Impact of M&A on Value Creation of Parmaceutical Companies: A Study of Indian Companies

Dr Shyam Chandra Gupta* and Mukesh Kumar*

Abstract

One of the defining parameter of corporate level strategy is amalgamation. Companies in this era of throat cut competition are not leaving any stone unturned to use Mergers and Acquisitions as a tool for expansion and diversification. This makes possible for the businesses to use their scarce resources in an efficient way. The competition has increased due to foreign companies entering Indian market through combinations or takeovers, pervasive marketing, policy liberalization, use of IT etc. These challenges pose and existential threat to companies and to overcome these challenges companies are going for amalgamation. This is a paradoxical situation, if handled well it may be a reason for success of business, if not can lead to potential failure of business. The present study tries to answer the important question that whether amalgamations have lead to success of business in India. The study has been carried out by analysing post merger and acquisition ratios of 6 companies in India that have gone for merger and acquisitions in Pharmaceutical industry in India. The result suggests that there is significant difference in financial performance of companies in India after merger and acquisition but the difference is not there as far as wealth creation is there.

Key Words: Merger, Acquisitions, Corporate Strategy, Restructuring

* Principal, M.R.M College Darbhanga, L. N. Mithila University, Darbhanga, Bihar, India.

** M.Com (B.H.U.) UGC-JRF, Assistant Professor, Department of Commerce, M. K. S. College, L. N. Mithila University, Darbhanga, Bihar, India, and is the corresponding author.

Introduction

Both internal and external factors affect the growth of the business. Both these factors are equally important, one defines the internal strategy whereas the other make possible for companies enter in a new geographical market or new product market. Expansion and diversifications are integral part of external growth strategies. The mergers and acquisitions are tools of expansion and diversifications. Mergers and Acquisitions are the routine work of today's corporate world and thus have taken central position in formulation of corporate strategy and public policy formulations. Survival is not easy in this competitive world without, utilizing their resources efficiently, desire to be an international brand, ensuring one's presence in the global markets, achieving economies of scale etc are some of the motives of mergers and acquisitions. To take advantage over rivals companies are going for mergers are acquisitions. But many factors define the success of merger and acquisition such as planning for smooth merger and acquisition, R&D, availability of new technology or new knowledge after merger, valuation of merger, availability of fund, feasibility study, taxation and other regulation related to merger etc. Before going for merger and acquisition, diligent planning is must otherwise it tends to fail. Of late many mergers have taken place and some of them have resulted into failure.

Review of Literature

Vanitha & Selvam (2007) explored the motives of the mergers and the performance of 17 companies after merger in manufacturing industry. They found that merging companies were taken over by companies with reputed and good management and the financial performance of many acquiring firms improved after merger. Maran (2008) investigated the performance of low sales growth firm and high sales growth firms after merger and acquisitions of companies in Malaysian context. He found that low sales growth firms tend to register higher return to shareholders in the form of wealth creation than high sales growth firms during recession. Pazarokis et al (2006) investigated the motives and financial performance mainly profitability of 50 Greek firms that have gone for merger and acquisitions. They found that profitability of the firms performed mergers and acquisitions had decreased due to merger and acquisition events. Fridolfsson & Stennek (2005) studied the impact of merger on profits and share price. They found that profits and stock price may move in opposite direction due to merger and acquisition events. They argued that if the market understood the merger dynamics, the stock price movements reflected the change in the real value of the firm; and if the merger came as a surprise, then the stock price reflected the uncertainty. Bishnoi & Devi (2015) examined the impact of merger & acquisition on financial performance of banking companies in India and found that the difference in pre merger and post merger financial performance is significant in some cases and insignificant in other cases. Lee & Lin (2010) examined the performance of merger and acquisition activities of 14 financial holding corporations in Taiwan before and after their establishment in 2002 and found weak evidence of improved performance of FHCs. Verma & Sharma (2012) examined the impact of merger and acquisition on financial performance of TATA group by taking ratios and found that there is no significant difference in ratios of TATA group. Altunbas et al (2004) investigated the motives and performance of bank mergers in Europe. They found that large and generally more efficient banks were merging with smaller and better capitalized institutions with more diversified source of income. They had also found that performances of these banks have improved. Dutta et al (1992) analysed the motives and effects of merger. They found that stock financing has an impact on shareholders wealth creation and returns to shareholders have increased due to merger. Singh (2020) examined the impact of cross border mergers and acquisitions on liquidity by taking sample of 30 Indian companies and found that there was negative impact of merger and acquisition on liquidity of companies. Duppati & Rao (2015) examined impact of outbound mergers and acquisitions on stock returns of 30 Indian companies. They found that the stock market reacted positively in short run following announcement of outbound mergers and acquisitions by Indian companies. It also showed positive result in the post acquisition period following the overseas deal. Li et al (2015) examined the impact of cross border acquisitions on value creation and found that stock prices of Chinese firms going for overseas acquisitions increased by 3-4% after announcement of acquisition. Santos et al (2008) examined the impact of cross border mergers and acquisitions by 150 USA acquirers and found that international diversifications do not destroy value. Gupta & Kumar (2023) examined the impact of merger and acquisition on financial performance of Indian companies that have gone for overseas acquisition and found that there is significant difference in performance of companies in India after M&A.

