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Growth in returns for Nifty and ESG Index: A non-financial reporting approach

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Abstract
This paper tries to compare growth in returns for Nifty and ESG Indices and examines if the reporting of non-financial information by the firms in ESG Index affects the growth in returns of ESG Index as compared to Nifty Index in the pre-crisis, crisis and post-crisis period. The analysis indicates that Nifty Index has performed better in pre-crisis period but ESG Index has performed better in crisis and post-crisis period.

Keywords: non-financial information, nifty index, ESG index

1. Introduction

The value-relevance of non-financial information has increased significantly over the last several years. Most top executives at large multinational firms believe that non-financial performance measures are more valuable than traditional financial measures in assessing long-term value (PricewaterhouseCoopers, 2002) [10]. This shift in information preferences has stimulated a substantial increase in the volume of non-financial information conveyed by firms to their stakeholders and market participants.

The current mandated of financial reporting does not give a complete picture of a firm and is too short-term in orientation (Holder-Webb *et al.* 2008, Simnett *et al.* 2009) [7, 12]. In a world where the market value of the firm is decoupled from the value of its underlying assets, non-financial information offers a tool for measuring the firm value arising from intangibles and future cash flows that is missing from traditional financial reports (Lev 2001) [8].

Given the limitations of historical financial information, an important question arises about what other information is of benefit to potential stakeholders. Holder-Webb *et al.* (2008, 2009) [7]. studied the disclosure of corporate governance and corporate social responsibility but Cohen *et al.* (2011) [4]. found that retail investors were most concerned with non-financial disclosures that more directly affected future earnings such as the disclosure of leading economic indicators. In a recent review of developments on the integration of financial and non-financial information, Adams *et al.* (2011) [1].argue that, "Integrated reporting is a means to providing a more coherent, balanced and complete picture of company performance, centered around strategic objectives and business models, and sensitive to the multiple drivers of value for today's businesses."

We can classify non-financial disclosures into two compartments namely economic and non-economic indicators. Economic indicators here mean the metrics, which directly, relates to performance of the business like market share, quality rankings, customer satisfaction, employee satisfaction, turnover and innovation among others. By non-economic indicators we mean those metrics, which are not directly related to the business of the reporting entity like expenditure on environment, CSR undertaken, expense on employees betterment among others. Firms are keeping their stakeholders informed about both the indicators. But with the growth in demand of responsibly produced and fairly traded goods the focus has shifted towards non-economic indicators.

Corporate social responsibility (CSR) activity is an area of intense and increasing interest both on the practice and academic fronts. Assets under professional management and invested with a social responsibility focus have also grown dramatically over the last ten years. Investors choosing social responsibility investment strategies require access to information not provided through traditional financial statements and analyses. At the same time, a group of mainstream institutional investors has encouraged a movement to incorporate environmental, social and governance information into equity analysis, and multi-stakeholder groups have supported enhanced business reporting on these issues.

Investors are not the only interested parties; CSR activity provides an increasing focus of product development and marketing practitioners. Research demonstrates that certain types of CSR activity produce value for firms in terms of brand loyalty and marketing advantages (Brown and Dacin 1997; Sen and Bhattacharya 2001) [3, 11]. As Handleman and Arnold (1999, p. 36) [6]. note, "In any community, it is common to find retailers donating to local charities, sponsoring little league sports teams, and proudly displaying the national flag. These actions demonstrate the retailer's adherence to unwritten but powerful normative rules of acceptable social conduct, such as becoming involved with the community and promoting national pride."

According to the Social Investing Forum, "issues now occupying mainstream consciousness – corporate governance, transparency, accountability, and greater disclosure – have long been central to the practice of social investing." This means that the markets are recognizing such information and the firms reporting this information should get advantage over other firms that are not indulging and reporting such information.

