IMPACT OF BONUS ISSUE ON SHAREHOLDERS WEALTH & TRADING

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ABSTRACT
The reaction of stock prices and share volume due to Bonus announcement has been analyzed in this paper. Also this paper talks about the efficiency level in stock markets. 12 companies out of the BSE 30 Company’s which had issued bonus shares between 2009 and 2014 were taken for the analysis. The objective of the study was to find out whether Bonus announcement conveys any information to the market or not and also to find out whether the share prices and volumes change abnormally after the announcement and the Ex-date. Event study methodology was used. F test, T test & Regression Analysis was done. An Event window of 7 days and Estimation window of 60 days was considered. Expected Returns and volumes were computed and were then compared with the actual returns and volumes. The results stated that the share price and the share volume do not increase abnormally after the announcement date and the ex-date. This shows that markets are efficient and the share price reflects all available information. It also shows that there is no leakage of insider information.

Keywords: Bonus shares, Announcement date, Ex-date, Cumulative abnormal return (CAR), Mean abnormal return (MAR), Event Window and Estimation Window

INTRODUCTION
Companies sometimes allot extra shares to the existing shareholders without receiving any additional payment from them. A bonus is a way of rewarding the company’s shareholders. This is known as issue of bonus shares. A 1:5 Bonus issue means 1 Bonus share for every 5 shares held. Bonus shares are allotted by capitalizing reserves. Since such shares are issued to the equity shareholders in proportion to their holdings of equity share capital of their company, a shareholder continues to retain his/her proportionate ownership of the company. It also does not affect the total earnings of the shareholders. Also, the share price of the issuing company generally falls post the bonus issue (to adjust itself in the ratio the bonus is issued in) making it affordable for retail investors to trade in the company’s shares. A lot of studies have shown that bonus issues significantly affect the price and volume of the shares of the issuing company. Companies issue bonus shares for a number of reasons.

1. To make the share more affordable
2. To increase the liquidity
3. To give new information to the market
4. To conserve cash
5. To get the attention of analysts

LITERATURE REVIEW

1. Pitabas Mohanty (1999) did a research on dividend paying behavior of more than 200 Indian companies over 15 years and examined whether the companies offering bonus issue were able to generate greater returns for their shareholders than those that had not offered any bonus issue. It was found that most of the companies did not maintain a constant payout ratio and most of the companies rewarded their shareholders by offering bonus shares. Cash dividend paid to the shareholders increased after bonus issue as dividend rate did not fall proportionately. Bonus issuing companies were able to give higher returns than the companies which did not issue bonus shares.

2. Balachandran et al (2004) observed positive and statistically significant abnormal returns for the announcement day and the next day.

3. A. K. Mishra (2005) in his paper on empirical analysis of market reaction around bonus issues in India for 46 stocks listed on NSE during 1998 to 2004 found that on an average, stocks start showing positive abnormal returns eight to nine days before the announcement date. On the announcement date there was an excess return of -0.10% which provided support to signaling hypothesis.

4. M.L. Barnes and S. Ma (2001) studied stock price reaction to bonus announcement in emerging stock market of China. Their study stated that issues with a high bonus ratio (number of bonus shares in the issue / number of existing shares) usually attract positive returns and the issues with a low bonus ratio were rewarded with negative returns.

5. Ray K.K. (2011) reported no price effect associated with bonus announcements on or around Announcement date and Ex-date.


7. Masse, et al. (1997) investigated the impact of stock split, reverse stock split and stock dividend announcements on the value of firms listed on the Toronto Stock Exchange from 1975-1994 and found significant and positive abnormal returns from day 0 to day 2.

8. A. F. M. Mainul Ahsan, et al (2014) did a research on stock price reaction to bonus issue announcement in Dhaka Stock Exchange (DSE) in Bangladesh. Data of 136 bonus issues was used in event study methodology. The findings revealed statistically significant abnormal returns on and around the bonus issue announcement dates.

9. Srinivas Shirur (2008) analyzed the reasons for the issue of bonus shares for companies which had issued bonus shares during January 2000 to September 2006. A sample of 165 companies was used. The study revealed that top management of the companies decided to issue bonus shares when the investors undervalued the company. This proved that promoters had to intervene to manage the prices of their stocks through corporate actions. It was found that companies may resort to stock dividends if growth rate of the share price was less than the market index and the average growth rate of sales and profit was higher than the companies included in the index. It was also found that the average beta of the companies that issued stock dividends was less than one.

10. Lukose & Rao (2005) examined market reaction and operating performance around distribution of bonus shares for selected companies listed in Bombay Stock Exchange. They took a period of 10 years from 1991 to 2000. They found significant positive correlation of stocks generating abnormal returns with bonus issue. The stocks had generated on an average 12.73% abnormal returns.
11. Anirban Ghatak (2011) in his paper examined stock price reaction to information release of bonus issues and stock split. The results showed positive abnormal return of 2.08% on bonus issue announcement date. Markets reacted positively on the announcement date and after that there were mixed reactions in the market.

