

# Impact of Stock Splits and Rights Issue Announcements on Market Price: Evidence From India

–Babitha Rohit\*, Prakash Pinto\*\*, Shakila B.\*\*\*

## ABSTRACT

*The current paper studies the impact of two events i.e stock splits and rights issue announcement on the stock returns of companies listed on the Bombay Stock Exchange. The study consists of a sample of 90 announcements for stock splits and 29 announcements for rights issue during the period 2011-2014. Market model is used to calculate the abnormal returns of securities. Positive Average Abnormal Returns were observed for the two events on the day their announcements, however they are not statistically significant. The study concludes that the Indian stock market is efficient in its semi-strong form.*

**Keywords:** *Semi-Strong, Stock Splits, Rights Issue, Market Model, Abnormal Returns*

## INTRODUCTION

The stock market plays a significant role in mobilising domestic resources. Efficient stock market is one in which stock prices fully and instantaneously reflects all available relevant information. It is well documented that stocks exhibit large abnormal returns during the period surrounding an equity issue (Lucas and Macdonalds, 1990). Efficient Market Hypothesis progressed from the state of a interest taken seriously

\* Assistant Professor and Research Scholar Department of Business Administration, St. Joseph Engineering College, Vamanjoor, Mangaluru, Karnataka, India. Email – babitha.rk2002@gmail.com

\*\* Professor and Dean, Department of Business Administration, St. Joseph Engineering College, Vamanjoor, Mangaluru, Karnataka, India. Email – prakashpinto74@gmail.com

\*\*\* Assistant Professor and Research Scholar Department of Business Administration, St. Joseph Engineering College, Vamanjoor, Mangaluru, Karnataka, India. Email - bolarshakila@gmail.com

by only a few scientists in the economics and finance communities, to that of a dominant model in finance and the foundation of an emerging revolution in macroeconomics (Jensen, 1978).

According to Jensen (1978), a market is efficient with respect to information set  $\theta_t$  if it is impossible to make economic profits by trading on the basis of information set  $\theta_t$ . A number of versions of the Efficient Market Hypothesis have been discussed and tested in finance literature. The differences revolve primarily around the definition of the information set  $\theta_t$  used in those tests. The three broad categories of hypotheses which have developed are:

- (1) The Weak Form of the Efficient Market in which the information set  $\theta_t$  is taken to be solely the information contained in the past price history of the market as of time  $t$ .
- (2) The Semi-Strong Form of the Efficient Market Hypothesis, in which  $\theta_t$  mistaken to be all information that is publicly available at time  $t$ .
- (3) The Strong Form of the Efficient Market Hypothesis, in which  $\theta_t$  is taken to be all information known to anyone at time  $t$ .

The semi- strong form of the theory maintains that the current stock prices instantaneously and fully reflects all the public information about the security. Announcements such as corporate reports, information related to corporate dividend policies, forthcoming stock splits, change in management and so on are considered as publicly available information. As soon as the information becomes public, it will be absorbed and reflected in the stock prices. If any such information does not lead to a alteration in security prices, then if the semi-strong form Efficient Market Hypothesis (EMH) is true, it can be inferred that the news contains no relevant information. Thus it would be too late for the investor to wait for the announcement to be reported in the financial press the next day.

The testing of Semi-strong form of EMH includes the testing of market reaction to accounting information, stock split, bonus shares, mergers and acquisitions, block trading (Fama, et al., 1969; Charest 1978; Klein and Peterson 1989; Amoruso, Gaver and Gaver 1998; Easley, O'Hara and Saar 2001; Aduda 2010)