In order to check whether reporting of corporate governance, transparency, accountability towards stakeholders and environment is enhancing the performance or not, we have done an analysis, where we compare the growth in returns of two groups of firms, one which are not indulging and

reporting such activities and other group of firms which are considered as more socially responsible. Our analysis is based on growth in returns of Nifty and ESG Index. Nifty Index comprises of top 50 companies listed on National Stock Exchange (NSE) in term of their market capitalization and ESG (Environmental, Social and Governance) Index comprises of companies, which are more socially responsible towards their stakeholders and society at large. Comparison of growth in returns for these two indices shall give us evidence, whether an index comprising of socially responsible companies is performing better than the index of other companies or being socially responsible doesn't serve any purpose. We expect the results of our analysis to indicate that the ESG index is not an underperformer or in other words, that being socially responsible is not wasteful.

In the next section, we have reviewed some of the studies that throw light on non-financial reporting and how the need for being socially responsible has aroused. In the third section, we have presented our methodology for the performance measurement analysis where we have identified the breaks and then in the fourth and fifth section, we have fitted a regression equation for the calculation of growth in returns for both the indices. In the last section, we have concluded the paper along with the major contribution and limitations of the study.

2. Literaure Review

The historical emphasis of traditional financial information does not answer the needs of stakeholders, who require information not only about future earnings but also about the firm's social and environmental responsibility and interactions with the environment and home communities (Adams 2011; Anderson *et al.* 2005) [1, 2].

The historical focus of financial reporting provides an incomplete picture of a firm's current status to auditors, investors, and creditors and has limited relevance for evaluating future prospects (Lev and Zarowin 1999; Lev 2001) [9, 8]. Cohen *et al.* (2011) [4]. demonstrate that the efficiency and effectiveness of audits is improved through auditor use of non-financial information. However, the backward-looking financials are subjected to assurance services, are standardized among firms by GAAP, and possesses the currency of long use by external parties; thus stakeholders may over-rely on financial information that does not fully reflect the sources of value of a business. These issues with the historical and financial approach to disclosure are well known to the regulatory and investing community. Disclosure of non-financial information is essential to reduce the information asymmetry that exists between management and important stakeholders. Providing non-financial information allows investors to better assess key areas of performance and supports a broader view of corporate performance that also encompasses society at large. These insights are not new – the role of intangibles such as quality of management in corporate success has a long history in the literature. What is the most effective way of informing stakeholders of those elements of business performance that do not show up on the financial statements?

A number of recent initiatives designed to encourage the integration of financial and non-financial metrics in an integrated reporting framework have been taken over the past decade. For example, the Global Reporting Initiative (GRI) (2011) [5]. provides guidelines for presenting a sustainability report that emphasizes evaluating a company by its ability to promote sustainable growth that is also cognizant of environmental, social, and governance metrics. Adams *et al.* (2011) [1]. argue that three major differences between integrated reporting and traditional reporting are "incorporating a variety of financial and non-financial metrics and their inter linkages; capturing a longer-term perspective; and providing a better reflection of company strategy."

This raises the question that what metrics allow external users to evaluate a company's viability and the company's value proposition effectively. We classify non-financial indicators into two broad categories namely economic and non-economic metrics. Economic metrics focuses on the information, which tells about the performance of the firm in its business. On the other hand non-economic metrics are those, which informs about the firms involvement in other important areas like environment, society, social welfare etc. Recently investors and other stakeholders have shown more interest towards non-economic indicators rather than economic non-financial indicators. Corporate social responsibility (CSR) activity is an area of intense and increasing interest both on the practice and academic fronts. Due to this shift in the preference of information, it is necessary for the firms to give such information to their stakeholders.

3. Data and Methodolog

3.1. Data

For our analysis, we have considered the period from February 2005 to October 2013 and collected monthly closing prices of both ESG and NIFTY indices for the above said period from Prowess Database of CMIE (Centre for Monitoring Indian Economy). The total number of observations is for 105 Months.

