

A Comparative Analysis of Liquidity and Profitability Position of Astral Poly Technik Ltd. and Finolex Industries Ltd. in India

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Abstract

The policy of 'Make in India' being given the major thrust, the manufacturing has emerged as one of the high growth sectors in India. Of various products of industrial, agricultural and household needs, PVC pipes are of multifarious utility and hence needed in all segments for both water supply and in laying concealed wiring in buildings. Hence, there is a stiff competition among the firms producing PVC pipes in India. However, the success of a firm depends on its financial soundness, particularly the liquidity and profitability levels. Liquidity refers to the ability of a concern to meet its current obligations as and when these become due. The profitability acts as a yardstick to measure the operating efficiency of the enterprise. The present study analyses and compares the liquidity and profitability position of the two leading PVC manufacturing companies listed in both NSE and BSE, namely Astral Poly Technik Ltd and Finolex Industries Ltd. The financial data of the past ten years from 2007-08 to 2016-17 was used. Accounting ratios, Mottaal's comprehensive test of liquidity and Spearman's rank correlation coefficient are the tools used for the analysis. The study indicates that there is a positive correlation between liquidity and profitability in case of Astral Poly Technik Ltd, while a negative correlation in case of Finolex Industries Ltd.

Keywords: Correlation, Inventory, Liquidity, Profitability, Working Capital

1. Introduction

Liquidity enables a concern to meet its current obligations. Whereas, profitability indicates the efficiency with which the operations of the business are carried on. A lower profitability may arise due to the lack of control over the expenses. Hence, it is essential that both liquidity and profitability levels are sound enough for the success of a business. The present study focuses on the soundness of liquidity and profitability of select firms in the PVC pipe industry. Pipes are essential for water supply. Today, the use of plastic pipes has increased. Many construction firms have preferred PVC pipes because of high durability, easy installation, cost effectiveness and light weight. As

competition increases in the PVC pipe industry, the firms should improve their liquidity position so as to become profitable.

2. Review of Literature

Vivek Singla¹ concluded that the performance of Tata Steel Ltd. was better than SAIL due to higher net profit. Arti Mudaliar and Bhadauria B. M. S.² evaluated the past performance, income position and the expected future performance of Coca Cola and Pepsico and found that Coca Cola has slightly better strategic position than the other. Idhayajothi R., Lata Sri O.T.V., Manjula N., Meharaj Banu A., and Malini R.³ attempted to bring out the financial

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position through financial strength and weakness of Ashok Leyland Ltd. and exposed that the entire requirements for capital expenditure and higher level of working capital commitment was met with higher volume of operations and from its operating cash flows. Sumathi N⁴ measured the short-term financial feasibility and also identified the profitability status of the select cement companies which were found to be satisfactory. Habiba Abbasi⁵ evaluated various aspects of operating and financial performance of FMCG firms - HUL and ITC and concluded as satisfactory. However, the present study makes a comparative analysis of liquidity and profitability of select PVC pipe companies - Astral Poly Technik Ltd. and Finolex Industries Ltd. which are the leading firms in the pipe industry.

3. Objectives of the Study

- To analyse the liquidity and profitability position of the select companies through financial ratios.
- To determine the soundness of the select companies through Mottal's Comprehensive Test.
- To measure the relationship between liquidity and profitability position of the select companies by using Spearman's Rank Correlation Coefficient.

4. Methodology

The study is based on secondary data. The required information relating to the companies' annual financial results were obtained from the companies' websites. Further necessary data were collected from textbooks and various journals.

4.1 Sample Design

The present study considers two leading PVC pipe manufacturing companies listed in both NSE and BSE.

4.2 Period of Study

The study covers a period of ten years from 2007-2008 to 2016-2017. The accounting period was from 1st April to 31st March.

4.3 Tools of Analysis

Tools used in this study are mean, standard deviation, Motaal's comprehensive test of liquidity and Spearman's rank correlation coefficient.

