

# **Inorganic growth strategies: An empirical analysis of who benefits from them?**

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## **Abstract**

Since 1991 Indian Industries have been increasingly exposed to both domestic and international competition. This has forced Indian corporate sector to restructure, reengineer to be competitive and deliver value to stakeholders. Relocation and re-distribution of economic power in the hands of BRIC (Brazil, Russia, India and China) drives home the point that India is firmly entrenched in the evolving multi-polar global businesses. Indian companies have adopted organic and inorganic strategies to enhance value for their shareholders. In developed nations like United States, it has been proved that inorganic value enhancement strategies like mergers, acquisitions have very high failure rates. Various financial journals and publications are full of news which relate to both the success and failure of these strategies. The objective of the paper is to ascertain whether mergers and acquisitions are good value enhancing strategies for acquirers or for the target company, in India.

The first section of this paper, we deal with classifying and providing a theoretical framework of all inorganic value enhancing strategies. In the second section we have included a literature review of research papers that have dealt with success and failure of inorganic strategies world over. Using the data of a sample of Indian companies, we have analyzed whether acquisition is a value enhancing strategy, has benefited the acquirer or the target company, in section 3. The last section deals with conclusions and limitations of the study.

**Introduction:**

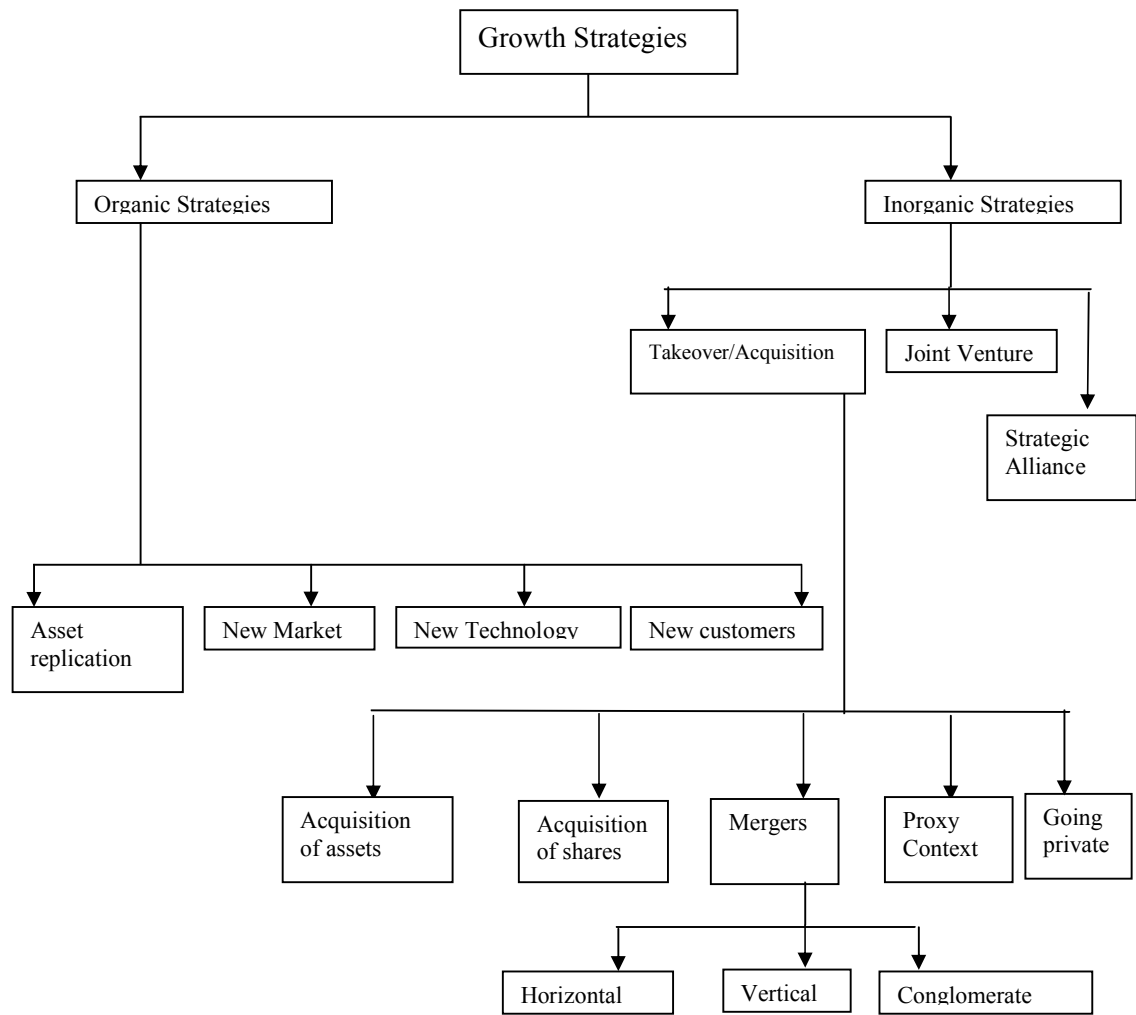
Today, the business environment is rapidly changing with respect to competition, products, people, process of manufacture, markets, customers and technology is embedded in all these functions. It is not enough if companies keep pace with these changes but are expected to beat competitors and innovate in order to continuously maximize shareholder value. Inorganic growth strategies like mergers, acquisitions, takeovers and spinoffs are regarded as important engines that help companies to enter new markets, expand customer base, cut competition, consolidate and grow in size quickly, employ new technology with respect to products, people and processes. Thus the inorganic strategies are regarded by companies as fast track strategies for growth and unlocking of value to shareholders.

