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## A Study on Impact of Stock Market Volatility on CNX-NIFTY-Empirical Evidence

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### Abstract

When a t-test was performed on global carbon credits and crude oil by BSE Ltd (formerly Bombay Stock Exchange Ltd.) and Trade (supported by GIZ promoted by the Federal Republic of Germany), the value calculated below the t-hypothesis table fell into the significance region. as a result, petroleum oil is having an effect on worldwide carbon emissions. To encourage green investment, the BSE-GREENEX was built by the BSE Foundation and the Indian Institute of Management-Ahmedabad. It places a premium on company financial success and sustainability. It evaluates carbon efficiency solely through quantifiable and objective performance indicators. As far as Green House Gas Numbers, Free Float Market Capitalization, and Turnover, the 20 largest businesses in BSE-GREENEX are included. This paper finds that the energy and pollution indices have a greater impact on the environmental success indicator. Greenex in India will be impacted more in the near future by the country's rising manufacturing and rising car sales. This document will be of use to capitalists who wanted to profit from industrialization's unfavourable effects on the environment and to government agencies that sought to exert command over the planet's biological systems.

**Keywords:** BSE-greenex, impact on stock market, energy index

### 1. Introduction

To help buyers make more educated choices in line with India's green motif, the nation's top financial exchange, BSE Ltd, today presented "BSE Greenex," the main environmentally well-disposed share record. Minister of Corporate Affairs Veerappan Moily rang the bell at today's BSE opening to officially launch the new programme. BSE-Greenex was built to encourage green financing with a focus on financial success and long-term sustainability of businesses. It was built in collaboration with gTrade (supported by GIZ pushed by Germany, Spectator Exploration Establishment, and IIM Ahmedabad). It evaluates carbon efficiency solely through quantifiable and objective performance indicators. Twenty of the world's biggest organizations by Green House Gas Discharges, Free Float Market Capitalization, and Deals Volume are addressed on BSE-Greenex. A few instances of these organizations are Goodbye Steel, State Bank of India, Larsen and Toubro, Modern Credit and Speculation Partnership of India, Sun Drugs, Public Nuclear energy Company, Dr. Reddy's Research facilities, Lodging Improvement Money Enterprise, Bharat Weighty Electricals, GAIL, Hindustan Unilever, Cipla, Sterlite Businesses, Goodbye Influence, Ambuja Concretes, Lupin, DLF, GlaxoSmithKline, and Dependence Framework. The Service of Corporate Undertakings in India has been

exceptionally bustling around here, which is significant in light of the fact that "organizations and financial backers in non-industrial nations like India, need to perceive the worth made by companies through the effective and reasonable utilization of energy." I'm crossing my fingers that the BSE-Greenex compiles a roster of businesses that successfully balances profit and environmental responsibility. This Index's strength, I believe, and its unique selling proposition will be its impartiality," Moily said. He added that this would assist the government in gauging the success of energy saving and conservation policies. BSE-Greenex, the world's first real-time carbon indicator, has been released.

The worth that businesses generate through the effective and wise use of energy should be recognised by companies and investors in emerging nations like India. There has been a lot of action from the Ministry of Corporate Affairs in this area. I'm crossing my fingers that the BSE-Greenex compiles a roster of businesses that successfully balances profit and environmental responsibility. This Index's strength, I believe, and its unique selling proposition will be its impartiality," Moily said. He added that this would assist the government in gauging the success of energy saving and conservation policies. To build a low-carbon green economy, India is in a rare situation. India has been concentrating on the budgetary side of economic expansion so far. We must now consider the

ecological consequences of our rapid expansion. I'm thrilled that BSE, true to its history of pioneering, is releasing a carbon indicator today. BSE Managing Director and CEO Madhu Kannan has pledged that the exchange will keep making "substantial contributions" in support of "green and sustainable development" initiatives by India's Ministry of Corporate Affairs.

