



"Comparative Analysis Of Investment In Non-Business Assets Of Indian Chemical And Fertilizer & Pesticides Companies"

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ABSTRACT

Company's investment pattern and intensity has evolved over a period of time, from investment in business assets to investment in non-business assets. Such change has occurred on account of exposure of companies to economic fluctuations. This change has witnessed, future returns and availability of large free cash flows for investments at management's disposal, during difficult times. As such, investment made in non-business assets assures long term profitability. In this context, researcher has studied the financial records of companies belonging to chemical sector and fertilizer and pesticides sector listed on Indian Stock Exchange from 2005 to 2015. It is observed that, such investments done are more in chemical sector companies compared to fertilizer sector companies. And also income generated from such investments is more in chemical sector than fertilizer and pesticides sector. Thus, indicating companies are giving more attention on earning income and profit by way of non-operating investment and neglecting investment in its core operating activities.

Keywords: Investment, Asset, Other Income, Profitability and Return.

INTRODUCTION

Investment in non-business assets by companies from Chemical and Fertilizer & Pesticides sector has evolved over the years. Factors such as availability of cash flow, future profitability, seasonal fluctuations and sustainability in business during difficult times, have been the key determiners for change in investment perspective by the companies. As such, investment made in non-business assets assures long term profitability.

Investments in non-business assets includes; investment in shares of other companies, investment in real estate property, investment in various financial instruments and capital appreciation.

The researcher's objective is to study, analyse and compare the relationship between investment intensity in non-business assets and return derived from such investments,

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belonging to companies from Chemical and Fertilizer & Pesticides sectors.

LITERATURE REVIEW

The researcher has studied certain research papers as a part of literature review, related to the study.

(Hosamane, Manjappa D.; R., Niranjana, 2010)

Manjappa D. Hosamane and Niranjana R, (2010) examines patterns and determinants of investment behaviour in Indian manufacturing sector. The crux of the study signifies the relationship between the investment pattern and variables affecting investment decision of Indian manufacturing companies. Investment decision of a firm depends on the amount of profit made by them i.e., profit expectation determine investment behaviour. Financing decision with regards to investment works in hierarchy, i.e., first internally, then with low-risk debt and finally with equity as a last resort. Further, equity finance, lag of capital stock, lag of accelerator determine the investment pattern of Indian manufacturing companies. Here, the aim is to understand the relationship of Investments pattern and its impact on firms Income and Profitability.

(Kotsina, Svetlana; Hazak, Aaro, 2012)

Svetlana Kotšina and Aaro Hazak, (2012) focuses on the impact of company's investment intensity on its return on assets under different phases of economic cycle. The study identifies that investments made during the boom years may have had no positive impact on the profitability of the company in a longer perspective, thus representing overinvestment. At the same time, some companies seem to have benefited during the boom years from investments made right before the upswing. Author states that a more detailed research on the relationship between investments and profitability under different phases of the economic cycle would be needed in order to identify what are the drivers of overinvestment, and what could be the measures to prevent investments into assets of limited long term productivity and consequent economic overheating.

(Mary, Okwo Ifeoma; Okelue, Ugwunta David; Uche, Nweze Austin, 2012)

Okwo Ifeoma Mary, Ugwunta David Okelue and Nweze Austin Uche, (2012) assesses the impact of a company's investment in fixed assets on its operating profit margin. The results of the study did not suggest any strong positive impact of investment in fixed assets on the operating profit of brewery firms in Nigeria. Further, investment in fixed assets does not have any strong and statistical impact on the profitability of brewery firms in Nigeria. Hence, it highlights the importance of evaluating the assets structure and its impact on company's profitability and return.

(Niranjana, R.; Hosamane, Manjappa D., 2015)

R. Niranjana and Manjappa D. Hosamane, (2015) explores the investment behavior and efficiency in allocation of investment in Indian private manufacturing industries and measures whether investment funds are going to industries with a higher marginal return to capital during pre-liberalization and post liberalization periods. The results of the study indicate that, the responsiveness of investment is higher with accelerator and profitability variables than the financial liberalization and policy variables. Since industries consider the demand factors, internal liquidity and prior capital expenditure decisions than policy

variables as the major indicators of investment behavior in Indian industries. Therefore it is important to evaluate investment asset structure, its impact on profitability.

