

A Study on Equity Analysis of Selected Small Cap Stocks Listed on NSE

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Abstract

The research paper is organized to analyze the risk and return of selected small cap stocks listed on NSE and also to compare the performance of each stock against the benchmark. The data is collected for a period of 9 years i.e., from 1st January 2014 to 31st December 2022. The paper compares the performance of each stock taking Nifty 50 index as benchmark. The study is purely based on secondary data collected from NSE. The data were collected based on daily prices of the selected small cap stocks, and with the help of daily prices annual return were calculated for a period of 9 years. The study shows that Tata Elxsi, Aarti drugs, HDFC Bank and Kotak Bank have given highest returns during the study period. Whereas the return of ICICI bank is lowest during the same period. The beta of all the stocks are positive, indicating that all the shares carry a higher risk.

Keywords: Benchmark • NSE • Returns • Risk • Small cap

Introduction

Investing in stock market provides many investors a way to earn money in a short span of time. Many of the new investors or aspiring investors fall short in understanding the stock market and get confused and often frustrated, leading them to make mistakes and incur losses which further demotivates them from investing and as a result of this, they resort to traditional ways of investing in bank fixed deposits or such which yield them not much returns.

The purpose of this study is to provide a clear vision on how to navigate through the stock market with a view to make higher profits in a short span of time, or how to have moderate profits with moderate risk factor governing the investments made by the investor. The knowledge about the financial investment is increasing amongst the investors who are looking for new ways of income other than job and to earn additional income other than salary, as they want to increase their standard of living. Investing in stock market is highly risk oriented task but high returns on the investment is obtained through vigilance on market and careful investing.

Literature Review

Swapna: The study creates awareness to the investors about the stock to invest in the best sector as it calculates the risk and return of particular stocks and also to assess the performance of return and risk of those companies. The objectives of investment is to get earn maximize return. More over the investment is depend upon the investor how much to invest in the stocks or companies stock based on risk. The author suggests to invest in Wipro is best and good to invest which lowest risk and highest return.

Suresh AS and Harshitha N: This research is about comparing risk and

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return relationship of stocks by using Markowitz and Sharpe's model. The study aims to identify the level of deviation in returns by comparing these two models and to check whether the results obtained are constant or not. The result of beta will allow the investors to know about the market risk of the particular investments. The research shows that both the models give almost the same value for both individual return and risk and also portfolio [1].

Suresh AS: The study was organized to analyse the risk and returns of selected logistic stocks listed on BSE and to compare their performance against the benchmark for the period of 5 years i.e. from 1st January 2013 to 31st December 2017. This paper analyses the performance of logistic sector taking BSE Sensex as benchmark. This study is based on secondary data collected from BSE. The date were collected based on monthly prices of the logistic sector and with the help of monthly prices, annual returns were calculated for a period of five years [2].

Objectives of the study

- To analysis the return and risk of the selected Small cap stocks listed on NSE.
- To compare the performance of selected small cap stocks against Nifty 50.
- To construct portfolio and to provide necessary suggestions based on the study

Methodology

The study mainly focuses on the price movement of selected small cap stocks. The study is descriptive in nature. For the equity analysis, the data of monthly share price are collected from the NSE. The date were collected for past the past 5 year i.e. JAN-2014 to DEC-2022.

Duration of the study

The data is collected for a period of 5 years starting from 1st Jan 2014 to 31st Dec 2022.

Data collection

The study is based on secondary data collected from NSE website. Data is collected for a period of 5 years (i.e. from 1st January 2014 to 31st December

2022) from Small Cap stocks listed in NSE. Additionally the data are also collected from newspaper, websites, journals, books reports by researchers and scholars.

Selection of sample companies

- TATA Elxsi
- Aarti Drugs
- HDFC Bank
- Kotak Bank
- ICICI Bank

Analytical tools for data analysis

- Return
- Standard deviation
- Variance
- Beta
- Alpha
- Correlation

Limitations of the study

- The study is limited to only one sectors from NSE.
- Analysis is based on secondary data collected from NSE website, published literature etc.
- Only five companies have been selected for conducting this study.

