
WORKING CAPITAL MANAGEMENT

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6.0 INTRODUCTION

Working capital management is a significant part of business decisions and is of major concern to a finance manager. Working capital management is concerned with the problems that arise in attempting to manage the current assets, the current liabilities and the inter-relationships that exist between them. Needless to say that the inefficient management of working capital not only reduces profitability, but ultimately may also lead a concern to a financial crisis. It is also known that while excessive working capital is undesirable as it causes adverse impact on profitability and makes management complacent, which degenerates, into managerial inefficiency. Inadequate working capital is equally unwarranted as it carries potential threat of holding production or sales operations of otherwise well managed business firms. Excessive working capital means unnecessary piling up of current assets. It leads to unremunerative use of scarce funds. Inadequate working capital refers to a situation, where the investment in current assets is less than the requirements. It is desirable that an organisation is expected to maintain an optimum level of current assets for maximum returns on investment¹. In determining the optimum level of current assets, a firm has to consider the behavioural pattern of both profitability and solvency, as there is an inverse relationship between profitability and solvency. It is expected to make an attempt to balance the profitability-solvency tangle by minimising the total costs, i.e., the cost of liquidity and illiquidity. The firm is to maintain its current assets at that level where the sum total of these costs would be minimum.

Almost all the textile mills under the public sector have been incurring heavy losses year after year. Side by side, almost all the private mills have been making profit during the years under study as we found in the previous chapter. In order to find the actual reasons for such performance of the two sectors, it is necessary to analyse the efficiency or inefficiency in working capital management of the sample mills under study. This chapter deals with the analysis of overall

working capital position and the different components of working capital (viz., inventory, receivables and cash) of cotton textile mills under public and private sector in Bangladesh.

6.1 ANALYSIS OF GROSS WORKING CAPITAL OF THE COTTON TEXTILE INDUSTRY IN BANGLADESH

6.1.1 Size of Gross Working Capital :

The analysis of quantitative aspect referred to also as gross working capital, concerns with its size and its share in total assets. The size of gross working capital of cotton textile mills under public and private sector is given in Table-6.1.

It is quite evident from the Table that the gross working capital in all the public sector mills showed a fluctuating trend during the period of study. The average gross working capital of public sector mills increased from Tk 565.08 lakh in 1987-88 to Tk 603.25 lakh in 1996-97 registering a growth of 6.75%. The highest average gross working capital during the study period was Tk 2372.53 lakh in Mill-A₁, followed by Tk 1002.71 lakh in Mill-A₇, Tk 997.61 lakh in Mill-A₂, Tk 532.65 lakh in Mill-A₁₀ and Tk 478.26 lakh in Mill-A₆. In the case of Mill-A₅, the average amount of gross working capital was lower i. e., Tk 154.87 lakh as compared to Tk 223.15 lakh, Tk 244.74 lakh, Tk 319.38 lakh and Tk 369.39 lakh in Mills-A₉, A₄, A₈ and A₃ respectively. The annual average growth rate was positive in nine mills while it was negative in one mill. Mill-A₃ had the highest AAGR i.e., 14.91% followed by Mill-A₄ having 12%.

In the private sector, the gross working capital showed a clear increasing trend in case of Mills-B₁, B₇ and B₁₀ while in case of other mills an occasional fluctuation was observed during the period of study. The average gross working

Table 6.1 : Size of Gross Working Capital of Selected Cotton Textile Mills
[Figures in Lakh Taka]

Mills	Years	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	Average	AAGR
	PUBLIC SECTOR												
A ₁		2618.00	3087.58	2490.07	1518.94	2315.24	1786.15	1934.65	2073.71	3133.16	2767.75	2372.53	4.898
A ₂		557.19	850.82	1003.46	1150.00	1251.19	1162.58	979.26	1119.43	1039.69	862.52	997.61	6.815
A ₃		208.98	322.32	331.77	297.96	366.97	420.53	330.58	798.69	327.16	288.97	369.39	14.914
A ₄		190.23	277.79	257.15	246.56	243.89	389.79	159.04	149.49	319.16	214.27	244.74	12.072
A ₅		187.88	155.58	150.42	151.21	186.97	205.02	121.70	124.14	143.57	122.25	154.87	-2.723
A ₆		379.86	481.69	462.30	450.32	492.41	656.75	501.37	491.82	541.79	324.30	478.26	0.818
A ₇		715.76	686.34	942.05	911.85	1270.24	1828.22	1132.92	902.01	781.62	856.11	1002.71	5.660
A ₈		172.72	264.01	328.53	323.88	442.72	490.35	418.20	224.92	321.37	207.10	319.38	7.746
A ₉		191.68	199.65	304.08	195.47	517.25	299.66	145.56	136.22	142.91	99.02	223.15	6.628
A ₁₀		428.46	517.65	586.34	466.77	980.48	894.63	485.62	346.29	330.11	290.17	532.65	2.645
Ave		565.08	684.34	685.62	571.30	806.74	812.67	620.89	636.67	708.05	603.25	669.46	2.435
PRIVATE SECTOR													
B ₁		788.84	758.41	765.55	913.10	1210.04	1351.14	2023.86	2432.77	2524.17	2971.53	1573.94	16.890
B ₂		1066.57	1072.37	1227.09	853.88	1052.86	1011.00	1021.02	1056.20	1006.07	1400.22	1076.73	4.750
B ₃		721.49	954.41	1340.54	1047.53	1041.50	1363.99	1476.18	1544.58	1273.03	1947.89	1271.11	14.395
B ₄		1764.93	2539.92	1994.69	2260.59	1814.68	2075.76	2179.01	2591.06	3188.94	2433.76	2284.33	5.968
B ₅		-	-	NA	30.06	69.33	152.97	193.80	151.41	131.94	355.63	155.02	68.796
B ₆		-	-	356.65	523.08	516.83	731.41	1004.48	1166.84	1094.18	1000.15	799.20	17.952
B ₇		-	-	760.79	914.78	1348.62	2282.89	4405.56	6556.93	8738.14	12915.47	4740.40	51.404
B ₈		-	-	421.89	522.77	615.26	749.06	938.07	660.51	1262.59	983.48	769.20	18.291
B ₉		-	-	-	-	NA	274.31	490.39	571.14	676.17	534.34	509.27	23.163
B ₁₀		-	-	-	-	NA	2001.13	3104.52	5637.11	5862.30	7010.75	4723.16	40.075
Ave		1085.46	1331.28	981.03	883.22	958.64	1199.37	1683.69	2236.86	2575.75	3155.32	1609.06	14.545

Source : Annual Reports of BTMC and Member Mills of BTMA.

