



# An Analytical study on Stock splits Announcements of Stock Exchanges and Market Trends in India

**Veerendra Kumar**

Research Scholar, Department of Accountancy and Law, Faculty of Commerce  
Dayalbagh Educational Institute, Agra

## Abstract

This paper analyses the impact of the trends in India's stock market on the stock split announcement. Several factors in the financial market may have no direct relationship with each other, but the perception of the people involved in it, which may or may not be reasonable, can impact one factor on another. In general, the trends are either bullish or bearish. Stock prices may reach a certain level in a bullish market where a company may decide to split the stocks. However, we also see that stock split announcements have occurred even in bearish trends. The main aim of the present study is to analyse empirically how the market trends impact stock split announcements. BSE Sensex and NSE Nifty Index are taken from 1995 to 2023 and stock split data was collected from the official website. The Independent Sample t-test and Regression analysis were used to analyse data and test hypotheses through SPSS software. The results of the study show that market trends affect significantly stock split announcements and there is no significant difference in split announcements in bullish and bearish market trends.

**Keywords:** Capital Market, Market trend, Stock splits, Bullish trend, Bearish trend, Corporate Announcements, Volatility, Optimal trading range.

## INTRODUCTION

The capital market plays an imminent role in every country's development. It provides a platform for corporate firms to raise capital for their operations. The companies listed on stock exchanges have to make several decisions and adopt various strategies to meet the changes in the capital market to attract investors and to meet compliance with stock exchanges and regulatory bodies.

The companies will make various corporate actions and announcements regularly and in exceptional circumstances. Such corporate actions and announcements may be an issue of bonus shares, issue of right shares, warrants, splitting of stocks, and decisions like merger/demerger, amalgamation, consolidations, hive-off, secured premium notes (SPNs), among others, and declaration of interim as well as final dividend.

Stock splits are corporate actions that reduce the face value of shares to enhance an outstanding number of shares. It increases the number of company exceptional shares by dividing each share based on the split ratio.

However, it does not affect the company's market capitalization, increased shares lead to greater liquidity and a greater volume of trade.

The capital market across the world is very volatile due to the various forces and changes in the economy, market, technology, culture, and politics, leading to trade cycles in the market. Market trends will change depending on the situation of the capital market. Such trends impact many companies and force them to make corporate decisions and announcements.

Splitting of stocks is a corporate action taken by management to adjust to market changes and trends. Mainly, when there is a bullish trend in the market, companies' share prices will go high, discouraging retail investors. They generally prefer moderate stock prices. The corporation will split the stocks to attract retail investors per the optimal trading range hypothesis and maintain the stock liquidity.

This paper attempts to study the concepts of market trends and their impact on the announcement of stock splits in India.

### **Concept of Market Trend:**

#### **Trend:**

A trend in the capital market is defined as the direction in which the market moves.

#### **Market Trend:**

A market trend in financial markets is understood as moving in a particular direction over time. These trends are classified as secular trends and secondary trends. Secular trends have a long-time frame, mainly for medium and secondary trends related to short time frames. Investors and Traders in the market must identify the trends using a framework called 'Technical analyses to predict the market trends based on price tendencies over time.

The market trend either moves upwards or downwards. When a market trend moves upwards, it can be treated as a "Bullish trend" and vice-versa as a "Bearish trend." The terms bull market and the bear market come from London's Stock Exchange Alley during the 18th century. The traders who are engaged in naked short selling are called "bear-skinned jobbers. The traders buying shares on a credit basis were called 'Bulls.'

### **Classification of Market Trends:**

Market trends are classified into two categories.

- I. **Secular Trends:** The secular market trend is a series of primary trends, usually a long-term trend that lasts 5 to 25 years.
  - **Secular Bull Market:** When the trend moves upward, it is a secular bull market. It consists of a larger bull market and a smaller bear market.
  - **Secular Bear Market:** When the trend moves downwards, it is a secular bear market. It consists of smaller bull markets and larger bear markets.
- II. **Secondary Trends:** Within primary trends, secondary trends are changes in price direction that occur over a shorter time. They may last for a few days, weeks, or months.

