STUDY ON RISK AND RETURN OF THE SELECTED COMPANIES

Murarishetty Saketh (Roll No 17031E0019), Student at Jawaharlal Nehru Technological University, Kukatpally, Hyderabad, India.

Under the guidance of Dr. Sindhu, Director, School of Management Studies, JNTUH.

Abstract:

Return and risk are inherent in any investment. Investor should carefully scrutinize the available investment avenues to effectively utilize the funds to yield maximum returns on the investible funds. In order to attain this, it is prominent for the investor to evaluate the attributes of risk and return of the investment avenues. There are abundant avenues to invest to gain returns. From government issued treasury bills, fixed income securities like bonds, debentures issued by private firms, commercial bills, equity and preference shares issued by private firms which has different attributes and risks associated with them. Each one of the avenues yield returns which vary from one to other. Like, equity has variable returns and risks which are very high when compared to other investment avenues like bonds or treasury bills. This study is to evaluate return and risk of the selected stocks in comparison with the market and Industrial average. There is a robust growth of IT sector in Indian economy hence it's a golden egg for every investor to earn returns by investing in equities of respective firms. This study is conducted to examine the risk and return of those firms over the last five years. For the study four Information Technology companies which were being listed in National Stock Exchange are selected and their price movements, risk, return, volatility is analysed for the period of five years i.e. from January 2014 to December 2018 using various statistical tools like co-relation, regression, variance and standard deviation.

Key words: risk, return, correlation, volatility.

I. Introduction:

Investing in profuse assets is an activity that attracts mankind from all walks of life irrespective of their financial and economic statue. A potential investor has surplus monetary funds over and above the present or actual consumption. Investment is a process of deployment of funds on diversified assets with an objective of yielding either income or capital appreciation. In finance, investment is a monetary asset procured in an anticipation that asset renders income in future else sold at excess prices for profit. It involves purchase of assets with an intent of holding it for a long term in anticipation of return. It entails procurement of assets like bonds, stocks, derivatives and other financial instruments. Return is inherent from any type of investment. Return is the money made or lost in the investment process. It can also be defined as the proportion of profit received by holding the investment for a period of time. These returns are always uncertain. During the exercise of investment, the current consumption is forfeited to gain a return in the near future. The renunciation has to be borne is certain but the return in future is unpredictable. One of the attribute of investment that specifies risk factor. The risk is taken up for the purpose of anticipation returns from investment. For a layman his adherence to purchase a flat, house or any other good can be termed as investment in his way of looking it. To an economist, the net inclusion to the stock comprising of goods and services utilized in production process can be termed as investment. Whereas, the financial investment is the assignment of monetary funds which are presumed to capitulate in a future time that entails the exchange of financial claims as bonds and stocks. Investment which is presumed to be longer period of time contrary to it, there is speculation which is embracing business with a desire to earn short term gains. It is the time factor that alters the investment from speculation. The objectives of speculator are of relatively short term. The speculator is more curious towards market action and its movements. An investor gauge the intrinsic worth of security whereas the speculator apprises its price variations. Investor endeavours to accomplish a trade-off between risk and return on contrary, speculator presume significant risk than investor. In addition to theses, there is gambling, which is usually presumed to a very short term collated to investment and speculation, it entails artificial risks.

II. Research Methodology:

Review of Literature

Dr. S Poornima and Swathiga P in 2017 analysed the risk and return of selected NSE stocks using Capital Asset Pricing Model of two sectors IT and Automobile and concluded that the Automobile companies yielded better returns than IT companies which yielded negative returns for the calculated period.

Sushma KS in 2019 analysed risk and return of financial services companies of NSE pre and post demonetisation and concluded that there was no noteworthy difference observed in the returns of the stocks over the analysed period and among eight stocks which were being taken for analysis Bajaj Finserv Limited yielded better returns in comparison with other financial services companies chosen for study.

M. Muthu Gopala Krishnan and Amal Vijay A K in 2017 performed a study on return risk analysis of Pharmaceutical companies which were listed in NSE for a period of 5 years and concluded that Sun Pharmaceutical Industries yielded higher return with the exception of higher market risk and volatility, besides Sun Pharma, Divi Pharmaceuticals Limited also yielded the same rate of return yet with a lower market risk and volatility.

Dr. Pramod Kumar Patjoshi in 2016 made a relative study on return risk analysis of BSE Sensex and selected Banking stocks of HDFC, SBI, ICICI, AXIS for a period of fifteen years and deduced that there was a significant relationship between the Banking stocks returns and BSE Sensex index returns as there was a high degree of correlation between the Sensex and selected banking stocks over the calculated period.

