

## Predictors and Outcomes of ESG Investing: A Post-COVID Review

Ms. Richa Dixit  
Associate Professor

Ms. Annu Aggarwal  
Associate Professor

Dr. Anjana Singh  
Associate Professor

Mr. Himanshu Tanwar  
Data Scientist

Institute of Innovation in Technology & Management, New Delhi

### ABSTRACT:

Environmental, Social, and Governance (ESG) investing has gained significant traction in recent years as investors increasingly recognize the importance of integrating sustainability factors into their decision-making processes. ESG investing is sometimes referred to as sustainable investing, responsible investing, impact investing, or social responsibility investing. This paper provides a comprehensive review of the predictors and outcomes associated with ESG investing. Drawing on a wide range of scholarly literature, empirical studies, and industry reports, we identify key predictors that influence the adoption and implementation of ESG strategies by investors and corporations. These predictors include regulatory frameworks, stakeholder pressure, financial performance incentives, and ethical considerations. Additionally, we examine the outcomes of ESG investing across various dimensions, including financial performance, risk management, corporate reputation, and societal impact. Our review highlights the growing body of evidence suggesting a positive relationship between ESG factors and investment performance, as well as non-financial outcomes such as employee engagement, customer loyalty, and community relations. Furthermore, we explore the potential challenges and limitations associated with ESG investing, including data availability, measurement issues, and conflicting stakeholder interests. By synthesizing existing research and identifying gaps in the literature, this paper aims to inform future research directions and contribute to a deeper understanding of the predictors and outcomes of ESG investing in the global financial markets.

**Keywords:** *Environment, Social, Governance, Sustainability, Social responsibility*

### INTRODUCTION

Over the past two decades, environmental, social, and governance (ESG) investing has become a major factor in transforming the global investment landscape. ESG investing takes into account a company's environmental policies, social responsibilities, and governance structures in addition to traditional financial indicators when making investment decisions. It is based on the idea that financial performance and societal impact are intertwined. This all-encompassing strategy aims to provide investors with competitive financial returns while encouraging ethical and sustainable company practices. Even before the COVID-19 outbreak, ESG investing was growing significantly and gaining popularity among investors across the globe. ESG assets under management increased to unprecedented levels as a result of growing investor preferences,

regulatory demands, and growing awareness of global sustainability issues. According to the Global Sustainable Investment Alliance (GSIA), global sustainable investment assets hit a record \$30.7 trillion in 2019, up 34% from 2016. This increase was a sign of a wider shift in the investment community, as ESG factors were becoming central to investment strategies instead of being on the margins. But the COVID-19 epidemic brought with it previously unheard-of difficulties and upheavals to the world economy, financial systems, and social mores, highlighting the flexibility and resilience of ESG investing. The pandemic highlighted the relationship between environmental health, social well-being, and economic stability as nations struggled with the health crisis and its effects on the economy. It also brought up important issues of how

ESG variables play a part in managing the crisis and creating a post-pandemic world that is more sustainable and resilient. The pandemic had a wide-ranging effect on the investment landscape, changing market dynamics, company practices, investor behavior, and regulatory frameworks. While some predicted that market volatility and economic uncertainty would be a potential setback for ESG investing, others contended that the crisis would hasten the shift to sustainable investing and increase the weight given to ESG factors when making investment decisions. It is more important than ever to comprehend the predictors and results of ESG investing in this new context, as the globe struggles to deal with the fallout from COVID-19. The pandemic had a wide-ranging effect on the investment landscape, changing market dynamics, company practices,

investor behavior, and regulatory frameworks. While some predicted that market volatility and economic uncertainty would be a potential setback for ESG investing, others contended that the crisis would hasten the shift to sustainable investing and increase the weight given to ESG factors when making investment decisions. It is more important than ever to comprehend the predictors and results of ESG investing in this new context, as the globe struggles to deal with the fallout from COVID-19.

### Background

ESG (environmental, social, and governance) investing has grown from a specialized idea to become a major player in the financial industry. Environmental, social, and governance (ESG) aspects are non-financial variables that are included in conventional investment analysis and decision-making processes through ESG investing. Finding businesses that exhibit solid financial performance along with sustainable business methods, ethical behavior, and responsible business practices is the main goal. The socially responsible investing (SRI) movement of the 1960s and 1970s, which first concentrated on removing "sin stocks" from investment portfolios—such as tobacco, alcohol, and firearms—is where the concept of ESG investing first emerged. ESG investing is now a more sophisticated and all-encompassing approach that uses a variety of investment strategies, including impact investing, positive and negative screening, ESG integration, and a wider range of ESG criteria. This development is indicative of a larger change in investor perceptions and market dynamics, with ESG factors being viewed as crucial to risk management and successful long-term