## REVIEW OF LITERATURE

Stock splits provide a means of reducing the stock's market price, thereby making it more appealing to small investors. It may also be the management's desire to increase the number of shares outstanding might be to broaden the ownership base (Baker and Gallagher 1980). It is a

simple non-cash distribution of common stock to existing shareholders (Boehme 2001). Reports state that the number of shareholders increases after a split (Dolley, 1933; Barker, 1956; Lamoureux and Poon, 1987). Plethora of studies has been conducted on the economic effects of stock splits. Specifically researchers have investigated the effect of stock splits on share price (Fama et al 1969; Bar-Yosef and Brown 1977; Charest 1978; Reilly and Drzycimski 1981; Grinbalt, Masulis and Titman 1984; Lamoureux and Poon 1987; Desai and Jain 1997; Byun and Rozeff 2003), earnings (Lakonishok and Lev 1987; Doran and Nachtmann 1988; Asquith, Healy and Palepu 1989; McNichols and Dravid 1990), risk (Ohlson and Penman 1985; Klein and Peterson 1989; Sheikh 1989; Wiggins 1992; Koski 1998; Reboredo 2003; Julio and Deng 2006) and liquidity (Copeland 1979; Lamoureux and Poon 1987; Conroy, Harris and Benet; 1990).

The pioneering work by Fama, Fisher, Jensen and Roll in 1969 examined 940 stock splits over the period 1927–1959. Applying market model and monthly returns they find on average an abnormal excess return of 34.07% over the 29 months preceding the split date for splitting companies. Stock splitting firms experience significant increases in earnings for several years before the stock split. In the year immediately prior to the split announcement, the split firms surpass their industries (Asquith, Healy and Palepu 1989). Lakoshinov and Lev (1987) find that splits are generally preceded by a period of strong earnings growth, which continues during the year following the split. Simultaneously splits increase the costs of trading the firm's shares, due to fixed per-share trading commissions (Brennan and Copeland 1988) and increases in bid-ask spreads (Copeland 1979; Conroy, Harris and Benet, 1990). Although stock splits increase the number of equity shares outstanding they do not provide the firm with new funds. Neither its stockholders get added claim to company's assets (Baker, Philips and Powell 1995). The studies of Ikenberry, Rankine, and Stice (1996), Desai and Jain (1997), and Ikenberry and Ramnath (2001) all find positive long-run abnormal returns following stock split announcements.

Studies in the Indian stock market relating to stock splits announcement also document positive abnormal returns (Desai and Jain 1997; Shirur 2008; Thirunellai 2013). Desai and Jain (1997) studied long run abnormal returns following stock split announcements. They showed splitting firms on an average earned a significant abnormal returns of 7.05% after one year of split. Shirur (2008) concluded that the Indian capital market is not inherently a semi-strong form of EMH. Chakraborty (2012) studied the

stock split announcement of stocks of S&P CNX Nifty for a period of 10 years. The study did not provide any strong and consistent evidence in support of the semi-strong form of EMH of the Indian stock market.

Often controversial and widely misunderstood, the rights issue remains a legitimate way of raising extra capital. Rights issue is when a company gives existing shareholders the right to buy a new issue of ordinary shares at a discount price. The share price of a company may either fall or rise when it announces a rights issue. The price is likely to fall since there will be more shares on offer and the new ones are being sold cheaply. Share prices may rise as there may be a strong demand for shares if the company is growing fast or investors think it's a particularly exciting investment prospect (Ukaegbu, 2001). The empirical studies on market reaction to rights issue exhibit mixed results indicating negative response (White and Lusztig 1980; Hansen 1988; Armitage 1999; Kabir and Roosenboom 2002; Pan et al ; 2008), positive response (Ball, Brown and Finn 1977; Eckbo and Masulis 1992) and no effect (Nelson 1965; Smith 1977; Loderer and Zimmermann 1988; Dubois and Jeanneret 2000).

Whether the empirical regularities reported from US market for seasoned equity offerings (SEO) are relevant for rights offer in other countries is an empirical question. Further the institutional mechanisms in India differ from other well developed markets. In the Indian market rights issues are normally below market prices (due to the minimum subscription clause) and are similar to bonus issues in some respects (Barua, Raghunathan and Varma 1994). Malhotra et al (2007) examined ordinary share price reaction to the announcements of equity rights issue by Indian Manufacturing firms during the period 1<sup>st</sup> January, 2001 to 1st July, 2005. Rights issues in India are associated with positive CAARs during the announcement day and the following day. They provided evidence on semi strong efficiency of the Indian stock market. Miglani (2011) investigated the impact of right shares issued by Indian companies that took place between 2005 & 2010. The results showed that the stock value of the firm increased on the day of announcement of right issue by about 1.42%.

