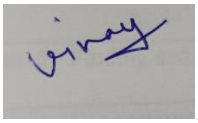
STUDENT UNDERTAKING

This is to certify that I have completed the Project Dissertation "**Technical Analysis of Bank Nifty from July 2024 to April 2025**" under the guidance of **Dr. Sukhvinder Singh** in partial fulfillment of the requirement for the award of degree of Masters of Business Administration at Maharaja Agrasen Institute of Technology, Delhi. This is an original piece of work & I have not submitted it earlier elsewhere.



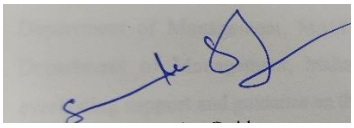
Signature of Student

Name of the Student: Vinay

Enrollment No: 10914803923

CERTIFICATE FROM FACULTY GUIDE

This is to certify that the Project dissertation titled "**Technical Analysis of Bank Nifty from July 2024 to April 2025**" is an academic work done by **Vinay** submitted in the partial fulfillment of the requirement for the award of the degreeof Masters of Business Administration from Maharaja Agrasen Institute of Technology, Delhi, under my guidance & direction. To the best of my knowledge and belief the data & information presented by him/her in the report has not been submitted earlier.



Signature of Faculty Guide

Name of the Faculty Guide: Dr. Sukhvinder Singh

Designation: Assistant Professor

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I take the opportunity to express my gratitude to all of them who in some or other way helped me to accomplish this challenging report. No amount of written expression is sufficient to show my deepest sense of gratitude to them.

I am very thankful to Director **Prof.(Dr.) Neelam Sharma** MAIT HOD **Dr. Sangeeta Rawal** Department of Management, MAIT and my Guide, Prof./Asso/Asst **Dr. Sukhvinder Singh** Department of Management, Maharaja Agrasen Institute of Technology, Rohini for their everlasting support and guidance on the ground of which I have acquired a new field of knowledge. The course structure created for this curriculum has benefit with the inclusion of recent development in the organizational and managerial aspects.

I express my sincere thanks to all people who participated and helped me in successfully preparing the project dissertation. I am thankful to all the members who gave valuable information in the part of my project dissertation.

Name and Signature of student : VINAY

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TABLE OF CONTENT

LIST OF ABBREVIATIONS

Abbreviation	Explanation
RSI	Relative strength index
MACD	Moving average convergence divergence
SMA	Simple moving average
EMA	Exponential moving average
BB	Bollinger bands
NSE	National stock exchange

EXECUTIVE SUMMARY

This study offers an in-depth technical analysis of the Bank Nifty index, focusing on historical price trends, key technical indicators, to predict the future movement and actionable trading strategies. The analysis covers calendar year, observing approximately 165 trading days from July 2024 to April 2025. The index's behavior is examined using tools like Chart reading, trend lines, support and resistance levels, and moving averages (SMA/EMA) to identify medium-term directional shifts. Emphasis is placed on recognizing price cycles, breakout levels, and trend confirmations to assist in formulating swing trading strategies tailored for daily and weekly chart observations.

The document integrates technical indicators such as Relative Strength Index (RSI), MACD, Bollinger Bands, and Fibonacci series to evaluate market momentum, volatility, and potential reversal points. Candlestick formations and classic chart patterns like Bullish Flag, Falling Wedge, Double bottom are used to support entry and exit timing. It also asses the relation between nifty50 and bank nifty. The study applies multi-indicator confluence, where signals are validated only when several tools align, increasing reliability. This framework is enhanced through the use of Trading View charts and secondary data from NSE, ensuring a practical, data-driven approach aligned with real market behavior.

Finally, the study underscores the importance of risk management, suggesting position sizing based on volatility, ATR-based stop-loss placement, and capital exposure limits (no more than 2% per trade). It recommends tracking heavyweights like HDFC Bank, ICICI Bank, and SBI for alignment with the broader index move. While the analysis is purely technical—excluding macroeconomic and fundamental factors—it provides a structured methodology for traders aiming to capitalize on long- to medium-term opportunities in Bank Nifty, using disciplined technical frameworks grounded in historical price action.

CHAPTER 1:
INTRODUCTION

1.1 OVERVIEW OF SECURITIES MARKET

The securities or equity market is a financial marketplace where shares of various companies, along with other financial instruments, are bought and sold. This market provides a platform not only for companies to issue shares and other securities but also for investors and traders to engage in the buying and selling of these instruments. The central entity that facilitates such transactions is known as the stock exchange.

A stock exchange serves as a regulated environment where equity shares, debentures, and other securities can be traded. It provides essential services related to the issuance, redemption, and trading of financial instruments, as well as the distribution of returns such as interest and dividends. Stock exchanges often operate as continuous auction markets, enabling real-time transactions between buyers and sellers, either physically on the trading floor or electronically.

With the advancement of technology, modern stock exchanges have transitioned to fully electronic trading platforms. These platforms offer significantly faster transaction speeds, reduced costs, and improved transparency. Although electronic systems have minimized the need for physical recordkeeping, they have dramatically increased transaction volumes. The trading operations are closely monitored and governed by the exchange authorities to ensure fair practices and regulatory compliance.

1.2 HISTORY OF STOCK MARKET

The stock market has evolved over several centuries, with its roots deeply embedded in early European trade practices. Its development reflects the transformation of commerce from informal gatherings to structured financial institutions that drive modern economies.

Early Beginnings in Europe

The concept of organized securities trading can be traced back to the 13th century in Venice, where merchants began trading government securities. To maintain stability, the Venetian government, in 1351, prohibited the spread of negative rumors that could devalue public debt. Similar practices were later adopted by traders in Pisa, Genoa, Verona, and Florence, which were powerful and independent city-states. These cities operated through merchant guilds rather than a feudal

hierarchy, allowing financial innovation to thrive. Italian merchants were among the first to issue shares of stock, laying the foundation for future equity markets.

The Emergence of Stock Exchanges

In France, during the 13th century, exchange dealers became involved in monitoring the agricultural credit obligations of businesses, reflecting early financial oversight for banking interests. A significant milestone occurred in Bruges (Belgium), where traders gathered near the house of the Van der Beurze family. This location became known as the “Brugse Beurse” in 1409, considered one of the earliest models of a stock exchange. The term "Beurse" later evolved into "bourse," commonly used to refer to stock markets in Europe.

The idea of a centralized trading venue quickly spread to other parts of Flanders, including Ghent and Rotterdam, and laid the groundwork for future financial exchanges.

Formalization in the 16th–18th Centuries

By the 16th century, structured financial trading had spread to England and the Low Countries (modern-day Netherlands and Belgium). The Amsterdam Stock Exchange, established in 1602 by the Dutch East India Company, is widely regarded as the world’s first official stock exchange. It introduced public share issuance and laid the groundwork for secondary trading.

In London, the London Stock Exchange was formalized in 1801, while in the United States, the New York Stock Exchange (NYSE) was founded in 1792 with the signing of the Buttonwood Agreement on Wall Street.

Development in India and Other Countries

In India, the Bombay Stock Exchange (BSE) was established in 1875, making it the oldest stock exchange in Asia. Later, the National Stock Exchange (NSE) was launched in 1992, introducing advanced electronic trading and enhancing transparency.

Modern Stock Markets

Today, stock markets operate as sophisticated electronic platforms with global connectivity, enabling the buying and selling of a wide range of financial instruments. Major global stock

exchanges include those in the United States, United Kingdom, Japan, India, China, Germany, France, Canada, South Korea, Pakistan, and the Netherlands.

Modern exchanges are essential for capital formation, wealth creation, and economic development. They not only facilitate the issuance and trading of equity and debt instruments but also play a vital role in corporate governance and financial regulation.

1.3 FUNCTION AND PURPOSE OF STOCK MARKET

The stock market plays a crucial role in mobilizing capital for economic growth. It allows companies to raise long-term funds by issuing shares and other securities to the public. This capital is then used for business expansion, product development, infrastructure building, and reducing debt. In return, investors gain ownership in the company and have the opportunity to earn dividends and capital gains. By offering a platform for buying and selling securities, the stock market also provides liquidity, enabling investors to convert their investments into cash quickly and easily.

Another important function of the stock market is price discovery, where the value of a company's securities is determined through the interaction of demand and supply in a transparent and regulated environment. This helps both investors and companies make informed financial decisions. Additionally, the market encourages investment diversification by allowing individuals to spread their investments across different sectors, industries, and asset classes, thereby reducing risk and enhancing returns. The stock market also acts as an indicator of the economic health of a nation—rising indices often suggest growth and investor confidence, while falling indices may reflect economic downturns.

Moreover, the stock market promotes good corporate governance and transparency. Listed companies are required to follow strict regulatory guidelines and disclose their financial information to the public on a regular basis. This builds trust among investors and ensures accountability. The market also facilitates corporate restructuring activities such as mergers, acquisitions, and takeovers by providing a mechanism for fair valuation and share-based transactions. In summary, the stock market is not just a place for trading securities—it is a key driver of financial stability, economic development, and wealth creation.

1.4 NATIONAL STOCK EXCHANGE

The National Stock Exchange of India (NSE), headquartered in Mumbai, is one of the largest and most advanced stock exchanges in India and globally. It was incorporated in 1992 and recognized as a stock exchange in 1993. The primary objective behind establishing NSE was to bring greater transparency, efficiency, and accessibility to the Indian securities market through a nationwide, electronic, screen-based trading system. It started its operations in the wholesale debt market in June 1994 and entered the equity market segment in November 1994. Later, it launched its derivatives segment in June 2000. Today, the NSE operates one of the most sophisticated, fully automated trading platforms in the world, with more than 200,000 trading terminals, enabling investors from across India to participate in trading with ease.

The NSE played a vital role in modernizing the Indian equity market by replacing manual systems with a fully electronic, order-driven trading mechanism, reducing transaction time, improving efficiency, and eliminating the risks associated with paper-based trading. To further enhance the settlement system, the NSE established National Securities Depository Limited (NSDL), which allows investors to hold and trade securities in electronic form through demat accounts. This eliminated the risk of theft, loss, or forgery of physical share certificates and made it possible for investors to trade even a single share.

As of early 2025, the NSE has over 2,671 companies listed, with a total market capitalization exceeding ₹438 lakh crore (US$ 5.13 trillion), making it the largest stock exchange in India by market value. Its benchmark index, the NIFTY 50, consists of 50 large, actively traded companies from various sectors and is widely used as a barometer of the Indian economy by domestic and international investors. The exchange facilitates trading in equities, equity derivatives, currency

derivatives, debt instruments, mutual funds, and more. It also offers clearing and settlement services through its subsidiary, NSE Clearing Limited.