(Kanhare, Bhagyashri; Saraf, Dr. Parag;, November 2016)

Bhagyashri Kanhare and Dr. Parag Saraf, (2016) analysed the financial statements of various companies from the point of view of risk, income structure and sources of profit. The researcher is attempting to study the change in proportion of business and other income of selected corporate and its impact on profitability. Further, he also tries to understand the impact of non-business investment income and the total income earning of Indian Corporate in various sectors, need of shareholders, income distribution, operating profit, income on investment outside the business.

The researcher intends to study and analyse the annual financial statements of various companies belonging to various industries to know whether, there is any impact of income earned by way of income from non-business investment on the total income. The findings of the study states that, competition essentially leads to more efficiency and through increased efficiency; it obviously results into more profits. Further, all the companies earned their profits mainly from other income sources. Thus, on the grounds of competitiveness, these business groups have been found to be defeated. It is imperative for all these business groups to concentrate on their strengths and compete in a truly global environment. Thus, it highlights that the profitability of the companies is highly dependent on investments in non-business assets and related income sources than on business operations.

PROBLEM STATEMENT

Large amount of investment in non-business assets by companies aids expansion opportunities and also provide additional income. While doing literature review, it is observed that, a limited research has been done on this topic, i.e.; relationship between investment in non-business assets and its impact on companies income and profitability.

RESEARCH METHODOLOGY

Ten year data from 2005-2006 to 2014-2015 of 12 companies belonging to chemical sector and 9 companies belonging to fertilizer and pesticides sector has been considered for doing the research. Each variable is identified and studied to average it out. A descriptive analysis is done such as, mean, median, standard deviation, Skewness and Kurtosis. The analysis is further followed by Pearson's correlation. Based on the calculation and data analysis, conclusions have been derived.

DATA ANALYSIS & FINDINGS

A. Comparative Analysis of Chemical and Fertilizer & Pesticide Sector **a. Chemical Sector Companies**

	2005-15	2005-15	2005-15	2005-15	2005-15	2005-15			
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Company Name	Average Investment in Non-Business Assets	Average Total Asset	Average Sales	Average PAT	Average Total Other Income	Average Total Income	Total Other Income /PAT %	% of Total Other Income to Sales	Total Other Income / Total Income %
Aarti Industries Ltd.	186.702	1494.605	1687.383	88.549	1697.125	3384.508	1916.594	100.5773	50.14392
Akzo Nobel India Ltd.	127.62	1627.303	1685.228	194.679	1867.62	3552.848	959.3331	110.823	52.56684
Atul Ltd.	193.665	1299.298	1633.536	98.778	1676.354	3309.89	1697.092	102.6212	50.64682
Gujarat Fluorochemicals Ltd.	633.062	2666.016	757.756	288.329	1633.024	2390.78	566.3752	215.5079	68.30507
Navin Fluorine Intl. Ltd.	324.48	678.897	418.352	59.476	513.804	932.156	863.8846	122.8162	55.11996
Pidilite Industries Ltd.	700.15	2176.641	2582.294	290.846	2639.614	5221.908	907.5641	102.2197	50.54884
Radico Khaitan Ltd.	127.571	1384.889	1806.75	49.005	1849.436	3656.186	3773.974	102.3626	50.58375
Rain Industries Ltd.	387.923	770.923	358.372	19.216	432.626	790.998	2251.384	120.7198	54.69369
Rashtriya Chemicals & Fertilizers Ltd.	97.703	4729.593	5994.759	224.851	6191.255	12186.01	2753.492	103.2778	50.80624
S R F Ltd.	140.733	3068.643	2646.618	265.888	2981.772	5628.39	1121.439	112.6635	52.97735
Solar Industries India Ltd.	134.711	497.61	582.504	47.246	615.316	1197.82	1302.366	105.6329	51.36965
Tata Chemicals	6660.215	9573.354	6828.406	534.57	7310.926	14139.33	1367.627	107.0664	51.7063

Ltd.									
Total Average	809.5446	2497.314	2248.497	180.194	2450.739	4699.236	1623.427	117.1907	53.28904

Observations:- From the above table it is observed that, even if the investment in non-business assets by the chemical sector companies, the income generated from such investment accounts to more than fifty percent in total income. Also, the share of other income in profit after tax is very huge.

