

'Role of Technical Analysis Tools for Trading Decision'

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Abstract:

In simple language, we can say that it is a place where buyers and sellers come together and doing the activity of buying and selling the shares of any listed company. These above mentioned both stock exchanges play an important role for development of Indian Capital Market and all the traders and investors and also for the economy of the India. NSE was established in 1992 as the first dematerialized electronic exchange in the country. BSE was established in 1875 which is the first stock exchange of Asia. These both stock exchanges are under the regulations of the SEBI which is a statutory regulatory body formed by the Government of India in 1992. The stock market is basically worked on the demand and supply basis. To know more about the stock market, one should do the study on 2 types of analysis of stock market, which we discuss in following points. The company changed its name to Infosys Technologies Pvt. Ltd. In April, 1992 and to Infosys Technologies Ltd. when it became a public limited company in June, 1992. Wipro Ltd. is an Indian multinational corporation that provides information technology, consulting and business process services. It is headquartered in Bangalore, Karnataka, India. In 2013, Wipro separated its non-IT businesses and formed privately owned Wipro Enterprises. The company was incorporated on 29th December, 1945 in Amalner, Maharashtra by Mohamed Premji as "Western India Palm Refined Oil Ltd.", later abbreviated to "Wipro".

Key Words

Technical Analysis, Stock Market, SEBI, Decision

Introduction

The information technology (IT) sector is comprised of companies that produce software, hardware or semiconductor equipment, or companies that provide internet or related services. The three major industry groups within the IT sector are software and services, technology hardware and equipment and semiconductors and semiconductor equipment. These three industry groups are further divided into industries and sub-industries. Companies are aligned to a specific sub-industry that best describes their core or most profitable business.

Indian IT industry has grown rapidly with an exponential growth rate after the economic reform of 1991-92. Indian IT companies have set up thousands of centres within Indian and around 80 countries across the world. The majority of global corporations are sourcing IT-ITES from the Indian IT industry, it accounts for approximately 55 percent of the global service sourcing market (US\$ 200-250 billion) in 2019-20. The market size (especially export) of the IT industry has grown manifold from approx. 67 billion US dollars in 2008-09 to 191 billion US dollars in 2019-20. The revenue is further expected to grow in the coming years with an accelerating growth rate and expected to reach 350 billion US dollars by 2025.

The remarkable feature of India's IT industry is that along with its expansion in terms of market size it is also incrementally adding a significant share to India's gross domestic product (GDP) and consequently boosting the growth and development of the country. From a minuscule 0.4 percent in 1991-92, the IT industry contributed around eight percent in 2017-18 to the total GDP of India. This share is expected to increase to ten percent by 2025.

India's digitally skilled pool has grown over the period and accounted for around 75 percent of global digital talent. India's four large IT companies (TCS, Infosys, Wipro, HCL Tech) have employed more than one million employees. New IT-based technologies such as telemedicine, remote monitoring, etc. are expanding and boosting the demand in the digital economy. The rollout of fifth-generation (5G) communication technology, growing adoption of artificial intelligence, Big Data analytics, cloud computing and the Internet of Things (IoT) will further expand the size of the IT industry in India. As the size of India's digital economy is increasing, IT companies are establishing their centres in tier II and tier III cities which will further enhance the growth and reduce the existing disparities.

Literature Review

- **(BhavishyaSajith, April 2020)** The paper attempts to compare the selected tools based on their mathematical formulation to understand the similarities between them. Trading strategies related to the selected tools are also highlighted in this paper. The study is purely based on secondary data which is obtained from various websites. From this study it was found that a single indicator cannot be used while trading, rather a combination of tools is very much required for making better decisions.

- **(Rodolfo ToribioFariasNazárioa, JéssicaLima Silva, ViniciusAmorimSobreiroa, Herbert Kimura February 2017)** This paper contributes to the existing literature on technical analysis by presenting an overview of characteristics of the literature and potential knowledge gaps in this area, focusing on the analysis of stocks. The paper also discusses suggestions for future research in technical analysis.

- **(Krishna Murthy, AnupamaTadamarladeceember 2016)**This paper investigated the profitability of optimization of MACD and RSI indicators in the Indian equity market. Compared to other technical standard tools, optimized MACD and RSI tools can be of great help to Indian investors. Results shows that optimized RSI is preferred to optimized MACD owing to its limited forecast error. The paper seems to defy efficient market hypotheses.

