Stock Split Announcements and Their Impact on Shareholders' Wealth : A Study on the Indian Stock Market

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Abstract

The study attempted to find out the impact of stock split on shareholders' wealth. The samples were selected from 500 companies of S&P BSE 500 index. The study analyzed the impact by taking the share prices of sampled companies for 30 days before and 30 days after the stock split announcements. The market adjusted model was used for calculating the abnormal returns. The statistical tools such as paired sample *t* - test and analysis of variance were used for analysis. The study concluded that stock split did not affect the share prices as per the theoretical point of view, but in reality, it affected the share prices and increased trading volumes after split. The study also concluded that stock split had an impact on shareholders' wealth, but this impact was not different according to the nature of the industry.

Keywords: stock split, shareholder wealth, share prices

JEL Classification : G10, G11, G23, G32

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Stock split announcement is a kind of corporate action in which a company decides to increase the number of shares by reducing the face value of its shares without raising any new capital. In fact, the face value of each share falls and total market capitalization remains the same. For example, the face value of one share of the company A is ₹ 100 and the outstanding shares that have been issued are 10,000. If company A declares a ratio of 2:1 stock split, it means that its shareholders will own two shares for every one held by them previously, but at half the face value. The company's outstanding shares will double to 20,000, while the face value per share will half to ₹ 50. So, if a shareholder owned 50 shares worth ₹ 5000 before the split, he will now have 100 shares worth ₹ 5000 after the split. This method of splitting makes the shares cheaper and improves liquidity in the market. When a company's share price goes up to a certain level, the management feels out of trading range, and at that point, it ceases to be a frequently traded stock and is mostly traded only by high net worth investors and institutional investors. Stock split is done in order to make the shares more affordable for various investors who could not buy the share of a company before due to high price, thereby stimulating enhanced trading in the stocks.

A stock split is also a play on the psyche of the investors because when shares of a particular company are available at a cheaper rate, it may motivate the small investors to buy more shares after a split. It has been observed by the analysts that fundamentally, stock split brings no change to the stock, however, psychologically, the stock becomes more affordable, and may see some uptick after the announcement.

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Table 1. Stock Split Announcements from 2000 to 2015

Year Wise	Indian Capital Market	BSE500 Index alone
2000-2001	26	12
2001-2002	15	3
2002-2003	22	5
2003-2004	31	19
2004-2005	40	14
2005-2006	133	35
2006-2007	71	25
2007-2008	83	29
2008-2009	63	15
2009-2010	77	15
2010-2011	106	43
2011-2012	66	20
2012-2013	66	14
2013-2014	72	5
2014-2015	94	3
Total	**965**	**257**

Source: Compiled from BSE website

Stock Split in the Indian Capital Market

Stock split started in 1999 in India, when SEBI allowed the companies to set the face value of their shares as long as it was not fractional. The SEBI ruling superseded the 1983 government circular banning companies from issuing shares at a face value other than ₹ 10 or ₹ 100. Prior to this, it was felt that frequent changes in the face value of a scrip would confuse investors.

The Table 1 shows the number of stock splits that occurred in the Indian capital market as well as BSE 500 index companies alone. It can be inferred that there was a considerable increase in stock splits from the year 2000 to 2015. During 2005 - 2006, huge number of splits, that is, 133 splits took place, which was the highest figure over one and a half decade. This figure was mostly equal to the total number of splits that occurred in the last 5 years which created history in the Indian capital market. The reason behind this is that the Indian economy was going through a boom period. The boom period is a period of rising prices. So, the companies do split their shares during the boom phase to make them affordable for the small investors. Therefore, the number of splits increase in the bull market and decrease in the bear market. In the year 2010 - 2011, the number of splits again increased to 106 from only 77 in the year 2009 - 2010. The number of splits by companies of BSE 500 index is also given in the Table 1. It represents that there was also a substantial growth from 2000 to 2011, but after that, the growth declined very significantly. The share of S&P BSE 500 index companies alone was more than 25% of the total stock splits that occurred in the market. So, companies of BSE 500 index were taken for the analysis for the present study. The industry wise number of companies and number of splits that occurred from 2000 to 2015 are given in the Table 2.

It can be inferred from the Table 2 that the industries such as transport equipments ; textile ; power ; miscellaneous ; metal, metal products, & mining ; IT ; housing related industries ; health care ; FMCGs ; finance ; capital goods ; and agriculture industries played a major role in the market with respect to stock split announcements. Most of the companies of these industries had announced stock split during 2000 to 2015.

