

Liquidity and Profitability Tangle: An Empirical Analysis of Petrochemical Industries

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Abstract - The main goal of financial statements is to provide financial information about a firm's performance that helps to meet decision makers' desire for certain information. Financial statements provide financial data that need analysis, comparison and interpretation for taking decision both by the internal and external users of accounting information. The research paper is based on two important financial statements profitability and liquidity. The main purpose is to classify 18 randomly selected petrochemical companies in four cells according to their degree of profitability and liquidity. The profitability ratio Net profit Margin (NPM) and the liquidity ratios and Current ratio (CR) have been considered for the analysis.

Key Words: *Net profit Margin, Current ratio, Profitability, liquidity, Net sales, Current Asset*

I. LIQUIDITY AND PROFITABILITY

Liquidity is concerned with management of these short term assets (current assets) and short term liabilities (current liabilities) on regular basis. The reason for managing such assets and liabilities on regular basis in any organization covering a small pan shop to a multinational company can be thought of as they act as running capital. They act as lubricant for smooth running of any organization (Abuzar M.A. Eljelly, 2004). There are broadly three types of liquid ratio; Current ratio, Quick ratio and Absolute liquid ratio. All these three ratios measure liquidity but degree or extent of liquidity differs for each.

Profitability is the ultimate measure through which both operating and financial performance can be gauged. Whenever a business starts its operations, its main goal is to earn or maximize profits. A profit earning business can contribute positively towards society in terms of welfare activities or CSR. Owners or promoters take lot of hardship to stand their business by investing their monetary and physical resources. It is therefore the responsibility of the business to maximize their wealth (wealth maximisation theory). Wealth comes from profit hence in any case profit should be the ultimate aim of any business. Further, profit can be maximized when resources are invested in productive assets. Therefore it is crucial for the business managers to choose appropriate assets in line with the risk profile of the business, (Mahmood and Qayyum2010). This means, the business should pursue in that area where the managers have experience in managing the affairs. With this backdrop, the study undertakes the analysis of liquidity and profitability ratios to place 18 sample petrochemical

companies according to their liquidity and profitability positions.

II. BACKGROUND OF THE STUDY

The firm has to make a risk-return trade off while considering liquidity versus profitability decision. Trade off means balancing between two opposite things: liquidity and profitability. Liquidity means holding to current assets (like cash, bank balances, inventory and receivables) (Renato Schwambach Vieira 2010). On the other hand profitability is a relative term that compares profit of a firm with sales or some other variables such as assets, equity etc. It is a general fact that holding to more than required current assets causes a decrease in profitability of any business concern and vice versa. The underlying logic is that current assets are very low or even zero yielding assets. For example if a company holds on to excess cash and bank balance, therefore remaining idle which could have earned interest if deposited in a bank or invested somewhere else. Similarly whenever a company gives credit facility to its customers (trade receivables) for certain number of days, it implies that its cash (in the form of cost of goods produced and sold) gets blocked for that many number of days which could have otherwise been invested to earn interest or dividend. Therefore it is justified to treat current assets as zero or very low yielding assets. However investment in fixed assets yields more profit. Therefore it is always the intention of a business to invest more in fixed assets and a very less amount in current assets (Dong 2010) Further investment in fixed assets in general is somehow stable or increases over a period of time, but current assets investment does fluctuate over time depending upon the raw material requirement, credit policy of the firm, desire to

pursue either a conservative or aggressive working capital strategy etc.

Now if a business concern holds excess current assets than required (means conservative policy or high liquidity), it indicates a lower profit on invested capital, as much of the invested capital is unnecessarily blocked in current assets (non productive/ low yielding assets). However in such case, it is possible to serve its outstanding expenses, creditors, bankers at its best as and when they become due. This involves a low return (low profit) and low risk (excess investment in current assets). On the opposite, if the concern holds less current assets than required (means aggressive policy or low liquidity), it indicates a higher profit on invested capital, as much of capital is invested in fixed assets which are high yielding assets. But in such case, frequent stock outs due to interrupted production and sales, falling creditworthiness due to inability to pay creditors in time is bound to happen. This involves high return (more profit) and high risk (less than required investment in current assets). Therefore a firm has to balance between two opposite aspects of return and risk (Ibenta N.S 2005)). In other words under a firm's given technology, production policy, sales and demand conditions, operating efficiency, a firm has to choose an optimum level of current assets which can maximize the profit (return) at an accepted level of risk.

