

# Analysis of Working Capital Efficiency of Vegetable Oil Companies in India

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## ABSTRACT

The research is mainly focused on operational efficiency of vegetable oil industry in India. In this research, the eight companies have been taken for analysis. The samples have been selected on the basis of total value of assets. Working capital efficiency of selected vegetable oil companies analysis by ratio analysis technique. Ratio analysis is a process of evaluating relationship between the component parts of financial statements to obtain a better understanding of the firm's position and performance. Current ratio has been used to measure the liquidity position of the selected companies. To evaluate the efficiency of firms, Debtors Turnover Ratio, Inventory Turnover Ratio and Fixed Asset Turnover Ratio have been used. Return on Capital Employed has been used to analysis the profitability of the selected oil production companies. The findings and suggestions would be useful for further researcher and corporate people to improve their operational efficiency.

**Keywords:** Vegetable Oil Companies, Current Asset, Liquidity, and Profitability.

## I. INTRODUCTION

Production of Vegetable oil is the major source in Indian food industry. India is productive in having a wide range of oilseeds crops grown in its different agro climatic zones. The major traditionally cultivated oilseeds are groundnut, mustard/rapeseed, sesame, safflower, linseed, and castor. In latterly, soyabean and sunflower have given more important among people.. Food use of oilseeds in middle of the year 2016-17 will increase by 5 per cent and driven by steady demand for value-added food products made from oilseeds, particularly nuggets, snacks, curries and sauces made from soy, rapeseed, mustard, sesame, peanuts, and other oil seeds(Department of Food & Public Distribution). The edible oil market is expected to be dominated by various national and multinational players due to the increasing import dependence of the country in the near future. About 50 per cent of domestic demand of edible oil is met through imports out of which palm oil constitutes about 80 per cent. During 2015-16, production of palm oil and soy oil makes the world's biggest importer and imports risen

an average of 12 per cent a year. The Agricultural and Processed Food Products Export Development Authority (APEDA) and Indian Oilseeds and Produce Export Promotion Council (IOPEPC) are work jointly to address quality issues and raise awareness of the quality of Indian oilseeds (namely peanuts) among different stakeholders reported by Global Agricultural Information Network. (2016)

## II. NEED FOR THE STUDY

A need at the present juncture is therefore felt to study whether the selected companies are having adequate current assets to meet their short term liabilities and to know the liquidity and short term solvency position of the industry and hence the research problem has to be "Analysis of Working Capital Efficiency of Vegetable Oil Companies in India". As such, the study is expressed to help the corporate management, the financiers, the investors and the government at large, to take valuable decisions at their own.

### III. STATEMENT OF PROBLEM

Edible oil is produced from oilseeds. According to Department of food and public distribution report said that India edible oil imports more than doubled in the decade to 2015 when demand rises, production falls. Indian oilseed output is expected to have jumped 20 per cent in 2016-17 to 38.2 million tons according to the Mumbai-based Solvent Extractors Association of India (SEA) and it is crucial for huge volumes. Due to unpredictable rainfall is the main reason, according to the government. Underused of production capacity is due to lack of internal or external financing in raw material and working capital

Indian companies appear to be worse-off in working capital cycle management compared with their global counterparts according to Aweek Datta in his EY report analysis (2014). The report concludes that based on the individual working capital cycle management, the efficiency levels of companies, they could have released between Rs. 2.7 trillion and Rs 5.3 trillion of cash or between 6% and 12 % of their aggregate sales. This could have been used for capital expansion or even repaying debt, a problem that many companies are faced. Also, the longer this cycle takes, the lower the return on the capital employed.

### IV. OBJECTIVE OF THE STUDY

- ✓ To study the liquidity position of the selected vegetable oil industry.
- ✓ To evaluate the operational efficiency among the selected industry.
- ✓ To analysis the profitability of the selected oil industry.

