RESEARCH ARTICLE

A Study on the Technical Analysis of NSE Towards it Stocks with Reference to Indian Stock Market

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Abstract

The article is about the technical analysis as to how it plays an important role in secondary market, analysis of stocks and its usefulness towards trading. Technical analysis can be defined as the process of identifying trend reversal at an early stage and to ride the trend until the weight of evidence suggests that the trend has reversed directions. "A Study on the Technical Analysis of NSE towards IT Stocks with Reference to Indian Stock Market" was done based on historical prices of IT stocks. Analysis is done based on the technical tools like Exponential Moving Average and Relative Strength Index and inferred based on the chart patterns formed.

Introduction

Technical analysis is based on the interaction between the supply and demand for the stocks, which can be caused by the rational and irrational factors. Technical analysts believe that prices move in trend and can persist for a long time until something happens to the stocks. Even though technical analysts do not know all the factors that influence the buying or selling of all stocks, they believe that investors are able to know the actual shifts in the supply and demand of stocks by looking into their market price behavior. The field of technical analysis is based on three assumptions

- The market discounts everything.
- Price moves in trends.
- History tends to repeat itself.

Statement of the Problem

The major problem in the firm was to give technical advice to investors based on technical analysis. The study will provide an insight into the different aspect of technical analysis which will help to guide the investors. Forthis purpose various technical tools like Relative Strength Index and Exponential Moving Average.

Objectives of Study

- To analyze the price fluctuations in the IT stocks.
- To analyze the demand and supply of a scrip influencing the price.
- To identify the market trend of IT stocks.
- To compare the price difference in NSE of IT stocks.

Limitations of the Study

- Technical analysis may not hold good always.
- Technical analysis does not consider the economy of the country, performance of the company etc.,
- The study is limited to cost and time constraints [1,2].

Review of Literature

- Sanjay K Hansda, Partha Ray, BSE AND NASDAQ: Globalization, information technology and stock prices, 2002. The synchronized movement of BSE and NASDAQ has often been interpreted as an indication of integration catching up with the Indian financial markets. The authors have looked into the nature of relationship between the daily share price in BSE and NSE on the one hand and NASDAQ and New York Stock Exchange on the other, for 1999-2000 through 2000-2001 and have found a unidirectional

causality from NASDAQ to BSE or NSE. The relationship as well as direction of causation also holds good for the technology segment of the New York Stock Exchange and BSE or NSE. However, domestic prices of technology stocks and overall domestic share prices were found to be independent of each other [3]

- RH Patil, Vinay Gupta, Amit K. Singh: National Stock exchange: Leveraging IT for creating an investor oriented Exchange,. The National Stock Exchange (NSE) of India was envisioned as an exchange for the fast changing and evolving capital market in India. NSE today garners the maximum share turnover and it is the most computerised stock exchange in the country. NSE offers various learning experiences such as understanding of the market requirements, learning from the best stock exchanges abroad, a bias free trading platform and designing a trading system with the little changes for manipulation [4].

- Lazar D, Julia Priya, Joseph Jeyapaul: SENSEX Monthly Return: Is there Seasonality? There are reports and studies both in India and abroad on the seasonality of the SENSEX monthly returns. These studies pertain to both developed and emerging markets. It covers only post-reform period. The study uses for analysis the monthly return data of the Bombay Stock Exchange's Sensitivity Index for the period from April 1991 to March 2005. After examining the stationary of the return series, we specify the augmented auto-regressive moving average model to find the monthly effect in the stock returns in India. The results confirm the existence of seasonality in stock returns in India. The findings are also consistent with the 'tax-loss selling' hypothesis. The results of the study imply that the stock market in India is inefficient, and hence investors can time their share investments to improve returns [5].

- Ram Kumar Kakani, Tanmoy Chatterjee: An Alternative Perspective on the Bull Run in Indian Markets. This paper probes into the recent bull run of the Indian equity markets. Using capital market data and facts it is found that the recent equity markets bull run is a shallow one, especially during the last two years. It is observed that this shallowness is due to - (a) Index rally being driven by only a few big stocks with large number of underperformers; and (b) Increasing narrowness of even the broad equity markets. In fact, in the last two years, more than 82% of the gains in BSE Sensitive Index (India's barometer for equity markets) can be explained by a mere seven stocks. The results are no different with even NSE Nifty Index. While the foreign institutional investors own investment norms make the funds get concentrated to a few but the problem gets aggravated due to the role being played by the institutional intermediaries (especially the stock exchanges by promoting F&O), government, analysts, and investment bankers in the same and the wide spread inter-linkage among them. This paper explores the above issues and other links which are increasing the shallowness of the Indian equity markets. The above issues do aggravate the chances of systemic errors and failures leading to one side movements in the market [6].

