Working Capital Structure And Liquidity Analysis : An Empirical Research On Gujarat Textiles Manufacturing Industry

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INTRODUCTION

Working Capital may be regarded as the blood circulatory system of any business unit. Its effective management can do much more for the success of the business, while ineffective management will undoubtedly lead to ensured failure of the business (Howard, 1971). Effectiveness of working capital and liquidity management has got a direct bearing on shareholder's wealth maximization. It is in this context that management of working capital assumes paramount importance. In the present scenario of cut-throat competition, businesses do not have any other option except cutting costs of production in order to survive and continue to be financially healthy. As Mr. Jagdish Khattar, Managing Director, Maruti Udyog Ltd., reiterates that if the business wants to develop the bottom line and fight competition, there is no other way than cutting cost. He also said that the market movement was unpredictable, but cost cutting was in the hands of the business itself. It is in this connection, effective management of working capital forms an absolute part of cost reduction. Many organizations suffer losses due to ineffective management of working capital. As pointed out by Kennedy and McMullen (Kennedy et al., 1958), the inadequacy or ineffective management of working capital is the leading cause of business failure.

Working capital is defined as the amount of funds required to run day to day business operations of the firm. It is that portion of the total funds of the business which is embarked for meeting routine obligations like payment of wages, raw materials, etc. The word 'Working Capital', however, may be understood in different ways by different people to suit their convenience. The research conduct by Khandelwal (1985) revealed that a significant percentage of respondents included only inventories in the definition of working capital, whereas the rest of the respondents included all current assets.

LITERATURE REVIEW

Despite innumerable number of studies on working capital management, the researchers screened and reviewed the most noticeable studies. The reviews have been arranged in chronological order.

The first and foremost formal study conducted and compiled on Working Capital Management in India was by National Council of Applied Economics Research (NCAER, 1966). The council published a report on *"Structure of Working Capital"*, which was limited to the analysis of the composition of working capital, with special reference to fertilizers, cement and sugar industries. The study revealed that working capital management practices were highly unplanned and hence, expressed the dire need for suitable and appropriate working capital management policies in the growth and success of the business.

A study conducted by Vijayasaradhi and Rao (1978) on Indian Public Enterprises revealed that the management of working capital played a key role in the success of the business. The study indicated that increasing trends in the investment of current assets resulted in higher carrying cost which, in turn, negatively affected the profitability position of the company.

Khandelwal (1985) carried out a half-complete empirical research initiated by the late N. M. Agarwal, among 40 small-scale industries in Jodhpur industrial estate. The study attempted to probe into working capital management processes and practices among the selected units between the years 1975-76 and 1979-80. The study revealed that the

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sample firms held more investments in inventories than required and management of receivables was found to be highly disorderly. It was found that bills receivable constituted as much as 50 percent of the total current assets. Highlighting the sickness in Jodhpur Industrial Estate, the study attributed the main reason to inefficient management of working capital. Based on the findings, the study suggested that the entrepreneurs needed to be educated about the basic concepts and efficient ways of working capital management.

Sinha, Sinha and Singh (1985) conducted a study on the analysis of working capital management in Fertilizer Corporation of India and Gujarat State Fertilizer Corporation. The analysis revealed that a huge portion of funds was tied up as working capital, especially in inventories and receivables. The study revealed that the sample companies failed to manage working capital efficiently by the usage of latest techniques and hence, the funds were locked up at various levels during the course of business operations. The study recommended the necessary need for streamlining working capital management practices, failing in which, the firms would get affected.

Swami (1987) in his study on *"Materials Management In Public Sector Undertakings"* took five sector enterprises in the state of Rajasthan. The study revealed that the inventory alone constituted 61 percent of the total current assets during the period (1978 to 1982). The growth of inventories during the period was found to be very high, indicating no control. The study concluded that the materials management in selected companies was not satisfactory, and the study recommended improvement through continuous monitoring and necessary action.

Jain (1988) in the study among ten manufacturing, trading and service industries in the state of Rajasthan brought out various working capital management practices followed by the selected companies. The study found out that the companies had both over-investment and under-investment problems. The study strongly recommended for the release of excess funds in the working capital, and to invest the same in short-term or long-term assets. On the other hand, the study recommended that the companies should avoid under-investment in working capital if they wanted higher profit margins.

Jain (1993) conducted a study among seven paper companies in India to analyze the basic components of working capital. The study revealed that the current ratio in public sector undertakings during the period of study was found to be highly erratic, while the same in private sector undertakings registered continuous decrease. As far as the inventory was concerned, the study revealed that it was highly unplanned in public sector undertaking units as compared to private sector units. The study contributed much in terms of realizing the importance of effective management of working capital.