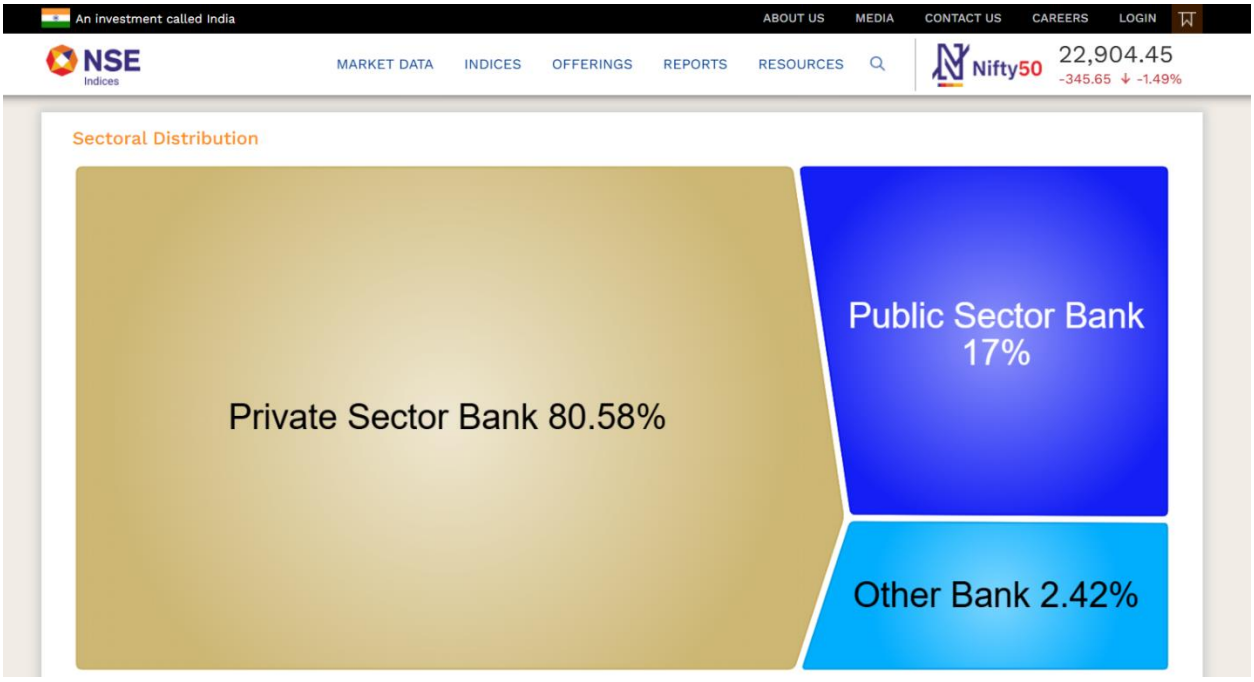
The ownership of NSE is diversified, with stakes held by major domestic institutions like Life Insurance Corporation (LIC), State Bank of India (SBI), GIC, and IDFC, as well as international entities such as Citigroup Strategic Holdings, Norwest Venture Partners, and MS Strategic (Mauritius) Limited. With advanced infrastructure, robust risk management practices, and continuous innovation, the NSE has significantly improved market reach, reduced transaction costs, and boosted investor confidence—contributing to India's emergence as a global financial hub. Its efforts have helped integrate India's capital markets with the global financial system, attracting both retail and institutional investors from around the world.

1.5 INDUSTRY PROFILE OF BANK NIFTY

The Nifty Bank Index, commonly referred to as Bank Nifty, is a prominent sectoral index in the Indian stock market that tracks the performance of the banking sector. It is Introduced by the National Stock Exchange of India (NSE) on September 15, 2003, the index comprises the most liquid and large-capitalized banking stocks listed on the NSE. Specifically, it includes 12 major banking companies, both from the public and private sectors, providing investors and market participants with a benchmark to gauge the health and performance of the Indian banking industry

The inception of Bank Nifty was driven by the need for a focused index that could accurately represent the banking sector's dynamics within the broader financial market. Given the pivotal role banks play in the Indian economy—facilitating credit, enabling financial transactions, and supporting economic growth—the performance of banking stocks is often viewed as a barometer for the country's economic health. By consolidating the leading banking stocks into a single index, Bank Nifty offers a clear and concise snapshot of the sector's performance, aiding investors in making informed decisions.

1.5.1Constituents of Bank Nifty



The Bank Nifty index consists of 12 major banking stocks listed on the NSE. These are selected based on free-float market capitalization, liquidity, and sector representation. This means that the banks included are not only among the largest in terms of market value but also exhibit high trading volumes and active market participation. The index undergoes a semi-annual review to ensure it remains reflective of the current market conditions and sectoral shifts.

As of **Feb 28, 2025**, the constituents of Bank Nifty include:

1. HDFC Bank
2. ICICI Bank
3. State Bank of India
4. Kotak Mahindra Bank
5. Axis Bank
6. IndusInd Bank
7. Federal Bank

8. Punjab National Bank
9. Bank of Baroda
10. IDFC First Bank
11. RBL Bank
12. Yes Bank

In terms of share holding, HDFC Bank Ltd., holds the highest share with an approximate weightage of 27–30%, owing to its large market cap, strong financials, and leadership in the private banking sector. ICICI Bank Ltd. follows closely, with a weight of around 20–22%, supported by its wide network and diversified banking operations. Axis Bank Ltd. ranks third, contributing roughly 11–13% to the index due to its consistent performance and retail banking growth.

Other significant constituents include Kotak Mahindra Bank and State Bank of India (SBI), each carrying a weight of about 8–9%. While Kotak Mahindra is known for its conservative lending model and high margins, SBI, being India's largest public sector bank, plays a vital role in the financial ecosystem. IndusInd Bank, IDFC FIRST Bank, and public sector banks like Bank of Baroda, Punjab National Bank, Canara Bank, Union Bank of India, and Indian Bank make up the rest of the index with relatively smaller weightages ranging from <1% to 5%.

Together, these 12 banks reflect the overall health and performance of India's banking sector. The dominance of private sector banks in terms of weightage shows their stronger market positions and investor preference. The Bank Nifty index is widely used for benchmarking, sector analysis, and trading in futures and options, and it serves as a key barometer of the Indian financial market.

The banking sector holds a significant position within the Nifty 50 index, comprising approximately 30% of its total weightage.

CHAPTER 2:

LITERATURE REVIEW

THEORETICAL BACKGROUND OF THE STUDY

2.1 OVERVIEW OF TECHNICAL ANALYSIS

Technical analysis involves evaluating securities by analyzing past market data—primarily price and volume—rather than focusing on the intrinsic value of the asset. Unlike fundamental analysis, which uses financial statements and macroeconomic indicators to assess a security's value, technical analysis relies on historical price movements and market patterns to forecast future performance.

Technical analysts believe that price movements follow patterns that repeat over time. These patterns, once identified, help traders predict future market behavior. The increasing popularity of technical analysis stems from the belief that market behavior reflects all relevant information, and thus historical price movements are strong indicators of future trends.

While fundamental analysts rely on financial reports and company performance over several quarters or years, technical analysts focus on market behavior and chart patterns. They argue that stock prices move in identifiable trends and patterns until a major event changes the direction of that trend. Thus, technical analysis emphasizes the timing of entry and exit points using tools like trendlines, volume studies, and indicators, without needing to understand the underlying business.

2.2 ASSUMPTIONS IN TECHINCAL ANALYSIS

1.Market discounts everything: Technical analysis assumes that all information—public or private, economic, political, or psychological—is already reflected in the current market price of a security. Hence, there is no need to analyze news or financial statements separately, as the price already incorporates all known factors.

2.Prices move in trends: This assumption suggests that market prices follow identifiable trends (uptrend, downtrend, or sideways) over time. Once a trend is established, it is likely to persist rather than reverse abruptly, allowing traders to make predictions based on the continuation of these trends.

3. History tends to repeat itself: Human psychology doesn't change much over time. As a result, patterns such as double tops, head and shoulders, and triangles tend to recur. Technical analysts use these repetitive patterns to predict future price behavior based on historical movements.

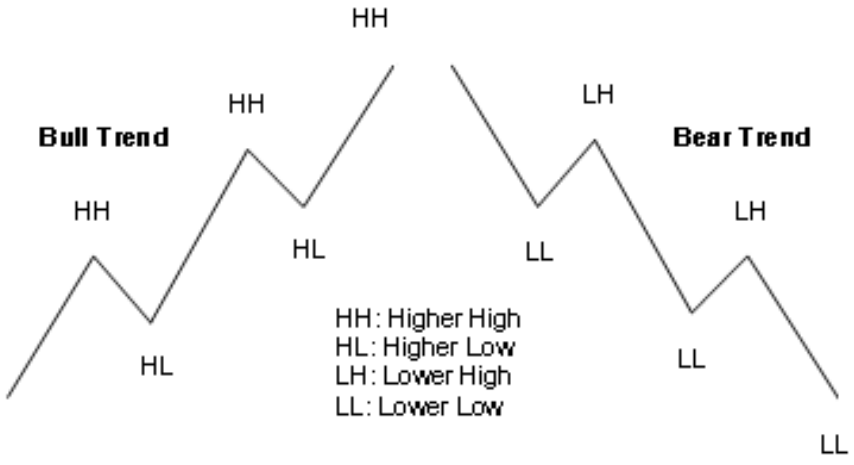
4.Market action is more important than the cause: Rather than focusing on the reasons behind price changes, technical analysis emphasizes price and volume data. Analysts believe that understanding what the market is doing (price action) is more important than why it is happening (economic or company-related news).

5.Price reflects the psychology of market participants: Market movements are seen as the result of collective emotions like fear, greed, and hope. Technical analysis tries to understand and predict price movements by studying how investor psychology manifests itself through price patterns and volumes.

6.Supply and demand determine market prices: Prices rise when demand exceeds supply and fall when supply exceeds demand. Technical indicators such as support and resistance levels are used to identify zones of buying and selling pressure, which signal potential price changes.

7.Market movements are not completely random: Although prices may appear unpredictable in the short term, technical analysis assumes that long-term movements follow certain patterns or trends. This belief enables the use of tools like trendlines, moving averages, and Fibonacci levels to make informed trading decisions.

2.2 BULL AND BEAR TREND

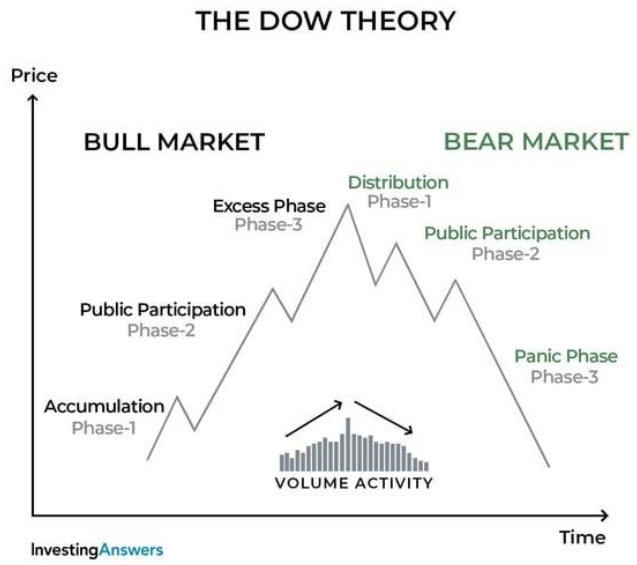


A bull trend refers to a sustained upward movement in stock prices, marked by higher highs and higher lows. It typically begins with an accumulation phase where informed investors start buying, followed by public participation as confidence grows, and ends in a phase of excess marked by

speculative buying and inflated prices. This trend is fueled by optimism, strong economic data, and increasing investor confidence.

