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Comparative Analysis of BB + RSI and MACD+RSI Trading Strategies in the Nifty India Digital Index: Evidence from Hurst Exponent Analysis

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Abstract

Technical indicators are highly prevalent in financial markets to identify price trends and momentum while the Hurst Exponent serves as an important measure to examine market persistence. This study examines the effectiveness of two technical trading strategies i.e. Bollinger Bands (BB; hereafter referred to as BB) with Relative Strength Index (RSI; hereafter referred to as RSI) and Moving Average Convergence Divergence (MACD; hereafter referred to as MACD) with RSI on the Nifty India Digital Index during the study period. Rescaled Range analysis has been applied to calculate Hurst exponent for the period of four years. The results of this analysis revealed deviation from random walk behaviour. Based on this finding, both trading strategies were evaluated using win ratio and mean trade return. The results indicate that the BB+RSI strategy outperforms the MACD+RSI strategy with a higher proportion of profitable trades and significantly higher average trade returns. The study concludes that combining volatility and momentum indicators through BB+RSI provides comparatively better trading performance in the index during the study period. The key contribution of this study lies in integrated analytical framework which combines Hurst Exponent analysis and comparative evaluation of two technical trading strategies. The findings have relevance for investors, traders, portfolio managers and researchers. The study contributes to the existing literature on technical analysis in emerging indices and can provide insights in selecting strategy for digital sector in trend-persistent market behaviour.

Keywords: Bollinger Bands+ Relative Strength Index, Moving Average Convergence Divergence+ Relative Strength Index, Hurst Exponent, Volatility and Momentum Indicatorst

Introduction

Changes in the economy, investor sentiment and market dynamics prove to be prominent causes for continuous price changes in financial markets. To benefit from these price changes traders and investors employ technical analysis which is critical study of price and volume data of index comprising of several shares or of a particular stock. Unlike fundamental analysis, which relies on intrinsic value of the securities, technical analysis attempts to gain from the time lag between arrival of information in the market and its consequent impact on prices. The analysis is used to draw out short, medium as well as long term patterns in price movements. It helps us to exploit pattern of trading by buyers and sellers of stocks in the market. Amongst various technical indicators available, BB, MACD and RSI are widely used as powerful indicators to capture different market dimensions including volatility, trend and momentum (Mahajan, 2015). It is an established fact that combining indicators helps to filter out false signals and improves the accuracy of trade signals generated (Irwansyah et al., 2025; Thakkar, 2025; Shalinigayathri & Shunmuga Kumari, 2024). But the biggest challenge for traders and investors is to determine whether technical trading strategies are capable of generating consistent profitable trades or not.

According to the notions of fundamental analysis and Efficient Market Hypothesis, current security prices efficiently manifest all the available information in the

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market and prices follows a random walk behaviour (Fama,1970). However, empirical evidence has pointed out that market exhibits persistent behaviour and that predictable price patterns can be exploited by technical trading strategies (Lo & MacKinlay, 1988; Cajueiro & Tabak, 2004; Awasthi, & Malafeyev, 2015). Hence, determining the effectiveness of various technical indicators is an important researchable issue for investors, portfolio managers and researchers.

Hurst Exponent analysis can prove beneficial for examining the market behaviour and evaluates whether the return series exhibits random walk behaviour or long-term persistence (Hurst, 1951). It was developed by Harold Edwin Hurst in 1950s and is a statistical measure used in time series analysis. It is used to identify long term memory and underlying trends. It measures the relative tendency of a time series to revert to its mean or move in a specific direction. It is calculated using the Rescaled Range (R/S) analysis. This exponent was used to determine whether the return series exhibits random walk behaviour or long-term persistence. Hence, estimating Hurst exponent before employing any of the technical trading strategies can be helpful to apply particular technical trading strategy in trend-following market behaviours. Despite growing research in technical trading strategies, very few studies integrate market persistence analysis with comparative evaluation of trading strategies.

It classifies the behaviour of time series data into three categories:

Hurst Exponent < 0.5: This is known as anti-persistent or mean reverting behaviour where an increase in prices is likely to be followed by a decrease.

Hurst Exponent = 0.5: This is also known as random walk indicating no memory in the series of prices.

Hurst Exponent > 0.5: This is known as trend persistent behaviour where increase in prices is followed by further increase and vice-versa.

