IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 4.819
Volume 5, Issue 1, June 2019

Risk and Return Analysis of Tourism Companies: Evidence from National Stock Exchange Index in India

Dr. Sanjay Joshi[1] and Ms. Priti Mehta[2]
Assistant Professor, SDJ International College, Vesu, Surat, India[1]
Assistant Professor, Bhagwan Mahavir College of Business Administration, Vesu, Surat, India[2]

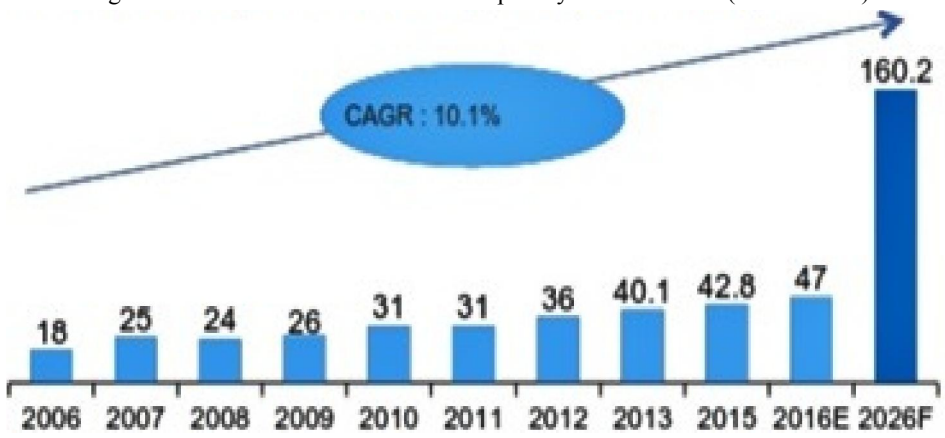
Abstract: *Risk and Return of securities are major concern for every investor whether they invest domestically or internationally. It is said that "Higher the Risk, Higher the Return" and visa-versa. So risk and return will move in tandem and the investors have to expose trade off all the time. The present study examines the risk and return pattern of Tourism companies listed on NSE Index in India. In order to fulfill the objective, the study used simple daily and yearly return formula and standard deviation as risk measurement techniques. Further return comparison has been done by applying ANOVA but data are not found normally distributed so the study applied a non parametric Kruskal Wallis Test. The necessary stock price data for all selected companies have been sourced from NSE website. The study conducted on past data starting from 1st January 2011 to 30th June, 2017. The study concludes that the risk return profile of tourism companies is volatile and showing greater amount of variations in the return as well as in the standard deviation. The research is useful to the investors, economist and tourism companies for further validation and comparison with other allied industries like transport, tours, hotels, travelling etc.*

Keywords: Return, Standard Deviation, Kruskal Wallis Test, Normal Distribution

I. INTRODUCTION

Security trading has increased significantly from last few decades. Cross border transactions have increased significantly throughout the world and the impact of the same on the economy is observed. Moreover, tours and travels are playing significant roles in economic and business deals. Followings are the data for tourism sector contribution in Indian economy.

Figure 1 Contribution of Tourism & Hospitality toIndia's GDP (USD Billion)



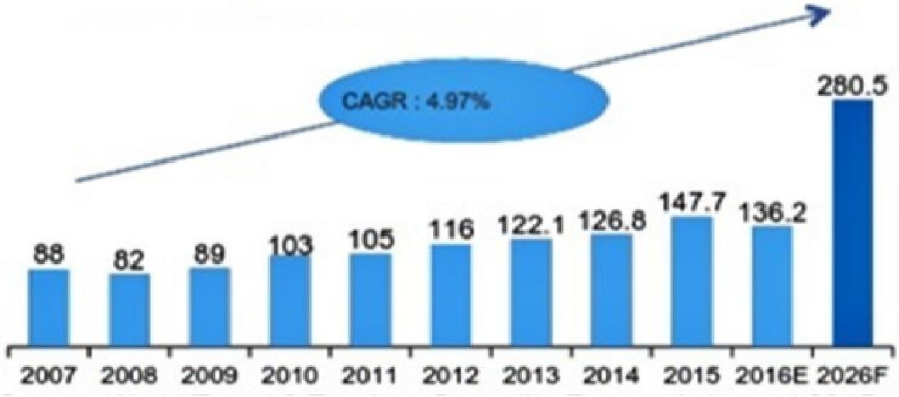
Source: World Travel and Tourism Council's Economic Impact 2015

