

Synopsis of Thesis:

Research Topic

“A STUDY ON ANALYSING INDIAN MERGERS & ACQUISITIONS AND ITS IMPACT ON FINANCIAL PERFORMANCE OF SELECTED CORPORATES IN INDIA”.

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Abstract

Merger and acquisition were introduced to India after the post liberalisation period and today there are hundreds of deals happening in India every year. This makes mergers and acquisitions an interesting study as today it has become one of the main strategies for expansion and growth. The study takes a comprehensive analysis on mergers and acquisitions, by analysing them from three angles. The first angle attempts to find out the impact of merger and acquisitions on the financial performance of selected companies who have undertaken mergers and acquisitions during the years of 2000 to 2012. The performance of companies in pre and post merger period has also been compared with the peer group companies through the use of industry adjusted variables. Tools like Wilcoxon Signed Rank Test, Kruskal Wallis Test, ANCOVA and multiple regression models have been used to support the analysis. The second angle is attempting to find out if the stock market performance of the entities undergoing mergers and acquisition have improved or otherwise in the long run period (through CAR and BHAR). Thus the attempt being to find out if the merger has helped in increasing the long run returns of shareholders. The third angle tries to examine if the macro economic factors in the country have their impact on post merger operating performance of firms. There by trying to find out if the timing of the merger that is in what economic circumstances the merger has taken place have an impact on its financial success or failure. A panel regression model has been used to support the analysis.

The study finds that over all, mergers slows the growth rate of operating performance post the merger as compared to its industry counterparts, significantly slows the long run CAR and BHAR and the operating performance is influenced by macro economic factors as there is a significant impact of returns on stock index on post merger operating profit margins.

This PhD Thesis would be useful in understanding the impact of mergers on operating performance, stock price performance and understanding role of macroeconomic factors on post merger operating performance thereby aid in enabling various stakeholders associated with mergers and acquisitions to make better decisions.

State of the Art of the Research topic:

The literature review of the study is theme based as the study tries to analyse merger and acquisitions from three angles. Thus the first part of past work and research done on mergers and acquisitions comprises of studies that have tried to analyse the impact of mergers on financial performance of companies. Many studies in the past have used accounting values and ratios for comparing the pre and post merger scenario (Neena and Sinha (2010); Vanitha and Selvam (2007); Leepsa and Chandrashekhar, 2012; Mantravadi and Reddy, 2010). Some studies have tried to take a different take on mergers and acquisitions. Prajapati (2010) compared the post merger returns of forced mergers and voluntary mergers (of banks) during the period of 1993 - 2007. Beena (2008) also analysed 115 acquiring companies (MNCs) over 1995-2000 in India. Mantravadi and Reddy (2008) analysed 64 horizontal mergers, 8 vertical mergers and 24 conglomerate mergers separately. Beena (2006) analysed 64 mergers of pharmaceutical sector in the post liberalisation period by comparing the post merger performance of companies undertaking mergers with that of their counterpart companies not undertaking mergers. Pawaskar (2001) also compared merging and non-merging entities, but not pertaining to any particular sector, over a period of 1992-95. Sabu and Gopi (2009) did a comparison between domestic and cross border acquisitions. In yet another study, Mantravadi and Reddy (2007) analysed the impact of relative size of target entity on the post merger performance. Then, there have been studies that have used industry adjusted parameters where the industry median is subtracted from the sample firm value. One of the most referred studies on this is by Healy et.al (1990) where they used industry adjusted cash flow returns to measure the impact of M&As. Ramakrishnan (2008) conducted a study of 87 mergers during 1996-2002, and ran a regression between pre and post merger figures of cashflows, operating margin and turnover which were industry adjusted. There have been studies conducted where various factors affecting post merger performance have been analysed. Ramaswamy and Waegelein (2003) used parameters like Pre and Post Median Industry Adjusted Operating Cash Flow Return, Difference Between Post & Pre Operating Cash Flow Returns, SIZE (target to acquiring firm), PLAN (performance plans to managers and Employees), PAY (Cash or Stock), Host (Hostile or friendly), IND (same or different industry), YEAR (before or after 1982). Other studies that have analysed factors affecting post merger performance are Datta et al,1992; Pradhan and Abraham, 2003; Kar and Soni, 2008; Janki, 2010; Pulak and Neha, 2012.

The studies understanding the impact of merger on stock market performance have largely been on event window analysis where the impact of merger is seen on stock prices through Cumulative Abnormal Returns on or around announcement dates (Bhabra and Huang, 2013; Mou wu, 2009 and Feito and Menendez, 2008) Alexandridis et al. (2007) examined the gains from mergers and acquisitions around the world. Study analysed 4577 companies in 39 countries during the period of 1990-2007. Jose and Yun Chu (2009) studied abnormal returns to mergers and acquisitions in ten Asian stock markets. Chakrabarty

(2008) also pointed some analysis on pre and post merger market price changes along with long run impact of mergers on stock market reforms. The long-term post-acquisition performance (relative to the market index) is positive as well but considerably worse than the pre acquisition performance.

The third section of past studies talks about the impact of macroeconomic factors mergers and acquisitions. Calderon et al. (2004) did a study of Greenfield foreign direct investment and its macroeconomic effects in 72 countries. They found out that higher M&A FDI lead to higher Green field investment, particularly in developing countries. Rossi and Volpin (2004) also analysed cross country determinants of mergers in 42 countries over the period of 1991-2002. Uddin & Boateng (2011) investigated the role of macroeconomic influences on cross border M&As in the UK over the 1987–2006 period. Khaja (2013) assessed the impact of FDI on the performance measures of select FDI-based pharmaceutical firms of India, there by projecting impact of a macroeconomic factor on corporate performance. Grave et al. (2012) tried to know how the effects of the global financial crisis are uncovering new M&A targets, and changing the related acquisition process and integration activities by conducting surveys. Beltratti & Paladino (2013) attempted to study abnormal stock returns to acquirers in the banking sector during the credit crisis. Shu et al. (2013) examined the role of macroeconomic information in forecasting U.S. firms earnings from 1962 to 2009. Sen (2012) tried to correlate the acquisitions in India with that of the stock exchange. Bhaumik & Selarka (2012) examined the impact of ownership concentration on post-M&A performance of firms through the use of panel data model.

Definition of the problem

The study aims at analysing a comprehensive outlook of mergers and acquisitions. Do mergers and acquisitions have significant impact on the post merger financial performance as compared to the pre merger performance? Do mergers and acquisitions affect different sectors differently? Do they perform better or otherwise as compared to their industry counterparts? Do mergers improve the long run returns for the shareholders? Do the macro economic factors have a part to play in post merger performance of firms? These are the questions attempted to be analyzed in the study.

Objective and Scope of Work

- 1) Analysing the impact of merger on post merger operating performance of selected listed (acquiring) companies of different sectors undertaking mergers.
- 2) Analysing the impact of merger on post merger long run market price return of the selected listed (acquiring) companies of different sectors undertaking mergers.
- 3) Analysing the impact of external macro economic factors on the post merger operating performance.

Original Contribution by the thesis

- The following models are attempted to be applied after checking for assumptions. Their detailed explanation is given in the analysis part:

- **ANCOVA Model:**

$$POST_OP = \beta_1 + \beta_2 PRE_OP + \beta_3 DIFF_TURN - \beta_4 DIFF_OP_EXP + \beta_5 D1 + \beta_6 D2 + \beta_7 D3$$

- **Multiple Regression Model:**

$$Post_OP_Margin = \beta_1 + \beta_2 Pre_OP_Margin + \beta_3 Diff_OE_ratio + \beta_4 Diff_turnover$$

- **Panel Data Model:**

$$PO_OP_Margin_{it} = B_1 + B_2 GDP_{it} + B_3 INT_{it} + B_4 INF_{it} + B_5 SENSEX_{it} + w_{it}$$

Methodology of Research, Results / Comparisons

Sample of Study:

The study examines the impact of mergers on operating performance of selected firms of four different sectors. These sectors are selected on the basis of top four sectors that have witnessed maximum mergers and acquisitions during the period of 1992 to 2012. These sectors are Non-Financial Services (1259 deals), Chemicals (682 deals), Food and Beverages (428 deals) and Textiles (247 deals) with the brackets indicating the number of deals. It should also be noted that the financial services sector has been excluded as the framing of financial statements of financial services is different from other companies and hence comparison would have been inappropriate.

A sample of 151 companies is selected from the above deals after the following filtration process:

Under filtration process, deals included in the sample are all deals which are:

- Done by publicly listed firms,
- Done by companies which feature in the BSE-Industry Watch (excluding deals within the same group of companies and deals coinciding with other mergers done during pre/post 2 years from the date effective date of merger)
- Due to lack of availability of historical financial statements from the source – moneycontrol.com, the deals prior to the year 2000 have been excluded.

Objective: 1

Sample and period of study

The sample consists of *151 companies and 6 comparable companies* for each company, thus around *906 companies* have been analysed. The period of the study is *1997 to 2015* (for objectives 1 and 2) and *2000 to 2016* (for Objective 3) where deals during the period of 2000-2011 have been analysed. Out of the 151 companies that have been observed along with 6 comparable industry companies for each company, for the sake of performing Wilcoxon signed rank test, some companies found as outliers have been separated and studied separately later. This has been done to meet the assumptions of normality and symmetrical data for performing Wilcoxon signed rank test respectively. Kruskal Wallis test and regression analysis have also been performed on the same sample. Following are the results of the same:

1.1.) Does pre and post operating performance differ significantly? : Results of Wilcoxon Signed Rank Test and Paired-T test:

Operating performance have been analysed for pre merger and post merger by taking three years post and three years pre data from the year of merger. The parameters studied for the same are

- 1.) Operating profits (Individual and Industry Adjusted)
- 2.) Turnover (Individual and Industry Adjusted)
- 3.) Operating expenses (Individual and Industry Adjusted)
- 4.) Operating Profit Margin (Individual and Industry Adjusted)
- 5.) Operating Expense Ratio (Individual and Industry Adjusted)

Nature of parameters: The attempt is to find out difference between post merger period and pre merger period in terms of its operating performance and how significant the difference is? Also, it is attempted to find out if there is a difference in the industry adjusted parameters when compared during post merger and pre merger period. Industry adjusted parameters are found out by subtracting the industry median from the value of sample firm parameter. The industry median is the median value of parameters of six comparable firms for each sample firm. These six companies are immediately comparable firms as per turnover as per the BSE industry watch.

Values Observed: The change in operating performance in the post merger period as compared to the pre merger period is observed in terms of the percentage growth during 3 years post and 3 year pre the merger as well as in terms of growth in crores of rupees during 3 years post and 3 years pre merger.

Methodology: To find out if there is significant change in operating performance of firms in post merger period as compared to pre merger period, Wilcoxon Signed Rank test is performed wherever data is found out to be non-normal. The assumptions of Wilcoxon Signed Rank test have been satisfied before performing the same.

Results:

Parameter	Results of Wilcoxon Signed Rank Test	
	Individual	Industry Adjusted
Operating Profit	Negative	Negative
	(0.05)**	-0.11
Turnover	Negative	Negative
	(0.03)**	-0.196
Operating Expenses	Negative	Positive
	-0.123	-0.25
Operating Profit Margin	Negative	Negative
	-0.19	(0.001)***
Operating Expense Margin	Negative	Positive
	(0.10)*	(0.00)***

(***significant at 1%, **significant at 5%, * significant at 10%)

In the above table, positive means where the post merger value is more than the pre merger value for the given parameter. Thus, it can be observed that the merger has got a negative impact on most of the above parameters except for industry adjusted operating expenses and operating expense ratio.