In the study on *"Working Capital Turnover In Pharmaceutical Companies"*, Das (1994) attempted to ascertain efficient or otherwise use of working capital in selected pharmaceutical firms in India. Having studied the data of ten years, he concluded that the overall working capital turnover ratio was 9.03 times. However, the study also revealed that working capital turnover ratio declined gradually over the period under review.

Reddy and Rao (1996) conducted a study on Hindustan Cable Ltd. for the period from 1989-90 to 1993-94. Having studied current ratio, quick ratio, working capital turnover ratio, etc., they concluded that the liquidity position of the company was unsatisfactory. However, the study revealed that there was a sign of improvement in the management of the inventory and ineffectiveness in the management of the debtors. The study recommended for effective utilization control of current assets.

Studying the management of working capital in Colgate Palmolive (India) Ltd., Sur (1997) attempted to assess the efficiency of working capital management in terms of working capital ratio, quick ratio, ratio of current assets to total assets, ratio of current assets to sales, and composition of working capital. The study revealed that the working capital management was inefficient during the study period. The study recommended that special attention must be paid to the management of inventories, which constituted the highest part of current assets.

A study conducted by Sharma and Chary (1999) in VST Industries Ltd. revealed that working capital management in the sample unit was inefficient. A disproportionate investment in current assets in relation to sales resulted in declining working capital turnover ratio. Having analyzed working capital in terms of current ratio, quick ratio, working capital turnover ratio, etc., the study revealed that the company failed to manage the inventory efficiently which, in turn, resulted in lower profitability.

THE NEED AND OBJECTIVES OF THE STUDY

As stated above, many researchers have depicted that working capital plays an essential role in the economic success of the business. It is at this juncture that the business needs to monitor the management of working capital constantly if

it wants to maximize the profits. Thus, keeping the importance of working capital management in view, the present study aims to analyze:

- ❖ The Working Capital structure of Gujarat Textiles Manufacturing Industry.
- ❖ The Liquidity position of Gujarat Textiles Manufacturing Industry.
- ❖ The Working capital turnover position of Gujarat Textiles Manufacturing Industry.

HYPOTHESES OF THE STUDY

The present study tests the following null hypotheses:

- ❖ **$H0_1$: The average current ratios of sample companies do not differ significantly.**
- ❖ **$H0_2$: The average quick ratios of sample companies do not differ significantly.**
- ❖ **$H0_3$: The average ratios of current assets to total assets of sample companies do not differ significantly.**
- ❖ **$H0_4$: The average ratio of current assets to sales of sample companies do not differ significantly.**
- ❖ **$H0_5$: The average current assets turnover of sample companies do not differ significantly.**
- ❖ **$H0_6$: The average working capital turnover of sample companies do not differ significantly.**

METHODOLOGY OF THE STUDY

The present study was conducted among five commercial textile companies, which constitute Gujarat Textiles Manufacturing Industry. The companies taken for the study purpose are : Arvind Limited (AL), Aarvee Denims and Exports Limited (ADEL), Garden Silk Mills Limited (GSML), PBM Polytex Limited (PBMPL), and Shri Dinesh Mills Limited (SDML). The data of eleven years (from 1999-2000 to 2009-2010) required for the analysis part was collected from the Ministry of Corporate Affairs. The analysis part was carried out with the help of the variables: Current Ratio (Current Assets /Current Liabilities); Quick Ratio (Quick Assets/Current Liabilities) ; Ratio of Current Assets to Total Assets (Current Assets/Total Assets x 100) ; Current Assets Turnover Ratio (Sales/Current Assets) and Working Capital Turnover Ratio (Sales / Working Capital), which measure the efficiency of working capital management. Apart from these ratios, the study also uses statistical tools like averages and one-way ANOVA. MS Excel software was used to derive the results.

