DOI:10.26524/jms.2013.43

Impact of merger & acquisition announcements on share price – a case of selected indian listed companies

Dr.S.Poornima[1] and V.Chitra[2]
[1]*Associate Professor, P.S.G.R.Krishnammal College for Women, Coimbatore*
[2]*Assistant Professor, Karpagam Institute of Technology, Coimbatore*

ABSTRACT: *This study examines the impact of merger and acquisition announcements on share price towards acquiring companies during the year 2012 listed on National Stock Exchange, India. The investigation has been carried out using traditional event study methodology. The present study is an empirical analysis to examine the stock price reaction to information content of merger and acquisition announcements with a view of finding whether Indian stock market is semi-strong efficient or not. Impact has been analyzed between ±7 days from the date of merger and acquisition announcement. The result divulges that around the announcement period the returns for the acquiring companies are higher. In the post merger announcement period there is an upward trend in the cumulative returns implying a positive result of the merger.*

Keywords: *Mergers & Acquisitions, Event study, Announcement date, Abnormal return.*

1. Introduction

In today's challenging global business environment and demanding economy, companies must seek unconventional techniques to remain competitive. Managers are constantly devising means to create corporate value in order to translate this to shareholders through higher dividend payments or higher share prices. In recent years, mergers and acquisitions have become an increasingly important method for companies to survive in the competitive global business arena. The law of the jungle is hitting the business environment, where only the strongest corporations stay in business. That is one of the reasons why the number of mergers and acquisitions (hereinafter ―M&A‖) have augmented.

The announcement of a Merger or an Acquisition is considered as an event in this study. The objectives of this paper are: (a) to investigate whether insider information or publicly available information drives the observed price pattern of the acquirer companies using event studies, and (b) to examine the effect of merger and acquisition announcement on acquirer companies‘ stock prices. Comparisons of the price run ups prior to the announcement of the merger and post announcement price pattern has also been studied. Further we also analyze the merged entity‘s stock price post merger, by examining the daily closing price of all the stocks prior and post merger announcement. The rest of the paper is divided into reviews the literature related to event studies, especially relating to merger. The data description and methodology are presented in next section. The empirical findings are given in next section and the last section concludes.

2. Review of Literature

Numerous studies estimate the effects of announcements related to Bonus issues, dividend declaration, mergers & acquisition on the stock prices of the firms involved in the process. In the present study the impact of merger announcement is analyzed and the pertinent literature in this context is as follows:

Ball, Brown & Finn (1977) examined stock price reaction around the announcement of ‗stock capitalization changes' (bonus, stock issues, stock splits & right issues) in Australia for the period between 1960 &1969 using monthly data. They found 20.2% abnormal return for 13 months up to & including the month of bonus issue announcement.

Foster & Vickrey (1978) examined the signaling hypothesis of the information content of 82 stock dividend announcements using data of daily returns. They found significant positive abnormal returns around the announcement dates.

Lakonishok & Lev (1987) studied the trading volume changes after the announcement of stock dividend. They researched the characteristics of the companies with stock dividends & without stock dividends. They concluded that there is no significant increase in trading volume as a result of stock dividends & no significant difference in the prices of two groups.

Lijleblom (1989) researched the signaling hypothesis by examining stock price reaction to stock dividends for firms that also released simultaneous contaminating announcements. Findings indicated significantly greater positive price reactions for the stock dividend- paying group than for the control group, which was interpreted as support for the signaling hypothesis in the presence of contaminating announcements.

Spuma M. Rao (1997) studied the effect of announcement of Bribery, scandals, white collar crime & illegal payment on returns to shareholders. The analysis shows that the actual stock prices for those companies were lower than the expected market adjusted returns after the announcement.

Ahmed Sohrabian & Jeanni Kusaudi (1999) investigated the impact of insurance mergers on shareholders returns. The results reveal that acquiring firms do not post any positive significant abnormal returns during the announcement period while the target firms get positive significant abnormal returns.

Balachandran Bala Singham (2001) examines the share price reaction to announcement of bonus share issues of Australian companies. They analyzed that the magnititude of price reaction to bonus issue announcements is statistically related to the size of bonus issues and pre-announcement effect.