Objectives of the Study

This paper has mainly two objectives

1) To study and analyze the impact of mergers and acquisitions on financial performance of Pharmaceutical companies.

2) To study and analyze the impact of overseas mergers and acquisitions on shareholders wealth creation of Pharmaceutical companies.

Hypothesis

1) There is significant difference between pre and post merger and acquisition financial performance of company.

2) There is significant impact of merger and acquisition on wealth creation of shareholders.

Method and Data

For the purpose of analysing financial performance, profitability ratios namely gross profit ratio, net profit ratio, return on capital employed, return on net worth, liquidity ratios namely current ratio, Quick ratio and and activity ratios namely inventory turnover ratio of six companies that have gone for overseas acquisition have been taken from their financial statements and moneycontrol website. Ratios have been taken for 16-18 years from 2005-2006 to 2022-2023 depending on the year of merger and have been divided in two groups namely pre and post merger and acquisition. The financial year in which merger and acquisition completed has been taken as 0 period represented by T. Ratios prior to merger and acquisition have been taken as T-1 to T-N. Similarly ratios post merger and acquisition have been taken as T+1 to T+N. Then two tailed paired sample t-test has been calculated for each ratio of every company. The ratios of Ranbaxy and Sun pharma merger and Elder Pharma are of 16 years excluding the year of merger. The ratios of Lupin, Dr Reddy and Cipla merger are of 14 years excluding the year of merger. The ratios of Abbott merger are of 12 years excluding the year of merger.

For the purpose of analysing wealth creation of shareholders, daily stock price for these six companies have been taken from BSE website and Yahoo Finance website for all working weekdays for the period of 10 years. In case of Abbott it has been taken for lesser period. It has been divided in two groups pre and post merger each of 5 years from date of announcement of merger and acquisition represented by dummy variable 0 and 1. If there was a public holiday, then the data used was based on the day before the public holiday. Daily percentage stock returns and market returns are calculated by using daily closing price of stock less previous day closing, divided by previous day closing prices and multiplied with 100. Then it has been indexed by multiplying with hundred.

$Rit = \log(P_{t1-} P_{t-1}) / P_{t-1} *100$

Rit= Daily percentage return of stock

$P_{t1=}$ Closing value of stock index i on day t

$P_{t-1=}$ Closing value of stock index i on day t-1

In the case of a trading day following a non-trading day, the return is calculated using the closing price index of previous trading day.

Thereafter descriptive statistics have been calculated and simple linear regression has been used by taking stock return as dependent variable and merger and acquisitions as independent variables in which mergers and acquisitions are represented by dummy variables. Then log returns of stock indices were regressed on log returns of market returns and dummy variables (0 & 1 for pre and post acquisition) to obtain parameters of characteristic line, α, β(x), β(y).

