

Corporate Social Performance and Corporate Financial Performance: A Link for the Indian Firms

Rupal Tyagi¹
Anil K. Sharma²

Department of Management Studies
Indian Institute of Technology Roorkee
India

Abstract

The present study addresses the issue of the relationship between Corporate Social performance and corporate Financial Performance in Indian context under good management theory. The study used S&P ESG India Index as a proxy of CSP/ CSR (Corporate social performance or Corporate Social Responsibility) of Indian firms for the first time over the 2005–2011 periods. We designed econometric models and controlled industry specific attributes and performed Weighted Least Square method for the analysis. Overall results show neutral though modest negative relationship between the CSP and CFP which eventually informs that if there would be any relationship, it would be negative.

Key Words: *ISO 14000, Assurance Services, Environmental information, Environmental management systems*

Introduction

The today's economic and business world is encountering with firms engaged in a serious effort to define and integrate Corporate Social Responsibility (CSR) into all phases of their businesses and dedicate their resources and managerial concentration to it. There is escalating demand for transparency and disclosures (T&D) and continuous improvement in social, environmental, and economic performance for

¹ Dr. Rupal Tyagi pursued her PhD. from in CSR from the Indian Institute of Technology (IIT) Roorkee, Roorkee, India and currently leads the CSR Intelligence Unit at CSR India, India, a project management and CSR consultancy firm. She also holds a Master's in Business Administration Degree and a Diploma in Computer Application. E-mail: rt.iitdoms@gmail.com

² Dr. Anil K. Sharma is an Associate Professor in the Department of Management Studies, Indian Institute of Technology Roorkee, Roorkee (Uttarakhand), India. His areas of Interest are Finance, Accounting, corporate social responsibility and sustainability. E-mail: aanilkssharma@gmail.com

firms and moreover, liability towards its stakeholders - customers, shareholders, employees, suppliers and the community. The fragmentary discussions on the expenditure on CSR activities are of worth to organizations or not, are still on. Three decades of research into the relationship between corporate social performance (CSP) and corporate financial performance (CFP) put forward that CSR boost firm's profitability (Orlitzky et al. 2003) in bulk of the studies (Laan et al. 2008).

CSP portrays the outcomes of socially responsive behavior (Wood, 1991). CSR has become a precondition for firms to secure their long-term accomplishment and competitiveness (Clarkson, 1995). Each company differs in the way, it implements CSR into their business process. Company's size, industry, business culture, stakeholder demands and historical CSR engagement are important factors. Thus, it becomes important that CSR strategy should be aligned with the company's specific corporate objectives and core competencies (Tsoutsoura, 2004).

However, Friedman (1970) stated the resources spent on CSR activities are of corporate and coming from the pockets of its shareholders in his well publicized New York Times Magazine article. Thus, CSR cannot be considered as value-maximizing to the firm. Later, agency theory supported this perspective where "agency problems that allow managers to act as principals not as agents of shareholders can result in investment in CSR that is not rewarded in the marketplace". If the claim of the agency theory is acceptable, there would be a negative relationship between CSP and CFP. Also, "in a simple economic model of a profit maximizing firm, trying to satisfy various stakeholders imposes additional constraints on the firm, and this can only decrease profits, if it has any effect" (Moon, 2007).

As a blistering topic of debate, CSP-CFP explored worldwide but lacks insights from Indian perspective. Further, continuing growth in CSR acts and CSR reporting gave a rise and concern towards assessing its financial implications from business point of view in developing economies who have become hub of CSR activities in general. Thus to explore the relationship of CSR/ CSP with CFP of Indian firms, researcher was motivated to design this empirical study. Hence, the primary objective of the present study is to explore the nature and the direction of the relationship between the financial performance and the social performance of the Indian organizations.

Literature Review and Hypothesis Development

Literatur Review

Studied extensively, the relationship between CSP and CFP has been a hot debate topic of scholars for a half century (Preston and O'Bannon, 1997; Waddock and Graves, 1997; Griffin and Mahon, 1997; McWilliams and Siegel, 2000; and Simpson and Kohers, 2002).

Previous literature indicated inconclusive results on the relationship between CSP and CFP; (Ullman 1985). Many empirical studies have pointed out the uncertain relationship between CSP and CFP (Alexander and Buchholz, 1982; Aupperle et al.

1985; Ullman 1985); and some studies documented positive correlation (Wokutch and Spencer, 1987; McGuire et al. 1988; Waddock and Graves, 1997); while other studies illustrated negative correlation (Marcus and Goodman, 1986; Lerner and Fryxell, 1988; Holman et al. 1990).

Positive correlation between CSP and CFP suggests that commitment to CSR would increase costs to competitiveness and lessen the hidden costs of stakeholders as good relations with employees, suppliers, and customers are essential for sustainability (Yang et al. 2009). Bowman and Haire (1975) pointed out that CSR is a symbol of reputation. Therefore, “when a company increases its costs by improving CSP to enhance competitive advantages, such social responsibility activities may improve company reputation, and in turn, long run financial performance can be improved, by sacrificing the short-term CFP” (Yang et al. 2009). The negative correlation between CSP and CFP suggests that the realisation of CSR will carry competitive disadvantages to the business (Aupperle et al. 1985) as the substantial costs may ask for other methods or need to bear other costs and increased costs due to CSR activities will result in little gain if measured in economic interests (Yang et al. 2009).

Some strategists assert that there are too many intervening variables to observe any direct relationship between CFP and CSP except possibly by chance (Ullman 1985). McWilliams and Siegel (2000) also verified that this relationship would disappear with the introduction of more precise variables, such as the R&D strength, into the economic models.

The research on the CFP - CSP link has employed a variety of theories and methodologies. Waddock and Graves (1997) used a lagged cross-sectional data to examine the link using the KLD social ratings and finds that last year's social performance is positively correlated with current year's financial performance, supporting good management theory. McWilliams and Siegel (2000) argue that Waddock and Graves (1997) have omitted an important explanatory variable - R&D intensity i.e. strongly correlated with both CSP and CFP. McWilliams and Siegel (2000) claim that introducing R&D intensity would vanish this relationship. Berman et al. (1999) investigated this relationship by recognizing the possibility of heteroscedasticity and autocorrelation in the error term. Ruf et al. (2001) take a first difference approach to glance at how the change in CSP affects changes in CFP in one, two, and three years' time between 1990 and 1991 (Table 1).

Table 1. Comparison with Benchmark Studies

STUDY	Waddock & Graves (1997) - OLS			McWilliams and Siegel (2000) - OLS		Moon (2007) - OLS	Laan <i>et al.</i> (2007) - FEM		Tyagi and Sharma (2012) - REM				
Coefficients	ROA	ROE	ROS	Accounting Measures	Accounting Measures	ROA	ROA	EPS	ROA	RONW	ROCE	OPM	EPS
CSP	0.024***	0.081	0.021**	0.141***	-0.062	0.003	0.07 0.40* *	0.51 5.30**	-0.091*	-0.034*	0.000	-0.002	0.000
Risk	N	N	N	Y	Y	-0.102	0.09* *	1.63**	-4.043*	-0.173	-0.170*	0.097*	0.025*
LEVERAGE	-0.120***	-0.471***	-0.115***	N	N	N	N	N	N	N	N	N	N
SIZE	-0.502e-6*	0.136e-6	-0.427e-6	Y	Y	Y	0.01	0.37**	-34.913*	-27.134*	-1.799*	-0.261	0.598*
R&D_Intensity	N	N	N	N	0.263***	N	N	N	64.283*	15.953*	1.059*	1.852	0.524*
INDUSTRY	Y	Y	Y	N	Y	Y	N	N	Y	Y	Y	Y	Y
YEAR	N	N	N	N	N	Y	N	N	Y	Y	Y	Y	Y
R ²	0.29	0.07	0.20	-	-	0.15	-	-	0.233	0.195	0.157	0.149	0.131
AR ²	0.27	0.04	0.17	0.10	0.29	-	0.69	0.39	0.228	0.190	0.152	0.144	0.125
F Stat	11.55***	2.20***	6.99***	-	-	-	9.28* *	3.37**	46.677	38.172	30.239	28.271	23.010
Observations	469	469	469	524	524	2669	1829	1791	1857	1907	1956	1949	1848

Hypothesis Development

Premeditated literature analysis on the relationship of CSP and CFP revealed mixed evidences especially positive impact on Financial Performance of firm. However, it is still a controversial theme whether CSP pays back to firm or not. Even after encountering a significant positive CSP - CFP relationship in the majority, scholars tend to conclude the relationship as inconclusive, complex, and nuanced (Arlow and Gannon, 1982; Griffin and Mahon, 1997; Margolis and Walsh, 2001; Roman *et al.* 1999). Jawahar and McLaughlin (2001, p. 399) found out that in most of those studies The reasons for expecting a relationship are not clearly articulated.