- Niladri DAS, Pattanayak JK (2009), Analysis of the fundamental factors affecting the market price of shares constituting the Indian index: A study of SENSEX. This paper examines the various research studies undertaken in the Indian and international context highlighting the effect of various fundamental factors on the behaviour of the stock market. This paper tries to identify the critical variables which have a significant effect on stock price movements and influence the entire market's movement. The 30 shares constituting the Bombay Stock Exchange-Sensitivity Index (BSE-SENSEX or SENSEX) are used as proxies to capture the entire stock market's movement. Appropriate statistical techniques have been used to establish a meaningful relationship among various explanatory variables identified through the empirical analysis considering the available research studies. The explanatory variables, which act as major determinants of stock price

movements, are condensed into a few critical factors by factor analysis and the relevance of these factors in influencing stock market movements is explained in detail. The analysis shows that higher earning power, Returns on Investment (ROIs), growth possibility and favourable valuation have a positive impact on the share price and stock market movement, while higher risk and volatility have a negative impact. These factors can be used as major analytical tools by investors, corporations and brokers to make rational and intelligent investment decisions [7].

- Asha E Thomas, MC Dileep Kumar: Empirical Evidence on Weak Form Efficiency of Indian Stock Market,. Ever since Fama (1965) propounded his famous Efficient Market Hypothesis (EMH), a number of empirical studies have been conducted to test its validity, both in developed markets and as well as in emerging markets. The contradictory nature of the results and the change in the current market scenario encouraged the researcher to conduct a research in the market efficiency of Indian Stock Market. Statistical tools like autocorrelation and run test were used to test the Weak Form market efficiency.One-sample Kolmogorov-Smirnov test was used to find out how well a data series fits a particular distribution. The null hypothesis of the study was whether the Indian Stock Market is Weak Form efficient. The results of both non-parametric (Kolmogrov-Smirnov goodness of fit test and run test) and parametric test (Auto-correlation test) provide evidence that the share prices do not follow random walk model and the significant autocorrelation co-efficient at different lags

reject the null hypothesis of weak-form efficiency [8].

- Saurabh Agarwal: Dynamics of investor's behaviour: a survey-based study on Indian securities market,. This paper attempts to formalize the effect of demographic variables like marital status, gender, occupation and age on the source of investment advice which in turn affect the herd behaviour of investors and probability of investment in near future. Further, postulations have been made for most preferred investment option and purpose of saving and source of investment. Impact of theoretical analysis on choice among investment alternatives has also been investigated. The analysis contributes to understanding the different investment choices made by households in India. The insights offered in the paper indirectly contribute in uncovering the various unexplained asset pricing puzzles [9].

Research Methodology

This is ananalytical study based on the secondary data collected from NSE India of five IT stocks. Data was collected by means of historical prices of IT Company Stocks for the five months given in the website. The study focuses on the investors' usage of technical analysis in share trading, price fluctuations and the usefulness of it. Non probability sampling was used for the study and the sample selected was to the convenience of the researcher. Analysis is done based on the technical tools like Exponential Moving Average (EMA) and Relative Strength Index (RSI) and inferred based on the chart patterns formed.

