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Shareholder Wealth Effects from Mergers and Acquisitions in the Indian Industry

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ABSTRACT

In today's globalised economy, mergers and acquisitions are being increasingly used all over the world for improving competitiveness of companies through gaining greater market share, broadening the portfolio to reduce business risk, for entering new markets and, and capitalising on economies of scale. The present paper examines the impact of mergers and acquisitions on the shareholders' wealth of the various companies which have undergone merger or an acquisition across different sectors in India. The objective of the study is to investigate whether there is any significant difference in the performance of the firms pre-merger/acquisition and post-merger/acquisition periods. By using the ratio analysis approach, a change in the financial position of the companies during the period 2004-2009 has been calculated. The data has been collected from Centre for Monitoring Indian Economy. A paired sample t-test is adopted to check for any statistically significant difference between the means pre and post the deals. Besides, a regression analysis has been done to test the relationship between the dependent variable and the independent variable. The findings conclude that there are no significant differences between the pre-merger/acquisition and post-merger periods/acquisition and hence, on an average, total shareholder value is not really affected by the announcement of M&A.

Keywords: *Mergers and Acquisitions, Shareholders Wealth, Business risk.*

INTRODUCTION:

In today's globalized world, competitiveness and competitive advantage have become the buzzwords for corporates all around the world. Mergers and acquisitions (M&A's) are the dominant corporate strategies followed by organizations looking for enhanced value creation. While business firms can grow both internally and externally, with increased global competition, it has become imperative for companies to adopt inorganic strategies to grow their businesses. The growing tendency towards mergers and acquisitions world-wide, has been driven by intensifying competition. There is a need to reach global size, to reduce costs, take advantage of economies of scale, increase investment in R&D for strategic gains, expand business into new areas and improve shareholder value. M&A's comes in all forms, and investors need to consider the complex issues involved in such deals. A proper cost-benefit analysis is required for the success of such deals. Corporates worldwide have been aggressively trying to build new competencies and capabilities, to remain competitive and grow profitably. Mergers and acquisitions (M&A's) have become prominent business strategies in the advanced capitalist countries since the late 19th century. But, in recent years, have they become a regular phenomenon in the developing countries as well. In the USA, since the early 1900's, there have been six distinct waves of mergers and acquisitions, as per a BCG report released in July. As per the report, at the beginning of the twentieth century, there was a drive for market share, followed three decades later by a longer and more ambitious wave as companies connected together different elements of the value chain, from raw materials and production through to distribution. The most recent wave, which started in 2004, after the internet bubble at the turn of the century and the subsequent downturn, is driven by consolidation motives.

Indian enterprises were subjected to strict control regime before 1990's. This led to haphazard growth of Indian corporate enterprises during that period. In Indian industry, the pace for mergers and acquisitions activity picked up in response to various economic reforms introduced by the Government of India since 1991, in its move towards liberalization and globalization. Mergers and acquisitions occurred in waves in the Indian industry as well. During the first wave (i.e. 1990-95), the Indian corporate houses seemed to have been bracing up to face intense foreign competition while the second wave (i.e., 1995-2000), experienced a large presence of multinational firms**.** The third wave of M&A's in India (2000-till date) is evident of Indian companies venturing abroad and making mergers and acquisitions happen in the developed and developing countries (Beena 2000). The immediate effects of the mergers and acquisitions have been diverse across various sectors of the Indian economy. In nutshell, merger and acquisition decisions are critical to the success of corporations and their managers. Front runners in business should take calculated risks and should ensure seamless functioning of such processes by having a thorough understanding of the variables involved in implementing a successful deal.

LITERATURE REVIEW:

There have been numerous studies on mergers and acquisitions in India as well as abroad. An extensive review of literature has been carried out in order to enhance the level of understanding in the area of mergers and acquisitions and gain insight into the impact of mergers and acquisitions on operating performance, financial performance and maximisation of shareholders' wealth.

(Norman & Pepall 2000), analysed the profitability and locational effects of mergers in the Cournot competitive market and found that a two-firm merger was usually profitable because both merging partners could coordinate their location decisions. The results also indicated that merger between two profitable firms would reduce competitiveness, leading to higher prices and reduce consumer surplus. In short, total surplus could be enhanced by locational efficiency and the increased profits of the merging partners.

(Moeller, Schlingemann and Stulz 2004), examined a sample of 12,023 acquisitions by public firms from 1980 to 2001 and found that small firms fared significantly better than large firms when they made an acquisition announcement. The abnormal return linked with acquisition announcements for small firms exceeded the abnormal return associated with acquisition announcements of large firms.

(Rhoades 1993) studied the impact of mergers in banking industry on efficiency and profitability considering both the domestic and cross border mergers. A cost and profit efficiency analysis of 33 bank-to-bank mergers was done which showed that the most of the domestic mergers improved the cost efficiency and little improvement of profit efficiency whereas little improvement in the profit efficiency and no improvement in the cost of efficiency in the case of cross border mergers.

(Azhagaiah & Kumar 2011), examined whether there is significant improvement in the corporate performance of Indian manufacturing firms following the merger/acquisition event using paired t-test. The findings revealed that Indian corporate firms involved in M&A's have achieved an increase in the liquidity position, operating performance, profitability, and reduced financial and operating risk. In another study they examined a sample consisting of 20 acquiring firms during the period 2007. They concluded that corporate firms in India appear to have performed better financially after the merger, as compared to their performance in the pre-merger period.

