"TECHNICAL ANALYSIS ON IT SECTOR COMPANIES IN NSE"

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Abstract: This research was carried out to study stock price prediction of IT sector companies through technical analysis. Various Large Cap, Mid Cap & Small Cap Companies like WIPRO, TCS, L&T Tech, Cyient, Zen Tech, 3i Infotech, etc. The technical analysis is done for 3 time periods i.e. 1 month, 6 months & 1 year. There are ten indicators used in this study – RSI, Bollinger Bands, MACD, VWAP, ATR, ADX, Stochastic, Accumulation/distribution line, Super trend and Ichimoku Cloud.

Keywords: IT Sector, RSI, Bollinger Bands, MACD, VWAP, ATR, ADX, Stochastic, Accumulation/distribution line, Super trend, Ichimoku Cloud

1.0 Introduction:

Technical analysis is an analysis methodology for analysing and forecasting the direction of prices through the study of past market data, primarily price and volume. Technical analysis focuses on identifiable price trends and conditions.

1.1 MACD: The MACD line, instead of crossing the signal line, crosses the zero level. It indicates a bullish trend when it gets positive. MACD indicates a bearish trend when it crosses the zero line in the downward direction and becomes negative.

1.2 RSI: RSI is a momentum oscillator that measures the speed and change of price movements. The RSI oscillates between zero and 100. Traditionally the RSI is considered overbought when above 70 and oversold when below 30.

1.3 Bollinger Bands: Bollinger Bands are envelopes plotted at a standard deviation level above and below a simple moving average of the price.

1.4 VWAP: The VWAP is used to calculate the average price of a stock over a period of time. The volume weighted average price helps compare the current price of the stock to a benchmark, making it easier for investors to decide when to enter and exit the market.

1.5 ATR: The average true range (ATR) is a market volatility indicator used in technical analysis. It is typically derived from the 14-day simple moving average of a series of true range indicators.

1.6 ADX: The average directional index (ADX) is a technical analysis indicator used by some traders to determine the strength of a trend. The trend can be either up or down, and this is shown by two

accompanying indicators, the negative directional indicator (-DI) and the positive directional indicator (+DI).

1.7 Stochastic: The stochastic indicator is a two-line indicator that can be applied to any chart. It fluctuates between 0 and 100. The indicator shows how the current price compares to the highest and lowest price levels over a predetermined past period.

1.8 Accumulation/ Distribution line: The accumulation/distribution (A/D) line gauges supply and demand of an asset or security by looking at where the price closed within the period's range and then multiplying that by volume. The A/D indicator is cumulative, meaning one period's value is added or subtracted from the last.

1.9 Supertrend: A super-trend indicator is plotted on either above or below the closing price to signal a buy or sell. The indicator changes colour, based on whether or not you should be buying. If the super-trend indicator moves below the closing price, the indicator turns green, and it signals an entry point or points to buy.

1.10 Ichimoku cloud: The Ichimoku Cloud is a type of chart used in technical analysis to display support and resistance, momentum, and trend in one view. TenkanSen and KijunSen are similar to moving averages and analyzed in relationship to one another.

2.0 Literature Review:

According to (Isidore and P January, 2020) Fundamental analysis and technical analysis have always been used s the main decision-making tools to transact in the stock market. Fundamental analysis Assumed that the current share price and the future share price depends on the intrinsic value of the share and expected return, Technical analysis involved employing several technical tools to predict the future changes in the stock prices based on the past pattern of stock price.

According to (Bhuriya et al. 2020) He implemented analysis through various indicators to predict the stock price of Tata Consultancy Services stock based on five features i.e., open, high, low, close price, and volume.

According to (Mishra, 2018) He stated the extent to which trading profitability using technical analysis indicators explains the risk premium or risk compensation' for investing in equity markets as against assets that are relatively risk-free using multiple regression analysis. It is advised that traders, retail investors and fund managers, while evaluating portfolios, can rely on technical indicators-based trading strategies other than fundamental analysis.

According to (Peachavanish, 2018) He suggests a cluster analysis-based approach for identifying a group of stocks with the best trend and movement characteristics at any given time, and hence are more likely to outperform the market over a short period of time.

According to (Jayakumar & K. Sumathi, 2016) His paper titled "Technical analysis of Union n Special Reference to NSE" researcher has described about the uses of technical analys1s, while buying and selling decision of the union bank stock taken with technical analysis tool for that reason weekly average price is used for the analysis, to know if the stock is technically strong or not.

According to (Boobalan, 2014) He conducted out technical analysis on the shares of industry-selected firms to aid investment decisions in the Indian market this study's technical analysis would not provide absolute forecasts about the future in terms of forecasting.

2.1 Research Gap: The major gap of technical analysis is that at some point of time trading of stock stops. So in the technical analysis chart there is a gap which means an area where no trading has taken place. This can be because of some major event or major news in that particular company or that particular sector.

3.0 Objectives:

1. To understanding the performance of IT sector of NSE.
2. To study on technical analysis on selected stock and interpret on whether to buy or sell them.
3. To Identify trends and pattern in stock price in IT sector.

4.0 Research Methodology:

4.1 Research Design: Analytical research design.

4.2 Sampling Method: Stratified Convenience Method.

4.3 Time of the study: 6 Months.

4.4 Research Tool: Trading View

4.5 Scope of Study:

- The study is related to technical analysis to predict the future behaviour of stock.
- The Analysis has been done on 5 selected stocks of large cap, mid cap and small cap companies of IT sector.
- The analysis involves using of limited technical tool out of various tools.

4.6 Tools and techniques:

MACD, RSI, VWAP, ATR, ADX, Super trend, Stochastic, Accumulation/Distribution Line, Bollinger Bands, Ichimoku Cloud.

