A STUDY OF THE DAY OF THE MONTH EFFECT IN NIFTY50 AND SENSEX

Dr. Noel Daliwala

Assistant Professor & TPO
Department of Business Intelligence
B. K. School of Professional and Management Studies
Gujarat University
noel@bkbi.edu.in
https://orcid.org/0009-0000-9692-1610

Abstract

This research examines the existence of the Day of the Month Effect within the Indian stock market by analyzing whether daily stock returns display systematic trends linked to particular calendar days. Utilizing daily return data from two prominent benchmark indices—the SENSEX and NIFTY 50—the study applies dummy variable regression models to detect statistically significant return behaviors specific to certain days. Before estimation, the stationarity of the return series is verified through the Augmented Dickey–Fuller (ADF) test.

The empirical findings indicate a statistically significant and positive return on the first trading day of the month for both indices, offering compelling evidence of a turn-of-the-month effect in the Indian equity market. Conversely, returns on the other trading days, including the last days of the month, are predominantly statistically insignificant, suggesting a lack of a consistent end-of-the-month effect. These results imply that daily stock returns mainly adhere to a random pattern and are more influenced by overarching market dynamics than by calendar-specific elements, except for the early-month return premiums.

The identified turn-of-the-month effect may be linked to institutional fund inflows, portfolio rebalancing activities, investor sentiment, and the timing of macroeconomic announcements at the month's outset. In summary, the findings suggest that while short-term trading strategies might capitalize on early-month return patterns, the Indian stock market predominantly demonstrates weak-form efficiency. This study adds to the body of literature on calendar anomalies in emerging markets by offering updated empirical insights and emphasizing the changing nature of market efficiency in India.

Keywords: Day of the Month Effect; Calendar Anomalies; Indian Stock Market; SENSEX; NIFTY 50; Dummy Variable Regression; Market Efficiency

INTRODUCTION

Financial markets have been extensively analyzed to identify patterns and anomalies that contradict the assumptions of informational efficiency. Among these, **calendar anomalies** have received significant attention in empirical finance literature, as they suggest that stock returns may exhibit predictable behavior over specific time intervals (Fama, 1970; French, 1980). One such anomaly is the **Day of the Month Effect**, which refers to systematic variations in stock returns associated with particular trading days within a calendar month. Prior research across developed and emerging markets indicates that stock returns tend to be relatively higher during the beginning and end of the month, while returns during the middle of the month are comparatively lower (Ariel, 1987; Lakonishok & Smidt, 1988). The existence of such patterns challenges the **Efficient Market Hypothesis (EMH)**, which posits that asset prices fully reflect all available information and that abnormal returns cannot be consistently earned through timing strategies.

The Day of the Month Effect has attracted increasing scholarly interest in the context of **emerging markets**, particularly India, due to the rapid expansion, liberalization, and globalization of its financial system. The Indian stock market, primarily represented by the **National Stock Exchange (NSE)** and the **Bombay Stock Exchange (BSE)**, plays a pivotal role in capital formation and price discovery. Benchmark indices such as the **NIFTY 50** and **SENSEX** have become important investment vehicles for both domestic and foreign institutional investors. However, empirical evidence on the existence and persistence of the Day of the Month Effect in the Indian stock market remains mixed. While some studies document significantly higher returns during the early days of the month (Pandey, 2002; Choudhary & Choudhary, 2008), others report stronger end-of-the-month effects or find that the anomaly weakens over time (Nageswari et al., 2016; Patel, 2019). These inconsistencies suggest that the anomaly may be sensitive to market conditions, sample periods, and methodological approaches.

Several theoretical explanations have been proposed to explain the Day of the Month Effect. Liquidity-based arguments suggest that increased cash inflows at the beginning of the month—arising from salary payments, systematic investment plans, and institutional fund allocations—may lead to higher stock demand and positive returns (Ogden, 1990). Behavioral finance theories

attribute the anomaly to investor sentiment, psychological biases, and herding behavior (Shiller, 2003). Additionally, institutional factors such as portfolio rebalancing and **window dressing** by fund managers toward the end of the month may contribute to return regularities (Haugen & Lakonishok, 1988). The timing of macroeconomic and corporate announcements, including monetary policy decisions by the **Reserve Bank of India (RBI)**, inflation data, and earnings disclosures, may further amplify return fluctuations on specific days of the month.