Further, review also observed that most of the studies dealt with developed nations where United States was the central of attraction while only a few studies investigated developing economies. Among all the accessible literature, only few studies exist in Indian context which shows that there exists gap in the literature and form the base of conducting the study in India (Table 2). According to KPMG survey (2005), Asian firms often lag behind their Western counterparts on CSR practices and it is evident that Indian firms mostly focus their CSR activities on community development (PiC, 2004). Though, philanthropic orientation of Indian businessmen has its roots in history, a 20-country public opinion survey revealed that India comes last in the level of CSR demanded from firms in any country (Environics International, 2001). A lack of provable link between CSR and firm performance often discourages firms from engaging in CSR (British Council *et al.* 2002). However at present, Indian companies have started changing their outlook towards CSR by looking beyond passive philanthropy. Companies are considering CSR for improved brand image and stronger ties with the local community (British Council *et al.* 2002; PiC, 2004).

Table 2. Research Continent

RESEARCH CONTINENT	PERCENTAGE
Developing Economies	15%
Developed Economies	51%
Mixed Economies	14%
Not Applicable	20%

It was also observed that Accounting measures followed by Market measures were favourite choice of most of the studies for comparing with social performance of firms. Griffin and Mohan (1997) found around 80 different CFP measures used in studies where firm size, return on assets, return on equity, asset age, and return on sales are the frequently used measures. Specially, ROA is consistently considered to be an authentic measure of financial performance (Berman *et al.* 1999; McGuire *et al.* 1988). The present study used both measures.

For Social Performance measure, the exhausted numbers of studies employed different measures thus have often been criticized for applying unfit CSR measures. Reputation Scores or Ethical Ratings were widely used CSP measure for the analysis. However, in Indian context, finger count studies which assess this relationship have not used authentic data of social performance. Mishra and Suar (2010) examined CSR influence on financial and non-financial performance (NFP) of Indian firms towards primary stakeholders used self-developed CSR measure. Bedi (2009) studied the link between social expenditure and financial performance of top Indian firms using Karamyog rating which is not authentic. The study of Mittal *et al.* (2008) used case study method to explore the CSR nature of top Indian firms. Therefore, the lack of authentic measures in Indian studies prompted to conduct a study with more reliable measures and indicators. Thus, making rationale for conducting further research and provide empirical evidences. Other important studies are Singhania (2011) and Banerjee *et al.* (2009) which tested corporate governance performance on financial performance of Indian companies however impact of Social Performance on CFP was not explored in both the studies. As only one authentic measure existed in Indian context by the time study conducted, it was used to fill the gap.

Creating reputation among stakeholders would give advantage over other firms in form of loyalty from employees, customer and suppliers which give power of retaining, increased sales and bargaining and much more. Repute may accolade socially responsible firms from their stakeholders especially in the long run (Moneva and Ortas, 2008; Porter and Kramer, 2006; Roberts and Dowling, 2002; Zairi and Peters, 2000).

Moreover, according to Berrone *et al.* (2007), stakeholder satisfaction enhances performance precisely because it is prone to create such intangible assets in terms of image and reputation (Melo and Galan, 2011). It would be these intangible, difficult-to-replicate assets (Branco and Rodrigues, 2006; Hillman and Keim, 2001; Lantos, 2001; Roberts and Dowling, 2002; Schnietz and Epstein, 2005) that would create a kind of value and competitive advantage to firms that would at last lead to superior financial performance. Rose and Thomsen (2004) believed that 'the benefits of a good reputation are none other than the possibility of demanding a higher price for the products or services supplied by the company; the payment of lower prices in its purchases; attracting more qualified people in the labour market; greater loyalty from consumers and employees and greater stability of incomes' (cited in Sánchez and Sotorrio, 2007).

Thus, these outlook supports us in designing following conceptual model to study the CFP-CSP relationship of Indian firms (Figure 1).

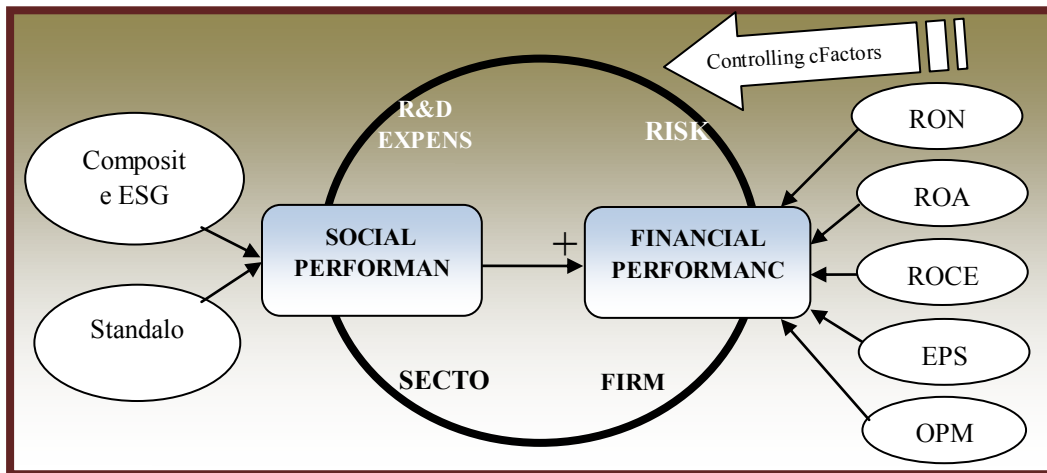


Figure 1. Conceptual Model

On the basis of deliberate literature reviews, we observed comprehensive linkage between CSP and CFP especially where most discourses show positive correlation (Moskowitz, 1972; Cochran and Wood, 1984; Waddock and Graves, 1997) indicating that the actual costs of CSR are covered by the benefits in long run. A firm that attempts to decrease its implicit costs by socially irresponsible behavior—by, for example, neglecting to take measures against pollution—will eventually incur higher explicit costs (Tsoutsoura, 2004). In light of these thoughts, the present study also hypothesizes that CSP and CFP have a positive causal relationship following mixed approaches of various studies. Further we also expect certain CFP measures may have different relation to ESG individually while regressing the ESG.

Hypothesis: *Higher CSP leads to higher CFP, ceteris paribus*

Research Design

Sample

The firms listed on the National Stock Exchange (NSE) as well as Standard and Poor's Environment Social Governance (ESG) India 500 Index was selected as a sample. Attention was restricted to firms that belong to the S&P ESG Index for at least 6 years during the 2005 to 2011 period. After merging the two data sources, unbalanced panel of 1995 company years representing 297 firms (Appendix 2) and an average of 6.72 years per firm was emerged after removing extreme observations for the final analysis.

Corporate Social Performance

Dependent variable of the study is CFP while independent variable is a CSP along with other control variables.

Past studies have used various methods to measure CSP and this disparity was partially responsible for raising a variety and mixture of results (Waddock and Graves, 1997). The majority of the studies have used CSR scores or ratings to measure the

CSP like US and other western countries. Earlier Indian firms have no such index / ratings to rate their CSP until 2005 when CRISIL, S&P and KLD collaboratively launched Environmental, Social and governance (ESG) Scores of Indian firms. This study uses these ESG scores as a proxy for measuring CSP.