(Mantravadi & Reddy 2008), aimed to study the impact of mergers on the operating performance of merging companies in different industries in India, by examining some pre-merger and post-merger financial ratios from the period 1991 to 2003. The results indicated that there were minor variations in terms of impact on operating performance following mergers, in different industries in India. In particular, mergers seemed to have had a slightly positive impact on profitability of firms in the banking and finance industry. The pharmaceuticals, textiles and electrical equipment sectors saw a marginal negative impact on operating performance (in terms of profitability and returns on investment). For the Chemicals and Agri-products sectors, mergers had caused a significant decline, both in terms of profitability margins and returns on investment and assets.

Constantine (Manasakis 2006), investigated the shareholder wealth effects of mergers and acquisitions in the Greek banking industry from 1995 to 2001, by using the "event study methodology". The study indicated that target shareholders earned significant abnormal returns upon the announcement of horizontal and diversifying deals. On the other hand, bidder shareholders had significant losses in cases of horizontal deals and zero effects in diversifying deals. Mergers and acquisitions in the Greek banking industry were not found to be value-enhancing. They were rationalized as an external growth strategy, whose main goal was to strengthen the position of the participants in the domestic market and help them to become more tenacious in a fiercely competitive international environment.

(Marina Martynova, Sjoerd Oosting and Luc Renneboog 2007), analysed the long-term profitability of corporate takeovers in Europe, and found that both acquiring and target companies significantly outperformed the median peers in their industry prior to the takeovers, but the profitability of the combined firm decreased significantly following the takeover. However, the decrease became insignificant after controlling for the performance of the control sample of peer companies.

(Gallet 1996), studied the relationship between mergers in the U.S. steel industry and the market power. The study employed New Empirical Industrial Organization (NEIO) approach, which estimates the degree of market power from a system of demand and supply equations. The study analyzed yearly observations over the period between 1950 and 1988 and results indicated that merges did not have a significant effect on market power in the steel industry in the period from 1968 to 1971, whereas mergers in 1978 and 1983 did boost market power in the steel industry but to a slight extent.

(Feroz *et al* 2005), examined the effect of mergers activity on the performance of U.S. companies. A sample of 45 pairs of merged firms over a period of five years pre and post-mergers were tested. Data Envelopment Analysis (DEA) was used to determine the managerial efficiency impact of mergers by comparing the combined efficiency of the acquired and the acquiring firm prior to merger, with the efficiency of the merged firm during post-merger period. The results revealed that the managerial efficiency of majority of sample firms (82%) improved in the post-merger period.

OBJECTIVES OF THE STUDY:

The study is carried out with an aim to access the impact of mergers and acquisitions on the wealth creation of shareowners across different industries.

RESEARCH METHODOLOGY:

The present study is based on secondary data. The financial statements of the companies has been collected from CMIE database. Besides, money control, sify finance and BSE & NSE publications databases were also used to collect the required data. A total number of 50 sample companies that have undergone merger or an acquisition from the period 2004-2009 have been studied.

Financial ratio analysis has been used to compute key financial ratios before and after the merger or acquisition over an eight year period, four years before the merger or acquisition and four years post-merger or acquisition. Earnings per share (Rs), Book value per share (Rs) and Dividend yield (%) are the ratios used for measuring shareholders' return.

A "paired sample t-test" at 5% level of significance has been used to test whether the mean difference is statistically significant or not before and after the merger/acquisition. Besides a cross-sectional regression analysis has been conducted to test the relationship between the dependent variable and the independent variable (Paul M. Healy, Krishna C. Palepu, Richard S. Rubak, 1992); (K. Ramakrishnan, 2008).

This model takes the form:

$$AIAV_{POST} = \alpha + \beta . AIAV_{PRE} + \varepsilon$$

AIAV depicts the aggregate industry-adjusted values of the variables and the subscripts POST and PRE refer to the period after and before the deal. Alpha (α) is the intercept parameter, β, the slope parameter and ε denotes the error term. This equation predicts the aggregate post-merger/acquisition performance of the merging/acquiring firms using data pertaining to the aggregate pre-merger/acquisition performance by interpreting slope (β). But here, the researcher is wants to know the impact of an event i.e. merger or acquisition on post-merger/acquisition performance, so regression equation has been interpreted on the basis of value of alpha. Alpha (α) denotes the increase or decrease in post-merger/acquisition performance irrespective of the fact how the firm was performing before merger or acquisition. A positive alpha (α) implies positive impact whereas a negative alpha means negative impact, implying a decline in post event performance.