Results

Table 1: Paired sample t-statistics of ratios

Company	PBIT	Net Profit Ratio	Return On Capital employed	Return on Net worth	Quick Ratio	Current Ratio	Inventory Turnover Ratio
Sun Pharma	-14.300* (p=.000)	-4.998 * (p=0. 002)	-1.943 (p=0.093)	-4.519* (p=0.003)	-5.184* (p=0.001)	-6.978* (p=0.000)	-1.688 (p=0.198)
Abbott	-1.980 (p=0.105)	-1.789 (p=0.134)	-1.989 (p=0.103)	-1.873 (p=0.120)	3.195* (p=0.024)	3.706* (p=0.014)	-2.727* (p=0.041)
Lupin Pharma	-3.676* (p=.010)	-5.059* (p=0.002)	-4.424* (p=0.004)	-5.388* (p=0.003)	2.652** (p=0.038)	2.163** (p=0.074)	-2.499** (p=0.047)
Dr Reddy	-1.141 (p=0.298)	-.733 (p=0.491)	.043 (p=0.967)	-1.401 (p=0.211)	2.398** (p=0.053)	2.698** (p=0.036)	-2.539** (p=0.044)
Torrent	1.778 (p=0.119)	.304 (p=0.770)	-.333 (p=0.749)	-2.218** (p=0.062)	-1.780 (p=0.118)	-1.351 (p=0.219)	-2.724** (p=0.030)
Cipla	.483 (p=0.646)	.218 (p=0.835)	.036 (p=0.973)	-5.029* (p=0.002)	2.222** (p=0.068)	2.590** (p=0.041)	-.483 (p=0.646)

*Significant @ 5% level of Significance, since calculated value> 2.365 at 7 DoF, calculated value> 2.447 at 6 DoF and calculated value> 2.571 at 5 DoF or p value <0.05

** Significant @ 10% level of Significance, since calculated value> 1.895 at 7 DoF, calculated value> 1.943 at 6 DoF and calculated value> 2.015 at 8 DoF or p value <0.100

Based on 16,14 and 12 years data (divided in pre and post acquisition data)

Table 1 gives t-statistics of acquiring company. In most of the cases there is significant difference between pre and post merger financial performance of acquiring companies. In many cases the t-statistics are negative means it has affected companies adversely. In case of Sun Pharma, there is significant impact @ 5% level of significance on all parameters except inventory turnover ratio. In case Abbott, there is significant impact @ 5% level of significance on liquidity ratios and inventory turnover ratio. In case of Lupin Pharma, there is significant impact @ 5% level of significance on PBIT, net profit ratio, return on capital employed, return on net worth and @10% on current ratio, quick ratio and inventory turnover ratio. In case of Dr Reddy, there is significant impact @ 10% level of significance current ratio, quick ratio and inventory turnover ratio. In case of Torrent, there is significant impact @ 10% level of significance on return on net worth and inventory turnover ratio. In case of Cipla, there is significant impact @ 5% level of significance on return on net worth and @10% on quick ratio and current ratio. Since there is significant mean difference in financial performance of companies in most of the cases, the first research hypothesis is accepted and null hypothesis is rejected.

Table 2: Descriptive Statistics of percentage daily stock returns

Statistics	Sun Pharma	Abbott	Lupin	Dr Reddy	Torrent	Cipla
Mean	-0.0219	-0.2021	-0.0502	-.0477	-0.1514	-0.0480
Std. Deviation	2.64956	2.16066	1.79338	1.62626	1.88689	1.66225
Variance	7.020	4.668	3.216	2.645	3.560	2.763
Skewness	13.791	-2.744	0.133	0.405	-0.445	-0.573
Kurtosis	383.496	17.685	6.478	5.521	2.661	4.544
Minimum	-12.18	-16.36	-13.26	-9.73	-10.08	-13.04
Maximum	79.99	5.35	16.88	14.56	10.13	8.83

Table 2 gives descriptive statistics of percentage daily stock return. It is evident from table all companies have negative mean return with high standard deviation and variance. Variance measures variability of return or risk. Therefore it can be concluded that in most of the cases yield capital gain is negative with high risk. This is again reflected by minimum and maximum, the difference of minimum and maximum is quite high in m most of the cases

Regression is used to judge causal relationship between two or more variables. Similarly this article tries to investigate the relationships between one independent variables namely merger and acquisition and one dependent variable that is stock return or shareholders wealth creation. That's why linear regression has been used.