investing. The performance and outcomes of ESG investments have been the subject of extensive research. The potential benefits can be discussed in terms of Financial Performance, Risk Mitigation, and Stakeholder Value Creation. Early research on the financial performance of ESG investments in comparison to conventional investments produced conflicting results, but more recent studies (Friede, Busch, & Bassen, 2015; Renneboog, Ter Horst, & Zhang, 2008) have shown a growing body of evidence supporting the financial viability of ESG investing. Strong ESG performance has been demonstrated in companies, which has improved long-term growth prospects, increased profitability, and decreased volatility, all of which improve risk-adjusted returns for ESG-focused portfolios. According to studies by Khan et al. (2016) and Riedl & Smeets (2017), investing with an emphasis on environmental, social, and governance issues has been linked to lower investment risks and increased portfolio resilience. Investors can limit potential risks and protect capital by including ESG elements in their investment analysis and decision-making processes. This improves portfolio stability. According to Harrison and Freeman (1999) and Margolis and Walsh (2003), ESG investing has been connected to improved business reputation, stakeholder engagement, and long-term value development, showing greater societal and environmental benefits. Prioritizing ESG factors increases a company's ability to develop shared value for all stakeholders, promote innovation, and establish trust. This leads to sustainable business practices and constructive societal change. Studies on the effectiveness and results of ESG investment in various

industries have also been conducted; certain industries have demonstrated superior success and greater alignment with ESG standards (Scholtens, 2017; Busch & Bauer, 2016). Technology, healthcare, and renewable energy are some of the sectors that have been recognized as ESG leaders because they perform exceptionally well in this area and offer investors who are concerned about environmental issues competitive returns. The study of the literature emphasizes the growing significance and development of ESG investing, pinpoints important factors driving its uptake, and offers insights into the performance and results of ESG investments made before the COVID-19 epidemic.

### Factors Contributed to the rise of ESG investing:

The rise of ESG (Environmental, Social, and Governance) investing can be attributed to several factors:

- **Increasing Awareness:** Growing concerns about climate change, social inequality, and corporate governance issues have led investors to seek more sustainable and responsible investment options.
- **Demand from Investors:** Investors, particularly millennials and institutional investors, are increasingly demanding investment strategies that align with their values and beliefs. They want to invest in companies that are socially responsible and environmentally sustainable.
- **Regulatory Environment:** Regulatory bodies in various jurisdictions are pushing for greater transparency and disclosure of ESG-related

information. This has led companies to pay more attention to their ESG performance.

- **Risk Mitigation:** Companies are recognizing that good ESG practices can help mitigate risks and enhance long-term value creation. Issues like climate change, diversity, and corporate governance can have significant financial implications if not managed effectively.
- **Financial Outperformance:** Increasing evidence suggests that companies with strong ESG performance tend to outperform their peers over the long term. This has attracted more investors to ESG investing, as they see it as a way to achieve both financial returns and positive societal impact.

#### **Relationship between ESG factors and Financial Performance:**

- **Long-Term Value Creation:** Companies that prioritize ESG factors tend to focus on long-term value creation rather than short-term profits. By addressing environmental and social risks, they can enhance their resilience and competitiveness over time.
- **Cost Reduction and Efficiency:** Adopting sustainable practices can lead to cost reductions through energy efficiency, waste reduction, and resource optimization. This can improve operational efficiency and contribute positively to financial performance.
- **Reputation and Brand Value:** Companies with strong ESG

performance often enjoy better reputations and brand value, which can lead to increased customer loyalty and higher sales. This intangible asset can translate into financial gains over the long term.

- **Access to Capital:** Companies with good ESG performance may find it easier and cheaper to access capital as they are seen as less risky investments by investors and lenders. This can lower their cost of capital and improve financial performance.
- **Risk Management:** Addressing ESG issues can help companies identify and mitigate risks that could harm their financial performance, such as regulatory fines, supply chain disruptions, or reputational damage.

Overall, while the relationship between ESG factors and financial performance may not always be direct or immediate, there is growing evidence to suggest that integrating ESG considerations into investment decisions can lead to better long-term financial outcomes.

#### **Impact of COVID-19 on Sustainable Investing:**

The COVID-19 pandemic has had significant impacts on sustainable development and has influenced emerging trends in ESG (Environmental, Social, and Governance) investing in several ways:

- **Heightened Focus on Social Factors:** The pandemic highlighted and exacerbated existing social inequalities, including access to healthcare, education, and employment opportunities. As a result, there

has been increased attention on social factors within ESG frameworks, such as employee well-being, diversity and inclusion, and community engagement.

- **Resilience and Adaptation:** The pandemic underscored the importance of resilience and adaptation in the face of unexpected shocks. Companies with strong ESG practices, particularly those related to risk management and business continuity planning, were better equipped to weather the challenges posed by COVID-19.
- **Acceleration of Digitalization and Technology Adoption:** The shift to remote work, online education, telemedicine, and e-commerce accelerated during the pandemic. This has implications for ESG investing, with a greater emphasis on technology-related factors such as data privacy, cybersecurity, and digital inclusion.
- **Supply Chain Resilience and Localization:** Disruptions to global supply chains highlighted the importance of supply chain resilience and diversification. There is growing interest in ESG factors related to supply chain management, including supplier transparency, labor practices, and environmental impacts. Some companies are also reevaluating their reliance on global supply chains in favor of more localized and resilient alternatives.
- **Renewed Focus on Environmental Sustainability:** While the immediate focus during the

pandemic was on addressing the health and economic impacts, there is a growing recognition of the interconnectedness between human health, environmental sustainability, and resilience to future crises. This has led to renewed commitments to addressing climate change and other environmental challenges within corporate and investment strategies.

