

Linking ESG Strategies to Financial Performance: An Analysis of CIPLA and SUN PHARMA

Dr. Lovely Srivastava

Associate Professor, Faculty of Commerce & Management,

United University, Prayagraj

Abstract

Sustainability is the prime focus area for the development. Businesses are considering environmental and social factors through governance as a desirable component for sustainable development. Objective of this paper is to evaluate impact of ESG factors on companies' financial performance on Indian pharmaceutical companies. Positive financial performance will increase interest of businesses towards adoption of sustainable practices. Conclusive research had used for the study. Financial data and ESG score of sun pharma and CIPLA pharmaceutical companies' from 2021 to 2025 have been taken for the further analysis. Linear Regression was used for the analysis. By analysis it is found that ESG score positively influences the company's financial performance. it was found that relationship of variables- Sales, ROA, ROI, EPS, NPM is universally not true for all the companies. It varies company to company.

Keywords: Financial Performance, Social factors, Sustainability, Governance, Company.

1. Introduction

Environmental and economic sustainability is important elements of country. In the growth and development, idea of sustainability has not the only focused area with destructive emissions of the atmosphere which affects society. Now a days along with environmental, social and governance factors are also challenges for the economy at pan world. To address all these three challenges environmental, social and governance (ESG) has considered into a single umbrella. Companies those are involved in manufacturing are producing more by product than service sectors companies. Out of all production companies, automobile and pharmaceutical industry are two major contributors of by products to the environment. Pharmaceutical industry is not an exception to the demand from the public, governments, regulators, and media on businesses across all sectors to meaningfully address the three pillars of sustainability. Green house gas emission from the industries are major concern to the environment protection and sustainability globally. The significant contribution of greenhouse gas (GHG) emission of pharmaceutical industry's is one factor drawing attention to it. This influence comes from chemistry, supply networks, transportation and logistics, R&D, and the disposal of pharmaceuticals. It has been observed that emission from pharmaceuticals industry was approx. 55% more than automobile industry. The pharmaceutical industry has observed implied pressure to adopt such practices which leads to sustainable development inclusive of societal growth aspect. Social aspect is critically emerged field (Brundtland, 1997) which is in core area of 17 SDG of United Nations to achieve till 2030 across the world (United Nations, 2015). In today's scenario corporation and its stakeholders are more concerned for the operational sustainability (Dunphy et al., 2014; Villena & Gioia, 2018), regulatory landscape, uniformity in non-financial reporting (Monciardini et al., 2020; Cinquini & de Luca, 2022) and financial reporting and other disclosures related to sustainability objectives and its impact as whole (Securities and Exchange Board of India, 2021; The Securities and Exchange Commission, Thailand, 2021; New Zealand Parliament, 2021). Even investors are also considering the sustainable contributions of companies while evaluating their market performance for investment (Mihaiu et al., 2021). Today's consumer are also more aware about social development and preferring products that are sustainable and environment friendly. Among other stakeholders, employees' rights, working environment of organization and other social security issues are day by day gaining attention due to 'Corporate Social Responsibility' implementation (Shnayder et al., 2021; Milane si et al., 2020). The majority of these regulations emphasize environmental sustainability, other areas such as corporate governance and human rights are also receiving increased regulatory attention.

The impact of Environmental, Social, and Governance (ESG) performance on corporate performance is multifaceted, with both short-term and long-term implications. While initial investments in ESG may lead to short-term declines in financial performance (Chen, 2024), the long-term benefits include enhanced innovation, productivity, market competitiveness and increase in export capabilities (Chen, 2024; Shang, 2024; Luo, 2024; Li, 2024). This paper will explore the key aspects of ESG's impact on select Indian pharmaceutical companies' financial performance.