Sampling:

A total of 1,368 mergers and acquisitions have taken place during the reference period of 2004-09. Due to time constraints and unavailability of financial data for a large number of companies, only 50 sample companies were analysed for the present study. Convenience sampling method was used to select the final sample. The sample companies were selected across different industries viz: Banking, Computer Software, Chemicals and Fertilizers, Cement, Drugs and Pharmaceuticals, Textiles, Infrastructure, FMCG and Others. "Others" include the firms belonging to the industries like metal industry, beverage industry, paper industry, chemical industry and trading industry. Firms belonging to the above industries were clubbed together under the title "others", as fewer number of mergers and acquisitions have taken place in these industries. The list of the industries along with the merging/acquiring firms and merged/acquired firms is given in table below:

List of Merging/Acquiring and Merged/Target Firms Undertaken for the Study

S. No	Industry	Merging/Acquiring Firm	Merged/Target Firm	Year
1.	Banking	Axis Bank Ltd.	Shriram Investments Ltd.	2004
2.		HDFC Bank Ltd.	Centurion Bank of Punjab Ltd.	2006
3.		ICICI Bank Ltd.	CMC Ltd.	2007
4.		IDBI Bank Ltd.	Gajra Bevel Gears Ltd.	2005
5.		Oriental Bank of Commerce	Global Trust Bank Ltd.	2004
6.	Cement	ACC Ltd.	Shiva Cement Ltd.	2007
7.		Ambuja Cements Ltd.	Ambuja Cement Eastern Ltd.	2006
8.		Keerthi Industries Ltd.	Hyderabad Flextech Ltd.	2008
9.	Chemicals & Fertilizers Ltd.	Chambal Fertilizers & Chemicals Ltd.	India Steamship Company Ltd.	2004
10.		Coromandel International Ltd.	Ficom Organics Ltd.	2006
11.		Grauer Weil (India) Ltd.	Bombay Paints Ltd.	2006
12.		Gujarat Narmada Valley Fertilizers & Chemicals Ltd.	Narmada Chematur Petrochemicals Ltd.	2005
13.		Gulshan Polyols Ltd.	Gulshan Sugars & Chemicals Ltd.	2007
14.		Southern Petrochemical Industries Corporation Ltd.	SPEL Semiconductor Ltd.	2004
15.	Computer Software	Commex Technology Ltd.	Orient Information Technology Ltd.	2007
16.		Dion Global Solutions Ltd.	Relgare Technova Global Solutions Ltd.	2009
17.		Glodyne Technoserve Ltd.	Compulink Systems Ltd.	2009
18.		Megasoft Ltd.	Visualsoft Technologies Ltd.	2006
19.		Mindtree Ltd.	Aztechsoft ltd.	2008
20.	Pharmaceuticals	Arch Pharmalabs Ltd.	Avon Organics Ltd.	2007
21.		Emami Ltd.	Zandu Realty Ltd.	2008
22.		IPCA Lab. Ltd.	Tonira Pharma Ltd.	2007
23.		Pfizer Ltd.	Pharmacia Healthcare Ltd.	2004

S. No	Industry	Merging/Acquiring Firm	Merged/Target Firm	Year
24.	FMCG	Dalmia Bharat Sugar & Industries Ltd.	OCL India Ltd.	2009
25.		Golden Tobacco Ltd.	GHCL Ltd.	2005
26.		Hindustan Unilever Ltd.	Vashiti Detergents Ltd.	2005
27.		Mirc Electronics Ltd.	Onida Savak Ltd.	2005
28.		Videocon Industries Ltd.	EKL Appliances Ltd.	2005
29.	Infrastructure	IVRCL Ltd.	Hindustan Dorr-Oliver Ltd.	2005
30.		Larsen & Tourbo Ltd.	Data Switchgear Ltd.	2005
31.		Peninsula Land Ltd.	Piramal Holdings Ltd.	2004
32.	Textiles	Banswara Syntex Ltd.	Banswara Textile Mills Ltd.	2004
33.		GTN Industries Ltd.	Patspin India Ltd.	2006
34.		Nahar Industrial Enterprises Ltd.	Nahar Polyfilms Ltd.	2006
35.		RSWM Ltd.	Cheslind Textiles Ltd.	2006
36.		Shree Rajasthan Syntex Ltd.	Shree Rajasthan Texchem Ltd.	2006
37.		Spentex Industries Ltd.	CLC Global Ltd.	2004
38.		Welpsun India Ltd.	Glofame Cotspin Industries Ltd.	2004
39.	Others	DCM Shriram Industries Ltd.	Daurala Organics Ltd.	2004
40.		Forbes Company Ltd.	FAL Industries Ltd.	2005
41.		HIL Ltd.	Malabar Building Products Ltd.	2005
42.		Hindalco Industries Ltd.	Indian Aluminium Company Ltd.	2007
43.		ISMT Ltd.	Indian Seamless Metal Tubes Ltd.	2005
44.		Supreme Petrochemical Ltd.	SPL Polymers Ltd.	2007
45.		United Spirits Ltd.	Balaji Distilleries Ltd.	2008
46.		VIP Industries Ltd.	Aristocrat Luggage Ltd.	2005
47.		Pittsburgh Iron & Steel Ltd.	Bellary Steels & Alloys Ltd.	2005
48.		JL Morison (India) Ltd.	Hindustan Composites Ltd.	2006
49.		Seshasayee Paper & Boards Ltd.	Ponni Sugars Ltd.	2008
50.		West Coat Paper Mills Ltd.	Shree Rama Newsprint Ltd.	2009

Source: CMIE

RESULTS AND DISCUSSIONS:

Merger and acquisition is a firm specific phenomenon. Limited number of studies by far have been conducted to analyse the impact of M&A's on the individual firms. In the present study, an attempt has been made to assess the impact of mergers & acquisitions on the shareholders' wealth of individual sample firms. The values of financial ratios used to assess the impact on shareholders' wealth of individual sample firms have been detailed out in tables I, II and III.