III. PROFITABILITY RATIOS

It refers to the analysis of profits in relation to some other variables of the business. That variable may be revenue from operations or assets employed in the business and the ratios calculated to meet this objective are known as profitability ratios. Different profitability ratios serve different purposes. Traditionally there used to be a broad classification of incomes and expenses into direct and indirect, accordingly two profit figures were derived ; gross profit and net profit. The present study is conducted based on Net profit ratio only.

3.1-NET PROFIT RATIO

It is based on overall concept of profit. It is loosely termed as net profit margin. In other words, it shows the operating result of an enterprise. It takes both operating and non operating expenses and incomes of the business. It is a measure of net profit margin in relation to operating revenue. It is mainly considered by shareholders as their return since it represents an amount after paying to all the stakeholders. It can be said as residual profit. Shareholders use it to compute return on equity which matters or urges shareholders to invest more in the business.

It is calculated as:

Net profit ratio = (Net profit/Net sales)×100. In this case, net profit means profit after tax (PAT).

IV. LIQUIDITY RATIOS

Liquidity ratios are calculated to measure the short-term solvency of the business, i.e. the firm's ability to meet its current obligations (Vishnani and Shah 2007). These are analyzed by looking at the amounts of current assets and current liabilities in the balance sheet. The two ratios included in this category are current ratio and liquidity ratio. In other words, to meet its short term commitment, business requires short term funds. The ability of the business to pay the amount due to short term stakeholders as and when they become due is known as liquidity, and the ratios calculated to measure it are known as 'Liquidity Ratios'. These are essentially short-term in nature. The researcher has considered current ratio for the particular study.

4.1-CURRENT RATIO

Current ratio is the variety of net working capital. Net working capital is determined in terms of absolute form whereas current ratio is a relative term. It is the proportion of total current assets to current liabilities. It provides a measure of degree to which current assets cover current liabilities as and when they become due. The excess of current assets over current liabilities provides a safety measure against any uncertainty in realisation of less liquid current assets such as inventory and debtors. The ratio should be reasonable and usually considered as 2:1. It should neither be very high or very low. Both the situations have their associated disadvantages. A very high current ratio implies high investment in current assets since it reflects under utilisation of resources. On the contrary, a low ratio can't even arrange short term finance at times needed much. Generally creditors and other external providers of loan seek to have a higher ratio in order to be in safe side.

It is expressed as follows

Current Ratio = Current Assets / Current Liabilities

Current assets include trade receivables including debtors and bills receivables, current investments, inventories, cash and cash equivalents, short-term loans and advances and other current assets such as prepaid expenses, advance tax and accrued income, etc. On the other hand current liabilities include trade payables (creditors and bills payables), other current liabilities and short-term provisions, current borrowings (short term borrowings).

V. OBJECTIVES OF THE STUDY

The objective of the study is to place the petrochemical companies in four different cells according to their degree of liquidity and profitability measured through Current ratio and net profit ratio.

VI. RESEARCH METHODOLOGY

The purpose of this research paper is to analyze the relationship between two important ratios of the financial statements the profitability and liquidity of randomly selected 18 petrochemical companies operating in India. The study is conducted on the basis of actual data available in respective company websites and CMIE data base collected during the period 2008 to 2017. The secondary sources have been used for the collection of the data. The following petrochemical companies have been considered in the analysis.

6.1-SAMPLE COMPANIES

Asian Fertiliser

Asian fertilizers began its operations in 1992 with installed production capacity of 100 MT of Sulphuric acid per day. With this production capacity the company has emerged as the second largest producer of Sulphuric acid in whole Uttar Pradesh and adjoining areas. The company serves customers across the areas of agriculture, chemicals and fertilizers industries, power generation industries and many more to name. The company has the mission and vision of 'Having leadership position in each of our businesses; creating value and delight for our customers and stakeholders; incorporating technology as the key differentiator and tool to deliver growth and sustain our position of leadership.