Post liberalization and reforms, the Indian corporate sector had to restructure, reengineer, innovate to be competitive and to deliver value to stakeholder. This led to increase in mergers and acquisitions in the Indian corporate sectors. The acquisitions of late have been global in nature with big deals like Tata steel acquiring Corus, etc. and Indian companies going global.

The question of whether mergers and acquisitions pay, who gains more out of the deal, is of prime importance both to the management and investors. Finance literature is full of a variety of studies conducted by researchers across the globe addressing this question. A review of the findings of such studies done with respect to mergers in UK and USA shows that M&A destroys value in most cases. With heightened M&A activity happening in the past decade in India, it is important to know about the profitability of M&A in India, which is the objective of this paper. This paper we have looked at 12 cases of acquisitions during the period from 2000 to 2006.

**Literature review:****Definition and classification of inorganic growth strategies:**

In finance literature the growth strategies followed by companies can be broadly classified into organic and inorganic growth strategies. Organic strategies refer to internal growth strategies that focus on growth by the process of asset replication, exploitation of technology, better customer relationship, innovation of new technology and products to fill gaps in the market place. It is a gradual growth process spread over a few years (Bruner, 2004). Inorganic



**Figure 1 : Growth strategies – Classification**

growth strategies refer to external growth by takeovers, mergers and acquisitions. It is fast and allows immediate utilization of acquired assets. Bruner (2004). It is less risky as it does not result in expansion in capacity. The classification of inorganic growth strategies is given in figure 1 above.

**Forms of acquisitions:** Acquisitions can take a variety of forms. They can be either mergers or consolidation or acquisition of assets or equity. (Damodaran, 2002)

A merger refers to the absorption of one firm by another, i.e. the acquiring firm retains its name and its identity, and it acquires all of the assets and liabilities of the acquired firm. The acquired firm ceases to exist as a separate business entity. As opposed to this in a consolidation, a new firm is created, both the acquiring and the acquired firm terminate their legal existence and become part of a new firm. Here, the distinction between the acquirer and the target firm is not crucial

Acquisition of stock refers to purchase of a firm's voting stock in exchange for cash, shares, or other securities; this may start as a private offer from the management of one firm to another. A tender offer is a public offer to buy shares of a target firm directly from its shareholders. Tender offers are usually unfriendly; they are used in an effort to circumvent the target firm's management, which is usually actively resisting acquisition

Acquisition of assets refers to a method of acquisition where a firm can acquire another firm by buying all of its assets. Generally, a formal vote of the shareholders of the selling firm is required. Acquisition of assets avoids the potential problem of having resisting minority shareholders, which can occur in an acquisition of stock.

Proxy contests occur when a group of shareholders attempts to gain controlling seats on the board of directors by voting in new directors. A proxy authorizes the proxy holder to vote on all matters in a shareholder meeting. In going-private transactions, all the equity share of a public firm is purchased by a small group of investors (e.g., the incumbent management via an LBO). The shares are de-listed from stock exchanges.

Mergers can be further classified into:

- **Horizontal merger:** Takes place between two firms in the same line of business (e.g., Daimler-Benz and Chrysler, Hewlett-Packard and Compaq)
- **Vertical merger:** Involves companies at different stages of production (e.g., America Online and Time Warner)
- **Conglomerate merger:** Involves companies in unrelated lines of businesses (e.g., AT&T and NCR)

In India these classifications are absent. The terms merger and amalgamations are used interchangeably. The companies act, 1956 does not define takeover, mergers and acquisitions. However as per the Indian companies Act, 1956 amalgamation may take place in any of the following methods:

Amalgamation under a scheme under section 391-394.

1. By the way of acquisition of shares under a scheme as per section 395
2. By an order of the central government in national interest under section 396
3. By the way of voluntary winding up scheme under section 494.

Review of literature with respect to studies on whether mergers and acquisitions pay, reveals that there are four approaches to the study (Bruner, 2004): Event studies, Accounting studies, survey of executives and clinical studies.

