

A Comparative Study Of Returns Of Nifty 100 And Nifty 100 ESG

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Abstract

Protection of the environment is a matter of international unease today. Investors and consumers prefer to associate with those corporate that are taking steps for the environment protection. To provide a yardstick for measuring such activities NSE propelled Nifty 100 ESG Index. It is intended to mirror the performance of companies inside NIFTY 100 index, in view of scores based on Environment, Social and Governance aspects. The aim of this paper to measure the performance of Nifty 100 index over a period of 5 years and compare it with Nifty 100 to find out which is giving more returns to the investor The data has been collected from NSE India Website and is longitudinal and quantitative in nature.

Keywords: NIFTY 100, NIFTY 100 ESG, Environmental, Social and Governance (ESG) Scores

Introduction

Environmental Concern is an important topic in today's world owing to the global warming, climate change and fast depletion of resources. Earlier the aim of the businesses was on reducing the cost and maximizing the profit. However now there is a shift in the ideology to wealth maximization. Consumer attraction is the key for every business success. Majority of the consumers are bothered about environment protection and to attract them corporate are also contributing towards the same in their long term interest.

The Nifty 100 shows 100 stock index representing large areas of the economy from NIFTY 500 based on complete market capitalisation. It is presenting mixed portfolio of two indices that are NIFTY 50 and NIFTY Next 50. The Nifty 100 ESG Index is designed to reflect the performance of companies within NIFTY 100 index, based on Environmental, Social and Governance (ESG) scores.

Review of Literature

- ✓ **Shelly Agarwal** did a comparative study of returns of SENSEX and GREENEX of both indices of BSE by taking the data of 20 quarters from 1st January 2013 to 31st December, 2018. It was observed that returns from BSE GREENEX were comparatively more and consistent. Investment in green stocks can provide investors with greater and less volatile returns.
- ✓ **Durga Prasad Samantaray** in his study on the topic Impact of Corporate Governance on the Stock Prices of the Nifty 50 Broad Index Listed Companies. The research involves a study of the 50 companies included in the nifty index. The variables which have been found significantly affecting share price of Nifty 50 Broad Index are as follows: EPS, Sales, Net Fixed Assets and Corporate Governance Score.
- ✓ **Rajib Bhattacharya** found that investing in green stocks is more fruitful in the long term interest of company and its stakeholders.
- ✓ **Aashna Aggarwal, Priyam Kumar singh, Jaskiran Arora and Chitrakalpa Sen in their research found that** GREENEX is not as much of responsive to policy announcements than BSE200 and highlighted the preference of companies to go green.
- ✓ **Shen, Shu, and Chen** focused that good corporate governance is essential to enhance the shareholder worth and firm's value.

Research Objectives

- ✓ To compare and analyse the returns of two indices, of National Stock Exchange (NSE), Nifty 100 and Nifty 100 ESG over a period of five years.
- ✓ To find out, volatility of the investment of Nifty 100 and Nifty 100 ESG,

Research Methodology

The closing values of both indices, NIFTY 100 ESG and NIFTY 100 have been taken from NSE India website starting from 1st October, 2014 to 30th September 2019. For the simplicity of calculation and comparison, the phase is divided into 20 quarters.

Daily returns have been found using the formula $R_k = (V_k - V_{k-1}) / V_{k-1}$, where ,

R_k = Daily Return and

V_k = Closing values of present day

V_{k-1} = Closing values of previous day

Then, the average, the Standard Deviation and the Coefficient of Variation (CV) is calculated on quarterly basis for both the indices.

Mean Return: This has been calculated by totalling the daily returns of the quarter. Secondly the returns of each quarter are divided by trading days in that quarter. Therefore, all the calculation has been done on quarterly basis.

Standard Deviation (SD): It is a statistic that calculates the dispersion of the returns relative to the mean returns.

Coefficient of Variation (CV): CV finds unpredictability of the investment. The coefficient of variation is, proportion of the standard deviation to the mean. CV compares the degree of variations existing between the series.

Analysis

The returns from Nifty 100 differ from the Returns from Nifty100 ESG.

