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Analysis of Working Capital of Indian Paper Industry

Dr. D. Yuvaraaj[1], Dr. G.T. Sasetharan[2], Mr. R. Manikandan[3]

[1]Head, and Associate Professor, Department of Corporate Secretaryship,
Nandha Arts and Science College (Autonomous), Erode-638052,
Tamil Nadu, India.
[2]Assistant Professor, Department of Management Studies,
[2]VET Institute of Arts and Science (Co-education) College Thindal,
Erode – 638012, Tamil Nadu, India.
[3]Research Scholar, Department of Corporate Secretaryship, Kongu Arts
& Science College (Autonomous), Nanjanapuram, Erode- 638107.
[1]yuvakiruthik73@gmail.com, [2]gtsasetharan@gmail.com, [3]rmanigandan40@gmail.com

ABSTRACT

Paper is one of the key industries that are linked to the basic human needs. Paper is imperative for education and literacy which is used as an index of advancement in these two fields as well as the holistic wellness of the society. From tenth century onwards paper production has been endured in India as a craft industry by the traditional craftsmen called kagzis. The inception of modern paper industry was established in 1816 at Chennai. Second paper mill was started at Serampore on the bank of Hugli in West Bengal in the year of 1832. The first successful paper mill was established in at Ballyganj near Kolkata in the year of 1870 with the name of the Royal Bengal Paper. India is recognized as flourishing market for paper around the world presenting an fascinating situation: the consumption of paper is set to experience a significant fostering economic development. The visionary perspective suggests that the increase in paper consumption will occur at exceeding GDP growth will leads to increase consumption of 1 trillion tonnes.

Keywords: Keyword 1: Working Capital, Keyword 2: Indian Paper Industry & Keyword 3: Trend Analysis

1. INTRODUCTION

Paper is one among the key industries that are linked to the basic human needs. Paper is imperative for education and literacy which is used as an index of advancement in these two fields as well as the holistic wellness of the society. From tenth century onwards paper production has been endured in India as a craft industry by the traditional craftsmen called kagzis. The inception of modern paper industry was established in 1816 at Chennai. Second paper mill was started at Serampore on the bank of Hugli in West Bengal in the year of 1832. The first successful paper mill was established in at Ballyganj near Kolkata in the year of 1870 with the name of the Royal Bengal Paper. India is recognized as flourishing market for paper around the world presenting an fascinating situation: the consumption of paper is set to experience a significant fostering economic development. The visionary perspective suggests that the increase in paper consumption will occur at exceeding GDP growth will leads to increase consumption of 1 trillion tonnes.

1.1. STATEMENT OF THE PROBLEM

The strength of the companies to assess their financial soundness is important for magnifying its competitive edge. By disseminating a full analyze of its financial results, the organization can spot potential advantage enhance the performance at unit/department/organization level. From this perspective, the researcher have strived to evaluate the "Financial Performance Analysis of Selected Paper Industry in India" to grasp the crucial position that financial management plays in cultivating advancement.

1. How to compute the working capital of Indian paper industry?
2. How to manage funds of Indian paper industry?

1.2. OBJECTIVES OF THE STUDY

1. To assess the working capital requirements which determine the return on total assets of Indian paper industry.
2. To analyze the growth and trend of working capital of the Indian paper industry.

2. REVIEW OF LITERATURE

1. Ahmed Mahdi Abdulkareem et al. (2025) while analyzing the working capital management practices of four paper industries such as JK Papers, Seshasayee Paper, South India Paper and Andhra Paper engrossing about financial strength between 2017–2018 to 2021–2022. The study has been carried out by using analytical tools like descriptive statistics, frequency distribution and analysis of variance (ANOVA) by evaluating the data with the help of annual reports. Important financial metrics like current ratio, quick ratio, inventory turnover ratio, and debtor turnover ratio, have been used for assessing performance optimization. There found substantial imbalances in adapting fund management among the companies such as Seshasayee Paper mill maintains standardized quick ratio while South India Paper has sound current and quick ratios, but JK Paper is facing hurdles such as negative working capital cycle and lower liquidity ratios.

2. Balasundram Nimalathasan (2017) in his study "Working Capital Management and Its Impact on Profitability: A Study of Selected Listed Manufacturing Companies in Sri Lanka" tries to spot out affinity among Working Capital Administration and Profitability. Ratio Analysis, Correlation and Regression Analysis have applied to recognize the Profitability. On concluding that the managers can escalate the profitability of company by way of reducing inventory period and quantum of accounts receivable.

3. RESEARCH METHODOLOGY

A research method constitutes a sequenced approach to carry out research activity. Socialist use a range of both qualitative as well as quantitative aspects like surveys, observations, experiments, questionnaires, detail analysis etc. The researcher carried out his study from the period of 2015-2016 to 2024-2025.He used Trend analysis for the research.

