Effect of Merger & Acquisition Announcements on Shareholders Wealth with Special Reference to Pharmaceutical Industries

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Key Words

M&A = Merger and Acquisitions

AAR = Average Abnormal Returns

CAAR = Cumulative Average Abnormal Returns

Arit = Abnormal Return of the security on 'i'th day

SD/Std Dev = Standard Deviation

Abstract

In this modern era the corporate world is undergoing an exemplar move, through diversification and expansion to maximize shareholders wealth through mergers and acquisitions. The waves of merger began in the year 1883. The first merger came due the economic expansion that occurred in the same year. A merger is a tactical implement used by a company for combining their operation between two or more companies. Shareholders are the real owners of the firms at any matter any announcement or any event occurrence on the market will be suffered by firms as well as the ultimate shareholders. The modern firms aim at the objectives of wealth maximization rather than the profit maximization. Keeping this in mind, the paper focuses on the impact of mergers & acquisitions and its impact on the wealth of shareholders with special reference to Pharmaceutical companies.

1.1 Introduction

In this modern era the corporate world is undergoing a paradigm shift, from diversification and expansion to increasing merger and acquisition. The waves of merger began in the way back in 1883. The first merger came due the economic expansion occurred in the same year. A merger is a strategic tool used by a company for combining their operation between two or more companies. In the past decade's most of the firms are going for the either Merger or Acquisition. In India when the new industrial policy 1991 introduced that time the industries became so independent and the policies regarding industries also became liberal. With the effect of LPG most the foreign MNC's incorporated in India with the effect of globalization. A Merger is a strategic tool used by a company for combining their operation between two or more companies. Merger is usually between domestic firms and Acquisition is between cross-border firms. In India, the merger & Acquisition played an important role during the Second the World War . The economic& political condition during the Second World war gave rise to a number of Mergers& Acquisitions. The post war period regarding M&A era , large number Acquisition refers to acquiring or gaining the majority interest of a firm. Mainly the majority interest is51%of stake. Firms which attempt to gain a majority interest is called acquiring firm and other firm is called the Target firm. Here the acquiring firm should attempt to acquire the 51% stake in the targeted firm. Acquisition can be one through economies of scale, enhanced market of M&A occurred in the industries like Sugar, Banking and Cotton Textiles. The MRTP act and other trade legislation amended paving way for large MNC's to resort in India trough M&A route for their growth. M&A became popular after the new industrialization policy 1991 when the regulations became liberal. The industries are become liberal and globalization of existence business was the route for Merger and Acquisition. In simple definition Merger means "A combination of two or more businesses into one business'. Merger is a strategic tool used by companies to increase their share holder's wealth and long term profitability through expansion of their operations. Merger is mutual consent between two firms merging each other. The firm which buying the other company is called as Merged or Surviving entity, and one merging with it called as the Merging Entity. visibility, and increased efficiency. Acquisition is completely difference from Merger were in Acquisition the targets firm may lose its existence while Acquiring. The ultimate effect either

Merger or Acquisition is share holders' wealth. The modern firms aim at the objectives of wealth maximization rather than the profit maximization. So now a days, all the firms are keeping eye on the maximization of share holders' wealth.

1.2 Background Merger

A merger is a combination of two or more companies into one company. It may be in the form of one or more companies being merged into an existing company or a new company may be formed to merge two or more existing companies. The Income Tax Act, 1961 of India uses the term 'amalgamation' for merger.

Thus, merger may take any of the two forms:

1) Absorption: A combination of two or more companies into an existing company is known as 'absorption'. In a merger through absorption all companies except one go into liquidation and lose their separateidentities.

2) Consolidation: A consolidation is a combination of two or more companies into a new company. In this form of merger, all the existing companies, which combine, go into liquidation and form a new company with a different entity. It is also known as triangular merger. The entity of consolidating corporations is lost and their assets and liabilities are taken over the new corporation or company.

1.2.1 Types of Merger

1) Horizontal Merger: When two or more concerns dealing in same product or service join together, it is known as a horizontal merger. The idea behind this type of merger is to avoid competition between theunits.

2) Vertical Merger: Vertical merger occurs when a firm acquires firms 'upstream' from it and/or firms 'downstream from it. In the case of an 'upstream' merger, it extends to the firms supplying raw materials and to those firms that sell eventually to the consumer in the event of a 'downstream'merger.

3) Conglomerate Merger: When two concerns dealing in totally different activities join hands it will be a case of conglomerate merger. The merging concerns are neither horizontally nor vertically related to each other.

Types of Conglomerate Mergers

i) Product Extension Merger: A product extension merger occurs when firms merge who sell non-competing products but use related marketing channels or production process.

ii) Market Extension Merger: A market extension merger is the joining of two firms selling the same product but in separate geographic markets,and

iii) Pure Merger: There is the 'pure' category of conglomerate mergers between firms with no relationship between them.

4) Congeneric Merger: It occurs where two merging firms are in the same general industry, but they have no mutual buyer/customer or supplier relationship,

1.2.3 Concept of Acquisition:

Acquisition is an attempt made by one firm to gain a majority interest in another firm. The firm attempting to gain a majority interest is called the acquiring firm and the other firm is called the target firm. Once the acquisition is completed the acquiring firm becomes the legal owner and controller of the business of the target firm. The acquiring firm pays for the net assets, goodwill, and brand name of the company bought.

1.2.4 Strategies for Acquisition Acquisition involves a process of identifying the right target. However, research shows that most companies identify the wrong acquisition targets

To make acquisitions more effective and meaningful, companies need to adhere to the following:

- Increase the number of targets
- Always explore alternatives available and not chase the one everyone else is bidding for

uch as a merger between a bank and a leasing company.

5) Reverse Merger: A unique type of merger called a reverse merger is used as a way of going public without the expense and time required by an IPO.

- Compare the targets concurrently in an attempt to choose the right and the best target
- Buy firms with assets that meet the current needs to build competitiveness

1.2.5 Types of Acquisitions

1) Assets Purchase

Under this method, the acquiring firm purchases specific identifiable assets for the business. These assets are perceived as having potential to add value to the acquiring company. In some cases, it may also assume specified liabilities.