Tourism in India accounts for 7.5 per cent of the GDP and is the third largest foreign exchange earner for the country. The tourism and hospitality sector's direct contribution to GDP in 2016 is estimated to be US$47 billion. The direct

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 4.819
Volume 5, Issue 1, June 2019

contribution of travel and tourism to GDP is expected to grow at 7.2 per cent per annum, during 2015 – 25, with the contribution expected to reach US$160.2 billion by 2026.

Figure 2 Contribution of Travels & Tourism to India's GDP (USD Billion)



Source: World Travel and Tourism Council's Economic Impact 2015

The sector's total contribution to GDP is expected to increase to US$ 136.2 billion by the end of 2016 and is expected to further grow to US$ 280.5 billion by 2026. The total contribution of travel and tourism to Indian GDP is forecasted to increase by 4.97 per cent per annum to US$ 280.5 billion by 2025 (7.2 per cent of GDP).

Looking to the above past figures and estimated figures of Tours, Travels and Hospitality sector, there are great amount of potential available. So the study focuses on Tourism service provider companies listed on NSE index in India.

Recent development in financial market has led to the use of various models and techniques that can model the attitude of investors not only towards expected returns but also towards unsystematic risk which is uncertain. But in this study we have used only simple average daily return for each year and standard deviation as a measurement of return and risk respectively. Return calculation was done like present closing price minus previous closing price and this difference is been divided with previous closing price of all companies. Standard deviation has been used as a measure risk which is very basic and widely used techniques in financial analysis.

The present study examines the return and risk of selected companies from tourism sector. The companies chosen for the study are all service provider companies listed on NSE500 Index. Out of them, only Tours, Travels and Hotel Service providers are considered for further data analysis. The companies are BalmerLawrie& Co. Ltd., Cox & Kings Ltd., Delta Corp Ltd., EIH Ltd., Gateway Distriparks Ltd., Indian Hotels Co. Ltd., Mahindra Holidays & Resorts India Ltd., and Thomas Cook (India) Ltd.

The purpose of taking these companies are very clear that in India tourism sector is widely developed in Indian market as well as international market by these giant organizations. However, seasonal demand, festivals and currency fluctuations are fundamental determinants of tourism sectors' performance in the market but still short term predictions possible with the help of various mean – variance analysis.

The remainder paper is scheduled as wide literature has been done on the risk return analysis with the help of average daily return and standard deviations, then after the next chapter shows the methodology. Empirical Data analysis and interpretations are there and at the end conclusions have been drawn after making detailed inferences out of risk return analysis.

II. LITERATURE

Vikraman P. and Varadharajan P. (2009) have worked on "A Study on Risk & Return analysis of Automobile industry in India".Based on the calculated values of Alpha (the returnIndicator) and the Beta (Systematic risk) for the fivedifferent firms between the periods of 2004- 2007, the Expected Return and risk involved in theinvestments made in these firms have been found.These calculations can help in certain analysis thatcould be made for a clear understanding about theinvestment decisions on these firms.

Naveen S., Mallikarjunappa T. (2016) worked on "A Study On Comparative Analysis Of Risk And Return With Reference To Stocks Of CNX Bank Nifty"Based on the calculations the investor can come to a conclusion that

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 4.819
Volume 5, Issue 1, June 2019

investors should analyze the market on a continuous basis which will help them to pick the right companies to invest their funds.

Ivanovski Z. Et. Al. (2016) studied "Macedonian Tourism Insight through the Analysis of Stocks Returns of Quoted Tourism Companies at MSE". The linear regression and correlation analysis oftwo securities provide evidence for statistical significance of their stocksdailyreturns at MSE. On the contrary, regression analysis did not reveal a statisticallysignificant relationship between MTUR, MPOL and MBI-10. Through theanalysis of daily stocksreturns at MSE they could not determine a statisticallysignificant relationship between tourism growth in the Republic of Macedoniaand tourism companies securities prices in the last two years. Some implicationsfor tourism planning and portfolio management can be drawn.