ANALYSIS AND DISCUSSION OF RESULTS

The analysis and interpretation part of the study is carried on in sequential order of the parameters mentioned in the methodology of the study. Thus, the discussions in terms of cross sectional comparison are as follows:

❖ **Working Capital Structure:** The working capital structure of Gujarat Textiles Manufacturing Industry is presented in the Table 1. Of all the current assets across Gujarat Textiles Manufacturing Industry, as it can be observed in the Table 1, inventories alone constituted the highest percentage of 46.50, followed by loan and advances (23.29%), trade receivables (20.36%), and cash and bank balances (9.85%). In the case of PBM Polytex Ltd., the average inventories were more than the industry aggregate; whereas, in the case of Arvind Ltd., Aarvee Denims and Exports Ltd., Garden Silk Mills Ltd., and Shri Dinesh Mills Ltd., it was below the industry aggregate. As far as trade receivables were concerned, Arvind Ltd. and Aarvee Denims and Exports Ltd. had more percentage of trade receivables than the industry aggregate. The average composition of loans and advances was more than the industry aggregate in the case of Arvind Ltd. and Garden Silk Mills Ltd., while in the case of Aarvee Denims and Exports Ltd., PBM Polytex Ltd. and Shri Dinesh Mills Ltd., it was below the industry aggregate. Though the constitution of cash and bank balances in case of Shri Dinesh Mills Ltd. had more average cash balances than the industry aggregate, the remaining companies' average cash and bank balances were less than the industry aggregate.

Of all the current liabilities across the industry, the trade payables alone constituted the highest of 62.6% followed by the total provision (19.28%) and the other current liabilities (18.07%). The average composition of trade payables of Arvind Ltd., PBM Polytex Ltd. and Shri Dinesh Mills Ltd. was more than the industry average; while that of Aarvee Denims and Exports Ltd. and Garden Silk Mills Ltd. was below the industry average. Of all the firms in the Industry, Arvind Ltd., Aarvee Denims and Exports Ltd. and Garden Silk Mills Ltd. had more average of other current liabilities than the industry average of other current liabilities. However, Aarvee Denims and Exports Ltd. and Garden Silk Mills Ltd. had more percentage of total provisions than the industry average and Arvind Ltd., PBM Polytex Ltd. and

Table 1: Working Capital Composition of Gujarat Textile Manufacturing Companies

(₹ In millions)

Particulars	AL	ADEL	GSML	PBMPL	SDML	Mean
Current Assets						
Inventory	4208.58	394.92	1244.26	332.72	240.57	1284.21
% of TCA	31.40	45.37	37.60	73.06	45.06	46.50
Trade Receivable	2766.60	318.82	601.70	64.01	65.68	763.37
% of TCA	20.64	36.63	18.18	14.06	12.30	20.36
Loan & Advances	5933.53	97.80	1133.01	46.13	88.40	1459.77
% of TCA	44.26	11.24	34.24	10.13	16.56	23.29
Cash & Bank Balance	495.87	58.85	329.87	12.53	139.25	207.27
% of TCA	3.70	6.76	9.97	2.75	26.08	9.85
Total Current Assets (TCAs)	13404.58	870.38	3308.84	455.38	533.89	3714.61
Current Liabilities						
Trade Payable	2275.26	219.20	491.24	67.40	206.99	652.02
% of TCL	64.18	59.19	47.50	63.12	79.24	62.64
Other Current Liabilities	972.62	72.49	249.10	18.95	4.00	263.43
% of TCL	27.44	19.57	24.08	17.75	1.53	18.07
Total Provisions	297.29	78.67	293.94	20.43	50.22	1481.11
% of TCL	8.39	21.24	28.42	19.13	19.23	19.28
Total Current Liabilities (TCLs)	3545.17	370.36	1034.27	106.78	261.22	1063.56
Net Working Capital	9859.41	500.02	2274.56	348.60	272.67	2651.05

Source: Computed from the Annual reports of all five textiles manufacturing companies from 1999-00 to 2009-10. The figures mentioned are eleven years average ones.

Shri Dinesh Mills Ltd. had lesser percentage when compared to the industry average.

❖ **Current Ratio :** The current ratio of Gujarat Textiles Manufacturing Industry is depicted in the Table 2. The current

Table 2: Current Ratio of Gujarat Textile Manufacturing Industry (In Times)

Year	AL	ADEL	GSML	PBMPL	SDML	Mean
2000	2.56	3.70	5.35	2.34	1.53	3.10
2001	2.74	3.34	5.19	3.14	1.66	3.21
2002	3.31	4.08	4.81	3.33	1.75	3.46
2003	3.70	3.48	3.02	3.89	2.12	3.24
2004	6.09	3.09	2.80	3.97	1.95	3.58
2005	5.90	1.66	3.81	6.31	1.99	3.94
2006	6.72	2.93	4.06	5.80	2.16	4.33
2007	3.58	1.00	4.82	4.52	2.50	3.28
2008	4.22	2.89	4.97	5.22	2.55	3.97
2009	2.67	2.46	3.54	5.98	2.27	3.39
2010	3.36	3.24	2.26	5.55	2.45	3.37
Mean	**4.08**	**2.90**	**4.06**	**4.55**	**2.09**	**3.53**