Sponsored by the International Finance Corporation (IFC), and developed by a consortium of Standard & Poor's, CRISIL, and KLD, this index represents the first of its kind to measure Environmental, Social, and corporate governing practices based on quantitative as opposed to subjective factors. The index employs a unique and innovative methodology that quantifies a company's ESG practices and translates them into a scoring system which is then used to rank each company against their peers in the Indian market.

Each company is assigned a quantitative score / ranking based on three factors – transparency and disclosure (T&D) on corporate governance, environment, and social governance as per the company's published information. 127 corporate governance (G) disclosure indicators identified under these Shareholder rights, Audit Process, Financial and operational indicators, Board and management profile, Ownership structure, Business Ethics items and 70 environmental and social (ES) disclosure indicators identified under Environment, Employees, Community, Customers/Product items. All 197 indicators are scored on a binary (1/0) basis for each disclosure item and 197 indicators include 27 "Extra Point" G and 9 "Extra Point" ES indicators where 'Extra point' questions contain greater weightage. Weighing of ES disclosure items differs according to sector considering High, Medium and Low impact. Thus Composite ESG T&D score is 50% G and 50% ES and based on the T&D score, the top 150 companies, qualify for the qualitative screening. The Index details has been fetched from the presentation of Sinha (2009), Director and Economist, CRISIL, India.

Scoring process of Qualitative Assessment involves an analysis of independent sources of information from regulatory agencies, NGOs, and the media, as well as from company sources such as websites, regulatory filings, and CSR reports. A Final composite ESG score is calculated for each company by summing the qualitative and the quantitative score.

Corporate Financial Performance

Measuring financial performance is believed as a less complicated task, though it also has its specific ramifications. Financial performance can be measured in two ways – one, market based performance (e.g., stock price, dividend payout and EPS) and two, accounting-based performance (e.g., ROA, ROE). Here, as well, is trivial unanimity about which measurement instrument should be employed (Roberts and Dowling, 2002; Surroca and Tribó, 2008; Waddock and Graves, 1997). Both of these measures represent different perspectives on how to evaluate a firm's financial performance and have different theoretical implications (Hillman and Keim, 2001) and each is subject to particular biases (McGuire et al. 1986).

Accounting measures generally focus on how firm earnings respond to managerial policies (Cochran and Wood 1984) and captures only historical aspects of firm performance (McGuire et al. 1986). They are subject, moreover, to bias from managerial manipulation (Orlitzky et al. 2003) and differences in accounting procedures (Branch, 1983; Brilloff, 1972). Market measures are forward looking and are less susceptible to different accounting procedures and represent the investor's evaluation of the ability of a firm to generate future economic earnings (McGuire et al. 1988). According to our line of reasoning present study use both accounting and market based measures to solve subjectivity's problems taking data relating to the market and furthermore it completes the measure.

The present study complements financial data from the Capitaline Plus database for the year 2005 through 2011. The study employs RONW or ROE (Return on Net Worth / Return on Equity) also used by Spicer (1978), Cowen et al. (1987), Waddock and Graves (1997), Preston and O'Bannon (1997), ROA (Return on Assets) used by Aupperle et al. (1985), Waddock and Graves (1997), Preston and O'Bannon (1997), McWilliams and Siegel (2001), ROCE (Return on Capital Employed) consistent with Balabanis et al. (1998), Poddi and Vergalli (2009), EPS (Earning Per Share) consistent with Brangdon and Marlin (1972), Paret and Eilbirt (1975), Sturdivant and Ginter (1977) and OPM / ROS (Operating Profit Margin / Return on Sales) applied by Tsoutsoura (2004), Ruf et al. (2001), Waddock and Graves (1997) and Yang et al. (2009).

Control Variables

A pile of studies has poured attention about the CFP-CSP relationship over other important factors that can have potential influence on firms' performance as industry sector, size, risk and R&D expenses.

The industrial sector has a potentially strong impact on social credential. Firms whose economic actions may modify the environment and the firms operating in natural resources (mining, forestry, oil, gas...) are more restrained in environmental performance than other sectors (Dierkes and Preston, 1977). In the present study, industry sector was controlled using dummy variable. The segmentation of industry sector was based on the average ESG score for each industry. Higher scores indicate a better rating for the company corresponding to different aspects of CSR. As per the scoring, 56 sectors were ranked from highest (1) to lowest (5) and clustered into five major groups (Table 3).

Large firms are able to have more responsible behavior compared to small firms because they may be more attentive to their external stakeholders (Waddock and Graves, 1997) which makes **SIZE** a relevant variable (Johnson and Greening, 1999; Ullman 1985). Though for measuring *company size*, authors diverge on which parameter to use. The present study used **Market Capitalization (MCAP)** for measuring size supported by Moskowitz (1972); Vance (1975) and Alexander and Buchholz (1978). Previous studies also controlled for **RISK** as Ullman (1985), McWilliams and Siegel (2000) because financial efforts towards employees or

environmental protection also depend upon the management's room for maneuver (Trebucq and D'Arcimoles, 2002). The present study used **Debt to Equity Ratio** for controlling risk i.e. consistent with Fauzi (2009) and Laan et al. (2008).

Table 3. Sector Scale

Sector Score / Scale	ESG Average Score	No of Sectors	No of Observations
1	39.7	12	468
2	37.0	8	444
3	35.7	11	373
4	33.8	10	405
5	30.5	15	305

For sustainable development, companies should keep on making profits. Thus, products or services must be able to satisfy customer needs in a sustainable manner, which suggests mandatory and continuous innovation of products or services (Yang et al. 2009). This arose from the realization that investment in CSR promotes product differentiation (McWilliams and Siegel, 2000) and there is strong evidence that a growing number of consumers value CSR attributes aggregated into a product (McWilliams and Siegel, 2001). In line with the methodology of Dowell et al. (2000) and Berrone et al. (2007), we divided R&D expenses by total assets to calculate R&D INTENSITY. As financial performance is closely affected by the BUSINESS CYCLE, models also include the year

Autoregressive Econometric Models

Following the technique of Mahoney and Roberts (2007), the study used Random-effects Feasible Generalized Least Square (FGLS) regression method of panel data to examine the proposed assertions about CSP and CFP, estimated after **Hausman Test**. As compared to Ordinary Least Square (OLS), FGLS is capable of generating best linear unbiased estimators (BLUE) because it takes into account the variability in the dependent and independent variables explicitly (Gujarati, 2003, pp. 395). For each financial measure, there are three models - model without dummies (A), model with industry dummy (B) and model with industry and year dummy (C).

To avoid potential misspecifications of the tested model, a FGLS specification in the form of cross section weights is used to allow for cross section heteroscedasticity (Eviews 5.1, 2005). All the models are tested for heteroscedasticity and study utilizes the White's cross section coefficient covariance method, which makes the model robust to cross sectional (contemporaneous) correlation and different error variances in each cross section (Wooldridge, 2002). Since, panel data of current study possess both a time series dimension and a cross sectional one, time series could also have

been done instead of the cross sectional dimension. However, the fact that the number of cross sections in the dataset by far exceeds the number of time series supports the choice of cross sectional dimension. Following are the models for the study:

$$\Delta CFP_{it-1} = \beta_0 + \beta_1 \Delta ESG_{it-1} + \beta_2 \Delta MCAP_{it-1} + \beta_3 \Delta DE_{it-1} + \beta_4 \Delta RD_{it-1} + e_{it} \quad (A)$$

$$\Delta CFP_{it-1} = \beta_0 + \beta_1 \Delta ESG_{it-1} + \beta_2 \Delta MCAP_{it-1} + \beta_3 \Delta DE_{it-1} + \beta_4 \Delta RD_{it-1} + IS + e_{it} \quad (B)$$

$$\Delta CFP_{it-1} = \beta_0 + \beta_1 \Delta ESG_{it-1} + \beta_2 \Delta MCAP_{it-1} + \beta_3 \Delta DE_{it-1} + \beta_4 \Delta RD_{it-1} + IS + YDs + e_{it} \quad (C)$$

Where

CFP _{t,i}	= financial performance in t _{th} year (ROA, ROCE, RONW, OPM and EPS)
B ₀	= constant
β ₁ , β ₂ , β ₃ , β ₄	= regression coefficients
ESG _{t-1,i}	= a proxy for corporate social performance
DE _{t-1,i}	= a proxy for the risk in the t _{th} year (Debt to equity Ratio)
MCAP _{t-1,i}	= a proxy for the size of the firm in the t _{th} year (Market Capitalization)
RD _{t-1,i}	= a proxy for the R&D Intensity (R&D Expenses/Total Assets)
e _{it}	= unobserved error component of firm i at year t,
IS	= Industry Dummy scaled by ESG scores
YDs	= Year Dummies

To remove outliers from the database, present study used robust methods where observations with **most extreme outliers** were dropped from the samples while **extreme outliers** were replaced with adjacent values from the remaining data (Barnett and Lewis, 1994). It is to be noted that all extreme observations cannot be removed due to their important contribution in the sample, thus, the method of transformations was adopted so that extreme scores can be kept in the data set yet the skew and error variance of the variable(s) can be reduced (Hamilton, 1992).