- Notes :
- i) '-' indicates the period before establishment and commencement of production.
 - ii) NA= Not Available;
 - iii) Minus = Negative growth rate.
 - iv) AAGR = Annual Average Growth Rate.

capital of all the private mills taken together showed a continuous increasing trend since 1991-92. The same increased from Tk. 1085.46 lakh in 1987-88 to Tk. 3155.32 lakh in 1996-97 registering a growth of 190.69%. Considering individually, the highest average amount of gross working capital was Tk. 4740.40 lakh in Mill-B₇, followed by Tk. 4723.16 lakh in Mill-B₁₀, Tk. 2284.33 lakh in Mill-B₄, Tk. 1573.94 lakh in Mill-B₁, Tk. 1271.11 lakh in Mill-B₃ and Tk. 1076.73 lakh in Mill-B₂ while the lowest average gross working capital was Tk. 155.02 lakh in Mill-B₅ followed by Tk. 509.27 lakh, Tk. 769.20 lakh and Tk. 799.20 lakh in Mills-B₉, B₈ and B₆ respectively. The annual average growth rate was positive in case of all the private mills. Mill-B₅ had the highest AAGR i.e., 68.80% followed by Mill-B₇ having 51%.

6.1.2 Gross Working Capital to Total Assets :

Table-6.2 depicts that the average percentage of gross working capital to total assets in public sector mills varied from 33.43 to 48.65 during the period. It indicates a lower rate of investment in gross working capital as compared to total assets in the public sector mills and in some years it was very low. The average percentage of gross working capital to total assets during the period was in the range 50 to 70 in Mills-A₁, A₂ and A₅. Mills-A₃, A₄, A₆, A₇ and A₈ were having average gross working capital in the range 30 to 50 percent of total assets while it was disappointing i. e. only 13 and 21 percent in case of Mills-A₉ and A₁₀ respectively. The annual average rate of growth was positive in seven mills but it was negative in three mills. Mill-A₃ had the maximum growth rate of 9.92%.

But in the private sector the average percentage of gross working capital to total assets in all the mills taken together was lower as compared of public sector mills during the period under study except 1987-88 and 1988-89. The rate varied

Table 6.2 : Percentage of Gross Working Capital to Total Assets.

Mills		Years										Average	AAGR
		1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97		
PUBLIC SECTOR	A ₁	56.00	60.16	51.28	31.11	50.87	38.76	47.28	52.35	59.10	58.78	50.57	4.233
	A ₂	37.63	49.89	55.80	60.74	63.89	63.33	60.69	65.54	65.50	62.69	58.57	6.340
	A ₃	23.44	33.65	35.38	34.80	41.36	46.07	41.39	64.79	44.77	43.20	40.89	9.918
	A ₄	67.40	43.91	34.21	33.01	29.31	39.46	22.01	22.14	39.76	31.99	36.32	-2.290
	A ₅	71.15	67.88	64.11	66.12	73.08	77.67	68.96	71.04	75.19	73.52	70.87	0.579
	A ₆	80.96	39.79	24.01	23.48	23.90	32.54	27.63	30.33	32.71	24.23	33.96	-8.685
	A ₇	85.56	48.63	19.86	20.59	26.83	36.61	28.02	25.44	24.19	27.61	34.33	-6.148
	A ₈	36.53	28.78	59.95	35.24	41.97	46.41	55.28	31.54	41.43	32.84	41.00	6.926
	A ₉	11.70	12.86	15.89	10.84	25.77	16.35	9.21	10.11	11.40	8.56	13.27	6.313
	A ₁₀	16.08	20.05	21.65	18.36	33.52	31.40	21.20	17.44	17.72	17.10	21.45	4.622
	Ave	48.65	40.56	38.21	33.43	41.05	42.86	38.17	39.07	41.18	38.05	40.12	-2.057
PRIVATE SECTOR	B ₁	47.10	46.23	46.83	52.11	23.08	23.75	31.70	38.13	41.58	40.98	39.15	2.142
	B ₂	86.05	33.99	37.32	28.18	34.18	33.18	35.25	34.46	23.31	26.85	37.28	-7.777
	B ₃	33.21	33.86	40.45	31.29	31.59	36.77	39.08	40.62	36.37	46.95	37.02	4.997
	B ₄	75.40	72.97	58.04	61.21	46.60	38.61	41.02	46.64	53.33	37.35	53.12	-6.101
	B ₅	-	-	NA	2.36	5.57	12.56	17.63	16.37	15.29	17.11	12.41	50.005
	B ₆	-	-	16.84	23.42	22.08	22.69	29.71	32.74	30.36	29.68	25.94	9.677
	B ₇	-	-	13.88	15.30	14.55	22.60	29.18	35.02	28.36	35.37	24.28	16.497
	B ₈	-	-	18.49	21.79	26.02	29.17	36.16	28.83	40.27	29.58	28.79	9.456
	B ₉	-	-	-	-	NA	10.32	16.43	13.55	15.99	13.80	14.02	8.072
	B ₁₀	-	-	-	-	NA	26.63	35.26	37.31	27.13	29.04	31.07	9.229
	Ave	60.44	46.76	33.12	29.46	25.46	25.63	31.14	32.37	31.20	30.67	34.63	-6.181

Source : Computed from Table-6.1 and Appendix-10.

Notes : i) '-' indicates the period before establishment and commencement of production,
 ii) NA = Not Available; iii) Minus = Negative growth rate; iv) AAGR = Annual Average Growth Rate.

from 25% in 1991-92, being the lowest to 60% in 1987-88, being the highest. Individually, Mill-A₈ had the highest percentage of average gross working capital to total assets i. e. 53%; Mills-B₁, B₂, B₃ and B₁₀ had the same in the range 30% to 40%. However, the same was very low ranging from 10% to 30% in case of Mills-B₅, B₆, B₇, B₈ and B₉. The annual average growth rate was negative in two private mills while eight mills had positive growth rate. Mill-B₅ had the maximum growth rate i.e. 50%.

Thus, the above analysis leads us to infer that public sector mills had higher rate of investment in gross working capital as compared of private sector mills. This is because of the fact that a large amount of capital work in progress was included in total assets of the private sector mills. But the actual picture would be clear when we go through the net working capital position of the textile mills under study.

6.2 ANALYSIS OF NET WORKING CAPITAL OF COTTON TEXTILE INDUSTRY IN BANGLADESH

According to the net working capital concept, current assets must exceed current liabilities and then only there can be working capital. On the other hand, if the current liabilities exceed the current assets, there is no working capital but there is a working capital deficit. This situation is also known as negative working capital. The net working capital should be increased if it is too small. In the words of Foulke, "If net working capital is too small, there are three solutions: (i) increase the net working capital by retained earnings in current assets, (ii) raise additional capital by the sale of stock or, in the case of proprietorships and firms, by the investment of additional cash funds, to be retained as current assets, and (iii) reduce the volume of business. Which solution or combination of solutions should be followed depends upon the circumstances and upon the ability of the

management to grasp the significance of a particular situation"². For the purpose of working capital analysis of cotton textile industry in Bangladesh in this chapter, the net approach has been taken use of.