Event study method adopts market based returns to shareholders as a measure of value created. It has the advantage of using a leading measure of value creation as stock prices are supposed to reflect the expected future cash flows. However, the method suffers from the disadvantage that may result from inefficient and weak markets, where share prices may not reflect correctly the value of the company. Further, the share prices may also react to other macro economic factors like exchange rates, interest rates, taxes etc. Findings using event studies have been mixed. Lang, Stulz and Walkling (1989), Berkovitch and Narayanan (1993), report significant positive cumulative abnormal returns to target firm shareholders in case of tender offers. Loughran and vjrh (1997) who study mergers, tender offers and combined returns have also found that all of them have returned significant positive returns to target firm shareholders. Houston et.al (2001) and Beitel et al. (2002) who have studied deals which relate to banks have also found that target firm shareholders gain and the acquirers' loose. A reason attributed to loss of value to Buyer Company's shareholder s is the size effect. Asquith et. al(1983) have studied the size effect and concluded that where the target's market value is greater than 10 percent of the market value of the buyer company, the buyer company shareholders have gained significantly and where ever the target company's market value is less than 10 percent of the market value of the buyer company they do not have any

significant gains because of the fact that the size of the buyer company is too large to actually make a material impact in value to shareholders.

Accounting studies use financial measures like Return on Equity, Return on Assets, Earnings per share, calculated from audited financial statements. These are compared for a time series before and after the event and also compared with peer group companies for the period in order to ascertain whether acquirers outperformed non acquirers. The method suffers from deficiencies that relate to accounting measures like being a lagging measure of value, does not consider intangibles and is subject to accounting bias. Healy, Palepu and Ruback (1997) studied 50 large mergers in the US using accounting based measures. They have reported that merged firms showed significant abnormal improvement in asset turnover. However, there was no improvement in operating cash flow margins. They also looked at market returns to shareholders and concluded that the Net present value for the acquirer shareholders was zero as the cash flows did not improve. The target company shareholders gained significantly. Chatterjee and Meeks (1996) who studied mergers in UK concluded that the acquiring companies did not show any significant increase in profitability though they reported better accounting profits, which could be because of accounting policy changes. Sharma and Ho (2002) compared the ROE, Profit margin and EPS of Australian companies for a period of 3 years before merger and three years after merger and concluded that buyers showed decline in these measures after merger. Ravenscraft and Scherer [1987] conclude that, on average, acquiring firms have not been able to maintain the pre-merger levels of profitability of the targets. Ali and Gupta (1999) examine the potential motives and effects of corporate takeovers that occurred in Malaysia during the period 1980 through 1993 and find that the acquire r firms have achieved larger size at the expense of reduced profit both for themselves and the acquired firms. Hence, summing the studies reviewed it can be said that most of the studies have concluded that based on accounting numbers the mergers have not resulted in significant benefits to the acquirers.

Survey of managers' method is one where a questionnaire is administered across a sample of chief executive officers and findings are based on views given by them. The method has the advantage of looking at mergers from the

view point of managers and can reveal new insights into motives and achievements derived from such deals. However, the views of the officers may be biased or casual and need not be correct or based on scientific reasons. Hence, the findings can be distorted. Bruner (2004), initially conducted a survey of 50 executives, and found that only 37% of the respondents felt that the deals created value for the buyers and 21% of the deals achieved strategic goals. However, when he conducted the same survey among executives who were involved in the merger he found that 58% of the respondents believed that their own deals created value and 51% believed that they achieved their goals. Only 23% believed that they did not create value and 31% believed that they did not achieve their strategic goals.

Clinical studies are basically case studies that look into a specific merger deal and examine them with references to the goals of the deal and whether they were achieved from a strategic, financial and organizational perspective.

From the above literature study it can be seen that event studies have shown mixed findings with bias towards gains to target company, whereas most of the accounting based studies have shown that the buyers have not gained significantly post merger. The findings of clinical studies cannot be generalized and those of survey is mixed and highly influenced by the sample selected for the survey. Hence, we conclude that even based study and accounting study methods are superior and give better results.

