

Invited Article

Corporate Social Responsibility & Shareholder Returns – Evidence from the Indian Capital Market

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The primary aim of this paper is to empirically examine the relative performance of the portfolio of socially-screened stocks in the Indian capital market. Using data on Environmental, Social and Governance (ESG) index ('S&P ESG India Index') and market index ('S&P CNX 500 Index') for the sample period January 2005-September 2008, this empirical study has inferred that the portfolio of stocks of socially responsible companies has not underperformed the market. Rather, as against the market, there are signals of positive excess return, though statistically not significant, for the shareholders of the socially responsible companies. Also, results of shareholder returns for the socially responsible companies are comparable with those observed for the 'Nifty' Portfolio ('S&P CNX Nifty Index'). These research findings have implications for socially-responsible investment decisions made by both the (activist) investors and corporate management.

Introduction

Lending complete support to the thought of sole accountability of businesses to the owners (shareholders), Friedman (1970) had opined that, in a capitalist economy, there is one and only one responsibility of business – to use its resources and engage in activities designed to increase its profits. Advocates of (financial) utilitarianism school of thought or 'shareholder theory' support this view arguing that the business actions which generate greater financial utility (say, profits), are better than those which generate less financial utility. Translated for the publicly traded companies, this school of thought aims at maximizing the shareholder returns in the capital market over a defined time interval.

Genesis of Corporate Social Responsibility (CSR) or 'ethical corporate behavior'¹, lies in the

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¹ In this paper, terms 'corporate social responsibility' and 'ethical corporate behavior' have been used interchangeably.

‘stake-holder theory’² (liberal accountability theory) which views businesses (corporates) as socio-economic entities. Stakeholder theory requires businesses to legitimize their existence in society by periodically rendering an account on their performance – both financial and social – to varied stakeholders (Vasal 2006)³. In operational terms, this implies accountability of businesses towards not only the shareholders / stockholders

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2 Freeman (1984), defined the term stakeholders as ‘any group or individual who can affect or is affected by the achievement of the organisation’s objectives’. Examples of stakeholder groups (beyond stockholders / shareholders) are employees, suppliers, customers, creditors, competitors, governments, and communities (Goodpaster 1991). Stakeholder theory has argued that corporations should periodically supply additional information to satisfy the accountability relationships with varied stakeholders (corporations giving an account of its actions to stakeholders). Incidentally, stakeholder theory is termed as no more than ‘reform capitalism’ by the communitarians, a partial solution (Demosthenous 2000). Communitarian principles, in turn, require corporations learning to treat their management, employees, suppliers and customers, as well as their shareholders, as members of a shared community.

3 In a generic sense, accountability for financial performance of businesses to the owners (shareholders) may be viewed as a sub-set of social performance.

(owners) but also other stakeholders, namely creditors, suppliers, employees, customers, community, government and environment.

Historically, a serious academic and professional debate on CSR began around the middle of the twentieth century (for instance, Bowen 1953). By this time, some of the widely admired corporate entities had meaningfully adopted the idea of CSR as an element of their strategic planning and ethical behavior. Johnson and Johnson (J&J) is a case in point⁴. In the Indian context too, some of the large sized public sector companies (such as Oil India) had taken initiatives to publicly report on their corporate social performance on a regular basis (Vasal 2006), particularly since the last quarter of the previous Century.

CSR Viewpoints

Traditionally, corporate responsibilities towards employees, customers,

4 In the known and documented business history, R.W. Johnson, Chairman, Johnson & Johnson (J&J) (an old economy *FORTUNE 500* business entity founded in 1886 that became a publicly traded company in 1944) wrote the ‘Credo’ of the company in 1943 (Johnson & Johnson 2008a). The ‘Credo’, embodying the mission and values, is practiced and lived by the J&J till this date by aligning her programs and practices to ‘it’ on a regular basis. Importantly, the Credo had prioritized the accountability of J&J to various stakeholders in the following order (decreasing) of importance – customers, employees, communities, and stockholders (Johnson & Johnson 2008b). Notably, the Credo had placed interests of the employees (and other stakeholders) above those of J&J shareholders (Johnson & Johnson 2008b; and Lath, 2006).

community and environment have been viewed as the four core dimensions of CSR (Vasal 2006). Over the years, however, there has been some debate in the academic and business literature over the domain of CSR. In recent past, with the growing importance of the environment dimension, domain of CSR is sought to be limited to include corporate responsibilities towards 'stakeholders other than the environment' (that is, customers, employees and community). Accountability of businesses towards the 'environment (inclusive of animal rights)' under this re-arrangement is termed as 'corporate environmental responsibility (CER)'. Emergence of ideas such as 'triple bottom-line' and 'sustainability reporting' emphasizing distinctiveness of environment dimension of CSR are illustration of this re-arrangement. In the present paper, CER is viewed as a subset of CSR.

