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A STUDY ON THE FINANCIAL PERFORMANCE OF SELECTED INDIAN CHEMICAL INDUSTRIES A POST MERGER PERFORMANCE ANALYSIS

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Abstract
India has significant presence in production of basic organic and inorganic chemicals, pesticides, paints, dyestuffs and intermediates, petrochemicals, fine and specialty chemicals, cosmetic and toiletry product segments. The Indian chemical sector accounts for 13-14% of total exports and 8-9% of total imports of India. In terms of volume of production, it is the twelfth-largest in the world and the third-largest in Asia, after China and Japan. Despite its large size and significant GDP contribution, Indian chemicals industry represents only around 3% of global chemical. Currently the per capita consumption of products of the Indian chemical industry is one-tenth of the world average, which reflects the huge potential for further growth. The Indian advantage lies in the manufacturing of basic chemicals that are also known as commodity chemicals that account for about 57% of the total domestic chemical sector.

Chemicals are a part of every aspect of human life, right from the food we eat to the clothes we wear to the cars we drive. Chemical industry contributes significantly to improving the quality of life through breakthrough innovations enabling pure drinking water, faster medical treatment, stronger homes and greener fuels. The chemical industry is critical for the economic development of any country, providing products and enabling technical solutions in virtually all sectors of the economy.

1.1 INTRODUCTION

India has significant presence in production of basic organic and inorganic chemicals, pesticides, paints, dyestuffs and intermediates, petrochemicals, fine and specialty chemicals, cosmetic and toiletry product segments. The Indian chemical sector accounts for 13-14% of total exports and 8-9% of total imports of India. In terms of volume of production, it is the twelfth-largest in the world and the third-largest in Asia, after China and Japan. Despite its large size and significant GDP contribution, Indian chemicals industry represents only around 3% of global chemical.

MERGER AND ACQUISITION IN INDIA

The post-war period is regarded as an era of M&A. Large number of M&A occurred in industries like jute, cotton textiles, sugar, insurance, banking, electricity and tea plantation. It has been found that, although there were a large number of M&As in the early post independence period, the anti-big government policies and regulations of the 1960s and 1970s seriously deterred M&As.

1.2 Need of the Study

Corporate India is facing hyper competition both with the domestic market and also in its export markets. In the context of Liberalization and Globalization of the economy, the changes required. In the functioning of corporate need to be vast. It becomes imperative for all the corporations to review their alignment of their everlasting desire for growth and changes. Merger &Acquisition are the inorganic growth strategies which gave got its significance in today's corporate world due to intensively competitive business environment. Merger &Acquisition is considered as one of the strategies for growth.

1.3 Statement of the Problem

The development of industries depends on several factors such as finance, personnel, technology, quality of the product and marketing. Out of these, financial and operating aspects assume a significant role in determining the growth of industries. In this hyper competitive environment one necessity for change and creativity to achieve Merger and acquisition are not totally new to the Indian economy.

1.4 Objectives of The Study

1. To observe the profitability and liquidity position of the selected Industries.
2. To determine the factor influencing the liquidity of the position of Indian Chemical Industries.
3. To determine the value of Total shareholder Return associating with pre and post merger period in selected Indian chemical industries

1.5 Research Methodology

1.5.1 Sources of Data

Secondary data is used for the study. The required data for the study is collected and compiled from "PROWESS" database of Centre for Monitoring Indian Economy (CMIE), period from 2005-2006 to 2013-2014 which is a reliable and empowered corporate database. The researcher undertook the field work, approximately for period 2014-2015.

1.5.2 Sample Selection

A study is in between 2005 to 2014 was chosen. For the study researcher have been taken for the analysis period Merger and Acquisitions occurred on financial crisis period 2007-2008. During this period there was a spurt merger and acquisition activities especially in Indian chemical industries.

The following are the selected Indian Chemical Industries of this study

- Bodal Chemicals Ltd.
- Chembond Chemicals Ltd.
- Dhunseri Petrochem & Tea Ltd.
- Gujarat State Fertilizers & Chemicals Ltd.
- Gulshan Polyols Ltd.
- Indokem Ltd.
- Khaitan Chemicals & Fertilizers
- Nilkamal Ltd.
- Piramal Enterprises Ltd.
- Shiva Global Agro Inds Ltd.
- Supreme Petrochem Ltd.
- V I P Industries Ltd.

