A STUDY ON TECHNICAL ANALYSIS OF SELECTED STOCKS AT NIFTY , ANGEL ONE LIMITED, ANANTAPUR

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ABSTRACT

The present project work " A STUDY ON TECHNICAL ANALYSIS OF SELECTED STOCKS IN NIFTY AT ANGEL ONE LIMITED, ANANTAPUR '' is purely based on technical analysis. Technical analysis was one of the most widely used methodology in stock market analysis. It was used to identify the demand and supply zones which gives the best time to enter into a trade and it also gives the opportunity to exit at the profitable position by identifying the trend reversal.

In the present study, we had taken the top 4 stocks in nifty which are large-cap companies for the purpose to identify investment and trading opportunities by using technical analysis and its tools. By using the confluence trading methodology to confirm the high probability of winning trades. Here we have used the technical indicators and price action analysis to study the moment of stock to plan the right time to invest and exit from the investment/trading. The results of the study will be seen in detail in further coming pages.

INTRODUCTION

HISTORY OF THE STOCK MARKET IN INDIA :

The history of the Indian stock market spans several decades and is characterized by significant developments. Starting from its humble beginnings, the stock market in India has grown into one of the world's largest and most dynamic markets .Its origins can be traced back to the 19th century during British colonial rule when the Native Share and Stock Brokers' Association was established in Bombay (now Mumbai) in 1850. Initially, the focus was on trading shares and securities of cotton mills and other commodities .The formal establishment of the Bombay Stock Exchange (BSE) in 1875 marked a crucial milestone in regulating and nurturing the Indian stock market. Originally, trading took place under a banyan tree in front of the Town Hall until a dedicated building for BSE was constructed in 1874.In its early years, the stock market primarily dealt with trading cotton and jute, reflecting the significance of these industries at the time. However, as industrialization took hold, the market evolved, and trading expanded to encompass shares from various sectors .In 1956, the Indian government introduced the Securities Contracts (Regulation) Act to regulate the stock market and safeguard investor interests.

STOCK MARKET :

- Fundamental Analysis
- Technical Analysis
- Sector and Industry Analysis
- Event-Driven Analysis

Components of technical analysis

- Charts
- Trend Analysis
- Support and Resistance
- Indicators
- Chart Patterns

In conclusion, technical analysis serves as a methodology extensively utilized by investors and traders to analyze financial markets, particularly the stock market. By studying historical price data, patterns, and market indicators.

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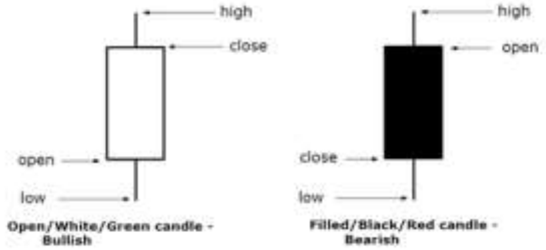
(1) CHARTS USED IN THE STUDY

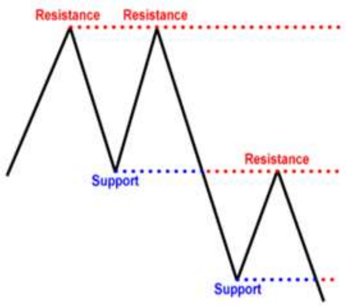


Japanese candlestick charts are a widely used tool in technical analysis to visualize and analyse price movements in financial markets..The body of the candlestick illustrates the range of price in between the opening and closing price
The wick represents the high and low price during the given period.

(2) TREND ANALYSIS

1. Uptrend: An uptrend occurs when the price of an asset exhibits higher highs and higher lows over a time period. In an uptrend, buyers dominate the market.
2. Downtrend: A downtrend, on the other hand, unfolds when the price of an asset experiences a sequence of lower highs and lower lows. In a downtrend, sellers outweigh buyers

(3) SUPPORT AND RESISTANCE



1. Support Level: A support level refers to a price level at which there is a historical tendency for buying interest to be strong, preventing the price of an asset from declining further.
2. Resistance Level: A resistance level is the opposite of a support level. It represents a price level at which there is a historical tendency for selling pressure to be significant, preventing the price of an asset from rising further

(4) INDICATORS

Moving Average (MA): Moving averages smooth out price data by calculating the average price over a specified period. They help identify trends and potential support or resistance levels.
Relative Strength Index (RSI): It measures the momentum and change of price movements and indicates whether an asset is overbought or oversold.
Moving Average Convergence Divergence (MACD): The MACD is a trend-following momentum indicator that calculates the difference between two moving averages.