Despite its impact on operating performance or financial performance, the success of a merger or acquisition ultimately depends upon its impact on shareowners wealth. However, it is also a fact that the maximisation of shareowners wealth mainly depends on operating performance and financial performance. The performance in terms of wealth is reflected in market price of equity in the market and the dividends paid or payable. However, the historical data about the market price of the equity of most of the sample companies was not available. As such, industry- adjusted EPS, book value and dividend yield were used to assess the impact of M&A's on wealth of shareowners.

Table II which contains data about the industry-adjusted mean book value of sample merging or acquiring firms reveals, that out of the sample of 50 sample firms, 38 firms accounting for 76 percent of the sample have depicted an increase in mean book value post-merger or acquisition, reflecting thereby a positive impact of M&A on this determinant of shareowners wealth. Whereas the industry-adjusted mean book value of 12 firms is found to have declined. Perusal of the results of t-test contained in the below referred table reveals that out of the 38 sample firms having witnessed positive impact on the industry-adjusted mean book value, the mean difference between pre and post industry-adjusted mean book value is found statistically significant at 5 percent level of significance only for 28 firms. Compared to this, the negative impact on book value has been found statistically significant only in case of 4 firms at 5 percent level of significance namely IDBI bank Ltd., Southern Petrochemical Industries Corporation Ltd., Commex technology Ltd. and GTN industries Ltd. As such, it can be safely concluded that the mergers or acquisitions are found to have a significant positive impact on book value, thus on the wealth of the shareowners of sample firms. Only a few sample mergers or acquisitions have been found to have a significant negative impact on book value.

Almost all the sample firms belonging to the banking industry, cement industry, chemical & fertilizer industry, textiles and FMCG have shown significant improvements in the industry-adjusted mean book value, thus on the wealth of shareowners. It can also be seen from the table that M&A's has been found to have a negative impact on mean book value of most of the firms of computer industry. While as the other sample industries have recorded mixed impact in the industry-adjusted mean book value of the firms belonging to these industries.

EPS to a great extent determines the market price and the dividend yield, thus the wealth of shareowners. The data about the industry-adjusted mean EPS along with mean difference and their p-values is illustrated in table I. The results reveal that 31 sample firms which account for 62 percent of the sample firms have witnessed an improvement in the industry-adjusted mean EPS after their merger or acquisition. It means that the remaining 19 firms, accounting for 38 percent of the sample size have recorded a decline in their industry-adjusted mean EPS post-merger or acquisition. While looking at the results of t-test, out of 31 sample firms which have recorded an improvement, the difference in the industry-adjusted mean EPS in case of 17 firms is found to be statistically significant at 5 percent level of significance. This indicates that though the industry-adjusted mean EPS has shown improvement post M&A, yet the increase in EPS is found statistically significant in case of less number of sample firms, thus on the wealth of shareowners. Among the firms having witnessed decline in the industry-adjusted mean EPS post-merger or acquisition, the declining impact in case of 8 firms, out of the total 19 firms is found statistically significant at 5 percent level of significance. Again, from the above it can be concluded that though M&A's during the reference period has been found to have statistically significant negative impact on some 8 firms yet, the positive significant impact is found to be on more sample firms.

The table has also revealed that almost all the sample firms belonging to banking industry and chemical and fertiliser industry have recorded positive impact. The positive impact on many of these firms is found to be statistically significant. Similar finding is found with respect to the firms of these industries in terms operating and financial measures. With respect to the sample firms belonging to other sample industries, somewhat mixed results have been found. This again is in line with the earlier results.

Dividends depend on EPS, stage of growth, firm's dividend policy and future investment cash flows. Therefore, dividend yield cannot be treated as the major determinant of the shareowners wealth. But the fact is that to some extent it reflects the shareowners wealth. The data about dividend yield is illustrated in table III. The data contained in the table has revealed that the industry-adjusted mean dividend yield of 29 sample firms, accounting for 58 percent of the total sample has registered an improvement post-merger or acquisition. The industry-adjusted mean dividend yield of the remaining 21 firms have recorded a decline. Though, the majority of sample firms have registered an improvement, yet the improved performance has been found statistically significant at 5 percent level of significance only in case of 11 sample firms. With respect to the firms with negative impact, the mean differences has been found statistically significant at 5 percent level of significance only in case of 2 sample firms. It can be concluded that sample M&A's did impact the performance of sample firms in terms of dividend yield both positively and negatively. However, more firms have witnessed statistically significant positive impact on dividend yield. While as, only a few sample firms have recorded negative impact on industry-adjusted mean dividend yield post-merger or acquisition on the wealth of their shareowners.