**Research methodology:** In this paper we have selected a sample list of 12 cases of acquisitions over the period from 1999 to 2005 in India. We have adopted both event based method and accounting based method to evaluate the success or failure of the merger. The listing of the sample and nature of study done is given vide Table 1 given below:

**Table -1 : List of Cases used for the study and nature of study done**

ACQUIRER	TARGET	DATE *	DATE OF OFFER	DATE OF CLOSURE	SWAP RATIO	NO OF SHARES	Mode of Payment	PRICE	% Stake Acquired	% stake after acquisition	Nature of study	Market price Rs. Date	Acquisition premium Rs.
CADILA HEALTH	GERMAN REMEDIES, RECON HEALTH CARE(WINTAC LTD),	1-Aug-01	18-Jul-01	16-Aug-01	7:04	1649179	CASH	650	20%	47.72	Both	400.3 29-7-01	249.7
ASAHI INDIA GLASSLTD	FLOATGLASS INDIA Ltd	22-Sep-01	15-Nov-01	14-Dec-01	NA	19507008	CASH	11	25%	100%	Both	8.45 22.8.01	2.55
COSMO FILMS LTD	GUJARAT PROPACK LTD	1-Apr-02	15-Nov 01	14-Dec-01	NA		CASH	29.25			Accounting		
GULF OIL CORPORATION LTD	GULF OIL INDIA LTD	1-Jan-02			1:02	58,70,000	SHARES			61.70%	Accounting		
ITC LTD	ITC BHADRACHALAM PAPER BOARDS LTD	1-Apr-01			1:16	20,96,982	SHARES				Acc		
AARTI INDUSTRIES LTD	ALCHEMIE ORGANICS LTD	1-Apr-01			1:04	5,12,525					Acc		
J K INDUSTRIES LTD	VIKRANT TYRES LTD	1-Apr-02			9:20	28,94,244					Accounting		

MANALI PETROCHEMICALS LTD	SPIC ORGANICS LTD	1-Apr-00			1:01	4,86,08400					Accounting		
GRASIM (ULTRATECH)	L & T	30-May-02	7-May-03	5-Jun-03		50781973	CASH	190	20%	34.23	Both	173.95 29.4.02	16.05
SOFTWARE SOLUTIONS INTEGRATED LTD	APTECH	16-Jun-03	3-Apr-03	2-May-03		3695390	CASH	49.75	20	47.18	Both	23.75 15.5.03	26.00
COROMANDAL	GODAVARI FERTILIZERS	19-Nov-03	11-Sep-03	10-Oct-03		6400000	CASH	124	20	63.13	Both	49.2 15.10.03	74.80
WEST COAST	RAMA NEWS PRINT & PAPERS LTD	6/9/2003	29-Oct-03	27-Nov-03		46526426	CASH	8.13	20	53.85	Both	8.05 1.08.03	0.08
											Both		

\* REFERS TO DATE OF ACQUISITION/MERGER

**Methodology – Event study:** The method adopted for event based study is as follows:

We have evaluated the performance of the merger/acquisition in terms of who benefits from the deal using market based share prices and only those cases where both target and acquirer are listed companies .Event study mechanism has been applied to 6 companies out of our total set of 12 companies as only these cases suitable data required for event study was found. We have taken share prices of target company for a period of 12 months before the announcement date or effective date of merger. We have also provided for the noise prevailing during the announcement period by excluding the prices of shares for 1 month before and after the announcement date, thus eliminating the noise effect to quite a good extent. This methodology is discussed by Weston (1998). We have also taken the share prices of the target company for a period of 12 months after the said date to evaluate post merger impact on the company. Similarly we have taken the event window for the acquiring company as 1year before the announcement date, 1 year and 2 years after the announcement date. The abnormal returns have been calculated using the Capital asset pricing model (CAPM)

The various inputs required by the CAPM for arriving at the expected return are the risk free rate, equity risk premium and beta, which have been calculated by us as follows:

**Capital asset pricing model formula:**

Expected s return=Risk less return +Beta \*(Market risk premium)

$$r = r_f + (\beta \times (r_m - r_f)) \dots\dots\dots(1)$$

Where,  $r_f$  is the risk free rate

$r_m$  is the expected return on the market and

$\beta$  is the beta of the cash flows or security being valued and beta of market will be 1.

The term  $(r_m - r_f)$  is the market risk premium.

**Equity Risk premium:** Equity risk premium is an important concept and its numerical value enters into many decisions made by financial managers, economist and analysts. It is widely used to forecast the growth of investment portfolios over the long term. It is also used as an input to the cost of capital in project choice, and employed as a factor in the expected rate of return to stocks. Given the importance of equity risk premium, the estimation in practice is very haphazard mainly because of lack of reliable data. The total returns index needed for the estimation of the market return for Indian market is available only from 1999. Unavailability of long periods of historical data introduces noise and error in the estimation of the risk premium. These issues have been addressed by JR Verma and S K Barua, (2006), where they have estimated equity risk premium after constructing their own total return index. The concept of estimating the premium for emerging markets using country risk premium have also been introduced by Aswath Damodaran where the issues of differing time frames and choosing between arithmetic and geometric means have also been considered. We have estimated the risk free rate using 10 year G-Sec and 91 days Treasury bills. For the market return we have taken the total returns index(S&P CNX NIFTY). Details as given below:

**Estimating Risk free rate** - Return given by risk free investments. It is interest rate that it is assured and can be obtained by investing in financial instruments with no default risk. However, the instrument can carry other types of risk, e.g. market risk, liquidity risk etc. For truly risk less the instrument must be free from default and market (interest rate) risks. Instruments issued by government, does not have any default risk. The 10 year Government security (G-sec) has an built in reinvestment risk. For dealing with that problem, we have calculated the historic 10 year rate and subtracted from it historic 91 days treasury bill rate, thus arriving at a better estimate for the risk free rate.