In contrast, a bear trend indicates a prolonged decline in prices, characterized by lower highs and lower lows. It starts with distribution by smart investors, followed by widespread panic selling, and concludes in a phase of despair when prices hit bottom. Bear markets are driven by fear, weak economic conditions, and negative sentiment, often accompanied by falling volumes and breaking of key support levels.

2.3 DOW THEORY



The Dow Theory was introduced to the world by Charles H. Dow, who also founded the Dow-Jones financial news service (Wall Street Journal). During his time, he wrote a series of articles starting from the 1900s which in the later years was referred to as 'The Dow Theory'. Much credit goes to William P Hamilton, who compiled these articles with relevant examples over a period of 27 years. Much has changed since the time of Charles Dow, and hence there are supporters and critics of the Dow Theory.

The Dow Theory Principles

The Dow Theory is built on a few beliefs. These are called the Dow Theory tenets. Charles H Dow developed these tenets over the years of his observation on the markets. 9 tenets are considered as the guiding force behind the Dow Theory.

They are as follows:

Sl No	Tenet	What does it mean?
01	Indices discounts everything	The stock market indices discount everything which is known & unknown in the public domain. If a sudden and unexpected event occurs, the stock market indices quickly recalibrate itself to reflect the accurate value
02	Overall there are 3 broad market trends.	Primary Trend, Secondary Trend, and Minor Trends
03	The Primary Trend	This is the major trend of the market that lasts from a year to several years. It indicates the broader multiyear direction of the market. While the long term investor is interested in the primary trend, an active trader is interested in all trends. The primary trend could be a primary uptrend or a primary downtrend
04	The Secondary Trend	These are corrections to the primary trend. Think of this as a minor counter-reaction to the larger movement in the market. Example – corrections in the bull market, rallies & recoveries in the bear market. The counter-trend can last anywhere between a few weeks to several months

05	Minor Trends/Daily fluctuations	These are daily fluctuations in the market; some traders prefer to call them market noise
06	All Indices must confirm with each other.	We cannot confirm a trend based on just one index. For example, the market is bullish only if CNX Nifty, CNX Nifty Midcap, CNX Nifty Smallcap etc. all move in the same upward direction. It would not be possible to classify markets as bullish, just by the action of CNX Nifty alone
07	Volumes must confirm	The volumes must confirm along with the price. The trend should be supported by volume. The volume must increase as the price rises and should reduce as the price falls in an uptrend. In a downtrend, the volume must increase when the price falls and decrease when the price rises. You could refer chapter 12 for more details on volume
08	Sideway markets can substitute secondary markets.	Markets may remain sideways (trading between a range) for an extended period. Example:- Reliance Industries between 2010 and 2013 was trading between 860 and 990. The sideways markets can be a substitute for a secondary trend
09	The closing price is the most sacred.	Between the open, high, low and close prices, the close is the most important price level as it represents the final evaluation of the stock during the day.

2.3.1 The different phases of Market

Dow Theory suggests the markets are made up of three distinct phases, which are self-repeating. These are called the Accumulation phase, the Markup phase, and the Distribution phase.

The Accumulation phase usually occurs right after a steep sell-off in the market. The steep sell-off in the markets would have frustrated many market participants, losing hope of any uptrend in prices. The stock prices would have plummeted to rock bottom valuations, but the buyers would still be hesitant to buy fearing another sell-off. Hence the stock price languishes at low levels. This is when the 'Smart Money' enters the market.

Smart money is usually the institutional investors who invest in a long term perspective. They invariably seek value investments which are available after a steep sell-off. Institutional investors start to acquire shares regularly, in large quantities over an extended period of time. This is what makes up an accumulation phase. This also means that the sellers trying to sell during the accumulation phase will easily find buyers, and therefore the prices do not decline further. Hence invariably, the accumulation phase marks the bottom of the markets. More often than not, this is how the support levels are created. Accumulation phase can last up to several months.

Once the institutional investors (smart money) absorb all the available stocks, short term traders since the support. This usually coincides with the improved business sentiment. These factors tend to take the stock price higher. This is called the markup phase. During the Markup phase, the stock price rallies quickly and sharply. The most important feature of the markup phase is speed. Because

the rally is quick, the public at large is left out of the rally. New investors are mesmerized by the return, and everyone from the analysts to the public sees higher levels ahead.

Finally, when the stock price reaches new highs (52 weeks high, all-time high), everyone around would be talking about the stock market. The news reports turn optimistic, business environment suddenly appears vibrant, and everyone (public) wants to invest in the markets. By and large, the public wants to get involved in the markets as there is a positive sentiment. This is when the distribution phase occurs.

The judicious investors (smart investors) who got in early (during the accumulation phase) will start offloading their shares slowly. The public will absorb all the volumes offloaded by the institutional investors (smart money) there by giving them the well-needed price support. The distribution phase has similar price properties as that of the accumulation phase. Whenever the prices attempt to go higher in the distribution phase, the smart money offloads their holdings. Over a period of time, this action repeats several times, and thus the resistance level is created.

Finally, when the institutional investors (smart money) completely sell off their holdings, there would no further support for prices. Hence, what follows after the distribution phase is a complete sell-off in the markets, also known as the mark down of prices. The selloff in the market leaves the public in an utter state of frustration.

Completing the circle, what follows the selloff phase is a fresh round of accumulation phase, and the whole cycle repeats. It is believed that that entire cycle from the accumulation phase to the selloff spans over a few years.

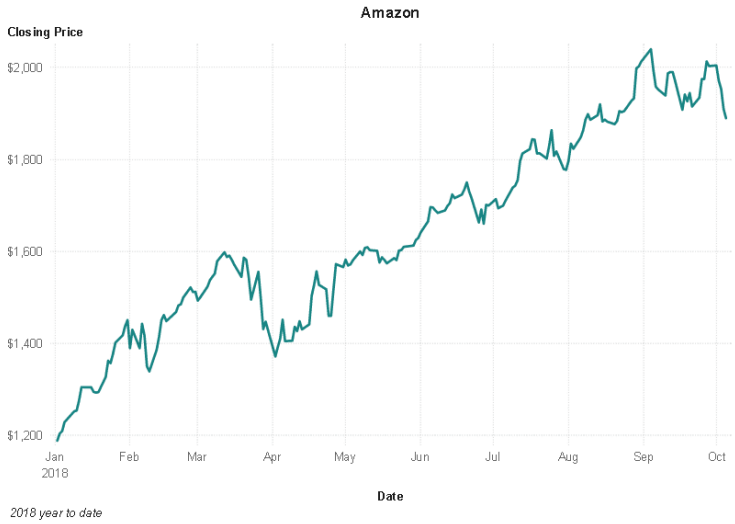
however alternatively is based on using inventory expenses developed inside the past to are expecting destiny expenses.

2.4 CHARTS IN TECHNICAL ANALYSIS

Charts are graphical tools used in technical analysis to visualize the price movement of a financial instrument over time. They help traders analyze trends, identify patterns, and make informed trading decisions. The X-axis of a chart usually represents time, while the Y-axis shows price. Different types of charts offer varying levels of detail and visual clarity.

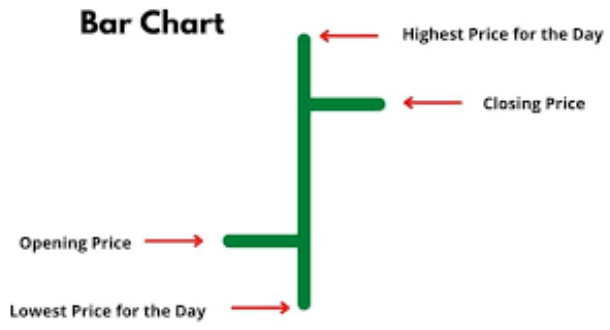
Types of Charts

Line Chart:



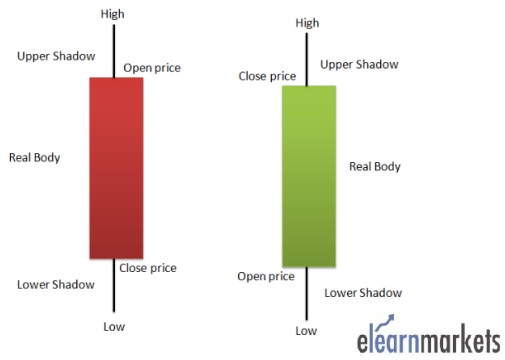
A line chart is the most basic type of chart. It connects the closing prices of an asset over a specific time period with a straight line. It is simple and effective for identifying the general trend (uptrend or downtrend), but it does not show price volatility during the trading period. Because it only uses closing prices, it's ideal for long-term investors looking at overall market direction.

Bar Chart (OHLC Chart):



A bar chart provides more comprehensive price information than a line chart. Each bar shows the open, high, low, and close prices for a given period (called OHLC data). The vertical line indicates the price range (high to low), with small horizontal ticks on the left and right sides representing the open and close prices, respectively. Bar charts help traders assess intraday volatility and trend strength.

Candlestick Chart:



Candlestick charts also show OHLC data but in a more visual and colorful format, making them easier to interpret. Each candlestick has a “body” and “wicks” (or shadows). The body shows the range between the open and close, while the wicks represent the high and low. If the close is higher than the open, the candle is typically green or white (bullish); if lower, it's red or black (bearish). Candlestick patterns like Doji, Hammer, and Engulfing help traders predict future price movements.

Volume: Volume refers to the number of shares or contracts traded in a security or market during a given period. It is a crucial indicator that measures the strength or weakness of a price trend. Analyzing volume helps traders confirm trends, identify potential reversals, and gauge the level of market participation. The importance of volume in reading charts are as follows:

Volume Confirms Trends: When price movements are accompanied by high volume, the trend is considered strong and more likely to continue. For example, an upward price movement on high volume indicates strong buying interest and investor confidence, while a downward movement on high volume shows strong selling pressure.

Volume Precedes Price: Often, a significant increase in volume occurs before a major price move. A sudden rise in volume without much price change could indicate that institutional investors are accumulating or distributing a position, potentially leading to a breakout or breakdown.

Volume Spikes Signal Reversals:Extremely high volume at key support or resistance levels may signal a potential reversal. For example, if a stock falls to a support level and volume surges with a price bounce, it could indicate a bullish reversal.

Low Volume Indicates Weak Trends:Price movements on low volume are often viewed with skepticism. They suggest a lack of interest or conviction among traders, making such trends more prone to failure or reversal.

Volume Divergence: If the price makes a new high but volume fails to increase or even declines, it may suggest a weakening trend. This divergence between price and volume is often seen as an early warning sign of a potential reversal.

Volume with Indicators: Volume is often used in conjunction with technical indicators like Volume Moving Average, On-Balance Volume (OBV), and Volume Price Trend (VPT) to get a clearer picture of market dynamics. These tools help quantify the relationship between volume and price changes.

