Forecasting of Stocks of Two Companies through Line and Bar charts (Tata Consultancy Services and Infosys)

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Abstract: *In the stock market, popularly two methods of analysis are used in practice. Technical analysis mainly points at analysis the stock performance through various tools and charts. The present paper highlights the importance of Line and Bar charts in forecasting the share prices for the investor. This paper also helps the investor in predicting the future price movements of stocks based on historic prices. This method can be used by any investor in understanding the future prices of stocks irrespective of other factors like micro and macro environment. The study mainly considers two types of charts bar and line and its application in the sector of information technology over a period of one year.*

Keywords: Forecasting, Bar Charts, Line Charts, Technical Analysis, Volatality

1. Introduction

Forecasting is a planning tool for the management to predict the future performance of a specific activity. Stock prices are very volatile and the price changes are more dependent on macro economic factors. The challenge for any investor lies in understanding the technical details of market prices of stocks and deciding on the investment pattern over the years. Information technology is a booming sector in India. Infosys and Tata Consultancy Services lead the sector in its market capitalisation. The market capitalisation of Infosys and TCS stand at 1,85,443 crores and 4,70,359 crores respectively.(Source: BSE India as on 16th July 2014.)

1.1 Types of charts used in Technical Analysis

- Line Chart
- BAR Charts
- Candlestick Charts
- Point and figure charts

The study covers the application of two charts i.e., bar and Line.

1.2 Line Charts

This chart is considered as the basic type of chart. It takes in to consideration the closing prices of stocks over a period of time. The line is formed by connecting the closing prices.

1.3 Bar Charts

This chart represents high and low prices of shares along with the closing prices.

2. Literature Survey

In the past, it has been found that the past returns inform expected returns. The past returns (three to twelve months) are positively related to future average returns. This concept was identified in the research papers of Jegadeesh(1990), DeBondt and Thaler(1985), and Jegadeesh and Titman(1993). There have been good reasons to explain these aspects. These factors are influenced by microstructure and data snooping biases (Boudoukh et al., 1994; Conrad and Kaul 1989; Lo and MacKinlay 1988), to rational risk based explanations (Conrad and Kaul, 1998; Berk et al., 1999; Chordia and Shivkumar, 2002; Bansal et al., 2002). Grinblatt and Han (2002) mentioned that the disposition effect brings in the results. Watkins (2002)[1] mentioned that information diffusion elaborates the consistency in stock returns.

3. Problem Definition

The previous research mainly highlights the factors affecting the future prices. The main problem in this area lies with the investor in the prediction of future prices of stocks and to take informed decisions. The research aims at analysing the future prices using line and bar charts and regression analysis for forecasting.

4. Objectives of the Study

1) To study the pattern of share price movements of the information technology sector.
2) To forecast the future price of the stock based on historic prices.
3) To apply the concepts of Line and Bar charts in the analysis.
4) To guide the potential investor in making right decisions.