Existing literature has extensively studied the performance of individual technical trading indicators with very few evaluating the performance of strategies devised combining technical indicators (Mahajan, 2015; Sami et al., 2022; Melda et al., 2025). Moreover, previous studies predominately focused on broad indices demonstrating a research gap in studying thematic emerging indices such as Nifty India Digital Index. Further, many studies evaluated the performance of trading strategies through calculating the ratios without statistically comparing performance using metrics such as win ratio and average trade return (Thakkar, 2025; Shalinigayathri & Shunmuga Kumari, 2024). Hence, the integration of Hurst Exponent analysis with statistical comparison of BB+RSI and MACD+RSI trading strategies remained underexplored specifically in context of emerging digital indices.

In order to address this problem, the present study attempts to find out the market behaviour present in Nifty India Digital Index and then compare the effectiveness of BB+RSI and MACD+RSI trading strategies by evaluating the performance through win ratio and average trade returns. The motivation of doing this research stems from rapid growth of India's digital economy and increasing participation of retail investors, portfolio managers, traders, etc in stock of companies operating in digital sector. There exists a gap in existing empirical studies which can demonstrate application of technical trading strategies in this sector and assist investor in taking informed trading decisions.

The key contribution of this study lies in integrated analytical framework which combines Hurst Exponent analysis and comparative evaluation of two technical trading strategies. The findings of this study can be useful for investors, traders, portfolio managers and researchers. The study adds knowledge to the existing research on technical analysis in emerging indices and can provide insights in selecting strategy for digital sector.

Objectives of the Study

- To study the market behaviour in the returns of the Nifty India Digital Index during the period of study.
- To compare the win ratios of the BB+RSI and MACD+RSI trading strategies applied to the Nifty India Digital Index during the period of study.
- To compare the average trade returns of the BB+RSI and MACD+RSI strategies applied to the Nifty India Digital Index during the period of study.

Literature Review

Literature Review on BB and RSI Strategies

The combination of BB and RSI has benefitted many traders and investors by generating profitable trade signals

due to volatility and momentum factors. BB, developed by John Bollinger, used to track market volatility and detect potential price reversals. RSI proves to be very powerful tool in tracking the movements in market before they occur through net difference between closing prices. Few studies have reported that the combination of these indicators can enhance the trading performance.

To illustrate, Irwansyah et al. (2025) evaluated the effectiveness of the RSI and BB individually and in combination for identifying buy and sell signals within the IDXMESBUMN17 index comprising Indonesian state-owned enterprises. They found that while the individual accuracy rates for RSI and BB were 65.6% and 70.2% respectively with their combined application achieving a significantly higher accuracy level of 87.5%. On the similar lines, Thakkar, U. P. (2025) examined the application of BB and RSI to optimize investor profitability within the Indian stock market across indices such as NIFTY, BANKNIFTY, and NIFTY AUTO for the period from 2018 to 2023. Their findings also matched the findings of Irwansyah et al. (2025) exhibiting that a combined signal where price action breaches a BB simultaneously with an RSI crossing into overbought or oversold provides a powerful indicator for selling or buying in the market rather than relying on single indicator. Likewise, Shalinigayathri and Shunmuga Kumari (2024) explored the optimization of trading strategies through the combined application of BB and the RSI for stock forecasting which could improve entry and exit decisions for ITC and TATACOFFEE for the period 2019 to 2023. The results of the study demonstrated good predictive performance with accuracy rates of 98.29% for ITC and 97.48% for TATACOFFEE.

Literature Review on MACD and RSI Strategies

The combination of MACD and RSI to detect the trend reversals while filtering false signals. MACD is calculated using difference between 26 days and 12 days exponential moving average and is widely used as momentum indicator for trend direction and reversals. A signal line also known as 9 days exponential moving average is plotted above MACD line to show entry and exit points. While RSI confirms the strength of price movements. The complementary nature of both these indicators proves beneficial across different market conditions.

Empirical studies have presented mixed findings with superiority of MACD indicator. Melda et al. (2025) conducted a comparative quantitative analysis to evaluate the accuracy and utility of RSI and MACD in predicting price trends within the LQ45 index. Their findings revealed that while the RSI achieved a significantly higher accuracy rate of 97% compared to the MACD 52%, but there was no significant overall difference in their effectiveness. Similarly, Sami et al. (2022) evaluated the performance of MACD and RSI across a sample of 27 stocks from diverse global markets and revealed that both indicators generated better signals for stocks with RSI identifying price movements in 81% of cases, whereas MACD achieved an accuracy rate of 56% during a distressed market. In contract to above studies, Inumula (2017) investigated the profitability of optimized MACD and RSI within the Indian equity market from April 2012 to March 2015 by analysing various stocks across Financials, Pharmaceuticals, Automobiles, IT, and FMCG sectors and found that standard application of these indicators was insufficient to beat the market, the optimized versions significantly outperformed the buy-and-hold approach.