Mulugetta Abraham *et al* (2002) examined the impact of standard and Poor's ranking changes on stock prices. The study used the traditional market model and found statistically significant abnormal returns on the announcement & surrounding dates.

Malhotra Madhuri *et al* (2003) provided evidence to support signaling hypotheses by examining the relationship between bonus issue announcement and stock price reaction. The study concluded that there is a negative reaction after the bonus issue announcement conveying that the market under reacts after the announcement.

Frank T. Delaney & Sam C. Wamuziri (2004) inferred the impact of mergers and acquisitions on shareholders wealth. The overall results from their study indicate that related construction mergers create wealth for shareholders of the target firm.

Xiaoww Huang (2004) analyzed the market reactions to financial announcement and provided the evidence that announcement related to earnings can lead to excess returns.

Delaney T. Frank and Wamuziric C. Sans (2004) analyzed wealth effects from the construction mergers. The study concluded that wealth effects from construction mergers are positive.

Mishra A K (2005) examined the stock price reaction to information content of bonus issue. The results indicated significant positive abnormal returns for a five-day period prior to bonus announcement. The results indicate stronger evidence of semi- strong market efficiency of the Indian stock market.

Chander Ramesh, Sharma Renuka, Mehta Kiran (2007) studied the informational content of dividend announcement. The results showed average abnormal returns for capital asset pricing model around the dividend announcement.

Vergos, Christopoulous & Mylonakis (2008) investigated the effects of political, economic, investment & analysts report announcement on share prices of Hellenic telecommunication organization. The study found that stock prices do not react to public announcement & continue to increase or decrease until 10 days after the event.

Anup Agrawal Jeffrey F. Jaffe (1999), in their article ―The Post - merger Performance Puzzle‖, examines the literature on long- run abnormal returns following mergers. The paper also examines explanations for any findings of underperformance following mergers. We conclude that the evidence does not support the conjecture that underperformance is specifically due to a slow adjustment to merger news. We convincingly reject the EPS myopia hypothesis, i.e. the hypothesis that the market initially overvalues acquirers if the acquisition increases EPS, ultimately leading to long - run under - performance.

3. METHODOLOGY

This section is divided into two parts: Data sources & data design. The data sources section explains the criteria applied in this study & data collection process. The data design section, on the other hand, describes the procedure of event study conducted in this research. The research hypotheses examined in this study are tested by applying an event study methodology described by Stephen J. Brown & Jerold B. Warner (1985).

A) DATA SOURCES:

The present study is descriptive and empirical in nature and it is based on secondary data. To obtain sample for the study, all firms that were either an acquirer or a target of the merger announcements during the period of January 2012- December 2012 are identified. In order to be included in the study, the acquiring company should be listed National Stock Exchange (NSE) during the period. A total of 6 companies met the above criteria and hence form the final sample in the study. The data on stock prices of the sample for the entire period of study are extracted from cmie-prowess, www.captialine.com and www.nseindia.com.

The selected companies are Binani Industries Ltd, Piramal Healthcare Ltd, Infosys Ltd, Rain Commodities Ltd, Cipla Ltd and Oil & Natural Gas Corp Ltd has been selected and data obtained from **Prowess**. The data used for the study are for the period from January 2012- December 2012. Closing Market Price of shares before seven days of date of merger announcement and after seven days of date of merger announcement has been taken for analysis. The announcement date is identified as the day when the target or acquiring company first publishes disclosed information about the merger. This was specified as day zero in the event time of our study. There were cases where some public announcements were also made after the market closed and some were made before. Importantly, in the latter case, market reaction took place a day before the merger news appeared in the national dailies. Hence, in this case we might incorrectly interpret the market reaction as a day before the news appeared in the national dailies as existence of ―abnormal return‖ based on trading on non-public information. Thus, in order to eliminate this bias the announcement date is defined as a range covering the date when the news appeared in the national dailies and the immediate preceding day, if it was a trading day. In such case, stock price for day ‗0', i.e. the announcement date is calculated using a simple average of prices on the day when the news appeared in the national dailies and on the day immediately preceding it, if it was a trading day.

Summary Statistics, difference Paired t-test has been used for measuring the change in share price with merger announcement.