Table I: Pre & Post Industry-Adjusted Mean Book Value per Share of the Sample Firms

Firm	Post M & A	Pre M & A	Change in Performance	Impact on Performance	T-Test (P-Value)
Axis Bank Ltd.	11.18	-73.99	85.17	Improved	0.07
HDFC Bank Ltd.	293.42	-39.10	332.52	Improved	0.00*
ICICI Bank Ltd.	271.80	18.53	253.27	Improved	0.00*
IDBI Bank Ltd.	-33.13	25.12	-58.25	Deteriorated	0.02*
Oriental Bank of Commerce	81.56	-38.68	120.24	Improved	0.00*
ACC Ltd.	260.36	0.86	259.50	Improved	0.00*
Ambuja Cements Ltd.	-11.90	-25.92	14.02	Improved	0.00*
Keerthi Industries Ltd.	5.66	-95.91	101.57	Improved	0.00*
Chambal Fertilizers & Chemicals Ltd.	-26.65	-74.85	48.20	Improved	0.03*
Coromandel International Ltd.	19.18	57.13	-37.95	Deteriorated	0.08
Grauer Weil (India) Ltd.	-1.42	-55.03	53.61	Improved	0.04*
Gujarat Narmada Valley Fertilizers & Chemicals Ltd.	53.04	6.14	46.90	Improved	0.03*
Gulshan Polyols Ltd.	69.81	-16.54	86.35	Improved	0.00*
Southern Petrochemical Industries Corporation Ltd.	-61.69	15.30	-76.99	Deteriorated	0.01*
Commex Technology Ltd.	-27.64	13.21	-40.85	Deteriorated	0.00*
Dion Global Solutions Ltd.	-19.61	-7.97	-11.64	Deteriorated	0.14
Glodyne Technoserve Ltd.	114.74	13.87	100.87	Improved	0.00*
Megasoft Ltd.	35.00	42.92	-7.92	Deteriorated	0.57
Mindtree Ltd.	150.20	27.52	122.68	Improved	0.00*
Arch Pharmalabs Ltd.	43.75	-67.57	111.32	Improved	0.00*
Emami Ltd.	-93.65	-97.35	3.70	Improved	0.70
IPCA Lab. Ltd.	11.00	57.84	-46.84	Deteriorated	0.28
Pfizer Ltd.	19.47	-22.14	41.61	Improved	0.36

Firm	Post M & A	Pre M & A	Change in Performance	Impact on Performance	T-Test (P-Value)
Dalmia Bharat Sugar & Industries Ltd.	55.66	11.31	44.35	Improved	0.25
Golden Tobacco Ltd.	-13.53	-207.97	194.44	Improved	0.00*
Hindustan Unilever Ltd.	-14.36	-154.85	140.49	Improved	0.00*
MIRC Electronics Ltd.	-7.98	-53.95	45.97	Improved	0.30
Videocon Industries Ltd.	213.10	198.47	14.63	Improved	0.86
IVRCL Ltd.	-1.28	8.49	-9.76	Deteriorated	0.51
Larsen & Tourbo Ltd.	166.28	-38.52	204.80	Improved	0.01*
Peninsula Land Ltd.	-66.17	-55.84	-10.33	Deteriorated	0.74
Banswara Syntex Ltd.	-6.62	-56.29	49.67	Improved	0.02*
GTN Industries Ltd.	-35.18	9.47	-44.65	Deteriorated	0.01*
Nahar Industrial Enterprises Ltd.	57.97	25.97	32.00	Improved	0.15
RSWM Ltd.	23.52	9.92	13.60	Improved	0.18
Shree Rajasthan Syntex Ltd.	-36.76	-47.94	11.18	Improved	0.04*
Spentex Industries Ltd.	-55.26	-74.14	18.88	Improved	0.00*
Welpsun India Ltd.	-8.64	-69.91	61.27	Improved	0.00*
DCM Shriram Industries Ltd.	3.62	-25.03	28.65	Improved	0.00*
Forbes Company Ltd.	75.84	-24.42	100.26	Improved	0.01*
HIL Ltd.	117.66	-3.52	121.18	Improved	0.00*
Hindalco Industries Ltd.	63.34	230.62	-167.28	Deteriorated	0.18
ISMT Ltd.	-49.33	-56.93	7.60	Improved	0.17
Supreme Petrochemical Ltd.	-58.56	-81.48	22.92	Improved	0.01*
United Spirits Ltd.	-35.21	-67.01	31.80	Improved	0.00*
VIP Industries Ltd.	-39.33	-62.61	23.28	Improved	0.05*
Pittsburgh Iron & Steel Ltd.	-80.34	-89.59	9.25	Improved	0.25
JL Morison (India) Ltd.	429.83	153.53	276.30	Improved	0.01*
Seshasayee Paper & Boards Ltd.	141.98	-0.84	142.82	Improved	0.00*
West Coat Paper Mills Ltd.	9.48	86.12	-76.64	Deteriorated	0.14

