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# *Semi Month and Turn of the Month Effect in Indian Stock Market with Reference to NSE Nifty Index*

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***Abstract:*** ***This study investigates the existence of a Semi month effect and Turn of the month effect in Indian stock market. The study uses the daily return data of the National Stock Exchanges (NSE) for the period ranging between April 2005 and March 2016. After examining the random of the return series, we insist on Descriptive statistics & paired „t" test to find the semi month effect and Turn of the month effect in India. The outcomes confirm the Semi month effect does not exists in India. The findings are also reliable with the turn of the month effect which exists in the NSE Nifty index. The results of the study imply that the NSE Nifty index is inefficient, and hence, Indian investors are advised to buy shares during the rest of the month and sell them on a First half of the month period which will give better returns.***

***Keywords: Indian stock market, Semi month effect, Turn of the month effect, National Stock Exchange and Anomalies.***

## I. INTRODUCTION

Efficient market hypothesis (EMH) is the foundation of Market theory on the basis of this many other expectations are formulated mainly, no arbitrage opportunity and independent and identically distributed. On the basis of this many financial products are formulated like options, derivatives and Value at Risk. When the main throaty has anomalies then subsequent financial models are also having anomalies. The 2007 financial crisis that originates in the derivative market caused because the every one blindly believed that EMH is correct. When you find anomalies in the theory then you have to modify it and make the theory and not modify the data. These studies mostly have shown that stock prices behave randomly. More recently, however, researchers have collected evidence opposing to the EMH. They have identified systematic variations in the stock returns. The important anomalies include the Semi Month Effect and the Turn of the MonthEffect. The existence of the seasonal effect denies the weak form of the EMH and implies market inefficiency. In an inefficient market investor would be able to earn abnormal profits, that is, returns that are not appropriate with risk.

### 1.1 SEMI- MONTH EFFECT

Semi-month Effect, the mean return of the First Half Month has been compared to the rest ofthe day of the month. The purpose of studying Semi-Month Effect is to find appropriateinvestment time during fortnight month. The first study on semi month effect was carried out by Ariel (1987) reports that in the USA stocks appear to earn positive average returns during the first half of calendar months, and zero average returns during the second half.

### 1.2 TURN-OF-THE- MONTH EFFECT

The trend of stock prices to increase during the last two days and the first three days of eachmonth, is called Turn of the Month Effect. For the purpose of this study, the average of thereturn on the last two trading days of the preceding month, and the first three days of thesubsequent month were computed and compared with the mean return for the rest of the daysin the subsequent month.

 

## II. Review of Literature

**EleftheriosGiovanis (2009)** in his study entitled "Calendar Effects and Seasonality on Returns and Volatility"found that the semi-month effect, where in 7 and 2 cases accept for both first and second half of the month returns are significant lower and higher, both India and Canada first half of the month noticed higher returns and lower returns noticed in the second half of the month. **Nageswari. P and Dr.M. Selvam (2011)** in their study entitled "Calendar Anomalies in the Indian Stock Market"found that the Semi Month Effect did exist in the Indian Stock Market returns during the study period (2002 – 2010).**Nageswari. P, Dr.M. Selvam and Dr.J. Gayathri (2011)** in their study entitled "An Empirical Analysis of Semi-Month and Turn ofthe Month Effects in Indian Stock Market" foundthat higher mean returns was recorded for the first half month than the rest of the day of the month. It is found that the semi month effect does not exist in BSE Sensex and S&P CNX Nifty index returns during the study period. **SiqiGuo and Zhiqiang Wang (2007)** in his study entitled "Market efficiency anomalies A study of seasonality effect on the Chinese stock exchange"found that the semi-month effect does not exist in Chinese stock market. **UshadSubadarAgathee (2009)** in his study entitled "Semi-Monthly Effect: Evidence from the Maurtian Official Stock Market" found that the semi month does exists in The Maurtian Official Stock Market. **Amy Dickinson and David R. Peterson (1995)** in their study entitled "Expectations of weekend and Turn-of-the-Month Mean Return Shifts Implicit in Index Call Option Prices" proves turn-of-the-month effect are at least partially anticipated in United States. **FiroozehKolahi (2006)** in his Study entitled "Turn-of-the-Month Effect for the European Stock Market" Confirmed that the Turn-of-the-Month Effect does exists in MSCI Euro indices January 2001 to December 2005.**PolinaHeininen and VesaPuttonen (2008)** in their study entitled"Stock Market Efficiency in the Transition Economies through the Lens of Calendar Anomalies"found that the stock returns of predictable based on the turn-of-the-month effect exists in Croatia, Hungary, Poland, Romania, Russia and Slovenia.**Silva. PM (2010)** in his study entitled "Calendar "Anomalies" in the Portuguese stock market" found that the Turn of the month effect does exists in the Portuguese stock market.

## III. Objective of the Study

To identify the existence of the Semi Month Effect and Turn of the Month Effect in Indian Stock Market.

## IV. Research Methodology

This study is analytical in nature. Secondary data collected from the NSE web portal for the period ranging between April 2005 and March 2016.

## V. Framework of Analysis

The collected data have been analyzed by making use of Descriptive statistics like as Mean, Standard Deviation, Variance, Skewness, Kurtosis and Shapiro-Wilk test and paired 't' test.

## VI. Limitation

Considering the continuity of data, the only NSE Nifty has been selected for the study. Hence, utmost care is exercised while generalizing the result.

## VII. Analysis and Interpretation

The following table exhibits whether semi month effect prevails in NSE Nifty index.