Analysis and Interpretation

Table 1: Showing RSI for the month of December'14 – April'15

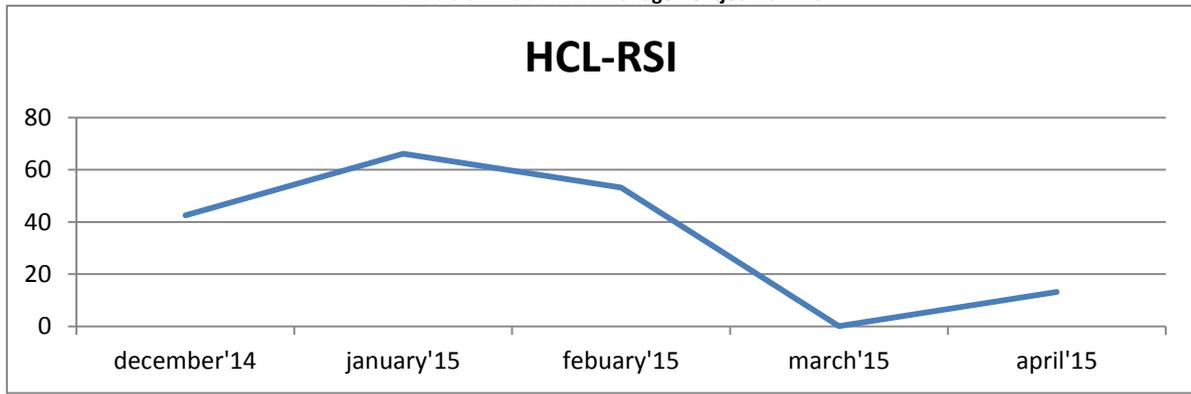| Months	Hexaware	Polaris	HCL	TCS	Tech Mahindra
Dec'14	37.7873563	39.47368	42.46728213	39.08074	45.7268
Jan'15	68.8262195	30.82386	66.17685647	43.83256	71.01649
Feb'15	89.4543787	40.33613	53.17315226	62.86856	47.68603
Mar'15	89.4543787	64.06728	0.130494505	96.07012	97.94602
Apr'15	66.5738808	45.83684	13.19389634	45.83684	20.69689

HCL-RSI

Figure 1: Showing RSI of HCL Tech Limited for the Months of December 2014 - April 2015

Interpretation

The Relative Strength Index is an oscillator used to identify the inherent technical strength or weakness in particular scrip.RSI foretells a rise or fall in scrip. As a rule of thumb, whenever the RSI goes above seventy, one had better prepare for a downturn similarly, and then the RSI goes below thirty. It is time to pick up the scrip.

The above chart shows the 20 days RSI chart of HCL tech for 5 month from December 2014 to April 2015. In the month of December the price pick up, rises above 60 which is nearing to 70 which shows the point to where there will be down turn in price in the month of March RSI falls down below 30 and touch as zero and price moving up.
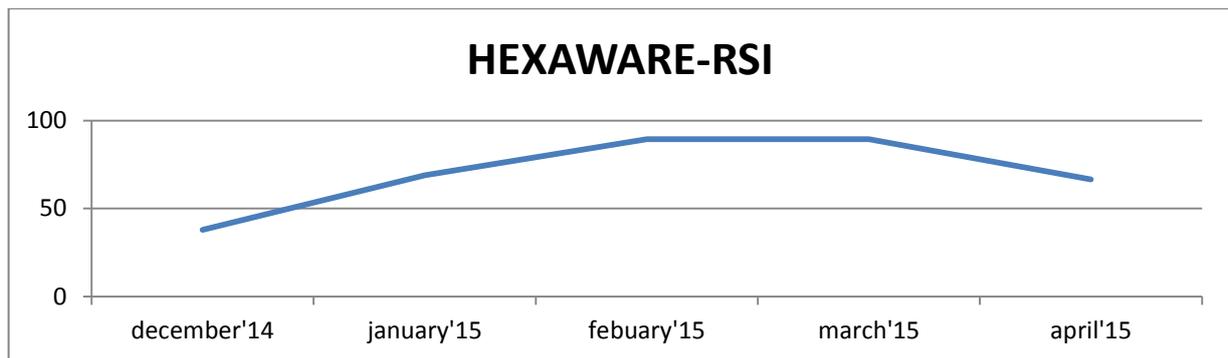
HEXAWARE-RSI

Figure 2: Showing RSI of Hexaware for the Months of December 2014 - April 2015

Interpretation

The above chart shows the 20 days RSI chart of HEXAWARE for 5 month from December 2014 to April 2015.In the month of January the price pick up, rises above 60 which is