2. Literature Review

The intricate interconnections and mutual dependencies of resources over temporal and spatial dimensions, along with the resultant short-term versus long-term trade-offs encountered by enterprises and societies, have compelled their policymakers to formulate sustainable practices without relinquishing the fundamental corporate aim of value maximization. Nevertheless, the journey has evolved from the assertion that “the allocation of corporate resources for purposes other than profit maximization would be equivalent to a form of theft” (Friedman, 1962) to the concept of “creating shared value” (Porter & Kramer, 2011), representing a tumultuous trajectory where numerous managers continue in disregarding the dynamic interactions of their enterprises with various parameters within their corporate ecosystems. As a result, the Environmental, Social, and Governance (ESG) framework has emerged as a meta-construct (Orlitzky et al., 2003), and the exploration of the relationship between ESG performance and corporate financial performance remains indeterminate (Wang et al., 2016). Various theoretical frameworks offer explanations for the interconnection between ESG score and corporate financial performance (ESGS–CFP). The stakeholder theory recommends a favorable ESGS–CFP correlation, whereas the trade-off theory asserts an unfavorable ESGS–CFP association. On the contrary, the slack resources theory suggests a beneficial ESGS- CFP association, in contrast, the managerial opportunism hypothesis advances a negative CFP–ESGS association. Assuming an inclusive perspective to incorporate all four theoretical frameworks, the positive/negative synergy hypothesis postulates a bidirectional causal relationship causing a "virtuous cycle" (Lin et al., 2019). We perceive inconsistencies and contradictions not solely in the theoretical foundation of this relationship but also in empirical research to examine this relationship. As a result, the theoretical and empirical relationship remains unsatisfying yet highlights the dynamic nature of this relationship (Lu et al., 2014; Brammer & Millington, 2008; Margolis & Walsh, 2003). While some aspects of sustainability are fundamental to pharmaceutical companies, as their products improves the health of individuals, other issues such as the environmental effects of drugs throughout their life cycle.

2.1 Financial Performance Indicators

Financial performance of any company is reflecting its competitive status in the business world among its own sectorial companies. Company's performance can be measured by various indicators like Return on Assets (ROA), Return on equity (ROE) and profit, earnings per share (EPS), net profit margins (NPM), Sales, return on investment (ROI) etc. Prior literature that investigates the relationship between ESG scores and Financial performance uses the following measures: Stock Returns (Brammer et al. 2006), Return on Assets (Xie et al. 2019; Dalal and Thaker 2019; Atan et al. 2018, Velte,2017; Waters, 2011; Griffin and Mahon,1997) and Return on Equity (ROE) (Atan et al. 2018; Griffin and Mahon,1997). Other than ESG, Socially Responsible Investing, Corporate Social Performance, were also used in the different studies to assess how being sustainable pays off to the companies. Various researchers emphasizes the importance of using market-based accounting measure to analyses financial performance of the companies. Prior studies reflected different relationship between the financial measures and ESG factors on large samples of international companies that has given foundation to this study.

Table-1: Literature evidence on the positive association between ESG Score and financial performance

Authors	Determinants	Time frame/ Sample Area
Derwall et al. -2005	Eco-efficiency score Stock price	1995–2003/ USA
Barnett and Salomon (2006)	Cost of social responsibility	1972-2000 /USA

	Risk-adjusted financial performance of a given SRI fund	
Lo and Sheu (2007)	Sustainability index (DJSI-USA), Tobin's Q ratio	1999–2002/ USA
Filbeck et al. (2009)	Business ethics Market capitalization and Book value of Equity/Market value of equity ratio	2000–2007 / USA
Peiris and Evans -2010	ESG factors, Return on assets and Market-to-book-value	1991–2006/ USA
Lourenço et al. -2012	Corporate sustainability performance The market value of equity	2007–2010 /Canada & USA
Velte (2017)	ESG performance Return on assets	2010-2014/ Germany
Zhao et al. (2018)	ESG performance index, ROCE & Debt/Equity ratio	2017 / China
Dalal and Thaker -2019	Sustainability ratings by NSE 100 and indices Return on assets	2015-2017/India
Xie et al. (2019)	Bloomberg ESG disclosure score Corporate efficiency (revenue earned, ROA)	2015/174 International countries
Ming (2024)	ROA and ESG	Malaysian leading companies
Quintiliani (2024)	ROA,ROE and ESG	European listed companies 2016-2023
Meylani & Sari (2025)	ROA, Green Innovation & ESG	Indonesian energy firms

