

IMPACT OF ESG RATING ON FINANCIAL PERFORMANCE OF NIFTY 50 COMPANIES

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Introduction

The regulatory frameworks and shifting interests of banks, institutional investors, and individual investors are two reasons why environmental, social, and governance considerations are becoming more and more significant. To adapt to the changing environment, businesses are reconsidering their business strategies. Without sustainable development, many businesses are unable to achieve extra growth in their operational and investment strategies. Business models that consider ESG factors are less resistant to the negative effects of technical or legislative changes, ensuring a long-term competitive advantage, as recent experiences with the COVID-19 pandemic have shown. Additionally, recent months have shown that organizations that adopt ESG components are frequently better equipped for crisis management. ESG data might lessen the impact of the current crisis, hasten recovery, encourage innovations needed to function in the new normal, and lower the likelihood of future crises.

Furthermore, financial sector players who take ESG factors into account when making decisions increase their long-term investments in sustainable activities and business ventures, greatly aiding in the mobilization of capital required to meet the objectives of the European Green Deal or global climate-related commitments. The largest investors demand an active and responsible approach to ESG from their investees and are keener to provide funding to those doing well in this area.

In a way, ESG rating is like a credit rating. Companies are evaluated by credit rating organizations depending on their financial health. The results of the study were used to develop a set of guidelines for evaluating the effectiveness of the proposed method.

Introduction to Financial Performance

Financial performance subjectively measures a company's ability to employ main line resources and generate income. The phrase also indicates a company's overall financial health during a given period. Analysts and investors compare companies in the same

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industry or sector's financial performance. Financial performance also indicates how well an organization makes income, manages assets and liabilities, and protects stakeholders and investors.

Financial performance indicators (KPIs) measure a company's financial health. They help management, board members, research analysts, and investors evaluate the company's performance, particularly compared to competitors, and identify its strengths and flaws. The few most popular financial success indicators are:

- a) Gross profit is the amount of revenue from sales remaining after deducting production expenses.
- b) Net profit is the amount of sales revenue left over after deducting all necessary company costs and taxes.
- c) Return on Assets refers how effectively an organization uses its assets to increase profitability.
- d) Return on equity is a profitability ratio, similar to return on assets which is used to evaluate the efficacy of equity, which generates profits for investors.

LITREATURE REVIEW

The study on Norwegian listed companies' by (G. Giannopoulos, 2022) showed that the performance of these companies is affected by the ESG scores and also that there exists a positive relationship between ESG scores and firm value as measured by Tobin's Q and a negative relationship between ESG scores and profitability as measured by ROA. Another study on 65 Indian companies listed on the NSE 100 ESG Index database by (Thaker, 2019) had highlighted the importance of implementing sustainability reporting, including disclosing ESG scores as this would enhance ethical business practices and the long-term sustainability and also wealth of the shareholders. (Balatbat, 2012) study on companies listed on Australian Securities Exchange measured the effect of ESG (environmental, social, and governance) practices on the financial performance and the results found a weak positive association between financial performance and ESG scores. (Nasruzzaman Naeem, 2022) study on 383 environmentally conscious companies (305 from developed nations and 78 from emerging markets) showed that the overall ESG performance of environmentally conscious corporations had a substantial positive relationship with the corporations' return on equity and Tobin's Q. The study of (Sewelén, 2021) examined the effect of ESG Scores on corporate performance using regression analysis and the result showed that ESG performance had a beneficial impact on business performance as measured by ROA and Tobin's Q.

(Yunus Kilic, 2022)research investigated the interdependence of the conventional stock market and ESG stocks for 19 developing and 19 developed nations from 2007 to 2021 and the findings revealed significant movement patterns between ESG returns and stock returns at different frequencies, time scales, and sample episodes across all countries, especially during times of financial turmoil.

The study of (Rigamonti, 2015)identified whether companies with independent businesses auditing have better ESG scores and the result showed that there is no significant change in ESG score after the incident is made public, suggesting that rating agencies accurately assess the sustainability of the company. Further, the findings also indicated that the auditing of sustainability reporting by third parties, which has an assurance effect on the quality of the company's ESG information, can benefit the dependability of ESG ratings.

3. RESEARCH METHODOLOGY

3.1 Objectives of the Study

To study the impact of ESG ratings on the financial performance of NIFTY 50 companies for the year 2023

3.2 Variables used in the study

Variable	Type	Definition
ESG Rating	Independent	An ESG score is used to objectively quantify or evaluate the performance of a firm, fund, or security in terms of environmental, social, and governance (ESG) concerns.
ROA	Dependent	The Return on Assets (ROA) ratio assesses a company's capacity to efficiently manage its assets and generate profits over time.
ROE	Dependent	Return on Equity (ROE) is a metric that measures how well a firm or enterprise did over a given time period.
EPS	Dependent	Dividends are deducted from quarterly or annual profits to calculate Earnings Per Share (EPS), a measure of a company's success.
ROI	Dependent	Return on Investment (ROI) is a performance metric used to evaluate an investment's efficacy or profitability, as well as to compare the success of many investments.
NPM	Dependent	The Net Profit Margin is the percentage of net income or profit earned as compared to revenue. It represents the ratio of a company's or business segment's net profits to revenues.

