

# Impact of Working Capital Ratios on Profitability of the Selected Paper Companies in India

Mrs.J.Nimala<sup>1</sup>, Dr. B. Kanagaraj<sup>2</sup>

<sup>1</sup>Assistant Professor, Hindustan Arts and Science College, Coimbatore

<sup>2</sup>Assistant Professor, Chikanna Government Arts College, Tirupur

---

**Abstract:** Paper is one of the essential industries and is associated to the necessary of people requirements. In this digital era, the documentation is also plays a vital role in determining the role of paper. Industrial expansion shows a higher growth rate among the manufacturing industries, machinery and equipment, motor vehicles and etc., but paper and pulp industry has low growth rate. Objectives of the study, to examine the working capital of the selected companies in paper industry in India. Methodology of the study, the study is mainly based on secondary data. **Selected Paper Companies:** 1. West Coast Paper Mills Limited (WCPML), 2. International Paper APPML Ltd (IPAPPML), 3. JK Paper Ltd (JKPL), 4. Tamilnadu Newsprint & Papers Limited (TNPL), 5. Star Paper Mills Ltd (STARPML), 6. Shesayee Paper & Boards (SPB), 7. Umami Paper Mills Ltd (EPML), 8. Shree Rama Newsprint Ltd. (SRNL), 9. Star Paper Mills Ltd (STAR PML), 10. Ballarpur Industries Ltd (BILT) and 11. Pudumjee Pulp & Paper Mills Ltd. (PPPM). **Period for the Study,** The period from 2006-07 to 2015-16 is chosen for this study of selected companies of Indian Paper industry. **Statistical Tools Used:** The following statistical tools used like a) Trend analysis and b) Multiple regression analysis. Findings of the study, the contributions of variations  $R^2$  are highest in Tamilnadu Newsprint & Papers Limited (TNPL) 0.945, followed by Ballarpur Paper Ltd (BILT) 0.918. For a unit increase in the positive working capital ratios increase the profitability of Tamilnadu Newsprint & Papers Limited (TNPL) at 94.5 percent and Ballarpur Paper Ltd (BILT) at 91.8 percent. Suggested this study, to regularize and optimize the use of cash balance, proper techniques may be adopted for planning and control of cash. The investments in inventories should be reduced and need to introduce a system of prompt collection of debts.

**Keywords:** working capital, profitability, multiple regression, trend, current ratio etc.,

---

## 1. INTRODUCTION

Paper is one of the essential industries and is associated to the necessary of people requirements. In this digital era, the documentation is also plays a vital role in determining the role of paper .It is the most for education and literacy and its use is an index of advancement in these two fields as well as the overall well being of the society. This is the most important of all the manufacturing industries. Some people treat it as a chemical industry due to its manufacturing process and because of certain chemicals used for its manufacturing. But it is include it in the group of agro-based industries because of the agricultural products and residuals are used as raw materials. Paper manufacturing has been carried on in India since tenth century as a small cottage1.

After industrialization large manufacturers emerged in paper industry. Several attributes of paper, including its pedagogic and packaging value makes Pulp and Paper industry uniquely positioned among the manufacturing industries. Paper, is thus, recognized almost as a touchstone of socio-economic development. It is also one of the 35 high priority industries of Government of India (DIPP-Annual Report 2010-11). The sector has witnessed a mammoth change in the structure during the last three decades especially after liberalization. It produced 1.19 percent of total output produced by all organized industrial manufacturing industries in 2009-10. The export of paper industry to the total manufacturing exports is work out to 0.35percent in 2010 while the import bill of paper and paperboard to the total imports is about 0.52percent. Analysing the globalisation of the sector suggests that the inward looking policy framework vigorously advanced by Government in the past has reduced the import dependency and improve the self-sufficiency.

However, the necessary fillip and encouragement provided since 1992 and more so since the onset of liberalization have remarkably transformed the structure leading to the sector becoming more globalised. The liberalization of the sector has also attracted few financial agencies to advance the long-term soft loans enabling the sector to curb the prolonged financial crisis to some extent. The aggregate demand of paper is akin to that of trends observed in production. Owing to strong domestic consumer base the share of India's paper consumption to the world's total has been rising. The consumption shares of paper plus paperboard, and wrapping plus packaging paper have been rapidly rising due to simultaneous growth in packaging industry<sup>2</sup>.