6.2.1 Size of Net Working Capital :

The size of net working capital of the selected cotton textile mills under public and private sector in Bangladesh has been presented in Table-6.3. This table portrays that the net working capital position in the public Mill-A₁ was good during the whole period of study except in the year 1996-97 when the amount of net working capital declined to as low as Tk. 892.89 lakh from Tk. 1365.51 lakh in the previous year. In Mill-A₂, the net working capital showed an increasing trend up to the year 1991-92, but thereafter it showed a decline in 1992-93, 1995-96 and 1996-97. But in Mills-A₃, A₄, A₇ and A₁₀ there had been negative balances in the net working capital in most of the years under study. Mills-A₅, A₆, A₈ and A₉ also recorded a highly unsatisfactory position of net working capital during the whole period of study as they had no net working capital or rather had working capital deficits during the period. In Mill-A₅, the working capital deficit showed an increasing trend during the period 1989-90 to 1994-95 and in Mill-A₆ it showed the same during 1989-90 to 1995-96 while in the other cases the working capital deficit registered a fluctuating trend. The public sector average of net working capital was negative during all the years, except 1987- 88 and 1988-89. The yearly average net working capital during the period of study was negative in all the public sector mills except Mills-A₁ and A₂.

In contrast, the net working capital position was found to be better in private sector. The net working capital was negative up to 1991-92 in Mill-B₁ but it turned to be positive and showed an impressive increase up to 1995-96 followed by a decrease in 1996-97. Mills-B₂ and B₆ had working capital deficit in more

Table 6.3 : Size of Net Working Capital of Selected Cotton Textile Mills

[Figure in Lakh Taka]

Mills	Years	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	Average	AAGR
	PUBLIC SECTOR												
A ₁		1866.00	1977.56	2129.12	1348.67	2124.21	1363.35	1811.29	1990.61	1365.51	892.89	1686.92	-2.731
A ₂		320.61	661.80	781.53	867.21	929.79	838.47	862.77	970.39	752.13	480.31	746.50	9.956
A ₃		(364.67)	(311.48)	(205.38)	(149.54)	(1.18)	86.01	(92.68)	650.34	(28.04)	(322.62)	(73.92)	-847.376
A ₄		(11.39)	(139.24)	107.23	83.04	40.31	(114.03)	(49.59)	(37.13)	3.40	(73.82)	(19.12)	-219.267
A ₅		(106.89)	(62.97)	(70.61)	(95.87)	(120.02)	(243.49)	(487.86)	(623.35)	(558.61)	(738.09)	(310.78)	31.640
A ₆		(264.01)	(191.21)	(268.56)	(332.81)	(391.28)	(594.66)	(918.64)	(1205.27)	(1244.78)	(743.06)	(627.03)	13.755
A ₇		63.66	45.80	(1267.77)	(1386.72)	(1174.09)	(2395.42)	(1507.48)	(1703.87)	(3166.85)	(2405.36)	(1489.81)	-306.695
A ₈		(140.66)	(156.50)	(145.83)	(209.18)	(341.57)	(499.25)	(271.92)	(165.85)	(512.24)	(783.61)	(322.66)	37.18
A ₉		(45.82)	4.88	(117.79)	(480.46)	(752.34)	(1384.64)	(371.91)	(461.46)	(429.43)	(638.34)	(317.26)	-242.578
A ₁₀		(697.58)	(1023.48)	(1138.84)	(1624.16)	(2016.09)	(2926.08)	(1002.16)	1100.04	1403.46	(1818.45)	(974.33)	-34.181
Ave		61.93	80.52	(19.69)	(197.98)	(19.76)	(586.97)	(202.82)	(51.45)	(241.55)	(615.02)	(179.28)	441.788
PRIVATE SECTOR													
B ₁		(139.41)	(132.24)	(149.73)	(125.95)	(310.69)	17.49	287.18	829.16	1351.22	871.45	249.86	199.044
B ₂		(50.28)	14.97	33.63	(314.11)	(353.67)	(398.60)	(151.25)	(104.80)	(140.45)	(149.11)	(161.37)	-118.491
B ₃		174.31	424.08	458.44	374.71	383.42	474.12	497.11	732.59	819.07	1086.47	542.43	28.419
B ₄		653.88	986.45	677.94	805.16	255.62	69.41	293.67	407.03	1012.16	649.56	581.09	41.310
B ₅		-	-	NA	(386.43)	(418.75)	(382.30)	(300.37)	(179.59)	(286.04)	(491.62)	(349.30)	11.527
B ₆		-	-	23.47	69.55	(58.01)	(3.26)	(48.92)	(51.16)	(2.84)	(511.32)	(72.81)	2733.359
B ₇		-	-	288.27	(461.75)	(180.89)	(705.68)	897.37	1292.30	1724.13	7.41	357.66	-40.028
B ₈		-	-	231.77	234.59	326.49	393.38	538.03	154.89	735.43	499.62	389.29	52.740
B ₉		-	-	-	-	NA	158.07	247.89	243.26	154.25	132.28	187.15	1.030
B ₁₀		-	-	-	-	NA	(329.70)	633.34	3619.71	4003.40	2742.15	2133.78	39.631
Ave		154.63	323.33	223.40	24.47	(44.56)	(70.38)	289.41	694.34	937.03	483.69	302.03	-69.583

Source : Annual Reports of BTMC and Member Mills of BTMA.

- Notes : i) '-' indicates the period before establishment and commencement of production,
ii) NA = Not Available; iii) '()' indicates working capital deficit
iv) Minus = Negative growth rate; v) AAGR = Annual Average Growth Rate.

than half of the years while Mill-B₅ had the same all through the period. In the case of Mill-B₃, the working capital showed an increasing trend during the period except 1990-91, while it showed a declining trend since 1994-95 in Mill-B₉. In case of other mills no clear trend could be said to have been established during the period. The average size of net working capital taking all the private mills together went on decreasing in 1989-90 and there became a working capital deficit in 1992-93; but thereafter it turned to be positive and increased up to 1995-96 followed by a decrease in 1996-97. Mill-B₁₀ had the highest average net working capital of Tk. 2133.78 lakh, followed by Mill-B₄ of Tk. 581.09 lakh and Mill-B₃ of Tk. 542.43 lakh. The annual average growth rate was negative in two private mills as against six public sector mills.

6.2.2 Net Working Capital to Total Assets :

It is a measure of the net liquid assets of the firm relative to the total capitalisation. A higher ratio is preferred. The percentage of net working capital to total assets of the selected cotton textile mills is given in Table-6.4.

A look into the above Table-6.4 shows that in public sector, year wise percentage of average net working capital to total assets was highly adverse during 1987-88 to 1996-97. The percentage of working capital deficit to total assets increased to (86.89%) in 1996-97 from (11.76%) in 1987-88 generating 638.86% increase over the period. The percentage of yearly average net working capital to total assets was 36.54% and 43.55% in Mills-A₁ and A₂ respectively. But the same had been highly negative in case of remaining all public sector mills due to their excessive current obligations.

