



A STUDY ON RISK & RETURN ANALYSIS OF SELECTED SECURITIES IN INDIA

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Abstract:

The main objective of the study is to give investors a basic idea of investing into the mutual funds and encourage them to invest in those areas where they can maximize the return on their capital. The research provided an interesting insight into awareness about the mutual funds, risk taking abilities of investors and investment options preferred etc. The Indian Capital has been increasing tremendously during the last few years. With reforms of economy, reforms of investing policy, reforms of public sector and reforms of financial sector, the economy has been opened up and many developments have been taking place in the Indian money market and Capital market. In order to help the small investors, mutual fund industry has come to occupy an important place. This study helps us to understand how the companies diversify themselves in different sectors and in different companies to maximize the returns and to minimize the risks involved in it.

Keywords: India; Risk & Return; Securities; Stock.

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1. Introduction

Security Analysis is the analysis of tradable financial instruments called Securities. These can be classified into Debt securities, Equities, or some hybrid of the two. Investing involves risk of loss of principal and is more concerned on the return of investment. This total risk measured by standard deviation, can be divided into two parts: Unsystematic Risk and Systematic Risk. Unsystematic Risk is also called as diversifiable risk. Systematic Risk may be called as non-diversifiable risk. Unsystematic Risk or Market Risk can be measured by Beta. The Security Analysis relationship is a fundamental concept not only in financial analysis, but also in every aspect of life. If decisions are to lead to benefit maximization, it is necessary that individuals/institutions consider the combined influence on expected (future) return or benefit as well as on risk/cost. The requirement that expected return/benefit be commensurate with risk/cost is known as the "risk/return trade-off" in finance.

1.1. Security Analysis

Investors have different motives for investing. Leaving aside a few who love the power and prestige of holding a major share or a minor share in the company, the majority of the investors have one of the following motives:

- Regular income either in the form of dividend or interest
- Capital gains or capital appreciation
- Hedge against inflation, a positive real rate of return
- Safety of funds and regularity of payment of interest and principal
- Liquidity and marketability in the sense that investor can convert his investments into cash or liquidity and back again into investments when cash is not needed

Security Analysis involves an examination of expected return and accompanying risks. The first three motives of income, capital appreciation and a positive hedge against inflation refers to the expected return. The last two motives of investor lead to the risks involved in the investments. These risks are due to uncertainty of returns, regularity of returns, safety of funds, marketability or lack of it, etc. Investors generally desire to have the maximum return possible, as they like returns, but they dislike risk, and the extent of risk varies from investor to investor. But the return depends on the extent of risk that the investor takes. Investments are made based on security analysis and decisions involved are what securities to be bought or sold and the extent of proportion of funds to be invested in each.

1.2. Stock market

The stock market is simply a term for the overall market or industry that is concerned with buying and selling company's 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. The stock market is mainly present to create money. Through the market, investors - both companies and individuals - can buy stocks, which effectively make them own a small part of a company. If the company prospers, investors are rewarded with dividends and profits. Companies, by becoming public and offering stocks to the public, can raise money and improve their profile through business expansions which can help them make great profit.

2. Scope of the Study

- The analysis is focused on ten companies
- The study is merely for academic purpose
- Study restricted to a smaller sample size because of lack of time and resources
- The recommendations made may not be a perfect prediction of the future as technical analysis is not an absolutely accurate practice
- The all portfolio consists of risky assets there no risk-free assets.
- Risky assets consist of equity shares and whereas risk-free assets consist of investments in the saving bank account, deposits, treasury bills, bonds equity etc.

- The holding period for risky assets was for one month period i.e. shares were assumed to be purchased at the first day and sold at the second consecutive day and average return for one month is considered.
- An equal no of shares i.e. I (one) share of each script is assumed to be purchased from the secondary market.