- **Stakeholder Capitalism and Purpose-Driven Business:** The pandemic highlighted the interconnectedness between businesses and society, leading to a greater emphasis on stakeholder capitalism and purpose-driven business models. Companies are increasingly expected to consider the interests of all stakeholders, including employees, customers, communities, and the environment, rather than solely focusing on maximizing shareholder value.
- **Regulatory and Policy Responses:** Governments and regulatory bodies have responded to the pandemic with various stimulus packages and policy measures aimed at promoting economic recovery, including investments in sustainable infrastructure, clean energy, and green technology. This has created opportunities for ESG investing in sectors aligned with these priorities.
- **Overall, the COVID-19 pandemic** has accelerated existing trends in ESG investing while also highlighting the importance of resilience, adaptability, and social responsibility in navigating global challenges. As a result, investors

and companies are increasingly integrating ESG considerations into their decision-making processes to drive long-term value creation and positive societal impact.

### Objectives and Scope of the Study

**Objective:** To investigate the predictors and outcomes of ESG investing in the post-COVID era, with a focus on understanding how environmental, social, and governance factors influence investment decisions and financial performance.

#### Sub-Objectives:

- **Identify Predictors of ESG Investing:**
  - A. Examine the factors driving investor interest in ESG investing post-COVID, including regulatory changes, societal trends, market dynamics, and investor preferences.
  - B. Investigate the extent to which environmental concerns, social issues, and governance practices influence investment decisions in the aftermath of the pandemic.
- **Assess Financial Performance of ESG Investments:**
  - A. Evaluate the financial performance of ESG investments post-COVID compared to non-ESG investments, considering factors such as risk-adjusted returns, volatility, and market liquidity.
  - B. Analyze the relationship between ESG ratings, ESG scores, or ESG metrics and financial outcomes, such as stock returns, firm value, and profitability.
- **Examine Impact on Companies and Industries:**

A. Explore how companies with strong ESG practices have fared post-COVID-19 pandemic in terms of resilience, adaptability, and long-term sustainability.

B. Assess the sectoral differences in ESG performance and financial outcomes, considering the unique challenges and opportunities faced by different industries in the post-COVID environment

- **Investigate Investor Behavior and Preferences:**

A. Investigate investor attitudes, motivations, and behaviors towards ESG investing post-COVID, including factors influencing investment decisions, risk perceptions, and performance expectations.

B. Examine the role of institutional investors, asset managers, and retail investors in driving demand for ESG investments and shaping market dynamics.

- **Explore Policy and Regulatory Implications:**

A. Examine the impact of policy initiatives, regulatory changes, and market interventions on ESG investing post-COVID, including the development of sustainable finance frameworks, disclosure requirements, and tax incentives.

B. Assess the effectiveness of regulatory measures in promoting ESG integration, enhancing transparency, and aligning financial markets with sustainability goals.

- **Provide Suggestions for Stakeholders:**

A. Offer recommendations for investors, policymakers, corporate



managers, and other stakeholders based on the findings of the study, including strategies for integrating ESG considerations into investment decisions, enhancing ESG disclosure and reporting, and promoting sustainable business practices.

By addressing these objectives, the study aims to contribute to the understanding of the drivers and outcomes of ESG investing in the post-COVID era, inform investment practices and policy decisions, and advance knowledge in the field of sustainable finance and responsible investment.

### Scope of the study:

The scope of a study on predictors and outcomes of ESG (Environmental, Social, and Governance) investing post-COVID encompasses various dimensions and aspects related to understanding how ESG factors influence investment decisions and financial performance in the aftermath of the pandemic. Here's a breakdown of the scope:

- Predictors of ESG Investing:

A. Regulatory Environment: Explore how changes in regulatory frameworks post-COVID have influenced investor interest and behavior towards ESG investing.

B. Market Dynamics: Investigate how shifts in market dynamics, such as changes in investor preferences, risk perceptions, and market volatility, have impacted the demand for ESG investments.

C. Societal Trends: Examine societal trends and stakeholder expectations post-COVID, including increased awareness of environmental and social issues and the growing emphasis on sustainability and responsible investing.

D. Investor Preferences: Analyze investor attitudes, motivations, and preferences towards ESG investing post-COVID, considering factors such as risk appetite, performance expectations, and ethical considerations.

- Outcomes of ESG Investing:

A. Financial Performance: Evaluate the financial performance of ESG investments post-COVID compared to non-ESG investments, focusing on risk-adjusted returns, market volatility, and long-term sustainability.

B. Corporate Resilience: Assess the resilience of companies with strong ESG practices post-COVID, examining their ability to navigate market disruptions, manage risks, and maintain business continuity.

C. Stakeholder Engagement: Explore the impact of ESG investing on stakeholder engagement and relationships, including investor relations, employee engagement, customer loyalty, and community trust.