Fibonacci Retracement: Fibonacci retracement levels are horizontal lines drawn on a price chart to indicate potential support or resistance levels based on Fibonacci ratios.

(5) CHART PATTERNS

Head and Shoulders: The head and shoulders pattern is a reversal pattern that consists of three peaks, with the middle peak (the head) being higher than the other two (the shoulders).

Double Top and Double Bottom: Double top and double bottom patterns occur when the price reaches a resistance level twice (double top) or a support level twice (double bottom) before reversing its direction.

Ascending Triangle: An ascending triangle pattern is formed when the price creates higher lows and meets a resistance level at approximately the same horizontal level.

Descending Triangle: The descending triangle pattern is the opposite of the ascending triangle. It occurs when the price forms lower highs and encounters a support level at approximately the same horizontal level.

Symmetrical Triangle: A symmetrical triangle pattern is characterized by a series of lower highs and higher lows, resulting in a converging trendline formation.

INDUSTRY PROFILE

SECURITIES AND EXCHANGE BOARD OF INDIA 1992 :

The Securities and Exchange Board of India (SEBI) serves as the regulatory authority responsible for overseeing and regulating India's securities market. Formed as an independent statutory body in 1988, SEBI holds a critical role in maintaining the integrity, transparency, and efficiency of the country's financial system. Let us delve deeper into SEBI's functions and responsibilities.

SEBI's primary objective revolves around safeguarding the interests of investors and fostering the development and regulation of the securities market. It operates under the Securities and Exchange Board of India Act, 1992, which grants it extensive powers to regulate various market participants, including companies, intermediaries, and investors.

One of SEBI's fundamental functions is to regulate and supervise the operations of stock exchanges in India. It ensures that these exchanges function fairly and transparently by setting guidelines and monitoring adherence to them. SEBI also approves the rules and regulations governing stock exchanges, thereby ensuring high standards of integrity and investor protection.

SEBI's regulatory purview extends to overseeing various intermediaries in the securities market, including brokers, sub-brokers, depositories, custodians, and merchant bankers. To promote fair practices, investor safety, and market stability, SEBI establishes eligibility criteria, a code of conduct, and prudential norms for these entities.

In conclusion, the Securities and Exchange Board of India (SEBI) holds a pivotal position in regulating and supervising India's securities market. Its vigilant oversight ensures investor protection, market integrity, and the development of a robust and transparent market ecosystem.

MAJOR EXCHANGES IN INDIA :STOCK

India hosts several prominent stock exchanges that play a vital role in facilitating the trading of securities.

1. National Stock Exchange (NSE):

Founded in 1992, the National Stock Exchange is the largest stock exchange in India, headquartered in Mumbai. NSE revolutionized the Indian stock market by introducing electronic trading systems and modern infrastructure. Its fully automated screen-based trading system, NEAT (National Exchange for Automated Trading), is instrumental in facilitating seamless and efficient trading.

NSE offers a diverse range of financial instruments, including equities, derivatives, debt securities, exchange-traded funds (ETFs), and mutual funds. A standout feature of NSE is its benchmark index, the Nifty 50, which comprises 50 actively traded stocks representing various sectors of the Indian economy. The Nifty 50 is widely regarded as an indicator of the overall market performance.

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2. Bombay Stock Exchange (BSE):
Established in 1875, the Bombay Stock Exchange stands as one of Asia's oldest stock exchanges. Also located in Mumbai, BSE has played a significant role in the development of the Indian capital market and holds a storied history.
BSE facilitates trading in equities, derivatives, debt instruments, mutual funds, and exchange-traded commodities (ETCs). Its BOLT (BSE Online Trading) system enables efficient electronic trading. The benchmark index of BSE is the Sensex, comprising 30 large and financially sound companies representing various sectors.

FINANCIAL INSTRUMENTS TO TRADE IN THE INDIAN STOCK MARKET :

1. Equities/Stocks
2. Derivatives
3. Mutual Funds
4. Exchange-Traded Funds (ETFs)
5. Commodities
6. Currency

These financial instruments offer investors various avenues to diversify their portfolios, manage risks.