12. Stulz R.M. (1996) studied the shareholder wealth effects associated with 875 new security issues in Japan from January 1, 1985, to May 31, 1991. The announcement of convertible debt issues had a significant positive abnormal return of 1.05 percent. There was an abnormal return of 0.45 percent at the announcement of equity issues.

13. Chhavi Mehta et al (2009) used the responses from private sector enterprises in India, to examine the managerial opinion about stock dividend. Sample consisted of 544 firms. The evidence suggested that the main motive for issuing stock dividend was to increase the total returns for the shareholders followed by improving liquidity. Stock dividends have a positive psychological impact on the shareholders. Issuing stock dividends attracts the attention of the investors which leads to increase in demand. This increased the share price and trading volume.

14. Kursat Aydogan and Gulnur Muradoglu (1998) analyzed whether announcement of stock dividends conveys any new information. They found significant positive price reactions with abnormal returns of 13.5% on day 18. They found that stock dividend decisions contained information which was an indication to future profitability.

15. Madhuri Malhotra, et al (2007) examined the share price reaction to announcement of Bonus Issue for a sample of Indian Companies. The period of study was 2000 to 2006. Bonus issue announcement yielded negative abnormal returns around the announcement date. There was a negative reaction after the bonus issue announcement, conveying that the market under reacted after the announcement. The analysis showed that stock dividends have a signaling effect but the effect is inversely related to stock price changes. It was also stated that the size of the firm giving stock dividends did not affect the abnormal returns of the company. It was also observed that there was no information leakage prior to the announcement.

16. Shankar H and Bharath M, (2012), in their research paper, “Market efficiency of Indian Stock Market – A study of Bonus Announcement in BSE”, tested the informational efficiency of the Indian Stock Market with respect to the information content of Bonus issue announced by companies listed in BSE 500. The study revealed that investors were not able to earn abnormal returns. The period of study was 2001 to 2010.

17. Rajamohan S (2015) analyzed the behavior of the share prices in the Indian equity market towards the announcements of bonus issue. He took into account the price movements of the Nifty Index stocks that had announced bonus issue and tried to find out the impact of the price behavior by comparing stock performance with the performance of the market index. The purpose of the study was also to comprehend the behavior of the Indian equity market, whether it aligns or differs with other major global equity markets. The research revealed that there was a significant impact on the price movement of shares in accordance with the size of the bonus issue in the Indian equity market as observed in other major global equity markets.

18. Mayank Joshipura (2013) studied stock price reaction due to bonus announcement in post global financial crisis period. He studied 74 bonus announcements from Indian CNX 500 companies for 2008-2012. The results showed that bonus announcement leads to some buzz in the market and it reacts positively to such announcements. If market is efficient in its semi strong form, such positive reaction should be restricted to announcement day only. However, it was found that market got some hint of announcement at least two days before the announcement date. The biggest positive market reaction was observed on announcement day. Capitalization of reserves was considered as a positive sign by the market as it indicated that the firm announcing bonus was confident of serving a higher capital base for distributing future dividends and that it may not
need reserves for distributing cash dividends during bad times. Positive market reactions were even observed on the ex-bonus date but it fizzled out immediately.

19. Papaioannou et al. (2000) analyzed price reaction to stock dividend announcements by firms listed on the Athens Stock Exchange and found no statistically significant abnormal returns on and around the announcement date. The results of this research can be explained by the fact that most stock dividend distributions are compulsory requirements imposed upon the firm to satisfy regulatory requirements and shareholder approval must be sought regarding the size and terms of the distributions. Stock dividend announcement in Greece are almost fully anticipated by the markets and hence do not contain any new information.

20. Remya Ramachandran (2013) did a research on Share price and trading volume reaction on Bonus Issue Information. His study focused on BSE 100 companies and was done for the period April 2004 to March 2009. The results indicated that neither the security prices nor the trading volume were getting significantly influenced by Bonus announcement.

21. Mayank Joshipura (2009) reported positive abnormal returns on and around announcement of Bonus and nothing around ex-date.

RESEARCH METHOD

1. We took all companies on BSE which had issued bonus shares from 2009 - 2014
2. We took data of price and volume for 7 days after and 7 day before (Event Window) Announcement Date (AD) & Ex-Date (ED)
3. We then used regression by taking data of 60 days (Estimation Window) prior to the Event window and found the expected returns and expected volume
4. We compared the expected data and actual data and found the abnormal returns for all the companies
5. Then we found CAR and MAR
6. After this, we tested whether the abnormality is significant enough with a confidence level of 95%
7. Finally we gave our interpretation and conclusion on the results of the tests

PROCEDURE

PART I: COLLECTING DATA

We searched for the BSE 30 companies that had issued bonus shares between 2009 and 2014. There were 12 such instances and a few of them were Bajaj Auto, Reliance Industries, Sun Pharma Industries, TCS, etc.

Using CapitalLine we identified the price (closing) and volume data for each share, seven days before and after the announcement date as well the ex-date. Also to calculate the expected share price and volume in each instance, we found out 60 day price and volume data for announcement and ex-date. The 60 day period we took into consideration was immediately prior to the seven days before the respective announcement and ex-date.