Data Analysis and Interpretation

Interpretation

The graph shows that all the small cap stocks has given the positive returns during the study period. Aarti drugs has gavin the highest return of 84.51% for the period 2014 to 2018 followed by RSS Software, TATA Elxsi and Wintac Pharmaceuticals. DCB bank has given the lowest return of 31.82% during the study period (Table 1 and Figure 1).

Interpretation

From the table it can be found that DCB bank has the lowest risk followed by Wintac Pharmaceuticals, TATA Elxsi and Aarti Drugs. The stock which has highest risk is RSS Software (Table 2).

Interpretation

From the table it can be found that the first stock with lowest variance is DCB bank followed by Wintac Pharmaceuticals, TATA Elxsi and Aarti Drugs. The stock which has highest variance is RSS Software (Table 3).

Interpretation

From the table it can be found that TATA Elxsi has lowest beta of -0.73, followed by DCB bank and Wintac Pharmaceuticals with beta of 1.41 and 2.40 respectively. The stock with highest beta is Aarti Drugs indicating that when market changes by 1% Aarti drug returns will change by 4.02% and vice-versa. It can be concluded that all the stocks carry higher market risk (Table 4).

Portfolio return and risk

An attempt has been made to analyse the portfolio return and risk of selected small cap stocks.

Table 1. Ranking of the small cap stocks based on returns.

Rank	Small Cap Stocks	Industry	Average Returns (%)
1	TATA Elxsi	Information Technology	30.32
2	Aarti Drugs	Pharmaceuticals	23.85
3	HDFC Bank	Bank	15.74
4	Kotak Bank	Bank	14.34
5	ICICI Bank	Bank	9.42

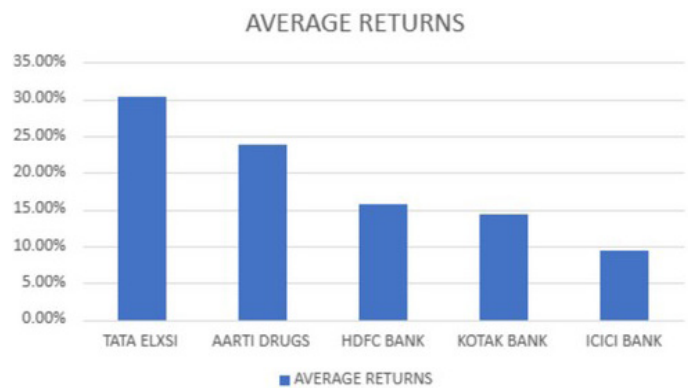


Figure 1. Ranking of small cap stocks based on returns.

Table 2. Ranking of the small cap stocks based on standard deviation.

Rank	Small Cap Stocks	Industry	Standard Deviation
1	DCB	Bank	47.15
2	Wintac Pharmaceuticals	Pharmaceuticals	99.85
3	TATA Elxsi	Information Technology	104.04
4	Aarti Drugs	Pharmaceuticals	119.05
5	RSS Software	Information Technology	148.74

Table 3. Ranking of the small cap stocks based on variance.

Rank	Small Cap Stocks	Industry	Variance
1	DCB	Bank	2223.38
2	Wintac Pharmaceuticals	Pharmaceuticals	9970.16
3	TATA Elxsi	Information Technology	10824.85
4	Aarti Drugs	Pharmaceuticals	14172.82
5	RSS Software	Information Technology	22123.28

Table 4. Ranking of the small cap stocks based on beta and alpha.

Rank	Small Cap Stocks	Industry	Beta	Alpha
1	TATA Elxsi	Information Technology	-0.73	91.18
2	DCB	Bank	1.41	6.33
3	Wintac Pharmaceuticals	Pharmaceuticals	2.4	30.88
4	RSS Software	Information Technology	3.83	11.53
5	Aarti Drugs	Pharmaceuticals	4.02	9.09

Table 5. Correlation of the selected small cap stocks.