4. DATA ANALYSIS AND INTERPRETATION

TREND ANALYSIS

Trend analysis involves the pervasive information gathering to recognize a pattern. Although it is commonly used to anticipate future occurrences, trend analysis can also be utilized to judge questionable historic occurrences, such as the expected count of ancient kings who ruled between couple of dates, based on information like the average duration of reigns of other known kings. In the domain of statistics, trend analysis refers to methods for uncovering an intrinsic pattern within a time series that might otherwise be blurred. If it is assumed that the trend is linear, trend analysis can be performed within the framework of formal regression analysis, as outlined in Trend estimation.

TABLE: 4.1

WORKING CAPITAL ANALYSIS OF INDIAN PAPER INDUSTRY

(2015-16 TO 2024-25) (Rs. In Crores)

Year	Ballarpur Industries Ltd	SPP Ltd	JK PapersLtd	Shreyans Industries Ltd	West Coast Paper Mills Ltd	Rainbow Papers Ltd	Emami Papers Ltd	Pudumjee Pulp And Papers Ltd	Shree Rama News Print Ltd	Star Paper Mills Ltd
2015-16	1007.73	52.16	229.08	18.85	102.96	12.7	82.57	73.22	62.65	30.16
2016-17	896.53	75.01	207.63	18.39	169.1	17.38	163.03	66.44	83.69	12.05
2017-18	1110.22	69.04	237.06	29.71	263.48	13.98	132.6	88.17	103.72	10.12
2018-19	1004.19	94.28	267.77	30.83	408.54	34.44	209.99	67.32	72.95	18.4
2019-20	403.17	121.24	215.92	23.97	303.3	145.73	198.39	88.09	51.6	0.73
2020-21	456.02	274.48	309.3	17.52	358.3	151.51	156.58	52.17	4.63	20.15
2021-22	434.47	145.85	355.1	23.36	358.67	184.97	180.56	51.1	-8.08	-7.19
2022-23	403.15	143.44	269.63	9.82	355.4	237.35	215.15	34.7	-16.89	-33.78
2023-24	490.35	164.58	420.97	22.75	414.73	207.16	274.14	49.57	-7.26	-44.87
2024-55	513.	172.3	440.7	23.82	434.22	216.90	287.02	51.90	-7.60	-46.98

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Mean	671.9	131.2	295.3	21.9	316.9	122.2	190	62.27	33.9	-4.12
S.D	292.7	65.3	84.3	6.13	109.2	92.6	61.8	17.5	45.5	28.18
CV	43.57	49.79	28.53	27.99	34.46	75.78	32.52	28.1	134.06	-683.75
Range	707.1	222.3	233.1	21.01	331.3	224.7	204.5	53.47	120.6	77.14
CAGR	-0.0722	0.1420	0.0754	0.0263	0.1734	0.3707	0.1485	-0.0375	-1.7911	-2.0505

As per Table 4.1, the highest mean value was found in Ballarpur Industries Ltd (i.e., 671.9) proceed by West Coast paper Ltd (i.e., 316.9). The sales figure for all the selected paper companies indicated that they low when compared to the mean ratios in the most of the years. Thus, it could be concluded that the working capital situation was disappointing in almost all companies.
The working capital range computed for Ballarpur Industries Ltd was 707.1, which was the highest among the paper companies selected for the study in India. Rainbow Papers Ltd exhibited the highest compound growth rate (0.3707) followed by West Cost paper Ltd (0.1734),Emami paper Ltd (0.1485), SPP Ltd (0.1420), JK (0.0754),Shreyans Industries Ltd (0.0263) and all others manifest negative growth rate.

The co-efficient of variation reflects that the working capital of Shreyans Industries Ltd. (27.99) reveals higher consistency among all and it was followed by Pudumjee Pulp And Papers Ltd (28.1), JK Papers Ltd (28.53), Emami Papers Ltd (32.52) and West Coast Papers Ltd (34.46).

TABLE: 4.2
ESTIMATES OF TREND CO-EFFICIENT FOR WORKING CAPITAL
(2015-16 TO 2024-25)

Sl.No.	**Companies**	**$P = \alpha + \beta_t + e$**				**p-value**	**S/NS**
		A	**B_t**	**R^2**	**F-value**		
1	Ballarpur Industries Ltd	Y_t = 1088.05	- 75.6599*t	61.2%	12.64	0.007	**NS**
2	SPP Ltd	Y_t = 51.6273	+ 14.4750*t	45.0%	6.54	0.034	**S**
3	JK Papers Ltd	Y_t = 164.765	+ 23.7377*t	72.7%	21.35	0.002	**S**