Figure 1 Daily Returns from Nifty100

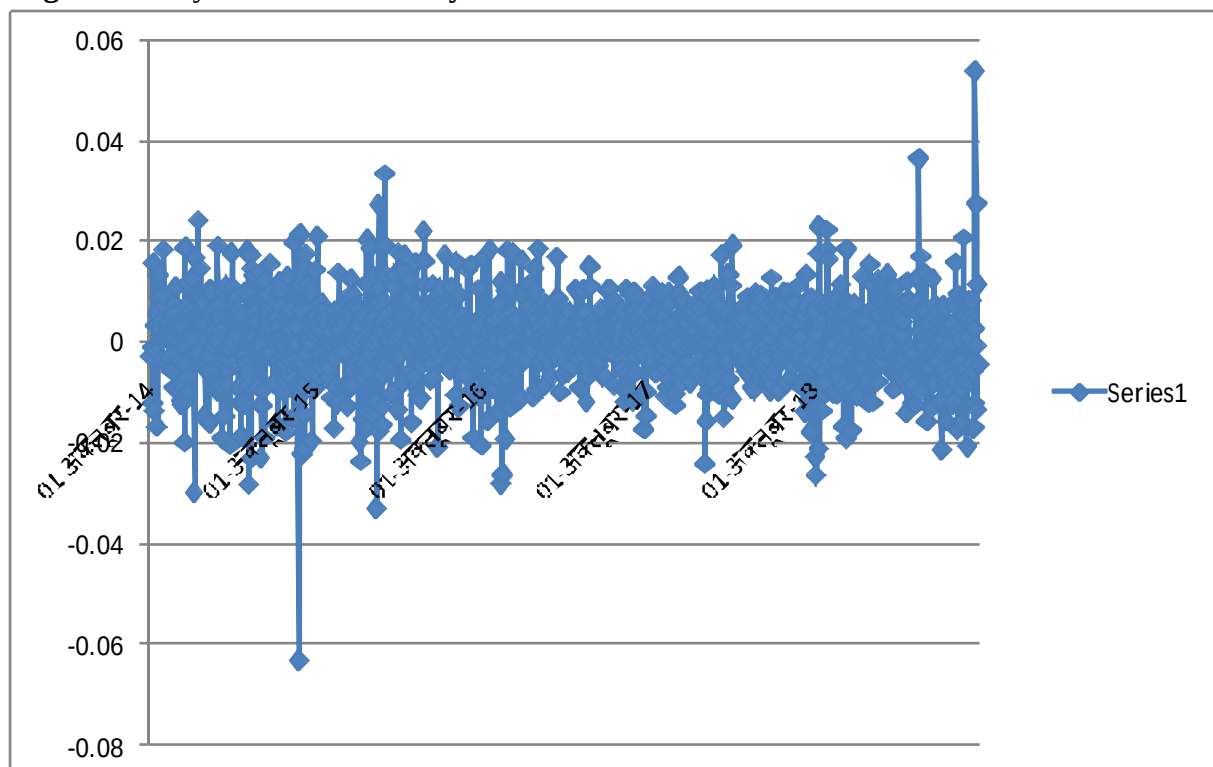
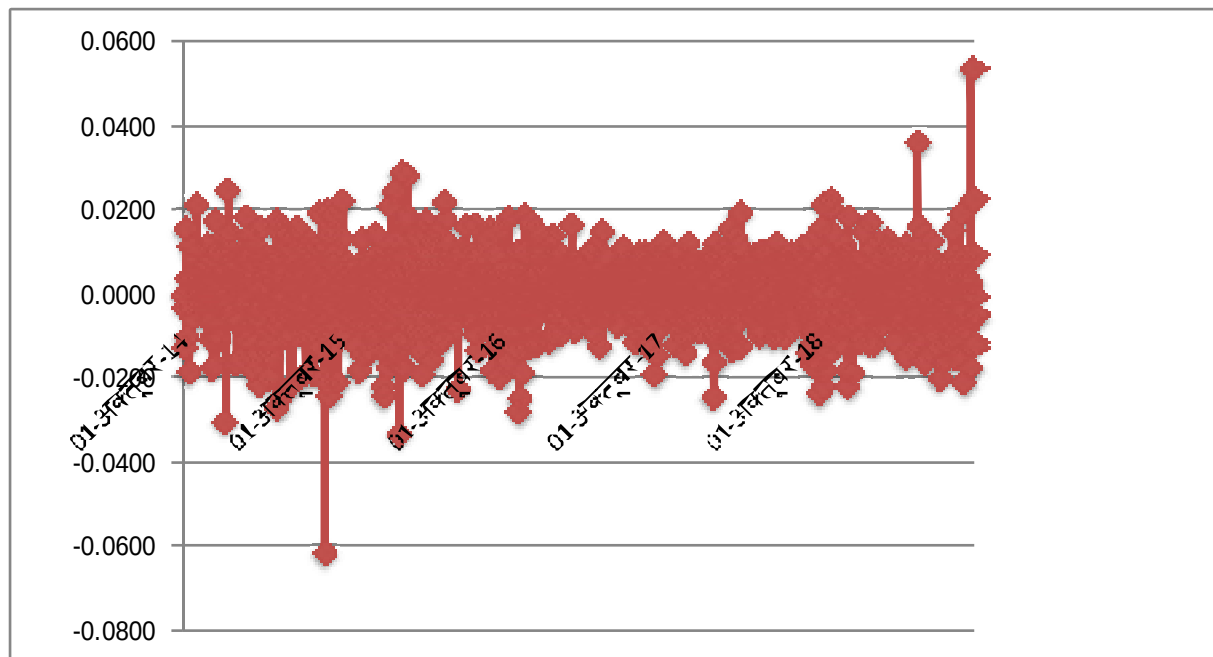