### V. RESEARCH METHODOLOGY

The data used for analysis is secondary data obtained from the capital line online database. The past 15 years data from 2001-02 to 2015-16 of eight companies has been taken for analysis. The descriptive method is used to study the operational efficiency of selected companies. The selected samples are Agro

Tech Food Ltd, Gokul Refoils & Solvent Ltd, JVL Agro Ltd, Marico Ltd, Rasoya Proteins Ltd, Ruchi Soya Industries Ltd, Vimal oil & Food Ltd and Vijay Solvex Ltd. To fulfill the objectives the following ratios are used:

- ✓ Current Ratio
- ✓ Debtor's Turnover Ratio
- ✓ Inventory Turnover Ratio
- ✓ Fixed Asset Turnover Ratio
- ✓ Return on Assets Ratio

### VI. REVIEW OF LITERATURE

**Azhagaiah Ramachandran and Muralidharan Janakiraman** (2009) analyzed the relationship between working capital management efficiency and earning before interest and taxes of paper industry in India during 1997-1998 to 2005-2006. They measure working capital management efficiency with three index values viz., performance, utilization and efficiency index. The study reveals there is a negative relationship between accounts payable days with EBIT. It shows that earning before interest and taxes improved by utilization payment to suppliers. They concludes that paper industry operate incredible during the period.

**Bana Abuzayed** (2012) carried out a research study regarding how efficient working capital management improves firms' profitability and firms' value for a sample of firms for the period from 2000 to 2008. In this study, cash conversion cycles as well as its components are used as measures of working capital management skills. The study found that profitability is affected positively with the cash conversion cycle which indicates that more profitable firms are not so much managing their working capital.

**Harsh et al** (2013) conducted a study to examine the efficiency of working capital management of the selected manufacturing companies of Healthcare sector during the period 2000-2001 to 2013-2014. For

measuring the efficiency of working capital management three variables namely performance index of working capital, utilization index of working capital and efficiency index of working capital have been calculated. Finding of the study indicates that overall Efficiency Index of the selected firms in Healthcare sector have efficiently managed their working capital.

**Hashem Valipour and Ali Jamshidi** (2012) in their study make an attempt to examine the working capital management efficiency of the selected firms listed in Tehran Stock Exchange. For measuring the efficiency of working capital management four index values-performance, utilizations, efficiency level and cash conversion cycle are calculated. Using efficiency of assets was taken as dependent variable of selected samples in four categorized industries. Finding of the study indicate that there is an insignificant and positive relationship between cash conversion cycle and the efficiency of the assets in the selected firms.

**Khatik S. K. and Titto Varghese** (2011) in their case study examine the efficiency and profitability position of the Hindustan Newsprint Ltd from the period 1999-2000 to 2008-2009. The profitability of selected firm have been analyzed by various financial ratios such as gross profit ratio, net profit ratio, operating profit ratio, productivity ratio, return on investment, return on net worth, earning per share and operating cost ratio. They found that the gross profit was strong of HNL and due to uncontrolled indirect expenses like power and fuel, repair and maintenance etc caused dissatisfactory in net profit position.

**Sandeep Goel** (2013) in his study made an attempt to examine the relationship between working capital efficiency and profitability of the selected five retail companies during the year 2008-09 to 2010-11. The result shows that there is a expansion trend in working capital relative to sales and net working cycle. From his study it is clear that shoppers shop was

managed their net working capital efficiently during the period. He concludes that proper working capital management helps in efficient utilization of resources.

**Shaista Wasiuzzaman** (2015) examined the relationship between working capital efficiency and firm value of the selected firms during the period of ten years (1999 to 2008).The results reveals that investors prefer the firms who follow a more constraining working capital policy and hence connect a higher value to firms with lower investment in net working capital. This relationship is influenced by the financing constraints faced by a firm. For financially constrained firms, working capital efficiency significantly increases firm value but it is found to be insignificant for unconstrained firms.

**Vedavinayagam Ganesan** (2007) in his study analyzed the working capital management efficiency of selected firms from telecommunication equipment industry. Researcher used correlation and regression analysis ANOVA method to find the association between working capital management efficiency and profitability for the period 2001 to 2007. The study reveals that days working capital is negatively related to the profitability, it is not significantly impacting the profitability of firms.

## VII. LIMITATION OF THE STUDY

- ✓ The analysis is based on annual reports of the companies only and restricted for a period of 15 years from 2001-02 to 2015-16.
- ✓ Ratio analysis is the important tools used in this project. So, it is subjected to the limitations of ratio analysis.

## VIII. ANALYSIS AND INTERPRETATION

### Liquidity Ratio:

A liquidity ratio is an indicator of whether a company's current assets will be sufficient to meet the

company's obligations when they become due. The current ratio is a financial ratio that investors and analysts use to examine the liquidity of a company and its ability to pay short-term liabilities (debt and

payables) with its short-term assets (cash, inventory, receivables).