1.2.) Outliers Analysis:

For each of the above variables, outliers have been separately assessed, so that they do not affect the results of the data. Usual practice generally avoids the outliers from the study, but in a study where the impact of merger is to be analysed on firms, further studying the outliers can bring out some revelations. Wilcoxon signed rank test is applied on these outliers to measure if there is a significant impact on merger on the firms. The results of the same are as under:

Parameter	Results of Wilcoxon Signed Rank Test	
	Individual	Industry Adjusted
Operating Profit	Positive	Positive
	-0.15	(0.04)**
Turnover	Negative	Negative
	(0.01)**	(0.00)***
Operating Expenses	Positive	Positive
	(0.00)***	(0.00)***
Operating Profit Margin	Negative	Negative
	-0.28	-0.86
Operating Expense Margin	Positive	Positive
	(0.07)*	(0.03)**

(***significant at 1%, **significant at 5%, * significant at 10%)

Unlike the results of the remaining sample, in case of outlying firms the merger has had a significant impact on all parameters except that of operating profit margins. Thus merger for these firms have had a significant impact on these firms. Also the results of industry adjusted variables show that the mergers have lead to a significant change in the firms as compared to their peer group firms. Also, the above results also hint at the fact that mergers have lead to higher savings of operating expenses as compared to their peer companies and lower turnover as compared to their peer group companies. And hence the overall profit margins are down. The same fact is confirmed by multiple regression analysis.

1.3) Does pre and post operating performance differ significantly sector wise? : Results of Kruskal

Wallis test:

The parameters, nature of parameters, values observed are same as above, but the same parameters are also tested for sector wise differences using Kruskal Wallis test.

Table: Comparing pre and post merger performance sector wise in terms of **Operating Profit**

		Median				Kruskal Wallis
		Food and Beverages	Textiles	Chemicals	Non-Financial Services	Significance Value
Post Merger	Growth (%)	35.63	69.18	23.70	3.96	0.03**
	Industry Adjusted Growth (%)	-22.26	13.89	-12.39	-7.36	0.41
	Growth (Rs.)	14.65	8.785	4.48	0.13	0.016**
	Industry Adjusted Growth (Rs.)	6.22	3.48	-2.88	0.37	0.011**
Pre Merger	Growth (%)	76.05	20.82	31.05	38.51	0.54
	Industry Adjusted Growth(%)	29.90	5.83	-7.31	8.58	0.61
	Growth (Rs.)	7.02	1.67	2.68	0.87	0.49
	Industry Adjusted Growth (Rs.)	5.43	-0.16	-0.34	-0.04	0.079

Table: Comparing pre and post merger performance sector wise in terms of **Operating Profit Margins**

		Median				Kruskal Wallis
		Food and Beverages	Textiles	Chemicals	Non-Financial Services	Significance Value
Post Merger	Operating Margins	14.2425	9.5867	10.9704	20.5664	0.0004***
	Operating Margins (Industry Adjusted)	3.049	-0.9097	-4.0534	2.0341	0.084*

Pre Merger	Operating Margins	12.2833	10.8388	12.3833	20.0641	0.001***
	Operating Margins (Industry Adjusted)	5.2818	1.277	-0.3604	3.3209	0.378

Table: Comparing pre and post merger performance sector wise in terms of Turnover

		Median				Kruskal Wallis
		Food and Beverages	Textiles	Chemicals	Non-Financial Services	Significance Value
Post Merger	Growth (%)	27.42	22.93	24.73	6.29	0.69
	Industry Adjusted Growth (%)	-0.05	-4.65	-1.78	-1.06	0.79
	Growth (Rs.)	42.15	90.27	21.10	0.39	0.02**
	Industry Adjusted Growth (Rs.)	27.80	2.72	-16.76	0.98	0.02**
Pre Merger	Growth (%)	24.08	11.11	32.52	52.22	0.30
	Industry Adjusted Growth (%)	-0.51	-3.31	1.94	5.54	0.73
	Growth (Rs.)	13.16	7.18	31.11	5.13	0.15
	Industry Adjusted Growth (Rs.)	1.15	-3.39	0.81	1.24	0.94

Table: Comparing pre and post merger performance sector wise in terms of **Operating Expenses**

		Median				Kruskal Wallis
		Food and Beverages	Textiles	Chemicals	Non-Financial Services	Significance Value
Post Merger	Growth (%)	22.25	31.57	29.86	25.41	0.70
	Industry Adjusted Growth(%)	0.24	-4.12	-1.61	-3.02	0.99
	Growth (Rs.)	90.03	65.22	21.35	4.94	0.10*
	Industry Adjusted Growth (Rs.)	6.79	0.79	-3.11	1.03	0.44
Pre Merger	Growth (%)	16.26	13.73	35.24	35.45	0.65
	Industry Adjusted Growth(%)	-11.23	-6.84	-1.08	-3.82	0.97
	Growth (Rs.)	16.58	22.97	19.34	4.59	0.05**
	Industry Adjusted Growth (Rs.)	-2.62	-1.33	-1.35	-0.34	0.97

Table: Comparing pre and post merger performance sector wise in terms of **Operating Expense Ratio**

		Median				Kruskal Wallis
		Food and Beverages	Textiles	Chemicals	Non-Financial Services	Significance Value
Post Merger	Operating Expense Ratio	87.03	92.12	90.74	79.62	0.0030** *
	Operating Expense Ratio (Industry Adjusted)	-12.89	-4.27	-3.61	-4.44	0.04**
Pre Merger	Operating Expense Ratio	88.21	91.64	90.17	80.23	0.003***
	Operating Expense Ratio (Industry Adjusted)	-7.34	-1.55	1.53	-4.91	0.02**

Results:

It can be observed that all the post-pre merger performance parameters are not significantly different for different sectors. Thus the change in post merger performance as compared to pre merger is not affected by the sector to which the firm belongs. However, when only post merger performance is evaluated, the operating profit growth, operating margins, turnover in crores, operating expense in crores, operating expense ratio differ significantly as per sectors.

1.4) Regression Analysis:

ANCOVA Model on Post Merger Operating Profits

Methodology and result:

By incorporating control variables as Pre merger operating profits, Difference between pre and post merger-Sale/turnover, Difference between pre and post merger-Operating expenses, the result of ANOCOVA model indicates that post merger performance of textile sector significantly differ from other sectors.

$$POST_OP = -14.67 + 0.68PRE_OP + 0.17DIFF_TURN - 0.12DIFF_OP_EXP + 17.73D1 + 28.99D2 + 6.69D3$$

$$Se = (7.13) \quad (0.08) \quad (0.03) \quad (0.02) \quad (15.18) \quad (12.02) \quad (9.64)$$

$$t = (-2.05) \quad (8.07)^* \quad (5.34)^* \quad (-4.59)^* \quad (1.17) \quad (2.42)^* \quad (0.69)$$

$$R^2=0.38, \quad F\text{- Stat}= 15.04 (0.00), \quad \text{Durbin-Watson}=2.2$$

[*indicates p values of less than 0.05]

POST_OP = Post merger-Operating Profits (Growth over 3 years in crores), industry adjusted

PRE_OP = Pre merger-Operating Profits (Growth over 3 years in crores), industry adjusted

DIFF_TURN = Difference between pre and post merger-Sale/turnover (Growth over 3 years in crores), industry adjusted.

DIFF_OP_EXP = Difference between pre and post merger-Operating Expenses (Growth over 3 years in crores), industry adjusted

d1 = 1 if the firm is in Food and Beverages Sector, 0 otherwise

d2 = 1 if the firm is in Textiles, 0 otherwise

d3 = 1 if the firm is in Chemicals, 0 otherwise

[Note: the dummy for Non-Financial Service Sector is taken as the benchmark or omitted category]

Multiple Regression Model on Post Merger Operating Profit Margin

Methodology and result:

A the results of the Willcoxon signed rank tests reveal that mergers help in reducing operating expenses significantly, but fails to increase turnover significantly, the impact of the same is tested on post merger operating profits margin, to confirm the same conclusion. Also, the impact of pre merger operating profits margin is checked on post merger margins, to check if merger helps in turning around the firms or not. The results confirm all the above aspects.

$$\text{Post_OP_Margin} = \beta_1 + \beta_2 \text{Pre_OP_Margin} + \beta_3 \text{Diff_OE_ratio} + \beta_4 \text{Diff_turnover}$$

$$\text{Post_OP_Margin} = -6.58 + 0.11 \text{Pre_OP_Margin} - 0.09 \text{Diff_OE_ratio} + 0.05 \text{Diff_turnover}$$

$$\text{SE} = (2.75) \quad (0.05) \quad (0.03) \quad (0.08)$$

$$t = (-2.39) \quad (2.51) \quad (-3.2) \quad (0.49)$$

$$p \text{ values} = (0.02) \quad (0.01) \quad (0.00) \quad (0.62)$$

$$F\text{-Stat} = 3.54 \text{ (p-value=0.02)}, \quad \text{Durbin-Watson} = 2.13$$

Where,

Post_OP_Margin = Post three years average industry adjusted operating profit margin

Pre_OP_Margin = Pre three years average industry adjusted operating profit margin

Diff_OE_ratio = Average of Post three years operating expense ratio minus Average of pre three years operating expense ratio

Diff_turnover = Ratio of post three years turnover growth upon pre three years turnover growth.

Objective: 2

The objective measures the long run post merger return on stock prices of the acquiring entity to know whether mergers succeed in providing long run returns to shareholders. Again, as the results of financial data indicate that the growth in post merger period operating performance is lower in the post merger period as compared to the pre merger period, the same results are found in terms of value to shareholders. Cumulative abnormal returns (CAR) and BHAR (Buy and Hold Abnormal Returns) on log returns have been found out for a period of 12 months, 24 months and 36 months before and after merger and following are the results of paired t-test:

	Cumulative Abnormal Return- Food and Beverages Sector			Buy and Hold Abnormal Return- Food and Beverages Sector		
	12 months CAR	24 months CAR	36 months CAR	12 months CAR	24 months CAR	36 months CAR
Pre Mean	26.47	5.66	-1.94	1.07	0.93	1.03
Post Mean	-14.80	-3.43	-14.41	0.85	0.85	0.55
DF	10	12	12	12	12	12
Sig.	0.00	0.69	0.67	0.07	0.74	0.36

	Cumulative Abnormal Return- Textiles Sector			Buy and Hold Abnormal Return- Textiles Sector		
	12 months CAR	24 months CAR	36 months CAR	12 months CAR	24 months CAR	36 months CAR
Pre Mean	23.62	28.42	20.49	1.16	0.93	0.72
Post Mean	-2.95	-50.32	-70.54	0.95	0.55	0.42
DF	19	19	18	19	15	15
Sig.	0.28	0.02	0.03	0.45	0.04	0.07

	Cumulative Abnormal Return- Chemicals			Buy and Hold Abnormal Return- Chemicals		
	12 months CAR	24 months CAR	36 months CAR	12 months CAR	24 months CAR	36 months CAR
Pre Mean	13.29	15.71	16.73	0.95	0.92	0.81
Post Mean	-27.89	-19.09	-31.63	0.96	0.74	0.58
DF	37	39	39	37	37	39
Sig.	0.05	0.02	0.02	0.97	0.20	0.20

	Cumulative Abnormal Return- Non-Financial Services			Buy and Hold Abnormal Return- Non-Financial Services		
	12 months CAR	24 months CAR	36 months CAR	12 months CAR	24 months CAR	36 months CAR
Pre Mean	-2.59	25.53	2.72	1.02	1.02	0.83
Post Mean	-37.69	-82.86	-76.25	0.74	0.41	0.35
DF	35	35	35	35	35	32
Sig.	0.10	0.00	0.02	0.12	0.01	0.01

	Cumulative Abnormal Return- All Firms			Buy and Hold Abnormal Return- All Firms		
	12 months	24 months	36 months	12 months	24 months	36 months

	CAR	CAR	CAR	CAR	CAR	CAR
Pre Mean	14.96	18.91	13.82	0.97	0.95	0.78
Post Mean	-8.70	-36.85	-43.30	0.87	0.61	0.52
DF	102	102	101	92	92	91
Sig.	0.00	0.00	0.00	0.16	0.00	0.00

Objective: 3

Since, the financials of firms do not tend to improve in post period as compared to pre merger period, there has to be more than internal factors affecting a firm's performance and hence external factors must be analysed. Hence, the attempt is to analyse if the macro economic scenario in the country has an influence over the post merger operating performance. This phenomenon is attempted to be tested by using panel data analysis. The use of panel data is helpful as it analysis the cross section effect as well as time effect.

