Investing Strategy Using Technical Analysis : A Case Of Infosys

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INTRODUCTION

Many people enter the stock market using strategies that stack the odds against success. One of the reasons this happens is because the stock market is such a confusing and complex phenomenon. In the face of all the confusion, many people try to find an easy way to succeed in the market. They experiment with several approaches:

1)Buying popular branded stocks

2) Searching for companies destined to be successful

3) Buying Hot tips

4) Buying stocks and putting them away

A MORE PROFITABLE APPROACH TO STOCK STRATEGY

The forces of supply and demand result from two powerful emotions: demand results from the hope for profits; supply results from the fear of loss. When these two opposing forces are not in balance, stock prices move up if the demand side is greater, and down if the supply side is greater. In the present paper, the researcher has analyzed the charts of the INFOSYS stock for the period from April 2011 to September 2011 and has used various technical Analysis Tools in predicting the trend so as to take informed decision in holding, buying, or selling the shares. The researcher has used candle stick charts and tools like EMA, Price Patterns, Stochastic, MSD, RSI, Bollinger Band, Resistance and Support to evaluate the Infosys Share.

OBJECTIVES OF THE STUDY

❖ To analyze the price movement of the shares of Infosys, and to interpret investment decisions based on Technical Analysis results.

❖ To provide necessary information to investors so that they can use Technical Analysis and its tools to make an informed decision on investing into stocks.

METHODOLOGY

The research design is analytical in nature. The researcher has used facts or information already available to make a critical evaluation of the material.

1) Sources of Data: The Data is collected from websites, various books, magazines, newspapers, and reports prepared by various scholars. Data and information from Bombay Stock Exchange and National Stock Exchange website has been used.

2) Method of Data Collection: The study is based purely on secondary data.

3) Statistical Tools Used For The Study : The analysis was done using secondary data. The researcher used Candle Stick Charts and Tools applied were EMA, RSI, MACD, Bollinger Band, and Stochastic.

4) Period of Analysis: The analysis of Infosys Stocks was done between 1st April, 2011 to 31st September, 2011.

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ANALYSIS AND INTERPRETATION

EXPONENTIAL MOVING AVERAGE

EMA is a type of moving average, which gives greater weightage to recent prices in an attempt to make it more responsive to new information. It is calculated by adding a percentage of yesterday's moving average to a percentage of today's closing value.

Figure 1 : EMA of Infosys For The Period - 1st April, 2011 To 30th June, 2011

Figure 2 : EMA of Infosys For The Period - 1st July, 2011 To 30th September, 2011

EMA (Current) = [(Price (Current) EMA (Prev)* Multiplier)] + EMA (Prev)

For the study, the researcher analyzed 5-day EMA, 12-day EMA, and 26-day EMA.

❖ **Interpretation :** On 28th April, 2011, the 5 day EMA moved down and crossed the 12 day EMA line as seen in the Figure 1. It also crossed the 26 day moving average, giving clear signals for the investor to sell all the stocks . The stock was going down all these days. Again on 28th June, 2011, the 5 day EMA moved up and crossed the 12 day as well as 26 day EMA, signaling an opportunity to buy. Also, the volume went up again on 28th June, 2011, signaling an opportunity to buy the stocks.

❖ **Interpretation:** The 5 day, 12 day, and 26 day EMA were going hand in hand until 26th August, 2011, when it broke down, giving the signal to sell off. The 5 day EMA moved upside and broke up the 12 day EMA on 2nd September, 2011, giving hope for upward breakthrough, but could not break the 26 day EMA. Again, on 30th September, 2011, the 5 day EMA was seen moving up, giving a hope to break the 12 day and 26 day EMA (Figure 2).