## **NEED FOR THE PRESENT STUDY**

Testing the semi-strong form of efficiency in the Indian capital market has been done using event study methodology for corporate announcements such as bonus issue (Mishra 2005; Lukose and Rao 2002), earnings

(Iqbal and Mallikarjunappa 2007), dividend (Mehndiratta & Gupta 2010, Chander, Sharma and Mehta 2006), stock splits (Choudhary and Choudary 2009) rights issue (Srinivasan 1993). These studies have tested single event. Studies that have two events are far and few (Shirur 2008; Ray K.K 2011; Dhar and Chhaochharia 2008) The current study takes two events i.e stock splits and rights issue to test the semi strong form of efficiency of the Indian stock market.

### Objectives

- To examine the presence of abnormal returns on or surrounding stock splits and rights issue announcement.
- To test the significance of abnormal returns for the two events
- To compare the stock market reaction to the two events.

## RESEARCH DESIGN

The current study is based on secondary data. The period of study is from January 2011 to December 2014. The sample consists of companies listed on the Bombay Stock Exchange (BSE) which made either a stock split or a rights issue announcement. The source of data is the website of the BSE and moneycontrol.com. A total of 175 companies and 60 companies have announced stock splits and rights issue respectively during the study period. The final sample consists of 90 companies for stock splits and 29 companies for right issues since companies' data was not available or companies' have also simultaneously made other corporate announcements during the period of study.

The investigation uses the event study methodology, a standard methodology proposed by Fama et al (1969) to examine the presence of abnormal returns due to the announcement. Market model is used to calculate the abnormal returns of securities. The BSE 500 is the proxy for the market index. The date of event announcement is '0' day. Estimation window for the study is  $t = -31$  days to  $t = -231$  days. The estimation window is used to determine the parameters  $\alpha$  and  $\beta$  of the market model. Event window is -30 days to +30 days. Pre split announcement window is -30 day to -1 day and post split announcement window is +1 day to +30 day.

The daily returns are calculated for both the individual securities as well as market index using the following equation

$$R_{j,t} = \frac{P_t - P_{t-1}}{P_{t-1}} \times 100 \quad 1$$

Where,  $R_{j,t}$  = Returns on security j on time t

$P_t$  = Price of the security at time t

$P_{t-1}$  = Price of the security at time t-1

Returns for the event window are computed using the following market model equation

$$R_{j,t} = \alpha_j + \beta_j R_m + e_t \quad 2$$

Where,  $R_{j,t}$  = The daily return on security j on time t

$R_m$  = The daily return on the Indian stock market at day t

$\alpha_j$  and  $\beta_j$  = OLS intercept and slope coefficient estimators respectively

$e_t$  = The error term for security j at day t

The expected return for the security j at day t is defined as

$$ER_{j,t} = \alpha_j + \beta_j R_m \quad 3$$

Where,  $\alpha_j$ ,  $\beta_j$  are OLS estimators

The daily abnormal return is calculated as

$$AR_{j,t} = R_{j,t} - ER_{j,t} \quad 4$$

Where,  $AR_{j,t}$  = Abnormal Returns on security j at time t

$R_{j,t}$  = Actual Returns on security j at time t

$ER_{j,t}$  = Expected Returns on security j at time t

The Average Abnormal Return (AAR) is determined by the equation given below

$$AAR_t = \frac{1}{n} \sum_{t=1}^n AR_{j,t} \quad 5$$

Where,  $AAR_t$  = Average Abnormal Returns on day t

$AR_{j,t}$  = Abnormal Returns on security j at time t

$n$  = Number of Sample announcements

The Cumulative Average Abnormal Returns (CAAR) is calculated as follows

$$CAAR_k = \sum_{t=1}^k AAR_t \quad 6$$

Where,  $CAAR_k$  = Cumulative Average Abnormal Returns for the period

$AAR_t$  = Average Abnormal Returns on time t

The study uses cross sectional t tests to examine the statistical significance of the AAR for each trading day. The cross sectional t test

assumes that the day ‘0’ abnormal returns are independent and identically distributed. The statistical significance is computed as follows:

$$t = \frac{\text{Mean Abnormal Return}}{\text{Standard Deviation}} \tag{7}$$

$$t(AAR) = \frac{AAR_t}{S(AAR_e)}$$

Where  $AAR_e$  is AAR of the estimation period for the entire sample and  $S(AAR_e)$  represents the standard deviation of the AAR of the estimation period.