nearing to 70 which shows the point to where there will be down turn in price in the month of mid-march RSI falls down below 70 and it does not touch as zero and price moving up.
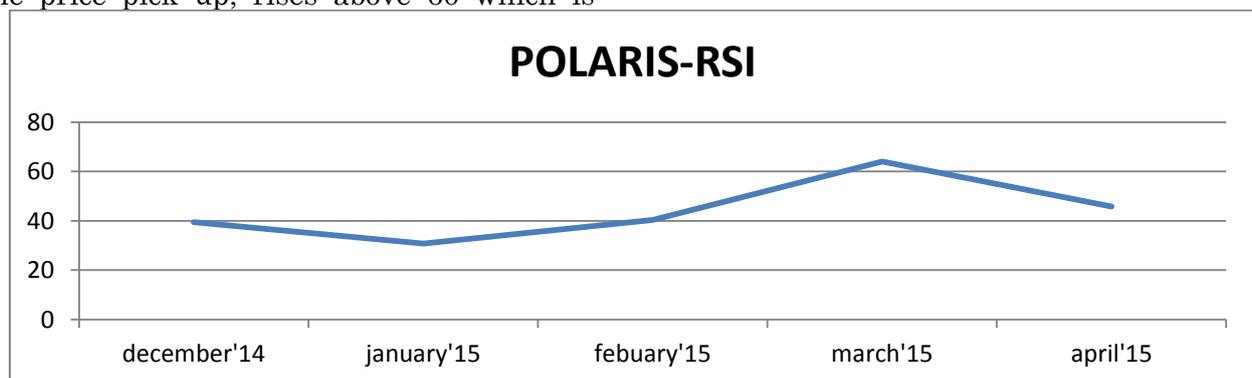
POLARIS-RSI

Figure 3: Showing RSI of Polaris Limited for the Months of December 2014 - April 2015

Interpretation

The above chart shows the 20 days RSI chart of POLARIS for 5 month from December 2014 to April 2015.In the month of March the price pick up, rises above 60 which is nearing to 70 which shows the point to where there will be down turn in price in the month of April RSI falls down below 30 and does not touch as zero and price moving up.
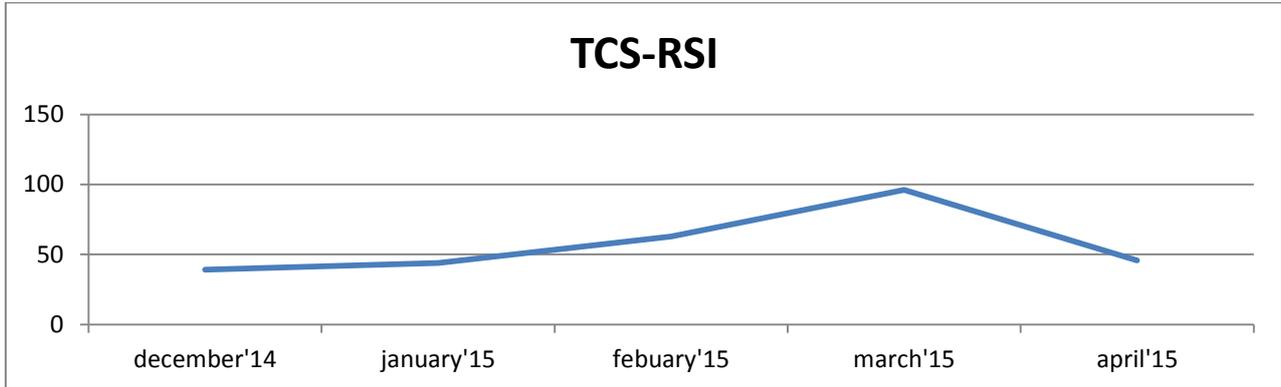

Figure 4: Showing RSI of TCS Limited for the Months of December 2014 - April 2015

Interpretation

The above chart shows the 20 days RSI chart of TCS for 5 month from December 2014 to April 2015. In the month of march the price pick up, rises above 60 which is nearing to 70 which shows the point to where there will be down turn in price in the month of March RSI falls down below 40 and does not touch as zero and price moving up.
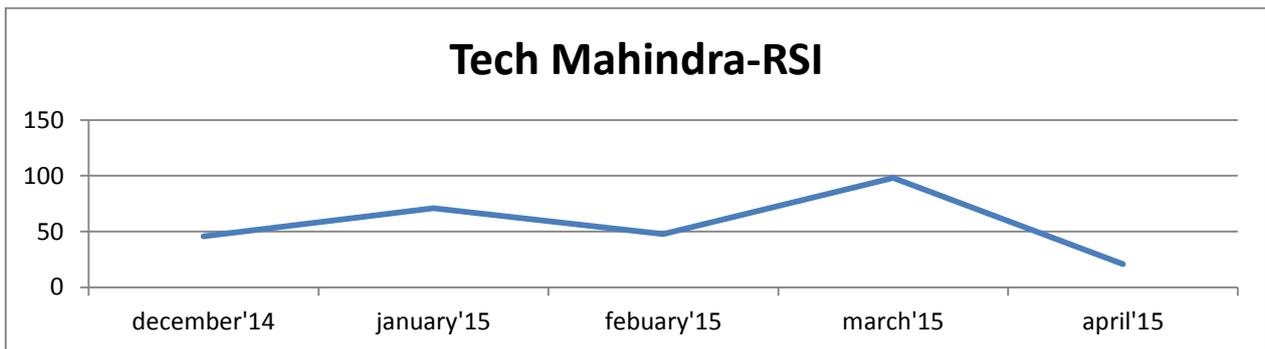