Table 2. Stock Split Announcements - Industry Wise

Industry	BSE 500 Index Companies	Stock Split	
		Company	Announcement
Agriculture	20	12	16
Capital Goods	48	26	29
Chemical & Petrochemical	15	3	3
Consumer Durables	14	3	4
Diversified	9	4	4
Finance	80	20	25
FMCG	29	18	24
Health care	40	22	27
Housing Related	45	22	27
Information Technology	29	11	12
Media & Publishing	15	4	4
Metal, Metal Products, & Mining	23	13	18
Miscellaneous	21	10	12
Oil & Gas	21	4	5
Power	23	6	9
Telecom	10	1	1
Textile	13	6	6
Tourism	5	4	4
Transport Equipments	25	18	21
Transport Services	12	2	2
Other	3	2	3
Total	**500**	**212**	**257**

Source: Compiled from BSE website

Therefore, this study analyzes these industries to find out the impact of stock split on shareholders' wealth.

Impact of Stock Splits

(1) Theoretical View Points : Stock split does not have the economic effect on a company ; not even on shareholders' wealth (Joshipura, 2008). It also has no impact on share prices even if share prices fall according to the split ratio. Similarly, a company's fundamentals don't change with its earnings, and equity capital base remains the same. It is simply splitting higher denomination into lower denomination. Since the stock split doesn't change anything for a company from a fundamental perspective, experts caution investors against buying such shares merely because they are cheap. They say investors should stay clear of companies which use stock split only to stay afloat. For example, if a company announces a 2:1 stock split, each shareholder will be issued an additional share for each share currently held. A shareholder will have twice as many shares after the split. Therefore, the earnings per share will decline by half, leaving the P/E and equity market value unchanged. If we assume that a company maintains the same dividend payout ratio as before the split, the dividend yield will also be the same after the split. Apart from the effect of any information or benefit that investors perceive a stock split to convey, the

Table 3. Impact of Stock Splits (at 2 : 1 Split Ratio) on Share Prices, EPS, DPS, Dividend Payout Ratio, Dividend Yield, P/E, and Market Value

Particulars	Before Split	After Split
Number of Shares	4000	8000
Share Price	40	20 (40/2)
EPS	1.5	0.75 (1.5/2)
Dividend Per Share	0.5	0.25(0.5/2)
Dividend Payout Ratio	1:3	1:3
Dividend Yield	1.25	1.25(.25/20)
P/E	26.7	26.7(20/.75)
Market Value	160000	160000

stock split should be neutral in its effect on shareholders' wealth. The split ratio might vary from company to company (2:1, 5:4, 3:1, 5:1, 7:4, 10:1), but it is important for investors to recognize that their wealth is not changed by the split ratio. The Table 3 shows the impact of stock split on share prices, EPS, DPS, dividend payout ratio, dividend yield, P/E, and market value.

It can be observed from the Table 3 that after a split, the number of outstanding shares increased by 50%, while price per share, EPS, dividend per share decreased by 50% and others like dividend yield, P/E, and total market value remain unchanged. Hence, a stock split does not affect the shareholders' wealth.

(2) Impact of Stock Splits in Reality : Theoretically, it does not affect the share prices, but in reality, the stock price quotes higher because it pushes up the share prices as the demand for the shares increases after the split. There is enough evidence to prove that trading activity usually improves after a split, which can be inferred from the Table 4.

The Table 4 shows eight companies which announced the stock split and its impact on a share. In the case of Bharti Airtel, which split the face value of its stock from ₹ 10 to ₹ 5 in a 2 :1 split on July 24, 2009, this announcement sent its stock price spiraling from around ₹ 800 before the split to ₹ 400 after the move. This made a sizeable impact on the stock's volume in the market, with average daily traded volume rising 153% in the month after the split, compared with that in the previous month. Consequently, the average daily turnover rose 26%, while the average trades per day rose by 58%. On the day of the split, it surged by 3.2% in NSE, while the Sensex

Table 4. Impact of Splitting on a Share

Company	Split Date	Split Ratio	Pre Split	Post Split	Volume (%)	Turnover (%)	Trades (%)
Sesa Goa	08-Aug-08	10:01	155	163	629	-62	-9
Bharati Airtel	24-Jul-09	02:01	402	406	153	26	58
M&M	29-Mar-10	02:01	547	525	104	-2	51
Sterlite Industries	21-Jun-10	02:01	162	168	117	-43	-12
HDFC	18-Aug-10	05:01	602	641	432	14	67
Katak Mahindra Bank	13-Sep-10	02:01	421	490	135	36	53
Sun Pharma	25-Nov-10	05:01	447	450	512	24	94
ONGC	08-Feb-11	02:01	291	273	162	-39	11

Source: Compiled from The Economic Times rose by 1.2%. This means that the stock value, instead of falling by half, actually fell by a lesser amount as more investors bought the stock at the cheaper price. It can be also observed from the Table 4 that the stock outperformed the broader index by an average of 2.1% on the split date itself.

Further, in 2014, from January till October, 72 companies had announced stock split, out of which 38 had already given effect to the split. Among the 38 companies, 26 gained since the announcement day and half of them jumped more than 20%. The Table 5 shows the top gainer companies who undertook the stock split announcement in 2014.

