



EVENT STUDY ANNOUNCEMENT OF STOCK SPLITS AND RIGHTS ISSUE AND ITS IMPACT ON THE MARKET, A STUDY WITH REFERENCE TO BOMBAY STOCK EXCHANGE, INDIA

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ABSTRACT:

A market in which the prices always fully reflect available information is called 'efficient'. Event studies are the cleanest evidence that is present on semi-strong form efficiency. In 1969, Fama et al., undertook the first ever study and their results lend considerable support to the conclusion that the stock market is efficient. The event study method has become popular because it obviates the need to analyze accounting-based measures of profit. Event studies are based on the assumptions that markets are efficient, the event was unanticipated and there are no confounding effects during the event window.

INTRODUCTION:

The pace of economic growth and development of any country depends upon its sound financial system. The financial system promotes savings and investment in the economy and enlarges the resources flowing into the financial assets which are more productive than the physical assets. The financial market has a significant role to play in this context because it is a part of the financial system. It provides the financial resources needed for a long term and sustainable development of different sectors of the economy. Financial Market is divided into Money

Market and Capital Market, Money Market refers to the open market operations in highly marketable short-term debt instruments whereas Capital Market deals in long-term debt issues and stocks. The capital market is one of the significant aspects of every financial market.

OBJECTIVES:

1. To analyze the impact of the stock split announcement on the day of the announcement.
2. To study the impact of the stock split announcement on the returns in the pre-announcement and post-announcement period.
3. To determine the abnormal returns, cumulative abnormal returns of different stock split ratios.

METHODOLOGY:

The study uses the event study methodology for two events, viz., stock splits, and the rights issue. An event study describes a technique of empirical financial research that enables an observer to assess the impact of a particular event on a firm's stock price. To devise an event study, the event, the event date, the event window, the estimation window, and the estimation model has to be determined. This study reveals secondary data is collected from various journals, articles, websites, and Text books.

LIMITATIONS:

- The study is limited to only two events i.e. stock splits and rights issue.
- The study considers a period of 15 years.

CONCEPTS:

The current study examines the market reaction to the announcement of the rights issue of shares by listed companies in the Bombay Stock Exchange. Spanning 15 years, the study period is from April 2004 to March 2018. There was a 314 announcement of the rights issue of share by companies. A sample of 60 rights issue is considered for the study. The year 2005 has the highest number (45) of the rights issue announcement by companies. The least number (11) of the announcement was in 2013 and 2018.

Table 5.1. Year-wise and Industry wise Classification of Rights Issue Announcement from 2004 – 2018

SIN	Industry	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total	Percentage
1	Automobiles & Auto Components	8	4	3	4	1	1	4	2	1	1	6	8	3	4	5	55	5.15
2	Banks				1	3		2	1		1	7	1	1	1		18	1.69
3	Capital Goods	1	15	4	22	8	11	9	3	5	5	5	5	3	5	1	112	10.5
4	Chemicals & Petrochemicals		8	3	2		2	5	6	2	5	10	3	4		5	55	5.15
5	Coal						1	1									2	0.19
6	Commercial Services & Supplies	1	10	2	1	1	1	10	3	2	5	9	5	3	5	1	59	5.53
7	Construction Materials	4	4			1	2	4	1	2		1	3	6	2	3	33	3.09
8	Consumer Durables	1		1			4		1	1	2	2	4	2	2	2	22	2.06
9	Diversified		3	1	1	1		1				1	1			1	10	0.94
10	Diversified Consumer Services		2														2	0.19
11	Financial		8	4	2	5	10	19	11	11	19	20	3	9	4	18	143	13.4
12	Services																	
13	Food, Beverages & Tobacco	2	11	3	5	5	2	8	3	3	5	4	4	2	4	7	68	6.37
14	Forest Materials		1		2	2	1	1									7	0.66
15	General Industrials	2	10	2	6	1	6	11	7	2	5	4	12	9	4	8	89	8.34
16	Hardware Technology & Equipment		1			1	1	1		1		1	3		2	1	12	1.12
17	Healthcare Equipment & Supplies													1	1	1	3	0.28
18	Healthcare Services			1				1					2			1	5	0.47
19	Hotels, Restaurants & Tourism		1	3	2	2		2	2	1	2	1					16	1.5

