

POWER SECTOR SELECTED STOCKS USING SYSTEMATIC RISK AT RELIGARE SECURITIES LTD

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ABSTRACT:

This study conducts a comparative analysis of the financial performance and risk metrics of five companies operating in the energy sector: Adani Green Energy, BF Utilities, Hitachi Energy, NCL Industries, and TD Power System Limited. The analysis includes average returns, variance, risk, coefficient of variance, and systematic risk for each company, providing insights into their relative risk-return profiles.

Findings reveal significant variations among the companies, with Adani Green Energy and TD Power System Limited exhibiting below-average returns coupled with relatively high risk and systematic risk. BF Utilities showcases the highest risk among the companies analyzed. Hitachi Energy emerges with average returns, moderate risk, and the lowest systematic risk, indicating a balanced risk-return profile compared to its peers.

NCL Industries stands out for having the lowest risk metrics but also the lowest returns, while exhibiting a negative coefficient of variance, suggesting relatively higher risk per unit of return. Based on this comparison, Hitachi Energy appears to offer a balanced risk-return profile. However, investors are advised to consider additional qualitative and quantitative factors before making investment decisions, emphasizing the importance of diversification and thorough research to mitigate risk and maximize potential returns in the energy sector.

1. INTRODUCTION

Investing in the stock market requires a strategic approach, particularly when selecting stocks within specific sectors like the power industry. One crucial aspect of this process is considering systematic risk, which encompasses factors influencing the broader market rather than individual companies. By understanding and managing systematic risk, investors can make informed decisions to build resilient portfolios.

In this analysis, we'll explore the selection of power sector stocks through the lens of systematic risk. We'll delve into the key steps involved in identifying stocks within the power sector while mitigating exposure to market-wide fluctuations. By employing these strategies, investors can navigate the dynamic landscape of the power industry with greater confidence, seeking opportunities while managing inherent risks effectively.

Selecting stocks in the power sector based on systematic risk involves analyzing various factors that influence the entire market or sector rather than individual companies. Systematic risk, also known as market risk, refers to the inherent risk associated with investing in the market as a whole. Here are some steps you can take to select stocks in the power sector based on systematic risk:

Identify Power Sector Companies: Begin by identifying companies that operate in the power sector. These can include utilities, renewable energy companies, and power generation companies.

Analyze Market Trends: Assess the current trends and outlook for the power sector. Look at factors such as government policies, regulatory changes, technological advancements, and macroeconomic conditions that could impact the sector as a whole.

1.1 NEED FOR THE STUDY

This study aims to explore the correlation between systematic risk, indicated by a firm's beta, and individual firm market power. Despite finding a weak association between market power and firm risk, we delve into analyzing the variance, risk, and returns within the power sector stocks.

1.2 SCOPE OF THE STUDY:

The scope of this study encompasses an in-depth analysis of variance, risk, and returns within the power sector stocks. Additionally, it involves the development and implementation of strategies aligned with investment policies to proactively mitigate future risks.

1.3 OBJECTIVES OF THE STUDY:

- To Analyze the performance of selected power sector stocks.
- To Examine the risk-return profile of the chosen power sector stocks.
- To Determine the level of systematic risk inherent in these selected stocks.

1.4 RESEARCH METHODOLOGY:

This study relies on secondary data primarily sourced from the NSE India website. It focuses on analyzing stocks from five chosen power generation/distribution companies over a three-month period (from Jan 1, 2024, to March 31, 2024).

Tools and Techniques:

Statistical methodologies, including risk assessment, average return calculation, and the determination of systematic risk, are employed to forecast future returns.

Average Returns = $((\text{Close price} - \text{Previous price}) / \text{Previous price}) \times 100$
 $\text{Risk} = \sqrt{\sum D^2 / (n - 1)}$

Systematic Risk (β) = $\sum (D1 * D2) / D2^2$

1.5 LIMITATIONS OF THE STUDY:

- The study is limited to the Indian markets.
- To confined to equity shares within the power sector.

To restricted to a three-month stock analysis of the power sector.

2. REVIEW OF LITERATURE

RISK:

Risk is the potential of gaining or losing something of value. Values can be gained or lost when taking risk resulting from a given action or inaction, foreseen or unforeseen. Risk can also be defined as the intentional interaction with uncertainty. Uncertainty is a potential, unpredictable, and uncontrollable outcome; risk is a consequence of action taken in spite of uncertainty.

Every organization must properly group the types of risk under two main broad categories viz.,

- Systematic risk
- Unsystematic risk

SYSTEMATIC RISK:

Systematic risk is uncontrollable, and the organization has to suffer from the same. However, an organization can reduce its impact, to a certain extent, by properly planning the risk attached to the project.

