Understanding the Price Behaviour of selected banks from banking sector in Bombay Stock Exchange

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ABSTRACT

Over the past two decades, the globalisation trend has led to a significant increase in financial markets, particularly the stock market. Stock markets play an important role as an indicator of the economy's overall performance. Analyzing past price movements is how Technical Analysis predicts future price movements. It encourages the mobilization of funds, provides equity capital to the banking sector, and offers adequate returns for investors. The Indian banking sector has undergone significant changes in recent years, with banks diversifying from traditional deposit-taking and lending activities to more complex activities such as investment banking, insurance, and wealth management. Therefore, understanding the price behavior of banks listed on the Bombay Stock Exchange (BSE) is crucial for investors, policymakers, and researchers. By using stock market indicators, investors can observe significant market movements. The main objective of this paper is to analyze a top 5 bank within the banking sector and forecast its stock price behavior. Additionally, the paper aims to test the effectiveness of technical indicators such as RSI and MACD in predicting the stock's behavior. The study focuses on analyzing the stock price trends of selected banks over a period of five years (2017-2022).

Keywords: Stock market, Technical Analysis, Bombay Stock Exchange, MACD, RSI Indicator

1. Introduction

The stock market is a key indicator of economic performance and financial market's health. It provides investors with a platform to invest in various securities, including stocks, bonds, and derivatives. The Bombay Stock Exchange (BSE) is one of the oldest and largest stock exchanges in Asia, located in the city of Mumbai, India. It was established in 1875 as the Native Share and Stock Brokers Association, making it the first stock exchange in Asia. The BSE is also known as the Dalal Street, named after the street on which it is located. It has emerged as one of the leading stock exchanges in India, offering a platform for companies to raise capital and for investors to invest in a diverse range of securities. The BSE has over 5,500 listed companies and is the world's 10th largest stock exchange by market capitalization. The total of $3.5 trillion is the market capitalization of BSE.

The Indian banking sector has undergone significant changes over the last few years, with the Reserve Bank of India (RBI) implementing several policy changes to promote growth and stability. Banks have diversified from traditional deposit-taking and lending activities to more complex activities such as investment banking, insurance, and wealth management. As a result, the Indian banking sector has become an essential player in the Indian stock market, with several banks listed on the Bombay Stock Exchange (BSE).

Understanding the price behavior of banking sector stocks listed on the BSE is crucial for investors, policymakers, and researchers. It helps investors make informed decisions while investing in banking sector stocks. Policymakers can analyze the market trends and formulate policies to promote growth and stability in the banking sector. Researchers can analyze the data and identify the factors that influence stock prices and develop models to predict future price movements.

The primary objective of this research paper is to analyze the price behavior of selected banks from the banking sector in BSE and identify the factors that influence their stock prices. The study focuses on analyzing the stock price trends of selected banks over a period of five years (2017-2022). The study employs various technical analysis tools such as the

Moving Average Convergence Divergence (MACD) and the Relative Strength Index (RSI) to understand price behavior.

2. Literature Review

A survey of the literature shows that several studies have been conducted on the performance of the banking sector in India and its impact on the economy. Also, several studies have been carried out to apply technical analysis in practice to various financial markets. Here are some selected quotes: -

According to a study by S. Senthilkumar and R. Gayathri, the Indian banking industry experienced significant growth in the years following liberalization in 1991. This growth was driven by increased competition, technological advancements, and regulatory reforms. The study found that the performance of banking companies listed on the BSE improved significantly in the post-liberalization period, with a marked increase in profitability and asset quality.

Another study by G. Sudarsanan and R. Balakrishnan examined the impact of mergers and acquisitions (M&A) on the performance of banks listed on the BSE. The study found that M&A activities had a positive impact on the financial performance of these banks, leading to increased profitability, efficiency, and asset quality.

According to a study by Gupta and Sharma (2018), the banking sector in India has shown significant growth in the past decade, with the total assets of the banking sector increasing from INR 39.8 trillion in 2007 to INR 151.7 trillion in 2017. The study also found that the profitability of the banking sector has improved over the years, with the return on assets (ROA) increasing from 0.84% in 2007 to 0.92% in 2017.

Balasubramaniam K (1994) conducted a study on stock returns in India by analyzing daily and weekly prices of 90 shares listed in the BSE. He used various techniques such as auto-correlation analysis, runs test, and filter techniques. His findings showed that the behavior of share prices is not random.