2.5 CHART PATTERN IN TECHNICAL ANALYSIS

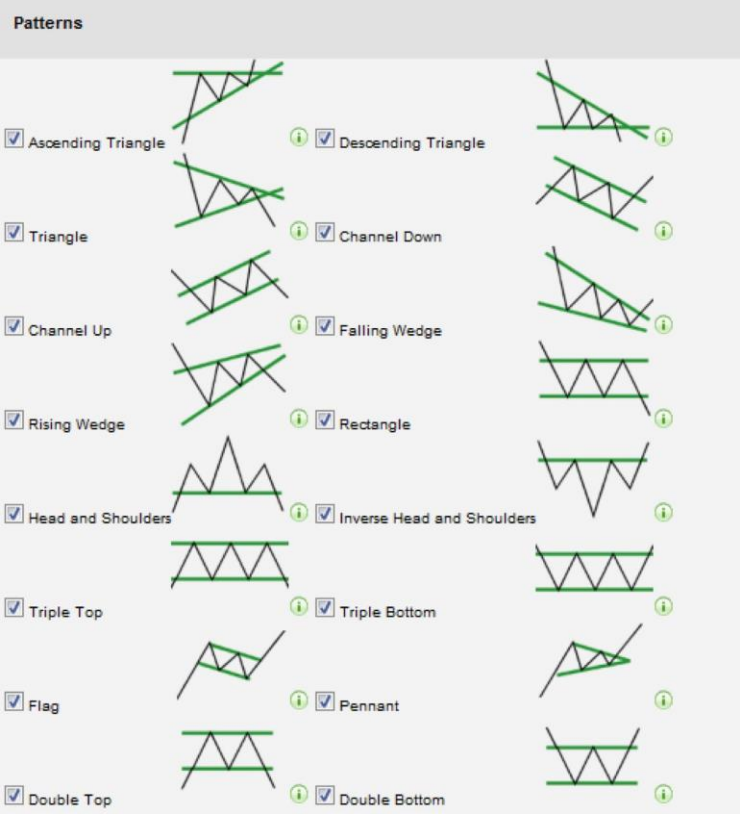


Chart patterns are essential tools in technical analysis used to forecast potential price movements by interpreting historical data. These patterns are broadly categorized into continuation, reversal, and bilateral patterns based on the likely direction of price breakout. Below is a detailed explanation of key patterns used in technical analysis:

1. Triangle Patterns

Triangles represent a consolidation phase followed by a breakout. They include:

Ascending Triangle: It Formed with a horizontal resistance line and a rising support line, indicating bullish pressure. Often results in an upward breakout.

Descending Triangle: It is Characterized by a horizontal support and a descending resistance line. It signals bearish pressure and often precedes a breakdown.

Symmetrical Triangle (Triangle):In this Both support and resistance lines converge, suggesting indecision in the market. The breakout can be in either direction.

2. Channel Patterns

Channels are parallel lines containing price movements within support and resistance

Channel Up: A bullish pattern with rising support and resistance lines. Indicates a steady uptrend.

Channel Down: A bearish pattern with declining support and resistance lines, showing a consistent downtrend.

3. Wedge Patterns

Wedges resemble triangles but have a clear slope

Rising Wedge: Bearish reversal pattern, formed by upward-sloping lines. Suggests a price decline after the breakout.

Falling Wedge: Bullish reversal pattern, where both lines slope downward. Often precedes a price increase.

4. Rectangle: A consolidation pattern where price oscillates between parallel support and resistance levels. Breakout direction determines future trend.

5. Head and Shoulders

Head and Shoulders: A reversal pattern indicating a shift from bullish to bearish trend. It consists of a peak (head) between two smaller peaks (shoulders) and a neckline.

Inverse Head and Shoulders: Bullish counterpart indicating a trend reversal from bearish to bullish.

6. Triple Top and Bottom

Triple Top: Reversal pattern formed after three peaks at the same level, indicating strong resistance and potential bearish trend.

Triple Bottom: Bullish reversal formed after three troughs at the same level, suggesting strong support.

7. Double Top and Bottom

Double Top: Bearish reversal formed after two failed attempts to break resistance.

Double Bottom: Bullish reversal after two failed attempts to breach support.

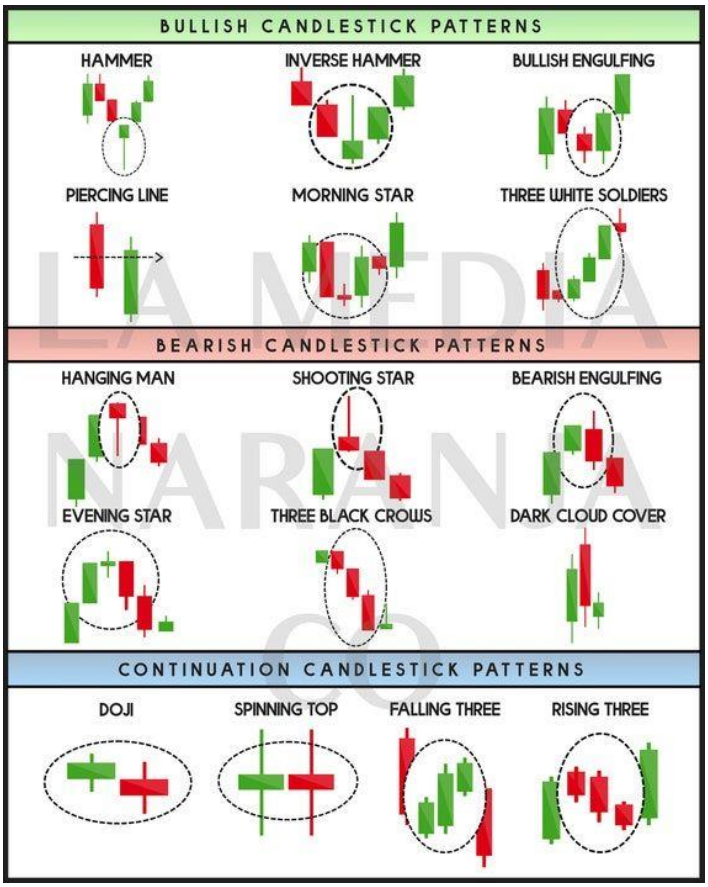
8. Flag and Pennant Patterns

These are short-term continuation patterns formed after a strong price move:

Flag: Appears as a small rectangular consolidation, sloping against the prior trend, followed by a breakout in the same direction.

Pennant: Similar to a small symmetrical triangle. Shows price contraction before continuation of the trend.

2.6 Candlestick pattern in Technical Analysis



Candlestick patterns are visual representations of market sentiment and price action over a specific time period. These patterns help traders forecast future price movements and are broadly classified into Bullish, Bearish, and Continuation patterns.

1. Bullish Candlestick Patterns

These patterns signal a potential reversal from a downtrend to an uptrend and indicate buying pressure.

- Hammer: A single candle with a small body and long lower wick, found at the bottom of a downtrend, suggesting buyers are stepping in.
- Inverse Hammer: Similar to the hammer, but with a long upper wick. Indicates potential bullish reversal after selling pressure weakens.

- Bullish Engulfing: A larger green candle completely engulfs the previous red candle. Strong indication of trend reversal.
- Piercing Line: A bullish candle that opens below the previous red candle but closes more than halfway into the red body. Indicates bullish intent.
- Morning Star: A three-candle pattern with a red candle, a small-bodied doji/spinning top, and a strong green candle. Suggests reversal after a downtrend.
- Three White Soldiers: Three consecutive long green candles with higher closes, signaling strong bullish momentum.

2. Bearish Candlestick Patterns

Bearish patterns indicate a reversal from an uptrend to a downtrend and warn of potential selling pressure.

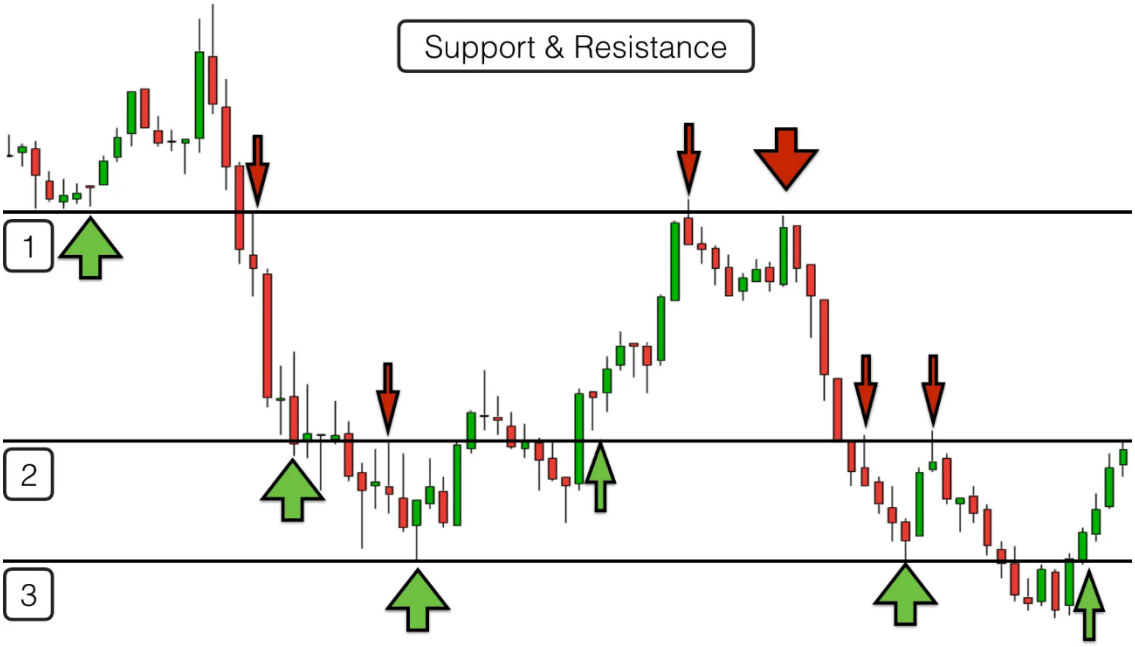
- Hanging Man: Appears at the top of an uptrend. A small body and long lower wick reflect weakening buying interest.
- Shooting Star: A small body with a long upper wick, signaling potential reversal as buying is rejected.
- Bearish Engulfing: A large red candle that engulfs the prior green candle. It indicates dominance of sellers.
- Evening Star: Opposite of the morning star. A red candle follows a green candle and a small-bodied candle, signaling trend reversal.
- Three Black Crows: Three long red candles in succession with lower closes, suggesting strong bearish pressure.
- Dark Cloud Cover: A red candle opens above the previous green candle but closes below its midpoint. Signals shift in sentiment.

3. Continuation Candlestick Patterns

These patterns suggest that the existing trend (uptrend or downtrend) is likely to continue.

- Doji: Indicates market indecision where open and close prices are nearly the same. Often a precursor to trend continuation or reversal.
- Spinning Top: Small body with long wicks on both sides. Reflects uncertainty but often within an ongoing trend.
- Falling Three: Bearish continuation pattern consisting of a long red candle, followed by small green candles within its range, and ending with another red candle.
- Rising Three: Bullish counterpart of falling three. A green candle is followed by small red candles, then another strong green candle, confirming uptrend continuation.

