Market Efficiency around Bonus, Stock Split and Rights Issue Announcement – Evidence from India

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Abstract

Information content and market reaction to corporate announcement is imperative information for optimizing shareholders value. This study attempts to verify the market efficiency around three announcements i.e. bonus, stock split and rights issue, using standard event study methodology taking sample firms from Nifty Index. It attempts to verify whether there is any excessive abnormal return during event window. Abnormal returns were calculated by using market model and t-tests were conducted to test the significance. The result shows existence of significant positive abnormal return on announcement day of bonus and negative abnormal return for stock split and rights issue event. It also finds the existence of positive abnormal return surrounding announcement day for all the three events. Findings confirm with the results of earlier research and affirm that there is semi strong market efficiency and conclude that corporate announcement has effect on stock returns and shareholders' value.

Keywords: Market efficiency, Abnormal returns, market reaction, event study methodology

JEL category: G23, G21

1. Introduction

Market reacts to all micro and macro information that are released by the entities. Signaling hypothesis states that when a corporate releases materially significant information, market interprets that it bring change in the shareholders wealth and react positively or negatively. Since the publication of seminal paper of Fama, Fisher, Jensen and Roll (1969), many empirical researches referring to different market have attempted to understand the ability of market to contain the information and adjust the price to reflect the fair value of the share. It is arguable whether all information that is released to the public really brings change in the shareholders value, as some of the information is materially not affecting the shareholders value immediately. For example, appointment of new CEO materially should not affect the share prices on the day of announcement as it is non financial information. However, it may have bearings on the performance of the company in the longer run and affect the expected dividends for shareholders. But, when there is financial information like mergers, take overs, stock dividends, stock split, rights issue, news on follow on public offerings, market perceive it as significant information and reacts immediately, as it brings changes in their portfolio holdings like mergers, stock split and bonus issue increases the number of shares held. Such type of events always attracts different behavioral response for market participants. As per the attention hypothesis, corporate do announce such events to trigger the market attention towards their stock to enhance liquidity and thereby increase the share value in the near term. As volumes build up, the share price also head upward and increase market capitalization. This strategy is used by firms also to popularize their stock and create market volumes for proprietary stake sales. Therefore, it is always arguable; being an investor in the market, is it wise to react for events like bonus, stock split or rights issue, as it just increases your quantity of holdings and not the value. The issue of market reaction is also related to the access to such information and the speed with which information are released to all the sections of the market participants. In reality there are always a set of people for whom certain information are available before it is officially made public resulting in abnormal profits for them. Information asymmetry is the biggest challenge in Indian market. Insider trading is a detrimental to growing market like India as the small and retail investors fall pray for undue changes in stock prices and lose their wealth as the larger trader book their profits once the small investors enter at higher price levels.

Ensuring market efficiency is the biggest challenge for regulators. In India, when a company issues corporate action information through any channel of communication like print or digital media, it is initiating a process that will bring change in its share price. By understanding such event announcements and their effects on stock prices investors can have a clearer picture of what a corporate action indicates about a company's financial affairs and how that action will influence the company's share price and performance. This knowledge, in turn, will aid the investor in determining whether to buy, sell or hold the stock in question. Corporate actions are typically agreed upon by a company's board of directors and authorized by the shareholders and informed to the shareholders from time to time. Informed shareholders generally understand the market as efficient and the daily stock prices reflect the market adjusted price for all available information of the corporate events. Such premises are hypothetical to believe that the market is efficient and are influenced by the corporate actions disclosure given from time to time. Under efficient markets corporate events should not show any abnormal return on or surrounding either announcement date or effective date of information, as it is absorbed by the market in the real

time, and the current prices reflect the benefits associated with such corporate events, and discounts its future earning benefits. As propounded by Eugune Fama (1960) in his efficient market hypothesis, market is said to be strongly efficient when stock price reflects both publicly and privately available information. In this case even insider trading should not lead to abnormal returns to the traders. When there is news it should affect the stock returns. However, in different markets there are mixed results found in the past about market reaction for stock dividend, stock splits, and rights issue announcements proving that the market is not strongly efficient as there are presence of abnormal return around announcement date. In this paper it is attempted to study whether the market in India strong or semi-strong efficient by taking announcement data of stock dividend, stock split and rights issue.