5. Analysis and Findings

5.1 Liquidity Analysis

The analysis of liquidity position of the select companies has been presented in Table 1.

As per Table 1, it can be observed that the current ratio of Astral Poly Technik Ltd. during the study period had ranged from 1.38 times to 3.68 times registering an average of 1.77 times, which is lower than the standard norm of 2:1 with a standard deviation and co-efficient of variation of 0.70 and 0.40 respectively. The current ratio of Finolex Industries Ltd. during the study period had ranged from 1.15 times to 3.16 times registering an average of 1.92 times, which is also lower than the standard norm of 2:1 with a standard deviation and co-efficient of variation of 0.55 and 0.29 respectively. Hence it can be concluded that Finolex Industries Ltd. has registered more stable current ratio than Astral Poly Technik Ltd with a lower co-efficient of variation.

The quick ratio of Astral Poly Technik Ltd. during the study period had ranged from 0.76 times to 2.04 times registering an average of 1.02 times, which satisfies the standard norm of 1:1 with a standard deviation and co-efficient of variation of 0.38 and 0.37 respectively. The quick ratio of Finolex Industries Ltd. during the study period had ranged from 0.39 times to 2.28 times registering an average of 0.99 times, which is more or less equal to the standard norm of 1:1 with a standard deviation and co-efficient of variation of 0.62 and 0.63 respectively. Hence it can be concluded that the quick ratio of Finolex Industries Ltd. was widely fluctuating than Astral Poly Technik Ltd. with a higher co-efficient of variation.

The absolute liquid ratio of Astral Poly Technik Ltd. during the study period had ranged from 0.004 times to 0.16 times registering an average of 0.06 times, which is lower than the standard norm of 0.5:1 with a standard deviation and co-efficient of variation of 0.05 and 0.83 respectively.

Table 1. Liquidity Ratios

Year	Company Name	Current Ratio	Quick Ratio	Absolute Liquid Ratio	CATA
2007-2008	Astral Poly Technik Ltd.	1.88	1.11	0.03	0.44
	Finolex Industries Ltd.	3.16	2.28	0.14	0.42
2008-2009	Astral Poly Technik Ltd.	3.68	2.04	0.05	0.57
	Finolex Industries Ltd.	2.26	1.73	0.02	0.39
2009-2010	Astral Poly Technik Ltd.	1.96	1.14	0.04	0.64
	Finolex Industries Ltd.	2.09	1.31	0.08	0.41
2010-2011	Astral Poly Technik Ltd.	1.49	0.89	0.07	0.66
	Finolex Industries Ltd.	1.66	0.86	0.05	0.44
2011-2012	Astral Poly Technik Ltd.	1.38	0.81	0.16	0.65
	Finolex Industries Ltd.	2.00	1.09	0.08	0.35
2012-2013	Astral Poly Technik Ltd.	1.41	0.76	0.05	0.60
	Finolex Industries Ltd.	1.46	0.52	0.02	0.37
2013-2014	Astral Poly Technik Ltd.	1.46	0.76	0.004	0.57
	Finolex Industries Ltd.	2.12	0.69	0.06	0.39

Table 1 Continued

2014-2015	Astral Poly Technik Ltd.	1.48	0.84	0.02	0.45
	Finolex Industries Ltd.	1.80	0.54	0.03	0.43
2015-2016	Astral Poly Technik Ltd.	1.39	0.82	0.12	0.42
	Finolex Industries Ltd.	1.15	0.39	0.02	0.37
2016-2017	Astral Poly Technik Ltd.	1.56	1.00	0.04	0.42
	Finolex Industries Ltd.	1.54	0.53	0.03	0.29
Average	Astral Poly Technik Ltd.	1.77	1.02	0.06	0.54
	Finolex Industries Ltd.	1.92	0.99	0.05	0.39
Standard deviation	Astral Poly Technik Ltd.	0.70	0.38	0.05	0.10
	Finolex Industries Ltd.	0.55	0.62	0.04	0.04
Co-efficient of variation (%)	Astral Poly Technik Ltd.	0.40	0.37	0.83	0.19
	Finolex Industries Ltd.	0.29	0.63	0.80	0.10