Panel Description:

The formation of the panel is made taking 111 firms who have undertaken mergers or acquisitions during the period of 2000 to 2012 as cross section units and for each firm (or cross section unit) 5 years post the merger year are taken as time period, making the period of the study as 2000 to 2017. Thus, number of observations are 555.

Methodology and Results:

The impact of economic factors on the post merger performance is explained through panel model. The post merger performance is explained through Post Merger Operating Profit Margins and is taken as dependent variable. The macroeconomic factors are taken as GDP, Interest Rate, Inflation rate-CPI and SENSEX Returns. The results of the model are analysed after checking the unit root test or stationarity of variables and after checking the appropriateness of random effects model through Hausman Test.

$$PO_OP_Margin_{it} = B_1 + B_2GDP_{it} + B_3INT_{it} + B_4INF_{it} + B_5SENSEX_{it} + w_{it}$$

Post Merger Operating Profit Margin				
		<i>p-value</i>	<i>t-stat</i>	<i>s.e</i>
GDP	0.65	0.37	0.90	0.72
Interest Rate	2.07	0.07	1.80	1.15
Inflation-CPI	-0.54	0.33	-0.98	0.56
SENSEX	0.11	0.02	2.38	0.04

F-Statistics	2.52	0.04
No. of firms	111	
No. of Observations	555	

The *third objective* attempted at analysing the fact that do macroeconomic factors affect the performance of firms. The focus was to know do mergers really perform better during the years of better macroeconomic factors. The results of Panel Data Model find REM (Random effects model) as the appropriate model. As per the same, GDP growth in the post five years period has had an insignificant impact on post five years operating margins of acquiring entities. Thus acquisition deals have not necessarily lead to significantly higher operating margins during the years of higher GDP growths. SENSEX is observed to have a significant and positive impact on operating profits margins as per random effects model. The reason SENSEX is used as measure of economic prosperity and hence can be positively linked with operating profits. Inflation has an insignificant impact on operating profits margin. Higher prices would lead to higher production cost and hence would negatively affect the profit margins. However the negative association is not found to be significant as per random effects model. Interest rate has an insignificant impact, probably as these are operating margins which exclude the interest cost. Ultimately, from among the macroeconomic parameters, only SENSEX returns have had a significant impact on post merger operating profit margins. The panel data model of random effects is tested significant as per the f – statistic and have been employed after testing of non-presence of unit root and non-presence of correlation among its parameters and after the application of Hausman test.

Achievements with respect to objectives

Under the *first objective*, operating performance tend to decrease in the post merger period at individual level as well as when compared with their peer group companies. This decline is found significant for operating profits, turnover and operating expense ratio and insignificant for operating profit margins and operating expenses. This is in tune to the past studies Pawaskar, 2001; Vanitha & Selvam , 2007, Beena, 2008; Mantravadi and Reddy, 2008; Mantravadi and Reddy, 2010; Leepsa and Chandrashekhar, 2012 and Vanitha and Selvam, 2007. As far past studies that have used industry adjusted variables, the results have been positive (Healy et al. 1990; Ramaswamy and Waegelein, 2003 and Ramakrishnan, 2008). The reasons for contrast in results can be that these studies have used industry adjusted cash flow and margins, and have been performed outside India, except for Ramakrishnan, 2008. But the time period of this study is 1996 to 2002, which is much before the time period of this study.

It has been found that the merger has had a negative impact on growth in turnover when compared with industry. But, the industry adjusted operating expenses and operating expense margins have had a positive and statistically significant impact of merger as there is a reduction in growth of operating expenses and operating

expense margin in post merger period. Hence, these firms have somehow overestimated the deal in terms of the turnovers that the combined firm will be able to generate and that had lead to a negative impact of the deal on final operating margins. And the same has been confirmed through the multiple regression model.

The results of the *second objective* indicate that post merger CAR and BHAR show a negative impact of merger as they have reduced in the post merger period as compared to the pre merger period. In the Indian context there have been lesser studies of long run impact of stock price performance of acquiring firms. Anand and Singh (2008) analysed CARs of five bank mergers over a short run period around announcement and found that CARs have significantly improved post the merger announcement. On the contrary, Rani and Yadav (2012) found positive abnormal returns post merger post merger after announcements as well as in long term ROE (return on equity) of five years where they studied M&As during the period of 2003 to 2008. In yet another Indian study, Gubbi et al. (2010) studied the impact of 425 cross border mergers by Indian Firms on 11 day post CAR values. They found that emerging economy firms feels international mergers give them value creation in terms of facilities of tangible and intangible resources which is difficult to develop internally and the magnitude of value created will be higher when the target firms are located in advanced economic and institutional environments. Also, it can be observed that the negative abnormal returns in the long term are in consistence with past similar studies in India (Chakrabarty, 2008)

The results of studies done around India also confirm the results of the present study with some reasonable reasoning. Malatesta,1983; Schipper and Thomson, 1983; Asquit, 1983; Agrawal et al.;1992; Gregory, 1997; Mitchell and Stafford, 1997; Loughran and Vijh, 1997 (stock mergers); Rau and Varmaelin,1998; Sheel and Nagpal, 2000; Agrawal and Jaffe, 2000; Kohers and Kohers, 2001; Sudarsanam and Mahate, 2003; Markelevich, 2004; Megginson et al., 2004; Dash, 2004; Olson and Paganno, 2005; Moeller et al.,2005; Brau et al., 2012; in countries like USA, UK and Canada have also observed negative abnormal returns post merger with some also finding out reasons like method of payment and performance extrapolation (Sudarsanam and Mahate, 2003), (Agrawal and Jaffe, 2000), glamour and non glamour mergers (Conn et al.,2005) and underperformance of post IPO mergers (Brau et al., 2012) affecting performance. It needs to be mentioned that these calculations and the outcomes are subjected to the method of calculation used and most of the long term anomaly changes with change in methodology adopted (Fama, 1998). Also, it is difficult to comment which is the best methodology as there is no evidence that more complicated methods convey any benefit; and can make the researcher worse off (Brown and Warner, 1980).

The results of the third objective in terms of panel data models reveal that the post merger operating profit margin is significantly impacted by SENSEX returns. Thus macro factors in the economy do affect the merger's performance and hence timing of a merger deal is also thus important for its success. The SENSEX is found to have a significant positive impact on operating profit margins as per REM. There have been studies in the past

that have taken indexes as strong indicator of macroeconomic situation in the country and related the same to mergers and acquisition. Weston (1953) was one of the first observations in which macroeconomic factors lead to merger and acquisition activity and found that stock market prices exert considerable influence on M&A activity. Nelson (1959) analysed quarterly mergers and acquisitions activity in US from 1895 to 1920 and found a positive relationship between stock market and mergers and acquisitions activity. Dunning (2009) opined that macro economic factors have more relevance today as compared to 15 years back as it helps in understanding the location advantage of countries. This information then helps firms to decide their investment countries for FDI or for M&As. Benzing (1991), Evenett (2004), Melicher et al. (1983) analysed the impact of stock market on merger and acquisition activity and found a positive relationship opining that higher stock prices indicate the prospects of future economic growth and consequently higher level of M&As activities. Sen (2012) found that number of acquisitions whether they were stock paid, cash paid or foreign acquisitions were significantly influenced by SENSEX and NIFTY performance. Studies have also been done where either there is a negative impact or there is an inconclusive impact of stock market on merger and acquisition activity (Chatterjee, 1990; Vasconcellos and Kish, 1998; McCann, 2001; Oster, 1990). Hence studies in the past have used SENSEX as a reflection of economic condition in the economy thereby explaining the positive and significant association between operating margins and the index in the present study.

Conclusion

Mergers and acquisitions being a vast area of research this study tries to understand mergers and acquisitions from three angles. Because selecting one and skipping the others aspects would not have given justice to the thesis. Also, it is important to mention that even though a large period has been covered up in the study, still a study on more recent deals of M&As might give a different picture and this can act as a limitation. As far as financial performance is concerned, the past studies have been largely inconclusive. There too if lesser firms or only firms with positive effect can be analysed further to find out the strategies to success from mergers. As far as market price performance post merger is concerned, areas less explored in India are long run performance, difference in performance of stock acquisitions and cash acquisitions (as the same has been testified in studies outside India), mergers following IPOs. Many studies have tried to associate economic conditions with mergers and acquisitions using advanced models of regression like Fama-Macbeth regression in other parts of the world and the same can be inspiration for Indian research as well. At the end, it can be said that the present study has tried to give justice to the objectives in the best of its possibilities.

Publications

Title: Post Merger Operating Performance: A Study on Selected Public Companies of Four Different Sectors.

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Abstract: The post merger operating performance of acquiring entity of 152 sample deals of four sectors – Food and Beverages, Textiles, Chemicals and Non- Financial Services are analyzed. The post merger Operating Profits are analyzed for a period of three years post the merger. The factors affecting this post merger operating profits are taken as Pre merger operating profits, Difference between pre and post merger-Sale/turnover, Difference between pre and post merger-Operating Expenses and sector/industry (dummy). It is also found out if the post merger performance has improved as compared to other peer group companies of the same industry by using industry adjusted variables.

Key Words: Operating Performance, Industry Adjusted Variables, Sector/Industry (Dummy)

1. INTRODUCTION:

The most important measure of performance for any organisation is the financial performance which gets reflected in the financial statements of the firm. Hence it is important to measure the impact of merger and acquisition on financial performance of firms. Many studies in the past have tried to measure the impact of mergers on the financial performance of the firm. Most of these studies have focused on acquiring firms and not target firms as most of the target firms get delisted after the merger. Some studies have used conventional accounting ratios which are not giving consistent results. While the studies that used non-conventional measures have got better results. Following are some of those studies who have tried to compare pre and post merger scenario of acquiring entities:

2. LITERATURE REVIEW:

The researches using accounting data as a measure of post merger financial performance have used various types of elements and ratios for the same. *S. Vanitha & M. Selvam* (2007) analysed financial performance of Indian manufacturing companies during the period of 2000-02 on sample of 17 merging entities. They observed increased liquidity in terms of high net working capital in the post merger period. The growth of operating profits were found to be statistically significant in 6 companies where as remaining 11 companies saw a statistically insignificant growth in the post merger period. The net worth of companies was found to be higher in the post merger period when compared to pre merger period. Thus, they were inconclusive whether the post merger financial performance was better-off or not.