Yongsheng C. and Jie J. (2014) had "Value Analysis of Listed Tourism Companies Based on Securities Investment". Based on the model analysis, factors that affect the investment value of listed companies aremainly six principal components, which explained 85. 53% of the original information and the degreeof impact on the value of investments are weakened in turn. The largest price gain during the past 6months and the maximum retracement during the past 6 months have the greatest impact on the price ofshort- term fluctuations. The growth of the company's performance, including EPS growth and ROE, the impact of the capital structure is much greater than we used tothink of, net profit for shareholders are important factor. The location of tourismcompanies also has influence on the share price, but it has little effect.

Chan F. and Lim C. (2011) studied on Tourism stock performance and macro factors. The purpose of this paper is to examine the relationship between hospitality-tourism stock prices andmacroeconomic factors in New Zealand using co-integration analysis and Vector Error Correction Model(VECM).Theresults provided empirical evidence on the existence of relationships between the stock returns of tourismcompanies and macro-economic variables. This should provide invaluable insight for governmental policymakers when designing monetary and fiscal policies as well as executives from these individual firms toforecast the stock returns of their companies.

Dickson T. and Dolnicar S. (2004) analyzed the role of perceived risk inadventure tourism. The aim ofthis paper is to investigate past literature on risk in the context of tourism consumer behavior and to compareoperationalisation of perceived risk in this context that has been developed in the past. The study is a reviewpaper and as such functions as an initial step of an exploratory study to determine factors of demandincreasingperceived risk relevant to define the concept. Based on the review an initial conceptualization ofdemand-increasing perceived risk (desired risk) in the area of adventure tourism is provided.

Pillai K. R. and Rao M. S. (2014) studied Risk and Return Analysis of Commercial Paper. The study depicts the behavior of rate of return and risks associated with commercial paper against the backdrop of the global financial crisis. A remarkable finding of the study is that as the Indian outstanding commercial paper market increases considerably, the US market experiences a sizeable decrease.

RashinkarS. M. and Divya U. (2014)made a research on Market Risk Analyses of selected Banking Stocks (Nationalized Banks) in Indian Context. They concluded based on systematic risk measured on beta value. The betas of State Sank of India, Industrial Development Bank of India,& Syndicate Bank were negative which implies that these stocks moved against the marketand less affected by market risk. On the other hand the betas of Punjab National Bank & Bank of Baroda were more than one. It indicates that these stocks were exposed to high market risk; i.e., any small changes in the market will directly impact on these stocks.

Narayanasamy R. and Thirugnanasoundari R. (2016) analyzed Risk and Return Analysis of Equity Shares withSpecial Reference IT Companies (NSE) StockIndex. The presence of randomness of thereturn series of both monthly market and monthlysecurity returns in India has proved that the Indianstock market is weakly efficient. It is noteworthy toexpress that the Indian capital market exhibits apositive risk-return relationship.

III. METHODOLOGY

The basic purpose of the present study is to identify the risk return profile of tourism companies listed on NSE India Ltd. Further the study is extended towards mean comparison of various selected companies. In order to fulfill the mentioned objectives, the study employed average yearly return calculated as present value minus previous value divided by previous closing price of each stock price. Risk has been measured with the help of standard deviation which

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 4.819
Volume 5, Issue 1, June 2019

is widely used in financial market. Further Kruskal Wallis test a non parametric version of ANOVA for mean rank comparison among the selected tourism companies. Necessary secondary data have been sourced from www.nseindia.com for closing price and also sued books, journals for more information.

The data collected from January 2012 to June 2017 which gave total observation of 1363. Company selection has been done as all the service provider companies have been considered from the NSE 500 list. Later on the study focused only on tourism service provider in particular. Total 8 companies found for the study in tourism sector and out of them 7 were finally selected for the study because one of company named a Wonderla Holidays Ltd is listed on NSE from 2013 so it did not match with the criteria of data availability.

The study will be useful to retail as well as institutional investor who wish to invest in tourism stocks. Risk and return is the fundamental pillar of any investment avenue. Based on the above methodology following chapter is on data analysis and interpretation.

Return Calculation:

$$R_i = (P_1 - P_0) / P_0$$

Where, R_i stands Abnormal Return

P_1 = Current Market Price of Share

P_0 = Previous Market Price of Share

Risk Calculation:

Standard deviation has been taken as a measure of risk for this study.