1.5.3 Period of Study

The study covers a period of eight years from the financial year 2005-2006 to 2013-2014.

1.5.4 Techniques of Analysis

Ratio analysis is a technique adapted to analyse and interprets general financial statements to assess the profitability, liquidity, Total shareholder return, financial distress and relative efficiency of selected Indian Chemical Industries. To analyse the financial re-structure of M&A in Indian chemical industries various accounting and statistical techniques were applied. Pre- acquisition and post- acquisition performance ratios were estimated and the mean values were computed for the set of sample firms, for pre and post-merger period. In order to assess the impact of M&A on the financial re-structure of acquired company, the following tools have been used. They are as follows

- Mean
- Standard deviation
- Co-efficient of variation
- Compound annual growth rate

1.6 Limitations

The study is subject to the following limitations.

1. The study is based on the secondary data taken from published annual reports and the PROWESS database of Indian chemical industries and as such its findings depend entirely on the accuracy of such data.
2. The study covered a period of eight years. But the changes that have taken place before and after the period are not considered.

2.REVIEW OF LITERATURE

The review of literature guides the researchers for getting better understanding of methodology used limitations of various available estimation procedures and the data base lucid interpretation and reconciliation of conflicting results.

Tofael Hossain Majumder(1968)[1] Financial ratios are the simplest method for evaluating the financial performance of all kinds of industries. In his study attempt to review the profile of pharmaceutical industries and asses the financial performance with help of ratios. it shows an state of affairs in selected industry. Altman (1968) used financial ratios to predict corporate bankruptcy. He found that the bankruptcy model has an accuracy rate of 93% and is very successful in predicting failed and non-failed firm this study noted that causes of failure and it gives suggestion to further improvement.

Altman (1970)[2] this study attempts a multivariate model consisting of few important variables. The tested 22 ratios and selected 5 ratios as having discriminating ability such as working capital / total assets, Earning before interest on Tax/ total asset, Retained Earnings / total assets, Market Value/ Book value, Sales/Total asset. He suggested that the discriminating model if applied correctly and periodically has the ability to predict corporate problems in advance to avoid the failure.

Edward Altman et al (1974) [3]Developed a model to assess the financial strength of 137 firms for cotton and wool industries in France. He observed that Financial ratios cab discriminate well between good and bad firms of particular troublesome industrial sector in France. 41 ratios covering liquidity, solvency and profitability were statistically investigated through principal component analysis which based them to develop a discriminate model.

Altman, headman & Narayanan (1977)[4] Combined a number of ratios liquidity, leverage turnover and profitably to form an index of profitability, which was effective indicator of corporate performance in predicting bankruptcy. A variety of studies using Multi Discriminate Analysis to project corporate failure have been conducted. The ZETA credit rise model was developed by Altman for assessing the distress of Industrial corporations. The model could discriminate between the bankrupt firms and non-bankrupt firms with 69.8% degree of accuracy three year prior to bank bankruptcy. The Altman model represents a milestone in insolvency prediction researchers and is used now by banks and rating agencies.

Kaveri(1978)[5] attempted to predict the financial health of selected industries. In her study she used 5 ratio model comprising of current ratio, Stock / Cost of goods sold . Current asset / net sales, Earnings before Interest on Tax/ capital employed. Net worth/outsiders liability for a cross section of industries to predict the health of firm.

3.INTRODUCTIONTO THE INDIAN CHEMICAL INDUSTRIES

Chemical industry is one of India's oldest industries, contributing significantly towards the industrial and economic growth of the nation. The Indian Chemical Industry forms the backbone of the industrial and agricultural development of India and provides building blocks for several downstream industries. According to the Department of Chemicals and Petrochemicals, the Indian chemical industry is estimated to be worth approximately US$ 35 billion, which is about 3% of India's total GDP. The total investment in the Indian chemical industry is approximately US$ 60 billion and total employment generated was about 1 million. In terms of volume, it is 12th largest in the world and 3rd largest in Asia.