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

**Table 1.** Current Ratio of Selected Oil Companies from 2001-02 to 2015-16 (Ratio in Times)

	Agro Tech Food Ltd	Gokul Refoils & Solvent ltd	JVL Agro Industries Ltd	Marico Ltd	Rasoya Proteins Ltd	Ruchi Soya Industries Ltd	Vimal Oil & Foods Ltd	Vijay Solvex Ltd
2001-02	1.63	1.35	1.19	1.62	1.3	1.25	1.25	1.28
2002-03	1.69	1.85	1.18	1.72	1.29	1.17	1.11	1.14
2003-04	1.28	1.85	1.1	1.7	1.09	1.12	1.17	1.19
2004-05	1.26	1.49	1.08	1.55	0.94	1.09	1.11	1.27
2005-06	1.43	1.34	1.14	1.58	0.91	1.05	1.02	1.35
2006-07	1.56	1.24	1.15	1.18	1.23	1.06	1.18	1.61
2007-08	1.77	1.24	1.07	1.14	1.4	1.09	1.22	1.82
2008-09	1.98	1.35	1.07	1.42	1.32	1.09	1.15	1.6
2009-10	2.01	1.31	1.16	1.44	1.36	1.09	1.19	1.47
2010-11	1.98	1.17	1.17	1.34	1.81	1.06	1.17	1.4
2011-12	2.1	0.98	1.12	1.27	1.58	1.02	1.12	1.19
2012-13	2.05	0.92	1.13	1.31	1.26	1.02	1.11	1.17
2013-14	1.7	0.93	1.16	1.25	1.23	1.03	1.13	1.21
2014-15	1.46	0.98	1.17	1.38	0.97	1.03	1.16	1.33
2015-16	1.3	1	0.99	1.57	0.42	0.96	1	1.49
Mean	1.68	1.27	1.13	1.43	1.21	1.08	1.14	1.37
Std	0.3	0.3	0.1	0.2	0.3	0.1	0.1	0.2
CV	17.57	23.41	4.84	12.93	26.60	6.43	5.85	14.38
Range	0.84	0.93	0.20	0.58	1.39	0.29	0.25	0.68
Minimum	1.26	0.92	0.99	1.14	0.42	0.96	1	1.14
Maximum	2.1	1.85	1.19	1.72	1.81	1.25	1.25	1.82

An increase in the current ratio shows improvement in the liquidity position of a firm while decrease in the current ratio represents there has been decline in the liquidity position of the firm. The above table shows the summary of current ratio of selected companies. The maximum value of mean CR ratio was 1.68 in Agro Tech food and minimum value of mean

was 1.08 in Ruchi soya Industries. The SD of selected companies shows minimum values. The CV of current ratio shows that 26.60 of Rasoya Proteins indicates the highest variability of current ratio and CV of current ratio of JVL Agro shows 4.84 which indicates that there is the least variability.

### Efficiency Ratio:

Efficiency ratio is used to analyze how well a company uses its assets and liabilities internally. An Efficiency ratio can be calculated the turnover of inventory, turnover of receivables and fixed asset turnover.

relationship between the cost of goods sold during a particular period and the average investment made in inventories. The higher the Inventory Turnover Ratio the greater would be the efficiency of the management and vice versa.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods sold}}{\text{Average Inventory}}$$

### Inventory Turnover Ratio

Inventory Turnover Ratio concentrated on the inventory control adopted by firm and shows the