Source: Compiled and Computed from annual reports

The absolute liquid ratio of Finolex Industries Ltd. during the study period had ranged from 0.02 times to 0.14 times registering an average of 0.05 times, which is also lower than the standard norm of 0.5:1 with a standard deviation and co-efficient of variation of 0.04 and 0.80 respectively. Hence it can be concluded that in terms of absolute liquid ratio, both Astral Poly Technik Ltd. and Finolex Industries Ltd. had registered a lower and a widely fluctuating ratio.

The average of Current Assets to Total Assets ratio of Astral Poly Technik Ltd. over the period of study is 0.54 times which indicates that the company is maintaining more than 50% of its total assets as current assets. This indicates that the company contributes its working capital investment towards profitability by increasing its liquidity. The average ratio of Finolex Industries Ltd. during the study

period is 0.39 times which indicates that the company has low investment in its working capital.

5.2 Motaal's Comprehensive Test of Liquidity

Motaal prescribes a comprehensive test for determining the soundness of a company as regards liquidity position⁶. It is a process of ranking to arrive at a more comprehensive measure of liquidity which involves calculating the following three different ratios.

1) Working Capital to Current Assets Ratio =

$$\text{(Working Capital/Current Assets)} \times 100$$

2) Stock to Current Assets Ratio =

$$\text{(Stock/Current Assets)} \times 100$$

3) Liquid Assets to Current Assets Ratio =

$$\text{(Liquid Assets/Current Assets)} \times 100$$

The higher the value of both working capital to current assets ratio and liquid resources to current assets ratio, relatively the more favourable will be the liquidity position of a firm and vice-versa. On the other hand, lower the inventory to current assets ratio, the more favourable is the liquidity position. Accordingly, ranking had been done in respect of all the three ratios separately for the select companies. In the second stage, all the three ranks against the three ratios were added to arrive at the total rank for both the select companies, which when again ranked constituted the ultimate rank.

Table 2 reveals the overall liquidity position of Astral Poly Technik Ltd. and Finolex Industries Ltd. on the basis of Motaal's Comprehensive Test of Liquidity. In case of Astral Poly Technik Ltd., the test indicates that during the entire study period, the year 2016-17 had obtained the ultimate rank of 1 denoting the most favourable liquidity

Table 2. Motaal's Comprehensive Test of Liquidity of Astral Poly Technik Ltd. and Finolex Industries Ltd.

Year	Company Name	WC to CA (%)	Rank	Stock to CA (%)	Rank	LR to CA (%)	Rank	Total Rank	Ultimate Rank
2007-2008	Astral Poly Technik Ltd.	46.89	3	41.24	5	58.76	5	13	3
	Finolex Industries Ltd.	68.35	1	27.90	2	72.09	2	5	2
2008-2009	Astral Poly Technik Ltd.	72.80	1	44.48	8	55.52	7	16	5
	Finolex Industries Ltd.	55.14	2	23.58	1	76.42	1	4	1
2009-2010	Astral Poly Technik Ltd.	48.99	2	41.82	6	58.18	6	14	4
	Finolex Industries Ltd.	52.23	4	37.55	3	62.44	3	10	3

