



EVALUATE IPL SEASONALITY AND SPONSOR STOCK EFFECTS ON INVESTOR SENTIMENT IN INDIAN STOCK MARKET: BUSINESS INTELLIGENCE APPROACH

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ABSTRACT

The research examines the influence of the well-known Indian Premier League (IPL) on the Indian stock market and economic development. Investors are drawn to stocks that have partnerships or sponsorships with IPL teams due to investment bias. Excluded bias behaviour of stock market sentiment and investor sentiment change based on environmental factors. IPL season provides enjoyment and entertainment for viewers, but wise investors consider the conditions before making investments. Here, only NSE sector stocks that sponsored the team are sorted, and historical data of these companies is analyzed. Currently, Business Intelligence technology easily transforms unstructured data into structured data. AI examines data, streamlines patterns, magnifies understandings, and Assists data analysts effectively. Business intelligence utilizes technologies and applications to analyze raw data, converting it into valuable information for decision-making. The Power BI Project is a dynamic tool that allows for easily creating visual reports to gain insights from data. Visualizations are available for traders to examine their investments, performance measures, and assets that are not meeting expectations, as well as for conducting back testing and optimizing strategies. Investors have the ability to review the stock's performance using visual data. During the process of making investment decisions and putting together a portfolio, investors carefully analyze both technical and fundamental factors.

KEYWORDS: Stock Market, Indian Premier League, Investor Sentiment, Business Intelligence, NSE.

1. INTRODUCTION

In 2007, the BCCI introduced the Indian Premier League (IPL), a T20 cricket competition for male players. The competition has become extremely popular as time has passed. IPL has completely transformed how cricket is played and marketed. Furthermore, the IPL has a significant influence on the Indian economy in this modern T20 tournament. This competition provides a stage for cricketers from both local and foreign origins. The Indian Premier League had an important effect on the economy, tourism, digital landscape, and job market, as seen in its rapid rise in brand value and commercial appeal. Here is a complicated connection between IPL games and stock market volatility. While the tournament attracts interest and affects sentiment among investors, its influence on individual stocks and overall movements in the markets are different. Historical patterns show that market performance changes throughout a series of IPL seasons, due to factors like political winds and the COVID-19 epidemic

1.1 CONTRIBUTION TO THE ECONOMY

1.1.1. Travel and Tourism

India's tourism sector gets a major boost by the IPL. The tournament, which pulls cricket fans from across the world, promotes travel abroad and enhances demand for regional accommodation, transportation, and airfares. The swarm of visitors emphasizes the league's broad impact and helps the Indian economy side by Stock also boom volatility regarding airlines, hotels etc.



1.1.2 Empowering Start-ups

Start-ups in the IPL showcase novel ideas and cutting-edge technologies, creating jobs and promoting growth. Notable successes like My11Circle and Dream11 reflect the league's dynamic entrepreneurial ecosystem. Many Fantasy apps supports IT stocks.

1.1.3 Promo and funding

In the IPL, sponsorship and advertising flourish, capitalizing on the vast number of fans to market products and services. Companies engage with each other to sponsor championships, making use of the tournament's popularity to increase their visibility and encourage expansion. Team sponsorships, which offer brand visibility through player jerseys mentions many Listed and unlisted Indian stock market industry.

1.2 EFFECT ON THE INDIAN STOCK MARKET:

The IPL's expansion creates a strong link between cricket and the financial sector. The financial market is thrilled every year whenever the IPL season starts. In 2009, the market reported a 26% return during the IPL season. Investors in the stock market are also positive about how the Indian Premier League in present time could impact trading.

Indian companies are classified into listed and unlisted based on securities listing. Both offer unique opportunities for investors. Listed companies attract more investors. Listed company is one whose securities are traded on a recognized Indian stock exchange, following compliance with listing requirements and rules set by the exchange. An unlisted company is one whose securities are not traded on a recognized Indian stock exchange. These companies are privately held and offer unique opportunities for investors compared to public companies.

