

# Technical Analysis of Select Banks listed in NSE Nifty Bank Index

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## Abstract

This research paper analyses the dynamic focus of technical analysis on banks listed in the NSE Nifty Bank Index with an emphasis on volatility patterns. The paper examines technical indicators like the Bollinger Band and Relative Strength Index to assess risk and return fluctuations. The researcher explores the evidence and insights from existing literature to understand the volatility patterns of banks. Daily closing prices and moving averages were taken for the analysis. The research contributes to technical understanding of the risk-return dynamics of the bank and offers insights into the financial behaviour within the Nifty Bank Index.

**Keywords:** NSE Nifty Bank, Volatility, RSI, Bollinger Band

## 1. INTRODUCTION

Banks are important to the development of both a national and individual economy. In India the banking industry is the backbone of both urban and rural economies. Any changes in bank stock prices will certainly have an impact on shareholder strategies for investing as well as the overall economy. The Indian banking sector is an essential component of the nation's economy and has consistently contributed to the financial crisis. The market value of the investments held by the stock market immediately affects the value of the units or shares. Even though funds in the banking and financial services sectors have advanced their ability to provide superior risk-adjusted returns, the market value of those investments will fluctuate based on the issuers' financial performance as well as broader market, tax, political, and economic factors. Stock prices, interest rates, foreign exchange rates, and commodity prices are examples of standard market risk variables. Greater risk is linked to a higher likelihood of a larger return, and lower risk is linked to a higher likelihood of a smaller return.

## 2. REVIEW OF LITERATURE

**Kumar (2022)** analysed the purpose of this study, which is to compare Bollinger Bands (BB) and Rate of Change (ROC) indicators on Nifty50 for the financial year starting from April 1, 2021, to March 31, 2022, to find out which one of the indicators or the combination of the indicators can generate better returns with the use of Streak software. Streak is an algo trading platform that facilitates traders to back-test trading strategies by giving some entry and exit conditions and deploy the same for automatic trading. A good technical indicator should give fewer signals with high accuracy, as there will be more brokerage costs involved if there are more signals. In this study, it was found that BB can give fewer signals with greater accuracy. ROC gives more signals with poor accuracy. Superior returns can be obtained if these indicators

are combined. Therefore, it is always recommended to investors not to use any indicator in isolation, as it is prone to more risk.

**Bhowmik (2022)** evaluated the framework of stock market volatility at the country level. According to the study, volatility would be spurred by political turmoil or instability, and high volatility would reduce the growth rate of the economy. Volatility also influences the volume of international trade and increases current account deficits.

### 3. OBJECTIVE OF THE STUDY

To elucidate the volatility of the risk and return of select public sector banks in the Nifty Bank.

### 4. RESEARCH METHODOLOGY

The study is based on secondary data that has been collected from NSE Websites historical data of the respective banks, books, journals, articles, and web searches. The following websites and journals are listed below:

- <https://finance.yahoo.com/>
- <https://investing.com/>
- Published research articles
- Books and journals

### 5. SAMPLE DESIGN

S. No.	Banks	Sector
1.	Bank of Baroda	Public Sector
2.	Punjab National Bank	Public Sector

### 6. PERIOD OF STUDY

The study covers the period of 2 years from 2022-23 to 2023- 24. Closing Stock was taken for the analysis.

