

International Conference on Innovative Trends in Engineering, Applied Science and Management

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# A Report on Equity Analysis of Telecom Sector

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# ABSTRACT

Stock market research is essential to good financial and investment decision making. every investor while investing expects more return with less risk. Depending upon the risk that stock carries the investor the investor can select a right securities or portfolio. If an investor is interested in earning more returns then this will be achieved only through bearing additional risk. Telecommunication has supported the social economic development of India and played a significant role. The volatility of equity shares of telecommunication explains the relationship between risk and returns by using some statistical methods like standard deviation, beta, correlation and variance.

# LITERATURE REVIEW

**R. NARAYANASWAMY AND R.THIRUGNANSOUNDARI(2016)**In this study they explained that there is a positive relation between the security market return and average rate of return during the period of study. They suggested that the investors must take decisions before investing share. According to their study the IT Companies like Infosys and oracle having good and high growth rate and the investors who are interested is short investment can prefer can prefer Wipro company as it gives profit in short term investments. They finally concluded that Indian capital market exhibits a positive risk return relationship.

**DR.SHYAM VASHISHTHA AND RAJESH KUMAR(2011)**In this study they explained that the equity volatility analysis is an effective analysis for measuring risk factor and it also helps the investors in investment decisions by forecasting volatility in the share prices because volatility analyzes the securities based on price fluctuation. Finally they concluded that actual price of shares are influenced by many factors such as internal information so decisions of investments cannot be made only on the basis of equity volatility analysis.

**DR. M.MUTHUGOPALAKRISHNAN AND MR.AKASH PK(2017)**In this study they considered alpha and beta values to measure the risk and return factors they said that to maximize the return the investors should consider both risk and return of various companies. Equity analysis is most important technique of various companies.

A. JHON WILLIAM AND T.VIMALA(2015)Conducted a study on equity share price volatility and revealed that causes for the changes in equity prices is due to market fluctuation and it is based on the closing price of the particular equity price and the investors should find out the drawbacks of market fluctuation to strengthen their investment decision. From this study they concluded that investment strategy equity is highly riskier than other standard deviation and beta value will provide a pathway to choose the best equity.

# **OBJECTIVES**

- To understand the concept of equity analysis and gain a practical knowledge
- To know the present scenarios of telecom sector
- To give suggestions based on findings.
- To suggest the investors whether to choose the telecom sector to invest to earn appropriate profits.



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To analyze the risk and return involved with telecom sector.

# **RESEARCH METHODOLGY**

## Primary data

The information collected directly from the company and processes in a required manner is called as primary data.

## Secondary data

This study is based on secondary data only.

The data have been collected from journals like impact journals, books like Donald E. Fischer and Ronald J.Jordan and BSE official website and integrated websites of telecommunication.

# PERIOD OF STUDY

The current study is to analyze the volatility of equity share price of selected telecommunication companies for the period of 2011-2016 of yearly closing prices.

# **METHODS OF SAMPLING**

Three private telecommunications are selected randomly for the study. The selection is based on mostly traded in BSE and availability of data. Random sampling technique is used in this study.

## **UNIT PROFILE**

India is currently the world's second largest telecommunications market with a subscriber base of 1.05 billion and has registered strong growth in the past 10 years. The telecom sector in India is increasing rapidly and contributing towardsIndia's gross domestic product.

#### Idea

Idea cellular is an aditya Birlacompany. Idea is one of the top three operators in India with an annual revenue in excess of USD 5 billion and a market share of 19% with nearly 200 million subscribers. It ranks sixth in global rankings of operators. Idea won the prestigious telecom awarding 2017 for best enterprise mobility solution .idea cellular ltd incurred a loss as intense competition in the telecom sector continued to hurt. It is selling its telecom tower to reduce debt, which posted a loss of RS 1107crores in quarter ended 30 september2017.

#### Tata Docomo

TATADOCOMOLTD is an Indian mobile network operator which is wholly owns subsidiary of Tata teleservices. It is the country's eight largest operator in terms of subscribers Tata docomo had about 1.5 million 3G subscribers as of may 2011. It providers both postpaid and prepaid services but in states like Rajasthan, Bihar and west Bengal it shut down its 15.30 million subscribers in rural phone market.

