INTERNATIONAL JOURNAL OF ADVANCE RESEARCH AND DEVELOPMENT

IJARnD

(Volume2, Issue5)

Available online at www.ijarnd.com

Equity Analysis of Automobile Industry in Indian Stock Market

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ABSTRACT

Every individual always wishes to get a decent return on his/her investments because investor makes the investment from the hard earned savings. Among the various schemes of investment, the equity market is considered to be one of the most rewarding avenues even though it involves more risk. Since the risk is very high in equity investment, the investors need to make equity analysis that helps them to know about the risk-return characteristics of those equity shares and those industries in which he/she wishes to park the savings. In this outlook, a study has been undertaken to analyse the equity shares of companies in the automobile industry of Indian stock market. Indian automobile industry is one of the largest in the world and considered to be one of the fastest growing sectors. In order to maintain the growing demand, many automakers have started to invest in this industry. So the study on equity analysis of this industry will help the potential investors in taking informed and rational investment decision. This study is conducted for a period of 5 years, covering from 2012 to 2017. It takes only 50% of the total companies forming NIFTY Auto index as on 21st April 2017. That is 8 companies. From the analysis, it is found that among all other companies Mahindra & Mahindra Ltd is the best company to invest because its beta value is less than one (0.9082) and it has a positive alpha value (0.0073).

Keywords: Risk and Return Analysis.

INTRODUCTION

Most of the investors commonly make poor investment decision caused by mental biases and emotions. All the investors make their investment with an avowed objective of increasing their wealth. Among the various investment opportunities equity market is said to be one of the most rewarding investment options even though it involves more risk. Since the risk is very high on such investment, the investors need to make equity analysis that helps them to know about the nature of those equity shares and those industries where they park their money. Therefore the equity analysis will help the potential investors in taking a rational and informed investment decision.

In this background, a research has been carried out to study the equity shares of sampled companies in Automobile Industry in Indian stock market. The automobile industry in India is one of the largest in the world and considered to be a fastest growing sector. The automotive industry has a strong multiplier effect on the economic growth of a country. The industry accounts for a 7.1% of the country's GDP and it has strong export growth expectations for the near future. Moreover, the emerging interest of the companies in exploring the rural markets further aided the growth for this sector. And in order to maintain the growing demand, many auto makers have started to invest in this industry. The main companies that present in Indian automobile market include Tata Motors Limited, Maruti Suzuki India Limited, Mahindra & Mahindra Limited, Ashok Leyland Limited etc.

STATEMENT OF THE PROBLEM

The investment made in any security involves the element of risk which may be very high or low. But such risk depends upon the nature of the equity shares and the industry which the company belongs to. Therefore before taking any rational investment decision, it is good for the investors to analyse the equity in terms of risk and return that provides a clear idea regarding the risk return characteristics of the equity. This study is undertaken to analyse the equity of selected automobile companies listed in Indian stock market.

NEED FOR THE STUDY

Indian automobile industry is one of the most preferred sectors by the investors since it is considered as a world's largest and fastest growing sector. Many automakers have started to invest in this sector. Among the equities listed on Indian stock exchange, the equity of automobile industry is considered to be one of the most rewarding securities. Similar to its reward it involves high-risk characteristics also. Therefore while making an investment in the automobile sector, a clear equity analysis is needed. This research on equity analysis of automobile industry in Indian stock market provides sufficient information for the potential investors in taking a rational and informed investment decision.

REVIEW OF LITERATURE

T. Mallikarjunappa and Shaini Naveen (2016) conducted a study on Comparative Analysis of Risk and Return with Reference to Stocks of CNX Bank Nifty. This study analyzes the risk and returns in the banking sector. They compare the performance of the 12 listed banks in the Nifty Bank Index. The study also analyses the performance of banking stocks mainly to understand the required rate of return and risk of a particular stock based on different risk elements prevailing in the market and other economic factors.

