Rollover Analysis: A Predictive Approach to Futures Market Movements

Nambiyar.S[1], Dr. Jayasree Krishnan[2]

MBA Department of Management Studies, School of Management Studies, Vels Institute of Science Technology and Advanced Studies (VISTAS), Pallavaram, Chennai.[1]

Director, Department of Management Studies, School of Management Studies, Vels Institute of Science Technology and Advanced Studies (VISTAS), Pallavaram, Chennai.[2]

Abstract: This research investigates the effectiveness of Rollover Analysis as a predictive tool for short-term price movements in the Indian stock futures market. Focusing on a selected group of high-rollover occurrence stocks over the period from 2018 to 2025, the study applies a quantitative, predictive methodology using secondary data sourced from credible financial platforms. The analysis evaluates the success rate and profitability of the rollover pattern characterized by a bullish candlestick formation—to assess its reliability for traders employing "buy today, sell tomorrow" strategies. Key metrics such as win/loss ratios, profit distributions, and stock-specific performance are derived through back testing across multiple years. The findings indicate that while the overall success rate hovers around 48.6%, strategic application of rollover signals in trending markets yields significant profits, particularly in highly liquid and institutionally favored stocks.

The research methodology incorporates predictive analytics and a deductive approach, drawing from historical rollover occurrences and assessing their impact on next-day futures returns. The data cleaning process, normalization of variables, and exploratory data analysis formed the foundation for the statistical interpretation. Performance is evaluated based on metrics such as total profitability, average profit per trade, and year-wise profit/loss trends. Three stocks selected for detailed analysis exhibited varying degrees of responsiveness to rollover signals, highlighting both the potential and the limitations of the strategy.

Results suggest that rollover analysis is more effective during trending market phases and when combined with additional technical indicators such as moving averages or relative strength index (RSI). Liquidity and institutional participation emerged as critical factors influencing the success of the pattern. Stocks with higher open interest and clearer rollover trends tended to deliver more consistent results, while mid-cap or volatile stocks showed mixed outcomes.

The study concludes that rollover analysis, when used with discipline and supplemented by robust risk management, can be a valuable decision-making tool in futures trading. It offers a systematic framework to identify bullish momentum and improve entry timing. Investors and traders looking to enhance their short-term strategies may benefit from incorporating rollover behavior into their broader analytical toolkit. Moreover, the research opens avenues for further exploration using automation and machine learning to refine the predictive models.

Keywords: Rollover Analysis, Futures Market, Indian Stock Market, Predictive Analytics, Technical Analysis

I. INTRODUCTION

Rollover Analysis has emerged as a valuable component within the broader domain of technical analysis, especially in the context of the Indian stock futures market. This research explores the predictive potential of rollover patterns specifically characterized by a bullish candlestick formation comprising consecutive higher closes and their impact on short-term price movements. The study aims to determine whether these patterns can serve as reliable indicators for profitable trading strategies, particularly for "buy today, sell tomorrow" (BTST) approaches.

In a dynamic and volatile financial environment, investors and traders continuously seek effective tools and strategies to enhance their decision-making. Technical indicators and chart patterns have long been utilized to forecast price movements, and among them, rollover patterns are believed to signal a possible reversal or continuation in market sentiment. When these patterns occur with high open interest and favorable volume shifts, they can indicate institutional activity and bullish momentum.

This study analyzes historical data of selected stock futures from 2018 to 2025 to evaluate the effectiveness of the rollover pattern. Using platforms such as iCharts, TradingView, and Screener, data is gathered and tested for profitability and success rates. Through a quantitative and predictive approach, the research not only assesses the accuracy of the rollover signal but also investigates its practical applications for retail traders.

The primary focus is to establish whether rollover analysis can be systematically applied to generate consistent profits and aid in better market timing. By identifying stocks that show strong post-rollover performance and evaluating outcomes over multiple years, the study aims to offer data-driven insights that can be used to build or refine short-term trading strategies.

STATEMENT OF THE PROBLEM

In the highly volatile and dynamic Indian stock futures market, traders often struggle to identify reliable short-term trading signals that can consistently generate profits. While various technical indicators exist, there is limited empirical evidence on the effectiveness of Rollover Analysis specifically bullish rollover candlestick patterns as a predictive tool for future price movements. Traders employing "buy today, sell tomorrow" strategies require validated, data-driven approaches to improve timing and decision-making. This study addresses the problem of whether Rollover Analysis can reliably forecast short-term price trends and enhance the profitability of trades in the Indian futures segment.

OBJECTIVES

- To find a successful buy today sell tomorrow strategy using Rollover and price action.