Descriptive Analysis	Average Investment in Non-Business Assets	Average Total Asset	Average Sales	Average PAT	Average Total Other Income	Average Total Income	Total Other Income/PAT %	% of Total Other Income to Sales	Total Other Income/ Total Income %
Mean	809.5446	2497.314	2248.497	180.194	2450.739	4699.236	1623.427	117.1907	53.28904
Standard Error	535.082	729.4253	605.5629	43.47297	625.6008	1229.125	267.6476	9.183873	1.444632
Median	190.1835	1560.954	1686.306	146.7285	1773.281	3468.678	1334.997	106.3496	51.53798
Standard Deviation	1853.579	2526.803	2097.731	150.5948	2167.145	4257.814	927.1586	31.81387	5.004353
Kurtosis	11.62754	5.912438	1.451196	1.399646	1.661816	1.579673	1.361664	10.3839	8.823284
Skewness	3.39169	2.310329	1.50382	1.151563	1.540988	1.534642	1.260211	3.153056	2.853399
Count	12	12	12	12	12	12	12	12	12
Confidence Level(95.0%)	1177.708	1605.454	1332.835	95.68336	1376.938	2705.286	589.0884	20.21357	3.179614

Observations:- There are 12 companies selected from chemical sector for the purpose of analysis. The median is less than mean, which signals that from the chosen sample there are good numbers of companies which have value greater than median. The mean Investment in non-business Assets combined for all companies is Rs.809.54 crores,

whereas mean Total Asset is Rs.2497.31 crores and mean sales is Rs.2248.49 crores. It has mean profit margin of Rs. 180.11 crores whereas Rs. 2450.73 is from Income Other Than Business i.e., income generated from other than operating income. It is observed that the Total Other Income is much more than Profit After Tax. Also, it is even more than Sales. In the Total Income, the share of Total Other Income is 53.28% which signals that companies are relying more on Income Other Than Business Income. Percentage of income from non-business activities from, profit stands out to be 1623.42, which is very high, highlighting that major source of income for the companies is from non-operating activities.

b. Fertilizer and Pesticides Sector

	2005-15	2005-15	2005-15	2005-15	2005-15	2005-15			
Company Name	Average Investment in Non-business Assets	Average Total Asset	Average Sales	Average PAT	Average Total Other Income	Average Total Income	Total Other Income/PAT %	% of Total Other Income to Sales	Total Other Income/ Total Income %
Chambal Fertilisers & Chemicals Ltd.	967.821	5466.012	5166.072	245.559	5324.898	10490.97	2168.48	103.0744	50.75697
Coromandel International Ltd.	691.398	5061.304	7099.194	393.834	7230.614	14329.81	1835.955	101.8512	50.45855
Deepak Fertilisers & Petrochemicals Corpn. Ltd.	163.968	2182.297	2042.006	146.261	2121.018	4163.024	1450.16	103.8693	50.94897
Dhanuka Agritech Ltd.	11.298	319.443	486.912	46.305	490.986	977.898	1060.33	100.8367	50.2083
Gujarat Narmada Valley Fertilizers &	476.556	6021.906	3617.486	191.934	3708.42	7325.906	1932.133	102.5137	50.62063

Chemicals Ltd.									
Gujarat State Fertilizers & Chemicals Ltd.	888.148	4776.045	4862.648	432.071	5034.144	9896.792	1165.12	103.5268	50.86642
PI Industries Ltd.	13.95	805.019	945.514	76.676	964.722	1910.236	1258.18	102.0315	50.50277
Rallis India Ltd.	277.266	956.045	1104.098	103.691	1124.364	2228.462	1084.341	101.8355	50.45471
U P L Ltd.	1561.711	5521.97	3127.242	216.162	3508.176	6635.418	1622.938	112.1811	52.87046
Total Average	561.3462	3456.671	3161.241	205.8326	3278.594	6439.835	1508.626	103.5245	50.8542

Observations:- From the above table it is observed that, even if the investment in non-business assets by the fertilizer and pesticides sector companies, the income generated from such investment accounts for fifty percent in total income. Also, the share of other income in profit after tax is very huge.