Dr. S. Krishnaprabha and Mr. M. Vijayakumar (2015) conducted a study on Risk and Return Analysis of Selected Stocks in India. Risk and return analysis play an important role in the decision-making process of most of the investors. Long term investors were able to take advantage of the market as it less volatile. As there is less fluctuation in the shares when compared to the market as well as its prices, the long-term investors are able to predict when the share will raise. The majority of Information Technology, Fast Moving Consumer Goods, Pharmaceutical Sectors give more return while compared to Banking and Automobile sector.

Dr. Anubha Srivastava (2014) conducted a comprehensive study of Performance of Indian Automobile Industry. In that study the Researcher analyses 3 major automobile companies in India that are Maruti, Mahindra, and Tata. The study found that the performance of the auto sector is directly related to the country's economic trend. It is also found that Mahindra and Mahindra are the most correlated to the auto index than the other two companies. The increasing demands and sales numbers of Indian auto bring many opportunities for these players.

Dr. M. Muthu Gopalakrisnan and Dr. K. V. Ramanathan (2013) conducted a Study on Volatility in Indian Stock Market – A Study of Post and Prerecession Period. In this study, the Researchers try to analyse price fluctuation in Indian stock market. Estimating the volatility in the market will help the investors in estimating or calculating their risk. They analyse the volatility of sectoral index listed in Nifty as on 28-03-2013 using daily opening price, closing price, high and low prices of 31 selected companies. This study helps in identifying volatility relationship during Pre-Recession and Post-Recession period.

S.Nagarajan and K.Prabhakaran (2013) conducted a study on Equity Analysis of Selected FMCG Companies Listed on NSE. They had used standard deviation, co- efficient of variation and beta for analysing the shares of various selected FMCG companies. They found that the Nestle India Ltd share price has 53% relationship with nifty index. It was much lower than other companies selected from the FMCG sector.

Dr. P Vikkreaman and P Varadharajan (2009) analysed the equity of selected companies in the automobile industry for the period of 2004 to 2007. They use Beta and Alpha techniques for analysing risk and return of the automobile companies. The calculation of the return indicator and systematic risk provide a clear understanding regarding the investment decisions on these companies.

OBJECTIVES OF THE STUDY

- To analyse risk and return of equity shares of automobile industry in India
- To compare the risk and return characteristics of selected automobile companies in Indian stock market
- To find out the extent of the relationship between automobile companies and market index.
- To offer valid suggestions for the investors in the automobile industry in order to take a rational decision.

METHODOLOGY

Indian equity market is one of the fastest growing and most preferred by the investors. Investors prefer this form of Investment Avenue because it provides more return for them. Similar to its return, it also involves more risk.

This study has analysed the equity of selected automobile companies in India. This helps the investors in understanding the risk and return characteristics of the equity of automobile industry in Indian stock market. This study is of descriptive in nature. That is, the Researcher has described the characteristics of the risk and return of the selected equity shares of Indian automobile industry.

PERIOD OF THE STUDY

In this study, it is decided to analyse the equity shares of selected automobile companies in Indian stock market for a period of 5 years, covering from 2012 to 2017. This period is selected by the Researcher because it gives a clear idea about the current scenario regarding the equity shares of Indian automobile industry.

SELECTION OF SAMPLE COMPANIES

In NIFTY Auto index as on 21st April 2017, there are 16 automobile companies. The Researcher takes 50% of such companies for conducting the study that forms a sample size of 8 companies. The names of those 8 companies are as follows.

1) Mahindra & Mahindra Ltd.
2) Maruti Suzuki India Ltd.
3) Tata Motors Ltd.
4) Ashok Leyland Ltd.
5) Bosch Ltd.
6) Eicher Motors Ltd.
7) Apollo Tyres Ltd.
8) Hero MotoCorp Ltd.

DATA COLLECTION

This study is completely based on secondary data mainly collected from the website of NSE (*https://www.nseindia.com/*). In addition to that, the data has also been collected from published sources and also from websites, newspapers (Business Standard. Economic Times), and Report by Management, Scholars, Researchers etc.

TOOLS FOR DATA ANALYSIS

The collected data have properly been analysed with the help of Microsoft Excel by applying various statistical tools. The researcher has mainly used the following techniques for analysing the collected data.