Table 5. Top Gainer Companies with Stock Split Announcements in 2014

Company	Returns (%)
Premier Capital, Services	225
Greencrest Financial Services	220
JBM Auto	154
Rekvina Laboratories	145
Orosil Smith	142
Cubical Fiancial Services	109
Alkyl Amines	103

Source: Compiled from The Economic Times

It can be observed from the Table 5 that Premier Capital Services and Greencrest Financial Services gained more than 200%. JBM Auto, Rekvina Laboratories, Cubical Financial Services, Alkyl Amines, and Orosil Smith are stocks that gained more than 100% since the split announcement. Other companies such as Atul Auto, Astral Poly Technik, La Opala RG, and Gujarat Automotive Gears are among those that gained 30% - 70% since the announcement. Therefore, it can be concluded that even though theoretically, stock split does not add any value to a stock, but in practice, it does add value.

In contrast to the theory of stock split, many empirical studies stated that the stock split is a puzzle phenomenon for financial economists. This puzzle is usually associated with stock split that elicits a positive stock price reaction upon the announcement. The reason for this reaction after the announcement, however, has not been fully understood and explained. Many researchers documented the positive market reaction to announcement of stock split. Lakonishok and Lev (1987) and Asquith, Healy, and Palepu (1989) documented that earnings increased significantly before and after split announcements. Fama, Fisher, Jensen, and Roll (1969) proved that the share prices increased prior to spilt announcement and produced positive abnormal returns in the month of announcement. Charitou, Vafeas, and Zachariades (2005) documented that there were substantial gains to shareholders around the stock split announcement. Kalay and Kronlund (2009) noted that stock split was associated with abnormal returns. Dhar and Chhaochharia (2008) observed positive abnormal returns on the announcement date, but there were negative abnormal returns in the subsequent period. Leemakdej (2007) reported negative abnormal returns in 20 days before and 18 days after the effective date of the split. Byun and Rozeff (2003) found that stock splits were essentially value neutral transactions and did not cause any market reaction.

From the past literatures, it can be observed that the impact of stock split on share prices had mixed results. Therefore, we attempted to find out the actual impact of stock split announcements on shareholders' wealth, whether there is a short run impact, long run impact, or no impact on share prices. We also attempted to find out whether this impact was different for different industries or not.

Review of Literature

Koustubh (2011) attempted to test the semi strong form of efficiency in the Indian equity market with the help of event study analysis. In this study, stock split and right issues which had taken place in the market from 1996 to 2008 were considered for the analysis. The 30 days before announcement and 30 days after announcement period was taken as the event window period for both events. The study tested whether stock split and right issues produced any abnormal returns or not and whether these events changed liquidity or not. The study concluded that the Indian market was not efficient in the semi strong form with respect to stock split and right issues. The study proved that the change in liquidity was significant for stock split announcement, but insignificant for right issues.

Lazar and Pramod (2010) attempted to find out the impact of corporate actions on share prices. To know this impact, the study analyzed 12 corporate actions of 80 companies which are listed on BSE. Share price data of each company was collected before the announcement and after the announcement of a particular corporate action. The statistical tool, that is, Wilcoxon Matched pairs test was used for the analysis. The study concluded that corporate actions had an impact on the share prices.

Iqbal and Mallikarjunappa (2009) attempted to examine the stock market reaction to the earnings announcements. The quarterly announcements of December 2001 were taken as the sample event. Companies having a minimum of 20% foreign holdings were taken as the sample unit. A total of 152 samples were taken for analysis. The sample companies were divided into good news, bad news, and overall portfolios. The event study methodology, t - test, runs test, sign test, raw returns, and log returns were used in the analysis. The behaviour of AARs and CAARs were examined for 30 days before and 31 days after the announcement of quarterly earnings. The results of the study revealed that stock market reaction to the earnings announcement was delayed.

Nadig (2017) examined the stock market reaction to interim dividend announcements. The public sectors banks that announced the interim dividends in 2014 were taken as total samples. A total of 22 public sectors banks out of 28 declared interim dividends. This study analyzed the semi-strong efficiency of the Indian stock market with respect to interim dividend announcements. The event study methodology was used for the analysis. The study found that there were significant positive abnormal returns in some banking stocks prior to the announcement. On the actual day of interim dividend announcement, 10 banks reacted positively on the announcement day, and 12 banks reacted negatively to the announcement.

Silky, Nathani, Kaur, and Holani (2008) attempted to test the weak-form efficiency of the Indian stock market - the Bombay Stock Exchange (BSE). Various tests related to weak form of market efficiency hypothesis were also applied on 30 companies used in the formation of index of Bombay Stock Exchange, that is, Sensex to check the efficiency level of the Bombay Stock Exchange (BSE). The tests such as runs test and auto correlation were applied on share prices to check the weak form of efficiency. The results of the study concluded that the Bombay Stock Exchange was weak form efficient.