The information about the company's merger announcements, their announcement dates are obtained from Capitaline database. The individual firm's security return & market return were also gathered from Capitaline Database. Values of the companies were also obtained from Capitaline Database.

B) DATA DESIGN:

To examine the market response to merger announcement standard event study methodology is used. The ordinary least square (OLS) market model is applied for estimation of abnormal return on a specific stock. The event study procedures in this study are gathered from previous researches by Bowman (1983) and Brown & Warner (1980 & 1985).To construct an event study the event, event date, event window, estimation window & estimation model should be determined. The event is what the researcher would like to study. The relationship of the said event is studied with the share prices. The events defined for this study are the merger announcements. The event date is the date of announcement of merger announcement by the sample firm. It can be expressed as to. The event window comprises some period before and after the event day. The event window in this study is days before and 7 days after merger announcement. It can be expressed as -7 to +7. The estimation period is the period prior to the occurrence of the event. Generally estimation period & event windows are chosen in such a way so that they don't overlap. The estimation period for this study is 7 days before to 7 days after the event date.

It can be expressed as t = -7 to t = -7. The selected examination model for this study is standard market model. The model assumes that there is a linear relationship between the return of the security and the return of market portfolio. For the purpose of studying the impact of right issues on share prices abnormal returns are computed. Abnormal returns are obtained by finding the difference between actual returns of the security j on day t & expected returns of security j on day t.

For the purpose of studying the impact of right issues on share prices abnormal returns are computed. Abnormal returns are obtained by finding the difference between actual returns of the security j on day t & expected returns of security j on day t. The following is the formula for OLS market model to compute abnormal returns:-

$$ARjt = Rjt - ERjt$$

Where

ARjt = Abnormal return of security j on day t

Rjt = Actual return on security j on day t

ERjt = Expected return on security j on day t

Expected return on security j in period t is computed as follows:-

ERjt = a*j* + b*j* Rmt

Where

a*j* = Risk free rate of return i.e. Treasury bill rate of RBI

b*j* = Relative riskiness of the security to market index i.e. BSE Sensex

Rmt = The rate of return on market index on the day t

4. LIMITATIONS OF THE STUDY

- ✓ The present study is confined to only one event announcement.
- ✓ This study is restricted with only few companies.
- ✓ All the limitations of the tools used are applicable to this study.

5. EMPIRICAL RESULTS

This section describes various analyses carried out to predict the impact of merger announcements on share prices during the study period.

The share price reaction has been studied from the base data considered for this study. The base data consists of closing price of the selected sample. Similarly, -7 days, event day and +7 days share price were captured for every year and for all the companies.

Table 1: List of Mergers during the year 2012

S.No.	*Acquiring Company*	*Target Company*	*Target Industry*	*Merger Announcement date*	*Share Price*
1	*Binani Industries Ltd, India*	*3B The Fiberglass Company, Belgium*	*Textile and Apparel Products*	*2nd Feb 2012*	*116.2*
2	*Piramal Healthcare Ltd, India*	*Decision Resources Group LLC, United States*	*Business Services*	*16th May 2012*	*427.25*
3	*Infosys Ltd, India*	*Lodestone Management Consultants AG, Switzerland*	*Business Services*	*10th Sep 2012*	*2511*
4	*Rain Commodities Ltd, India*	*Rutgers Belgium NV, Belgium*	*Chemicals and Allied Products*	*22nd Oct 2012*	*41.15*
5	*Cipla Ltd, India*	*Cipla Medpro South Africa Ltd*	*Drugs*	*21st Nov 2012*	*389.4*
6	*Oil & Natural Gas Corp Ltd, India*	*NCOC BV, Kazakhstan*	*Oil and Gas; Petroleum Refining*	*26th Nov 2012*	*241.92*

The above table shows the date on which, the merger was announced and the share price details on the date of announcement of the acquiring companies. From these dates, daily adjusted prices for sample stocks for 7 days before and 7 days after the event date were taken and the event window were determined as t = −7 to t = +7 relative to the event day t =0 (date of announcement of merger and acquisitions). The study aim is to find whether the events have any signaling impact on the share prices or not.