Dr P Subramanyam in 2018 analysed the risk return analysis of selected stocks listed in NSE through Fundamental Analysis of the equities. It has been concluded from the Fundamental analysis that the returns yielded by the stocks and in co-relation with the firms' financial position and performance in the market.

Dr. G Sudarsana Reddy in 2013 compared the performance of FMCG companies' stocks in relation to the market (NSE) and concluded that the stocks were highly fluctuating over the period of study and long term investments in the stocks related to FMCG would be more favourable when compared to short term investments.

Objectives of the Study:

- ➢ To compare return and risk associated with the stocks.
- ➢ To compare return associated with the stock with market index and Industrial average.
- ➢ To analyse and compare the volatility associated with the selected stocks in relation to market.

Sampling Technique:

Judgemental sample technique is adopted for selecting the Information Technology stocks which were being listed in National Stock Exchange for analysis. The outcome of the sample is biased since it based on the own judgement.

Data Collection:

Secondary data

The source of data for project is mainly secondary data which was collected from the websites, documents, which were in printed forms like annual reports, books, journals, Government reports, websites etc.

Period of study:

Five years of data is collected for the calculation of β, returns, risk of the stocks i.e., from 01st January 2014 to 31st December 2018. Stock prices are used for calculating returns and risk connected with the shares.

Sample selection:

There has been a prominent, promising growth of IT industry over the years and there has been hindrances due to the various international factors attributed to this industry. Four companies related to IT industry are selected randomly from NSE 50 companies for the study.

Tools used for Analysis:

Capital Asset Pricing Model (CAPM):

$\beta = (\text{covariance } (R_m, R_s))/ (\text{variance } (R_m)) = \{n \sum XY - (\sum X \times \sum Y)\}/ \{n\sum(X^2) - (\sum X)^2\}$

Various statistical tools used for analysis:

- ➢ Mean
- ➢ Variance
- ➢ Correlation
- ➢ Regression

Limitations of the study:

- ➢ No primary data is collected for the study.
- ➢ The study is limited to a period of 5 years
- ➢ Dividends are not considered during the calculation of the average return on the stock

> ➢ Beta is the historical assessment of volatility of the stock which cannot effectively envisage the subsequent risk associated with the stock.

III. Data Analysis and Interpretation:

In this part of the study, the return and risk of the selected companies are calculated and evaluated using various statistical tools. The equity data of the respective firms for the past five years is used for the analysis. For the analysis weekly stock prices are taken into consideration and return and risk is calculated and compared with the market return NSE and industrial average CNX IT. In addition to it, regression and correlation analysis is done to evaluate the relation between individual equities and market movements.

Here the risk and return of the companies for the five years is calculated and evaluated through weekly returns.

Table 1: Risk and Return comparison of the stocks for five year period

Company		Years				
		2014-15	2015-16	2016-17	2017-18	2018-19
HCL	Return	0.375%	0.208%	0.129%	0.150%	0.210%
	Risk	3.974%	4.219%	3.692%	2.280%	3.741%
TCS	Return	0.148%	-0.075%	0.083%	0.294%	0.761%
	Risk	3.161%	3.025%	3.147%	2.962%	3.558%
Tech Mahindra	Return	0.621%	-0.456%	0.005%	0.230%	0.640%
	Risk	3.062%	4.200%	3.721%	3.768%	3.322%
Infosys	Return	0.163%	0.121%	-0.056%	0.155%	0.53%
	Risk	3.134%	3.702%	3.240%	2.791%	3.006%

From the above table it can be analysed that over the calculated period of study TCS has yielded higher returns in comparison to other companies for the same amount of risk. For the same amount of risk between TCS and Infosys TCS yielded better returns than Infosys over the five year calculated period.

Here the NSE market return is compared with the company return for the period of five years.

Table 2: NSE market return and Company return comparison

Years	Return				
	NSE Return	HCL	TCS	Tech Mahindra	Infosys
2014-15	0.587%	0.375%	0.148%	0.621%	0.163%
2015-16	-0.099%	0.208%	-0.075%	-0.456%	0.121%
2016-17	0.188%	0.129%	0.083%	0.005%	-0.056%
2017-18	0.462%	0.150%	0.294%	0.230%	0.155%
2018-19	0.063%	0.210%	0.761%	0.640%	0.525%

From the above table it can be interpreted that HCL and TCS yielded better returns than NSE over the calculated period Tech Mahindra returns were fluctuated and NSE yielded more returns than Infosys for the period of study.