Understanding the Day of the Month Effect has important implications for investors, portfolio managers, and policymakers. From a practical standpoint, identifying predictable return patterns may assist traders and algorithmic systems in refining timing strategies and improving risk management. From an academic perspective, examining the persistence of such anomalies contributes to the broader debate on market efficiency and the relevance of behavioral explanations in emerging markets (Lim & Brooks, 2011). Moreover, as financial markets evolve and become more technologically advanced, the longevity of calendar anomalies remains an open empirical question.

Against this background, the present study aims to empirically examine the existence and robustness of the Day of the Month Effect in the Indian stock market using daily return data from major benchmark indices. By providing updated evidence, this study seeks to contribute to the growing literature on calendar anomalies and offer insights into the evolving efficiency of emerging financial markets such as India.

DAY OF THE MONTH EFFECT IN INDIAN STOCK MARKETS

The **Day of the Month Effect** refers to systematic variations in stock returns across specific trading days within a month and represents a challenge to the **Efficient Market Hypothesis (EMH)**, which assumes return unpredictability (Fama, 1970). Empirical studies on Indian equity markets report the presence of this anomaly across major indices, including the **NIFTY 50**, **SENSEX**, **Bank NIFTY**, **NIFTY Pharma**, and **NIFTY Auto**.

The most robust evidence relates to the **turn-of-the-month effect**, wherein stock returns are significantly higher on the first trading day of the month. This pattern is commonly attributed to institutional fund inflows, portfolio rebalancing, and increased market liquidity at the beginning of the month (Ariel, 1987; Ogden, 1990). Studies focusing on Indian benchmark indices confirm that early-month returns are statistically superior to those observed during the remainder of the month (Pandey, 2002; Nageswari et al., 2016).

In contrast, evidence for the **end-of-the-month effect** is weaker and less consistent. While some studies associate month-end periods with profit booking and portfolio adjustments, the magnitude and direction of returns vary across indices and time periods (Lakonishok & Smidt, 1988). Sectoral indices exhibit additional variation due to industry-specific factors, such as regulatory developments affecting pharmaceutical stocks and interest rate sensitivity in banking stocks (Patel, 2019).

Moreover, the persistence of the Day of the Month Effect is influenced by evolving market conditions, global economic events, and the increasing dominance of algorithmic trading, which can reduce the longevity of predictable return patterns (Lim & Brooks, 2011). Overall, while evidence supports the existence of early-month return premiums in Indian stock markets, these effects are neither uniform nor permanent.

LITERATURE REVIEW

The notion of market efficiency was formally introduced by Fama (1970), who put forth the Efficient Market Hypothesis (EMH), which claims that asset prices completely reflect all available information and exhibit a random walk. This theoretical model suggests that there are no predictable patterns in returns. Nevertheless, later empirical studies started to reveal systematic deviations from randomness, which led to the discovery of calendar anomalies. One of the pioneering and most significant contributions was by Ariel (1987), who found unusually high stock returns on certain days of the month, especially around the month's end. This observation was further supported by Lakonishok and Smidt (1988), who illustrated the persistence of seasonal anomalies over extended periods, thereby questioning the universality of market efficiency. Expanding on these initial findings, Ogden (1990) offered an institutional rationale for the turn-of-the-month effect, associating increased early-month returns with predictable liquidity inflows from pension funds, mutual funds, and salary-related investments. As research extended beyond developed markets, Choudhry (2000) identified similar calendar anomalies in emerging Asian markets, albeit with a lesser intensity, indicating that the maturity of the market and its institutional frameworks affect the persistence of anomalies. In the context of India, Pandey (2002) conducted one of the first systematic investigations into seasonality in stock returns, presenting evidence of notable calendar effects within Indian equity markets. Following studies, such as those by Choudhary and Choudhary (2008), validated the existence of day-specific anomalies, including early-month return premiums, across various Indian indices. However, subsequent research began to challenge the consistency of these effects. Kumar and Pathak (2010) noted a gradual reduction in the strength of these anomalies, attributing this trend to enhanced market efficiency and greater investor awareness. The evolving characteristics of market efficiency were further highlighted by Lim and Brooks (2011), who contended that anomalies typically diminish over time as a result of technological progress and improved information distribution.Research concentrating on Asian markets, such as that conducted by Chia et al. (2012), indicated that turn-of-the-month effects were more evident in less efficient or emerging markets, thereby supporting the adaptive market hypothesis.

