

A Study on Technical Analysis of IT and Banking Industry with Special Reference to Simple and Exponential Moving Averages

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Abstract:

Stock exchange plays a significant role in development of any country. Stock exchange is a place where securities are traded and it acts as intermediary between surplus spending units to deficit spending units. The share prices are volatile in nature by various factors such as economic, industry and company factors as well as psychological and emotional factors. All these factors are reflected in share price movements. Hence, Technical analysis is a tool which helps in forecasting the future share prices by analysing the past share price movements. This paper is made an attempt to analyse the movement of share prices and to identify the buy or sell signals by using 50 days simple and exponential moving average as a tool in technical analysis of five top companies in software and banking industry.

Keywords: Stock exchange, economy factors, volatility, moving average.

Introduction:

Investment is sacrifice of money with an expectation of some positive rate of return in future period of time. Investor has to analyse the underpriced and overpriced securities before taking an investment decisions. There are two approaches to analyse the securities that is fundamental analysis and technical analysis. The fundamental analysis is used to find the intrinsic value (future earning capacity of a share) by considering the economy, industry and company factors. Whereas the technical analysis is used to forecast future share prices by observing past share price movements by using various chart patterns and mathematical indicators. J.Nithya, Dr.G. Thamizchelvan (2014) used Relative strength index and moving average convergence and divergence to forecast the future prices and recommended investment options based on their risk appetite. C. Bobolink (2014) says technical analysis is used for short and medium term investment decisions. Valarmathi A, Kowsalya P (2016) says that the technical analysis holds good to take short investment decisions than the long term investment decisions. This paper made an attempt to analyse the movements of shares prices and to identify the buy and sell signals by using 50 days simple and exponential moving average as a tool in technical analysis for software and banking industry.

Literature review

J.Nithya, Dr.G. Thamizhchelvan (2014) has carried her research with an objective to find the right stock for investment by using Moving average convergence and divergence and Relative strength index as a tool in technical analysis in banking industry from national stock exchange January 2013 to 20th February 2014. The results found that the buy and sell signals to investors as an investment options as Ingvysya Bank, Industrial Development Bank of India and Canara Bank is suitable to low risk, medium risk and high respectively based on the risk taking capacity of an investor.

Valarmathi A, Kowsalya P (2016) has analysed the stocks of information technology sector by using exponential moving average and relative strength index as a tool in technical analysis from national stock exchange from 2014 to 2015. Finally concluded that the information technology sector has given better gain in shorter period of time and also says short term investors can rely on technical charts for their investment decisions.

C. Boobalan (2014) has documented in his paper with an objective to analyse the movement of top five stocks which are actively trading in national stock exchange by using candle stick chart, exponential moving average, moving average convergence and divergence and relative strength index from 3rd February 2011 to 3rd March 2014 and also to assist in investment decisions in Indian capital market. Researcher pointed out technical analyst assumes that 90% psychological and 10% logical and further concluded by recommending buy and sell signals (decisions) in each of the stocks in National stock exchange and also says technical analysis is useful for taking short and medium term investment decisions apart from it the fundamental knowledge is also required to get clarity in investment decisions.

Wing-Keung Wong et al.,(2010) was carried his research with an objective to provide new evidence on whether technical indicators such as moving averages (single, dual and triple moving average) and Relative Strength Index is significant towards the timing of stock market entry and exit is tested by using appropriate statistics to test whether buy or sell signals yield significantly positive return or not during 1st January 1974 and 31st December 1994 in Singapore stock exchange. He concluded that moving average and relative strength index are significance in yielding positive returns and it is evident that the technical analysis has forecasting power. Further says through technical indicators the member firms of Singapore stock exchange able to earn substantial profits.

Research Gap

Technical analysis is study of various price charts, chart patterns and mathematical indicators used to predict the future share prices by analysing the past share price movements. Generally technical analysis ignores the fundamental factors which influence the share price volatility. Wing-Keung Wong et al., (2010) proved that the by using technical indicators buy and sell signals yielded significant positive returns means technical analysis has forecasting power. This paper is useful to investors who want to make short term investments in stock market. In this direction, this paper made an attempt to analyse the securities by using moving averages.

Objectives

- To Understand the Moving average as a tool in Technical analysis to forecast the future share prices.
- To analyse the share price movements of Software and Banking industry to interpret buy or sell decisions by using Moving average as a tool in Technical analysis.
- To advice investors in making investment decisions by using Technical analysis.

Research Methodology

Data Sources: The data which is required for my study is secondary sources such as publications, Thesis, Journals, Books, the closing prices of selected companies is collected from the websites of Bombay stock exchange and money control.

