
Impact of Bonus Issue on Stock Returns -Evidence from Bombay Stock Exchange, India

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Abstract

Bonus Share Issue a tool used by managers to capitalize companies profits and satisfy shareholders by issuing them free equity shares in a ratio they already own. Any kind of corporate action affects the company's image but, bonus share announcements affect on shareholders wealth is an old age topic of discussions for researchers. This study is an attempt to examine the impact of bonus share issue announcement on shareholders earnings.the study has been conducted on companies listed in Sensex index. The study computes Average Abnormal Return (AAR) and Cumulative Average Abnormal Return (CAAR) for the event window of 21 days. A T-test was also carried out to check the significance of data. The study can be used by practitioners, investors, academicians, and policyholders while framing policies for the company.

Keywords: *Bonus Share Issue, shareholders wealth, Average Abnormal Return, Cumulative Average Abnormal Return, T-test*

Introduction

Capital market's growth is of utmost importance for any economy. The market channelizes saving's into investment. The economic performance of a country can be judged by its capital market performance. A boom in the capital market indicates a growing economy whereas a depression in the capital market symbolizes a falling or slowdown of the economy. Corporates, here are the key drivers of these markets. The Bonus issue is one such method. The term bonus itself means, one-sided economic transfer, in the form of reward, return or any other ^{compensation}. Therefore Bonus issue is, corporates issuing free additional equity shares, to their existing shareholder, in a ratio they already own. Though bonus issue increases the number of shares held by shareholders, it does not increase the ownership proportion held by them. It is only a transfer of reserves by the company to its shareholders. Companies, are when left with

surplus profit but does not have enough liquid cash to distribute it or may not want to incur capital expenditure by issuing dividend and parting with it, distributes it to its existing shareholders in the form of equity share known as bonus share issue, this leads to capitalization of company's profit.

Issuing bonus share by the companies are more beneficial to them than harmful. Past studies have shown that bonus issue leads to increase in share price of a company in the capital market, it also increases shareholders confidence in the company, tax burden over companies are reduced as profits are now capitalized and also it prevents hostile takeovers. But there are also some disadvantages that companies have to bear while issuing bonus shares. It reduces reserves and surplus of the company; it leads to extra expenditures like stamp duty, stationary expenses, print etc. and also it consumes manager's time and energy.

The relation between the issue of bonus shares and its effect on the share prices of stocks is one of the most discussed topics among researchers over time. This paper is an attempt to have a better insight into the same.

Literature Review

Prakash Poddar (2013) has studied the effect of bonus issue on share prices of the companies, from January 2008 to December 2012. To fulfill his objective the author has divided the sample companies into financial and non-financial companies. A window of 20+days, 0day and 20- days, where 0 is the day of bonus issue, was taken into consideration. The study is examined using Abnormal average return (AAR), Cumulative Average Abnormal Returns (CAAR) method, further a series of T-test were also performed. The author also evaluates the difference between bonus issue announcement on a share price of financial companies and non-financial companies. The result revealed that there is a significant difference between share price of companies before and after the issue of bonus also there is a difference between share prices of financial companies and non-financial companies.

Ms. Madhuri Malhotra, Dr. M. Thenmozhi and Dr. G. Arun Kumar (2007) examined the effect of bonus issue on share prices of Indian chemical companies listed in Bombay stock exchange(BSE) from 2000-2006. Bonus

issue above 5:1 and below 4:1 has not been taken into consideration. A window of 20+ days, 0 and 20- days were evaluated. The author uses market

adjustment model and parametric T-test for fulfilling his objective. The result obtained showed a negative abnormal return around the event date also there was a negative reaction to the bonus issue reveals that there is no relation between the announcement of bonus issue and share prices of Indian chemical companies listed in Bombay stock exchange(BSE).