### 7. DATA ANALYSIS AND INTERPRETATION

#### 1. Bollinger Band Analysis

Table 1

Analysis of Bank of Baroda for the period from 2022-23 to 2023- 24

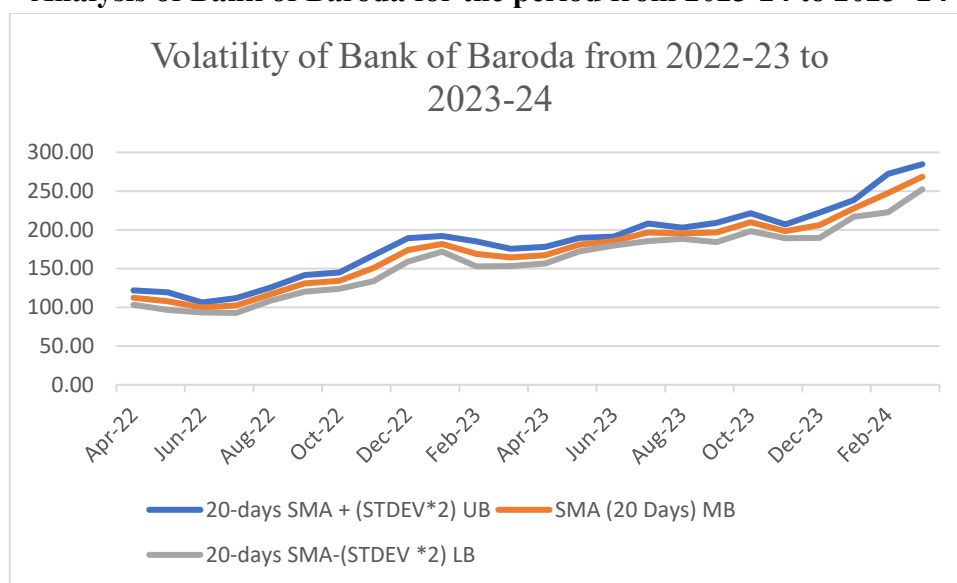
Date	20-days SMA + (STDEV*2) UB	SMA (20 Days) MB	20-days SMA- (STDEV *2) LB	Date	20-days SMA + (STDEV*2) UB	SMA (20 Days) MB	20-days SMA- (STDEV *2) LB
Apr-22	121.74	112.56	103.37	Apr-23	178.16	167.33	156.51
May-22	119.28	107.97	96.66	May-23	189.73	180.91	172.09
Jun-22	106.28	99.89	93.51	Jun-23	191.31	185.50	179.68
Jul-22	111.99	102.40	92.81	Jul-23	208.07	196.83	185.59
Aug-22	125.42	117.10	108.78	Aug-23	202.97	195.60	188.23
Sep-22	141.67	130.91	120.16	Sep-23	209.10	196.74	184.37
Oct-22	144.93	134.42	123.92	Oct-23	221.23	209.83	198.44

Nov-22	167.31	150.63	133.96	Nov-23	207.16	198.18	189.20
Dec-22	189.04	174.07	159.09	Dec-23	222.27	206.04	189.82
Jan-23	191.92	181.96	172.00	Jan-24	238.27	227.51	216.75
Feb-23	185.07	169.00	152.93	Feb-24	272.11	247.43	222.75
Mar-23	175.43	164.33	153.24	Mar-24	284.68	268.51	252.34

Source: Compiled from Secondary data

**Graph 1**

**Analysis of Bank of Baroda for the period from 2023-24 to 2023- 24**



Source: Compiled from Secondary data

The above graph 4.11 shows an upward trend, which indicates that the price moves close to both the lower and upper bands in the period of December 2022 to March 2024. During the period August 2023, it shows a bearish signal, which indicates a lot of opportunity for investors to sell their shares at high prices, which is a good price for investors. In the past years, the bank has been highly volatile, which shows prices are close to the Bollinger Band.

**Table 2**

**Analysis of Punjab National Bank for the period from 2021-22 to 2023- 24**

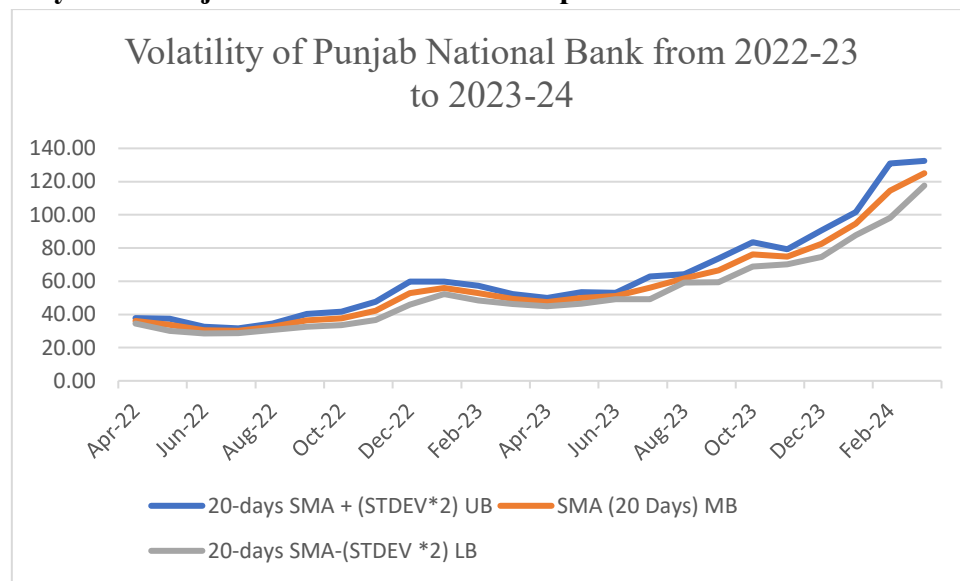
Date	20-days SMA + (STDEV*2) UB	SMA (20 Days) MB	20-days SMA- (STDEV *2) LB	Date	20-days SMA + (STDEV*2) UB	SMA (20 Days) MB
Apr-22	37.76	36.10	34.44	Apr-23	50.00	47.42
May-22	37.48	33.76	30.04	May-23	53.44	49.96
Jun-22	32.58	30.56	28.53	Jun-23	52.98	51.03
Jul-22	31.60	30.15	28.69	Jul-23	62.91	56.02
Aug-22	34.60	32.62	30.63	Aug-23	64.15	61.67
Sep-22	40.24	36.43	32.63	Sep-23	73.71	66.59
Oct-22	41.72	37.63	33.55	Oct-23	83.48	76.17