PART II: CALCULATING ABNORMAL RETURNS

On using the Regression function of the Data Analysis in Excel, a Summary Output was displayed on the screen from where the ‘beta’ and the ‘constant’ values were obtained.
*Summary output obtained on using regression function for closing price and SENSEX for the 60 day period before announcement date of RIL.

To find the expected price and volume around the announcement and ex-date, these values were used in the equation: $y = mx + c$, for the seven day sample period before and after the announcement and ex-date for both price and volume where,

$y$ = Expected price or volume, $m$ = Beta, $x$ = SENSEX values, $c$ = Intercept

*Calculating expected closing price around announcement date of RIL.

*Calculating expected closing price around announcement date of RIL.
Once we have the expected price and volume the abnormal returns can be calculated using the formula-

\[
\text{Abnormal return} = \frac{(\text{Actual price/volume} - \text{Expected price/volume})}{\text{Expected price/volume}}
\]

*Calculating abnormal returns in price around announcement date of RIL

Using the above procedure we calculated the abnormality in company’s share price and volume around the announcement and ex-date. We did this individually for each of the twelve company’s for each day and then summed them up and we got four outputs:

- Cumulative Abnormal Returns in price around the announcement date
- Cumulative Abnormal Returns in volume around the announcement date
- Cumulative Abnormal Returns in price around the ex-date
- Cumulative Abnormal Returns in volume around the ex-date

We then took an average of the Cumulative Abnormal Returns (CAR) to find out the Mean Abnormal Returns (MAR).

Here, MAR = CAR/12 as there are 12 bonus instances. That gave us four samples:

- Mean Abnormal Returns in price around the announcement date
- Mean Abnormal Returns in volume around the announcement date
- Mean Abnormal Returns in price around the ex-date
- Mean Abnormal Returns in volume around the ex-date
PART III: HYPOTHESIS TESTING

Once the MAR is calculated, we had to test whether these returns were significant or not. First we had to check if the data is normally distributed or not as that would determine the type of test we could use.

To test if the data is normally distributed or not, we ran the Descriptive Statistics in Data Analysis of Excel for all four samples and further within each sample, separately for the before seven day period and after seven day period. The summary statistics obtained gave us the skewness and kurtosis of the data. Then using the standard formula of skewness and kurtosis—\(\sqrt{6/n}\) and \(\sqrt{24/n}\) respectively where \(n\) is the number of elements you are finding the skewness and kurtosis for, in this case 7- we found the standard skewness and kurtosis. We then divided the skewness and kurtosis of summary statistics with the one we found using the standard formula to find the standard error of skewness and kurtosis. To test this value we considered a confidence level of 95%. Our standard error was lying within the range of -1.96 to +1.96. Hence we accepted our data to be normally distributed.

Now since our data is normally distributed we use parametric tests for hypothesis testing.

First we had to test if the variances of the price and volume MAR before and after the announcement date were equal or not. We used the F-Test Two-Sample for Variances in Data Analysis of Excel. The same test was used to test the variance in MAR (price and volume) around the ex bonus date.

\(H_0=\text{Variances are equal}\)
H₀: Variances are not equal
Level of significance = 5% i.e., confidence level 95%
From the summary output of the F test we checked the P(F<=f) one-tail value. This value should be greater than 0.05 in order to accept the null hypothesis. Anything below 0.05 would lie in the rejection zone as the level of significance is 5%.

*Checking if the variances of MAR in price are equal before and after the announcement date.

Finally we used the t-Test: Paired Two-Sample for Means function in the Data Analysis of Excel. Our confidence interval was 95%. Therefore to accept the null hypothesis, the t Stat value had to lie within -1.96 and +1.96.

**HYPOTHESIS TEST RESULTS:**

i. MAR of price around announcement date.

H₀: Prices do not increase abnormally after AD
H₁: Prices do increase abnormally after AD

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</table>
As our t stat lies in the range (-1.96 to 1.96), the null hypothesis is true.
We conclude that the **prices do not increase abnormally** after the announcement date.

**ii. MAR of volume around announcement date.**

H₀: Volume does not increase abnormally after AD

H₁: Volume does increase abnormally after AD

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As our t stat lies in the range (-1.96 to 1.96), the null hypothesis is true.
We conclude that the **volume does not increase abnormally** after the announcement date.

**iii. MAR of price around ex date.**

H₀: Prices do not increase abnormally after ED

H₁: Prices do increase abnormally after ED

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As our t stat lies in the range (-1.96 to 1.96), the null hypothesis is true.
We can conclude that the prices do not increase abnormally after the Ex-date.

iv. MAR of volume around ex-date.

H$_0$: Volume does not increase abnormally after ED
H$_1$: Volume does increase abnormally after ED

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As our t stat lies in the range (-1.96 to 1.96), the null hypothesis is accepted.

We conclude that the volume does not increase abnormally after the Ex-date.

RESULTS AND ANALYSIS

The analysis shows that there is no arbitrage opportunity to make extra returns in the India Stock Markets.

The paper states that there is no abnormal increase in volume before and after the announcement date and the ex-date and hence it proves that Indian markets are efficient.

Also it shows that no insider trading is possible as there was no abnormal increase in price before and after the announcement date and the ex-date.

REFERENCES