2. Review Literature

There are many empirical evidences document in the earlier researches with respect to announcement effect on stock returns. Grinblatt, M. S., Masulis, R. W., & Titman, S. (1984) presents evidence, which indicates that stock prices, on average, react positively to stock dividend and stock split announcements that are uncontaminated by other contemporaneous firm-specific announcements. In addition, it documents significantly positive Excess returns on and around the ex-dates of stock dividends and splits. Both announcement and ex-date returns were found to be larger for stock dividends than for stock splits. Nickolaos V. Tsangarakis, National Bank of Greece (1991) studied the common stock price reaction on the ex-rights day of seasoned equity issues using an event study methodology and observes that on the ex-rights day there are no abnormal returns concluding that the Greek Stock Market is efficient in the semi-strong form. Balachandran, B., & Tanner, S. (2001) examines 139 bonus issue observations share price reaction to announcement of bonus share issues of Australian companies and find statistically significant and positive of average 2.37% for uncontaminated events and 2.11% for contaminated events around AD0 and AD-1 employing the market model. Lukose Jijo and Narayanan Rao.S (2002) have examined the reaction of stock prices around the date of announcement of stock splits and ex-split date. It was found out that on the date of announcement, there was an abnormal return of 5.27 percent and on day +1, 2.42 percent. The result of abnormal returns around the ex-split day shows that much of the abnormal returns take place on day 0 (3.68%) and day +1 (2.04%). Batchelor, R., & Orakcioglu, I. (2003) examines the behavior of the prices of leading shares traded on the Istanbul Stock Exchange (ISE) in the weeks before and after the payment of stock dividends and finds that the returns rise in advance of stock dividend payments, but this effect becomes statistically insignificant when proper allowance is made for heteroscedasticity. Mishra, A. K. (2005) examined the stock price reaction to the information content of bonus issues in view of examining whether the Indian stock market is semi strong efficient or not. His results indicate that there is significant positive excessive abnormal return around 5 day's window around announcement dates. On the announcement date there is -.10% abnormal return is observed and it provides an evidence for confirming that Indian market is semi strong efficient. Malhotra, Madhuri; Thenmozhi, M; Kumar, G. Arun (2007a) examines ordinary share price abnormal returns reaction to announcements of rights issues in the Indian Stock Market and confirms that Indian stock market reacts positively to the announcement of rights issue and there is no information leakage prior to the rights issue in India. Madhuri Malhotra, Dr. M. Thenmozhi & Dr. G. Arun Kumar (2009b) examines the stock market reaction and Liquidity changes around the bonus issue announcement of the chemical companies in India and finds that bonus issues have a signaling effect but the effect is inversely related to stock price changes. The findings suggest that firms need to consider the under reaction of the stock market after the bonus issue. Joshipura, M. H., & Nusrathunnisa (2013) investigates the stock price reaction for bonus announcement in a post global financial crisis period by taking sample of 74 bonus announcements from the constituents of Indian CNX 500 index for the period between 2008 through 2012. Using event study methodology it reports statistically significant positive abnormal return surrounding announcement as well as effective day and it is consistent with earlier studies. Suresha, B., & Naidu, G (2012) documents a positive abnormal return on announcement day for bonus and negative abnormal return for stock split and rights issue announcement. It confirms the presence of abnormal returns before the official announcement and concludes that there is information asymmetry and semi strong market efficiency condition in India. Dr. Satyajit Dhar, & Ms. Sweta Chhaochharia, (2009) finds positive market reaction for corporate announcements and states that there is semi-strong form of efficiency in the Indian stock market.

3. Methodology

Thou earlier researchers have made attempts to study corporate announcement effect on stock returns, there are no enough evidences on bonus, stock split and rights offer announcements with cross sectional study on stock returns, in particular to NIFTY constituents, which is a benchmark index in India. Hence, to bridge this gap of knowledge, this study was conducted. This study is intended to verify presence of any abnormal returns on or surrounding bonus, stock split and rights issue announcements and find the information efficiency of NIFTY constituents stocks. As the corporate announcement data is not published directly in any of the leading business dailies, to find out effective announcement date of the event, data available on nseindia.com, Capital line and CMIE's Prowess database has been used. To test the above objectives the companies that went for bonus, stock split and rights issue

in between 1996 to 2015 has been taken from a sample frame of current constituents of CNX Nifty. There were 56 bonus issues, 33 stock splits and 13 right issue announcement made during the period were taken as the samples for analysis.