D. Sectoral Analysis: Conduct sectoral analysis to identify the performance of ESG investments across twenty-four FMCG, consumer retail and food retail industries post-COVID, considering sector-specific challenges and opportunities.

- Methodological Approach:

A. Data Collection: Data has been collected from sources, such as financial databases, ESG ratings agencies such as CRISIL, and industry reports, for conducting empirical analysis. It includes overall ESG scores, environmental scores, social scores, and corporate governance scores of various companies, along with specific scores for each dimension.

B. Data Analysis: Employ appropriate statistical or econometric techniques to analyze the relationship between ESG factors and investment outcomes, considering factors such as correlation analysis, and regression analysis.

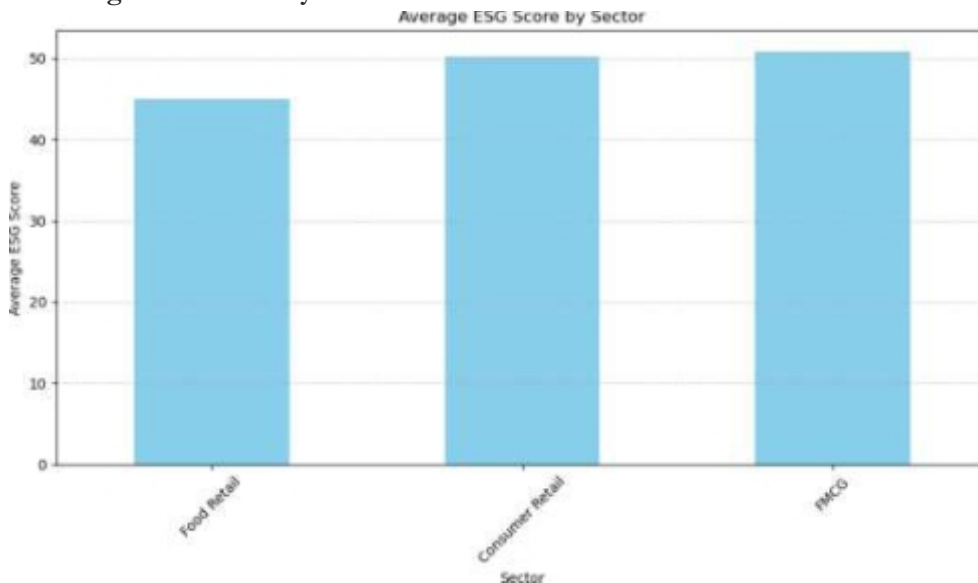
C. Comparative Analysis: Compare the performance of ESG investments post-COVID to identify trends, patterns, and shifts in investor behavior and market dynamics.

D. Data Availability: Access to comprehensive and reliable ESG data remains a challenge, Study is limited to twenty-four companies and to three sectors only. Data available for the study is for the fiscal year 2022.