2) Stock Purchase: Under this method, the acquirer purchases the entire outstanding equity of the target company. It is a method whereby the acquirer purchases the entire company and all assets and liabilities of the business that come with it. Stock purchase does not cause any disruption in the operations which can continue as usual.

3.3 Motives Behind Merger and Acquisition

The principal economic rationale of a merger motive behind mergers is that the value of the combined entity is expected to be greater-than the sum of the independent values of the merging entities. A variety of reasons like growth, diversification, economies of scale, managerial effectiveness, utilization of tax shields, lower financing costs, strategic benefit and so on are cited in support of merger proposals. Some of them appear to be plausible in the sense that they create value; others seem to be dubious as they do not create value. The merger activities are primarily the result of following factors and strategies, which are classified under three heads:

1) Strategic motives
2) Financial motives
3) Organizational motives.

1.2.6 Impact of Mergers and Acquisitions Stakeholders

The impact of mergers and acquisitions on various sectors of the company may differ. Mergers and acquisitions are aimed at improving profits and productivity of a company. Simultaneously, the objective is also to reduce expenses of the firm. However, mergers and acquisitions have taken place successfully. At times, the main goal for which the process has losses focus. The success of mergers, acquisitions, or takeovers is determined by a number of factors. Those mergers and acquisitions, which are resisted not only affects the entire workforce in that organization but also harm the credibility of the company. In the process, in addition to deviate from the actual aim, psychological impacts are also many. Studies have suggested that mergers and acquisitions affect the senior executives, labor force, and the shareholders. They are as follows:

1) Impact of Mergers and Acquisitions on Workers or Employees: It is a well- known fact that whenever there is a merger or an acquisition, there are bound to be lay-offs. In the event when a new resulting company is efficient business-wise, it would require less number of people to perform the same task. Under such circumstances, the company would attempt to downsize the labour force. If the employees who have been laid-off possess sufficient skills, they may in fact benefit from the lay-off and move-on for greener pastures. But, it is usually seen that the employees those who are laid-offwould not have played a significant role under the new organizational set-up. This accounts for their removal from the new organizational set-up. These workers in turn would look for re-employment and may have to be satisfied with a much lesser pay package than the previous one. Even though this may not lead to drastic unemployment levels, nevertheless, the workers will have to compromise for the same. If not drastically, the mild undulations created in the local economy cannot be ignored fully.

2) Impact of Mergers and Acquisitions on Top Level Management: Impact of mergers and acquisitions on top level management may actually involve a "clash of the egos". There might be variations in the cultures of the two organizations. Under the new set-up, the manager

may be asked to implement such policies or strategies, which may not be quite approved by him. When such a situation arises, the main focus of the organization gets diverted and executives become busy either in settling matters among themselves or moving-on. If however, the manager is well-equipped with a degree or has sufficient qualification, the migration to another company may not be troublesome at all.

3) Impact of Mergers and Acquisitions on Shareholders: the shareholders can be categorizing into two parts:

i) Shareholders of the Acquired Firm: The shareholders of the acquired company benefit the most. The reason being, it is seen in majority of the cases that the acquiring company usually pays a little

excess than it what should. Unless a man lives in a house he has recently bought, he will not be able to know its drawbacks. So that the shareholders forgo their shares, the company has to offer an amount more than the actual price, which is prevailing in the market. Buying a company at a higher Price can actually prove to be beneficial for the local economy.

ii) Shareholders of the Acquiring Firm: They are most the affected. If one measure the benefits enjoyed by the shareholders of the acquired company in degrees, the degree to which they were benefited, by the same degree, these shareholders are harmed. This can be attributed to debt load, which accompanies an acquisition.

1.3 Literature Review

Rajinder S. Aurora, Kavitha Shetty &Sharad R Kele (2011), in their book 'Merger and Acquisition' they explains Merger is a tactical implement used by the companies to increase the long run profitability by expanding their operations. The buying company is called as surviving entity or merged, and the merging company is called as merging entity. Once the Merger happens one company will survive and other company will lose its corporate entity. Dr. Smitha Meena& Dr. Pushpender Kumar (2014) explain in their study that Merger is done to accomplish the economies of scale and to combat the unhealthy competition. Merger helps in Diversifying the product and rivalry competition risk. Rabi Narayan Kar& Amit Soni (2013) attempt to evaluate many reasons for Merger that can be economic and institutional factors in isolation, which influences much to engage in the M&A. A long run profits comes as of the necessary takeovers. Merger results in managerial growth and self-interest.

Rahul Mittal (2014) states that major motives of the companies is having an edge over its rivalry firms, this can be achievable either by expanding the business or making huge profits. Expansion is anvital part of the firm can be ended through implementing new technologies, new product line and services and enhancing overall efficiency, in the modern era firms are going for external expansion and external expansion comes through Merger, takeover and amalgamation. Prof Alexander Roberts,

Dr. William Wallace, et.al (2012) in their study they clearly explains why company go for the Merger, because it helps compel to buy into growth market, to increase management efficiency, to diversify the industry competition and competitor pressure, to drive into new customer base or new market because of globalization. From the above literature it clear that most of the firms go for the Merger is because of expansion and avoids heavy competition.The real effect of horizontal Merger will arise when the higher growth company merges with the lower growth company. Here the real post-Merger effect will arise. The study of Pankaj Sinha and Susanth Gupta (2011) on their study they clearly mentioned how Profit After Tax (PAT) and profit before depreciation, interest and tax (PBDIT) have been positively effect after Merger. They mentioned interest coverage is the main aspect and it will determine the shareholders' return. After M&A Company will evaluate the reduction in risk. They say that unless the return of the both merging companies should be perfectly co-related. Luis Franco Hilario (2011) says by considering the Nokia and Microsoft Merger he says that M&A is the best strategies to improve share holders' wealth if it is implemented well. Merger will add more additional value by combining both firms. If the combining is implemented improperly it will destroy consequent worth of the shareholder's wealth rather than increasing it. Debdas Rakshith &Chanchal Chatterjee (2008) has explained that main motive of the M&A is optimum utilization of available resources, improving company's growth with the help of removing all the patches in the firm. They study the effect of Merger return on investment (ROI) and earnings per share (EPS). Martin (1998) suggest that after Merger examination should be done for the consumer, rival firms and welfare of owners, all the analysis must be based on the investment behavior. There are two ways to examine the investment decision. Firstly post-Merger allocation of capital within the industry, how effects investment decision and secondly investment decision based statistical data scrutiny of M&A implication. And also studies the post-Merger wave is contrasted to asses' changes in costs and also considers one period investment. And his studies clearly states that two third of selected companies lose the market value after Acquisition and only one third is acquiring firms increases the market value.