Many statistical tests require that your data follow a normal distribution. Sometimes this is not the case. In some instances it is possible to transform the data to make them follow a normal distribution; in others this is not possible or the sample size might be so small that it is difficult to ascertain whether or not the data a normally distributed. In such cases, it is necessary to use a statistical test that does not require the data to follow a particular distribution. Earlier studies documents that (Brown and Warner (1985) that mean excess returns in a cross-section of securities converge to normality as the sample size increases and in this study the sample size is statistically adequate and there won't be a problem of non normality of returns. There are several hypothesis put forwarded by previous researchers to explain price changes associated with corporate events. The most practical way to verify the market efficiency around event announcement is to check whether there is statistically significant abnormal return present in pre event window, on announcement date and in post event window. If there is any evidence of presence of abnormal return, it is said to be market inefficient and semi strong form of market condition exist in India.

3.1 Event window framework

The approach used to achieve above mentioned objective is known as "event study" which is a standard approach in the area of financial economics ever since it has been published by Fama (1969). An event study is designed to examine market reaction of any event under observation using abnormal return criteria. For this study, data is divided into various windows. It has been always a debatable issue when it comes to choosing window length, and different researchers have used different lengths. The following event window has been framed to test the hypothesis.

a). Pre event window (AD_{-21} to AD_{-1}): This window provides information on the existence of any abnormal return before formal announcement of the event. If there is any abnormal return found in this period, it confirms that there is information asymmetry and an insider trading exists with few who have access to the private information leading abnormal returns.

b). Announcement date effect (AD_0): On announcement day, if there is any abnormal return exist, as it has been explained by market maker hypothesis and the same is anticipated by the market may bring positive impact on shareholders wealth.

c). Post announcement window (AD_{+1} to AD_{+21}): As per tradable range hypothesis, larger section of the market participants has access to the event information only after official announcement. This leads to the improved liquidity and change in return dynamics. Presence of abnormal return in this window affects shareholders wealth positively. However, sustaining of the return is questioned, due to profit booking and stock price adjusting itself to its normal price.

3.2 Measuring Wealth effect:

Price or wealth effect has been analyzed, with the equilibrium model for the normal stock return, which is the expected return, if the event did not happen. Estimation window of AD_{-21} to AD_{-201} days which is the standard practice in most of such studies has been developed. The forecast errors over the event window +21 to -21 measures the abnormal performance of returns associated with the event. The normal model most widely used in the event-studies is the market model, which can be expressed as

$$AR_{i,t} = R_{i,t} - \alpha_i - \beta_i R_{m,t} \quad \text{......................} (1)$$

Daily return of a security (firm) at a particular date, R_{it} is computed by using formula

$$R_{it} = \ln \frac{P_{it} - P_{io}}{P_{io}} \text{.................................} (2)$$

Where, P_{it} = Price of the stock I on day t and P_{i0} = Price of the stock I on day 0.

The Nifty index is considered as market portfolio ($R_{m,t}$). The coefficients alpha and beta are estimated by using period of AD_{-21} days to aAD_{-201} as mentioned above. Ordinary least square method was used to obtain the coefficients for the estimation window. The expected returns for security j at day t are defined as,

$$ER_{jr} = \alpha_i + \beta_i R_{mt} \text{...............................} (3)$$

Where, α_i, β_j are OLS estimators of (α_i, β_j)

The daily abnormal return is measured as

$$AR_{jt} = R_{jt} - ER_{jt} \text{...............................} (4)$$

For each event date t, the cross sectional average abnormal returns for all firms are defined as:

$$AAR_t = \frac{1}{n}\sum_{i=1}^{n}\varepsilon_{it}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(5)$$

To analyze the price effects, the Cumulative Average Abnormal Returns (CAAR) for the 42 days centered in the announcement dates has been calculated. The use of CAAR is a common methodology. CAAR for event day's t_1 to t_2 were obtained as follows:

$$CAAR = \sum_{t=1}^{t_2} AAR_t\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..(6)$$

3.3 Test of significance:

To compute the t-statistic, first, all abnormal returns are standardized as:

$$SAR_{it} = \frac{AR_{it}}{S_i(AR)}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.(7)$$

Where, S_i (AR) is the standard deviation of the abnormal returns of stock 'i' in the estimation period. The t-statistic for the sample of N observations for each day 't' in the event window is calculated as:

$$t(SAR) = (\sum i = 1 \text{ to } N\ SAR_{it})\ 1/\sqrt{n}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(8)$$

$$\text{Students }'t'\text{ test} = \frac{\sum AAR_t/SD_t}{\sqrt{n}}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.(9)$$