Chemical Cluster Insights

Organic chemicals industry is one of the most significant sectors of the chemical industry. It plays a vital developmental role by providing chemicals and intermediates as inputs to other sectors of the industry like paints, adhesives, pharmaceuticals, dye stuffs and intermediates, leather chemicals, pesticides etc. Methanol, acetic acid, formaldehyde, pyridines, phenol, alkyl amines, ethyl acetate and acetic anhydride are the major organic chemicals produced in India. In the Indian chemical industry, alkali chemicals enjoy the highest contribution in the total production.

Ownership Patterns

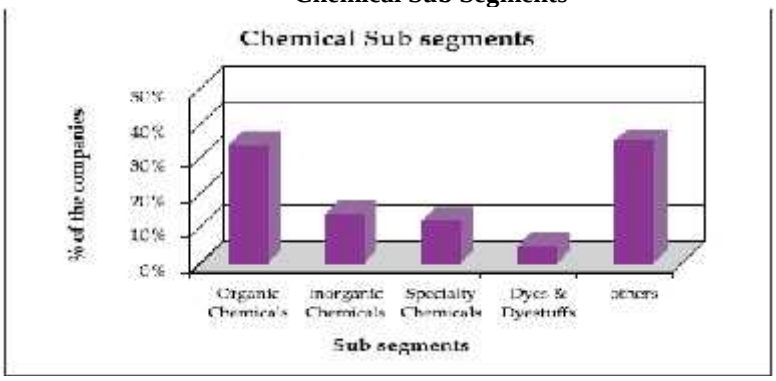
The ownership pattern of the chemical companies was inclined largely towards the private limited category that account for 69% of the total sample. It is followed by 11% of partnership firms indicating the huge gap between the largest and the second largest category in the sample. However, public limited entities account for 10% while 8% are proprietary concerns.

- 53% of the private limited companies deal in organic chemicals, 9% deal in specialty chemicals while 15% are involved in inorganic chemicals
- 58% of the public limited companies deal in organic chemicals
- 77% companies from the sample are established before 1990 while 21% are established after 1990.

Sub segment

Manufacturing of organic chemicals seems to be the most popular sub segment with around 34% of the sample companies involved in manufacturing of organic products. It is followed by 14% of the sample companies involved in the production of inorganic chemicals, 12% in specialty chemicals and 5% in dyes and dyes and dye stuffs. 35% of the companies dealing in other chemical sub segments that comprise of industrial gases, solvents etc display the high demand of products in this segment. 16% of the companies dealing in organic chemical s generate 100% of their revenue exclusively through the domestic market.

Chemical Sub Segments



Nature of operations

79% of the companies are engaged exclusively in manufacturing, while 21% are engaged in manufacturing as well trading. 58% of the manufacturing companies have single manufacturing facility while 42% operate with two or more plants. 31% of the companies involved exclusively in manufacturing activity have invested up to Rs 50 million in plant and machinery.

Future plans

82% chemical companies have envisaged strategies for future growth. The plans range from capacity expansion, modernization to new market entry and diversification.

- Companies operating in organic chemicals are keen for capacity expansion and diversification
- Of the companies interested in capacity expansion, 80% belong to the private limited category
- Of the companies interested in diversification, 65% are private limited companies

4.PROFITABILITY ANALYSIS OF SELECTED INDIAN CHEMICAL INDUSTRIES

Introduction

Profitability ratios are used to evaluate the profitability of a company and it is important to measure the performance of a company. Profitability ratios are primarily used to determine the profit earned by a company relative to its sales, net worth and total assets. In this chapter the ratios have been used to measure the profitability of the selected Indian chemical industries.

4.1 Analysis of Profitability

The profitability can be measured with the help of the given ratios.