3.2. Identification of breaks

After obtaining the data, we plot the data so as to identify the structural breaks if any, in our data. We obtain the following trends, when we plotted the closing prices for both the indices with respect to time:

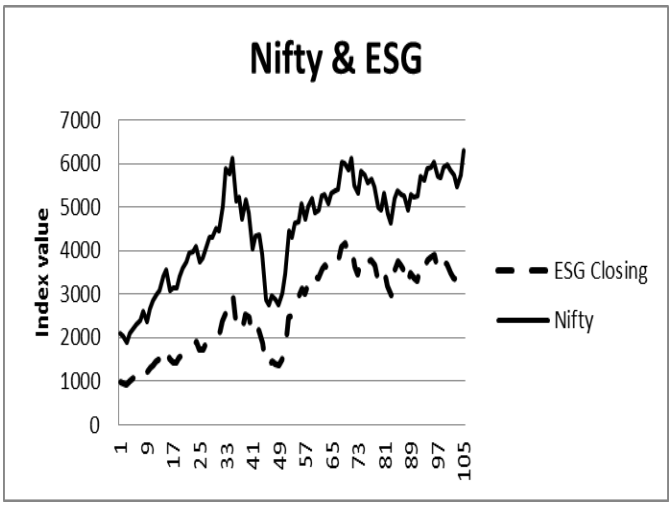

Fig 1: Plotting Nifty and ESG Indices to identify breaks

From the above trend, we can identify three breaks occurring simultaneously both in the case of ESG and Nifty Index values. These breaks are as follows:

- February 2005 to October 2007 – Pre Crisis Period
- November 2007 to September 2008 – Crisis Period
- October 2008 to October 2013 – Post Crisis Period

We observe that the above-mentioned breaks occurred simultaneously in case of ESG and Nifty. However, we are interested in knowing the fact that how these indices behaved during these periods and fitting a regression equation and using dummies for the identified break periods can facilitate us in the achievement of our objective. The estimated equations are presented later in this section.

3.3. Model in General Form and in the Form of Estimating Equation

We are interested in finding out the growth in returns of Nifty and ESG Index for the whole period and the behavior of the index in the identified break periods for both the indices.

3.4. Calculation of Returns

Returns are calculated by dividing the Index value for a period by the value of same Index of the preceding period and then taking its natural log. For instance, returns for first period can be calculated by dividing the Index value of second period by the value of first period. Nifty value for February is 2103.25 and that of March is 2035.65, return would be Ln (0.967859).

3.5. Functional Equation:

3.5.1 *Ln (Nifty Returns)= f (Time)*
3.5.2 *Ln (ESG Returns)= f (Time)*

3.6. Estimating equations

3.6.1. Equation 1 (ESG Returns)

$Ln\ (ESG\ Returns) = b_0 + b_1T + u_t$

Where, Ln (ESG Returns) = Natural log of ESG Returns
b_0 = constant/ intercept of ESG Returns
b_1 = Growth rate of ESG Returns
T = Time period (1 for February 2005, 2 for March 2005. 105 for October 2013)

3.6.2. Equation 1A (Nifty Returns):

$Ln\ (Nifty\ Return) = b_0 + b_1T + u_t$

Where, Ln (Nifty Returns) = Natural log of Nifty Returns
b_0 = constant/ intercept of Nifty Returns
b_1 = Growth rate of Nifty Returns
T = Time period (1 for February 2005, 2 for March 2005. 105 for October 2013)

3.6.3. Equation 2 (ESG Returns using time dummy for identified breaks)

$Ln\ (ESG\ Returns) = b_0 + b_1d_1 + b_2d_2 + b_3T + b_4Td_1 + b_5Td_2 + u_t$

Where, Ln (ESG Returns) = Natural log of ESG Returns
$d_1 = 0, d_2 = 0$ for pre-crisis period
$d_1 = 1, d_2 = 0$ during crisis period
$d_1 = 0, d_2 = 1$ for post-crisis period
b_0 = constant/ intercept for pre-crisis period of ESG Returns
$b_0 + b_1$ = constant/ intercept during crisis period of ESG Returns
$b_0 + b_2$ = constant/ intercept for post crisis period of ESG Returns
b_3 = Growth rate for pre-crisis period of ESG Returns
$b_3 + b_4$ = Growth rate during crisis period of ESG Returns
$b_3 + b_5$ = Growth rate for post crisis period of ESG Returns
T = Time period (1 for February 2005, 2 for March 2005. 105 for October 2013)