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While emphasizing earning of profits as the sole responsibility of business Friedman (1970) had qualified this thought by adding the dimension of good corporate governance to it. Specifically, Friedman had opined that a business entity should be aiming at increasing its profits so long as it stays within the rules of the game, which is to say, it engages in open and free competition without deception or fraud. In recent years, with failures of iconic companies such as Enron, Lehman

Brothers, Worldcom and others, the issue of good corporate governance has assumed critical importance. Though a discipline in its own right, good corporate governance is now bracketed with the themes of environmental and social responsibilities of an 'ethical business' entity. 'Environmental, Social and Governance (ESG)' responsibilities as a composite theme illustrate this new viewpoint. For the objectives of the present paper (stated below), CSR has been defined in terms of the ESG viewpoint. Notably, this viewpoint is consistent with the Principles for Responsible Investment (PRI) (UN 2005), and objectives of the 'Socially Responsible Investment' (SRI) funds⁵.

Objective, Research Question, & Hypothesis

Linking of shareholder returns to CSR issues is, arguably, the most effective way to not only highlight but also assess the acceptability of this concept to both the investors and the management. Accordingly, Anginer et al. (2007), Bauer et al. (2005), Brammer et al. (2006), Edams (2008), Geczy et al. (2005), Hamilton et al. (1993), Hong and Kacperczyk (2008), Moskowitz (1972), Renneboog et al. (2008), Schroder (2007), Teoh et al. (1999), Yermack (2006), among others, have explored the relationship between various dimensions of CSR and shareholder returns, over the past few decades. For the publicly traded companies, while

⁵ According to Kropp (2008), UN-backed Principles for Responsible Investment (PRI) ... have more than \$15 trillion in assets.

Friedman school of thought predicts that socially responsible companies (termed ‘socially-screened stocks’, ‘socially responsible stocks’ or ‘ESG portfolio’ hereafter) are not expected to perform as well as stocks of companies focusing solely on increasing the economic welfare of the shareholders (termed ‘Friedman stocks’ hereafter), or the overall market (termed ‘market portfolio’ hereafter), findings of the foregoing research studies have often found evidence inconsistent with this expected outcome. In view of the past evidence on the shareholder returns for ‘socially responsible stocks’ not being inferior to returns on ‘Friedman stocks’, or the ‘market portfolio’; and introduction of ‘S&P ESG India Index’⁶, beginning 2008, by the National Stock Exchange (NSE) of India, the primary objective of this, apparently, pioneer research study is to empirically examine the relative shareholder returns on ‘ESG portfolio’ in the Indian capital market. For achieving the research objective stated above, following research question has been raised in this study: Does ‘ESG portfolio’ perform as well as the ‘market portfolio’ in India? Corresponding to this research question, following null hypotheses has been formulated and tested in this study:

H₁: there is no difference between the average rate of return between the ‘ESG portfolio’ and the ‘market portfolio’.

In the study, observed shareholder returns for ‘ESG portfolio’ have also been compared against returns obtained on a rival, but comparable, portfolio of 50 blue-chip stocks, namely ‘S&P CNX Nifty Index’ (‘Nifty portfolio’ hereafter) of the NSE.

Variables & Definitions

In terms of discussion above, three variables of direct interest in the study are ‘shareholder returns’ on the ‘ESG portfolio’ ‘Nifty portfolio’ and ‘market portfolio’. In the study, ‘market portfolio’ refers to the ‘S&P CNX 500 Index’ of the NSE.

‘Shareholder return’ is defined and measured in the present work as ‘excess return over the risk-free rate’ (‘excess return’ hereafter). ‘Risk-free rate’ here refers to ‘yield on 364-day Government of India Treasury bills’ (RBI 2008). For measuring ‘excess return’, ‘raw shareholder return’ is defined as successive difference in the values of relevant stock price indices, over the sample period

6 In the construction of the Index, two transparency and disclosure (T&D) screens – one focusing on environment and social (ES) indicators, and the other focusing on corporate governance (G) indicators – have been used for screening the top 500 Indian companies (by total market capitalization) listed on the National Stock Exchange (NSE) of India Ltd. The T&D template for assessing the ES conduct of Indian companies

has included the following dimensions (indicators): Employees (Employee Relations/Job Creation, Labor Rights, Equal Opportunity, and Union Relations), Customers (Product Safety, Anti-trust, and Customer Outreach and Product Quality), Community (Human Rights, and Community Investment) and Environment (Environmental Pollution, Natural Resources Use, and Management Policy and Performance Indicators).

(described below). In view of the availability of data on 'Risk-free rate' over an interval of 14-days (on Wednesday every two-weeks), values of 'excess returns' have been defined and measured on a fortnightly basis. In all, four variables have been defined, measured, and employed in this study.