Assam Petrochemicals

Assam Petro-Chemicals Ltd. (APL) is amongst the few prestigious PSUs under state Govt. APL is on its way to be a major Petro-Chemicals complex in the Northeast region thereby opening a new horizon in the industrialization of Assam with its Methanol-Formalin project. The company has undertaken the CSR activities with the objectives of providing drinking water and sanitation to the residents of locality of the plant; providing and promoting primary education to children of the vicinity of the Company's plant area; taking-up projects to ensure environmental sustainability, ecological balance, protection of flora and fauna, animal welfare and conservation of natural resources and maintaining quality of soil, air and water.

CIL NOVA

CIL Nova Petrochemicals Limited was demerged from Nova Petrochemicals Limited in April 2007 and have since emerged as leading producer of Partially Oriented Yarn (POY), Micro-Filament Yarn, Fully Drawn Yarns (FDY), Texturised Yarns, PTY, and Draw Twisted Yarn (DTY). In 1999, in keeping with its philosophy to exceed its own performance, 10 end parallel spinning lines from Barmag AG, Germany, were installed in the plant to manufacture micro filament yarn and since then it has gone ahead with its expansion drive and reached a production capacity target of around 75 to 80 MT/Day.

Chennai Petrochemicals

Chennai Petroleum Corporation Limited (CPCL), formerly known as Madras Refineries Limited (MRL) was formed as a joint venture in 1965 between the Government of India (GOI), AMOCO and National Iranian Oil Company (NIOC) having a shareholding in the ratio of 74 %, 13 % and 13 % respectively. The company was formed with the vision and mission to manufacture and supply petro products at competitive prices, meeting the quality expectations of the customers; to proactively fulfill social commitments including environment and safety.

Deepak Fertilisers

Deepak Fertilisers and Petrochemicals Corporation Ltd. (DFPCL) is among India's leading producers of fertilisers and industrial chemicals. The Company has manufacturing facilities in Taloja – Maharashtra, Srikakulam – A.P., Panipat – Haryana and Dahej – Gujrat. The Company has adopted some of the global state-of-the-art technologies that enable it to manufacture and supply high quality products that meet global standards. The company has established a prime position for itself over the last three and a half decades across Indian and global markets.

Gail India

Gail India, the largest brand name in Gas generation, transmission and marketing is one of the Ratna companies in India. The company has the vision of being the leader in natural gas value-chain and beyond, with global presence, creating value for stakeholders with environmental responsibility. Mission of the company is to enhance quality of life through clean energy, and beyond. Among its business verticals, it undertakes natural gas transmission and marketing which emerge as a new age fuel due to its lowest carbon to hydrogen ratio, making it the cleanest of fossil fuels.

GSL NOVA Petrochemicals

Promoted by Gupta Synthetics Ltd & Gupta Silk Mills Pvt Ltd of the Gupta group and Chiripal Twisting & Sizing Pvt Ltd and Shanti Processors Ltd of the Chiripal group, Nova Petrochemicals Ltd (NPL) was incorporated on 1993 in Gujarat. NPL is engaged in the processing of all types of petrochemicals and related products and by-products like natural gas and synthetic gas naphtha hydrogen methane ethane propane butane propylene etc. During 1995 the company came out with a public issue of equity shares at premium aggregating Rs.13.69 Crores to set up a plant to produce partially oriented yarn (POY) with an installed capacity of 11977 TPA.

IG Petrochemicals ltd

IGPL commenced production in the year 1992 with a view to become one of the leading players in the petrochemicals industry. The company was promoted by the Dhanuka Group in technical collaboration with Lurgi GmbH,

Germany. The company is an established market leader in (PAN) with strong recognition and excellent plant facilities of international standards. Equipped with one of the largest capacity at a single location, the company has the ability to cater to local and international market. Phthalic Anhydride (PAN) is used in industries such as flexible PVC, plastics, paints, construction, transportation and marine.

Madras Fertilizers' Limited (MFL)

In 1966 Madras Fertilizers was incorporated as a joint venture between GOI and AMOCO India. Further in 1972, NIOC acquired 50% of the shareholding in accordance with the participation agreement between GOI, AMOCO and National Iranian Oil Company. Subsequently in 1994, GOI and NIOC shares 67.55 % and 32.45 % respectively. The company manufactures Chemical fertilisers, Bio fertilizers, Neem based agro chemicals. Among the best products in fertilizers category, it produces and sells Ammonia, Urea and NPK. It has a production capacity of 346500 MT (of Ammonia), 486750 MT (of Urea) and 840000 (of NPK 17-17-17).