Babu and Kasilingam (2013) attempted to find out the effect of quarterly results on share prices of securities. The paired sample *t* - test was employed to compare the prices of stocks before and after the quarterly results announcements. The correlations between share prices and Sensex were also analyzed to find out whether the changes in prices were due to changes in the market index. The change in prices was also compared with profits reported in the quarterly results. The study concluded that share prices increased due to the market condition rather than announcement. The increase or decrease in share prices was not reflected in the growth in profits announced in the quarterly results.

Deborah, Nguyen, and Nguyen (2012) attempted to examine the influence of the number of financial analysts following a firm on market reaction around the stock split announcement. The findings of the study concluded that the abnormal returns were negatively related to level of analyst coverage. In addition, the impact of analyst coverage on market reaction was stronger for a small sized stock than a sample of large stocks. The study suggested that information asymmetry was an important factor which influenced the market reaction to stock split announcements.

Impson (2010) attempted to find two motives of stock split such as "attract attention" and "improve liquidity". The data were collected from small commercial banks and non commercial banks for the analysis. The study found that there was no relationship between the attention changes and return changes around stock split announcement. Unlike the attention effect, the relationship between liquidity and returns was significant for both banks and non banks. The findings of the study suggested that improved liquidity was the most important valuation effect of stock split for both bank and non banks.

Pavabutr and Sirodom(2008) examined the impact of the stock split on share price and liquidity. The study was carried out on stock split samples of listed companies in the stock exchange of Thailand during 2002 to 2004. The findings of the study concluded that reductions in trade frictions and increase in splits adjusted price levels were associated with the size of split factors and post split trading range. Stocks with high split factors had better post split adjusted price performance and low trade bid ask spreads and price impact. This study also supported the popular trading range hypothesis of stock splits.

Beltratti, Bortolotti, and Caccavaio (2012) concluded that during 2005 to 2006, the Chinese government reformed the stock split structure for development of small stocks, weak stocks, stocks issued with low transparency, weak governance, and less liquidity stocks. They also said that the reformed stocks split structure definitely helped to change the ownership, liquidity, and corporate governance in China.

Joshipura (2008) reported that the price effect was associated with the split around the time of the announcement and the effective day. He also stated that the stock split did not have an impact on shareholders' wealth but did improve the liquidity of the stock significantly.

Dennis and Strickland (2003) examined that the impact of split stock on share price was a dilemma, but whether it had some benefits either real or perceived - that depended upon the firm splitting process.

From above discussion, it can be observed that the relationship between stock split announcements and share price reaction resulted in contradictions. Empirical studies stated a positive market reaction to announcements. Some studies also found positive abnormal returns in the short run and negative abnormal returns in the long run. Therefore, this study attempts to focus on share price reaction to stock split announcements.

Research Methodology

The study describes the behaviour of share prices in the effect of stock split announcements. So, it is descriptive in nature. The study analyzes the impact of stock splits using the share price data. Share price data were collected from sampled companies which are listed under S&P BSE 500 index. Before that, the date of stock split announcements were recorded from stock exchange data and the data were arranged company wise as well as industry wise. Initially, announcement dates of companies of BSE 500 index were considered from April 1, 2000 to March 31, 2015. But due to non availability of share price data, the study period was restricted to 5 years from April 1, 2008 to March 31, 2015. The sample population, sample unit, criteria for drawing the sample , and size of sample are explained below :

(1) Sample Population and Sample Unit : The 500 companies of S&P BSE 500 index were considered as total population for the study. Any company of S&P BSE 500 index could be considered as a sample unit if that particular company had announced stock split and completed the process successfully over the study period.

(2) Criteria for Selection of Sample Unit : (a) company must be listed under S&P BSE 500 index ; (b) every industry should have a minimum of three companies and five announcements over the last 7 years from April 1, 2008 to March 31, 2015 ; (c) a maximum of five companies in each industry and a maximum of five announcements in each company may be taken as total sample for an industry, which equals to a maximum of 25 announcements (one industry * five companies * five announcements) per industry.

(3) Sample Size : According to the selection criteria for drawing the sample unit, a total of 73 announcements were selected, out of which four samples were drawn from the transport equipments industry . Five samples were drawn from textile ; power industry ; miscellaneous related companies ; metal, metal products, & mining industry ; IT industry ; and housing related industry, respectively. Seven samples were drawn from the healthcare industry ; nine samples were drawn from FMCG related companies ; 11 samples were drawn from the finance industry ; five samples were drawn from the capital goods industry ; and seven samples were drawn from the agriculture industry. The simple random sampling method was used for selection of companies as well as the announcements in a particular industry. If there were more samples, then maximum intake as the per selection criteria was done.

