
Utilities	-1.288	2.98	-0.43	.666	-7.166	4.591	
Constant	45.427	9.33	4.87	0	27.019	63.836	***
Mean dependent var		-1.095		SD dependent var		8.805	
R-squared		0.357		Number of obs		208	
F-test		4.435		Prob > F		0.000	
Akaike crit. (AIC)		1450.439		Bayesian crit. (BIC)		1530.540	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.291 Pre-COVID ESG Combined Score impact on Market Value added across industries

MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	1784.246	1516.67	1.18	.241	-1214.107	4782.6	
Intotalassets	-53501.736	15333.105	-3.49	.001	-83814.234	-23189.238	***
firmage_	566.835	630.172	0.90	.37	-678.973	1812.642	
TOT_DEBT_TO_TOT_EQY	15.335	33.084	0.46	.644	-50.069	80.739	
capitalintensity	591856.55	343202.71	1.72	.087	-86631.684	1270344.8	*
cashflowbysale	150380.5	78859.528	1.91	.059	-5519.383	306280.38	*
TOT_MKT_VAL	.807	.028	29.22	0	.753	.862	***
financialslack	-14302.647	12202.709	-1.17	.243	-38426.566	9821.273	
Internationalisation	-1397.985	759.454	-1.84	.068	-2899.375	103.404	*
NUMBER_OF_WORKING_DAYS	27694.795	21311.196	1.30	.196	-14435.979	69825.57	
rdbysales	211711.62	445402.1	0.48	.635	-668817.83	1092241.1	
opefficiency_	-35722.291	107633.89	-0.33	.74	-248507.11	177062.53	
BB_3Y_DEFAULT_PROB	118746.59	646413.21	0.18	.855	-1159168	1396661.2	
UNLEVERED_BETA	1147.037	4784.821	0.24	.811	-8312.226	10606.3	
Industry : base Beta	0	.	.	.	.	.	
Communications	177829.82	74648.184	2.38	.019	30255.471	325404.16	**
Consumer, Cyclical	84991.683	48393.139	1.76	.081	-10678.237	180661.6	*
Consumer, Non-cyclical	103980.93	43955.624	2.37	.019	17083.67	190878.18	**
Diversified	-17760.31	166472.15	-0.11	.915	-346864.35	311343.73	
Energy	-365266.8	80206.758	-4.55	0	-523830.07	-206703.54	***
Financial	94954.349	85063.386	1.12	.266	-73210.137	263118.84	
Industrial	56805.758	42194.241	1.35	.18	-26609.365	140220.88	
Technology	116216.6	63389.631	1.83	.069	-9100.359	241533.55	*
Utilities	-212636.51	75979.407	-2.80	.006	-362842.59	-62430.429	***
Constant	473118.89	187776.23	2.52	.013	101898.16	844339.62	**
Mean dependent var	288097.865		SD dependent var	555392.730			
R-squared	0.928		Number of obs	165			
F-test	79.391		Prob > F	0.000			
Akaike crit. (AIC)	4445.442		Bayesian crit. (BIC)	4519.985			

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5.292 Post-COVID ESG Combined Score impact on Market Value added across industries

MarketValueAdded	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ESG_DISCLOSURE_SCORE	-728.781	1765.35	-0.41	.68	-4211.712	2754.149	
Intotalassets	-70773.515	18729.203	-3.78	0	-107725.12	-33821.911	***
firmage_	179.17	639.099	0.28	.78	-1081.735	1440.074	
TOT_DEBT_TO_TOT_EQY	-343.7	335.325	-1.02	.307	-1005.275	317.876	
capitalintensity	147880.99	402930.28	0.37	.714	-647076.49	942838.47	
cashflowbysale	-6092.853	85524.46	-0.07	.943	-174827.53	162641.82	
TOT_MKT_VAL	.841	.026	32.19	0	.789	.892	***
financialslack	-12105.747	13818.184	-0.88	.382	-39368.202	15156.709	
Internationalisation	-1391.608	1012.195	-1.37	.171	-3388.609	605.394	
NUMBER_OF_WOMEN_DIRECTORS	15248.5	17962.666	0.85	.397	-20190.772	50687.771	
rdbysales	345632.72	961190.41	0.36	.72	-1550738.8	2242004.3	
opefficiency_	39279.171	133460.42	0.29	.769	-224030.29	302588.64	
BB_3Y_DEFAULT_PROB	85282.692	597464.02	0.14	.887	-1093478.3	1264043.7	
UNLEVERED_BETA	-402.211	2678.282	-0.15	.881	-5686.301	4881.88	
Industry : base Banks	0	.	.	.	.	.	
Communications	79078.876	99587.629	0.79	.428	-117401.59	275559.35	
Consumer, Cyclical	66378.718	54014.545	1.23	.221	-40188.767	172946.2	
Consumer, Non-cyclical	81260.963	51636.813	1.57	.117	-20615.398	183137.32	
Diversified	-2465.19	211402.89	-0.01	.991	-419550.53	414620.15	
Energy	-575618	136907.32	-4.20	0	-845728	-305507.99	***
Financial	114837.98	87893.561	1.31	.193	-58570.787	288246.75	
Industrial	43101.276	49314.131	0.87	.383	-54192.572	140395.12	
Technology	73553.418	75754.843	0.97	.333	-75906.383	223013.22	
Utilities	-261585.81	80971.257	-3.23	.001	-421337.28	-101834.33	***
Constant	724368.51	253555.25	2.86	.005	224119.07	1224617.9	***
Mean dependent var	217674.164		SD dependent var		584661.681		
R-squared	0.892		Number of obs		208		
F-test	66.253		Prob > F		0.000		
Akaike crit. (AIC)	5697.819		Bayesian crit. (BIC)		5777.920		