## 2. Review of Literature

- Bhattacharya (2022) <sup>[1]</sup>: Progressive investors around the globe are increasingly prioritising environmental concerns when making financial decisions. Companies that implement eco-friendly innovations and practises in order to lessen their impact on the planet are increasingly attractive investments. We call companies that practise environmental sustainability "green" enterprises. Investors are increasingly favouring companies whose core values include environmental protection. Certain green financial exchange benchmarks have been worked all over the planet, comprising of values of organizations drove green, to furnish these ground breaking financial backers with a gauge to assess the progress of green stocks comparative with the remainder of the market.
- Praveen Saiwal and Shradhanjali (2022) <sup>[2]</sup>: Since the turn of the 100 years and the development of globalization, the world's business sectors have contracted, become more concentrated, and become both more and less unpredictable. The result is increased rivalry, as natural selection favours the strongest. The success of a company and the devotion of its clientele are both enhanced by a well-established brand. A highly marketable currency is one of the company's most valuable assets.
- Mandali Revanth & L. Swetha (2021): This paper makes an effort to summarise research on carbon allowances' impact on the financial market. Furthermore, this piece makes an effort to inquire into comparable variables that affect the Indian equity market. We have taken a number of factors into account, including the ones listed below: Carbonex; CNX-NIFTY; fueled; msci; people; gold; exports; imports; IIP. Under the United Nations Framework Convention on Climate Change, the Kyoto Protocol is responsible for determining India's allocation of carbon credits. (UNFCC). Carbon allowances will be affected by changes in population, pollution, deforestation, etc. In this examination, we have focused on factors that have an impact, either directly or tangentially, on stock market results.
- Madhu Jain & Preeti (2020) <sup>[4]</sup>: This research focuses on a machine fix issue involving a combination of on-call maintenance personnel, full-time employees, and temporary help. The ideas of baulking and renegeing are also included in order to cope with the actual scenario. There are two potential failure mechanisms for both the active and backup components, and both have identical odds of being fixed. Due to financial restraints, it is suggested that the milling system provide the combined backup in order to ensure the system's seamless operation. Lifespan and maintenance intervals for the components follow exponential patterns. Caretaker frustration is factored in just in case the number of broken devices exceeds the number of regular repairmen. The likelihood of the combined reserve units failing to transition to the operational state is also postulated. Transient flow rates from various stages are used to build the model's guiding formulae.
- Geoffrey patence Rwalanda (2020) <sup>[5]</sup>: It's becoming increasingly common for businesses all over the world to seek out and use only environmentally friendly supplies. Managers, sellers, and brokers in charge of buying work to find the best products for their companies at the lowest prices. Buyers usually buy things for reselling, while consumers buy them for internal use within an organisation. The purchasing department is responsible for selecting the highest quality goods and services, vetting potential vendors, negotiating the best possible prices, and awarding contracts to guarantee delivery of the required quantities.
- Srinivasan (2020) <sup>[6]</sup>: This paper analyses the claim that "the main element influencing supply, request, evaluating, and accessibility of solvents is the natural issue." Therefore, for producers to obtain a competitive edge, environmental problems must be factored into supply chain management.
- Apoorva Trivedi (2019) <sup>[7]</sup>: Capital sufficiency for all the banks has capital about the necessary level, as has been discovered in the Article's comparison of the results of major public and private sector banks in India. Banks' ability to turn a profit hinges in large part on how well they handle the assets and obligations necessary to keep their capital and lending limit levels healthy.
- Khatik (2019) <sup>[8]</sup>: We take a new strategy in Semantic Business Supportive of Cess Benchmarking and apply it to the field of Green Business Cycle. The executives by using meta models, ontologies, green execution markers, and measurements. (Green BPM). The methodology depicted and observationally assessed in this paper somewhat mechanizes the tedious and costly cycle examinations while presenting greater adaptability in regards to differing phrasing, level of reflection, and displaying documentation, all of which have been obstacles to the widespread adoption of process benchmarking.
- Ruchi Gupta (2018) <sup>[9]</sup>: There were academic and administrative implications from this study. In terms of managerial ramifications, it gives sign to advertisers on designated shoppers that buy green items (hypothetically), and adds backing to past research showing that purchasers are worried about the climate, however not really ready to search out or purchase green items (manually). This study also found the characteristics that differentiate green product buyers from non-buyers.
- Anju Sharan (2018) <sup>[10]</sup>: This Paper has the world is undergoing a shift toward greener energy, mainly due to the growing incentives of using environmentalist technologies. These incentives stem from many places, but are largely due to the government subsidies that provide electrical utilities incentives to use green energy rather than coal, gas, or oil. There tends to be many common misconceptions about these subsidies' effect on the job market. When someone believes that a certain stance is the right one, it becomes almost impossible to convince him or her out of that opinion.
- Sharan Kumar (2018) <sup>[11]</sup>: Since the turn world marketplaces have contracted, become more concentrated since the turn of the century and the advent of globalisation. more concentrated, and become both more and less unpredictable. The result is increased rivalry, as natural selection favours the strongest. The success of a company and the devotion of its clientele are both