Table 3: Model Summary

Company (b dependent variable)	*Ra*	R Square	Adjusted R Square	Std. Error of the Estimate
Ranbaxy and Sun Pharma	.008(a)	.000	.000	2.65001
Abbott and Parimal	.082(a)	.007	.001	2.15951
Lupin Pharma	.051(a)	.003	.002	1.79146
Dr Reddy	.025(a)	.001	.000	1.62608
Torrent	.014(a)	.000	.000	1.88708
Cipla	.015(a)	.000	.000	1.66239

a Predictors: (Constant), Merger

Table 4: ANOVA

Company (b dependent variable)		Sum of Squares	df	Mean Square	F	Sig.a
Sun Pharma	Regression	1.116	1	1.116	0.159	0.690(a)
	Residual	17401.897	2478	7.023		
	Total	17403.013	2479			
Abbott	Regression	5.550	1	5.550	1.190	0.277(a)
	Residual	825.436	177	4.663		
	Total	830.986	178			
Lupin Pharma	Regression	20.321	1	20.321	6.332	0.012(a)
	Residual	7943.059	2475	3.209		
	Total	7963.380	2476			
Dr. Reddy	Regression	4.097	1	4.097	1.549	.213(a)
	Residual	6528.373	2469	2.644		
	Total	6532.469	2470			
Torrent	Regression	1.745	1	1.745	0.490	0.484(a)
	Residual	8806.547	2473	3.561		
	Total	8808.292	2474			
Cipla	Regression	1.625	1	1.625	0.588	0.443(a)
	Residual	6842.498	2476	2.764		
	Total	6844.124	2477			

a Predictors: (Constant), Merger ,b Dependent Variable: Indexed stock return

Table 5: Coefficients

Company (b dependent variable)		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
Sun Pharma	(Constant)	-0.043	0.075		-0.573	0.566
	Merger	0.042	0.106	0.008	0.399	0.690
Abbott	(Constant)	-0.379	0.229		-1.656	0.099
	Merger	0.352	0.323	0.082	1.091	0.277
Lupin Pharma	(Constant)	-0.140	0.051		-2.763	0.006
	Merger	0.181	0.072	0.051	2.516	0.012
Dr. Reddy	(Constant)	-0.088	0.046		-1.912	0.056
	Merger	0.081	0.065	0.025	1.245	0.213
Torrent	(Constant)	-0.178	0.054		-3.321	0.001
	Merger	0.053	0.076	0.014	0.700	0.484
Cipla	(Constant)	-0.073	0.046		-1.567	0.117
	Merger	0.051	0.067	0.015	0.767	0.443

a Dependent Variable: Indexed stock return

The objective of the regression analysis is to determine causal relationship between independent variable which is merger and acquisition represented by dummy variable on stock return. The model summary in table 3 suggests that adjusted R-square is low in case of all companies suggesting low variance in the dependent variable is explained by independent variable. The result of ANOVA indicates that the regression analysis does not explain significant variation in the variable using F test. The P value of F test is more than 0.05 for all companies. Table 5 indicates that merger and acquisition is not significantly affecting the company's stock return as its P value is more than 0.05. Which are 0.690 for Sum Pharma, 0.277 for Abbott Pharma, 0.012 for Lupin Pharma, 0.213 for Dr Reddy, 0.484 for Torrent Pharma and 0.443 for Cipla . Since there is no significant impact of merger and acquisition represented by dummy variables on stock return the third research hypothesis is rejected and null hypothesis is accepted at 5% level of significance.