Pramod Mantravadi & Vadyadhar Reddy (2008) clearly discuss about the Indian Companies post-Merger effect and say about the clear reasons for getting market value and for reducing the business risk through portfolio. In India the real industrialization began in 1991 when the LPG concept introduced. Also discuss about the main 3 objective reasons behind Merger is Improving profitability and revenues, Faster growth in scale and quicker to marker &Acquisition of new technology or competence. Their study clearly implicates that there are minor variation in operating performance after Merger. Angela Morgan, Lance Nail, et.al (2000) they clearly mentions about how long run Merger return will effect in the corporate and ownership structure. Also they say in long run return is positively strong and low return for stockholders' wealth during the merged year. Josi and Desai (2013) clearly explain about significance of acquiring company comparing their after Merger and before Merger performance. They tested improving in operating recital of acquiring companies by using financial analysis and synergy. They studied in Aviation industry and found net profit margin and return on net worth where both adverse and there was no much post-Merger effect on wealth of share holders'. Nihat, Eric, et.al, (2000) they discuss about the application of regulation with M&A operations. Also discuss the parts played by the different authorities at universal level and complexity of political and legal environment peculiar to MNC's. Ultimately they give result that intervention of any commission will influence a lot. This literature clearly suggests that factors which can influence the M&A is intervention of any commission in nation. Huck & Konrad (2006) examines experimental cournot market of three to four firms with the bilateral Mergers. Found that merged firms create more outputs than their competitors. Shah, Khyati (2010) examine the cause of M&A of Indian companies with the effect of 1991 new industrial policy by considering 8 Indian manufacturing companies, by taking consideration of PBIT to sales ratio, net profit ratio, technical efficiency and return on assets. The result of this study indicates that the assessment of the firm enhances when technical effectiveness is used to determine the performance of Acquisition firms. The accounting measures of Merger performance not have any significance effect on profitability of firms. Rani, Yadav, et.al, (2014) studies domestic M&A and cross border Acquisition of Indian acquirer and effect on share holders' wealth during 2003-2008. With the event study reveals thatcross-border Acquisition results in higher return than the domestic Acquisition and share holders' of acquiring firms earns higher abnormal returns in case of cross-border Acquisition. And they suggest that better to go for cross-border Acquisition rather than domestic Acquisition. Doukas, Travlos (1998) they studies cause of global Acquisition on stock prices of U.S firms. The MNC's which is not operating in the target firms are showing abnormal return as positive at the announcement on Acquisition. The abnormal return is larger when firms go for the expansion into a new industry and new geographical markets. Fich, Nguyen, et.al (2012) they examines the announcement of M&A with the larger bidder share holders' wealth. They mentions few events which may result in large-gain they are synergies from a supply chain, transactional specific event, typically "bolt-on" deals, implemented when borrowing cost is low. These kinds of event occurrences can be a helpful for the larger-bidder on share holders' wealth. Arora, Kumar, wt.al (2012) studies impact of M&A on Management and Employees. They says M&A phenomenon is easy to think but difficult to implement, post-Merger phase have its own advantages and drawbacks, if handles with the proper synergies can be eliminate the few drawbacks and for this both organization and workforce should work hard. Alberto, Murgia (2000) explains valuation of M&A in the European Banking Sector. Based on the announcement time performance of firms they found cross-sectional variation, abnormal return associatedwith announcement of Domestic Banks deals and diversification of product into insurance sector. Mehta, Kakani (2006) they studies various motives for M&A in Indian banking sector. By taking consideration of various motives like Stability, return & risk of share holders' & bankruptcy risk. Ravichardran (2012) explains the major factors endorsed to M&A are emergence of globalization, current financial turn over & low cost funding. M&A is the increased globalization of investment seeking high return and providing opportunity to diversify the risk.

Robert (2003) explains about does M&A pay? With the three possible outcomes i.e. value conserved, value created & value destroyed. Considering required return performance, and earnings on the investment opportunities of risk. Agarwal, Jaffe (1999) they studied the stock return of firms on Merger announcements and long-run performance. Long run performance is negative while following Merger. Two explanation of under- performance pace of price-alteration and EPS, method of compensation and performance extrapolation receives greater support. Andrade, Mitchell, et.al (2008) studies the response of stock market on pronouncement of Merger and how it will creates value for shareholders. They found Mergers improved operating relative industryof peers. Heena, Samridhi (2016) they explains M&A is only key for long term survival, also examines the impact it on GDP, profitability, overall expansion of the market and employment in economy. Also explains M&A cases and reasons behind why firms choose this M&A option.

1.4 Problem statement:

From the literature review it is clear that most the study supports the view that the firms goes for the Merger because avoid rivalry competitor's risk, force to buy into growth market, to increase management efficiency, to drive into new customer base or new market because of globalization. Surviving entity will have most benefits that merging entity because when Merger took place the market rate of the surviving firms market value will automatically grow and merged entity will lose his market value sometimes because of Merger. In India, Pharmaceutical Industries have witnessed a number of M&As.Buttheaboverationalesstillnot clear in Indian Economy especially M&A in Pharma Industries. This investigates the above rationale we come up with the following objectives.

1.5 Objectives:

- To measure Stock Market reaction to the Announcements of M&A in Indian Pharmaceutical Industries.
- To investigate significance of AAR on Event Day as well as Pre and Post EventDays.
- To critically analyze the CAAR and its Significance on the Day of Event and Pre and Post EventDays.

