



RIGHT ISSUE ANNOUNCEMENT AND STOCK MARKET REACTION IN BSE: TESTING THE MARKET CONDITION (WITH SPECIAL REFERENCE TO TATA MOTORS)

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Abstract

Efficiency Market Hypothesis (EMH) is being researched for long time. Different issues have been researched to investigate whether the market exhibits the characteristics of the efficient market. One of the most important criteria being used for testing the market efficiency is to know whether market allows opportunity for the investors to make profit. Since it is difficult to simultaneously test the market efficiency in absolute form, EMH is tested in weak form, semi-strong form and strong form. The objective of this study is to investigate whether stock prices adjust to right issue announcement information and to examine whether EMH applies to the Indian Stock Market. The study focuses on Tata Motors listed on the Bombay Stock Exchange and uses Right issue announcement as an event. The market adjusted model is used to measure the abnormal returns. The stock price behavior is examined through event study methodology. Student 't' test is applied for statistical significance. The result based on right issue announcement show that the investors can not earn abnormal returns.

Introduction

Right shares are those shares which are issued to existing shareholders. According to section 81 of Indian company act 1956, "Company can issue right shares only after the two years of creation of company or one year of first issue of shares whichever is earlier."

They must be in ratio of equity shares of existing shareholders. They will be issued with 15 days' notice. Existing shareholders can either accept or reject this offer. They must not be opened more than 60 days under SEBI guidelines. Provision of 81 will not apply on private company. This rule will not also apply on conversion of debentures into shares. Sometime, company can contract with underwriter who promises that if existing shareholders will not buy, he will take over all not right shares. Underwriters and sub-underwriters may be financial institutions, stock-brokers, major shareholders of the company or other related or unrelated parties.

Equity shares are made on the basis of market conditions. If the market perceives that a company will continue to have good earnings in future, the market price of the company's share will remain at the same level or will go up. On the other hand, if the market doubts about the future earnings capacity of the company, it may place lesser value on its share price. Of course any new investments made for expanding business bear results only after short gestation period, extending sometimes to a few years. The aspects would of course be considered by the market and the price gets normalized over a period of time. How quick the market adjusts the prices, factoring in the new information would reveal the efficiency of the market. Hence, this aspect was studied with regard to the company which made right issue during the study period. From the market point of view, it is essential to know how the market reacts to the right issue of Tata Motors.

In efficient market every investor has equal access to information and therefore, any information that is released to the market should be available to every investor. Based on the information content of the stock prices, Efficient Market Hypothesis (EMH) is investigated in weak, semi-strong and strong form. Lot of research has been taken place in the EMH at the western context. There is a dearth of studies in India. The available literature evidenced in the literature review shows that even though there are some investigating the market efficiency, there are no robust conclusions on the market efficiency. Therefore investigation of the market efficiency in the Indian context is an imperative need. This inspires us to take up the investigation of the market efficiency in the Indian context.

Objectives of the Study

1. To study whether BSE market reacts to the right issue of Tata Motors; and
2. To test the stock market reactions reflect the market efficiency.

Data and Research Methodology

Sources of Data

Information has been collected for the study on announcement of right issue of Tata Motors share listed in the BSE Sensex. Daily stock price of Tata Motors and BSE Sensex were collected from 30-12-2013 to 10-02-2015. The event of right issue announcement based on board meeting was identified held on 27-01-2015. Ten observations of closing market prices of shares before and after the event of buyback of shares have been considered. Returns were used for the purpose of time consistency. Official website of BSE India.com and money control website were the sources of data collection.

Tools of Analysis

The data collected for the study is analysed logically and meaningfully to arrive at meaningful conclusions. The statistical tools applied for data analysis is inferential statistic like 't' test. Based on objectives, the hypotheses formed for analysis are:

H₁: Null hypothesis states that there is no significant difference between pre-right issue and post-right issue in earning Abnormal Returns of Tata Motors share.

H₂: Null hypothesis states that there is no significant difference between pre-right issue and post-right issue in earning Cumulative Abnormal Returns of Tata Motors share.

