Research Article

Impact Of Corporate Actions On Options Market

Nijumon K John,

Research Scholar, Research and Development Centre, Bharathiar University, Coimbatore, Tamil Nadu, Email: nijumon.k.john@christuniversity.in

Dr. Murugan.N,

Professor, Dept. of Management Studies, PSNA College of Engineering and

Technology, Dindigul, Tamil Nadu. Email: nmuruganpsna@gmail.com

Abstract

The economic development of a nation is a basis for the existence of a well-organized financial system, which is the indicator of the health of the economy. Financial system may be viewed as a structure consisting of financial institutions, financial instruments, financial services, and financial markets. Capital market is one of the components that build an economy. Capital market is influenced by corporate actions. This study focused on imapct of corporate actions on option contract price of the companies. The study collected options price of selected companies on the day of corporate actions. The results concluded that options price of Ambuja cements and Indian Oil Corporation impact the option premium settlement on the day of corporate actions significantly and the other variables – Bharat Electronics Limited, CRISIL, GAIL, India Bulls, India Nippon, KPR Mills, Marathon, and Tata Steel - do not impact the option premium settlement significantly.

1. Introduction

Share price fluctuations in the stock markets are unavoidable and these fluctuations are due to various reasons. One of the main reasons for the fluctuations in share price is the corporate actions of companies. These corporate actions can influence the shareholders. Shareholders can take the corporate actions in a positive way or negative way. On the basis of Corporate Actions, the investors make a judgment on the future performance of the companies. On the basis of this judgment, investors buy or sell securities. Distributions of dividend/interest, issue of rights/bonus shares, issue of fresh securities by issuers, splits, etc. made by the companies are called corporate actions. Corporate Actions are essential for all companies.

The starting point of corporate actions is the ownership of individual units of investments. The ownership of common stock gives the investor the right to elect board of directors, vote for corporate actions that require shareholder approval, share in corporate earnings in the form of dividends, to

participate additional shares being issued (Right issue), and to retrieve residual assets of the company at the time of liquidation. So, along with ownership of shares, there are benefits and rules to protect the rights attached to each share. The type and kind of corporate action would vary according to the way it is being defined. In general, the corporate action is described as "an event initiated by a company that affects its share".

Corporate events have numerous effects on the stock market and it is been observed that stock price movements is an area of research that attracted the attention of various researchers. But, there are limited research studies on assessing role of corporate actions on performance of options market in India. The present study intends to measure and analyze role of corporate actions on options market in India.

2. Review of Literature

Corporate actions such as mergers, acquisitions and spin-offs often necessitate a change to the amount or name of the security deliverable under the terms of the options contract. When such adjustments occur, the short call position must deliver the adjusted security at the strike price where the call was sold.

Many assertions are made about the impact of stock splits on stock prices. There are numerous studies which have estimated the effects of announcements related to stock split and other corporate events on the stock and market prices. In the present study, the impact of stock split is identified and the pertinent literatures related to the context are as follows:

Pooja (2013) analyzed the market reaction around stock split announcement using event study methodology by taking a sample of 27 companies that split their stock during the period January 1, 2008 to December 31, 2009. The result revealed that there is no announcement effect associated with stock splits in India. The study found improvement in trading volume of shares but daily turnover does not increase. Stock Splits were also found to improve the average number of trades and thus affected the liquidity of stocks in India.

Sultan Singh and Kumari Supna (2013) examined the efficiency of Indian stock market around stock splits announcement in India during the period 2006-07 to 2009-10. A database of 309 observations by complete enumeration method had been constructed, which reduced to 219 observations after implementing the criteria. The event study methodology had been used for calculating the abnormal returns. Percentile method and the paired t-test for means have been used to examine the impact of announcement on liquidity. The study found significant CAAR and mixed results regarding liquidity aspect. From percentile method it was found that number of transactions had increased only in few companies but the results of the paired t-test was contradictory to the results.

Deborah A. Ford, et al (2012) examined the influence of the number of financial analysts following a firm on market reaction around the announcement of stock splits. Results proved that the raw as well as abnormal returns at the announcement of stock splits were negatively related to the level of analyst coverage. The negative relation prevails even after controlling for size, book-to market, split factors and post-split target price. The findings of this article suggest that information asymmetry is an important factor influencing market reaction to stock split announcements.

Koustubh Kanti Ray (2011) stated that stock split and bonus issue has impact over market movements. These events are tested for abnormal returns and liquidity. –30 to +30 days investigation window were taken for all the events to test the abnormal returns and the change in liquidity. The results

suggested that the Indian market reacts to the stock split announcements but not to bonus issues, and the change in liquidity is significant for stock splits at 1% significance level.

