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THE IMPACT OF ESG SCORE ON SHAREHOLDER WEALTH CREATION VIA DIVESTITURE: AN EMPIRICAL ANALYSIS

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ABSTRACT:
As Environmental, social, and governance (ESG) factors start to play an important role in corporate decision-making, it becomes important to study the impact of divestiture announcements on shareholders' wealth creation in low versus high ESG-rated companies. The study looks into the differences in cumulative average abnormal return (CAAR) of two sets of companies, the ones that occupy the top ten positions in the ESG ranking and those that occupy the bottom ten positions in the same ESG score and ranking framework of companies. The study's period was from 1995 to 2020. The study serves as a basis for investors to make better decisions on whether to invest in a divesting company with a high ESG score or a low one to maximize their wealth creation via holding or selling that stock of the divestment announcing company. The findings of this study would contribute to the financial implications of ESG scores.

Keywords: Divestitures, ESG, Investing Strategy, Sustainability, Sustainable finance.

1. INTRODUCTION

In today's business environment, Environmental, Social, and Governance (ESG) factors are playing a more and more important role in driving a company's performance. ESG covers various initiatives companies take to avoid social, environmental, and governance issues. It encompasses issues like climate change, economic equality, and even fair representation of all shareholders in the board room, as well as the interest protection of the minority shareholders, which in most cases is the retail investor, who has the least say in the business operations. As investors become more socially and environmentally concerned, they have also started aligning their investing interests along the same lines. Investing in environmentally friendly companies supports good social causes and has fair and equitable management practices (Clark et al., 2020; Gossling et al., 2018). An important factor in corporate and investor behavior now is the consideration of ESG factors. There can be some influence of ESG score and factors, even on the decision of the investors to value a company that is separating from the parent concern.

Divestiture is when a company hives off a part of itself into two or more parts. Usually, this takes the form of a spinoff where a company with an identical ownership pattern as the parent is separated from the parent concern and listed on the stock exchange as a separate company in its own right. Example: When eBay spun off PayPal in 2015, eBay shareholders received shares of PayPal as a dividend, and PayPal became a separate publicly traded company. Even if the company reduces its size by selling off a part of its concern, division, or assets, it is also considered a divestiture and is called a sell-off. An example of a sell-off would be when General Electric (GE) divested its biopharma business to Danaher Corporation in 2019. Another means for a company is to sell only a part of its equity to new shareholders and list

itself on the stock exchange as a separate entity. It can be seen as a partial IPO with the sale of some stake in the parent company. Split-off happens when the shareholders must choose between the subsidiary shares or the parent to retain post-transaction. Example: In 2000, Abbott Laboratories conducted a split-off of its hospital products division, allowing shareholders to exchange their Abbott shares for shares in the newly formed company, Hospira.

Divestitures can be taken for several motives. This ranges from strategic realignment, which happened in the case of Altria Group in March 2008 when it completed the spin-off of Philip Morris International. As a result, Philip Morris International became an independent, publicly traded company with its own management, operations, and financial structure. The spin-off allowed Philip Morris International to pursue growth opportunities in emerging markets such as Asia, Latin America, and Eastern Europe. At the same time, Altria Group could focus on its core domestic (US) business and non-tobacco ventures. Increasing focus or portfolio optimization. An example of divestiture undertaken to increase a company's focus is the sale of Nestlé's U.S. confectionery business to Ferrero Group in 2018. By divesting its U.S. confectionery business, Nestlé aimed to streamline its portfolio, reduce complexity, and allocate resources to higher-growth segments such as coffee, pet care, and health and wellness products. The divestiture allowed Nestlé to increase its focus on categories with a leading market position, strong brand equity, and greater potential for innovation and expansion. Divestitures can also be a response to changing market conditions, as happened in the case of the divestment of IBM's personal computer (PC) division in 2005. As the personal computer environment became more competitive and IBM, a leader in computer manufacturing, faced stiff competition in the changing landscape of personal computers, it decided to divest itself. IBM sold its PC division to Lenovo Group, a Chinese multinational technology company, for approximately $1.75 billion.