Event Study Methodology

Right issues are made on a particular day. For the purpose of the analysis, event study methodology proposed by Henderson (1990) is applied. Event day is considered as the day in which a major event happened in a particular company. Under this methodology, an event window is to be framed which consists of certain number of days before the event day and the same number of days after the event day. Studying price movements during the event window would help in assessing the impact. To study the pricing efficiency, the change in the market value of the shares subsequent to right issue has to be assessed. Change in market prices may occur due to change in general economic conditions and industry related conditions, which are referred to as general market factors affecting the prices of all the shares in the market. Another set of factors is specific company related, which is due to change in the company-related information.

To assess the impact of the specific event identified (here right issue is the event) on the price of the shares, the changes in the price over the previous trading day is to be taken. Such change may be due to the particular event and general market-related factors. For the purpose of knowing the changes caused by the particular event, the changes caused by general market-related factors need to be therefore eliminated. The resulting change is referred to as market-adjusted return. In other words, market-adjusted return would reflect the change in the value of shares exclusively due to company-related factors.

The share price index of BSE Sensex is considered for the study to reflect the changes in the general market factors. To exclude market effect on returns, ARs were calculated by subtracting market returns from actual returns of respective stocks and are also called market-adjusted returns. For those days, ARs are calculated with the help of selected share prices and market index. For the purpose of studying the returns around right issue announcement in the Tata Motors listed in the BSE have been considered.

The standard event study procedure was adopted for the analysis.

- Event Study: The date of the meeting of the board of directors regarding the announcement of right issue.
- Event Window: The days surrounding the event study (10 days before and 10 days after the event).
- Estimation Period: 252 days prior to the first day of the event window (-262 to -1 days).

The returns for the securities have been taken as the core data for the analysis and are calculated as $R_t = (P_t - P_{t-1}) \times 100$, Where R_t indicates the return for the day t , P_t implies price in day t and P_{t-1} denotes the price on the previous trading day. The BSE Sensex index returns were taken as proxy for the market returns of 252 days during the estimation window and the respective share of Tata Motorare regressed against the proxy to determine the constant and the regression coefficient to calculate the expected return during the event window (Market Model). The difference between the actual return and the expected return during the event window is considered as abnormal returns (AR). The AR is calculated for each day during the event window across the security of Tata Motor for analyzing the ARs around the event. The Cumulative Abnormal Returns (CARs) were also calculated for analyzing the price adjustment process.

The following regression is used,

$$R_{jt} = \alpha_j + \beta_j R_{mt} + E_{jt}$$

R_{jt} indicates expected return of a security j on day t

α_j denotes intercept term for security j

β_j refers to systematic risk component of security j

R_{mt} expresses return on the market portfolio of NSE Nifty index on day t

E_{jt} implies White noise error term of security j on day t having zero mean and constant variance

AR is calculated as $R_{jt} - \alpha_j - \beta_j R_{mt}$

AR_{jt} denotes abnormal return of security j at day t

R_{jt} indicates actual return of security j at day t and

α_j refers to Expected return of security j on day t

Results and Discussion

It is observed that AR of 1.46% on the event day is not statistically significant at 5% level of significance, thereby denoting no abnormal return to signal a strong reaction. The days having significant AR were only 2 out of 21 days for the study.

The post-event window period had negative abnormal returns of 4.37% on day +8 and positive of 3.35% on day +10 of the entire window period thereby denoting impossibility of earning abnormal return. In the post event period first half of these days were positive and rest half are negative returns.