3. Objectives of the Study

The main objective of the study is to know the performance of equities of infrastructure sector

- 1) To study the return and risk assessments of equities
- 2) To study the co-efficient of variation of equities
- 3) To suggest the investors how to invest, when to invest in equities
- 4) To measure the risks of selected securities with the help of tools and techniques

4. Research Methodology

Data Analysis: The collected data is sorted out and analyzed to prepare the final report. The tools and techniques used in the analysis are

- 1) $RISK = \sqrt{\sum D^2 / (n-1)}$
- 2) $Return = \frac{\text{close price} - \text{previous price}}{\text{previous price}} * 100$
- 3) $Co\text{-efficient of variation} = Risk / Return$
- 4) $Difference = Return - Average$
- 5) $D^2 = Difference * Difference$

5. Data Analysis & Interpretation

Table 1: A Statement Showing Risk and Return of GMRINFRA

Symbol	Series	Date	Prev. Close	Open Price	Close Price	Ret.	Avg.	Diff.	D ²
GMRINFRA	EQ	1-Feb-17	21.6	21.6	22.65	-77.35	-78.235	0.885	0.783225
GMRINFRA	EQ	2-Feb-17	22.65	22.7	22.6	-77.4	-78.235	0.835	0.697225
GMRINFRA	EQ	3-Feb-17	22.6	22.6	22	-78	-78.235	0.235	0.055225
GMRINFRA	EQ	6-Feb-17	22	21.6	21.5	-78.5	-78.235	-0.265	0.070225
GMRINFRA	EQ	7-Feb-17	21.5	21.45	22.15	-77.85	-78.235	0.385	0.148225
GMRINFRA	EQ	8-Feb-17	22.15	22	22	-78	-78.235	0.235	0.055225
GMRINFRA	EQ	9-Feb-17	22	21.55	21.1	-78.9	-78.235	-0.665	0.442225
GMRINFRA	EQ	10-Feb-17	21.1	21.25	21.2	-78.8	-78.235	-0.565	0.319225
GMRINFRA	EQ	13-Feb-17	21.2	21.3	21.25	-78.75	-78.235	-0.515	0.265225
GMRINFRA	EQ	14-Feb-17	21.25	21	21.4	-78.6	-78.235	-0.365	0.133225
GMRINFRA	EQ	15-Feb-17	21.4	21.3	21.55	-78.45	-78.235	-0.215	0.046225
GMRINFRA	EQ	16-Feb-17	21.55	21.55	22.25	-77.75	-78.235	0.485	0.235225
GMRINFRA	EQ	17-Feb-17	22.25	22.5	21.85	-78.15	-78.235	0.085	0.007225
GMRINFRA	EQ	20-Feb-17	21.85	22	22.4	-77.6	-78.235	0.635	0.403225
GMRINFRA	EQ	21-Feb-17	22.4	22.4	22.3	-77.7	-78.235	0.535	0.286225
GMRINFRA	EQ	22-Feb-17	22.3	22.3	22.25	-77.75	-78.235	0.485	0.235225

GMRINFRA	EQ	23-Feb-17	22.15	22	22	-77.9	-78.235	0.335	0.112225
GMRINFRA	EQ	24-Feb-17	22.25	22.1	22.1	-78.7	-78.235	-0.465	0.216225
GMRINFRA	EQ	27-Feb-17	22.1	22	21.3	-78.9	-78.235	-0.665	0.442225
GMRINFRA	EQ	28-Feb-17	21.1	21	20.35	-79.65	-78.235	-1.415	2.002225
TOTAL						-78.235			6.9555