The data set was examined and all sorts of transformations were employed to ascertain the best transformation method. As suggested by Msetfi (2011, pg. 32-34) finally, power transformation (variable^{power}) or also called Box-Cox transformation was used to remove the skewness. The Levin-Lin-Chu (LLC) Unit Root test (Appendix 2) was also conducted to check the stationarity of the data. The first difference of the transformed variables was performed to remove the first order auto correlation and the unit root existence.

Results and Discussion

Descriptive Results

Table 4 reports correlation among all the dependent, independent and control variables used in the present study. ESG Scores are correlated with all variables at 0.01 and 0.05 significant levels with exception to ROA, RONW and ROCE. This indicates that there is a less than 0.05 probability that a correlated coefficient this large would have occurred by chance.

ROA and RONW found to be correlated with all the variables at $p < 0.01$ significance. ROCE correlates with all the variables except DE and MCAP. OPM is also significantly correlated at $p < 0.01$ with all variables except EPS and Mcap. EPS is strongly correlated with all variables except R&D Intensity (RDINT) and OPM at $p < 0.05$. RDINT is significantly correlated with all variables except EPS and Mcap. DE correlates with all variables except ROCE. Mcap correlates with all variables except ROCE, OPM and RDINT at $p < 0.05$.

Table 4. Correlations

	ESG	ROA	RONW	ROCE	OPM	EPS	RDINT	DE	MCAP
ESG	1								
ROA	0.044	1							
RONW	0.030	0.651**	1						
ROCE	-0.008	0.625**	0.621**	1					
OPM	-0.064**	0.307**	0.182**	0.722**	1				
EPS	-0.120**	-0.259**	-0.339**	-0.177**	-0.033	1			
RDINT	0.079**	0.104**	0.091**	0.110**	0.066**	-0.018	1		
DE	-0.094**	-0.330**	-0.118**	-0.037	0.342**	0.184**	-0.050*	1	
MCAP	-0.392**	-0.126**	-0.175**	-0.025	0.039	0.262**	-0.040	0.136**	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

All variables are in Transformed Scale

Table 5 reports the descriptive statistic of transformed variables. In the present study, mean value of all the dependent variables is quite different to what is documented in benchmark studies. The mean value of CSP or ESG score is 12.51 and SD is 1.93. Other studies reported a mean of CSP are Trebucq and Charles-Henri (2002), Waddock and Graves (1997) and Moon (2007) are -3.02, 0.034 and -0.23 respectively.

For ROA, the mean value is 12.83 and SD is 13.32 that is higher from Garcia-Castro et al. (2009) – mean - 10.54 and SD - 8.53. The study of Waddock and Graves (1997) reported a mean of ROA as 0.06 while Trebucq and Charles-Henri (2002) and Tsoutsoura (2004) reported 5.72 and 5.15 mean value of ROA respectively. Mean value of RONW (also referred as ROE) is 7.78 and SD is 3.68. Other studies reported a mean of RONW/ROE are Trebucq and Charles-Henri (2002) – 14.94, Garcia-Castro et al. (2009) - 16.57, Tsoutsoura (2004) - 19.05 and Waddock and Graves (1997) - 0.14. The present study documented mean of OPM (also referred as ROS) as 1.79 and SD as 0.65 which is higher from Waddock and Graves (1997) - 0.059 (mean) and 0.073 (SD). Mean value of EPS in the present analysis is 0.65 which lower to what Laan et al. (2008) - 1.08 reported while SD of EPS is 0.126. Mean value of ROCE is 2.40 while SD is 1.05.

Mean value of DE is 0.77 which is higher from Moon (2007) – 0.64 and Laan et al.

(2008) – 0.41. Standard Deviation of DE is 0.74 which is again higher from Laan et al. (2008) – 0.40. Mean of RDINT is 0.003 and SD is 0.011 which found to be lower to what Garcia-Castro et al. (2009) reported – 0.04 (mean) and 0.07 (SD) respectively. Mean and SD of Mcap are 0.75 and 0.036 respectively.

Table 5. Descriptive Statistics

	ESG	ROA	ROCE	RONW	OPM	EPS	DE	MCAP	RDINT
Mean	12.505	12.829	2.395	7.779	1.785	0.653	0.766	0.749	0.003
Median	12.380	9.665	2.550	7.520	1.931	0.634	0.660	0.754	0.000
Maximum	20.383	141.834	5.139	30.566	2.851	1.834	5.609	0.837	0.104
Minimum	7.885	0.065	0.000	0.000	0.000	0.398	0.000	0.639	-0.002
Std. Dev.	1.929	13.316	1.053	3.678	0.652	0.126	0.744	0.036	0.011
Skewness	0.617	3.872	-1.039	1.227	-1.724	1.662	1.687	-0.670	5.813
Kurtosis	3.946	30.603	3.860	8.698	5.648	10.531	7.990	3.171	43.196
Observations	1995	1911	1974	1946	1963	1904	1995	1995	1995

All variables are in Transformed Scale

Panel Data Regression Results

The hypothesis of the study is in line with the work of Trebucq and Charles-Henri (2002), Waddock and Graves (1997), Yang et al. (2009), Ruf et al. (2001), McWilliams and Siegel (2001), Roberts and Dowling (2002), Laan et al. (2008), Garcia-Castro et al. (2009) and Fauzi (2009). To assess study proposition, three econometric models were designed of each financial performance measure as the dependent variable which will result into 15 different models.

As mentioned earlier that before running the models, data were transformed and differenced to overcome the problem of unit root and auto – correlation and also validated from Hausman test to ensure the appropriate panel data technique. Feasible GLS with Cross Section Weights was performed for data analysis (Table 6). As already informed, in all the models A, B and C denotes no dummies, industry dummy and industry and year dummies respectively which documents the results of each financial measure as dependent variable.

The adjusted R Square gives some idea of how well the model generalizes and ideally, it should be small or very close to R Square. From the models of ROA financial measure, AR^2 and R^2 revealed that the predictors together for Indian firms could explain more than 23% variation in ROA in each model. The difference between AR^2 and R^2 here is 3% that means that if the model were derived from the population rather than a sample it would account for approximate 3% less variance in the outcome. Overall R square of ROA is closed to Waddock and Graves (1997) and Moon (2007).

Similarly other financial measure also reports significant contribution to the outcome. It is to be noted that each model of financial measure with industry and year dummy

have demonstrated more variation level or r square than models without any dummy. This implies that significant role of business cycles and operating industry. If a model is good then it is expected that there is an improvement in the prediction, and the difference between the model and observed data to be small. Thus, a good model should have large F statistic (greater than 1 at least) at significant p value 0.01. Here F statistic is greater than 1 in every model of each financial measure and is significant at $p \leq 0.01$. This indicates that the model is significant in predicting the outcome variable.