**Table 2.** Inventory Turnover Ratio of selected companies from 2001-02 to 2015-16

	Agro Tech Food Ltd	Gokul Refoils Ltd	JVL Agro Industries Ltd	Marico Ltd	Rasoya Proteins Ltd	Ruchi Soya Industries Ltd	Vimal Oil & Foods Ltd	Vijay Solvex Ltd
2001-02	14.87	23.78	13.13	8.85	6.67	17.68	16.88	10.84
2002-03	17.77	20.78	13.94	8.66	7.99	18.9	19.61	13.6
2003-04	17.59	13.49	6.54	9.29	8.07	10.41	16.35	15.65
2004-05	16.04	15.85	6.02	9.14	5.85	8.99	17.76	14.18
2005-06	20.13	13.73	7.85	9.02	6.88	11.85	17.56	13.44
2006-07	18.62	11.9	6.03	8.7	4.93	9.38	15.03	13.49
2007-08	14.71	7.26	6.69	7.57	4.24	7.06	14.38	11.74
2008-09	12.87	7.66	8.09	7.8	3.01	6.55	15.01	11.79
2009-10	11.55	6.42	6.88	6.29	3.341	8.68	19.81	14.7
2010-11	10.69	8.72	8.14	5.71	2.78	7.55	22.67	20.51
2011-12	12.97	12.31	7.86	6.03	3.74	8.04	15.28	20.53
2012-13	9.97	10.6	8.53	5.5	4.51	7.49	13.74	18.94
2013-14	9.79	14.07	9.59	5.37	4.94	7.21	11.71	16.43
2014-15	7.43	12.17	8.66	6.44	2.05	8.73	11.41	15.27
2015-16	6.24	4.98	4.66	6.36	0.99	10.25	7.47	13.91
Mean	13.42	12.25	8.17	7.38	4.67	9.92	15.64	15.00
Std	4.2	5.2	2.5	1.5	2.1	3.7	3.8	3.0
CV	31.05	42.19	30.76	19.99	45.31	37.24	24.10	19.99
Range	13.89	18.80	9.28	3.92	7.08	12.35	15.20	9.69
Minimum	6.24	4.98	4.66	5.37	0.99	6.55	7.47	10.84
Maximum	20.13	23.78	13.94	9.29	8.07	18.9	22.67	20.53

The inventory turnover ratio of selected vegetable oil companies over the period of 15 years from 2001-02 to 2015-16 is presented. The maximum of inventory

turnover ratio of 15.64 in case of Vimal oil and foods and a minimum of 4.67 was found in case of Rasoya Proteins. The maximum SD was 5.2 in case of Gokul

Refoils and minimum SD was 1.5 of Marico Ltd. The maximum CV value of ratio of 45.31 in case of Rasoya which indicates that there is highest variability of inventory turnover ratio and Vijay solvex and Marico shows a minimum value of 19.99 which indicates that there is least variability or consistency of inventory turnover ratio.

important tool for analyzing the efficiency of liquidity management. The liquidity position of a company or firm turned on the quality of debtors to a large size. It measures the quickly or slowness of their collectability. Higher Debtors Turn Over Ratio implies the prompt payment made by debtors and vice versa.

**Debtors Turnover Ratio or Receivable turnover ratio:**

Debtors Turnover Ratio gives light on the type of credit and collection policy followed by a firm. It is an

$$\text{Receivable Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Account Receivable}}$$

**Table 3.** Debtor Turnover Ratio of selected companies from 2001-02 to 2015-16

	Agro Tech Food Ltd	Gokul Refoils & Solvent ltd	JVL Agro Industries Ltd	Marico Ltd	Rasoya Proteins Ltd	Ruchi Soya Industries Ltd	Vimal Oil & Foods Ltd	Vijay Solvex Ltd
2001-02	51.09	27.52	275.65	18.78	35.15	8.93	17.56	28.62
2002-03	41.25	22.75	265.79	27.17	37.36	8.82	22.38	22.69
2003-04	25.59	18.64	157.77	29.04	48.91	8.13	15.07	20.31
2004-05	22.35	28.87	134.36	23.65	57.86	8.11	9.88	14.88
2005-06	28.28	29.15	60.58	21.74	32.67	12.88	10.97	14.61
2006-07	27.39	21.93	37.56	30.23	22.82	11.52	11.85	17.11
2007-08	27.94	22.02	23.89	37.87	24.45	11.72	13.37	17.94
2008-09	30.69	31.27	18.31	37.37	18.61	11.57	8.78	17.22
2009-10	38.48	20.79	14.28	26.04	18.6	12.06	6.13	20.14
2010-11	27.24	16.24	19.81	22.03	17.63	9.71	5.52	24.51
2011-12	20.22	16.45	21.15	26.97	35.23	9.78	4.44	22.06
2012-13	20.43	16.7	23.84	30.33	13.34	7.14	5.98	25.1
2013-14	24.1	18.41	24.9	27.1	11.7	5.55	6.08	27.11
2014-15	32.85	13.38	18.45	33.62	6.16	5.38	7	23.63
2015-16	22.84	6.38	17.32	30.71	2.15	4.39	3.73	21.3
Mean	29.38	20.70	74.24	28.18	25.51	9.05	9.92	21.15
Std	8.5	6.7	90.9	5.5	15.6	2.6	5.3	4.3
CV	29.04	32.30	122.47	19.45	61.07	29.12	53.84	20.12
Range	30.87	24.89	261.37	19.09	55.71	8.49	18.65	14.01
Minimum	20.22	6.38	14.28	18.78	2.15	4.39	3.73	14.61
Maximum	51.09	31.27	275.65	37.87	57.86	12.88	22.38	28.62