In private sector, the average percentage of net working capital to total assets in all the mills taken together went up to 8.36% in 1996-97 from 4.88 % in 1987-88 registering 71.31% increase. Mills-B₃, B₄, B₈ and B₁₀ had yearly average of 15.45%, 14.13%, 14.38% and 11.33% net working capital to total assets

Table 6.4: Percentage of Net Working Capital to Total Assets.

Mills	Years	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	Average	AAGR
PUBLIC SECTOR	A ₁	39.91	38.53	43.85	27.63	46.67	29.59	44.27	50.25	25.76	18.96	36.54	-0.704
	A ₂	21.65	38.81	43.46	45.80	47.48	45.67	53.47	56.82	47.38	34.91	43.55	8.543
	A ₃	(40.90)	(32.52)	(21.97)	(17.46)	(0.13)	9.42	(11.60)	-52.76	(3.84)	(48.23)	(11.45)	-805.347
	A ₄	(4.04)	(22.01)	14.27	11.12	4.84	(11.55)	(6.86)	(5.50)	0.42	(11.02)	(3.03)	-336.566
	A ₅	(40.48)	(27.47)	(30.10)	(41.92)	(46.91)	(92.25)	(276.42)	(356.73)	(292.56)	(443.88)	(164.87)	43.076
	A ₆	(56.27)	(15.79)	(13.95)	(17.35)	(18.97)	(29.47)	(50.63)	(74.32)	(75.17)	(55.51)	(40.74)	11.005
	A ₇	7.61	3.25	(26.73)	(31.31)	(24.80)	(47.96)	(37.29)	(48.06)	(98.01)	(77.57)	(38.09)	-88.923
	A ₈	(16.11)	(17.06)	(15.23)	(22.76)	(32.38)	(47.25)	(28.82)	(23.25)	(66.04)	(124.27)	(39.32)	40.646
	A ₉	(2.80)	0.31	(6.16)	(26.64)	(37.49)	(77.37)	(23.52)	(33.34)	(34.26)	(55.16)	(22.15)	-162.282
	A ₁₀	(26.18)	(39.65)	(42.06)	(63.87)	(68.93)	(102.70)	(43.74)	55.39	75.33	(107.15)	(36.36)	-9.352
	Ave	(11.76)	(7.36)	(5.46)	(13.68)	(5.56)	(32.38)	(37.27)	(32.60)	(42.10)	(86.89)	(27.51)	72.003
PRIVATE SECTOR	B ₁	(8.32)	(8.06)	(9.16)	(7.19)	(5.93)	0.31	4.50	13.00	22.26	12.02	1.34	159.110
	B ₂	(4.06)	0.47	1.02	(10.37)	(11.48)	(13.08)	(5.22)	(3.42)	(3.25)	(2.86)	(5.23)	-133.125
	B ₃	8.02	15.04	13.83	11.19	11.63	12.78	13.16	19.27	23.40	26.19	15.45	17.44
	B ₄	23.86	28.34	19.73	21.80	6.56	1.29	5.53	7.33	16.93	9.97	14.13	33.303
	B ₅	-	-	NA	(30.31)	(33.67)	(31.38)	(27.32)	(19.42)	(33.15)	23.65	(21.66)	-23.035
	B ₆	-	-	1.11	3.11	(2.48)	(0.10)	(1.45)	(1.44)	(0.08)	(15.17)	(2.06)	2860.262
	B ₇	-	-	5.26	(7.73)	(1.95)	(6.98)	5.94	6.90	5.60	(0.02)	0.88	-50.274
	B ₈	-	-	10.16	9.78	13.81	15.32	20.74	6.76	23.45	15.03	14.38	32.480
	B ₉	-	-	-	-	NA	5.95	8.31	5.77	3.65	3.42	5.42	-8.486
	B ₁₀	-	-	-	-	NA	(4.39)	7.19	23.95	18.53	11.36	11.33	-23.001
	Ave	4.88	8.95	5.99	(1.22)	(2.94)	(2.03)	3.14	5.87	7.73	8.36	3.87	-9.641

Source : Computed from Table-6.3 and Appendix-10.

- Notes : i) '-' indicates the period before establishment and commencement of production.
 ii) NA= Not Available; iii) '(') indicates working capital deficit
 iv) Minus = Negative growth rate; v) AAGR = Annual Average Growth Rate.

respectively, while a very low percentage of the same was in Mills-B₁, B₇ and B₉. However, it was negative in case of Mills-B₂, B₅ and B₆. Annual average growth rate was found to be negative in five mills as against six in public sector.

6.3 LIQUIDITY ANALYSIS

Through the liquidity ratios, it may be ascertained whether the enterprise has adequate current assets to meet its current obligations. In fact, maintenance of adequate liquidity without impairing profitability is two foremost requirements of sound and efficient working capital. Usually liquidity is measured in terms of (a) current ratio, (b) quick ratio, and (c) ratio of cash to current assets. These ratios have also been used by Verma³ in his work on State Electricity Boards.

6.3.1 Current Ratio :

Current Ratio (CR) is a measure of the enterprise's short-term solvency. It gives a crude measure of liquidity⁴. In the words of Schall and Haley, "The simplest measure of the firm's ability to raise funds to meet short term obligations is the current ratio. It is the ratio of current assets to current liabilities⁵. A strong current ratio is a matter of financial strength. A ratio of greater than one means that the enterprise has more current assets than current claims against them. A current ratio of 2:1 has come to be recognised as a standard of liquidity for a business enterprise. Ratio of current assets to current liabilities in the cotton textile mills under study for the period 1987-88 to 1996-97 is furnished in Table-6.5.

An analysis of the figures presented in the above Table-6.5 reflects that in the face of ideal ratio of current assets to current liabilities of 2:1, the position of public sector Mills-A₁ and A₂ with 8.84 and 4.47 average current ratio respectively is abnormally liquid indicating inefficient tie-up of funds. In case of

Table 6.5. Current Assets to Current Liabilities

(In Times)