PRICE PATTERN

Figure 3 : Price Pattern of Infosys For The Period - 1st April, 2011 To 30th September, 2011

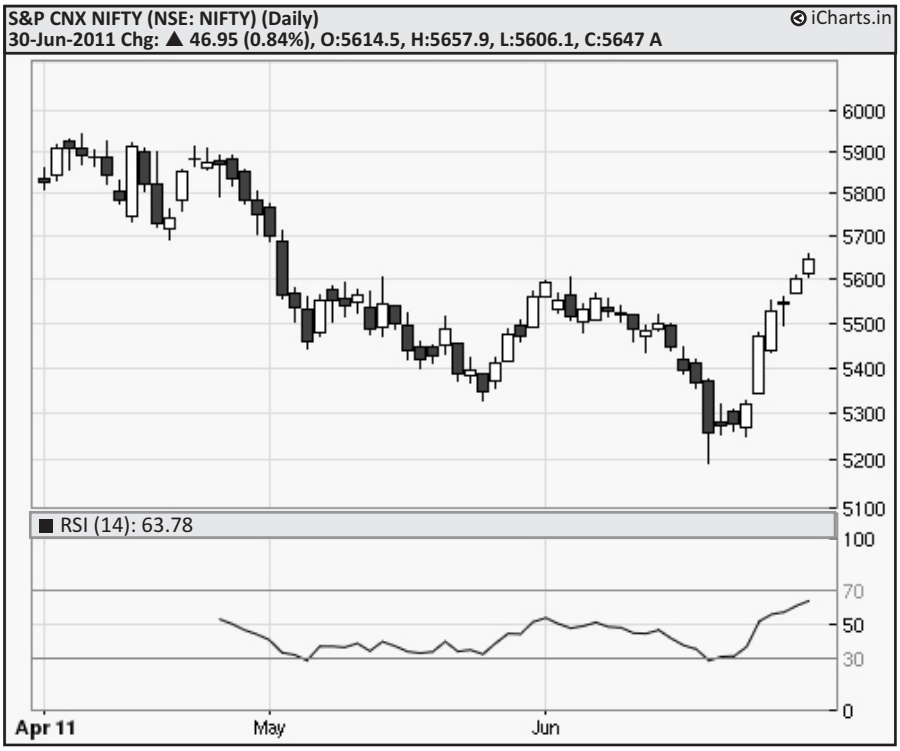
❖ **Interpretation:** The Figure 3 reveals that on 26th August, 2011 and then again on 14th September, 2011, an inverted double bottom was formed. This is a clear indication that the price would go up. The target would be the difference between the two lines from the upper line.

STOCHASTIC

❖ **Interpretation:** On 28th June, 2011 (Figure 4), there was a positive crossover in uptrend, giving an indication for buying stocks. On 6th July, 2011, the crossover was downside on downtrend, indicating selling. Again, on 24th July, 2011, it showed that the downtrend and crossover was downside, giving an indication for selling the stocks. On 18th September, 2011, again, there was an upward cross at uptrend, indicating an option for buying the stocks. The stochastic is an add on indicator, along with others to take decision on the investment.

Figure 4 : Stochastic Infosys For The Period - 1st April, 2011 To 30th September, 2011

Figure 5 : RSI of Infosys For The Period - 1st April, 2011 To 30th June, 2011



RELATIVE STRENGTH INDEX (RSI)

RSI is an oscillator used to identify the technical strength or weakness in a particular scrip. It gives the magnitude of recent gains to recent losses in attempt to determine overbought and over sold conditions of security. The researcher used 14 days RSI for the stock. The indicator has definite boundary, and the price momentum ranges between 0 and 100.

$$RSI = 100 – (100/1+(U/D))$$

Where,
U = An average of upward price change;
D = An average of downward price change.

❖ **Interpretation:** The Figure 5 depicts RSI for the period from 1st April, 2011 to 30th June, 2011. The overbought condition was taken at above 70, and the oversold condition was below 30. The researcher did not witness any oversold, nor at any point of time the RSI was going below 30. Therefore, the signal is for hold. Furthermore, the researcher did not witness any downturn at the overbought condition to signal sell.