The cross-sectional t-test using cross-sectional variance as proposed by Brown/Warner (1985) to take cross sectional correlation into account is calculated as follows: is calculated as

$$t_i = \frac{AAR_i}{S^2/\sqrt{N}}\qquad --------------(\ 10)$$

Under the assumption that the abnormal returns are cross sectional independent and identically normally Distributed, Mayank Joshipura (2008) where S2 is equal to

$$S^2 = \frac{1}{N}\sum_{i=1}^{N}\frac{(AR_{it} - AAR_t)^2}{N-1}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.(11)$$

4. Empirical findings

From the analysis it is found that for bonus event on announcement date there is positive abnormal return of 0.310, and positive AAR of -0.620. AAR is significant at 1% level. It is observed that there is 14 times positive AAR present in the pre event window of which 12 are significant and 7 times negative AAR present of which 3 are significant for bonus announcement. It is also found that in the post event window there is only 4 times positive AAR of which 2 are significant and 17 times negative AAR present, of which 12 are significant for the event. This results in the pre and post event window positive abnormal return ratio of 14:04 and negative abnormal return ratio of 7:17 and the observation of abnormal returns are significant and 1%,5% and 10% level. From the table it is observed that there are 14 days positive AAR in the pre announcement window and 04 days positive AAR in the post event window. It is also evident that on day 18 there is maximum positive abnormal return generated with AAR of 0.010 and CAAR of 0.004 but it is statistically insignificant. On announcement date, statistically insignificant AAR of 0.006 and CAAR of 052 has been observed. These results confirm that in Indian market, there is information asymmetry and there are investors with private information able to make abnormal returns. It means that there are transactions where one party has more or better information than the other. However, the existence of significant abnormal return is for very short period and it can be due to the profit booking of the event.

For stock split announcement it is found that 17 companies (i.e 61% of the total sample) have positive mean return and 11 (i.e. 39% of the total sample) companies have negative mean return around event window. It also observed that 18 (i.e 65% of the sample) companies have reported positive mean return on announcement date. On announcement date there is negative average abnormal return (AAR) of -7.484, which is significant at 1% level. It is observed that there is 14 times positive AAR present in the pre event window of which 12 are significant and 7 times negative AAR of which four are significant. In the post event window the table reveals that there is 11 times positive AAR present of which 9 are significant and 10 times negative AAR of which 7 are significant for the event.

For rights issue announcement it is found that on announcement date there is insignificant negative AAR of -0.048.   It is observed that there is 9 times positive AAR in the pre event window, of which 3 are significant and 12 times negative AAR, of which 4 are significant. In the post event window the table reveals that there is 7 times positive AAR of which 3 are significant and 14 times negative AAR of 3 are significant for the event. This results in the pre and post event window positive abnormal return ratio of 9:7 and negative abnormal return ratio of 12:14 and the observation of abnormal returns are significant and 1%,5% and 10% level. From the table it is observed that there 9 days positive AAR in the pre announcement window and 7 days positive AAR in the post event window. It is also evident that on day 5 and 18 there is maximum positive abnormal return generated with AAR of 0.017 and 0.020 and it is statistically insignificant and significant respectively. On announcement date statistically insignificant negative AAR of -0.005 and significant negative CAAR of -0.304 has been observed.

The short run and immediate impact of the announcement is tested with an event window range of +10 to -10 with different frequencies. It is observed that there is statistically highly significant positive abnormal return in the pre event window of t-10 – t-2 and t-21 to t-2. It is has t value of 6.16 and 3.54 respectively and significant

at 1% level. On announcement date there is positive abnormal return on event window of t0 to t1, t-1 to t1 significance value of 5.10 and 26.95 at 1% level respectively. On Post Event window of t2 to t21 there is negative abnormal return with statistically insignificant value of -1.02. In case of stock split event on post-event announcement, 2.3, 9, and 11th day there is significant positive abnormal returns. It is observed that there is statistically highly significant positive abnormal return in the pre event window of t-10 – t-2 and t-21 to t-2. It is significant at 1% level with 5.70 and 4.32 values respectively. On announcement date there is negative abnormal return on event window of t0 to t1, with significance value of -18.76 at 1% level and on t-1 to t1 insignificant value respectively. On post event window of t2 to t21 there is negative abnormal return with statistically insignificant value of -10.58. It also documents that the short run price impact of stock split announcement for a three-day event window. It shows that in the 3 days pre event there is statistically highly significant positive AAR on day -3 and -1. In the post event it is highly significant with positive AAR on day+1 and+3. Therefore, null hypothesis is rejected and alternative hypothesis is accepted i.e, there is significant abnormal return present in pre announcement, announcement date and post announcement for stock split announcement. For right issue announcement event it is observed that there is statistically significant negative abnormal return in the pre event window of t-10 – t-2 and t-21 to t-2. It is significant at -5.569 and -5.885 at 1% level respectively. On announcement date there is negative abnormal return on event window of t_0 to t_1 and t-1 to t1, with significance value of -13.124 at 1% level for t0 to t1 and t-1 to t1 it is insignificant. On post event window of t2 to t21 there is negative abnormal return with statistically insignificant value of -15.460.

