Impact of Acquisition Announcement on Shareholders' Wealth- A Case Study of Lupin Ltd

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Abstract: There has been a significant growth in terms of mergers and acquisitions in Indian Pharmaceutical Industry. The firms in the industry have started adopting mergers and acquisitions as a tool for improving their financial and operating performances. With this background, the present study explores the reaction of the investors on the announcement of acquisition of GAVIS Pharmaceutical by Lupin Ltd. The study used an event study approach which examines the impact of acquisition announcement on the shareholders' wealth of acquiring firm. Lupin ltd had announced the acquisition of GAVIS Pharmaceuticals on 23rd July, 2015. The impact of the acquisition has analyzed with the calculation of abnormal returns (AR), cumulative average abnormal return (CAAR) earned by the shareholders of acquiring firm. The results of the study showed a significant negative return generated by the acquisition which indicates that the acquisition has failed to create the wealth to the shareholders of acquiring firm (Beena-2004).

Key Words: Acquisition, Event Study, Abnormal Return, CAAR, t-test

Introduction

A firm can attain the growth through internal expansion or external expansion. Internal expansion means producing new product, adopting innovative strategies of marketing, using latest technology, reengineering of business processes and many more. A firm can go for external expansion through mergers and acquisitions. It is one of the important tools of corporate restructuring for a firm to achieve the fastest growth in the market. The tendency of growth towards mergers and acquisitions has been mainly driven by the intense competition across the world. The firms generally choose the mergers and acquisitions to reduce cost, improve the size of the business, benefit from economies of scale and scope and improve the wealth of the shareholders. There has been significant increase in the mergers and acquisitions activities in India post deregulation of policies measures and competition policies (Nagano & Yuan-2013, Banerjee et al- 2014).

Many researchers agree that the mergers and acquisitions are very important decision of the firms in their business (Mitchell & Stafford-2000) which significantly affect the financial performance of acquiring firms and also state that these decisions are taken with the fundamental purpose of improving the wealth of the shareholders. The activity of mergers and acquisitions are benefited to the shareholders when the combined value of the firm post-merger is higher than the value of individual firms (Pilloff & Santomero-1996).

Event Study

Event study is an important statistical tool for investigating the relationship between stock prices and various economic events (Dyckman et al-1984). The event study is used to measure the impact of announcement of mergers and acquisitions on the stock prices of the firm and to test whether the event has resulted in the creation of wealth (Kothari & Warner, 2006). The study of Fama et al. (1969) provides important evidence on the reaction of stock prices for specific information. There are literatures available for studies adopting both long run window and short run window. The benefit of using the short run approach is that model is free from the effect of other events on abnormal returns.

Literature Review

This study mainly focuses on the impact of announcement of mergers and acquisitions on the wealth of the shareholders. According to the efficient capital markets which assume that the market reflects all the available information, research on mergers and acquisitions using event study methodology shows the announcement of mergers and acquisitions had significant wealth loss of the shareholders in both the short run and long run. (Jaffe Mandelker-1992).

Majority of the event studies have been conducted using short run window and some studies have reported significant positive returns to the shareholders of acquiring firms on the announcement of mergers and acquisitions (Asquith-1983) and some studies have reported significant negative losses during the window period (Ng and Hsu and Jang-2007). The results of the study (Rani, Yadav, & Jain-2011) revealed the significant gain of wealth in the short run of firms in Indian Pharmaceutical Industry. Kashiramka & Rao-2013 has analyzed the effect of announcement of mergers and acquisitions on the wealth of the shareholders and found the significant wealth gain for acquiring firm and target firm for acquisitions and significant wealth loss in case of mergers during the study. Reddy et al. (2019) studied the announcement effect of mergers and acquisitions of the creation of value and found that the acquisitions announcement fails to create value for the acquiring firms in China and India.

Methodology

a) Sample selection and period of study

This study is based on the case study of acquisition of GAVIS Pharmaceuticals Ltd of USA by the Lupin Ltd India. To achieve the objective of the study, the data was collected from the website of NSE India for both the stock and index. The date of announcement is taken as per the public announcement of the acquiring (Lupin Ltd) firm. This date is considered as zero in the analysis of the study. The data of daily stock price of Lupin and Nifty-50 (index) is collected for a period of 28 July, 2014 to 20 Oct, 2015. The study analyzed the impact of acquisition announcement on the shareholders' wealth of acquiring firm only due to the unavailability of the full-fledged data of target firm.

b) Event Day, Event Window, and Estimation Period

This study considered first date of the public announcement of the acquisition as event date (t=0). The benefit of the acquisition to the acquiring firm will reflect on the stock price when the initiation for acquisition begins.