- ❖ Gross Profit Ratio
- ❖ Net Profit Ratio
- ❖ Operating Profit Ratio
- ❖ Return on Equity

Table 4.1 - Gross profit ratios of Indian Chemical Industries during the Pre-Merger period from 2010-2011 to 2013-2014

Pre-Merger period of Gross profit Ratio								
	2010-2011	2011-2012	2012-2013	2013-2014	MEAN	SD	CAGR (%)	CV (%)
Bodal Chemicals Ltd	-18.11	-5.16	4.40	5.74	-3.28	11.01	1.88	14.30
Chembond Chemicals Ltd.	6.87	6.67	8.46	7.77	7.44	0.83	-0.03	-6.61
Dhunseri Petrochem & Tea Ltd.	5.79	12.36	11.27	15.73	11.29	4.13	1.15	-7.16
Gujarat State Fertilizers & Chemicals Ltd.	-7.09	-4.97	-0.37	-8.73	-5.29	3.62	-2.18	8.91
Gulshan Polyols Ltd.	13.20	7.93	8.78	14.65	11.14	3.29	0.13	-7.85
Indokem Ltd.	5.26	4.85	5.60	5.84	5.39	0.43	-0.16	-4.96
Khaitan Chemicals & Fertilizers Ltd.	8.30	6.52	6.49	5.11	6.60	1.31	-2.47	-5.29
Nilkamal Ltd.	7.18	12.96	15.26	16.88	13.07	4.24	1.13	-8.83

Piramal Enterprises Ltd.	16.36	20.58	17.11	18.25	18.08	1.84	0.24	-16.24
Shiva Global Agro Inds. Ltd.	2.01	1.87	1.74	1.58	1.80	0.18	-1.75	-1.62
Supreme Petrochem Ltd.	4.47	5.76	3.07	4.27	4.39	1.10	-1.58	-3.29
V I P Industries Ltd.	7.12	7.23	7.55	7.48	7.35	0.21	-0.29	-7.14

Source: Compiled and Calculated from the data published in CMIE

Table 4.1 reveals the gross profit ratio of selected Indian Chemical Industries from 2010-2011 to 2013-2014. This gross profit ratio shows a fluctuating trend during the period of study. It implies the high cost of goods sold due to unfavorable purchasing policies and lesser sales. The Piramal Enterprises Ltd has the highest average gross profit ratio of 18.08 per cent and the Supreme Petrochem Ltd has the lowest average gross profit ratio of 4.39 per cent. It shows a good financial position during pre merger period than other Indian Chemical Industries. The Bodal Chemicals Ltd has the highest standard deviation with of gross profit ratio of 11.01 per cent. The Shiva Global Agro Inds Ltd has the lowest standard deviation with gross profit ratio of 0.18 per cent and it is found to be stable in gross profit ratio. The Bodal Chemicals Ltd has the highest compound annual growth rate of 1.88 per cent. Khaitan Chemicals & Fertilizers Ltd has the negative growth during the pre merger period. The compound annual growth is between 1.88to -2.47 during the period.

The Bodal Chemicals Ltd has the highest co-efficient variance with gross profit ratio of 14.30 per cent. The Piramal Enterprises Ltd has the lowest co-efficient variance with gross profit ratio of -16.24 per cent. It is found that there is more consistency in its gross profit ratio than the other Indian Chemical Industries.

Table 4.2 - Gross profit ratio of Indian Chemical Industries during the Post -Merger period from 2010-2011 to 2013-2014

Post-Merger period Of Gross Profit Ratio								
	2010-2011	**2011-2012**	**2012-2013**	**2013-2014**	**MEAN**	**SD**	**CAGR (%)**	**CV (%)**
Bodal Chemicals Ltd.	-2.13	6.79	6.82	-3.76	**1.93**	**5.66**	**0.21**	**2.94**
Chembond Chemicals Ltd.	5.79	6.61	7.07	6.19	**6.41**	**0.55**	**0.02**	**0.09**
Dhunseri Petrochem & Tea Ltd.	23.18	12.80	14.13	4.65	**13.69**	**7.59**	**-0.41**	**0.55**
Gujarat State Fertilizers &Chemicals	-1.95	-3.13	-3.17	-3.78	**-3.01**	**0.77**	**0.25**	**-0.26**
Gulshan Polyols Ltd.	15.23	14.37	12.83	12.79	**13.80**	**1.20**	**-0.06**	**0.09**
Indokem Ltd.	0.26	-12.08	-23.10	-18.27	**-13.30**	**10.10**	**-5.13**	**-0.76**
Khaitan Chemicals & Fertilizers Ltd.	6.60	3.66	11.61	5.87	**6.93**	**3.36**	**-0.04**	**0.48**
Nilkamal Ltd.	13.21	12.33	19.22	12.46	**14.31**	**3.30**	**-0.02**	**0.23**
Piramal Enterprises Ltd.	17.20	21.48	2041.42	17.13	**524.31**	**1011.41**	**0.00**	**1.93**
Shiva Global Agro Inds. Ltd.	3.39	4.10	4.47	4.93	**4.22**	**0.65**	**0.13**	**0.15**
Supreme Petrochem Ltd.	3.80	6.82	7.66	3.11	**5.35**	**2.23**	**-0.07**	**0.42**
V I P Industries Ltd.	4.58	12.87	12.31	13.17	**10.73**	**4.12**	**0.42**	**0.38**