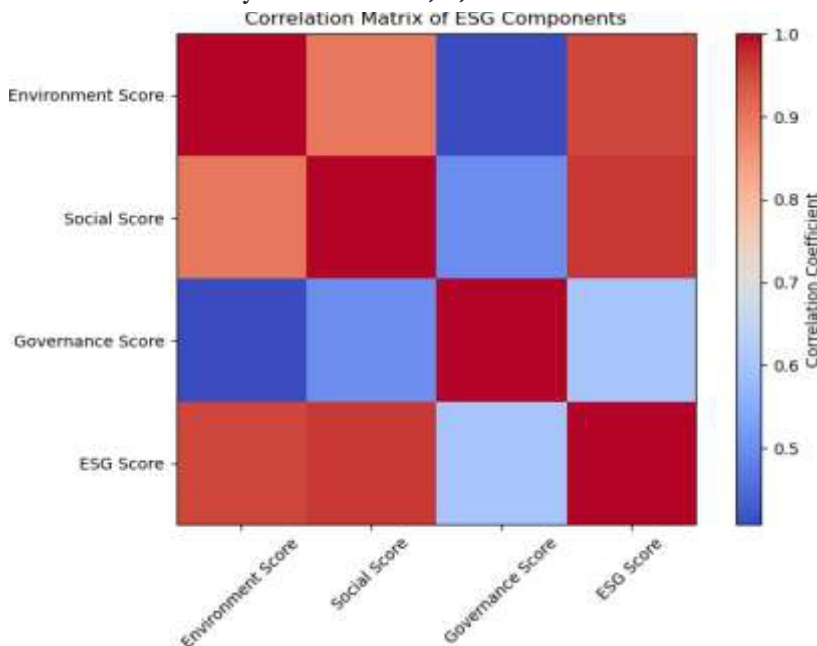
## DATA ANALYSIS & INTERPRETATION

| Serial No. | Company Name                         | Sector Classification | Environment Score | Social Score | Governance Score | ESG Score | Category      | Scoring Period |
|------------|--------------------------------------|-----------------------|-------------------|--------------|------------------|-----------|---------------|----------------|
| 1          | Adani Wilmar Ltd.                    | FMCG                  | 49                | 55           | 64               | 56        | Adequate      | March, 2022    |
| 2          | ADF Foods Ltd.                       | FMCG                  | 41                | 38           | 64               | 49        | Adequate      | March, 2022    |
| 3          | Agro Tech Foods Ltd.                 | FMCG                  | 31                | 38           | 61               | 45        | Below Average | March, 2022    |
| 4          | Apex Frozen Foods Ltd.               | FMCG                  | 28                | 37           | 64               | 45        | Below Average | March, 2022    |
| 5          | Avanti Feeds Ltd.                    | FMCG                  | 33                | 37           | 69               | 48        | Adequate      | March, 2022    |
| 6          | Bajaj Consumer Care Ltd.             | FMCG                  | 33                | 48           | 66               | 50        | Adequate      | March, 2022    |
| 7          | Bikaji Foods International Ltd.      | FMCG                  | 29                | 34           | 63               | 44        | Below Average | March, 2022    |
| 8          | Britannia Industries Ltd.            | FMCG                  | 49                | 55           | 73               | 60        | Adequate      | March, 2022    |
| 9          | CCL Products (India) Ltd.            | FMCG                  | 31                | 41           | 69               | 48        | Adequate      | March, 2022    |
| 10         | Colgate - Palmolive India Ltd.       | FMCG                  | 57                | 61           | 72               | 64        | Strong        | March, 2022    |
| 11         | D F M Foods Ltd.                     | FMCG                  | 30                | 40           | 67               | 47        | Adequate      | March, 2022    |
| 12         | Dabur India Ltd.                     | FMCG                  | 46                | 61           | 68               | 59        | Adequate      | March, 2022    |
| 13         | Dodla Dairy Ltd.                     | FMCG                  | 31                | 42           | 68               | 48        | Adequate      | March, 2022    |
| 14         | Emami Ltd.                           | FMCG                  | 32                | 45           | 66               | 49        | Adequate      | March, 2022    |
| 15         | Aditya Birla Fashion and Retail Ltd. | Consumer Retail       | 55                | 63           | 70               | 63        | Strong        | March, 2022    |
| 16         | Arvind Fashions Ltd.                 | Consumer Retail       | 34                | 41           | 65               | 48        | Adequate      | March, 2022    |
| 17         | Asian Star Company Ltd.              | Consumer Retail       | 30                | 41           | 64               | 47        | Adequate      | March, 2022    |
| 18         | Barbeque-Nation Hospitality Ltd.     | Food Retail           | 25                | 35           | 66               | 44        | Below Average | March, 2022    |
| 19         | Bata India Ltd.                      | Consumer Retail       | 32                | 44           | 73               | 51        | Adequate      | March, 2022    |
| 20         | Borosil Ltd.                         | Consumer Retail       | 30                | 41           | 68               | 48        | Adequate      | March, 2022    |
| 21         | Borosil Renewables Ltd.              | Consumer Retail       | 32                | 43           | 67               | 49        | Adequate      | March, 2022    |
| 22         | Campus Activewear Ltd.               | Consumer Retail       | 28                | 42           | 68               | 48        | Adequate      | March, 2022    |
| 23         | Devyani International Ltd.           | Food Retail           | 27                | 37           | 67               | 46        | Adequate      | March, 2022    |
| 24         | Eureka Forbes Ltd.                   | Consumer Retail       | 31                | 41           | 67               | 48        | Adequate      | March, 2022    |

### Average ESG Score by Sector



### Correlation Analysis between E, S, G scores and ESG Score



#### Correlation Matrix:

|                   | Environment Score | Social Score | Governance Score | ESG Score |
|-------------------|-------------------|--------------|------------------|-----------|
| Environment Score | 1.000000          | 0.895626     | 0.407908         | 0.953429  |
| Social Score      | 0.895626          | 1.000000     | 0.501499         | 0.965348  |
| Governance Score  | 0.407908          | 0.501499     | 1.000000         | 0.602405  |
| ESG Score         | 0.953429          | 0.965348     | 0.602405         | 1.000000  |

#### Interpretation:

**High Positive Correlations:** There is a strong positive correlation between ESG Score and Environment Score (0.953429) as well as between ESG Score and Social Score (0.965348). This indicates that companies with higher Environment and Social scores tend to have higher overall ESG scores. There is also a relatively

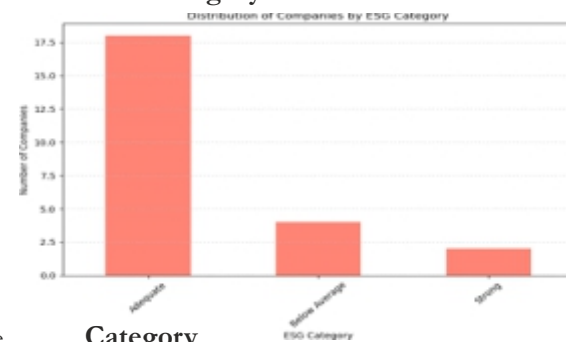
strong positive correlation between Environment Score and Social Score (0.895626), suggesting that companies performing well in one aspect (environmental or social) often perform well in the other aspect too.