Despite increasing interest in divestiture and ESG scores, there seems to be scant research in the field of shareholder wealth creation upon divestiture announcements for high versus low ESG-scored divesting parent companies. The rest of the paper is divided into six sections. Section 2 is for the literature review, section 3 is for sample selection, section 4 is for methodology, section 5 is for the results and discussion, and Section 6 is for the conclusion.

2. LITERATURE REVIEW

Literature on divestitures almost always indicates a positive relation between divestiture announcements and shareholder wealth creation via an increase in the firm's share price in a 3 to 21-day window following divestiture announcement using event studies from various time periods and regions. (Gupta et al.,2022; Aggarwal and Garg, 2019; Chai et al., 2016; Dasilas and Leventis, 2018; Humphery and Jenner, 2019; Kim and Yoon, 2023; Owers and Sergi, 2021; Teschner and Paul, 2020; Boreiko & Murgia, 2016; Cusatis et al., 1993; Daley et al., 1997; Desai and Jain, 1999; Schipper and Smith, 1983; Finlay et al., 2018). This phenomenon has mainly been studied in the United States of America and Europe.

Research by Margolis & Walsh (2003) found that companies divest low ESG rating departments of their concern to reduce the long-term risk of reputation damage associated with operating this concern under one parent company. It also helps them distance themselves from the wrongdoings of their divested concern and prevents green investors from withdrawing their investment in case of adverse environmental issues (Flammer, 2015). Researchers also find significant shareholder wealth creation in well-executed divestitures (Denis et al., 2019; Megginson et al., 2004; Lichtenberg & Siegel, 1990). It has also been

found that divestitures by financially unhealthy companies undertaken to improve the company's financial health by using proceeds of the sale of the company benefit shareholders upon the divestiture announcement.(Chen and Yu, 2023; Allen and McConnell, 1998; Lasfer et al., 1996)

Even in the context of lung run performance, Pham et al. (2020) and Daley et al. (1997) find a positive impact of divestiture on the company's profitability. Daley et al. (1997) also find that in the long run, a company's performance improves in terms of financial efficiency measured through various turnover ratios and return on investment in the following divestiture. These findings have been substantiated but insignificantly by Boreiko and Murgia (2016).

In the context of corporate governance, Bansal and Sharma (2016) find that board size has a positive effect on shareholder wealth creation upon divestiture announcement as well as CEO of duality, that is, the CEO occupying both the seats as the chairperson as well as the CEO of the company. However, they find no significant evidence between audit committee size and independence with the returns enjoyed by shareholders upon divestiture announcement. Studies have found that companies with superior ESG scores have a higher and better financial performance in terms of profitability leverage as well as efficiency of operations measured in financial terms using indicators like return on investment, return on equity, etc. (Clark et al., 2020; Gossling et al., 2018; Cheng et al., 2014).

Given this resounding evidence between shareholder wealth creation upon divestiture announcement and the positive impact ESG scores have on the financial performance of the company and the fact that good corporate governance is positively related to the shareholder wealth creation upon divestiture announcement, it can be hypothesized that: -

H1: There would be a Positive Cumulative Average Abnormal return in four event windows surrounding the divestiture announcement for high ESG-rated companies.

H2: Returns enjoyed by shareholders of companies with higher ESG ratings would be better than those of lower ESG-rated companies.

3. SAMPLE

The top 10 and bottom ten companies from the Stakeholders Empowerment Service's "ESG Scores: Top 100 listed companies in India" which covers seventeen industries and companies that represent almost seventy percent of the National Stock Exchange (NSE) value by market capitalization, were the universe of the study. Using the Prowess IQ database, 29 transactions were identified between 1995 and 2020. The results of the Stakeholders Empowerment Service's "ESG Scores: Top 100 listed companies in India" published in the year 2020, were taken as the basis for determining the top 10 and bottom ten ranked companies via ESG score to form the universe of this study.

{TABLE 1 APPROX HERE}

Table 1 shows the top 10 and bottom 10 listed companies by ESG score, based on the Stakeholders Empowerment Service's "ESG Scores: Top 100 listed companies in India" published in 2020.

{TABLE 2 APPROX HERE}

Table 2 shows that five divestiture transactions took place among the bottom ten companies and seven in the top 10 ESG-rated companies during the study period.