5. Discussions and Conclusions

In an efficient market condition, there is no information or analysis that can result in stock out performance. As stated by Eugune Fama in his efficient market hypotheses, market absorbs all past and current available public and private information and adjusts the stock prices to show the fare price of the stock. He believably made the argument that in an active market that includes many well-informed and intelligent investors, securities will be fairly priced and reflects all available information. In semi-strong-form efficiency, it is implied that share prices adjust to publicly available new information very rapidly and in an unbiased fashion such that no excess returns can be earned by trading on that information. Event study methodology is generally followed to test the market information efficiency using abnormal return criteria. If the abnormal return exists in the pre event window market is semi strong and only few those who have access to information in the market can outperform. In this study, from the above analysis, it is observed that there exists significant abnormal return in the 42 days event window for bonus announcement. It confirms that the market in India is semi strong efficient on an overall basis. It is evident that announcement of bonus, stock split and rights issue bring significant change in stock prices, and affect the shareholders wealth in Indian market. Companywise positive mean return for nifty stocks were found around event window and on announcement dates. Sample firms have documented significant positive abnormal return and positive cumulative abnormal returns in the event window. Paradoxically on announcement date, it is found that there is insignificant negative abnormal return and significant negative average abnormal return for the event. Stock split event reacts positively with significant abnormal return in the pre and post event window.

Also, the study supports the signaling hypothesis consistent with the findings in the developed stock market. Signaling hypothesis has received strongest support in explaining the positive market reaction to bonus issue announcements. It suggests that the announcement of a bonus issue conveys new information to the market. Public and private people generally associated with the internal management like managers have asymmetric information and information advantage for abnormal return generation. This hypothesis has received almost unequivocal support with few exceptions [for example, Papaioannou et al (2000)). Foster and Vickrey (1978) were among the earliest to examine the signaling hypothesis using daily returns data and in their examination of the information content of 82 stock dividend announcements, they found significant positive abnormal return around the announcement dates.

There are different theories that have emerged, with the common formulae of explaining the abnormal return associated with stock splits. McNichols & Dravid, (1990) affirmed that the abnormal return in relation to a stock split announcement is a mystifying occurrence. Earlier researches have shown perplexity why companies resort for stock splits. As stated earlier, the signaling hypothesis states that in a scenario of asymmetric information between managers and investors, managers may use stock splits to signal positive information to the market about the firm's future expectations. The managers declare stock splits to convey favorable information about the current value of the firm. Managers obtain pertinent information about the future because of their expertise in making operating and investment decisions. The presence of any positive abnormal returns around the stock split announcement has impact on shareholders wealth creation. Apart from signaling hypotheses, liquidity theory and the attention hypothesis is concerned with the stock split event. These hypotheses and theories are not mutually exclusive, but often combined (Wulff, 2002). The trading range hypothesis proposes that stock splits reconstitutes the price per share to a affordable price range for all categories of investors reducing the cost of a share, thus making the stock more attractive and liquid. Also, wealthy investors and institutions save in their transaction cost

due to low price per share. On the contrary to the trading range hypothesis, new theory of stock splits as propounded by Angel (1997) states that stock splits highlights the importance of creating incentives for brokers and dealers to market a firm's stock by focusing on brokerage commissions and the tick as a percentage of stock prices. Companies can modify the tick size for their firms, relative to the stock price, by splitting their stock. The tick provides an important role in simplifying the trading process. It reduces negotiating time as well as the potential costly trading mistakes. The tick also protects the time priority of those who place limit orders and by putting a floor on the quoted bid-ask spread it provides incentives for market makers to provide liquidity. The optimal share price for a firm represents a trade-off between the incentives that a lower price creates for intermediaries through higher commissions and wider spreads and the costs to shareholders imposed by a lower price through higher bid-ask spreads (Angel 1997, 68). In this empirical study it is found that of 28 sample firms, 18 firms have positive AR on announcement date, which means that, the firms attempting to convey the potential value creation to shareholders and signaling the growth potential that shareholders can expect in the longer run. Overall, statistically significant abnormal returns are detected for stock splits during the event window. The results obtained in this empirical study support prior evidence that a stock split is key event of corporate governance for shareholders wealth maximization as it increases positive returns and better liquidity. The announcement of a stock split is thus interpreted as a positive signal from the management and the effect seems to have persisted over time. This study also verified the abnormal returns for right issue announcement and found no significant price effect on the day of announcement. However, in the pre event window there is existence of abnormal returns and confirms with the signaling hypothesis and positive wealth effect. In conclusion, it may be said that the market in India is semi strong efficient, and announcements on stock splits, stock dividend and rights issue have impact on shareholders wealth and therefore it is imperative for investors to be educated about such event market reactions and revise portfolios as per the investment objectives.