1.6 Research Methodology:

This study uses 69 M&A announcements made by pharmaceutical companies in India during the period from 1st January 2010 to 30th April 2016. List of M&As during the study phase has been obtained from the Prowess database. Share price and index data required for the study are obtained from Yahoo finance.

There were 206 M&A announcements by pharmaceutical companies during the study period. Certain criteria are used to select the samples for the study and the procedure of sample selection has been depicted in the following table.

This study uses event study methodology to measure the impact of M&A announcements on the short-term stock price performance of acquirers. Event study measures the impact of specific event related to a company on the stock price performance by measuring the abnormal returns around the day of the announcements.

Pre Event window: Pre Event Window is aimed to investigate the Pre Event (M&A announcements) effect on shareholder's wealth. Our study considered 10 Days, 5 Days and 3 Days pre- AAR of 69 announcement of study. Pre event days is denoted with the negative symbol in our study such as -1,-2,-3 etc.

b) Event window: An event study is an analysis of the impact of a specific piece of news or event directly or indirectly related to a company and its stock. It can also be used as a macroeconomic tool to analyze the impact of an event on an industry, sector or overall market. This study considered Event day as -10,-9…….0,+1, +2……+10 as an event days.

c) Post Event Window: In the post event window, we aimed to investigate M&A announcement of the pharmaceutical companies in India on the shareholders after the announcement of the event. We considered 10 days, 5 days and 3 days AAR and SD of estimation window for the said investigation.

1.6.1 Computation of Abnormal Returns(AR)

Abnormal return (AR) is computed as follows.

1.6.3 Market Model

The market model is based on the assumption of a constant and linear relation between individual asset returns and the return of a market index.

$E(Rit) = \alpha i + \beta iRmt$

Where;

$ARit = Rit - E(Rit)$

ARit= Abnormal return of company i on day t

Rit= Actual return

$E(Rit)$ = Expected return

Where;

αi= Normal return of the security 'i' when Rmtis0

βi= Sensitivity of company return (Rit) to the market return.

Rmt, denotes the market return, in this study, Sensex is used as the market proxy.

For computing expected return this study uses both the market model and constant mean return model.

1.6.2 Constant Mean Adjusted Return Model

In this model mean of the abnormal returns during the estimation period (-110 to -11) is considered as the expected return.

$E(Rit)=\overline{\bar{A}\bar{R}\bar{i}}$

Where,

$\overline{\bar{A}\bar{R}\bar{i}}$ = Mean of the abnormal

An estimation period of 100(-110 to -11) days, i.e., 11 days before acquisition announcement till 110 days before acquisition announcement, has been used to compute the parameters (α and β) of the market model.

1.6.4 Computation of AARs and CAARs

Daily abnormal returns (ARs) are averaged over the number of announcements for each day‘t’ to compute AARs and are calculated as follows:

$\sum N$

$ARit$

returns of company i during the estimation window.

$AARt = i=1 \quad N$

Where

$AARt$= Average abnormal returns on day‘t’.

$ARit$= abnormal return of the security ‘i’ on day ‘t’.

N = Total number of announcements used in this study.

Then we compute cumulative average abnormal returns (CAARs) by summing AARs over the broad event window of 21 days and various sub-event windows as follows:

T

$CAAR = \sum AARt$

$t=1$

In order to comment on whether AARs and CAARs are statistically different from zero, we need to test the significance of AARs of each day in the event window and CAAR using required confidence level. We follow parametric test proposed by Brown and Warner (1985).

Statistical significance of AARs on each day is tested using the following formula.

$AARt$

$tAAR = (\sigma AAR\ )$

Where;

CAARs show the total effect of the event across the securities over the event

$AARt$= Average abnormal return on day‘t’ in the event window

$\sigma AARt$= Standard deviation of $AARt$during the estimation period Statistical significance of CAARs

are tested using the following formula. window. Various sub-event windows such as, 11-day (-5, +5), 5-day (-2, +2), 3-day (-

$tCAAR$

$CAAR = (\sigma AARt * \sqrt{T})$

1, +1), pre event-window of 10-day (- 10, -1), 5-day (-5, -1) and post-event window of 10-day (+1, +10) and 5-day (+1, +5) have been used.

1.6.5 Statistical Significance of AARs and CAARs

Where 'T' is the number of days over which AARs are cumulated. $\sigma AARt$is the standard deviation of AAR over the estimation period (-110 to -11).1.7 Analysis and Interpretation

To investigate the effect of Merger and Acquisition announcement on shareholders wealth in the pharmaceutical company, we need our study identifies the total number of announcement during our study period that is 01/01/2010 to 30/04/2016. There were 206 announcements. But we filtered announcement considering following criteria.

Mean Adjusted Model

In order to Investigate our primary objective i.e.to identify whether the announcement had any influence on shareholders wealth. We started off with identifying the return. Mean adjusted method analyses the effect of M&A in terms of return of the acquired company during the event days (any event window) and company with the Mean Return of its own. For the evaluation of mean return this study used daily return of the company which covers details for the duration of 01/01/2008 to 31/12/2016. The analysis was in 3 dimension i.e. we analyzed the effect of merger announcement on shareholders wealth prior to the event day, post event day and both pre and post event day. Study used 100 day estimation day as a calculation of Average Abnormal Returns (AAR).