RESEARCH METHODOLOGY

NEED OF THE STUDY

Technical analysis plays a key role in identifying demand and supply zones here. we plan up for the right time to invest and the right time to exit from the investment.
Whereas Fundamental analysis involves the study of Company, Economic, and Industrial factors which suits long-term investing, and at the same time we can’t find demand and supply zones to enter and exit our investment.

OBJECTIVES OF THE STUDY

- To identify the trading and investment process of selected stocks by using technical analysis tools.
- To study the risk and return of selected stocks in nifty at Angel one limited using technical analysis.
- To evaluate the performance of selected stocks based on technical analysis at Angel one limited.

Hypothesis Test
H0 : There is a no significant relationship between indication of Technical analysis tools and performance of stocks

- The true mean average return is equal to 0.

H1 : There is a significant relationship between indication of technical analysis tools and performance of stocks
-The true mean average return is not equal to 0.

SCOPE OF THE STUDY

The study covers only selected stocks under the Nifty index. Considered for the short term only and the study covers 2 years of equity prices data and charts. (2021-2022 & 2022-2023)

SOURCES OF DATA

The study is mainly based on secondary data.
*The secondary data will be collected from websites, journals, and author books.
Websites
www.nseindia.in
www.tradingview.com
www.yahoofinance.in

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BOOKS

Encyclopedia of chart patterns.

Journals

Dalal Street, Capital Markets.

TOOLS AND TECHNIQUES

TOOLS :

- Technical indicators

ex: RSI, MACD, MOVING AVERAGES, etc.,

- Charts and candlesticks :
- Japanese candlestick charts and candlestick patterns, Charts patterns.
- MS excel
- R programming language

TECHNIQUES :

- Confluence trading
- Risk reward ratio.

LIMITATIONS OF THE STUDY

Time and cost are the major limitations of the study.

Whereas the technical analysis indicators are time lagging because of real-time data response according to price.

Data analysis and interpretation

Objective (1) :

To identify the trading and investment process of selected stocks by using technical analysis tools.

TRADING AND INVESTMENT PROCESS

CONFLUENCE TRADING :

It is a strategy that combines multiple trading techniques to increase the probability of the right entry & exit of our trade.

BUYING

- AT THE SUPPORT, END OF DOWNTREND, TREND REVERSAL
- RSI > 30 , DIVERGENCES
- MACD - CROSS OVERS
- MA 21 – PRICE CROSS OVER

SELLING

- AT RESISTANCE, END OF UPTREND, TREND REVERSAL
- RSI > 70, DIVERGENCES
- MACD - CROSS OVER
- MA 21 – PRICE CROSS OVER

Objective (2) :

To study the risk and return of selected stocks in nifty at Angel one limited using technical analysis

4.1(a) Chart of Reliance showing investment opportunities using technical analysis for short term.

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Chart analysis of reliance :

Trade (1): Buying after the accumulation phase and showing RSI divergence, MA 21 & MACD crossover. Sell at the failure of all conditions specified above.Trade (2): RSI divergence, buying at support, MA & MACD cross-over. Sell the stock at the failure of the same conditions specified.Trade(3): Buying a stock at support, when the price breaks 21 ema and MACD cross over, RSI was above 30. Sell the stock at resistance when the price breaks 21

4.1(b) Returns and Risk of Investment in Reliance Industries ltd using technical analysis

DATE	ENTRY	EXIT	ROC	RISK	RRR
11/8/21 - 25/10/21	2117	2570	21.30%	11.07%	1.92
16/3/22 - 2/5/22	2403	2758	14.70%	5.27%	2.8
18/10/22 - 6/12/22	2463	2697	9.50%	4.54%	2.09
Avg return per trade			15.17%		
Avg risk per trade				6.96%	
Avg risk reward ratio					2.27

INTERPRETATION :

- In the two years of 2021-2023, there is the possibility to take 3 positions in reliance by complying with the conditions of confluence trading.
- The average return per trade is 15.17%.
- The average risk taken per trade is 6.96%.
- Return will vary based on risk, taking a high risk will result in high return. During trade (1) the risk is 11.07% very high that the reason for getting a high return of 21.3%

4.2(a) Chart of HDFC bank showing investment opportunities using technical analysis for short term.

Chart analysis of HDFC bank :

Trade (1): Traded fake out after confirmation with EMA 21, MACD, and RSI and sell the stock at fake break out and confirm with RSI divergence. Trade (2): Confirm uptrend after there is a trend reversal forming a base at the bottom with accumulation at the demand zone. Sell at the RSI divergence. Trade (3): Confirming trend continuation after price retracement to Fibonacci golden ratio. Sell at the RSI divergence.