### Hypothesis for the Study

- H<sub>1</sub>= There is a significant average abnormal return around the stock split announcement day
- H<sub>2</sub>= There is a significant average abnormal return around the rights issue announcement day

### Analysis and Interpretation

**Table No. I: Table Showing AAR and CAAR for Stock Splits and Rights Issue announcement**

Day	Stock splits		Rights issue	
	AAR (%)	CAAR (%)	AAR (%)	CAAR (%)
-30	0.316408	0.316408	-0.23991	-0.23991
-29	-0.31618	0.000225	-0.17708	-0.41699
-28	0.126985	0.12721	0.596716	0.179723
-27	0.094776	0.221986	1.27219	1.451914
-26	-0.02411	0.197874	0.813504	2.265418
-25	0.133539	0.331413	-0.21843	2.046984
-24	0.283973	0.615387	0.158209	2.205193
-23	-0.0234	0.591984	-1.10178	1.103411
-22	-0.24509	0.346893	-0.46558	0.637827
-21	0.022118	0.369011	-0.33101	0.306818
-20	0.350248	0.719259	-0.19276	0.114062
-19	0.125276	0.844535	-0.33369	-0.21963
-18	-0.10378	0.740753	0.012148	-0.20748

-17	0.337555	1.078308	0.467768	0.260288
-16	0.085516	1.163823	-0.86251	-0.60222
-15	0.07525	1.239074	-0.04073	-0.64296
-14	0.416553	1.655627	-0.75219	-1.39514
-13	0.327592	1.983219	-1.22853	-2.62368
-12	0.179473	2.162692	-0.53412	-3.1578
-11	-0.19996	1.962728	-0.62808	-3.78588
-10	-0.222	1.740723	0.50617	-3.27971
-9	-0.2439	1.496821	-0.50504	-3.78475
-8	0.42586	1.922681	-0.41654	-4.20129
-7	0.441784	2.364464	-0.44043	-4.64172
-6	0.549055	2.913519	-0.686	-5.32772
-5	0.790312	3.703831	0.905557	-4.42216
-4	0.912777	4.616608	0.067078	-4.35509
-3	0.446595	5.063203	0.548515	-3.80657
-2	0.005332	5.068535	-0.24166	-4.04824
-1	0.505588	5.574123	0.114464	-3.93377
0	0.413527	5.987649	0.589178	-3.34459
+1	0.116198	6.103847	0.766813	-2.57778
+2	0.155498	6.259346	0.383227	-2.19455
+3	0.003785	6.263131	0.064257	-2.1303
+4	-0.2226	6.040528	-0.58118	-2.71148
+5	-0.18528	5.855251	-0.79367	-3.50515
+6	-0.43948	5.415773	-0.55677	-4.06192
+7	-0.5403	4.875471	-0.56871	-4.63063
+8	0.289313	5.164784	-2.23859	-6.86922
+9	-0.43666	4.728122	-0.3656	-7.23482
+10	-0.00633	4.721793	-0.4368	-7.67162
+11	-0.12985	4.591943	-0.74821	-8.41983
+12	-0.24394	4.348005	-0.61	-9.02983
+13	0.154952	4.502957	0.509668	-8.52016
+14	0.52044	5.023397	0.338943	-8.18122
+15	0.213716	5.237113	-0.24071	-8.42193
+16	0.078663	5.315776	-1.1219	-9.54383
+17	-0.66469	4.651086	-0.50329	-10.0471
+18	-1.74611	2.904974	-1.13479	-11.1819

