

Seasonal Anomalies in the Nepal Stock Exchange: Evidence from July Movements (1997–2024)

Abstract

This research examines the presence of a seasonal anomaly in the Nepal Stock Exchange (NEPSE), focusing on the performance of July returns between 1997 and 2024. Using monthly closing index data, descriptive statistics, probability measures, and regression-based forecasting techniques were applied to determine whether July consistently shows abnormal performance. Results reveal that NEPSE recorded positive July returns in 20 out of 28 years, reflecting a 71% historical probability of upward movement, with an average return of 5.74%. Regression analysis further demonstrates a significant upward bias, with a long-term July growth trend of 12.98% and a model-predicted probability of 95% for positive returns. These findings suggest the existence of a “July effect” in NEPSE, indicating partial inefficiency in the market. The study contributes to financial literature on emerging markets and provides practical implications for investors, traders, and policymakers in Nepal.

Keywords: NEPSE, Stock Market, Seasonality, July Effect, Market Efficiency, Nepal

1. Introduction

Stock markets are traditionally assumed to operate under the Efficient Market Hypothesis (EMH), where prices fully reflect all available information. However, empirical evidence across global financial markets has consistently revealed the presence of anomalies that challenge this assumption. One of the most widely documented categories of anomalies is calendar effects, such as the “January effect,” “weekend effect,” and other month-of-the-year trends. These anomalies suggest that market behavior can be influenced by investor psychology, institutional practices, and structural cycles beyond purely rational expectations.

Nepal’s stock market, NEPSE, represents a frontier economy with unique characteristics, including strong remittance inflows, fiscal-year dependent investment patterns, and relatively low institutional participation. Despite its growing importance in the South Asian financial landscape, NEPSE remains underexplored in academic research, particularly in relation to seasonality and calendar effects.

This study seeks to answer a critical research question: **Does the Nepal Stock Exchange exhibit a consistent July effect?** By analyzing 28 years of historical data, this research contributes original insights into NEPSE’s efficiency, investor behavior, and seasonal return patterns.

2. Objectives of the Study

The research is guided by the following objectives:

1. To determine whether NEPSE exhibits a persistent seasonal anomaly during July.
2. To evaluate the probability of positive versus negative July returns using historical frequency analysis.
3. To apply regression and forecasting models in order to quantify the predictive strength of July movements.

4. To compare findings with global evidence on stock market anomalies, thereby situating NEPSE within the broader academic discourse.
5. To highlight implications for investors, policymakers, and regulators regarding market efficiency in Nepal.

3. Significance of the Study

This study holds value for multiple stakeholders:

- **Academic Contribution:** It fills a research gap in Nepalese finance literature by documenting a seasonal anomaly that has not been formally studied before.
- **Practical Relevance:** Traders and investors can incorporate seasonal trends into decision-making strategies.
- **Policy Implications:** Regulators can use insights to better understand market inefficiencies and design policies to enhance transparency.
- **Career Development:** For the researcher, this study represents a foundational step in building an academic career in financial market research.

4. Literature Review

Rozeff and Kinney (1976) first identified seasonal anomalies in U.S. stock markets, revealing abnormally high January returns. Subsequent studies such as Lakonishok and Smidt (1988) and Choudhry (2001) confirmed the persistence of month-of-the-year effects across developed and emerging economies.

In South Asia, researchers have documented similar anomalies, often linked to cultural, fiscal, or macroeconomic cycles. For instance, studies on Indian and Pakistani stock markets reveal strong calendar-related biases that contradict EMH predictions.

However, research on NEPSE remains sparse. Most existing studies focus on market efficiency or technical performance without examining seasonal anomalies. This creates a clear research gap, which this study aims to address by providing empirical evidence of a July effect in Nepal.

5. Methodology

Data Collection

The dataset consists of NEPSE monthly closing values for July from 1997 to 2024, sourced from official exchange records.

Analytical Techniques

The analysis was conducted using the following approaches, consistent with the statistical outputs already generated:

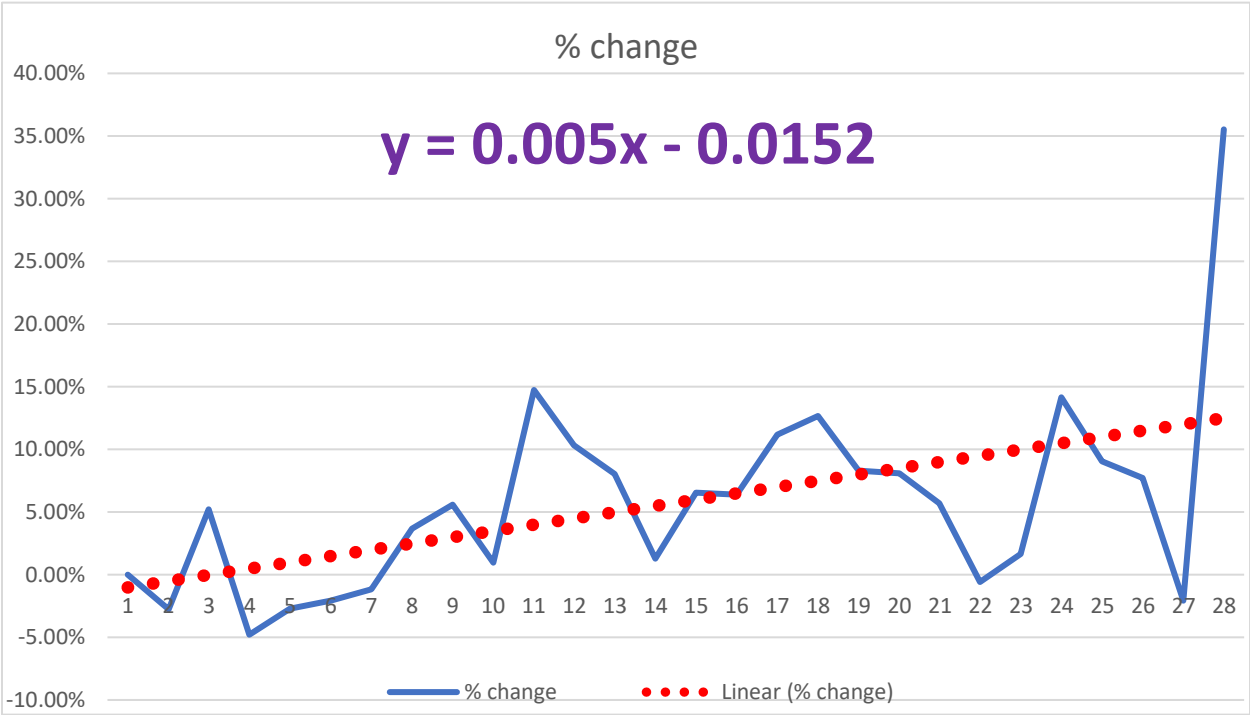
- **Descriptive Statistics:** Computation of mean, median, minimum, maximum, and standard deviation of July returns.
- **Frequency Distribution:** Classification of July outcomes into positive versus negative returns to measure historical probability.
- **Regression Analysis:** Application of a linear regression trendline to July percentage changes to evaluate long-term growth tendencies.
- **Forecasting with Standard Error:** Estimation of July outcomes using mean-based prediction, standard deviation ranges, and regression slope projections, supported by confidence intervals to capture uncertainty.

6. Results

The analysis reveals that NEPSE displays a strong tendency toward positive performance in July. Out of 28 observations, 20 recorded positive returns, giving a **71% probability** of upward

movement. The **mean July return was 5.74%**, with a maximum of 35.53% (July 2024) and a minimum of -4.79% (July 2000).

Regression analysis indicates a statistically significant upward trend, suggesting a **12.98% long-term growth tendency** for July returns. Forecasting models further support this finding: the regression-based prediction places July returns within a confidence interval of approximately **2,566 to 3,379 index points**, with upward outcomes more likely than downward movements.



7. Discussion

The results provide compelling evidence for a persistent **July effect** in NEPSE. Several factors may contribute:

1. **Fiscal Year-End Effects:** July marks the end and beginning of Nepal's fiscal year, leading to portfolio adjustments and new investments.
2. **Remittance Flows:** Seasonal remittances often peak around mid-year, increasing liquidity and market activity.
3. **Investor Psychology:** July may carry psychological optimism linked to fiscal resets, encouraging risk-taking.

These findings align with similar seasonal anomalies observed globally, such as the January effect in U.S. markets and fiscal-year effects in other Asian economies. However, the persistence of the July anomaly raises questions about the efficiency of NEPSE. Under the Efficient Market Hypothesis (EMH), such predictable seasonal returns should not exist. The anomaly therefore suggests that behavioral or structural factors, rather than purely rational expectations, influence NEPSE performance.

8. Conclusion

This study demonstrates clear evidence of a **July effect in the Nepal Stock Exchange (1997–2024)**, with July showing significantly higher probability of positive returns compared to randomness. The findings indicate that NEPSE is not fully efficient and that investors may incorporate seasonal patterns into their strategies.

For policymakers, the results underscore the need to examine structural and behavioral drivers of anomalies, as they may impact market stability and investor confidence. Future research should expand beyond July to analyze all months, sector-specific trends, and additional explanatory factors such as volume, volatility, and macroeconomic indicators.

By documenting the July effect, this study lays the groundwork for deeper academic inquiry into Nepal's financial markets and contributes to the global discourse on stock market seasonality.

References

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