NSE	SECTOR
Mumbai Indians	
Usha Martin Ltd.	Iron & Steel Products
Astral Ltd	Plastic Products
IDFC First Bank Ltd.	Banking and Finance
Ashok Leyland Ltd.	Auto - Trucks
United Breweries Ltd	Breweries & Distilleries
Balkrishna Industries Ltd.	Auto Tyres & Rubber Products
Chennai Super Kings	
Tvs Motor Ltd	Automobile
JSW Holdings Ltd.	Finance - Investment
The India Cements Ltd.	Cement & Construction Materials
ICICI Bank Ltd	Banking And Finance
Gujarat Titans	
Balkrishna Industries Ltd.	Auto Tyres & Rubber Products
Astral Ltd	Plastic Products
Equitas Small Finance Bank Ltd.	Banking and Finance
One97 Communications Ltd	Software & Services
Kolkata Knight Riders	
Capri Global Capital Ltd.	Banking and Finance
Philips	Unlisted
Balkrishna Industries Ltd.	Auto Tyres & Rubber Products
JSW Holdings Ltd.	Investment
Jio Financial Services	Finance services
Punjab Kings	
Balkrishna Industries Ltd.	Auto Tyres & Rubber Products
Astral Ltd	Plastic Products
One97 Communications Ltd	Software & Services
Jio Financial Services	Finance services
Lucknow Super Giants	
Balkrishna Industries Ltd.	Auto Tyres & Rubber Products
Astral Ltd	Plastic Products
SBI General Life insurance	Unlisted
Jio Financial Services	Finance services

Rajasthan Royals	
Balkrishna Industries Ltd.	Auto Tyres & Rubber Products
Jio Financial Services	Finance services
Schneider Electric Infrastructure	Electric Equipment
Easy Trip Planners Ltd.	Travel Services
Royal Challengers Bangalor	
KEI Industries Ltd.	Cables
Jio Financial Services	Finance services
Delhivery Ltd	Courier Services
Kotak Mahindra Bank	Banking and Finance
Titan Company Ltd.	Diamond & Jewellery
ITC Ltd	FMCG
Sunrisers Hyderabad	
Balkrishna Industries Ltd.	Auto Tyres & Rubber Products
Philips	Unlisted
Jio Financial Services	Finance services
Delhi Capitals	
Hero Fincorp	Unlisted
Jio Financial Services	Finance services
One97 Communications Ltd	Software & Services

Table.1. IPL Team wise Stocks Companies

Above mention table shown In the IPL, sponsorship listed and unlisted stocks companies from Indian stock market. Table mentioned text has colorful which indicated IPL team jersey.

1.3 THEORETICAL FRAMEWORK

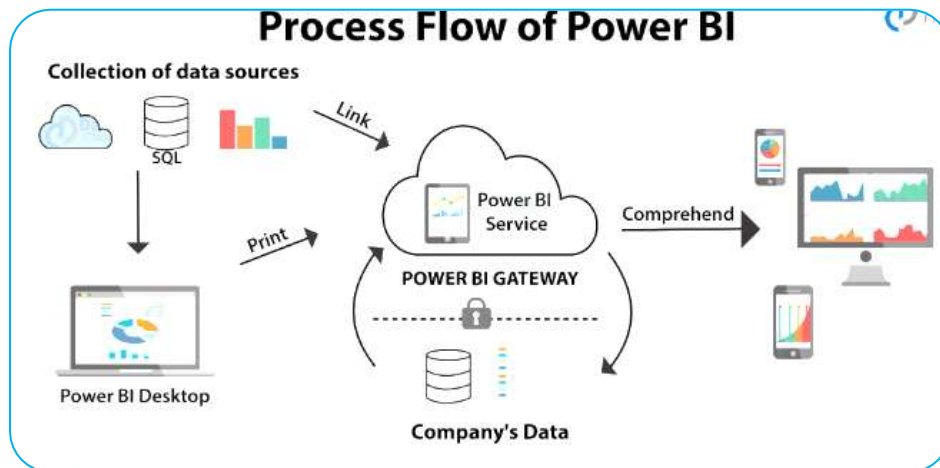


Fig 1: Source: Data fair

1.3.1 Definition of Business Intelligence

BI's origins can be dated back to the 1960s, when companies began utilizing computer systems for streamlining tasks and storing information. Contemporary BI systems include functions like real-time analytics, data visualization, and mobile access. Business intelligence (BI) involves technologies, applications, and practices that gather, evaluate, and display business data to aid organizational decision-making. It includes collecting data from different sources, converting it into valuable insights, and displaying it in a manner that supports efficient decision-making.