4.7   Benefits of Study:

- To learn the value of technical aspects in IT stock sector.
- This study is beneficial for researchers and investors.

4.8   Limitations of Study:

- The Study is restricted only fifteen selected stocks.
- The study depends more on secondary data rather than on primary data.
- We have study only on IT sector stock.
- We cannot predict the price of the stocks for long term.

5.0 Analysis:

5.1 MACD

Chart 1: MACD chart

Bearish Trend. Time to sell

5.2 Bollinger Bands

Chart 2: Bollinger Bands chart

Price may go up. Time to buy.

5.3 Super trend

Chart 3: Super trend chart

Stock price crosses super trend line and goes down. Stock is negative. Time to sell.

5.4 Stochastic

Chart 4: Stochastic chart

Price around 20, so it may go up. Time to buy.

5.5 VWAP (Volume Weighted Average Price)

Chart 5: VWAP chart

Stock is labelled as cheap or off value. Time to sell.

5.6 RSI (Relative Strength Index)

Chart 6: RSI chart

Price around 50 means neutral range. Price may go up or down.

5.7 ATR (Average True Range)

Chart 7: ATR chart

Decreasing ATR. Time to sell.

5.8 Ichimoku Cloud

Chart 8: Ichimoku Cloud chart

Price above the cloud means uptrend. Time to buy.

5.9 ADX (Average Directional Index)

ADX declining. Current trend weakening. Time to sell.

5.10 Accumulation/ Distribution Line

Chart 10: Accumulation/ Distribution Line chart

Line showing uptrend and likely to continue. Time to buy.

6.0 Findings:

Table 1: Overall findings

RANK										
Company	MACD	BB	ATR	VWAP	AD Line	Ichimoku	RSI	ST	Stochastic	ADX
WIPRO	2nd	3rd	3rd	2nd	3rd	2nd	0	3rd	3rd	3rd
Tech Mahindra	2nd	2nd	0	2nd	0	3rd	3rd	3rd	3rd	3rd
Infosys	2nd	3rd	2nd	1st	2nd	1st	2nd	0	3rd	2nd
TCS	1st	3rd	3rd	3rd	2nd	2nd	3rd	3rd	3rd	3rd
HCL Tech	2nd	2nd	3rd	2nd	2nd	2nd	2nd	2nd	2nd	3rd
Persistent Systems Ltd.	3rd	3rd	0	3rd	3rd	0	0	2nd	0	1st
L&T Tech	2nd	2nd	2nd	2nd	0	2nd	2nd	3rd	2nd	3rd
L&T Infotech	2nd	2nd	3rd	2nd	2nd	2nd	3rd	2nd	1st	0
Sonata Software	2nd	2nd	3rd	3rd	3rd	3rd	0	2nd	3rd	0
Cyient	2nd	0	0	2nd	3rd	0	2nd	2nd	3rd	3rd
Zen Tech	3rd	2nd	2nd	3rd	3rd	3rd	3rd	3rd	2nd	3rd
3i Infotech	3rd	2nd	0	3rd	2nd	3rd	3rd	3rd	1st	0
63 Moons Tech	3rd	0	2nd	3rd	3rd	3rd	0	3rd	0	2nd
Quick Heal Tech	3rd	2nd	3rd	3rd	3rd	3rd	2nd	2nd	2nd	2nd
GSS Infotech	3rd	2nd	3rd	2nd	0	2nd	3rd	2nd	1st	3rd

Table 2: Ranking Analysis

Company	Out of 10			
	3rd rank	2nd rank	1st rank	0
WIPRO	6	3	0	1
Tech Mahindra	5	3	0	2
Infosys	2	5	2	1
TCS	7	2	1	0
HCL Tech	2	8	0	0
Persistent Systems Ltd.	4	1	1	4
L&T Tech	2	7	0	1
L&T Infotech	2	6	1	1
Sonata Software	5	3	0	2
Cyient	3	4	0	3
Zen Tech	7	3	0	0
3i Infotech	5	2	1	2
63 Moons Tech	5	2	0	3
Quick Heal Tech	5	5	0	0
GSS Infotech	4	4	1	1

*Buy decision is taken considering 1 month, 3 months and 6 months' time period.

Best Company – Infosys

Neutral Company – HCL Tech

Worst Company – Persistent Systems Ltd.

7.0 Conclusion:

Technical analysis is the study of behaviour of buyer & seller. It is very useful tool to capture gain with the help of technical analysis. It is very important analysis because of the study of investor behaviour and its effect on the subsequent price action of financial instruments. The main data that we need to perform our studies are the price histories of the instruments, together with time and volume information. Technical analysts examine the price action of financial markets instead of fundamental factors that to effect to market prices. It is important to understand to enter in the transaction & understand the trade management once you understand this psychology then itis easier to predict future & earn profit. While it is time to rejoice at the booming Indian economy and the historical journey of the Sensex, the foremost question in the minds of all investors is whether it is the right time to buy or sell stocks now.

8.0 References:

1) Isidore & P January (2020), in their technical analysis of research refers to the study of market achievement as something divergent from the study of the goods in which the market deals.

2) Bhuriya, Dinesh, Girish Kausha, Ashish Sharma, and Upendra Singh. 2020. Stock Market Prediction Using a Linear Regression. Paper presented at the 2017 International Conference of Electronics, Communication and Aerospace Technology (ICECA), Coimbatore, India, April 20–22; vol. 2.

3) Mishra (2018), In his research paper explained about trading profitability using technical analysis indicators

4) Peachavanish (2018) point out that the cluster analysis based approach for identifying stocks.

5) Jaykumar and K Sumathi (2016) has research paper titled "Technical analysis of Union n Special Reference to NSE"

6) Boobalan (2014) this is a significant technical analysis of selected companies which helps to understand the price behaviour of the shares.