Figure 5: Showing RSI of Tech Mahindra for the Months of December2014-April2015

Interpretation

The Relative Strength Index is an oscillator used to identify the inherent technical strength or The above chart shows the 20 days RSI chart of Tech Mahindra for 5 month from December 2014 to April 2015 in the month of December the price pick up, rises above 60 which is nearing to 70 which shows the point to where there will be down turn in price in the month of March RSI falls down below 30 and does not touch as zero and price moving up.
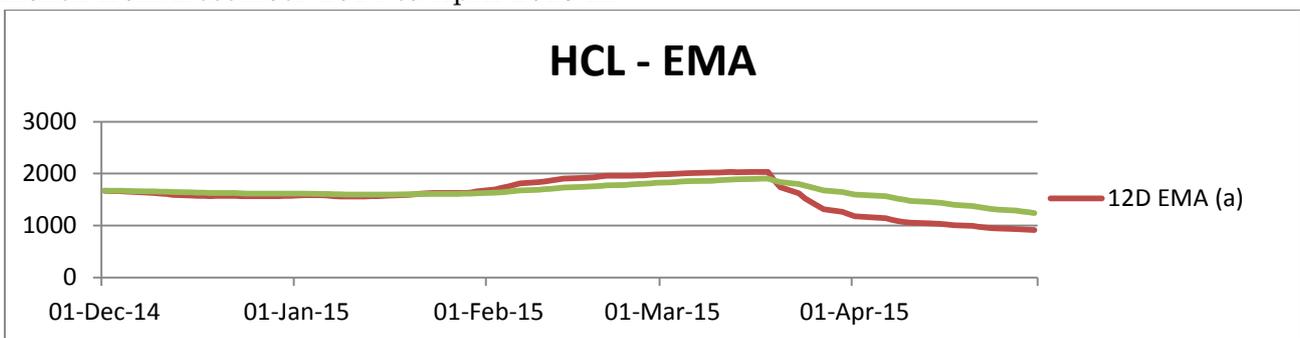

Figure 6: Showing EMA of HCL Tech for the Months of December 2014 - April 2015

Interpretation

The analyst uses a combination of two moving averages. One is short term moving average i.e. 12 days and the other one is a longer term average i.e. 48 days. The buy and sell signals are generated by the intersection of the two moving averages. The above chart shows that the two moving averages for the months of December'14-April 2015, the long moving average cuts the short moving averages and moves down. It's a signal to sell the HCL TECH shares. During end of February and in the mid of March it has the signal to buy the HCL TECH shares.
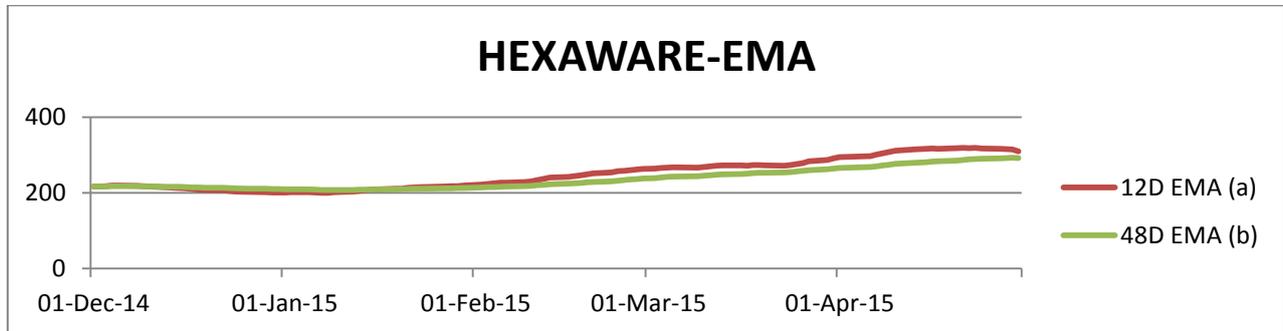
HEXAWARE-EMA