Correlation (DCB & RSS)	0.738415
Correlation (DCB & TE)	-0.66581
Correlation (DCB & AD)	0.926521
Correlation (DCB & MNP)	0.46508
Correlation (RSS & TE)	-0.43162
Correlation (RSS & AD)	0.847793
Correlation (RSS & WNP)	0.898357
Correlation (TE & AD)	-0.38259
Correlation (TE & WNP)	0.004513
Correlation (AD & WNP)	0.723558

Calculation of correlation of selected small cap stock (Table 5)

Portfolio return of small Cap stocks (assuming equal weights on all stocks):

$$\begin{aligned} \text{Portfolio Return} &= (w_1 \times r_1) + (w_2 \times r_2) + (w_3 \times r_3) + (w_4 \times r_4) + (w_5 \times r_5) \\ &= (0.2 \times 31.82) + (0.2 \times 83.31) + (0.2 \times 77.56) + (0.2 \times 84.51) + (0.2 \times 75.87) \end{aligned}$$

$$= 6.36364 + 16.66266 + 15.5128 + 16.90108 + 15.17434$$

Portfolio return = 70.61%

Calculation of portfolio risk of small cap stocks

Portfolio Risk =

$$\begin{aligned} &\sqrt{\{(w_1 \times \sigma_1)^2 + (w_2 \times \sigma_2)^2 + (w_3 \times \sigma_3)^2 + (w_4 \times \sigma_4)^2 + (w_5 \times \sigma_5)^2 + (2 \times w_1 \times w_2 \\ &\times \sigma_1 \times \sigma_2 \times \text{Cor}_{12}) + (2 \times w_1 \times w_3 \times \sigma_1 \times \sigma_3 \times \text{Cor}_{13}) + (2 \times w_1 \times w_4 \times \sigma_1 \times \sigma_4 \times \\ &\text{Cor}_{14}) + (2 \times w_1 \times w_5 \times \sigma_1 \times \sigma_5 \times \text{Cor}_{15}) + (2 \times w_2 \times w_3 \times \sigma_2 \times \sigma_3 \times \text{Cor}_{23}) + (2 \times \\ &w_2 \times w_4 \times \sigma_2 \times \sigma_4 \times \text{Cor}_{24}) + (2 \times w_2 \times w_5 \times \sigma_2 \times \sigma_5 \times \text{Cor}_{25}) + (2 \times w_3 \times w_4 \times \sigma_3 \\ &\times \sigma_4 \times \text{Cor}_{34}) + (2 \times w_3 \times w_5 \times \sigma_3 \times \sigma_5 \times \text{Cor}_{35}) + (2 \times w_4 \times w_5 \times \sigma_4 \times \sigma_5 \times \text{Cor}_{45})\}} \end{aligned}$$

$$= \sqrt{(88.936 + 884.932 + 432.998 + 566.916 + 398.809 + 414.301 + (261.269) + 416.033 + 175.148 + (534.329) + 1200.985 + 1067.424 + 123.863 + 3.740 + 689.08)}$$

$$= \sqrt{(2372.591 + 209.884 + 3085.093)}$$

$$= \sqrt{(5667.568)}$$

Portfolio risk = 75.28%

Interpretation

From the above, it can be found that the portfolio return on selected small cap stock is 70.61% and the portfolio risk is 75.28% [3-6].

Conclusion

The study is based on the analysis of small cap stocks listed on NSE. This study helps the investor in identifying the performance of selected small cap stocks for a given period. It can be concluded that stock with higher beta value is not preferred as it is exposed to higher market risk. All the small cap stocks has higher standard deviation, therefore it is advised to construct a portfolio to avoid higher risk. This study is an attempt to evaluate the performance of selected small cap stocks listed on NSE and to identify the best stock to invest

and the worst stock to be ignored. If the investors are ready to take higher risk, then the investors are suggested to invest in Aarti drugs and RSS software, where the returns are highest but risk is also high. The investors who are looking for moderate returns are suggested to invest in Tata Elxsi and Wintac pharmaceuticals. The investors who are looking for low risk are suggested to invest in DCB bank. However by constructing a portfolio an investor can minimise the overall risk.

Acknowledgement

None.

Conflict of Interest

None.

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