Neetu Mehndiratta and Shuchi Gupta (2010) attempted to contribute positively to the understanding of the behavior of Indian share prices in relation to the dividend announcements. It is said that dividend announcements are usually considered as the positive signal to its shareholders and positive impact on share prices are also expected. A standard even study methodology is used to examine the price reactions on stock prices. This study found that average abnormal returns occur randomly.

3. Research Methods

The study is descriptive in nature and secondary data has been used. As the study has an objective of measuring and analyzing impact of corporate actions on options market, event study methodology has been used. The event study methodology is used to examine option market reaction to the events considered in this study using abnormal return criteria. In this study, database is divided in to two windows namely Estimation window and Event window.

Estimation window is T-34 to T-4

Event window is T-3 to T+3

Abnormal return has been calculated to determine price or wealth effect of the event considered in the study. Further, the abnormal model is most widely used in event studies and market model of abnormal return method is used in this study. Cumulative Abnormal Return (CAR) is calculated over windows T1 and T2.

$$CAR\ i, t\ = \Sigma T1\ AR\ i, t$$

An attempt is made in this study to see whether corporate actions influence the performance of options market in India. For this study, the performance of options market in India is measured by premium of settlement on monthly basis. Further, 10 companies listed in the BSE were randomly selected and considered for the study and closing monthly share prices of those companies were considered for the study. Five corporate actions were identified. Corporate actions considered for this study include rights issue, dividend, buy back of shares, stock split, and bonus issue.

In this study, total of 10 companies listed under BSE index have been selected randomly. Monthly closing price values of 10 companies are collected for the period from April 2008 to
April 2018. The selected companies are Ambuja Cements, Bharat Electronics Limited, CRISIL, GAIL, India Bulls, India Nippon, Indian Oil Corporation, KPR Mills, Marathon, and Tata Steel.

4. Results and Discussion

The unit root test was performed for all series of the data which are under consideration of this study in order to avoid spurious regression of non-stationary series at the level by employing Augmented Dickey Fuller (ADF) test statistic. The following table displays the
results of the unit root test.

Table 1: Unit Root Test – ADF Method

Particulars	At level		1st Difference	
	Adj. "t" statistics	P value	Adj. "t" statistics	P value
Ambuja Cements	-3.876687	0.016	-	-
BEL	-	-	-10.46466	0.000
CRISIL	-	-	-10.23676	0.000
GAIL	-	-	-1.092533	0.000
India Nippon	-	-	-6.389714	0.000
India Bulls	-	-	-6.232384	0.000
Indian oil Corporation	-	-	-3.512133	0.042
KPR Mills	-	-	-10.06122	0.000
Marathon	-	-	-8.388382	0.000
Tata Steels	-12.45200	0.000	-	-
Premium Settlement	-8.457967	0.000	-	-

Table 1 provides information about unit root test results. The data sets considered for the study namely Ambuja cements, Tata steels and premium settlements of options market are at stationary at the level. The data sets considered for the study namely BEL, CRISIL, India Nippon, Indiabulls, Indian Oil Corporation, Marathon, Gail, and KPR Mills are at stationary at level 1.

Table 2: Ordinary Least Square Regression

Included observations: 119				
Variable	**Coefficient**	**Std. Error**	**t- statistic**	**Probability**
Ambuja Cements	3.95769	1.04297	3.79462	0.0002
BEL	-0.0465	0.03939	-1.1801	0.2405
CRISIL	0.02782	0.02311	1.20386	0.2312
GAIL	0.4051	0.59171	0.68463	0.495
India Nippon	0.18202	0.28932	0.62911	0.5306
India Bulls	0.11449	1.03613	0.11049	0.9122
Indian oil Corporation	0.96169	0.24365	3.94705	0.0001
KPR Mills	-0.2883	0.18096	-1.5931	0.114
Marathon	0.02442	0.55715	0.04383	0.9651
Tata Steels	-0.0818	0.11384	-0.7186	0.4739
C	9.842747	1.542469	6.381164	0.0000
R-squared	0.315688	Mean dependent var		1149.07
Adjusted R-squared	0.259186	S.D. dependent var		288.994
S.E. of regression	248.7391	Akaike info criterion		13.951
Sum squared residual	6743953	Schwarz criterion		14.1845
Log likelihood	-820.083	Hannan-Quinn criter.		14.0458
F-statistic	305.0802	Durbin-Watson Statistic		1.958005
Probability (F-statistic)	0.00000			