3.6.4. Equation 2A (Nifty Index using time dummy for identified breaks):

$\boldsymbol{Ln\ (Nifty\ Returns) = b_0 + b_1d_1 + b_2d_2 + b_3T + b_4Td_1 + b_5Td_2 + u_t}$

Where, Ln (Nifty Returns) = Natural log of Nifty Returns
$d_1 = 0, d_2 = 0$ for pre-crisis period
$d_1 = 1, d_2 = 0$ during crisis period
$d_1 = 0, d_2 = 1$ for post-crisis period
b_0 = constant/ intercept for pre-crisis period of Nifty Returns
$b_0 + b_1$ = constant/ intercept during crisis period of Nifty Returns
$b_0 + b_2$ = constant/ intercept for post crisis period of Nifty Returns
b_3 = Growth rate for pre-crisis period of Nifty Returns
$b_3 + b_4$ = Growth rate during crisis period of Nifty Returns
$b_3 + b_5$ = Growth rate for post crisis period of Nifty Returns
T = Time period (1 for February 2005, 2 for March 2005. 105 for October 2013)

3.7 Hypotheses of the Study

For achieving the purpose of our study we have made the following hypotheses:

3.7.1. Primary Hypothesis

Null Hypothesis (H_0P_2): Returns are same both in case of ESG and Nifty Index.
Alternate Hypothesis (H_1P_2): Returns are different in case of ESG and Nifty Index.

3.7.2. Secondary Hypothesis for the primary hypothesis

Null Hypothesis (H_0S_{22}): Structural break has no impact on returns.
Alternate Hypothesis (H_1S_{22}): Structural break has an impact on returns.

4. Regression Analysis of Equation 1 and 1A (Returns for ESG and Nifty)

4.1. Results that we have obtained from SPSS by estimating the data collected in estimated equation 1 [i.e. Ln (ESGRET) = $b_0 + b_1T$] are as follows:

Table 1: Results for ESG Returns

Regression Statistics					
Multiple R	0.100778088				
R Square	0.010156223				
Adjusted R Square	0.000451872				
Standard Error	0.083256201				
Observations	104				
ANOVA					

	Df	SS	MS	F	Significance F
Regression	1	0.007254357	0.007254	1.046564	0.30871996
Residual	102	0.70702269	0.006932		
Total	103	0.714277047			
Value of parameters and t-statistics					
	Coefficients	*Standard Error*	*t Stat*	*P-value*	
Intercept	0.0270	0.016446347	1.647363	0.1025	
Month	-0.0002	0.000271943	-1.02302	0.3087	

Ln (ESGRET) = 0.0270 - 0.0002T P-Value (0.1025) (0.3087)

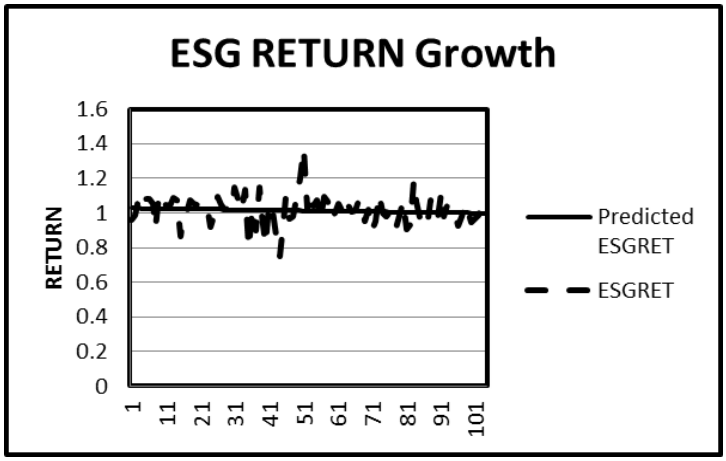

Fig 2: ESG Return Growth

4.2 Results that we have obtained from SPSS by estimating the data collected in estimated equation 1A [i.e. Ln (NiftyRET) = b_0 + b_1T] are as follows:

Table 2: Results for Nifty Returns

Regression Statistics					
Multiple R	0.078148194				
R Square	0.00610714				
Adjusted R Square	-0.003636907				
Standard Error	0.076949286				
Observations	104				
ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.003711143	0.003711	0.626756	0.430384956
Residual	102	0.603961642	0.005921		
Total	103	0.607672785			
Value of parameters and t-statistics					
	Coefficients	*Standard Error*	*t Stat*	*P-value*	
Intercept	0.0209	0.015200485	1.381139	0.1702	
Month	-0.0001	0.000251342	-0.79168	0.4303	

Ln (NiftyRET) = 0.0209 - 0.0001T P-Value (0.1702) (0.4303)

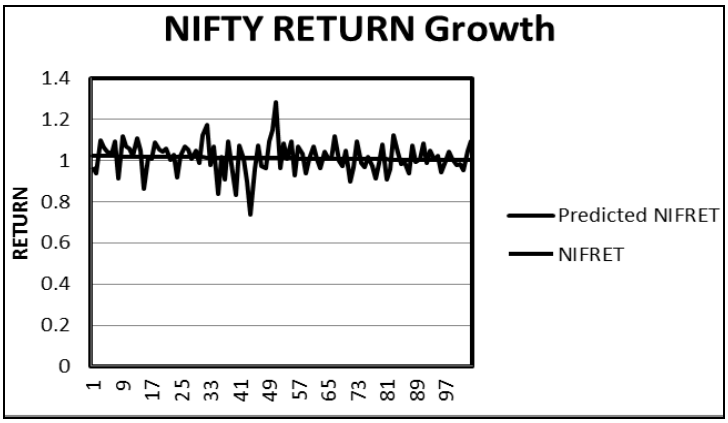

Fig 3: Nifty Return Growth

4.3 Interpretation of value of the Parameters and t-test for both the indices

Coefficient of determination (R^2) for ESG Index is at 0.0101 as against Nifty Index in which case the R^2 is 0.0061. This indicates that returns in ESG Index is more adequately captured by time period under study as the actual value of ESG Return is revolving around the predicted ESG Return which can be seen in the Figure 2 and 3.

Intercept of the ESG Return (i.e. 0.027) is higher than that of Nifty Return (i.e. 0.020). But in both the cases it is small and positive which means that minimum level of returns is very small. Intercept for ESG Returns is significant at 15% level with p-value of .1025 but intercept of Nifty Returns is not even significant at 15% level. Although, the intercepts can't be directly interpreted as it is semi-log model.

Growth rate for ESG Return is -0.027%, which is lower than Nifty Return, which is at -0.019%. Growth rate is very small in both the cases and not significant. Growth coefficients in both the cases differ by only .008 of a percent. There is high degree of volatility in case of growth in ESG Returns but the coefficient in case of growth in Nifty Returns is lower, the t-statistic in case of Nifty is lower and it is less than 1. Therefore, the p-value is 0.43, which shows that the level of significance for growth in Nifty Returns is even lower than that of growth in ESG Returns.

5. Regression Analysis of Model 2 and 2A (Returns with crisis dummies)

5.1 Results that we have obtained from SPSS by estimating the data collected in estimated equation 2 [i.e. Ln (ESGRET) = $b_0 + b_1d_1 + b_2d_2 + b_3T + b_4Td_1 + b_5Td_2$] are as follows:

Table 3: Results for ESG Returns with dummies

Regression Statistics					
Multiple R	0.405267632				
R Square	0.164241854				
Adjusted R Square	0.121601132				
Standard Error	0.078047792				
Observations	104				
ANOVA					
	Df	*SS*	*MS*	*F*	*Significance F*
Regression	5	0.117314186	0.023463	3.851761	0.003145341
Residual	98	0.59696286	0.006091		
Total	103	0.714277047			
Value of parameters and t-statistics					
	Coefficients	*Standard Error*	*t Stat*	*P-value*	
Intercept	0.0214	0.027802321	0.771768	0.4421	
Month	0.0004	0.001426855	0.335636	0.7378	
D_2	0.5609	0.292497839	1.917732	0.0580	0.582389305
D_3	0.0790	0.052471891	1.507261	0.1349	0.100545777
D_2T	-0.0168	0.007577124	-2.22763	0.0281	-0.016400148
D_3T	-0.0016	0.001540916	-1.04852	0.2969	-0.001136781