Nov-22	47.60	42.16	36.72	Nov-23	79.31	74.78
Dec-22	59.76	52.83	45.90	Dec-23	90.54	82.59
Jan-23	59.77	55.97	52.18	Jan-24	101.60	94.62
Feb-23	57.18	52.76	48.33	Feb-24	130.86	114.46
Mar-23	52.27	49.29	46.30	Mar-24	132.46	125.02

Source: Compiled from Secondary data

**Graph 2**

**Analysis of Punjab National Bank for the period from 2021-22 to 2023- 24**



Source: Compiled from Secondary data

The above graph 4.12 shows a down trend from December 2023 to March 2024; it shows a bearish signal, and it is advisable for new investors to purchase shares in this period. The Punjab National Bank had high volatility from June 2023 to November 2023, which shows high fluctuations because the share prices are not close to the Bollinger Band. During the period April 2022 to October 2022, the fluctuations are close to the middle band, which shows the shares of the bank are close to the Bollinger Band.

## 2. Relative Strength Index

**Table 3**

**Analysis of Bank of Baroda for the period from 2022-23 to 2023- 24**

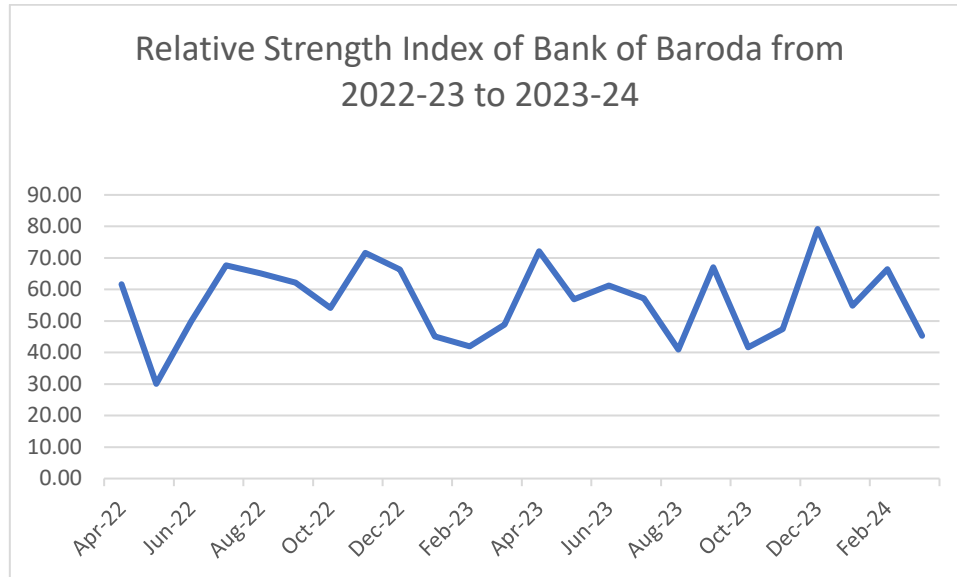
Date	RSI	Date	RSI
Apr-22	61.67	Apr-23	72.13
May-22	30.05	May-23	56.83
Jun-22	49.90	Jun-23	61.27
Jul-22	67.60	Jul-23	57.20
Aug-22	65.10	Aug-23	40.91
Sep-22	62.12	Sep-23	67.04
Oct-22	54.11	Oct-23	41.65
Nov-22	71.57	Nov-23	47.39
Dec-22	66.27	Dec-23	79.17