**Moderate Positive Correlation:** There is a moderate positive correlation between ESG Score and Governance Score (0.602405). This implies that companies with stronger governance practices tend to have higher overall ESG scores.

**Weak Positive Correlation:** The correlation between Environment Score and Governance Score

(0.407908) is relatively weak compared to other correlations in the matrix. This suggests that while there might be some relationship between environmental performance and governance practices, it's not as strong as the relationships observed between other variables.

### Distribution of companies by ESG Category



#### Category

|               |    |
|---------------|----|
| Adequate      | 18 |
| Below Average | 4  |
| Strong        | 2  |

The data shows that the majority of companies (18 out of 24) have "Adequate" ESG scores, indicating they meet basic standards. Four companies have "Below Average" scores, indicating room for improvement, while two companies have "Strong" scores, signifying exemplary ESG performance.

#### Descriptive Statistics:

|       | Environment Score | Social Score | Governance Score | ESG Score |
|-------|-------------------|--------------|------------------|-----------|
| count | 24.000000         | 24.000000    | 24.000000        | 24.000000 |
| mean  | 35.166667         | 44.166667    | 67.041667        | 50.166667 |
| std   | 9.101680          | 8.514268     | 3.042870         | 5.783535  |
| min   | 25.000000         | 34.000000    | 61.000000        | 44.000000 |
| 25%   | 30.000000         | 38.000000    | 64.750000        | 47.000000 |
| 50%   | 31.500000         | 41.000000    | 67.000000        | 48.000000 |
| 75%   | 35.750000         | 45.750000    | 68.250000        | 50.250000 |
| max   | 57.000000         | 63.000000    | 73.000000        | 64.000000 |

#### Correlation Matrix:

|                   | Environment Score | Social Score | Governance Score | ESG Score |
|-------------------|-------------------|--------------|------------------|-----------|
| Environment Score | 1.000000          | 0.895626     | 0.407908         | 0.953429  |
| Social Score      | 0.895626          | 1.000000     | 0.501499         | 0.965348  |
| Governance Score  | 0.407908          | 0.501499     | 1.000000         | 0.602405  |
| ESG Score         | 0.953429          | 0.965348     | 0.602405         | 1.000000  |

#### Hypothesis Testing (Adequate vs Strong ESG Scores):

T-statistic: -4.5830632589732705

P-value: 0.0002306833951006720

#### Regression Analysis:

##### OLS Regression Results

##### OLS Regression Results

|                   |                  |                     |          |
|-------------------|------------------|---------------------|----------|
| Dep. Variable:    | ESG Score        | R-squared:          | 0.997    |
| Model:            | OLS              | Adj. R-squared:     | 0.997    |
| Method:           | Least Squares    | F-statistic:        | 2277.    |
| Date:             | Tue, 16 Apr 2024 | Prob (F-statistic): | 1.66e-25 |
| Time:             | 22:12:13         | Log-Likelihood:     | -5.6265  |
| No. Observations: | 24               | AIC:                | 19.25    |
| Df Residuals:     | 20               | BIC:                | 23.97    |
| Df Model:         | 3                |                     |          |
| Covariance Type:  | nonrobust        |                     |          |

|                   | coef   | std err | t      | P> t  | [0.025 |
|-------------------|--------|---------|--------|-------|--------|
| const             | 2.6321 | 1.613   | 1.632  | 0.118 | -0.732 |
| Environment Score | 0.3098 | 0.017   | 17.847 | 0.000 | 0.274  |
| Social Score      | 0.2961 | 0.020   | 15.122 | 0.000 | 0.255  |
| Governance Score  | 0.3514 | 0.027   | 13.164 | 0.000 | 0.296  |

|                |        |                   |          |
|----------------|--------|-------------------|----------|
| Omnibus:       | 1.527  | Durbin-Watson:    | 2.117    |
| Prob(Omnibus): | 0.466  | Jarque-Bera (JB): | 1.300    |
| Skew:          | -0.529 | Prob(JB):         | 0.522    |
| Kurtosis:      | 2.576  | Cond. No.         | 2.08e+03 |



### Notes:

Standard Errors assume that the covariance matrix of the errors is correctly specified.

The condition number is large, 2.08e+03. This might indicate that there are strong multicollinearity or other numerical problems.

## FINDINGS & CONCLUSION

### Findings from Data Analysis

#### From the Descriptive Statistics:

**Environment Score** The mean environment score is approximately 35.17 with a standard deviation of 9.10. Scores range from 25 to 57.

**Social Score** The mean social score is around 44.17 with a standard deviation of 8.51. Scores vary between 34 and 63.

**Governance Score** The mean governance score is approximately 67.04 with a standard deviation of 3.04. Scores range from 61 to 73.

**ESG Score** The mean ESG score is about 50.17 with a standard deviation of 5.78. ESG scores vary between 44 and 64.

#### From the correlation matrix

There is a strong positive correlation between ESG Score and Environment Score (0.953), Social Score (0.965), and a moderate positive correlation with Governance Score (0.602). Environment Score and Social Score exhibit a strong positive correlation (0.896), while Governance Score has a weaker positive correlation with Environment Score (0.408) and Social Score (0.501).