Source: Computed from the Annual reports of all five textiles manufacturing companies from 1999-00 to 2009-10.

ratio of Gujarat Textiles Manufacturing Industry varied between the highest of 4.33 times in 2006 and the lowest of 3.10 times in 2000, with eleven years average of 3.53 times. The data in the Table 2 reveals that Shri Dinesh Mills Ltd. could not maintain its current ratio above the industry average in any year. The eleven years average current ratio of Arvind Ltd., Garden Silk Mills Ltd. and PBM Polytex Ltd. were much higher than the eleven years industry average of 3.53 times. The mean current ratio of Aarvee Denims and Exports Ltd. and Shri Dinesh Mills Ltd. was much below the industry aggregate. The distribution of industry average current ratio reveals that PBM Polytex Ltd. had the healthiest current ratio followed by Arvind Ltd. and Garden Silk Mills Ltd. throughout the study period. However, the average current ratio of all sample companies was more than the set standard of current ratio i.e. 2, indicating sound liquidity position of Gujarat Textiles Manufacturing Industry. The average current ratio of sample companies were compared using one-way ANOVA and were tested by the following hypothesis ($H0_1$). The results are shown in the Table 3.

Table 3: ANOVA Results For The Average Current Ratios Of Sample Companies

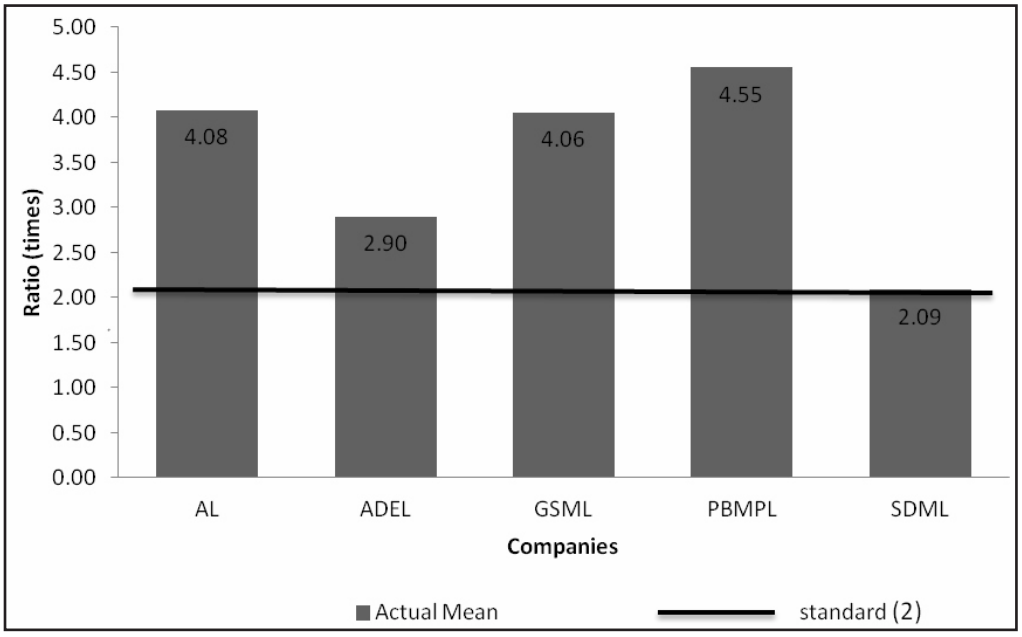
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	45.15444	4	11.28861	9.458283	8.98E-06	2.557179
Within Groups	59.67579	50	1.193516			
Total	**104.8302**	**54**				

Source: ANOVA is performed by using MS Excel Software.

❖ **$H0_1$: The average current ratios of Arvind Ltd., Aarvee Denims and Exports Ltd., Garden Silk Mills Ltd., PBM Polytex Ltd. and Shri Dinesh Mills Ltd. do not differ significantly.**

❖ **Inference:** $F_{cal} > F_{crit}$ .We reject $H0_1$ and conclude that the average current ratios of sample companies differ significantly.

Figure 1: Mean Current Ratios of Sample Companies



The Figure 1 shows that all sample companies maintained standard current ratio i.e. 2 and each company registered above the norm.