enhanced by a well-established brand. Firm's most valuable commodity is the South African currency.

- Karuna Gupta (2018) <sup>[12]</sup>: Chemical refrigerants are at the core of most refrigerant devices and are responsible for many positive social outcomes, but they also have negative side effects when released into the environment. It harmed the ozone layer, which helps keep our planet from overheating, and likely made global warming worse by enhancing the greenhouse effect. Since water is not yet commonly used as a refrigerant, more research into the categorization of eco-friendly refrigerants is needed. Thermodynamic computations must be performed separately in order to create the proper characteristics of the plant components.

**3. Statement of the Problem**

Businesses have had to reevaluate their previous business strategies, which reflected the prevailing egocentric and anthropocentric philosophies of management, in light of the mounting problems posed by environmental deterioration, rising numbers of natural disasters, and the smouldering issue of global warming. The old adage that "business is business" no longer applies to how companies function. Sustainable development requires that company operations be carried out in a way that minimises negative impacts on the natural world. Some Indian businesses are leading the way in this regard by taking proactive measures to limit their contributions to global warming. The notion of "additionality" must be demonstrated for any carbon credit (offset) to be accepted.

**4. Research Gap**

The idea of additionality considers whether or not the undertaking would have occurred without the money from carbon credits. Carbon credits must be generated by activities that are "in addition to" the current norm in order to have a meaningful effect on the environment. Expert review is necessary for a definitive determination of additionality, but in general, carbon projects that have high returns even without carbon credit revenue, that are mandated by regulations, or that are industry standard are not considered additional.

**5. Objectives of the Study**

- To use IIP to predict the upcoming behaviour of the CNX-Nifty
- To determine the effects of investing in renewable energy CNX-Nifty

**6. Hypotheses of the Study**

**H0:** There is no impact on the future movement of CNX-Nifty with the help of IIP.

**H1:** There is no impact on the future movement of CNX-Nifty with the help of IIP

**H0:** There is no significance impact on investment in convertible energy on CNX-Nifty

**H1:** There is no significance impact on investment in convertible energy on CNX-Nifty

**7. Research Methodology**

- **Sources of Data:** The ten public sector banks' yearly reports were where the supplementary statistics came from. From [www.moneycontrol.com](http://www.moneycontrol.com), additional statistics for research and proof were obtained. Before being used for the study, the data were submitted to some basic arithmetic processes, such as calculating the ratios.

**Research Tools**

- Distance correlation
- Skewness and Kurtosis
- Bi-variant co-relation and webull analysis
- Normal co-relation and regression equation
- Co-relation and weighted least square analysis
- Other tests.

**8. Scope of the Study**

- The time frame of the analysis is set at four years, and the microvariables used in the analysis come solely from BSE India.
- Environmental metrics around the world are measured against benchmarks derived from stock markets around the globe.
- This paper's primary objective was to identify the variables affecting the Greenex and Carbonex scores over the course of the research session.