#### From Hypothesis Testing

The hypothesis testing (t-test) indicates a significant difference in mean ESG

scores between companies classified as “Adequate” and “Strong” (p-value < 0.05), suggesting that the two groups have significantly different ESG performance levels.

#### From Regression Analysis

The regression analysis shows that the model has a high R-squared value (0.997), indicating that 99.7% of the variability in ESG Score is explained by the predictor variables (Environment Score, Social Score, Governance Score). All predictor variables have statistically significant coefficients (p-value < 0.05), indicating that they are strong predictors of ESG Score. However, there may be issues with multicollinearity given the large condition number.

**Null Hypothesis (H0):** The mean ESG scores of companies classified as “Adequate” and “Strong” are equal.

**Alternative Hypothesis (H1):** The mean ESG scores of companies classified as “Adequate” and “Strong” are not equal. In statistical terms, this can be expressed as:

A. H0:  $\mu_{\text{adequate}} = \mu_{\text{strong}}$  (where  $\mu_{\text{adequate}}$  represents the mean ESG score of companies classified as “Adequate,” and  $\mu_{\text{strong}}$  represents the mean ESG score of companies classified as “Strong”).

B. H1:  $\mu_{\text{adequate}} \neq \mu_{\text{strong}}$   
The t-test is conducted to determine whether there is enough evidence to reject the null hypothesis in favor of the alternative hypothesis, based on the observed difference in mean ESG scores between the two groups and the variability within each group.

#### Findings from Theoretical Data

Empirical data on ESG (Environmental, Social, and Governance) investing pre-COVID and post-COVID is still evolving, but there are several trends and insights that can be gleaned from available research and market observations:

#### Pre-COVID ESG Trends:

- **Growing Interest:** ESG investing had been gaining traction steadily before the COVID-19 pandemic, with increasing numbers of investors incorporating ESG criteria into their investment decisions.
- **Performance:** Studies had shown mixed evidence regarding the financial performance of ESG investments compared to non-ESG investments. Some research indicated that ESG funds outperformed their non-ESG counterparts over certain time periods, while other studies found no significant difference in performance.
- **Integration:** ESG integration was becoming more mainstream, with many asset managers and institutional investors adopting ESG frameworks and strategies in their portfolios.

#### Post-COVID ESG Trends:

- **Resilience:** The COVID-19 pandemic highlighted the resilience of companies with strong ESG practices, as they tended to fare better in terms of risk management, employee well-being, supply chain resilience, and adaptability to changing market conditions.
- **Accelerated Adoption:** The

pandemic accelerated existing trends towards ESG investing, with heightened awareness of environmental and social issues and increased demand for sustainable and responsible investment options.

- **Performance:** Initial research suggests that ESG investments may have exhibited greater resilience during the market downturn caused by the pandemic, with some ESG funds outperforming their non-ESG counterparts.
- **Focus on Social Factors:** There has been a heightened focus on social factors within ESG investing post-COVID, including employee health and safety, workforce management, diversity and inclusion, and community support.

Potential Shifts in Investor Behavior:

A. Continued Emphasis on ESG Integration.

B. Greater Demand for Impact Investing

C. Enhanced Disclosure and Transparency

D. Focus on Resilience and Adaptation

- Overall, while the COVID-19 pandemic has brought about significant challenges, it has also accelerated trends towards sustainability, resilience, and responsible investing. Investors are increasingly recognizing the importance of ESG factors in driving long-term value creation and are expected to continue integrating these considerations into their investment strategies post-pandemic.

## Conclusion & Suggestions

### Conclusion:

#### Implications of Esg :

ESG (Environmental, Social, and Governance) considerations have significant implications for investors, policymakers, and corporate managers:

#### Investors

- ESG factors can help investors identify and manage risks that may not be captured by traditional financial analysis.
- Companies with strong ESG performance are more likely to generate sustainable long-term returns by addressing environmental challenges, fostering social inclusion, and maintaining effective governance practices.
- Investors face increasing pressure from stakeholders, including customers, employees, regulators, and the public, to incorporate ESG considerations into investment strategies and promote sustainable and responsible business practices.
- Companies with strong ESG credentials may have better access to capital and lower financing costs as investors increasingly prioritize sustainability.

#### Policymakers:

- Policymakers play a crucial role in shaping the regulatory environment to incentivize ESG integration and promote sustainable finance.
- ESG considerations can contribute to market stability by mitigating systemic risks associated with environmental degradation, social inequality, and corporate governance failures.

- Promoting sustainable development and responsible business practices can contribute to economic growth, job creation, and social welfare.

#### Corporate Managers:

- ESG factors should be integrated into strategic planning processes to identify risks and opportunities, drive innovation, and enhance competitiveness.
- Corporate managers must engage with stakeholders, including investors, employees, customers, suppliers, and communities, to understand their ESG expectations and priorities.
- Corporate managers should develop robust ESG metrics and performance indicators to track progress, measure impact, and communicate outcomes to stakeholders.