Ln (ESGRET) = 0.0214 +0.0004d_1 + 0.5609d_2 + 0.0790T - 0.0168Td_1 - 0.0016Td_2

P-Value (0.4421) (0.7378) (0.0580) (0.1349) (0.0281) (0.2969)

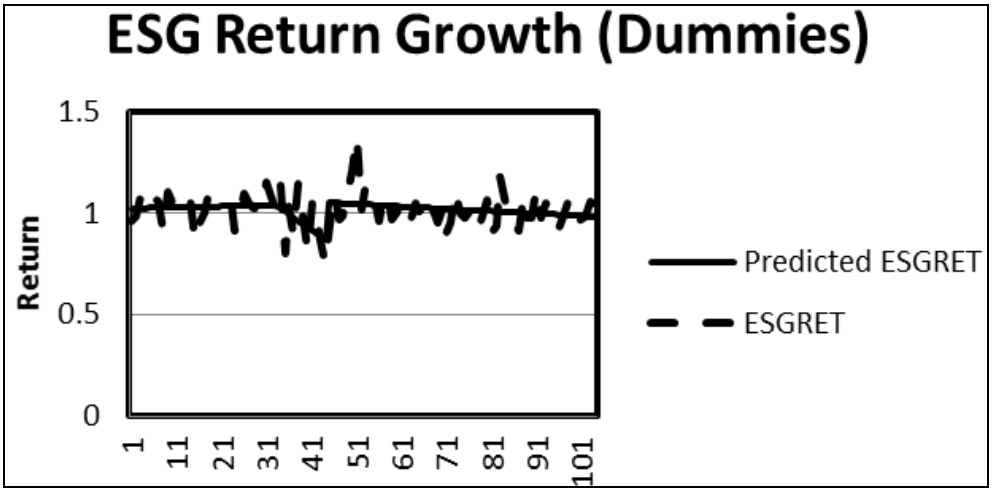

Fig 4: ESG Return Growth (Dummies)

5.2 Results that we have obtained from SPSS by estimating the data collected in estimated equation 2A [i.e. Ln (NiftyRET) = $b_0 + b_1d_1 + b_2d_2 + b_3T + b_4Td_1 + b_5Td_2$] are as follows:

Table 4: Results for Nifty Returns with dummies

Regression Statistics					
Multiple R	0.407410171				
R Square	0.165983048				
Adjusted R Square	0.123431162				
Standard Error	0.071913313				
Observations	104				
ANOVA					
	Df	*SS*	*MS*	*F*	*Significance F*
Regression	5	0.100863381	0.020173	3.900721	0.002879861
Residual	98	0.506809404	0.005172		
Total	103	0.607672785			
Value of parameters and t-statistics					
	Coefficients	*Standard Error*	*t Stat*	*P-value*	
Intercept	0.0192	0.025617086	0.750417	0.4548	
Month	0.0006	0.001314706	0.506482	0.6136	
D_2	0.4604	0.269507799	1.708317	0.0907	0.479628317
D_3	0.0345	0.048347652	0.714452	0.4766	0.053765559
D_2T	-0.0145	0.006981569	-2.08783	0.0394	-0.013910474
D_3T	-0.0012	0.001419802	-0.85428	0.3950	-0.000547036

Ln (Nifty RET) = 0.0192 +0.0006d_1 + 0.4604d_2 + 0.0345T - 0.0145Td_1 - 0.0012Td_2
P-Value (0.4548) (0.6136) (0.0907) (0.4766) (0.0394) (0.3950)