Estimation Window (-180 to -60): The estimation window is used for the analysis of behavior of the stock's return with respect to the market return.

Event Window (-60 to +60): The event window starts few days before the announcement and after the announcement. The length of the window can be one, two, five, ten, twenty, thirty, fifty, sixty days (MacKinlay-1997). By following this procedure information leakage can be investigated. These windows are adopted by many studies such as Chan-Lau-2001, Anand & Singh-2008).

The event window period in this study is considered as -60 days before the announcement of the acquisition and +60 days after the announcement of the acquisition. A period of 180 days before -60 days is considered for the study.

Estimation of Cumulative Average Abnormal Returns (CAAR) using Market Model

The market model is the most commonly used model in the event study analysis which tests the statistical relationship between the stock's return and the market return. In this model the price of the stock is regressed with the market index. Using the information from the model, the abnormal return and normal returns of the stock are calculated. The normal and abnormal returns are computed by taking the market index as Nifty-50 and industry index as Nifty Pharma.

Single Factor Model: Single: It is most widely used model for the analysis of event study as shown by the literature and it is considered as the appropriate model than the other models available for the analysis.

To compute the normal returns of the stock using single factor model for stock i at time t is as follows:

$$E(R_{it}) = \alpha_{i+} \beta_i R_{mt} + \varepsilon_{it}$$

where,

$E(R_{it})$ = Expected return of firm 'i' at 't' time, α_i = alpha coefficient of security I, β_i = OLS coefficient of Nifty (Market), R_{mt} = Market Return, ε_{it} = error term

Two Factor Model: It is another used model for the analysis of event study as shown by the literature and it considers two factors i.e., Market Return and Industry Returns as compared to the other models.

To compute the normal returns of the stock using two factor model for stock i at time t is as follows:

$$E(R_{it}) = \alpha_{i+} \beta_1 R_{mt} + \beta_2 R_{it} + \varepsilon_{it}$$

where,

$E(R_{it})$ = Expected return of firm 'i' at 't' time, α_i = alpha coefficient of security I, β_1 = OLS coefficient of Nifty50 (Market), β_2 = OLS coefficient of Nifty Pharma (Industry), R_{mt} = Market Return, R_{it}=Industry Return and ε_{it} = error term
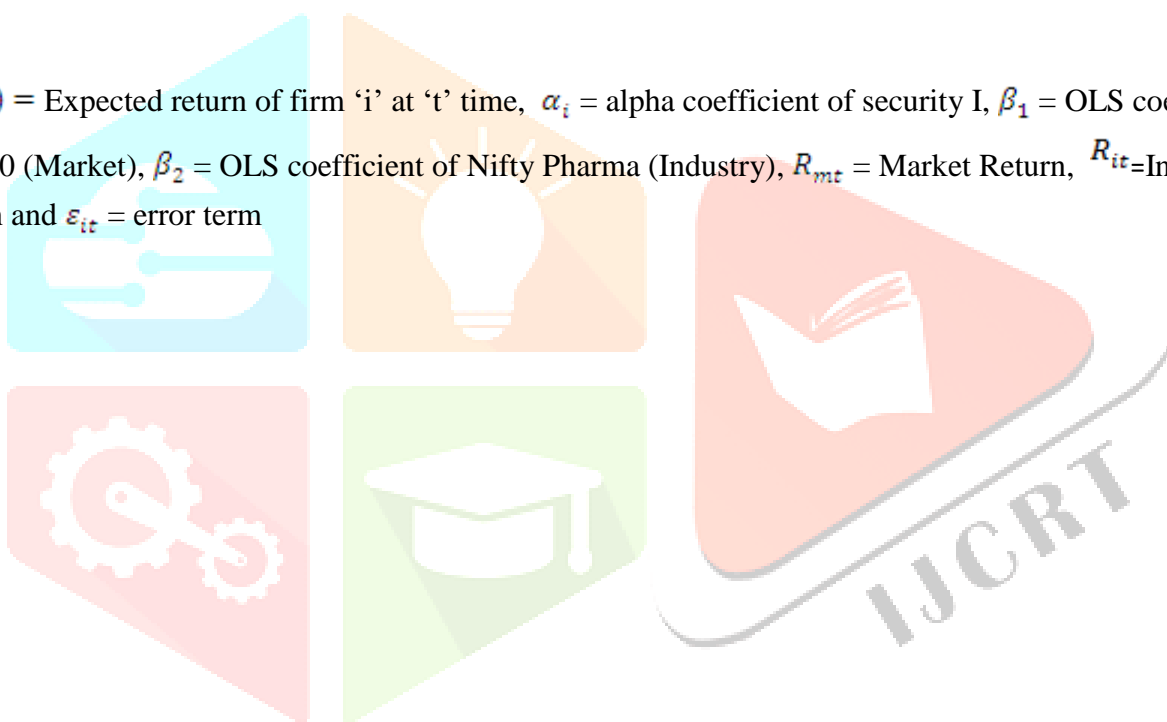
Table 1: CAAR of Acquiring Firm surrounding event date