#### Airtel

Bharathi airtel limited is a global telecommunication company which operates in 16countries.its headquarters is located at new Delhi. It provides 3G and 4G mobile services and voice services. It is the third largest mobile operator in the world which was headed by Sunil mittal.

# **TOOLS OF ANALYSIS**

# Mean

Mean is the average of the number. It is the most common and best general purpose for the midpoint of a set of values. Mean is calculated by using following formula



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 $X = \sum x/N$ 

Where X = mean  $\sum x =$  symbol for summation scores. N = number of scores. Standard deviation

It is a statistical tool. It is applied to the annual rate of returns of an investment so that it reveals the historical volatility of that investment. The greater the standard deviation of a security, the greater the variance between each price and mean. Standard deviation can be calculated by using the following formula

$$\sigma = \operatorname{sqrt} \left[ \Sigma (\operatorname{Xi} - \mu)^2 / \mathrm{N} \right]$$

Where

 $\sigma$  = Standard deviation

X = each value in population

μ =mean

N = Number of values

Beta

The systematic risk of a security is measured by a statistical measure called beta. The input data required period for the calculation ofbeta. The historical data of returns of individual securities as well as the returns of representative stock market indices.

$$\beta_p = \frac{Cov(r_p, r_b)}{Var(r_b)}$$

# HYPOTHESSIS

H0: There is no impact of market returns on the returns of telecommunication sector.

H1: There is a positive impact of market returns on the returns of telecommunication sector.

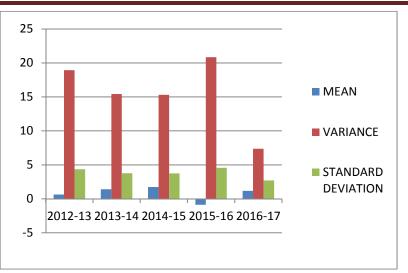
# MARKET RETURNS

YEAR	MEAN	VARIANCE	STANDARD DEVIATION
2012-13	0.63	18.93	4.35
2013-14	1.4	15.43	3.76
2014-15	1.73	15.31	3.74
2015-16	-0.87	20.84	4.56
2016-17	1.18	7.36	2.71



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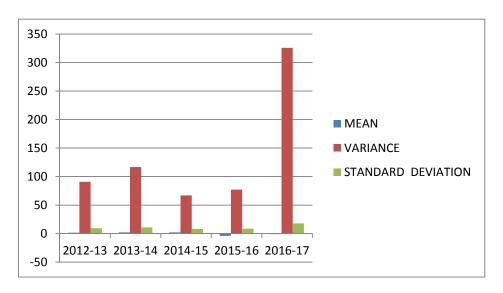


#### INTERPRETATION

Above table shows that highest mean value as 1.18 in the year 2016-17, lowest mean at -0.87 in the year 2015-16. The highest standard deviation as 4.56 in the year 2015-16 and lowest as 2.71 in the year 2016-17 and the highest variance as 20.84 in the year 2015-16 and lowest variance as 7.36 in 2016-17.

#### IDEA

YEAR	MEAN	VARIANCE	STANDARD DEVIATION
2012-13	1.52	90.81	9.52
2013-14	2.09	116.58	10.79
2014-15	2.19	67.08	8.19
2015-16	-3.92	76.99	8.77
2016-17	-0.96	325.761	18.048





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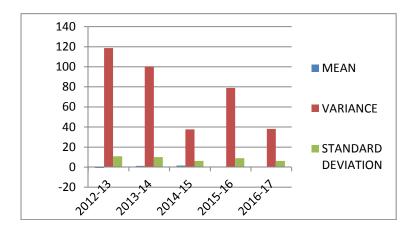
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#### **INTERPRETATION**

Above table shows that highest mean value as 3.513 in the year 2011-12, lowest mean at -3.92 in the year 2015-16. The highest standard deviation as 10.79 in the year 2013-14 and lowest as 8.19 in the year 2014-15 and the highest variance as 116.58 in the year 2013-14 and lowest variance as 67.08 in 2014-15.

