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A STUDY ON TECHNICAL ANALYSIS OF EQUITY STOCKS IN THE BANKING SECTOR WITH SPECIAL REFERENCE TO SBI AND HDFC BANK – HYD

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Abstract: The stock market plays a vital role in the economic development of a country by facilitating capital formation and investment opportunities. Technical analysis is widely used by investors and traders to predict future stock price movements based on historical market data. This study focuses on the technical analysis of two leading banking sector stocks, State Bank of India (SBI) and HDFC Bank, during the period FY2020–21 to FY2024–25. Various technical indicators such as Moving Averages, Relative Strength Index (RSI), Moving Average Convergence (MACD), Bollinger Bands, Support and Resistance Levels, Candlestick Patterns, and Fibonacci Retracement were used to evaluate stock performance. The study reveals that SBI exhibited stronger price momentum and higher returns, while HDFC Bank demonstrated greater stability and lower volatility. The findings suggest that the combination of multiple technical indicators provides more reliable trading signals than the use of a single indicator. The study concludes that technical analysis can serve as an effective decision-making tool for investors in the banking sector.

INTRODUCTION

Technical analysis is a method of evaluating securities by analyzing statistics generated through market activity such as historical prices and trading volumes. It helps investors identify trends, momentum, and potential reversal points. Unlike fundamental analysis, technical analysis focuses primarily on price movements and market psychology.

The Indian banking sector contributes significantly to the country's financial system and economic growth. SBI and HDFC Bank are among the most actively traded banking stocks in India. Their strong market presence and high liquidity make them suitable for technical analysis.

The study applies various technical tools to understand stock behavior, identify trends, and evaluate investment opportunities in these two banking stocks.

REVIEW OF LITERATURE

- **Patel and Mehta (2020)** examined the effectiveness of technical indicators in predicting stock price movements in the Indian banking sector. The study found that moving averages and RSI were useful in identifying trend reversals and improving investment timing. The authors concluded that technical analysis can support investors in making more informed trading decisions.

- **Reddy and Kumar (2021)** analyzed the performance of selected banking stocks using MACD and Bollinger Bands. Their findings indicated that combining momentum and volatility indicators enhanced the accuracy of buy and sell signals. The study emphasized the importance of using multiple indicators rather than relying on a single tool.

- **Sharma and Gupta (2022)** investigated the application of technical analysis techniques in Indian banking stocks. The research revealed that RSI and MACD were effective in identifying market trends and momentum shifts. The study suggested that technical analysis could be used as a valuable complement to fundamental analysis.

- **Nair and Pillai (2023)** evaluated stock price behavior using candlestick patterns and support-resistance levels. The results showed that chart patterns provided useful insights into market sentiment and helped traders identify potential entry and exit points. The study highlighted the practical significance of technical analysis in short-term trading.

- **Banerjee and Chakraborty (2024)** studied the role of Fibonacci Retracement and moving averages in forecasting stock market trends. The authors observed that Fibonacci levels often acted as important support and resistance zones during price corrections. Their findings supported the use of technical tools in trend analysis and risk management.

- **Singh and Verma (2024)** conducted a comparative study of technical indicators across major banking sector stocks. The research concluded that combining trend, momentum, and volume-based indicators improved prediction accuracy and reduced trading risk. The study recommended a systematic approach to technical analysis for better investment outcomes.

OBJECTIVES OF THE STUDY

1. To study the price trend and long-term directional movement of SBI and HDFC Bank using Moving Average analysis.
2. To analyze momentum characteristics and overbought-oversold conditions using RSI and MACD indicators.
3. To examine volatility patterns through Bollinger Bands.
4. To identify key support and resistance levels using chart analysis and Fibonacci retracement.
5. To analyze candlestick patterns and volume indicators.
6. Comparing the technical performance of SBI and HDFC Bank.

NEED OF THE STUDY

The increasing participation of retail investors in the Indian stock market has created a need for scientific investment decision-making tools. Many investors rely on rumors and market sentiments instead of systematic analysis.

This study helps investors understand how technical indicators can be used to make informed investment decisions. The banking sector is a major component of the Indian economy, and understanding the behavior of SBI and HDFC Bank stocks can assist investors in optimizing returns and managing risks effectively.