### Primary Market Trends:

- a) **Bull Market/ Bullish Trends:** The period of a financial market generally in which rising prices of stocks are expected to grow is considered a bull market. In general, bull markets begin when stock prices increase by 20% from their low and after a decline of 20%. Traders adopt various strategies, i.e., increase buy and hold, to profit from a bull market. India's BSE had a primary bull market trend from April 2003 to January 2008 for about five years as it increased in BSE SENSEX from 2900 points to 21000 points with more than 600% returns.
- b) **Bear Market/ Bearish Trends:** The decline of stock prices or moving downward of prices in the stock market over time is generally considered a bear market. It makes investors and traders pessimists change their views with a fear of a price decline of 20% or more over at least two months. In early 2020, many stock markets crashed due to the COVID-19 pandemic, which resulted in a bearish market worldwide.
- c) **Market Top:** When a market reaches the highest point for some time without any awareness to the market participants, it is considered a market top.
- d) **Market Bottom:** It is a reversal trend, the end of the market downturn, and the beginning of an upward-moving trend. It isn't easy to identify.

### Reasons for market trends:

There are several reasons for changes in market trends over time in the capital market. The fundamental reasons are.

- a) **Demand and Supply:** - Demand and Supply of stocks in the market highly impact changes in market trends. When there is equilibrium in supply and demand, it will not result in any immediate change in trend if the absence of equilibrium between demand and supply leads to unanticipated changes in the market.
- b) **Investors' perceptions:** Investors' perception plays a dominant role in market trends. Investors' pessimistic or optimistic behaviour results in cyclical changes in market trends.
- c) **Market sentiments:** - Sometimes, market sentiments are also considered a tremendous impactful force for changes in market trends.
- d) **technology, culture, and politics change: Technological developments, cultural transformation, and political happenings change market trends.**
- e) **Corporate actions and announcements:** - Sometimes corporate actions like any announcements of mergers or de-mergers, changes in top-level management positions, dividend declaration, stock splits, etc., also lead to changes in market trends.

### Theoretical framework:

The bullish market trend raises the price level of shares as it crosses the optimal trading range. It becomes difficult for retail investors to invest their hard-earned money in stocks with higher share prices. They prefer a moderate stock level to invest according to the optimal trading range hypothesis. When the companies have high price levels, it discourages the investors and, somewhere, impacts liquidity. So, the companies

announcing stock splits by reducing the face value of values without changes in market capitalization will attract retail investors and keep the stock price level moderate.

### Market Trend and Announcement of Stock Splits in India:

The following table and chart provide the return details in the BSE Sensex and NSE Nifty index, overall market trend, and announcement of stock splits from 1995 to 2023.

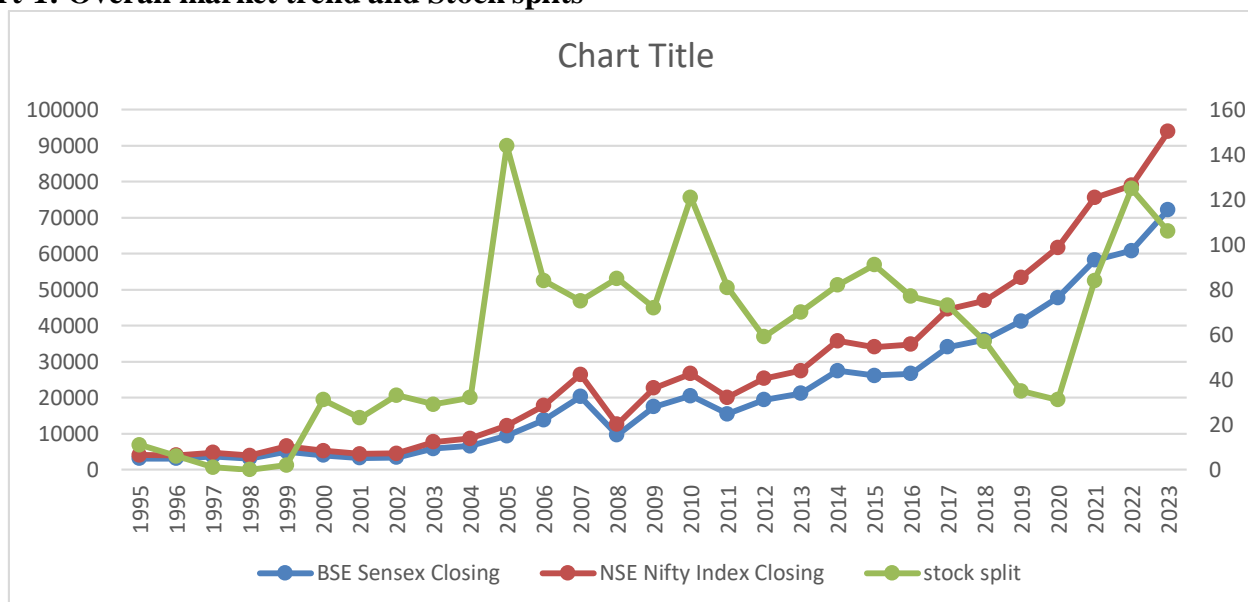
**Table 1: Overall closing value of market and trend on BSE, NSE, and Stock splits.**