Descriptive Analysis	Average Investment Other Than Fixed Assets	Average Total Asset	Average Sales	Average PAT	Average Total Income	Average Total Income	Total Other Income/PAT %	% of Total Other Income to Sales	Total Other Income/ Total Income %
Mean	561.3462	3456.671	3161.241	205.8326	3278.594	6439.835	1508.626	103.5245	50.8542
Standard Error	172.3071	781.2877	747.0026	44.80181	765.8572	1512.48	134.3762	1.126614	0.263398
Median	476.556	4776.045	3127.242	191.934	3508.176	6635.418	1450.16	102.5137	50.62063
Standard Deviation	516.9212	2343.863	2241.008	134.4054	2297.572	4537.439	403.1287	3.379842	0.790195

n									
Kurtosis	0.130239	-2.1263	0.75039	0.53399	0.8862	0.81757	-1.28474	7.108061	6.949253
Skewness	0.801246	-0.33696	0.485994	0.714495	0.400134	0.442637	0.433999	2.561593	2.522869
Count	9	9	9	9	9	9	9	9	9
Confidence Level(95.0%)	397.3408	1801.653	1722.591	103.3132	1766.07	3487.785	309.8721	2.597976	0.607397

Observations:- There are 9 companies selected from fertilizer and pesticides sector for the purpose of analysis. The mean Investment in non-business Assets combined for all companies is Rs.561.34 crores, whereas mean Total Asset is Rs.3456.67 crores and mean sales is Rs.3161.24 crores. It has mean profit margin of Rs. 205.83 crores whereas Rs. 3278.59 is from Income Other Than Business i.e., income generated from other than operating income. It is observed that the Total Other Income is much more than Profit After Tax. Also, it is even more than Sales. In the Total Income, the share of Total Other Income is 50.85% which signals that half of income generated comes from non-operating sector. Percentage of income from non-business activities from, profit stands out to be 1508.62 , which is very high.

These points out that, companies from chemical sector and from fertilizer and pesticides sector are giving more attention towards generation of non-business income from investment in non-business assets rather than focusing more on generation of operating profit.

B. Hypotheses-Specific Analysis

For the purpose of this data analysis, the researcher has formulated the following hypotheses:

H1:- Increase in Investment in Non-Business Assets is significant than increase in investment in Total Assets

a. Chemical Sector

	Investment in Non-Business Asset	Investment in Total Asset
Investment in Non-Business	1	0.875534

Asset		
Investment in Total Asset	0.875534	1

Observations:- The mean total assets (M=2497.31, N= 12) was significantly greater than zero and Pearson Correlation is 0.88 Indicating the increase in investment in non-business assets is significant than investment in total assets for chemical sector companies.

b. Fertilizer and Pesticides Sector

	Investment in Non-Business Asset	Investment in Total Asset
Investment in Non-Business Asset	1	0.794313
Investment in Total Asset	0.794313	1

Observations:- The mean total assets (M=3456.67, N= 9) was significantly greater than zero and Pearson Correlation is 0.79 Indicating the increase in investment in non-business assets is significant than investment in total assets for selected Indian fertilizer & pesticides sector companies.

Companies belonging to chemical sector and also fertilizer and pesticides sector make more investment in non-business assets than investment in total assets, mainly in companies from chemical sector.

H2:- The proportion of non-operating income in profit is more than operating income.

a. Chemical Sector

	Total other Income	Sales	PAT	Total Income
Total other Income	1	0.993381	0.800179	0.998397
Sales	0.993381	1	0.747668	0.998289
PAT	0.800179	0.747668	1	0.775635
Total Income	0.998397	0.998289	0.775635	1

Observations:- The mean total other income (M=2450.73, N= 12) was significantly greater than zero and Pearson correlation is 0.80 indicating a significant increase in the proportion of other income on arising from investing in non-business assets. It is observed that, Total Other Income and Profit after Tax have significant relationship with all other

variables. Thus highlighting that major source of income for chemical sector companies is, by way of other incomes rather than operating income.

b. Fertilizer and Pesticides Sector

	Total other Income	Sales	PAT	Total Income
Total other Income	1	0.998995	0.910926	0.999755
Sales	0.998995	1	0.907947	0.999742
PAT	0.910926	0.907947	1	0.909684
Total Income	0.999755	0.999742	0.909684	1

Observations:- The mean total other income (M=3278.59, N= 9) was significantly greater than zero and Pearson correlation is 0.91 indicating a significant increase in the proportion of other income due to increased investment in non-business assets. It is observed that, Total Other Income and Profit after Tax have significant relationship with all other variables, i.e.; operating income and total income. Thus highlighting that, major source of income for fertilizer & pesticides sector companies is, by way of non-operating incomes rather than operating income.