+19	0.226368	3.131341	-0.13902	-11.3209
+20	-0.2944	2.836942	0.635996	-10.6849
+21	-0.4488	2.388142	0.11434	-10.5706
+22	-0.74115	1.646991	-0.36781	-10.9384
+23	-0.00187	1.645125	0.048232	-10.8902
+24	0.318033	1.963158	0.879909	-10.0103
+25	0.078184	2.041342	0.319719	-9.69054
+26	-1.33253	0.708814	-0.71055	-10.4011
+27	-1.06454	-0.35573	-0.70018	-11.1013
+28	-2.36724	-2.72296	-0.08507	-11.1863
+29	-1.26115	-3.98411	-0.52573	-11.7121
+30	-1.04959	-5.0337	-0.19713	-11.9092

The above table reveals the AAR and CAAR for the two events. For stock splits the AAR on the announcement date is 0.41%. In the short window period of t-3 to t+3 days, there are positive AARs but it fluctuates and there is a steep decline on the day following the announcement day. In the pre announcement period the AAR is positive for 22 days while in the post announcement period the AAR is positive for 11 days. The highest AAR is 0.91% on day t-4 for the 61 days event window. The CAAR rises steadily from 0.31% on day t-30, reaches a peak of 6.04% and falls to -5.03% on day t+30.

In the case of rights issue the AAR on the announcement date is 0.58%. In the short window period of t-3 to t+3 days, there is a negative AAR on day t-2. Moreover there is an increase in the AAR on the day following the announcement day. The number of days the AARs are positive is 11 in the pre announcement period and 10 in the post announcement period. The highest AAR for rights issue announcement is 1.27% on day t-27 for the 61 days event window. The CAAR shows a negative trend for most of part of the event window since there are more negative AARs than positive AARs.

**Table No. II: Table Showing Abnormal Returns on the day of the Announcement**

	Positive returns on the announcement day	Negative returns on the announcement day	Total
	No.of Companies	No.of Companies	
Stock splits	47 (52%)	43 (48%)	90 (100%)

Rights issue	15 (52%)	14 (48%)	29 (100%)
--------------	----------	----------	-----------

The number of companies showing positive returns and negative returns on the day of the announcement is shown in Table No. II. It can be observed from the above table that for stock split announcement 47 companies shows positive abnormal returns. Similarly for rights issue announcement 15 companies show positive abnormal returns. This implies that the market reaction of the participants to the announcement of the two events is similar.

**Table No.III: Table Showing p-values of t-test for AAR of Stock Splits and Rights Issue**

Day	Stock splits		Rights issue	
	AAR (%)	p-value	AAR (%)	p-value
-30	0.316408	.165	-0.23991	.786
-29	-0.31618	.239	-0.17708	.752
-28	0.126985	.614	0.596716	.263
-27	0.094776	.794	1.27219	.070
-26	-0.02411	.922	0.813504	.192
-25	0.133539	.544	-0.21843	.620
-24	0.283973	.243	0.158209	.825
-23	-0.0234	.931	-1.10178	.026**
-22	-0.24509	.318	-0.46558	.455
-21	0.022118	.949	-0.33101	.363
-20	0.350248	.309	-0.19276	.822
-19	0.125276	.689	-0.33369	.508
-18	-0.10378	.709	0.012148	.972
-17	0.337555	.286	0.467768	.211
-16	0.085516	.778	-0.86251	.038
-15	0.07525	.800	-0.04073	.937
-14	0.416553	.129	-0.75219	.382
-13	0.327592	.407	-1.22853	.162
-12	0.179473	.642	-0.53412	.350
-11	-0.19996	.426	-0.62808	.121
-10	-0.222	.334	0.50617	.478
-9	-0.2439	.304	-0.50504	.345
-8	0.42586	.172	-0.41654	.364

