

ANNOUNCEMENT OF BONUS ISSUE & ITS EFFECT ON THE EQUITY SHARES MARKET PRICE OF NSE INDIA LISTED COMPANIES

Dr. D. Y. Patil, Dean–Centre of Excellence for Research
S.P. Mandali's Prin. L. N. Welingkar Institute of Management Development and Research
Matunga East, Mumbai
dypatil19@gmail.com

Sonali Athawale, Assistant Professor
Guru Nanak Institute Of Management Studies, Kings Circle
Matunga East, Mumbai
sonali.athawale@gmail.com.

Uttara Athawale
Visiting Faculty. Mumbai
uttara.athawale@gmail.com

ABSTRACT

An attempt is made to gauge the reaction of the announcement of bonus, on the market price of equities, in terms of its effect on returns in Indian environment. The impact is captured for 61 days (-30 0 +30) event window. Present study consists of 123 selected bonus announcements, relevant to the companies, listed on National Stock Exchange. The selected announcements are spread across 13 years ranging from 1st April 2006 to 31st March 2019. Event study methodology is used with market model. Cross sectional AAR is calculated and are tested for the entire event period. In addition 30 days pre & 30 days post announcement day, effects are also observed. Besides, CAAR- Cumulative Average abnormal return is tested for examining the cumulative effect. The study reveals that the AAR reaches the peak on the announcement day. The results of T statistics at 5% LOS provide adequate confirmation of significant positive AAR, clustered on and the days surrounding the event day thereby rejecting the null hypothesis at 5% LOS. Strong rejection at 1% LOS is observed on D-2, D-1 & D0 days. The cumulative average abnormal returns (CAAR) take off from the days before the announcement with a gradual rise, to reach the peak on the D+1 day and further a decline in the immediate post event window is noticed. 14 significant CAAR is observed at 5% LOS with presence of strong rejection at 1% LOS for 8 CAAR. Paired T test result showed strong rejection as significant difference of AAR at 1% in 30 day's pre-and 30 days post-announcement day is discovered. Overall, it can be said that the selected bonus announcements create a significant impact on the equity shares market price around the event window. Hence, it sounds reasonable to conclude that the bonus announcement is viewed as a positive action by the market & thereby, these freebies offer an opportunity for wealth creation.

Keywords: Bonus, Event study, Market Model, AAR, CAAR.

Introduction

'Free Shares', sounds interesting... In the world of finance these shares are popularly known as bonus share. Without charging a penny these extra shares are bestowed by a company to its present shareholders on a Pro-rata Basis & there is no dilution of shareholder's interest in the company. Bonus is a non-monetary and mandatory corporate action. Suppose a company comes up with a bonus issue of 1:2, it means for every 2 shares held by the shareholder in the company, he will get one share without any charge as a freebie. The reasons for bonus can be varied, to reward the shareholders, to infuse liquidity, to arrest the share price moving southwards, or to face the liquidity crunch. One of the advantages of bonus issue from a company viewpoint is that the existing cash reserve of the company can be maintained. The notion in finance theory states bonus issue does not increase value of shares as it is a mere transfer from reserves to capital. There is a depletion in the reserves with an equal rise in the company's share capital. The number of shares with the shareholders is increased and there is a proportionate reduction in price. So in terms of wealth effect, the impact should be immaterial, as the increase in the number of shares tends to compensate, with fall in price ex-bonus, with no change in the total equities. Therefore it should not have real economic significance for investors however the delight as the bonus announcement news hits the market, poses certain questions. Does the script pick up with the pace of announcements, does it remain stagnant or does it head for a nosedive on announcement? Is there any effect in terms of significant return on the announcement day? Is it confined to announcement day itself, or spread in the pre post days of the announcement? Is there any difference of the impact in the pre and post announcement period of the announcement day? Do the shareholders have an opportunity to create wealth? Here an attempt is made to unfold these questions by assessing the reaction on the market price of equities, due to bonus announcement, in terms of its impact on returns.