Sources of Data, Sample Period & Sample Size

For measuring 'raw shareholder return' for the three portfolios, index values have been collected from NSE (2008). For measuring 'excess return', data for the 'risk-free rate' have been compiled from the Bulletins of the Reserve Bank of India (RBI 2008).

Since 'S&P ESG India Index' was launched in India in Jan.2008 with base date Jan.3, 2005 (base value =1000) (NSE 2008, S&P 2008), raw data for 'ESG portfolio' are available effective Jan.3, 2008. Accordingly, sample period for the present study begins with Jan.3, 2005. Further, at the time of this study, since the latest available data for 'risk-free rate' was for the fortnight ended Sep.24, 2008, sample period ends with this date. In other words, 'shareholder returns' have been investigated in this paper for the three portfolios over the sample period Jan.3, 2005-Sep.24, 2008. Over the sample period, there are 98 observations on the index values, thereby yielding a maximum of 97 observations of 'excess returns'⁷. Thus, sample size for

the present study is 97 observations.

Model

Theoretical relationship between the 'excess return' of a portfolio ($(r_p - r_f)$, where, r_p and r_f , respectively are 'return on a portfolio and 'risk-free rate') and the 'excess return' on a 'market portfolio' ($(r_M - r_f)$ where, r_M and r_f , respectively are 'return on market portfolio' and 'risk-free rate'), termed *ex post* characteristic line, is described as under (Sharpe et al. 1995):

$$r_p - r_f = \hat{a}_p + \hat{a}_p (r_M - r_f)$$

In the present study, the above *ex post* characteristic line has been modelled and estimated as below:

$$Y_t = a_0 + b_1 X_t + e$$

where,

$Y_t - (r_p - r_f)$ 'excess returns' on a portfolio,

$X_t - (r_M - r_f)$ 'excess returns' on the market portfolio, and

e - random error term.

The above model has been estimated in this study for 97 observations. Y_t has,

to lack of trading on four of the 97 dates of auctions of treasury bills, suitable adjustments were made to the rates of returns generated in the capital market during the relevant preceding and succeeding fortnights. A total of eight observations on rates of returns for each of the three portfolios have required adjustment.

⁷ Over the sample period, risk-free rate of return was available for every fortnight. However, owing

alternatively, been referred to in this paper as ‘ESG portfolio’ as well as ‘Nifty portfolio’.

Using values of summary statistics of the variables and coefficients of the estimated relationship described above, risk-adjusted performance of the ‘ESG portfolio’ has been evaluated in the next section. The observed performance of ‘ESG portfolio’ has also been compared with that of ‘Nifty portfolio’.

Findings

For the sample data on four variables, descriptive statistics are summarized in Table 1 for the sample period. Results have shown that average fortnightly returns generated by ESG and Nifty portfolios are similar (with respective annualized returns of 22.88

and 23.12 percent). Returns on these two portfolios have been found somewhat higher than the average return for the ‘market portfolio’ (with annualized return of 20.38 percent). Results have also shown that variability in the rates of returns for all the three portfolios were nearly the same during the sample period. On the whole, statistical results presented in the table have indicated that shareholder returns for the socially responsible companies (as proxied by the ‘ESG portfolio’) are not inferior to those found for the market or the ‘Nifty portfolio’.

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Table 1: Summary Statistics – Rates of Return (Fortnightly)

Statistic	Treasury Bills	ESG Portfolio	NIFTY Portfolio	Market Portfolio
Mean	0.0027	0.0088	0.0088	0.0078
Standard Deviation	0.0004	0.0515	0.0524	0.0540
Minimum	0.0021	(0.1551)	(0.1701)	(0.1702)
Maximum	0.0037	0.1129	0.1302	0.1311
Number of Observations*	97	97	97	97

* Based on raw data of 98 observations.

Results of regression of ‘excess returns’ of ‘ESG portfolio’ (Y_{1t}) and ‘Nifty portfolio’ Y_{2t} on ‘market portfolio’ (X_t), presented in ‘Panel A’ and ‘Panel B’ respectively of Table 2 have shown that about 95 percent of the excess return in both ESG and Nifty portfolios is explained by variation in the inde-

pendent variable. Further, magnitude of the coefficients of the independent variable at 0.92 for ESG portfolio and 0.95 for the Nifty portfolio is observed to be less than one, thus implying lower level of market risk associated with returns on ESG and Nifty portfolios. These findings are considered valuable

for the reason that at the time of launch of the ESG index, less than 50 percent of its constituents were members of the Nifty index. In other words, results have provided some preliminary evidence on, first, market not penalizing the stocks of the socially responsible companies, and, second, high degree of substitutability (and suitability) of adopting ESG index

as a substitute for Nifty index in the investment decisions made by the investors, both domestic and foreign, individuals and institutional. These findings are further examined below in terms of some commonly used risk-adjusted measures of portfolio performance evaluation.