5. Research Methodology/Approach

For the purpose of research the secondary data has been used. The data used here are high, low and closing prices of two stocks. i.e., Infosys and Tata Consultancy Services over a period of one year July 2013- July 2014. The high, low, close prices for each month were collected from Bombay Stock Exchange. The data of the first six months of year 2013 were considered to observe the chart movements and then compared with the next six months of year 2014 for the analysis. The price of July 2014 was taken as the standard for forecasting. On the basis of this, the forecast function was applied by taking into consideration the price of July as X which is the data point to predict the value. The price from January to June (2014) are taken as the dependent arrays (known y) and July to December (2013) are taken as independent ranges (known x). The linear regression is used to estimate the result.
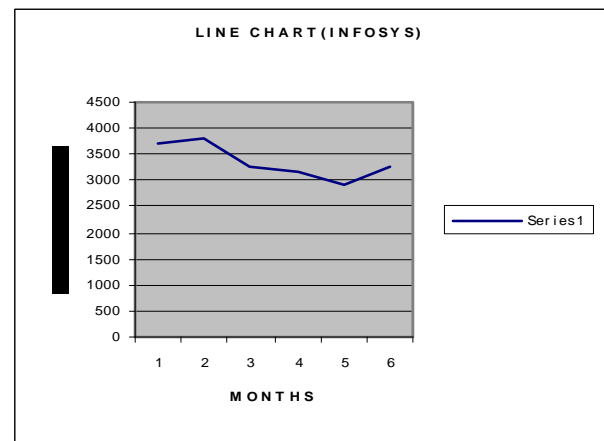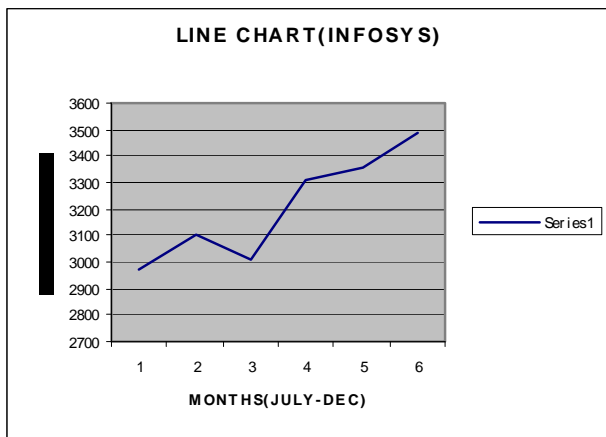
6. Data Analysis

6.1 Closing Prices of Infosys

Months	Infosys(2014)	Months	Infosys(2013)
Jan	3701.1	July	2969.65
Feb	3824.85	Aug	3105.85
March	3282.8	Sept	3013
April	3180.8	Oct	3309.9
May	2939.4	Nov	3354.55
June	3255.55	Dec	3485.65
July	3292.7		

Source: BSEINDIA

Line Chart Infosys

6.2 Closing Prices of TCS

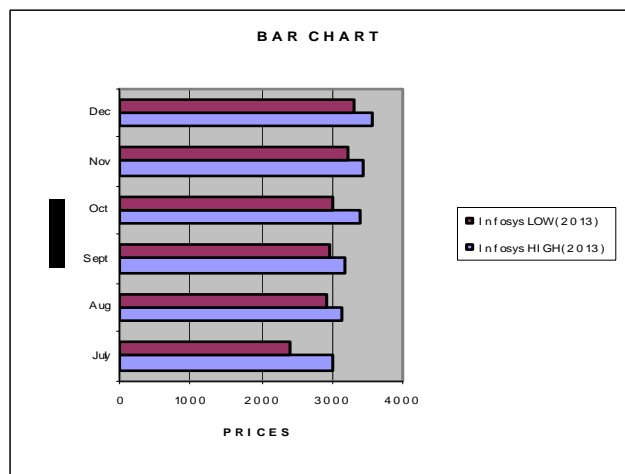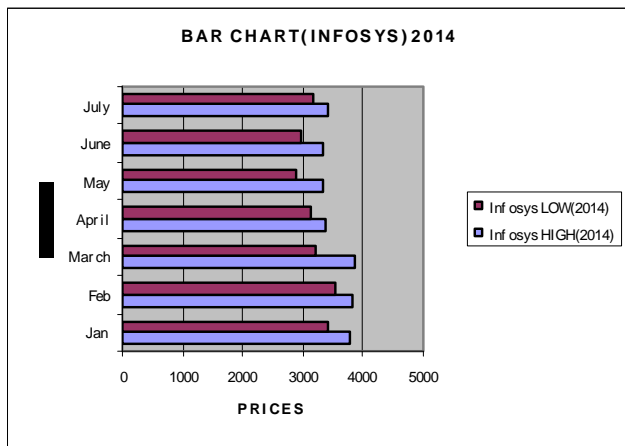| Months	TCS(2014)	Months	TCS(2013)
Jan	2241.05	July	1815.5
Feb	2275.75	Aug	2033.2
March	2133.15	Sept	1927.8
April	2189.2	Oct	2112.05
May	2141.35	Nov	2004.35
June	2425.4	Dec	2172.05
July	2351.8		