The table also reports b-values of each predictor indicating their individual contribution into the model. ESG show modest negative coefficient in all the models of each financial measure, though the sign is significant only with ROA and RONW at $p \leq 0.05$. This outcome is consistent with Waddock and Graves (1997), McWilliams and Sigel (2000), Hillman and Keim (2001) and Garcia-Castro et al. (2009).

DE found to be significant in all models at $p \leq 0.05$ i.e. consistent with the work of Laan et al. (2008), Trebucq and Charles-Henri (2002), and Fauzi (2009) except in case of RONW. R&D Intensity and Mcap are statistically significant in all of the models at $p \leq 0.05$ of each financial measure implying the significant contribution except in model 4C. Studies of Choi et al. (2010), Apostolakou and Jackson (2009) and Waddock and Graves (1997) also documented size as an important variable in the model. The study of Trebucq and Charles-Henri (2002), McWilliams and Sigel (2000), Garcia-Castro et al. (2009) and Laan et al. (2009) confirm that R&D is an important determining factor of CSR.

Here different coefficient was obtained in all the models, which indicate no relationship between dependent and independent variable, so, as the values of predictor increase, or decrease, CFP will have no impact. The b value also informs about to what degree each predictor affects the outcome 'if the effect of all other predictors are held constant'. The significance value associated with t test statistics informs the significant contribution of each predictor in the model (at $p \leq 0.05$).

Table 6. Panel Egl's - Cross Section Weights - Esg Score (Independent)

Dependent Variable	ROA			RONW			ROCE			OPM			EPS		
Model No.	1A	1B	1C	2A	2B	2C	3A	3B	3C	4A	4B	4C	5A	5B	5C
Industry Dummy	N	Y	Y	N	Y	Y	N	Y	Y	N	Y	Y	N	Y	Y
Year Dummy	N	N	Y	N	N	Y	N	N	Y	N	N	Y	N	N	Y
Constant	0.004	0.702*	0.669*	-0.017	0.628*	0.038	0.001	0.083*	0.115*	-0.006	-0.003	-0.202*	-0.006	-0.013*	-0.007
ESG	-0.141*	-0.105*	-0.091*	-0.065*	-0.053*	-0.034*	-0.005	-0.001	0.000	-0.001	-0.001	-0.002	-0.001	-0.001	0.000
Beta															
DE	-4.211*	-4.142*	-4.043*	-0.182	-0.230	-0.173	-0.146*	-0.159*	-0.170*	0.092*	0.097*	0.097*	0.024*	0.024*	0.025*
RDINT	66.383*	63.303*	64.283*	19.463*	15.049*	15.953*	2.327*	1.339*	1.059*	1.954*	2.007*	1.852	0.427*	0.483*	0.524*
MCAP	-28.037*	-29.473*	-34.913*	-18.616*	-20.671*	-27.134*	-1.418*	-1.767*	-1.799*	-0.290*	-0.385*	-0.261	0.528*	0.555*	0.598*
R Square	0.250	0.240	0.233	0.101	0.112	0.195	0.120	0.144	0.157	0.077	0.086	0.149	0.124	0.126	0.131
Adjusted R Square	0.248	0.237	0.228	0.098	0.110	0.190	0.118	0.141	0.152	0.075	0.083	0.144	0.121	0.123	0.125
ANOVA															
F	123.183	97.331	46.677	42.562	40.064	38.172	53.361	54.606	30.239	32.381	30.283	28.271	52.021	44.257	23.010
SIG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Durbin Watson (DW)	1.926	1.946	1.950	2.012	2.059	2.049	1.810	1.851	1.856	1.668	1.662	1.646	1.984	1.988	2.009
Hausman Statistics	2.61	2.57	9.83	2.91	4.47	18.64	4.03	4.17	11.71	10.49*	9.71*	10.70	13.92*	13.56*	19.80*
F statistic	1.74	1.80	1.79	14.75	12.38	8.12	15.03	11.75	9.75	19.06	14.48	10.43	11.28	9.43	5.75
Heteroskedasticity Test															
White**	Obs*R-squared	24.26	35.73	111.42	187.66	221.33	419.42	191.32	211.82	485.35	236.27	254.51	509.94	146.56	316.09
	Scaled explained SS	545.09	802.03	2543.83	1415.28	1668.12	3277.43	1120.24	1233.95	2834.37	2484.21	2668.88	5292.52	1036.06	1221.29
															2257.03

*P value is significant at the 0.05 level.

**Each value of white test is significant at the 0.05 level.

Conclusion

The authenticity and value addition of being socially responsible in business is always been a part of extensive deliberation especially the view of 'wealth maximization should be the sole goal of a corporation' (Tsoutsoura, 2004). This study addresses the question whether corporate social performance is linked to corporate financial performance using empirical methods. The study used wide data covering a seven year period, 2005-2011 on S&P ESG 500 Indian firms.

So, the cavernous analyses revealed that there exists a complex relationship between CSP and CFP as expected, albeit different from what was hypothesized as assumptions were based on earlier work. Interestingly results exhibit a neutral relationship though, with very low magnitude inclination towards negative side and can be considered a moderate relationship between the CSR scores and the financial performance measures of Indian sample firms.

The significant contribution of ESG variable into models of ROA and RONW financial measure show a moderate negative slope of the relationship. A higher ROA means higher value creation for shareholders because of its positive correlation with the stock price especially in asset-heavy firms such as the manufacturing firms (Simpson and Kohers, 2002). While ROE or RONW guarantees in defining performance from an economic point of view also surrogate from works using it (Poddi and Vergalli, 2009). The present study is also successful in highlighting the importance of size, risk and research and development as important predictors.

The present study utilizes ESG scores for the measuring CSR for the first time in India (as per knowledge of the researcher). Though findings do not suggest that a CSP is not useful, or is unable to bring competitive advantage in the long run, CSR bobbed up as a better predictor of financial performance even if indicating a neutral relationship.

It appears that better CSP does not reduce financial performance from the outcome; it will become more difficult to expect firms to be socially responsible. Hence strict Transparency and Disclosures are required to be imposed to save the interest of all stakeholders by the government so that Indian companies should be obliged to disclose annual reports.

Like the previous studies, the present study is also influenced by few undesirable factors. Hence the analysis is not completely free from biases and may suffer from a certain degree of subjectivity. The panel data analysis was conducted on a relatively small number of sample Indian companies - 297 and their coverage period compared to the previous studies was curbing - 7 years. Agree with Fauzi (2009), the period covered of the study is important because the characteristic of CSR and financial performance is discretionary, i.e. independent-CSP and outcome-CFP has no direct relationship. Moreover, there is a need to understand the relationship in the time lag model.

It was also observed that the cross sections are from 56 categories of industries. Issues faced by each category being unique and different from the other, an aggregate analysis across multiple categories of industries might have missed industry-specific issues (Griffin and Mahon, 1997).

The findings do not conclusively establish that CSR initiatives have a negative/positive impact on a business's performance for all the years. They are, however, evidenced against the take that CSR initiatives have positive financial impacts on companies. Thus, more explorations is required that will keep the debate on. Future research in this area could go forward in a number of directions:

It is to bear in mind that CSR initiatives inflict significant programmatic and administrative costs on businesses and only financially strong firms are able to maintain CSR activities in the long run and can afford the overhead CSR costs or investments (Mittal et al. 2008). Thus there are many factors which are required to be taken care of such as industry sector, large firms and small firm, multi-nationality and market risk profile. The researcher require to explore more extensively the causal mechanisms linking CSR to profitability and whatever the result is, determine whether or not those relationships hold consistently over time. Different measures can be used such as MVA, EVA and Tobin's Q could also be used to assess firms' financial performance. Increasing size of sample firms and years of observations can dramatically improve the outcome. The extended study period and short-term and long-term measures of financial performance could be employed (Aupperle, et al. 1985). One more year lag between the measurement of financial performance and the determination of CSP can be applied to monitor whether there may be a lag associated with the implementation of social responsibility and improved financial performance (Blackburn et.al. 1994). Finally overall, the results (weakness of the identified relationships) imply that additional factors need to be taken into account to explain higher proportions of the CSP-CFP relationship.