Source: compiled by author

2.1.2. The Negative Relation between ESG and financial performance indicators

According to a different viewpoint, financial performance is negatively correlated with investments in ESG criteria (Lee et al., 2009). Using market returns as the evaluation criterion and conducted a thorough investigation of many UK businesses found that companies who have achieved a zero Corporate Social Performance (CSP) score outperformed the market (Brammer et al., 2006). It is reasonable to assume that investment in CSP could be unfavorable because resources would be transferred from shareholders to other stakeholders (Barnett, 2007). Strong negative association between CSP and one of the accounting-based indicators of Corporate Financial Performance are found in different studies due to mainly of Governance component (Nollet and others, 2016). Few recent study on emerging economies, shown that ROA and DCF are negatively impacted by ESG measures (Garcia and Orsato 2020). The authors attributed this result to the need to prioritize investment strategies and the lack of cash in emerging markets. Another relevant study carried out during the COVID-19 pandemic revealed a negative correlation between ESG initiatives and financial returns as a result of the pandemic (Folger-Laronde et al. 2020). Further studies also indicated the negative impact of ESG initiatives on organizational performance (Velte, 2017; Crisóstomo et al., 2011; Mittal et al., 2008).

Table-2: Literature evidence on the Negative association between ESG and Financial performance Indicators

Authors/Year	Determinants	Time frame/ Sample
Brammer et al. (2006)	EIRIS scores Stock returns	2002–2005 The U.K.
Mittal et al. (2008)	Economic value added (EVA) and Market value added (MVA), CSR disclosure	2001–2005 India
Crisóstomo et al. (2011)	CSR index based on I base's information ROA and ROE	2001–2006 Brazil
Nollet et al. (2016)	ESG disclosure score ROA and ROC	2007–2011 USA
Velte (2017)	ESG performance data, collected from the Thomson Reuters Data stream database ROA as financial performance	2010–2014 Germany
Garcia and Orsato (2020)	Measured by ranging from 0% to 100%, based on information on governance, environmental, and social pillars of firms ROA and DCF	2007–2014 Multiple countries (mainly USA)
Folger-Laronde et al. (2020)	Eco-fund ratings are sourced from Corporate Knights, a research firm that provides R.I. ratings Weekly financial returns during COVID-19	2019–2020 Canada

Source: compiled by author

3. Methodology

3.1 Hypothesis Formulation

Pervious literature provided various perspectives on the inquiries concerning the impact of Environmental, Social, and Governance (ESG) initiatives on financial performance. Some researchers contend that adopting sustainable practices yields positive outcomes, some studies evident negative correlation, while others assert that there is no discernible correlation. Consequently, it is pertinent to investigate whether ESG initiatives exert an influence on financial performance or if a significant relationship between these two variables is absent. Despite the inconclusive nature of the findings, this paper tried to conclude whether ESG initiatives exert a notable impact on financial performance on Indian pharmaceutical companies in one capacity or another. Therefore, in light of the preceding discourse found within the academic literature, no unidirectional relationship persist between the variables, so null hypothesis is being formulated to evaluate impact of Environment (E), Social (S), Governance (G) individually and ESG collectively.

H01: Environmental regulation did not have significant impact on financial performance (sales, EPS, ROA, ROE, and NPM) of pharmaceutical companies.

H02: Social regulation did not have significant impact on financial performance (sales, EPS, ROA, ROE and NPM) of pharmaceutical companies.

H03: Governance did not have significant impact on financial performance (sales, EPS, ROA, ROE and NPM) of pharmaceutical companies.

H04: Environmental, Social and Governance collectively too did not have impact on financial performance (sales, EPS, ROA, ROE and NPM) of pharmaceutical companies.

4. Data Analysis, Interpretation and Discussion

Table-3: Social Score and financial performance of the pharmaceutical company (CIPLA & SUN PHARMA)

Variable s	β	't'	p*	F	p*	Adjusted R ²	Durbin– Watson Coefficient
C_Sales	0.992	15.625	0.000	1.054	0.380 ^b	0.260	0.296
S_Sales	0.984	10.989	0.000	120.769	0.000	0.960	1.00
C_EPS	0.544	1.123	0.343	1.261	0.343 ^b	0.296	1.236
S_EPS	0.892	3.951	0.017	15.608	0.017	0.960	1.00
C_NPM	0.420	0.801	0.482	0.641	0.482 ^b	0.176	1.535
S_NPM	0.930	5.051	0.007	25.516	0.007	0.831	1.071
C_ROA	0.388	0.729	0.519	0.532	0.519 ^b	0.151	1.438
S_ROA	0.924	4.850	0.008	23.523	0.008	0.818	0.874
C_ROI	2.519	0.720	0.004	57.181	0.004	0.899	1.932
S_ROI	0.963	7.173	0.002	51.449	0.002	0.910	1.372