Systematic risk or market risk and volatility of investing in stocks is commonly measured by what is called Beta. It is a tool that facilitates investor's choices regarding the type of investment that best suits their risk tolerance.

However, there are times when different sources present different values of Beta. In such cases, investors are usually confused about exactly what course of action to take.

In order to bring light in the commonly confusing situation of receiving different Betas for one and the same stock, let's first consider the definition of a beta. Beta is a measurement of the risk concerning the market or the volatility of a particular stock.

3. INDUSTRY PROFILE

3.1.INDUSTRY PROFILE

The securities market achieves one of the most important functions of channeling idle resources to productive resources or from less productive resources to more productive resources. Hence in the broader context the people who save and investors who invest focus more towards the economy's abilities to invest and save respectively. This enhances savings and investments in the economy, the two pillars for economic growth. The Indian Capital Market has come a long way in this process and with a strong regulator it has been able to usher an era of a modern capital market regime. The past decade in many ways has been remarkable for securities market in India. It has grown exponentially as measured in terms of amount raised from the market, the number of listed stocks, market capitalization, trading volumes and turnover on stock exchanges, and investor population. The market has witnessed fundamental institutional changes resulting in drastic reduction in transaction costs and significant improvements in efficiency, transparency and safety.

STOCK MARKET:

When investors think of the stock market, they may imagine a specific place - such as a stock exchange. In fact, the stock market is the abstract idea of stock trading and stock exchange. All selling of stocks - at stock exchanges and in other ways - affects the market overall. Following stock market information in the news can help you make the right decisions about stock market investing.

NEED OF STOCK MARKET:

The stock market is simply a term for the overall market or industry that is concerned with buying and selling company stock, both private and publicly traded securities. The stock market does many things. It helps to set prices of stocks. The more a stock is traded on the market and the more in demand the stock, the higher is its value. Having a stock market that is interconnected with stock markets around the world helps traders and investors to see how specific stocks are doing.

3.2 COMPANY PROFILE

Online Share Trading

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RSL is a member of the NSE, BSE, MCX-SX, USE and a depository participant with NSDL and CDSL. RSL also offers TIN facilitation & PAN facility at select branches - a unique service to help an individual with PAN, TAN and TDS/TCS returns related requirements. In addition, RSL is an NSDL-appointed enrolment agency for Aadhaar UID (Unique Identification Number) and an AMFI-registered mutual fund distributor.

4. DATA ANALYSIS AND INTERPRETATION

RISK RETURN ANALYSIS ON ADANI GREEN ENERGY LIMITED

Date	OPEN	close	Return	avg return	Difference	D*D
28-Mar-24	1,832.55	1,835.15	0.14	-0.29	0.43	0.18
27-Mar-24	1,869.70	1,822.50	-2.59	-0.29	-2.30	5.31
26-Mar-24	1,840.00	1,859.00	1.02	-0.29	1.31	1.71
22-Mar-24	1,857.05	1,851.75	-0.29	-0.29	0.00	0.00
21-Mar-24	1,861.00	1,855.35	-0.30	-0.29	-0.02	0.00
20-Mar-24	1,834.90	1,847.75	0.70	-0.29	0.98	0.96
19-Mar-24	1,870.00	1,821.55	-2.66	-0.29	-2.37	5.64
18-Mar-24	1,810.05	1,869.90	3.20	-0.29	3.49	12.15
15-Mar-24	1,902.00	1,902.60	0.03	-0.29	0.32	0.10
14-Mar-24	1,716.00	1,895.30	9.46	-0.29	9.75	94.98
13-Mar-24	1,897.10	1,725.00	-9.98	-0.29	-9.69	93.92
12-Mar-24	1,930.00	1,897.10	-1.73	-0.29	-1.45	2.10
11-Mar-24	1,930.00	1,930.30	0.02	-0.29	0.30	0.09
07-Mar-24	1,919.90	1,929.10	0.48	-0.29	0.76	0.58
06-Mar-24	1,950.00	1,910.50	-2.07	-0.29	-1.78	3.18