Figure 2 Daily Returns from Nifty100 ES G



NIFTY100 ESG index has given similar returns as compared to their parent NIFTY 100 index since 2014. Also, the NIFTY100 ESG index has slightly excelled NIFTY 100 Index in 9 out of 20 quarters.

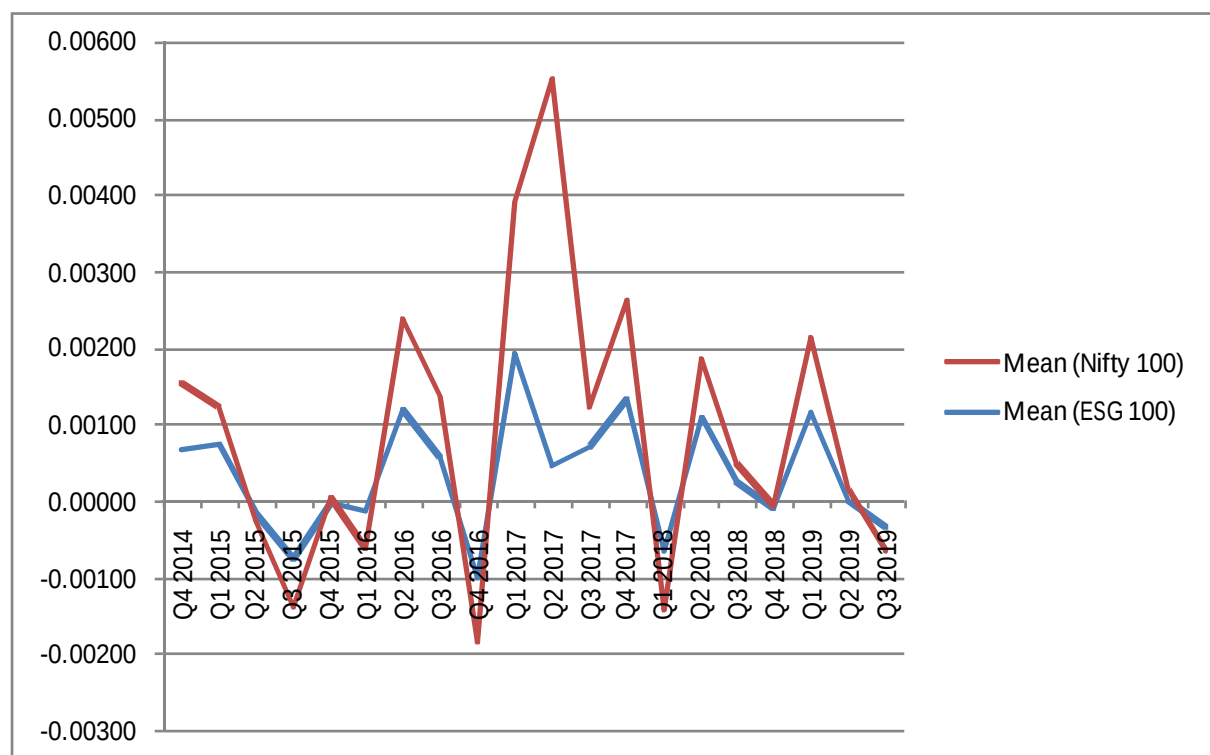
Table 1Mean Daily Returns (calculated on Quarterly Basis)