Mangalore Refinery & Petrochemicals Limited (MRPL)

Mangalore Refinery and Petrochemicals Limited (MRPL) is a schedule 'A' Mini ratna, Central Public Sector Enterprise (CPSE) under the Ministry of Petroleum & Natural Gas. MRPL is located in the north of Mangaluru city, in Dakshina Kannada District of Karnataka State (India). The company has the dominance in refining crude oil through primary processing units (where Crude Oil is separated into various products depending on the relative volatility of the Hydrocarbon components), secondary processing unit (receive feedstock from the Crude Unit and upgrade it to value added products) – comprising of Hydrocracker Unit, Continuous Catalytic Regeneration Platforming Unit, Isomerisation Unit, Gas Oil Hydro-Desulphurisation Unit, Petro Fluidised Catalytic Cracking Unit, Delayed Coker Unit, Visbreaker Unit, Bitumen Unit etc.

Nagarjuna Fertilisers

The Company in terms of the Composite Scheme of Arrangement and Amalgamation of Nagarjuna Fertilizers and Chemicals Limited, Kakinada Fertilizers and Chemicals Limited, Ikisan Limited and Nagarjuna Oil Refinery Limited has merged into Kakinada Fertilizers Limited, its wholly owned subsidiary. Accordingly the name of the Company is now Kakinada Fertilizers Limited with effect from August 1, 2011. The flagship company of the Nagarjuna Group, Nagarjuna Fertilizers and Chemicals Limited is a leading manufacturer and supplier of plant nutrients in India. Commencing operations in 1986-87, today our asset base is around Rs. 21 billion. The company has the distinction of being the single largest private sector investment in Southern India.

National Fertilisers Limited (NFL)

National Fertilisers Limited, a Schedule 'A' & a Mini Ratna (Category-I) Company, having its registered office at New Delhi was incorporated on 23rd August 1974 with its corporate office at NOIDA (U.P). It has an authorized capital of Rs. 1000 crore and a paid up capital of Rs. 490.58 crore out of which Government of India's share is 74.71 % and 25.29 % is held by financial institutions & others. NFL has five gas based Ammonia-Urea plants viz. company has a Bio-Fertilizers Plant at Vijaipur with a capacity of 600 tonnes of solid & liquid Bio-Fertilizers to produce three strains of Bio-Fertilizers viz. PSB, Rhizobium and Azotobacter are produced.

Numaligarh Refinery

Numaligarh Refinery Limited (NRL), set up at Numaligarh in the district of Golaghat (Assam) in accordance with the provisions made in the historic Assam Accord signed on 15th August 1985. The company has been conceived as a vehicle for speedy industrial and economic development of the region. With capacity of 3 MMTPA, Numaligarh Refinery Limited was dedicated to the nation on 9th July, 1999. NRL has been able to display creditable performance since commencement of commercial production in October, 2000.

ONGC

ONGC being the largest energy company in India represents India's energy security through its pioneering efforts. Maharatna ONGC is the largest crude oil and natural gas Company in India, contributing around 70 per cent to Indian domestic production. Crude oil is the raw material used by downstream companies like IOC, BPCL, and HPCL to produce petroleum products like Petrol, Diesel, Kerosene, Naphtha, and Cooking Gas-LPG. The company has the vision of becoming a global leader in integrated energy business through sustainable growth, knowledge excellence and exemplary governance practices.

Oswal Chemicals and Fertilisers Limited

The company was incorporated as a Private Limited company in 1981 and it became a Public Limited company on 29th January, 1982. The company was engaged in the business as importers of synthetic and wool wastes. During 1985-86, the company acquired an existing agro-products industrial complex at Dewas near Indore in Madhya Pradesh. The complex comprised facilities for the manufacture of integrated agro-products viz. Vegetable Oil refinery, hydrogenation plant and flour mill. Subsequently, a Vanaspati (vegetable ghee) plant with an installed capacity of 22,500 tonnes per annum was established at Mandideep near Bhopal.