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4	Shreyans Industries Ltd	Y_t = 23.6707	- 0.321576*t	42.5%	0.21	0.661	**NS**
5	West Coast Paper Mills Ltd	Y_t = 148.012	+ 30.7015*t	72.5%	21.04	0.002	**S**
6	Rainbow Papers Ltd	Y_t = -35.804	+ 28.7302*t	88.2%	59.92	0.000	**S**
7	Emami Papers Ltd	Y_t = 93.3207	+ 17.5786*t	74.2%	22.99	0.001	**S**
8	Pudumjee Pulp And Papers Ltd	Y_t = 84.3313	- 4.01152*t	48.2%	7.44	0.026	**NS**
9	Shree Rama News Print Ltd	Y_t = 106.008	- 13.1031*t	76.0%	25.35	0.001	**S**
10	Star Paper Mills Ltd	Y_t = 41.5307	- 8.30030*t	79.5%	31.10	0.001	**NS**

** P<0.01 *P<0.05 S-significant N S-Not Significant

As per Table 4.2,it is evident that, the p-value is below 0.01 and 0.05, leading to rejection of the null hypothesis, which means "There is no significant difference between actual value and the trend value of total assets across various years for the selected companies" at both 1 percent and 5 percent level of significance. Therefore, a significant difference exists between actual value vs trend value of working capital across many years for the selected companies excluding Ballarpur Industries Ltd, Shreyans Industries Ltd, Pudumjee Pulp and Papers Ltd and Star Paper Mills Ltd.

TABLE: 4.3

PROJECTIONS FOR WORKING CAPITAL

(2025-26 TO 2029-30) (Rs in Crores)

Year	**Ballarpur Industries Ltd**	**SPP Ltd**	**JK Papers Ltd**	**Shreyans Industries Ltd**	**West Coast Paper Mills Ltd**	**Rainbow Papers Ltd**	**Emami Papers Ltd**
2025-26	255.793	210.853	425.879	20.1333	485.728	280.228	286.685
2026-27	180.133	225.328	449.617	19.8118	516.429	308.958	304.264
2027-28	104.473	239.803	473.355	19.4902	547.131	337.688	321.843
2028-29	28.814	254.278	497.092	19.1686	577.832	366.419	339.421
2029-30	-46.846	268.753	520.830	18.8470	608.534	395.149	357.000

Source: Computed

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TABLE: 4.3 (A)
PROJECTIONS FOR WORKING CAPITAL OF SELECTED PAPER INDUSTRIES (2025-26 TO 2029-30) (Rs in Crores)

Year	Pudumjee Pulp And Papers Ltd	Shree Rama News Print Ltd	Star Paper Mills Ltd
2025-26	40.2047	-38.1260	-49.7727
2026-27	36.1932	-51.2291	-58.0730
2027-28	32.1816	-64.3322	-66.3733
2028-29	28.1701	-77.4353	-74.6736
2029-30	24.1586	-90.5384	-82.9739

Source: Computed

As per Table 4.3& 4.3A, SPP Ltd is having positive working capital, followed by JK Papers Ltd, West Coast Paper Mills Ltd, Rainbow Papers Ltd and Emami Papers Ltd. Conversely, the trend analysis for the same period indicates negative working capital for Ballarpur Industries Ltd, Shreyans Industries Ltd, Pudumjee Pulp And Papers Ltd, Shree Rama News Print Ltd., and Star Paper Mills Ltd**.** Notable the Star paper Ltd is projected to have the lowest working capital, with the trend value of -66.3733.

5. SUMMARY OF FINDING

The highest mean value was found in Ballarpur Industries Ltd (i.e., 671.9) proceed by West Coast paper Ltd (i.e., 316.9). The sales figure for all the selected paper companies indicated that they low when compared to the mean ratios in the most of the years. Thus, it could be concluded that the working capital situation was disappointing in almost all companies

Therefore, a significant difference exists between actual value vs trend value of working capital across many years for the selected companies excluding Ballarpur Industries Ltd, Shreyans Industries Ltd, Pudumjee Pulp and Papers Ltd and Star Paper Mills Ltd.

The trend analysis for the same period indicates negative working capital for Ballarpur Industries Ltd, Shreyans Industries Ltd, Pudumjee Pulp And Papers Ltd, Shree Rama News Print Ltd., and Star Paper Mills Ltd**.** Notable the Star paper Ltd is projected to have the lowest working capital, with the trend value of -66.3733.

6. SUGGESTIONS

Based on this research, the researcher has highlighted few recommendations for the enhancement of the Indian paper industry:

1. The handpicked Paper companies ought to align their working with the sales trends. In instances where there is a shortfall in working capital, effort should be taken to increase the amount of working capital. Reversely when there is an excess of working capital, it should be allocated either to trade securities or used for the repayment of debts.
2. The management ought to endeavor to implement cash cycle management to achieve improved working capital management.

7. CONCLUSION

The paper industry has been experiencing challenging times and lot of difficulties. There have been numerous instances of hardship, during which growth metrics have decreased, leading to the impression that misfortune may prevail. There is a pressing need for technological advancements, structural reforms, deregulations from controls and enhanced productivity of both labor and machinery and dependable quality assurance systems to address contemporary demands. The Indian paper industry is poised to seize this opportunity for hassle less trade and to place the position in international market by way of progressive and prompt financial management.

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