According to a news report published in Paper Mart, the paper industry was likely to see a turnaround in the first quarter of 2014, following estimates of increasing profitability on capital expenditure made over the last several years and incremental demand to absorb surplus output. In five years, the paper sector has invested Rs 20,000 crore towards capacity enhancement, technology up gradation and acquisitions. As a result, it has added manufacturing capacity of a CAGR of 11percent. The sector has added 1 million tonnes of capacity in 2013. Weaker rupee, which prevailed in 2013, has helped, as a tariff barrier against imports. However, the sector has been impacted in the case of wood imports<sup>3</sup>. A study by Emkay Global Financial Services said the balance-sheet leverage continued to remain elevated as a result of increase in Capex over the last decade. The Indian paper industry accounts for 3.25percent of the world production of paper and paperboard. The estimated turnover of the industry is approximately Rs 538 billion. According to a Crisil report, the total global consumption of paper and paperboard is 400 million tonnes, out of which 13 million tonnes (or 3.25 percent of the total) is from India. Of this 13 million tonnes, the share of writing and printing paper is 4.1 million tonnes, paperboard 5.9, specialty paper 0.6 and the share of newsprint is 2.5 million tonnes<sup>4</sup>. The pulp and paper industry is expected to grow at the average rate of 7.8percent per annum to achieve the target production of 22 million tonnes in 2025. To meet this target, industry needs raw material resources, infrastructure and capital.<sup>5</sup>

## **2. STATEMENT OF THE PROBLEM**

Industrial expansion shows a higher growth rate among the manufacturing industries, machinery and equipments, motor vehicles and etc, but paper and pulp industry has low growth rate. Paper Industry is a large capital intensive and yields poor return on investment, due to various challenges and issues such as high cost of raw materials , heavy investment , low scale of operation, low capacity utilization , outdated technology , low profitability , lack of research and development, environmental issues related to pollution and lack of skilled manpower etc. All these factors, in turn affect the profitability and liquidity of industries. Thus it is worthwhile to conduct a study of profitability and working capital of selected paper industry in India. The study is meant to analyze the economic cost of the industry for a period of ten years and for understanding profitability presentation of Paper Industry in India. The following issues were probed by the researcher to take up this study.

## **3. OBJECTIVE OF THE STUDY**

1. To examine the working capital of the selected companies in paper industry in India.
2. To give suitable suggestions to improve the working capital of the selected companies in paper industry in India

## **4. HYPOTHESIS OF THE STUDY**

There is no significant difference between the actual working capital and trend values of working capital among different years in the selected companies of paper industry in India.

## 5. RESEARCH METHODOLOGY

The study is mainly based on secondary data. The major source of data analyzed and interpreted in this study related to all those companies selected is collected from "PROWESS" database, which is the most reliable on the empowered corporate database of Centre for Monitoring Indian Economy (CMIE). The database provides financial statements, ratio analysis, funds flow, cash flow, product profiles, returns and risk on the stock market and so on. Besides prowess database, relevant secondary data have also been collected from BSE Stock Exchange Official Directory, CMIE Publications, Annual Survey of Industry and Business newspapers, Reports on Currency and Finance and through Internet and so on. The paper companies have been selected through purposive sampling method, among the companies listed in stock exchange. The following criteria were used for the study to select samples. The sample set includes,

- i. Those companies which are listed and aggressively functioned in BSE under the category of the paper industry
- ii. Those companies which are continuously functioning till the end of the study period.

**Selected Paper Companies:** 1. West Coast Paper Mills Limited (WCPML), 2. International Paper APPML Ltd (IPAPPML), 3. JK Paper Ltd (JKPL), 4. Tamilnadu Newsprint & Papers Limited (TNPL), 5. Star Paper Mills Ltd (STARPML), 6. Shesayee Paper & Boards (SPB), 7. Emami Paper Mills Ltd (EPML), 8. Shree Rama Newsprint Ltd. (SRNL), 9. Star Paper Mills Ltd (STAR PML), 10. Ballarpur Industries Ltd (BILT) and 11. Pudumjee Pulp & Paper Mills Ltd. (PPPM). **Period for the Study,** The period from 2006-07 to 2015-16 is chosen for this study of selected companies of Indian Paper industry. This period of ten years is favoured in direction to have an independently drawn out, at usual intervals of proportionate period, for which completely identical, constant and current financial data would be presented. **Statistical Tools Used:** The following statistical tools used like a) Trend analysis and b) Multiple regression analysis.

## 6. ANALYSIS AND INTERPRETRATION

**Table 1 - Estimates of trend co-efficient for working capital  
(2006-07 to 2015-16)**

Name of the companies	Working capital	
	Calculated F-value	p-value
West Coast Paper Mills (WCPM)	18.27	0.003**
International Paper APPM Ltd (IPAPPML)	0.70	0.428
JK Paper Ltd (JKPL)	4.19	0.075
Tamilnadu Newsprint & Papers Limited (TNPL)	0.15	0.707
Star Paper Mills Ltd (STARPML)	41.07	0.000**
Seshasayee Paper and Board Limited (SPB)	4.23	0.074
Emami Paper Mills Limited (EPML)	13.63	0.006**
Sirpur Paper Mills Limited (SPML)	8.59	0.019*
Shree Rama Newsprint Ltd. (SRNL)	0.08	0.785
Ballarpur Industries Limited (BILT)	2.44	0.157
Pudumjee Pulp & Paper Mills Ltd(PPPM)	1.31	0.286

**Source:** Secondary data - \*\*  $P < 0.01$  \*  $P < 0.05$

It is clear from the Table 1 that there is difference between actual working capital and trend value of working capital is significant in selected paper companies except International Paper APPM Ltd (IPAPPML), Tamil Nadu Newsprint and Papers Limited (TNPL), Shree Rama Newsprint Ltd. (SRNL), Ballarpur Industries Limited (BILT) and Pudumjee Pulp & Paper Mills Ltd (PPPM). As the P value less than 0.05, the null hypothesis is rejected at 5 and 1 percent level of significance, while the alternate hypothesis is accepted.

