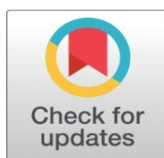


REVIEW OF STOCK PRICE OF BHARTI AIRTEL LIMITED WITH STOCK OPTION ANALYSIS

Sanjay Kumar Sharma ¹, Tek Chand ¹

¹ Assistant Professor, Department of Commerce, Shyam Lal College (E), University of Delhi, New Delhi, India



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ABSTRACT

Telecom industry in India, at present, is being run by companies which can be counted on finger tips. The two largest players in this industry in India are well known names, Bharti Airtel and Jio. Competition is growing to grab more and more market share out of the existing users as well as the potential users who would be joining digital revolution of the country. Besides, the telecom sector faces challenges from fast changing technology as also stiff government regulations. This study will take care of the overall analysis of past performance of Bharti Airtel stock to assess the stock as a good investment in the market. Our study has indicated that Bharti Stock is a win case for shorter term as well as longer term investment. Apart from this, simple option strategy has worked wonders for this stock and the results have shown that the stock is profitable even in the derivatives segment in which one out of every ten traders is having losses (SEBI, 2023). The secondary data for the selected time frame has been obtained from reliable published sources, complied carefully and analysed for the study. Data analysis has been made using excel software and the IBM SPSS software.

Keywords: Telecom Sector, Bharti Airtel, Stock Investment, Stock Options, Digital India



1. INTRODUCTION

The company stock under the present study is Bharti Airtel Limited which is one of many largecap companies listed on Stock Exchanges of India. The company is operating in seventeen countries in the world and approximately 1/4th of the world population is served directly or indirectly by company. This shows the deep reach of the company in telecom sector within India and worldwide. The company is also known for its dual digit growth, good operating margins and healthy balance sheet. Despite all this, share price is highly volatile at times. So, it becomes important to study the share price fluctuations of this stock carefully.

2. NEED FOR THE STUDY

India has huge population, and the number of telecom users is huge. There is a lot of potential of reaching out to new customers who are still out of the telecom revolution. In its efforts, the company acts as one of the market leaders and playing an important role for the services sector. It is also contributing to the growth story of Indian economy as well. In fact, digital India mission of our country is possible to complete only with the help of telecom sector. The marks the importance of this company for telecom sector and Indian economy as well. It is a large cap stock listed on both Indian exchanges, huge money is invested in this company by various stakeholders and there is a need to study the share price

movements and to know the underlying reasons of the share price movements of this company. There is also need to test the derivatives (options) strategy as to whether Bharti Airtel stock favoured option buyers or option sellers.

3. LITERATURE REVIEW

Integrated Official Report and Published Results, Bharti Airtel Ltd. [2023]

In the published annual statements of the company for the financial year 2022-23, the focus was inter alia on Network which is ready to face future challenges Diagnostic tools are being made by the company itself and used for timely and efficient correction of faults. Such efforts are dedicated to rich communication experience, lowering the costs of services. The emphasis was not only on the past financial performance but also on adapting to futuristic environment.

Sridharan and Govindarajan (2023)

Telecom companies face a lot of challenges on the environment sustainability front and this study focussed on environment hazards of such companies. The degradation of environment was addressed and it was suggested that such companies should adapt to environment friendly technologies in futures to sustain in longer term. Smarter technologies are needed because businesses do have to fulfil their social goodness goals along with providing quality digital environment. Stock prices alone can't be benchmark for a company success.

SEBI Research on Equity F.N.O.(2023)

As per the report for FY ended 2022, data collected through a sample of ten brokerages, there were forty-five lakh retail/individual traders in the derivatives segment and approximately eighty nine percent lost investment and the mean negative exceeded INR one lakh twentyfive thousand. The top one percent profitable traders were making more than half of total profits, so only few are gaining. This throws light on how F.N.O.(futures and options) segment creates losses for the low capital individual traders. Regulatory steps have been made time to time by SEBI to educate and also to save money of such traders.

National Policy (2018)

The National Digital Communications Policy, 2018 was introduced in India to cater various services to the public including the communication services. The goal of digital economy and importance of digital communication for welfare of public was set. The missions were Connect, Propel and Secure. The promotion of broadband for public for overall economic and social growth of public was stressed upon. So, telecom sector is one of the top priority sectors for G.O.I. also. It was also observed that approximately 90 percent of total communication needs is catered by private sector.

Goyal and Malhotra (2018)

In this study, it was observed that the entry of 'RelianceJio' as a new competitor transformed the telecom industry and it was noticed that there is always a fear of new entrants in this industry, Jio as a new entrant coming up with free voice and SMS services suddenly ate major share of the current players including Bharti Airtel. The industry has huge potential of absorbing new companies in the sector as there is a huge population to serve. This poses one of the many challenges for a telecom company specially market leaders like Bharti Airtel.

Yalla, Bhattacharyya and Jain(2018)

The study was purposed to know the effect of regulations on the Systemicrisk in telecom in India CAPM and Kalman filter for beta was used and significant effect of telecom regulatory environment on such companies was found and it was suggested that regulations risk does exist in the telecom firms of India and the firms must account for such regulatory changes to ensure that their business is not adversely affected by such changes.