AVERAGE RETURN=- -78.235

RISK= $\sqrt{\sum D^2 / (n-1)}$ =0.60

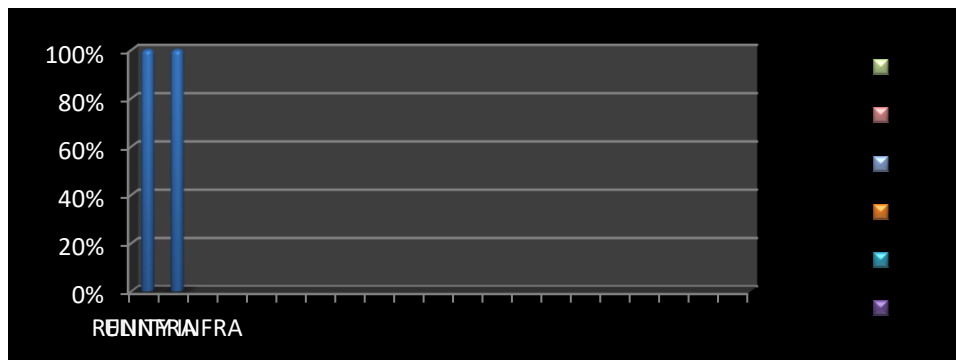


Figure 1: Risk and Return of GMRINFRA

Interpretation

The above table shows the calculation of risk and return of GMRINFRA Company for a period of one month. The average return is -78.235 and risk is 0.60. The highest market price is 22.65 on 01-Feb-17. The lowest market price is 20.35 on 28-Feb-17

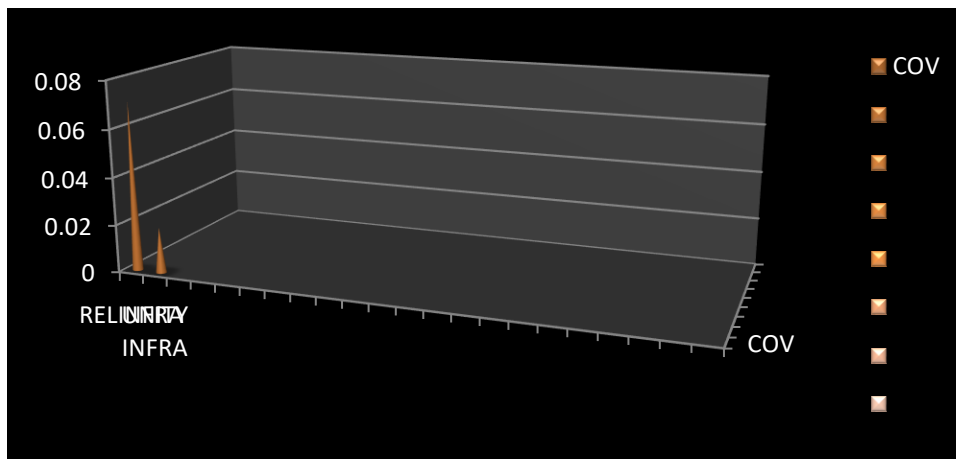
Table 2: A Statement Showing Risk and Return of HCC

Symbol	Series	Date	Prev. Close	Open Price	Close Price	Ret.	Avg.	Diff	D ²
HCC	EQ	1-Feb-17	13.65	13.7	14.55	-85.45	-85.635	0.185	0.034225
HCC	EQ	2-Feb-17	14.55	14.75	15.05	-84.95	-85.635	0.685	0.469225
HCC	EQ	3-Feb-17	15.05	15.25	14.85	-85.15	-85.635	0.485	0.235225
HCC	EQ	6-Feb-17	14.85	14.9	14.3	-85.7	-85.635	-0.065	0.004225
HCC	EQ	7-Feb-17	14.3	14.15	14.25	-85.75	-85.635	-0.115	0.013225
HCC	EQ	8-Feb-17	14.25	14.35	14.4	-85.6	-85.635	0.035	0.001225
HCC	EQ	9-Feb-17	14.4	14.55	14.25	-85.75	-85.635	-0.115	0.013225
HCC	EQ	10-Feb-17	14.25	14.15	14.15	-85.85	-85.635	-0.215	0.046225
HCC	EQ	13-Feb-17	14.15	14.2	14.15	-85.85	-85.635	-0.215	0.046225
HCC	EQ	14-Feb-17	14.15	14.2	14.1	-85.9	-85.635	-0.265	0.070225
HCC	EQ	15-Feb-17	14.1	14.05	14.25	-85.75	-85.635	-0.115	0.013225
HCC	EQ	16-Feb-17	14.25	14.1	14.3	-85.7	-85.635	-0.065	0.004225
HCC	EQ	17-Feb-17	14.3	14.5	14.6	-85.4	-85.635	0.235	0.055225
HCC	EQ	20-Feb-17	14.6	14.9	14.6	-85.4	-85.635	0.235	0.055225