19	Household & Personal Products	1		2	1	1		2	1	1			1	4		14	1.31		
20	Insurance															0	0		
21	Media	2	4	2	6	1	2	2				4	2			25	2.34		
22	Metals and mining	1	5	3	7	3	2	5	2	6		1	1	2	1		39	3.66	
23	Oil & Gas		2		2	2		1					1	1	1	1	11	1.03	
24	Pharmaceuticals & Biotechnology	5	11		4	4	4	6	1	3	1	4	9	4	1	1	58	5.44	
25	Real Estate Investment																0	0	
26	Realty		1	1		1		2		1	1		2	1	1		11	1.03	
27	Retailing			1		1	1	1					2				6	0.56	
28	Software & Services	1	27	3	4	5	5	2	1	3	5	4	1	4	1		66	6.19	
29	Telecom Services							2	1					1	1		5	0.47	
30	Telecommunication Equipment		4	1		2	2					1	2			12	1.12		
31	Textiles, Apparels & Accessories	2	14	6	6	4	8	7	5	5	4	2	4	1	3		71	6.65	
32	Transportation	1		2	1		2	2		1		2	2	4	2		19	1.78	
33	Utilities			1	2	1	3	2	3	1	2				3		19	1.78	
	Total		32	146	9	81	56	73	112	53	51	64	86	82	61	50	61	1067	100
	Percentage		3	14	6	8	5	7	10	5	5	6	8	8	6	5	6	100	

Table 4.1 reveals the year wise and industry-wise classification of companies that have made stock splits announcements. A total of 1067 stock splits announcement was made from the year 2004-2018. The maximum number of the stock split announcement was in the year 2005 reaching a total of 146 (14%) announcements followed by the year 2010. The number of the stock split announcement in the year 2010 was 112 (10%). The years 2017 and 2012 had the least stock splits announcement with 50 (4.69%) and 51 (4.8%) respectively. There was a sudden spurt in the number of the stock split announcement in the year 2005 with 146 stock split announcements. In the year 2006, there is a 56% fall in the stock split announcement from the previous year with only 59 announcements (5.5%).

The years 2007, 2008, and 2009 shows alternate swings in the stock split announcement by companies. There were 81 (8%), 56 (5.5%), and 73 (6.8%) stock split announcements in the year 2007, 2008, and 2009 respectively. The stock split announcement increased by over 50% in the year 2010 totaling 112 (10.5%). The year 2010 has the second-highest number of announcements during the study period. There is a sharp decrease in the stock split announcement in the year 2011. It decreased by 47.32% with a total announcement of 53 (4.97%). This fall continues in the year 2012 with 51 (4.8%) stock split announcement. This trend reverses in the year 2013 with 64 (5.99%) stock split announcements. It continues until 2014. Then it falls till 2017. In 2017 there were 50 (4.69%) announcements. Then it increases to 61(6%) announcements.

Table 4.1 also discloses the industry-wise classification of companies making stock split announcements. This classification is based on the Bombay stock exchange database. The highest number of stock splits announcements is made by the Financial Services industry with 146 (13.4021%). The Financial Services industry comprises of Non-Banking Financial Companies, Holding Companies, Asset Management Companies, and other Financial Services. The industry has made consecutive stock splits of 19 and 20 in the years 2013 and 2014. The Capital Goods industry has made the second-highest stock split announcement during the study period. The industry has made a total of 112 (10.49%) stock split announcement with a high of 22 announcements in the year 2007. The capital goods industry is defined as companies engaged in construction and are also manufacturers of heavy electrical equipment, agriculture, and commercial equipment, industrial machinery, aerospace, and defense equipment.

The companies in the Insurance, Real Estate Investment, and health care equipment and supplies industries have not made stock split announcements during the study period. Companies in the Food, Beverages & Tobacco industry have made 68 (6.37%) stock split announcements with a high of 11 announcements in the year 2005. There is only 2 Stock split announcement done by Coal and Diversified Consumer Services industries during the study period. Pharmaceuticals and Biotechnology industry constitute 58 (5.43%) of the stock split announcement. General industries constitute 89(8.34%) of the stock split announcement during the study period. A high of 12 announcements was made by the industry in the year 2015. As defined by the Bombay Stock Exchange General Industries are those companies that manufacture Container and Packaging, Iron & Steel products, Plastic products, and other industrial products like abrasives, copper rods, coils, and so on.