Table 2 Continued

2010-2011	Astral Poly Technik Ltd.	33.09	5	40.21	2	59.78	2	9	2
	Finolex Industries Ltd.	39.66	7	47.95	5	52.05	5	17	5
2011-2012	Astral Poly Technik Ltd.	27.68	10	41.06	3	58.94	3	16	5
	Finolex Industries Ltd.	49.95	5	45.27	4	54.73	4	13	4
2012-2013	Astral Poly Technik Ltd.	29.13	8	46.04	9	53.96	8	25	9
	Finolex Industries Ltd.	31.43	9	64.48	6	35.52	6	21	6
2013-2014	Astral Poly Technik Ltd.	31.67	7	48.28	10	51.72	9	26	10
	Finolex Industries Ltd.	52.77	3	67.29	9	32.71	9	21	7
2014-2015	Astral Poly Technik Ltd.	32.59	6	43.15	7	32.32	10	23	8
	Finolex Industries Ltd.	44.42	6	69.72	10	30.28	10	26	10
2015-2016	Astral Poly Technik Ltd.	28.18	9	41.23	4	58.77	4	17	7
	Finolex Industries Ltd.	12.87	10	66.24	8	33.76	8	26	9
2016-2017	Astral Poly Technik Ltd.	35.73	4	35.44	1	64.56	1	6	1
	Finolex Industries Ltd.	35.02	8	65.31	7	34.69	7	22	8

Source: Compiled and Computed from annual reports

position enjoyed by the company. Whereas, the year 2013-14 had obtained the ultimate rank of 10 denoting the most unfavourable liquidity position faced by the company. In case of Finolex Industries Ltd., it can be concluded from the test that the year 2008-09 was the year of the most favourable liquidity position with the ultimate rank of 1. Whereas, the year 2014-15 had obtained the ultimate rank of 10 denoting the most unfavourable liquidity position.

5.3 Profitability Analysis

Table 3 shows that the gross profit ratio of Astral Poly Technik Ltd. during the study period from 2007-2008 to 2016-2017 had ranged from 23.75% to 35.27% registering an average of 27.97%, which is quite high and hence better the company's profitability, with a standard deviation and co-efficient of variation of 3.21 and 0.11 respectively. The gross profit ratio of Finolex Industries Ltd. during the study period ranged from 24.48% to 44.01% registering an average of 31.19%, which is quite high and hence better the company's profitability with a standard deviation and

co-efficient of variation of 5.35 and 0.17 respectively. Hence it can be concluded that Finolex Industries Ltd's. relatively higher profitability was also accompanied by a higher variability than Astral Poly Technik Ltd. as its co-efficient of variation was higher.

Net profit ratio of Astral Poly Technik Ltd. during the study period from 2007-2008 to 2016-2017 had ranged from 5.44% to 12.58% registering an average of 7.57%, with a standard deviation and co-efficient of variation of 2.14 and 0.28 respectively. The net profit ratio of Finolex Industries Ltd. during the study period ranged from -2.54% to 11.79% registering an average of 5.56%, with a standard deviation and co-efficient of variation of 4.15 and 0.75 respectively. Hence it can be concluded that Astral Poly Technik Ltd. had maintained a higher and more consistent net profit ratio than Finolex Industries Ltd. as its co-efficient of variation was lower.

Operating profit ratio of Astral Poly Technik Ltd. during the study period from 2007-2008 to 2016-2017 had ranged from 12.00% to 15.27% registering an average of 13.89%, with a standard deviation and co-efficient of variation of

Table 3. Profitability Ratios

Year	Company Name	Gross Profit Ratio (%)	Net Profit Ratio (%)	Operating Ratio (%)	ROCE
2007-2008	Astral Poly Technik Ltd.	35.27	12.58	84.76	19.98
	Finolex Industries Ltd.	28.99	5.10	89.21	10.40
2008-2009	Astral Poly Technik Ltd.	30.54	5.98	84.73	12.01
	Finolex Industries Ltd.	33.34	-2.54	86.58	1.83
2009-2010	Astral Poly Technik Ltd.	29.72	9.43	85.45	23.92
	Finolex Industries Ltd.	44.01	9.09	78.13	14.41
2010-2011	Astral Poly Technik Ltd.	26.87	8.18	86.37	26.04
	Finolex Industries Ltd.	30.12	3.85	88.89	12.89