The Table 4.1 provides statistical data for a sample of 50 organizations on various financial and ESG performance measures. The mean of ESGRISK RATING is 26.488 and a standard deviation of 9.59, the sample's average ESG risk rating shows considerable variability. The distribution of the ESG rankings appears to be skewed to the left because the mean is 7692.82 and the median GLOBALESGRANK is 8434.

Earnings per share are very variable throughout the sample, with a mean of 73.55 and a standard deviation of 100.998. Net profit margins are moderately dispersed, with a mean of 14.05% and a standard deviation of 9.09%.

With a mean ROA of 8.02% and a standard deviation of 7.41%, asset efficiency is quite variable. A moderate amount of variability in shareholder profitability is indicated by the mean ROE of 19.92% and the standard deviation of 17.12%. The entire return on investment is highly variable, with a mean ROI of 26.96% and a standard deviation of 32.86%.

According to the skewness and kurtosis readings, some of the variables may not have a normal distribution. This is supported by the findings of the Jarque-Bera Test, which shows that some variables deviate significantly from a normal distribution.

Table 4.1: Correlation Matrix

	ESG_RISK_RATING	GLOBAL_ESG_RANK	INDUSTRY_ESG_RANK	EPS	NPM	ROA	ROE	ROI
ESG_RISK_RATING	1.000							
GLOBAL_ESG_RANK	0.386	1.000						
INDUSTRY_ESG_RANK	0.972	0.446	1.000					
EPS	0.027	-0.138	0.054	1.000				
NPM	-0.207	0.162	-0.209	0.090	1.000			
ROA	-0.241	-0.188	-0.229	0.278	0.225	1.000		
ROE	0.020	-0.094	0.031	0.210	0.211	0.651	1.000	
ROI	-0.116	-0.200	-0.150	0.294	0.003	0.543	0.375	1.000

A matrix of correlations between various factors is displayed in the table. The correlation coefficient runs from -1 to 1, with a perfect negative correlation denoted by a value of -1, a perfect positive correlation by a value of 1, and no correlation denoted by a value of 0. The correlation matrix table 4.2 shows that ESG Risk Rating and Industry ESG Rank has a very high degree of positive correlation between them. While the performance variables NPM, ROA and ROI have negative correlation with ESG Risk Rating and Industry ESG Rank. On the other hand, Global ESG rank has a negative correlation with all performance variables except NPM. The negative correlation signifies that with increase in rating the performance declines for NIFTY 50 stocks.

Table 4.3: Impact of ESG Rating on ROA

Dependent Variable: RETURN_ON_ASSETS				
Method: Least Squares				
Included observations: 50				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.94506	3.045573	4.25045	0.0001
ESG_RISK_RATING	-0.186041	0.108236	-1.7188	0.0921
R-squared	0.057982	Mean dependent var		8.0172
Adjusted R-squared	0.038356	S.D. dependent var		7.409893
S.E. of regression	7.266396	Akaike info criterion		6.843576
Sum squared resid	2534.424	Schwarz criterion		6.920057
Log likelihood	-169.0894	Hannan-Quinn criter.		6.8727
F-statistic	2.954417	Durbin-Watson stat		1.702516
Prob(F-statistic)	0.092087			

The above regression table 4.3 indicates the negative impact of ESG risk rating on Return on Assets which means with increase in ESG rating the performance as measured by Return on Assets will decline. The p-value of the same is 0.0921 which is greater than 0.05 indicating the non-significant impact. The value of R square shows that ESG risk rating has only 4 % impact on Return on Assets.

Table 4.4: Impact of ESG Rating on ROE

Dependent Variable: RETURN_ON_EQUITY				
Method: Least Squares				
Included observations: 50				
Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	18.97695	7.250268	2.617414	0.0118
ESG_RISK_RATING	0.035588	0.257667	0.138115	0.8907
R-squared	0.000397	Mean dependent var		19.9196
Adjusted R-squared	-0.020428	S.D. dependent var		17.1243
S.E. of regression	17.29833	Akaike info criterion		8.578274
Sum squared resid	14363.14	Schwarz criterion		8.654755
Log likelihood	-212.4569	Hannan-Quinn criter.		8.607399
F-statistic	0.019076	Durbin-Watson stat		2.057651
Prob(F-statistic)	0.890727			

The table 4.4 displays the findings of a linear regression study on the correlation between return on equity and ESG risk rating. A sample of 50 observations served as the basis for the analysis. The coefficient for the ESG risk rating is 0.035588, while the intercept is 18.97695. ESG risk rating is not a significant predictor of return on equity, according to the regression model's low R-squared value of 0.000397 and its adjusted R-squared value of -0.020428. The model is not statistically significant, according to the F-statistic and its corresponding p-value.