Year	BSE Sensex Index Closing	NSE Nifty Index Closing	Overall Market	Stock Split
1995	3110.49	908.53	Bearish	11
1996	3085.2	899.1	Bearish	6
1997	3658.98	1079.4	Bullish	1
1998	3055.41	884.25	Bearish	0
1999	5005.82	1480.45	Bullish	2
2000	3972.12	1,263.55	Bearish	31
2001	3262.33	1,059.05	Bearish	23
2002	3377.28	1,093.50	Bullish	33
2003	5838.96	1,879.75	Bullish	29
2004	6602.69	2,080.50	Bullish	32
2005	9397.93	2,836.55	Bullish	144
2006	13786.91	3,966.40	Bullish	84
2007	20286.99	6,138.60	Bullish	75
2008	9647.31	2,959.15	Bearish	85
2009	17464.81	5,201.05	Bullish	72
2010	20509.09	6,134.50	Bullish	121
2011	15454.92	4,624.30	Bearish	81
2012	19426.71	5,905.10	Bullish	59
2013	21170.68	6,304.00	Bullish	70
2014	27499.42	8,282.70	Bullish	82
2015	26117.54	7,946.35	Bearish	91
2016	26626.46	8,185.80	Bullish	77
2017	34056.83	10,530.70	Bullish	73
2018	36068.33	10,862.55	Bullish	57
2019	41253.74	12,168.45	Bullish	35
2020	47751.33	13,981.75	Bullish	31
2021	58253.82	17,354.05	Bullish	84
2022	60840.74	18,105.30	Bullish	125
2023	72240.26	21,731.40	Bullish	106

Source: BSE, NSE and Moneycontrol.com

The BSE Standard & Poor index value increased from 3110.49 in 1995 to 72240.26 by the end of 2023. From 1995 to 2023, only eight years, 1995, 1996, 1998, 2000, 2001, 2008, 2011, and 2015, observed a bearish market trend, and the rest of the years found a bullish market trend.

In the period 1995 to 2023, a total of 1720 stock split announcements took place in India, particularly in 2005 (144), 2010(121), 2022 (123), and 2023(106). More than 100 companies announced stock splits, and it was also found that there was a bearish market trend in the years 1995, 1996, 1998, 2000, 2001, 2008, 2011, and 2015. The companies split their stocks 11, 6, 0, 31, 23, 84, 81, and 91, respectively.

**Chart-1: Overall market trend and Stock splits**

## Review of literature

A literature review based on this research topic has been undertaken. Through review, only one can identify the research gaps. Several scholars studied similar issues to get more clarification. The following are the principal works of literature that were reviewed.

**Jijo et al. (2002)** investigated the effects of stock splits on market valuation and trading patterns around the split announcement and ex-date of BSE30 (Bombay Stock Exchange) stocks of India. It was found that there was an abnormal return of 7.14 per cent around the stock split announcements. The study also finds that there is no liquidity after stock splits. The abnormal returns are statistically significant around the ex-split date.