{TABLE 3 APPROX HERE}

Table 3 shows that whereas four companies among the top 10 companies based on ESG-rating undertook divestiture within the given period, three of the bottom ten companies by ESG-rating undertook divestiture in the same period.

{TABLE 4 APPROX HERE}

As Table 4 shows, two transactions out of the 27 transactions had to be dropped due to the unavailability of share price information, as they were not listed on the stock exchange at the time of the divestiture event date. Over 15 transaction dates had to be dropped as there were other divestiture events within the estimation period of these divestitures.

Bajaj Holdings & Invst. Ltd., M R F Ltd., and Sun Pharmaceutical Inds. Ltd. were the three bottom 10 ESG-rated companies that undertook divestiture, and there was a total of five divestiture transactions. Meanwhile, Infosys Ltd., Mahindra & Mahindra Ltd., Marico Ltd., and Tata Consumer Products Ltd. were the top 10 ESG-rated companies that undertook seven divestitures between themselves.

4. METHODOLOGY

Event study methodology has been used. The market model method of estimating normal returns has been used. In the events study, first, the actual returns are calculated in our study. **Actual returns** are calculated as the natural logarithm of the share price on a given day divided by the share price on the previous day expressed in a formula as: -

$$R_{it} = \ln\left(\frac{P_{it}}{P_{it-1}}\right)$$

where R_{it} is the stock return for the company i on day t, and P_{it} is the share price of the company i on day t.

Post-calculation of the actual return event study requires us to compute the normal returns. This is done using the market model, which takes into account the systematic risk of the company concerned. It is the most commonly used method and thus is used in this study to predict the normal return of the company's share over the event window. Here, normal return refers to the return the share would have provided if market expectations of the Company had stayed the same due to new information. It is calculated via the following formula: -

$$E(M_{it}) = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

Where αi measures the average return over the calculation period, which is not explained by the market, the βi measures a company's sensitivity to the market risk component. R_{mt} is the return on a market index. ε_{it} is an error term, and $\sum\varepsilon=0$.

Abnormal return- is calculated as the difference between the actual return of stock i on day t and the normal return of share i on day t calculated using the normal return formula.

$$AR_{it} = R_{it} - E(M_{it})$$

Where AR_{it} is the abnormal return of stock i on day t, E (M_{it}) is the normal return of stock i on day t, and R_{it} is the actual return of stock i on day t.

Cumulative abnormal returns will be calculated as the sum of the abnormal returns over the event window. Since a (-10,+10) event window i is being considered, the formula for it can be written as: -$CAR(-10,+10) = \sum_{i=-10}^{10} AR_{it}$

As the number of shares under consideration is too many, thus average abnormal returns are calculated by averaging all abnormal returns of various stocks on day t.

$$oneAAR_t = (1/N)\sum_{i=1}^{N} AR_{it}$$

AAR is the average abnormal return on day t, N is the number of companies, and AR_{it} is the abnormal return of stock i on day t.

Further, CAAR or Cumulative Average Abnormal return is calculated as the sum of average abnormal return over the chosen event window. it can be expressed as:-

$$CAAR_p = \sum_{i=1}^{p} AAR_t$$

$CAAR_p$ is the cumulative average abnormal return for period p, and AAR_t is the average abnormal return on day t.

Significance level of CAAR is computed via the formula:

$$T - statistic\ of\ CAAR_{it} = \frac{CAAR_{it}}{(\sigma AAR_{it}) * N^{(1/2)}}$$

Where CAAR is cumulative average abnormal return of companies i in event window t, σAAR_{it} is standard deviation of average abnormal return of companies i in estimation window t which. N is the number of days in the event window.

Four different event windows have been taken three days (-1,+1), seven days (-3,+3), 11 days (-5,+5) and 21 days (-10,+10). These event windows have been chosen in a progressive manner to measure as market return to new equilibrium which direction do the price of the divesting company settle in.