**Estimating the Market return ( $R_m$ )**

For estimating the market return we have taken the index values of total return index(S&P CNX NIFTY) which were available from 1999. We have taken the S&P CNX NIFTY and not the SENSEX mainly because SENSEX is price index and not the total return index. The price index clearly understates the return in the stock market because it omits the dividend payments. Thus the total return index becomes a more correct measure for estimation of market

return. For calculating the  $R_m$ , we have taken the month end values of the nifty and noted the percentage change over the previous month. We have then annualized it and calculated the arithmetic mean, thus getting market return for each year starting from 1999 to 2007. The data for total return index values is taken from the NSE website.

**Estimating the Beta:**

We have estimated the beta of the sample companies by following the regression method. By regressing the share price data available for the relevant year of the study with the market return for the respective year the beta for the company has been estimated.

**Estimating the Equity risk premium ( $R_m - R_f$ )**

After estimating the risk free rate and the market return, the market premium is simply the difference between the two. The premium so calculated is not real, it has inflation too built into it. For calculating the real equity premium we would need to calculate the real risk free rate and real return index values. For that we would have to take the help of Fisher's equation:

$$(1+n) = (1+i) (1+r) \dots\dots\dots (2)$$

Where,

N=nominal interest rate

i=inflation rate

r=real interest rate

The inflation rate can be calculated using the WPI index

$$WPI (i+1) = WPI (i) (1+i) \dots\dots\dots (3)$$

**Methodology – Accounting study:**

For accounting based studies we have used accounting ratios as a tool for evaluating whether the mergers have benefited the acquirers in terms of profitability, operational costs, asset utilization with respect to fix and working capital assets and market share. Further, we have also looked at whether the merger has resulted in creating more wealth for the shareholders. These ratios have been calculated for the period of 1 year before and 3 years after merger. We have benchmarked them against the performance of the industry in order to evaluate whether they have succeeded or not. The benchmarking has been done with a view to assess whether the acquisitions have created more value for the acquirers than in comparison with cases where no acquisitions have been done.

The financial data for the different companies is taken from the Capital line database.

### Results of the study

#### a) Event study:

The event study examines the gains to the target and the acquirer company taking into account only those transactions which were all cash deals. Further, in these cases the target company continued to operate after the sale of a specific percentage of stock to the acquirers till further stake was acquired and control transferred to the acquirer. The results of the event study are given in table 2 and table 3 below.

Table – 2: Event study gains to the target company (all cash deals)

Sl. No.	Acquirer	TARGET	% Stake Acquired	Price Paid Rs.	Market Price Rs.	Premium Rs.	Premium %	12 months Pre announcement *	12 months Post announcement *
1	CADILA HEALTH	GERMAN REMEDIES, RECON HEALTH CARE (WINTAC LTD),	20%	650	400.3	249.7	62%	-22%	-1%
2	ASAHI INDIA GLASS LTD	FLOATGLASS INDIA LTD	25%	11	8.45	2.55	30%	0%	16%
3	GRASIM (ULTRATECH)	L & T	20%	190	173.9	16.05	9%	-41%	25%
4	SOFTWARE SOLUTIONS INTEGRATED LTD	APTECH	20%	49.8	23.75	26	109%	-46%	-35%
5	COROMAN DAL	GODAVARI FERTILIZERS	20	124	49.2	74.8	152%	88%	-8%
6	WEST COAST	RAMA NEWS PRINT & PAPERS LTD	20	8.13	8.05	0.08	1%	73%	34%

Table -3 : Event study gains to the acquirer.

No	Acquirer	TARGET	Market price before 1 Month	Market price after 1 Month	% profit or loss	% Stake Acquired	12 months Pre announcement *	12 months Post announcement *	2 year post acquisition *
1	CADILA HEALTH	GERMAN REMEDIES, RECON HEALTH CARE(WINTAC LTD),	96.5	92.85	3	20%	-46%	-4%	
2	ASAHI INDIA GLASSLTD	FLOATGLASS INDIA LTD	295	204.05	- 31	25%	-69%	-92%	166%
3	GRASIM (ULTRATECH)	L & T	302.2	305.5	1	20%	-10	51%	321%
4	SOFTWARE SOLUTIONS INTEGRATED LTD	APTECH	62.85	112.1	78	20%	-81	47%	71%
5	COROMANDAL	GODAVARI FERTILIZERS	94.6	118.1	25	20	-75%	-5%	-54%
6	WEST COAST	RAMA NEWS PRINT & PAPERS LTD	180.2	208.4	16	20	60%	-33%	108%