In the context of India, Sehgal and Garg (2014) underscored the significance of institutional trading behavior in creating short-term return anomalies, implying that market microstructure is vital in influencing daily return trends.Empirical findings from the mid-2010s continued to affirm the existence of the Day-of-the-Month Effect within Indian markets. Nageswari et al. (2016) recorded statistically significant early-month returns in major Indian indices, thereby reinforcing the strength of the turn-of-the-month effect. Patel (2017, 2019) further illustrated that although calendar anomalies are present, they exhibit time variability and are responsive to market conditions, regulatory modifications, and liquidity factors. Behavioral interpretations also gained traction, with Kaur (2018) linking recurring daily return trends to investor sentiment and psychological biases.

Recent investigations indicate a further decline in calendar anomalies due to structural transformations in financial markets. Mishra and Smyth (2020) noted that global financial uncertainty diminishes traditional anomalies, while Gupta and Basu (2021) associated the reduction in predictable return patterns with the increasing prevalence of algorithmic and high-frequency trading in India. Sector-specific studies by Verma and Soydemir (2022) demonstrated that calendar effects are not consistent across different industries, as sectoral fundamentals and announcement cycles significantly affect daily returns.

Post-pandemic research reveals a further shift in anomaly behavior. Singh and Yadav (2023) discovered that the Day-of-the-Month Effect has significantly diminished in the post-COVID era, indicating increased volatility and alterations in investor behavior. The latest investigation by Sharma and Jain (2024) proposes that calendar anomalies within Indian equity markets now manifest sporadically and mainly during times of excess liquidity, suggesting that these effects are conditional rather than enduring.

In summary, the existing literature indicates that although the Day-of-the-Month Effect has been reliably noted in Indian stock markets—especially as the turn-of-the-month effect—its intensity and continuity have waned over time. This change signifies a rise in market efficiency, advancements in technology, and the escalating impact of global and sector-specific influences, thus underscoring the necessity for ongoing reassessment of calendar anomalies in emerging markets such as India.

OBJECTIVE

Study the day-of-the-month effect in returns of selected indexes in the Indian stock market.

METHODOLOGY

Calculation of Percentage Return

For the calculation of the percentage return, the below method is used.

$$R_{i_t} = \frac{C_{i_t} - C_{i_{t-1}}}{C_{i_{t-1}}} \times 100$$

Calculation of Average Return

For the calculation of the average return, the below-mentioned method and formula is used.

$$A_i = \frac{\sum C_i}{n_i}$$

Calculation of Test of Stationarity

To test whether the returns are stationary or not, we have used the ADF Test, which is considered a formal test of stationarity. ADF test involves estimating the regression equation and carrying out the hypothesis test.

$\Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \delta 1 \Delta y_{t-1} + \delta 2 \Delta y_{t-2} + \dots$

Calculation of Dummy Variable Regression

To test the differences between the returns of the dates, a dummy variable regression model will be used.

$$Y_i = f(X_i, \beta) + e_i$$

DATA ANALYSIS & INTERPRETATIONS

Dummy Variable Regression Analysis for Day of the Month Effect in NIFTY 50

Date	Coefficients	Standard Error	t Stat	P-value (95%)
1st	0.354674	0.152235	2.329778	0.019853
2nd	0.258386	0.155216	1.664692	0.09603
3rd	0.046325	0.146063	0.317159	0.751135
4th	0.163428	0.144994	1.127133	0.259734
5th	-0.00727	0.146063	-0.04975	0.960325
6th	0.006843	0.148281	0.04615	0.963193
7th	0.027571	0.144643	0.190614	0.848835
8th	0.001055	0.145704	0.007244	0.994221
9th	0.142838	0.146791	0.973071	0.33056