Table 3 Continued

2011-2012	Astral Poly Technik Ltd.	27.66	6.86	85.87	29.18
	Finolex Industries Ltd.	25.27	3.58	89.68	10.25
2012-2013	Astral Poly Technik Ltd.	27.38	7.25	86.40	31.60
	Finolex Industries Ltd.	32.10	6.35	87.75	16.87
2013-2014	Astral Poly Technik Ltd.	26.26	7.20	85.95	32.35
	Finolex Industries Ltd.	30.37	6.94	83.83	21.32
2014-2015	Astral Poly Technik Ltd.	23.75	5.50	88.02	16.58
	Finolex Industries Ltd.	24.48	1.93	91.38	10.23
2015-2016	Astral Poly Technik Ltd.	25.57	5.44	87.62	15.83
	Finolex Industries Ltd.	31.14	9.52	84.70	36.29
2016-2017	Astral Poly Technik Ltd.	26.63	7.23	85.96	18.10
	Finolex Industries Ltd.	32.04	11.79	81.15	22.31
Average	Astral Poly Technik Ltd.	27.97	7.57	86.11	22.56
	Finolex Industries Ltd.	31.19	5.56	86.13	15.31
Standard deviation	Astral Poly Technik Ltd.	3.21	2.14	1.07	7.10
	Finolex Industries Ltd.	5.35	4.15	4.17	10.02
Co-efficient of variation	Astral Poly Technik Ltd.	0.11	0.28	0.01	0.31
	Finolex Industries Ltd.	0.17	0.75	0.05	0.65

Source: Compiled and Computed from annual reports

1.07 and 0.08 respectively. The operating profit ratio of Finolex Industries Ltd. during the study period ranged from 8.62% to 21.87% registering an average of 13.87%, with a standard deviation and co-efficient of variation of 4.16 and 0.30 respectively. Hence it can be concluded that Astral Poly Technik Ltd. had a more stable operating profit ratio than Finolex Industries Ltd. as its co-efficient of variation was lower.

Return on capital employed of Astral Poly Technik Ltd. during the study period from 2007-2008 to 2016-2017 had ranged from 12.01% to 32.35% registering an average of 22.56%, which is high, with a standard deviation and co-efficient of variation of 7.10 and 0.31 respectively. The return on capital employed of Finolex Industries Ltd. during the study period ranged from 1.83% to 36.29% registering an average of 15.31%, which is also quite high with a standard deviation and co-efficient of variation of 10.02 and 0.65 respectively. Hence it can be concluded that Finolex Industries Ltd. had registered a relatively lower overall profitability accompanied by a higher variability than Astral Poly Technik Ltd. as its co-efficient of variation was higher.

5.4 Association of Liquidity and Profitability - Simple Rank Correlation Analysis

Table 4 reveals the relationship between liquidity (measured by CATA) and profitability (measured by ROCE) of Astral Poly Technik Ltd. and Finolex Industries Ltd. during the study period. By using Spearman's rank correlation coefficient⁷, the relationship has been measured between CATA (liquidity) and ROCE (profitability) by applying the formula:

$$r_{\text{Rank}} = 1 - (6\sum d_i^2 / n(n^2 - 1))$$

Where,

d= difference in rank

n= number of pairs of observation

Table - 4 shows the rank correlation coefficient obtained for Astral Poly Technik Ltd. as $r_{\text{Rank}} = 0.64$ which indicates that the company's liquidity and profitability are positively correlated, while the same in case of Finolex Industries Ltd stood as $r_{\text{Rank}} = -0.38$ which indicates that the company's liquidity and profitability are negatively correlated.