Mills	Years	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	Average	AAGR
		PUBLIC SECTOR											
A ₁		3.48	2.78	6.90	8.92	12.12	4.22	15.68	24.95	7.89	1.48	8.84	34.34%
A ₂		2.36	4.50	4.52	4.07	3.89	3.59	8.41	7.51	3.62	2.26	4.47	11.46%
A ₃		0.36	0.51	0.62	0.67	1.00	1.26	0.78	5.38	0.92	0.47	1.10	62.93%
A ₄		0.94	0.67	1.72	1.51	1.20	0.77	0.76	0.80	1.01	0.74	1.01	6.98%
A ₅		0.64	0.71	0.68	0.61	0.61	0.46	0.20	0.17	0.20	0.14	0.44	-12.44%
A ₆		0.59	0.72	0.63	0.58	0.56	0.52	0.35	0.29	0.30	0.30	0.48	-6.15%
A ₇		1.10	1.07	0.43	0.40	0.33	0.43	0.43	0.35	0.18	0.26	0.50	-8.82%
A ₈		0.55	0.63	0.69	0.61	0.56	0.50	0.61	0.58	0.39	0.21	0.53	-7.58%
A ₉		0.81	1.03	0.72	0.29	0.41	0.18	0.28	0.23	0.25	0.13	0.43	-8.77%
A ₁₀		0.38	0.34	0.40	0.22	0.33	0.23	0.33	0.24	0.19	0.14	0.28	-5.45%
PRIVATE SECTOR													
B ₁		0.85	0.85	0.84	0.88	0.80	1.01	1.17	1.52	2.32	1.45	1.17	9.07%
B ₂		0.95	1.01	1.03	0.73	0.75	0.72	0.87	0.91	0.88	0.90	0.88	0.25%
B ₃		1.32	1.80	1.52	1.56	1.58	1.53	1.51	1.90	2.80	2.26	1.78	8.24%
B ₄		1.59	1.63	1.51	1.55	1.16	1.03	1.16	1.19	1.46	1.36	1.36	-0.83%
B ₅		-	-	NA	0.07	0.14	0.29	0.39	0.46	0.32	0.42	0.30	43.39%
B ₆		-	-	1.07	1.15	0.90	1.00	0.95	0.96	1.00	0.66	0.96	-5.27%
B ₇		-	-	1.61	0.66	0.88	0.76	1.26	1.25	1.25	1.00	1.08	0.81%
B ₈		-	-	2.22	1.81	2.13	2.11	2.34	1.31	2.40	2.03	2.04	4.70%
B ₉		-	-	-	-	NA	2.36	2.02	1.74	1.30	1.33	1.75	-12.81%
B ₁₀		-	-	-	-	NA	0.86	1.26	2.79	3.15	1.64	1.94	33.22%

Source : Computed from Annual Reports of BTMC and Member Mills of BTMA.

Notes : i) '-' indicates the period before establishment and commencement of production.
 ii) N A= Not Available; iii) Minus = Negative growth rate; iv) AAGR = Annual Average Growth Rate.

Mills-A₃ and A₄, the low average current ratio indicates the risk of liquidity apparently. But the position of Mills-A₅, A₆, A₇, A₈, A₉ and A₁₀ with less than one average current ratio was the worst from the liquidity point of view and immediate efforts are necessary to improve the situation. The annual average growth rate was positive in four public sector mills while six mills had negative growth rates.

But in private sector, the position was relatively better. In case of Mill-B₈ the ideal current ratio of 2:1 could have been achieved which indicates the efficient utilisation of current assets, while the position of Mills-B₃, B₉ and B₁₀ with current ratio of 1.78, 1.75 and 1.94 respectively may also be termed as quite good as these were quite near to the ideal norm of 2:1. However, the same was low in case of Mills-B₁, B₄ and B₇ indicating the risk of liquidity while the positions of Mills-B₂, B₅ and B₆ were very bad from the liquidity point of view and it needs immediate efforts to improve the situation. The annual average growth rate was positive in 7 mills while 3 mills had negative growth rates.

The following Table-6.6 shows the average amount of current assets, current liabilities and current ratio of both public and private sector taking all the sample mills together from 1987-88 to 1996-97. The mean, standard deviation, coefficient of variation (CV) and the coefficient of correlation (r) are also presented for further analysis.

Table-6.6 reveals that in public sector, average current assets of the ten mills rose to Tk. 603.25 lakh in 1996-97 from Tk. 56.08 lakh in 1987-88 generating 6.75 percent increase while their average current liabilities went up to Tk. 1218.26 lakh in 1996-97 from Tk. 503.15 lakh in 1987-88 registering a growth rate of 142.13%. The mean of current assets and current liabilities were Tk. 669.50 lakh and Tk. 906.50 lakh with a standard deviation of Tk. 83.47 lakh and Tk. 276.16 lakh respectively. The coefficient of variation in case of current liabilities was also higher with 30.45 percent as compared to current assets with 12.47% indicating greater variability in current liabilities.

Table-6.6: Average Current Assets, Current Liabilities and Current Ratio of Selected Cotton Textile Mills : 1987-88 to 1996-97

Years & Statistical Parameters	Public Sector			Private Sector		
	Current Assets (Lakh Taka)	Current Liabilities (Lakh Taka)	Current Ratio (Times)	Current Assets (Lakh Taka)	Current Liabilities (Lakh Taka)	Current Ratio (Times)
1987-88	565.08	503.15	1.12	1085.46	925.83	1.17
1988-89	684.34	603.83	1.13	1331.28	1007.96	1.32
1989-90	685.62	705.31	0.97	981.03	757.63	1.29
1990-91	571.30	769.28	0.74	883.22	858.75	1.03
1991-92	806.74	1119.96	0.72	958.64	1003.20	0.96
1992-93	812.67	1399.64	0.58	1199.37	1270.07	0.94
1993-94	620.89	823.71	0.75	1683.69	1394.29	1.21
1994-95	636.67	805.24	0.79	2236.86	1542.52	1.45
1995-96	708.05	1120.89	0.63	2575.75	1630.36	1.58
1996-97	603.25	1218.26	0.50	3155.32	2667.59	1.18
Average (X)	669.46	906.93	0.79	1609.06	1305.82	1.21
SD	83.47	276.16	0.22	747.57	533.85	0.21
CV	12.47%	30.45%	27.34%	46.46%	40.88%	17.02%
Co-efficient of Correlation (r)	0.62			0.94		

Source: Computed from Annual Reports of BTMC and Member Mills of BTMA.

In private sector, average current assets of the ten mills went up to Tk. 3155.32 lakh in 1996-97 from Tk. 1085.46 lakh in 1987-88 registering a growth rate of 190.69% while their average current liabilities went up to Tk. 2667.59 lakh in 1996-97 from Tk. 925.23 lakh in 1987-88 generating a growth rate of 188.13%. The mean of current assets and current liabilities for the entire period were Tk. 1609.00 lakh and Tk. 1305.90 lakh with a standard deviation of Tk. 747.57 lakh and Tk. 533.85 lakh respectively. The coefficient of variation in case of current assets was higher of 46.46% than that of current liabilities of 40.88% indicating greater variability in current assets. The co-efficient of correlation between current assets and current liabilities was to +0.936 while it was +0.619 in public sector. The average current ratio in public sector came down to 0.50 times in 1996-97 registering 55.36% decrease over 1987-88 while the same in the private sector went up to 1.18 times in 1996-97 generating 0.85% increase over 1987-88. The overall trend of current ratio in public sector was towards decrease while it was towards increase in case of private sector. However, the ideal standard of current ratio 2:1 could not have been achieved during the period in case of both public and private sector. The average current ratio for the entire period was 0.79 times in public sector while it was 1.21 times in private sector.