References:

Anshuman, V.R., Kalay, A. (2002), ""Can split create market liquidity? Theory and evidence"", Journal of Financial Markets, Vol. 5 pp.83-125.

Arbel, A. and G. Swanson, 1993, The role of information in stock split announcement effects, Quarterly Journal of Business and Economics 32, No. 2, 14-25.

Balachandran, B., & Tanner, S. (2001). Bonus Share Issues and Announcement Effect: Australian Evidence. Social Science Research Network, (61), 1–27.

Batchelor, R., & Orakcioglu, I. (2003). Event-related GARCH: the impact of stock dividends in Turkey. Applied Financial Economics, 13(4), 295–307. http://doi.org/10.1080/09603100210138547

Dhar, S., & Chhaochharia, S. (2008). Market Reaction Around the Share Splits and Bonus Issues: Some Indian Evidence. Social Science Research Network, 9434139726(M), 1–24. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1087200

E. F. Fama, L. Fisher., M. C. Jensen & R. Roll, The adjustment of stock prices to new information, International Economic Review, 10, 1969, 1-21.

E. Lijleblom, The Informational Impact of Announcements of Stock Dividends and Stock Splits', Journal of Business Finance and Accounting, 16(5) (Winter), 1989, 681 – 698.

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. http://doi.org/10.1016/0304-405X(84)90011-4

Joshipura, M. H., & Nusrathunnisa. (2013). Market Reaction to Bonus Announcement in Post Global Financial Crisis Era: Evidence from India. Asian Journal of Finance & Accounting, 5(2), 256. http://doi.org/10.5296/ajfa.v5i2.4328

Kryzanowski, L. and H. Zhang, 1993, Market behavior around Canadian stock-split exdates,

Lakonishok, J. and B. Lev, 1987, Stock splits and stock dividends: Why, who and when,Journal of Finance 42, 913-932

Lamoureux, C.G. and P. Poon, 1987, The market reaction to stock splits, Journal of Finance 42, 1347-1370.

Lukose, P. J. J., & Rao, S. N. (2003). Operating Performance of the Firms Issuing Equity through Rights Offer, 28(4), 25–40.

Malhotra, M., M, T., Arun, & Gopalaswamy, K. (2013). Liquidity changes around bonus and rights issue announcements: Evidence from manufacturing and service sectors in India. Munich Personal RePEc Archive, (47061).

Malhotra, M., Thenmozhi, M., & Kumar, A. (2007). Stock Market Reaction and Liquidity Changes Around Bonus Issue Announcement: Evidence From India. Social Science Research Network, 1–12.

Marsden A, Shareholder wealth effects of rights issues: evidence from the New Zealand capital market. Pacific-Basin Finance Journal 8, 2000, 419–442.

Mishra, A . K. (2007). The Market Reaction to Stock Splits-Evidence from India. International Journal of Theoretical and Applied Finance, 10(2), 251-271.

Nickolaos, V. (n.d.). Seasoned equity issues in the Greek stock market. Stock price reaction on the ex-rights day: a test of semi-strong form market efficiency, 43(2).

Obaidullah, M. "How do stock prices react to bonus issues?" Journal of Financial Economics. 17-22, 1992.

Satyajit Dhar. Dr, Ms. Sweta Chhaochharia (2006), Market Reaction around the Stock Splits and Bonus Issues: Some Indian Evidence, http://ssrn.com/abstract=1087200 pg 10 -16. Journal of Empirical Finance 1, 57-81

Schultz, P. (2000):\Stock Splits, Tick Size, and Sponsorship," The Journal of Finance, 55(1):429- 450

Singh, Balwinder, and Mittal, R.K. "Under pricing of IPOs: Indian Experience." The ICFAI Journal of Applied Finance. Vol. 9(2), March 29-42, 2003.