5. RESULTS AND DISCUSSION

As Table 4 shows, the immediate response of the market in a 3-day event window for the bottom 10 ESG-rated companies is a statistically significantly negative 5.71% at a 99% level of confidence. In a 7-day event window, the CAAR for the bottom 10 ESG-rated companies is negative 9.92%, which is again statistically significant at a 1% level of significance. In the event window of 11 days, the CAAR for the bottom 10 ESG-rated companies is negative at 11.89%, and in the 21-day event window, it is a positive 17.1%. In the case of the top 10 ESG-rated companies, all results are statistically insignificant at any level of significance, but the sample finds a positive return in all windows except the seven-day event window.

{TABLE 5 APPROX HERE}

{GRAPH 1 APPROX HERE}

Graph 1 clearly shows that the return for high ESG-rated companies is positive in all event windows except the seven-day event window, and the returns for the bottom 10 ESG-rated companies are negative in all event windows except for a drastic upsurge in the 21-day event window.

As indicated, an estimation can be made as to the fact that the bottom 10 ESG-rated companies would have a negative stock market reaction to divestiture announcements in the 3 to 11-day event window. It is only when the market starts to normalize towards the fag end of the event study window of 21 days do we see a statistically significant at a 99 % level of confidence, a huge jump of 17.1%. All this seems to indicate that the market takes the announcement of a bottom 10 ESG-rated company to be a negative event initially, but as the market normalizes, Margolis & Walsh's (2003) theory that divesting lower ESG-rated companies will lead to positive shareholder wealth creation upon divestiture announcement starts to hold true. Hypothesis one's findings are insignificant, and the findings of hypothesis two cannot be validated as we found insignificant returns in the case of the top 10 ESG-rated companies.

6. LIMITATIONS AND SCOPE FOR FUTURE STUDIES

One of the most glaring limitations of the study is the small sample size. Rather it is difficult to say whether these findings would hold true robustly for a larger sample because of the small sample size of only 12 transactions. Also, the statistically significant results in the bottom 10 ESG rated companies can be due to the fact that only 5 transactions of this bottom ESG rated companies is analysed.

There is great scope of future research. the sample size can be increased by increasing the number of companies studied and shareholder wealth creation upon divestiture announcement between top 50 and bottom 50 ESG rated companies can be made.

7. CONCLUSION

Despite its small sample size, the study indicates that the bottom 10 ESG-rated companies would suffer a dramatic price reduction upon divestiture announcement, which would be followed by a sudden reversal in the 21-day event window. If a sensible trader were to use this strategy, he would short the shares of the bottom 10 ESG-rated companies and buy them back after an 11-day window at a deeply discounted price, which would not only lead to a profit of around 12% due to short selling but would also open the door for him to reap the high rewards of up to 17% when the trend of share prices reverses 21 days post divestiture. The study has severe sample size limitations, and therefore, it is difficult to generalize these findings to low ESG-rated companies, but the findings are statistically significant for the bottom 10 ESG-rated companies. The findings for the top 10 ESG-rated companies are insignificant at all event windows, and therefore, nothing can conclusively be said about a company with a leading ESG ranking and shareholder wealth creation upon divestiture.

This is indicative of the rapid need for further and larger studies in this area of research, which remains unexplored and deeply neglected. Any further research in this direction would be of great aid to not only Merger—and acquisition-oriented investors but would also shed light on the impact of ESG on share market reactions.

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Table 1

Sample of the study of top 10 and bottom 10 ESG-rated companies by Stakeholders Empowerment Service's "ESG Scores: Top 100 listed companies in India" published in the year 2020

Top 10 ESG companies	Bottom 10 ESG companies
Adani Ports & Special Economic Zone Ltd.	Bajaj Holdings & Invst. Ltd.
Dr. Reddy's Laboratories Ltd.	Bandhan Bank Ltd.
Housing Development Finance Corpn. Ltd. [Merged]	GlaxoSmithKline Pharmaceuticals Ltd.
Infosys Ltd.	I D B I Bank Ltd. [Merged]
Ltimindtree Ltd.	Indraprastha Gas Ltd.
Mahindra & Mahindra Ltd.	Kotak Mahindra Bank Ltd.
Marico Ltd.	M R F Ltd.
Tata Consultancy Services Ltd.	Rajesh Exports Ltd.
Tata Consumer Products Ltd.	Sun Pharmaceutical Inds. Ltd.

Tech Mahindra Ltd.	Yes Bank Ltd.