\* Represents abnormal excess returns calculated before and after 12 months from the date of acquisition

From Table 2 it can be seen that most of the target company shareholders other than shareholders of Grasim and L&T have gained an acquisition premium ranging from 30% to 152%. Those shareholders who held on to the company shares for a period of 12 months from the date closure of the deal have not gained much. The excess abnormal returns on the shares over a period of 12 months post deal, is less than the immediate premium gained by the shareholders of the target company.

The results of gains to acquirer company shareholders as shown by annexure 3, shows that over a period of 12 months after the acquisition date only 2 out of the 6 cases give a positive abnormal return. The results over a period of 2 years post acquisition are however encouraging for the acquirer company shareholders. 5 out of 6 cases show a positive abnormal excess returns.

**b) Accounting study:**

The results of accounting study are given vide Table 4. The question of whether the profitability of the acquiring company has improved subsequent to the acquisition has been evaluated using the Cash Profit margin % (CPM) and profit margin before interest and taxes % (PBITM). The sales growth of the two individual companies before merger has been compared with the sales growth of the combined firm post merger. The efficiency of utilization of assets has been assessed using the fixed asset turnover ratio. Similarly, the debtors and inventory turnover ratios are used to measure the efficiency with respect to working capital management. The value to shareholders has been measured using the Return on capital employed % (ROCE) and return on net worth % (RONW).

From Table 4 it can be seen that the sales growth of the combined entity was negative in the first year after the acquisition in case of 3 out of a total of 8 cases and positive for the others. However, all cases reveal a positive growth in sales from the second year onwards. 4 cases show a high growth in sales in the second year after the acquisition. The PBITM and CPM percentages compared with the pre-acquisition % and the benchmark of the industry shows that only in 4 cases the profits margins have improved. In the balance cases the profit margins have fallen both against the benchmark and the pre acquisition margins in the first year following the acquisition. The results with respect to margins do not undergo any changes in the subsequent years also. Hence it can be said that the companies do not gain any significant cost advantage due to acquisitions. The fixed asset turnover ratio of the cases show that 5 companies had a fixed asset utilization ratio that was better than the bench mark before the acquisition, whereas in case of 4 companies the asset turnover has improved significantly in the first year after acquisition and the years following it. In the case of ITC Badrachalam and ITC the asset turnover has fallen and has not shown any improvement. Surprisingly, all the cases of acquisitions have shown improvement in working capital management subsequent to the acquisition. The value to the shareholder, as measured by ROCE and RONW, show that in 7 out

of 8 cases the returns to shareholders was better than the benchmark and improved in the years after the acquisition.

Table 4 : Summary of results of accounting study

Key Ratios	Before merger			After Merger			Benchmark Industry			Comments
	Target	Acquirer	Benchmark	Acquirer			Industry			
	2001	2001	2001	2004	2003	2002	2004	2003	2002	
<b>1. Gulf oil and gulf oil India</b>										
Sales Growth - %	-7.92	13.3	3.55	60.79	27	-44				falls in year 1 following M&A, then picks up
Long Term Debt-Equity Ratio	0.13	0.59	0.57	0.27	0.35	0.34	0.09	0.17	0.37	n benchmark
Fixed Assets	7.69	2.43	8.17	2.85	2.84	2.27	7.97	7.35	6.87	Less than benchmark, improved two years after merger
Inventory	5.1	6.55	14.79	6.48	5.69	4.89	16.52	15.55	14.3	Less than benchmark improved two years after merger
Debtors	2.33	4	20.43	4.82	3.94	3.12	31.38	25.49	20.46	
PBITM (%)	3.89	-1.81	2.92	3.17	5.73	7.94	4.42	3.56	5.7	was bad earlier, but improved after merger
CPM (%)	1.54	-5.69	1.88	2.42	4.73	4.51	3.48	3.01	3.88	more than doubled
ROCE (%)	8.44	-2.88	16.3	6.37	9.8	9.95	39.05	27.73	33.7	negative before, but improved after merger
RONW (%)	1.83	-18.75	11.01	1.69	8.71	5.25	28.02	21.33	26.78	
<b>2. Godavari &amp; Coromandal</b>										
Sales Growth %	2003	2003	2003	2006	2005	2004	2006	2005	2004	
	-25.75	-11.06		23.88	28.6	-9				falls in year 1 following M&A, then picks up
Long Term Debt-Equity Ratio	1.62	0.31	0	0.72	1.515	1.685	0	0	0	< bench, borrowings have increased
Fixed Assets	4.01	1.82	1.63	5.295	4.205	3.515	1.09	1.01	0.87	improved significantly
Inventory	4.34	5.23	0.82	8.16	7.82	6.4	7.92	7.57	6.21	improved significantly
Debtors	5.05	5.82	5.1	15.38	10.165	7.02	6.62	6.91	5.23	improved significantly
PBITM (%)	-0.14	10.01	9.5	5.63	5.015	5.455	6.66	7.55	7.98	fallen
CPM (%)	-0.78	7.19	-6.36	4.28	4.125	3.74	-1.73	-1.71	-1.95	fallen but better than benchmark
ROCE (%)	-0.45	16.17	-12.22	16.1	14.01	14.2	0.12	0.14	0.01	