It is clear from the above table that, the maximum mean value of debtor turnover ratio of 74.24 in case of JVL Agro and a minimum mean value of 9.05 was found in case of Ruchi Soya. The Maximum CV value of Debtor

turnover ratio was 122.47 in case of JVL Agro which indicates that there is highest variability of debtor turnover and 19.45 which indicates that there is least variability or consistency.

### Fixed Asset Turnover Ratio

Fixed asset turnover ratio known as activity ratio that calculated how efficiency Company utilized its fixed assets to generate its sales revenue.

$$\text{Fixed assets turnover ratio} = \text{Net sales} / \text{Average fixed assets}$$

**Table 4.** Fixed Asset Turnover Ratio of selected companies from 2001-02 to 2015-16

	Agro Tech Food Ltd	Gokul Refoils & Solvent ltd	JVL Agro Industries Ltd	Marico Ltd	Rasoya Proteins Ltd	Ruchi Soya Industries Ltd	Vimal Oil & Foods Ltd	Vijay Solvex Ltd
2001-02	15.44	27.34	14.9	3.99	4.69	14.67	9.46	6.65
2002-03	19.31	33.47	14.52	4.53	5.65	13.67	13.09	6.26
2003-04	22.11	33.75	22.7	5.79	6.92	10.43	12.65	7.76
2004-05	18.24	26.82	17.47	5.87	5.14	8.49	12.73	7.73
2005-06	17.02	18.22	16.2	3.65	4.81	8.73	18.22	9.07
2006-07	19.31	15.59	18.26	4.43	6.59	6.87	21.95	12.7
2007-08	18.18	12.44	14.93	7.03	9.96	7.78	23.75	14.8
2008-09	13.4	12.63	18.76	7.82	9.29	7.36	18.11	12.63
2009-10	10.91	8.92	13.96	7.28	6.03	6.32	17.21	10.3
2010-11	11.1	10.75	8.48	6.57	4.55	6.28	23.72	13.95
2011-12	9.18	14.16	12.28	6.68	5.93	8.68	23.65	17.18
2012-13	8.25	11.59	15.24	6.83	4.47	7.81	33.28	21.3
2013-14	5.64	12.05	13.65	5.88	4.84	6.8	36.52	22.8
2014-15	4.13	10.48	10.88	6.36	1.87	7.52	47.34	16.81
2015-16	3.48	3.91	9.42	6.41	0.31	7.09	26.01	14.12
Mean	13.05	16.81	14.78	5.94	5.40	8.57	22.51	12.94
Std	6.0	9.2	3.7	1.3	2.4	2.5	10.2	5.1
CV	46.16	54.58	25.07	21.10	44.68	29.43	45.41	39.53
Range	18.63	29.84	14.22	4.17	9.65	8.39	37.88	16.54
Minimum	3.48	3.91	8.48	3.65	0.31	6.28	9.46	6.26
Maximum	22.11	33.75	22.7	7.82	9.96	14.67	47.34	22.8

The result shows that the maximum mean value of fixed assets ratio of 22.51 in case of Vimal Oil & food and a minimum mean value of 5.40 was found in case of Rasoya Proteins. The maximum SD fixed assets ratio was 10.2 in case of Vimal oil & foods and minimum SD fixed asset ratio of 1.3 in case of Marico

ltd. The maximum CV value of fixed assets ratio was 47.34 in case of Vimal oil & foods which indicates that there is highest variability of fixed assets ratio.

### Profitability Ratio

Profitability ratio is used to measure the financial status of firm and assess their ability to generate earnings compared to its expenses and other relevant costs incurred during a specific period of time.

### Return on Capital Employed:

Return on Capital Employed is used to measure the overall profitability and efficiency of a business. The performance of the enterprise can be assessed in relation to other concerns by making inter-firm and

intra-firm comparisons. A high Return on Capital Employed indicates that a larger block of profits can be invested back into the company for the benefit of shareholders. This shows a sign of a successful growth company.