Overall, ESG considerations are increasingly shaping investment decisions, regulatory policies, and corporate strategies, as stakeholders recognize the importance of sustainability, social responsibility, and good governance in driving long-term value creation, risk management, and stakeholder engagement. Collaboration among investors, policymakers, and corporate managers is essential to advance ESG integration and promote sustainable and responsible business practices across industries and markets.

#### Suggestions:

Here are some of the best ESG practices that can be adopted by the companies:

##### 1. Environmental Sustainability:

- Embracing renewable energy sources such as solar and wind power to reduce carbon emissions and mitigate

environmental impact.

- Implementing measures to improve energy efficiency, reduce water consumption, minimize waste generation, and promote recycling and reuse.

## 2. Social Responsibility:

- Prioritizing employee welfare by offering fair wages, safe working conditions, healthcare benefits, and opportunities for skill development and career advancement.
- Engaging with local communities through corporate social responsibility (CSR) initiatives.

## 3. Governance Practices:

- Ensuring diversity and independence in corporate boards
- Maintaining transparency in financial reporting, corporate governance practices, and ESG performance.

## 4. Stakeholder Engagement:

- Engaging with investors to provide transparent and timely information.
- Building trust and loyalty among customers by delivering high-quality products and services.
- Collaborating with government authorities and regulatory bodies to promote sustainable development, comply with regulations, and advocate for policies that support ESG goals.

## 5. Innovation and Technology:

- Investing in research and development of sustainable technologies and innovative solutions to address environmental challenges and enhance operational efficiency.
- Embracing digitalization and technology-driven solutions to optimize processes, reduce environmental

footprint, and improve stakeholder engagement and transparency.

## References

- Syed, Ali. Murad (2017), "Environmental, social and governance (ESG) criteria and performance managers", Cogent Business and Management, ISSN: (Print) 2331-1975 (online), pp 9-22
- Sood, K., Pathak, P., Jain, J. and Gupta, S. (2023), "How does an investor prioritize ESG factors in India? An assessment based on fuzzy AHP", Managerial Finance, Vol. 49 No. 1, pp. 66-87.
- Aneja R, Ahuja V. An assessment of socioeconomic impact of COVID-19 pandemic in India. J Public Aff. 2021;21(2)
- Malik, C. and Yadav, S. (2020), "Forecasting and asymmetric volatility modelling of sustainability indexes in India", Corporate Governance and Sustainability Review, Vol. 4 No. 1, pp. 56-64.
- Harrison JS, Freeman RE. 1999. Stakeholders, social responsibility, and performance: empirical evidence and theoretical perspectives. Academy of Management Journal 42(5): 479-485
- Busch, T., Bauer, R., & Orlitzky, M. (2016). Sustainable Development and Financial Markets: Old Paths and New Avenues. Business & Society, 55(3), 303-329. <https://doi.org/10.1177/0007650315570701>
- <https://www.statista.com/topics/6248/covid-19-impact-on-the-fmcg-market-worldwide/#topicOverview>
- <https://earth5r.org/esg-investing-in-india-pioneering-sustainable-growth-with-top-10-companies/>
- <https://www.crisil.com/what-we-do/financial-products/crisils-sustainability-solutions/esg-score-2021.html>
- <https://www.icra.in/Rating/DownloadResearchSpecialCommentReport?id=2928>
- [https://www.researchgate.net/publication/377150354\\_Environmental\\_Social\\_and\\_Corporate\\_Governance\\_Disclosures\\_Practices\\_of\\_Listed\\_Fast\\_Moving\\_Consumer\\_Goods\\_FMG\\_Companies\\_in\\_India](https://www.researchgate.net/publication/377150354_Environmental_Social_and_Corporate_Governance_Disclosures_Practices_of_Listed_Fast_Moving_Consumer_Goods_FMG_Companies_in_India)
- <https://www.crisil.com/en/home/what-we-do/financial-products/crisils-sustainability-solutions/esg-score-2022.html>
- [https://www.sesgovernance.com/esg-pdf/photo\\_1684497102\\_ESG-Scores---Top-100-Listed-Companies-in-India.pdf](https://www.sesgovernance.com/esg-pdf/photo_1684497102_ESG-Scores---Top-100-Listed-Companies-in-India.pdf)
- [https://www.pwc.com/gx/en/issues/esg.html?WT.mc\\_id=GMO-ESG-NA-FY24-ESGCC-ESGWLP-T9-CI-XLOS-WBP-GMOS00012-EN-PSEDI-T2&gclid=EAIaIQobChMIwPP5zvXKhQMvYKNmA0sqA1VEAAYASAAEgLf8\\_D\\_BwE&gclidsrc=aw.ds](https://www.pwc.com/gx/en/issues/esg.html?WT.mc_id=GMO-ESG-NA-FY24-ESGCC-ESGWLP-T9-CI-XLOS-WBP-GMOS00012-EN-PSEDI-T2&gclid=EAIaIQobChMIwPP5zvXKhQMvYKNmA0sqA1VEAAYASAAEgLf8_D_BwE&gclidsrc=aw.ds)
- <https://www.emerald.com/insight/content/doi/10.1108/MF-04-2022-0162/full/html>