- **(ThiagoRaymon Cruz Caciqueda Costa, Rodolfo ToríbioNazário, Gabriel SoaresZicaBergoVinicius, AmorimSobreiro, Herbert Kimura March 2015)** This paper studies the power of predictability of such methods using various combinations of periods, brokerage fees and a policy of Stop-Loss and compares these with the buy-and-hold strategy. The results indicate that while the studied techniques lead to a high probability of obtaining a return that exceeds the investment value, they have little power of predictability in the Brazilian market. In relation to the passive buy strategy, only the smallest part of the obtained returns outweighs the results of the buy-and-hold strategy.

- **(Arvid O. I. Hoffmann, HershShefrin April 2014)** In this research paper they find that individual investors who use technical analysis and trade options frequently make poor portfolio decisions, resulting in dramatically lower returns than other investors. The data on which this claim is based consists of transaction records and matched survey responses of a sample of Dutch discount brokerage clients for the period 2000–2006. Overall, their results indicate that individual investors who report using technical analysis are disproportionately prone to have speculation on short-term stock-market developments as their primary investment objective, hold more concentrated portfolios which they turn over at a higher rate, are less inclined to bet on reversals, choose risk exposures featuring a higher ratio of non-systematic risk to total risk, engage in more options trading, and earn lower returns.

- **(Krishna Murthy Inumula, AnupamaTadamarla December, 2015.)** The main objective of the research is to identify the potential contribution of standard MACD and RSI indicators vis-à-vis optimized MACD and RSI indicators. The main hypotheses of the research is that the application of standard MACD and RSI indicators contribute to profitable investments than buy and hold strategy (Efficient Market Hypotheses). The tools of data analysis include Metastock trading simulation software and Excel Mathematical calculations. Research results indicate that the buy and hold strategy results in profitable investments than standard MACD and RSI indicators.

OBJECTIVES OF THE STUDY:

- To identify that the indicators of technical analysis should play any role in the investment decision
- To learn about the practical application of various technical analysis tools/indicators
- To forecast the trend and performance of the selected stocks
- To make an in-depth study of Technical Analysis

Research Problem:

As given in the statement it is yet not easy to get good decision regarding your investment which give handsome return so problem statement is '**Role of Technical Analysis Tools for Trading Decision**'

RESEARCH METHODOLOGY

Research Design	Descriptive Research Design
Source of Data	Secondary Source of Data
Sample Size	3 listed IT Sector Companies on NSE (Infosys, TCS & Wipro)
Data Collection Tool/s	Internet
Technical Analysis Tools to be Used	MACD (Moving Average Convergence Divergence) & RSI (Relative Strength Index)

HYPOTHESIS

H₀ = There is any significant difference in price of 3 selected companies during 5 years.

H₁ = There is no any significant difference in price of 3 selected companies during 5 years.

ANOVA TEST:

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Infosys	61	739.175109	12.11762474	2876.502143
TCS	61	1864.600462	30.56722069	15921.9852
Wipro	61	162.218584	2.659321049	303.8161213

Result of ANOVA TEST:

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	24576.85855	2	12288.42928	1.929887037	0.148156418	3.046147939
Within Groups	1146138.208	180	6367.434488			
Total	1170715.066	182				

Interpretation of the ANOVA TEST:

If, p-value > alpha value, then H₀ accepted.

If, p-value < alpha value, then H₀ rejected.

Hence, here 'p-value (0.148156418)' > 'alpha value (0.05)'. So, **H₀ accepted.**

Findings:

COMPANY NAME	ACCORDING TO MACD	ACCORDING TO RSI
INFOSYS	Hold	Hold
TCS	Buy	Buy
WIPRO	Sell	Buy

LIMITATIONS OF THE STUDY:

- Tools of technical analysis can be predictable but no one gives guarantee for the any particular trend or movement in the stock price in future.
- Due to various methods used in technical analysis, it is possible that suggestions made by analysts are vary from analysts to analysts for the same stock.
- Due to time constrains, we take 3 listed companies of IT sector of India.

CONCLUSION

At the last, we want to conclude our project report by mention that, from the overall study of these various tools of the technical analysis we can say that the technical analysis tools definitely play an important role in the decisions of the investors. We also want to suggest that, if investors should pay attention towards these technical analysis tools and made their buy or sell decisions according to the analysis of various tools like MACD, RSI, ROC etc., it will definitely affect the returns for investors positively. Means if investor gain from the trade, it is more than the one who trade without any analysis, and if he makes loss, it is less than one who don't make analysis.

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