Dr. Satyajit Dhar and Ms. Sweta Chhaochharia (2008) examines the market efficiency of three corporate announcements, stock split; bonus issue and right issue on share prices of companies listed in National stock exchange (NSE). The study was conducted from 1996- 2015 with an event window of 41 days. The methodology used was Average Abnormal return (AAR), Cumulative Average Abnormal Returns (CARR) and T-test to test the significance level. The study resulted in a significant positive abnormal return on bonus announcement day and a negative abnormal return on right issue and stock split shows the existence of significant positive abnormal return on announcement

day of bonus and negative abnormal return for stock split and rights issue event. Therefore the author concludes that there is semi-strong market efficiency for corporate announcements in the Indian market.

Denis Oliech Ayoma (2009) examines the impact of bonus issue on share prices of securities listed in Nairobi Securities Exchange (NSE) of Africa from 2009-2012. The study examines the 29 days window of study which is 14 days before and 15 days after the happening of the event. Tools used for the study are t-test, ARR, and CARR. The result showed that there is a semi-strong form of market efficiency. Therefore the author concluded that it is possible to earn a profit with any such announcement which investors of NSE consider as news.

Rajesh Khurana and Dr. D. P. Warne (2016) focuses on the reaction of stock prices before and after bonus announcement from 2006-2012. For this article, the author took 34 companies from 11 sectors listed in NSE 100. The result showed a positive abnormal return for the eight-day period prior to announcement day and a negative return on the announcement day. Therefore the author concludes semi-strong market efficiency on the Indian market.

Objective

- To examine the effect of bonus announcement on shareholders earnings.
- To have an insight on bonus share announcement in Indian Market.

Hypothesis

To test whether the announcement of bonus shares by companies can result in earning abnormal returns to the shareholders.

Ho= There is no significant effect of bonus share announcement on share prices of the company i.e. $AR=0$.

H1=There is a significant effect of bonus share announcement on share prices of the company i.e. $AR \neq 0$.

Research methodology

Source of data

The present study is based on secondary available data of share prices and Index prices available on BSE's official website. Also, information from books, journals and money control website has been used to collect background information.

Data collection method

The data for this study is collected from BSE exchange. The 30 companies listed in Sensex index are considered to be the population for this research. Out of these 30 companies, only companies that have issued bonus shares in past ten years from 1st January 2008 to 31st December 2017 are

considered as a sample for this study. Out of which only 15 companies fulfilled the above-mentioned criteria, namely Larsen and Toubro Ltd, Infosys Ltd, ITC Ltd, Kotak Mahindra Bank Ltd, Mahindra and Mahindra Ltd, Reliance Industries Ltd, Sun Pharmaceutical Industries Ltd, Wipro Ltd, Bajaj Auto Ltd, Tata Consultancy Services, out of these many companies has issued bonus shares more than once in 10 years, which has been considered as a separate event.

Design of the study

The study computes return on the daily closing price of individual sample companies and Index, for the event window. The data collected for this purpose are all secondary data collected from BSE website, which is the oldest stock exchange in India.

Estimation procedure

The study aims to determine the effect of bonus issue on the share price of the sample companies. For this purpose, we determine whether there is any abnormal return surrounding the event window. The event window for this study is of 21 days i.e -10,-9,-8,-7,-6,-5,-4,-3,-2,-1,0,1,2,3,4,5,6,7,8,9,10. Where '0' is the event date on which the announcement for issuing bonus shares was made.

Further, a regression was run using Microsoft Excel, on an estimation window of 200 days prior to the event window. For computing abnormal return, following steps were followed:-

Step 1 Daily closing price for individual stock and Sensex index was collected from BSE website for 241 days which include -200 days of estimation window,-10 days of event window, 0 day i.e. the event day(the

bonus share announcement date) and +10 days of the event window.

Step 2 Log return on the daily closing price of stock and index was calculated using the following formula in excel.

$$Return = \ln(P1/P0)$$

Where:

P1=Present day closing price

P0= Previous day closing price

ln= log return

Step 3 Regression was run in excel on log return of stock and market, for 200days prior to the event window.