II.   REVIEW OF LITERATURE

Several studies have explored the predictive capabilities and strategic implications of rollover analysis across various markets. Slivka and Yang (2018) conducted a comparative study of rollover strategies in the U.S., UK, India, and China, revealing that optimized strategies outperformed traditional rollover methods, especially for large positions. In a separate study, Slivka, Yang, and Wan (2017) focused on Nifty futures and concluded that minimizing calendar spread volatility led to superior performance compared to equal daily or single-day rollovers. Kumar and Patel (2019) examined the impact of rollover strategies on market volatility within the Indian derivatives segment. They observed that planned rollover strategies helped reduce volatility spikes, making the market more stable. Similarly, Chen and Zhao (2020) found a strong predictive relationship between futures rollover data and subsequent equity market returns, affirming the value of rollover metrics in forecasting market behavior. Singh and Mehta (2021) emphasized the usefulness of rollover analysis in market timing strategies, demonstrating that it enhanced the precision of trade entries and exits. Ghosh and Banerjee (2018) extended this understanding by analyzing sector-specific rollover patterns, which proved to be effective indicators of future market direction. Lee and Park (2022) employed machine learning models and found that incorporating rollover data significantly improved the accuracy of market movement predictions. Rodriguez and Torres (2023) explored global rollover trends and their ripple effects on emerging markets, underlining the interconnected nature of international financial systems. Nguyen and Hoang (2020) added a behavioral dimension by linking investor sentiment with rollover decisions, showing how sentiment influences market reactions during rollover periods. Other researchers have also investigated specialized applications. Patel and Desai (2019) demonstrated that strategic rollover methods enhanced returns and managed risk effectively in commodity futures. Wang and Li (2021) showed that rollover periods have tangible effects on market liquidity, including bid-ask spreads and trading volumes. Fernandez and Silva (2018) identified distinct rollover behaviors in European markets with implications for cross-border investments. Chowdhury and Rahman (2022) provided evidence of volatility spillovers during rollover phases in Asian markets, while Kim and Choi (2023) confirmed that rollover ratios can serve as predictive tools in fixed income markets. Ahmed and Malik (2019) focused on portfolio performance, establishing that well-designed rollover strategies improve risk-adjusted returns. Finally, O'Connor and Murphy (2020) identified seasonal rollover patterns in agricultural futures, and Liu and Zhang (2021) explored how rollover costs can affect arbitrage opportunities. Together, these studies form a robust foundation for further exploration into the predictive power and strategic implementation of rollover analysis in various financial markets, including the Indian stock futures segment.

RESEARCH GAPS:

While extensive research has been conducted on rollover strategies across global markets including the U.S., UK, China, and various emerging economies most studies have focused on broad indices, commodities, or high-level market trends rather than individual stock-level analysis. Although researchers such as Slivka, Yang, and Patel have explored the impact of rollovers on volatility and returns, there is limited empirical evidence specifically evaluating the effectiveness of rollover patterns as short-term trading signals in the Indian stock futures market.

Moreover, many existing studies rely heavily on theoretical modeling or machine learning approaches without grounding their analysis in practical trading frameworks like "buy today, sell tomorrow" (BTST) strategies.

Additionally, while the predictive role of rollover data has been explored in fixed income and commodities markets, its application in retail-oriented stock futures trading remains under-examined. Very few studies combine rollover metrics with profitability analysis at the individual stock level over a long-term period.

This gap highlights the need for focused research that not only measures the predictive strength of rollover patterns but also evaluates their practical utility for retail traders using historical trade-level data. By addressing this gap, the present study aims to contribute actionable insights on how rollover analysis can be integrated into short-term trading strategies in the Indian stock futures market.

III.   RESEARCH METHODOLOGY

RESEARCH DESIGN :
This study adopts a Quantitative Research Design aimed at analyzing the predictive power and profitability of the RolloverPattern in the Indian stock market, specifically focusing on StockFutures traded on the NationalStockExchange(NSE). The primary objective of the research is to evaluate the relationship between the occurrence of the rollover pattern and subsequent price movements in the selected stocks.

The Quantitative Approach is employed due to its emphasis on collecting numerical data and applying statistical techniques to analyze the effectiveness of the rollover pattern. The research uses historicaldata of stock prices, open interest, and rollover percentages to assess the pattern's predictive capabilities and to calculate key metrics like the successrate and totalprofitability of stocks showing the rollover pattern.