Period of Study: Two sectors are chosen Software and Banking sectors for the period from 1st January 2018 to 31st May 2019.

Sample Size: The top five companies in Software and Banking sectors are chosen for my study from 1st January to 31st May 2019

Statistical tools used: Simple moving averages and Exponential moving averages.

Methodology:

1. Moving average: Moving averages are one of the most commonly used technique to smoothen the data which is easier to spot trends in volatile markets. There are two moving averages is used for the study are

- (a) Simple moving average
- (b) Exponential moving average

(a) Simple Moving average: A simple moving average is calculated by computing the average closing price of stocks over a specified period of time.

(b) Exponential moving average: Exponential moving average is used to reduce the lag by applying more weight to recent prices compared to older prices. Exponential moving average is calculated by using the formula

$$\text{EMA} = (\text{Current Closing prices-Previous} - \text{Previous EMA}) * \text{Factor} + \text{Previous EMA}$$

$$\text{Factor} = \frac{2}{n+1}$$

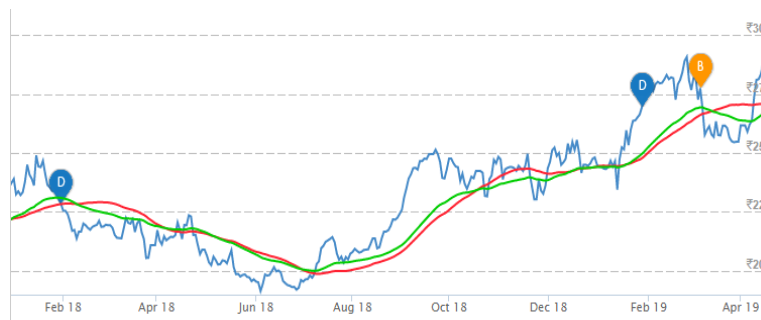
I. 50 Days Simple and Exponential moving averages of Software Industry

Chart 1.1 : Chart showing 50 Days Simple and Exponential moving average of TCS



Analysis: In chart 1.1 blue colours indicates the closing prices of Tata consultancy services stocks, red and green colour indicates the 50 days simple and exponential moving averages respectively. When the closing prices move from below to above direction with reference to moving average as a base then this point indicates to buy a stock on after 11th April 2018 (Rs.1507.08) which may earn superior profits holding till 10th October. On 10th October 2018, the closing prices of a stock is moving from from above to below direction with reference 50 days moving average give a signal to sell a stock.

Chart 1.2 : Chart showing 50 Days Simple and Exponential moving average of WIPRO



Analysis : From the above chart, it is clearly indicates that there is bearish trend from January to July and from there share prices started increasing. Firstly identify where the moving average and closing prices are intersected then see the direction of closing prices with reference to moving average it gives buy or sell signal. Buy Wipro stocks above Rs 202.95 (10th July). SMA and EMA gives the same results that a big difference is not observed.

Chart 1.3 : Chart showing 50 Days Simple and Exponential moving average of HCL Technologies



Analysis : Chart 1.3 shows that share price is volatile, the gain is not superior in HCL stocks. Buy HCL stocks in January 2018(above Rs.892.80), July 2018(937.50), January 2019 (above Rs. 977.80) and sell HCL Technologies stocks in may 2018 (above Rs. 1000.50), December 2018 (above Rs. 1051).

Chart 1.4 : Chart showing 50 Days Simple and Exponential moving average of TECH Mahindra



Analysis: Chart 1.4 clearly indicates bullish trend, investor can make good profits if they buy Tech Mahindra stock above Rs. 503 in January and sell on June 27th at Rs. 714.25. Buy stock on 17th august 2018 (Rs. 682.70) and sell on 3rd October 2018 (Rs. 750.15) and the stock prices are stagnant for 3 months of time and then share prices started slightly increasing.

Chart 1.5 : Chart showing 50 Days Simple and Exponential moving average of MPHASIS



Analysis: From the chart 1.5 indicates a Bullish trend from January to September and later share prices decreasing. According to both the moving averages give a signal to buy a Mphasis share on 16th January at Rs. 741 and sell a share on 24th September at Rs. 1188, here investor can make a good profits.

II. 50 days Simple and Exponential moving averages of Banking Industry

Chart 2.1: Chart showing 50 Days Simple and Exponential moving average of SBI



Analysis : According to the chart 2.1 initially indicates a bearish trend and later slightly share prices of State Bank of India stated increasing it gives a signal to buy SBI shares on 22th may 2018(Rs.253) , 24th July 2018 (Rs. 266) , 31st October 2018 (Rs. 281) , 11th March 2019(287) and sell SBI shares on 10th September (Rs. 284) , 18th January (Rs. 294) these signals offers a very small profits to investors.