RajaGopala Nair and Elsamma Joseph (2000) conducted a study on the risks faced by investors in corporate securities and ways to minimize those risks. They found that by taking calculated risks, investors can reduce the potential losses associated with investing in corporate securities.

In a study conducted by Kavajecz and Odders-White in 2004, they found that the support and resistance levels of a stock often correspond to the peaks in the limit order book. They also discovered that moving average forecasts can provide insight into the position of the depth on the book. These relationships are the result of technical rules that identify the depth already present on the limit order book.

Keshar J. Baral and Surya Kumar Shrestha conducted a research paper in 2006 about the daily behavior of stock prices for commercial banks in Nepal. They used two approaches to predict stock price behavior: technical analysis and fundamental analysis. The study analyzed the daily price movement of seven commercial banks selected randomly during the fiscal year of 2005/06. The researchers used statistical tools such as mean, standard deviation, and coefficient of variation to analyze the volatility of daily stock prices and indices. They also applied serial correlation and run tests to measure the independence and randomness in daily successive stock prices. The study found that successive price changes were independent, indicating that the Nepalese stock market is inefficient in pricing shares.

In a study conducted by Mohsen Ghobadi in 2014, the profitability of different technical indicators like SMA, RSI, and MFI was evaluated by applying them on various commodities traded on the London Metal Exchange between 2000 and 2013. The study found that when different technical indicators were combined, abnormal profits could be generated from the capital market. Additionally, it was observed that Buy signals were more reliable and consistent compared to Sell signals.

C. Boobalan conducted a study in 2014 on technical analysis in select Indian companies. In the study, he used technical indicators, moving averages, and charts to predict the movement of stocks on the Indian Stock Exchanges. Boobalan found that technical analysis is a useful tool for predicting future price movements of stocks and can be used along with fundamental analysis to make investment decisions.

In a study conducted by Bhamini Garg in 2014, various technical indicators such as RSI, Moving Averages, and ADX were discussed and their relevance explained. The author concludes that technical indicators are popular tools used by investors and traders worldwide as they provide

valuable information, but there are limitations to their use in stock trading. The performance of MACD and RSI indicators was evaluated by applying them to stock trading on five OECD Stock Exchanges and some developing country Stock Exchanges. The study found that these two indicators can generate abnormal returns compared to the traditional Buy & Hold approach, with higher returns seen in developing countries.

Basavaraj Nagesh Kadamudimatha conducted a study in 2017 to evaluate the performance of technical indicators RSI and MFI on various banking stocks traded on Indian Stock Exchanges. He analyzed their performance over a period of time from 2012 to 2016 and concluded that using both indicators together can lead to divergent results. Therefore, it is advisable to use only one indicator at a time for predicting share prices.

3. Objective of The Study

1. To understand the price behavior of selected banking sector companies listed on the BSE.
2. To analyze the performance of selected banks in BSE and to predict the future trends in the share prices through Technical Analysis.
3. To analyze and interpret selected stocks to determine whether to buy or sell.
4. To intimate the investors about making investment decisions in selected stocks.

4. Limitation

1. Technical analysis only for five year is undertaken; from this data we cannot predict prices accurately.
2. This study can be used only for short term decision making not for long term decision.

5. Research Methodology

This study aims at extracting the price movements & analyzing the price movement of selected banking sectors companies' stocks. The study uses a sample of five banking sector companies listed on the BSE. The companies selected for the study are HDFC Bank Limited, ICICI Bank Limited, Axis Bank Limited, Kotak Mahindra Bank Limited, and State Bank of India. The study employs secondary data sources to collect data on the stock prices of these companies and macroeconomic factors such as inflation, interest rates, and GDP growth rate. The secondary data published are to be used for this study and were obtained from the BSE website. For technical analysis, secondary data the monthly share price movements of the selected Banks in BSE were absorbed for the five years (2017-2022). The closing price of share prices was taken and also the future price movement was analyzed using important tools.

Time Period of the Study

The period of five years from January 2017 to January 2022 have been taken to carry out the present study.

The Major 2 Technical Indicators used in this study are:

1. RSI
2. MACD

Relative Strength Index (RSI)

Relative Strength Index (RSI) is a technical indicator used to measure the strength and momentum of a Stock or Index price movement. It is calculated using the average gains and losses of a specified time period and is expressed as a value between 0 and 100. The 14-day Relative Strength Index (RSI) is a widely used technical indicator that measures the strength and momentum of a Stock or Index price movement over a two-week period. Traders often use the RSI to identify overbought and oversold conditions in the market. A reading above 70 suggests that the Stock or Index may be overbought, while a reading below 30 suggests that it may be oversold.