Paradeep Phosphates Limited (PPL)

Paradeep Phosphates Ltd (PPL) is a leading fertilizer company with an annual turnover close to Rs. 5, 500 crores.

PPL is part of Adventz Group of Companies. The company is a leading producer of Di - Ammonium Phosphate (DAP - 18:46:0), NPK - 12:32:16, Nitrogen in Ammonical (Ammonium Sulphate) form, NPK-10:26:26, NP - 20:20:0:13 (Ammonium Phosphate Sulphate), Muriate of Potash (MOP), Ammonia & Sulphuric Acid, Zypmite (a micronutrient mixture containing Sulphur, Zinc, Boron, Calcium and Magnesium), Gypsum (used amongst cement units, plaster of Paris manufacturing units and fly ash brick manufacturing units).

Rashtriya Chemicals and Fertilizers Limited

Rashtriya Chemicals and Fertilizers Limited (RCF), a Government of India Undertaking is a leading fertilizer and chemical manufacturing company with about 80% of its equity held by the Government of India. It manufactures Urea, Complex Fertilizers, Bio-fertilizers, Micro-nutrients, 100 per cent water soluble fertilizers, soil conditioners and a wide range of Industrial Chemicals. It produces 23 lakhs MT Urea, 6.5 lakhs MT Complex fertilizers and 1.6 lakhs MT of Industrial Chemicals every year. The company is a household name in rural India with brands "Ujjwala" (urea) and "Suphala" (complex fertilizers) which carry a high brand equity.

Shiva Global Agro

Shiva Global Agro Industries is a fast-growing, research-led agriculture company. An emerging leader in the agro products domain, the company manufactures fertilizers, soil and crop health products, Oil, de-oiled cakes (DOC) and hybrid seed varieties. Along with its subsidiaries, Shiva Global Agro Industries strives to fulfill its commitment towards India’s food security by way of products that help farmers increase crop yield. The company began as a fertilizer manufacturing unit in 1993 and grew to a provider of holistic range of solutions for the farmer’s agri-based needs.

All the information was retrieved from respective websites of sample companies.

VII. ANALYSIS OF THE DATA

7.1-Analysis of Net Profit Ratio

The trend of NPM of all the sample companies was fluctuating during 2008-2017 as tabulated in table-1. Amongst the entire sample companies, NPM of Assam Petrochemicals Ltd and G S L Nova Petrochemicals Ltd had fluctuated to larger extent as evident from their higher C.V. G S L Nova Petrochemicals Ltd was not able to make any net profit margin during the period under study. But, Oswal chemicals and fert. Ltd. was able to make net profit margin at a good rate during the period under study.

Table No.-1: Net Profit Ratio

Company Name	Mar-08	Mar-09	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17
Asian Fertilizers Ltd.	1.1	2.97	0.87	1.8	2.51	1.41	1.03	1.67	0.61	0.69
Assam Petrochemicals Ltd.	12.62	8.47	5.36	-24.65	4.59	3.96	7.63	-6	-25.14	3.27
C I L Nova Petrochemicals Ltd.		-5.39	-0.25	0.57	0.7	0.85	0.84	1.54	2.79	2.22
Chennai Petroleum Corpn. Ltd.	3.35	-1.09	1.47	1.27	-0.6	-3.76	-0.65	-1.57	2.1	2.68
Deepak Fertilisers & Petrochemicals Corpn. Ltd.	8.68	9.5	10.62	10.96	8.21	5.18	5.99	1.99	2.05	4.39
G A I L (India) Ltd.	13.53	11.42	12.21	10.68	8.61	8.34	6.97	4.96	3.81	7.08
G S L Nova Petrochemicals Ltd.	-8.09	-3.12	-2.31	-2.52	-12.42	-43.46	-180	-1035.98	-82.35	
I G Petrochemicals Ltd.	4.55	0.12	4.27	1.46	0.59	2.65	0.1	2.3	5.72	8.88
Madras Fertilizers Ltd.	-11.6	-12.89	0.53	2.72	4.96	0.99	3.81	-8.46	-9.47	-1.74
Mangalore Refinery & Petrochemicals Ltd.	3.24	2.88	3	2.62	1.56	-1.19	0.66	-2.8	2.5	3.42
Nagarjuna Fertilizers & Chemicals Ltd.		0	0	0	2.74	1.47	-6.25	-10.69	-2.27	-3.73

