A STUDY ON MARKET PERFORMANCE OF SELECTED TELECOMMUNICATION COMPANIES IN INDIA

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ABSTRACT

Risk or uncertainty is an integral part of an investment decision. Technically risk can be defined as a situation where the possible consequences of the decision that is to be taken are known "Uncertainty is generally defined to apply to situations where the probabilities cannot be estimated. Risk and return analysis of an investment opportunity forms the core part of investment management business. Any investment decision is taken to achieve a better return than other available avenues, or expect a higher return than the others .Risk and return analysis of an investment opportunity forms the core part of investment management business. The stock market expectations are enormous, and investors and financial analysts need tested tools to gain information about how companies perform financially compared to their competitors, what they are good at, who the major competitors are, etc. In other words, the telecom companies need to benchmark their performances against competitors in order to remain important players in this global market.

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INTRODUCTION

India operates one of the largest telecom networks in the world adding nearly 200million connections every month. Telephones are an important means of telecommunication. The telecommunication plays an important role in today's market dynamic. In the last decade a dramatic change in the ownership structure of telecommunications companies has taken place, from public (state-owned) monopolies to private companies. The rapid development of mobile telephone networks and video and Internet technologies has created enormous competitive pressure on the companies. As new competitors arise, companies need intelligent tools to gain a competitive advantage. Also, stock market expectations are enormous, and investors and financial analysts need tested tools to gain information about how companies perform financially compared to their competitors, what they are good at, who the major competitors are, etc. In other words, the telecom companies need to benchmark their performances against competitors in order to remain important players in this market.

The telecommunication sector, especially the mobile phone sector, in India is one of the fastest growing business segments of the country which provides a lot of value addition to the society with its service and creation of employment opportunities. At present there are fifteen mobile phone operators in the country - Bharti Airtel Limited (Bharti), Reliance Communications Limited (Reliance), Vodafone Essar Limited (Vodafone), Bharat Sanchar Ni-gam Limited (BSNL)- Government of India owned public sector company, Tata Teleservices Limited (Tata), Idea Cellular Limited (IDEA), Aircel Limited (Aircel), Unitech Wireless Limited (Unitech), Mahanagar Telephone Ni-gamm Limited (MTNL), Sistema Shyam TeleServices Limited (Sistema), Loop Mobile (India) Limited - Formerly BPL Mobile (Loop Mobile), Videocon Telecommunications Limited (Videocon), S Tel Private Limited (S Tel), Himachal Futuristic Communications Limited (HFCL) and Etisalat DB Telecom Private Limited (Etisalat). All of them compete with each other to grab customers by providing wide range of services. They not only offer basic services of cell phone but also produce other value added services. Along with the normal services all of the operators are now offer internet facilities which enable the subscribers to reach the whole world through internet easily and their services include prepaid, postpaid, internet, value added services, roaming and devices.

IMPORTANCE OF THE STUDY

Telephone, the new communication system has altered our patterns of communications and has created economic and social impacts on the lives of the individuals. Now in the present

century, a new technological advancement has hit the telecommunications. The telecommunication companies are facing a competition with the entry of many companies. All the companies are constantly engaged in gaining the attention of the customers by introducing new offers, new schemes like price offers, refund offers, etc. In this paper the researcher analyses the financial performance of selected private sector telecommunication companies in India.

METHODOLOGY OF THE STUDY

In the present study an attempt has been made to examine the market performance of selected Telecommunication Companies in India . The sample companies are selected on the basis of convenient sampling method. The Market Performance of the selected companies taken for the period from January 2009 to December

SAMPLING

The following companies have been selected for the study

- Bharti Airtel
- Reliance Communication
- Idea Cellular
- Tata Communication
- Tata Teleservices
- Tata Teleservices Maharashtra Limited (TTML)

RISK- RETURN RELATIONSHIP

Risk-Return relationship of selected telecommunication companies from the Nifty Index. Return is the yield on a security. The return is better known as reward from investments that includes both current and capital gain or losses. It arises due to increase or decrease of the security prices. There are several concepts of return like current yield, expected earning yield, holding period yield, etc. the return from an investment is the realizable cash flow earned by its owner during the given period of time. Typically it is expressed as a percentage of the beginning of period value of the investment. The rate of return on investment concept can be used not to measure the past performance of companies as a whole or its divisions but also as a guide in making decisions on future commitment.