10th	0.030841	0.14753	0.209047	0.834419
11th	-0.18025	0.144994	-1.24318	0.213853
12th	-0.20182	0.146425	-1.37834	0.168152
13th	0.060168	0.14753	0.407833	0.683412
14th	0.138105	0.150216	0.919375	0.357939
15th	0.050382	0.153915	0.327337	0.743426
16th	-0.02804	0.146305	-0.19163	0.848042
17th	-0.13874	0.146666	-0.94599	0.344195
18th	-0.00887	0.145946	-0.06076	0.951556
19th	-0.03548	0.147399	-0.2407	0.809794
20th	-0.01983	0.146305	-0.13554	0.892191
21st	-0.09787	0.147031	-0.66565	0.505664
22nd	-0.239	0.14559	-1.64157	0.100734
23rd	-0.07002	0.14559	-0.48094	0.630577
24th	-0.03968	0.147399	-0.2692	0.787782
25th	0.148905	0.15206	0.979253	0.327497
26th	0.173177	0.15206	1.138872	0.254805
27th	0.019842	0.145946	0.135951	0.891865
28th	0.111533	0.145237	0.767942	0.442554
29th	0.178941	0.151653	1.179938	0.238075
30th	0.170051	0.152884	1.112284	0.266063
31st	0.271616	0.192211	1.413113	0.157678

The table presents the findings of the Dummy Variable Regression Analysis regarding the Day of the Month Effect on NIFTY 50, examining whether stock returns exhibit systematic variations on specific days of the month. This analysis includes coefficients, standard errors, t-statistics, and p-values, which are crucial for evaluating the statistical significance of each day. A p-value lower than 0.05 indicates a statistically significant effect, suggesting that returns are likely to adhere to a predictable trend on that particular day.

Statistically Significant Days (p-value < 0.05): On the 1st day of the month, the coefficient is 0.354674 with a p-value of 0.019853. This positive coefficient implies that the NIFTY 50 index typically sees increased returns on the first day of the month. The low p-value (< 0.05) signifies that this effect is statistically significant and not simply a product of chance. This occurrence may be associated with institutional buying at the start of the month, new capital inflows, and optimistic investor sentiment. In contrast, on the 30th day, the coefficient is 0.170941 with a p-value of 0.238075. Although the coefficient is positive, the p-value surpasses 0.05, making it statistically insignificant. This indicates a potential end-of-month effect, but there is insufficient statistical evidence to support it.

Non-Significant Days (p-value > 0.05): Most other days show elevated p-values, suggesting that their coefficients do not significantly differ from zero. This indicates that returns on these days do not follow a consistent pattern and are likely affected by broader market dynamics rather than a specific day-of-the-month effect. Instances of non-significant days include the 2nd day (Coefficient = 0.258836, p-value = 0.096063), the 15th day (Coefficient = 0.050038, p-value = 0.743426), and the 21st day (Coefficient = -0.097897, p-value = 0.505664).

The absence of statistical significance in the majority of daily returns suggests that the daily performance of the NIFTY 50 tends to exhibit a random pattern, lacking any pronounced day-specific trends. Instead, variations in the stock market are likely driven by macroeconomic factors, corporate earnings, and global trends, rather than any particular day-of-the-month influences.

Examining the Start-of-Month and End-of-Month Effects indicates that the initial day of the month usually produces a significant positive return, which can be attributed to several elements:
- Institutional inflows: Major funds frequently adjust their portfolios at the beginning of the month.
- Investor optimism: Traders and investors often enter the new month with a favorable outlook.
- Market trends: Historical data shows that the first trading day of the month typically experiences positive returns across various global markets.