In addition to these threshold levels, traders can also look for divergences between the RSI and the Stock or Index price movement, which can indicate potential trend reversals. Central line crossovers, where the RSI crosses above or below the 50 level, can also be used to generate trading signals. Overall, the RSI is a valuable tool for technical analysis and can help traders make informed decisions about their investments.

The formula for RSI is: $RSI = 100 - (100 / (1 + RS))$, where RS = (Average Gain / Average Loss) for the specified time period.

Traders use RSI to recognize overbought and oversold conditions and potential trend reversals.

Moving Average Convergence and Divergence (MACD)

Moving Average Convergence Divergence (MACD) is a popular technical indicator used to identify trend reversals and momentum shifts in the market. It's a calculation in finance that involves subtracting a short-term average of a set of data from a longer-term average to analyze trends. The short-term average is

based on the last 12 periods, while the longer-term average is based on the last 26 periods. The result is plotted on a graph, along with a 9-period EMA, called the signal line.

The formula for MACD is as follows:

MACD = 12-period EMA - 26-period EMA

Signal line = 9-period EMA of MACD

When the MACD line crosses above the signal line, it is considered a bullish signal, indicating that the Stock or Index price may be about to rise. If the MACD line crosses below the signal line, it's a bad sign for the stock or index. It means the price might be getting ready to drop. Traders can also look for divergences between the MACD line and the Stock or Index price movement, which can indicate potential trend reversals. In addition, the distance between the MACD line and the signal line can provide insight into the strength of the trend.

Overall, the MACD is a valuable tool for technical analysis and can help traders make informed decisions about their investments.

HDFC Bank Limited
Relative Strength Index (RSI)

Figure 1 RSI Divergence

From Figure 1 it could be concluded that the RSI values on 1st January 2018 (86), 2nd July 2018 (82), and 3rd January 2019 (76) showed divergence, indicating a potential market trend reversal. An RSI value above 70 indicates overbought conditions, but it's possible for the stock or index to continue rising before a correction or reversal occurs. The RSI values are decreasing while the price candlestick is showing an upward trend, indicating a potential divergence. This may suggest that the price increase is not supported by the momentum of the stock or index. With the added impact of Covid news, it corrected in next month

Moving Average Convergence and Divergence (MACD)

Figure 2 MACD Bullish & Bearish Crossover

From Figure 2, it can be inferred that the HDFC bank's stock had a bullish trend in February 2017 as the MACD line crossed the average line from the down to up direction. The share price showed a strong movement, rising from 600 to 800. However, in February 2020, the MACD line crossed from the upside to downside, indicating a bearish trend, and the share price dropped from 1200 to 700 due to the impact of Covid. Later in November 2020, the MACD line crossed from the down to the upside, indicating a bullish trend, and the share price increased from 900 to 1400.

ICICI Bank Limited
Relative Strength Index (RSI)

Figure 3 RSI Divergence & Overbought Area

Figure 3 indicates that an RSI value above 70 is considered overbought, indicating a potential reversal or correction in the market. The RSI values of ICICI Bank's stock were 78 on 2nd December 2019, 74 on 1st October 2021, and 71 on 1st November 2022, suggesting a weakening of the stock's strength. Despite this, the stock price rose from 500 to 900, which shows a bearish divergence in the ICICI Bank stock. It's important to note that bearish divergences can signal a potential reversal of the market trend, so investors should monitor the stock's movement closely.

Moving Average Convergence and Divergence (MACD)

Figure 4 MACD Bullish & Bearish Crossover

From Figure 4, we can see that on 2nd March 2020, there was a bearish crossover in the MACD, which could have been due to the impact of the COVID pandemic. As a result, the stock price of the ICICI bank decreased from 600 to 300. However, on 1st Dec 2020, a bullish crossover occurred in the MACD, which indicated a potential uptrend in the stock price. The stock price subsequently increased from 350 to 720.

Axis Bank Limited

Relative Strength Index (RSI)

Figure 5 RSI Overbought Area

From Figure 5, it can be observed that the RSI value of Axis Bank's stock was above 70 in 2019, indicating an overbought area. Subsequently, the share price of the bank corrected itself and dropped from 800 to 530. Based on this data, it can be concluded that the RSI gave a reliable sell signal to investors.