2.6 SUPPORT AND RESISTANCE IN TECHNICAL ANALYSIS



Support and resistance are fundamental concepts used by traders to identify price levels on a chart where a stock or asset tends to **reverse** or **stall** its movement. These levels help in making decisions about entry, exit, and stop-loss placements. Key concepts which helps in chart reading are as follows:

Support Level:The support level is the price point where a downtrend tends to pause due to buying interest. At this level, demand is strong enough to halt or reverse the fall in price. Traders believe the asset is undervalued at this point, and buyers step in. If the price touches support multiple times

without breaking it, the level is considered strong. However, if it is broken with high volume, it can become a new resistance.

Resistance Level: The resistance level is the opposite—it is where an uptrend is expected to pause or reverse due to selling interest. This is the price at which many traders feel the asset is overvalued and begin selling to book profits. If price breaks above this level with strong volume, it may lead to a new rally, and this former resistance can now act as support.

Role Reversal: Once a support or resistance level is broken, its role often reverses. A broken support can become a resistance, and a broken resistance can become a new support level. This behavior helps traders set targets and stop-losses in a dynamic market.

Psychological Support/Resistance: Often, round numbers (like ₹100, ₹500, or ₹1000) act as psychological barriers. Traders tend to place buy/sell orders at these levels, making them natural zones of support or resistance.

Trendline Support and Resistance: Support and resistance levels can also be drawn diagonally using trendlines, which connect a series of higher lows (for support) or lower highs (for resistance). These are especially useful in trending markets.

Importance in Trading: Identifying accurate support and resistance levels helps traders set entry/exit points, stop-losses, and target prices. It also improves the risk-reward ratio, making trading decisions more structured and strategic.

2.7 INDICATORS IN TECHNICAL ANALYSIS

Technical indicators are tools used by traders to analyse securities and market sentiment. These indicators can provide insight into whether a price trend is likely to continue or reverse. Technical analysis, which utilises these indicators, involves using this information to generate buy and sell signals for traders. To develop a comprehensive technical analysis strategy, traders often use a combination of different indicators. By examining metrics such as trading volume alongside these indicators, traders can gain a better understanding of market sentiment and make more informed trading decisions.

What is a leading indicator?

A leading indicator is designed to help traders anticipate future price action. Leading indicators basically 'lead' price action and deliver signals to traders before a trend or reversal happens in the market. Leading indicators could help traders capture maximum profits because they can enter a trade at the start of a price move in the market. However, because they anticipate price action, leading indicators can sometimes deliver many false signals. For instance, a leading indicator can provide a reversal signal when it is only a temporary retracement in the market.

What is a lagging indicator?

A lagging indicator is designed to help traders confirm a trend or reversal in the market. Most lagging indicators basically 'lag' the market and deliver signals after a trend or reversal has already started in the market. Lagging indicators help traders confirm that a trend in the market is indeed in place, and trades that are in tandem with the existing market condition can then be executed. While they are solid confirmation tools, lagging indicators tend to deliver signals late, and there might not be enough time to capture as many profits as possible. For instance, most trends make the bulk of their movement in the early stages, and a lagging indicator may deliver a signal when the trend has already done a huge leg.

Here are some examples of popular leading indicators:

2.7.1 Relative Strength Index (RSI)

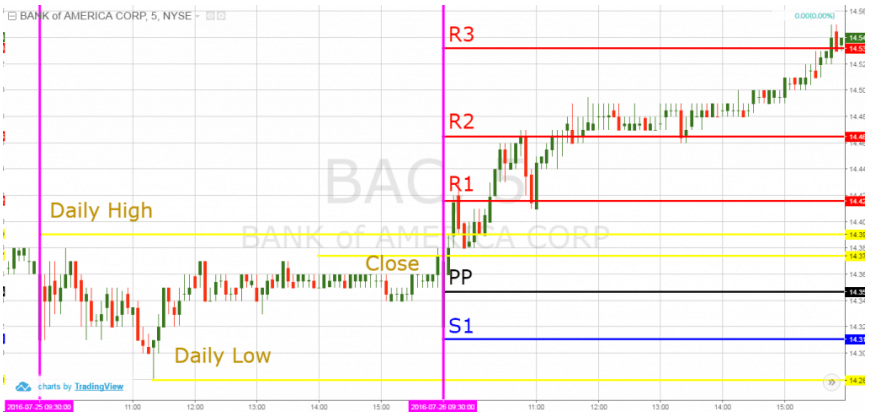
The RSI is a momentum indicator that delivers overbought and oversold signals in the market. The indicator oscillates between 0 and 100. An RSI reading of 30 and below implies that an asset is oversold, and higher prices can be expected, whereas a reading of 70 and above denotes an

overbought asset where lower prices can be expected. Traders seek buying opportunities in oversold markets and selling opportunities in overbought markets.

2.7.2 Stochastics RSI

Like the RSI, Stochastics is a momentum indicator that delivers overbought and oversold signals. The indicator oscillates between 0 and 100, with distinct lines drawn at 20 and 80. A reading below 20 indicates that a market is in oversold territory, thus, potentially cheap. Traders then seek opportunities to place buy orders because higher prices are expected. Similarly, a reading above 80 implies that a market is overbought territory, where prices are considered expensive and unsustainable. Traders will seek opportunities to place sell orders because lower prices are expected.

2.7.3 Pivot Points



The Pivot Points indicator generates multiple support and resistance lines based on a previous period's high, low, and close prices. Typically, there is a reference line or central pivot (PP) and three support lines (S1, S2, and S3) as well as three resistance lines (R1, R2, and R3). These lines are excellent reference levels for demand and supply in the market. In a trending market, the lines can be used as ideal areas where price pullbacks can end; whereas in ranging markets, the pivot lines serve as support and resistance areas. The Pivot point lines can also be used to time price breakouts in the market.

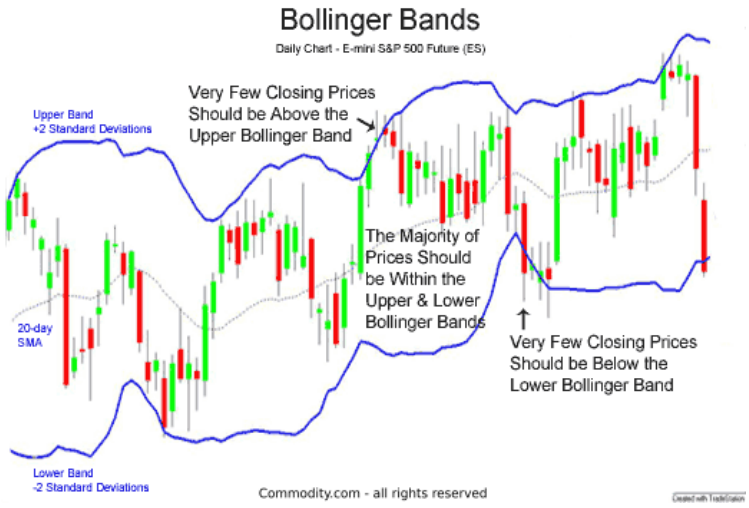
Here are some examples of popular lagging indicators:

2.7.4 Moving Averages

Moving averages (MAs) are among the most popular technical analysis indicators. Traders use them because they smooth out price action and provide a clear visual of the trend in the market. MA's are the average prices of an asset over a specified period. MA's are lagging indicators because they are computed using historical prices. They are primarily used in trend-following strategies, with traders typically combining shorter period MA's with longer period ones. For instance, a 50-period MA can be combined with a 200-period MA. When the shorter period MA crosses the longer period MA, it signals that a new trend is already in place. However, such crosses usually happen after the price has already moved considerably. There are three main types of moving averages commonly used in technical analysis: Simple Moving Average (SMA), Exponential Moving Average (EMA), and Weighted Moving Average (WMA). The Simple Moving Average (SMA) is the most basic type, calculated by taking the average of closing prices

over a specific number of periods. It gives equal importance to all data points, making it useful for identifying long-term trends but less responsive to recent price changes. The Exponential Moving Average (EMA), on the other hand, assigns more weight to recent prices, making it more sensitive to new information and price movements. This makes EMA particularly useful for short-term trading signals. Finally, the Weighted Moving Average (WMA) also emphasizes recent prices but does so using a linear weighting system, where the most recent prices are given higher weights than older ones. This makes WMA more responsive than SMA, but slightly less reactive than EMA. Each type of moving average serves a different purpose and is chosen based on the trader's strategy and market conditions.

2.7.5 Bollinger Bands

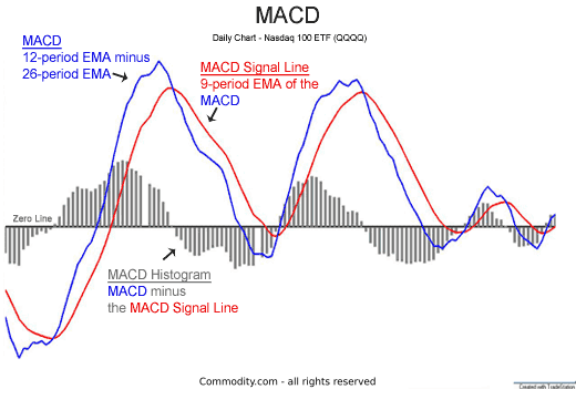


Bollinger Bands is a volatility indicator with a 20-period simple moving average and an upper and lower band with two positive and negative standard deviations of the middle line. The bands converge when there is low volatility and diverge when there is high volatility. While some traders watch the bands for potential leading signals for strategies such as breakout trading, Bollinger Bands itself does not indicate when volatility is likely to change in the market. Still, it merely reacts after the underlying price action has happened. This is why Bollinger Bands is never used in isolation, mainly combined with leading indicators such as RSI.

2.7.6 Average Directional Index (ADX)

ADX is an indicator used to gauge the strength of the underlying trend in the market. Traders use ADX to filter out the best trending and ranging markets to trade. ADX plots readings from 0 to 100. When ADX stays below 25 for an extended time, it is an indication that there is no clear trend, and traders can apply range-bound plays in the market. A reading of above 25 implies that a strong trend is forming. Still, ADX lags the market and is often combined with other indicators to deliver effective trading signals.

2.7.7 MACD



The Moving Average Convergence Divergence (MACD) is a popular indicator used to determine trend direction, its strength, and a possible reversal. It features a histogram as well as a MACD line and signal. Traders watch for crossovers, divergences, and strengthening trends when trading with MACD. But because it is computed using moving averages, the MACD is inherently a lagging indicator and is often combined with oscillators such as RSI for more credible signals.

Leading Vs Lagging Indicators

Consider the market as a car to understand the relationship between leading and lagging indicators. Leading indicators are your windshield (showing you where you are going), whereas lagging indicators are your side mirrors (displaying where you are coming from). Both indicators are essential to your driving. It is always tempting for traders to focus on leading indicators because they offer ideal entry points for maximum profits but are also prone to numerous false signals. On the other hand, despite lagging indicators limiting potential profits, they provide the much-needed conviction to enter trades in the market. Therefore, a solid trading strategy will find a way to combine the two indicators in relevant market conditions effectively. For instance, RSI can identify overbought and oversold conditions on relevant Pivot Point levels.

2.8 REVIEW OF LITERATURE

Murphy (2007) in his research work, technical analysis is the study of market achievements, mainly from the first to the last, the use of graphics, with the intention to forecast upcoming price trends. The word market success involves the three sources of data reachable for technical price, volume and open interest.