Leepsa and Chandrashekar, 2012 also performed a post merger analyses on 115 cases of mergers in the manufacturing sector during the period of 2003-04 to 2006-07 and found similar results as that of S. Vanitha & M. Selvam (2007). They were inconclusive about whether mergers lead to a significant improvement in the financial performance of the acquiring entity or otherwise.

The above researches were done on a particular sector and hence could not have a generalized conclusion on post merger financial performance. This limitation was removed by *P. Mantravadi and A Vidyadhar Reddy, 2010* where they analysed 118 cases of merger spread across different sectors (during 1991-2003) and analysed post merger performance of each sector separately. And they do found out the fact that post merger performance differed from sector to sector. However the impact of M&A was found to be more or less negative for all most all the sectors the magnitude differed in certain cases.

S Beena, 2006 analysed 64 mergers of pharmaceutical sector in the post liberalisation period by comparing the post merger performance of companies undertaking mergers with that of their counterpart companies not undertaking mergers. All parameters except advertising and marketing intensity, showed a significant difference between merging and non merging

entities. Merging entities showed a better performance as compared to non-merging entities in case of majority of ratios. While comparing pre and post merger performance of merging entities on the said ratios, all the ratios showed improvement except capacity utilization.

All the above mentioned studies used conventional accounting ratios as parameters of performance to evaluate the post merger performance. But there have been certain prominent studies that have utilized un-conventional parameters. One such prominent study has been undertaken by **Healy, Palepu and Ruback, 1990**. The study has been the most researched and sought after by most researchers. The study was conducted on 50 acquisitions in US during the period of 1979-1983. Way back in 1990, it gave prominent parameters which were industry adjusted and which according to them served a better measure of performance. They used *Industry adjusted performance measures (Calculated by subtracting industry related median from sample firm value)*. Industry adjusted cash flow returns show an improvement in the post merger period.

K. Ramakrishnan, 2008 conducted a study of 87 mergers during 1996-2002, by adjusting the cash flow figures of each sample company with that of the industry average and then compared the pre and post figures. It also ran a regression between pre and post merger figures of cashflows, operating margin and turnover by taking pre-merger figures as independent variable. The study concluded that all the three parameters showed considerable improvement in the post merger period. Also pre-merger cash flow and turnover does have an impact on post merger cash flow and turnover, however pre-merger operating margins have no impact on post-merger operating margins. Thus it indicates the fact that firms which were financially strong before the merger would continue to remain so in the post merger period also.

There have also been studies that have used OLS regression analysis to find out which factors have an impact on post merger performance of companies. Never the less, there have been studies in India that have used this method to understand the post merger scenario of mergers. **Janki (2010)** analyzed the impact of factors like year of merger, industry type, pre merger return on net worth & return on capital employed and percentage Change in post merger sales on post merger return on net worth & capital employed. From among these, the percentage change in post merger sales was the only independent variable that had a significant impact on dependent variables. Together all these independent variable were responsible for an 89% change in return on Net Worth post merger and a 56% change in return on capital employed post merger.

Kar and Soni, 2008 also conducted analysis on 15 companies undertaking mergers during 1990-1991 to 2000-01 in India using regression analysis. They used only four but concrete parameters naming RONW, Turnover, PAT & Book value per share. They concluded that RONW had no impact of merger over it. PAT and BV per share increased only marginally. Whereas merger had a positive impact on the turnover; thus signifying the fact that mergers can indeed lead to higher sales and hence a larger market share.

Studies conducted outside India using OLS regression as a tool are more substantial. **Ramaswamy and Waagelein, 2003** studied 162 acquiring firms in US over a period of 1975-90. It used multivariate regression **analysis. It used** parameters like Pre and Post Median Industry Adjusted Operating Cash Flow Return, Difference Between Post & Pre Operating Cash Flow Returns, SIZE (target to acq.Firm), PLAN (performance plans to managers and Employees), PAY (Cash or Stock), Host (Hostile or friendly), IND (same or different industry), YEAR (before or after 1982). First regression model Stated that *POMDROA* is positively related with the same variable pre merger. It also stated that *POMDROA* is negatively related with relative size means firms acquiring larger targets have lesser post merger returns. The second model concludes that SIZE, YEAR and PLAN have significant impact on DROA.

The perceived research **gap** identified from the above literature can be explained as under:

Not many studies have focused on industry based evaluation. Very less amount of work has been done till date in comparing the post M&A performance on the basis of the sector or industry to which they belong. Also, very few studies in India have used industry adjusted variables. Thus studying M&A undertakings from this angle is equally important and challenging. These can be identified as the perceived research gap in this context.

3. METHODOLOGY:

3.1 Objectives:

- Analysing post merger operating performance of selected listed (acquiring) companies undertaking M&A s of four different sectors.
- To analyse if pre merger operating profits affect post merger operating profits.
- To analyse if difference in sales between post and pre merger period affect post merger operating profits.

- To analyse if difference in operating expenses between post and pre merger period affect post merger operating profits.
- To analyse if post merger operating performance is affected by the sector in which the firm belongs.

3.2 Sample Selection:

Keeping in mind the above gaps, this study examines the impact of mergers on operating performance of selected firms of four different sectors. These sectors are selected on the basis of top four sectors that have witnessed maximum mergers and acquisitions during the period of 1992 to 2012. These sectors are Non-Financial Services (1259 deals), Chemicals (682 deals), Food and Beverages (428 deals) and Textiles (247 deals) with the brackets indicating the number of deals. It should also be noted that the financial services sector has been excluded as the framing of financial statements of financial services is different from other companies and hence comparison would have been inappropriate.

The following table shows the total number of deals which incurred in various sectors during the period of 1992-2012

TABLE: I
SECTOR-WISE NUMBER OF DOMESTIC MERGER DEALS IN INDIA DURING 1992-2012

Sector	No. of Mergers (1992-2012)
Food and Beverages – Including Dairy, Tea, Coffee, Sugar, Vegetable Oils & Products and others (confectionery, bakery products, processed foods, starches, marine, poultry & meat products)	428
Textiles – Including Cotton and Blended Yarn, Cloth, Ready-made garments, man-made filament and fibers	247
Chemicals – Including Drugs/Pharmaceuticals, Plastic products, Petroleum Products, other chemicals	682
Financial Services – Including Banking Services, Investment Services, asset Financing Services, others	1360
Non-financial Services – Including Hotels and Tourism, Recreational Services, Health Services, Wholesale and Retail Trading, Communication Services, IT	1259
Transport Equipments – Including Automobiles	116
Construction and Real Estate	367

(Source: Based on data collected from business-beacon, by CMIE)

A sample of 152 companies is selected from the above deals after the following filtration process:

Under filtration process, deals included in the sample are all deals which are:

- Done by publicly listed firms,
- Done by companies which feature in the BSE-Industry Watch (excluding deals within the same group of companies and deals coinciding with other mergers pre-post 2/3 years)
- Due to lack of availability of historical financial statements from the source – moneycontrol.com, the deals prior to the year 2000 have been excluded.

3.3 Data Analysis

The post merger Operating Profits are analysed of these companies for a period of three years post the merger. The factors affecting this post merger operating profits are taken as Pre merger operating profits, Difference between pre and post merger-Sale/turnover, Difference between pre and post merger-Operating Expenses and sector/industry (dummy).

There is also an attempt to find out if the post merger performance has improved as compared to other peer group companies of the same industry. Thus the variables have been **industry adjusted** (subtracting the industry median value from sample firm value). To use an industry-adjusted variable, there is a need to know the comparable companies within the same industry, so that an industry average can be calculated and subtracted from the sample firm value. To find out comparable companies, it was obtained from BSE industry watch (where companies of each industry are ranked as per their turnover).

Thus, following are the variables taken in the study to measure the impact of mergers on operating performance of selected firms of four different sectors using regression analysis:

Dependent Variable:

- Post merger-Operating Profits (Growth over 3 years), industry adjusted. (*Healy, Palepu and Ruback, 1983*)

Independent Variables:

- Pre merger-Operating Profits (Growth over 3 years), industry adjusted. (*Healy, Palepu and Ruback, 1983*)
- Difference between pre and post merger-Sale/turnover (Growth over 3 years), industry adjusted. (*Ramaswamy and Waegelein, 2003*)
- Difference between pre and post merger-Operating Expenses (Growth), industry adjusted.
- Sector/industry (Dummy)

4. RESULT DISCUSSION:

The following tables show some revelations with respect to **post merger performance of the sample firms.**

TABLE: II

IMPACT OF MERGER ON POST MERGER OPERATING PROFITS (3 YEARS)

Sector	Total Sample Firms	Firms with positive growth in operating profits post 3years	Firms with positive growth in operating profits post 3years as compared to the peer companies	Firms with more growth in post merger period as compared to pre merger period
Food and Beverages	16	11	12	12
Textiles	25	21	16	15
Chemicals	57	37	25	26
Non-Financial Services	54	30	27	26
Total	152	99	80	79

(Source: Based on financial statements data collected from moneycontrol.com)

TABLE: III

IMPACT OF MERGER ON POST MERGER SALES (3 YEARS)

Sector	Total Sample Firms	Firms with more growth in post merger period as compared to pre merger period	Firms with more growth in post merger period as compared to pre merger period as compared to peers
Food and Beverages	16	8	8
Textiles	25	14	13
Chemicals	57	38	26
Non-Financial Services	54	25	23
Total	152	75	60

(Source: Based on financial statements data collected from moneycontrol.com)

TABLE IV

IMPACT OF MERGER ON POST MERGER OPERATING EXPENSES (3 YEARS)

Sector	Total Sample Firms	Firms with more growth in post merger period as compared to pre merger period	Firms with more growth in post merger period as compared to pre merger period as compared to peers
Food and Beverages	16	9	7
Textiles	25	15	22
Chemicals	57	36	29
Non-Financial Services	54	34	29

Total	152	84	87
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(Source: Based on financial statements data collected from moneycontrol.com)

Findings of the **regression analysis** are as follows:

$$Y = 13.90 + 1.06X1 + 0.094X2 - 0.093X3 - 35.04d1 + 17.97d2 - 27.90d3$$

$$Se = (30.18) \quad (0.045) \quad (0.011) \quad (0.020) \quad (62.55) \quad (54.01) \quad (41.59)$$

$$t = (0.46) \quad (22.03)^* \quad (8.69)^* \quad (-4.77)^* \quad (0.56) \quad (0.33) \quad (-0.67)$$

[*indicates p values of less than 0.05]

Y = Post merger-Operating Profits (Growth over 3 years), industry adjusted

X1 = Pre merger-Operating Profits (Growth over 3 years), industry adjusted

X2 = Difference between pre and post merger-Sale/turnover (Growth over 3 years), industry adjusted.