National Fertilizers Ltd.	2.1	0.09	2.33	2.69	1.98	-1.76	-3.37	-0.75	2.41	2.55
Numaligarh Refinery Ltd.	4.13	2.52	2.85	3.26	1.43	1.44	3.74	6.82	10	13.19
Oil & Natural Gas Corpn. Ltd.	23.98	21.37	25.11	25.17	25.15	21.22	21.77	18.32	19.07	16.04
Oswal chemicals and fert. Ltd.	38.67	25.92	9.52	28.09	16.69	-7.25	50.05	38.04	25.6	44.39
Paradeep Phosphates Ltd.	10.5	1.81	1.77	2.7	2.82	0.56	-4.09	0.63	1.53	
Rashtriya Chemicals & Fertilizers Ltd.	2.64	2.4	2.05	3.73	3.14	3.98	3.49	4.61	1.61	1.97
Shiva Global Agro Inds. Ltd.	1.13	1.95	2.57		2.84	1.89	1.84	1.87	1.73	2.3

Source-Compiled from CMIE data base

7.2-Analysis of Current Ratio

All the current ratios of Assam Petrochemicals Ltd and Oswal Chemicals and Fertilisers Limited were higher than the standard norm 2:1 as tabulated in table no-2. Oswal Chemicals and Fertilisers Limited recorded the highest average current ratio of 15.8 times amongst all the sample companies. But, the ratios of Oswal Chemicals and Fertilisers Limited were not consistent as evident from C.V of 90.2. The standard deviation and lower degree of co-efficient of variation (10.4) revealed that C I L Nova Petrochemicals Ltd. has maintained its current ratio more consistently than any other company.

Table-2: Current ratio (times)

Company Name	Mar-08	Mar-09	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17
Asian Fertilizers Ltd.	0.97	1.2	1.12	1.16	1.66	1.55	1.39	1.27	1.44	1.3
Assam Petrochemicals Ltd.	3.79	4.07	3.71	3.28	3.12	3.77	4.42	5.42	6.97	5.18
C I L Nova Petrochemicals Ltd.		0.7	0.97	0.88	0.96	0.98	0.96	0.81	0.91	0.97
Chennai Petroleum Corpn. Ltd.	1.34	1.07	1.14	1.02	1.03	0.9	0.96	0.7	0.69	0.78
Deepak Fertilisers & Petrochemicals Corpn. Ltd.	0.78	0.88	1.21	1.75	1.34	1.69	1.41	1.16	1.09	0.82
G A I L (India) Ltd.	1.47	1.22	1.09	0.95	0.84	0.9	1	1	1.03	0.79
G S L Nova Petrochemicals Ltd.	0.69	0.76	0.77	0.62	0.47	0.2	0.18	0.29	0.14	
I G Petrochemicals Ltd.	1.24	0.9	1.25	1.09	1.22	1.05	0.97	1	1.19	1.47
Madras Fertilizers Ltd.	0.44	0.36	0.57	0.9	0.67	0.7	0.89	0.77	0.65	0.6
Mangalore Refinery & Petrochemicals Ltd.	1.28	1.08	0.97	0.83	0.94	0.91	1.05	0.64	0.79	0.71
Nagarjuna Fertilizers & Chemicals Ltd.		2			0.91	0.93	0.75	0.64	0.86	0.73
National Fertilizers Ltd.	1.15	1.69	1.94	1.78	1.16	1.17	1.16	1.13	1.12	1.14
Numaligarh Refinery Ltd.	1.22	1.45	1.28	1.32	1.44	1.76	1.94	1.64	3.26	3
Oil & Natural Gas Corpn. Ltd.	1.18	0.95	0.95	1.3	1.18	1.66	1.46	1.25	1.39	1.34
Oswal chemicals and fert. Ltd.	5.45	5.09	8.52	15.06	6.13	4.45	7.08	35.54	28.44	42.46
Paradeep Phosphates Ltd.	1.15	1.49	3.36	1.5	1.36	1.23	1.24	1.22	1.09	
Rashtriya Chemicals & Fertilizers Ltd.	1.37	1	1.13	1.83	1.38	1.41	1.58	1.63	1.36	1.55
Shiva Global Agro Inds. Ltd.	1.5	1.23	1.85	1.25	1.13	1.14	1.14	1.13	1.2	1.3

Source-Compiled from CMIE data base

7.3- Liquidity Verses Profitability

For the liquidity, the companies with a current ratio higher than 1 are considered to have a high liquidity. For the

profitability, the classification is made according to average NPM for the sample during the year, companies are classified as having a high profitability if their NPM is

higher than the average NPM and a low profitability in the other case.