Narendra, N.Patel "trading through technical analysis", explained RSI is more useful in stock price analysis when comparing with MACD as it has more accuracy and generate more signals then MACD and provide more clear guidelines for entry and exit from the market

Sudheer (2010) in his research began the technical analysis is the study of the prediction of prices of securities for the future, the most important objective of technical analysis is to produce returns leaving the being to decide when go into market and when to leave in safety . The conclusion is to buy in dangerous and sell at first sight to obtain a considerable amount of performance or benefit.

Andrew W. Lo, Harry Mamaysky and Jiang Wang (2011) in their research work had done "Foundation of technical analysis Computational Algorithms, Statistical assumption, and experiential accomplishment", the researcher examines this logical and mechanical approach for the detection of technical patterns using non-parametric kernel useful regression in US stocks from 1962 to 1996 to guess the success of technical analysis.

Lawrence Blume, David Easley and Maureen O'hara (2011) in their research paper entitled "Market information and technical analysis: The role of quantity", the researcher discovered that role of volume and its application for technical analysis. The researcher also shows that the volume, information and price are linked together and shows how the volume and price are enriching and also shows that the merchant using the information included in the market statistics does better than the merchants.

Yingzi Zhu and Guofu Zhou (2012) in their research using an exploratory paper study, studied the use of technical analysis in an efficient portion of resources in individual risky assets. When yields are expected, technical analysis adds value to the asset portion and wealth maximization. The document provides a hypothetical explanation of the use of the moving average to allocate money in different actions and how to add value to the investment through the use of technical analysis.

R. Krishnan and Vinod Mishra (2014) in this document entitled "Intraday Liquidity Pattern in Indian Market" study the liquidity pattern and identify any common distinctive in liquidity measures, using annual intra annual data from the National Stock Exchange. India (NSE). The researcher discovered that most of the volume and liquidity measures connected show a U-shaped intraday pattern.

Cory Janssen, Chad Langager and Casey Murphy (2014) in their technical analysis of the research article are a system of evaluating standards by analyzes information moving up by market action, such as prices and past volume. Technical analysts do not to effort to calculate security and intrinsic value, but use graph and additional tools to recognize patterns that suggest future actions.

Adrin Taran-Morosan (2015) in his research paper entitled "The researcher of the revised relative strength index" examines that the relative strength index (RSI) is one of the indicators of excellent technical analysis and widely used. The research studies aim to empirically investigate the role of the RSI in its standard formation.

Edwards, Magee and Bassetti&quot (2016) in their technical analysis of research refers to the study of market achievement as something divergent from the study of the goods in which the market deals. Technical Analysis is the science of recording, usually explicitly, the definitive history of changes in the negotiation price, the volume of dealings, etc., in a given action or in the averages and then deduce from that the past the potential future.

South India Journal of Social Sciences(2023) employed classical technical tools such as Moving Averages (MA), Exponential Moving Averages (EMA), Relative Strength Index (RSI), Bollinger Bands, and Moving Average Convergence Divergence (MACD) to analyze Bank Nifty's performance from 2020 to 2022. The study aimed to assess the predictive power of these indicators for 2023, providing a foundational perspective on their effectiveness in forecasting index movements.

International Journal of Research Publication and Reviews, Vol. 4, Issue 1, January 2023**,** although this study encompassed the broader Indian stock market, it provided valuable insights into the effectiveness of traditional technical indicators like Bollinger Bands, MACD, and RSI. The research analyzed their performance across various sectors, including banking, offering comparative data that could be relevant to Bank Nifty analysis.

European Economic Letters, Vol. 14, Issue 2, 2024, this study explores the practical application of technical analysis among traders and investors in Mumbai. It investigates how technical analysis influences financial decision-making and identifies challenges such as market volatility and regulatory dynamics. The research aims to provide insights into improving trading strategies through technical analysis.

Anu Raman in his research "AIRO International Research Journal, March 2024", examines the impact of technical analysis on stock performance in emerging markets. Utilizing a mixed-methods approach, it combines quantitative analysis of historical stock data with qualitative insights from investors. The study highlights the role of technical analysis in investment decisions and addresses challenges like market volatility.

International Journal of Research in Engineering, Science and Management, Vol. 2, Issue 6, December 2022, this paper focused on applying traditional technical indicators to the Bank Nifty index to determine their effectiveness in predicting market trends. The study utilized tools like Moving Averages, RSI, and MACD to analyze historical data and identify potential trading signals.

CHAPTER 3:
RESEARCH METHODOLOGY

3.1 OBJECTIVE OF THE STUDY

The primary objective of this study is to conduct a comprehensive technical analysis of the Bank Nifty index in order to examine its historical price trends, evaluate the efficacy of key momentum indicators, and develop actionable trading strategies for Long- to medium-term horizons. Bank Nifty, which tracks the performance of the most liquid and capitalized banking stocks listed on the National Stock Exchange (NSE), serves as a critical benchmark for the Indian banking sector and broader financial market sentiment.

The specific objectives include:

- To interpret trading signals from indicators such as RSI(Relative strength index), MACD(Moving average convergence divergence), Bollinger Bands, and Moving Averages.
- To detect long- and medium-term trading opportunities based on trend momentum and pattern recognition.
- To propose tactical index trade strategies tailored for swing trading based on technical setups.
- To enhance the understanding of technical Analysis for effective decision-making in volatile market conditions.

By meeting these objectives, the study seeks to aid both retail and institutional market participants in navigating the Bank Nifty index more effectively through the lens of technical analysis.

3.2 RESEARCH METHODOLOGY

This study employs a quantitative, technical analysis-based methodology, relying solely on secondary market data obtained from reputable financial platforms. The research adopts an observational, non-experimental approach where historical market data is analyzed using pre-established analytical frameworks without altering or manipulating any variables.

The methodology is grounded in identifying patterns and momentum indicators derived from historical price and volume movements. The indicators utilized are time-tested tools commonly applied in technical trading and include:

- Simple and Exponential Moving Averages (SMA & EMA) for trend detection.
- Relative Strength Index (RSI) to measure price momentum and potential reversals.
- Moving Average Convergence Divergence (MACD) for detecting momentum divergence.

- Bollinger Bands to identify volatility-based setups.
- Chart structures for refining entry and exit points.

Data interpretation was performed using trading platforms such as Trading View, NSE and other financial charting tools that facilitate multi-layered visual analysis. The output derived from these tools enables deeper insights into trend behavior, breakout potential, and reversal conditions within Bank Nifty.

3.3 RESEARCH DESIGN

The research follows an analytical and exploratory design, suitable for the study of market behavior through technical analysis. The analytical design allows for the quantitative examination of trends, momentum, and reversal patterns, while the exploratory element helps identify potentially underutilized signals or unique confluences of indicators.

The design is structured to observe natural trading behavior in the market over a defined period. It avoids hypothetical forecasting or algorithmic modeling and instead focuses on the interpretation of actual price data to draw practical trading conclusions.

This design supports:

- Identifying cyclical patterns within Bank Nifty.
- Highlighting predictive signals based on past price behavior.
- Providing clarity on swing trading opportunities during consolidation, breakout, or reversal phases.

3.4 SOURCE OF DATA COLLECTION

The data for this research has been exclusively collected from secondary sources, ensuring accuracy, credibility, and alignment with real-world market behavior. The main sources include:

National Stock Exchange of India (NSE): For historical Open, High, Low, Close (OHLC) and trading volume data of Bank Nifty.

Trading View: A widely used technical analysis platform offering customizable charts and indicator tools.

Financial portals: Websites like Investing.com and Yahoo Finance were used to cross-verify prices, download data sets, and supplement chart analysis.

The data covers approximately 165 trading days from July 2024 to April 2025 and the technical analysis conducted on 6 April 2025, allowing the study to encapsulate varied market conditions such as rallies, corrections, and sideways consolidation phases.

3.5 SAMPLE DESIGN AND SAMPLE SIZE

This study follows a non-probability purposive sampling technique, selecting the Bank Nifty index as the primary sample due to its relevance, liquidity, and importance in the Indian equity derivatives market. The index is composed of major banking stocks and is widely traded by both institutional and retail investors.

Sample Universe: Bank Nifty index on the National Stock Exchange (NSE).

Sample Size: Daily price and for approximately 168 trading days.

Sample Duration: July 2024 to April 2025

This specific timeframe ensures the inclusion of various price cycles, enabling a robust assessment of technical patterns under different market sentiments. The sample include intraday data, keeping the focus on swing trading setups based on daily and weekly intervals.

3.6 TECHNIQUES OF DATA ANALYSIS

The analysis in this study utilizes a structured blend of classical and modern technical tools aimed at identifying trend direction, momentum shifts, and volatility levels in the Bank Nifty index. To detect prevailing and emerging trends, the Simple Moving Average (SMA) and Exponential Moving Average (EMA) are applied, offering a smoothed and responsive view of price direction respectively. For momentum evaluation, the Relative Strength Index (RSI) and Moving Average Convergence Divergence (MACD) are employed to uncover overbought/oversold conditions and momentum divergences. Volatility is gauged through Bollinger Bands , helping to assess breakout potential and fine-tune stop-loss levels. Furthermore, candlestick and chart patterns are analyzed for signs of trend continuation or reversal, while support and resistance levels provide contextual

cues for entry and exit points. The study adopts a confluence-based approach—where multiple indicators are used in combination—to improve trade setup accuracy and minimize false signals, ultimately guiding actionable trading strategies within the swing trading framework. The study also finds the correlation between the nifty 50 index and bank nifty to make better trading strategy.

3.7 SCOPE OF THE STUDY

The scope of this research is clearly defined to maintain a targeted and actionable analysis framework:

- Instrument Focus: Limited to the Bank Nifty index, without diving into individual banking stocks except when validating the index's trend.
- Market Environment: The analysis is primarily technical in nature. No fundamental company-specific or macroeconomic indicators are considered.
- Comprehensive Technical Indicator Application: This study incorporates a variety of technical indicators—RSI, MACD, Bollinger Bands, EMA, and Fibonacci Retracement — to analyze trend direction, strength, volatility, and potential reversal zones in the Bank Nifty index.
- Swing Trading Strategy Development: The project aims to identify medium- and short-term trading opportunities by analyzing chart patterns and momentum indicators, helping develop practical swing trading strategies suitable for volatile market conditions.
- Market Behavior Analysis through Chart Patterns: By studying historical price movements and recognizing classic chart patterns (like double tops, triangles, channels), the project interprets how Bank Nifty reacts to psychological price levels, aiding in market behavior forecasting.
- Enhancing Decision-Making for Traders: The findings of the study are intended to enhance technical analysis-based decision-making for both retail and institutional traders, providing a framework for more disciplined and objective trading in Bank Nifty futures.

By maintaining this well-defined scope, the study avoids dilution of insights and ensures clarity in deriving conclusions relevant to technical trading within the Bank Nifty framework.