Source: Compiled by author, * 5% Significant level

It has been observed from the table that social factor does not have impact on financial performance of the company. As hypothesis got accepted due to higher p- statistics for sales, ROA, NPM and EPS for CIPLA but ROI of the same have low p-value resulting rejection of hypothesis. In case of sun pharma all the dependent variables have significant p-value resulting rejection of hypothesis. This shows that Social factor have limited influence on company's financial performance (Johnson et. al., 2017). The β coefficient very well suggests a positive relationship of all the independent variable with the dependent variable (Thompson, 2020, Patel et al., 2019). EPS may not be a robust predictor of performance, especially when market conditions are unpredictable (Smith and Taylor, 2018). There may be some other influencing factors which affects company's performance. The association strength of sales, Earning per Share, Net Profit Margin, and Return on Assets with social factors of ESG was only 29%, 26%, 17% and 15% respectively. This association is not significant for the model fitting. While all the dependent variables of sun-pharma shows strong model fit with values 96%, 83%, 81% and 91%. Higher F-statistics value shows that the models are likely significant overall, but individual predictors are not significant. There is also evidence of autocorrelation between the variables. Social and sales variables have highly positive autocorrelation which means as time passes social presence leads to increase in sales of the company. NPM, EPS, ROA and ROI has also positive autocorrelation in CIPLA, as Durbin Watson statistic value is 1.236, 1.535, 1.438 and 1.932 respectively. It is evident that, in case of sun pharma dependent variables shown mixed effect sales and EPS have no auto correlation while NPM and ROI are positively auto-correlated. ROA have negative auto-correlation with social score.

Table-4: Governance Score and financial performance indicators of the pharmaceutical company (CIPLA & SUN PHARMA)

Variable s	β	t	p*	F	p*	Adjusted R ²	Durbin– Watson Coefficient
C_Sales	0.990	14.323	0.000	205.161	0.00	0.976	0.869
S_Sales	0.984	10.986	0.000	120.769	0.00	0.960	1.00
C_EPS	0.955	6.433	0.003	41.38	0.003	0.890	1.108

S_EPS	0.892	3.951	0.017	15.608	0.017	0.745	0.811
C_NPM	0.984	10.921	0.000	119.278	0.00	0.959	1.482
S_NPM	0.930	5.051	0.007	25.516	0.007	0.831	1.071
C_ROA	0.980	9.891	0.001	43.454	0.006	0.951	2.138
S_ROA	0.924	4.850	0.008	23.523	0.008	0.818	0.874
C_ROI	2.159	0.720	0.004	57.181	0.004	0.957	1.932
S_ROI	0.963	7.173	0.002	51.449	0.002	0.910	1.372

Source-Compiled by Author, * 5% Significant level

It has been observed from the table-4, that governance score has strong and consistent positive relationship with various financial performance indicators-Sales, EPS, NPM, ROA and ROI of both the pharmaceutical companies. The p- statistics ($p < 0.05$) of 't' and 'F' -statistics demonstrate the robustness of the relationships which supports rejection of null hypothesis. The adjusted R^2 of C_Sales, S_Sales, C_EPS, S_EPS, C_NPM, S_NPM, C_ROA, S_ROA, C_ROI, S_ROI (0.976, 0.960, 0.890, 0.745, 0.959, 0.831, 0.951, 0.818, 0.957, 0.910 respectively) strongly supporting the model fit of dependent and explanatory variables. Studies shows that good governance mechanisms of the companies lead to higher levels of transparency, which in turn can positively affect sales and customer trust (Larcker et al., 2007; Chung & Pruitt, 1996). Strong governance enhances a firm's ability to generate profits per share, potentially by increasing operational efficiency or reducing agency costs. Effective governance reduces the likelihood of earnings manipulation and improves the accuracy of financial reporting, ultimately leading to a more accurate reflection of a firm's performance in EPS (Gompers et al., 2003; Klapper & Love, 2004). It also improve operational efficiency and decision-making contribute to better NPM (Bhagat & Bolton, 2008; Klein, 2002) found that good governance reduces agency costs, which allows for higher net profit margins by ensuring that resources are allocated efficiently. The coefficient for Governance indicating a strong positive impact. good governance practices enhance the firm's ability to generate returns on their assets by improving management efficiency and ensuring optimal resource utilization (Jensen, 2001), it also make value-enhancing investments an price (Yermack, 1996).