Companies from both the sectors considered for conducting research work signals that, proportion of non-operating income is more in total income, particularly in companies from chemical sector.

CONCLUSIONS

The descriptive analysis carried out on selected variables of companies belonging to chemical sector and fertilizer and pesticides sector, contributes in proving the hypotheses set by researcher to do the research work. The above study puts focus on change in approach by the companies towards investment, i.e. from investment in business assets to investment in non-business assets. It is observed that, such investments done are more in chemical sector companies compared to fertilizer sector companies. And also income generated from such investments is more in chemical sector than fertilizer and pesticides sector. Thus, indicating companies are giving more attention on earning income and profit by way of non-operating investment and neglecting investment in its care operating activities.

Works Cited

Aswath Damodaran. (2005). Dealing with Cash, Cross Holdings and Other Non-Operating Assets: Approaches and Implications. 1-55.
 Chaudhuri, Atanu; Koudal, Peter; Seshadri, Sridhar;. (2010). Productivity and Capital Investments: An Empirical Study of three Manufacturing industries in India. IIMB Management Review,22 , 65-79.

Devi, S.L. Tulasi; Rao, V.V.L.N.; (2011). Determinants of Investment in Fixed Assets in Metals, Alloys, Metal products and Structural Industry. International Conference on Management, Behavioral Sciences and Economics Issues, (pp. 291-295).

Donglin Li. (2004). The Implications of Capital Investments for Future Profitability and Stock Returns - an Overinvestment Perspective. 1-55: Haas School Of Business, University of California.

Hosamane, Manjappa D.; R., Niranjana. (2010). Determinants of Investment Pattern in Indian Manufacturing Industries A Panel Data Study. Indian Journal of Economics and Business, Volume 9, No. 1 , 207-218.

Hubbard, R. Glenn; Kashyap, Anil K.; Whited, Toni M.;. (1993). Internal Finance and Firm Investment. National Bureau of Economic Research, Working Paper No. 4392 , 1-36.

Iqbal, Athar;Mati, Madhu;. (December 2012). Relationship between Non-current Assets and Firms Profitability. MPRA Munich Personal RePEc Archive, Paper No. 44132 , 101-112.

Iqbal, Athar;Mati, Madhu;. (December 2012). Relationship between Non-current Assets and Firms Profitability. MPRA Munich Personal RePEc Archive, Paper No. 44132 , 101-112.

Kotsina, Svetlana; Hazak, Aaro;. (2012). Does Investment Intensity Impact Company Profitability? A Cross-Country Empirical Study. 2nd International Conference on Economics, Trade and Development (pp. 157-161). Singapore: IPEDR Volume 36, IACSIT Press.

Mary, Okwo Ifeoma; Okelue, Ugwunta David; Uche, Nweze Austin;. (2012). Investment in Fixed Assets and Firm Profitability: Evidence from the Nigerian Brewery Industry. European Journal of Business and Management, Volume 4, No. 20, ISSN 222-1905 , 10-17.

Niranjana, R.; Hosamane, Manjappa D.;. (2015). Determinants and Efficiency of Investment Allocation in Indian Manufacturing Sector. Journal of Chinese Economics, Volume 3, No. 1 , 25-57.

Surajit Bhattacharyya. (2008). Determinants of Corporate Investment: Post Liberalization Panel Data Evidence from Indian Firms, MPRA Paper No. 6702 . Munich Personal RePEc Archive, 1-33.

Jamali, Amir Hossein; Asadi, Asghar;. (2012). Management efficiency and profitability in Indian automobile industry: from theory to practice . Indian Journal of Science and Technology, Vol. 5, No. 5, ISSN: 0974- 6846 , 2779-2781.

Walter A. Chudson. (1945). Fixed Capital Asset and Long Term Investment. The Pattern of Corporate Financial Structure: A Cross-Section View of Manufacturing, Mining, Trade and Construction, 1937, National Bureau of Economic Research , pp. 81-93.

Kanhere, Bhagyashri; Saraf, Dr. Parag;. (2016). Competitiveness of the Selected Listed Indian Companies - An In-Depth Analysis of the Risk, Income Structure and Sources for Profit. IOSR Journal of Business and Management , 54-58.