Empirical Analysis:

Figure 3 Balmer Lawrie & Co. Ltd.

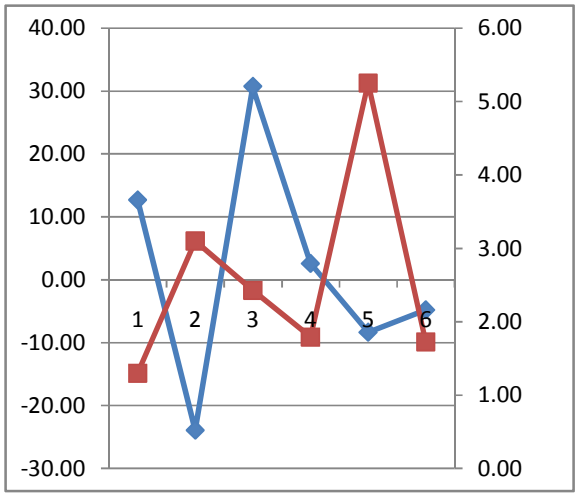


Figure 4 Cox & Kings Ltd.

Source: Excel Output

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 4.819
Volume 5, Issue 1, June 2019

Figure 4 Delta Corp. Ltd.

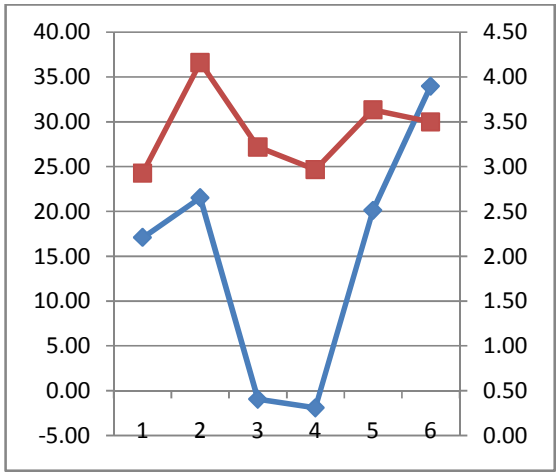
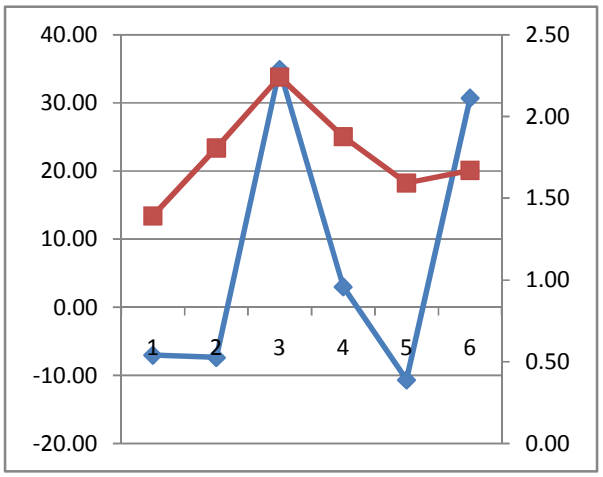


Figure 6 EIH Ltd.



Source: Excel Output

The figure number 3, 4, 5 and 6 indicating the risk return profile of Balmer&Lawrie, Cox 7 Kings, Delta Corporation and EIH respectively. Overall return of all the tourism company is so volatile. Three times Negative return reported by Cox & King and EIH Ltd. While Balmer and Delta Corporation reported twice. In recent past, Delta Corporation is doing well but simultaneously the risk element is also increasing. So the saying is acceptable as return increases, risk is also going to increase.

Figure 5 Gateway Distriparks Ltd.