**Table 1 Semi Month Effect – NSE Nifty Index**

| | Mean | Median | Std. Deviation | Variance | Skewness | Kurtosis | Shapiro-Wilk |
|---|---|---|---|---|---|---|---|
| First half | 0.0653 | 0.0829 | 0.46728 | 0.218 | 0.081 | 3.592 | 0.000 |
| Second half | 0.0752 | 0.1283 | 0.46353 | 0.215 | -0.087 | 3.089 | 0.000 |

Source – Database collected from NSE web portal and computed.

 

High mean returns were noticed during the second half of the month (0.0752) and low mean return was found during the first half of the month (0.0653). While comparing the variance, high level of volatility was noticed on the first half of the month (0.218) and low level of volatility was noticed in the second half of the month (0.215).

Result of the Skewness test disclosed that positive value were noticed during the first half of the month (0.081) returns, which implies that most of the first half of the month returns were more than the average returns. The second half of the month (-.087) returns was noticed negative Skewness, which implies that most of the second half of the month returns were less than the average returns. The Kurtosis results of the NSE Nifty index returns were found leptokurtic on both the First half of the month (3.592) and the second half of the month (3.089). Since, Kurtosis values are more than 3, thus, it is inferred that the level of risk associated with the NSE Nifty index was high, which means investors may obtain either high level of profit or loss.

As the calculated P value of the Shapiro-Wilk testis less than 0.01, it is clearly proved that the data are not normally distributed. Hence, anomaly exists inthe NSE Nifty index returns.

The following table depicts, whether first half and second half returns differ in NSE Nifty index.

**Table 2 Semi Month Effect - NSE Nifty Index**

| | Mean | N | Std. Deviation | Paired t value | P value |
|---|---|---|---|---|---|
| First half | .0653 | 132 | .46728 | -0.192 | 0.848 |
| Second half | .0752 | 132 | .46353 | | |

Source – Database collected from NSE web portal and computed.

As the calculated P value is greater than 0.05, it is inferred that NSE Nifty index returns does not differ between the first half and the second half of the month.

The following table exhibits whether Turn of the month effect prevails in NSE Nifty index.

**Table 3 Turn of the Month Effect – NSE Nifty Index**

| | Mean | Std. Deviation | Variance | Skewness | Kurtosis | Shapiro-Wilk |
|---|---|---|---|---|---|---|
| First Half | 0.1993 | 0.67677 | 0.458 | -0.837 | 1.905 | 0.000 |
| Rest of the Month | -0.0052 | 0.42751 | 0.183 | -0.911 | 3.947 | 0.000 |

Source – Database collected from NSE web portal and computed.

High mean returns were noticed during the First half of the month (0.1993) and low mean returns were found during the rest of the month (-0.0052). While comparing the variance, high level of volatility was noticed on the First half of the month (0.458) and low level of volatility was noticed in rest of the month (0.183).

Result of the Skewness test disclosed that negative returns were noticed in the First half of the month and rest of the month returns, which implies that most of the first half of the month and rest of the month returns were less than the average returns. The Kurtosis results of the NSE Nifty index returns were found leptokurtic in the rest of the month (3.947). Since, Kurtosis values are greater than 3, thus, it is inferred that the level of risk associated with the rest of the month returns of the NSE Nifty Index was high, which means investors may obtain either high level of profit or loss. The first half of the month return were found platykurtic (1.905). Since, Kurtosis values are less than 3, thus, it is inferred that the level of risk associated with the first half of the month returns of the NSE Nifty index was low, which means investors may obtain either low level of profit or loss.

As the calculated P value of the Shapiro-Wilk test is less than 0.01, it is clearly proved that the data are not normally distributed. Hence, anomaly exists inthe NSE Nifty index returns.

The following table depicts, whether first half and rest of the month returns differ in NSE Nifty Index.

**Table 4 Turn of the Month Effect – NSE Nifty Index**

| | Mean | N | Std. Deviation | Paired t value | P value |
|---|---|---|---|---|---|
| First Half | .1993 | 132 | .676770 | 2.949 | 0.004 |

 

| | | | | | |
|---|---|---|---|---|---|
| Rest of the Month | -.0052 | 132 | .427507 | | |

Source – Database collected from NSE web portal and computed.

As the calculated P value is less than 0.01, it is inferred that NSE Teck index returns differs between the first half and rest of the month. Hence turn of the month effect prevails in the NSE Nifty Index.

## VIII. SUGGESTIONS

### Semi Month Effect

The NSE Nifty found that the highest mean returns were noticed in the Second half of themonth. Hence, Indian investors are advised to buy scriptsduring the First half of the month and sell them on a Second half of the month period which itwill give better returns.

### Turn of the Month Effect

The NSE Nifty found that the highest mean returns were noticed in the first half of the month.Hence, Indian investors are advised to buy scripts during the rest of the month and sell theshares during the First half of the month, which will give better returns. Investors couldtrial the above strategy to start with on small stocks and spread the similar on blue-chipsbased on the risks and rewards.

## IX. CONCLUSION

The study focused on the existence of a Semi Month Effect and Turn of the month effect inthe NSE Nifty index in India. The analysis Semi Month Effect of descriptivestatistics displayed that the highest mean return wasnoticed in the Second half of the month, then the First half of the month.Hence, Indian investors are advised to buy scripts during the First half of the month and sell them on a Second half of the month period which it will give better returns. The analysis of Turn ofthe Month Effect of descriptive statistics displayed that the highest mean return was noticed in the First half of the month, then the rest of the month. Hence, Indian investors are advised to buy scripts during the rest of the month and sell the shares during the First half of the month, which will give better returns. TheCalculated paired ‘t’ test value is Not significant the Semi Month Effect in NSE Nifty index.The Calculated paired ‘t’ test value is significant the turn of the month effect which exists in the NSE Nifty index. The study points out that stockreturns in India are not entirely random. This suggests that the Indian stock market is not efficient.

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