Godfrey and Hatch (2007) contend that "corporate social responsibility activity is not one comprehensive activity but rather a collective name for many different activities". Accordingly, it should not be expected that the effect of CSR to reside in a single measure of financial performance. CSR means businesses making choices, not only based on profit margins but also the best options for society. Private sector businesses such as corporations are typically motivated by profit, rather than altruistic aims. Unfortunately, if the ultimate goal of a company is the highest profit margin possible, issues such as sustainable resourcing, labor, and safety standards may be disregarded or reduced in order to increase profits. From an ethical standpoint, these considerations are subjective, leading to debate over the choices one makes.

References

- Alexander, G. J. & Buchholz, R. A. (1978). "Corporate Social Responsibility and Stock Market Performance", *Academy of Management Journal*, 21(3), 479-86.
- Apostolakou, A. & Jackson, G. (2009). "Corporate Social Responsibility in Western Europe: An Institutional Mirror or Substitute?" Working Paper, viewed 3 February 2012. <http://ssrn.com/abstract=1341591>.
- Arlow, P. & M. J. Gannon, (1982). "Social Responsiveness, Corporate Structure, and Economic Performance", *Academy of Management Review*, 7(2), 235-341.
- Aupperle, K. E., Carroll, A. B. & Hatfield, J. D. (1985). "An empirical examination of the relationship between Corporate social Responsibility and Profitability", *Academy of Management Journal*, 28(2), 446-463.
- Balabanis, G., Phillips, H. C. & Lyall, J. (1998). "Corporate social responsibility and economic performance in the top British companies: are they linked?", *European Business Review*, 98(1), 25-44.
- Banerjee, A., Gokarn, S., Pattanayak, M. & Sinha, S. K. (2009). "Corporate Governance and Market Value: Preliminary Evidence from Indian Companies", Standard & Poor, viewed 2 February 2012, http://www2.standardandpoors.com/spf/pdf/index/CG_and_Market_Value.pdf.
- Barnett, V. & Lewis, T. (1994). *Outliers in statistical data*. 3rd (ed.) New York: Wiley.
- Bedi, H. S. (2009). "Financial Performance and Social Responsibility: Indian Scenario", Working Paper, viewed 29 December 2010. <http://ssrn.com/abstract=1496291>.
- Berman, S. L., Wicks, A. C., Kotha, S. & Jones, T. M. (1999). "Does Stakeholder Orientation Matter? The Relationship between Stakeholder Management Models and Firm Financial Performance", *Academy of Management Journal*, 42(5), 488-506.
- Berrone, P., Surroca, J. & Tribó, J. A. (2007). "Corporate ethical identity as a determinant of firm performance: a test of the mediating role of stakeholder satisfaction", *Journal of Business Ethics*, 76, 35-53.
- Blackburn, V., Doran, M. & Shrader, C. (1994). "Investigating the Dimensions of Social Responsibility and the Consequences for Corporate Financial Performance", *Journal of Managerial Issues*, 6(2), 195-218.
- Bowman, E. H. & Haire, M. (1975). "A strategic posture toward corporate social responsibility", *California Management Review*, 18(2), 49-58.
- Branch, B. (1983). "Misleading Accounting: the Danger and the Potential" In possession of University of Massachusetts, Amherst.
- Branco, M. C. & Rodrigues, L. L. (2006). "Corporate Social Responsibility and Resource-Based Perspectives", *Journal of Business Ethics*, 69, 111-132.

- Brangdon, J. H. & Marlin, J. T. (1972). "Is Pollution Profitable?" *Risk Management*, 19(2), 9-18.
- Brilloff, A. J. (1972). *Unaccountable Accounting*. New York: Harper & Row.
- British Council, UNDP, CII & Pricewaterhouse Coopers (2002). *Corporate Social Responsibility Survey*. A Survey, India
- Choi, J., Kwak, Y. & Choe, C. (2010). "Corporate Social Responsibility and Corporate Financial Performance: Evidence from Korea", *Australian Journal of Management*, 35(3), 291-311.
- Clarkson, M. (1995). "A Stakeholder Framework for Analysing and Evaluating Corporate Social Performance", *Academy of Management Review*, 20(1), 92-118.
- Cochran, P. L. & Wood, R. A. (1984). "Corporate social Responsibility and Financial Performance", *Academy of Management Journal*, 27(1), 42-56.
- Cowen, S. S., Ferreri, L. B. & Parker, D. B. (1987). "The Impact of Corporate Characteristics on Social Responsibility Disclosure: A Typology and Frequency-Based Analysis", *Accounting Organizations and Society*, 12(2), 111-22.
- Dierkes, M. & Preston, L. (1977). "Corporate Social Accounting Reporting for the Physical Environment: A Critical Review and Implementation Proposal", *Accounting, Organization and Society*, 2(1), 3-22.
- Dowell, G., Hart, S. & Yeung, B. (2000). "Do corporate global environmental standards create or Destroy market value?", *Management Science*, 46(8), 1059-1074.
- Enviroics International (2001). eFlash Report: CSR Index (Enviroics International, Toronto)
- EvIEWS 5.1 (2005). EvIEWS 5 User's Guide, *Quantitative Micro Softwares*, LLC, CA.
- Fauzi, Hasan (2009). "Corporate Social and Financial Performance: Empirical Evidence from American Companies", In possession of *Globsyn Management Journal*, viewed 29 March 2011, <http://ssrn.com/abstract=1489494>.
- Friedman, M. (1970). "The social responsibility of business is to increase its profits". *New York Times Magazine*, September 13: 32-33, 122-124.
- Garcia-Castro, R., Ariño, M. A. & Canela, M. A. (2009). "Does Social Performance Really Lead to Financial Performance? Accounting for Endogeneity", *Journal of Business Ethics*, 92, 107-126.
- Godfrey, P. C. & Hatch, N. W. (2007). "Researching corporate social responsibility: An agenda for the 21st century", *Journal of Business Ethics*, 70, 87-98.
- Griffin, J. J. & Mahon, J. F. (1997). "The Corporate Social Performance and Corporate Financial Performance Debate- Twenty-Five Years of Incomparable Research", *Business & Society*, 36(1), 5-31.
- Gujarati, Damodar, N. (2003). Basic Econometrics. 4th (Ed.) *U. S. Military Academy*,

West Point.

- Hamilton, L. C. (1992). "Regressions with graphics: A second course in applied statistics", Monterey, CA: Brooks/Cole.
- Hillman, A. J. & Keim, G. D. (2001). "Shareholder Value, Stakeholder Management, and Social Issues: What's the Bottom Line?", *Strategic Management Journal*, 22(2), 125-139.
- Holman, W. R., New, J. R. & Singer, D. (1990). "The impact of corporate social responsiveness on shareholder wealth. In Preston LE (Ed.)", *Corporation and society research: Studies in theory and measurement*, 265- 279. Greenwich, CT: JAI.
- Jawahar, I. M. & McLaughlin, G. L. (2001). "Toward a Descriptive Stakeholder Theory: An Organizational Life Cycle Approach", *Academy of Management Review*, 26, 397-414.
- Johnson, R. A. & Greening, D. W. (1999). "The Effects of Corporate Governance and Institutional Ownership Types on Corporate Social performance", *Academy Management Journal*, 42(5), 564-576.
- KPMG (2005). KPMG International Survey of Corporate Responsibility Reporting 2005. KPMG Global Sustainability Services: Amsterdam.
- Laan, G. V. der, Ees, H. V. & Witteloostuijn, A. V. (2008). "Corporate Social and Financial Performance: An Extended Stakeholder Theory, and Empirical Test with Accounting Measures", *Journal of Business Ethics*, 79, 299-310.
- Lantos, G.. P. (2001). "The boundaries of strategic corporate social responsibility", *Journal of Consumer Marketing*, 18(7), 595-632.
- Lerner, L. D. & Fryxell, G. E. (1988). "An empirical study of the predictors of corporate social performance - A multi-dimensional analysis", *Journal of Business Ethics*, 7, 951-959.
- Mahoney, L. & Roberts, R. (2007). "Corporate Social and Environmental Performance and Their Relation to Financial Performance and Institutional Ownership: Empirical Evidence on Canadian Firms with Robin Roberts", *Accounting Forum*, 31(3), 233-253.
- Marcus, A. A. & Goodman, R. S. (1986). "Compliance and performance: Toward a contingency theory. In Preston LE, Post JE (Eds.)", *Research in corporate social performance and policy*, 8, 193-221. Greenwich, CT: JAI.
- Margolis, J. D. & Walsh, J. P. (2001). "Social Enterprise Series no. 19 - Misery Loves Companies: Whither Social Initiatives by Business"? In possession of Harvard Business School, Working Paper Series, 01-058.
- McGuire, J. B., Schneeweis, T. & Branch, B. (1986). "A comparison of alternative measures of corporate performance". Unpublished Manuscript, University of Massachusetts, Amherst.