Literature Review

Masse (1997), conducted a study to inspect the effect around bonus announcements on the listed companies in Toronto exchange Canada & found presence of positive extraordinary returns which were significant. Papaioannou, Travlos, Tsangarakis (2000) Presence of significant excess returns on announcement day was not observed. The returns were not statistically different from zero in the Greece market. Pathirawasam (2009) study at Colombo stock exchange Sri Lanka offered support to information signalling hypothesis. Ahsan, Chowdhury & Sarkar (2014) captured the effect in Dhaka bourses Bangladesh- extraordinary returns encompassing the period surrounded by the announcement and on stock dividend announcement date itself were revealed. Findings also document inconsistent results with respect to sectoral decomposition. Four sectors showed positive reaction while two sectors engineering and textile showed opposite results to the proven theories. The study has highlighted the concern of leakage of information. Ansari, Hussien (2017) documented positive impact on share price in the Egyptian Stock Exchange. Moving to the studies in the Indian context Obaidullah (1992) has documented positive reaction on bonus announcement as manifested by CAAR. The study consisted of seventy five stock dividend issues. The period of study was 1987-89. The study mentions about the rise in the trend prior to the announcement period. Mishra, (2005) with 46 bonus announcements during 1998 to 2004 of Indian listed companies, revealed the stocks showed positive abnormal returns around eight to nine days prior to the announcement. They attributed the possibility of information leakage. The post announcement returns were found to be negative which were significant on the 4th day. Malhotra, Thenmozhi, & ArunKumar, G.(2007) observed negation of abnormal returns around the stock dividend announcement date for chemical companies in India. It conveyed markets under reaction since negative reaction after announcement was observed. Dhar, Chhaochharia (2008) documented abnormal return for bonus announcement. The reaction to the announcement was found to be significantly positive in the Indian stock Market. Sharma, Singh (2009) Studied 25 bonus issues of companies, though the results were positive but they were not statistically significant. Joshipura, (2009). Sufficient evidence of positive abnormal return ahead of the announcement & on bonus announcement day were found. Ray (2011) the bonus issues revealed a negative AAR of -1.3 percent on the announcement date. However it was not statistically significant. Alex (2017) analysed market Reaction of 57 companies around the Bonus Issues in Indian Market, the study carried out for sample companies in India documented average abnormal returns on 5th day, however it was not found to be statistically significant. So the study claimed that bonus announcements do not affect the share prices in India. Kaur, Singh (2009) conducted the study pertaining to the period from January 1999 to December 2004 regarding the reactions of the stock market on the of stock dividend announcements by listed Indian companies on the BSE. Based on the results, abnormal returns have been observed around stock dividend announcements. Moreover, support is found for the signalling hypothesis as well as for optimal price hypothesis. Sharma, Anute, & Ingale (2021) the investor should learn about the development taking place in the marketplace. Investors should keep in mind before investing in the share market that trading has both positive and negative effects. Kumari, Pushpender (2019) did not find reaction to announcement of stock dividend on Indian bourses. No significant reaction was observed on the share price on the bonus share announcement.

Objectives

1. To find the bonus announcement effect on market price of equity shares in the event window.
2. To analyze the cumulative effect of bonus announcements on returns.
3. To examine the announcement effect of bonus before (-30) and after (+30) days of the event day.

Hypothesis

H0 1: There is no significant reaction on market price of equity shares due to announcement of bonus around (-30,0, +30) days of the event window.

H1 1: There is significant reaction on market price of equity shares due to announcement of bonus around (-30,0, +30) days of the event window.

H0 2: There is no significant (CAAR) depicted in the (-30,0, +30) days event window due to bonus announcement of equity shares.

H1 2: There is significant (CAAR) depicted in the (-30,0, +30) days event window due to the bonus announcement of equity shares.

H0 3: There is no significant difference in the pre- announcement day (-30) days AAR and post announcement day (+30) days AAR upon the bonus announcement.

H1 3: There is a significant difference in the pre-announcement day (-30) days AAR and post announcement day (+30) days AAR upon the bonus announcement.