HCC	EQ	21-Feb-17	14.6	14.6	14.4	-85.6	-85.635	0.035	0.001225
HCC	EQ	22-Feb-17	14.4	14.5	14.45	-85.55	-85.635	0.085	0.007225
HCC	EQ	23-Feb-17	14.45	14.6	14.3	-85.7	-85.635	-0.065	0.004225
HCC	EQ	24-Feb-17	14.3	14.3	14.1	-85.9	-85.635	-0.265	0.070225
HCC	EQ	27-Feb-17	14.1	14.3	14.25	-85.75	-85.635	-0.115	0.013225
HCC	EQ	28-Feb-17	14.25	14.2	14	-86	-85.635	-0.365	0.133225
TOTAL						-85.635			1.2905

Average Return=-85.635

RISK= $\sqrt{\sum D^2 / (n-1)}$ =0.26



Graph 2:

5.1. A Statement Showing Co-Efficient of Variation

COV=Risk/Return

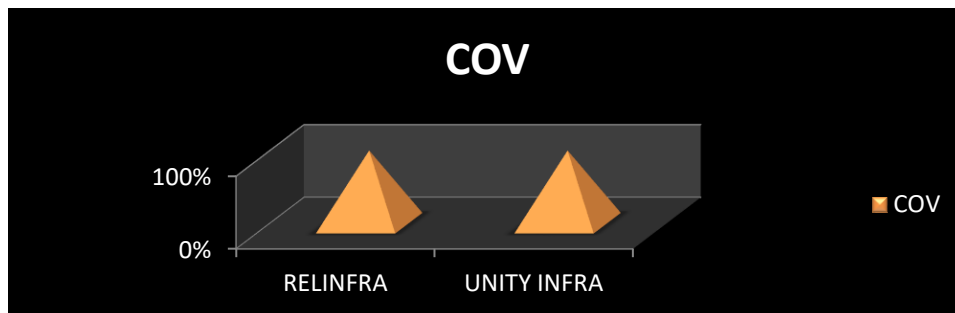
Table 3:

COMPANY	RETURN	RISK	COV
GMR INFRA	-78.235	0.6	-0.007669202
HCC	-85.635	0.23	-0.002685818
NCC	-67.9425	1.6	-0.023549325
LITL	-89.255	0.3	-0.003361156
IVRCL	-79.7	0.89	-0.011166876
SIMPLEX INFRA	-73.275	0.86	-0.011736609
GAMMN INFRA	-88.9975	0.27	-0.003033793
REL INFRA	255.1925	18.13	0.071044408
RAMKY INFRA	-37.1475	2.97	-0.079951545
UNITY INFRA	69.7925	1.34	0.019199771

List of Companies with Positive COV

Table 4:

COMPANY	COV
RELINFRA	0.071044408
UNITY INFRA	0.019199771



Graph 3:

6. Findings

The present project work has been undertaken to study Security Analysis for a period of one month. During this study the following facts have been identified.

- 1) The company GMR INFRA has an average return of -78.235 and risk 0.6 of the highest price during the month was 22.65 on 1-Feb-17. The lowest price during the month was 20.35 on 28-Feb-17. The co-efficient of variation is -0.007669202.
- 2) The company HCC has an average return of -85.635 and risk of 0.23. The highest price during the month was 14.85 on 3-Feb-17. The lowest price during the month was 14 on 28-Feb-17. The co-efficient of variation is -0.002685818.
- 3) The company NCC has an average return of -67.9425 and risk of 1.6. The highest price during the month was 34.75 on 1-Feb-17. The lowest price during the month was 29.9 on 11and12-Feb-17. The co-efficient of variation is -0.023549325.
- 4) The company LITL has an average return of -89.255 and risk of 0.30. The highest price during the month was 11.65 on 28-Feb-17. The lowest price during the month was 10.5 on 24-Feb-17. The co-efficient of variation is -0.003361156.
- 5) The company IVRCL has an average return of -79.7 and risk of 0.89. The highest price during the month was 21.75 on 1-Feb-17. The lowest price during the month was 19.4 on 09-Feb-17. The co-efficient of variation is -0.011166876.
- 6) The company SIMPLEX INFRA has an average return of -73.275 and risk of 0.86. The highest price during the month was 27.45 on 2-Feb-17. The lowest price during the month was 24 on 28-Feb-17. The co-efficient of variation is -0.011736609.
- 7) The company GAMMN INFRA has an average return of -88.9975 and risk of 0.27. The highest price during the month was 11.45 on 2-Feb-17. The lowest price during the month was 10.7 on 12and16-Feb-17. The COV is -0.003033793.