Research Gap and Contribution of the Study

BB, MACD and the RSI has been extensively used in previous literature in predicting stock price movements, both in individuality and in combinations. Limited empirical research has been conducted on the comparative performance of combined technical trading strategies specifically BB+RSI and MACD+RSI in emerging digital indices. Therefore, the present study addresses this gap by investigating the market behaviour and analysing the performance of BB+RSI and MACD+RSI trading strategies and statistically comparing their effectiveness on the Nifty India Digital Index during the period of study.

Research Methodology

Research Design

The research design is quantitative to evaluate the effectiveness of selected technical trading strategies on Nifty India Digital Index during the period of study. Daily returns were calculated using secondary data of the index

collected for a period of four years from January 2022 to January 2026. Initially, Rescaled Range method was applied to find the Hurst exponent to examine whether the return series follows a random walk behaviour. Based on the output from Hurst Exponent, two technical trading strategies, namely BB combined with RSI (BB+RSI) and MACD combined with RSI (MACD+RSI) were applied to generate buy and sell signals based on prescribed indicator rules. Trade returns were calculated by considering the average buy price prior to a sell signal. The performance of the strategies was evaluated using measures such as win ratios and average trade return using a two-proportion Z-test and Independent Sample t-test (Welch test) respectively.

Hurst Exponent

Firstly, daily returns were calculated from the closing prices and the return series was divided into 8 subsamples. For each subsample, the mean return was computed and the returns were demeaned by subtracting the subsample mean. The cumulative sum of these demeaned returns was then calculated to obtain the cumulative deviations. The range of the cumulative deviations was determined as the difference between the maximum and minimum values and standard deviation of the returns was computed for each subsample. By dividing the range with its corresponding standard deviation rescaled range was obtained. The average rescaled range for each subsample size was then calculated by taking the arithmetic mean of all rescaled range values corresponding to that subsample length and the Hurst exponent was estimated as the slope calculated by regressing the log values of rescaled range against the log of sub-sample sizes.

The slope coefficient from the regression of log (R/S) on log(n) obtained is Hurst exponent:

$$\log(R/S) = \log(c) + H \log(n)$$

Trading Strategy Construction

BB+RSI



Source: Author, prepared using historical data from Nifty India Digital Index and chart visualisation from Investing.com

Fig. 1: Visual Presentation of Buy-Sell Signals Generated Using BB+RSI

In a trend-persistent market, this strategy helps to identify trend continuance or pullbacks. They are effective for identifying the strength of ongoing move and safe entry points during brief periods of pauses as prices move along the outer bands.

A 'Buy' signal is triggered when the price is equal to or falls below the Lower BB. This entry is filtered by the RSI having a value below 45. This dual-constraint ensures that the long entry is executed when the asset is both undervalued and positioned for a momentum shift back toward the equilibrium. A 'Sell' signal is triggered when the price is equal to or above Upper BB, confirming a volatility breakout. This price action is further filtered by the RSI which must maintain a value strictly greater than 55.

MACD+RSI



Source: Author, prepared using historical data from Nifty India Digital Index and chart visualisation from Investing.com

Fig. 2: Visual Presentation of Buy-Sell Signals Generated Using MACD+RSI

In a trend-persistent market, both of the above indicators are used as momentum indicators. MACD confirms the trend direction and RSI measures the speed.

The 'Buy' signal is triggered when MACD line move above signal line from a previously lower position. This is further filtered out by RSI exceeding 45 at the time of the crossover. This ensures that the trade is initiated only when speed supports the emerging bullish trend. The 'Sell' signal is triggered when MACD line moves below signal line provided the RSI remains below 55. These combination of filters out false signals by ensuring that speed supports bearish trend.