6.3.2 Quick Ratio or Acid Test Ratio :

The quick ratio (QR) also known as Acid test ratio measures the firm's ability to meet short-term obligations from its most liquid assets. In the words of Van Horne, "The ratio concentrates on cash, marketable securities and receivables in relation to current obligations and thus, provides a more penetrating measure of liquidity than does the current ratio⁶". The term 'quick assets' refers to current assets which can be converted into cash immediately or with in reasonable time without a loss of value. In this case, inventory is not included with other current assets because it is generally far less liquid than the other current assets. According to Schall and Haley, "The quick

Table 6.7. Quick Assets to Current Liabilities of the Selected Cotton Textile Mills

(In Times)

Mills	Years	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	Average	AAGR
PUBLIC SECTOR	A ₁	2.47	2.02	4.63	3.67	3.49	1.70	12.20	22.21	5.30	1.03	5.87	64.117
	A ₂	1.49	3.19	2.51	2.73	1.77	0.82	6.13	6.67	1.11	0.96	2.74	63.578
	A ₃	0.13	0.20	0.13	0.15	0.49	0.51	0.12	4.61	0.23	0.19	0.68	424.196
	A ₄	0.33	0.13	0.51	0.66	0.44	0.15	0.37	0.42	0.26	0.34	0.36	34.969
	A ₅	0.15	0.22	0.18	0.17	0.14	0.09	0.08	0.06	0.06	0.05	0.12	-9.245
	A ₆	0.41	0.48	0.42	0.43	0.37	0.28	0.24	0.23	0.20	0.24	0.33	-4.757
	A ₇	0.91	0.93	0.26	0.22	0.01	0.16	0.20	0.31	0.11	0.16	0.33	153.361
	A ₈	0.13	0.20	0.23	0.23	0.10	0.07	0.12	0.31	0.08	0.06	0.15	12.543
	A ₉	0.34	0.40	0.17	0.06	0.03	0.02	0.05	0.08	0.07	0.07	0.13	1.067
	A ₁₀	0.09	0.07	0.10	0.08	0.06	0.05	0.10	0.15	0.07	0.06	0.08	4.594
PRIVATE SECTOR	B ₁	0.43	0.52	0.49	0.54	0.35	0.29	0.48	0.74	0.94	0.85	0.56	12.241
	B ₂	0.30	0.34	0.47	0.23	0.50	0.45	0.43	0.57	0.50	0.29	0.41	9.081
	B ₃	0.40	0.44	0.43	0.41	0.43	0.32	0.51	0.48	0.95	0.78	0.52	12.876
	B ₄	0.88	0.92	0.78	0.95	0.44	0.48	0.48	0.47	0.66	0.78	0.68	2.561
	B ₅	-	-	NA	0.05	0.05	0.07	0.11	0.39	0.30	0.39	0.19	59.768
	B ₆	-	-	0.18	0.10	0.03	0.16	0.24	0.30	0.40	0.22	0.20	4.305
	B ₇	-	-	0.72	0.30	0.42	0.30	0.74	0.67	0.69	0.55	0.55	10.428
	B ₈	-	-	0.64	0.44	0.72	0.45	0.70	0.18	1.04	0.50	0.58	57.430
	B ₉	-	-	-	-	NA	0.89	1.24	1.13	0.45	0.87	0.92	15.902
	B ₁₀	-	-	-	-	NA	0.37	0.57	1.67	1.64	0.77	1.00	48.047

Source : Computed from Annual Reports of BTMC and Member Mills of BTMA.

Notes : i) '-' indicates the period before establishment and commencement of production.

ii) NA= Not Available; iii) Minus = Negative growth rate; iv) AAGR = Annual Average Growth Rate.

ratio equals current assets, excluding inventory, divided by current liabilities⁷. Thus, the quick ratio is the ratio between quick assets and current liabilities. As a rule of thumb quick ratio of 1:1 is considered satisfactory.

Table-6.7 presents the quick ratio in the selected cotton textile mills under public and private sector during the period from 1987-88 to 1996-97. Table-6.7 portrays that in public sector mills, the ideal quick assets to current liabilities of 1:1 could not have been achieved during the period under study in case of all the mills except Mills-A₁, and A₂. The yearly average quick ratio of Mills-A₁ and A₂ had been abnormally higher than the standard norm due to their very low current obligations. The position of all other mills with very low quick ratio had been the worst from the liquidity point of view and the claims of their current creditors were not well protected throughout the period of study. It also indicates that they had almost no quick assets, to carryout their operation.

In the private sector, quick assets to current liabilities in terms of the standard were not satisfactory during the period. On average the ideal quick ratio could have been achieved in only Mill-B₁₀ while the position of Mill-B₉ with quick ratio of 0.92 may be termed as quite good as it was quite near to the standard norm. Mills-B₁, B₃, B₄, B₇ and B₈ had quick ratio in the range 0.50 to 0.70. The position was very bad in Mills-B₂, B₅ and B₆, which had almost no quick assets to carryout their operations. The annual average growth rate was positive in all the private mills as against the eight public mills. Table-6.8 presents the average quick assets, current liabilities and quick ratios of selected cotton textile mills under public and private sector during 1987-88 to 1996-97. The table indicates that the average quick assets of ten textile mills in public sector increased by 2.83% in 1996-97 over 1987-88, but the average current liabilities of those mills increased by 142.13% in 1996-97 over 1987-88. The mean of quick assets and current liabilities were Tk. 347.70 lakh and Tk. 906.90 lakh with the standard Deviation of Tk. 80.94 lakh and Tk. 276.16 lakh respectively. The co-efficient of variation in case of current liabilities was higher with 30.45% compared of 23.28% in case of quick assets indicating greater

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Table-6.8: Average Quick Assets, Current Liabilities and Quick Ratio of Selected Cotton Textile Mills : 1987-88 to 1996-97

Years & Statistical Parameters	Public Sector			Private Sector		
	Quick Assets (Lakh Taka)	Current Liabilities (Lakh Taka)	Quick Ratio (Times)	Quick Assets (Lakh Taka)	Current Liabilities (Lakh Taka)	Quick Ratio (Times)
1987-88	347.07	503.15	0.69	482.20	925.83	0.52
1988-89	426.46	603.83	0.71	621.99	1007.98	0.62
1989-90	365.31	705.31	0.52	419.69	757.63	0.55
1990-91	277.17	769.28	0.36	387.23	858.75	0.45
1991-92	223.92	1119.96	0.20	387.65	1003.20	0.39
1992-93	259.51	1399.64	0.16	445.37	1270.07	0.35
1993-94	350.66	823.71	0.43	763.52	1394.29	0.55
1994-95	523.31	805.24	0.65	1112.50	1542.52	0.72
1995-96	347.02	1120.89	0.31	1273.63	1630.36	0.78
1996-97	356.88	1218.26	0.29	1592.54	2667.59	0.60
Average (X)	347.73	906.93	0.43	748.63	1305.82	0.55
SD	80.94	276.16	0.20	408.48	533.85	0.14
CV	23.28%	30.45%	46.98%	54.56%	40.88%	24.73%
Co-efficient of Correlation (r)	0.57			0.92		

Source: Computed from Annual Reports of BTMC and Member Mills of BTMA.

variability in current liabilities. The co-efficient of correlation 0.574 indicates positive relationship between current assets and current liabilities.