Suresha, B., & Naidu, G. (2012a). An empirical study on effect of bonus announcement on share price volatility and liquidity and its impact on market wealth creation of informed investors in Bangalore with special reference to CNX NIFTY stocks of NSE. International Journal of Management and Technology, 2(9), 38–59.

Suresha, B., & Naidu, G. (2012b). An empirical study on announcement effect of right issue on share price volatility and liquidity and its investors in Bangalore with special reference to CNX. EXCEL International Journal of Multidisciplinary Management Studies, 2(7).

Suresha, B., & Naidu, G. (2013). An empirical study on price pressure and liquidity effect of stock split announcement" - Evidence from Indian market. International Journal of Management and Technology, 3(1), 138–156.

Exhibits

Table 01

Table showing the Average Abnormal Return (AAR) around event announcement

| Event Window | Corporate announcement | | | | | |
| | Bonus | | Stock Splits | | Rights issue | |
	AAR%	t(AAR)%	AAR%	t(AAR)%	AAR%	t(AAR)%
-21	-0.629	-4.326*	0.328	2.872*	0.046	0.765
-20	-0.247	-1.678**	-0.612	-4.928*	0.111	1.747
-19	0.257	1.472***	0.037	0.266	-0.126	-1.599***
-18	0.975	5.777*	0.405	2.595*	0.083	0.619
-17	0.295	1.412***	-0.167	-1.201	-0.069	-0.562
-16	-0.183	-1.080	0.066	0.544	-0.178	-1.512***
-15	-0.716	-4.620*	0.538	2.036**	-0.095	-1.406***
-14	0.443	2.773*	0.195	1.951**	-2.603	-1.139
-13	0.499	3.135*	-0.025	-0.259	0.136	2.427**
-12	0.144	0.653	-0.260	-2.394**	-0.046	-0.516
-11	-0.208	-0.801	0.174	1.884**	0.064	0.679
-10	0.579	4.082*	0.271	2.124**	-0.058	-0.468
-9	-0.149	-0.676	-0.496	-3.932*	-0.077	-0.652
-8	0.367	1.790**	0.346	2.170**	-0.011	-0.125
-7	-0.277	-1.242	0.420	3.485*	-0.170	-1.199
-6	0.855	3.379*	0.446	3.757*	0.043	0.524
-5	0.226	1.038	0.693	5.264*	0.001	0.010
-4	0.318	1.762**	-0.128	-0.738	-0.120	-1.279
-3	0.751	4.223*	0.695	3.803*	-0.152	-3.125*
-2	0.644	2.611*	-0.207	-1.798**	0.029	0.426
-1	0.644	3.550*	0.145	1.432***	0.200	2.480**
0	0.620	2.545*	-0.048	-3.271*	-0.048	-0.578
1	-0.197	-0.802	0.468	2.751*	-0.047	-0.317
2	-0.457	-2.613*	-8.277	-3.662*	-0.035	-0.330
3	0.049	0.286	0.605	2.893*	-0.003	-0.037
4	-0.290	-1.752**	-0.270	-2.484*	0.130	1.249
5	-1.979	-3.014*	-0.265	-3.149*	0.174	1.401***
6	-1.319	-1.878**	-0.135	-1.030	0.037	0.407
7	-0.195	-1.200	0.297	2.399**	-0.179	-1.882**
8	-4.711	-3.140*	-0.210	-1.661***	-0.058	-0.525
9	-0.563	-2.743*	0.377	2.521*	-2.634	-1.119
10	0.158	0.790	-0.035	-0.331	-0.016	-0.103
11	-0.782	-1.054	0.069	0.243	-0.099	-1.229
12	-0.972	-5.224*	-0.508	-3.489*	-0.086	-0.812
13	-0.192	-1.225	-0.834	-6.884*	-0.113	-1.299
14	0.382	1.675**	-0.289	-3.592*	0.053	0.467
15	-0.320	-1.765**	0.937	7.309*	0.062	0.487
16	-0.315	-2.127**	0.537	4.774*	-0.097	-1.230
17	-0.610	-2.782*	0.083	0.611	0.133	1.467***
18	0.842	2.854*	-0.553	-5.403*	0.202	2.577**
19	-0.178	-0.976	0.509	4.044*	-0.070	-1.335
20	-2.374	-2.071**	0.498	4.414*	-0.144	-1.625***
21	-0.738	-2.608*	0.238	1.559***	-0.136	-1.944**

* t values shows the significance at *1%, **5% and ***10% level.