Source: Compiled and Calculated from the data published in CMIE.

.Table 4.3 indicates the gross profit ratio of selected Indian Chemical Industries from a period of 2010-2011 to 2013-2014. This gross profit ratio shows a fluctuating trend during the period of study.The Piramal Enterprises Ltd has the highest average gross profit ratio of 524.31 per cent and the Indokem Ltd has the lowest average gross profit ratio of -13.80 per cent.

The Piramal Enterprises Ltd has the highest standard deviation with gross profit ratio of 1011.41 per cent. The Chembond Chemicals Ltd with lowest standard deviation of gross profit ratio of 0.55 per cent and it is found to be stable in gross profit ratio. The V I P Industries Ltd has the highest compound annual growth rate of 0.42 per cent. The Dhunseri Petrochem & Tea Ltd has the negative growth rate of -0.41 per cent. During this period it is seen to have has a fluctuating growth rate.The Bodal Chemicals Ltd has the highest co-efficient variance with gross profit ratio of 2.94 per cent. The Gulshan Polyols Ltd has the lowest co-efficient variance with gross profit ratio of 0.09 per cent .It is found that there is more consistency in the gross profit ratio than of the other Indian Chemical Industries.

Table 4.3 -Net profit ratios of Indian Chemical Industries during the Pre -Merger period from 2010-2011 to 2013-2014

Pre-Merger period of Net profit Ratio								
	2010-2011	**2011-2012**	**2012-2013**	**2013-2014**	**MEAN**	**SD**	**CAGR (%)**	**CV (%)**
Bodal Chemicals Ltd.	-26.42	-10.87	4.76	3.87	**-7.17**	**14.70**	**-1.53**	**-2.05**
Chembond Chemicals Ltd.	3.99	3.78	4.73	4.55	**4.26**	**0.45**	**0.04**	**0.11**
Dhunseri Petrochem & Tea Ltd.	2.08	7.48	6.02	10.47	**6.51**	**3.48**	**0.71**	**0.54**
Gujarat State Fertilizers &Chemicals.	7.85	5.00	9.78	7.59	**7.55**	**1.96**	**-0.01**	**0.26**
Gulshan Polyols Ltd.	3.63	2.63	3.80	6.03	**4.02**	**1.44**	**0.18**	**0.36**
Indokem Ltd.	0.93	1.00	1.15	1.39	**1.12**	**0.20**	**0.14**	**0.18**
Khaitan Chemicals & Fertilizers Ltd.	3.29	2.43	3.56	2.46	**2.94**	**0.57**	**-0.09**	**0.20**
Nilkamal Ltd.	4.51	3.64	1.97	1.30	**2.85**	**1.48**	**-0.34**	**0.52**
Piramal Enterprises Ltd.	13.02	12.95	11.29	11.02	**12.07**	**1.06**	**-0.05**	**0.09**
Shiva Global Agro Inds. Ltd.	0.74	0.50	0.10	0.47	**0.45**	**0.27**	**-0.14**	**0.59**
Supreme Petrochem Ltd.	1.56	2.55	1.09	2.06	**1.81**	**0.63**	**0.10**	**0.35**
V I P Industries Ltd.	2.17	2.16	2.27	3.16	**2.44**	**0.48**	**0.13**	**0.20**

Source: Compiled and Calculated from the data published in CMIE.