Risk and return analysis of an investment opportunity forms the core part of investment management business. Any investment decision is taken to achieve a better return than other available avenues, or expect a higher return than the others. But this expectation might not materialize, because of innumerable reasons. This chance of not being able to meet the

expected or targeted return is generally known as risk. Thus analyzing the risk and return profile of the investment strategy assumes centre stage and many theories came into being for better analysis of investment.

RETURN

An investment is a commitment of money that is expected to generate additional money on a bond. An investor expects to receive interest on a stock, dividends may be anticipated. The investor may expect capital gains from some investments and rental income from house property return may take several forms.

There are several concepts of return like current yield, expected earning yield, holding period yield, actual yield and so on. The return from an investment is the realizable cash flow earned by its owner during the given period of time. It is expressed as a percentage of the beginning of period value of the investment. The rate of return on investment concept can be used not only to measure the past performance of the company as a whole, or its divisions but also as a guide in making decisions of future financial commitments.

MEASUREMENT OF RETURNS

In this chapter the return on security is measured on a fortnightly basis throughout formula is

$$\mathbf{r = [p_1 - p_0 / p_0] \times 100}$$

Where,

r = return

p_0 = Opening price of security

p_1 = Closing price of security (fortnightly)

There are 24 fortnights involved over a two year period and that there are 24 return figures, return for all the chosen six telecommunication companies and also NIFTY Index.

RISK

Risk or uncertainty is an integral part of an investment decision. Technically risk can be defined as a situation where the possible consequences of the decision that is to be taken are known “Uncertainty is generally defined to apply to situations where the probabilities cannot be estimated.

However risk and uncertainty are used inter changeably. There are two components of risk.

- Systematic risk
- Unsystematic risk

Systematic risk relates to the events that affect individual companies, such as strikes, product developments, new patents and other activities of individual securities.

Unsystematic risk is influenced by general economic condition, political environment of the country the monetary and fiscal policies, economic policies, psychological condition of investor's inflation and other events that affect individual securities in share markets as well as foreign stock markets. This is measured by beta.[6]

Beta is a measure of risk that measures the indivisible market-related risk. The systematic risk could be diminished if securities are combined into a portfolio. Beta measures the variability in actual returns in relation to market price returns where all share prices are taken together in the form of index numbers. High beta values indicate much greater volatility in the return and low beta show lesser volatility in the return. The individual security beta is measured by the following.

Formula,

$$\mathbf{B = \sum xy / \sum x^2}$$

Where,

β = Beta

$\sum xy$ = Covariance of portfolio return and market return

$\sum x^2$ = Variance of market return.[7]

According to theory the return from any investment should be commensurate with the risk involved and hence the relationship between them should be positive. In other words, an investor cannot reasonably expect larger returns without willingness to take large risks. The Capital Asset Pricing Model (CAPM) is the name suggests is a theory that explains hoe asset prices are formed in the market place.

Modern portfolio theory argues that the risk of investments can be reduced significantly by clubbing together a number of risk assets. This is known as the diversification theory. The explanation is that the factors effecting the movements in the price of the assets are not uniform among a wide class of assets and hence it might happen that the same information could have opposite effects on two different assets.

There are a number of theories explaining the relationship between the expected return and the risk. These form part of the modern portfolio theory. The theory states that any asset risk can be decomposed into two a systematic part and a non-systematic part. The systematic part is the one which is the effect of forces that affect the entire economy like the economic

strength of the country, the industrial scenario prevailing, etc. these factors affect all the assets systematically though not in the same order and it cannot be diversified away. But there are some risks which affect the particular asset, which is known as non-systematic risk.