❖ **Quick Ratio :** The quick ratio of Gujarat Textiles Manufacturing Industry is depicted in the Table 4. As presented in

Table 4: Quick ratio of Gujarat Textile Manufacturing Industry (In Times)						
Year	**AL**	**ADEL**	**GSML**	**PBMPL**	**SDML**	**Mean**
2000	2.06	2.68	3.94	0.45	0.87	2.00
2001	2.14	2.06	3.48	0.75	0.97	1.88
2002	2.59	2.35	3.37	0.85	0.95	2.02
2003	2.15	1.80	2.12	0.69	1.13	1.58
2004	3.94	1.71	1.69	0.69	0.99	1.80
2005	4.02	0.90	2.70	1.82	1.13	2.11
2006	5.06	1.67	2.64	1.58	1.27	2.44
2007	2.16	0.50	2.97	1.28	1.48	1.68
2008	2.57	1.40	3.21	1.78	1.43	2.08
2009	1.70	1.27	2.16	2.46	1.06	1.73
2010	2.38	1.89	1.15	1.75	1.30	1.69
Mean	**2.80**	**1.66**	**2.68**	**1.28**	**1.14**	**1.91**
Source: Computed from the Annual reports of all five textiles manufacturing companies from 1999-00 to 2009-10.						

the Table 4, the mean quick ratio of Gujarat Textiles Manufacturing Industry varied between the highest of 2.44 times in 2006 and the lowest of 1.58 in 2003, with an average of 1.91 times. The mean quick ratio of Arvind Ltd. (2.80 times) was the best among all five companies. It was more than the industry mean (1.91 times). The average quick ratio of Garden Silk Mills Ltd. (2.68 times) was also more than the industry mean (1.91 times). Shri Dinesh Mills Ltd. could not maintain the quick ratio above the industry yearly average in any year during the study period. The mean quick ratio of Aarvee Denims and Exports Ltd. and PBM Polytex Ltd. was also found to be below the industry average. On an aggregate basis, it is found that it was only Arvind Ltd. and Garden Silk Mills Ltd. which maintained the quick ratio above the industry average during the entire study period. The average quick ratios of sample companies were compared by using one-way ANOVA and was tested by the following hypothesis ($H0_2$). The results are shown in the Table 5.

Table 5: ANOVA Results For The Average Quick Ratio Of Sample Companies						
Source of Variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	26.61289	4	6.653223	12.52517	3.93E-07	2.557179
Within Groups	26.55942	50	0.531188			
Total	**53.17231**	**54**				
Source: ANOVA is performed by using MS Excel Software.						

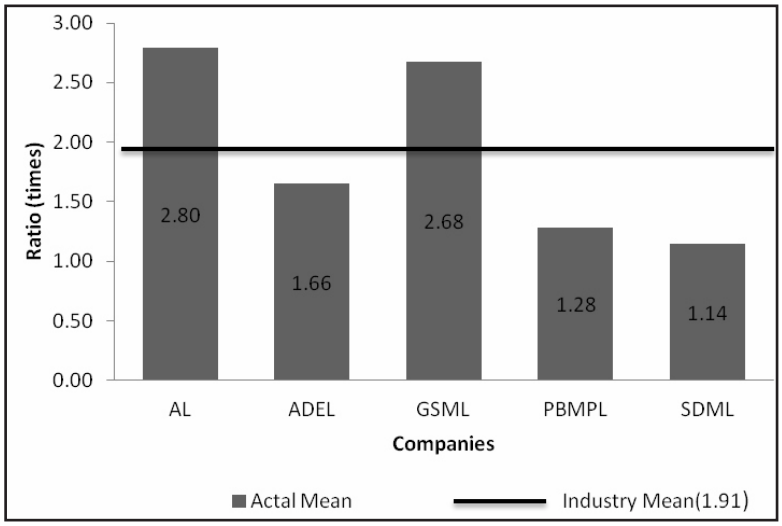
❖ **$H0_2$: The average quick ratios of Arvind Ltd., Aarvee Denims and Exports Ltd., Garden Silk Mills Ltd., PBM Polytex Ltd. and Shri Dinesh Mills Ltd. do not differ significantly.**

❖ **Inference:** $F_{cal} > F_{crit}$ .We reject $H0_2$ and conclude that the average quick ratios of sample companies differ significantly.

As it is shown in the Figure 2, across the industry, Arvin Ltd. and Garden Silk Mills Ltd. alone could maintain above the industry position on an eleven-years basis, while Aarvee Denims and Exports Ltd. was much closer, and PBM Polytex Ltd. and Shri Dinesh Mills Ltd. were below the industry average.