CHAPTER 4:
DATA PRESENTATION AND ANALYSIS

5.TECHNICAL ANALYSIS OF BANK NIFTY

To conduct a comprehensive technical analysis of Bank Nifty, a top-down approach was employed. The analysis commenced at the weekly timeframe to identify the broader market trend, followed by a more detailed examination on the daily, 1-hour, and 15-minute charts. This multi-timeframe analysis ensured alignment with the overall trend while capturing precise entry and exit signals. This analysis used price action for technical and to support price action I utilized indicators.

Key technical tools and indicators used in the analysis include:

- Relative Strength Index (RSI) – to assess momentum and identify overbought or oversold conditions.
- Bollinger Bands – to evaluate volatility and potential reversal zones.
- Moving Averages – to determine trend direction and dynamic support/resistance.
- Candlestick Patterns – to detect price action signals for potential reversals or continuations.

This systematic approach enabled the identification of the overall trend direction, optimal entry and exit points, and target price levels, enhancing the precision and reliability of trading decisions within the Bank Nifty index.

5.1 WEEKLY ANALYSIS

In this approach I utilized Trend line for the weekly analysis

5.1.1 Long-Term Trend

- The overall trend from mid-2020 onwards is upward, marked by higher highs and higher lows.
- From the COVID-19 bottom around March 2020, the index witnessed a strong bullish rally till late 2021 and early 2022 shows economy recovery.

5.1.2 Correction Phase

- After reaching highs in early 2022, Bank Nifty entered into a Correction phase, trading in a range roughly between 41,000 and 32,000.
- This indicates a distribution or accumulation phase, where institutions may be repositioning before the next big move and profit booking who build long position.
- After that a breakout happens at 35600 and rally continues upto 42000 level till 2023 after that it again enters in a correction phase. These repetitive cycle validates the Dow theory which shows that market moves in patterns.

5.1.3 Recent Breakout Attempt

- In the most recent candles (early 2025), the price has moved back above the mid-range of this consolidation zone, around the 51,500 mark.
- This can be seen as a bullish attempt to break out of the sideways structure.

5.1.4 Candlestick Structure

- From oct 2023 to sept 2024, the price moves in upward channel. After that it enters In consolidation range from 50000 to 53500.Due to high selling pressure which can be seen in wicks from upper resistance the index breakdown from long sustaining trend line. After that recovery happens in double bottom pattern with Doji candle at bottom. Recent weekly candles are showing bullish momentum, with long-bodied green candles and smaller red candles — a sign of bullish dominance.
- However, wicks on the top in previous swings indicate selling pressure at higher levels, suggesting that sustaining above 52,000–53,000 is crucial for a confirmed breakout.

5.1.5 Key Support & Resistance Zones

- **Support:**
    - ₹44,000–45,000 zone (multiple bounces visible here)
    - ₹48,000 (interim support, previously resistance turned support)
- **Resistance:**
    - ₹52,000–52,500 (top of the range)
    - ₹55,000+ (next potential resistance if breakout sustains)

5.1.6 Interpretation

- The long-term trend remains bullish, but the market is currently in a range-bound phase with signs of a breakout.
- A weekly close above 52,000 with strong volume would be a confirmation of bullish continuation, potentially targeting 55,000–58,000.
- A failure to sustain above 52,000 may lead to another correction or retest of 48,000–49,000 levels.
- Entry decisions should ideally be taken on lower timeframes around these key levels for precision.

Now, I utilized EMA to support my above analysis

5.1.7 Weekly Analysis Using 100 and 200 EMA's

Trend Overview

The price action is in a clear long-term uptrend, moving within upward-sloping parallel channels that reflect sustained bullish momentum. The orange circles mark key bounce points off the trendline, indicating strong support zones that align closely with the 100 and 200 EMAs.

Role of the EMAs

1. **100 EMA (Blue Line – ~47,600):**
    - It Acts as a dynamic support during pullbacks.
    - The price has repeatedly tested and respected this level, bouncing off and continuing the uptrend.
    - It shows medium-term bullish momentum.
2. **200 EMA (Purple Line):**
    - Represents the long-term trend and major support.
    - The price hasn't broken below it throughout the chart, showing the structural strength of the uptrend.
    - When price is above both EMAs, the market is in a strong bullish phase.

Recent Price Action

- The most recent candle shows a sharp pullback, with the price reacting around the 100 EMA.
- This may indicate another potential buying opportunity, if the price holds above the 100 EMA and resumes upward.
- A break below 100 EMA could mean further downside toward the 200 EMA.

Interpretation

The chart shows a clear bullish bias as long as the price remains above the 200 EMA, which acts as a strong long-term support. The 100 EMA serves as a key dynamic level for identifying potential trend continuation opportunities during pullbacks. The repeated bounces from the orange-circled zones highlight how the price consistently respects both the trendline and EMAs, forming a reliable pattern for technical traders.

5.2 DAILY ANALYSIS

Now after identifying major trend i performed weekly analysis to find the short term trend.

5.2.1 Falling Wedge Breakout (Bullish Reversal Pattern)

- A clear falling wedge pattern formed from October 2024 to March 2025, which is typically a bullish reversal setup.
- The three orange circled areas mark swing lows, creating a descending support line, while the upper trendline connects lower highs — both converging into the wedge.
- Breakout from the wedge occurred recently with strong bullish candles and volume at 48000, indicating a potential trend reversal and the start of an uptrend. Recently, it formed a bullish flag pattern indicating continuation of the trend.

5.2.2 Resistance Retest Zone

- Price has now entered a resistance zone marked near ₹51,600–₹52,200, which acted as previous support/resistance multiple times.
- The gray horizontal box indicates a critical supply zone, where sellers previously dominated. Currently the price trading in a no trading zone.

5.2.3 Bullish Flag Formation (Continuation Pattern)

- After a strong breakout, the price is now consolidating in a bullish flag (highlighted in blue).
- This small channel sloping downward is a healthy pullback, which often precedes another upward leg.
- A break above the flag's upper boundary could provide a strong buy signal, targeting the next levels around ₹53,500–₹54,000.

5.2.4 Support & Target Levels

- **Immediate Support:**
    - ₹50,800 (flag’s lower boundary)
    - ₹49,800 (previous swing high near wedge breakout)
-

- **Resistance/Target Zone:**
    - ₹52,200–52,500 (immediate)
    - ₹54,000+ (projected target based on wedge breakout and flag continuation)

5.2.5 Interpretation

- The overall short-term trend is bullish, supported by the breakout from a falling wedge and a forming bullish flag.
- A breakout above ₹52,200 may trigger further upside momentum, aligning with the higher timeframe weekly trend.
- Traders may consider entry on breakout confirmation from the flag, with stops below ₹50,800 and targets between ₹53,500–₹54,000.
- Though the trend is bullish but it is trading near resistance so, we can also expect a downward movement if sellers activated.

To confirm this trend and interpretation I utilized EMA 200.

5.2.6 Bank Nifty Chart: EMA (200) Analysis – Daily Timeframe

Price Break Above the 200-Day EMA

- Recently, Bank Nifty broke above this long-term EMA with strong momentum, confirming a shift in market sentiment from bearish to bullish.
- This crossover is a strong long-term buy signal, especially when backed by volume and a breakout from the falling wedge pattern.

Previous Resistance Now Turned Support

- Historically, price struggled to stay above the 200 EMA, reversing multiple times in December–February.
- Now that it's convincingly broken, this level (~₹50,000) may act as a major support zone in case of any pullback.
- Traders often consider pullbacks toward the 200 EMA as fresh long opportunities.

EMA Confirms Pattern Breakout

- The falling wedge breakout and bullish flag formation now have extra confirmation from the price staying above the 200 EMA.
- This aligns with classical technical analysis theory — a confluence of trendline breakout and EMA crossover significantly strengthens the bullish case.

Long-Term Trend Reversal Signal

- When the price moves decisively above the 200 EMA after a prolonged downtrend, it often marks the beginning of a major uptrend.
- As long as Bank Nifty holds above ₹50,000, the long-term bias remains positive, and we may see higher targets unfolding.

After this analysis it is confirmed that major and short term trend is Bullish. Now to find entry and exit point I utilized hourly analysis

5.3 HOURLY ANALYSIS

The 1-hour time frame is particularly effective for swing trading strategies, entry and exit points, especially when analyzing the Bank Nifty index and its constituent stocks. This time frame provides a balanced view that captures short-term price movements while filtering out excessive market noise, making it ideal for trades held over 4–5 days.

For derivative trading, Bank Nifty options contracts with weekly or monthly expiries can be used, depending on the trader's risk appetite and the expected duration of the trade. Weekly expiries are preferred for sharper, quicker moves, while monthly expiries are suitable for more conservative swing trades.

For stock trading, the same 1-hour technical framework can be applied to high-weighted banking stocks within the index. By aligning stock movements with overall index trends, traders can enhance the effectiveness of their swing positions.

As per hourly price action:

5.3.1 Bearish Flag / Descending Channel in Play

- The index is currently consolidating in a downward sloping channel, post a strong rally—typically recognized as a bullish flag or bullish continuation pattern.

- This reflects healthy profit booking or sideways correction before a potential breakout continuation.
- Multiple rejection and long wicks suggesting high selling pressure. The price is no trading zone suggesting to wait the candlestick formation near the support trend line

5.3.2 Strong Resistance Around 51,800–52,000

- Price is struggling near the upper boundary of the descending channel and just below the horizontal resistance zone (~52,000), as seen from the daily chart.
- Multiple rejections near the upper line suggest a short-term supply zone.

5.3.3 Key Support Near 51,100–51,200

- The lower boundary of the channel aligns around 51,100.
- If Bank Nifty respects this level again, we may see another bounce, keeping the flag structure intact.

5.4.4. Interpretation

- A breakout above 52,000 with volume would confirm the bullish flag breakout — potential target could be around 53,500–54,000 (flagpole projection).
- Conversely, breakdown below 50,800 could extend the consolidation toward 50,200–50,000 (next major support zone near 200 EMA on daily).
- Buyers can also buy derivatives and stocks of the index at swing low which is around 50.800 with confirmation with reversal candle like doji and morning star.

To support our interpretation I took help of Indicators such as:

5.4.5 Relative Strength Index (RSI 14)

- **Current RSI Value:** 54.04
- **Signal Line (Yellow):** 60.46
- **Interpretation:**
    - The RSI is in the **neutral zone**, suggesting neither overbought (>70) nor oversold (<30) conditions.
    - The RSI has recently moved down from near-overbought levels, indicating a **loss in bullish momentum**.
    - If RSI drops below 50, it may signal a **short-term bearish trend**, especially if price breaks the lower trendline of the consolidation channel.
    - However, if it stays above 50 and bounces, it could support a **bullish continuation** within the consolidation range.

5.4.6 Moving Average Convergence Divergence (MACD 12,26,9)

- **MACD Line (Blue):** 86.56
- **Signal Line (Orange):** 82.52
- **Histogram:** Positive and slightly expanding

- **Interpretation:**
    - The MACD line is above the signal line, indicating **bullish momentum**.
    - However, the gap is **narrow**, and there's a potential **crossover risk** if momentum weakens.
    - The histogram is currently positive but not showing strong expansion, suggesting **weak bullish bias**.