In private sector, the average quick assets increased by 230.27% in 1996-97 over 1987-88 while the average current liabilities increased by 188.13% in 1996-97 over 1987-88. The mean of quick assets and current liabilities were Tk. 748.63 lakh and Tk. 1305.82 lakh with standard deviation of Tk. 408.48 lakh and Tk. 533.85 lakh respectively. The higher co-efficient of variation of 54.56% indicates greater variability in quick assets compared to current liabilities. The co-efficient of correlation between quick assets and current liabilities was + 0.922 while it was + 0.574 in case of public sector. The quick ratio in public sector came down to 0.29 times in 1996-97 from 0.69 times in 1987-88 registering a decrease of 57.97% while the same went up to 0.60 times in 1996-97 from 0.52 times in 1987-88 generating an increase of 15.38%. However, the ideal quick assets to current liabilities could not have been achieved during the period in case of private sector as well as in public sector mills. The average quick ratio for the entire period was 0.55 times in private sector while it was 0.43 times in public sector.

6.3.3 Ratio of Cash to Current Assets :

Cash and bank balances is the most commonly used mode of making payments in the ordinary course of business, as eventually all major current assets get converted into cash. Hence, management of 'cash and bank balances', is a matter of crucial significance in working capital management.

Ratio of cash and bank to current assets expresses the relationship between cash and bank and current assets. If most of the current assets are made up of cash alone, the profitability of an enterprise decreases, because as non-earning asset

cash by itself does not yield any profit. Therefore, "corporate firms should carry cash and bank balance which is adequate to make all routine payments in time, but does not remain idle for long as cash is a non-earning asset"⁸. The role cash plays in the working capital management depend on the nature of business. There is then, no standard ratio of cash to current assets. The ratio of cash to total current assets should be kept as low as possible, considering the problems which may arise if cash balance is too low.

The ratio of cash and bank balance⁹ to total current assets in the selected cotton textile mills under study from 1987-88 to 1996-97 is given in Table-6.9. This table reveals that in the public sector, the average ratio of cash and bank balance to current assets of all the mills taken together ranged between 19.34% in 1987-88 being the highest and 3.70% in 1996-97, being the lowest, indicating an erratic position in cash management. The public sector average ratio for the entire period was 11.63%. The yearly average ratio of individual mill was the highest in Mill-A₂ (36.82%) followed by Mill-A₁ (18.04%) varying in a range of 54.77 and 57.43 respectively. The yearly average ratio of cash and bank balance to current assets in Mills-A₁, A₂, A₃ and A₆ was higher as compared to the public sector average as a whole indicating inefficient management of cash in these mills than the other mills. The yearly average ratio of Mills-A₄, A₅, A₇, A₈, A₉ and A₁₀ was lower than the public sector average as a whole. The lower ratio indicates their better efficiency in cash management.

In contrast, the average ratio of cash and bank balance to current assets in case of private sector mills was lower than that of public sector mills in all the years except 1995-96. The average ratio in this sector varied in a small range of 6.04 between 9.22% in 1987-88 to 3.18% in 1996-97. However, the average ratio of all the private sector textile mills for the entire period was 5.82% which was much lower than that of public sector. The yearly average ratio of cash and bank balance to current assets was the highest in Mill-B₄ (13.50%) followed by Mill-B₅

Table 6.9: Ratio of Cash and Bank Balance to Current Assets.

(In Percentage)

Mills	Years	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	Average	Range
	PUBLIC SECTOR												
A ₁		50.11	57.48	49.52	0.66	1.30	0.05	14.63	6.11	0.05	0.45	18.04	57.43
A ₂		49.53	50.42	44.52	50.42	27.30	2.45	51.74	54.87	=	0.10	36.82	54.77
A ₃		12.17	21.45	8.24	6.66	31.85	27.13	5.22	3.86	5.17	3.57	12.53	28.28
A ₄		10.90	2.52	10.37	0.38	5.13	0.27	10.73	9.18	0.22	2.74	5.24	10.68
A ₅		5.57	9.60	6.41	4.81	3.95	4.20	11.82	21.52	13.51	17.28	9.87	17.57
A ₆		16.19	16.21	12.29	14.18	10.86	9.38	13.48	20.47	13.65	0.15	12.69	20.32
A ₇		0.29	0.28	3.53	0.98	9.21	0.26	1.25	29.54	2.76	0.81	4.89	29.26
A ₈		12.69	13.93	0.86	0.57	2.47	0.50	4.79	7.02	1.56	0.94	4.53	13.43
A ₉		34.61	20.05	12.95	3.39	0.12	12.39	0.30	12.80	1.92	10.28	10.88	34.49
A ₁₀		1.32	0.23	2.38	0.15	1.29	2.43	3.26	27.47	0.81	0.70	4.00	27.32
Ave		19.34	19.22	15.11	8.22	9.35	5.91	11.72	19.28	4.41	3.70	11.63	15.64
PRIVATE SECTOR													
B ₁		0.35	0.21	0.77	10.13	8.36	7.88	6.75	5.65	5.40	5.28	5.08	9.92
B ₂		0.17	1.78	2.22	2.61	10.80	3.93	0.81	15.22	8.38	0.16	4.61	15.06
B ₃		18.82	13.40	14.12	0.93	0.37	0.49	0.30	0.28	0.25	1.94	5.09	18.57
B ₄		17.55	6.84	15.90	14.83	11.99	20.03	10.80	11.27	10.36	15.40	13.50	13.19
B ₅		-	-	NA	19.69	12.16	4.97	9.69	5.71	13.95	1.41	9.65	18.28
B ₆		-	-	1.39	0.58	0.73	0.49	0.33	0.26	0.30	0.22	0.54	1.17
B ₇		-	-	13.24	4.45	1.99	0.39	15.46	0.17	0.75	1.39	4.73	13.07
B ₈		-	-	9.75	2.08	0.62	0.27	0.69	3.04	2.28	3.92	2.83	9.48
B ₉		-	-	-	-	NA	0.69	0.98	2.88	0.29	0.41	1.05	2.59
B ₁₀		-	-	-	-	NA	4.68	2.75	11.83	2.22	1.64	4.62	10.19
Ave		9.22	5.56	8.20	6.91	5.88	4.38	4.86	5.63	4.42	3.18	5.82	6.04

Source : Computed from Annual Reports of BTMC and Member Mills of BTMA.

Notes : i) '-' indicates the period before establishment and commencement of production,
 ii) NA= Not Available; iii) '=' indicates no cash and bank balance.