❖ **Ratio of Current Assets To Total Assets:** The ratio of current assets to total assets of Gujarat Textiles Manufacturing Industry is presented in the Table 6. The current assets of Gujarat Textiles Manufacturing Industry constituted the highest percentage of total assets by 44.33 percent in 2006, and the lowest of 37.19 percent in 2007, with an average of 40.71 percent. The Table 6 shows that, of all the companies, Shri Dinesh Mills Ltd. blocked more funds in current

Figure 2: Mean Quick Ratios Of The Sample



assets by an average of 53.79 percent of the total assets, followed by Arvind Ltd. (39.93%), Aarvee Denims and Exports Ltd. (38.47%), and PBM Polytex Ltd. (38.29 %), whereas Garden Silk Mills Ltd. invested the least amount of funds (average of 33.07 %) in current assets as compared to the industry average.

Table 6: Ratio of Current Assets To Total Assets of Gujarat Textile Companies (In %)

Year	AL	ADEL	GSML	PBMPL	SDML	Mean
2000	31.44	38.26	46.05	34.30	64.28	42.87
2001	33.36	41.29	35.26	31.42	65.73	41.41
2002	34.70	45.56	37.77	30.89	62.08	42.20
2003	34.44	50.91	29.83	36.38	61.37	42.59
2004	39.52	45.15	28.31	42.37	61.50	43.37
2005	49.44	39.10	22.17	34.99	48.68	38.88
2006	52.72	41.61	25.20	46.28	55.83	44.33
2007	42.85	27.11	28.46	41.00	46.55	37.19
2008	39.46	25.12	37.69	36.43	48.36	37.41
2009	41.73	32.88	35.02	37.58	40.09	37.46
2010	39.52	36.19	38.00	49.52	37.23	40.09
Mean	**39.93**	**38.47**	**33.07**	**38.29**	**53.79**	**40.71**

Source: Computed from the Annual reports of all five textiles manufacturing companies from 1999-00 to 2009-10

The average ratios of current assets to total assets of sample companies have been compared by using one-way ANOVA and were tested by the following hypothesis ($H0_3$). The results are shown in the Table 7.

❖ **$H0_3$: The average ratios of current assets to total assets of Arvind Ltd., Aarvee Denims and Exports Ltd., Garden Silk Mills Ltd., PBM Polytex Ltd. and Shri Dinesh Mills Ltd. do not differ significantly.**

❖ **Inference:** $F_{cal} > F_{crit}$. We reject $H0_3$ and conclude that the average ratios of current assets to total assets of sample companies differ significantly.

❖ **Ratio of Current Assets to Sales:** The ratio of current assets to sales of Gujarat Textiles Manufacturing Industry is depicted in the Table 8. As it is shown in the Table 8, in the case of Arvind Ltd. and Shri Dinesh Mills Ltd., the current

Table 7: ANOVA Results For Average Ratios Of Current Assets To Total Assets Of Sample Companies						
Source of Variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	2651.033	4	662.7582	11.45465	1.12E-06	2.557179
Within Groups	2892.967	50	57.85934			
Total	**5544.000**	**54**				
Source: ANOVA is performed by using MS Excel Software.						

assets as percentage of sales were higher than the industry average in every year, whereas in the case of Aarvee Denims and Exports Ltd., Garden Silk Mills Ltd. and PBM Polytex Ltd., the current assets as percentage of sales were lower than the industry average in every year. The current assets of Gujarat Textiles Manufacturing Industry constituted the highest percentage of sales by 68.11 percent in 2002, and the lowest of 50.47 percent in 2008, with an average of 55.47 percent. On an aggregate basis, Arvind Ltd. and Shri Dinesh Mills Ltd. were two companies to have invested more in

Table 8: Ratio of Current Assets To Sales of Gujarat Textile Manufacturing Companies (In %)						
Year	**AL**	**ADEL**	**GSML**	**PBMPL**	**SDML**	**Mean**
2000	84.84	31.09	53.12	34.47	96.25	59.96
2001	55.63	33.16	37.09	32.82	101.66	52.07
2002	141.18	29.16	43.56	30.46	96.19	68.11
2003	61.81	43.01	32.95	37.73	83.74	51.85
2004	74.83	36.35	35.66	43.27	79.44	53.91
2005	95.40	30.74	29.96	34.88	76.20	53.44
2006	121.94	39.86	25.69	47.72	88.99	64.84
2007	87.98	42.09	22.38	39.06	74.83	53.27
2008	67.77	43.83	28.75	34.64	77.34	50.47
2009	69.31	48.76	40.49	31.57	68.51	51.73
2010	65.66	46.05	28.07	43.40	69.46	50.53
Mean	**84.21**	**38.55**	**34.34**	**37.28**	**82.96**	**55.47**
Source: Computed from the Annual reports of all five textiles manufacturing companies from 1999-00 to 2009-10						

current assets as percentage of sales by 84.21% and 82.96% respectively. The average ratios of current assets to sales of sample companies were compared by using one-way ANOVA and were tested by the following hypothesis ($H0_4$). The results are shown in the Table 9.