Table 2 Distribution of the Closing prices

Acquiring Companies and their Industries			***Average Closing Price***	***Skewness***	***Kurtosis***
Textile and Apparel products	*Binani Industries Ltd, India*	*Post*	*123.4286*	*1.712867*	*-0.55901*
		Pre	*109.3429*	*-0.40163*	*0.432809*
Business Services	*Piramal Healthcare Ltd, India*	*Post*	*420.0214*	*0.543116*	*0.156411*
		Pre	*439.1929*	*-1.30699*	*1.084904*
Business Services	*Infosys Ltd, India*	*Post*	*2573.179*	*0.425023*	*1.287926*
		Pre	*2391.407*	*-1.1867*	*1.683302*
Chemicals and Allied Products	*Rain Commodities Ltd, India*	*Post*	*39.15714*	*-0.49743*	*-0.39598*
		Pre	*43.1*	*-0.90377*	*1.534301*
Drugs	*Cipla Ltd, India*	*Post*	*393.05*	*1.064662*	*0.171788*
		Pre	*386.7214*	*-0.34689*	*-2.35232*
Oil and Gas; Petroleum Refining	*Oil & Natural Gas Corp Ltd, India*	*Post*	*259.05*	*0.32002*	*2.24478*
		Pre	*253.1929*	*1.53959*	*2.672751*

From the above table, it can be observed that Binani Industries Ltd had shown a positive skewness value of 1.712867 during the post-merger announcement period. Similarly, Piramal Healthcare Ltd, Infosys Ltd, Cipla Ltd and Oil & Natural Gas Corp Ltd had shown a positive skewness value of 0.543116, 0.42502, 1.0646623 and 0.32002 during the post-merger announcement period. This shows that there is a positive impact on share prices during the post-merger announcement period for the above said companies. But, Rain Commodities Ltd had shown negative impact on share price during both pre- and post-merger announcement period. Oil & Natural Gas Corp Ltd had shown positive impact on share prices during both pre- and post-merger announcement period.

Table 3 Comparison of the closing prices of the Pre-Merger Announcements and Post-Merger Announcement

Companies	*Pre-Merger Announcements*	*Post-Merger Announcements*	*Variance*
Binani Industries Ltd, India	*109.3429*	*123.4286*	*111.1096*
Piramal Healthcare Ltd, India	*439.1929*	*420.0214*	*124.7673*
Infosys Ltd, India	*2391.407*	*2573.179*	*106.3439*
Rain Commodities Ltd, India	*43.1*	*39.15714*	*4.4000659*
Cipla Ltd, India	*386.7214*	*393.05*	*95.92286*
Oil & Natural Gas Corp Ltd, India	*253.1929*	*259.05*	*39.34412*

The above table shows that there are positive variances found in all acquiring companies during the study period. Binani Industries had shown a positive variance of 111.1096, Piramal Healthcare Ltd had shown a positive variance of 124.7673, Infosys Ltd had shown a positive variance of 106.3439, Rain Commodities Ltd had shown a positive variance of 4.4000659, Cipla Ltd had shown a positive variance of 95.92286 and Oil & Natural Gas Corp Ltd had shown a positive variance of 39.34412.

Table 4: AAR, CAAR and t-statistic for Acquiring companies

Companies	*Pre-Merger Announcements*			*Post-Merger Announcements*		
	AAR	*CAAR*	*t-stat*	*AAR*	*CAAR*	*t-stat*
Binani Industries Ltd, India	*0.1032*	*-0.0192*	*0.1376*	*1.2880*	*0.1684*	*0.4051*
Piramal Healthcare Ltd, India	*-0.1618*	*-0.0607*	*0.0926*	*-0.3384*	*-0.0340*	*0.5198*
Infosys Ltd, India	*0.0322*	*0.0289*	*0.0548*	*0.0321*	*0.0543*	*0.1232*
Rain Commodities Ltd, India	*-0.9074*	*-0.2790*	*0.0888*	*-0.0045*	*0.0394*	*0.0915*
Cipla Ltd, India	*0.2017*	*-0.0311*	*0.3536*	*0.2636*	*0.0828*	*0.1345*
Oil & Natural Gas Corp Ltd, India	*0.0351*	*-0.0062*	*0.0604*	*-0.1162*	*-0.0212*	*0.0760*