Step 4 The alpha and beta value derived from step 3 was then used in calculation of estimated return, using market model as follows:-

$$ER_{jt} = \alpha_j + \beta_j * (R_{mt})$$

Where:

ER_{jt}= Estimated return of security 'j' at time't'.

R_{mt}= market return of sensex at time 't'.

α_j, β_j= regression estimates from step 3.

Step 5 After calculating estimated return in above step abnormal return was calculated as follows.

$$\text{Abnormal return} = \text{Actual return} - \text{Estimated return}$$

Step 6 Next we calculated average abnormal return and cumulative abnormal returns using the following equations

$$AAR_t = (AR_{jt} + AR_{kt} + AR_{lt} + AR_{mt} + \dots \dots \dots AR_{xt})/N$$

Where:

AAR_t=Average abnormal return

N= Total number of securities

AR_{jt}= abnormal return calculated in step 5 of security j at time t till security x.

$$CAAR = \Sigma AAR$$

Where:

CAAR= Cumulative average abnormal return

Step 7 At the end one sample T-test was run on above calculated AR to test the hypothesis, using SPSS software.

Result and Findings

Regression

For computing abnormal return, regression was run in Microsoft Excel. As a result, the value of α (intercept) and β (X Variable 1) coefficients for the sample companies were

computed. These values were then used to calculate abnormal returns. Below given is the table showing the bonus announcement date/event date, Alpha value(α), Beta value(β), R² value, T-stat and F value for all 15 sample companies. The R² value shows the variability in the dependent variable by

the independent variable, for eg. from the R2 value of Reliance Industries Ltd is computed as 0.746657, which means that 74.66% of the variability in the dependent variable (the company stock, in this case, Reliance Industries Ltd) is explained by the independent variable(the index, in this case,

SENSEX). F value is 583.55 and significance value is 0.00 of sample company (Reliance Industries Ltd). Further the regression coefficient values i.e. alpha and beta are further used to compute AR. The alpha value for Reliance Industries Ltd is -0.00071 and beta value is 1.206903.

Table 1

Company name	Event date	Alpha	Beta	R2	T-stat	F	Significance
LARSEN & TOUBRO LTD.	29/5/2017	0.0001	1.0924	0.3847	11.1257	123.7808	0.0000
INFOSYS LTD.	10/10/2014	-0.0001	0.4175	0.0444	3.0326	9.1967	0.0027
ITC LTD.	20/5/2016	0.0005	0.8420	0.3073	9.3725	87.8432	0.0000
KOTAK MAHINDRA BANK LTD.	5/5/2015	0.0015	0.8354	0.1805	6.6042	43.6160	0.0000
MAHINDRA & MAHINDRA LTD.	10/11/2017	-0.0004	0.9309	0.2086	7.2239	52.1843	0.0000
RELIANCE INDUSTRIES LTD.	21/7/2017	0.0011	0.8068	0.1311	5.4666	29.8837	0.0000
SUN PHARMACEUTICAL INDUSTRIES LTD.	28/5/2013	-0.0003	1.1312	0.3647	10.6604	113.6448	0.0000
WIPRO LTD.	25/4/2017	-0.0006	0.4611	0.0923	4.4860	20.1243	0.0000
LARSEN & TOUBRO LTD.	22/5/2013	-0.0006	1.4898	0.4915	13.8330	191.3530	0.0000
INFOSYS LTD.	24/4/2015	-0.0022	0.6455	0.0110	1.4808	2.1928	0.1402
BAJAJ AUTO LTD.	22/7/2010	0.0030	0.6256	0.1462	5.8232	33.9091	0.0000