**Budhraja et al. (2003)** studied India's BSE30 (Bombay Stock Exchange) stocks. They argued that the announcement of a split sets off the following chain of events, such as an increase in the daily number of transactions and an increase in the noise of the security return process. The noise of the stock enhances the tax option value, and it is this value that generates the announcement effect of stock splits.

**Ranjan et al. (2003)** tried to study the reasons for firms offering equity after stock splits. They have found no difference in returns between firms issuing equity after stock splits and non-stock split firms during the issue period. Since investors react positively to stock-divided announcements, firms issuing stocks will sell their new issue at a higher price and raise more funds. The authors have also found that firms split stocks to make their subsequent equity offerings more marketable to investors attracted by low-priced shares.

**Savitri et al. (2005)** examined the impact of stock splits and reverse splits on stock return and trading volume on the Jakarta Stock Exchange between 2001 and 2005. The study has analysed abnormal returns and volume during the split period and related stock returns to profitability, leverage, and volume. It is concluded that there are significant abnormal returns on the split date on the fifth day before the split. Trading volume and return on assets have a considerable influence on market-adjusted returns.

**Katerina et al. (2006)** indicated that the market reaction to stock split announcements is positive, which shows that managers and investors perceive the stock split as a beneficial news event regarding the company. The results are consistent with the trading range and liquidity hypothesis.

**Farinos et al. (2006)** investigated the results' robustness for the possible motivation for listed firms in the Spanish Market to execute a stock split using different methodologies. Executive surveys show great evidence for using stock splits to increase the liquidity of shares; the evidence is relatively less than required. The authors have used logit and Cox regression models, which all support signalling and optimum range hypotheses.

**Gupta (2007)** provided evidence that no announcement effect is associated with stock splits in India, though a pronounced ex-day effect exists. Also, there was no evidence for the trading range hypothesis as a possible explanation for stock splits in India, as most shares that underwent split were trading at low market prices. It appears that the reason for a stock split by low-priced companies could be the neglected firm hypothesis-, which seems valid for the Indian stock market.

**Harish (2007)**, in his study the author has taken a close look at stock split as an event to study the efficiency of the Indian market. He has studied the cumulative abnormal returns of stocks that have gone for stock splits for the period of study undertaken. The results have shown that the abnormal returns during pre- and post-stock splits are statistically insignificant, leading to the conclusion that semi-strong forms of efficiency do not exist in the Indian stock market.

**Dhar et al. (2006)** examined the effects of stock splits and bonus issues on the Indian stock market. Also, the study has studied the nature of the efficiency of the Indian stock market. The results have shown that both events are associated with a significantly positive announcement effect. The stock splits yield anomalous returns of 0.8 per cent, and the study has identified the presence of semi-strong form efficiency in the Indian stock market.

**Sk Md Imran, S Md Ghouse (2019)** This paper mainly focused on the behaviour of stock splitting in Bombay Stock Exchange listed companies. The stock reaction is observed in price before and after the stock split. The paper also discusses the benefits of stock splitting; we have taken those companies that are gone for two times of stock splitting. "The owner expected to enthrall the more individual investors" of the company. Due to the increased demand from small investors in the market, the stock split will improve the company's liquidity and drive up share prices on the stock exchange. The splitting company's stock price has reacted differently through the split stages. Already, some researchers believe that stock splits will attract new investors and small investors of the stock exchange companies. Our results come for positive abnormal returns surrounding the stock split event.

**Athulya Shaji Theckanathukaduppil (2021)** Stock split is a corporal tactic to increase the shares' liquidity by dividing the shares into multiple shares, as per Eugene's efficient market hypothesis (EMH). According to F. Fama, any information that is available in the market may be fully reflected or absorbed by the capital market. Bonus issues, dividend declarations, and stock split announcements are essential decisions in the stock market. Based on this announcement, the investors make decisions. This study examines the capital market's reaction to the stock split announcement of CNX nifty 100 companies. It looks at the trend of the closing price of the companies after and before the stock split announcement. An event model of preannouncement and

post-announcement 90 days is used for this study. We found that every piece of information in the stock market affects stock prices either positively or negatively.