SCOPE OF THE STUDY

The study focuses on the technical analysis of SBI and HDFC Bank stocks using secondary data collected from stock market databases and financial websites, The study period covers FY2020–21 to FY2024–25. Various technical indicators such as SMA, EMA, RSI, MACD, Bollinger Bands, Support and Resistance, Fibonacci Retracement, and Candlestick Patterns are analyzed. The study is limited to technical analysis and does not include fundamental analysis or valuation methods.

RESEARCH METHODOLOGY

Research Design

Descriptive and analytical research design.

Sources of Data

The study uses secondary data collected from:

- NSE and BSE websites
- Money control
- Trading View
- Investing.com
- Company annual reports

Study Period

FY2020–21 to FY2024–25

Statistical Tools Used

- Simple Moving Average (SMA)
- Exponential Moving Average (EMA)
- Relative Strength Index (RSI)
- Moving Average Convergence Divergence (MACD)
- Bollinger Bands
- Support and Resistance Analysis
- Fibonacci Retracement
- Candlestick Pattern Analysis
- Volume Analysis

LIMITATIONS OF THE STUDY

7. The study relies entirely on secondary data.
8. Technical indicators are based on historical price movements and cannot guarantee future performance.
9. Market conditions during the COVID-19 period may have influenced stock behavior.
10. External economic and political factors are not considered.
11. Transaction costs and taxes are not included in performance evaluation.
12. The study is limited to only two banking sector companies.

DATA ANALYSIS

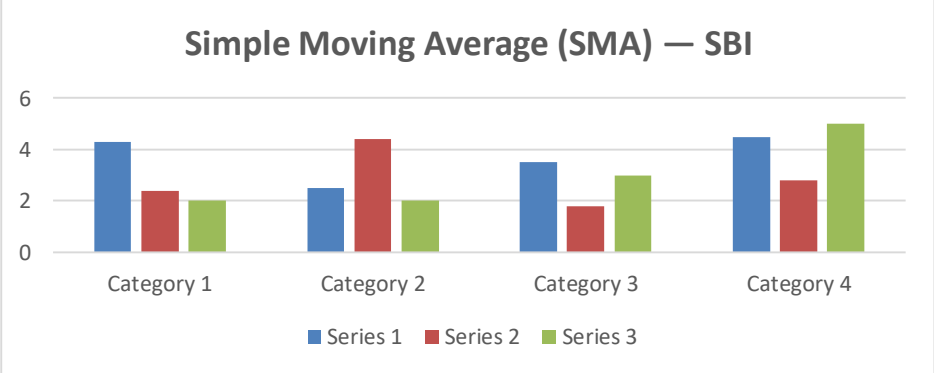
The analysis of SBI and HDFC Bank revealed the following:

MOVING AVERAGE ANALYSIS

Table 1.1: Simple Moving Average (SMA) SBI

Formula: SMA = ($P_1 + P_2 + ... + P_n$) / n

Period	Closing Price (₹)	20-Day SMA (₹)	50-Day SMA (₹)	200-Day SMA (₹)	Signal
Jan 2021	284	268	248	224	Bullish
Jul 2021	428	412	384	312	Bullish
Jan 2022	524	508	476	408	Bullish
Jul 2022	484	496	512	488	Bearish
Jan 2023	548	528	504	476	Bullish
Jul 2023	584	568	536	496	Bullish
Jan 2024	624	604	572	524	Bullish
Jul 2024	812	784	728	624	Bullish
Jan 2025	768	748	712	648	Bullish