*** $p < .01$, ** $p < .05$, * $p < .1$

APPENDIX 3

INTERVIEW QUESTIONS

1. What does Sustainability or ESG mean to you, and how does this perspective influence your approach to ESG initiatives?
2. Does your company have a specifically laid out ESG policy describing your approach and commitments for the management of key ESG risks and opportunities?
3. What is the adoption status of your existing ESG policies, processes, and systems (Full-fledged / Partial)?
4. Do you provide ESG training to staff?
 - If yes, please specify the type of training, frequency, and involvement of senior management.
5. What tangible and intangible benefits can your organization derive from embedding ESG principles into operations?
6. Do you believe that ESG practices impact your organization's financial performance?
7. How can technology be leveraged to accelerate progress towards sustainability and ESG objectives within an organization? How do you approach sustainability reporting and communication to ensure transparency and accountability to stakeholders?
8. What are the key challenges in sourcing sustainability data?
9. How do you ensure the accuracy and completeness of ESG data for BRSR compliance?
10. Which tools or platforms have you used for managing ESG data, and how effective were they?
11. What strategies do you employ to engage and align stakeholders with your organization's sustainability initiatives?
12. Does your company have an environmental policy that sets out clear commitments and targets to improve the company's environmental footprint?
13. Does this policy also cover climate change issues relevant to the company?

14. Does the company monitor and report its carbon and/or other greenhouse gas (GHG) emissions such as methane or nitrous oxide?
15. Is there a regulatory requirement to do so? If yes, how is it implemented?
16. Does the company identify Scope 1, 2 & 3 emissions? If yes, how are these monitored?
17. What environmental certifications do you consider most critical for enhancing your organization's sustainability footprint, and why?
18. How do you design and implement Corporate Social Responsibility (CSR) programs that effectively contribute to community development and well-being?
19. What strategies have you found effective in motivating employees to embrace and adopt sustainable practices within the workplace?
20. How do you measure the social impact of your sustainability initiatives?
21. Have you had any serious social issue-related complaints, claims, or enforcement actions over the last three years associated with employees or stakeholders (customers, suppliers, etc.)? If yes, please provide details.
22. Does the company have a policy supporting diversity and equal opportunity? If yes, please provide details of your key commitments or control measures.
23. How do you ensure corporate governance structures support and enhance your organization's sustainability efforts?
24. What is the number of independent directors on the board?
25. How many are women directors? Do you think board gender diversity plays an important role in influencing ESG outcomes?
26. Does the company have a whistle-blowing policy?
27. What are the major ESG risks and opportunities you foresee for your industry in the next five years?
28. In an ever-changing regulatory and societal landscape, how would you track and adapt your organization's ESG strategy to remain competitive and compliant?

APPENDIX 4

NVIVO CODEBOOK OF ESG THEMES, SUBTHEMES, AND REFERENCES

Table 6.3: NVivo Codebook of ESG Themes, Subthemes, and References (Source: NVivo)