Table 7.1: Event Window Detail for 21 Days Using Mean Adjusted Model

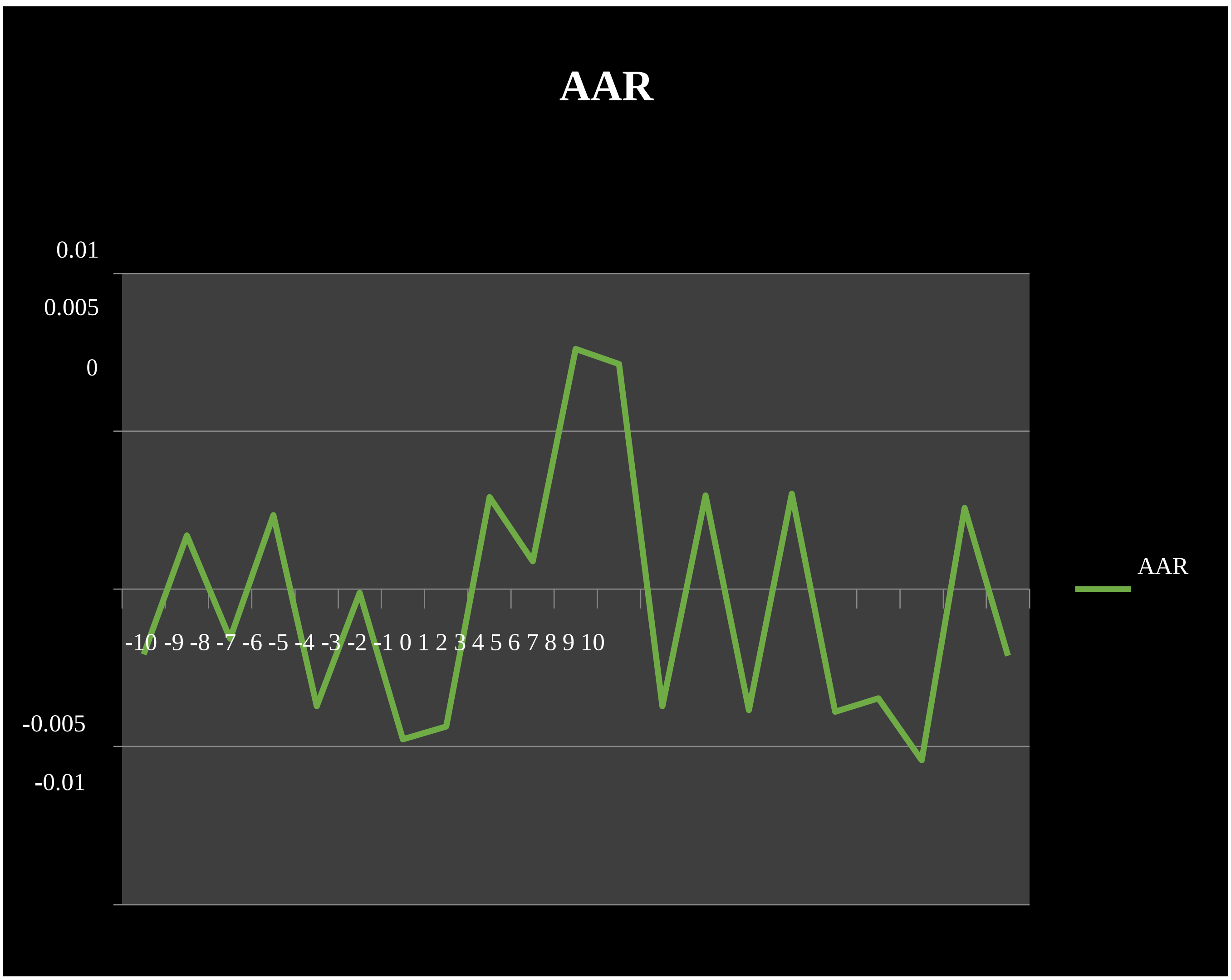
(All the Pre-Calculations Shown in the Annexure)

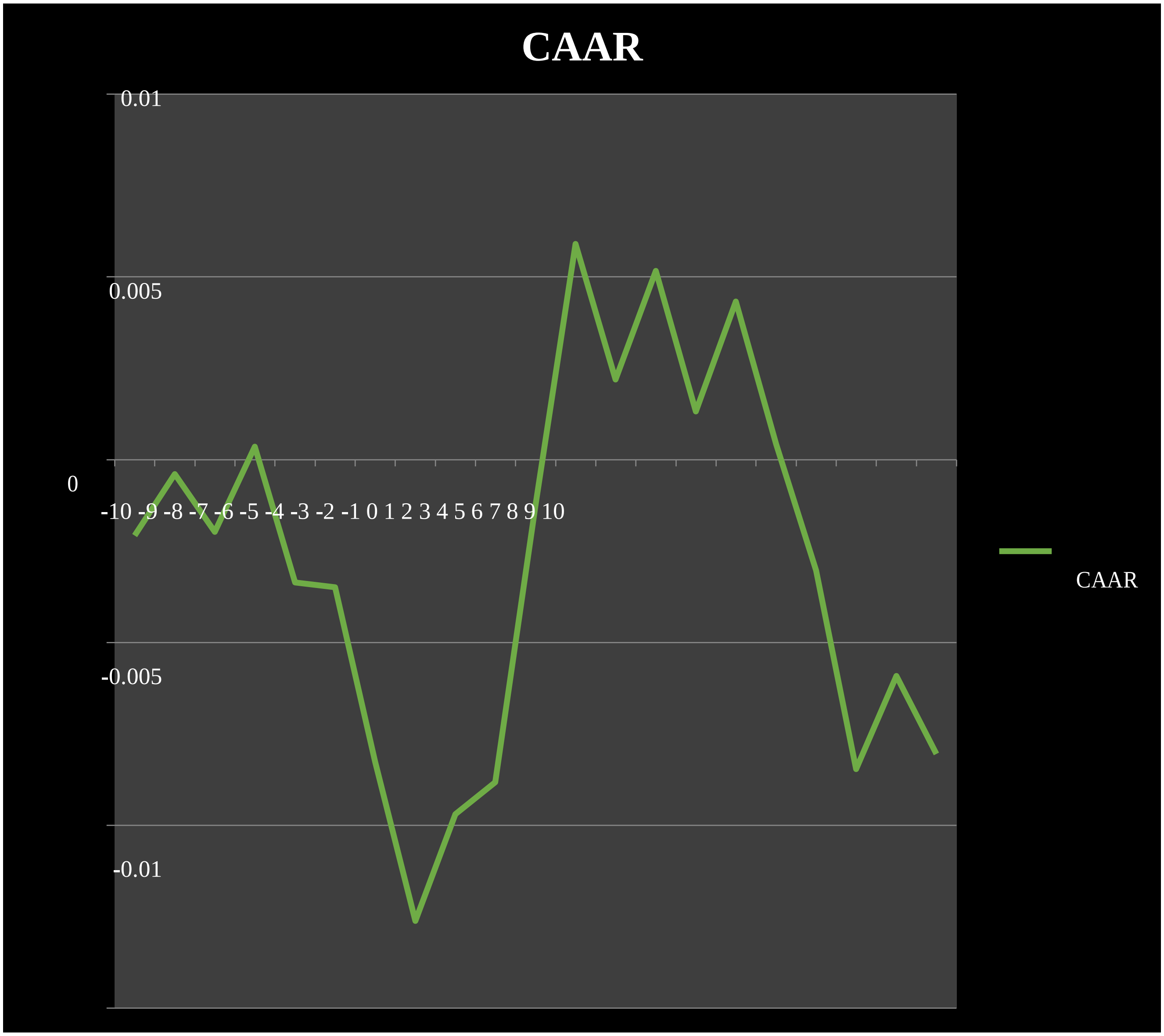
Event window- 21 –day										
Day		N				T				
	AAR		Std Dev of AARs	t value	CAAR		Std Dev of AARs	√T	SD*√T	t value
-10	-0.0021	100	0.0077	-0.2715	0.0021	1	0.0077	1.0000	0.0077	-0.2715
-9	0.0017	100	0.0077	0.2200	0.0004	2	0.0077	1.4142	0.0108	-0.0364
-8	-0.0016	100	0.0077	-0.2069	0.0020	3	0.0077	1.7321	0.0133	-0.1491
-7	0.0023	100	0.0077	0.3050	0.0004	4	0.0077	2.0000	0.0153	0.0234
-6	-0.0037	100	0.0077	-0.4861	0.0034	5	0.0077	2.2361	0.0171	-0.1965
-5	-0.0001	100	0.0077	-0.0166	0.0035	6	0.0077	2.4495	0.0187	-0.1862
-4	-0.0048	100	0.0077	-0.6232	0.0083	7	0.0077	2.6458	0.0202	-0.4079
-3	-0.0044	100	0.0077	-0.5693	0.0126	8	0.0077	2.8284	0.0216	-0.5828
-2	0.0029	100	0.0077	0.3818	0.0097	9	0.0077	3.0000	0.0230	-0.4222
-1	0.0009	100	0.0077	0.1137	0.00882	10	0.0077	3.1623	0.0242	-0.3646