#### AIRTEL

YEAR	MEAN	VARIANCE	STANDARD
			DEVIATION
2012-13	-0.84	118.71	10.89
2013-14	1.29	100.345	10.01
2014-15	1.64	37.68	6.13
2015-16	-0.29	78.91	8.88
2016-17	-0.06	38.18	6.17



#### **INTERPRETATION**

Above table shows that highest mean value as 1.61 in the year 2014-15, lowest mean at -0.84 in the year 2012-13. The highest standard deviation as 10.89 in the year 2012-13 and lowest as 6.13 in the year 2014-15 and the highest variance as 118.71 in the year 2012-13 and lowest variance as 37.68 in 2014-15.

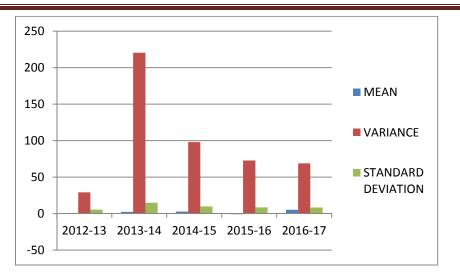
# TATA DOCOMO

YEAR	MEAN	VARIANCE	STANDARD	
			DEVIATION	
2012-13	0.51	29.13	5.39	
2013-14	2.41	220.30	14.84	
2014-15	2.77	97.93	9.89	
2015-16	-0.94	72.82	8.53	
2016-17	5.24	68.88	8.29	



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#### **INTERPRETATION**

Above table shows that highest mean value as 5.24 in the year 2016-17, lowest mean at -0.94 in the year 2015-16. The highest standard deviation as 14.84 in the year 2013-14 and lowest as 5.39 in the year 2011-12 and the highest variance as 220.30 in the year 2013-14 and lowest variance as 29.13 in 2012-13.

#### **ANALYSIS OF BETA**

YEAR	IDEA	AIRTEL	DOCOMO
2012-13	0.97	1.11	0.78
2013-14	0.65	1.59	2.24
2014-15	-0.76	-0.06	1.09
2015-16	0.87	1.09	1.66
2016-17	1.58	0.50	-0.07

#### **INTERPRETATION**

From the above table we can observe that the risk factor in idea is highest as 0.97 in the year 2012-13 and lowest as -0.76 in the year 2014-15 and the risk factor of airtel is highest as 1.59 in the year 2013-14 and lowest as -0.06 in 2014-15 and finally the risk factor of TataDocomo is higher as 2.24 in the year 2013-14 and lowest as -0.07 in the year 2016-17.

#### CORRELATION

companies	Market returns	idea	airtel	Tata Docomo
Market returns	1			
idea	0.856107219	1		
Airtel	0.660325765	0.525722	1	
Tata Docomo	0.764456577	0.351912	0.369634	1



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# **INTERPRETATION**

From the above study we can conclude that the average calculated value of telecommunication sector is 0.758 where the critical or tabulated value of correlation degrees of freedom (v = 3) and at 5%(0.05) level of significance is r=0.878. Since the calculated value is less than critical value, it is not significant and we fail to reject hypothesis H<sub>0</sub> at 0.05%. Hence H<sub>0</sub> may be accepted at 0.05 level of significance I.e, there is no impact of market returns on telecommunication sector of selected companies.

## FINDINGS

- From the above study it was found that the returns of above selected companies started reducing from the year 2015-16 and it continued for 2016-17 due fall in the market price of shares this is because of new entrance of other telecom company called jio gave a strong competition to these companies.
- From this study we can observe that entry of jio reduced the market returns in the year 2015-16 but it was positively impacted in the year 2016-17 as market returns stated increasing.

#### CONCLUSION

From the above study we can conclude that equity analysis is an appropriate method to measure the relationship between market returns and telecom sector returns. This study helps the investors to ascertain the risk involved with each selected company and market returns and impact of market returns with other companies because it analyses the returns on the basis of price fluctuation. This study also explained the relation among selected companies. Even though this study helps the investors in decision making they should also concern some internal forces of companies which would impact positively or negatively on share prices while making investment decisions.

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- DR.Shyam vashishtha and Rajesh Kumar(2011) "a study on equity volatility"
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