X3 = Difference between pre and post merger-Operating Expenses (Growth over 3 years), industry adjusted

d1 = 1 if the firm is in Food and Beverages Sector, 0 otherwise

d2 = 1 if the firm is in Textiles, 0 otherwise

d3 = 1 if the firm is in Chemicals, 0 otherwise

[Note: the dummy for Non-Financial Service Sector is taken as the benchmark or omitted category]

5. IMPLICATIONS

- The post merger operating performance is significantly affected by pre merger operating performance. Thus this implies that pre merger performance is also one the factor necessary for success of a merger.
- The post merger operating performance is significantly affected by the growth in sales from pre to post period. Thus mergers lead to increase in sales post merger period and hence play an important role in affecting post merger operating profits. Also, these variables are industry adjusted, thus mergers do help increases turnover as compared to their peers and hence earn more profits as compared to their peers.
- The post merger operating performance is significantly negatively affected by the growth in operating expenses from pre to post period. Thus mergers lead to reduction in operating expenses which helps in increasing the operating profits confirming merger synergies. Merging firms do help the firms in reducing operating expenses as compared to their peers.
- The post merger performance is not significantly affected by the sector to which the firm belongs.

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Empirical Study of M&A in India

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Abstract:

India's corporate sector has undergone a sea change during the last two decades. The first wave of this sea change occurred during the early 1990s when the Indian economy moved from being a closed one to an open one by adopting the new industrialization policy in favor of Liberalisation, Privatization and Globalization. The MNCs over the world were eyeing India as a huge market and hence a lot of multinationals stepped into the country to establish their businesses. They brought in the needed technology, expertise, standards, employment and development. But at the same time it increased competition for the domestic firms and forced them to better themselves. It was this period that marked the beginning of amalgamations between companies, more popularly known as Mergers and Acquisitions (M&A). For multinationals it was an easier route to enter into the country and for Indian firms it was one of the key strategies to survive and expand.

This paper tries to study the extent to which Indian companies have utilized this strategic tool of M&As in the past two decades. It tries to show the trend of M&As in India during the past years. It also attempts to highlight which period specifically witnessed higher M&A activity. An attempt is made to know which segments or sectors have more prominently undergone M&As. This study tries to bring out the overall trends with regard to M&A activity in India.

Introduction:

In the current scenario of highly competitive globalised markets, it is detrimental for organizations to be dormant and sit on their laurels. Organisations today need to be much more strategic in their decisions as compared to the same twenty years back. Thus organizations constantly need to re-invent and re-construct themselves to meet the demands of the ever growing market and to satisfy a more powerful group of stakeholders. Corporate restructuring in general and Mergers and Acquisition (M&A) in particular have given the required pace to organizations to develop and expand. Countries like U.S and U.K have passed four–five waves of mergers and acquisitions, while developing countries like India are witnessing probably the first wave of mergers and acquisitions. This paper is an attempt to look in detail the trend of M&A been in India in the last two decades.

Before beginning with the trend of M&A in India, it is important to build a little conceptual framework regarding mergers and acquisitions. First of all, mergers and acquisitions are a part of the broad purview of corporate restructuring. *Corporate restructuring* stands for partially dismantling or otherwise reorganizing a company to make it more efficient or otherwise more profitable. This re-structuring can be internal or external to the organization. *Internal restructuring* involves in making changes internal to the organization like changing the organization structure, changing employee policy, changing the working conditions and systems, etc. While *external re-structuring* includes mergers and acquisitions, takeover, capital restructuring, creditor restructuring, hive-off/spin-off, slump sale, etc. Among the same, mergers and acquisitions have been more popular.

A *merger* is a strategy where two or more companies agree to combine their operations. Once the merger happens, one company survives while other loses its corporate identity. The surviving company acquires all the assets and liabilities of the merging company. It either loses its identity or is rechristened. The laws in India use the term amalgamations for mergers. When a merger happens between two companies that are in to same product or service, it is known as *horizontal merger*. When merger happens between companies at different points in the value chain, for e.g. manufacturer and distributor, it is known as a *vertical merger*. Thus it involves either forward integration (manufacturing firm acquiring the distributing firm) or backward integration (distributing firm acquiring the manufacturing firm). Mergers can also be *conglomerate or*

diagonal where the two firms belonging to different business merge together. That is the acquiring firm goes for a diversification strategy. **Acquisition** is an attempt made by a firm to gain majority stake in another firm. Once the acquisition is complete, the acquiring firm becomes the legal owner and controller of the business of the target firm. Thus it is a purchase of one firm by the other. The acquiring firm pays for the net assets, goodwill and brand name of the company bought.

Merger and Acquisition Trends in India:

India is one of the emerging economies in the world today, but the same was not true twenty years back. The seeds of this development were sowed in the year 1992, when the country adopted the new industrial policy in favor of Liberalisation, Privatisation and Globalization. Thus the economy moved from a closed one to an open one. This led to a massive change in the operating structures of Indian corporates. Now they had to compete not only with their Indian counter-parts but also with major MNCs which had started entering the Indian economy. Among the many strategies, which corporates used for survival and development, mergers and acquisitions played a significant role. For domestic firms it was a strategy for meeting the competition while for MNCs it was one easy way of entering into Indian Markets. Thus it was during this period after liberalisation that M&A activity in India took pace. Before this period mergers and acquisitions were not as popular activity at all. As the Indian economy developed year by year, more and more merger deals began to undertake in various sectors of the economy. And today, Indian companies are acquiring firms abroad which are three to four times their size. This section of the paper takes an over all look at the trend of M&As in India in the last twenty years. It tries to examine the trend of M&A activity, is it an increasing one or decreasing one, which years did M&A activity peaked and what does the trend speak about the economy at large.

Table-1: The number of M&A deals in India during 1992-2012

Year	No. of Mergers	Growth in Merger deals	No. of Acquisitions	Growth in Acquisition deals	Total	Total Growth in M&A deals
1992	12				12	
1993	8	-33			8	-33
1994	18	125			18	125
1995	15	-17	1		16	-11
1996	32	113	1	0	33	106
1997	24	-25	2	100	26	-21
1998	20	-17	1	-50	21	-19
1999	45	125	14	1300	59	181
2000	141	213	162	1057	303	414
2001	175	24	132	-19	307	1
2002	140	-20	79	-40	219	-29
2003	174	24	81	3	255	16
2004	146	-16	87	7	233	-9
2005	138	-5	51	-41	189	-19
2006	186	35	96	88	282	49
2007	209	12	95	-1	304	8
2008	177	-15	109	15	286	-6
2009	132	-25	73	-33	205	-28
2010	145	10	82	12	227	11
2011	161	11	57	-30	218	-4
2012	154	-4	66	16	220	1
	2252		1189		3441	

Source: Based on Data collected for twenty years from Prowess powered by CMIE

Figure 1: Number of Domestic Mergers in India during 1992-2012

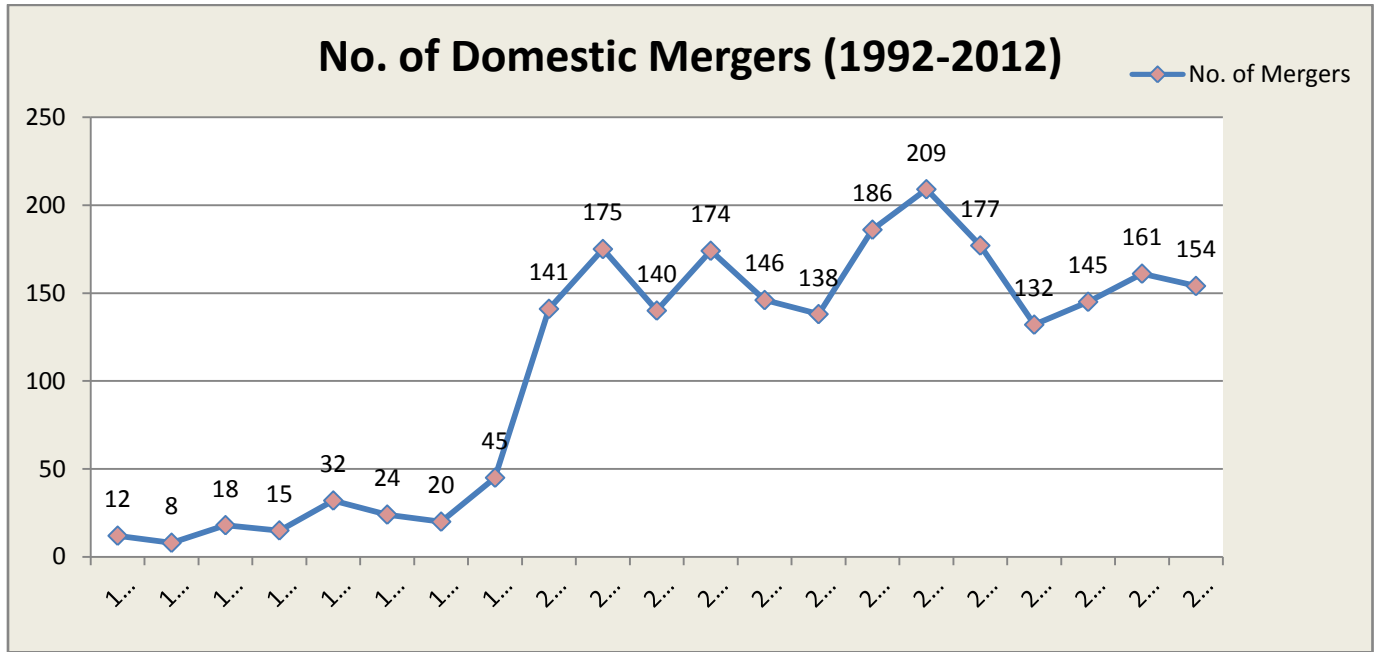


Figure 2: Number of Domestic Acquisition during 1992-2012

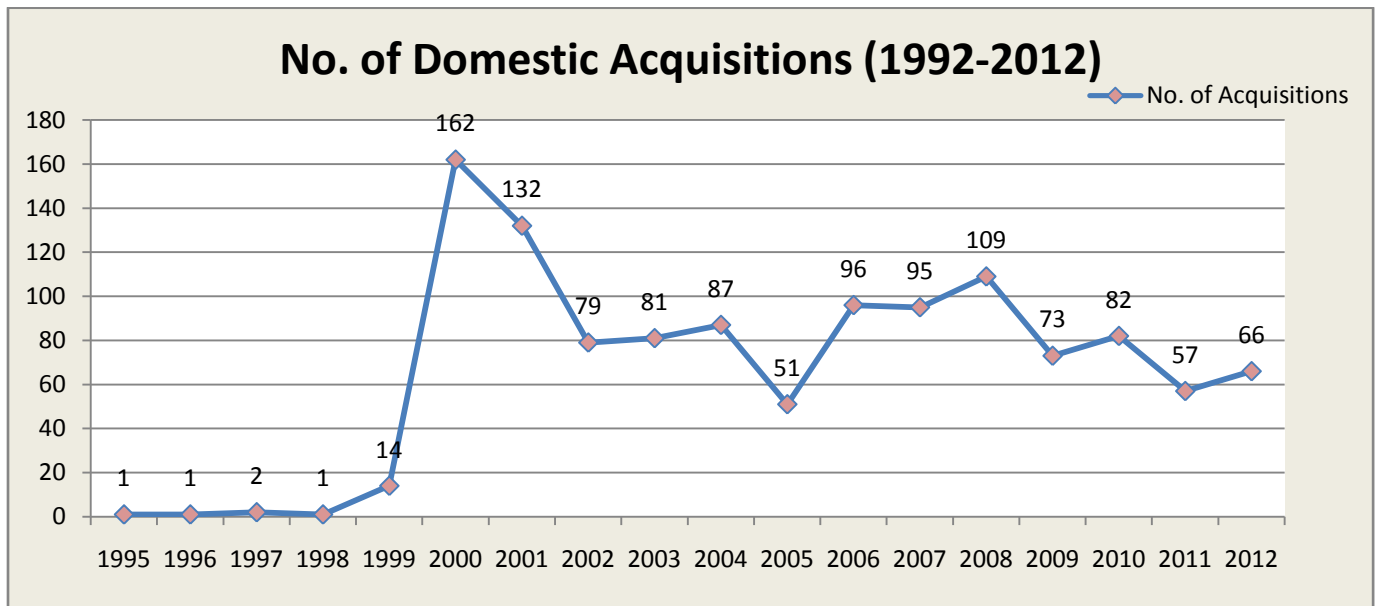


Table-1 depicts the volume of M&A deals year to year from 1992 to 2012. If the volume of M&A activity is determined by the level of economic development in a country, then these figures exactly replicate the same. The Indian economy has grown by leaps and bounds in the last two decades and so has the volume of M&A activity. If the overall trend is observed, the volume of M&A deals has increased from mere 12 deals in 1992 to a total of 3441 deals during 1992-2012. Out of these total deals, the deals involving mergers are 2252 while 1189 deals are involving acquisition of assets. During this period of 1992 to 2002, a total of 1649 companies undertook M&A activity.