Single Factor Model				Two Factor Model		
Event Window	CAAR	t-stats		Event Window	CAAR	t-stats
(-60, +60)	-0.0510	-0.3624		(-60, +60)	-0.0013	-0.0086*
(-55, +55)	-7.4808	-55.4854*		(-55, +55)	-3.3457	-22.4174*
(-50, +50)	-7.2221	-56.1554*		(-50, +50)	-3.2900	-23.1103*
(-45, +45)	-6.8949	-56.4803*		(-45, +45)	-3.1323	-23.1794*
(-40, +40)	-6.3832	-55.4225*		(-40, +40)	-2.8172	-22.0974*
(-35, +35)	-5.7816	-53.6174*		(-35, +35)	-2.6417	-22.1318*
(-30, +30)	-5.1385	-51.4120*		(-30, +30)	-2.6058	-23.5528*
(-25, +25)	-4.4614	-48.8173*		(-25, +25)	-2.3900	-23.6257*
(-20, +20)	-3.8725	-47.2592*		(-20, +20)	-2.1803	-24.0374*
(-15, +15)	-3.2052	-44.9849*		(-15, +15)	-1.8403	-23.3332*
(-10, +10)	-2.3747	-40.4931*		(-10, +10)	-1.4143	-21.7870*
(-09, +09)	-2.1615	-38.7490*		(-09, +09)	-1.2882	-20.8629*
(-08, +08)	-1.9235	-36.4548*		(-08, +08)	-1.1382	-19.4869*
(-07, +07)	-1.6724	-33.7435*		(-07, +07)	-0.9771	-17.8096*
(-06, +06)	-1.4530	-31.4904*		(-06, +06)	-0.8413	-16.4719*
(-05, +05)	-1.2699	-29.9207*		(-05, +05)	-0.7321	-15.5828*
(-04, +04)	-1.0563	-27.5136*		(-04, +04)	-0.5961	-14.0270*
(-03, +03)	-0.8615	-25.4435*		(-03, +03)	-0.4791	-12.7832*
(-02, +02)	-0.6550	-22.8884*		(-02, +02)	-0.3476	-10.9754*
(-01, +01)	-0.4068	-18.3536*		(-01, +01)	-0.2240	-9.1300*
(-00, +00)	-0.1425	-11.1387*		(-00, +00)	-0.0801	-5.6560*

Results of Single Factor Model:

The table of 1 shows the results CAAR using single factor model. The single factor model results showed that the shareholders of acquiring firm have lost the wealth from the acquisition. There has been change in the abnormal returns for a period of around two months from -7.48 (-55, +55) days event window to -0.14 (-0, +0) on the announcement day.