-7	0.441784	.199	-0.44043	.252
-6	0.549055	.100	-0.686	.070
-5	0.790312	.026**	0.905557	.025**
-4	0.912777	.003**	0.067078	.845
-3	0.446595	.082	0.548515	.288
-2	0.005332	.985	-0.24166	.603
-1	0.505588	.049**	0.114464	.851
0	0.413527	.311	0.589178	.582
+1	0.116198	.733	0.766813	.273
+2	0.155498	.687	0.383227	.723
+3	0.003785	.991	0.064257	.920
+4	-0.2226	.545	-0.58118	.232
+5	-0.18528	.480	-0.79367	.062
+6	-0.43948	.056	-0.55677	.208
+7	-0.5403	.028**	-0.56871	.581
+8	0.289313	.239	-2.23859	.174
+9	-0.43666	.071	-0.3656	.580
+10	-0.00633	.978	-0.4368	.310
+11	-0.12985	.560	-0.74821	.120
+12	-0.24394	.262	-0.61	.231
+13	0.154952	.542	0.509668	.275
+14	0.52044	.120	0.338943	.437
+15	0.213716	.365	-0.24071	.665
+16	0.078663	.760	-1.1219	.001**
+17	-0.66469	.034**	-0.50329	.256
+18	-1.74611	.176	-1.13479	.004**
+19	0.226368	.341	-0.13902	.816
+20	-0.2944	.210	0.635996	.266
+21	-0.4488	.029**	0.11434	.824
+22	-0.74115	.476	-0.36781	.423
+23	-0.00187	.995	0.048232	.897
+24	0.318033	.232	0.879909	.126
+25	0.078184	.749	0.319719	.537
+26	-1.33253	.208	-0.71055	.187
+27	-1.06454	.288	-0.70018	.067
+28	-2.36724	.111	-0.08507	.842

+29	-1.26115	.282	-0.52573	.132
+30	-1.04959	.313	-0.19713	.572

\*\* indicates significance at 5% level

### Results of Hypothesis Tested

On the day of the announcement for stock splits the 'p'-value (0.311) is more than 0.05 at 5% level of significance; the study accepts the null hypothesis and concludes that there is no significant average abnormal return around the stock split announcement day. This result is consistent with Gupta and Gupta (2007)) but inconsistent with the findings of Banerjee and Banerjee (2010) and Ray (2011). The result for the rights issue announcement shows a 'p'-value of 0.582 which is more than 0.05 level of significance on the day of the announcement. The study accepts the null hypothesis and concludes that there is no significant average abnormal return around the rights issue announcement day. This finding is similar to that of Agarwal and Mohanty (2012) but differs from the results of Ray (2011) who obtained significant abnormal returns on the day of rights issue announcement. Further, it is observed from Table No. III that for stock splits the p- value on days t-5, t-4, t-1, t+7, t+17 and t+21 are less than 0.05, indicating that the returns on those days are statistically significant at 5% level of significance. For rights issue the p-value on days t-23, t-5, t+16 and t+18 are less than 0.05, indicating that the returns on those days are statistically significant

### CONCLUSION

The study examines the announcement effect of the stock split and right issue on the Bombay Stock Exchange for the period 2011 to 2014. The study uses the event study methodology to find the presence of abnormal returns. The study found a positive AAR of 0.41% for stock split announcement and 0.58% for rights issue announcement indicating that the market participants earn higher return from rights issue announcement than stock split announcement. However, the returns are not statistically significant at 5% level of significance. The outcome of this study is similar to that of Gupta and Gupta (2007), Dhar and Chhaochharia (2008) who found no significant announcement effect of stock splits and to the results of Agarwal and Mohanty (2012) stating that there is no significant announcement effect of rights issue in India. This implies that

the information content of the two events is impounded in the prices of the stock so instantaneously that the investors do not get an opportunity to earn abnormal returns from the stock. The study concludes that the Indian stock market is efficient in its semi – strong form.