The Digital First Journey by KPMG (2017)

In this paper, the OTT (Over the Top) services were taken up and observed that such services consume huge data because of video streaming as there are crores to viewers who use such services. Telecom has to work not only on basic communication but also on such value-added services. Apart from this telecom companies have gone into wallets business. This again have created revenue and net income potential for such companies affecting their profitability and stock prices.

Baruah and Baruah (2014)

In this study the data of fifteen telecom operators existing at that time was studied and it was seen that contribution of the sector to uplift the economic and social status of citizens of India is substantial. It was also observed that

competition amongst the firms must be there, but good practices must always be followed to ensure quality of service. Telecommunication services are very important for information and communication needs of the citizens and the role private firms included in the study was substantial.

4. OBJECTIVES OF THE STUDY

- 1) To review stock price of Bharti Airtel over past year 2023 (1.1.2023 to 31.12.2023) to find nexus between stock price and various affecting the stock price.
- 2) To study which of the derivatives trader, buyer or seller, have gained in Bharti Airtel stock in the derivatives segment over the time period under study.

5. RESEARCH METHODOLOGY AND HYPOTHESES

The stock's secondary data has been used as freely available for public on official web pages of the National Stock Exchange. The time period has taken for one year for the year ended 31.12.2023. Various statistical tools have been used as detailed hereinafter in the study. Various variables have been defined as follow.

1) Variables

Dependent variable: Share Price(P)

Independent variables: V.WAP(V), Fifty-two weeks highest price(H), Fifty-two weeks lowest price(L), Trading volumes(T) in the market.

2) Hypothesis Formulation:

- **H0:** There exists no relationship between stock price and the independent variables.
- **H1:** There exists significant relationship between stock price and V.WAP
- **H2:** There exists significant relationship between stock price and 52 Week High Price
- **H3:** There exists significant relationship between stock price and 52 Week Low Price
- **H4:** There exists significant relationship between stock price and Trading Volumes

3) Function:

Share price as a function of independent variables:

$$P = f(V, H, L, T)$$

6. DATA ANALYSIS AND FINDINGS

- 1) The secondary data as compiled from official website of NSEEx has been analysed using SPSS and following observations were recorded.

Table 1 Data analysis showed the following summary "Descriptive.Statistics"

Variables	Mean	Std.Deviation	N
Price	856.76	79.35824	246
V.WAP	856.28	79.08717	246
High52W	907.17	55.83882	246
Low52W	669.11	47.72467	246
Volume	5085042	3974876	246

Source Self compiled data from Secondary Sources

The above table demonstrates the descriptive statistics for the stock for the period under consideration with mean and standard deviation for the time period. There are N=246 trading days in this time period of a year. During this period, the stock price averaged INR.856.76. At the end of the time period the price closed at INR.1032.20 and in the beginning of the year, the price closed at INR.813.50. This shows a direct change of INR.218.70 and as a percentage it arrives at increment in stock price at 27 percent ($218.70/813.50 \times 100$). While the free of risk rate of income of term deposits ranges approximately from 4.50% to 7.7% depending on the bank or instrument of National Schemes Deposits.

V.WAP (Volume.weighted.mean.price) is an indicator in the stocks market. It is average stock price over a certain time period if we give weight of the trading volumes to the stockprice. V.WAP is the Cumulative Stock Price multiplied by its Volumes divided by the Cumulative Volumes. Thus, price considering the volumes is important than price alone. Average of V.WAP comes at INR.856.28.

The average of 52weeks high and low price is 907.17 and 669.11 respectively giving a huge range of 238.06 over the time period. Average Stock trading volumes are 5085042.

2) Results of Correlation (Table 2)

Correlations						
		Price	V.WAP	High52W	Low52W	Volume
Correlation (Pearsons)	Price	1.000	.999	.938	.886	-.033
	V.WAP	.999	1.000	.939	.886	-.037
	High52W	.938	.939	1.000	.882	-.011
	Low52W	.886	.886	.882	1.000	-.074
	Volume	-.033	-.037	-.011	-.074	1.000
Sig. (1. tailed)	Price	.	.000	.000	.000	.302
	V.WAP	.000	.	.000	.000	.284
	High52W	.000	.000	.	.000	.433
	Low52W	.000	.000	.000	.	.122
	Volume	.302	.284	.433	.122	.

Source Self compiled data from SPSS

The correlation significance value (p.value) is greater than .05 (at 95percent confidence.level) only in case of one variable i.e. volumes while the same is below .05 in all other cases. So, there exists significant relationship between price and all other variables except the volumes of shares trades. So, Hypotheses, H0 is rejected and H1, H2 and H3 are true and H4 is rejected. High degree correlation exists between price and other variables except the volumes.

3) Summarised. Model (Table 3)

Model	R	R.Square	Adjusted.R.Square	Std.Error.of.Estimate
1	.999 ^a	0.998	0.998	3.17001

- **Predictors.:** (Constant), Volume, High52W, Low52W, VWAP
- **Dependent. Variable:** Price

The R squared shows at .998 which is coefficient of determination indicates that .998 of 99.80percent of the variances in price is duly explained by the independent variable under study. It passes goodness.of.fit test and regression fit actual data well.