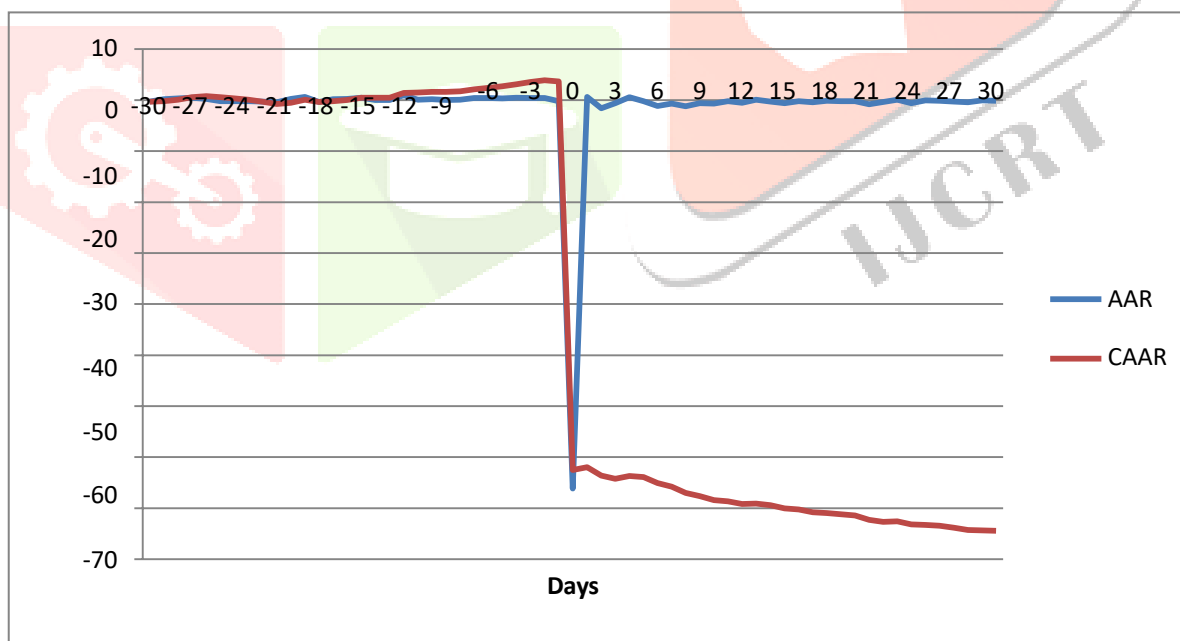
Companies in the Automobiles & Auto Components industry have made 55 (5.15%) stock split announcements during the study period with a high of 8 announcements in the year 2004 and 2015 respectively. Companies in the Metals and Mining industry have made 39 (3.65%) stock split announcements during the study period. Metals and Mining industry defined as companies involved in the extraction, production, and manufacture of metals and minerals. Companies in the Commercial Services and Supplies industry have made 59 (5.52%) stock split announcements from 2004 to 2018. Companies providing commercial printing, Data Processing

Services, Diversified Commercial Services, Trading and Consulting services belong to the Commercial Services and Supplies Industry. Companies in Textiles, Apparels & Accessories 71 (6.65%) of stock split announcements during the study period with a high of 14 announcements in the year 2005.

During the study period, Companies belongings to industries such as Banks, Construction Materials, Consumer Durables, Diversified, Hardware Technology & Equipment, Hotels, Restaurants & Tourism, Household & Personal Products, Media, Oil & Gas, Realty, Telecommunication Equipment, Transportation, utility industries have respectively made (1.68%), (3.09%), (2.06%), (0.93%), (1.12%), (1.49%), (1.31%), (2.34%), (1.03%), (1.03%), (1.12%), and (1.78%) stock split announcements.

Companies in the Coal, Diversified Consumer Services, Forest Materials, Healthcare Equipment & Supplies, and Healthcare Services, Retailing, and Telecom Services industries have made less than 10 stock split announcements each during the study period. It can be observed that Automobiles & Auto Components, Capital Goods, Commercial Services & Supplies, Food, and Beverages & Tobacco industries have made a consistent stock split announcement in each year of the study period.