Table 4.5 shows the net profit ratio of selecteIndian Chemical Industries from the time period of 2005-2006 to 2008-2009. The net profit ratio shows the fluctuating trend during of study period. This fluctuation indicates the firm's capacity to face adverse economic conditions as price competition, low demand etc.

The Piramal Enterprises Ltd has the highest average gross profit ratio of 12.07 per cent and the Bodal Chemicals Ltd has the lowest average net profit ratio of -7.17 per cent. The Bodal Chemicals Ltd has the highest standard deviation with gross profit ratio of 14.70 per cent. The Indokem Ltd with lowest standard deviation and gross profit ratio of 0.20 per cent is found to be stable in net profit ratio.

The Dhunseri Petrochem & Tea Ltd has the highest compound annual growth rate of 0.71 per cent. The Bodal Chemicals Ltd has the negative growth during the pre merger period with -1.53 per cent. During this period compound annual growth is between -1.53 to 0.71 per cent.

The Dhunseri Petrochem & Tea Ltd has the highest co-efficient variance in net profit ratio of 0.54 per cent. The Piramal Enterprises Ltd has the lowest co-efficient variance of net profit ratio of 0.09 per cent .It is found that there is more consistency in the net profit ratio than of other Indian Chemical Industries.

5.SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION

Introduction

Chemical Industry is engaged in the development, optimization and monitoring of fundamental chemical processes used in industry for transforming raw materials and precursors into useful commercial products for society. Chemical domain plays a

vital role as an applied science in diverse areas that influence human society ranging from economic, environmental and political stability.

5.1 Summary of Findings

The following are the major findings of the present study.

Analysis of Profitability Ratios

Gross Profit for the pre-merger period

The Bodal Chemicals Ltd has the highest co-efficient variance of gross profit ratio of 14.30 per cent. The Piramal Enterprises Ltd has the lowest co-efficient variance of gross profit ratio of -16.24 per cent and it is found that there is more consistency in gross profit ratio than the other Indian Chemical Industries.

Gross Profit for the Post -Merger Period

The Bodal Chemicals Ltd has the highest co-efficient variance of gross profit ratio of 2.94 per cent. The Gulshan Polyols Ltd has the lowest co-efficient variance of gross profit ratio of 0.09 per cent and it is found that there is more consistency in gross profit ratio than the other Indian Chemical Industries.

Pre-Merger period of Net profit Ratio

The Dhunseri Petrochem & Tea Ltd has the highest co-efficient variance with net profit ratio of 0.54 per cent. The Piramal Enterprises Ltd has the lowest co-efficient variance with net profit ratio of 0.09 per cent. It is found that there is more consistency in net profit ratio than the other Indian Chemical Industries.

Post -Merger period of Net profit Ratio

The Piramal Enterprises Ltd has the highest co-efficient variance with net profit ratio of 1.93 per cent. The Gulshan Polyols Ltd has the lowest co-efficient variance with gross profit ratio of 0.26 per cent and it is found that there is more consistency in net profit ratio than the other Indian Chemical Industries.

5.2 Suggestions

1. This study would be useful for all the stakeholders of Indian chemical industry. Reasons could be attributed such as the financial management with special regard to purchases; sales and inventory have to be seen. Credit policy should also be looked into. Major chunk of profit should not be used to pay fixed charges.
2. The five companies should improve their financial performance as early as possible. Operational efficiency should also be increased by reducing the cost and wastage and improving operating and management performance.
3. It is advised that the companies should take necessary steps in utilizing their assets in generating more sales revenue. Working capital supply should also be adequate. Motivation and accountability for performance achievement should be fixed along with penalization for non achievement.
4. Proper input and output financial parameter should be used to analyse the performance of decision making units.

5.3 Conclusion

Thus, it is learned from the study that most of companies in the sample category would improve the growth in terms of assets and increase the financial health in terms of income and higher sales. Most of the Selected Indian Chemical Industry, financial position and operational performance are satisfactory after the merger period. If the Pharmaceutical Industry has to perform well, it has to invest more capital and has to do more sales, only then it will improve its performance level. Thus, the Indian Chemical industry will reach in a better position in India as well as abroad in near future.

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