Power BI is a service that provides business analytics. Developed by Microsoft. Users can create interactive content with this tool. Dashboards and reports in order to acquire valuable information. Information collected. Power BI is extensively utilized in various sectors because due to its seamless connection to other Microsoft services and applications its interface that is easy for users to navigate. (Parthe, R. M. 2023). The significance of Business Intelligence (BI) in capital markets investment decisions cannot be emphasized enough. The center of the true power

of Business Intelligence (BI) is its incredible capacity to convert unprocessed data into valuable knowledge. Business intelligence is crucial for helping companies make financial decisions, managing human resources and information technology, and improving decision-making based on data. It helps control risks, maximize portfolios, ensure adherence, and enhance customer experiences, ultimately leading to higher profits and success in financial markets (Zhang, X. 2024).

1.3.2 Importance of Business Intelligence in Stock Market:

BI tools offer organization functions by gathering and studying data from different sources. Save time, money, and improving efficiency through accurate performance information, business intelligence supports informed decision-making for ongoing process enhancements and improved outcomes. Analyzing historical data and market trends helps identify trends and predict future market conditions. Business intelligence allows organizations to gain insights into competitors' activities. Predictive analytics can spot emerging trends or opportunities that others may miss. By recognizing areas where the market lacks products or services meeting investor's demands, you can create original solutions before your rivals.

1.3.3 Stock Data and Portfolio Tracking of Investor: The Stock Market Analysis with

Power BI is an innovative tool for contemporary financial analysis. It transforms unprocessed information into useful intelligence, enabling financial experts to improve their examination, elevate decision making, and synchronize their plans with market trends. Sarah's ability to utilize the dashboard demonstrates the significance of utilizing data-driven market analysis. Create a Stock Market Analysis Dashboard in Power BI to maximize the effectiveness of your market analysis endeavors. By utilizing data-driven insights, investor can enhance strategies and increased financial success.

1.3.4 Analysis of the stock market using PowerBI



The stock market data is constantly being updated, so it is essential to have the most recent or real-time information for data analysis.

a) **Data Preparation (Gather):** The initial stage of the BI procedure is to gather pertinent information from different sources like databases, spreadsheets, cloud computing services, or external systems. This information may encompass sales data, customer details, financial records, website analytics, or any other relevant business data.

b) **Data integration (Prepare):** Once the data is gathered, it must be integrated and consolidated into a central repository to provide a unified view. This integration ensures that data from different sources can be analyzed together, allowing for comprehensive business analysis.

c) **Data Visualization & Reports:** Companies use data visualization methods to effectively convey insights obtained from data analysis. Graphics, like charts, graphs, dashboards, or reports, help decision-makers grasp complex information quickly. Transparent and easy-to-understand visualizations allow stakeholders to recognize trends, patterns, and anomalies and choose actions based on data.

d) **Data analysis:** The essence of business intelligence is in examining data to uncover valuable insights. Different methods of analysis, like statistical analysis, data mining, and machine learning, are utilized to reveal patterns, trends, correlations, and connections found in the data. This evaluation assists in recognizing essential performance indicators (KPIs) and measurements that align with business objectives.

e) **Dashboards:** The Power BI dashboard is restricted to a single page, showcasing only the key points of a narrative. Each dashboard features visual representations derived from individual reports, with each report linked to a specific dataset. The tiles on the dashboard are visualizations that report designers pin to the dashboard.

f) **Result:** By analyzing and visualizing the data, stakeholders can make well-informed business decisions. They have the ability to pinpoint areas for enhancement, assess performances in comparison to goals, recognize shifts in the market, comprehend customer actions, enhance operations, and plan for upcoming strategies.



2. LITERATURE REVIEW

Kumar, A., & Lee, C. M. C. (2006) the study examined the impact of retail investor trading on stock returns and volatility change trade direction. Based on studies, variations in retailer sentiment at the portfolio level may have an impact on stock returns. The power of retail investor sentiment, a systematic aspect of buying and selling, was explained by return movement. Retail sentiment change for a stock basket is calculated with a BSI the metric system for different stock portfolios.

Asha, T. (2014) this study evaluates technical analysis from an Indian perspective and determines its stock market utility. There are two types of strategies: fundamental and technical to analyses price movements. Technical analysis uses prices in the past and security trading summary statistics to predict future prices. The study results revealed on base of market indicators, chart patterns, line studies.

L.R. & N V, D. M. K. (2018) this research technical analysis is financial market knowledge. It analyses a stock's historical price to forecast its future price. The study examined 12 selected companies from 4 industries' one-year and weekly base pricing data. Research design employing descriptive research, sampling size, statistical methods, and RSI calculation.