4.2(b) Returns and risk of investment in HDFC bank using technical analysis

DATE	ENTRY	EXIT	ROC	RISK	RRR
6/8/21 - 25/10/21	1490	1650	10.73%	3.65%	2.93
22/7/22 - 15/9/22	1390	1520	9.35%	4.53%	2.06
24/10/22 - 21/12/22	1463	1625	11.07%	4.45%	2.48
Avg return per trade			10.38%		
Avg risk per trade				4.21%	
Avg risk reward ratio					2.49

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INTERPRETATION :

- In the two years of 2021-2023, there is the possibility to take 3 positions in HDFC bank by complying with the conditions of confluence trading.
- The average return per trade is 10.38%.
- The average risk taken per trade is 4.21%.

Return will vary based on risk, taking a high risk will result in a high return. During trade (2) the risk is 4.45% and the return is 11.07% which is among the 3 trades

4.3(a) Chart of ICICI bank showing investment opportunities using technical analysis for short term.

Chart analysis of ICICI Bank:

Trade (1) & (2) :

In both trades there is a triangle pattern break out i.e.) symmetrical triangle. Also confirming with the other tools to take the position.And sell the stock where there are bearish signals such as RSI divergence and crossovers.

4.3(b) Returns and risk of investment in ICICI bank using technical analysis

DATE	ENTRY	EXIT	ROC	RISK	RRR
5/5/21 - 10/11/21	604	780	29.13%	11.52%	2.52
8/7/22 - 22/9/22	750	880	17.33%	7.26%	2.38
Avg return per trade			23.33%		
Avg risk per trade				9.39%	
Avg risk reward ratio					2.45

INTERPRETATION :

- In the two years of 2021-2023, there is the possibility to take 2 positions in ICICI Bank by complying with the conditions of confluence trading.
- The average return per trade is 23.33 %.
- The average risk taken per trade is 9.39 %.,During trade (1) we invested for 6 months at Rs 604 when the triangle pattern break out resulting in 29.13% and taking a risk is around 11.52%.

4.4(a) Chart of INFOSYS limited showing investment opportunities using technical analysis for short term.

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Chart analysis of Infosys Limited:

Trade (1): There is a bullish flag and pole pattern break out in satisfy with other indicators. Exit the trade at RSI divergence. Trade (2): Entry at the demand zone end RSI divergence in confirmation with MA, MACD. Exit the trade at the resistance.Trade (3): Double bottom, a trendline break out and other indicators indicate bullish sign. Exit the trade at the resistance and RSI also showing the divergence confirming the same.

DATE	ENTRY	EXIT	ROC	RISK	RRR
11/6/21 - 2/9/21	1440	1670	15.97%	6.83%	2.33
29/6/22 - 12/8/22	1460	1595	9.24%	5.55%	1.66
17/10/22 - 2/12/22	1490	1640	9.14%	5.63%	1.62
avg return per trade			11.45%		
avg risk per trade				6.00%	
avg risk reward ratio					1.87

INTERPRETATION :

- In the two years of 2021-2023, there is the possibility to take 2 positions in ICICI Bank by complying with the conditions of confluence trading.
- During trade (1) swing high gives the max return of 15.97% among 3 trades during the two years data analysis.
- The average return per trade is 11.45% and the average risk taken per trade is 9.39 %.

Among the 3 trades, we witnessed the flag and pole break out, RSI divergence at the demand level, and a trendline break out and turn into bullish.

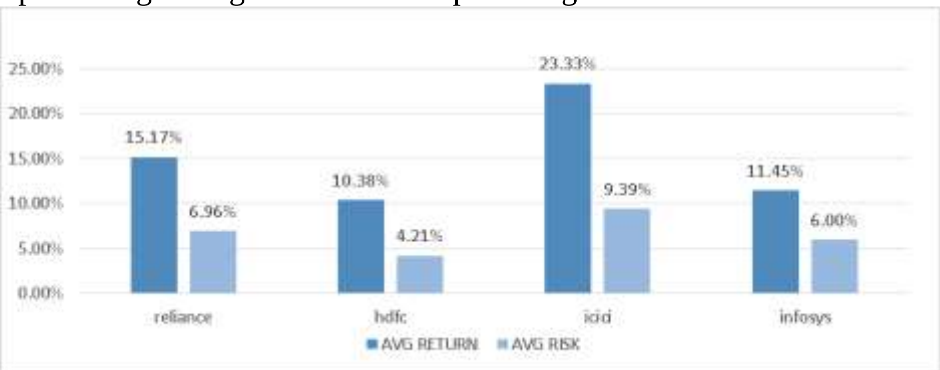
Objective (3) :

To evaluate the performance of selected stocks based on technical analysis at Angel one limited.