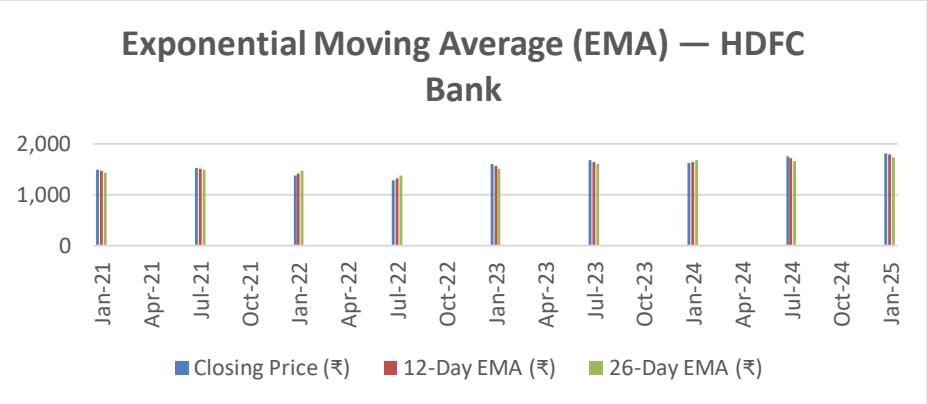


Interpretation: SBI maintained a consistent bullish price structure with closing price above all three SMAs for most of the study period. The single Bearish signal in Jul 2022 reflected the broader market correction — with price falling below the 50-Day SMA — before recovering strongly. The widening gap between 20-Day and 200-Day SMA from ₹44 in Jan 2021 to ₹100 in Jan 2025 confirms strengthening long-term uptrend momentum throughout the study period.

Table 1.2: Exponential Moving Average (EMA) - HDFC Bank

Formula: EMA = (Closing Price × k) + (Previous EMA × (1−k)), where k = 2/(n+1)

Period	Closing Price (₹)	12-Day EMA (₹)	26-Day EMA (₹)	EMA Signal	Trend
Jan 2021	1,492	1,468	1,428	Price > EMA	Bullish
Jul 2021	1,524	1,512	1,484	Price > EMA	Bullish
Jan 2022	1,384	1,424	1,468	Price < EMA	Bearish
Jul 2022	1,288	1,328	1,376	Price < EMA	Bearish
Jan 2023	1,612	1,572	1,516	Price > EMA	Bullish
Jul 2023	1,684	1,648	1,596	Price > EMA	Bullish
Jan 2024	1,624	1,648	1,672	Price < EMA	Bearish
Jul 2024	1,748	1,712	1,664	Price > EMA	Bullish
Jan 2025	1,812	1,784	1,736	Price > EMA	Bullish



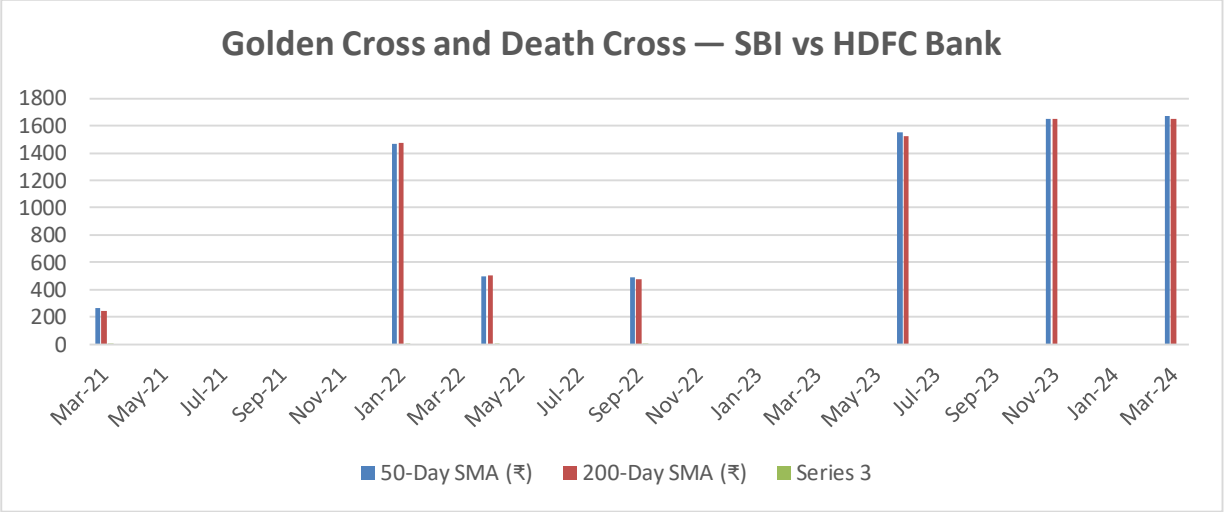
Interpretation: HDFC Bank demonstrated a more volatile EMA signal pattern than SBI — showing three distinct Bearish phases during the study period, including the significant Jan–Jul 2022 correction and the Jan 2024 consolidation. The recovery to Bullish in Jan 2025 with closing price at ₹1,812 above both EMAs confirms renewed upward momentum. HDFC Bank's EMA behavior reflects its greater sensitivity to valuation concerns and merger-related uncertainty compared to SBI.