(4) Event Study Methodology : This study uses the event study methodology. The event study methodology examines the impact of stock split announcements on share prices. In the events study methodology, it is necessary to calculate the abnormal returns to know abnormal performances of the stock around the announcement of a particular event. The abnormal returns can be calculated by using different models. Here, market adjusted abnormal returns model is used. The formula of the market adjusted abnormal returns model is given below :

$$AR_{jt} = R_{jt} - R_{mt}$$

where,

AR_{jt} = abnormal returns of a company *j* at time *t*,

R_{jt} = Daily company share price returns of company *j* at time *t*,

R_{mt} = Daily market index returns at time *t*.

The study attempted to capture the abnormal returns (AR) earned by shareholders during the announcement of the stock split. If there is a shareholders' reaction to a stock split, it will not be captured instantaneously in behaviour of abnormal returns for a particular day ; hence, it is necessary to estimate the AR over a long period. It gives an idea about the share price behaviour over a period of time. Hence, the study has taken the event window period of 61 days (including 0 day). The study has also calculated abnormal returns and cumulative abnormal returns in the entire event window period to know its effect. The day 0 is denoted as announcement day. Pre announcement period includes 30 days prior to the event date, that is, days -30 to -1. Similarly, the post announcement period includes 30 days after the event announcement, that is, days +1 to +30.

Event window analysis was also used in this study to measure the impact of stock split on shareholders' wealth for a specific period. So, the effect of stock split is categorized based on the time period. Immediate effect is taken from 1 day before the announcement to 1 day after the announcement of stock split. Similarly, short term effect is taken from 5 days before the announcement to 5 days after the announcement ; the medium term effect is defined from 15 days before the announcement to 15 days after the announcement ; the long term effect is taken from 30 days before the announcement to 30 days after the announcement. The cumulative abnormal returns accruing during these time periods are assessed industry wise.

(5) Statistical Tools Used for Analysis : Statistical tools such as paired sample *t* - test and ANOVA were used for the analysis. Paired sample *t* - test was used to check the reaction of share prices before and after the announcements. ANOVA was also used to know whether the industries were different or similar with subject to the abnormal returns produced by them.

Analysis and Results

(1) Impact of Stock Split Announcements on Share Prices : In this section, the study attempts to find out whether the share prices changed significantly after the stock split announcement or not. To know this impact, paired sample *t* - test was used. It compares the mean share prices of 30 days before the announcement and 30 days after the announcement. This analysis has been done industry wise. The 12 industries such as finance industry ; agriculture industry ; healthcare industry ; housing related industry ; FMCG industry ; capital goods industry ; IT industry ; metal, metal products, & mining industry ; transport equipments industry ; textile industry ; power industry ; and miscellaneous industry are taken for analysis.

Table 6. Impact of Stock Split Announcements on Share Prices - Industry wise

Industry	Share Price		*t* - value	Sig.
	Before	After		
Finance	24.774	29.888	-25.476	.000
Agriculture	86.376	96.492	-8.635	.000
Healthcare	81.56	92.336	-23.988	.000
Housing Related	146.424	141.816	3.297	.003
FMCG	48.074	59.492	-6.163	.000
Capital Goods	73.918	80.818	-6.215	.000
IT	78.023	126.653	-15.912	.000
Metal, Metal Products, & Mining	195.566	238.958	-6.791	.000
Transport	229.738	231.983	8.215	.000
Textile	30.913	38.233	-22.973	.000
Power	66.403	62.095	16.824	.000
Miscellaneous	260.776	372.362	-7.425	.000

The Table 6 shows the mean share price of each industry, *t* - value, and its significant value. The industries are significant at the 99 % level of confidence. This indicates that the share prices of these industries changed significantly after the stock split announcements. Therefore, it can be concluded that the stock split announcements had a significant impact on the share prices.

(2) Impact of Stock Split Announcements (SSA) on Shareholders' Wealth : Here, the study analyzes the impact of stock split for industry wise as well as overall. Abnormal returns and cumulative abnormal returns are given for both industry wise and overall. The study also analyzes the effect of stock split by doing event window analysis and inter industry comparison.

The Figure 1 shows the abnormal returns of 12 industries. The abnormal returns of all the industries are close to 0 in the short run. Very few industries such as miscellaneous industry ; FMCG industry ; and metal, metal