Table 2: Regression Analysis $Y_t = a_0 + b_1X_t + e$

	Coefficients	Standard Error	t-stat	P-value
Panel A (Dependent Variable $Y_{t, r_p} - r_f$ - of ESG portfolio), Adjusted R ² =0.95				
Intercept	0.001364	0.001231	1.108079	0.270625
$X_t (r_M - r_f)$	0.926908	0.022791	40.67062	6.79E-62
Panel B (Dependent Variable $Y_{t, r_p} - r_f$ - of Nifty portfolio) Adjusted R ² =0.96				
Intercept	0.001275	0.001029	1.239612	0.218172
$X_t (r_M - r_f)$	0.952277	0.019043	50.00588	4.85E-70

Using market portfolio as a benchmark, some commonly used measures for evaluating the performance of the portfolios of stocks are *Ex Post Alpha* or Jensen's Coefficient (Jensen 1968), Reward-to-Volatility Ratio (RVOL) or

Treynor Ratio (Treynor 1965), and Reward-to-Variability Ratio (RVAR) or Sharpe Ratio (Sharpe 1966). Computed values of these measures are presented in Table3.

Table 3: Risk-Adjusted Performance Evaluation

Measure	Benchmark Value– Market Portfolio	Observed Value– ESG Portfolio	Observed Value– Nifty Portfolio
<i>Ex Post Alpha</i> (Jensen's Coefficient) (%)	0.00%	0.14%	0.13%
Reward-to-Volatility Ratio (RVOL) - Treynor Ratio (%)	0.51%	0.66%	0.65%
Reward-to-Variability Ratio (RVAR) - Sharpe Ratio	0.09	0.12	0.12

Results have shown that the observed values of the three measures for both the ‘ESG portfolio’ and ‘Nifty portfolio’ are greater than the benchmark values of the market portfolio. This implies that both ESG and Nifty portfolios have generated superior shareholder returns over the sample period. In terms of *Ex Post Alpha*, the excess return is to the extent of 0.13 percent for the ‘Nifty portfolio’ and 0.14 percent for the ‘ESG portfolio’. This fortnightly return has, however, not been found statistically significant (as shown for the value of intercept in Table 2). Importantly, in terms of other two measures of evaluation, it is found that market has rewarded the socially screened stocks at least as much as the ‘Nifty portfolio’. In any case, it is worth mentioning that socially responsible companies have not been penalized in the Indian capital market over the sample period⁸.

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Implications of the Study

Based on the above discussion, some important implications of this study are

⁸ An analysis of data since January 10, 2008 has yielded findings similar to those reported and discussed in this paper. This finding is viewed significant for the reason that even in this current phase of economic hardships, capital market has not unduly penalized the socially responsible companies.

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as follows. First, findings of the study relating to risk-adjusted performance measures have implied that shareholder returns for socially responsible companies are not inferior to those for the market as a whole. Rather, benchmarked against the ‘market portfolio’, there are some signals of superior *ex post* returns for the ‘ESG portfolio’. Thus, ‘ESG portfolio’ companies should find themselves in a relatively better position in attracting capital flows for investment in their securities from both domestic and foreign investors. Second, corporate management should not unduly worry that pursuit of socially responsible programs is penalized in the capital market. Rather, results of the study have provided support to the idea that Indian corporates should be adopting and integrating socially responsible activities and programs as important elements in their strategic plans.

Summary & Conclusions

Beginning 2008, NSE launched ESG index in India. This index, representing 50 companies, ‘ESG portfolio’, has been used in this study to proxy for the socially responsible companies. In this backdrop, the primary aim of this research paper has been to empirically examine the relative performance – shareholder returns – of these socially-

screened stocks in the Indian capital market. Using data for the sample period Jan.2005-Sept.2008, this, apparently, pioneer empirical study has found that socially responsible companies in India have generated shareholder returns that are, at least, as attractive as those for the 'Nifty portfolio' or 'market portfolio'. Results presented in the study have provided signals of superior returns, though statistically non-significant, for the shareowners of socially responsible stocks vis-à-vis of the market portfolio. Findings of this study have implications for, first, retaining and attracting capital flows to the socially screened stocks from the investors who actively apply socially responsible investment (SCI) screens in their decision processes. Second, findings of this study should help in regulating the managerial beliefs that capital market penalizes the pursuit of socially responsible programs by the corporate sector. Results of the study have implied that Indian companies should not only continue but also be adopting and integrating socially responsible activities and programs as important elements in their strategic plans on a sustained basis.

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