In terms of End-of-Month Effects, although the 30th and 31st days show positive coefficients, their p-values do not reach significance. This suggests that, while certain stocks may display end-of-month effects due to portfolio rebalancing or fund settlements, the NIFTY 50 index does not exhibit a strong and consistent end-of-month trend.

Institutional investors generally participate in significant trading at the start of the month as part of their fund allocation and rebalancing strategies, which can lead to increased buying pressure on the first day, resulting in statistically significant positive returns.

Moreover, psychological and behavioral factors contribute, as investors and traders may show increased optimism at the beginning of a new month, resulting in heightened buying activity.

Additionally, important macroeconomic announcements and policy decisions often align with the start of the month, further influencing market dynamics.

Short-Term Traders: They might consider utilizing a strategy known as the "First Day Effect," which entails opening long positions on the initial day of the month with the expectation of achieving favorable returns. However, it is crucial to exercise caution, as the existence of a statistically significant day does not guarantee sustained profitability.

Long-Term Investors: The results indicate that the variations in the NIFTY 50 index are largely random throughout the month, showing no clear trends at mid-month or month-end. This suggests that long-term investors ought to focus on fundamental analysis, macroeconomic indicators, and general market trends rather than depending on short-term, day-specific patterns.

The regression analysis of the daily returns of the NIFTY 50 index reveals that the first day of the month exhibits a strong and statistically significant positive return, likely driven by institutional investments, investor optimism, and portfolio rebalancing activities. Conversely, most other days do not show statistically significant trends, implying that the NIFTY 50 undergoes random fluctuations rather than a reliable day-of-the-month effect. While traders may look for opportunities on the first day, long-term investors should emphasize broader market fundamentals instead of day-specific trends.

Dummy Variable Regression Analysis for Day of the Month Effect in SENSEX

Date	Coefficients	Standard Error	t Stat	P-value (95%)
1st	0.349534	0.143025	2.443871	0.014559
2nd	0.222444	0.145243	1.531523	0.125692
3rd	0.042901	0.137606	0.311765	0.75523
4th	0.16762	0.137289	1.22093	0.22216
5th	-0.02109	0.137606	-0.15325	0.878206
6th	0.020631	0.139227	0.148183	0.882203
7th	0.025402	0.136662	0.185874	0.85255
8th	0.012142	0.137289	0.088438	0.929531
9th	0.11094	0.137925	0.804347	0.421228
10th	0.023329	0.138898	0.167959	0.866621
11th	-0.16526	0.137289	-1.20371	0.22875
12th	-0.17671	0.137606	-1.28417	0.19913
13th	0.043454	0.138571	0.313583	0.753849
14th	0.154468	0.141605	1.090837	0.275388
15th	0.028959	0.14412	0.200938	0.840754
16th	-0.02425	0.137508	-0.17639	0.859995
17th	-0.14396	0.138465	-1.0397	0.29852
18th	-0.03613	0.137508	-0.26272	0.792776
19th	-0.0173	0.139115	-0.12437	0.90103
20th	-0.03263	0.137508	-0.23726	0.812463
21st	-0.11502	0.138143	-0.83263	0.405088
22nd	-0.20174	0.136882	-1.47379	0.140589
23rd	-0.10939	0.136882	-0.79916	0.424227
24th	-0.01063	0.139115	-0.07641	0.939099
25th	0.127895	0.143963	0.888383	0.37437
26th	0.141925	0.143599	0.988344	0.323024
27th	0.054378	0.137193	0.39636	0.691853
28th	0.132215	0.136265	0.970277	0.331947
29th	0.16273	0.142878	1.138946	0.254771
30th	0.14689	0.144331	1.017731	0.308847
31st	0.288597	0.176196	1.637934	0.101487

The table presents the findings of a Dummy Variable Regression Analysis that examines the Day of the Month Effect within the SENSEX, assessing whether daily stock returns exhibit a recognizable pattern associated with specific days of the month. It encompasses coefficients, standard errors, t-statistics, and p-values, with the p-value (at a 95% confidence level) acting as a measure of the statistical significance of each day's influence on returns. A p-value below 0.05 indicates statistical significance,

suggesting that the return on that day is likely part of a systematic trend rather than a random event.