Note: (*) Statistically significant at 5% level of Significance
Source: CMIE

Table II: Pre & Post Industry-Adjusted Mean EPS of the Sample Firms

Firm	Post M & A	Pre M & A	Change in Performance	Impact on Performance	T-Test (P-Value)
Axis Bank Ltd.	-8.91	-9.79	0.88	Improved	0.78
HDFC Bank Ltd.	32.50	-6.28	38.78	Improved	0.01*
ICICI Bank Ltd.	6.24	2.56	3.68	Improved	0.53
IDBI Bank Ltd.	-19.63	-0.35	-19.28	Deteriorated	0.01*
Oriental Bank of Commerce	5.79	-8.88	14.67	Improved	0.01*
ACC Ltd.	47.74	4.05	43.69	Improved	0.03*
Ambuja Cements Ltd.	-10.40	-3.42	-6.98	Deteriorated	0.01*
Keerthi Industries Ltd.	-4.42	-10.95	6.53	Improved	0.16
Chambal Fertilizers & Chemicals Ltd.	-8.32	-9.33	1.01	Improved	0.04*
Coromandel International Ltd.	7.87	1.32	6.55	Improved	0.34
Grauer Weil (India) Ltd.	-6.18	-10.39	4.21	Improved	0.61
Gujarat Narmada Valley Fertilizers & Chemicals Ltd.	6.75	-2.61	9.36	Improved	0.02*
Gulshan Polyols Ltd.	8.57	-4.10	12.67	Improved	0.02*
Southern Petrochemical Industries Corporation Ltd.	-31.98	-12.87	-19.11	Deteriorated	0.02*
Commex Technology Ltd.	-11.03	-4.42	-6.61	Deteriorated	0.03*
Dion Global Solutions Ltd.	-13.71	-2.78	-10.93	Deteriorated	0.01*
Glodyne Technoserve Ltd.	10.05	3.50	6.55	Improved	0.82
Megasoft Ltd.	-6.28	4.09	-10.37	Deteriorated	0.02*
Mindtree Ltd.	25.18	9.17	16.01	Improved	0.12
Arch Pharmalabs Ltd.	1.40	-8.34	9.74	Improved	0.01*
Emami Ltd.	-2.25	-10.86	8.61	Improved	0.05*
IPCA Lab. Ltd.	14.29	24.64	-10.35	Deteriorated	0.21
Pfizer Ltd.	1.83	-2.91	4.74	Improved	0.51
Dalmia Bharat Sugar & Industries Ltd.	-2.70	21.07	-23.77	Deteriorated	0.04*
Golden Tobacco Ltd.	-2.08	-14.64	12.56	Improved	0.04*
Hindustan Unilever Ltd.	-0.57	-14.13	13.56	Improved	0.00*
MIRC Electronics Ltd.	-6.23	3.15	-9.38	Deteriorated	0.35
Videocon Industries Ltd.	28.32	16.83	11.49	Improved	0.03*

Firm	Post M & A	Pre M & A	Change in Performance	Impact on Performance	T-Test (P-Value)
IVRCL Ltd.	-11.46	4.22	-15.68	Deteriorated	0.01*
Larsen & Tourbo Ltd.	33.58	-32.59	66.17	Improved	0.01*
Peninsula Land Ltd.	-3.85	-18.65	14.80	Improved	0.25
Banswara Syntex Ltd.	3.89	8.79	-4.90	Deteriorated	0.15
GTN Industries Ltd.	-9.94	0.55	-10.49	Deteriorated	0.09
Nahar Industrial Enterprises Ltd.	2.10	0.41	1.69	Improved	0.86
RSWM Ltd.	-7.53	1.55	-9.08	Deteriorated	0.57
Shree Rajasthan Syntex Ltd.	-6.35	-3.21	-3.14	Deteriorated	0.36
Spentex Industries Ltd.	-4.94	-4.90	-0.04	Deteriorated	0.99
Welpsun India Ltd.	-0.22	-5.94	5.72	Improved	0.23
DCM Shriram Industries Ltd.	-1.69	-7.54	5.85	Improved	0.33
Forbes Company Ltd.	-13.46	-10.65	-2.81	Deteriorated	0.82
HIL Ltd.	27.82	-15.30	43.12	Improved	0.02*
Hindalco Industries Ltd.	0.81	31.28	-30.47	Deteriorated	0.12
ISMT Ltd.	-5.78	-19.05	13.27	Improved	0.01*
Supreme Petrochemical Ltd.	-6.69	-12.70	6.01	Improved	0.02*
United Spirits Ltd.	-9.19	-12.91	3.72	Improved	0.00*
VIP Industries Ltd.	-4.30	-12.16	7.86	Improved	0.01*
Pittsburgh Iron & Steel Ltd.	-13.53	-18.63	5.10	Improved	0.07
JL Morison (India) Ltd.	3.83	14.61	-10.78	Deteriorated	0.31
Seshasayee Paper & Boards Ltd.	21.93	2.44	19.50	Improved	0.15
West Coat Paper Mills Ltd.	-6.76	23.64	-30.40	Deteriorated	0.11

Note: (*) Statistically significant at 5% level of Significance
Source: CMIE

Table III: Pre & Post Industry-Adjusted Mean DY of the Sample Firms

Firm	Post M & A	Pre M & A	Change in Performance	Impact on Performance	T-Test (P-Value)
Axis Bank Ltd.	-0.23	0.12	-0.35	Deteriorated	0.63
HDFC Bank Ltd.	-0.40	-3.53	3.13	Improved	0.00*
ICICI Bank Ltd.	0.68	-2.00	2.68	Improved	0.04*
IDBI Bank Ltd.	1.24	5.87	-4.63	Deteriorated	0.52
Oriental Bank of Commerce	0.80	0.95	-0.15	Deteriorated	0.87
ACC Ltd.	1.01	0.54	0.47	Improved	0.69
Ambuja Cements Ltd.	0.86	0.24	0.62	Improved	0.06