Name	Description	Files	References
Theme 1 organizational understanding and perspective of ESG		8	25
Board Level Oversight		2	2
Calls to Action		1	1
Creating Shared Value		1	1
Equitable Economy		1	1
ESG Adoption Status		1	1
ESG Aligned Products		1	1
ESG at the Center of Company's Vision		1	1
ESG is Strategic Imperative		1	1
ESG isn't just Compliance Requirement		1	1
ESG Newsletters		1	1
ESG Policy		2	2
Healthier Planet		1	1
Holistic Approach		1	1
Planetary Boundaries		1	1
Present Needs Without Compromising Future Gen		2	2
Profitable Business		1	1
Responsible Business		1	1
Responsible Governance		1	1
SDGs		1	1
Shared Prosperity for All		1	1
Sr Mgt Leads By Ex		1	1
Transition Industrial Ecological Civilization		1	1
Theme 2 environmental practices and climate disclosures		9	43
Biodiversity Conservation		1	1

Name	Description	Files	References
Carbon Credit Opportunities		3	4
Carbon Neutrality		1	1
Climate Change		7	8
Decarbonization		2	2
Energy Efficiency		6	6
Environment Policy		1	1
Environmental Conservation		1	1
GHG Emissions		4	4
Regular Assessments		1	1
Renewable Energy Usage		4	7
Scope 1,2 and 3 Emissions		5	5
Stewardship		1	1
Waste Reduction		1	1
Theme 3 social impact and community initiatives		9	35
Board Gender Diversity		7	8
Community Development		1	1
Community Impact Assessments		3	3
CSR Programs		1	1
Diversity		4	5
Education		4	4
Equal Opportunity		1	1
Healthcare		3	3
Marginalized groups		1	1
Motivating Employees		1	1
Quality Learning Opportunities		1	1
Rural Livelihood		1	1
Safety Performance		1	1
Skill Development		2	2
Social Equity		1	1
Social Impact Beneficiaries Reached		1	1
Theme 4 governance structures and board composition		8	34

Name	Description	Files	References
BRSR		2	3
Companies Act		1	1
Corporate Governance Structures		1	1
Data Governance Frameworks		1	1
Excel		1	1
GRI		4	6
Independent & Women Directors		1	1
ISO 14001		3	3
Regulatory Foresight		1	1
Regulatory Requirements		5	7
Risk Committee		1	1
Robust Internal Controls		1	1
SASB		2	2
SBTi		1	1
Social Issues or Complaints		1	1
SOPs for data BRSR		1	1
UNGC		1	1
Whistle Blowing Policy		1	1
Theme 5 Barriers		7	17
Cumbersome		1	1
Cybersecurity		1	1
Fragmented Data		3	3
Inconsistency of data		1	1
Key Challenges		1	1
Limited Audit Readiness		1	1
Limited Control Value Chain		1	1
Manual Data Process		1	1
Supply Chain Disruptions		4	5
Varying Data Formats		2	2
Theme 6 Mitigation Strategies		9	76
AI & Blockchain		4	4

Name	Description	Files	References
Automate Reporting		2	2
Board Level ESG Committee		1	1
Capacity Building Workshops Events		1	1
Digital Partnerships		2	2
Digitize Sustainability		1	1
Educate Employees		1	1
Employee Driven Sustainability Clubs		1	1
Employee Engagement		4	4
Employee Training Initiatives		2	2
ESG Committees		1	1
ESG Training		4	5
Ethical Principles		1	1
Expert Talks & Thematic Sessions		1	1
Finacial Literacy		1	1
Governance from Top Leadership		1	1
Green Financing		2	2
Green Hydrogen Initiatives		1	1
Grievance Redressal		1	1
Investments in Sustainable Technologies		1	1
Investor Friendly Practices		1	1
Leadership Engagement		1	1
Management Council Focused on ESG		1	1
Mapping Organizational Maturity against Changing Business Environmnet		1	1
Oracle ERP		1	1
Periodic Audits		1	1
Product Based Sustainability Certifications		1	1
Proprietary Tools		1	1
Real Time Tracking and Reporting		4	4
SAP Sustainability Control Tower		2	2
Scenario Planning		1	1

Name	Description	Files	References
Stakeholder Feedback		1	1
Stakeholders Engagement		6	9
Standard Frameworks		3	3
Sustainable Financing		1	1
Sustainability Awareness Campaigns		1	1
Technology & Innovation		4	6
Third Party Audits		4	4
Third Party Verification		2	2
Theme 7 Emerging Opportunities		11	80
Accountability		2	3
Agile Strategies Adoption		2	2
Balancing Economic Growth		2	2
Balancing Energy Security Environmental Stewardship		1	1
Circular Economy		2	2
Consistency		1	1
Cost Savings		5	5
Credit Quality		1	1
Data Accuracy		1	1
Digital Banking		1	1
Efficiency		1	1
Employee Consciousness		1	1
EVs		2	2
Financial Inclusion		1	1
Improved Diversity		1	1
Inclusive Economic Growth		1	1
Increase in Financing		1	1
Investor Confidence		2	2
Long Term Profitability		6	6
Long Term Value Creation		5	5
Monetary Benefits		1	1
Net Zero Goals		1	1