❖ **$H0_4$: The average ratios of current assets to sales of Arvind Ltd., Aarvee Denims and Exports Ltd., Garden Silk Mills Ltd., PBM Polytex Ltd. and Shri Dinesh Mills Ltd. do not differ significantly.**

❖ **Inference:** $F_{cal} > F_{crit}$ .We reject $H0_4$ and conclude that the average ratios of current assets to sales of sample companies differ significantly.

Table 9 : ANOVA Results For The Average Ratios Of Current Assets To Sales Of Sample Companies						
Source of Variation	**SS**	**Df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	29104.960	4	7276.24	36.75744	2.54E-14	2.557179
Within Groups	9897.643	50	197.9529			
Total	**39002.600**	**54**				
Source: ANOVA is performed by using MS Excel Software						

❖ **Current Assets Turnover Ratio:** The current assets turnover ratio of Gujarat Textiles Manufacturing Industry is depicted in the Table 10. The data in the Table 10 reveals that the current assets turnover ratio of Gujarat Textiles Manufacturing Industries varied between the highest of 2.38 times in 2007, and the lowest of 2.04 times in 2000, and the mean ratio was 2.20 times. The average current assets turnover ratio of Garden Silk Mills Ltd. (3.08 times), PBM Polytex Ltd. (2.73 times) and Aarvee Denims and Exports Ltd. (2.67 times) were greater than industry average (2.20 times). Garden Silk Mills Ltd. had the greatest average of current assets turnover ratio among all companies, while the current assets turnover ratio of PBM Polytex Ltd. was above the yearly industry average in all the years. In the case of Arvind Ltd. and Shri Dinesh Mills Ltd., the current assets turnover ratio was much below the yearly industry average in every year during the study period. On the whole, Garden Silk Mills Ltd. was highly efficient in achieving higher sales with lower investment in current assets, followed by PBM Polytex Ltd. and Aarvee Denims and Exports Ltd.

Table 10: Current Assets Turnover Ratio of Gujarat Textile Companies (In Times)

Year	AL	ADEL	GSML	PBMPL	SDML	Mean
2000	1.18	3.22	1.88	2.90	1.04	2.04
2001	1.80	3.02	2.70	3.05	0.98	2.31
2002	0.71	3.43	2.30	3.28	1.04	2.15
2003	1.62	2.32	3.04	2.65	1.19	2.16
2004	1.34	2.75	2.80	2.31	1.26	2.09
2005	1.05	3.25	3.34	2.87	1.31	2.36
2006	0.82	2.51	3.89	2.10	1.12	2.09
2007	1.14	2.38	4.47	2.56	1.34	2.38
2008	1.48	2.28	3.48	2.89	1.29	2.28
2009	1.44	2.05	2.47	3.17	1.46	2.12
2010	1.52	2.17	3.56	2.30	1.44	2.20
Mean	**1.28**	**2.67**	**3.08**	**2.73**	**1.23**	**2.20**

Source: Computed from the Annual reports of all five textiles manufacturing companies from 1999-00 to 2009-10

Table 11: ANOVA Results For Average Current Assets Turnover Ratio Of Sample Companies

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	33.91625	4	8.479063	38.86202	9.03E-15	2.557179
Within Groups	10.90919	50	0.218184			
Total	**44.82544**	**54**				

Source: ANOVA is performed by using MS Excel Software.

The average current assets turnover ratio of sample companies was compared by using one-way ANOVA and was tested by the following hypothesis ($H0_5$). The results are shown in the Table 11.

❖ **$H0_5$: The average current assets turnover of Arvind Ltd., Aarvee Denims and Exports Ltd., Garden Silk Mills Ltd., PB M Polytex Ltd. and Shri Dinesh Mills Ltd. do not differ significantly.**

❖ **Inference:** $F_{cal} > F_{crit}$. We rejected $H0_5$ and concluded that the average ratios of current assets turnover ratio of sample companies differ significantly.