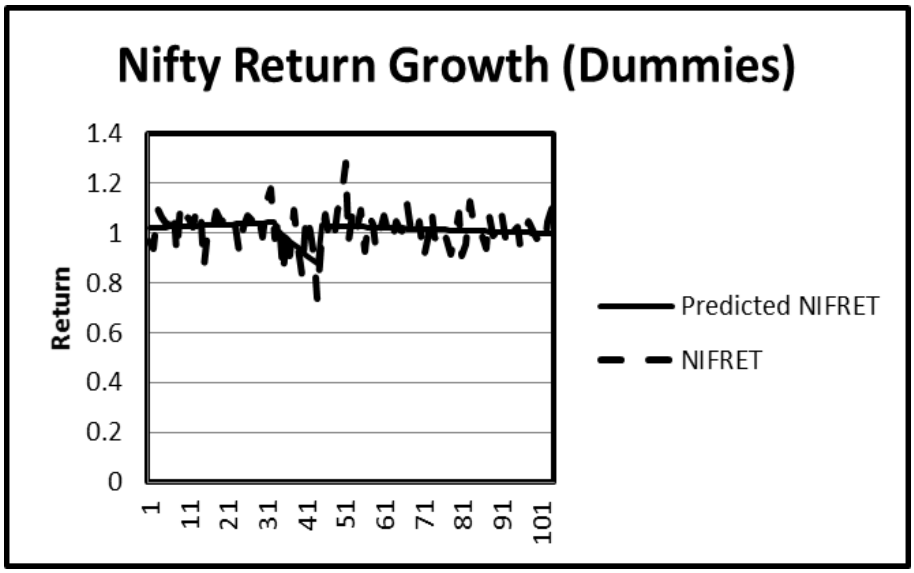

Fig 5: Nifty Return Growth (Dummies)

Table 5: Analysis for Pre – crisis period

	ESG Index			Nifty Index		
	Identifier	Value of Parameter	P-value	Identifier	Value of Parameter	P-value
Intercept	B_0	0.021456948	0.4421	B_0	0.019223491	0.4548
Growth Rate	B_3	0.000478904	0.7378	B_3	0.000665875	0.6136

5.3 Interpretation of value of the Parameters and t-test for both the indices for pre-crisis period

Intercept in both the cases is small and insignificant. Growth rate for ESG Return is 0.0478904 of a percent, which is lower than that of Nifty Return, which is at 0.0665875 of a percent. Although, growth rate is very small in both the cases and it is not significant. P-values of growth rate for both the indices are very high at 0.737863 and 0.613656, which shows that the values are not significant. We can find out that growth rate of Nifty Return is higher than that of ESG Return, this may be because of lack of framework for non-financial information and the market participants did not recognize such information.

Table 6: Analysis of crisis period

	ESG Index			Nifty Index		
	Identifier	Value of Parameter	P-value	Identifier	Value of Parameter	P-value
Intercept	B_0+B_1	0.582389	0.0580	B_0+B_1	0.479628	0.0907
Growth Rate	B_3+B_4	-0.016400	0.0281	B_3+B_4	-0.01391	0.0394

5.4 Interpretation of value of the Parameters and t-test for both the indices for crisis period

Intercept for ESG Index in crisis period has increased to 0.582389, which means that the minimum level of return has increased in the crisis period as compared to the Nifty Index for which it is 0.479628. It is significant for ESG Index at a 10% level of significance but not for Nifty Index. During crisis period the magnitude of intercept has increased for both the indices, which imply that other factors are playing prominent role in determining the minimum level of growth in returns.

In the period of crisis both the indices have negative growth in the returns which means crisis had impacted the performance of indices. For ESG Index it is -0.0164 whereas for Nifty it is -0.01391. We can find out that negative impact is more on ESG Index rather than on Nifty Index this may be because the markets were in transition period and was clueless about the processing of non-financial information. The coefficient for growth rate of return is significant for both the indices at 5% level of significance. As minimum level of growth in returns is higher in case of ESG Index, the effect on effective growth rate would be less severe as compared to Nifty Index.

Table 7: Analysis for Post – crisis period

	ESG Index			Nifty Index		
	Identifier	Value of Parameter	P-value	Identifier	Value of Parameter	P-value
Intercept	B_0+B_2	0.100545	0.1349	B_0+B_2	0.053765	0.4766
Growth Rate	B_3+B_5	-0.001136	0.2969	B_3+B_5	-0.000547	0.3950

5.5. Interpretation of value of the Parameters and t-test for both the indices for post-crisis period

Intercept for ESG Index in post-crisis period has increased to 0.100545, which means that the minimum level of return has increased in the post-crisis period as compared to the Nifty Index for which it is 0.053765. It is significant for ESG Index at a 15% level of significance but not for Nifty Index.