AAR and CAAR of Market Model:



Day	Average abnormal Return	T-test	5%	1%	Cumulative Average abnormal Return	T-test CAAR	5%	1%
-30	-0.1858	0.1478	NS	NS	-0.18578	0.04842	NS	NS
-29	0.28262	0.2249	NS	NS	0.096848	0.02524	NS	NS
-28	0.48665	0.3873	NS	NS	0.484132	0.12619	NS	NS
-27	0.5486	0.4366	NS	NS	0.920719	0.23999	NS	NS
-26	0.49592	0.3947	NS	NS	1.315378	0.34287	NS	NS
-25	-0.124	0.0987	NS	NS	1.216722	0.31715	NS	NS
-24	-0.1923	0.153	NS	NS	1.063726	0.27727	NS	NS
-23	0.12299	0.0979	NS	NS	1.1616	0.30278	NS	NS
-22	-0.1538	0.1224	NS	NS	1.039202	0.27088	NS	NS

AAR and CAAR of Market Adjusted Model

-21	-0.268	0.2133	NS	NS	0.825934	0.21529	NS	NS
-20	0.28887	0.2299	NS	NS	1.055817	0.27521	NS	NS
-19	0.60038	0.4778	NS	NS	1.533608	0.39975	NS	NS
-18	-0.2747	0.2186	NS	NS	1.315023	0.34277	NS	NS
-17	0.40455	0.3219	NS	NS	1.636971	0.42669	NS	NS
-16	0.62965	0.5011	NS	NS	2.13806	0.55731	NS	NS
-15	0.62638	0.4985	NS	NS	2.636542	0.68724	NS	NS
-14	0.16489	0.1312	NS	NS	2.76776	0.72144	NS	NS
-13	0.12876	0.1025	NS	NS	2.870232	0.74815	NS	NS
-12	0.9492	0.7554	NS	NS	3.625617	0.94505	NS	NS
-11	0.14515	0.1155	NS	NS	3.741128	0.97516	NS	NS
-10	0.34155	0.2718	NS	NS	4.012941	1.04601	NS	NS
-9	0.29035	0.2311	NS	NS	4.244007	1.10624	NS	NS
-8	0.50835	0.4046	NS	NS	4.648559	1.21169	NS	NS
-7	0.54924	0.4371	NS	NS	5.085651	1.32562	NS	NS
-6	0.45756	0.3641	NS	NS	5.449786	1.42054	NS	NS
-5	0.35887	0.2856	NS	NS	5.735378	1.49498	NS	NS
-4	0.66838	0.5319	NS	NS	6.267286	1.63363	NS	NS
-3	0.55711	0.4434	NS	NS	6.710641	1.74919	NS	NS
-2	0.57593	0.4583	NS	NS	7.168974	1.86866	NS	NS
-1	0.18459	0.1469	NS	NS	7.315873	1.90695	NS	NS
0	-75.868	60.377	SIG	SIG	-53.0614	13.831	SIG	SIG
1	0.87581	0.697	NS	NS	-52.3644	13.6493	SIG	SIG
2	-1.8197	1.4482	NS	NS	-53.8126	14.0268	SIG	SIG
3	-0.5272	0.4195	NS	NS	-54.2321	14.1361	SIG	SIG

4	0.78534	0.625	NS	NS	-53.6071	13.9732	SIG	SIG
5	0.14976	0.1192	NS	NS	-53.4879	13.9422	SIG	SIG
6	-1.0942	0.8708	NS	NS	-54.3587	14.1691	SIG	SIG
7	-0.6634	0.528	NS	NS	-54.8867	14.3068	SIG	SIG
8	-0.8177	0.6507	NS	NS	-55.5374	14.4764	SIG	SIG
9	-0.4719	0.3755	NS	NS	-55.9129	14.5743	SIG	SIG
10	-0.5963	0.4745	NS	NS	-56.3875	14.6979	SIG	SIG
11	-0.1839	0.1463	NS	NS	-56.5338	14.7361	SIG	SIG
12	-0.3025	0.2407	NS	NS	-56.7745	14.7988	SIG	SIG
13	0.3337	0.2656	NS	NS	-56.5089	14.7296	SIG	SIG
14	-0.1069	0.0851	NS	NS	-56.5941	14.7518	SIG	SIG
15	-0.5624	0.4476	NS	NS	-57.0416	14.8685	SIG	SIG
16	-0.0921	0.0733	NS	NS	-57.1149	14.8876	SIG	SIG
17	-0.1877	0.1494	NS	NS	-57.2643	14.9265	SIG	SIG
18	-0.044	0.035	NS	NS	-57.2994	14.9356	SIG	SIG
19	-0.0926	0.0737	NS	NS	-57.3731	14.9549	SIG	SIG
20	-0.1228	0.0977	NS	NS	-57.4708	14.9803	SIG	SIG
21	-0.5627	0.4478	NS	NS	-57.9186	15.0971	SIG	SIG
22	0.0541	0.0431	NS	NS	-57.8756	15.0858	SIG	SIG