The relationship between beta and the expected return is the essence of CAPM, the best known theory among the modern portfolio theory. The CAPM predicts a linear relationship between the expected return and beta. Thus for an investor to get a higher return it is compulsory to assume a higher beta, according to CAPM.

Table –1

COMPANY -WISE YEARLY RISK – RETURN COMPUTION

COMPANY NAME	RETURN 2009	RETURN 2010	BOTH	SD 2009	SD 2010	BOTH	BETA 2009	BETA 2010	BOTH
BH	24.17	12.09	18.13	2.89	6.04	6.12	0.36	0.39	0.38
RC	31.01	16.14	23.58	15.50	7.07	10.74	0.08	0.42	0.15
IC	14.95	08.97	11.96	7.89	2.24	8.40	0.11	0.35	0.21
TC	17.80	14.10	15.95	8.05	7.20	5.55	0.11	0.13	0.11
TT	62.85	47.07	54.96	22.79	14.56	18.89	0.78	0.29	0.33
TTML	14.18	23.00	18.59	7.90	12.57	8.98	0.51	0.32	0.43
NIFTY	0.50	20.82	10.17	4.66	5.63	5.14			

Source: computed

RISK RETURN ANALYSIS OF BHARTI AIRTEL

The Bharti Airtel , has earned a return 5.38% during the first fortnight, 1st January 2009 to 31st January 2009, followed by 2.16% return in second fortnight and so on. The highest fortnightly return of 12 fortnightly periods (i.e. January to December 2009) of 14.99% was recorded during 4th fortnight April 2009. The lowest return of -0.14% was recorded during 12th fortnight 31st December. Out of 12 fortnightly periods, 6 periods saw positive returns and rest negative returns.

The overall 12 returns for the 1 year period worked out to be 24.17% as against that of Nifty basket put 0.49%. The security concerned has done better than Nifty basket. The standard deviation measured to 6.04% as against that of Nifty basket put 4.66%. But the beta co-efficient (β) for the security has been found to be 0.36. It indicates that the company is less risky during the year.

The higher fortnightly return during January to December 2010 of 9.62% was recorded during 12th fortnight from December 2010. The lowest return of -0.32% was recorded during 6th

fortnight, from June 30th. Out of 12 fortnight periods covered in the year 2010 5 periods, saw positive returns and the balance saw negative returns.

The overall mean return for the 12 months period worked out to 12.09% as against that of Nifty basket 20.82%. The security concerned has done better than the return. The standard deviation measured 6.04 as against that of Nifty basket put at 5.63. The security concerned is less risky than the Nifty basket. The beta co-efficient (β) for the security has been found to be 0.39%. It indicates that the company is risky during the year 2010.

The overall fortnightly return for the whole period of study worked out to be 18.13% as against that of Nifty basket put at 10.17%. The security concerned has done better than the Nifty basket. The standard deviation measured 6.12% as against that of Nifty basket put at 5.13%. The security concerned has done worse than the Nifty basket. In the two year period of study the Bharti Airtel, has in fact depreciated in normal term. The beta co-efficient for the security has been found to be 0.38. It indicates that the company is of less risky category in contradiction with the high standard deviation.

RISK RETURN ANALYSIS OF RELIANCE COMMUNICATION LIMITED

The Reliance Communication Limited has earned a return 2.73% during the first fortnight, 1st January 2009 followed by -19.61% returns in second fortnight and so on. The highest fortnightly return of 12 fortnightly periods (January to December 2009) of 16.73% was recorded during 12th fortnight December 31st. The lowest return of -0.33% was recorded during 9th fortnight 30th September out of fortnightly periods, 8 periods saw positive returns and rest negative returns.