Timeline		Mean (ESG 100)	Mean (Nifty 100)
Q4	2014	0.00071	0.00085
Q1	2015	0.00075	0.00049
Q2	2015	-0.00015	-0.00010
Q3	2015	-0.00072	-0.00062
Q4	2015	0.00001	0.00007
Q1	2016	-0.00011	-0.00046
Q2	2016	0.00121	0.00120
Q3	2016	0.00057	0.00083
Q4	2016	-0.00098	-0.00082
Q1	2017	0.00195	0.00198
Q2	2017	0.00047	0.00505
Q3	2017	0.00073	0.00051
Q4	2017	0.00135	0.00130

Q1	2018	-0.00062	-0.00076
Q2	2018	0.00111	0.00077
Q3	2018	0.00029	0.00022
Q4	2018	-0.00006	0.00004
Q1	2019	0.00118	0.00098
Q2	2019	0.00001	0.00017
Q3	2019	-0.00032	-0.00030

Source: www.nseindia.com and own calculations

Figure 3 Mean Daily Returns (calculated on Quarterly Basis)



The variation in returns also differs between Nifty100 ESG and Nifty 100. Between Q4 2014 to Q2 2016 the variation is slightly more in Nifty100ESG as compared to Nifty 100. However, for the next 4 quarters variation is higher in Nifty 100 and it is equal in the last quarter of year 2017. Thereafter again the for each quarter Nifty100 ESG showed a greater Variation in returns as compared to Nifty 100 Returns.

Timeline	Variation (Nifty ESG 100)	Variation (Nifty 100)
Q4 2014	0.0085	0.0081
Q1 2015	0.0101	0.0097
Q2 2015	0.0105	0.0104
Q3 2015	0.0129	0.0128
Q4 2015	0.0075	0.0072
Q1 2016	0.0128	0.0125
Q2 2016	0.0086	0.0084
Q3 2016	0.0070	0.0072
Q4 2016	0.0094	0.0097
Q1 2017	0.0058	0.0059
Q2 2017	0.0006	0.0051
Q3 2017	0.0064	0.0066
Q4 2017	0.0058	0.0058
Q1 2018	0.0079	0.0078
Q2 2018	0.0064	0.0063
Q3 2018	0.0072	0.0070
Q4 2018	0.0113	0.0110
Q1 2019	0.0068	0.0067
Q2 2019	0.0089	0.0088
Q3 2019	0.0115	0.0108

Source: www.nseindia.com and own calculations.

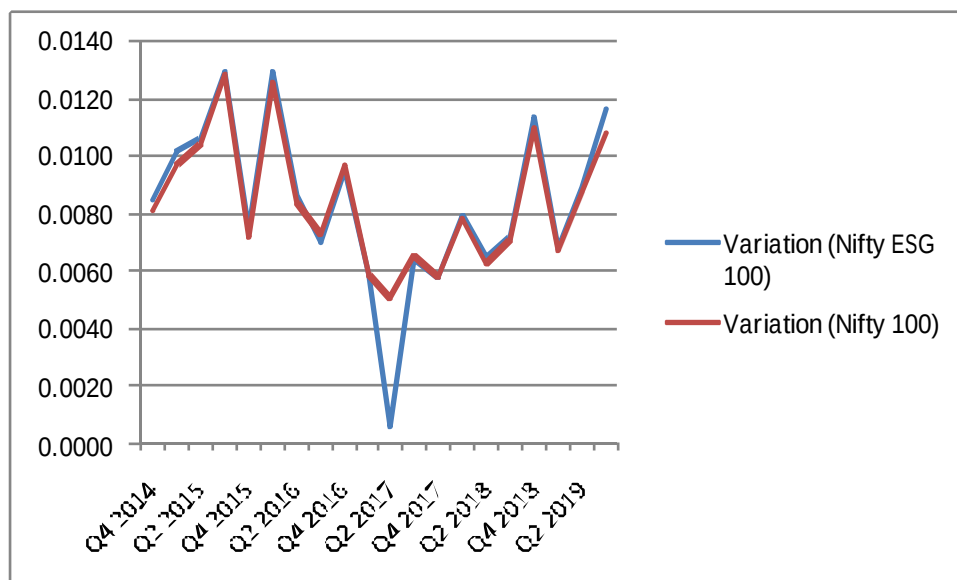


Figure 4: Standard Deviation of returns (Calculated Quarterly)