## REFERENCES

- Aduda, J. O. (2010). Market reaction to stock splits: Empirical Evidence from nairobi stock exchange. *African Journal of Business and Management*, 1, 165-184.
- Agarwal, A., & Mohanty, P. (2012). The Impact of rights issue on stock returns in India. *Asia-Pacific Finance and Accounting Review*, 1(1), 5-16.
- Amoruso, A. J., Gaver, J. J., & Gaver, K. M. (1998). *The Association Between Stock Splits and Post Earnings Announcement Drift*. Retrieved from Social Science Research Network: <http://ssrn.com/abstract=144418>
- Armitage, S. (1998). Seasoned equity offers and rights issue: A review of the evidence. *The European Journal of Finance*, 4, 29-59.
- Asquith, P., Healy, P., & Palepu, K. (1989). Earnings and stock splits. *The Accounting Review*, 64(3), 387-403.
- Baker, H. K., & Gallagher, P. L. (1980). Management's view of Stock-Splits. *Financial Management*, 9, 73-79.
- Ball, R., Brown, P., & Finn, F. J. (1977). Share capitalisation changes, information and the Australian equity market. *Australian Journal of Management*, 2(2), 105-117.
- Banerjee, P., & Banerjee, P. S. (2010). The information content and stock return behavior around the stock splits - Evidence from India. *Paradigm*, 14(2). Retrieved from [www.freepatentsonline.com/article/Paradigm/297309484.html](http://www.freepatentsonline.com/article/Paradigm/297309484.html).
- Barker, C. A. (1956). Effective stock splits. *Harvard Business Review*, 101-106.
- Barua, S. K., Raghunathan, V., & Varma, J. R. (1994). Research on the Indian capital market: A review. *Vikalpa*, 19(1), 15-31.
- Bar-Yosef, S., & Brown, L. D. (1977). A reexamination of stock splits using moving betas. *Journal of Finance*, 32(4), 1069-1080.
- Boehme, R. D. (2001, November). *Reexamining The Lon Run Stock Split Anomaly Puzzle*. Retrieved from <http://ssrn.com/abstract=287044>

- Brennan, M. J., & Copeland, T. E. (1988). Stock-splits, stock-prices and transaction costs. *Journal of Financial Economics*, 22, 83-101.
- Byun, J., & Rozeff, M. (2003). Long-run performance after stock-splits: 1927 to 1996. *The Journal of Finance*, 5(3), 1063-1085.
- Chakraborty, M. (2012). The equity market around the ex-split date: Evidence from India. *Vikalpa*, 37(1), 57-68.
- Chander, R., Sharma, R., & Mehta, K. (2007). Dividend announcement & Informational efficiency: An empirical study of Indian stock market. *The ICAI Journal of Applied Finance*, 13, 29-42.
- Choudhary, K., & Choudhary, S. (2009). Stock return behaviour around stock splits: Indian evidences. *Asia Pacific Business Review*, 5(2), 91-101.
- Conroy, R. M., Harris, R. S., & Benet, B. A. (1990). The effects of stock splits on bid-ask spreads. *Journal of Finance*, 45, 1285-1295.
- Copeland, T. E. (1979). Liquidity changes following stock splits. *The Journal of Finance*, 34(1), 115-141.
- Desai, H., & Jain, P. (1997). Long-run common stock returns following stock splits and reverse splits. *Journal of Business*, 70, 409-433.
- Dubois, M., & Jeanneret, P. (2000, October). *The Long Run performance of Seasoned Equity Offerings with Rights: Evidence from the Swiss Market*. Retrieved from Social Science Research Network: <http://ssrn.com/abstract=239873>
- Easley, D., O'Hara, M., & Saar, G. (2001). How stock splits affect trading: A microstructure approach. *Journal of Financial and Quantitative Analysis*, 36(1), 25-51.
- Fama, E., Fisher, L., Jensen, M., & Roll, R. (1969). The adjustment of stock prices to new information. *International Economic Review*, 10, 1-21.
- Grinblatt, M. S., Masulis, R. W., & Titman, S. (1984). The valuation effects of stock splits and stock dividends. *Journal of Financial Economics*, 13(4), 461-490.
- Gupta, A., & Gupta, O. P. (2007). Market reaction to stock market splits: Evidence from India. *The Icfai Journal of Applied Finance*, 13(1), 5-22.
- Hansen, R. (1988). The demise of the rights issue. *Review of Financial Studies*, 1, 289-309.
- Ikenberry, D. L., Rankine, G., & Stice, E. (1996). What do stock splits really signal? *Journal of Financial and Quantitative Analysis*, 31, 357-375.