The overall 12 fortnightly mean returns for the 1 year period worked out to be 31.01% as against that of Nifty basket put at 0.50%. The securities concerned have done better than the Nifty basket. The securities concerned have done better than the Nifty basket. The standard deviation measured to 15.50% as against that of Nifty put 4.66%. The security has concerned is worse than the Nifty basket.But the Beta co-efficient (β) for the security has been found to be 0.08. I t indicates that the company is less risky during the year 2009.

The higher fortnight return during January to December 2010 of 7.96% was recorded during 4th fortnight from 30th April. The lowest return of -1.62% was recorded during 10th fortnight 31st October. Out of 12th fortnight periods covered in the year 2009, 9 periods saw positive returns and the balance saw negative returns.

The overall mean return for the 12 months periods worked out to 16.14% as against that of Nifty basket 20.82%. The security concerned has done better than the Nifty basket. The standard deviation measured 7.07% as against that of Nifty basket put at 5.63%. The security concerned is worse than the Nifty basket.The Beta co-efficient (β) for the security has been found to be 0.42. It indicates that the company is less risky during the year 2010.

The overall fortnightly mean return for the whole period of study worked out to be 23.58% as against that of Nifty basket put at 10.17%. The security concerned has done better than the nifty basket. The standard deviation measured 10.74% as against that of Nifty basket put at 5.14% the security concerned is riskier than the Nifty basket. In two year period of the study the Reliance Communication Limited, has in fact depreciated in normal term, the beta co-efficient for the security has been found to be 0.15. It indicates that the company of less risky category in contradiction with the high standard deviation.

RISK- RETURN ANALYSIS OF IDEA CELLULAR

The Idea Cellular Company has earned a return -1.87 during the first fortnights 31st June 2009, followed by 3.14% return in second and so on. The highest fortnightly period. (i.e. January to December 2009) of 15.45% was recorded during June 30th 2009. The lowest return of -16.20% was recorded during 11th fortnight 30th November out of 12 fortnightly periods 6 periods saw positive returns and rest negative returns.

The overall 12 fortnightly mean returns for the 1 year period worked out to be 14.95% as against that of Nifty basket put at 0.49%. The security concerned has done better than the Nifty basket. The standard deviation measured 7.89% as against that of Nifty basket put 4.66%. The security concerned is riskier than the Nifty basket. But the Beta co-efficient (β) for the security has been found to be 0.11. It indicates that the company is less risky during the year.

The higher fortnightly return during January to December 2010 of 7.97% was recorded during 12th fortnight from 31st December. The lowest return of -8.13% was recorded during 1st fortnight 31st January. Out of 12 fortnight periods covered in the year 2010, 5 periods saw positive returns and the balance saw the negative returns.

The overall mean return for the 12 month period worked out to be 23.58% as against that of Nifty basket put at 10.17%. The security concerned has done less than Nifty basket. The standard deviation measured concerned is riskier than the nifty basket. But the beta co-efficient (β) for the security has been found to be 0.35%. It indicates that the company is less risky during the year 2010.

The overall fortnightly mean return for the whole period of study worked out to be 11.96% as against that of Nifty basket put at 10.17%. The security concerned has done better than the Nifty basket. The standard deviation measured 8.40% as against that of Nifty basket put at 5.14%. The security concerned is better than the Nifty basket. In two year periods of the study the Idea Cellular Company, has in fact depreciated in normal term. The beta co-efficient for the security has been found to be 0.21. It indicates that the company is of less risky category in contradication with the high standard deviation.

RISK- RETURN ANALYSIS OF TATA COMMUNICATIO

The Tata Teleservices Limited has earned a return of -0.17% during the first fortnight, from 31st January 2009, followed by 5.41% return in second fortnight and so on. The highest fortnightly return of 12 fortnightly periods (i.e. January to December 2009) of 18.71% was recorded during 6th fortnight from 30th June 2009. Out of 12 fortnightly periods, 6 periods saw positive returns and rest negative returns.