Table 4.4: Impact of ESG Rating on ROI

Dependent variable: RETURN_ON_INVESTMENT				
Method: Least Squares				
Included observations: 50				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	37.47725	13.81988	2.711835	0.0093
ESG_RISK_RATING	-0.396914	0.491144	-0.80814	0.423
R-squared	0.013423	Mean dependent var		26.9638
Adjusted R-squared	-0.00713	S.D. dependent var		32.85577
S.E. of regression	32.97269	Akaike info criterion		9.868414
Sum squared resid	52185.52	Schwarz criterion		9.944895
Log likelihood	-244.7104	Hannan-Quinn criter.		9.897539
F-statistic	0.653091	Durbin-Watson stat		1.853972
Prob(F-statistic)	0.422997			

The table 4.4 displays the findings of a regression study in which ESG_RISK_RATING served as the independent variable and RETURN_ON_INVESTMENT as the dependent variable. Although the latter is not statistically significant, the coefficients show that there is a positive intercept (C) and a negative coefficient for ESG_RISK_RATING. The R-squared value is quite low, which shows that the model does not adequately account for the dependent variable's variability. The F-statistic is likewise non-significant, which shows that the model is not statistically significant as a whole. Overall, the findings imply that ESG_RISK_RATING and RETURN_ON_INVESTMENT do not significantly correlate.

Table 4.5: Impact of ESG Rating on NPM

Dependent Variable: NET_PROFIT_MARGIN				
Method: Least Squares				
Included observations: 50				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19.25429	3.764737	5.114379	0
ESG_RISK_RATING	-0.196394	0.133795	-1.46788	0.1487
R-squared	0.04296	Mean dependent var		14.0522
Adjusted R-squared	0.023022	S.D. dependent var		9.087455
S.E. of regression	8.98224	Akaike info criterion		7.267554
Sum squared resid	3872.67	Schwarz criterion		7.344034
Log likelihood	-179.6888	Hannan-Quinn criter.		7.296678
F-statistic	2.154663	Durbin-Watson stat		2.013862
Prob(F-statistic)	0.14866			

The results of a linear regression analysis with the dependent variable NET_PROFIT_MARGIN and the independent variable ESG_RISK_RATING are displayed in the table 4.5. When ESG_RISK_RATING is zero, NET_PROFIT_MARGIN is projected to have a value of 19.25429, according to the coefficient for the constant component (C). The correlation between ESG_RISK_RATING and NET_PROFIT_MARGIN is negative, as shown by the coefficient of -0.196394 for ESG_RISK_RATING. Only a minor amount of the fluctuation in NET_PROFIT_MARGIN can be described by ESG_RISK_RATING, according to the R-squared value of 0.043. The link between the two variables does not appear to be statistically significant at the 5% level, according to the F-statistic of 2.154663 and p-value of 0.148660.

Table 4.5: Impact of ESG Rating on EPS

Dependent Variable: EARNING_PER_SHARE				
Method: Least Squares				
Included observations: 50				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	66.03821	42.75457	1.544588	0.129
ESG_RISK_RATING	0.283773	1.519453	0.18676	0.8526
R-squared	0.000726	Mean dependent var		73.5548
Adjusted R-squared	-0.02009	S.D. dependent var		100.998
S.E. of regression	102.0076	Akaike info criterion		12.12715
Sum squared resid	499466.6	Schwarz criterion		12.20363
Log likelihood	-301.179	Hannan-Quinn criter.		12.15627
F-statistic	0.034879	Durbin-Watson stat		1.760572
Prob(F-statistic)	0.852636			

The results of a linear regression model with the dependent variable Earnings Per Share and the independent variable ESG Risk Rating are displayed in the Table 4.5. For each variables, the coefficients, standard errors, t-statistics, and probabilities are shown. Only 0.07% of the variation in the dependent variable is explained by the independent variable, according to the R-squared value. Since the p-value for the independent variable is not significant (0.8526), there is no proof that the ESG Risk Rating and Earnings Per Share are significantly correlated

Table 4.6 SUMMARY OF HYPOTHESIS

Variable	Relationship	Null Hypothesis
ESG Risk Rating and Return on Assets	Negative and Insignificant	Accepted
ESG Risk Rating and Return on Equity	Positive and Insignificant	Accepted
ESG Risk Rating and Return on Investment	Negative and Insignificant	Accepted
ESG Risk Rating and Net Profit Margin	Negative and Insignificant	Accepted
ESG Risk Rating and Earnings Per Share	Positive and Insignificant	Accepted

Conclusion :

In the Indian context, this study significantly contributes to the literature in the field of impact assessment of ESG. The paper clearly articulates that companies with better ESG Risk Rating have better financial performance as measured by return on assets, return on equity, return on investment, earnings per share, and net profit margin. The findings have practical implications for regulators, policymakers, and Indian companies. Companies with lower ESG risks have better chances of delivering a sustainable financial performance and are thereby able to attract investors for longer durations.

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