During the period from 1992-99, the number of M&A deals was very low i.e. 193 deals in total. Only few mergers happened in the manufacturing sector during this phase and service sector was inactive in terms of undertaking mergers. The year 1999-2000 witnessed the highest growth rate in terms of number of deals. The total number of deals increased from 59 in 1998-99 to 303 in 1999-2000, a growth of 414 %. This was probably due to major direct tax initiative to facilitate industry restructuring through mergers and amalgamations and major reduction in excise duties announced in the union budget 1999. This jump in growth of M&As is the highest observed increase till date, thus it can be said that it marked the beginning of wave of merger and acquisitions in India and thus marked the beginning of high number of M&A deals in India, which continue till date. The highest number of deals was observed in the year 2001 and it was 307 and the least number of deals in the year 1993 when it was only 8.

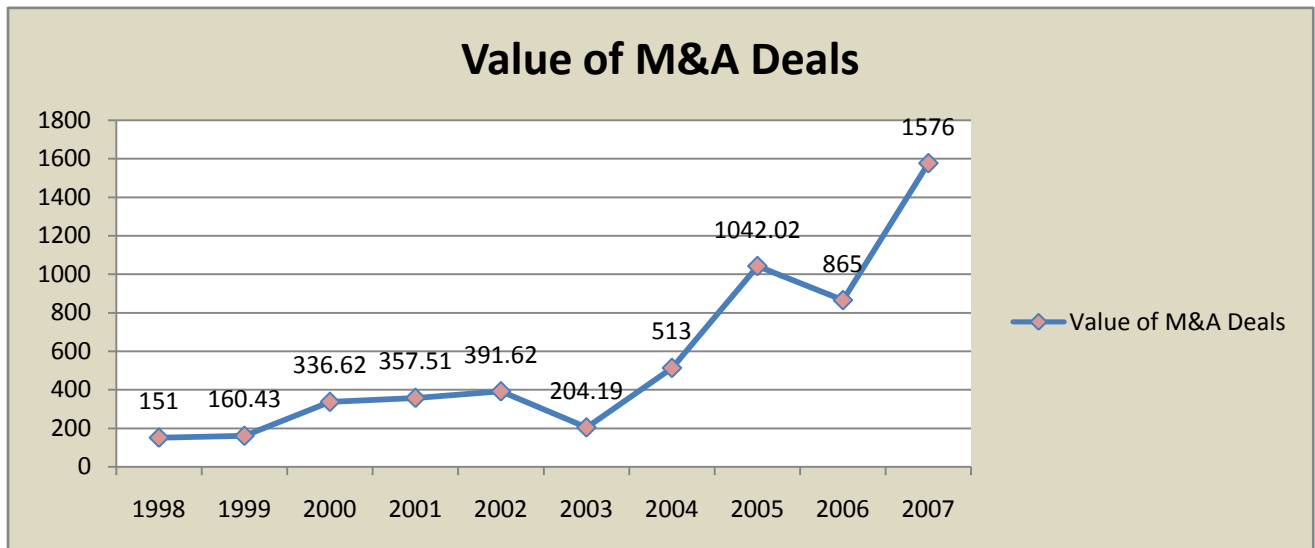
Similarly, the values of mergers and acquisitions (refer-Table-2) have also significantly increased over the years. The value of M&As increased 7 times in the year 2005 compared the year 1998. In the year 2005 the value of M&A deals was maximum that is Rs. 1042.02 billion. The percentage increase was 103% in the 2005 as compared to 2004. This was the largest rise in terms of value of M&A deals.

Table-2: The value of M&A deal in India during the period of 1998-2007

Year	M&A Value (Rs. in billion)
1998	151.00
1999	160.43
2000	336.62
2001	357.51
2002	391.62
2003	204.19
2004	513.00
2005	1042.02
2006	865
2007	1576

Source: The Mergers and Acquisitions, Text and Cases, Authored by B Rajesh Kumar

Figure 3: The value of M&A deals (Rs. In billion) in India during the period 1998-2007



Sector or Industry Wise Trends of Mergers in India

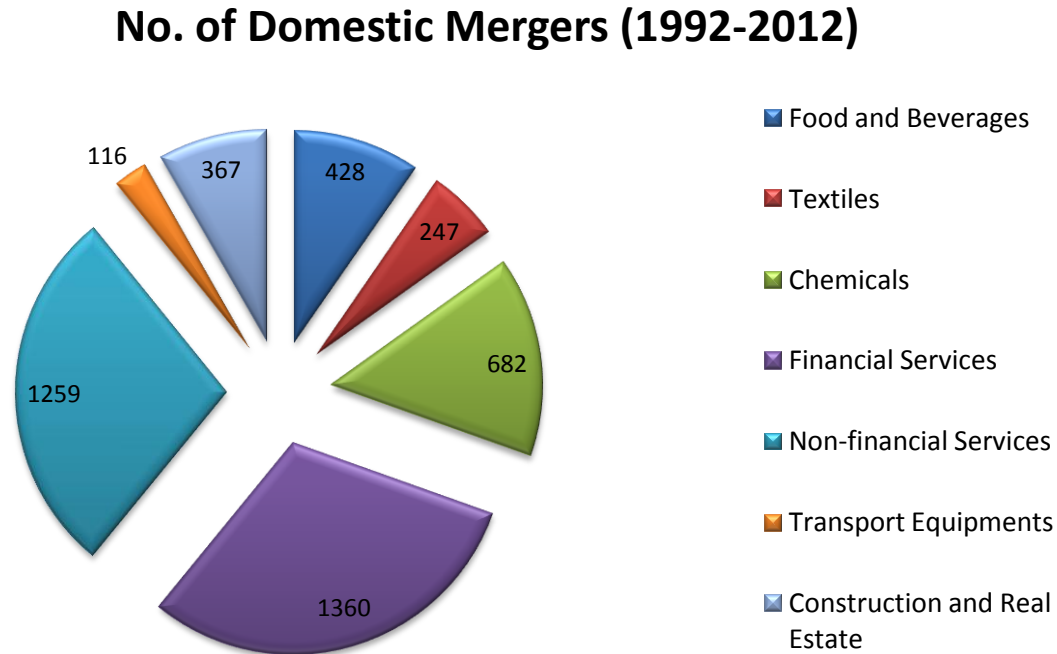
After analysing the overall trend of M&As in India, this section tries to observe sectoral trends in terms of number of mergers. It throws light on the fact that corporates of which sectors have more prominently undertaken mergers. It also tries to opine if higher level of development in a particular sector leads to higher number of merger deals in that sector. The following table shows the total number of deals which incurred in various sectors during the period of 1992-2012.

Table 3: – Sector-wise number of domestic merger deals in India during 1992-2012

Sector	No. of Mergers (1992-2012)
Food and Beverages – <i>Including Dairy, Tea, Coffee, Sugar, Vegetable Oils & Products and others (confectionery, bakery products, processed foods, starches, marine, poultry & meat products)</i>	428
Textiles – <i>Including Cotton and Blended Yarn, Cloth, Ready-made garments, man-made filament and fibers</i>	247
Chemicals – <i>Including Drugs/Pharmaceuticals, Plastic products, Petroleum Products, other chemicals</i>	682
Financial Services – <i>Including Banking Services, Investment Services, asset Financing Services, others</i>	1360
Non-financial Services – <i>Including Hotels and Tourism, Recreational Services, Health Services, Wholesale and Retail Trading, Communication Services, IT</i>	1259
Transport Equipments – <i>Including Automobiles</i>	116
Construction and Real Estate	367

Source: Based on data collected from business-beacon, by CMIE

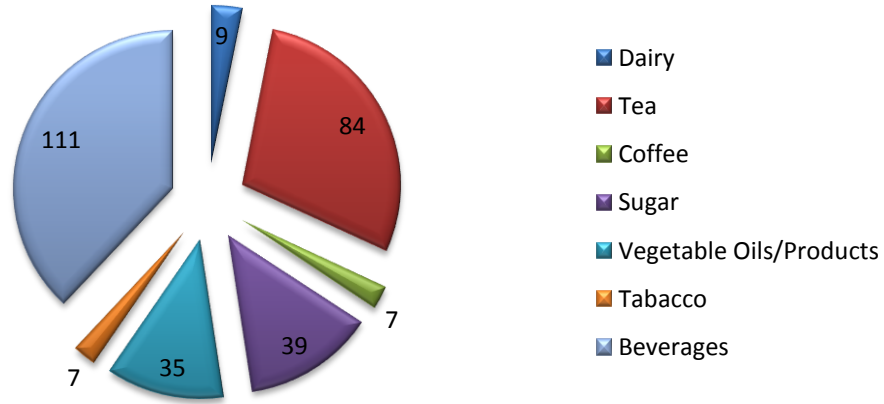
Figure-4: Sector-wise number of domestic merger deals in India during 1992-2012



As far as number is concerned the service sector and manufacturing sector are at par in terms of number of M&A deals. Under manufacturing, the sectors which have undertaken considerable amount of mergers are mainly chemicals, food and beverages and textiles. Again under the service sector, both financial as well as non-financial services both have undertaken substantial number of mergers. The sectors where merger activity is as good as nil are irrigation and agriculture.

Under *food and beverages*, majority mergers have been undertaken in food products (301 deals) as compared to beverages and tobacco (118 deals). Under food products maximum mergers are undertaken by Tea companies (84 deals), followed by vegetables oils/products (35 deals) and sugar companies (39 deals). Very few mergers have taken place in products like coffee and dairy products (7 & 9 deals respectively). Under beverages alcohol companies have more actively undertaken mergers (111deals), where as very few mergers have been undertaken by tobacco companies (7 deals).