The overall 12 fortnightly mean return for the 1 year period worked out to be 17.80% as against that of Nifty basket put at 0.50%. The securities concerned have done better than the Nifty basket. The standard deviation measured 8.05% as against that of Nifty basket put at 4.66%. The security has concerned is more risky than the Nifty basket. But the Beta co-efficient (β) for the security has been to be 0.11%. It indicates that the company is less risky during the year 2009.

The higher fortnightly return from January to December 2010 7.97% was recorded 12th fortnightly from December 31st 2010. The lowest return of -10.97% was recorded during 8th fortnight, from 31st October 2010. Out of 12 fortnight periods covered in the year 2010, 5 periods saw positive returns and balance negative returns.

The overall mean return for the 12 months period was worked out to be 14.10% as against that of Nifty basket 20.82%. The security concerned has done better than the Nifty basket. The standard deviation measured 7.20% as against that of Nifty basket put at 5.63%. The security concerned is more risky than the Nifty basket. But the Beta co-efficient (β) for the security has been found to be 0.12. It indicates that the company is less risky during the year 2010.

The overall fortnightly mean for the whole period of study worked out to be 15.95% as against that of Nifty basket put at 10.17%.

The security concerned has done better than the Nifty basket. The standard deviation measured 5.55% as against that of Nifty basket put at 5.14%. The security concerned has done better than the Nifty basket. In two years periods of the study the Tata Teleservices Limited,

has in fact depreciated in normal term. The beta co-efficient for the security has been found to be 0.11. It indicates that the company is of less risky category in contradicition with the high standard deviation.

RISK- RETURN ANAYSIS OF TATA TELESERVICES

The Tata Communication Limited has earned a return of -3.75% during the first fortnight, from 31st January, followed by 3.99% return in second fortnight and so on. The highest fortnightly return of 12 fortnightly periods. (January to December 2009) of 19.59% was recorded during 31st December 2009, the lowest fortnightly return of 12 fortnightly periods of -91.20% was recorded during 30th November.

The overall 12 fortnightly mean returns for the 1 year period worked out to be 62.85% as against that of Nifty basket put at 0.50%. The securities concerned have done better than the Nifty basket. The standard deviation measured 22.79% as against that of Nifty basket put at 4.66%. The security has concerned is more risky than the Nifty basket. But the Beta co-efficient (β) for the security has been to be 0.11%. It indicates that the company is less risky during the year 2009.

The higher fortnightly return from January to December 2010 10.04% was recorded 3th fortnightly from March 31st 2010. The lowest return of -52.23% was recorded during 9th fortnight, from 30th September 2010. Out of 12 fortnight periods covered in the year 2010, 5 periods saw positive returns and balance negative returns.

The overall mean return for the 12 months period was worked out to be 47.07% as against that of Nifty basket 20.82%. The security concerned has done better than the Nifty basket. The standard deviation measured 14.56% as against that of Nifty basket put at 5.63%. The security concerned is more risky than the Nifty basket. But the Beta co-efficient (β) for the security has been found to be 0.29. It indicates that the company is less risky during the year 2010.

The overall fortnightly mean for the whole period of study worked out to be 54.96% as against that of Nifty basket put at 10.17%.

The security concerned has done better than the Nifty basket. The standard deviation measured 18.89% as against that of Nifty basket put at 5.14%. The security concerned has done better than the Nifty basket. In two years periods of the study the Tata Teleservices Limited, has in fact depreciated in normal term. The beta co-efficient for the security has been found to be 0.33. It indicates that the company is of less risky category in contradicition with the high standard deviation.

RISK-RETURN ANALSIS OF TATA TELESERVICES MAHARASHTRA LIMITED (TTML)

The Tata Teleservices Maharashtra Limited (TTML), has earned a return of 2.37% during the first fortnight, from 31st January 2009, followed by 4.79% return in second fortnight and so on. The highest fortnightly return of 12 for fortnightly period (i.e. January to December 2009) of 4.79% was recorded during 2nd fortnight from Feb 2009. Out of 12 fortnightly periods, 5 periods saw positive returns and rest negative returns.