Research Methodology

Secondary data is collected from National Stock Exchange, Capitaline Database, Economic Times, Money control. In addition Articles & Research papers are also referred. The study covers 123 selected bonus announcements spanned across 13 years ranging from 1st April 2006 till 31st March 2019. Event study methodology is used in the study in order to find the impact on the stock returns.(MacKinlay, A. C. (1997), Brown, S. J., & Warner, J. B. (1980). Brown, S. J., & Warner, J. B. (1985).

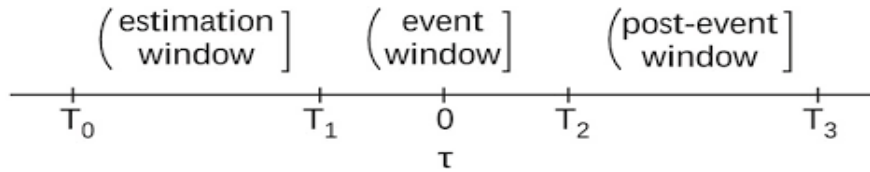


Figure 1: Event study timeline: (MacKinlay, A. C. (1997).)

Estimation period: Time period (days) “T₀-T₁”

Event window: Time period (days) “T₁-0-T₂”

Event date: Day T “0”

Post-event window Time period (days) “T₂-T₃”

Market model is used for this study. Event date considered is the board meeting date for bonus announcement. T “0” (If the announcement is made on a holiday then the following trading date is considered.). The event window [T₁ 0 T₂] is [-30 0 +30. T₀ to T₁ is the estimation window of 120 days. Nifty 500 - Index of National Stock Exchange India is considered as the surrogate for market portfolio. Daily stock returns and market returns are computed as below:

$$R_{it} = (P_{it} - P_{it-1})/P_{it-1}$$

Where,

R_{it} Is the daily stock return

P_{it} & P_{it-1} are the daily prices for Company i at time t & t - 1 respectively

$$R_{mt} = (I_t - I_{t-1})/I_{t-1}$$

Where,

R_{mt} is the daily market return

(I_t - I_{t-1}) are the daily index - (Nifty 500) values at time t & t - 1 respectively

Normal Return:

$$NR_{it} = \alpha_i + \beta_i R_{mt} + \epsilon_{it}$$

NR_{it} is the observed daily return of the stock for the company i at time t,

α_i is estimate of the intercept for stock of company i,

β is the estimate for beta of stock of company i,

R_{mt} is the observed daily return for the market index at time t

ε_{it} is the residual error term

Abnormal Return: it is the excess return computed as daily stock return over the normal return.

$$AR_{it} = R_{it} - NR_{it}$$

Where,

AR_{it} is the Abnormal Return of stock for company i at time t

R_{it} is daily stock return

NR_{it} is the normal Return for the company i at time t

Average Abnormal Return (AAR_{it}): Cross-sectional AAR_{it} are computed as below:

$$AAR_{it} = \frac{\sum AR_{it}}{N}$$

Where,

AAR_{it} is the Average Abnormal return of stocks i at time t.

AR_{it} is the abnormal return of the stock for the company i at time t

N is the number of observations.

Cumulative Average Abnormal Returns: (CAARs): Computation of CAAR is done by aggregating the AAR_{it} for the event window

$$CAAR = \sum AAR_{it}$$

Where,

AAR_{it} is the Average Abnormal return of stocks i at time t.

Testing Of Hypothesis: Traditional Brown and Warner method is used to calculate the t statistic. The test statistic for AAR on day t in the event window is as below:

$$t_{AAR_t} = \frac{AAR_t}{S_{AAR}}$$

$$S_{AAR}^2 = \frac{1}{M-2} \sum_{t=T_0}^{T_1} (AAR_t - \underline{AAR})^2$$

Where, (T₀, T₁) is the estimation window and

$$\underline{AAR} = \frac{1}{M} \sum_{t=T_0}^{T_1} AAR_t$$

The test statistic for testing CAAR is

$$t_{CAAR} = \frac{CAAR}{\sqrt{T_2 - T_1} S_{AAR}}$$

For testing before & after event effects Paired T Test is used

Results and Discussions: The results obtained are as below:

COUNT	AAR	ARR (%)
No. of Days : Positive	32	52.46
No. of Days : Negative	27	44.26
No. of Days : Zero	2	3.28

Table 1: No. & Percentage -Positive, Negative, Zero _AAR
(Source generated by researcher)

Table No.1 shows that the AAR is positive for thirty-two days which is 52.46 % more than half of the days in the event window. Negative returns and zero returns are observed for 27 days _44.26 % and 2 days _3.28% respectively.