Figure 1. Industry Wise Abnormal Returns

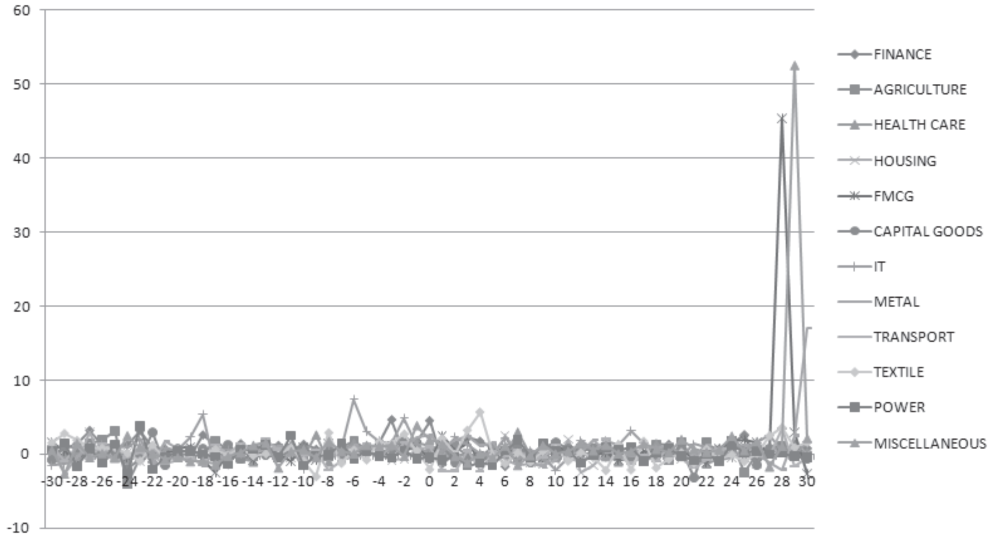
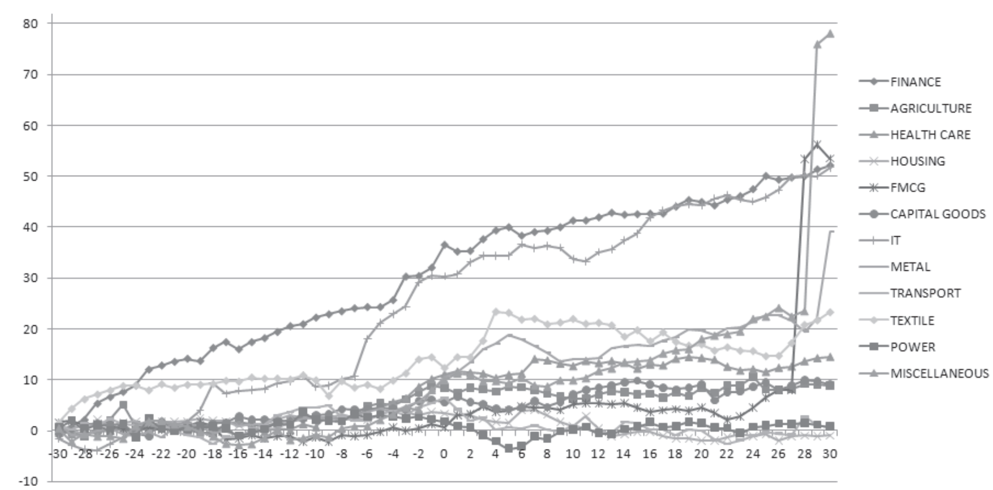


Figure 2. Industry Wise Cumulative Abnormal Returns



products, & mining industry earned excess returns in the long run after announcement. So, it can be concluded that these three industries gave more value to shareholders in the long run after stock split announcements.

The Figure 2 shows the cumulative abnormal returns of 12 industries. The cumulative abnormal returns of finance industry and IT industry increased in a linear trend, while CAR of the remaining industries was close to 0 and earned constant returns as evident from the parallel lines. But after the 26th day of announcement, CAR of FMCG industry ; miscellaneous industry ; and metal, metal products, and mining industry increased steeply. From this discussion, it can be concluded that the stock split announcements had a significant impact on shareholders' wealth.

The calculated mean values of AR and CAR of stock split announcements are depicted in the Table 7. It shows that before the announcement, the CAR gradually increased from -9th day. AR was negative on the -10th, -16th,