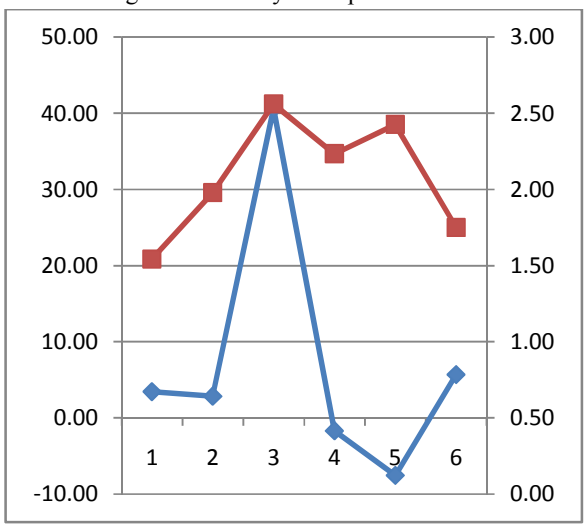
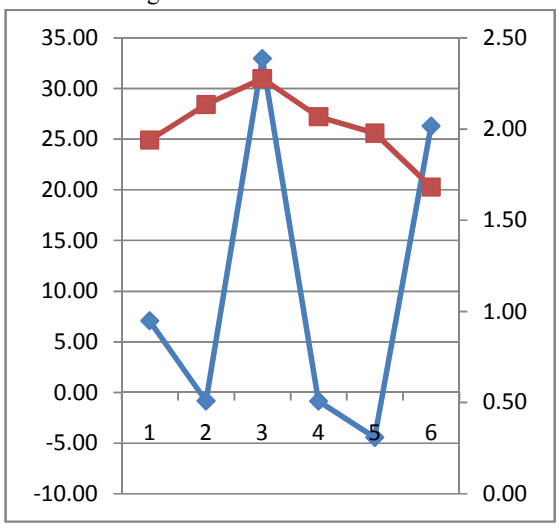


Figure 8 Indian Hotels Co. Ltd.



Source: Excel Output

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 4.819
Volume 5, Issue 1, June 2019

Figure 6 Mahindra Holidays & Resorts Ltd.

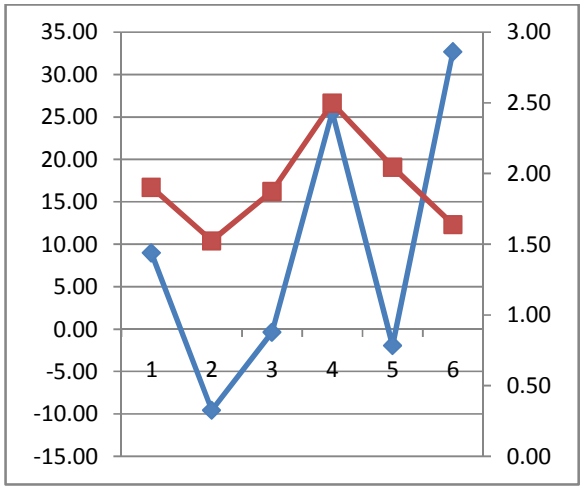
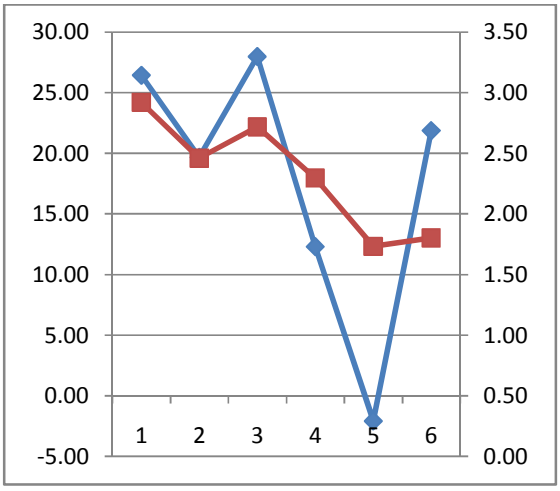


Figure 10 Thomas Cook (India) Ltd.



Source: Excel Output

The figure number 7, 8, 9 and 10 indicating the risk return profile of Gateway, Indian Hotels, Mahindra Holidays and Thomas Cook respectively. Indian Hotels and Mahindra have reported three times negative return while Thomas Cook has reported only once. Interesting result found from Thomas Cook as standard deviation of return series is getting decreased year by year and simultaneously return is also getting decreased. Maximum return generated by Mahindra holidays with minimum risk which is a good sign of management.