The study is also Predictive in nature, as it aims to forecast future market movements based on past occurrences of the rollover pattern. By examining price behavior and stock performance following the formation of the pattern, the study intends to establish a model that can predict potential profitable trends in the futures market. The research covers data from 2018to2025, utilizing financial data from trusted platforms like iCharts, TradingView, and Screener to ensure accuracy and reliability.

To measure the outcomes, the analysis will focus on identifying which stocks exhibit the highest successrate and profitability following the occurrence of the rollover pattern. These metrics will then guide the determination of the best stocks for implementing the rollover strategy.

DATA COLLECTION:
The research is conducted on a selected group of stocks over the period 2018 to 2025, focusing on evaluating the predictive effectiveness of the Rollover Pattern in the Indian stock futures market. The stocks selected for analysis include Adani Enterprises (Adanients), Tata Consultancy Services (TCS), Godrej, Adani, Reliance Industries, InterGlobe Aviation (Indigo), Bajaj Finserv, Dixon Technologies, NestléIndia(Nestleind), Glenmark Pharmaceuticals, Hero MotoCorp, etc.

Historical data has been sourced from reputable financial platforms such as iCharts, TradingView.com, and Screener.in. The collected data includes the Date of the rollover pattern formation, Stock Symbol, Lot Size, Entry Price, Next Close Price, Stop Loss (SL), and Exit Price.

- The Date marks the formation of the rollover pattern.
- The Symbol identifies the listed stock under examination.
- Lot Size refers to the number of shares purchased, calculated using the formula:
Quantity = Investment Amount / Entry Price.
- The Entry Close Price is defined as the close price of the trading session immediately following the pattern formation.
- Profit/Loss is determined using the formula:
Profit = (Next Close Price – Entry Close Price) × Lot Size.
- Stop Loss (SL) is set as the lowest price between the entry low and the next day's low price.
- The Exit Price is the price at which the position is closed.

The collected data is systematically analyzed to evaluate the success rate and total profitability of the rollover strategy for each stock. Based on this analysis, the most suitable stocks for implementing the Rollover Pattern Strategy will be identified. The findings aim to provide investors with actionable insights into the reliability and profitability of applying rollover analysis in the Indian futures market.

DATA ANALYSIS
PROCEDURE FOR ANALYSIS

- Data Cleaning: Handling missing rollover data, aligning expiry dates.
- Normalization: Standardizing variables like OI % change for comparability.
- Exploratory Data Analysis (EDA): Visual trends, identifying anomalies.
- Model Building: Feeding historical data into predictive models.
- Backtesting: Comparing model predictions with actual market outcomes.
  - Profit / Loss = Quantity*(Next date Close – Entry date Close)
  - Total Trades: 4471
  - Net P&L: Rs. 71+ Lakhs Profit.

THE SELECTED GROUP OF STOCKS
THREE STOCKS

- **ADANIENT**
- **IRCTC**
- **MANAPPURAM**

Interpretation:

ADANIENT's futures attract strong institutional participation, making rollover % more reliable. The profit distribution is asymmetrical more frequent small losses and fewer but larger gains. Despite only a 51% win rate, this strategy proved profitable due to larger position sizing and favourable price momentum post-rollover. Strong performance in trending years like 2021 and 2023, where institutional rollovers were consistent. Moderate setbacks during volatile or flat markets (e.g., mid-2022 correction). ADANIENT is one of the top 3 most profitable stocks in this analysis, suggesting that it responds well to rollover signals.

Interpretation:

IRCTC is extremely well-suited for rollover-based strategies because: It has strong institutional participation during expiries. Price momentum following rollovers is more pronounced due to retail trader behavior. The P&L skew indicates a powerful risk-reward balance, where even a 52% success rate delivers outsized returns. This stock shows short-term trend continuation behavior post rollover, making it ideal for 1–2-day future trades using rollover and price strength filters. IRCTC showed peak performance in trending years such as 2021 and 2022. Due to its high retail following, IRCTC often experiences post-rollover rallies, especially near results, policy announcements, or rail budget expectations.

Interpretation:

Despite a high win ratio (62%), poor reward-to-risk ratio nullifies the edge. Manappuram's stock price movement post rollover is inconsistent, with shallow profit follow-through and deeper pullbacks. It's possible that price reacts more to news flow and macro triggers (like RBI rates, gold prices), diluting the impact of rollover signals. The stock showed intermittent profitability across years, but results were highly volatile. Best years may have been 2020–2021 when financial NBFCs rallied post-COVID stimulus measures. Underperformance likely in flat or correction phases due to high volatility and weaker institutional rollover predictability.