Table No- 3: Current ratio Verses Net profit ratio

Sample Companies	Average CR (In Times)	Average NPM (In %)
Asian Fertilizers Ltd.	1.306667	1.552222
Assam Petrochemicals Ltd.	4.283333	-1.46222
C I L Nova Petrochemicals Ltd.	0.89625	0.20625
Chennai Petroleum Corpn. Ltd.	0.983333	0.057778
Deepak Fertilisers & Petrochemicals Corpn. Ltd.	1.256667	7.02
G A I L (India) Ltd.	1.055556	8.947778
G S L Nova Petrochemicals Ltd.	0.457778	-152.25
I G Petrochemicals Ltd.	1.101111	2.417778
Madras Fertilizers Ltd.	0.661111	-3.26778
Mangalore Refinery & Petrochemicals Ltd.	0.943333	1.385556
Nagarjuna Fertilizers & Chemicals Ltd.	1.015	-1.875
National Fertilizers Ltd.	1.366667	0.635556
Numaligarh Refinery Ltd.	1.701111	4.021111
Oil & Natural Gas Corpn. Ltd.	1.257778	22.35111
Oswal chemicals and fert. Ltd.	12.86222	25.03667
Paradeep Phosphates Ltd.	1.515556	2.025556
Rashtriya Chemicals & Fertilizers Ltd.	1.41	3.072222
Shiva Global Agro Inds. Ltd.	1.285556	1.9775
Average	1.96439	4.35946

*G S L Nova Petrochemicals Ltd. is excluded from the analysis as it could not generate any positive profit during 10 years.

As such, the companies C I L Nova Petrochemicals Ltd. (0.89625), Chennai Petroleum Corpn. Ltd. (0.983333), Madras Fertilizers Ltd. (0.661111) and Mangalore Refinery & Petrochemicals Ltd. (0.94333) are rated to have low liquidity. The liquidity ratio of Assam Petrochemicals Ltd. is highest amongst all sample companies and it is 4.283333 but the profitability is negative. And the companies, I G Petrochemicals Ltd. (2.417778), Asian Fertilizers Ltd. (1.552222), Assam Petrochemicals Ltd. (-1.46222), Nagarjuna Fertilizers & Chemicals Ltd. (-1.875), National Fertilizers Ltd. (0.635556) and Numaligarh Refinery Ltd. (4.021111) have the profitability less than the average profitability of all the companies (4.35). And so these six companies are rated to have low profitability during the study period. The net profit margin of Oil & Natural Gas Corpn. Ltd. is 33.25111% and that Oswal chemicals and fert. Ltd. of is 25.0367 % with higher Current ratio more than 1.

7.4-Matrix

Cell-1 ((High profitability and high liquidity)

Now the above matrix shows that Oswal fertilizers Ltd., G A I L (India) Ltd., Oil & Natural Gas Corpn. Ltd. Deepak

Fertilisers & Petrochemicals Corpn. Ltd. are the companies that are situated in a position which show both high profitability and high liquidity (Cell 1). This is in sharp contradiction to the theory that liquidity and profitability are opposite to each other. This implies that these four companies have been able to earn a good amount of profit on sales due to better asset turnover and cost management practices despite of pursuing a conservative strategy in working capital management. It would be possible for these types of companies to maximize the profit even to a greater extent by adopting an effective working capital management strategy thereby releasing the blocked capital from current assets to be diverted to revenue producing assets or activities causing the overall opportunity cost of fund to decrease.