Table 1 Normality Test for Average Yearly Return

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Average Yearly Return	0.165	48	0.002	0.933	48	0.009

Source: SPSS Output

The table number 1 shows the result of normality testing for average yearly return generated by companies. for average yearly return generated by companies. Kolmogorov-Smirnov and Shapiro Wilk Both test statistics are 0.002 and 0.009 respectively which is les then 0.05. so we reject the null hypothesis of data are normally distributed. Thus normality is the basic assumption of further ANOVA testing. It is not possible to perform ANOVA is such condition so followings are the results of Kruskal Wallis non parametric test.

Table 2 Mean Rank of Return for Tourism Companies

	Company Name	N	Mean Rank
Average Yearly Return	BalmerLawrie& Co. Ltd.	6	18.17
	Cox & Kings Ltd.	6	22.00
	Delta Corp Ltd.	6	29.17
	EIH Ltd.	6	21.33
	Gateway Distriparks Ltd.	6	24.17
	Indian Hotels Co. Ltd.	6	26.17
	Mahindra Holidays & Resorts India Ltd.	6	24.00
	Thomas Cook (India) Ltd.	6	31.00
	Total	48	

Source: SPSS Output

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 4.819
Volume 5, Issue 1, June 2019

Table 3 Kruskal Wallis Test Statistics

	Average Yearly Return
Chi-Square	3.782
df	7
Prob. Value	0.804

Source: SPSS Output

Table number 2 and 3 represents the test statistics of Kruskal Wallis test. Before interpreting table number 2, we will first interpret the output of table number 3. Probability value is 0.804 which is greater than 0.05 so we fail to reject the null hypothesis of there is no significant difference among the mean yearly return of tourism companies under study. Thus we can say that table number 2 mean ranks is showing difference but the difference is not statistically significant. In other words, all the companies' average yearly return is equal.

IV. CONCLUSION

The study concludes that the risk return profile of tourism companies is volatile and showing greater amount of variations in the return as well as in the standard deviation. Interestingly all the companies' performance in terms of return has increased in one and half year. Further the study concludes from the mean rank test, all the companies under study are equal in generating yearly average return. This may the good news for investors who are looking an investment opportunity in tourism sector. The research is useful to the investors, economist and tourism companies for further validation and comparison with other allied industries like transport, tours, hotels, travelling etc.

REFERENCES

[1]. Black Ken, (2004), "Business Statistics", Wiley India Pvt. Ltd., New Delhi, pp. 48-50, pp. 76-78.
[2]. Chan F. and Lim C. (2011), "Tourism stock performance and macro factors", 19th International Congress on Modeling and Simulation", Perth, Australia, PP. 1596-1602
[3]. Dickson T. and Dolnicar S. (2004), "No risk, no fun: The role of perceived risk in adventure tourism", Proceedings of the 13th International Research Conference of the Council of Australian University Tourism and Hospitality Education (CAUTHE 2004)
[4]. Ivanovski Z. Et. Al. (2016), "Macedonian Tourism Insight through the Analysis of Stocks Returns Of Quoted Tourism Companies At MSE", SITCON 2016.
[5]. Narayanasamy R. and Thirugnanasoundari R. (2016), "SSRG International Journal of Economics and Management Studies,volume 3, issue 2. PP. 1-4
[6]. Naveen S., Mallikarjunappa T. (2016), "A Study on Comparative Analysis of Risk and Return with Reference to Stocks of CNX Bank Nifty", International Journal of Scientific Research and Modern Education, Vol. 1, Issue 1, PP. 737-743
[7]. Pillai K. R. and Rao M. S. (2014), "Risk and Return Analysis of Commercial Paper", Asia-Pacific Business Review, Oct-Dec. 2011, Vol. VII (4), PP. 40 – 49
[8]. Rashinkar S. M. and Divya U. (2014), "A Study on Market Risk Analyses of selected Banking Stocks (Nationalized Banks) in Indian Context", Acme Intellects International Journal of Research in Management, Vol.- 7 No. 7. PP. 1-7
[9]. Schindler S Pamela and Cooper R Donald (2006) "Business Research Methods", The McGraw-Hill Companies, New Delhi, pp. 69-78.
[10]. Vikraman P. and Varadharajan P. (2009), "A Study on Risk & Return analysis of Automobile industry in India", Journal of Contemporary Research in Management, PP. 35-40
[11]. Yongsheng C. and Jie J. (2014), "Value Analysis of Listed Tourism Companies Based on Securities Investment" PP. 22-30.