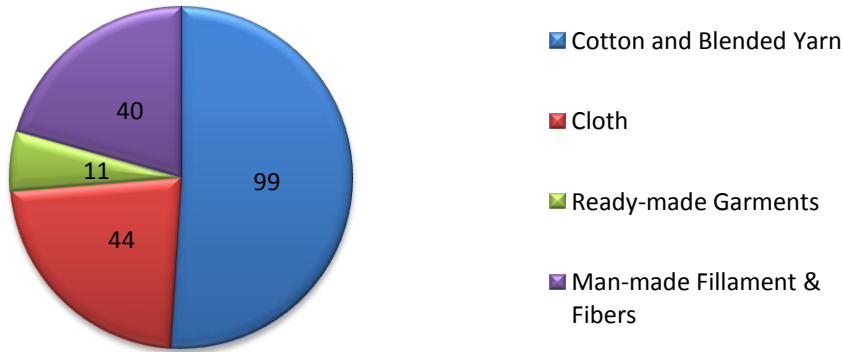
Figure-5: No. of domestic deals in food and beverages sector (1992-2012)



Source: Based on data collected from business-beacon, by CMIE

When the trend in *textile* sector is observed, maximum mergers have been undertaken in blended yarn and cotton sector (99 deals), followed by cloth (44 deals) and man-made filament & fibers (40 deals). The ready-made garments sector has the least number of mergers (11 deals) in the last two decades.

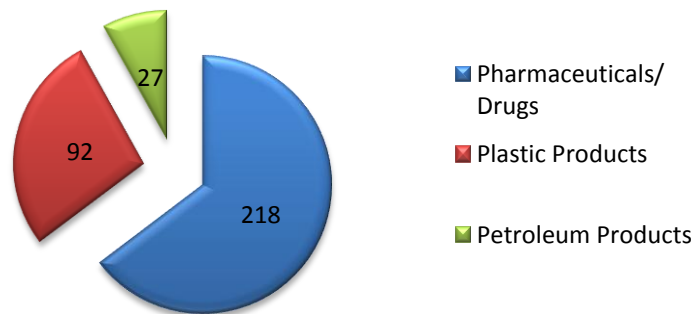
Figure-6: No. of domestic deals in textile sector (1992-2012)



Source: Based on data collected from business-beacon, by CMIE

Majority of the mergers in the Manufacturing sector is in the **Chemical** industry. Within Chemical adding sector most mergers have taken place in the drugs/pharmaceuticals sector (218 deals). The process of consolidation in the Pharma sector increased all over the world after the 1990s and the same effect was seen in India as well. Indian Pharma companies also went out to acquire major foreign companies as well. There were 92 deals among plastic products and 27 deals in petroleum products.

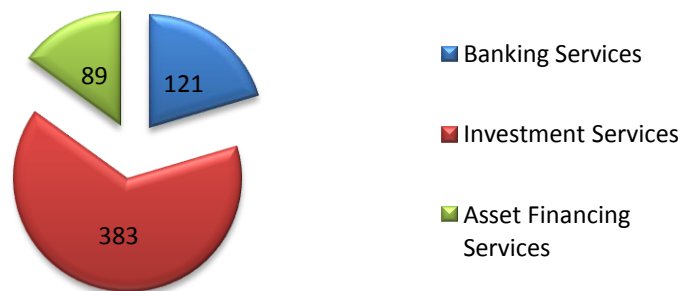
Figure-7: No. of domestic deals in Chemical industry (1992-2012)



Source: Based on data collected from business-beacon, by CMIE

Financial services industry has undertaken many deals in the last two decades, and in it investment services is the leader with 383 deals, followed by banking services (121 deals) and asset financing services (89 deals). Most of the deals in banking sector have been forced merger deals undertaken by RBI by merging ailing banks with major public sector banks to safeguard depositor’s money. Very few private sector banks have undertaken M&A activity.

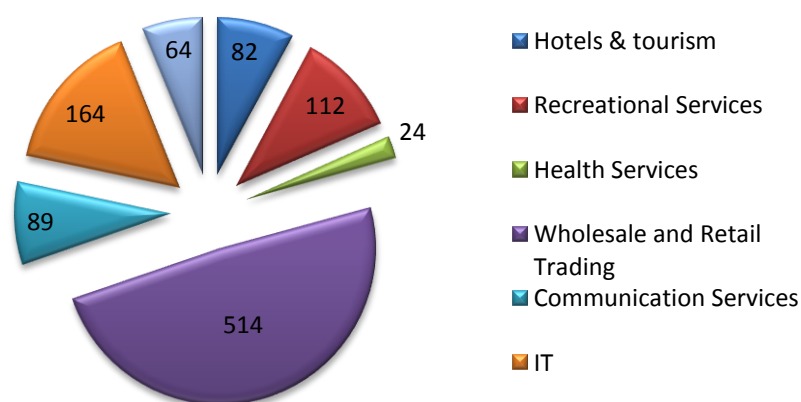
Figure-8: No. of domestic deals in financial services sector (1992-2012)



Source: Based on data collected from business-beacon, by CMIE

Non-financial services have also witnessed several mergers. Wholesale and retail trading services lead the sector with 514 deals. IT sector has also undertaken substantial number of deals with 134 deals in software segment and 43 deals in IT Enabled Services (ITES) segment. Recreational services segment had 112 deals, hotels and tourism had 82 deals, communication services had 89 deals and health services had 24 deals and transport services had 64 deals.

Figure-9: No. of domestic deals in non-financial service sector (1992-2012)



Source: Based on data collected from business-beacon, by CMIE

If the *year to year trend* of the sectors undertaking maximum mergers is observed, then the entire period of last twenty years can be *divided in to three phases*. The first phase from was from **1992 - 1998** where merger activity was very minimal and slowly catching pace. During this phase, more mergers took place in chemicals, food and beverages and textiles. The second phase can be identified from **1999-2007**. During this phase all the sectors witnessed a high merger activity. It was during this period that the economy of India was also surging at a high pace. This phase saw major growth in the service sector, both financial and non financial and hence more number of deals occurred during this phase in the service sector. The third phase is from **2008 till date**. In 2008 the world economy suffered from a slow down and the effects were seen on Indian economy as well and hence merger activity slowed down during the period in almost all sectors. During this phase maximum merger deals happened within the non-financial service sector, where as the financial service sector saw a reduction in merger activity. The manufacturing sector also marked a low period of merging activity.

Table-5: Year to year trend of major sectors in terms of number of deals (1992-2012)

Year	Food and Bverages	Textiles	Chemicals	Financial Services	Non-Financial Services
1992	3	5	7	0	2
1993	10	2	4	0	1
1994	9	5	10	2	5
1995	6	2	11	2	6
1996	2	2	8	5	9
1997	7	3	8	6	1
1998	3	1	8	6	2
1999	25	7	6	20	11
2000	20	17	43	63	36
2001	40	13	49	146	60
2002	36	14	64	135	105
2003	57	17	58	156	101
2004	21	18	41	123	107
2005	32	18	48	88	106
2006	34	28	66	123	124
2007	27	36	61	109	140
2008	26	14	36	82	82
2009	16	15	31	46	61
2010	10	0	37	82	90
2011	18	7	42	82	107
2012	11	7	44	86	101

Source: Based on data collected from business-beacon, by CMIE

Figure-10: Year to year trend of major sectors in terms of number of deals (1992-1998)

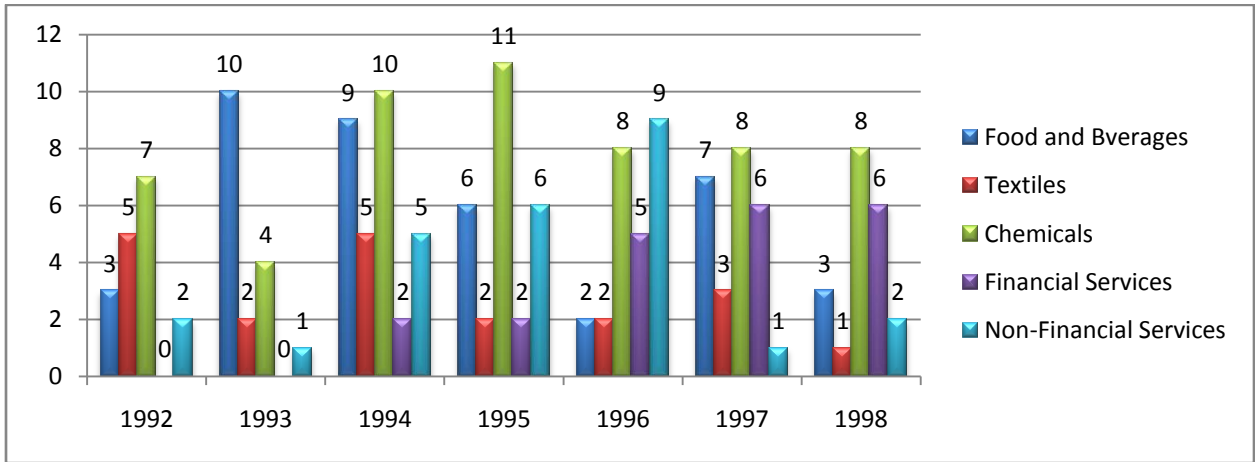


Figure 11-Year to year trend of major sectors in terms of number of deals (1999-2007)

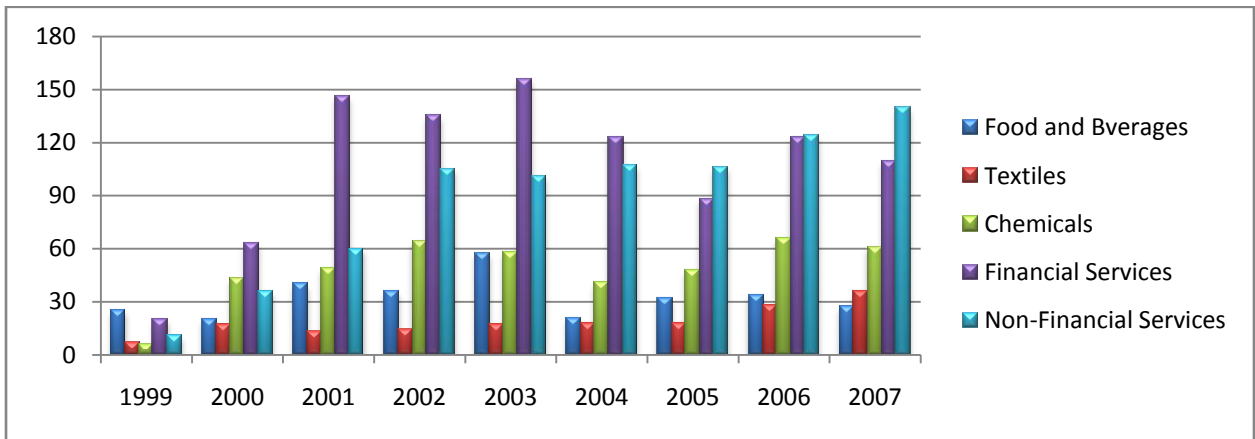
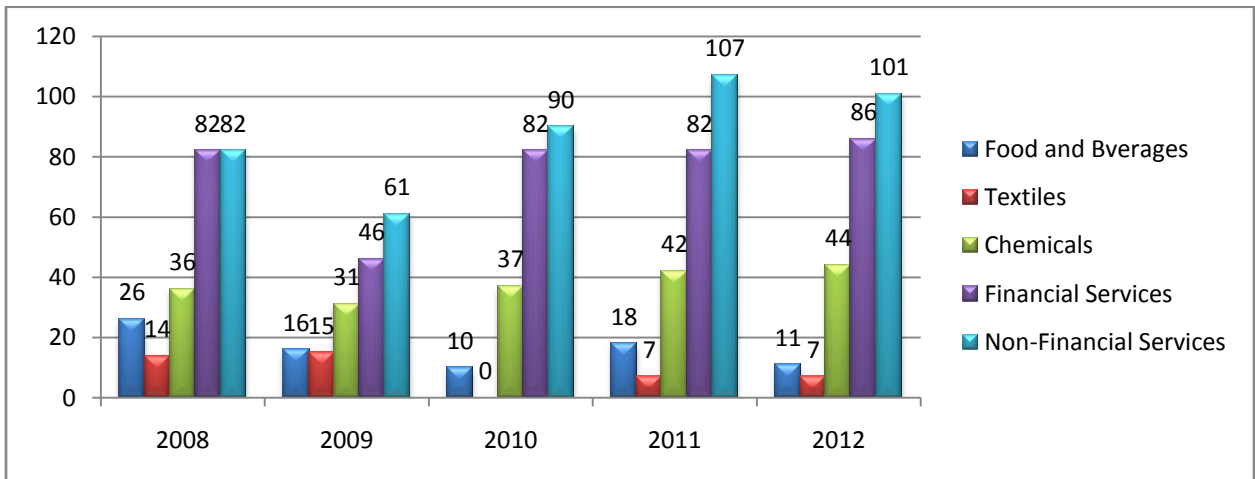