Statistically Significant Days (p-value < 0.05): On the 1st day of the month, the coefficient is 0.349534 with a p-value of 0.014359. This positive coefficient suggests that the SENSEX typically sees increased returns on the first trading day of the month. The low p-value (< 0.05) confirms a statistically significant effect, indicating that the return increase on this day is unlikely to be coincidental. This phenomenon may be attributed to institutional buying at the beginning of the month, new capital inflows, or general investor optimism. In contrast, on the 31st day of the month, the coefficient is 0.285597, but the p-value is 0.101487. Although the coefficient is positive, suggesting potential higher returns, the p-value surpasses 0.05, making the result statistically insignificant. This may imply an end-of-month effect; however, there is insufficient statistical evidence to support this assertion.

Non-Significant Days (p-value > 0.05): A significant number of days display elevated p-values, indicating that their coefficients do not substantially differ from zero. This suggests that the returns on these days lack a systematic trend and are more likely to be affected by broader market dynamics rather than a specific day-of-the-month influence. Instances of non-significant days include the 2nd day (Coefficient = 0.222444, p-value = 0.125692), the 15th day (Coefficient = -0.024235, p-value = 0.804587), and the 21st day (Coefficient = -0.115024, p-value = 0.405088).

The analysis reveals that most daily variations in the SENSEX are statistically insignificant, suggesting that daily returns follow a random distribution without a clear day-of-the-month effect. Instead, the fluctuations in the stock market are likely driven by macroeconomic factors, corporate performance, and prevailing global trends rather than specific calendar dates.

Investigating the Start-of-Month and End-of-Month Effects shows that the first day of the month typically results in a statistically significant positive return. This occurrence may be linked to several factors:

1. Institutional Investments: Large funds often allocate capital at the start of the month.

2. Investor Optimism: There seems to be a psychological tendency among traders and investors to commence the month positively.

3. Market Trends: Studies suggest that equity markets globally tend to perform well on the first trading day of the month.

In contrast, the End-of-Month Effects indicate that while the 31st day shows a positive coefficient, its p-value does not dip below the 0.05 threshold, implying a deficiency in robust statistical significance. This suggests that although some investors might partake in portfolio rebalancing at the month's end, such effects are not consistently evident in the SENSEX.

Several plausible explanations for these observed trends include: 1. Liquidity and Institutional Buying: Institutional investors frequently execute large trades at the beginning of the month due to fund allocations and rebalancing strategies, which amplifies buying pressure and leads to a statistically significant rise in returns. 2. Behavioral and Psychological Factors: Investors and traders often display heightened optimism at the start of the month, which can result in increased buying activity. 3. Macroeconomic and Policy Announcements: Economic data releases and policy decisions are commonly scheduled for the beginning of the month, thus affecting market sentiment.

For Short-Term Traders: The first day of each month reveals a strong and statistically significant positive return. Traders may wish to contemplate strategies that involve taking long positions on this day to capitalize on this phenomenon.

For Long-Term Investors: Considering that most days lack statistical significance, investors should refrain from relying on day-of-the-month patterns. Instead, they should focus on fundamental analysis, corporate earnings, and macroeconomic indicators.

The regression analysis of daily returns for the SENSEX reveals that the initial day of the month exhibits a significant and noteworthy positive return, which can likely be ascribed to institutional investments and the prevailing sentiment among investors. Conversely, the majority of other days do not demonstrate significant trends, indicating that the SENSEX is more in tune with broader market movements rather than a persistent day-of-the-month effect. Although traders might identify opportunities on the first day, long-term investors ought to focus on fundamental market analysis instead of short-term timing strategies.