0	0.0076	100	0.0077	0.9938	0.00122	11	0.0077	3.3166	0.0254	-0.0480
1	0.0071	100	0.0077	0.9303	0.00590	12	0.0077	3.4641	0.0265	0.2226
2	-0.0037	100	0.0077	-0.484	0.00219	13	0.0077	3.6056	0.0276	0.0795
3	0.0030	100	0.0077	0.3882	0.00517	14	0.0077	3.7417	0.0286	0.1804
4	-0.0039	100	0.0077	-0.502	0.00132	15	0.0077	3.8730	0.0296	0.0445
5	0.0030	100	0.0077	0.3931	0.00433	16	0.0077	4.0000	0.0306	0.1414
6	-0.0039	100	0.0077	-0.51	0.00043	17	0.0077	4.1231	0.0316	0.0136
7	-0.0035	100	0.0077	-0.452	0.00303	18	0.0077	4.2426	0.0325	-0.0934
8	-0.0054	100	0.0077	-0.71	0.00847	19	0.0077	4.3589	0.0334	-0.2538
9	0.0026	100	0.0077	0.3336	0.00591	20	0.0077	4.4721	0.0342	-0.1728
10	-0.0021	100	0.0077	-0.279	0.00805	21	0.0077	4.5826	0.0351	-0.2295

Source: Thomson Reuters (Collected from IIM Kozhikode)

7.1 Trend Showing of AAR and CAAR (%) for 21 Event Days Using Means Adjusted Model





Interpretation: The above Event Window of 21 days (-10 0 +10) analyzed the impact of M&A announcements during pre-10 days and post 10 days. According to share market hypothesis effect should be observed during event day. The Average Abnormal Returns of 69 announcements by 39 companies shows that on the event day i.e. Zero (0) day in our 21 day window average returns had good amount of impact. The upward trend during -1 to 0 day can be observed in the figures. The returns were increased from 0.09% to 0.76% on the event day. It is true that AAR is increased on the event day but this shift is not significant according to't' statistics. The't' statistics of AAR is 0.994 then after having a upward trend shift in the AAR. Still the AAR on the event day holds insignificant. It can be observed from AAR table that during the event window of 21 days nowhere AAR found significant. In the case of CAAR results similar the cumulative returns also failed to generate the significant impact on wealth of shareholder's. The CAAR of pre -5 days event observed cumulative loss, from pre-1 day CAAR has improved and showing profit zone for shareholders. After the post 6 days again CAAR slotted down to negative zone.

7.1.2 Event Window Using Market Model

The market model assumes the following linear relationship between the return of any security and the return of the market portfolio:

R =α+βR+ e (1)

Where is the time index, i = 1, 2, ..., N stands for security, Rit and Rmt are the returns on security i and the market portfolio, respectively, during period t. The return in the market portfolio is measured by the variation in some benchmarks (senses return is considered) .Equation is estimated over a period that runs between 110days prior to the event up to 10 days prior to the event. The event window can be defined as a two-day window, a three-day window, or a five-day window. With the estimates of αi and βi from equation (1), a "normal" return is predicted during the days covered by the event window. The prediction error (the difference between the actual return and the predicted normal return), commonly referred to as the abnormal return (AR), is then calculated from following equation:

Arit= Ri -

(a+bRmit)

Where Ri =r2-

r1/r1*100

Where ARit is the abnormal return for firm i on day t, Rit is the actual return for firm i on day t. Average aggregate abnormal return (AAR) on day t is mean value of summed abnormal returns of sample firms