Chart 2.2 : Chart showing 50 Days Simple and Exponential moving average of Bank of Baroda



Analysis : The Blue colour indicates the closing prices of Bank of Baroda, red and green colour indicates 50 days simple and exponential moving averages. The share prices of Bank of Baroda are decreasing from January to July month and after slightly increases and then decreasing again indicates a bearish trend. Better not to Buy a share of Bank of Baroda.

Chart 2.3 : Chart showing 50 Days Simple moving average and Exponential moving average of IDBI Bank



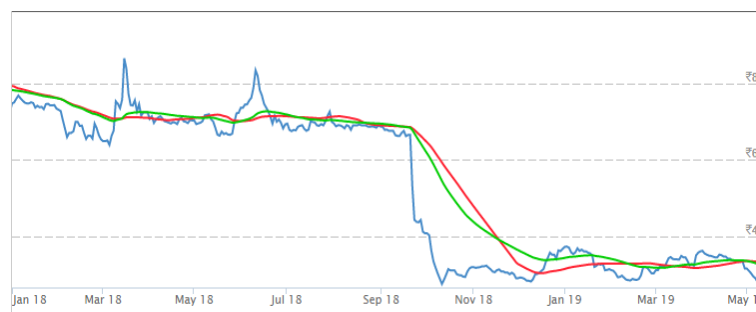
Analysis : The chart 2.3 indicates a buy signal on 9th February at Rs. 62.75 and sell on 11th April at Rs. 72.10 and then share prices of IDBI bank decreases. According to both simple and exponential moving averages gives same results. Better not to Buy IDBI Bank shares.

Chart 2.4: Chart showing 50 Days Simple and Exponential moving average of PNB



Analysis : From chart 2.4 evidently indicates Bearish trend from January to July and then Punjab national bank shares prices are sluggish from July to may 2019. Better not to buy shares of Punjab National Bank.

Chart 2.5 : Chart showing 50 Days Simple moving average and Exponential moving average of Central Bank of India



Analysis : According to the chart 2.5 clearly indicates the share prices of Central Bank of India are stagnant from January to August and then sudden drop of shares prices from Rs. 68.95 non 30th august 2018 to Rs.30.10 on 13th December 2018 and again the share prices are stagnant till may 2019. Better not buy shares of Central bank of India.

Conclusion:

The 50 days simple and exponential moving average is used in technical analysis to predict the share price movements of Software and Banking Industry. From the study it is found that the software companies such as Tata Consultancy services, Tech Mahindra and Mphasis as shown Bullish trend earned better short term gains compared to Wipro and HCL technologies. Whereas banking industry such as SBI, Bank of Baroda IDBI, Punjab National Bank and Central Bank of India as shown Bearish trend and suggested not to invest in these banks as their movement of share prices is moving downtrend. From the above analysis the software companies provided better short term gains to investors compared to Banking Industry. Technical analysis is used to analyse the securities for short term investment decisions.

References:

- [1] J.Nithya, Dr.G.Thamizhchelvan (2014) “Effectiveness of Technical Analysis in Banking Sector of Equity Market” *IOSR Journal of Business and Management (IOSR-JBM)* e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 16, Issue 7. Ver. V (July. 2014), PP 20-28.
- [2] Valarmathi A, Kowsalya P(2016) “A Study on the Technical Analysis of NSE Towards it Stocks with reference to Indian Stock Market” *International Journal of Advances in Management and Economics*, ISSN: 2278-3369, volume 5, issue 4.
- [3] C. Boobalan (2014) “Technical Analysis In Select Stocks of Indian Companies” *International Journal of Business and Administration Research Review*, Vol.2, Issue.4, Jan-March, 2014, ISSN No. 2347 – 856X.
- [4] Wing-Keung Wong, Meher Manzur, Boon-Kiat Chew (2010) “How rewarding is technical analysis? Evidence from Singapore stock market” *Hong Kong Baptist University, Institutional Repository Applied Financial Economics* 13.7 (2010): 543-551.

Books

- [1] Fischer E, Donald, Jordon J, Ronald, (2006) *Security analysis and portfolio management*, Pearson education inc., New Delhi, pp.522- 549.
- [2] S. Kevin (2013) “ *Portfolio Management*” PHI learning private ltd, Second edition, ISBN – 978-81-203-2959-1.

Websites

- [1] www.bseindia.com
- [2] www.moneycontrol.com
- [3] www.investopedia.com