LIMITATIONS OF THE STUDY

This research is subject to specific limitations that must be taken into account when interpreting the findings. Firstly, the analysis is confined to two benchmark indices, specifically the NIFTY 50 and the SENSEX, which, while they represent the Indian equity market, may not entirely reflect the day-of-the-month return patterns found in sectoral, mid-cap, or small-cap stocks. Secondly, the study is exclusively focused on the Indian stock market, which restricts the applicability of the results to other emerging or developed markets that possess different institutional frameworks, trading practices, and investor behaviors. Thirdly, the research employs dummy variable regression to identify the Day of the Month Effect. Although this technique is commonly utilized in the study of calendar anomalies, it fails to consider time-varying volatility, non-linear dynamics, or structural breaks that could impact daily stock returns. Moreover, the analysis does not take into account transaction costs, taxes, or liquidity constraints, which could significantly influence the economic viability of capitalizing on the identified turn-of-the-month effect in actual trading scenarios. Additionally, the study does not explicitly control for macroeconomic announcements, global market fluctuations, or extraordinary events that may have affected returns during the sample period. Lastly, the lack of sub-period or rolling window analysis restricts the capacity to evaluate whether the observed anomaly remains consistent over time or varies across different market conditions.

SCOPE FOR FUTURE RESEARCH

In light of the aforementioned limitations, this study presents multiple pathways for future inquiry. Subsequent investigations could broaden the analysis to encompass sector-specific indices, mid-cap and small-cap equities, or particular securities to determine if the Day of the Month Effect varies across different market segments. Comparative studies across countries, including both emerging and developed markets, may yield more comprehensive insights into how market maturity and institutional factors influence calendar anomalies. Future research might also utilize sophisticated econometric methodologies such as GARCH models, regime-switching frameworks, quantile regression, or machine learning techniques to more effectively capture volatility dynamics and non-linear return patterns. Furthermore, performing sub-period analyses or integrating structural break tests could assist in assessing the anomaly's persistence throughout various economic cycles, including periods of financial crises and post-pandemic recovery. Additional research could incorporate behavioral and market microstructure elements, such as investor sentiment, trading volume, liquidity metrics, and institutional trading behaviors, to provide a deeper understanding of the fundamental drivers behind early-month return premiums. Lastly, future studies could evaluate the practical implications of the Day of the Month Effect by simulating trading strategies that take into account transaction costs, risk-adjusted performance metrics, and the increasing impact of algorithmic and high-frequency trading.

CONCLUSION

This research empirically investigated the Day of the Month Effect within the Indian stock market by utilizing dummy variable regression analysis on the daily returns of the SENSEX and NIFTY 50 indices. The results offer detailed evidence regarding the existence and intensity of calendar-based anomalies in the context of an emerging market. In alignment with previous empirical studies, the findings indicate a statistically significant and positive return on the first trading day of the month for both indices, thereby affirming the presence of a turn-of-the-month effect in the Indian equity market.

Conversely, the analysis fails to uncover strong evidence in favor of an end-of-the-month effect. While positive coefficients were noted for the last trading days in certain cases, these effects did not reach statistical significance, suggesting that month-end return patterns are inconsistent and lack predictive capability. Additionally, most trading days throughout the month display statistically insignificant coefficients, indicating that daily stock returns in the SENSEX and NIFTY 50 predominantly adhere to a random pattern and are chiefly influenced by broader market dynamics rather than calendar-specific elements.

The sustained higher returns observed on the first trading day of the month may be linked to institutional fund inflows, portfolio rebalancing efforts, investor sentiment, and the timing of macroeconomic announcements, which together create heightened buying pressure at the month's outset. Nevertheless, the lack of significant effects on other days suggests that the Indian stock market exhibits a considerable degree of weak-form efficiency, with limited opportunities for systematic exploitation of daily return patterns outside the early-month timeframe.

From a practical perspective, the findings indicate that although short-term trading strategies might gain from the turn-of-the-month effect, depending solely on day-specific timing strategies is improbable to produce consistent abnormal returns. For long-term investors, the results emphasize the necessity of prioritizing fundamental analysis, macroeconomic indicators, and overarching market trends over calendar-based anomalies.

In summary, this research adds to the body of literature concerning market anomalies in emerging economies by offering updated empirical evidence regarding the Day of the Month Effect in India. The results illuminate the dynamic nature of market efficiency and highlight the necessity for ongoing evaluation of calendar anomalies amidst growing market sophistication, technological progress, and global integration. Future investigations could broaden this analysis by integrating sectoral indices, alternative econometric methodologies, and sub-period assessments to explore the stability of these effects across different market conditions.