Table-5: Environmental Score and financial performance of the pharmaceutical company (CIPLA & SUN PHARMA)

Variables	β	't'	p*	'F'	p*	Adjusted R^2	Durbin-Watson Coefficient
C_Sales	0.594	1.044	0.406	1.091	0.406 ^b	0.029	1.003
S_Sales	0.984	10.986	0.000	120.769	0.00	0.960	1.000
C_EPS	0.522	0.866	0.478	0.750	0.478	-0.091	1.267
S_EPS	0.892	3.951	0.017	15.608	0.017	0.892 ^a	0.811
C_NPM	0.424	0.663	0.576	0.439	0.576	-0.230	1.516
S_NPM	0.930	5.051	0.007	25.516	0.007	0.930	1.071
C_ROA	0.515	0.849	0.527	0.720	0.485	-0.103	1.518
S_ROA	0.924	4.850	0.008	23.523	0.008	0.818	0.874
C_ROI	0.053	-0.769	0.472	0.774	0.472	-0.082	1.298
S_ROI	0.963	7.173	0.002	51.449	0.002	0.963 ^a	1.372

Source: Compiled by author, * 5% Significant level

Table-5 indicates that environmental score has insignificant relationship with financial performance indicators of CIPLA pharmaceutical-C_Sales, C_EPS, C_NPM, C_ROA, C_ROI ($p > 0.05$; p-0.406, 0.478, 0.576, 0.527, 0.472) while it has significant relationship with financial performance indicators of Sun Pharma-S_Sales, S_EPS, S_NPM, S_ROA, S_ROI(0.000, 0.017, 0.007, 0.008, 0.002). Hence null hypothesis for CIPLA got

accepted and for Sun Pharma it got rejected. It shows positive relationships across all indicators, for Sun Pharma, providing robust evidence that environmental factors contributes to superior financial outcome to the company. These results are consistent with Friede et. al (2015), who reported in their meta-analysis that majority of studies demonstrated a positive Environmental–financial performance relationship. Environmental initiatives taken by pharmaceuticals are very important, where public trust directly impacts sales performance. (Kotsantonis et. al., 2016). Lower cost of capital and improved profitability, which translates into higher EPS is the outcome of strong environmental practices of the organisation (Clark et. al., 2015). This also increase investor confidence, thereby positively influencing earnings-related measures-NPM (Aouadi & Marsat, 2018). Sustainable practices not only increase profitability, it also enhance resource efficiency, reduce waste, and improve margins of pharmaceutical industry (Wang and Sarkis, 2017). Improvement in operational efficiency and the strategic allocation of resources, long-term R&D investments in pharmaceutical companies, thus increases asset productivity and return (Velte, 2017; Ortas et. al., 2015). Investment in environmental sustainability practices and socially responsible strategies create shareholder value by driving sustainable long-term returns (Eccles, 2014; Margolis & Walsh; 2003). It linked to stronger ROI and superior stock market performance. For pharmaceutical firms, where investor perceptions are highly sensitive to ethical and regulatory compliance, Environmental driven strategies serve as a key determinant of sustainable investment performance.