Table 4. Liquidity and Profitability Relationship - Rank Correlation Analysis

Year	Company Name	CATA (%)	Rank on CATA (x_1)	ROCE (%)	Rank on ROCE (x_2)	d= ($x_1 - x_2$)	d ² = ($x_1 - x_2$) ²	r value
2007-2008	Astral Poly Technik Ltd.	43.90	8	19.98	6	2	4	
	Finolex Industries Ltd.	41.64	3	10.40	7	-4	16	
2008-2009	Astral Poly Technik Ltd.	56.92	6	12.01	10	-4	16	
	Finolex Industries Ltd.	38.52	6	1.83	10	-4	16	
2009-2010	Astral Poly Technik Ltd.	64.21	3	23.92	5	-2	4	
	Finolex Industries Ltd.	41.48	4	14.41	5	-1	1	

Table 4 Continued

2010-2011	Astral Poly Technik Ltd.	65.88	1	26.04	4	-3	9	
	Finolex Industries Ltd.	43.83	1	12.89	6	-5	25	
2011-2012	Astral Poly Technik Ltd.	64.52	2	29.18	3	-1	1	
	Finolex Industries Ltd.	34.60	9	10.25	8	1	1	
2012-2013	Astral Poly Technik Ltd.	59.66	4	31.60	2	2	4	
	Finolex Industries Ltd.	36.73	8	16.87	4	4	16	
2013-2014	Astral Poly Technik Ltd.	57.48	5	32.35	1	4	16	
	Finolex Industries Ltd.	39.34	5	21.32	3	2	4	
2014-2015	Astral Poly Technik Ltd.	45.14	7	16.58	8	-1	1	
	Finolex Industries Ltd.	43.10	2	10.23	9	-7	49	
2015-2016	Astral Poly Technik Ltd.	41.84	10	15.83	9	1	1	
	Finolex Industries Ltd..	37.11	7	36.29	1	6	36	
2016-2017	Astral Poly Technik Ltd.	42.14	9	18.10	7	2	4	
	Finolex Industries Ltd.	28.91	10	22.31	2	8	64	
	Astral Poly Technik Ltd.						$\sum d^2 = 60$	0.64
	Finolex Industries Ltd.						$\sum d^2 = 228$	-0.38

Source: Compiled and Computed from annual reports

6. Key Findings

The liquidity position of the select companies - Astral Poly Technik Ltd. and Finolex Industries Ltd. was found to be just satisfactory since the average current ratio was 1.77:1 and 1.92:1; average quick ratio was 1.02:1 and 0.99:1; and the current assets to total assets ratio was 0.54 and 0.39 times respectively.

The overall profitability position of the Astral Poly Technik Ltd. and Finolex Industries Ltd. was found to be satisfactory as indicated by the average return on capital employed ratio at as high as 22.56% and 15.31% respectively.

The Motaal's test of liquidity of Astral Poly Technik Ltd. indicates that the year 2016-17 was the year of the most favourable liquidity position whereas, in case of Finolex Industries Ltd. the test indicates that the year 2008-09 was the year of the most favourable liquidity position.

The association between liquidity and profitability analysed by the Spearman's rank correlation coefficient indicates that there exists a positive correlation in case of Astral Poly Technik Ltd. ($r = 0.64$), while a negative correlation in case of Finolex Industries Ltd. ($r = -0.38$).

7. Conclusion

PVC pipes industry experiencing an ascending demand for its products from all segments is not without the stiff competition among its firms. Consistent success of these firms therefore calls for financial soundness in managing them. Hence, the study was carried out to analyze and compare the liquidity and profitability position of the two leading firms in the industry - Astral Poly Technik Ltd. and Finolex Industries Ltd. The liquidity and profitability position of the select companies was found to be quite satisfactory. The association between liquidity and

profitability was also probed with the help of Spearman's rank correlation coefficient and the results indicated that there existed a positive correlation between liquidity and profitability in case of Astral Poly Technik Ltd., while a negative correlation in case of Finolex Industries Ltd. Further, the analysis has exposed that liquidity and profitability positions of Astral Poly Technik Ltd was better than Finolex Industries Ltd.

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