05-Mar-24	1,943.20	1,947.40	0.22	-0.29	0.50	0.25
04-Mar-24	1,977.55	1,940.70	-1.90	-0.29	-1.61	2.60
02-Mar-24	1,969.90	1,971.35	0.07	-0.29	0.36	0.13
01-Mar-24	1,930.00	1,969.55	2.01	-0.29	2.29	5.26
29-Feb-24	1,921.00	1,895.05	-1.37	-0.29	-1.08	1.18
28-Feb-24	1,989.80	1,918.15	-3.74	-0.29	-3.45	11.90
27-Feb-24	1,964.00	1,979.50	0.78	-0.29	1.07	1.14
26-Feb-24	1,931.40	1,970.45	1.98	-0.29	2.27	5.14
23-Feb-24	1,930.50	1,923.30	-0.37	-0.29	-0.09	0.01
22-Feb-24	1,915.00	1,922.65	0.40	-0.29	0.68	0.47
21-Feb-24	1,926.00	1,904.95	-1.11	-0.29	-0.82	0.67
20-Feb-24	1,963.70	1,926.65	-1.92	-0.29	-1.64	2.68

19-Feb-24	1,919.00	1,955.05	1.84	-0.29	2.13	4.53
16-Feb-24	1,910.05	1,904.75	-0.28	-0.29	0.01	0.00
15-Feb-24	1,868.00	1,900.75	1.72	-0.29	2.01	4.03
14-Feb-24	1,813.00	1,852.25	2.12	-0.29	2.40	5.78
13-Feb-24	1,853.00	1,815.55	-2.06	-0.29	-1.78	3.16
12-Feb-24	1,888.05	1,842.60	-2.47	-0.29	-2.18	4.76
09-Feb-24	1,836.90	1,880.70	2.33	-0.29	2.61	6.83
08-Feb-24	1,884.10	1,827.95	-3.07	-0.29	-2.79	7.76
07-Feb-24	1,749.50	1,866.00	6.24	-0.29	6.53	42.62
06-Feb-24	1,668.65	1,721.65	3.08	-0.29	3.36	11.32
05-Feb-24	1,684.00	1,668.65	-0.92	-0.29	-0.63	0.40
02-Feb-24	1,681.90	1,674.25	-0.46	-0.29	-0.17	0.03
01-Feb-24	1,689.00	1,665.95	-1.38	-0.29	-1.10	1.21
31-Jan-24	1,680.00	1,669.45	-0.63	-0.29	-0.35	0.12
30-Jan-24	1,720.00	1,679.45	-2.41	-0.29	-2.13	4.53
29-Jan-24	1,684.95	1,715.50	1.78	-0.29	2.07	4.27
25-Jan-24	1,647.00	1,664.80	1.07	-0.29	1.35	1.83
24-Jan-24	1,687.95	1,641.35	-2.84	-0.29	-2.55	6.52
23-Jan-24	1,740.00	1,680.90	-3.52	-0.29	-3.23	10.44
20-Jan-24	1,580.00	1,678.30	5.86	-0.29	6.14	37.73
19-Jan-24	1,610.00	1,570.75	-2.50	-0.29	-2.21	4.90
18-Jan-24	1,615.00	1,588.25	-1.68	-0.29	-1.40	1.96
17-Jan-24	1,653.00	1,615.00	-2.35	-0.29	-2.07	4.27
16-Jan-24	1,693.50	1,666.80	-1.60	-0.29	-1.32	1.73
15-Jan-24	1,725.00	1,694.80	-1.78	-0.29	-1.50	2.24
12-Jan-24	1,725.60	1,710.70	-0.87	-0.29	-0.59	0.34
11-Jan-24	1,739.00	1,714.15	-1.45	-0.29	-1.16	1.36
10-Jan-24	1,704.00	1,723.25	1.12	-0.29	1.40	1.97
09-Jan-24	1,698.05	1,683.40	-0.87	-0.29	-0.58	0.34
08-Jan-24	1,685.30	1,680.05	-0.31	-0.29	-0.03	0.00
05-Jan-24	1,695.00	1,674.00	-1.25	-0.29	-0.97	0.94
04-Jan-24	1,706.55	1,692.50	-0.83	-0.29	-0.54	0.30

03-Jan-24	1,699.00	1,697.25	-0.10	-0.29	0.18	0.03
02-Jan-24	1,598.80	1,603.55	0.30	-0.29	0.58	0.34
01-Jan-24	1,598.00	1,598.40	0.03	-0.29	0.31	0.10