### **Objectives of the study:**

1. To study the concept of market trends in India.
2. To analyse the impact of market trends in BSE and NSE on stock split announcements.
3. To empirically evaluate the stock split announcements in Bullish and Bearish trends.

### **Hypotheses:**

Ho: There is no significant relation between BSE and NSE market trends and stock split announcements.

H1: A significant relationship exists between BSE and NSE market trends and stock split announcements.

Ho: There is no significant difference in stock split announcements between bullish and bearish trends.

H1: There is a significant difference in stock split announcements between bullish and bearish trends.

### **Research Methodology**

- **Data:** The present study is based on secondary data. The data is collected from the official websites of BSE, NSE, and SEBI.
- **Duration of the study:** The study used data from 29 years, from 1995 to 2023.
- **Tools used for Data Analysis:** Descriptive Statistics, Regression analysis, and Independent Sample t-test.
- **Description of the variables used:** In the present study, the main variables are BSE and NSE index value, returns, and stock split.

### **Results and analysis**

The Independent Sample t-test and Regression analysis were used to analyse data and test hypotheses through SPSS.

**Hypothesis-1:** Relationship between market trend and stock split announcements.

Ho: There is no significant relation between BSE and NSE market trends and stock split announcements.

H1: There is a significant relationship between BSE and NSE between market trends and stock split announcements.

**Table: -2 Descriptive Statistics**

<b>Descriptive Statistics</b>			
	Mean	Std. Deviation	N
Stock split	59.31	39.468	29
NSE Nifty Closing	6408.509	5762.772	29
BSE Sensex Closing	21338.7276	19323.04423	29

**Table: -3 Correlations**

<b>Correlations</b>				
		STOCKSPLIT	NSECLOSED	BSECLOSE
Pearson Correlation	Stock Split	1.000	.511	.507
	NSE Nifty Closing	.511	1.000	1.000
	BSE Sensex Closing	.507	1.000	1.000
Sig. (1-tailed)	Stock Split	.	.002	.002
	NSE Nifty Closing	.002	.	.000
	BSE Sensex Closing	.002	.000	.
N	Stock Split	29	29	29
	NSE Nifty Closing	29	29	29
	BSE Sensex Closing	29	29	29

**Table: 4 ANOVA**

<b>ANOVA<sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13015.778	2	6507.889	5.530	.010 <sup>b</sup>
	Residual	30600.429	26	1176.940		
	Total	43616.207	28			

a. Dependent Variable: STOCK SPLIT

b. Predictors: (Constant), BSECLOSE, NSECLOSED

**Table: 5 Coefficients**

<b>Coefficients</b>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	34.165	9.895		3.453	.002
	NSECLOSED	.066	.053	9.652	1.236	.228
	BSECLOSE	-.019	.016	-9.143	-1.170	.252

a. Dependent Variable: STOCK SPLIT



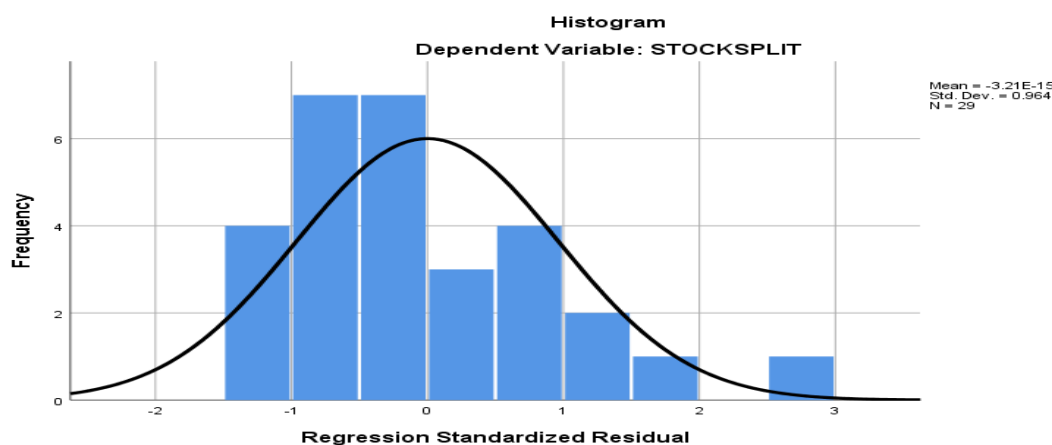
**Table: 6 Model Summary**

Model Summary								
Model	R	Adjusted R Square	Std. Error of the Estimate	F	T	Sig	Unstandardized co-efficient	
1	.546 <sup>a</sup>	.298	34.307	5.530	3.453	0.002	0.000	