Figure 6 : RSI of Infosys For The Period - 1st July, 2011 To 30th September, 2011

The period from 7th August, 2011 to 26th August, 2011 shows that the RSI dipped below 30, thus indicating that the stocks have been oversold, and investors can now look for an opportunity for buying (Figure 6).

❖ **Buy :** 28th August, 2011 gave an indicator for buying stocks as it crossed the positive up and moved beyond the 30 mark.

MOVING AVERAGE CONVERGENCE DIVERGENCE (MACD)

MACD is a trend following momentum indicator that shows the relationship between two moving averages of price. MACD has proven most effective in wide swinging trading markets. The three ways to use MACD are : crossovers, overbought/oversold conditions and divergences (Figures 7 and 8).

Figure 7 : MACD of Infosys For The Period - 1st April, 2011 To 30th June, 2011

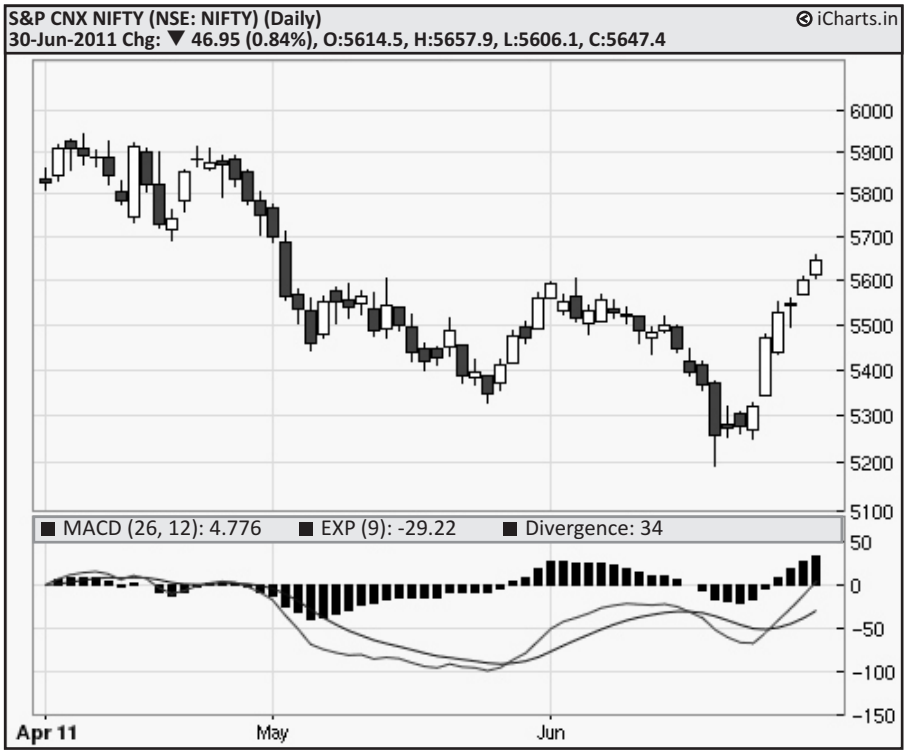


Figure 8 : MACD of Infosys For The Period - 1st July, 2011 To 30th September, 2011

Figure 9 : Bollinger Band of Infosys For The Period - 1st April, 2011 To 30th June, 2011

❖ **Buy :** No positive crossover seen in positive zone. Hence, no indication of any buys in the period. There was a crossover on 26th May, 2011, however, even though the crossover was positive going up - but was not in the positive zone i.e. above the 0 mark. Hence, there was no signal for buying.

❖ **Sell :** Negative crossover in negative zone was seen on 01 May, 2011. Hence, it gives a signal to sell.

❖**Interpretation**

❖ **Buy :** No positive crossover was seen in the positive zone. Hence, there was no indication of any buy in the period.