The result of the CAAR for multiple event windows was tested for its significance using t-test. T-test carried out for all the event windows from -60, +60 days to -0, +0 day. The results of the t-test showed that the shareholders of the acquiring firm have lost the wealth significantly for all the event window period.
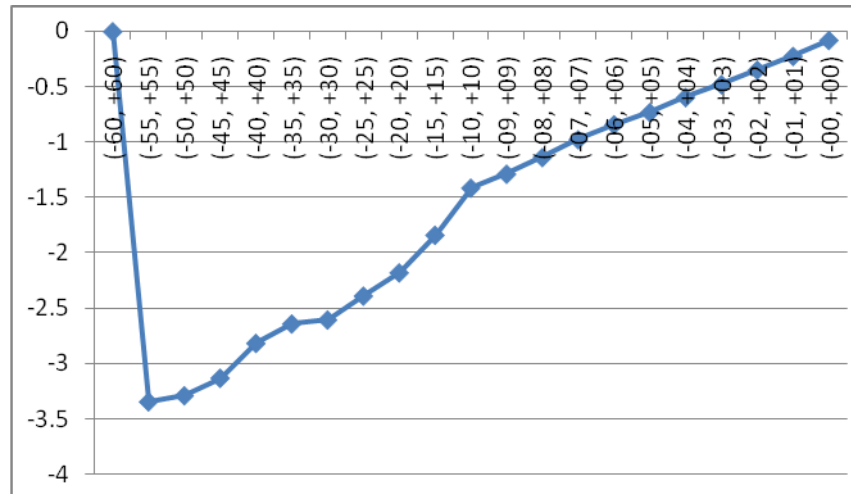
Fig 1: CAAR in Single Factor Model
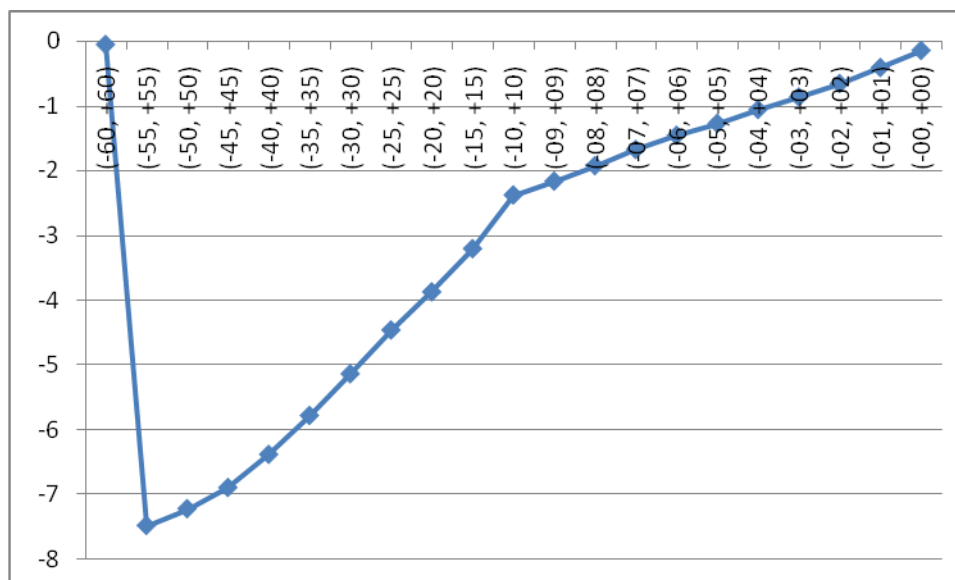
The above figure (Fig 1) shows the CAAR using the single factor model. The figure covered the abnormal return for all the event window periods. The figure clearly shows the negative CAAR for the event window from -60, +60 days to -0, +0 days. It indicates the wealth loss to the shareholders of acquiring firm.

Results of Two-Factor Model:

The table no 1 also shows the results of CAAR using two factor model. Two factor model also showed the wealth loss for the shareholders of acquiring firm. There has been change in the abnormal returns from -3.34 (-55, +55) days to -0.08 (-0, +0) on the announcement day.

The result of the CAAR for multiple event windows was tested for its significance using t-test. T-test was carried out for all the event windows from -60, +60 days to -0, +0 day. The two-factor model also supported the results of single factor model. The results showed that the shareholders of the acquiring firm have lost the wealth significantly for all the event window period.

Overall, the acquisition has failed to generate the wealth to the acquiring firm post-merger.

Fig 2: CAAR in Two Factor Model

The figure no 2 shows the CAAR using the two-factor model. The figure covered the abnormal return for all the event window periods using two factor model. The figure shows the negative CAAR for the event window from -60, +60 days to -0, +0 days. It also supports the results indicating the wealth loss to the shareholders of acquiring firm.

Conclusion

Mergers and acquisitions have been the important reason for the firms to grow around the world. The adoption of inorganic approach by the firms around the world forced by the intense competition, domestic market saturation, growth ambition, enhancement of shareholders' wealth etc. The changing scenario of enhancement of shareholders' wealth has become very important activity for every firm. Many researchers have made an attempt in this regard and shown their finding on them. There are many studies conducted across the world on examining whether the mergers and acquisitions have improved the wealth of the shareholders or not.

The present study examined the impact of acquisition announcement on the wealth of the shareholders. The results of the study using event study have shown that the shareholders of the acquiring firm have lost the wealth significantly post-merger. The results of both the single factor model and two factor models showed the similar findings. The Hubris hypothesis theory of mergers and acquisitions supports the findings of the study. The theory says that the acquisition will not lead to the wealth creation of acquiring firm; rather it transfers the wealth from acquiring firms to target firms.

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