Dependent variable: Premium settlement

Table 2 exhibits the results of Ordinary Least Square (OLS) Regression for the equation formulated for this study. In the OLS regression, premium settlement has been considered as a dependent variable and closing price of options contract of Ambuja cements, Bharat Electronics Limited, CRISIL, GAIL, India Bulls, India Nippon, Indian Oil Corporation, KPR Mills, Marathon, and Tata Steel are the regressors. The results indicate that among the independent variables, Ambuja cements (p-value 0.0002) and Indian Oil Corporation (p-value 0.0001) are the variables which impact the option premium settlement on the day of corporate actions significantly and the other variables – Bharat Electronics Limited, CRISIL, GAIL, India Bulls, India Nippon, KPR Mills, Marathon, and Tata Steel - do not impact the option premium settlement at 5% level of significance. The R squared value of the model is 0.315688 which means that the independent variables of the study explain the variance in the dependent variable to the extent of 31.56 percent. As p-value of F statistic is 0.00, the prediction model under the consideration is significant at the overall level. All three criterion scores- Akaike Info Criterion (13.951), Schwarz Criterion (14.1845), and Hannan-Quinn Criterion (14.0458)– are smaller and closer to each other. Dubin-

Watson statistic ensures (1.958005) that there is no serial correlation problem in the model. From the above results, it can be concluded that the prediction model considered for the study does not have any serial correlation problem and the model is significant at the overall level. Further, it is concluded that corporate actions of Ambuja Cements, and Indian Oil Corporation impact the option premium settlement significantly.

5. Conclucion

Corporate actions have been taken place in day to day in the corporate field. These actions have their own impact of share price movements of the respective corporates. There are numerous studies that focused on imapct of corporate actions on share price of the companies. But, the studies didn't focus on imapct of corporate actions on option contract price of the companies. This study intended to fill this research gap. The study collected options price of selected companies on the day of corporate actions. The results concluded that options price of Ambuja cements and Indian Oil Corporation impact the option premium settlement on the day of corporate actions significantly and the other variables – Bharat Electronics Limited, CRISIL, GAIL, India Bulls, India Nippon, KPR Mills, Marathon, and Tata Steel - do not impact the option premium settlement significantly.

References

1. Pooja, Stock split announcement and liquidity effect: Evidence from India. *XIMB Journal*, 10 (1), 2013,135 - 148.

2. Sultan Singh & Kumari Supna, Efficiency of Indian stock market: Evidences based on stock splits. *International Journal of Research in Computer Application and Management*, 3 (7), 2013, 12 - 21.

3. Deborah A. Ford, Hoang H. Nguyen, & Van T. Nguyen, Analyst coverage and market reaction around stock split announcement. *Applied Financial Economics*, 22 (2), 2012, 135 - 145.

4. Anirban Ghatak, Capital market reaction around the stock splits and bonus issues: Evidence from some Indian IT stocks. *Research Journal of Social Science and management*, 1 (5), 2011, 191 - 213.

5. Koustubh Kanti Ray, Market reaction to bonus issue and stock splits in India: An empirical study. *The IUP Journal of Applied Finance*, 17 (1), 2011, 54 - 69.

6. Neethu Mehndiratta & Shuchi Gupta, Impact of dividend announcement on stock prices.*International Journal of Information Technology and Knowledge Management*, 2 (2), 2010, 405 - 410.

7. Pantisa Pavabutr & Kulpatra Sirodom, The impact of stock splits on price and liquidity on the stock exchange of Thailand. *International Research Journal of Finance and Economics*, 20, 2008, 123 - 131.

8. A. Gupta & O. P. Gupta, Market reaction to stock market splits: Evidence from India. *The IUP Journal of Applied Finance*, 13 (1), 2007, 5 - 22.

9. E.F. Fama, L. Fisher, M. Jensen & R. Roll, The adjustments of stock prices to new information. *International Economic Review*, 10 (1), 1969, 1 - 21.

10. Sindhu .K.P., Dr. Kalidas .M.G. and Anil Chandran. S, "A Study on Factors Influencing

    Investor Sentiment in Indian Stock Market", International Journal of Management (IJM), Volume 5, Issue 1, 2014, pp. 7 - 13, ISSN Print: 0976-6502, ISSN Online: 0976-6510.

11.   Govind Chandra Patra and Dr. Shakti Ranjan Mohapatra, "A Study on Volatility of

Indian Stocks and Index – Pre and Post Derivatives Era", International Journal of Management (IJM), Volume 1, Issue 2, 2010, pp. 106 - 128, ISSN Print: 0976-6502, ISSN Online: 0976-6510.

12.   *http://www.nseindia.com/*.