- 8) The company REL INFRA has an average return of 255.1925 and risk of 18.13. The highest price during the month was 382.45 on 22-Feb-17. The lowest price during the month was 329.15 on 03-Feb-17. The co-efficient of variation is 0.071044408.
- 9) The company RAMKY has an average return of -37.1475 and risk of 2.97. The highest price during the month was 66.65 on 23-Feb-17. The lowest price during the month was 54.2 on 01-Feb-17. The COV is -0.079951545.
- 10) The company UNITY INFRA has an average return of 69.7925 and risk of 1.34. The highest price during the month was 33.05 on 22-Feb-17. The lowest price during the month was 28.65 on 10-Feb-17. The co-efficient of variation is 0.019199771.

7. Suggestions

The suggestions of the study are as follows:

- 1) Feb.2017 is favor for investor to invest in Reliance infrastructure as it gives 255.19 returns.
- 2) Reliance and Unity infrastructure has high idle of COV better to use it in operating cycle for getting results.
- 3) Investment in Reliance and unity infrastructure is favor for long term investment.
- 4) From this analysis it is better not to go with the RAMKY infrastructure as it yields negative returns of the Feb 2017.
- 5) The eight infrastructure companies are not performed well the month of Feb 2017. So investment in infrastructure industry is risky so better to invest in other sector.

8. Conclusion

The study risk return investigation helps the investor to pick up the securities based on his choice. The study of this kind provides information about the performance of various stocks in the market in terms of risk and return. This paper emphasizes on the market fluctuations relations to the prices of Scrip's though it is difficult to observe a pattern for the price movements but efforts have been taken using fundamental analysis and technical analysis. Using fundamental analysis, it is observed that the financial position and performance of the firms are in correlation with present market prices. According to technical analysis, the historical data taken is used to observe the trends followed by the Scrip's. However, we cannot say that any one method is sufficient to analyze and interpret the fluctuations but they help the investor to define the trends to some extent. Overall we can say that the project is satisfied.

References

- [1] Fama E, French K. The Cross Section of Expected Stock Return, Journal of Finance. 1992; 427-465
- [2] Dhankar RS, Kumar R. Relevance of CAPM to Indian Stock Market, ICFAI. 2007
- [3] Mythri B, Radhakrishna Nayak. Selection of Stock: A Practical Study on Selected Software Companies, Journal of Business and Management. 2016
- [4] Syndey C. Ludvigson, Serena Ng "The empirical risk return relation: a factor analysis approach" National bureau of economic research 1050 Massachusetts Avenue, Cambridge, MA 02138
- [5] Prasanna Chandra, financial management: Theory and Practice, Fourth edition, Tata McGraw- Hill Pp 198-215

- [6] Arindam Mandal and Prasun Bhattacharje, “The Indian Stock Market and the Great Recession”- Theoretical and Applied Economics Volume XIX (2012), No. 3(568), pp. 59-76
- [7] I M Pandey.,2010, “Financial Management 10th Edition” Vikas Publishing House
- [8] Chikashi Tsuji (2014). An Investigation of the Relationship between Risk and Return: The Case of the Latin American Stock Markets. Accounting and Finance Research, 3(1)
- [9] Ratna Sinha (2013). An Analysis of Risk and Return in Equity Investment in Banking Sector. International Journal of Current Research, 5(8), 2336-2338.