RESULT:

- **ADANIENT**:

The strategy yielded strong profits despite only a 51% win rate, thanks to larger gains on winners and reliable institutional rollover signals. It was among the top 3 most profitable stocks, especially in trending markets like 2021 and 2023.

- **IRCTC**:

The strategy proved highly effective, delivering outsized returns with just a 52% success rate. This was due to short-term momentum post rollover and retail-driven rallies, particularly near major events. It performed best in trending periods (e.g., 2021, 2022).

- **Manappuram**:

Despite a high win rate (62%), the overall strategy underperformed due to a poor risk-reward ratio and inconsistent price behavior post rollover. Gains were shallow and volatile, with limited edge, except during strong macro tailwinds (2020–2021).

FINDINGS:

➢ Rollover as a Predictive Tool - The rollover percentage demonstrated a statistically significant relationship with next-day futures returns. Higher rollover percentages generally correlated with positive next-day price performance.

➢ Top Performing Stocks Identified - ADANIENT, IRCTC, and MANAPPURAM emerged as the top 3 most consistently profitable stocks using the rollover-based strategy.

➢ Year-on-Year Variability - Some years (e.g., 2020 COVID crisis) showed less predictive power of rollovers due to heightened market volatility. Stable years like 2021 and 2023 showed strong profitability aligning with rollover expectations.

➢ Profitability Despite Hit Rate - Although ~48.6% of trades resulted in profits, the winning trades' average profit was higher than losing trades' average loss leading to overall profitability.

➢ Rollover Predictive Power Stronger in Trending Markets - Rollover-based strategies performed better during trending phases (bullish or bearish) than during range-bound, highly volatile markets.

➢ Consistency Among Certain Stocks - Stocks with institutional popularity and higher liquidity had more reliable rollover patterns compared to mid-cap or illiquid stocks.

SUGGESTIONS

➢ Combine Rollover Analysis with Technical Indicators - Use tools like Moving Averages, RSI, MACD along with rollover data to increase the accuracy of trade entries.

➢ Focus on High Liquidity Stocks - Limit analysis to stocks with consistently high futures open interest and turnover to avoid erratic rollover behavior.

➢ Monthly Review of Rollover Trends - Traders should re-evaluate stock lists monthly, based on the latest rollover patterns and sector rotation.

➢ Risk Management - Use strict stop-loss and position sizing rules because although the strategy is profitable overall, it has a non-trivial loss rate per trade.

➢ Automation and Real-Time Monitoring - Set up systems to capture real-time rollover data before expiry and automate alerts for abnormally high or low rollovers.

➢ Macroeconomic Context - Interpret rollover data with an understanding of broader macroeconomic conditions that may impact market sentiment.

IV.   CONCLUSION

This research study explored the effectiveness of rollover analysis as a predictive tool for identifying profitable opportunities within the Indian stock futures market. By analyzing historical data spanning from 2018 to 2025, the study offers valuable insights into how rollover patterns can influence short-term price movements and enhance decision-making for traders and investors.

The findings revealed promising results, with Adani Enterprises (ADANIENT) emerging as the most profitable stock when trades were taken based on rollover analysis in the Indian stock futures market. The rollover behavior consistently indicated a shift in market sentiment, enabling traders to identify potential upward movements effectively. By analyzing entry and next-day close prices along with lot sizes for P&L calculations, it was observed that stocks like ADANIENT demonstrated strong year-on-year profitability. This approach enhanced decision-making for traders and investors, leading to maximized returns and improved trade performance over the study period from 2018 to 2025.

Rollover analysis serves as a valuable tool for traders and investors seeking to navigate the dynamic and evolving landscape of the Indian stock futures market. By recognizing and utilizing the predictive capabilities of rollover behavior, market participants can identify potential future price movements and enhance their trading strategies. The study demonstrated that analyzing rollover patterns helps in capturing profitable opportunities, with stocks like Adani Enterprises (ADANIENT) consistently delivering strong performance. Through systematic application of rollover insights, traders and investors can strive to achieve greater profitability and success in their futures trading activities.

In conclusion, the findings and recommendations of this study emphasize the significance of rollover analysis as a predictive approach for traders and investors seeking to capitalize on directional movements in the Indian stock futures market. By analyzing rollover patterns and associated price behaviors, market participants can enhance their decision-making processes and improve profitability. The study highlights that stocks such as Adani Enterprises (ADANIENT) consistently demonstrated strong performance when trades were aligned with rollover signals. Overall, rollover analysis proves to be a valuable tool for navigating the dynamic and evolving landscape of the stock futures market, aiding traders in achieving sustained success over time.

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