The overall 12 fortnightly mean return for the 1 year period worked out to be 14.18% as against that of Nifty basket put at 0.50%. The security concerned has done much worse than the Nifty basket. The standard deviation measured to 18.59% as against that of Nifty basket put 4.66%. The security has concerned is less riskier than the Nifty basket. But the Beta co-efficient (β) for the security has been found to be 0.51. It indicates that the company is less risky during the year 2009.

The higher fortnightly return from January to December 2010 9.97% was recorded 1st fortnightly from January 31st 2010. The lowest return of -10.85% was recorded during 8th fortnight, from 31st October 2010. Out of 12 fortnight periods covered in the year 2010, 7 periods saw positive returns and balance negative returns.

The overall mean return for the 12 months period was worked out to be 23.00% as against that of Nifty basket 20.82%. The security concerned has done less than the Nifty basket. The standard deviation measured 12.57% as against that of Nifty basket put at 5.63%. The security concerned is more risky than the Nifty basket. But the Beta co-efficient (β) for the security has been found to be 0.32. It indicates that the company is less risky during the year 2010.

The overall fortnightly mean for the whole period of study worked out to be 18.59% as against that of Nifty basket put at 10.17%.

The security concerned has done better than the Nifty basket. The standard deviation measured 8.98% as against that of Nifty basket put at 5.14%. The security concerned has done better than the Nifty basket. In two years periods of the study the Tata Teleservices Limited, has in fact depreciated in normal term. The beta co-efficient for the security has been found to be 0.43. It indicates that the company is of less risky category in contradicition with the high standard deviation.

REQUIRED RETURN VS ACTUAL RETURN

Risk Return analysis must evaluate performance of companies based on required return and actual return. Required Return is calculated based on the CAMP model taking the equation

$$RR = R_f + \beta (R_m - R_f)$$

Where,

RR is Required Return

R_f is Risk free Return

β is measured of Risk (Market Beta)

R_m is market return

The risk free return is taken as 6% for 2009 and 7% for 2010 and for both 2009 and 2010 combined at 6.5% pa. Accordingly required return is calculated for the different companies for 2009, 2010 and average annualized return for 2009-2010 combined. The Required return when compared with actual return will help to evaluating whether the companies have done better or worse than the market (Nifty)

REQUIRED RETURN VS ACTUAL RETURN – 2009

The risk free return is taken as 6% for 2009 required return is calculated for the different companies for 2009. The Required return when compared with actual return will help evaluate whether the companies have done better or worse than the market. The calculated required return and actual return are given in Table .2

TABLE - 2

Comparison of Required Return and Actual Return – 2009

S.NO	COMPANY NAME	Required Return (%)	Actual Return (%)	Excess Return (AR-RR)	Result
1	Bharti Airtel	4.03	24.17	20.14	Better than market
2	Reliance Communication	5.52	31.01	25.49	Better than market
3	Idea Cellular	5.42	14.95	9.53	Better than market
4	Tata Communication	5.38	17.80	12.42	Better than market
5	Tata Teleservices	1.72	62.85	61.13	Better than market
6	TTML	3.63	14.18	10.55	Better than market

Source: computed

From the table 5.2 it is clear that all the companies have done better than the NIFTY. Reliance Communication has done better than the result.

REQUIRED RETURN VS ACTUAL RETURN – 2010

The risk free return is taken as 7% for 2010. Required return is calculated for the different companies for 2010. The required return is compared with actual return to evaluate whether the companies have done better or worse than the market.