a. Predictors: (Constant), BSECLOSE, NSECLOSED

b. Dependent Variable: STOCK SPLIT

**Chart: 2**



Simple linear regression tests to determine if closing the NSE Nifty and N BSE Sensex index value (Market trend) significantly predicted stock split announcements. The fitted regression model was  $\text{Stock Split announcements} = 34.165 + 0.066 - 0.019 * (\text{Index value})$ .

The overall regression was statistically significant (R<sup>2</sup> is 0.298, F is 5.530, T is 3.453, Sig value is P<0.01). Hence, the null hypothesis is rejected. There is undoubtedly a significant relationship between market trends and the announcement of stock splits.

**Hypothesis 2:** stock split announcements in Bullish and Bearish Trends.

Ho: There is no significant difference in stock split announcements between bullish and bearish trends.

H1: There is a significant difference in stock split announcements between bullish and bearish trends.

**Table: 7 Group Statistics**

Group Statistics					
	Overall Market	N	Mean	Std. Deviation	Std. Error Mean
Stock Split	Stock Split in Bullish Trend	21	66.29	38.501	8.402
	Stock Split in Bearish Trend	8	41.00	38.296	13.540

**Table: 8 Independent Samples Test**

		Levene's Test for Equality of Variances				t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Stock Split	Equal variances assumed	.141	.710	1.583	27	.125	25.286	15.974	-7.490	58.062
	Equal variances are not assumed.			1.587	12.766	.137	25.286	15.934	-9.203	59.774

There is a homogeneity of variances as assessed by Levin's test for equality of variances. Levin's test Sig value is  $>0.05$  homogeneity satisfied assumed that equal variance between the announcement of stock splits in Bullish and Bearish trend. The p-value is 0.710, more significant than 0.05, so we cannot leave the null hypothesis. This means we can assume that the variances of the two groups are equal. An Independent sample t-test was run with a 95% confidence for the mean difference. It is found that splits announcements in bullish trend and bearish trend were  $t(27)=1.583$ ,  $p>0.05$ . Because the p-value is more than the standard significance level of 0.05 we cannot reject the Null hypothesis hence Null hypothesis is accepted. There is no significant difference in stock split announcements in a bullish trend and a bearish trend.

The **95% Confidence level of the Difference** values are the lower and upper bounds of the confidence interval for the mean difference. In this case, there are two rows for the t-test results, depending on whether we assume equal variances. We can look at the first row since we considered equal variances based on Levene's test. The p-value is 0.125, more significant than 0.05, so we cannot reject the null hypothesis. This means that we cannot conclude that there is a substantial difference between the mean values of the two groups. The mean difference is 25.286, which means that the Bullish group has a higher mean value than the Bearish group, but this difference is not statistically significant. The 95% confidence level for the mean difference ranges from -7.490 to 58.062, which means we are 95% confident that the actual mean difference lies within this interval.

#### **Conclusion: -**

Because of its extreme volatility, the capital market has ups and downs in its operations in response to changes in the overall market. Market trends have an impact on businesses and compel them to make announcements and corporate decisions. The analysis revealed a substantial impact of market dynamics on the timing of stock split announcements. The stock's price rises and crosses the optimum trading range within a bullish market trend. The general phenomenon is that when there is a bullish trend, stock prices are so high that it becomes difficult for retail investors and vice versa in a bearish trend. We assume that a bullish trend results in more stock splits than a bearish trend, but the study found no significant difference in the announcement of stock

splits in a bullish and bearish trend. Even though there is a bearish market trend, some companies have announced stock splits.

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