23	0.06313	0.0502	NS	NS	-57.8253	15.0727	SIG	SIG
24	-0.2735	0.2176	NS	NS	-58.043	15.1295	SIG	SIG
25	0.01695	0.0135	NS	NS	-58.0295	15.126	SIG	SIG
26	-0.0756	0.0601	NS	NS	-58.0896	15.1416	SIG	SIG
27	0.00786	0.0063	NS	NS	-58.0834	15.14	SIG	SIG
28	-0.1458	0.116	NS	NS	-58.1994	15.1702	SIG	SIG
29	0.1107	0.0881	NS	NS	-58.1113	15.1473	SIG	SIG
30	0.2097	0.1669	NS	NS	-57.9444	15.1038	SIG	SIG

SIG- Significant; NS- Not Significant

Table 4. reveals the output of the Market Adjusted Model. The table shows the AAR, CAAR, corresponding t statistic, significance at 5%, and 1% level for the 61 days window period. In the announcement period, there are no positive AARs. The highest AARs on the pre-announcement period is on day $t_{(-12)}$ followed by $t_{(-4)}$ and $t_{(-16)}$ have Average Abnormal Return of 0.9492%, 0.66838%, 0.62965%. the lowest AAR is on day $t_{(-1)}$ with a value of - 0.2747%. in this period there are 6 days of negative AARs and 24 days of positive AARs. There is no significant AAR value in the pre-announcement period. On the date of announcement, the AAR value is - 75.868% with the t statistic value of 60.3773 and significant at 5% and 1% level. In the post-announcement period, there are 10 days of positive AARs and 20 days of negative AARs. In this period the highest Aar is on day $t(1)$ immediately after the announcement day with a value of 0.8758%. the lowest AAR is on day $t(8)$ with a value of -0.8177%. there are no significant values in the post-announcement period.

The CAAR increasing from day $t(-29)$ with a value of 0.0968% till the day of $t(-1)$ with a value of 7.3159%. This trend signifies that there have been positive returns till day $t(-1)$. On the day of the announcement, the CAAR is -53.061% with the t statistics of 13.831 and significant both 5% and 1% level. The CAAR shows a decreasing trend from day $t(1)$ reaching a low of - 57.944% on day $t(30)$. The CAAR is statistically significant from the day $t(1)$ to day $t(30)$ at both 5% and 1% level of significance

Findings:

Market response to Stock Split announcements- Findings

The study considers a sample of 60 announcements from a population of 1067 announcements of stock splits from 2004 to 2018. During this period the highest announcement were in 2005 while the least was in 2004. The highest number of stock splits announcement is made by Financial Services industry followed by capital goods industry. The Abnormal Returns for the sample stock split announcements were calculated using Market Model, Market Adjusted Model for the event window of 61 days. On the day of the announcement following were the observations made from the above two models.

- The Average Abnormal Return using the Market model was -76.1528% and statistically significant at 5% and 1% level. the CAAR on this day was -72.5395% and statistically significant at 5% and 1% level.
- The Market Adjusted Model AAR was -75.8684% and statistically significant at 5% and 1% level. The CAAR was -53.0613% and significant at 5% and 1% level.

From the above observation it can be concluded that there is significant negative market reaction to stock split announcements in the Indian stock market.

The study analyses the trend of AAR and CAAR in different window periods. The 31 days 15 days and 3 days window reveals that the AAR on the announcement day is negative and statistically significant at 5% level. This indicates that for shorter window periods, the market is efficient in its semi strong form.

The study tests the effect of the stock split announcement before and after the event day. The results report that there is a significant average abnormal return before and after the announcement of stock splits. Further there is a significant average abnormal return in the pre-announcement period than the post announcement period

The impact of announcement of stock splits on the liquidity of the market is measured using Trading Volume. The measures give mixed results.

- For a period of 60 days around the announcement day, the average pre announcement trading volume is higher than average post announcement trading volume. However it is not statistically significant.
- The average trading volume for 14 days surrounding the announcement day are greater in the pre-announcement period than in post announcement period. However it is not statistically significant.

From the above observation it can be inferred that due to announcement day of stock splits there is insignificant liquidity in pre-announcement period than the post announcement. This implies that there is no significant change in the liquidity of securities associated with stock split announcement.