5.4.7 Bolinger Bands(20 SMA, ±2S.D.)

- Price is currently near the midline (SMA at 51,766) but slightly pulling back, suggesting consolidation or indecisiveness in the short term.
- The upper band recently acted as a resistance level, leading to a price rejection.
- The lower band has been tested previously and resulted in a bounce, indicating buying interest at lower volatility extremes.
- Band Width is relatively contracted compared to the prior breakout phase, indicating a period of reduced volatility and potential breakout/breakdown buildup.
- The price is respecting the boundaries of a descending channel, aligned with the Bollinger Bands, supporting the idea of a range-bound market with potential breakout/breakdown scenarios.

5.4.8 Interpretation

- The price is consolidating in a descending channel after a strong uptrend, reflecting a possible bullish flag/pennant formation.
- RSI cooling off showing possible bearish movement while still above the midpoint indicates neutral to mildly bullish bias.
- MACD shows weakening bullishness, and a crossover could lead to a short-term correction.
- If price moves toward the lower Bollinger Band and RSI remains above 40, it may present a buying opportunity within the range.
- Conversely, rejection from the upper band could indicate shorting potential or a call to avoid fresh longs.
- A breakout beyond the upper band on strong volume could signify the resumption of the prior uptrend and breakdown beyond the lower band suggesting a possible downside movement.

5.4 15-MIN ANALYSIS

It helps in analysing the short term trend for intraday trade.

5.4.1 Bearish Rising Wedge Breakdown

- The price broke down from a rising wedge inside the larger descending channel (shown in blue).
- This breakdown is a bearish signal and is happening below the 20 EMA, increasing conviction of further downside.

5.4.2 Fibonacci Retracement Levels

- The recent swing high at 51,895 and low near 50,745 gives us key Fib levels:
    - 0.5 level at ~51,320 acted as a short-term support.
    - 0.618 at ~51,185 is the next likely support.
    - Below that, 0.786 (~50,991) and extension levels (1.272 & 1.414) indicate targets of 50,432 and 50,269.

5.4.3. Price Respecting Descending Channel

- As seen in both the 1H and 15M charts, the upper channel line is holding well.
- This suggests continued downside unless a clear breakout above 52,000 occurs.

5.4.4 EMA & RSI Confirmation

- Price is trading below the 20-period EMA (blue line), signaling short-term bearishness.
- RSI is at 47.45, trending lower, indicating momentum has shifted toward the bears but not yet oversold.

5.4.5 Interpretation

On the 15-minute chart, the breakdown from the rising wedge pattern coupled with a failed retest at the 0.618 Fibonacci retracement level indicates a short-term bearish bias. The RSI indicator confirms weakening momentum, and price trading below the 20-period EMA adds to the selling pressure. A short trade may be initiated upon a weak pullback to resistance near the 0.382 retracement (51,471), targeting levels derived from Fibonacci extensions and previous price

action. Conversely, a bullish reversal would require a convincing breakout above 51,580, invalidating the bearish wedge structure.

5.4.6 Entry-Exit Strategy Suggestion

Short Entry (Bearish Setup):

- **Entry**: On a retest and rejection near 51,471–51,500 (Fib + EMA resistance)
- Stop Loss: Above 51,580 (recent high + wedge top)
- **Target 1**: 51,184 (Fib 0.618)
- **Target 2**: 50,991 (Fib 0.786)
- **Target 3**: 50,432 (1.272 Extension – aggressive)

Long Entry (Bullish Reversal Setup):

- **Entry**: Only if the price reclaims 51,580 with strong volume
- **Stop Loss**: Below 51,330 (Fib 0.5 support)
- **Target 1**: 51,750 (channel resistance)
- **Target 2**: 52,000 (previous swing high)

5.5 CORRELATION BETWEEN NIFTY AND BANK NIFTY

	A	B	C	D
		Close_BankNifty	*Close_Nifty50*	
Close_BankNifty		1		
Close_Nifty50		0.855131655	1	

The correlation coefficient between Nifty 50 and Bank Nifty over the period from April 7, 2024 to April 7, 2025 is approximately 0.855.

Interpretation:

This strong positive correlation (close to +1) indicates that the Bank Nifty index and Nifty 50 index tend to move in the same direction. When one rises or falls, the other is highly likely to follow a similar trend. This relationship reflects the significant weightage of banking stocks within the Nifty 50 index and underscores how broader market movements often align with those in the banking sector.

CHAPTER 6:
FINDING AND CONCLUSION

FINDINGS

1. Chart Pattern: The weekly chart formed double bottom pattern indicating possible reversal after breaking the last lower low. The daily chart formed Bullish flag indicating continuation of the current uptrend. Breaking of small upward channel in 15 min chart shows weakness in uptrend and signal possible downside movement.
2. Long Term Trend-Bullish: Bank Nifty is currently in a bullish long-term trend, sustaining over 100 and 200 EMA'S on the Weekly chart.
3. Long Term Support and Resistance: Strong support lies between ₹47,800 – ₹47,900, while key resistance is seen near ₹51,800 – ₹52,000. A long-term target of ₹55,000 can be expected over the next 2–3 months depending on further price action.
4. Long Term Trend Confirmation: The bullish outlook is supported by weekly RSI staying above 55 and MACD showing a positive crossover, confirming trend continuation.
5. Short Term Trend-Bullish: Bank Nifty shows a weak bullish bias in the short term, with the 1-hour chart indicating a correction phase, suitable for Wait and watch policy over 4–5 days.
6. Short Term entry and Target point: Ideal entry is on dips near ₹50,750,if confirmed by RSI <30 bullish MACD crossover, reversal candlestick formation. The expected target range is ₹51,500-51,600, offering 300–600 points based on previous swing cycles.
7. Risk Management: A stop-loss at ₹50,700 is recommended to protect against downside, aligning with the recent swing low and maintaining a favorable risk-reward ratio.
8. Intraday Trend-Sideways To Bearish: Bank Nifty holds a neutral to bearish intraday trend, indicating profit book. The structure on both 1-hour and 15-minute charts shows price oscillation within a defined range, suggesting potential for reversal-based trades during the day. Lower time frame indicating that the possibility of trend change to downside due to breakdown of upward channel. Squeezing of Bollinger Bands suggesting volatility is reducing and breakout can happen on either side, also MACD Suggesting weakness in uptrend.
9. Intraday Support: Strong intraday support lies between ₹50,500, confirmed by oversold RSI readings on both timeframes, MACD bullish crossovers, and lower Bollinger Band interaction. Ideal entries are triggered when a bullish candlestick pattern (like bullish engulfing or hammer) appears in this zone.

10. Intraday Resistance: Resistance is visible near ₹51,623 and 51,900, where prices tend to stall. Profit booking is suggested in this region, especially when RSI exceeds 70 and price nears the upper Bollinger Band on the 15-min chart.

CONCLUSION

The comprehensive technical analysis of Bank Nifty across multiple timeframes confirms a strong bullish structure with high probability swing and intraday opportunities. On the weekly chart, Bank Nifty is forming an Double Bottom pattern, indicating sustained accumulation and the potential for a breakout above ₹52,000. The daily chart supports this long-term bullish view, with a clearly established Falling wedge Pattern followed by bullish flag pattern.

In the short term (swing trading over 4–5 days), the index exhibits a weak bullish bias, characterized by Consolidation in range between 51,900 and 47,800 from January2025 to April 2025,suggesting Wait and watch policy for taking trades, suggesting with optimal buy-on-dips opportunities between ₹47,750 and ₹47,900. Momentum indicators like RSI and MACD reinforce these zones as high-probability entry points, with targets ranging from ₹51,600 to ₹51,800, and stop loss tightly placed at ₹47,700 for favorable risk-reward (1:2 or higher).

For intraday trading, the trend is neutral to Bearish, favoring avoid quick long entries near the lower Bollinger Band on the 15-min and 1-hour charts, confirmed by RSI levels and MACD crossovers. Profit booking near upper Bollinger Bands and RSI above 70 has shown reliability in prior setups. To further extend the analysis a positive correlation of 0.88 between nifty50 and bank nifty has been identified.

The use of multiple technical indicators—RSI, MACD, Bollinger Bands, Exponential Moving Averages and candlestick patterns—in confluence with price action, provides strong validation for trading decisions across timeframes. Notably, patterns such as Double Bottom, Rising Channel, Falling Wedge and Morning Star improved entry confidence, while Bollinger Band squeezes helped anticipate breakouts.

Overall, Bank Nifty presents a technically favorable landscape for Both Bear and Bullish-biased trades in both positional and derivative strategies. With strong trend confirmation, well-defined support/resistance zones, and reliable indicator alignment, traders can approach Bank Nifty with confidence, using structured entry/exit rules and disciplined risk management.

CHAPTER 6:

SUGGESTIONS AND LIMITATIONS

SUGGESTIONS

1. Wait and watch policy-Based on the technical analysis, trader should wait for the price action formation at support because the price is moving in range.
2. Trading Style Recommendation-Swing Trading: Based on the technical indicators discussed in the analysis, including the use of daily chart patterns, MACD crossovers, the most suitable trading style appears to be swing trading.
3. Instrument Choice-Bank Nifty Futures & Options: Bank Nifty futures and options are ideal instruments for trading this index due to their high liquidity and direct alignment with price movements.
4. Options Strategy-In the short term, considering the current RSI and MACD signals, a straddle strategy can be employed to benefit from a potential breakout in either direction. If a decisive move occurs, the position can be adjusted accordingly, such as shifting to directional selling strategies. In case the index turns bullish again after a pullback, strategies like a Bull Put Spread or buying long call options would be more appropriate to capture the upward momentum.
5. Time Frame-Daily & Hourly: The ideal time frames for trading Bank Nifty based on this analysis are daily and Hourly charts. Hourly charts help identify precise entry and exit points using technical indicators, while Daily charts provide a broader view to confirm the prevailing trend and filter out market noise.
6. Stock Selection Aligned with Bank Nifty: Focus on high-weightage stocks like HDFC Bank, ICICI Bank, Axis Bank, Kotak Mahindra Bank, and SBI, as they significantly influence Bank Nifty's movement. Monitor these for trend confirmation or divergence to refine your trading decisions.
7. Risk Management Plan: Limit risk to 2% per trade with ATR-based stop-losses and adjust position size based on VIX Index.

LIMITATIONS

1. Dependence on Historical Price Patterns: The analysis relies heavily on past trends and technical indicators like MACD and RSI, assuming that historical patterns will repeat, which may not always hold true in dynamic market conditions.
2. Lack of Macroeconomic Context: The document completely ignores macroeconomic factors such as RBI policy changes, inflation, interest rates, and global cues, all of which significantly impact the banking sector and the index.
3. No Fundamental Backing: There is no mention of earnings, balance sheets, or NPA levels of the underlying banks, making the analysis one-dimensional and purely technical.
4. Assumption-Driven Interpretation: Many of the conclusions drawn (e.g., potential reversal, short-term weakness) are based on assumed reactions to indicator signals.
5. No Quantitative Metrics or Data Support: The analysis lacks numerical evidence such as past performance stats, success rates of patterns, or historical indicator accuracy, making it difficult to assess reliability.

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Attendance/Remarks for Project Dissertation

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S.No.	Date	Time	Progress Report/Remarks of Project Dissertation and Research paper	Signature of the student	Signature of Supervisor
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