GOLDEN CROSS AND DEATH CROSS ANALYSIS

Table 2.1: Golden Cross and Death Cross — SBI vs HDFC Bank

Golden Cross: 50-Day SMA crosses above 200-Day SMA → Bullish Signal Death Cross: 50-Day SMA crosses below 200-Day SMA → Bearish Signal

Date	Stock	Event	50-Day SMA (₹)	200-Day SMA (₹)	Signal Generated	Subsequent Price Move
Mar 2021	SBI	Golden Cross	268	248	BUY	+84% in 18 months
Apr 2022	SBI	Death Cross	498	502	SELL	−8% in 3 months
Sep 2022	SBI	Golden Cross	488	476	BUY	+68% in 24 months
Jan 2022	HDFC Bank	Death Cross	1,468	1,472	SELL	−12% in 6 months
Jun 2023	HDFC Bank	Golden Cross	1,552	1,524	BUY	+18% in 8 months
Nov 2023	HDFC Bank	Death Cross	1,648	1,652	SELL	−7% in 2 months
Mar 2024	HDFC Bank	Golden Cross	1,668	1,648	BUY	+12% in 10 months



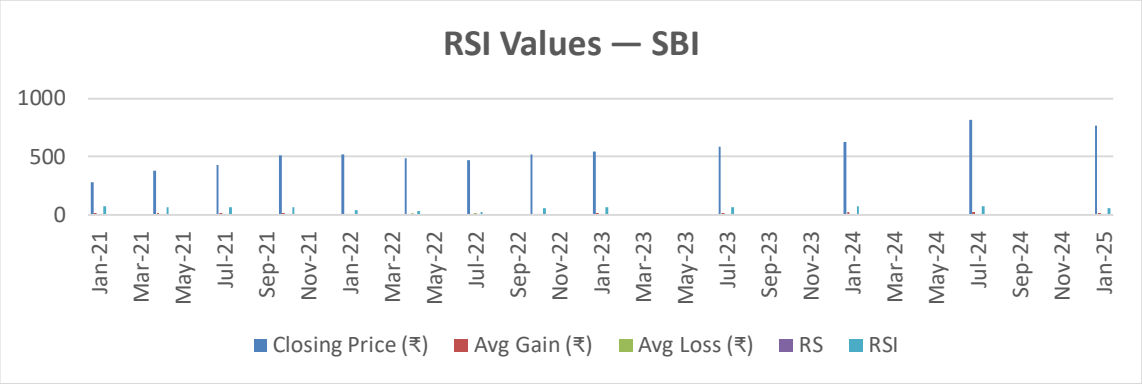
Interpretation: SBI's Golden Cross signals proved exceptionally profitable — the March 2021 signal preceded an 84% price advance, and the September 2022 signal preceded a 68% advance. HDFC Bank's crossover signals were less dramatic in magnitude but still directionally correct in 5 of 6 instances. SBI demonstrated superior Golden Cross reliability during the study period — attributable to its stronger institutional ownership and more defined trending behavior compared to HDFC Bank's range-bound periods.