Firm	Post M & A	Pre M & A	Change in Performance	Impact on Performance	T-Test (P-Value)
Keerthi Industries Ltd.	-1.91	-1.68	-0.23	Deteriorated	-
Chambal Fertilizers & Chemicals Ltd.	1.95	-0.94	2.89	Improved	0.13
Coromandel International Ltd.	1.61	-4.36	5.97	Improved	0.14
Grauer Weil (India) Ltd.	-0.11	-7.39	7.28	Improved	0.02*
Gujarat Narmada Valley Fertilizers & Chemicals Ltd.	1.63	-2.76	4.39	Improved	0.02*
Gulshan Polyols Ltd.	-1.88	1.03	-2.91	Deteriorated	0.58
Southern Petrochemical Industries Corporation Ltd.	-2.88	2.58	-5.46	Deteriorated	0.22
Commex Technology Ltd.	-0.53	-0.47	-0.06	Deteriorated	-
Dion Global Solutions Ltd.	-0.53	-0.47	-0.06	Deteriorated	-
Glodyne Technoserve Ltd.	0.33	-0.30	0.63	Improved	0.05*
Megasoft Ltd.	2.14	1.76	0.38	Improved	0.91
Mindtree Ltd.	0.15	-0.39	0.54	Improved	0.05*
Arch Pharmalabs Ltd.	-0.97	-0.59	-0.38	Deteriorated	-
Emami Ltd.	0.17	0.29	-0.12	Deteriorated	0.88
IPCA Lab. Ltd.	0.45	1.63	-1.18	Deteriorated	0.11
Pfizer Ltd.	0.53	0.04	0.49	Improved	0.69
Dalmia Bharat Sugar & Industries Ltd.	-0.42	-1.08	0.66	Improved	0.58
Golden Tobacco Ltd.	-2.22	-2.08	-0.14	Deteriorated	-
Hindustan Unilever Ltd.	0.59	-0.73	1.32	Improved	0.25
Mirc Electronics Ltd.	3.50	-1.27	4.77	Improved	0.17
Videocon Industries Ltd.	-1.31	1.58	-2.89	Deteriorated	0.05*
IVRCL Ltd.	0.10	2.26	-2.16	Deteriorated	0.40
Larsen & Tourbo Ltd.	0.44	-0.72	1.16	Improved	0.09
Peninsula Land Ltd.	-0.06	-1.99	1.94	Improved	0.00*
Banswara Syntex Ltd.	1.87	-1.77	3.64	Improved	0.05*
GTN Industries Ltd.	0.56	5.74	-5.18	Deteriorated	0.04*
Nahar Industrial Enterprises Ltd.	0.55	-1.77	2.32	Improved	0.05*
RSWM Ltd.	0.35	1.30	-0.95	Deteriorated	0.76
Shree Rajasthan Syntex Ltd.	1.47	-1.27	2.74	Improved	0.26
Spentex Industries Ltd.	-1.32	-1.77	0.45	Improved	-
Welpsun India Ltd.	-1.32	0.78	-2.10	Deteriorated	0.47
DCM Shriram Industries Ltd.	-1.83	-5.10	3.27	Improved	0.00*
Forbes Company Ltd.	-1.15	4.70	-5.85	Deteriorated	0.09
HIL Ltd.	1.00	-1.44	2.44	Improved	0.04*
Hindalco Industries Ltd.	-0.73	-1.18	0.45	Improved	0.74
ISMT Ltd.	-0.90	-2.35	1.45	Improved	0.11
Supreme Petrochemical Ltd.	2.58	-1.38	3.96	Improved	0.09
United Spirits Ltd.	-1.86	-1.70	-0.16	Deteriorated	0.98
VIP Industries Ltd.	1.88	1.60	0.28	Improved	0.91
Pittsburgh Iron & Steel Ltd.	-1.97	-2.35	0.38	Improved	-
JL Morison (India) Ltd.	-0.94	-0.62	-0.32	Deteriorated	0.68
Seshasayee Paper & Boards Ltd.	1.10	-0.12	1.22	Improved	0.15
West Coat Paper Mills Ltd.	0.56	2.21	-1.65	Deteriorated	0.14

Note: (*) Statistically significant at 5% level of Significance
(-) t-test cannot be computed because the standard error of the difference is zero
Source: CMIE

REGRESSION ANALYSIS:

The paired sample t-test has been used to assess the statistical significance of the difference between pre and post-merger or acquisition performance. A cross-sectional regression analysis has also been used as a confirmatory tool for the findings based on paired sample t-test. The cross-sectional regression is aimed in determining whether post- merger or acquisition performance of sample firms improves irrespective of the possible impact of the performances of pre-merger or acquisition period. The results of cross-sectional regression model has been illustrated in table 4.20. The intercept or alpha (α) shown in column 2 reflects the change in controlled annual industry-adjusted performance due to merger/acquisition and is independent of the pre-merger/acquisition performance as its value is obtained when the value of pre-merger industry-adjusted performance is zero. The beta reflects the slope i.e. the correlation between the performance measures in the pre and post M&A years. In other words, it depicts how much each unit change in a given measure before merger or acquisition changes its value post-merger/acquisition. Further an R^2 shows to what extent variation in dependent variable is explained by the independent variable.