Al Warmouth, B., Fraihat, S., & Computer Science Department, King Hussein School of Computing Sciences, Princess Sumaya University for Technology. (2019)The framework aims to assist investors in making trading decisions using historical stock market data. It analyzes attributes of various companies to improve timing of buying and selling stocks, minimize financial risks, and discover trends, seasonal patterns, and random fluctuations through techniques like descriptive statistics and visualization methods.

Bhatia, A. (2021) the study was carried out to evaluate how charting patterns and candlesticks function for small and midcap firm stocks. The study compares various charting patterns, such as Japanese candlestick patterns and typical price patterns, to specific corporations. The research employed market capitalization-based sampling. Three midcap and small size organizations were chosen for the investigation. With a 75% success rate, the sample included 16 patterns (11 Japanese candlestick patterns and 5 classical price patterns). Price forecasting and decision-making by investors and traders.

Kumanireng, A. (2023) this study illuminates essential analysis approaches like, Technical and fundamental. Technical indicators and chart patterns forecast price movements and Fundamental analysis covers economic conditions, government policies, and industrial changes and externalities. The Market sentiment and economic policies or factors can also affect stock values along with investors make sensible investments.

Shah, S., Sharma, S., Kokane, R., & Shinde, M. (2023) Power BI for stock market analysis: connects to data sources, transforms and models data, creates interactive visualizations and reports. Generates user-friendly dashboards for trend analysis, plots historical data with real-time data to facilitate comparisons over different time periods. The Proposed method concluded to give users the tools needed to make smart investment choices and develop successful trading plans through a user-friendly solution that analyzes past and current stock data thoroughly.

Sen, S., & Kayal, P. (2020) Research examines how IPL match wins affect major sponsors' stock returns during 2014-2017 using event study method. It calculates abnormal and cumulative abnormal returns to determine the influence of match outcomes on sponsors' stocks. The paper emphasized the positive response of sponsors' cumulative abnormal returns (CAR) to the success of the teams they sponsor, highlighting the advantages sponsors receive from their sponsored teams' victories and underscoring the beneficial effect of affiliations with significant sports events on investors' emotions.

Zhang, X. (2024)Business Intelligence enhances decision support and risk management.BI enhances decision-making and risk management in investments.Data-driven approaches improve capital market operations and investment efficiency.the gap of study was Lack of empirical data on BI effectiveness in investments along with Limited exploration of user experience with BI systems.methods has been used to research Automated investment management through algorithms.



3. METHODOLOGY

3.1 Dataset

The data collected from Yahoo finance historical data of 1 year i.e. 01/04/2023 to 31/03/2024 only.

3.2 Secondary Data

The below given data analyzed using Power BI tool. Total number of companies are 21. some companies repetitively of team sponsorship so once time sored given table.

Sr.no	Name of stock	Sr.no	Name of Stock
1	Usha Martin Ltd.	11	Equitas Small Finance Bank Ltd.
2	Astral Ltd	12	One97 Communications Ltd
3	IDFC First Bank Ltd.	13	Capri Global Capital Ltd.
4	Ashok Leyland Ltd.	14	Jio Financial Services
5	United Breweries Ltd	15	KEI Industries Ltd.
6	Balkrishna Industries Ltd.	16	Delhivery Ltd
7	Tvs Motor Ltd	17	Kotak Mahindra Bank
8	JSW Holdings Ltd.	18	Titan Company Ltd.
9	The India Cements Ltd.	19	ITC Ltd
10	ICICI Bank Ltd	20	Schneider Electric Infrastructure
		21	Easy Trip Planners Ltd.

Table.2. sector wise NSE listed stocks

The research result mention one time figure window given below total 21 companies wise candlestick pattern resulted on one year historical data. Study purpose result data comes under technical analysis that historical data shifted using Power Bi tool.