Conclusion

This research investigates the impact of mergers and acquisitions on financial performance of companies. In the beginning mean difference of ratios were presented in order to understand the operational efficiency and financial health of companies. In most of the cases, significant impact of merger and acquisition is there. In many cases it has negatively impacted the performance of companies. In case of Torrent the impact is lesser but in all other cases it has severely impacted the performance. If we talk of wealth creation of shareholders, the impact is not there of merger and acquisitions. The findings of the research are in conformity with the many researchers that it affects the overall profitability and efficiency of the firms but it may or may not lead to shareholders wealth creation as many others factors affect stock prices. The study suggests that some other variables might also have impacted the outcome and further study can be conducted by taking more independent variables and longer period.

References:

1) Vanitha, S and Selvam M. “Financial Performance of Indian Manufacturing Companies During Pre and Post Merger” *International Research Journal of Finance and Economics*, Issue 12 (2007), Pages 7-35.

2) Marimuthu, Maran. “Mergers and Acquisitions: Some Empirical Evidence on Performance, Financial Characteristics and Firm Sustainability” *International Journal of Business and Management*, Vol 3, No 10 (October 2008), Pages 8-15

3) Pazarskis, Michail, Vogiatzogloy Manthos, Christodoulou Petros and Drogalas George. “Exploring the Improvement of Corporate Performance After Mergers- A Case of Greece” *International Research Journal of Finance and Economics*, Issue 6 (2006), Pages 184-192.

4) Fridolfsson, olof, and Stennek Johan. “Why Mergers Reduce Profits and Raise Share Prices- A Theory of Pre-emptive Mergers” *Journal of the European Economic Association*, Vol.3. No 5 (2005), Pages 1083-1104.

5) Bishnoi, T. R. and Devi Sofia. “Mergers and Acquisitions of Banks in Post- Reform India.” *Economic and Political Weekly*, Vol 50, No 37 (Sep 12, 2015), pages 50-58

6) Lee, Hung-Ta and Lin Chuang-Yuang. “The Bigger the Better? Merger and Acquisition Performance of Financial Holding Corporations; Empirical Evidence from Taiwan.” *Emerging Markets Finance & Trade*, Vol 46, No 1 (Jan- Feb, 2010), pages 96-107

7) Verma, Neha & Sharma Rahul. “Impact of Mergers and Acquisitions on Financial Performance : With Special Reference to TATA Group.” *International Journal of Research in Commerce and Management*, Vol No 3, Issue 7 (July 2012), pages 140-143

8) Altumbas, Yener and Ibanez David. “Mergers and Acquisitions and Bank Performance in Europe:- The Role of Strategic Similarities” *European Central Bank*, 2004.

9) Dutta, Deepak K, Pinches E George and Narayanan V K. “Factors Influencing Wealth Creation from Mergers and Acquisitions: - A Meta Analysis” *Strategic Management*, Vol. 13, No 1 (1992), Pages 67-84.

10) Singh, Dr Sashmita. “Do Outbound Mergers and Acquisitions Affect Liquidity of the Acquirers: A Study of Indian Acquiring Firms.” *Indian Journal in Management and Social Science*, Volume 08, Issue 02 (Feb 2020).

11) Duppati, Geeta Rani & Rao Narendar V. “Cross-border mergers and acquisitions: Mature markets vs. emerging markets—with special reference to the USA and India.” *Cogent Business & Management*, (2015), Pages 1-11.

12) Li, Jiatao, Li Peixin & Wang Baolian. “Do cross-border acquisitions create value? Evidence from overseas acquisitions by Chinese firms.” *International Business Review*, 1243 (2015), Pages 1-13.

13) Santos, Marcelo B. Dos, Errunza Vihang R. & Miller Darius P. “Does corporate international diversification destroy value? Evidence from cross-border mergers and acquisitions.” *Journal of Banking & Finance*, 32 (2008), Pages 2716-2724.