ITC LTD.	18/6/2010	0.0007	0.7312	0.2868	8.9235	79.6292	0.0000
LARSEN & TOUBRO LTD.	29/5/2008	-0.0001	1.1092	0.5852	16.7136	279.3430	0.0000
RELIANCE INDUSTRIES LTD.	7/10/2009	-0.0007	1.2069	0.7467	24.1567	583.5484	0.0000
TATA CONSULTANCY SERVICES LTD.	20/4/2009	-0.0009	0.8696	0.4997	14.0618	197.7351	0.0000

Abnormal return, Average abnormal return, and Cumulative abnormal return

Below is the graphical representation of abnormal return(AR) of all the 15 sample companies. It is visible that two days prior and after the event date i.e. between+2 and -

2 days stocks such like Larsen and Toubro Ltd, Infosys, Kotak Mahindra Bank Ltd, ITC Ltd, Bajaj Auto Ltd and Tata consultancy services has earned a high positive abnormal return. Larsen and Toubro earning the highest on the event day.

Figure1

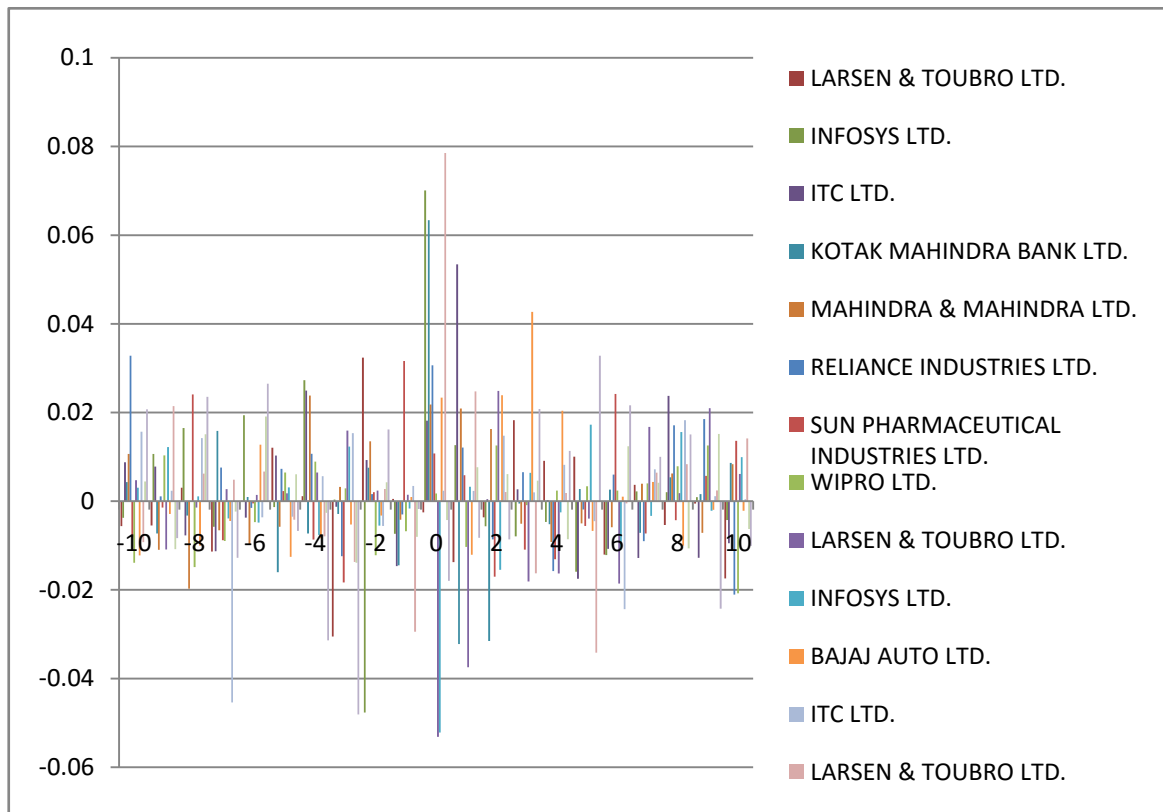
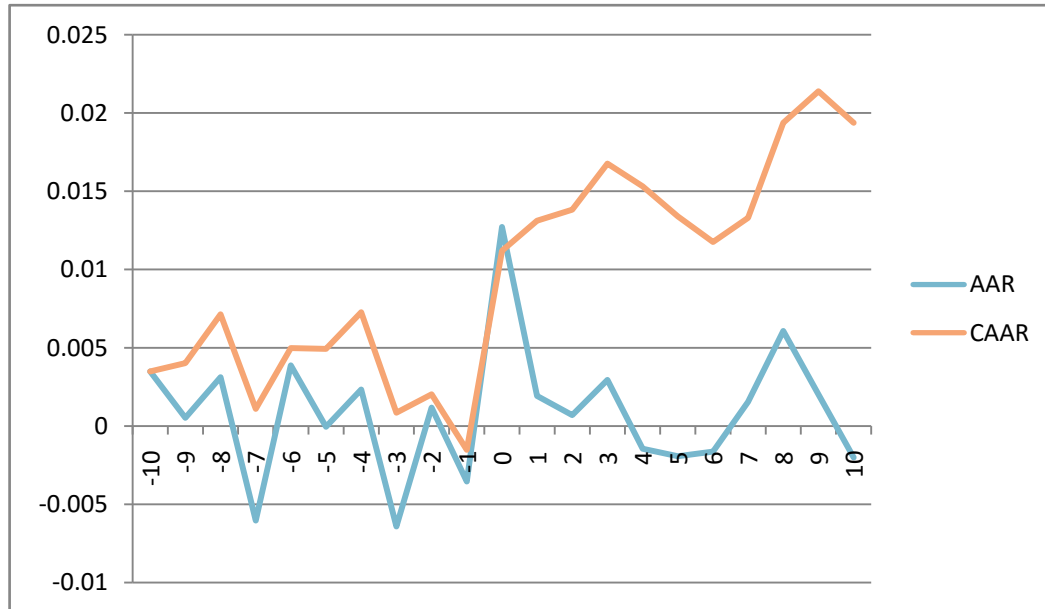