Expected return E(R) = α+β (Rm) α= 0.001610469 β=0.233120839

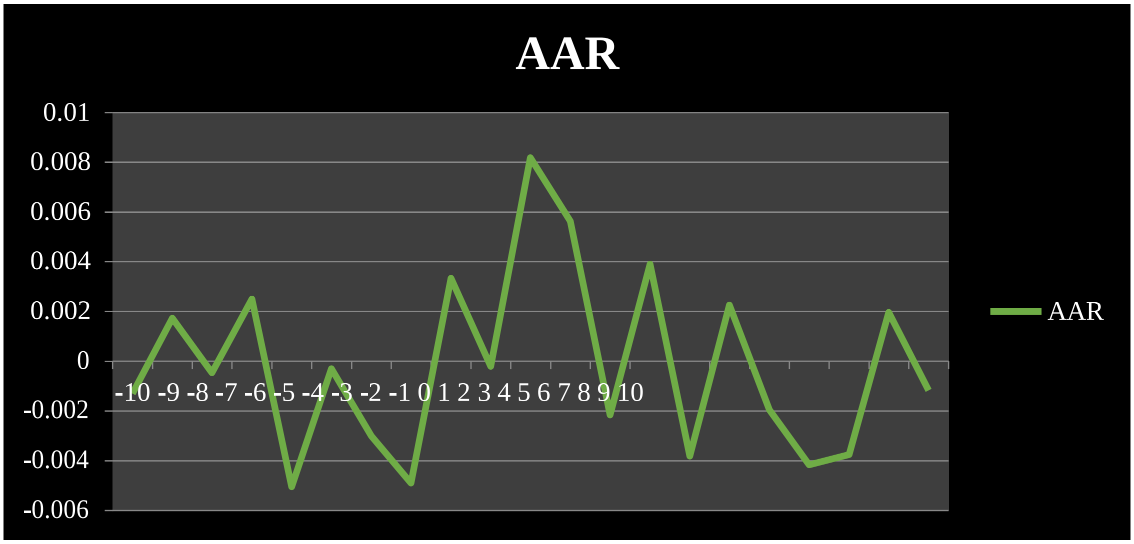
R square = 0.019428506

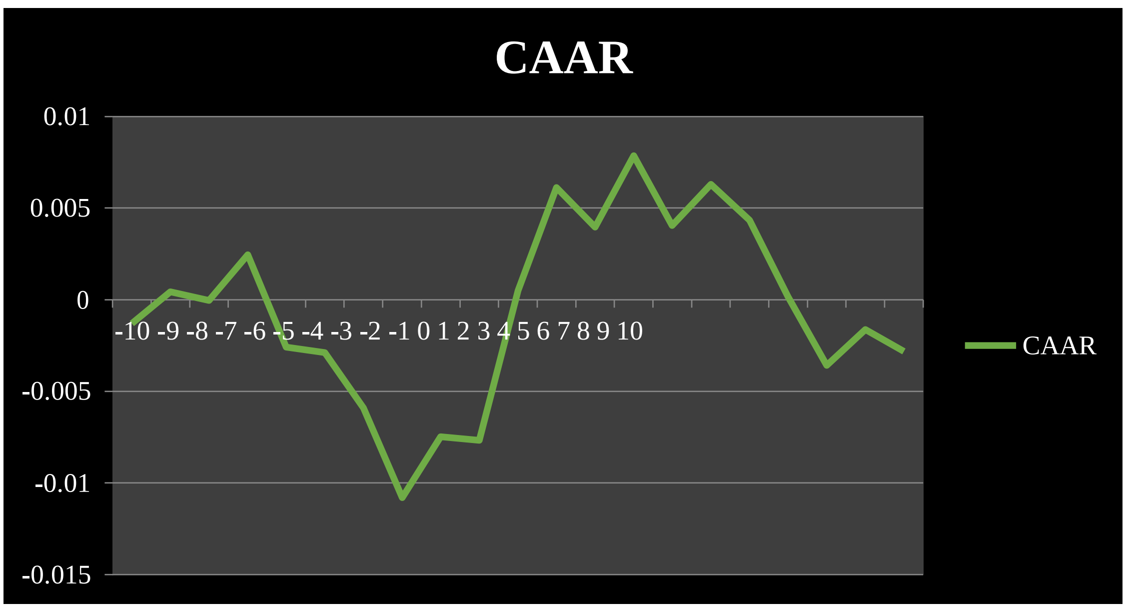
Table 7.2: Event Window Detail for 21 days Using Market Return Model

(All the Pre-Calculations Shown in the Annexure)

Event window- 21 –day										
Day	**AAR**	**N**	**StdDev of AARs**	**t value**	**CAAR**	**T**	**StdDev of AARs**	**√T**	**SD*√T**	**t value**
-10	-0.0013	100	0.007637	-0.17028	-0.0013	1	0.007637	1	0.007637	-0.17028
-9	0.001729	100	0.007637	0.226385	0.000428	2	0.007637	1.414214	0.0108	0.039671
-8	-0.00046	100	0.007637	-0.06085	-3.6E-05	3	0.007637	1.732051	0.013228	-0.00274
-7	0.002499	100	0.007637	0.327234	0.002463	4	0.007637	2	0.015274	0.161241
-6	-0.00506	100	0.007637	-0.662	-0.00259	5	0.007637	2.236068	0.017077	-0.15184
-5	-0.0003	100	0.007637	-0.03932	-0.00289	6	0.007637	2.44949	0.018707	-0.15466
-4	-0.00301	100	0.007637	-0.39465	-0.00591	7	0.007637	2.645751	0.020206	-0.29235
-3	-0.0049	100	0.007637	-0.64155	-0.01081	8	0.007637	2.828427	0.021601	-0.50029
-2	0.003334	100	0.007637	0.436498	-0.00747	9	0.007637	3	0.022911	-0.32618
-1	-0.00021	100	0.007637	-0.02694	-0.00768	10	0.007637	3.162278	0.02415	-0.31796
0	0.008183	100	0.007637	1.071543	0.000505	11	0.007637	3.316625	0.025329	0.019918
1	0.005629	100	0.007637	0.737035	0.006133	12	0.007637	3.464102	0.026455	0.231834
2	-0.00217	100	0.007637	-0.28372	0.003967	13	0.007637	3.605551	0.027536	0.144051
3	0.003899	100	0.007637	0.510498	0.007865	14	0.007637	3.741657	0.028575	0.275247
4	-0.00382	100	0.007637	-0.50028	0.004045	15	0.007637	3.872983	0.029578	0.136742
5	0.002257	100	0.007637	0.295588	0.006302	16	0.007637	4	0.030548	0.206297
6	-0.00195	100	0.007637	-0.25599	0.004347	17	0.007637	4.123106	0.031488	0.138051
7	-0.00417	100	0.007637	-0.54649	0.000173	18	0.007637	4.242641	0.032401	0.005352
8	-0.00377	100	0.007637	-0.49315	-0.00359	19	0.007637	4.358899	0.033289	-0.10793
9	0.001957	100	0.007637	0.256206	-0.00164	20	0.007637	4.472136	0.034154	-0.04791
10	-0.00118	100	0.007637	-0.15415	-0.00281	21	0.007637	4.582576	0.034997	-0.08039