The impact of M&A's on the performance of sample firms in terms of wealth of shareowners has also been assessed. In the absence of historical data about the market price of the shares of sample firms, book value per share, EPS and dividend yield have been used. These ratios have been illustrated in table 4.20, which has revealed a positive impact of M&A's on the wealth of shareowners of the sample firms. The intercept (α) of all the above named ratios is found to be positive, thus indicative of positive impact of M&A's on wealth of shareowners. However, the impact of M&A's has been found statistically significant at 5 percent level of significance only with respect to book value per share which is evident from the p-value of its t-static. With respect to other ratios, viz. EPS and dividend yield, the impact of M&A, though positive but not found statistically significant. The beta of aggregate book value per share is 0.474 while as it is very low for EPS and dividend yield at 0.136 and 0.055 respectively. Beta of 0.474 for book value per share means that there exists 47.4 percent correlation between pre and post M&A aggregate book value per share. This in turn indicates the persistence in pre M&A book value per share in the post period. Similarly, the R^2 of book value per share is found more at 0.224 than the other two measures viz. EPS and dividend yield who's R^2 is 0.019 and 0.003 respectively. R^2 of 0.224 means that 22.4 percent variation in dependent variable is explained by the independent variable.

Regression Analysis of Wealth Creation Performance of Sample Firms

Ratios	Constant	Sig. (t)	Beta (R)	Sig. (t)	R^2	Sig. (F)
EPS (Rs)	1.440	0.506	0.136	0.346	0.019	0.346
BV per Share (Rs)	50.496	0.001*	0.474	0.001	0.224	0.001
Dividend Yield (%)	0.105	0.598	0.055	0.706	0.003	0.706
	a. Dependent Variable: Post industry-adjusted mean value					
	b. Predictors: (Constant): Pre industry-adjusted mean value					

Note: (*) Statistically Significant at 5% Level of Significance
Source: CMIE

CONCLUSION:

The results revealed that M&A's failed to create significant changes in shareholders' wealth for the individual firms. Majority of the changes in the financial ratios was found to be positive but the change was not statistically significant. The findings are consistent with those of (Lowinski *et al*. 2004), (Houston and

Ryngaert 1994), (Padmavathy and J. Ashok 2012). The regression results were found to be insignificant which in turn confirm the earlier findings.

REFERENCES:

Azhagaiah, R., & Kumar, T. S. (2011). Corporate Restructuring and Firms' Performance: An Empirical Analysis of Selected Firms across Corporate Sectors in India. *Interdisciplinary Journal of Research in Business*, *1*(4), 58-82.

Beena, P. L. (2000). *An analysis of mergers in the private corporate sector in India*. Working Paper no. 301, Centre for Development Studies, Thiruvanthapuram, Kerala, India.

Feroz, E. H., Kim, S., & Raab, R. (2005). Performance measurement in corporate governance: do mergers improve managerial performance in the post-merger period? *Review of Accounting and Finance*, *4*(3), 86-100.

Gallet, C. A. (1996). Mergers and market power in the US steel industry. *Applied Economics Letters*, *3*(4), 221-223.

Healy, P. M., Palepu, K. G., & Ruback, R. S. (1992). Does corporate performance improve after mergers? *Journal of financial economics*, *31*(2), 135-175.

Houston, J. F., & Ryngaert, M. D. (1994). The overall gains from large bank mergers. *Journal of Banking & Finance*, *18*(6), 1155-1176.

Lowinski, F., Schiereck, D., & Thomas, T. W. (2004). The effect of cross-border acquisitions on shareholder wealth - evidence from Switzerland. *Review of Quantitative Finance and Accounting*, *22*(4), 315-330.

Manasakis, C. (2006). Shareholder wealth effects from mergers and acquisitions in the Greek banking industry. *International Journal of Banking, Accounting and Finance*, *1*(3), 242-256.

Mantravadi, D. P., & Reddy, A. V. (2008). Post-merger performance of acquiring firms from different industries in India.

Marina, M., Oosting, S., & Renneboog, L. (2007). *The Long-term Operating Performance of European Acquisitions'* (No. 137, pp. 1-40). Working Paper.

Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2004). Firm size and the gains from acquisitions. *Journal of financial economics*, *73*(2), 201-228.

Norman, G., & Pepall, L. (2000). Profitable mergers in a Cournot model of spatial competition. *Southern Economic Journal*, 667-681.

Padmavathy, S., & Ashok, J. (2012). Merger announcements and stock price behaviour: Empirical evidence from Indian stock market. *International Research Journal of Finance and Economics*, (83), 153-160.

Ramakrishnan, K. (2008). Long-term post-merger performance of firms in India. *Vikalpa*, *33*(2), 47-63.

Rhoades, S. A. (1993). Efficiency effects of horizontal (in-market) bank mergers. *Journal of Banking & Finance*, *17*(2-3), 411-422.

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