Table02
Table showing the Cumulative Average Abnormal Return (CAAR) around event announcement

window	Bonus		Stock split		Rights issue	
	CAAR	t (Cross Sectional)	CAAR	t (Cross Sectional)	CAAR	t (Cross Sectional)
-21	-0.006	-0.459	0.003	2.214**	0.005	0.125
-20	-0.009	-1.167	-0.003	-1.186	0.016	1.572***
-19	-0.006	1.123	-0.002	1.767**	0.003	-1.439***
-18	0.004	0.296	0.002	1.794**	0.011	0.557
-17	0.007	0.978	0	-4.347*	0.005	-0.506
-16	0.005	-1.573***	0.001	1.989**	-0.013	-1.361
-15	-0.002	-0.403	0.006	1.349***	-0.023	-1.265
-14	0.002	0.652	0.008	3.716*	-0.283	-1.025
-13	0.007	0.579	0.008	-2.109**	-0.269	2.184**
-12	0.008	2.004**	0.005	-2.795*	-0.274	-0.464
-11	0.006	-1.386	0.007	4.179*	-0.268	0.611
-10	0.012	0.499	0.009	2.682*	-0.273	-0.421
-9	0.011	-1.931**	0.005	-1.462***	-0.281	-0.587
-8	0.014	0.786	0.008	2.097**	-0.282	-0.113
-7	0.011	-1.041	0.012	1.728**	-0.299	-1.079
-6	0.02	0.337	0.017	1.628***	-0.295	0.471
-5	0.022	1.278	0.024	1.048	-0.295	0.009
-4	0.025	0.907	0.022	-5.693*	-0.307	-1.151
-3	0.033	0.384	0.029	1.045	-0.322	-2.813**
-2	0.039	0.448	0.027	-3.503*	-0.319	0.383
-1	0.046	0.448	0.029	5.001*	-0.299	2.232
0	0.052	0.465	-0.046	-0.097	-0.304	-0.52
1	0.05	-1.464***	-0.042	1.552***	-0.309	-0.286
2	0.046	-0.632	-0.124	-0.088	-0.312	-0.297
3	0.046	5.837*	-0.118	1.199	-0.312	-0.033
4	0.043	-0.994	-0.121	-2.684*	-0.299	1.124
5	0.023	-0.146	-0.124	-2.736*	-0.282	1.261
6	0.01	-0.219	-0.125	-5.370*	-0.278	0.366
7	0.008	-1.484***	-0.122	2.440**	-0.296	-1.694***
8	-0.039	-0.061	-0.124	-3.458*	-0.302	-0.472
9	-0.045	-0.512	-0.12	1.924**	-0.565	-1.007
10	-0.043	1.831**	-0.121	-2.461*	-0.567	-0.093
11	-0.051	-0.369	-0.12	1.454***	-0.577	-1.106
12	-0.061	-0.297	-0.125	-1.428***	-0.585	-0.731
13	-0.062	-1.503***	-0.133	-0.871	-0.597	-1.169
14	-0.059	0.755	-0.136	-2.514*	-0.591	0.42
15	-0.062	-0.903	-0.127	0.774	-0.585	0.439
16	-0.065	-0.917	-0.122	1.353***	-0.595	-1.107
17	-0.071	-0.473	-0.121	8.746*	-0.582	1.32
18	-0.063	0.343	-0.126	-1.313	-0.561	2.319**
19	-0.064	-1.619***	-0.121	1.427***	-0.568	-1.202
20	-0.088	-0.122	-0.116	1.458***	-0.583	-1.462***
21	-0.096	-0.391	-0.114	3.056*	-0.596	-1.749***

* t values shows the significance at *1%, **5% and ***10% level.

Table 03
Table showing the Short run effect of event announcement on stock returns

Event effects	Days	Bonus		Stock Split		Rights issue	
		CAAR	t test	CAAR	t test	CAAR	t test
Pre Event	t-10 to -2	0.188	6.169*	0.15313	5.70*	-2.6733	-5.5694*
	t-21 to -2	0.203	3.543*	0.00932	4.32*	-0.1882	-5.8859*
AD	t0 to +1	0.102	5.100*	-0.08775	-18.76*	-0.6125	-13.1241*
	t-1 to +1	0.148	26.955*	-0.05913	-0.81	-0.9116	-1.1070
Post Event	t+2 to +21	-0.691	-1.030	-2.46042	-10.58*	-9.6355	-15.4606*

* t values shows the significance at *1%, **5% and ***10% level.