Average returns=-0.29

Variance = $\sum D^2 / (n-1)$
=6.952209

Risk(σ)= $\sqrt{\text{variance}}$

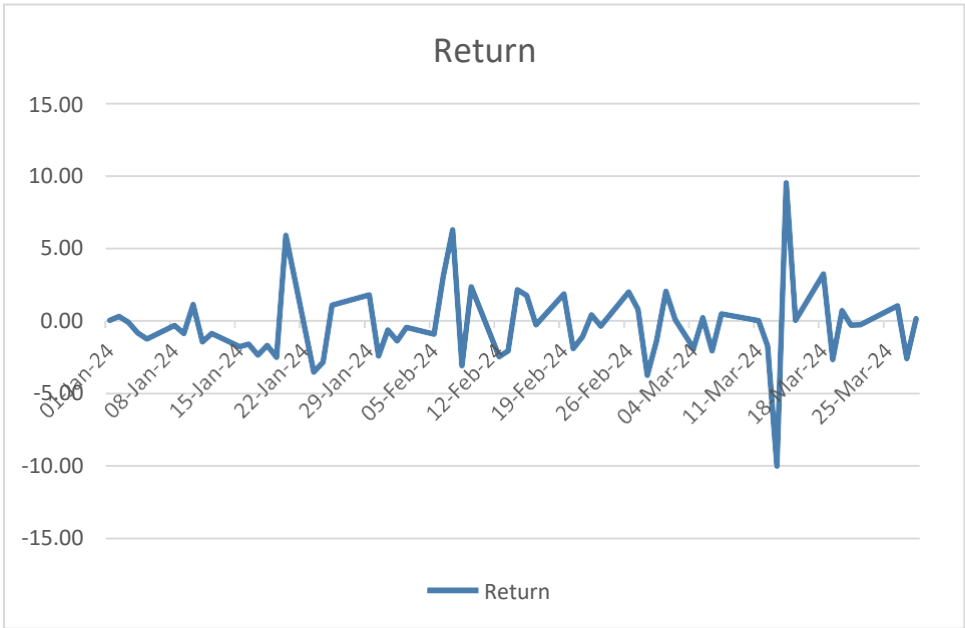
=2.636704

Coefficient of variance = Risk/Avg Returns

=2.636704/-0.29

=-9.24064

GRAPHICAL REPRESENTATION



Interpretation:

From the above table it represents the risk and returns of Adani Green Energy limited for a period of 3 months i.e. from 01-Jan-2024 to 31-Mar-24, the company has average returns of- 0.29, Variance of 6.952209, risk of 6.952209 and coefficient of variance is-9.24064.

The company has highest stock value on 01-Jan-24 i.e. 1,979.50 and lowest stock value on 19-Mar-24 i.e. 1,570.75.

5.1 FINDINGS:

Adani green energy has average returns of-0.29, Variance of 6.952209, risk of 6.952209 and coefficient of variance is-9.24064 and Systematic risk of 0.259907.

BF utilities has average returns of-0.2697, Variance of 16.9472, risk of 4.1167 and coefficient of variance is 15.266 and Systematic risk of 0.260593.

Hitachi energy has average returns of 0.05, Variance of 7.617377, risk of 2.75996 and coefficient of variance is-1.00091 and Systematic risk of 0.215563.

NCL industries has average returns of-0.72559 Variance of 5.43434235, risk of 2.33116759 and coefficient of variance is-3.2127963 Systematic risk of 0.176796.

TD power system limited has average returns of-0.25827 Variance of 8.180505, risk of 2.860158 and coefficient of variance is-11.0744 Systematic risk of 0.259907.

5.2 SUGGESTIONS

NCL Industries has the lowest average returns (-0.72559), while Hitachi Energy has the highest (0.05). BF Utilities has the highest risk (4.1167), while NCL Industries has the lowest (2.33116759). Hitachi Energy has the lowest systematic risk (0.215563), while NCL Industries has the highest (0.259907). These metrics are measures of dispersion and relative risk respectively. A lower coefficient of variance indicates less risk per unit of return.

Based on this comparison, it seems Hitachi Energy has relatively lower risk and systematic risk compared to the others. However, each company may have different factors affecting their performance, so it's essential to consider other qualitative and quantitative factors before making investment decisions.

5.3 CONCLUSION

Based on the provided information on the companies' financial performance and risk metrics, here are some conclusions:

Adani Green Energy:

Shows below-average returns with high risk and systematic risk. The coefficient of variance indicates a high level of risk per unit of return.

BF Utilities:

Exhibits below-average returns with high risk and a relatively high coefficient of variance. Systematic risk is also notable.

Hitachi Energy:

Demonstrates average returns with moderate risk and systematic risk. The coefficient of variance is negative, which may indicate relatively lower risk per unit of return compared to others.

NCL Industries:

Shows the lowest average returns among the listed companies but also has the lowest risk and systematic risk. However, the negative coefficient of variance suggests that the risk per unit of return might be relatively higher.

TD Power System Limited:

Similar to Adani Green Energy and BF Utilities, it presents below-average returns with relatively high risk and systematic risk. The coefficient of variance is also notable. Overall:

Hitachi Energy appears to offer a balanced risk-return profile compared to the other companies listed.

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