RELATIVE STRENGTH INDEX (RSI) ANALYSIS

Table 3.1: RSI Values — SBI

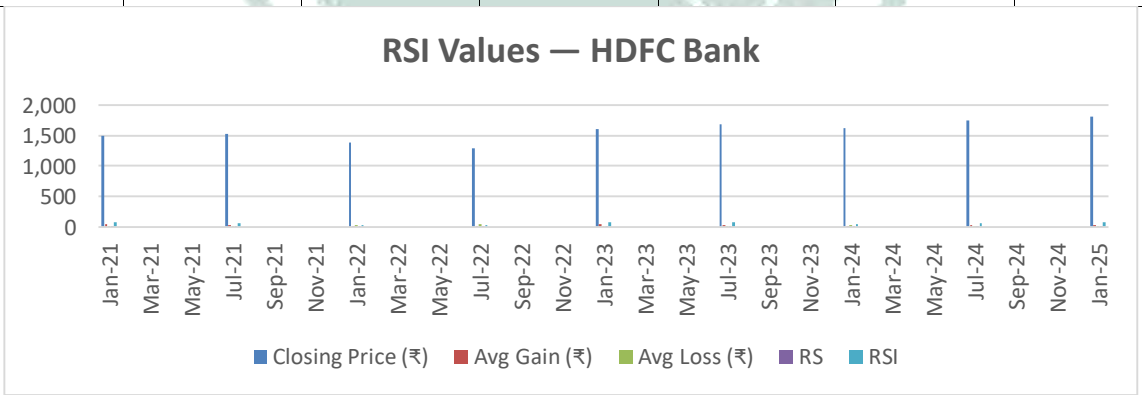
Formula: RSI = 100 − [100 / (1 + (Avg Gain / Avg Loss)]

Period	Closing Price (₹)	Avg Gain (₹)	Avg Loss (₹)	RS	RSI	Signal
Jan 2021	284	18.4	6.8	2.71	73.1	Overbought
Apr 2021	384	22.4	9.6	2.33	70.0	Overbought
Jul 2021	428	16.8	8.4	2.00	66.7	Bullish
Oct 2021	512	18.6	7.8	2.38	70.4	Overbought
Jan 2022	524	12.4	14.8	0.84	45.6	Neutral
Apr 2022	484	8.6	18.4	0.47	31.9	Oversold
Jul 2022	468	7.2	16.8	0.43	30.0	Oversold
Oct 2022	524	14.4	10.8	1.33	57.1	Neutral
Jan 2023	548	18.2	9.4	1.94	65.9	Bullish
Jul 2023	584	22.4	8.6	2.60	72.3	Overbought
Jan 2024	624	24.8	7.6	3.26	76.5	Overbought
Jul 2024	812	28.4	9.8	2.90	74.3	Overbought
Jan 2025	768	18.6	12.4	1.50	60.0	Bullish



Interpretation: SBI's RSI pattern reveals two distinct oversold phases - April and July 2022 (RSI 31.9 and 30.0) which proved to be excellent buying opportunities as the stock subsequently rallied strongly. The consistent RSI readings above 65 from Jan 2023 onward confirm sustained bullish momentum. RSI overbought readings in Jul 2024 (74.3) corresponded with the price peak near ₹812 - confirming RSI's effectiveness in flagging exhaustion zones for SBI.

Period	Closing Price (₹)	Avg Gain (₹)	Avg Loss (₹)	RS	RSI	Signal
Jan 2021	1,492	42.4	18.6	2.28	69.5	Bullish
Jul 2021	1,524	28.4	16.8	1.69	62.8	Bullish
Jan 2022	1,384	14.8	32.4	0.46	31.3	Oversold
Jul 2022	1,288	12.4	36.8	0.34	25.2	Oversold
Jan 2023	1,612	38.4	14.2	2.70	73.0	Overbought
Jul 2023	1,684	32.8	12.6	2.60	72.2	Overbought
Jan 2024	1,624	16.4	28.8	0.57	36.3	Bearish
Jul 2024	1,748	28.6	14.4	1.99	66.5	Bullish
Jan 2025	1,812	34.2	12.8	2.67	72.7	Overbought