It is observed from the above table that average abnormal return and t-statistics of share price have been calculated for above companies. For the Binani Industries Ltd, the average abnormal return for pre-merger and post-merger announcements shows positive performance on share price of 0.1032 and 1.2880. T-statistics was performed to measure the significant difference, during the study period, pre-merger announcement shows a value of 0.1376 and post-merger announcement had shown a value of 0.405. The Company found significant difference in both pre-merger announcement and post-merger announcement. It is tested at 5% level of significant.

Similarly, abnormal return has been computed for Piramal Healthcare Ltd it shows that pre-merger and post-merger announcements shows a negative performance of share price of -0.1618 and -0.3384. T-statistics was performed to measure the significant difference, during the study period, pre-merger announcement shows a value of 0.0926 and post-merger announcement had shown a value of 0.5198. The Company found significant difference in both pre-merger announcement and post-merger announcement. It is tested at 5% level of significant.

Similarly, abnormal return has been computed for Infosys Ltd it shows that pre-merger and post-merger announcements shows a positive performance on share price of

0.0322 and 0.0321. T-statistics was performed to measure the significant difference, during the study period, pre-merger announcement shows a value of 0.0548 and post-merger announcement had shown a value of 0.1232. The Company found significant difference in both pre-merger announcement and post-merger announcement. It is tested at 5% level of significant.

Similarly, abnormal return has been computed for Rain Commodities Ltd it shows that pre-merger and post-merger announcements shows a negative performance on share price of -0.9074 and -0.0045. T-statistics was performed to measure the significant difference, during the study period, pre-merger announcement shows a value of 0.0888 and post-merger announcement had shown a value of 0.0915. The Company found significant difference in both pre-merger announcement and post-merger announcement. It is tested at 5% level of significant.

Similarly, abnormal return has been computed for Cipla Ltd it shows that pre-merger and post-merger announcements shows a positive performance of share price of 0.2017 and 0.2636. T-statistics was performed to measure the significant difference, during the study period, pre-merger announcement shows a value of 0.3536 and post-merger announcement had shown a value of 0.1345. The Company found significant difference in both pre-merger announcement and post-merger announcement. It is tested at 5% level of significant.

Similarly, abnormal return has been computed for Oil & Natural Gas Corp Ltd it shows that pre-merger and post-merger announcements shows a positive performance of share price of 0.0351 and -0.1162. T-statistics was performed to measure the significant difference, during the study period, pre-merger announcement shows a value of 0.0604 and post-merger announcement had shown a value of 0.0760. The Company found significant difference in both pre-merger announcement and post-merger announcement. It is tested at 5% level of significant.

6. CONCLUSION

This paper examines the announcement effects of merger and acquisition announceemnt on the selected scrip‘s during the period January 2012 to December 2012. An event study is conducted using a ±*7 days* event window. There is a significant impact with respect to Merger announcement on the acquiring company. Merger announcement have given impact during post-merger announcement period compared with pre-merger announcement period.

7. REFERENCES

[1] http://www.nseindia.com/qresann/compres.asp
[2] White R.W.and Lusztig P.A., ―The Price Effects of Right Offering: Journal of Financial and Quantitative Analysis‖(1980) .
[3] Kalle Rinne and Matti J. Suominen, ―A Behavioral Theory of Public and Rights Offerings‖:Empirical Evidence from Europe (Feb28,2007), http://ssrn.com/abstract=966156
[4] Raste, Deepak R.Chari and Vijaylaxmi, ―Regulatory impact: a case study of right issues in emerging capital market of India‖ (17 Jan, 2010)
[5] Lukose jiji PJ and Rao S Narayan , ―Operating Performance of Firms Issuing Equity through Right offer‖, VIKALPA • VOLUME 28 • NO 4 • OCTOBER - DECEMBER 2003
[6] http:// www.money.sulekha.com/bse-right-share-announcement
[7] http://www.freemba.in/articlesread.php?artcode=454&substcode=27&stcode=10 . http://www.svtuition.org/2010/10/right-shares.html