- McGuire, J. B., Schneeweis, T. & Sundgren, A. (1988). "Corporate social responsibility and firm financial performance", *The Academy of Management Journal*, 31(4), 854-72.
- McWilliams, A. & Siegel, D. (2000). "Corporate social responsibility and financial performance: Correlation or misspecification?", *Strategic Management Journal*, 21(5), 603-609.
- McWilliams, A. & Siegel, D. (2001). "Corporate social responsibility: a theory of the firm perspective", *Academy of Management Review*, 26(1), 117-127.
- Melo, T. & Galan, J. I. (2011). "Effects of corporate social responsibility on brand value", *Journal of Brand Management*, 18, 423-437.
- Mishra, S. & Suar, D. (2010). "Does Corporate Social Responsibility Influence Firm Performance of Indian Companies?", *Journal of Business Ethics*, 95, 571-601.
- Mittal, R. K., Sinha, N. & Singh, A. (2008). "Current Research Development – An Analysis of Linkage between Economic Value Added and Corporate Social Responsibility", *Management Decision*, 46(9), 1437-1443.
- Moneva, J. M. & Ortas, E. (2008). "Are stock markets influenced by sustainability matter?- Evidence from European companies", *International Journal of Sustainable Economy*, 1(1), 1-16.
- Moon, J. J. (2007). In Good Companies?-A Critical Evaluation of the Corporate Social Performance - Corporate Financial Performance Link.
- Moskowitz, M. (1972). "Profiles in Corporate Responsibility: The Ten Worst and the Ten Best". *Business and Society Review*, 13, 8-42.
- Msetfi, Dr. Rachel (2011). "Distributions & Transformations" *Research in Clinical Psychology*, viewed 14 April 2012, <http://www.docstoc.com/docs/70273094/Distributions-and-transformations>
- Orlitzky, M., James, G., Schmidt, F. L. & Rynes, S. L. (2003). "Corporate Social and Financial Performance: A Meta-analysis", *Organization Studies*, 24, 403- 441.
- Parket, R. & Eilbirt, H. (1975). "Social Responsibility: The Underlying Factors", *Business Horizons*, 18(4), 5-10.
- PIC - Partners in Change (2004). Third Report on Corporate Involvement in Social Development in India. New Delhi
- Poddi, L. & Vergalli, S. (2009). "Does Corporate Social Responsibility Affect the Performance of Firms?" In possession of Nota Di Lavoro, *FEEM*, Working Paper no. 52.
- Porter, M. E. & Kramer, M. R. (2006). "Strategy & Society: The Link between Competitive Advantage and Corporate Social Responsibility", *Harvard Business Review*, 84(12), 56-68.
- Preston, L. & O'Bannon, D. (1997). "The corporate social-financial performance relationship", *Business and Society*, 36(1), 5-31.

- Roberts, P. W. & Dowling, G. R. (2002). "Corporate Reputation and Sustained Superior Financial Performance", *Strategic Management Journal*, 23, 1077–1093.
- Roman, R. M., Hayibor, S & Agle, B. R. (1999). "The relationship between social and financial performance" *Business & Society*, 38, 109-125.
- Rose, C. & Thomsen, S. (2004). "The Impact of Corporate Reputation on Performance: Some Danish Evidence", *European Management Journal*, 22(2), 201–210.
- Ruf, B.M., Muralidhar, K., Brown, R.M., Janney, J.J., & Paul, K. (2001). "An empirical investigation of the relationship between change in corporate social performance and financial performance: a stakeholder theory perspective", *Journal of Business Ethics*, 32(2), 143-156.
- Sánchez, J. L. F. & Sotorrió, L. L. (2007). "The Creation of Value through Corporate Reputation", *Journal of Business Ethics*, 76, 335–346.
- Schnietz, K. E. & Epstein, M. J. (2005). "Exploring the financial value of a reputation for corporate social responsibility during a crisis", *Corporate Reputation Review*, 7(4), 327-345.
- Simpson, W. G. & Kohers, T. (2002). "The Link between Corporate Social and Financial Performance: Evidence from the Banking Industry", *Journal of Business Ethics*, 35, 97–109.
- Singhania Dr. M. (2011). "Corporate Governance and Financial Performance in India: An Empirical Study", *Social Responsibility Review*, 4, 44-64.
- Sinha, Sunil 2009, "Mainstreaming Transparency and Disclosure - S&P ESG India Index", proceedings of the National conference, CRISIL Ltd", viewed 25 November 2010, <http://www.sustainabledevelopment.in/events/National-Conference/sunil-sinha.pdf>
- Spicer, B. H. (1978). "Investors, Corporate Social performance and Information Disclosure: An empirical study". *The Accounting Review*, 53(4).
- Sturdivant, F. D. & Ginter, J. L. (1977). "Corporate Social Responsiveness: Management Attitudes and Economic Performance", *California Management Review*, 19(3), 30-9.
- Surroca, J. & Tribó, J. (2008). "Managerial Entrenchment and Corporate Social Performance", *Journal of Business Finance and Accounting*, 35(5), 748-789.
- Trebucq, S. & D'Arcimoles, Charles-Henri (2002). "The Corporate Social Performance-Financial Performance Link: Evidence from France", in possession of University of Bordeaux Department of International Accounting, Working Paper no. 02-01.
- Tsoutsoura, M. (2004). "Corporate Social Responsibility and Financial Performance" in possession of *Center for Responsible Business*, Working Paper Series, 7, University of California, Berkeley.

- Ullman, A. A. (1985). "Data in Search of a Theory: A Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economic Performance of U.S. Firms", *Academy of Management Review*, 10(3), 540-557.
- Vance, S. C. (1975). "Are Socially Responsible Corporations Good Investment Risks?", *Management Review*, 18-24.
- Waddock, S. A. & Graves, S. B. (1997). "The Corporate Social Performance - Financial Performance Link", *Strategic Management Journal*, 18(4), 303-319.
- Wokutch, R. E. & Spencer, B. A. (1987). "Corporate saints and sinners: The effects of philanthropic and illegal activity on organizational performance", *California Management Review*, 29, 77-88.
- Wood, D. (1991). "Corporate Social Performance Revisited", *Academy of Management Review*, 16(4), 691-718.
- Wooldridge, J. M. (2002). "Econometric Analysis of Cross Section and Panel Data", *MIT Press, Cambridge, Massachusetts* London, England.
- Yang, Fu-Ju, Lin, Ching-Wen & Chang, Yung-Ning (2009). "The linkage between corporate social performance and corporate financial performance", *African Journal of Business Management*, 4(4), 406-413.
- Zairi, M. & Peters, J. (2000). "Social responsibility and impact on society", *The TQM Magazine*, 12(3), 172-178.

ⁱ **CRISIL** is India's leading Ratings, Research, Risk and Policy Advisory Company. CRISIL offers domestic and international customers a unique combination of local insights and global perspectives, delivering independent information, opinions and solutions that help them make better informed business and investment decisions, improve market efficiency and market participants, and help shape infrastructure policy and projects through integrated range of capabilities as credit ratings and risk assessment; research on India's economy, industries and companies; global equity; fund services; risk management and infrastructure advisory services.