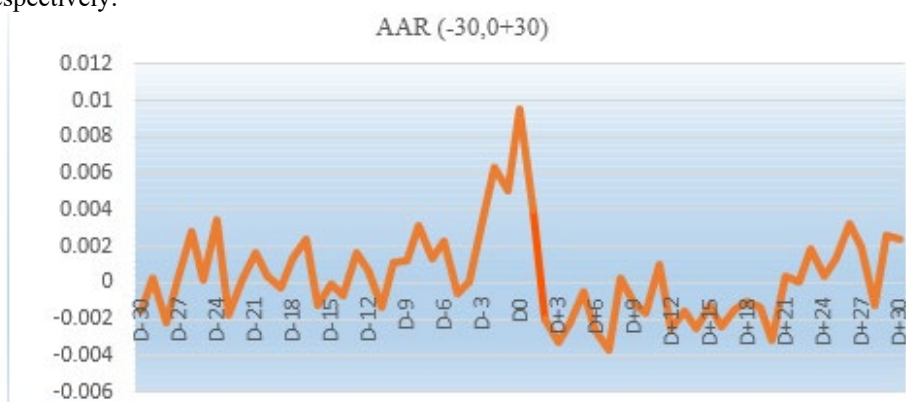


Figure 2: Event Window AAR (Source generated by researcher)

The above figure 2 shows the increase in AAR in the immediately preceding days of the announcement day. Strikingly it reaches the peak on the event day Further days the fall in AAR is visible.

BONUS_ W30	AAR	TSTAT_AAR
D-2	0.0063	3.4265**
D-1	0.005	2.7132**
D0	0.0095	5.1724**
D+1	0.004	2.1989*
D+7	-0.0037	-1.9962*

** , * Significant at 1%, & 5% $\alpha = 0.05$ T Critical= 1.9796, $\alpha = 0.01$ T Critical= 2.6167

Table 2: Significant AAR Days (Source generated by researcher)

Table 2 presents the results for AAR for a sixty-one -day event window (-30 0 +30). It portrays the (AAR) & the t-statistic for $\alpha =0.05$ and $\alpha =0.01$. Null hypothesis H0 1 is rejected strongly at 1% LOS which comprises the event day. Two consecutive days' pre-event D-1 & D-2 & on D+1 it is rejected at 5 % LOS For positive AAR. Further negative returns are found to be significant on D+7 day.

CAAR: In order to evaluate the net magnitude the total returns are cumulated for the entire window period.

COUNT	CAAR	CAAR (%)
Positive	55	90.16
Negative	6	9.84
Zero	0	0

Table 3: No. & Percentage -Positive, Negative, Zero _CAAR for (-30, 0, +30 window)
(Source generated by researcher)

Table 3 exhibits the No. & Percentage -Positive, Negative, Zero _CAAR. The positive CAAR witnessed are 55 (90.16%) ,with only 6 negative CAAR (9.84 %) at the beginning of the window, during the pre-event period are seen.

BONUS_ W30	CAAR	TSTAT_CAAR
D-2	0.0237	2.3912*
D-1	0.0287	2.8463**
D0	0.0382	3.729**
D+1	0.0423	4.059**
D+2	0.0403	3.812**
D+3	0.037	3.4449**
D+4	0.0348	3.1952**
D+5	0.0343	3.1031**
D+6	0.0317	2.8283**
D+7	0.028	2.4671*
D+8	0.0282	2.4494*
D+9	0.027	2.3208*
D+10	0.0254	2.151*
D+11	0.0264	2.2095*

** , * Significant at 1%, & 5% $\alpha =0.05$ T Critical= 1.9796, $\alpha =0.01$ T Critical= 2.6167

Table 4: Significant CAAR Table (Source generated by researcher)