4) Analysis of Variances: A.N.O.V.A. (Table 4)

	Model	Sum.Squares	d.f.	Mean.Square	F	Sig.
	Regression.	1540522.306	4	385130.577	38325.5	.000 ^b
1	(Residual.)	2421.794	241	10.049		
	Total.	1542944.101	245			

- **Dependent. Variable:** Price
- **Predictors.:** (Constant), Volume, High52W, Low52W, VWAP

The P.value is .000 at alpha of .05 and $p < \alpha$ and we have to reject the null hypothesis, H_0 . There is sufficient analysis to arrive at the conclusion that there is significant relationship between price and various independent variables under study.

The value of F is at 38325.50, here large F.value indicates group means differences are significantly more than the variability within each of the groups, so it has not happened by a matter of chance and Null hypothesis H_0 is rejected.

5) Derivatives Analysis

This analysis is based on observations from analysing the past data of Option price of Call/Put (CE&PE). The averages of all the prices for the time under review have been used for this analysis. As we observe that the Bharti Airtel is in the Derivatives segment and its options are traded with monthly expiries. There is a premium of a call option and put option to make a buy or sell position on the stock. The average calculated monthly is approximately 2 percent of the stock price in the beginning of the month to secure the entire up movements in the stock.

Table 5 Table showing price movements monthly

Month	Movements in Price
Jan.	-43
Feb.	-28
Mar.	7
Apr.	50
May	51
Jun.	29
Jul.	11
Aug.	-34
Sep.	70
Oct.	-12
Nov.	100
Dec.	17
Total Points	218
Total Plus Points	335

Source Self Compiled Data from Secondary Sources

From the above table it is evident that the stock has risen 8 out of 12 months and a CE buyer must have gained total 335plus points. The average monthly premium paid at Rs. 17 (approx.2percent stock price) per unit for 12 months comes to INR.204. Net payoff of CE option buyer will be $335-204= 131$ points. 131 points multiplied by 500 shares comes to INR.65500 in one year in one lot (One lot investment requires a just the option premium every month). This analysis justifies that the stock is worth investing even in option segment. It is here clarified and disclaimed that the data is of past year is a history and stock market is subject to fluctuations and unpredictabilities and it is not a recommendation to invest for anyone. The analysis is just for academic purposes only.

7. CONCLUSION

From the forgoing discussion, it is quite evident that the Stock price can be explained as a function of various independent variables as discussed before. Our variable, stock price, closely coincides with various variables which affected the price. Except volume(variable) all the others have impacted the price of the script. Further, the Option analytics of the stock favoured buyer of C.E. and he gained substantially as the share have risen eight months out of twelve months in the year under analysis. It may be noted that options are hedging instruments and conclusions in the study are for academic analysis only. It may also be noted as stated earlier that 90 of 100 option dealers never increased their investment and ran into negative capital (SEBI 2023). The study is under various limitation and creates scope for further study because the stock markets are dynamics and need continuous evaluation of data to get latest trends in the market dynamics.

CONFLICT OF INTERESTS

None.

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REFERENCES

- Annual Report (2021-22), Department of telecommunications, Ministry of Communications, GOI, New Delhi, <https://dot.gov.in>
- Annual Results 2022-23 [2023], Bharti Airtel Limited, <https://www.airtel.in/about-bharti/equity/results>
- Baruah, Papori and Baruah, Rashmi. (2014), Telecom Sector in India: Past, Present and Future, International Journal of Humanities & Social Science Studies, 1(3), 147-156.
- Goyal, Anil Kumar and Malhotra, Gaurav. (2018), "Impact of Reliance Jio on Financial Performance of Key Players of Telecom Industry", International Journal of Business and Management Research, 8(4)
- Sharma, S., & Sharma, P. (2020). Financial performance analysis of telecom companies in India: An empirical study. International Journal of Management, 11(8), 1232-1241.
- SEBI, Reports and Statistics, Analysis of Profit and Loss of Individual Traders dealing in Equity F&O Segment (2023), <https://sebi.gov.in>
- Sridharan, Harish and Sangeetha, Govindarajan (2023). Sustainability in Telecom: Reducing the Environmental Impact of Networks, International Journal of Science and Research (IJSR), 12(1), 1352-1365. DOI: <https://dx.doi.org/10.21275/SR24913031348>
- The Digital First Journey, KPMG (2017), How OTT platforms can remain ondemand ready. <https://assets.kpmg.com/content/dam/kpmg/in/pdf/2017/09/The-Digital-First-journeyV2.pdf>
- Website of the National Stock Exchange of India. <https://www.nseindia.com>
- Yalla , Sushma Priyadarsini, Bhattacharyya, Som Sekhar and Jain, Karuna, Impact of Regulatory Announcements on Systemic Risk in the Indian Telecom Sector(2018), International Journal of Emerging Markets, 13(2), DOI:10.1108/IJoEM-08-2017-0307.