Here CNX IT industrial average is compared with the company returns for the period of five years

Table 3: CNX IT Industrial average and Company returns comparison

Years	Return				
	CNX IT	HCL	TCS	Tech Mahindra	Infosys
2014-15	0.587%	0.375%	0.148%	0.621%	0.163%
2015-16	-0.099%	0.208%	-0.075%	-0.456%	0.121%
2016-17	0.188%	0.129%	0.083%	0.005%	-0.056%
2017-18	0.462%	0.150%	0.294%	0.230%	0.155%
2018-19	0.063%	0.210%	0.761%	0.640%	0.525%

From the above table it can be deduced that HCL, TCS yielded better returns than CNX IT industrial average whereas Tech Mahindra results were fluctuating on the other hand CNX IT yielded better results when compared to Infosys. In all the companies there has been reduction in returns from 2014-16 but from 2016-19 there has been positive trend in the returns.

Here volatility of the companies is analysed through Correlation coefficient and Beta

Table 4: Beta and Correlation coefficient for companies over five years

Companies	Beta	Correlation coefficient
HCL	0.520	0.4865
TCS	0.614	0.6256
Tech Mahindra	0.376	0.7172
Infosys	0.572	0.584

From the above table over the calculated period the value of beta is high from TCS and Tech Mahindra is low i.e. in relation to the market TCS stock has shown high volatility for a change in the market. But, Tech Mahindra has higher correlation coefficient when compared with other firms. But all the values of correlation coefficient is in the range of 0 and 1 which deduce that the stocks are positively correlated to the market.

IV. Findings and Conclusions:

Findings:

➢ The correlation coefficient is 0.520 for the firm HCL and beta value is 0.4865 implies the stock is positively correlated to market. Average return is 0.214% for HCL is higher in relation to the industry average CNX IT and NSE return over the calculated period. Though Industrial average, NSE yielded negative returns in the years 2015-17 HCL stock yielded positive returns during that period.

➢ The correlation coefficient is 0.614 for TCS and beta value is 0.6256 implies the stock is positively correlated to market. Average return is 0.242% for TCS is higher when compared to CNX IT industrial average and NSE market return. The returns of TCS are in trend with the CNX IT and yielded positive returns in 2016-17 where CNX IT yielded negative returns for two years from 2015-17. The returns were higher than NSE and CNX IT in the year 2018-19.

➢ The correlation coefficient is 0.376 for Tech Mahindra which is lower when compared to above firms and beta is 0.7172 implies the stock is positively correlated to market. Average return is 0.2078% is higher than industry return but lower than HCL and TCS. Though the CNX IT, NSE yielded negative return in 2015-16. Tech Mahindra stock performed even worse than industry average and NSE with a return of -0.4564%.

➢ The correlation coefficient is 0.572 for Infosys and beta value is 0.5840 which implies the stock is positively correlated to market. Average return is 0.1815% which is higher than industry average but is lower than the other IT firms during the period of study. Infosys yielded better returns in 2015-16 where CNX IT and NSE yielded negative returns. For the year 2019 Infosys yielded better returns than CNX IT and NSE.

Conclusions:

➢ From the findings, it can be concluded that the equities of HCL, TCS, Tech Mahindra and Infosys were correlated to market and the volatility in their returns was in relation to market performance (beta). For all the stocks beta was in the range of 0 to 1 over the calculated period.

➢ The returns were TCS was higher than the market returns (NSE) and also the industry returns (CNX IT). HCL returns were stable, Infosys yielded less returns and Tech Mahindra returns were highly volatile during the calculated period. On the other hand all the stocks had higher degree of risk.

➢ When individual companies are compared TCS has yielded higher returns when compared with other firms of the same industry and next to it were HCL followed by Tech Mahindra and Infosys. Among them Infosys had yielded lower returns for higher degree of risk.

➢ While for the relatively same amount of risk between TCS and Infosys, TCS had yielded better returns.

➢ The systematic risk which depicts the volatility of the stock in relation to market shown considerable effect on the return of the stock and all the stocks were in relation with the trends in the market changes.

Suggestions:

➢ Every investor has divergent investment objectives. So, based on the investment objective proper investment avenue must be chosen.

➢ In regard to IT sector which is one of the leading service sector industry in India. There is a scope for lot of development in the future with the advent of new technologies and IT firms in India were able to compete with global markets in rendering products and services to its clients all over the world.

➢ As, Information Technology sector is subject to global economy. Changes in economic and other policies of the countries in which they are operating may affect the return of the stock and also internal policies of the company. So, there is a degree of risk associated with it.

➢ Hence, IT sector is growing at a good rate year after year in the country and globally. One can invest in IT companies for a long term investment objective rather than opting for short term speculations through price changes in the market.

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MURARISHETTY SAKETH

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