Figure2 shows the graphical representation of average abnormal return(AAR) and cumulative abnormal return (CAAR) of all sample companies computed for the event window. From the graph it can be concluded that AAR is fluctuating throughout the event period, prior to the event day i.e. '0' day, AAR is negative and on the event day AAR

is in its peak, but this hike is seen only for a temporary interval as the market adjusts itself automatically in the following days. Whereas CAAR prior to the event day is negative but as the event day stood positive, CAAR is seen positively sloped. This is a positive indication.

Figure2



One sample T-test

To test the hypothesis, One Sample T-test was performed at 95% confidence level. The t-value lying between the range of +1.95 and -1.95 shows insignificant result i.e. rejecting of the null hypothesis ($AR=0$) whereas t-value falling outside this range shows a significant result i.e. accepting the hypothesis ($AR \neq 0$). Below is the tabular representation of T-test of all 15 sample companies. The VAR0001- VAR00021 represents the event window of 21 days for all sample companies.

The table below shows the result of T-test performed on abnormal return (AAR) of all sample stocks for each day of the event window. The highlighted row is the event day. Therefore the majority of p-values for the event window lie between -1.96 stating insignificant results. Hence null hypothesis for all sample companies are rejected, and the alternative hypothesis is accepted. This means that shareholders can earn abnormal return after bonus share announcement is made.