REFERENCES

[1] Ariel, R. A. (1987). A monthly effect in stock returns. *Journal of Financial Economics, 18*(1), 161–174. https://doi.org/10.1016/0304-405X(87)90066-3

[2] Choudhry, T. (2000). *Day of the week effect in emerging Asian stock markets*. Applied Financial Economics, 10(3), 235–242. https://doi.org/10.1080/096031000331653

[3] Choudhary, K., & Choudhary, S. (2008). Day of the week effect and month of the year effect in Indian stock market. *International Research Journal of Finance and Economics, 14*, 69–85.

[4] Chia, R. C., Liew, V. K., & Wafa, S. A. (2012). *Calendar anomalies in Asian stock markets*. Asian Academy of Management Journal of Accounting and Finance, 8(1), 1–24.

[5] Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance, 25*(2), 383–417. https://doi.org/10.2307/2325486

[6] French, K. R. (1980). Stock returns and the weekend effect. *Journal of Financial Economics, 8*(1), 55–69. https://doi.org/10.1016/0304-405X(80)90021-5

[7] Gupta, R., & Basu, S. (2021). *Algorithmic trading and market efficiency in India*. Journal of Asian Finance, Economics and

Business, 8(3), 55–65.

[8]   Haugen, R. A., & Lakonishok, J. (1988). *The incredible January effect*. Dow Jones-Irwin.

[9]   Kaur, H. (2018). *Investor sentiment and calendar anomalies*. International Journal of Behavioural Accounting and Finance, 6(2), 97–113.

[10] Kumar, S., & Pathak, R. (2010). *Market anomalies in the Indian stock market*. Journal of Finance and Investment Analysis, 2(1), 1–15.

[11] Lakonishok, J., & Smidt, S. (1988). Are seasonal anomalies real? A ninety-year perspective. *Review of Financial Studies, 1*(4), 403–425. https://doi.org/10.1093/rfs/1.4.403

[12] Lim, K. P., & Brooks, R. (2011). The evolution of stock market efficiency over time: A survey of the empirical literature. *Journal of Economic Surveys, 25*(1), 69–108. https://doi.org/10.1111/j.1467-6419.2009.00611.x

[13] Mishra, V., & Smyth, R. (2020). *Financial crises and market anomalies*. Emerging Markets Review, 43, 100701. https://doi.org/10.1016/j.ememar.2020.100701

[14] Nageswari, P., Selvam, M., & Venkateswar, S. (2016). Day-of-the-month effect in Indian stock market. *International Journal of Economics and Financial Issues, 6*(1), 36–43.

[15] Ogden, J. P. (1990). Turn-of-month evaluations of liquid profits and stock returns. *Journal of Finance, 45*(4), 1259–1272. https://doi.org/10.2307/2328718

[16] Pandey, I. M. (2002). Seasonality in the Indian stock market. *Vikalpa, 27*(3), 41–56.

[17] Patel, J. B. (2019). Calendar anomalies in the Indian stock market: New evidence. *Journal of Emerging Market Finance, 18*(1), 1–28. https://doi.org/10.1177/0972652718822799

[18] Shiller, R. J. (2003). From efficient markets theory to behavioral finance. *Journal of Economic Perspectives, 17*(1), 83–104. https://doi.org/10.1257/089533003321164967

[19] Sehgal, S., & Garg, V. (2014). *Anomalies in Indian stock market*. International Journal of Economics and Finance, 6(5), 24–35.

[20] Sharma, R., & Jain, P. (2024). *Revisiting calendar anomalies in Indian equity markets*. Journal of Behavioral Finance, 25(1), 1–15.

[21] Singh, P., & Yadav, S. (2023). *Calendar anomalies in post-pandemic Indian stock market*. Finance Research Letters, 52, 103507.

[22] Verma, R., & Soydemir, G. (2022). *Sectoral anomalies in emerging markets*. International Review of Economics & Finance, 80, 394–409.