Table 7. Abnormal Returns and Cumulative Abnormal Returns of All Industries

Pre Announcement					Post Announcement				
Day	AR	CAR	*t* - value	Sig.	Day	AR	CAR	*t* - value	Sig.
-30	0.379	0.379	1.487	.143	0	0.682	10.941	1.472	.147
-29	-0.228	0.151	-.588	.559	1	0.250	11.192	.579	.565
-28	0.094	0.245	.272	.787	2	0.093	11.284	.211	.834
-27	0.871	1.116	2.379	.021	3	0.474	11.758	1.400	.167
-26	0.352	1.468	1.099	.277	4	-0.018	11.740	-.041	.967
-25	0.458	1.926	1.272	.209	5	0.227	11.967	.830	.410
-24	-0.497	1.429	-1.138	.260	6	0.307	12.274	.916	.364
-23	0.786	2.215	1.816	.075	7	0.293	12.566	.972	.335
-22	0.190	2.406	.663	.510	8	-0.567	11.999	-2.399	.020
-21	-0.121	2.284	-.443	.659	9	-0.108	11.891	-.341	.734
-20	0.177	2.461	.791	.432	10	0.298	12.189	1.055	.296
-19	0.049	2.511	.199	.843	11	0.320	12.509	1.243	.219
-18	0.192	2.703	.534	.596	12	0.019	12.528	.058	.954
-17	-0.043	2.660	-.138	.891	13	0.303	12.831	1.025	.310
-16	-0.242	2.418	-.953	.345	14	0.334	13.165	1.009	.318
-15	0.334	2.752	1.122	.267	15	0.080	13.246	.292	.772
-14	0.133	2.885	.468	.642	16	-0.030	13.216	-.092	.927
-13	0.817	3.702	3.536	.001	17	0.130	13.346	.465	.644
-12	0.148	3.849	.493	.624	18	0.314	13.660	1.118	.269
-11	0.598	4.447	2.448	.018	19	0.352	14.012	1.318	.193
-10	-0.039	4.409	-.149	.882	20	0.298	14.311	.826	.413
-9	0.045	4.454	.156	.877	21	-0.773	13.538	-2.753	.008
-8	0.394	4.848	1.165	.249	22	0.373	13.911	1.328	.190
-7	0.176	5.024	.565	.574	23	0.055	13.966	.156	.877
-6	0.793	5.817	1.961	.055	24	0.989	14.954	2.783	.007
-5	0.725	6.541	3.220	.002	25	0.472	15.426	1.247	.218
-4	0.623	7.164	2.517	.015	26	0.149	15.575	.418	.677
-3	0.726	7.890	1.601	.115	27	0.216	15.791	.750	.457
-2	1.110	9.000	3.789	.000	28	4.936	20.727	1.160	.251
-1	1.259	10.259	3.999	.000	29	5.396	26.123	1.118	.269
0	0.682	10.941	1.472	.147	30	1.660	27.783	1.096	.278

-17th, -24th, and -29th days. Moreover, AR was highest positive and significant one day before the announcement, which indicates that there was a positive signal conveyed to the market about the corporate events. Furthermore, the AR was also significant on the -2nd, -4th, -5th, -11th, -13th, and -27th days. Moreover, after the announcement, AR was highest on the 29th day and CAR gradually increased all days except on 4th, 8th, 16th, and 21st days due to positive price reaction to stock split. In addition, AR was also significant on 8th, 21st, and 24th days, but negative on the 8th and 21st days. So, the investors lost returns significantly on the 8th and 21st days after the stock split announcements. Therefore, it can be concluded that the stock split announcements had an impact on shareholders' wealth.

(3) Event Window Analysis : Event window analysis is done to measure the impact of stock split announcements on shareholders' wealth for a specific period. So, the announcement effect is categorized into : immediate effect (-1 to +1 days), short term effect (-5 to +5 days), medium term effect (-15 to +15days) , and long term effect (-30 to +30 days). Cumulative abnormal returns accruing during these time periods have been assessed industry wise. CAR of different industries are depicted in the Table 8.

The Table 8 shows the event window analysis of four different periods. From the Table 8, it can be inferred that the cumulative abnormal returns of agriculture industry, transport equipments industry, and power industry were negative in the period of -2 to +2. This indicates that there was a negative impact on the share prices with immediate effect of the stock split announcements. During this period, CAR was highest for miscellaneous industry followed by metal, metal products, and mining industry. So, the investors who had invested in miscellaneous and metal, metal products, and mining industries would have earned excess returns than the investors who had invested in other industries due to the immediate effect of stock split announcements. However, at the same time, investors who invested in the agriculture industry, transport equipments industry, and power industry would have lost returns after the announcements. Similarly, the power industry, transport equipment industry, and housing related industry had a negative impact on the shareholders' wealth in the short run. However, IT ; metal, metal products, & mining ; healthcare ; agriculture ; FMCG ; capital goods ; miscellaneous ; finance ; and textile industries produced positive surplus returns, and among them, IT produced the highest returns. The IT industry also produced the highest returns in the medium term effect of stock split.

In the long term effect of stock split, all industries except the housing related industry produced positive returns, and among them, the miscellaneous industry produced the highest returns. This indicates that stock split had a long-term positive impact on shareholders of these industries. In case of the housing related industry, it produced negative returns, which indicates that there was a negative impact on shareholders' wealth. Therefore, it can be concluded that stock split announcements negatively influenced the housing related industry and positively influenced the remaining industries in the long run.