Figure 7: Showing EMA of Hexaware for the Months of December 2014 - April 2015

Interpretation

The above chart shows that the two moving averages for the months of December 2014-April'15, the long moving average cuts the short moving averages and moves up. It's a signal to sell the Hexawareshares. During end of March and in the mid of April it has the signal to buy the Hexawareshares.
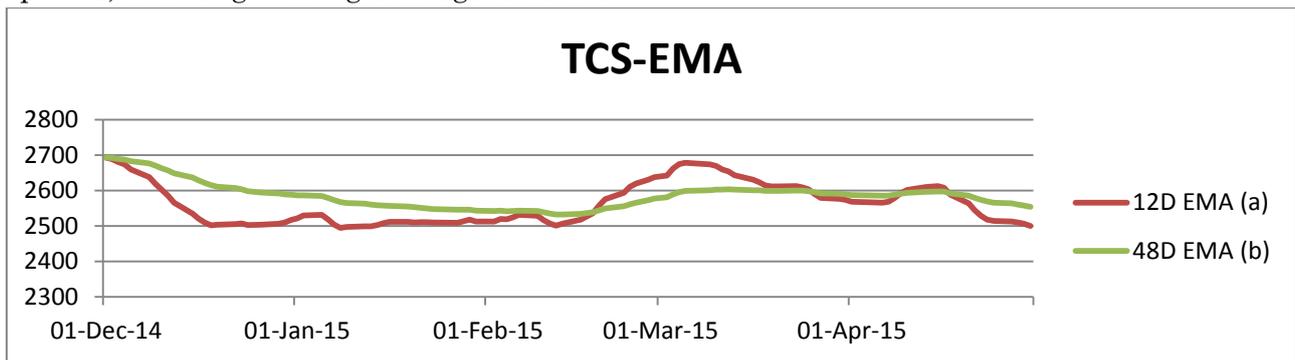
TCS-EMA

Figure 8: Showing EMA of TCS for the Months of December 2014 - April 2015

Interpretation

The above chart shows that the two moving averages for the months of December 2014-april'15, the long moving average cuts the short moving averages and moves down. It's a signal to sell the TCS shares. During end of March and in the mid of April it has the signal to buy the TCS shares.
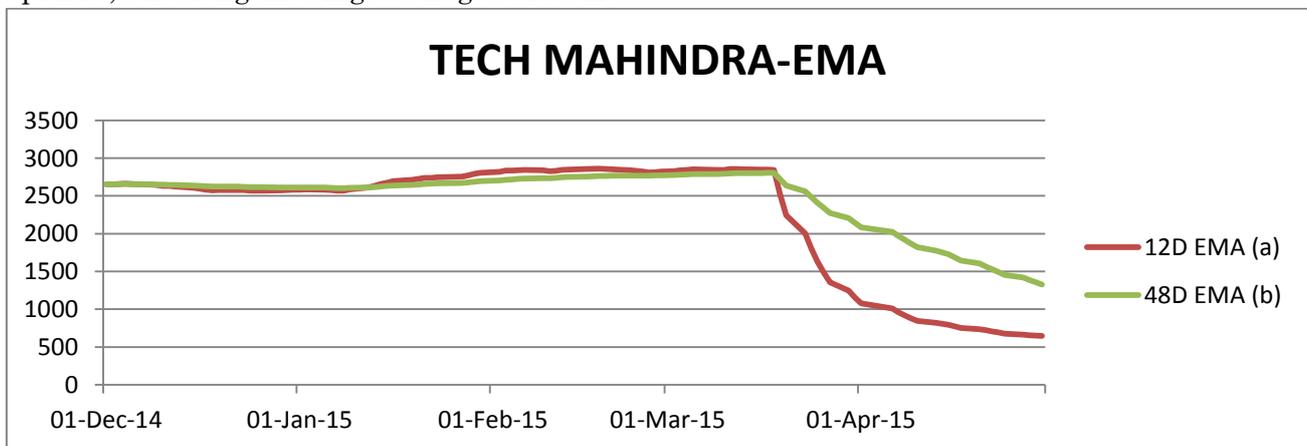
TECH MAHINDRA-EMA