❖ **Working Capital Turnover Ratio:** The working capital turnover ratio of Gujarat Textiles Manufacturing Industry is presented in the Table 12. The working capital turnover ratio of Gujarat Textiles Manufacturing Industry, as depicted in the Table 12, ranged between the highest 4.01 times in 2005, and the lowest 2.55 times in 2007, with an average of 3.21 times. Arvind Ltd. varied between the highest 2.83 times in 2001 and the lowest 1.02 times in 2002, with an average of 1.80 times. In the case of Aarvee Denims and Exports Ltd., working capital turnover ratio measured the

highest of 8.21 times in 2005 and the lowest of 3.14 times in 2010, with a mean of 3.88 times in the year 2007. Aarvee Denims and Exports Ltd. suffered a deficit of working finance and hence, the turnover was zero. Garden Silk Mills Ltd. ranged between the highest of 6.39 times in 2010 and 2.32 times in 2000, with an average of 4.27 times. PBM Polytex Ltd. had the fluctuation between the highest of 5.07 times in 2000 and the lowest of 2.53 times in 2006, with an average of 3.66 times. Working capital turnover of Shri Dinesh Mills Ltd. varied between 2.10 times and 2.98 times, with an average of 2.44 times. On an aggregate basis, Garden Silk Mills Ltd. was found to be the most efficient company by achieving the average working capital turnover ratio of 4.27 times, which was above the industry average of 3.21 times. Followed by it, Aarvee Denims and Exports Ltd. and PBM Polytex Ltd. could achieve higher turnover of working capital than the industry average, while Arvind Ltd. and Shri Dinesh Mills Ltd. were found to be below the industry aggregate ratio.

Table 12: Working Capital Turnover Ratio of Gujarat Textile Manufacturing Companies (In Times)

Year	AL	ADEL	GSML	PBMPL	SDML	Mean
2000	1.93	4.41	2.32	5.07	2.98	3.34
2001	2.83	4.30	3.34	4.47	2.48	3.49
2002	1.02	4.54	2.90	4.69	2.42	3.11
2003	2.22	3.26	4.54	3.57	2.26	3.17
2004	1.60	4.07	4.36	3.09	2.58	3.14
2005	1.26	8.21	4.52	3.41	2.63	4.01
2006	0.96	3.81	5.16	2.53	2.10	2.91
2007	1.58	0.00	5.64	3.29	2.23	2.55
2008	1.93	3.49	4.35	3.57	2.12	3.09
2009	2.30	3.45	3.44	3.80	2.61	3.12
2010	2.17	3.14	6.39	2.81	2.43	3.39
Mean	**1.80**	**3.88**	**4.27**	**3.66**	**2.44**	**3.21**

Source: Computed from the Annual reports of all five textiles manufacturing companies from 1999-00 to 2009-10

The average working capital turnover ratios of sample companies were compared by using one-way ANOVA and were tested by the following hypothesis ($H0_6$). The results are shown in the Table 13.

Table 13: ANOVA Results For The Average Working Capital Turnover Ratio Of Sample Companies

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	47.93701	4	11.98425	9.841573	5.95E-06	2.557179
Within Groups	60.88586	50	1.217717			
Total	**108.8229**	**54**				

Source: ANOVA is performed by using MS Excel Software.

❖ **$H0_6$: The average working capital turnover ratio of Arvind Ltd., Aarvee Denims and Exports Ltd., Garden Silk Mills Ltd., PBM Polytex Ltd. and Shri Dinesh Mills Ltd. do not differ significantly.**

❖ **Inference:** $F_{cal} > F_{crit}$. We reject $H0_6$ and conclude that the average ratios of working capital turnover ratio of sample companies differ significantly.

CONCLUSION

The structure of working capital was analyzed through the construction of Tables highlighting the percentage of

composition of individual current assets and current liabilities during the years from 1999-2000 to 2009-2010. The study revealed that of all the current assets across the industry, inventories formed the highest percentage, followed by loan and advances and trade receivables; whereas cash and bank balances formed a very negligible part. However, inventories formed the highest part in the case of Aarvee Denims and Exports Ltd., Garden Silk Mills Ltd., PBM Polytex Ltd. and Shri Dinesh Mills Ltd. Whereas, in the case of Arvind Ltd., it was the second highest part of current assets. The study also indicated that the variation between current assets turnover and working capital turnover was quite high across the industry. The present study also revealed that Arvind Ltd. and Shri Dinesh Mills Ltd. achieved lower sales over their working capital and current assets as compared to other companies. However, the sample companies had good current ratios (more than the prescribed standard of current ratio, i.e. 2), which also implies sound liquidity position of the sample companies.

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