Table 8. Cumulative Abnormal Returns - Event Window Analysis

Industry	-1 to 1	-5 to 5	-15 to 15	-30 to 30
Finance	4.78	15.66	26.48	52.04
Agriculture	-0.20	3.84	5.57	8.77
Healthcare	3.04	6.91	10.63	14.48
Housing Related	0.09	-0.60	-1.20	-1.04
FMCG	2.65	4.83	6.14	53.54
Capital Goods	0.80	0.01	7.01	9.17
IT	1.63	16.35	30.82	51.64
Metal, Metal Products & Mining	5.95	15.04	17.88	39.03
Transport Equipments	-0.37	-1.26	2.64	0.55
Textile	0.45	14.12	10.07	23.25
Power	-1.86	-6.19	1.78	0.72
Miscellaneous	7.09	8.41	16.36	78.11

Table 9. Inter Industry Comparison - Analysis of Variance

	Sum of Squares	*Df*	Mean Square	*F*	Sig.
Between Groups	122.578	11	11.143	1.366	.184
Within Groups	5969.597	732	8.155		
Total	6092.175	743			

(4) Inter Industry Comparison : Different industries may have a different impact on shareholders' wealth due to stock split. So, an attempt is made by using ANOVA to measure the inter industry comparison - whether the industries produced equal quantum of abnormal returns or not. Here, 12 different groups of industries are taken for analysis. From the Table 9, it can be inferred that the F - value is 1.366 and its significance value is 0.184, which is not significant at the 95% level of confidence. This indicates that there is no significant difference among the industries with respect to the abnormal returns produced by them. Therefore, it can be concluded that the industries produced equal quantum of abnormal returns around the stock split announcements.

Implications of the Study

(1) As this study covers the major industries for the analysis, the results from this study are more reliable, accurate, and may represent whole industries in the market. The findings are of particular interest to investors, researchers, and practitioners.

(2) The study proves that stock split does not have any impact on share prices with a theoretical point of view, but in reality, there is an impact of stock split on share prices. So, the investors can take this advantage to earn extra profits from the markets.

(3) The study states that the impact of the stock split is not different with respect to the nature of the industry. So, the investors may construct an optimum portfolio, irrespective of the choice of industry.

(4) As this study does not support the semi strong form of efficient market hypothesis, the investors should do a self analysis and understand the motive of stock split announcements if they take investment decisions based on stock split.

Conclusion

Stock split depends upon the market movements and exists in a bull market. Since the Indian capital market is developing gradually, there is an inconsistent market movement. So, the stock split growth is also inconsistent. It increases in the bull market and decreases in the bear market. If we look at the accounting years 2005 to 2006 and 2010 to 2011, a large number of stock split, that is, 133 and 106, respectively occurred during the boom periods. Therefore, companies announced stock split to bring the share prices into the popular trading range so that the small investors could buy the shares at low prices. In fact, it affects the share prices and trading volumes. The results of the study show that stock split influences the share prices, which is line with the findings of Charitou et al. (2005) and Pavabutr and Sirodom (2008) and improves the trading activity (Impson, 2010) after the announcement. The study concludes that industries produce greater positive abnormal returns in the long term effect of the announcements, which is similar to the findings of Dhar and Chhaochharia (2008). The study also suggests that investors who make investment decisions based on stock split should go for long term investments in the following industries : finance, FMCG, IT, textile, and miscellaneous industries so that they can earn surplus returns after announcements. However, they should not go for investments in the housing related industry before analyzing the price reactions of different companies to stock split because the share prices reacted negatively to stock split (Leemakdej, 2007). If they are going for the short term investments, they may also prefer to invest in finance ; IT ; metal, metal products, and mining ; textile ; and miscellaneous industries.

The study suggests that the financial analysts of the housing related industry should analyze the movements of share prices of each and every company as the shares of this industry were negatively influenced by stock split. The study also concludes that the impact of stock split is not different according to the nature of the industry. Finally, the study proves that stock split does not affect the share prices theoretically, but in real time, it affects the share prices.

Limitations of the Study

(1) There are two major stock exchanges in India. One is the National Stock Exchange (NSE) and another is the Bombay Stock Exchange (BSE). However, this study analyzes only companies of Bombay Stock Exchange which are listed on S&P BSE 500 index because S&P BSE 500 index represents nearly 93% of the total market capitalization of BSE. In addition to that, S&P BSE 500 index covers the major 20 industries, and free-float methodology is used for calculation of this index since October 2005.

(2) Due to non availability of data, the study considered only 12 industries for the analysis. The period of the study was restricted from 2008 to 2015 because during this period, many companies announced stock split.

(3) For the calculation of abnormal returns, three existing alternative methods are there, such as market model, market adjusted model, and mean adjusted model. But in this study, we used only the market adjusted model for the calculations.

(4) As this study only considered companies listed on BSE, the results may not represent all the capital markets of India.

Scope for Further Research

This study analyzes only BSE listed companies to find out the impact of stock split on shareholders' wealth. This study can be extended by adding NSE listed companies to the analysis so that the results of the study will be more reliable and valid. This study used only market adjusted model for calculation of abnormal returns. In addition to that, other two models such as market model and mean adjusted model can be included in the future studies to find out any deviation of the abnormal returns with respect to the models. Comprehensive studies can be done in the future including all kinds of corporate actions to find out the impact on shareholders' wealth.

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