Moving Average Convergence and Divergence (MACD)

Figure 6 MACD Bullish & Bearish Crossover

According to Figure 6, on 2nd July 2018, the MACD line of Axis Bank's stock crossed over from the bottom to the upside, indicating a bullish trend. The stock price increased from 500 to 800 following this crossover. On 1st August 2019, although the MACD gave a bearish crossover signal, the stock price continued to rise. However, in December 2019, the stock price fell due to the impact of Covid-19, which was indicated by the earlier bearish crossover. On 1st December 2020, there was a sharp bullish crossover in the MACD line, which resulted in the share price increasing from 400 to 800. Investors should keep a close eye on the MACD trend and take buying and selling decisions accordingly.

Kotak Mahindra Bank Limited
Relative Strength Index (RSI)

Figure 7 RSI Divergence

In Figure 7, we can observe that the RSI value for Kotak Mahindra Bank stock has been consistently decreasing from 80 to 64, indicating a weakening of the stock's strength. However, the stock price has been continuously increasing during this period, suggesting a strong bearish divergence on the chart. It's essential to note that bearish divergences can signal a potential reversal of the market trend, and investors should closely monitor the stock's movement before making any investment decisions.

Moving Average Convergence and Divergence (MACD)

Figure 8 MACD Bullish & Bearish Crossover

From Figure 8, it can be observed that on 1st March 2017, there was a Bullish Crossover in the MACD of Kotak Mahindra Bank, resulting in an increase in share price from 750 to 1250. However, on 1st October 2018, a Bearish Crossover was observed, which gave a false signal as the share price continued to rise. On 2nd March 2020, a Bearish Crossover was observed, and the share price dropped from 1700 to 1000 due to the impact of the COVID-19 pandemic. Subsequently, on 2nd November 2020, a Bullish Crossover was observed, and the share price increased from 1250 to 2000.

State Bank of India

Relative Strength Index (RSI)

Figure 9 RSI Divergence

According to Figure 9, from July 3rd 2017 to February 1st 2019, the RSI for State Bank of India continuously decreased, indicating a weakening of the stock's strength. During the same period, the stock price remained stagnant, suggesting a bearish divergence in the stock. Investors should monitor the stock closely and use caution when making any investment decisions related to State Bank of India.

Moving Average Convergence and Divergence (MACD)