Return on Capital Employed = Earnings before Interest and Tax (EBIT) /Capital Employed (expressed as a percentage)

**Table 5.** Return on Capital Employed of selected companies from 2001-02 to 2015-16

	Agro Tech Food Ltd	Gokul Refoils & Solvent ltd	JVL Agro Industries Ltd	Marico Ltd	Rasoya Proteins Ltd	Ruchi Soya Industries Ltd	Vimal Oil & Foods Ltd	Vijay Solvex Ltd
2001-02	5.22	23.45	14.09	32.52	7.06	20.72	11.77	18.26
2002-03	17.68	23.28	28.19	30.37	13.56	18.7	13.97	18.38
2003-04	15.09	29.85	24.87	33.78	27.42	11.83	10.11	14.28
2004-05	12.46	29.5	16.72	34.16	8.61	9.51	12.45	11.42
2005-06	14.06	25.79	19.28	32.74	14.35	16	14.78	10.19
2006-07	20.98	36.41	15.67	40.12	20.57	14.26	15.68	18.17
2007-08	20.26	38.55	11.07	41.22	19.84	17.26	17.72	16.58
2008-09	22.56	17.84	17.71	39.31	12.92	12.16	16.96	13.75
2009-10	23.86	16.35	17.03	38.23	9.67	12.64	15.01	9.17
2010-11	17.77	19.32	13	28.66	7.3	11.3	13.6	6.3
2011-12	25.08	0.59	17.05	27.35	10.71	12.57	9.25	6.86
2012-13	25.56	11.31	14.9	26.52	9.27	11.03	23.93	7.9
2013-14	21.18	7.22	12.8	28.48	11.18	9.21	28.14	9
2014-15	14.16	12.3	7.52	29.04	-1.48	9.43	26.06	7.44
2015-16	10.36	3.5	8.6	35.38	-65.62	-4.28	-42.16	8.97
Mean	17.75	19.68	15.90	33.19	7.02	12.16	12.48	11.78
Std	5.8	11.4	5.5	4.8	21.2	5.7	16.1	4.4
CV	32.88	57.94	34.39	14.60	301.77	47.01	129.08	37.48
Range	20.34	37.96	20.67	14.70	93.04	25.00	70.30	12.08
Minimum	5.22	0.59	7.52	26.52	-65.62	-4.28	-42.16	6.3
Maximum	25.56	38.55	28.19	41.22	27.42	20.72	28.14	18.38

The return on capital employed of selected oil from 2001-02 to 2015-16 is presented. The maximum production companies over the period of 15 years of return on capital employed of 33.19 in case of

Marico ltd and a minimum of 7.02 was found in case of Rasoya Proteins. The maximum CV value of return on capital employed of 41.22 of Marico which shows that there is highest variability of return on capital employed and this means that Marico does a better job of deploying its capital.

## IX. FINDINGS AND SUGGESTIONS:

There are several suggestions have to be offered on the basis of the problems notified under the study:

- Current ratio is greater than 1 in all selected companies which indicates that they are well-positioned to cover its current or short-term liabilities. As such, current ratio can be used to make a simple estimate of a company's financial health.
- Inventory turnover is a ratio showing how many times a company's inventory is sold and return over a period of time. In this study shows that higher inventory turnover ratio, it means that companies commence an effective sales promotion to demand their products.
- Receivable turnover ratio shows how company efficiently collects its credit that issues to their customers. And moreover, a firm's investment in accounts receivable depends on the volume of credit sales and the collection period. Under the study it is clear that selected company's collection of accounts receivable is efficient and that they have been high proportion of quality customers and pay off their debts quickly.
- The selected oil production companies regarding fixed asset management, they should examine the ways fixed assets are being used and improve the output from those assets which will give maximum return on investment. Thus asset turnover ratio measures a company's efficiency and productivity.
- With regard to the return on capital employed, the companies should maintain higher ROCE which indicates that more efficiently used their

capital. Some of the selected companies show that decreased significantly during the study period which was on account of considerable decrease in profit margin as well as high cost of equity.

## X. CONCLUSION

The study helped in analyzing the liquidity, efficiency and profitability relationship of selected vegetable oil production companies in India. This research work clearly shows that how effectively selected companies is managing their working capital position. However, this study is the foundation stone for carrying out further research in the field of working capital management.

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