ⁱⁱ **S&P**-Standard & Poor's Index Services, the world's leading index provider, maintains a wide variety of investable and benchmark indices to meet an array of investor needs. Its family of indices includes the S&P 500, an index with \$1.32 trillion invested and \$4.91 trillion benchmarked, and the S&P Global 1200, a composite index comprised of seven regional and country headline indices

ⁱⁱⁱ **KLD** Research & Analytics, Inc. is an independent investment research firm providing management tools to professionals integrating environmental, social and governance factors (ESG) into their investment decisions. KLD Indexes, a division of KLD, constructs indexes that are accepted as the benchmarks for ESG investment strategies. Investors, trustees and consultants depend on the quality and integrity of KLD Indexes, which are designed to be transparent, representative and investable. Today, more than \$11 billion is invested in funds based on KLD's family of indexes.

^{iv} **IFC**, a member of the World Bank Group, fosters sustainable economic growth in developing countries by financing private sector investment, mobilizing private capital in local and international financial markets, and providing advisory and risk mitigation services to businesses and governments. IFC's vision is that poor people have the opportunity to escape poverty and improve their lives. In FY07, IFC committed \$8.2 billion, mobilized an additional \$3.9 billion through syndications, and structured finance for 299 investments in 69 developing countries. IFC also provided advisory services in 97 countries.

^v **CAPITALINE** is corporate database of Indian companies which contains extensive data on Company such as Bio-data, Collaborators, Expansion Plans, Shareholding Patterns, 10-year Profit & Loss, Balance Sheet, Schedules & Notes to Account, Fund Flows, Financial Ratios (in all 650 finance fields per company which cover almost 98% of any annual report). It also covers full text of Director's Reports, Auditor's Report and extensive news clippings of companies.

Appendix 1. Results of LLC Panel Unit Root Test

Null Hypothesis: Unit root (common unit root process)

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on MAIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Total number of observations: 17292

VARIABLES	NO TREND		TREND	
	<i>Statistics</i>	<i>Obs.</i>	<i>Statistics</i>	<i>Obs.</i>
ESG	-1.25879	1993	-1.25879	1993
ROA	-1.13314	1808	-1.13313	1808
ROCE	-1.09274	1939	-1.09277	1939
RONW	-1.19271	1870	-1.19270	1870
OPM	-1.01149	1907	-1.01150	1907
EPS	-1.18460	1797	-1.18469	1797
DE	-1.02019	1993	-1.02019	1993
RDINT	-1.12251	1992	-1.12251	1992
MCAP	-1.24650	1993	-1.24650	1993
LLC	STATISTIC	PR	STATISTIC	PRO
RESULTS	-175.028	0.00	-247.753	0.00

Appendix 2. List Of Firms

Sn.	Name of Firms	Sn.	Name of Firms	Sn.	Name of Firms
1	A B B	36	Canara Bank	71	Gateway Distr.
2	Aban Offshore	37	Carborundum Uni.	72	Glaxosmit Pharma
3	ACC	38	Century Textiles	73	GlaxoSmith C H L
4	Adani Enterp.	39	CESC	74	Glenmark Pharma.
5	Aditya Bir. Nuv.	40	Chambal Fert.	75	Godfrey Phillips
6	Alfa Laval (I)	41	Cipla	76	Godrej Consumer
7	Allahabad Bank	42	CMC	77	Godrej Inds.
8	Alok Inds.	43	Colgate-Palm.	78	Graphite India
9	Alstom Projects	44	Container Corpn.	79	Grasim Inds
10	Andhra Bank	45	Coromandel Inter	80	Greaves Cotton
11	Apollo Hospitals	46	Corporation Bank	81	GTL
12	Apollo Tyres	47	CRISIL	82	Guj Alkalies
13	Arvind Ltd	48	Crompton Greaves	83	Guj Fluorochem
14	Asahi India Glas	49	Cummins India	84	Guj Gas Company
15	Ashok Leyland	50	Dabur India	85	Guj Inds. Power
16	Asian Paints	51	DCM Shriram Con.	86	H D F C
17	Aventis Pharma	52	Deepak Fert.	87	H P C L
18	B H E L	53	Dena Bank	88	Havells India
19	B P C L	54	Dishman Pharma.	89	HCL Infosystems
20	Bank of Baroda	55	Divi's Lab.	90	HDFC Bank
21	Bank of India	56	Dr Reddy's Labs	91	HEG
22	Bannari Amm.Sug.	57	EID Parry	92	Hero Motocorp
23	BEML Ltd	58	Electrost.Cast.	93	Hexaware Tech.
24	Berger Paints	59	Engineers India	94	Hind.Construct.
25	Bharat Electron	60	Esab India	95	Hind.Oil Explor.
26	Bharat Forge	61	Essar Oil	96	Hindalco Inds.
27	Bharti Airtel	62	Exide Inds.	97	Honeywell Auto
28	Bhushan Steel	63	Fag Bearings	98	Hotel Leela Ven.
29	Biocon	64	Federal Bank	99	I O B
30	Birla Corpn.	65	Finolex Cables	100	I O C L
31	Blue Star	66	Finolex Inds.	101	ICICI Bank
32	Bombay Dyeing	67	G M D C	102	IDBI Bank
33	Britannia Inds.	68	G N F C	103	IFCI
34	C P C L	69	G S F C	104	India Cements
35	Cadila Health.	70	GAIL (India)	105	Indian Hotels

106	Indraprastha Gas	143	Nag. Fert & Chem	180	Shree Cement
107	IndusInd Bank	144	Natl. Aluminium	181	Shriram Trans.
108	Infosys	145	Nava Bharat Vent	182	Simplex Infra
109	Infotech Enterp.	146	Navneet Publicat	183	Sintex Inds.
110	ING Vysya Bank	147	NDTV	184	SKF India
111	Ingersoll-Rand	148	Neyveli Lignite	185	South Ind.Bank
112	Ipca Labs.	149	NIIT	186	SREI Infra. Fin.
113	ITC	150	NTPC	187	SRF
114	IVRCL	151	O N G C	188	Sterlite Inds.
115	J & K Bank	152	Opto Circuits	189	Sun Pharma.Inds.
116	Jain Irrigation	153	Orchid Chemicals	190	Sundram Fasten.
117	Jet Airways	154	Orient Paper	191	Supreme Inds.
118	Jindal Steel	155	Oriental Bank	192	Tata Chemicals
119	JSW Steel	156	P & G Hygiene	193	Tata Motors
120	Jyoti Structures	157	Panacea Biotec	194	Tata Power Co.
121	Kalpataru Power	158	Patni Computer	195	Tata Steel
122	Kansai Nerolac	159	Peninsula Land	196	TCS
123	Karnataka Bank	160	Petronet LNG	197	Thermax
124	Karur Vysya Bank	161	Pfizer	198	Thomas Cook (I)
125	Kesoram Inds.	162	Pidilite Inds.	199	Titan Inds.
126	Kotak Mah. Bank	163	Polaris Finan.	200	Torrent Pharma.
127	KPIT Infosys.	164	Praj Inds.	201	Trent
128	Lak. Mach. Works	165	Prism Cement	202	Tube Investments
129	Larsen & Toubro	166	PTC India	203	TVS Motor Co.
130	LIC Housing Fin.	167	Punjab Natl.Bank	204	UltraTech Cem.
131	Lupin	168	Radico Khaitan	205	Union Bank (I)
132	M & M	169	Rajesh Exports	206	Unitech
133	M R P L	170	Ranbaxy Labs.	207	United Phosp.
134	Madras Cement	171	Raymond	208	Usha Martin
135	Mah. Seamless	172	REI Agro	209	UTV Software
136	Marico	173	Rel. Indl. Infra	210	Voltas
137	Maruti Suzuki	174	Reliance Capital	211	Welspun Corp
138	Mastek	175	Reliance Inds.	212	Wipro
139	Max India	176	Ruchi Soya Inds.	213	Wyeth
140	Monsanto India	177	S A I L	214	Zee Entertainmen
141	Moser Baer (I)	178	S Kumars Nation	215	Zuari Inds.
142	Motherson Sumi	179	Sesa Goa		