Market response to Rights Issue announcement – Findings

The Market reaction to rights issue announcement was examined for a sample of 60 announcements from April 2004 to March 2018. The largest number of announcement were in 2005 (45), the least being in 2013, 2018 (11). The highest number of rights issue Announcements is made by the Capital Goods industry with 32 (10.19%) with the highest announcement in 2005. The population of 314 rights issue announcement has been refined to a sample of 60 announcements by excluding confounding events – dividend announcements, bonus announcements; inadequate data and infrequent trading.

The Abnormal Return for the sample rights issue announcements were calculated using market model, Market Adjusted Model for the event window of 61days. On the day of the announcement following were the observations made from the above models.

- The Average Abnormal Return recorded using the Market model was - 6.32% and statistically significant at 5%. The CAAR on this day was - 7.48% and statistically significant.

- The Market Adjusted Model AAR -6.1064% and significant at 5% and 1% level. The CAAR was -7.5172% but not statistically significant.

It can be deduced from the above observations that there is a significant negative market reaction to rights issue announcements in the Indian stock market.

The study analyses the trend of AAR and CAAR indifferent window periods. The 31 days, 15 days, and 3 days window reveals that AAR on the announcement day is negative and statistically significant at 5% level. This indicates that for shorter window periods, the market is efficient in its semi strong form. The study tests the effect of the stock split announcement before and after the event day. The results report that there is a significant average abnormal return before and after the announcement of rights issue of shares. Further there is a significant larger average abnormal return in the pre- announcement period than the post announcement period.

The impact of rights issue announcement on the liquidity of the market is measured using Trading Volume the measures give consistent results.

- For a period of 60 days around the announcement day, there is a significant difference in the trading volume before and after the day of the announcement. The average pre-announcement trading volume is lesser than average post announcement trading volume.

- The average trading volume for 14 days surrounding the announcement day is greater in the pre-announcement period than in the post announcement period. However it is not statistically significant.

From the above observation it can be inferred that due to announcement day of rights issue there is insignificant liquidity in pre-announcement period than the post announcement. This implies that there is no significant change in the liquidity of securities associated with

rights issue announcement.

Conclusion.

The impact of stock splits announcement and rights issue announcement on the liquidity of the market is measured using Trading Volume. The study analyses the long term and short term effect on the liquidity of the market. The study concludes that there is no significant impact on the liquidity of the market due to stock splits and rights issue announcement.

Bibliography

- A., D. M. (2012, July 20). *A Study on the Liquidity Effects of Stock Splits in Indian Stock Markets*. Retrieved from Social Science Research Network: <https://ssrn.com/abstract=1440139>
- Agarwal, A. &. (2012). The impact of rights issue on stock returns in India . *Asia- Pacific Finance and Accounting Review* , 5-16.
- Agnes Ogada, E. K. (2017). Impact of Rights Issue on Share Returns of Firms Listed on The Nairobi Securities Exchange, Kenya. *IOSR Journal of Business and Management (IOSR- JBM)* , 54-62.
- Ansary, O. A. (2017). The impact of Stock Dividends and Stock Splits on shares prices : Evidence from Egypt. *Accounting and Finance Research* , 96-114.
- Asquith, P. H. (1989). Earnings and Stock Split. *The Accounting Review* , 387-403. Asquith, P. H. (1989). Earnings and Stock Splits. . *The Accounting Review* , 64 (3) 387-403.
- Babitha Rohit, P. P. (2017). Impact of Stock Splits and Rights Issue Announcements on Market Price: Evidence From India. *Drishtikon: A Management Journal* , 1-16.
- Baker, H. K. (1980). Managements view of Stock-Splits. *Financial management* , 9, 73-79. Barker, C.(1956). Effective Stock Splits. *Harward Business review* , 101-106.
- Beaver W, R. L. (1980). The Information Content of security Prices. *Journal of Accounting and Economics* , 3-28.
- Chakrabart, B. B. (2017). Impact of Stock Splits on Returns: Evidence from Indian Stock Market . *Indian Institute of Management Calcutta* , 1-12.
- Chhaochharia, D. a. (2008). Market Reaction around the Stock Splits and bonous Issues: Some Indian Evidence. *Journal of Financial Research* , 75-90.
- Dasilas, K. L. (2006). The valuation effects of stock splits in NASDAQ. *Emerald Group Publishing Limit* , 401-414.
- India, G. o. (2007-08 to 2017-18). *Indian Public Finance Statistics*. MINISTRY OFFINANCE DEPARTMENT OF ECONOMIC AFFAIRS ECONOMIC DIVISION