4. EXPERIMENTAL RESULTS

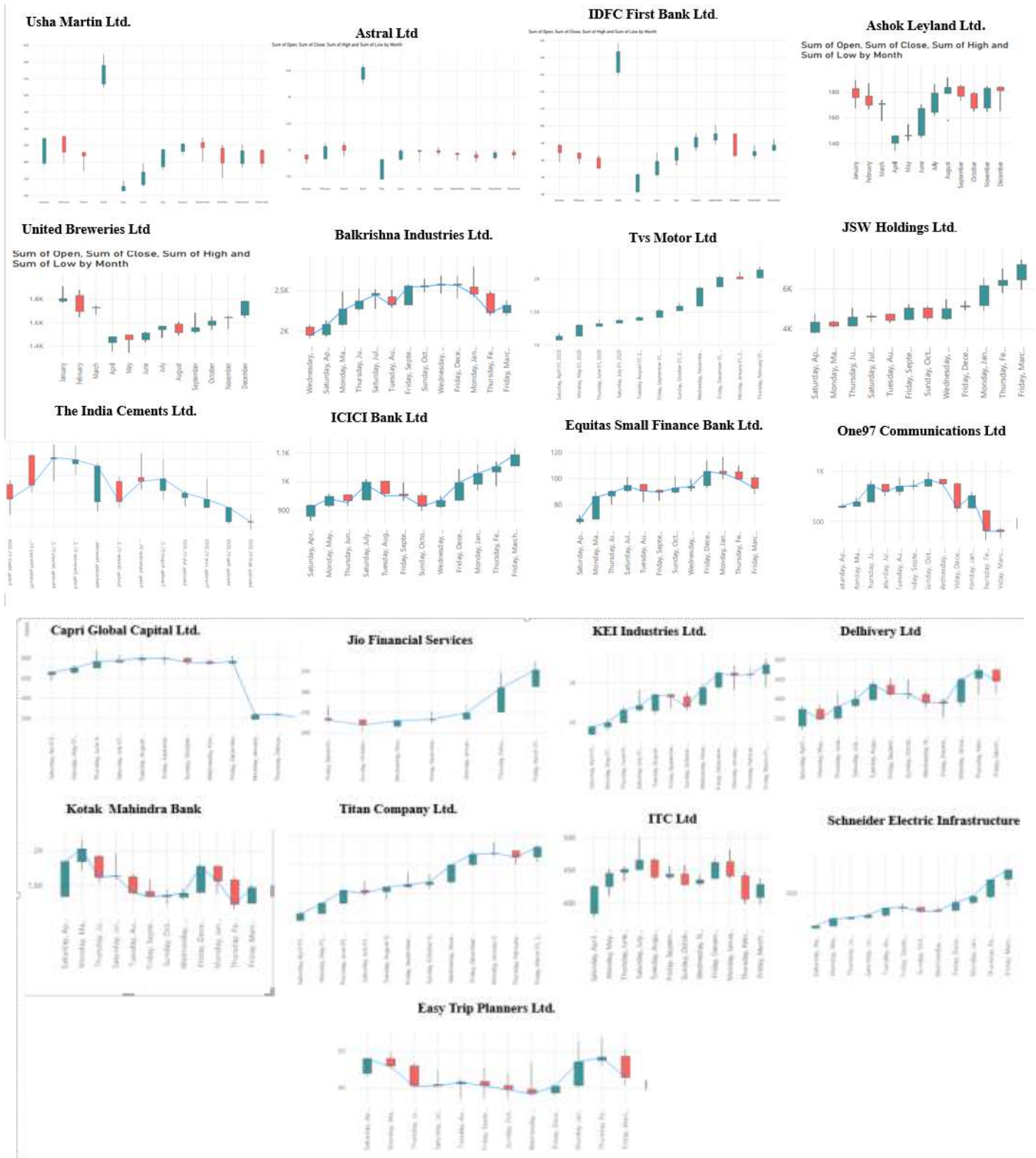


FIGURE 2: STOCKS RESULT ANALYSIS (2023 -2024)



The study's result analysis above utilizes a monthly time frame for candlestick patterns. In general, candlesticks use color to indicate market sentiment: Green for bullish and Red for bearish. Especially study focused only Indian premier league sponsored company's stock has experimented.

5. OBJECTIVES OF STUDY

1. To study of various sectors stocks sponsors to IPL teams
2. the use of the business intelligence tool Microsoft Power BI to contribute to the best decision making in stocks
3. To study market sentiment and investor sentiment
4. To analyze one year's historical data NSE listed companies
5. To find technical analysis candlestick pattern result with using tool power BI.

6. CONCLUSION

Investor sentiment & emotional bias effect on investment decision is one of most important part to generate economic development of Indian economy. Investor get it an opportunity while season comes to build wealth from stock market. Study analyzed historical data result convert into technical candlesticks .Green candle are bullish and Red are candles bearish. Limitation of study is it covered only March 2023 to April 2024 monthly time frame. Business Intelligence importance increased day by day in financial services. Investor emotions or sentiments has changed as per events they changed financial decisions so various events made portfolio of retail investor in stock market. Here, business intelligence using this tool investor easily track his or portfolio made self-monitoring dashboard.

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