- Mean
- Standard deviation
- Variance
- Co-efficient of variance
- Correlation
- Beta

LIMITATIONS OF THE STUDY

Like other studies, this study also has its own limitations. They are:-

- The analysis was completely based on the secondary data collected from the website of NSE, published literature, annual reports, etc., and so the findings of the study entirely depend on the accuracy of such data.
- Different experts have different opinions regarding the analysis of equity shares, therefore, the view used in this study can't be treated as the absolute and perfect.
- The Researcher uses some statistical tools for analyzing and interpreting the collected data. Therefore the analysis is affected by the natural limitations of the statistical tools.

DATA ANALYSIS AND INTERPRETATION

This section of the research paper discusses the analysis of data and interpretation in terms of mean return, the standard deviation of the return, variance of the return, the coefficient of variation of return, correlation coefficient of return of individual companies and that of market beta and alpha of the selected automobile companies.

TABLE No. 1
MEAN RETURN OF AUTOMOBILE COMPANIES

Sl. No.	Name of the Company	Mean Return
1	Mahindra & Mahindra Ltd.	-0.0617
2	Maruti Suzuki India Ltd.	-0.1362
3	Tata Motors Ltd.	-0.0678
4	Ashok Leyland Ltd.	-0.1096
5	Bosch Ltd.	-0.0957
6	Eicher Motors Ltd.	-0.2227
7	Apollo Tyres Ltd.	-0.1104
8	Hero MotoCorp Ltd.	-0.0488

Source: Compiled and Calculated.

It has been observed from Table 1 that during the study period that is 2012 to 2017, all the companies show a negative daily mean return. The daily mean return is recorded as highest (0.0488) in the case of Hero MotoCorp Ltd. Eicher Motors Ltd has the lowest daily mean return that is -0.2227.

TABLE No. 2
STANDARD DEVIATION OF AUTOMOBILE COMPANIES

Sl. No	Name of the Company	Standard Deviation
1	Mahindra & Mahindra Ltd.	1.6569
2	Maruti Suzuki India Ltd.	1.7185
3	Tata Motors Ltd.	2.2689
4	Ashok Leyland Ltd.	2.3895
5	Bosch Ltd.	1.6045
6	Eicher Motors Ltd.	2.0426
7	Apollo Tyres Ltd.	2.5157
8	Hero MotoCorp Ltd.	1.5895

Source: Compiled and Calculated.

From the Table 2, it is inferred that the standard deviation is high for Apollo Tyres Ltd (2.5157) and it is very low for Hero MotoCorp Ltd that is 1.5895. Ashok Leyland, Tata Motors, and Eicher Motors Ltd have a standard deviation of more than 2. Since the standard deviation of return denotes the total risk, it is found that among the selected companies, Apollo Tyres Ltd has the highest risk.

TABLE No. 3
VARIANCE OF AUTOMOBILE COMPANIES

Sl. No	Name of the Company	Variance
1	Mahindra & Mahindra Ltd.	2.7455
2	Maruti Suzuki India Ltd.	2.9532
3	Tata Motors Ltd.	5.1483
4	Ashok Leyland Ltd.	5.7099
5	Bosch Ltd.	2.5746
6	Eicher Motors Ltd.	4.1723
7	Apollo Tyres Ltd.	6.3289
8	Hero MotoCorp Ltd.	2.5266

Source: Compiled and Calculated.

It is clear from Table 3 that the variance is recorded to be the highest for Apollo Tyres Ltd (6.3289) followed by Ashok Leyland (5.7099) and Tata Motors (5.1483). It is recorded very low as 2.5266 for Hero MotoCorp Ltd. So it is found that among the selected companies Hero MotoCorp Ltd has the lowest risk.