Table 2 One-Sample Test

Test Value = 0

t	df		Sig. (2-tailed)	Mean Difference		95% Confidence Interval of the Difference
	Lower	Upper		Lower	Upper	
VAR00001	1.040	14	.316	.003491	-.00371	.01069
VAR00002	.203	14	.842	.000526	-.00503	.00608
VAR00003	.900	14	.383	.00311840	-.0043155	.0105523
VAR00004	-1.735	14	.105	-.00604080	-.0135088	.0014272
VAR00005	1.407	14	.181	.00388173	-.0020363	.0097997
VAR00006	-.022	14	.983	-.00004540	-.0045452	.0044544
VAR00007	.578	14	.573	.00233620	-.0063340	.0110064
VAR00008	-1.436	14	.173	-.00641833	-.0160047	.0031680
VAR00009	.266	14	.794	.00118060	-.0083482	.0107094
VAR00010	-1.070	14	.303	-.00355000	-.0106653	.0035653
VAR00011	1.273	14	.224	.01272067	-.0087142	.0341556
VAR00012	.327	14	.748	.00191940	-.0106517	.0144905
VAR00013	.169	14	.868	.00069933	-.0081594	.0095580
VAR00014	.735	14	.474	.00294793	-.0056519	.0115478
VAR00015	-.530	14	.604	-.00145113	-.0073185	.0044163
VAR00016	-.486	14	.635	-.00192627	-.0104344	.0065819
VAR00017	-.456	14	.655	-.00163693	-.0093362	.0060623
VAR00018	.753	14	.464	.00154507	-.0028586	.0059487
VAR00019	2.219	14	.043	.00607673	.0002040	.0119495
VAR00020	.658	14	.521	.00201187	-.0045465	.0085703
VAR00021	-.647	14	.528	-.00201587	-.0086977	.0046660

Scope for further research

Affect of bonus issue on Shareholders wealth is an evergreen topic of research. Existing study are useful for a limited time span, it loses its importance in a different economic cycle or with a different sample. Therefore in future researchers should conduct a study on a different market, with different time span or maybe with a wider scope or use primary data.

Further researchers should also investigate the percentage or magnitude of the impact of bonus issue on shareholders earning. Sectoral effect of bonus announcement should also be tested.

Conclusion

The study examines the impact of impact of Bonus share issue on share prices of 15 sample company listed in SENSEX index of Bombay stock exchange (BSE), India. For conducting the study we have calculated abnormal return using market model. Then a T-test was run, to test the hypothesis of the study.

The fluctuations in average abnormal return (AAR) of share prices of sample companies show that bonus announcements affect share prices of the company. The AAR on event day is the highest (0.013), but later it stabilizes because the market automatically adjusts the share prices over time. The CAAR is seen to be rising after the event day, this is because, issuing bonus shares is an act performed by companies for, correcting the share prices of the company, also bonus issue reflects the profitability of companies and improves the liquidity of shares in the market in long run.

References

- [1] Malhotra, M., Thenmozhi, M., & Arunkumar. G. (2007). Stock Market Reaction and Liquidity Changes Around Bonus Issue Announcement: Evidence from India. 10th Capital Market Conference, Indian Institute of Capital Markets Paper,(12), 1st ser. Retrieved from <http://ssrn.com/abstract=962830>
- [2] Prashant, P. (2013). Impact of Bonus Issues on Share Prices of the Companies. Thesis submitted as part of Bachelor of



Business Studies.

doi:10.13140/RG.2.1.3623.560

[3] Ayoma, D. O. (2013). The Impact of Bonus Issues on Share Prices of Companies quoted in Nairobi Stock Exchange. An University of Nairobi Project. Retrieved February 22, 2018, from [http://chss.uonbi.ac.ke/sites/default/files/chss/THESIS-FINAL\(1\).pdf](http://chss.uonbi.ac.ke/sites/default/files/chss/THESIS-FINAL(1).pdf)

[4] Khurana, R., & D.P., Warne. (2016). Market Reaction to Bonus Issue in India: An Empirical Study. International Journal of Innovations in Engineering and Technology (IJJET),7(4).

[5] Suresha, B., & Chandrashekara, B. (2016). Market Efficiency around Bonus, Stock Split and Rights Issue Announcement – Evidence from India. Journal of Economics and Sustainable Development,7(11).