Cell-2 (High profitability and low liquidity)

Cell 2 comprises of companies which faces a shortage of working capital (low liquidity) but able to earn a good amount of profit (high profitability). This implies that such companies adopt an aggressive working capital policy where much of profit could be attributed due to increased investment in fixed assets, better asset utilization (turnover), and fair cost management practices. These types of companies should have to maintain good credibility in the market for accommodating themselves with access to short term financing facilities in case of urgent deployment.

Cell-3 (low profitability and High liquidity)

Cell 3 contains companies with low profitability and High liquidity characteristics. Companies like Assam Petrochemicals Ltd., Nagarjuna Fertilizers & Chemicals Ltd., National Fertilizers Ltd., Rashtriya Chemicals & Fertilizers Ltd. Asian Fertilizers Ltd., Shiva Global Agro Inds. Ltd. Paradeep Phosphates Ltd. I G Petrochemicals Ltd, Numaligarh Refinery Ltd. are in this category. A common characteristic of such companies is that they mostly belong to fertilizer producing units except Oswal Chemicals and Fertilisers ltd. and Deepak Fertilisers which are in cell 1. One of the obvious reasons could be that during the study period, such companies were supposed to sell their produce at subsidized price due to Government regulation which caused to earn a low profit. Further nature of fertilizer production is complex (due to continuous processing units) that requires a comparatively higher investment in work-in-process inventory and expense (a component of current asset), hence high liquidity.

Cell-4 (low profitability and low liquidity)

Finally cell 4 deals with companies which have both low liquidity as well as profitability. Companies like G S L Nova Petrochemicals Ltd., C I L Nova Petrochemicals Ltd., Chennai Petroleum Corpn. Ltd., Madras Fertilizers Ltd., Mangalore Refinery & Petrochemicals Ltd. are in this category. This implies that these types of companies could not be able to earn higher profit due to inefficient cost

management (expense ratio for these companies might be high), lower asset turnover ratio (bad investment in fixed asset), lower demand for products due to obsolescence (which might be due to operation in matured industry that leads to stability or decreasing cash flows). Further a low liquidity is a symbol of inefficiency in both current asset and current liabilities management, which ultimately make them a sick one.

Among the above four types, companies in cell 2 are considered as the best types due to following reasons.

1. Low liquidity is an indication of comparatively lesser investment in current assets (low yielding assets)
2. Higher profitability comes from better cost management practices which are once again accepted as the best practices to survive in oligopoly market.
3. Access to external funds may relatively be easier as companies grow to a significant size in operation over a time period, due to possibility of conservation of cash flow of the initial periods, thereby slowly and steadily build up creditworthiness in the market.
4. Return on Equity (Return on Net worth) is usually highest for this category among all the four.

But, none of our sample companies comes under this classification, reflecting their inefficiency in managing their resources to generate profit.

VIII. FINDINGS AND CONCLUSION

Evaluation of the financial information contained in the financial statements in order to understand and make decisions regarding firm's operations is called Financial Statement Analysis. It is basically a study of relationship or comparison of several financial facts and figures as given in financial statements, and their interpretation to gain an insight into the profitability and operational efficiency of the firm to assess its financial health and future prospects.

The financial analysis revealed that the net profit margin of Oil & Natural Gas Corpn. Ltd. is 33.25111% and that of Oswal chemicals and fert. Ltd. is 25.0367 % with higher Current ratio more than 1 amongst all the sample companies. But, G S L Nova Petrochemicals Ltd. was not able to make any net profit margin during the period under study. As such Oil & Natural Gas Corpn. Ltd. and Oswal Chemicals and Fertilisers ltd. are considered as the better performed company as per their better cost management practices and G S L Nova Petrochemicals Ltd. is the lowest performed company during the study period.

Matrix analysis of the companies identified that none of our sample companies comes under the classification of high risk and highest profit that is (High profitability and low liquidity), reflecting the inefficiency of all the sample

companies in managing their resources to generate profit. But, the companies like Assam Petrochemicals Ltd., Nagarjuna Fertilizers & Chemicals Ltd., National Fertilizers Ltd., Rashtriya Chemicals & Fertilizers Ltd. Asian Fertilizers Ltd., Shiva Global Agro Inds. Ltd. Paradeep Phosphates Ltd. I G Petrochemicals Ltd, Numaligarh Refinery Ltd. are in the category of low risk and highest profit (profitability and High liquidity).

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