Note. Adapted from Stakeholders Empowerment Service's "ESG Scores: Top 100 listed companies in India". Copyright 2020 by Stakeholders Empowerment Service.

Table 2

Number of divestiture transactions based on top and bottom 10 ESG-rated companies.

Particulars	No. of companies
Total number of divestiture transactions from the bottom 10 ESG-rated companies	5
Total number of divestiture transactions from the top 10 ESG-rated companies	7
Total number of transactions under study period from 1995 to 2022	12

Note. Author's own compilation

Table 3

Number of companies undergoing divestiture divided by top 10 and bottom 10 ESG-rated companies.

Particulars	No. of companies
Total number of bottom ten companies engaged in divestiture	3
Total number of top 10 companies engaged in divestiture	4
Total number of companies under study out of top 10 as well as bottom ten companies by ESG ranked companies	7

Note. Author's own compilation

Table 4

Shortlisting of transactions

Particular	Details
Total number of events	29
Price data not available	-2
Compounding events	-15
Total events studied	12

Note. Author's own compilation

Table 5

Results of Event study in 4 different event windows with a corresponding t statistic

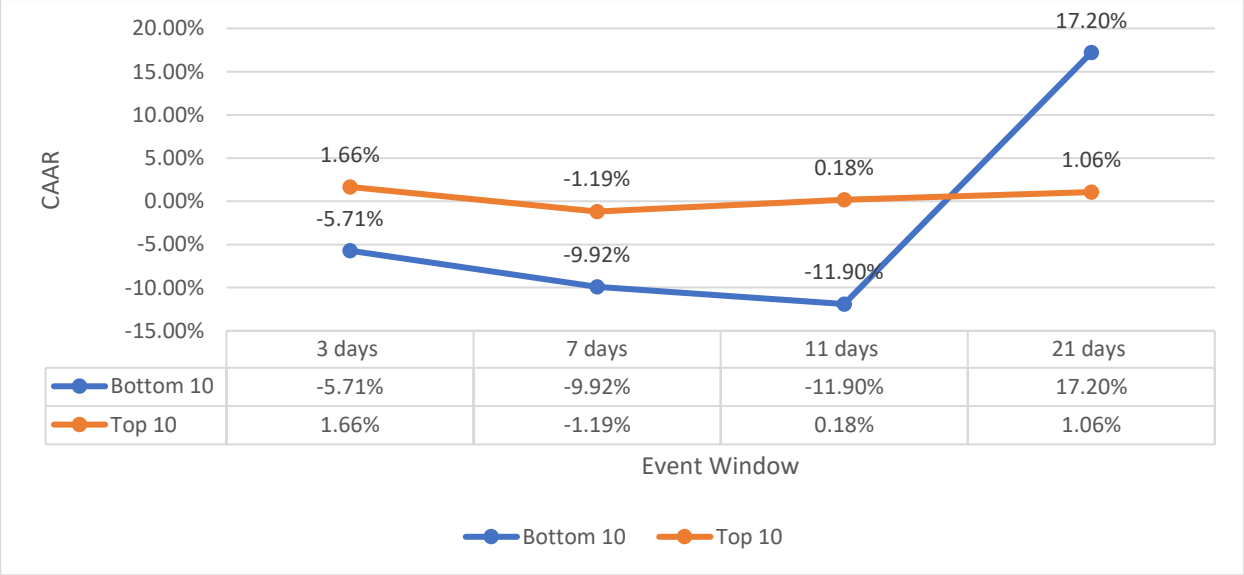
CAAR(event window)	Bottom 10 ESG-rated companies	t-stat of CAAR	Top 10 ESG rated companies	t-stat of CAAR
CAAR(+1,-1)	-0.057134001	-3.51090***	0.016580034	1.012210356
CAAR(-3,+3)	-0.099203459	-3.99082***	-0.011922341	-0.476495202
CAAR(-5,+5)	-0.118966047	-3.81779***	0.001834524	0.058488832
CCAR(-10,+10)	0.171953932	3.99381***	0.010558	0.243622841

**p<0.10. **p<0.05. ***p<0.01*

Note. Author's own compilation

Figure 1

CAAR over four event windows for the top 10 as well as the bottom 10 companies by ESG rating



Note. Author's own compilation