4.5(a) Table representing the average risk, return and risk reward ratio to consider while taking position in respective stocks.

Stock name	Avg return	Avg risk	Avg RRR	Ranking
Reliance	15.37%	6.96%	2.27	3
Hdfc	10.38%	4.21%	2.49	1
Icici	23.33%	9.39%	2.45	2
Infosys	11.45%	6.00%	1.87	4

4.5(b) Graph representing average risk & reward percentage



INTERPRETATION :

- ICICI bank has the highest average return per trade of 23.33% and at the same time it also has high average risk per trade of 9.39%
- In technical analysis the rate of return depends on the amount of risk taken.
- We can observe the HDFC bank, its average risk & return is low compared with other stocks, because of less risk.
- HDFC bank avg risk is just 4.21% & avg return is just 10.38%

4.5(C) Graphical representation of risk reward ratio of stocks

INTERPRETATION :
The risk we are going to take to get the reward. It was also considered as how much return we take per rupee of risk.
Optimal Risk Reward Ratio: We can find the optimal risk-reward ratio by averaging the previous successful trades ratio.
Here, HDFC Bank has a high-risk reward ratio of 2.49 and INFOSYS has a low-risk reward ratio of 1.87.*The risk is constant at 1 the reward will vary always look for low-risk and high reward trade.

Hypothesis test for average return -- One sample t test
R Code

```
# Data
average_return <- c(15.17, 10.38, 23.33, 11.45)
# Perform one-sample t-test
result <- t.test(average_return, mu = 0)
# Print the t-test results
print(result)
```

result

```
data: average_return
 t = 5.1397, df = 3, p-value = 0.01427
 alternative hypothesis: true mean is not equal to 0
 95 percent confidence interval:
5.743521 24.421479
sample estimates:
 mean of x
15.0825
```

Interpretation
Average risk : reject H0 accept H1
The p-value of 0.226 which is greater than 0.05 suggests that there is not enough evidence to reject the alternative hypothesis. Therefore, we fail to reject the alternative hypothesis and conclude that the true mean average risk is not significantly different from 5.
Average return : reject H0 accept H1
The p-value of 0.01427 indicates that there is sufficient evidence to reject the null hypothesis. Therefore, we reject the null hypothesis and conclude that the true mean average return is significantly different from 0. with a typical significance level of 0.05, the p-value for average return is less than 0.05, supporting the rejection of the null hypothesis.

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FINDINGS

- Technical analysis can be used to trade in the short term and for short-term investing, we can prefer using technical analysis to plan for investment.
- Here in this study, various technical analysis tools were used such as RSI, MACD, and MA with pre-fixed conditions.
- Strict follow of technical analysis setup/system gives the following results:
- ICICI Bank outperforms the other stocks with an average swing return of 23.33% and at the same time it has a good risk-reward ratio of 2.45
- HDFC bank has a high risk-reward ratio of 2.49% but at the same time the stock is less volatile, which has less risk of 4.21% per trade and a return of 10.38%
- Stocks with volatility have high swings and lows that's why their risk and return both are high

CONCLUSION

- Investors and traders can trade & invest in the stock market using technical analysis for the short term.
- Traders must take the risk or reward compulsory and should not exit before that. This was the only way to escape from the emotions.
- The need to have complete knowledge of the technical analysis and psychology of traders is a very important concept to know to be profitable in the stock market.
- Use technical analysis to find out the demand and supply zones. Price always respects the major supports and resistances.
- It's better to consult a certified financial advisor before taking any investments if lack experience.
- It is advisable to diversify your investments to minimize systematic risk.

SUGGESTIONS

- Investor/trader must possess complete knowledge of technical analysis and the psychology of traders is a very important concept to become profitable in the stock market.
- Diversify the investments based on the risk associated with securities ex: bonds, fixed deposits, equity, etc.
- Don't be greedy for more than expected returns.
- Follow risk reward
- Control emotions
- Confirm position by using confluence trading only.
- Always follow risk management.

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