Win Ratio

Win ratio is a commonly used performance metric in trading strategy evaluation and is calculated by dividing the number of profitable trades in a strategy with total number trades for that strategy. In this study, the win ratios were calculated for the BB+RSI and MACD+RSI trading strategies applied to the Nifty India Digital Index during the period of study. Each completed trade was classified as either a winning trade or a losing trade based on the return generated when the position was closed. A trade was considered profitable when the trade return was positive and a loss-making trade when the return was negative.

$$\text{Win Ratio} = \frac{Number\ of\ profitable\ trades}{Total\ number\ of\ trades}$$

Strategy Trade Return

Trade returns were calculated to evaluate the profitability of each completed trade generated by the trading strategies. A trade is considered complete when a sell signal occurred after one or more buy signals. In case, where multiple buy signals were generated before a sell signal, the average purchase price of all buy transactions prior to the sell signal was considered. This approach assumes that the position is accumulated with each buy signal and the entire position is closed when the sell signal occurs.

$$Strategy\ Trade\ Return = \frac{Sell\ Price - Average\ Buy\ Price}{Average\ Buy\ Price}$$

Hypothesis of the Study

- H_{01}: The return series of the Nifty India Digital Index exhibits a random walk behaviour, implying that the H=0.5.
- H_{11}: The return series of the Nifty India Digital Index does not exhibit a random walk behaviour, implying that the H≠0.5.

- H_{02}: The win ratio of the BB+RSI trading strategy is less than or equal to that of the MACD+RSI trading strategy applied to the Nifty India Digital Index during the period of study.
- H_{12}: The win ratio of the BB+RSI trading strategy is greater than that of the MACD+RSI trading strategy applied to the Nifty India Digital Index during the period of study.
- H_{03}: The average trade return of the BB+RSI strategy is less than or equal to that of the MACD+RSI strategy applied to the Nifty India Digital Index during the period of study.
- H_{13}: The average trade return of the BB+RSI strategy is greater than that of the MACD+RSI strategy applied to the Nifty India Digital Index during the period of study.

Statistical Tests

Two-Tailed T-Test

It is a statistical test used to test whether there exists significant difference between sample mean and population mean. Here, it is employed to determine whether the estimated Hurst exponent significantly differs from the theoretical benchmark value of 0.50 (random walk behaviour) in either direction. The test compares the sample estimate with the hypothesized population value by standardizing the difference using the standard error of the estimate.

$$t = \frac{\bar{X} - \mu_0}{s/\sqrt{n}}$$

Two-Proportion Z-Test

It is a statistical method used to find whether the proportions of two independent groups significantly differ. This test evaluates whether the observed difference in win ratios between two trading strategies' independent trade signals is likely due to a real performance advantage or merely random market noise.

$$Z = \frac{p_1 - p_2}{\sqrt{p(1-p)(\frac{1}{n_1} + \frac{1}{n_2})}}$$

Where,

p_1 = Win ratio of BB+RSI strategy

p_2 = Win ratio of MACD+RSI strategy

n_1 = Total trades in BB+RSI

n_2 = Total trades in MACD+RSI

p = Pooled proportion

Independent Sample Welch test

It is a statistical test used to test significant difference in population means of two independent groups with unequal variances. One tailed Independent Sample Welch test was applied to determine whether the mean trade return from the one strategy is significantly higher than that from another strategy.

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

Where:

$\bar{X}_1$ = Mean trade return of BB+RSI strategy

$\bar{X}_2$ = Mean trade return of MACD+RSI strategy

S_1^2 = Variance of trade returns for BB+RSI strategy

S_2^2 = Variance of trade returns for MACD+RSI strategy

n_1 = Number of trades in BB+RSI strategy

n_2 = Number of trades in MACD+RSI strategy

Data Analysis and Interpretation

Descriptive Statistics of Nifty India Digital Index Returns

Table 1: Descriptive Statistics of Returns of Nifty India Digital Index

Mean	*Standard Deviation*	*Minimum Return*	*Maximum Return*	*Number of Observations*
0.000387	0.011347	-0.053826	0.054756	987

Source: Author, computation using Nifty India Digital Index historical data.

The descriptive statistics of daily returns of the Nifty India Digital Index during the period of study has been presented in Table 1. The mean daily return of the index is 0.000387 indicating a small but positive average return with standard deviation of 0.011347 reflecting volatility present in the index returns. The minimum return observed during the period is -0.053826 while the maximum return is 0.054756, suggesting that the index experienced both notable negative and positive movements during the study period.