Jan-23	45.09	Jan-24	54.84
Feb-23	41.96	Feb-24	66.44
Mar-23	48.82	Mar-24	45.30

Source: Compiled from Secondary data

**Graph 3**

**Analysis of Bank of Baroda for the period from 2022-23 to 2023- 24**



Source: Compiled from Secondary data

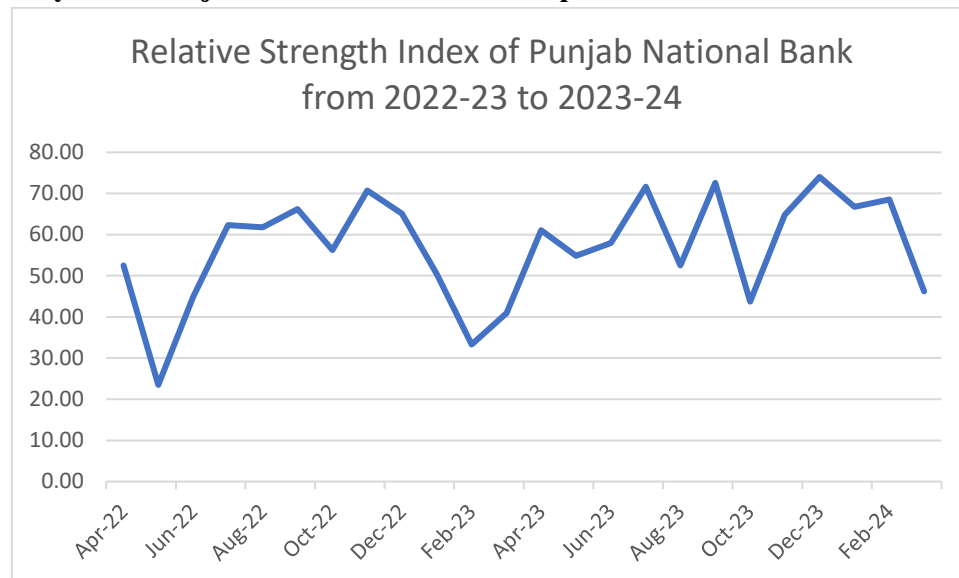
The above graph 4.21 shows the RSI value of Bank of Baroda for the months of April 2022 to March 2024, showing price strength by comparing upward, downward, and close-to-close movements. In the month of November 2022, April 2023, December 2023, it touches the 70 level, which indicates the investor to sell the share at a high price where they gain a high profit because it exceeds the 70-level line it suggests that they may buy the share.

**Table 4 Analysis of Punjab National Bank for the period from 2022-23 to 2023- 24**

Date	RSI	Date	RSI
Apr-22	52.54	Apr-23	61.04
May-22	23.48	May-23	54.86
Jun-22	44.86	Jun-23	58.00
Jul-22	62.33	Jul-23	71.66
Aug-22	61.75	Aug-23	52.53
Sep-22	66.17	Sep-23	72.56
Oct-22	56.28	Oct-23	43.70
Nov-22	70.71	Nov-23	64.79
Dec-22	65.09	Dec-23	74.01
Jan-23	50.39	Jan-24	66.74
Feb-23	33.30	Feb-24	68.54
Mar-23	40.95	Mar-24	46.19

Source: Compiled from Secondary data

**Graph 4**  
**Analysis of Punjab National Bank for the period from 2021-22 to 2023- 24**



**Source: Compiled from Secondary data**

The above graph 4.22 shows the RSI value of Punjab National Bank for the months of April 2016 to March 2024, showing price strength by comparing upward, downward, and close-to-close movements. In the months of November 2022, July 2023, September 2023, December 2023, it touches the 70 level, which indicates the investor to sell the share at a high price where they gain a high profit because it exceeds the 70-level line. Also, sometimes it touches the 30 level during the months of May 2022 where it suggests buying that share.

## 8. FINDINGS

### Bank of Baroda

Over the previous five years, BOB has shown a rising pattern with significant volatility, a bearish indicator, and high volatility. The RSI reached the 70 level in the following months: November 2022, April 2023, December 2023. When the RSI rises above 70, it usually means that the stock is overbought and could be ready for a consolidation or price correction. A stock that has an RSI below 30 may be oversold and represent a good opportunity to buy.

### Punjab National Bank

The trend and volatility of the PNB share price show both significant and consistent fluctuations in recent years. It showed more consistent fluctuations in prices. The RSI reached the 70 level in the following months: November 2022, July 2023, September 2023, December 2023. The RSI dropped below the 30 level in May 2022.

## 9. SUGGESTIONS

- The banks should maintain a normal trading position in order to improve returns.
- The banks should maintain their management to operate through operational challenges and economic values to stabilise and enhance their performance. The bank must focus on stabilising the return.

## 10. CONCLUSION

The study attempts to analyse the volatility patterns of banks in terms of share price. It provides the performance dynamics of select banks within the Nifty Bank Index. It reveals that each bank has unique volatility patterns. It shows the difference in stability with banks maintaining moderate volatility and steady growth and with significant fluctuations. Investors can successfully balance their portfolios and match their investing strategies with their risk tolerance and financial goals.

## REFERENCES

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