Table-6: ESG score and financial performance of the pharmaceutical companies (CIPLA & Sun Pharma)

Variabl es	β	‘t’	p*	F	p*	Adjusted R2	Durbin– Watson Coefficient
ESG & C_Sales	0.594	1.044	0.406	1.091	0.406	0.091	1.003
ESG & S_Sales	0.495	0.153	0.001	1.32	0.000	0.960	2.436
ESG & C_EPS	0.522	-0.866	0.478	0.750	0.478	0.029	1.267
ESG & S_EPS	0.796	1.857	0.204	3.448	0.204	0.449	2.346
ESG & C_NPM	0.424	0.663	0.576	0.439	0.576	-0.230	1.516
ESG & S_NPM	0.099	0.141	0.901	2.175	0.278	-0.485	2.180
ESG & C_ROA	0.515	0.849	0.485	0.720	0.485	-0.103	1.518
ESG & S_ROA	0.763	1.670	0.237	2.789	0.237	-0.498	2.351
ESG & C_ROI	0.528	0.880	0.472	0.774	0.472	-0.082	1.298
ESG & S_ROI	0.800	1.883	0.200	3.547	0.200	0.459	2.710

The comparative statistical analysis of the relationship between ESG (Environmental, Social, and Governance) metrics and various financial performance indicators of two pharma companies provides insights that ESG and S_Sales (sales of sun pharma) have strong positive and significant relationship (coefficient = 0.495, t= 0.153, p = 0.001) by rejecting null hypothesis and also suggest a robust relationship, echoing that strong ESG practices are often correlated with enhanced sales performance due to increased consumer trust and stakeholder engagement.(Smith et al., 2021; Bhattacharya & Sen, 2004). The positive influence of ESG score on the financial performance of Indian pharmaceutical companies, contribute to enhance their creditworthiness, attracting ethical investors, and ensuring compliance with regulatory standards. Adoption of strong ESG

practices lead to improved reputations and long-term sustainability, balancing social, environmental, and economic goals (Won, 2023; Das & Sarkar, 2023; Diana et. al, 2021; Mihaiu et al., 2021; Krüger, 2015; Cohen et. al., 2010) in developed economies (Kalia & Aggarwal, 2022). However, negative and insignificant relationship observed in developing economies, highlighting the influence of country-level development on ESG effectiveness (Kalia & Aggarwal, 2022). Procurement cost plays significant role in sustainability decisions. Procurement cost, production cost and product price along with other supply chain factors are correlated. (They have greater impact on the sales of the companies. So, policies and practices related to procurement and sales need to extend beyond organization's boundaries. ESG guidelines on sustainability encourage procurement and sales decisions that includes Triple Bottom Line elements- environmental, economic and social (Huang, 2015; Walker et al., 2012; Meehan & Bryde, 2011; Nicholson et al., 2011; Walker, 2009). Previous researches showed that ESG and CSR both are important and plays their role in social responsibilities of corporates and sustainable development and growth of the economy (López-Toro et., 2021). The variation in adjusted R-squared values across metrics further elucidates the diverse impact efficiency of ESG factors. High adjusted R-squared in ESG & S_Sales (0.960) points to a well-fitted model, aligning with literature that stresses the tangible benefits of sustainability practices on enterprise sales. But the ESG and C_Sales (sales of CIPLA) by accepting null hypothesis shows insignificant impact relationship. Other variables such as EPS, NPM, ROA, ROI of both the companies does not have significant impact of ESG on their performances as null hypothesis of all mentioned variables got accepted. These relationships underline the complexities found in other studies, such as those by Johnson and Lee (2019), who observed erratic influences of ESG on net profit margins, potentially due to differing industry standards and reporting practices. Other studies on ESG and financial performance (Margolis & Walsh, 2003; Orlitzky, Schmidt, & Rynes, 2003; Friede, Busch, & Bassen, 2015) shows positive impact which may be industry and company specific. Studies focusing on stock-based and accounting-based outcomes similarly report that firms with stronger ESG profiles tend to exhibit higher profitability, superior risk-adjusted returns, or lower cost of capital (Derwall et al., 2005; Eccles, Ioannou, & Serafeim, 2014; El Ghouli et al., 2011). Socially and environmentally responsible behavior can create long-term value for firms and investors (Porter & Kramer, 2006, 2011). Equally, the low adjusted R-squared in ESG & other variables of both the companies indicate room for expanding the model, perhaps by integrating more sector-specific variables, a point also highlighted by recent sector-focused studies. This aligns with prior evidence that ESG information contributes incremental explanatory power beyond traditional financial and structural variables (Clark, Feiner, & Viehs, 2015). Furthermore, the Durbin-Watson coefficients describes autocorrelation between variables. It also supports the validity of the regression inferences. This is particularly important if the data involve panel controls are included (Lins, Servaes, & Tamayo, 2017). suggesting that between ESG and sales, EPS, NPM, ROI, ROA of CIPLA have positive autocorrelation which is similar to finding of Thompson et al. (2020) about the robustness of models when evaluating ESG impacts. The positive association between ESG measures and firm performance indicators (sale, EPS, ROA, and ROI) are broadly consistent with the prior research which focused on the resource-based and stakeholder-oriented explanations put forward in earlier work. From a resource-based view, ESG practices can create valuable intangible assets such as reputation, trust, and employee commitment, which can translate into superior financial performance (Hart, 1995; Barney, 1991).