Hurst Exponent Analysis

Table 2: Hurst Exponent Analysis

Sub-Sample Size	*Average R/S*	*Log (n)*	*Log (R/S)*
2	30.68	6.22	3.42
4	20.06	5.53	3.00
8	13.38	4.83	2.59
16	8.75	4.14	2.17
32	5.64	3.45	1.73
64	3.90	2.75	1.36
128	2.46	2.06	0.90
256	1.43	1.37	0.36
H- Exponent	0.62	Expected Hurst	0.50
T-Statistic	11.74	p value	0.0000230

Source: Author, computation using Nifty India Digital Index historical data.

The results of R/S analysis on Hurst exponent for the return series of the Nifty India Digital Index during the period of study has been presented in Table 2. The return series was divided into several subsamples of varying sizes and the rescaled range (R/S) values were presented for each subsample size. Hurst exponent is obtained as a slope of log regression from log values of subsample size and the log average rescaled range. The estimated Hurst exponent of 0.62 is greater than the expected value of 0.50. This confirms the presence of persistent behaviour in the return series indicating that past movements in returns tend to influence future movements. The calculated t-statistic of 11.74 with a p-value of 0.000023 (less than 0.05) indicates that the null hypothesis i.e. The return series of the Nifty India Digital Index follows a random walk behaviour, implying that the H=0.5 can be rejected, depicting that technical trading strategies may have predictive potential during the period of study.

Win Ratio Analysis

Table 3: Win Ratio Analysis

Strategy	*Win Ratio*	*Total Trades*
BB+RSI	0.9166	12
MACD+RSI	0.4285	14
Z-Statistic	2.61	
Standard Error	0.1872	
p value	0.0091	

Source: Author's computation.

The above table depicts the win ratios of two trading strategies namely BB+RSI and MACD+RSI applied to the Nifty India Digital Index during the period of study. The BB+RSI strategy generated a win ratio of approximately 91.66% based on a total of 12 trades. In contrast, the MACD+RSI strategy recorded a win ratio of about 42.85% out of 14 trades. The calculated Z-statistic of 2.61 with a p-value of 0.0091 indicated that there exists statistically significant difference in win ratios at the 5% level of significance. Therefore, the null hypothesis i.e. The win ratio of the BB+RSI trading strategy is less than or equal to that of the MACD+RSI trading strategy applied to the Nifty India Digital Index during the period of study is less than or equal to that of MACD+RSI trading strategy can be rejected which demonstrates that BB+RSI strategy exhibits a significantly higher profitable trades compared to the MACD+RSI strategy.

Strategy Trade Returns Analysis

Table 4: Strategy Trade Returns Analysis

Strategy	*Mean Trade Return*	*Variance*	*Number of Trades*
BB+RSI	0.0655	0.0062	12
MACD+RSI	0.0115	0.0023	14
T Statistic		2.053	
p value		0.027	

Source: Author's computation.

The above table demonstrates that the BB+RSI strategy generated a mean trade return of 0.0655 whereas the MACD+RSI strategy produced a relatively lower mean trade return of 0.0115. The calculated t-statistic of 2.053 from One-Tail Independent Sample Welch Test with a corresponding p-value of 0.027 revealed that there

exists statistically significant difference in average trade returns at the 5% level of significance. Therefore, the null hypothesis i.e. The average trade return of the BB+RSI strategy is less than or equal to that of the MACD+RSI strategy applied to the Nifty India Digital Index during the period of study can be rejected. Hence, BB+RSI trading strategy generates significantly higher average trade returns compared to the MACD+RSI strategy when applied to the Nifty India Digital Index during the period of study.

Discussion

The findings of the study have contributed to existing research base on technical trading strategies by exploring the research gap of investigating the market behaviour in return series of Nifty India Digital Index and comparing the trading effectiveness of two trading strategies through testing the proposed hypothesis. The first hypothesis examined whether return series in the given index follows a random walk behaviour. The results highlighted statistically significant hurst exponent of 0.62 from two-tailed t test which led to rejection of null hypothesis. This indicated long term persistence of trend rather than random walk behaviour. This implies that historical price movements contain useful information and can be exploited using through technical analysis.

The second hypothesis tested the difference trading performance of two trading strategies by comparing their win ratios. The null hypothesis of win ratio of the BB+RSI trading strategy is less than or equal to that of the MACD+RSI trading strategy is rejected based on statistical significance through two-proportion Z-test. The BB+RSI strategy generated win ratio of 91.66% which proves to be significantly high from win ratio of 42.85% generated by MACD+RSI.