During post-crisis period the magnitude of intercept has increased for both the indices, which imply that other factors are playing prominent role in determining the minimum level of growth in returns. It can be seen that for ESG Index it is higher and significant which means other social factors are getting reflected in the returns.

In the period of post-crisis both the indices have negative growth in the returns. For ESG Index it is -0.001136 whereas for Nifty it is -0.000547. We can find out that negative impact is more on ESG Index rather than Nifty Index, which can be due to high volatility. The coefficient for growth rate of return is not significant for both the indices at 5% level of significance. As minimum level of growth in returns is higher in case of ESG Index, the effect on effective growth rate would be less severe as compared to Nifty Index.

6. Conclusion

Hitherto it can be seen that there exists no sound framework for Business Ethics. The concept of Business Ethics is somewhat mirage. Traditionally, there was no conceptual framework for business ethics so it was just limited to payment to various factors of production at the prices established in the market. Hence, in the traditional sense there existed no social responsibility. If there was any social responsibility, then it was purely on personal and individual basis. So traditionally CSR was just entirely on voluntarily basis and since it was on voluntarily basis, it logically limit down to philanthropy.

Analysis indicates that over the period of time the firms, which are socially responsible, are performing better than the other firms. This change can be attributed to the global crisis when the market participants understood the meaning of non-financial information and started considering it as a useful input for decision taking rather than considering it as wasteful.

6.1 Hypothesis and Their Results

- **First Primary Hypothesis**

Null Hypothesis (H_0P_1): Returns are same both in case of ESG and Nifty Index.

Alternate Hypothesis (H_1P_1): Returns are different in case of ESG and Nifty Index.

Result: Alternate hypothesis is rejected and Null hypothesis is accepted i.e. returns are same both in the case of ESG and Nifty Index.

- **Secondary Hypothesis of first primary hypothesis**

Null Hypothesis (H_0S_{11}): Structural break has no impact on returns.

Alternate Hypothesis (H_1S_{11}): Structural break has an impact on returns.

Result: Null hypothesis is rejected and Alternate hypothesis is accepted i.e. structural breaks have impact on returns of the index.

6.2 Contribution of the study

- **This study has linked non-financial reporting with accounting:** This study has linked non-financial reporting with traditional accounting, which is static. The accounting information system however is intended to be dynamic because it relates to dynamic environment and to the larger stakeholders. Therefore this study is an off shout of the accounting information system and it tends to go beyond the traditional static framework of accounting that is essentially financial in nature.

- **Identification of the breaks:** We have identified the structural breaks with the help of closing index values on the graphs. These breaks helped us in studying the performance of index in different structural breaks and give interpretation about the performance in these structural breaks.

- **Indicates the behavioral change of the market participants:** The analysis indicates that due to crisis the market participants have started considering non-financial

information in their decision-making, which clearly shows that the markets have matured.

6.3 Limitations of the Study

- **Numbers of firms were limited:** The firms in the indices were very less and the analysis can be done with larger number of firms.

- **Time period for the analysis was short:** We have studied the impact of financial and non-financial factors on the performance of the firms for a period from February 2005 to October 2013. The period of very short but as the ESG Index was discontinued so this period was selected. But, still the results of the study remain very useful as it shows that very change in the markets when the behavior of the market participants' changed and non-financial information became relevant. In the time to come as markets are getting more matured, we can expect that the performance of socially responsible firms will be far better as compared to other firms.

6.4 Scope of Further Study

- **Number of firms can be increased:** As the number of firms is limited in the analysis, we can broaden the analysis by increasing the number of firms by selecting a broader index.
- **Time period can be extended:** We can also extend the time period and calculate the ESG Index on our own by using the methodology used by S&P as the ESG Index had been discontinued.

6.5. Overall Conclusion

Analysis shows that the performance of ESG Index is better as compared to Nifty Index in the crisis and post-crisis period which indicate that the markets are maturing where non-financial information is also given the same weightage as given to financial information. It also means that the expenditure done by the companies for such social activities is not wasteful as it was considered earlier.

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