Key Ratios	Before merger			After Merger			Benchmark			Comments
	Target	Acquirer	Benchmark	Acquirer			Industry			
RONW (%)	-20.02	12.16		24.53	18.055	12.39 <sup>3</sup>	0.13	0.2	0.02	
<b>3. aarti and alchemie</b>	<b>2001</b>	<b>2001</b>	<b>2001</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	
Sales Growth	12.5	16.98		6.4	38.86	6				falls in year 1 following M&A, then picks up
Long Term Debt-Equity Ratio	0.61	0.51	1.31	0.48	0.47	0.52	1.46	1.86	1.71	same as before but better than benchmark
Fixed Assets	1.4	2.11	1.43	1.97	2.17	1.94	1.46	1.4	1.42	fallen but better benchmark
Inventory	4.37	9.97	3.68	7.13	8.63	8.66	4.81	5.1	4.04	improved
Debtors	8.02	4.22	5.51	4.64	5.3	4.77	6.07	5.57	4.99	improved
PBITM (%)	3.11	11.29	6.34	12.38	11.91	14.38	9.93	7.1	5.69	improved
CPM (%)	0.27	9.92	2.81	10.57	9.96	12.58	8.62	4.71	2.14	improved
ROCE (%)	4.18	16.11	8.4	18.29	20.39	21.38	12.7	9.41	6.87	better than benchmark
RONW (%)	-8.97	16.92	-5.73	22.46	21.88	24.01	15.52	3.19	-10.6	better than benchmark
<b>4 Spic and Manali</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	
Sales Growth	-22.29	23		6.71	1.45	2.23				falls in year 1 following M&A, then picks up
Long Term Debt-Equity Ratio	1.79	0.53	1.18	0.86	1.25	1.08	0.66	0.93	1.09	reveals consolidated debt, > benchmark
Fixed Assets	1.14	1.17	0.9	1.1	1.04	1.36	1.18	1.05	1.1	improved in the first year after merger, later, same as benchmark
Inventory	5.08	5.77	5.5	6.57	4.87	5.77	6.82	5.6	5.72	not materially different from the benchmark
Debtors	5.8	4.66	5	5.4	4.98	6.13	6.33	5.23	5.64	better after merger, but not better than benchmark
PBITM (%)	3.3	1.38	5.23	-1.58	0.28	-1.19	6.79	6.27	6.46	
CPM (%)	3.11	1.82	2.99	0.53	2.08	0.07	7.17	5.17	5.12	lower than the benchmark both before and after the merger
ROCE (%)	0.01	0.011	0.12	0.14	0.15	0.01	8.98	6.65	7.47	
RONW (%)	0.042	0.05	0.067	0.05	0.02	0.04	6.44	0.3	0.61	
<b>5. Float glass and asahi</b>	<b>2002</b>	<b>2002</b>	<b>2002</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	
Sales Growth	29.33	5.24		20.17	21.49	9.22				high growth in sales after merger