The calculated required return and actual return and excess return are given in Table .3

Table .3

Comparison of Required Return and Actual Return – 2010

S.NO	COMPANY NAME	Required Return (%)	Actual Return (%)	Excess Return (AR-RR)	Result
1	Bharti Airtel	12.44	12.09	0.35	Better than return
2	Reliance Communication	12.82	16.14	3.32	Better than market
3	Idea Cellular	11.82	08.97	2.85	Better than return
4	Tata Communication	8.73	14.10	5.37	Better than market
5	Tata Teleservices	10.96	47.07	36.11	Better than market
6	TTML	4.20	23.00	28.8	Better than market

Source: computed

From the table 5.3 it is clear that all the companies have done better than the NIFTY. Tata Teleservices has done better than the result.

REQUIRED RETURN VS ACTUAL RETURN – 2009-10

The risk free return is taken at 6.5% for 2009 and 2010 combined. Accordingly required annualized return is calculated for the different companies for 2009 and 2010 and average annualized return for 2009 and 2010 combined. The required return when compared with actual return will help evaluating whether the companies have done better or worse than the market. The calculated required return and actual return are given in table .4

Table- 4

Comparison of Required Return and Actual Return

(2009 and 2010 combined)

S.NO	COMPANY NAME	Required Return (%)	Actual Return (%)	Excess Return (AR-RR)	Result
1	Bharti Airtel	7.90	18.13	10.23	Better than market
2	Reliance Communication	7.03	23.58	16.55	Better than market
3	Idea Cellular	7.28	11.96	4.68	Better than market
4	Tata Communication	6.90	15.95	9.05	Better than market
5	Tata Teleservices	7.70	54.96	47.26	Better than market
6	TTML	3.92	18.59	14.67	Better than market

Source: computed

From the table 5.4 it is clear that all the companies have done better than the Nifty. Reliance Communication Limited is topping the six companies.

WILLIAM SHARPE'S INDEX Vs JACK L. TREYNOR INDEX

Risk return analysis must evaluate performance of companies based on sharpe's Index and Jack.L treynor Index based performance though these indices are used for managed portfolio only. The researcher is using them to analyze the performance of individual stocks

- William Sharpe's Index measures the realized risk premium for total risk. The formula is:

$\{(R_A – R_F) / \sigma_A\}$

Where,

R_A is average return of the security

R_F is risk free return

σ_A is standard deviation of the security.

Jack. L Treynor Index measures the realized risk premium for systematic risk only. The formula is

$\{(R_A - R_F) / \beta_A\}$

Where,

R_A is average return of the security

R_F is risk free return

β_A is systematic risk

The risk free referred is to taken as 6% for 2009 and 7% for 2010 and both 2009 and 2010 combined at 6.5%. Accordingly William Sharpe's Index is calculated for the different companies for 2009-2010 combined. The data are given in the table .5.

Table- 5

Comparison of Sharpe Index and Treynor Index

COMPANY NAME	WSI 2009	WSI 2010	WSI 2009&2010	JTI 2009	JTI 2010	JTI 2009 & 2010
Bharti Airtel	6.29	0.84	1.90	50.47	13.05	30.61
Reliance Communication	1.61	1.29	1.59	312.63	21.76	113.87
Idea Cellular	1.13	0.88	0.65	81.36	5.63	6.62
Tata Communication	1.47	0.99	1.70	107.27	54.62	85.91
Tata Teleservices	2.49	2.75	2.57	72.88	138.17	146.85
TTML	1.04	1.35	1.35	16.04	50.00	28.12

Source: computed

As per Sharpe Index in 2009 Bharti Airtel performed very well followed by Tata Teleservices, Reliance Communication, Idea Cellular, Tata Communication, and TTML. In 2010 the top place went to Tata Teleservices followed TTML, Reliance Communication, Tata Communication, Idea Cellular and Bharti Airtel. Both 2009 and 2010 combined, the index showed Tata Teleservices was at the top with premium of 2.57% percent of total risk, followed by Bharti Airtel with risk premium of 1.90% per unit of total risk and so on.