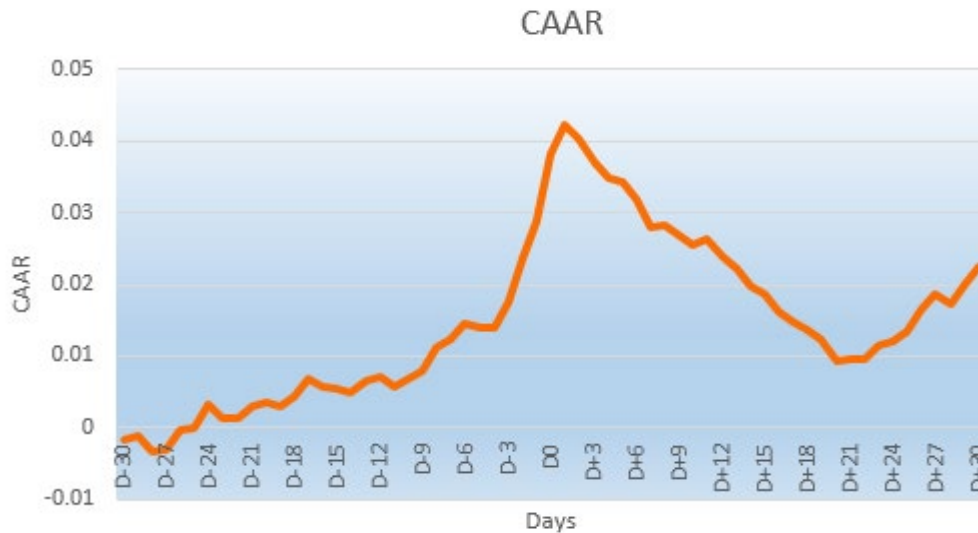


Figure 3: Event Window CAAR (Source generated by researcher)

Table 4 and Figure 3 shows the CAAR takes off from the commencement of the pre event window (-30,0+30) and displays a steady growth from -30 day till it reaches the peak on D+1 followed by a gradual downward movement. A reverse direction is visible where a pick up is seen from day +22 CAAR onwards till the end of the event window. The null hypothesis H0 2 is rejected for 14 CAAR from D -2 to D+11 days at 5% LOS. The strong rejection is captured for 8 CAAR from D-1 to D+6. Whereby the null hypothesis is rejected at 1 % LOS. Further in order to test the effect thirty days earlier and thirty days after the event day. Paired sample t test is applied, the results are as below:

PAIRED T TEST FOR AAR								
Before (Mean)	After (Mean)	Difference of Means	p-value	Calculated t-Value	Critical t-Value 5% LOS	Decision at 5% LOS	Critical t-Value 1% LOS	Decision at 1 % LOS
0.0010	-0.0005	-0.0015	0.0005	3.5844	1.9796	H0 Rejected	2.6167	H0 Rejected

Table 5: Paired T Test Result (Source generated by researcher)

The above table reveals that the average AAR has reduced in the post event window as compared to pre event window. The difference is significant and strong rejection of null hypothesis H0 3 is evident at 1%LOS.

Conclusion

The study examined the stock price reaction to selected 123 bonus announcement by using event study methodology with market model. It is evident that the bonus announcements generate statistically significant AAR around the announcement. The rejection of null hypothesis on the event day and immediate post and pre event windows is seen. Observations reveals the rejection of null hypothesis around the event window at 5% LOS and strong rejection is also seen at 1% LOS. The before and after effect of the announcement shows the difference in AAR is also significant. It is noticed that AAR is highly significant & reaches its peak on 0 day (Event day). The rise in CAAR is gradual till D+1 day, with a drop in the immediate surrounding days. 14 significant CAAR are observed at 5% LOS with presence of strong rejection at 1% LOS for 8 CAAR. Overall, it can be said that the selected bonus announcements create a significant impact on the equity shares market price around the event window. Hence, it sounds reasonable to conclude that the bonus announcement is viewed as a positive action by the market & thereby, these freebies offer an opportunity for wealth creation.

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