Similarly, the third hypothesis investigated the difference in average trade returns of these two strategies. The null hypothesis was rejected as the average trade returns from BB+RSI proved to be significantly higher than MACD+RSI when tested through Welch's one-tailed t-test. However, both strategies generated profitable trades during the study period but BB+RSI demonstrated superior results indicating combination of volatility and momentum indicators produces reliable profitable trading signals in trend persistent market.

The findings of the study are consistent with study undertaken by Irwansyah et al. (2025) demonstrating high trading accuracy from combining BB and RSI compared to their individual application. Similarly, Thakkar (2025) also confirmed that buy and sell signals generated from combination of BB and RSI have generated profitable trades. The results were also in parity with study undertaken by Shalinigayathri and Shunmuga Kumari (2024) who pointed higher predictive accuracy from these indicators.

In context of MACD+RSI strategy, our findings are also slightly consistent with Melda et al. (2025) and Sami et al. (2022) who favoured RSI possessing high predictive power compared to MACD under different market conditions. Further, our findings are also slightly consistent with Inumula (2017) who found that MACD can prove beneficial when used as an optimised versions for tracking price movements.

In a nutshell, the existence of persistent market behaviour found by Hurst exponent analysis provides the scope for application of trend following strategies on emerging digital index. Amongst the two strategies examined, BB+RSI consistently demonstrated superior results both in terms of profitable trades and average trade returns. Hence, the study expands the existing literature by novel integration of market persistence analysis and consequent comparison of trading performance from two-trend following strategies on the index which has received limited empirical consideration.

Conclusion

The findings of the study fulfil the stated objectives and provide meaningful insights into the trading behaviour of the Nifty India Digital Index during the period of study. The estimated Hurst exponent of 0.62 demonstrated a deviation from random walk behaviour in return series and exhibits persistent market characteristics. These findings also support the relevance of applying technical analysis in the selected market. Further, the comparative evaluation of trading strategies reveals that the BB+RSI strategy significantly outperforms the MACD+RSI strategy, both in terms of win ratio and average trade return, indicating its ability to generate profitable trading signals. These results are also broadly consistent with prior studies that highlight the effectiveness of combining

volatility-based indicator such as BB with momentum confirmation indicator such as RSI, specifically on Nifty India Digital Index which together improve signal quality and reduce false trading entries.

The significance of the study lies in combination of Hurst exponent analysis with statistical comparison of trading strategies performance. Previous studies, more or less, were found to evaluate the performance of technical indicators in isolation from market behaviour where the present study had contributed to this research gap by analysing the relative effectiveness of two combinations of indicators under trend persistent market. Hence, it contributes to understanding of whether a particular market behaviour influence the performance of trading strategies.

Implications of the Study

The practical implications of the study are relevant for investors, portfolio managers, traders, analyst and researchers as the results suggest that BB+RSI strategy provides a robust framework for generating buy and sell signals in emerging digital index. Further, the present framework can be applied to broad indices, sectoral indices and other international indices to examine whether the similar results can be obtained under varying market behaviours. Moreover, one can also incorporate machine learning algorithms and momentum indicators in the framework to further enhance the applicability to different markets.

Scope and Limitations

The present study examines the market behaviour through Hurst exponent analysis to determine whether there exists deviation from random walk behaviour in Nifty India Digital Index. After determining the presence of long term persistence in the return series of the said index, the study further focuses on evaluating the effectiveness of two technical trading strategies using win ratio and average trade return by applying statistical techniques namely two-proportion Z-test and independent sample welch test. The results provide evidence regarding successful application of technical trading strategies in digital sector and will also serve as reference for future studies exploring technical analysis in other markets.

The limitations of the study are given below:

- The analysis is confined to only Nifty India Digital Index.
- The study considers only two combinations of technical indicators i.e. BB+RSI and MACD+RSI.
- The analysis is based on daily closing prices.
- The trading performance has been evaluated by applying only two key metrices namely win ratio and average trade return.

Data Availability

The historical data compiled and analysed in present research can be accessed from: https://niftyindices.com/reports/historical-data.

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Declaration of Competing Interest

The author has declared that they do not have any competing financial interests or relationships that could have influenced the research work.

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Conflict of Interest

The author declares that there exists no conflict of interest with regard to publication of this research paper.

AI Disclosure

AI assisted language-tool has been used to improve language quality to present the findings in professionally

readable manner. However, AI tool was not used to produce research data, to conduct analysis or to interpret results.

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