Source: BSEINDIA

Line Chart TCS:
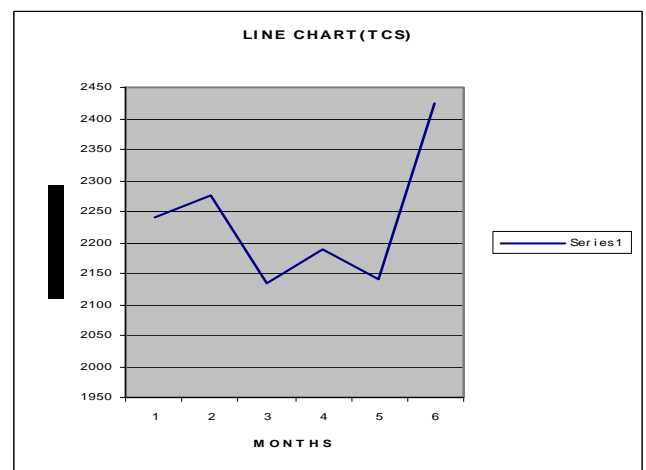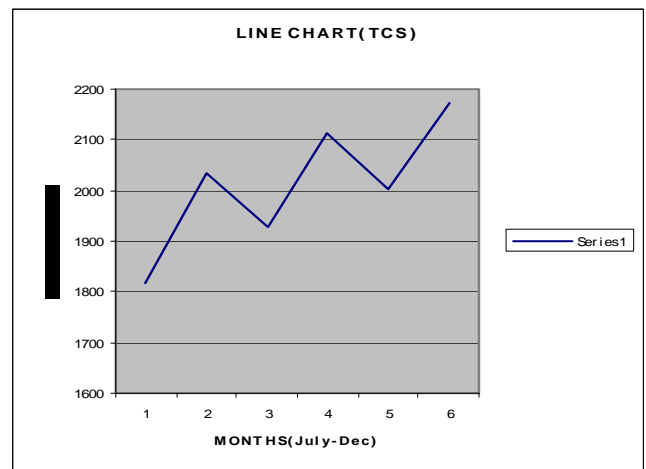
6.3 High and Low prices of Infosys

Months	Infosys HIGH (2014)	Infosys LOW (2014)	Months	Infosys HIGH (2013)	Infosys LOW (2013)
Jan	3799	3417.85	July	2991.6	2392.6
Feb	3837.15	3541	Aug	3130	2922.1
March	3849.95	3215.95	Sept	3188	2980.1
April	3388	3142.4	Oct	3377.7	3003
May	3340	2880	Nov	3448	3233
June	3339.4	2950	Dec	3575	3318.2
July	3406.35	3190.5			

Source: BSEINDIA

Bar Chart Infosys:
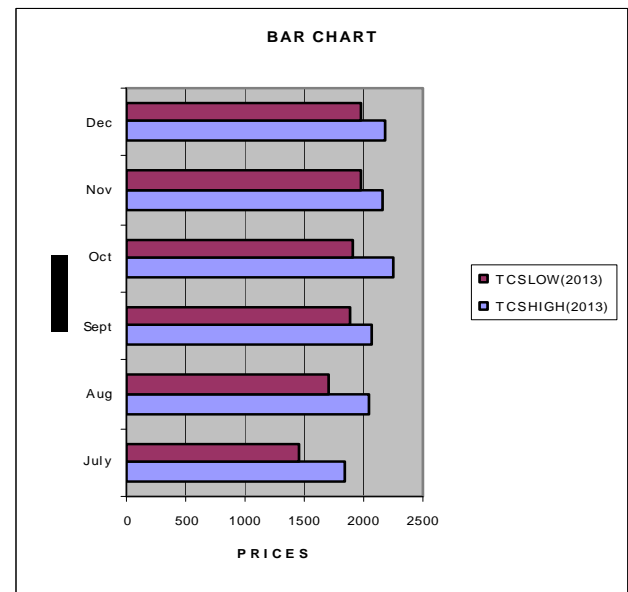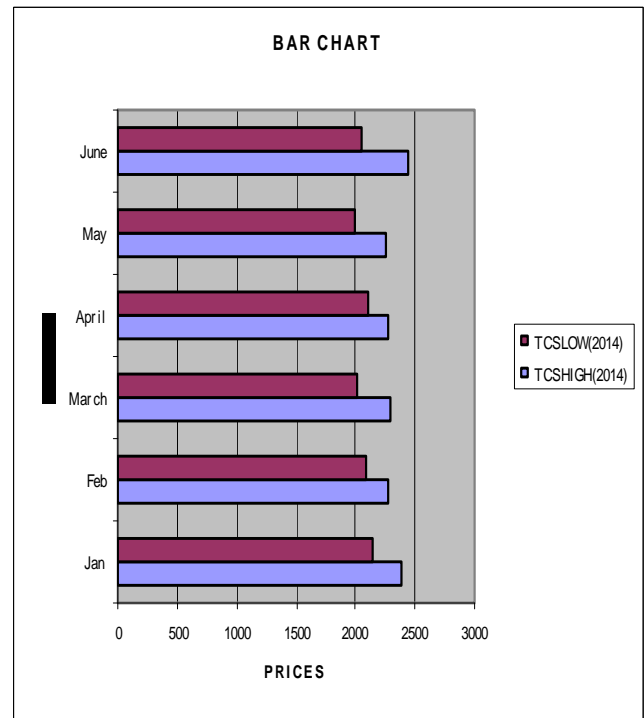
6.4 High and Low prices of TCS:

Months	TCS HIGH(2014)	TCS LOW(2014)	Months	TCS HIGH(2013)	TCS LOW(2013)
Jan	2384.8	2147.25	July	1831.5	1465
Feb	2280	2085.1	Aug	2050	1695
March	2299	2011.4	Sept	2078.8	1894.05
April	2264	2100	Oct	2258.85	1916.7
May	2253.4	1999.5	Nov	2148.15	1970
June	2435	2056	Dec	2184.95	1983.05
July	2498	2335			

Source: BSEINDIA

Bar Chart TCS:

7. Results and Discussions

The line chart of Infosys shows an increasing trend for the year 2013 whereas the year 2014 has fall in the share prices over a period of six months. From the point of view of the investor this stock may not be appealing as it shows the downward trend. On the basis of the stock prices it can be inferred that the price in the future would come down and the forecasting technique shows the future price to be 3274.438.

The line chart of TCS shows an increasing trend for the year 2013 and also for the year 2014 over a period of six months. From the point of view of the investor this stock is appealing

as it shows the upward trend. On the basis of the stock prices it can be inferred that the price in the future would go up and the forecasting technique shows the future price to be 2379.55.

When the prices of 2014 are compared with the prices of 2013, it can be concluded that 2013 was a good year for the stocks as it showed increasing trend. The prices of 2014 was good upto march. The stock prices decreased after that till June. On the basis of the stock prices it can be inferred that the price in the future would go down and the forecasting technique shows the future high price to be 3461.69 and the forecasted low price would be 3062.40.

When the prices of 2014 are compared with the prices of 2013, it can be concluded that 2013 was a good year for the stocks as it showed increasing trend. The prices of 2014 were also good and showed an increasing trend. On the basis of the stock prices it can be inferred that the price in the future would go up and the forecasting technique shows the future high price to be 2255.12 and the forecasted low price would be 1957.46.

8. Conclusion

From the analysis, it can be concluded that forecasting helps the management as well as individuals to ascertain the future prices. The study attempts to forecast the stock prices of two companies of information technology sector. It also guides the investor to take informed decisions on the basis of past prices. Line and bar charts are the two tools used to predict the future prices of stocks in the study.

9. Future Scope

The methodology used in the study would help the risk averse investors to understand the behaviour of stock price movements and invest in high risk stocks. It would also help the investors to earn good returns from the deal.

References

[1] www.bseindia.com
[2] in.finance.yahoo.com
[3] [1]DeBondt and Thaler (1985), Lo and MacKinlay (1988), Conrad and Kaul (1989), Jegadeesh (1990), Jegadeesh and Titman (1993), Boudoukh et al., 1994, Conrad and Kaul, 1998, Berk et al., 1999, Chordia and Shivakumar, 2002; Bansal et al., 2002, Grinblatt and Han (2002), Watkins (2002).

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