TABLE No. 4
COEFFICIENT OF VARIATION OF AUTOMOBILE COMPANIES

Sl. No	Name of the Company	Coefficient of Variation
1	Mahindra & Mahindra Ltd.	-2685.3010
2	Maruti Suzuki India Ltd.	-1261.0932
3	Tata Motors Ltd.	-3345.2011
4	Ashok Leyland Ltd.	-2179.0472
5	Bosch Ltd.	-1675.8348
6	Eicher Motors Ltd.	-916.9067
7	Apollo Tyres Ltd.	-2276.8474
8	Hero MotoCorp Ltd.	-3255.2384

Source: Compiled and Calculated.
Table 4 shows that all the automobile companies have a negative Coefficient of Variation and it is recorded a high coefficient of variation for Eicher Motors Ltd (-916.9067). The lowest value of Coefficient of Variation is -3345.2011 that is for Tata Motors Ltd.

TABLE No. 5
CORRELATION COEFFICIENT OF AUTOMOBILE COMPANIES

Sl. No	Name of the Company	Correlation Coefficient
1	Mahindra & Mahindra Ltd.	0.6580
2	Maruti Suzuki India Ltd.	0.6151
3	Tata Motors Ltd.	0.8168
4	Ashok Leyland Ltd.	0.4917
5	Bosch Ltd.	0.4160
6	Eicher Motors Ltd.	0.4234
7	Apollo Tyres Ltd.	0.4461
8	Hero MotoCorp Ltd.	0.5484

Source: Compiled and Calculated.
Table 5 exhibits the correlation coefficient between the daily return of individual automobile companies and the return of NIFTY Auto index. It can be understood that all the automobile companies return are positively correlated with the return of NIFTY Auto index. The correlation is highest for Tata Motors Ltd as compared to other company that is 0.8168 and it is very low for Bosch Ltd (0.4160).

TABLE No. 6
BETA AND ALPHA OF AUTOMOBILE COMPANIES

Sl. No	Name of the Company	Beta	Alpha
1	Mahindra & Mahindra Ltd.	0.9082	0.0073
2	Maruti Suzuki India Ltd.	0.8805	-0.0692
3	Tata Motors Ltd.	1.5437	0.0496
4	Ashok Leyland Ltd.	0.9786	-0.0352
5	Bosch Ltd.	0.5561	-0.0534
6	Eicher Motors Ltd.	0.7204	-0.1679
7	Apollo Tyres Ltd.	0.9348	-0.0393
8	Hero MotoCorp Ltd.	0.7262	0.0064

Source: Compiled and Calculated.
It is clearly understood from Table 6 that all automobile companies show a positive volatile during the study period. Tata Motors Ltd shows the highest beta value of 1.5437 followed by Ashok Leyland Ltd (0.9786). Bosch Ltd assumes a very low Beta value among all sample companies (0.5561). The table also shows the return indicator that is alpha. The highest alpha value is 0.0496 that is for Tata Motors Ltd. except for Mahindra & Mahindra and Hero MotoCorp all other companies have a negative alpha value

FINDINGS

- During the study period, the average daily return of all the selected companies in the automobile sector is negative. Among all the companies, Hero MotoCorp Ltd (-0.0488) has the highest negative daily average return.
- The correlation coefficient between the daily return of selected automobile companies with the return of NIFTY Auto index is highest for Tata Motors Ltd as compared to other company that is 0.8168 and it is very low for Bosch Ltd (0.4160)**.**
- Tata Motors Ltd has a beta value of more than one (1.5437). It shows that the market risk of Tata Motors is very high. On the other hand, the alpha value is also high for Tata Motors (0.0496). Therefore it has a potential of gaining a high return.
- The beta values of all other companies are less than one. Therefore the risk of such equity will be low. Similarly, their alpha values are also less. Therefore such equities have a low return.

CONCLUSION

In order to achieve the objective of maximizing the return, the investors need to consider both risk factor and return potential of various companies under consideration. That will be differing from companies to companies. Equity analysis is one of the most important techniques used to measure the risk and return factor of equities of different companies. From this analysis, it is concluded that the Bosch Ltd equity has a low beta value (0.5561) so it is less risky and the volatility of price is lesser than the market. But its alpha value is very low (-0.0534). Tata Motors Ltd gives a high return as compared to other equities but its beta value is also very high. Thus it involves more risk. Among all other companies, Mahindra & Mahindra Ltd is the best company to invest because its beta value is less than one (0.9082) and it has also a positive alpha value (0.0073).

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