From a stakeholder perspective, better ESG performance may enhance legitimacy and stakeholder relationships, thereby stabilizing revenues, improving customer loyalty, or facilitating access to resources (Jones, 1995; Freeman, 1984). However, in case of Sun Pharma, ESG and firm's financial performance indicators (sales, EPS, NPM, ROI and ROA) shows minimal negative autocorrelation. This observational consistency and variance underscore the evolving narrative of ESG's financial impact, advocating for a nuanced approach in future research that considers industry, region, and market maturity. Bridging these insights with comprehensive literature and empirical data not only enhances our understanding but also informs strategic decision-making within corporate governance and broader market contexts. These findings provide empirical support for the argument that ESG activities are not merely a cost center but can be associated with improved financial outcomes. The strength and significance of the ESG–financial performance relationship can vary depending on the specific financial indicator, time horizon, and model specification (Horváthová, 2010; Pelozo, 2009). Some coefficients may be small in magnitude or statistically insignificant, which is consistent with studies suggesting

that the ESG–performance link is contingent rather than universal (Barnett & Salomon, 2012; Servaes & Tamayo, 2013). Firms with higher ESG performance are often found to be more resilient during crises and to experience lower downside risk (Albuquerque et.al., 2019; Lins et al., 2017). The study underscores the idea that ESG should not be treated as an exogenous constraint on profitability, but rather as a strategic dimension that can interact with core business operations. This aligns with integrated perspectives that view ESG considerations as part of a firm's overall value creation logic, rather than as peripheral or purely philanthropic activities (Hahn et al., 2015; Eccles & Serafeim, 2013). Investors may find ESG metrics to be informative signals for firm quality and long-term performance prospects, in line with the growing use of ESG data in asset management and credit assessment (Amel-Zadeh & Serafeim, 2018).

5. Findings & Conclusion

From the analysis it was found that relationship of variables- Sales, ROA, ROI, EPS, NPM is universally not true for all the companies. It varies company to company. In case of sun-pharma social, environmental and overall ESG score has significant impact while CIPLA does not shows significant impact. Governance score have significant impact on the financial performance variables of both the pharmaceutical companies. They underscore the importance of contextualizing results within specific industries and time periods, as well as the need for more nuanced models that account for other factors that could influence the outcomes. The results from this analysis consistently show that better governance is associated with improved financial performance across various metrics, including Sales, EPS, NPM and ROA. These findings align with existing literature that highlights the critical role of governance in enhancing firm performance. Strong governance mechanisms, such as board independence, shareholder rights, and effective management controls, seem to contribute significantly to a firm's ability to generate sales, maximize profitability, and effectively use assets. The robust statistical results—high coefficients, significant t-values, and low p-values—underscore the importance of governance as a key driver of financial performance. Future research could explore the specific governance mechanisms that are most influential in enhancing these outcomes, as well as whether industry-specific factors modify these relationships. Overall, the findings are consistent with the broader literature, which largely supports a positive and significant ESG financial performance relationship. The results reinforce the view that ESG engagement not only strengthens stakeholder trust and corporate reputation but also acts as a risk management tool, thereby contributing to higher sales, profitability, and investor returns in pharmaceutical companies. Despite the clear benefits of ESG practices, some argue that the initial costs and complexities of implementation may deter companies from fully committing to these frameworks. However, the long-term advantages often outweigh these challenges, suggesting that a strategic focus on ESG is essential for sustainable growth in the pharmaceutical industry.

6. Future Scope of Research

Future research could extend this work by using instrumental variables, difference-in-differences designs, or natural experiments to better isolate causal effects. The study can also be done by Reverse causality among variables and through intermittent variables.

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