Figure-12: Year to year trend of major sectors in terms of number of deals (2007-2012)



Many *significant deals* have taken place during the last two decades which deserve a special mention. Among *the top deals in 2001*, were the merger between ICICI bank and ICICI, Grasim's buyout of 10% stake in L&T and Sterlite Industries buying 51% stake in Balco. The biggest merger in the Indian merger history occurred in *2002*, when intra-group consolidation of Reliance Industries and Reliance Petroleum Ltd. took place. In *2005*, the telecom sector accounted for one third share of all merger deals in terms of value. Large deals in this sector included Essar group's acquisition of BPL communications, Vodafone's investment in Bharti's Tele ventures, Maxis's group acquisition of Aircel and VSNL's acquisition of Teleglobe International Holdings. In *2006*, IT and ITES were clear leader as far as deal value was concerned. This sector garnered \$2.9 billion worth of deals. In *2007*, telecom sector dominated the and overtook IT sector in terms of number of deals. The largest deal of the sector was Vodafone's acquisition of Hutchinson Essar. The Indian financial sector continued to attract overseas investments with occupying 15% of merger deals in value and 19% in terms of number of deals. the largest deal in the sector was \$ 646 million investment in ICICI Financial Services and the \$ 644 million in HDFC Ltd. the largest deal of the year in India was by Tata steel acquiring Anglo Dutch giant Corus which made Tata steal the 6th largest steel maker in the world. The same year saw some important mergers in the aviation sector, Jet airways overtook Sahara Airline, Kingfisher Airlines acquired significant stake in Deccan Aviation Indian Airlines and Air India decided to merge.

Cross Border M&A

Globalization and technological advancement in transport and communication have made cross border mergers and acquisitions a popular tool for expansion and capturing foreign markets. Indian firms have done a credible job in terms of merging and acquiring foreign firms. In the first decade of the 21st century, some of the years have even witnessed more cross-border deals than domestic deals. Cross border deals by Indian corporates have actually played a big role in putting India in the top slot of economically advanced countries. According to one of the Thompson Financial Reports, India stood 13th in the list of world acquirers in terms of number of foreign firms acquired.

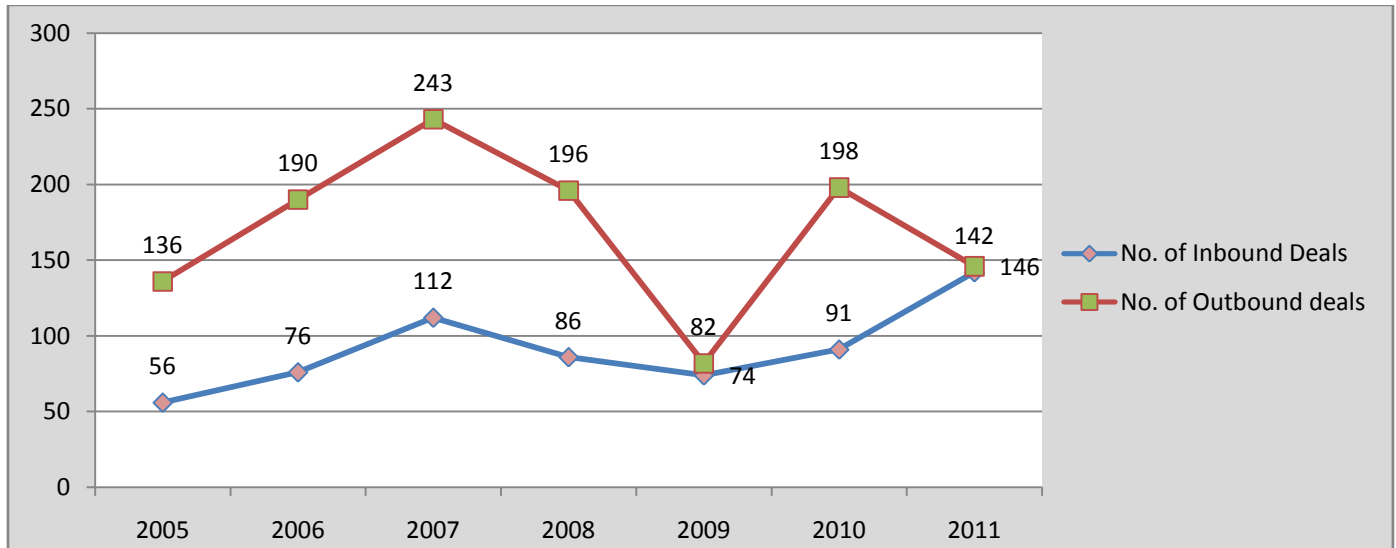
India saw maximum cross border mergers during the second half of the first decade of 21st century.

Table-6: Number and value of Cross Border Deals in India (2005-2011)

Year	No. of Inbound Deals	No. of Outbound Deals	Total	Value of Inbound Deals	Value of Outbound Deals
2005	56	136	192	5173.93(US\$ million)	4298.52 (US\$ million)
2006	76	190	266	5399.75 (US\$ million)	9914.15 (US\$ million)
2007	112	243	355	15500.95 (US\$ million)	32759.04 (US\$ million)
2008	86	196	282	12.55 (US\$ billion)	13.19 (US\$ billion)
2009	74	82	156	3.88 (US\$ billion)	1.38 (US\$ billion)
2010	91	198	289	8.96 (US\$ billion)	22.5 (US\$ billion)
2011	142	146	288	28.73 (US\$ billion)	10.84 (US\$ billion)

Source: Based on data collected from Grand Thornton-Annual Deal Tracker Issues

Figure-13: Number of Cross Border Deals in India (2005-2011)



Certain highlighting facts about cross border M&A in India:

- According to Mckinsey data, by 2005, India emerged as one of the top three markets in Asia, with total deals estimated to have crossed the \$20 billion mark, against \$10 billion in 2004.
- During the period of 2007, cross border M&As increased significantly. The value of cross border outbound mergers increased from \$4298.52 million in 2005 to \$9914.15 million in 2006, an increase of 130%.

- The total outbound deals have outnumbered the total inbound deals throughout. Thus clearly indicating India's preference towards mergers and acquisitions as an effective tool for going global and capturing global markets.
- The biggest portion of Indian M&A activities has been in Europe and America, indicating India's confidence in investing in developed countries.
- In 2007, 243 deals worth \$33billion saw massive growth of 300% over the previous year.
- The average deal size increased from \$58 million dollars in 2006 to \$150 million in 2007.
- In 2010, inbound M&As accounted for 18% and outbound M&As accounted for 45% of total M&A deals. Inbound Deal values in 2010 rose by 131% over 2009. While outbound deal value rose 6 times more in 2010 as compared to 2009.
- In 2011, cross border M&A shifted focus from outbound to inbound. This might be in the backdrop of fear over economic dynamics of European region and its impact globally and also the also the domestic market growth of India. Both these reasons might have made India a safer bet and lead to a trend reversal.

Indian companies are targeting different countries for different sectors globally. For Pharma and Auto components, Europe is a major destination. Metal and mineral sector are being targeted in the Asian-Pacific region. IT, ITES and telecom sector acquisitions happen more in US markets. Over all, the sectors dominating cross border deals are IT, financial and banking services and pharmaceuticals. A host of mid and small cap companies in industries ranging from textiles, consumer durables, FMCG, energy, automobiles and components and IT are participating more in outbound deals. Thus, almost all sectors are active in cross border acquisitions but IT sector lead other sectors in acquisition deals during 2007 and the period around it. In 2010-2011, it is the energy and power sector which dominated both inbound and outbound sector. There is a rising appetite for Indian power companies to move abroad for capturing more markets on account of domestic scarcity of power. Also foreign companies want to explore the oil and gas sector in India.

Some of the significant cross border deals over the years deserve a special mention. The first prominent cross border deal was undertaken by Tata group's Tata Tea, when it acquired UK's famous brand Tetley tea for \$ 430 million in 2001. This sort of the marked the beginning of cross border deals in India. Other companies from Tata group have also made significant acquisitions.

In 2007, Tata Steel acquired Corus, the steel giant of UK (\$12.2 billion) and Tata Motors acquired Jaguar Land Rover car makers (\$2.3 billion). Recently Tata-tele services and NTT-DoCoMo also took place for \$ 2.7 billion. Thus Tata group has continuously acquired massive foreign companies in varied sectors.

Apart from the above mentioned deals, there were a lot more significant cross-border deals done by India in the last few years:

Table-7: Some of the largest outbound deals by India

Acquirer	Target	Sector	Country	Value
Hindalco	Novelis	Aluminum	US	\$ 3331 million
Suzlon Energy	Repower Systems	Energy	Germany	\$ 1794 million
Bharti Airtel	Zain	Telecom	South Africa	\$ 10700 million
Mahindra and Mahindra	Ssangyong Motor Company Limited	Automobiles	South Korea	\$ 463 million
ONGC	Imperial Energy	Energy	Russia	\$2.8 billion
Fortis Healthcare (India) Ltd	Fortis Healthcare International Pte Ltd	Healthcare	Singapore	
GVK Power	Hancock Coal	Power	Australia	1.26 billion dollars
Adani	Abbot Point Port	Ports	Australia	1.9 billion dollars
Reliance	BP	Energy	UK	7.2 billion dollars

Source: Various Sources from the web

Conclusion

The Indian corporate sector has witnessed tremendous growth in M&As during the last two decades, both in terms of value as well as volume. This paper is a small attempt to capture the vibes surrounding the merger and acquisition deals in the last few years. The paper has tried to capture a relatively a long period of time to get a clear idea for understanding the trend right from the period of 1992 till date. The growth period is varied as well as interesting. the volume of M&A deals has increased from mere 12 deals in 1992 to a total of 3441 deals during 1992-

2012. The highest number of deals was observed in the year 2001 and it was 307 and the least number of deals in the year 1993 when it was only 8. The value of M&As increased 7 times in the year 2005 compared the year 1998. As far as number is concerned the service sector and manufacturing sector are at par in terms of number of M&A deals. Under manufacturing, the sectors which have undertaken considerable amount of mergers are mainly chemicals, food and beverages and textiles. . Cross Border M&As have also played significant role in the last seven to eight years. The development of growth of M&As have faced three phases 1992-2000, 2001-2007, and 2008 onwards. The last phase is still going on and has slowed down in terms of number of deals after the peak of 2007. New sectors like energy and power are now occupying merger and acquisition space in the crossover market.

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