❖ **Sell :** Negative crossover in negative zone was seen on July 26, 2011. Hence, it gave a signal to sell.

Figure 10 : Bollinger Band of Infosys For The Period - 1st July, 2011 To 30th September, 2011

BOLLINGER BAND

Bollinger bands are similar to moving envelops. Bollinger bands are plotted at standard deviation levels above and below moving averages.

❖ **Interpretation :** The Bollinger Band was very wide from 2nd May, 2011 to 9th May, 2011, thus indicating high volatility. The band narrowed down from 19th May, 2011. The narrowing of the band indicates that there is a chance of breakthrough, which was seen on 17th June, 2011. The band also indicates the price band in which small trading can be done i.e. when the price reaches a low point, band purchase of stocks can be made; and it can be sold when the price reaches a high point of the band (Figure 9).

❖ **Interpretation:** The Bollinger band was very narrow on 3rd August, 2011 .The narrowing of the band triggered a breakthrough downward, and prices started falling from 4th August, 2011 onwards. The band again widened from 9th August, 2011to 4th September, 2011. The band tightened on 5th September, 2011, again indicating a breakthrough. Furthermore, a trader can trade between high and low points of the Bollinger band (Figure 10).

FINDINGS

1) It was found from the EMA that on 28th April, 2011, there was a clear signal for investors to sell the stocks held by them. Again, on 28th June, 2011, there was an opportunity to buy. Also, the volume went up on 28th June, 2011, giving a buying signal. 26th August, 2011 gave a signal to sell off.

2) Price Pattern showed a double bottom pattern, and it can be seen as a indication for a positive turnaround.

3) Stochastic indicator on 28th June, 2011 gave an indication for buying, then on 6th July, 2011, the indicator showed selling, and again on 24th July, 2011, it indicated selling.

4)The period from 7th August, 2011 to 26th August, 2011 showed that the RSI has dipped below 30, thus indicating that the stocks has been oversold, and investors could now look for an opportunity for buying.

5) SELL : MACD showed Negative crossover in negative zone on 1st May, 2011 and on 26th July, 2011. Hence, it gave a signal to sell.

6) The Bollinger band narrowed down from 19th May, 2011. The narrowing of the band indicated a chance for breakthrough, which was seen on 17th June, 2011. A trader could trade between high and low points of the Bollinger band.

SUGGESTIONS

1) The markets are either up trending, range bound, or in a down trend. Investors need to apply appropriate indicators and strategies for each type of market.

2) Investors should learn the art of technical analysis as it's very difficult to get the insiders' information of the company.

3) Fundamental analysis can also be used along with Technical Analysis in case the investment is done for a long term.

4) Investors need to calculate the risk reward ratio before initiating any trade.

5) A single indicator cannot give the overall picture of the future trend, but all indicators, charts and oscillators together constitute a collated picture, which gives a good view and prediction of the future trend.

CONCLUSION

Buying or selling of stocks is a complex and challenging issue. The price of a security represents a consensus. It is the price at which one person agrees to buy and another, sell. It has been found that sentiments play a very important role in determining a stock's price. If we all were totally logical, and could separate our emotions from our investment decisions - the fundamental analysis, the determination of prices based on future earnings would work magnificently. However, it doesn't happen that way. There are plenty of examples where we have seen all together different trends,

even though the company is doing well and has generated positive results. Technical analysis is the process of analyzing a security's historical prices in effort to determine a probable picture for the future. In doing so, it counts everything, including human sentiments, fears etc. The technical analysis of Infosys in this paper will help an investor with informed knowledge about how to go about using various tools and charts available for analysis. If we rely purely on Fundamental Analysis, broker's advice, tips, newspaper articles , and news, then the investor is inviting trouble for himself. However, it also has to be understood that technical analysis does not confirm 100% accuracy in analyzing future trends. But even if an investor is able to predict the correct trends and the expected target 70% of the time, it will guarantee him consistent returns in the stock market.

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