Name	Description	Files	References
Operational Efficiencies		4	4
Operational Performance		3	3
Reduce Risks		1	1
Reputation		7	7
Resilient		2	3
Resource Optimization		2	2
Revenue Growth		1	1
Risk Mitigation		2	3
Shareholder Value Creation		1	1
Stakeholder Trust		5	5
Sustainable Future		1	1
Sustainable Goals		1	1
Sustainable Infrastructure		1	1
Tapping New Markets for Green Technologies		1	1
Transparency		3	3
UN SDGs		1	1

LIST OF PUBLICATIONS AND CONFERENCES

Publication Details

S.No.	Paper	Journal	Indexing	Publisher
1.	ESG in Transition: A Text Mining Analysis of How Indian Corporations Evolved From Checkbox Reporting to Strategic Integration (Acceptance Received)	European Journal of Sustainable Development Research	Scopus	Modestum
2.	ESG Implementation in Indian NIFTY 500 Companies: A Comprehensive Multi-Case Analysis of Strategy, Implementation, and Value Creation	South Asian Journal of Business and Management Cases	Scopus, ABDC C	Sage
3.	Linking Sustainable Finance and Environmental, Social, and Governance (ESG): A Systematic Literature Review & Sentiment Analysis	Academy of Marketing Studies Journal	ABDC B	Allied Business Academics
4.	Unlocking the Hidden Value: A Novel Approach to Assess the Relationship Between Environmental, Social and Governance (ESG) and Firm Performance through Systematic Review and Bibliometric Analysis	Asian And Pacific Economic Review	ABDC C	Asia Pacific
5.	Exploring Environmental, Social, and Governance (ESG) and Corporate Financial Performance (CFP): A Systematic Review using Theory, Context, Characteristics, and Methodology (TCCM)	JIM QUEST Journal of Management and Technology	UGC- Care	Jaipuria Institute of Management
6.	The Sustainability Equation: Board Diversity, Environmental Stewardship, Social Responsibility, and Governance Impact on Financial Performance in Indian Markets	International Journal of Environmental Sciences	Scopus	Academic Science Publications and Distributions
7.	ESG Opinionated: A Roundtable Reflection	Proceedings of Sustainability, Entrepreneurship, Equity and Digital Strategies	Book will be Scopus Indexed	Springer

Papers Communicated

S.No.	Paper Details	Journal	Indexation
1.	Navigating Corporate Responsibility: A Critical Examination of ESG Disclosures in Turbulent Global Contexts (Under Review)	Gurukul Business Review	ESCI

International Conferences

S.No.	Paper Presented	Type of Conference	Organising Body
1.	Towards a Sustainable Future - Mapping the Landscape of Industry 4.0 and Circular Economy for Sustainable Development Goals: A Systematic Review	International (Fully Sponsored, Selected among top 20)	Qatar University, Doha
2.	ESG Opinionated: A Roundtable Reflection	International (Best Paper Award)	Middlesex University, Dubai
3.	Environmental, Social, and Governance (ESG) and Corporate Financial Performance (CFP) Relationship: A Bibliometric and Thematic Discussion	International (Fully Sponsored, Selected among top 15)	Indian Institute of Management Bangalore
4.	Linkages between Industry 4.0, Supply Chain Management & Circular Economy: A Future Research Agenda	International (Best Paper Award)	Vivekananda School of Economics
5.	From Papers to Posts: Tracking the Pulse of Sustainable Finance in Research and X Sentiments	International (Fully Sponsored)	Indian Institute of Technology Bombay
6	Exploring the Dynamic Interplay Between Environmental, Social, and Governance and Firm Value Creation by analysing Moderating Effects of Board Gender Diversity: An Empirical Study	International	Loughborough University London, UK
7.	Leveraging Blockchain for Enhanced Environmental, Social and Governance (ESG) Reporting: A Systematic Review and Future Research Agenda	International	INDAM, Goa Institute of Management
8.	Exploring the Relationship Between Environmental, Social, and Governance (ESG) and Corporate Financial Performance (CFP): A Systematic Review of Literature	International	Indian Institute of Management Ahmedabad
9.	Exploring the Interconnections between Circular Economy and Sustainable Development Goals: A Systematic Review	International	Indian Institute of Management Calcutta
10.	Linking Sustainable Finance and Environmental, Social, and Governance (ESG): A Systematic Literature Review & Sentiment Analysis	International	Delhi Technological University

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