### IMPACT OF WORKING CAPITAL RATIOS ON PROFITABILITY – MULTIPLE REGRESSION ANALYSIS:

The impact of working capital on profitability has been examined by computing coefficients of correlation and regression between profitability ratio and working capital ratios to know the association of profitability with working capital.

**Table .2 ---: Estimated Regression Results of Impact of Working Capital Ratios on Profitability (From 2006-07 to 2015-2016)**

$$(RNW=b_0 + b_1CR+ b_2LR+ b_3WTR+ b_4ITR+ b_5CAWCR)$$

Name of the companies	R <sup>2</sup>	Calculated f-value	P-value
West Coast Paper Mills (WCPM)	0.669	16.133	0.004**
International Paper APPM Ltd (IPAPPML)	0.527	5.953	0.041**
JK Paper Ltd (JKPL)	0.647	14.635	0.005**
Tamilnadu Newsprint & Papers Limited (TNPL)	0.945	154.904	0.000**
Star Paper Mills Ltd (STARPML)	0.625	11.657	0.011**
Seshasayee Paper and Board Limited (SPB)	0.774	30.778	0.000**
Emami Paper Mills Limited (EPML)	0.601	12.021	0.008**
Sirpur Paper Mills Limited (SPML)	0.489	7.641	0.025**
Shree Rama Newsprint Ltd. (SRNL)	0.830	17.075	0.002**
Ballarpur Paper Ltd (BILT)	0.918	39.048	0.000**
Pudumjee Pulp & Paper Mills Ltd.(PPPM)	0.540	9.402	0.015**

**Source: Computed from the Annual Reports of the respective units**

The contributions of variations R<sup>2</sup> are highest in Tamilnadu Newsprint & Papers Limited (TNPL) 0.945, followed by Ballarpur Paper Ltd (BILT) 0.918. For a unit increase in the positive working capital ratios increase the profitability of Tamilnadu Newsprint & Papers Limited (TNPL) at 94.5 percent and Ballarpur Paper Ltd (BILT) at 91.8 percent. The Overall ANOVA results, of the above table which assesses the impact of working capital ratios *viz.*, current ratio, liquid ratio, working capital turnover ratio, inventory turnover ratio, and Current Assets to Working Capital (CAWCR) from 2006-07 to 2015-16 on Profitability are significant at 5 percent and 1 percent

## 7. SUGGESTIONS OF THE STUDY

- To regularize and optimize the use of cash balance, proper techniques may be adopted for planning and control of cash. The investments in inventories should be reduced and need to introduce a system of prompt collection of debts.
- The policy of borrowed financing in selected paper companies under study was not proper. So the companies should use widely the borrowed funds and should try to reduce the fixed charges burden gradually by decreasing borrowed funds and by enhancing the owner's fund. For this purpose, companies should enlarge their equity share capital by issuing new equity shares. It should be done keeping in mind the principle of trading on equity.
- Selected paper companies should try to use properly their operating assets and should try to minimize their non-operating expenses. Cost accounting and cost audit should be made mandatory for these units and cost sheet along with annual financing statement should be prepared.

- There has been too much of government interference in the policies and the day-to-day working and decisions. This leads to delays in decision making. This should be abolished.

## 8. CONCLUSION

It is observed that the profitability of the selected paper companies have been increasing marginally, whereas the working capital management is not satisfactory in some of the companies which mean that the major variable which affects the working capital should be controlled to achieve the optimum utilisation in their day to-day, paper industry. To achieve the working capital efficiency it is vital to have better inventory control which is the major influence factor in determining the working capital efficiency. The paper companies should ensure balanced liquidity and profitability level by improving their viability in the challenging environmental scenario.

## REFERENCES

1. <http://www.yourarticlelibrary.com/>
2. Sandeep Kumar Kujur\* "Globalisation, Energy efficiency and Material Consumption in a Resource based Industry: A Case of India's Pulp and Paper Industry 1980-81 to 2009-10" <http://pupdepartments.ac.in>
3. <https://www.pulpandpaper-technology.com>
4. <http://www.printweek.in> , "The Indian paper industry: All ready to rise on a global stage", By Dibyajyoti Sarma, 12 September 2014.
5. [http://ipma.co.in/wp-content/uploads/2015/09/wg\\_paper.pdf](http://ipma.co.in/wp-content/uploads/2015/09/wg_paper.pdf)