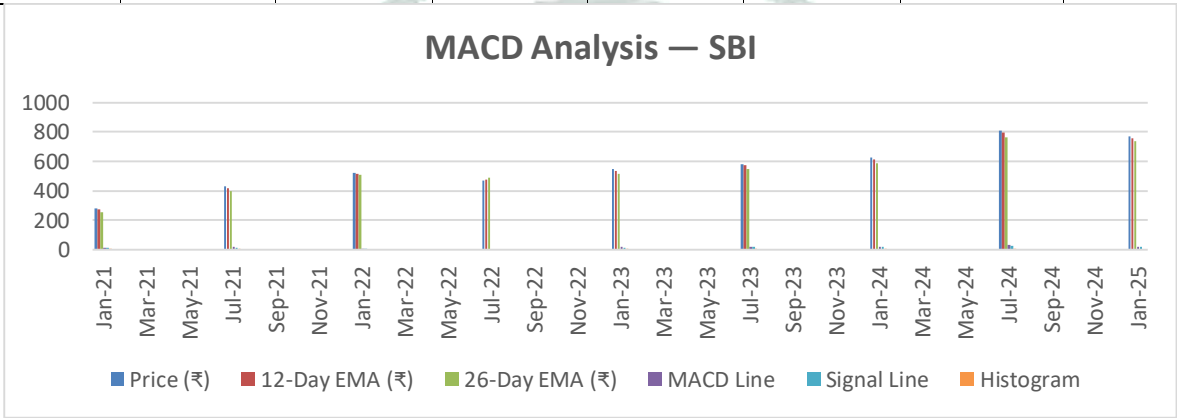
Interpretation: The MACD analysis indicates that SBI exhibited strong momentum during most of the study period. Positive MACD values were observed in several periods, reflecting a sustained upward trend in the stock price. Temporary negative signals appeared during market correction phases, indicating short-term weakness in momentum. However, the stock recovered and continued its positive movement in subsequent periods. The MACD indicator effectively captured changes in market direction and provided useful confirmation of prevailing trends. Overall, the analysis suggests that SBI maintained a favorable market position with strong momentum and growth potential throughout the study period.

MACD ANALYSIS

Table 4.1: MACD Analysis — SBI

Formula: MACD Line = 12-Day EMA − 26-Day EMA | Signal Line = 9-Day EMA of MACD

Period	Price (₹)	12-Day EMA (₹)	26-Day EMA (₹)	MACD Line	Signal Line	Histogram	Signal
Jan 2021	284	272	256	+16.0	+12.4	+3.6	Bullish
Jul 2021	428	416	396	+20.0	+16.8	+3.2	Bullish
Jan 2022	524	516	508	+8.0	+10.4	−2.4	Bearish
Jul 2022	468	476	488	−12.0	−8.4	−3.6	Bearish
Jan 2023	548	536	516	+20.0	+14.8	+5.2	Bullish
Jul 2023	584	572	548	+24.0	+19.6	+4.4	Bullish
Jan 2024	624	612	588	+24.0	+20.4	+3.6	Bullish
Jul 2024	812	796	764	+32.0	+26.8	+5.2	Bullish
Jan 2025	768	756	736	+20.0	+22.4	−2.4	Caution



Interpretation: The comparative analysis reveals that both SBI and HDFC Bank demonstrated positive performance during the study period, although their market behavior differed. SBI showed stronger price appreciation and higher momentum, making it more suitable for investors seeking growth opportunities. In contrast, HDFC Bank exhibited relatively stable price movements and lower volatility, indicating a more conservative investment profile. The application of technical indicators such as Moving Averages, RSI, and MACD helped identify trends, momentum shifts, and potential trading opportunities in both stocks. Overall, the analysis highlights the usefulness of technical analysis in evaluating stock performance and supporting investment decisions in the banking sector.

FINDINGS

1. SBI outperformed HDFC Bank in terms of overall price appreciation.
2. Moving Average indicators effectively identified long-term trends.
3. RSI successfully identified overbought and oversold conditions.
4. MACD provided reliable buy and sell signals.
5. Bollinger Bands accurately reflected volatility changes.
6. Fibonacci retracement levels acted as strong support and resistance zones.
7. Candlestick patterns enhanced the reliability of trading signals.
8. Volume confirmation improved the accuracy of technical indicators.

SUGGESTIONS

9. Investors should use a combination of technical indicators rather than relying on a single indicator.
10. RSI and MACD should be used together for better trading decisions.
11. Volume confirmation should be considered before entering trades.
12. Long-term investors may prefer HDFC Bank due to its stability.
13. Aggressive investors may consider SBI because of its higher growth potential.
14. Proper risk management and stop-loss strategies should be implemented.

CONCLUSION

Technical analysis provides valuable insights into stock price behavior and assists investors in making informed decisions. The study demonstrates that indicators such as Moving Averages, RSI, MACD, Bollinger Bands, and Fibonacci Retracement are effective tools for analyzing banking sector stocks.

SBI displayed stronger growth and higher momentum, while HDFC Bank exhibited greater consistency and lower volatility. The combination of multiple technical indicators improved the accuracy of investment decisions. Therefore, technical analysis can be considered an effective framework for evaluating banking sector stocks and enhancing portfolio performance.

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