Coefficient of variation also recognized as relative standard deviation (RSD). The lower the coefficient of variations the better it is since it shows smaller variation in returns when compared to mean returns. Out of 20 quarters under the study, in 10 quarters nifty 100 ESG had lower coefficient of variation. Also in quarter Q1 of 2017, the coefficient of variation (CV) from both is equal.

Hence, returns are more steady and reliable from Nifty 100 ESG in comparison to Nifty 100.

Table 3 Coefficient of Variations (calculated quarterly)

Timeline	CV (Nifty ESG 100)	CV((Nifty 100)
Q4 2014	12.01	9.52
Q1 2015	13.45	19.97
Q2 2015	-71.21	-104.85
Q3 2015	-17.76	-20.50
Q4 2015	1343.26	100.07
Q1 2016	-112.21	-27.50
Q2 2016	7.14	7.01
Q3 2016	12.16	8.76
Q4 2016	-9.58	-11.82
Q1 2017	3.00	3.00
Q2 2017	1.37	1.00
Q3 2017	8.77	12.85
Q4 2017	4.29	4.46
Q1 2018	-12.76	-10.34
Q2 2018	5.79	8.18
Q3 2018	25.16	31.81
Q4 2018	-175.23	310.23
Q1 2019	5.71	6.88
Q2 2019	839.37	52.05
Q3 2019	-35.82	-35.92

Source: www.nseindia.com and own calculations

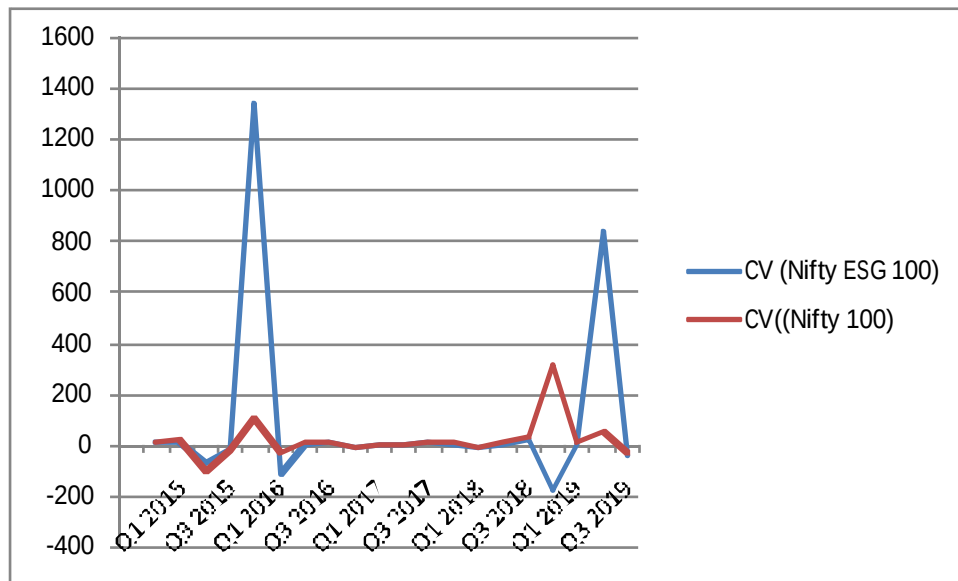


Figure 5: Coefficient of Variation (Calculated quarterly)

Conclusion

ESG based investment are gaining popularity with accentuation on investments in corporate which have feasible and conscious models of business. The returns of nifty 100 ESG are more consistent than nifty 100. Investment in green stock provides less unstable returns. Thus, fundamental motive of investing under ESG theme lies in generating returns from environmentally affable, socially responsible, and ethical firms which are also in long term interest of the company.

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