- Ikenberry, D., & Ramnath, S. (2002). Underreaction to self-selected news events: The case of stock splits. *Review of Financial Studies*, 15, 489-526.
- Iqbal, & Mallikarjunappa, T. (2007). Market reaction to earnings information: An empirical study. *AIMS International*, 1(2), 153-167.
- Joshi, M. (2008). Price and liquidity effects of stock split: An empirical evidence from Indian stock market. *NSE India*, 2-20.
- Julio, B., & Deng, Q. (2006). *The Informational Content of Implied Volatility Around Stock Splits*. Retrieved from Social Science Research Network: <http://ssrn.com/abstract=831144>
- Klein, L. S., & Peterson, D. R. (1989). Earnings forecast revisions associated with stock split announcements. *Journal of Financial Research*, 12, 319-328.
- Koski, J. L. (1998). Measurement effects and the variance of returns after stock splits and stock dividends. *Review of Financial Studies*, 11, 143-162.
- Lakonishok, J., & Lev, B. (1987). Stock splits and stock dividends: Why, who and when. *The Journal of Finance*, 42, 913-932.
- Lamoureux, C. G., & Poon, P. (1987). The market reaction to stock splits. *Journal of Finance*, 42, 1347-1370.
- Lukose, P. J., & Rao, S. N. (2003). Operating performance of the firms issuing equity through rights offer. *Vikalpa*, 28(4), 25-40.
- Malhotra, M., Thenmozhi, M., & Kumar, G. A. (2007). Announcement Effect of rights issue on stock returns: A study of selected Indian manufacturing companies. *Journal of Services Research*, 7, 215-231.
- McNichols, M., & Dravid, A. (1990). Stock dividends, stock splits, and signaling. *The Journal of Finance*, 45(3), 857-879.
- Mehndiratta, N., & Shuchi, G. (2010). Impact of dividend announcement on stock prices. *International Journal of Information Technology and Knowledge Management*, 2(2), 405-410.
- Miglani, P. (2011). An Empirical analysis of impact of right issues on shareholders returns of Indian listed companies. *Journal of Arts, Science and Commerce*, 2(4), 169-176.
- Mishra, A. K. (2005). The empirical analysis of market reaction around the bonus issues in India. *The ICFAI Journal of applied Finance*, 21-37.
- Nelson, J. R. (1965). Price effects in rights offerings. *Journal of Finance*, 20(4), 647-650.
- Ohlson, J. A., & Penman, S. H. (1985). Volatility increases subsequent to stock splits: An empirical aberration. *Journal of Financial Economics*, 14, 251-266.

- Pan, H., Xia, X., & Yu, M. (2008). Expropriation: Evidence from rights issue in China. *Emerging Markets, Finance & Trade* , 44(1), 5-20.
- Reilly, F. K., & Drzycimiski, E. F. (1981). Short run profits and stock splits. *Financial Management* , 10(3), 64-74.
- Roberto, J. C. (2003). How is the market reaction to stock splits. *Applied Financial Economics* , 13(5), 361-368.
- Satyajit, D., & Chhaochharia, S. (2008, January). *Market Reaction Around the Stock Splits and Bonus Issues: Some Indian Evidence*. Retrieved from Social Science Research Network: <http://ssrn.com/abstract=1087200>
- Sheikh, M. A. (1989). Stock splits, volatility increases and implied volatilities. *Journal of Finance* , 44(5), 1361-1372.
- Shirur, S. (2008). Dilemma of corporate action: Empirical evidences of bonus issue vs. stock split. *Vikalpa* , 33(3), 35-47.
- Smith, C. W. (1977). Alternative methods for raising capital: Rights vs underwritten offerings. *Journal of Financial Economics*, 5(3), 273-307.
- Srinivasan, R. (1997). Security prices behaviour associated with rights issue related events. *The ICFAI Journal of Applied Finance* , 3(1), 50-62.
- Thirunellai, S. (2013). Stock splits: Reasons and valuation effects. *NSE India Publications*, 1-24.
- Ukaegbu, B. (2002). Know your rights. *Financial Management*, 28-30.
- White, R., & Lusztig, P. (1980). The price effects of rights offerings. *Journal of Financial and Quantitative Analysis*, 15, 25-40.
- Wiggins, J. B. (1992). Beta Changes Around Stock Splits Revisited. *Journal of Financial and Quantitative Analysis*, 27(4), 631-640.