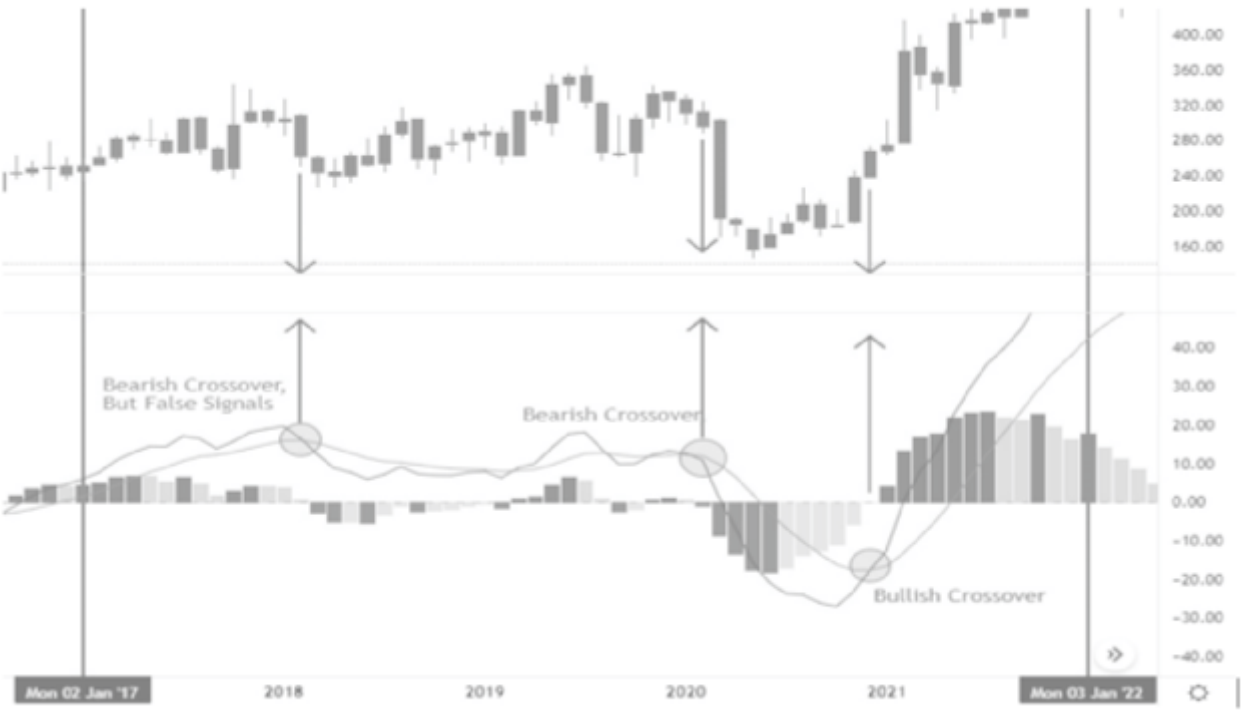

Figure 10 MACD Bullish & Bearish Crossover

From Figure 10, it can be observed that on February 1, 2018, there was a bearish crossover in the MACD, but it turned out to be a false signal as the SBI stock price increased. However, on February 1, 2020, MACD showed a bearish crossover, and the stock price decreased from 320 to 160 due to the impact of COVID-19. Subsequently, on December 1, 2020, MACD showed a bullish crossover, and the stock price increased from 180 to 400. These observations suggest that MACD can provide useful signals for investors in making informed decisions.

6. Finding

1. Relative Strength Index (RSI) usually provides accurate signals for identifying bullish and bearish divergences.

2. RSI can also give incorrect signals, so it's essential to use other indicators or price action to confirm the signals.

3. Moving Average Convergence Divergence (MACD) generally provides reliable signals for buying or selling in the market.

4. In some cases, MACD may generate false signals, but combining it with other indicators like price action can help avoid false signals.

7. Suggestions

1. When deciding whether to buy or sell, investors can use price action analysis in combination with other indicators such as RSI or MACD.

2. It's important for investors to use multiple tools or indicators before taking a trade decision.

3. RSI and MACD are lagging indicators, so investors should not solely rely on them for decision-making.

4. Investors can also use support and resistance levels, Fibonacci retracements, and trendlines for additional confirmation before making a trade decision.

8. Conclusion

Technical analysis, which involves the use of various technical tools such as the RSI and MACD indicators, can provide insight into the future share prices of selected companies. With the knowledge gained from technical analysis, investors can make informed decisions regarding investments in the stock market. By utilizing technical indicators, investors can gain knowledge of the future market of securities, allowing them to make more accurate predictions about stock prices.

Analyzing the RSI and MACD indicators for five major banks including HDFC Bank, ICICI Bank, Axis Bank, Kotak Mahindra Bank and SBI Bank can provide insight into the future trends of these banks. Technical analysis is especially useful for predicting the short and medium-term price movements of stocks, enabling investors to select the right plan and make profitable investment decisions. For long-term investments, fundamental knowledge is also necessary to gain a clear idea about investment decisions.

Both technical and fundamental analysis play an essential role in making investment decisions in the stock market and predicting the future trends of selected banks in which we have invested. A saying that is often true in the stock market is that the only profitable side is the one that makes the right decisions at the right time. It doesn't matter whether the overall sentiment is optimistic (bullish) or pessimistic (bearish) – what matters is making the right choices at the right moments.

Technical analysis, including the use of RSI and MACD indicators, can help investors identify the right time to buy or sell a stock.

References

C. Boobalan (2014). Technical Analysis In Select Stocks Of Indian Companies. International Journal of Business and Administration Research Review, Volume2, Issue4, pp.26-36.

Ms. Padma (2015). A Case Study on Equity Share Price Behaviour of selected Pharmaceutical Industries (BSE) in Stock Exchange. International Research Journal of Management Science &Technology ,Volume 6, Issue 10,pp.133-139.

Gupta, P. and Sharma, A. (2018). Growth and Profitability of Banking Sector in India: A Study of Select Banks. International Journal of Engineering Technology Science and Research, 5(9), pp. 351-358.

Rakshith L and Dr Manoj Kumara N V (2018).Technical Analysis on Selected BSE Stocks.International Journal of Latest Technology in Engineering, Management & Applied Science Volume VII, Issue VII, pp.45-51.

Websites

1. www.moneycontrol.com
2. www.google.com
3. www.bseindia.com
4. www.tradingview.com