Key Ratios	Before merger			After Merger			Benchmark			Comments
	Target	Acquirer	Benchmark	Acquirer			Industry			
Long Term Debt-Equity Ratio	7.83	1.35	1.33	1.44	2.22	2.56	1.06	1.65	2.1	Deteriorated post merger
Fixed Assets	0.55	1.34	1.22	0.92	0.85	1.1	0.96	0.89	1.09	ATO has fallen but better than the benchmark
Inventory	4.45	6.64	6.66	6.01	5.63	7.28	5.99	5.8	7.31	as good as before
Debtors	13.07	17.96	14.28	9.91	10.44	13.74	10.15	10.8	13.42	better than benchmark
PBITM (%)	8.33	9.6	5.01	13.17	14.43	10.2	12.01	13.55	9.69	better & continues to be better than benchmark
CPM (%)	13.18	12.47	8.53	17.54	21.63	17.58	16.51	20.44	17.25	
ROCE (%)	5.62	16.3	6.57	17.12	19.41	16.12	14.89	17.37	13.32	
RONW (%)	20.25	31.61	3	50.98	68.92	62.7	32.23	41.26	32.51	
<b>6. Jk Tyres and Vikranth</b>	<b>2002</b>	<b>2002</b>	<b>2002</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	
Sales Growth	29.97	1		17.76	9.9	-27				falls in year 1 following M&A, then picks up
Long Term Debt-Equity Ratio	1.49	0.74	0.7	1.41	1.33	0.84	0.68	0.68	0.67	was higher than benchmark, post merger same as benchmark
Fixed Assets	1.5	1.23	1.96	1.59	1.57	1.26	2.26	2.25	2.08	was below benchmark, has improved after merger but < benchmark
Inventory	9.25	7.24	8.23	11.29	11.49	10.13	8.58	8.57	8.8	was below benchmark, has improved after merger
Debtors	5.58	6.73	6.83	5.54	5.19	5.35	8.15	7.75	7.18	"
PBITM (%)	3.01	8.61	6.49	2.64	4.56	6.96	3.95	5.28	6.86	was better but noe below
CPM (%)	0.76	3.72	4.18	3.04	3.29	4.02	3.93	4.38	5.06	was below contn to be below
ROCE (%)	5.05	8.77	11.88	5.34	8.42	9.31	9.43	12.1	14.28	improved in 1 year and then started decline
RONW (%)	-11.1	2.69	5.62	2.21	2.83	3.27	7.37	9.28	10.96	
<b>7. G. Propack and Cosmo</b>	<b>2002</b>	<b>2002</b>	<b>2002</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	
Sales Growth	-20.4	23.74		24.71	-0.63	35				significant improvement in 1st year
Long Term Debt-Equity Ratio	2.59	0.67	0.33	1.3	1.62	1.37	0.44	0.4	0.33	was as good as benchmark, but then on started falling
Fixed Assets	1.05	1.17	0.95	1.1	0.99	1.48	0.96	0.97	1.01	was better, now as good as benchmark

Key Ratios	Before merger			After Merger			Benchmark			Comments
	Target	Acquirer	Benchmark	Acquirer			Industry			
Inventory	9.23	8.21	7.44	8.81	8.76	10.87	8.24	7.91	8.27	improved, better than benchmark
Debtors	7.97	6.55	10.1	8.29	7.45	9.11	10.87	11.93	11.04	improved but still below benchmark
PBITM (%)	10.12	18.82	10.73	4.96	13.9	22.24	11.18	13.79	8.82	
CPM (%)	4.62	18.08	11.78	11.3	17.92	17.72	12.98	14.02	7.16	better than benchmark
ROCE (%)	14.84	22.88	7.06	6.52	16.21	37.84	8.75	10.55	6.61	
RONW (%)	0.73	25.54	5.17	9.45	30.56	50.05	8.6	9.9	1.05	
<b>8. Badra.paper &amp; ITC</b>	<b>2001</b>	<b>2001</b>	<b>2001</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	
Sales Growth	36.04	9.18		9.05	16.99	5.4				falls in year 1 following M&A, then picks up
Long Term Debt-Equity Ratio	0.75	0.12	0.16	0.01	0.03	0.06	0.03	0.05	0.09	improved
Fixed Assets	0.77	4.07	4.68	2.66	2.82	3.23	2.92	3.11	3.58	was better, has fallen after merger
Inventory	6.92	8.36	8.51	8.48	9.06	8.46	8.8	9.33	8.43	same as before
Debtors	11.17	77.8	54.89	51.28	53.35	65.56	47.35	46.45	50.72	improved
PBITM (%)	11.85	19.6	16.23	19.92	19.02	18.88	17.84	16.79	16.78	
CPM (%)	11.01	13.2	10.83	15.53	14.59	14.11	13.74	12.8	12.3	better throughout
ROCE (%)	8.66	44.1	41.58	39.58	41.69	41.44	39.25	40.62	40.35	
RONW (%)	6.86	32.43	32.18	27.34	28.41	30.43	27.32	28.44	30.59	

### Conclusions and limitations:

Based on the results from the event study it can be concluded that the target company shareholders gain immediately on the basis of the high premium they receive from the acquirer on acquisition. However, the acquirer company's shareholders gain abnormal returns over a period of 2 years. The accounting study results however vary very much from the event study results. As per the accounting study, it can be seen that though the returns to shareholders based on the ROCE and RONW show improvements, only about 50% of the companies show significant improvement in fixed asset utilization and cost reduction due to acquisition for the acquirer. Most acquirers have however shown significant improvement in working capital management. Overall the improvements achieved by Indian M&A's as compared to those in other nations seem to be better over a period of 2 years post acquisition. The limitation of the study is

that the sample size is small and can be increased. Further, a statistical inference based on paired t test can be conducted over a larger sample to conclude better.

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