Figure 9: Showing EMA of tech Mahindra for the months of December 2014 - April 2015

Interpretation

The above chart shows that the two moving averages for the months of December 2014-April'15, the long moving average cuts the short moving averages and moves down. It's a signal to sell the Tech Mahindra shares. During end of March and in the mid of April it has the signal to buy the Tech Mahindra shares.
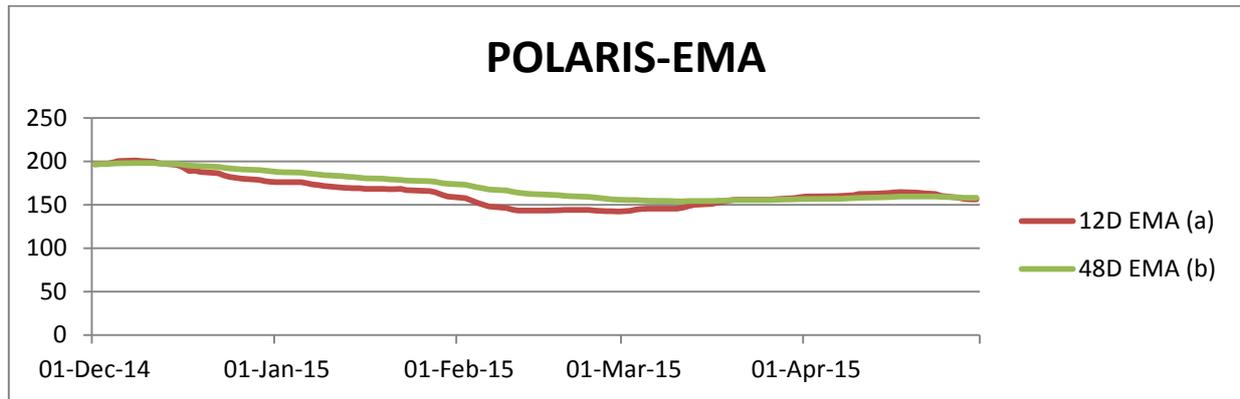

POLARIS-EMA

— 12D EMA (a)
— 48D EMA (b)

Figure 10: Showing EMA of polaris for the months of december 2014 - April 2015

Interpretation

The above chart shows that the two moving averages for the months of December'14-April '15, the long moving average cuts the short moving averages and moves down. It's a signal to sell the Polaris shares. During end of Marchand in the mid of April it has the signal to buy the Polaris shares.

Findings and Suggestions

Company	HCL		Hexaware		Polaris		TCS		Tech Mahindra	
Months	**EMA**	**RSI**	**EMA**	**RSI**	**EMA**	**RSI**	**EMA**	**RSI**	**EMA**	**RSI**
Dec'14	Sell	Over bought	Sell	Over bought	Buy	Over sold	Buy	Over bought	Sell	Over bought
Jan'15	Sell	Over sold	Sell	Over bought	Buy	Over bought	Sell	Over bought	Sell	Over sold
Feb'15	Sell	Over sold	Sell	Over sold	Sell	Over bought	Sell	Over bought	Sell	Over bought
Mar'15	Buy	Over bought	Buy	Over sold	Sell	Over sold	Buy	Over sold	Buy	Over sold
Apr'15	Sell	Over sold	Sell	Over bought	Sell	Over bought	Buy	Over bought	Sell	Over bought

- Each and every IT company has its own significance.
- The Technical tool helps the investors to get the clear idea about the value of the shares of particular company.
- For a short term investment decision Technical analysis will suites best to give buy and sell signal based on the trend the price movement follows during the particular period.
- By using the chart patterns from the technical analysis the investors can came to know about the price fluctuations and market trend of a particular IT company.

Conclusion

The present study had done with the technical analysis of five IT companies using the technical tools RSI and EMA. From the study it is found that after the Recession the IT companies provided short term investment gain to its investors. It also

found that the market trend of IT industry tends up with gradual price fluctuation. It is concluded that investors can invest in the IT stocks in future also with the consideration of country's economic scenario and the short term investors can rely on the technical charts for their investment decisions. Technical charts holds goods for short term movement then for the long term investment decisions [10-20].

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