7.2 Trend Showing AAR and CAAR (%) for 21 Event Days Using Market Model





Interpretation:

The above Event Window of 21 days (- 10 0 +10) analyzed the impact of M&A announcements during pre-10 days and post 10 days. According to share market hypothesis effect should be observed during event day. The Average Abnormal Returns of 69 announcements by 39 companies shows that on the event day i.e. Zero (0) day in our 21 day window average returns had good amount of impact. The upward trend during -1 to 0 day can be observed in the figures. The returns were increased from -0.02% to 0.82% on the event day. It is true that AAR is increased on the event day but this shift is not significant according to 't' statistics. The 't' statistics of AAR is 1.072 then after having a upward trend shift in the AAR. Still the AAR on the event day holds insignificant. It can be observed from AAR table that during the event window of 21 days nowhere AAR found significant. In the case of CAAR results similar the cumulative returns also failed to generate the significant impact on wealth of shareholder's. The CAAR of pre -5 days event observed cumulative loss, from pre-1 day CAAR has improved and showing profit zone for shareholders. After the post 7 days again CAAR slotted down to negative zone

Findings

Mean Adjusted Returns Model

- Pre Event Window of 10 (-10, -1) days shows that CAAR is -0.88% and 't' value is-0.365
- Pre Event Window of 5 (-5, -1) days shows that CAAR is -0.55% and 't' value is-0.319
- Pre Event Window of 3 (-3, -1) days shows that CAAR is -0.06% and 't' value is-0.043
- Event Window of 21 (-10, +10) days shows that CAAR is -0.80% and the 't' value is–0.23
- Event Window of 11 (-5, +5) days shows that CAAR is 0.77% and 't' value is0.303
- Event Window of 5 (-2, +2) days shows that CAAR is 1.48% and 't' value is0.865
- Event Window of 3 (-1, +1) days shows that CAAR is 1.56% and 't' value is1.117
- Post Event Window of 10 (1, +10) days shows that CAAR is -0.68% and 't' value is-0.282
- Post Event Window of 5 (1, +5) days shows that CAAR is 0.55% and 't' value is0.324
- Post Event Window of 3 (1, +3) days shows that CAAR is 0.64% and 't' value is0.278

Market Model

- Pre Event Window of 10 (-10, -1) days shows that CAAR is -0.77% and 't' value is-0.318
- Pre Event Window of 5 (-5, -1) days shows that CAAR is -0.51% and 't' value is-0.298
- Pre Event Window of 3 (-3, -1) days shows that CAAR is -0.18% and 't' value is-0.134
- Event Window of 21 (-10, +10) days shows that CAAR is -0.28% and the 't' value is–0.08
- Event Window of 11 (-5, +5) days shows that CAAR is 0.89% and 't' value is-0.315
- Event Window of 5 (-2, +2) days shows that CAAR is 1.48% and 't' value is0.865
- Event Window of 3 (-1, +1) days shows that CAAR is 1.36% and 't' value is1.029
- Post Event Window of 10 (1, +10) days shows that CAAR is -0.33% and 't' value is-0.137
- Post Event Window of 5 (1, +5) days shows that CAAR is 0.58% and 't' value is0.339
- Post Event Window of 3 (1, +3) days shows

that CAAR is 0.74% and ‘t’ value is0.321

Suggestions and Recommendations

The M&A announcements in pharmaceuticals industries in India and its impact on shareholders wealth was investigated in this study and following are the suggestions:

- The finance manager should analyze the target company in a proper manner that it should bring synergy in every aspects especially with respect to our study share holder s wealth also should be considered.
- The finance manager should study the market behavior and the performance of target companies in the share market.
- Acquiring company should have an estimations of impact on shareholder s wealth from the merger announcements before going to the actual announcements.
- In the Indian Pharmaceuticals scenario it is better if the manager think twice before going for M&A as there is no significant impact on shareholder’s wealth.
- Indian corporate announcements specially M&A announcements in the pharmaceutical should be well organized so that shareholders may be well informed to behave according to the announcements
- Indian pharmaceutical industries manager need to have a proper SWOT analysis of the M&A actions which there are going to execute.
- Study recommended a review of M&A announcements by the 39 companies of the study regarding the failure in generating significant impact on shareholder’s wealth.
- Study suggests the finance managers to come up with the M&A announcements which not only brings operational synergy also brings financial synergy especially in the form of increased shareholders wealth.

Conclusions

This study investigated M&A announcements impact on shareholder’s wealth with the special reference to pharmaceutical industries India. Total 69 announcements from the 39 companies were considered during this study to analyze the said objective. Study employed mean adjusted and Market based model of share returns in order to investigate the impact. Study used 100 days estimation period and tested impact on different event windows. Such as 21 days, 11 days, 5 days and 3 days. The AAR and CAAR found in significant in every event window under both Mean Adjuster Return model and Market Return model. After seeing results the question which arise is why Merger and Acquisition in the Pharmaceuticals companies in India take place though it fails to have a significant amount of impact on shareholder's wealth. It is fact that shareholders wealth not only is a a criteria for M&As but there are many other factors too. In conclusion , it can be stated that the article substantiates the existing literature which states that there is no significant impact of M&A announcements on shareholder's wealth on Indian Pharmaceuticals Companies.

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