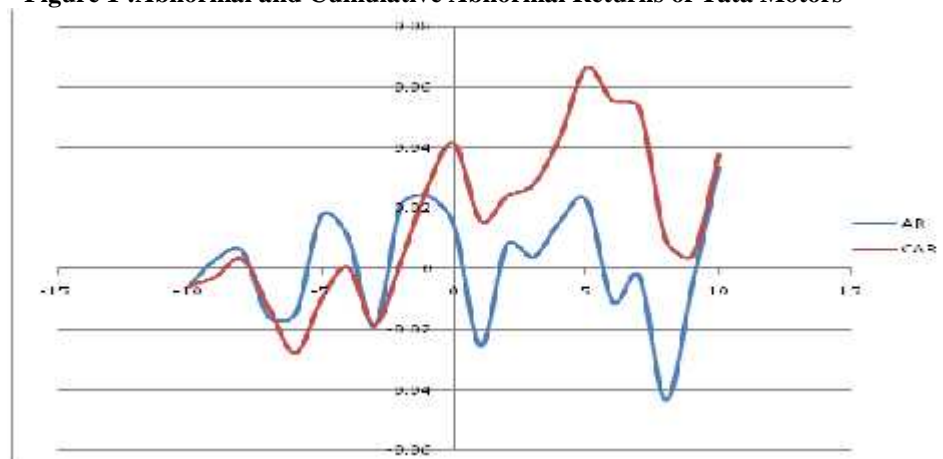
The pre-event window had none of the days having significant from day -1 to day - 10. During these period, only four days namely day -1, Day -4, day -5 and day -8 booked negative abnormal returns registering less than 2% Rest of them booked positive abnormal returns recording not more than 2.44%.

An observation of Cumulative abnormal Returns (CAR) showed that no single day had significant CAR and there was mixture of positive and negative returns in the pre-event window. On the event day, there was significant of positive CAR of 4.16%. In the post event period, CAR had only positive returns. There was significant on days +4, +5, +6, +7, and +10.

Table 1: Abnormal Returns and Cumulative Abnormal Returns of Tata Motors

Days	Expected Return	Actual Returns	AR	t- Stat	CAR	t- Stat
-10	0.0067	0.0010	-0.0057	-0.3914	-0.0057	-0.3914
-9	-0.0086	-0.0055	0.0032	0.2175	-0.0025	-0.1739
-8	-0.0043	0.0015	0.0059	0.4040	0.0033	0.2301
-7	0.0392	0.0233	-0.0159	-1.0977	-0.0126	-0.8676
-6	0.0023	-0.0129	-0.0152	-1.0482	-0.0278	-1.9158
-5	0.0073	0.0250	0.0178	1.2231	-0.0101	-0.6927
-4	0.0272	0.0378	0.0106	0.7289	0.0005	0.0361
-3	0.0053	-0.0138	-0.0190	-1.3093	-0.0185	-1.2731
-2	0.0059	0.0270	0.0211	1.4550	0.0026	0.1819
-1	0.0138	0.0381	0.0244	1.6777	0.0270	1.8596
0	0.0146	0.0293	0.0146	1.0078	0.0416	2.8673
1	-0.0007	-0.0264	-0.0257	-1.7688	0.0159	1.0985
2	0.0060	0.0142	0.0081	0.5607	0.0241	1.6592
3	-0.0249	-0.0210	0.0039	0.2656	0.0279	1.9248
4	-0.0032	0.0126	0.0157	1.0823	0.0437	3.0071
5	-0.0063	0.0165	0.0227	1.5660	0.0664	4.5732
6	-0.0060	-0.0169	-0.0109	-0.7510	0.0555	3.8222
7	-0.0017	-0.0039	-0.0022	-0.1493	0.0533	3.6729
8	-0.0069	-0.0505	-0.0437	-3.0068	0.0097	0.6661
9	-0.0253	-0.0306	-0.0054	-0.3699	0.0043	0.2962
10	0.0066	0.0401	0.0335	2.3056	0.0378	2.6017

Figure 1 :Abnormal and Cumulative Abnormal Returns of Tata Motors





Conclusion

The studies concerned with the reaction of stock markets to the release of new information were quite large both at international and national levels. The reaction of stock market to the right issue announcement has concentrated on various aspects. The foreign studies and studies in the Indian context, by and large, documented undervaluation signaling. This study documented gradual reaction of stock market to the right issue announcement of Tata power.

The study finds a statistically insignificant of AR of 1.46% and significance of CAR of 4.16% on the event day. There was a significance of negative Abnormal Returns of 4.37% on day +8 and positive of 3.35% on day +10 of the entire window period. In the post event period, CAR had only positive returns. There was significant on days +4, +5, +6, +7, and +10. It was found that the market signaled not strongly and insignificant. Hence, it does not inspire investors to earn abnormal returns.

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