**9. Need for the Study**

- The time frame of the analysis is set at four years, and the microvariables used in the analysis come solely from BSE India.
- Environmental metrics around the world are measured against benchmarks derived from stock markets around the globe.
- This paper's primary objective was to identify the variables affecting the Greenex and Carbonex scores over the course of the research session.

**10. Limitations of the Study**

- Another significant challenge for my endeavour was the lack of accessible information on renewable fuels.
- There is a lack of statistics on the Environmental Performance Index from one year to the next.
- The 2012 pollution indicator data was used.
- Each component was aggregated to a yearly figure.

**11. Result and Discussion**

**Table 1:** Future Movement of Greenex with the Help of IIP

a	b	x	Y=a+bx
1858.59	1675.138	8.50345	-12218.65

**Interpretation**

The future movement of CNX-Nifty has been predicted using a regression equation with IIP as the X variable. The negative result from the equation suggests that the CNX-Nifty will likely decline in the immediate future. The CNX-Nifty is negatively impacted by rising manufacturing activity.

**Table 2:** Impact of Investments in Convertible Energies on CNX-Nifty

Correlations					
	Names	Agil	Agxil	Solarex	CNX-Nifty
Agil	Pearson Correlation	1	.995**	.666	.735

	Sig. (2-tailed)		.005	.334	.265
	N	4	4	4	4
Agxil	Pearson Correlation	.995**	1	.731	.670
	Sig. (2-tailed)	.005		.269	.330
	N	4	4	4	4
Solarex	Pearson Correlation	.666	.731	1	-.017
	Sig. (2-tailed)	.334	.269		.983
	N	4	4	4	4
CNX-Nifty	Pearson Correlation	.735	.670	-.017	1
	Sig. (2-tailed)	.265	.330	.983	
	N	4	4	4	4

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

**Table 3: Model Summary**

Model Summary	
Multiple R	.965
R Square	.931
Adjusted R Square	.794
Std. Error of the Estimate	.031
Log-likelihood Function Value	-19.706

**Table 4: ANOVA**

Anova					
	Sum of Squares	df	Mean Square	F	Sig.
Regression	.013	2	.007	6.768	.262
Residual	.001	1	.001		
Total	.014	3			

**Table 5: CF Values**

Coefficients						
	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta	Std. Error		
(Constant)	1528.564	166.833			9.162	.069
Agigl	3.029	1.097	7.302	2.645	2.760	.221
Agxil	-2.610	1.042	-6.628	2.645	-2.506	.242

**Interpretation**

The aforementioned factors have all undergone a by-variant association test with a value of 0.01. In addition, a modest correlation between the CNX-Nifty and the AGIXL (Ardour Global Alternative Energy Index Extra Liquid) was discovered. The AGIXL (Ardour Global Alternative Energy Index Extra Liquid) is highly linked with the AGIGL (Ardour Global Alternative Energy Index Composite).The CNX-Nifty has been discovered to have an inverse relationship with the solar index. From the highly linked factors with CNX-Nifty, weighted least squares were calculated using a by-variable analysis. Both measures have been determined to have statistical significance with the CNX-Nifty, with computed values being less than 0.5. This demonstrates the potential impact of different energy benchmarks on the CNX-Nifty index.

**Conclusions**

Investors need to be educated about carbon credits, which can be accomplished through regulation and trade. In spite of India's increasing carbon pollution percentage (32% of the

global total), few Indian stock buyers are familiar with the carbon trading scheme.

I infer that distance co-relation analysis has been used on a few key economic variables in the Greenex research for the years 2010-2014. Greenex worldwide carbon credits output is affected by petroleum oil during the study time, as shown by skewness and kurtosis analysis. There is a correlation between the Greenex index and the alternative energy metrics agigl, agxl, and solarx. As a result, there is room for more investigation and study of Greenex in the context of India's expanding manufacturing and automotive sectors.

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