As per Treynor's Index in 2009, Reliance Communication performed very well followed by Tata Communication, Idea Cellular, Tata Teleservices, Bharti Airtel and TTML. In 2010 the top place went to Tata Teleservices performed very well followed by Tata Communication, TTML, Reliance Communication, Bharti Airtel and Idea Cellular. Both 2009 and 2010 combined index showed that Tata Teleservices performed very well followed by Reliance Communication, Tata Communication, Bharti Airtel, TTML and Idea Cellular.

Table - 6

QUARTER-WISE COMPANY RETURN COMPUTATION

QUARTER	Bharti Airtel	Reliance Communication	Idea Cellular	Tata Communication	Tata Teleservices	TTML
Q1	18.31	18.67	4.57	2.50	2.81	-3.36
Q2	22.88	13.06	18.26	25.57	19.09	0.33
Q3	3.30	25.78	1.12	6.20	-5.91	-1.68
Q4	-20.34	10.84	-9.00	-14.41	-78.84	0.53
Q5	3.15	-1.12	3.41	-3.77	-1.67	12.06
Q6	5.79	11.31	-0.80	5.60	2.07	-3.97
Q7	-11.2	6.07	12.46	-8.86	-42.89	-0.69
Q8	4.33	-0.12	-16.00	2.93	-4.59	15.60

Source: computed

From the above table we could know about the details of quarter wise company returns to apply for Kruskal Wallis (or) H – Test.

Table – 7

KRUSKAL – WALLIS (OR) H - TEST

Bharti Airtel	Reliance Communication	Idea Cellular	Tata Communication	Tata Teleservices	TTML
44	45	30	24	25	15
46	40	43	47	42	20
28	48	22	35	11	16
3	36	7	5	1	21
27	17	29	13	16	38
33	37	19	32	23	12
6	34	39	9	2	18
30	19	4	26	11	41
217	276	193	191	131	181

Source: computed

TESTING HYPOTHESIS

Table 5.6.1gives the relevant details whether the quarterwise company returns differed significantly or whether the return differed across the 5 years. Two way ANOVA was used.

Two sets of Null Hypotheses

Set – 1: HO: There is no significant difference in the values of mean returns of the companies.

Set – 2: HO: There is no significant difference in the values of different quarters of the companies.

Table –8

ANOVA- Kruskal – Wallis (or) H- Test

	Sum of Square	Degrees of Freedom	Mean Square	F-Ratio
Between Column	1410.94	5	282.19	2.14
Within Row	2862.94	7	408.99	3.09
Residual	4626.04	35	132.17	
Total	8899.92	47		

Source: computed

RESULT

Set -1: HO: The table value of 'F' at 5% for V1 = 5, V2 = 35 is 2.53. Since calculated value is less than the table value. So the null hypothesis is accepted. There is no difference among the returns.

Set-2: HO: The table value of 'F' at 5% for V1 = 7, V2 = 35 is 2.27. Since calculated value is more than the table value. So the null hypothesis is rejected. There is difference amongst the different period's returns.

CONCLUSION

Indian telecom market is one of the fastest growing markets in the world as a result of its high population and development potential. Some of the telecommunication companies in India are Bharti Airtel, Reliance Communication, Idea Cellular Tata Communication Tata Teleservices Tata Teleservices Maharashtra limited (TTML) and other major operators in India. In is the backbone of industrial and economic development. The industry has been aiding delivery of voice and data services at rapidly increasing speeds, and thus has been revolutionizing human communication.

Financial Performance of six companies for five years periods is analyzed for the study by using the techniques as follows: liquidity, profitability, turnover, and comparative analysis calculating Equity share capital, Reserve, co-efficient of variation in operating profit, interest earned, and income earned, employee expenses, expenditure and market performance of selected telecommunication sector in India.

Telecommunication is played a vital role in our economy. The booming telecom industry has been attracting large amount of investments in the country. Private telecommunication is more telecom operator sector in India. Bharti Airtel emerges as India's top mobile phone operator in 2009-10. Other operator is important place of telecommunication in India. In the present ear people cannot ignore telecommunication services in communicating each other.

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