(9.65%) and their range of variation were 13.19 and 18.28 respectively. The ratio in these mills was higher than the private sector average, while it was lower in the remaining private sector mills. But the ratio was very low in Mills-B₆ and B₉ i.e., only 0.54% and 1.05% varying in a range of only 1.17 and 2.59 respectively which might be of cash crisis in making all routine payment. We may now conclude that the lower private sector average ratio during all the years indicate better cash management as well as better profitability of private mills as compared to their counter parts in public sector.

6.4 ANALYSIS OF OPERATIONAL EFFICIENCY

Numerous ratios can be calculated and used for analysing the efficiency of working capital but generally the following three important ratios are used:-

- i) working capital turnover ratio,
- ii) Inventory turnover ratio, and
- iii) Debtors turnover ratio.

For lack of information as to total debtors of all the private sector mills, our analysis has been kept limited to working capital turnover and inventory turnover only.

6.4.1 Working Capital Turnover Ratio :

The relationship between sales and working capital tests the efficiency with which the working capital is used. It is calculated by dividing sales by average working capital or closing working capital. The ratio reflects the extent to

which a business is operating on a small or a large amount of working capital in relation to sales. The faster the turnover, the lower is the investment and the greater is the profit. However, a very high ratio may be the result of over trading which is indicated by an increase in the amount of sales without corresponding increase in the amount of working capital. A very low ratio may be the result of under trading which indicates more working capital funds are invested in the business than needed.

Table-6.10 presents the working capital turnover ratio of selected cotton textile mills in Bangladesh during 1987-88 to 1996-97. It can be seen from the table that there was a negative turnover of working capital in three public sector mills viz., Mills-A₅, A₆ and A₈ throughout the period under study due to their working capital deficit during the period while in case of Mills-A₃, A₄, A₇, A₉ and A₁₀, negative turnover of working capital was present in almost all the years under review due to working capital deficit. The yearly average negative turnover was the lowest in Mill-A₁₀ (0.40 times) while it was the highest (123.24) times in case of Mill-A₃. The range of variation was also the lowest in Mill-A₁₀ and it was the highest in Mill-A₃. The turnover of working capital was very low and almost nil throughout the period in Mills-A₁ and A₂ which indicates more working capital funds had been invested in business than they needed. The public sector average turnover of working capital ranged between 0.57 to 117.43 times in negative sense during the study period except in 1992-93 and 1995-96 when the ratio was positive i.e., 0.67 and 14.83 times respectively.

On the other hand, a study of the said ratio in private sector found a negative position due to working capital deficit throughout the period in Mill-B₅ while it was also found in more than half of the years in case of Mills-B₅ and B₆. After suffering from working capital deficit up to 1991-92 a small amount of working capital was built-up during 1992-93 in Mill-B₁ and its turnover of working capital was 83.18 times during this year which indicates insufficient

Table 6.10: Working Capital Turnover Ratio.

(In Times)

Mills	Years	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	Average	Range
	PUBLIC SECTOR												
A ₁		1.05	0.84	0.89	1.39	0.39	1.40	1.17	0.39	0.99	0.87	0.94	1.01
A ₂		3.54	2.13	1.54	1.40	0.76	1.19	2.08	1.18	0.92	1.07	1.59	2.78
A ₃		(2.30)	(3.33)	(5.74)	(7.94)	(1184.60)	14.66	(9.81)	1.65	(34.06)	(0.96)	(123.24)	1199.26
A ₄		(52.77)	(4.90)	6.42	9.32	20.68	(4.07)	(12.52)	(15.84)	184.39	(5.06)	12.57	237.16
A ₅		(4.90)	(8.95)	(7.66)	(6.15)	(4.84)	(1.72)	(0.60)	(0.52)	(0.62)	(0.16)	(3.61)	8.79
A ₆		(2.51)	(3.88)	(2.95)	(3.16)	(3.00)	(1.36)	(0.95)	(0.73)	(0.41)	(0.33)	(1.93)	3.55
A ₇		10.11	16.70	(1.73)	(1.77)	(1.66)	(1.07)	(1.21)	(1.35)	(0.68)	(0.54)	1.68	18.47
A ₈		(5.54)	(4.99)	(6.05)	(4.11)	(1.99)	(1.46)	(2.52)	(6.42)	(1.51)	(0.29)	(3.49)	6.13
A ₉		(14.05)	147.78	(5.19)	(1.54)	0.46	(0.53)	(1.63)	(1.10)	(1.06)	(0.26)	12.20	161.83
A ₁₀		(1.08)	(0.91)	(0.95)	(0.53)	(0.21)	(0.39)	(1.34)	1.09	0.36	(0.05)	(0.40)	2.43
Avc		(6.85)	(0.73)	(2.14)	(1.31)	(117.43)	0.67	(2.73)	(2.17)	14.83	(0.57)	(11.84)	132.26
PRIVATE SECTOR													
B ₁		(5.65)	(8.21)	(8.46)	(7.64)	(3.89)	83.18	9.33	4.92	2.36	4.28	7.02	91.64
B ₂		(19.91)	55.63	29.24	(2.66)	(3.60)	(3.54)	(8.86)	(18.44)	(12.29)	(7.58)	0.80	75.54
B ₃		6.71	3.89	4.06	5.24	6.03	5.09	4.45	3.81	4.26	2.79	4.63	3.92
B ₄		3.94	2.70	4.89	4.42	15.02	70.49	18.02	15.73	6.24	7.98	14.94	67.79
B ₅		-	-	NA	(1.81)	(1.44)	(1.64)	(2.75)	(7.28)	(3.90)	(1.70)	(2.93)	5.84
B ₆		-	-	16.48	12.93	(18.15)	(375.39)	(35.68)	(42.38)	(814.24)	(3.85)	(157.54)	830.72
B ₇		-	-	8.22	(8.42)	(30.25)	(10.08)	10.32	8.73	8.60	2366.29	294.18	2396.54
B ₈		-	-	4.80	5.32	4.43	3.81	3.88	17.95	3.92	6.14	6.28	14.14
B ₉		-	-	-	-	NA	7.19	5.83	8.08	15.10	23.28	11.90	17.45
B ₁₀		-	-	-	-	NA	(8.06)	5.86	1.29	1.30	1.61	0.40	13.92
Avc		(3.73)	13.50	8.46	0.92	(3.98)	(22.90)	1.04	(0.76)	(78.87)	239.92	15.36	318.79

Source : Computed from Table-6.3 and Appendix-7.

Note : i) '-' indicates the period before establishment and commencement of production.
 ii) NA= Not Available; iii) '()' Indicates Negative Ratio.

working capital was invested during this particular period. It declined gradually and went down to 4.28 times in 1996-97 showing improvement in working capital position during the second half of the study period. Mills-B₃ and B₈ had a better turnover all through the period of study and their yearly average ratio was 4.63 and 6.28 times varying in a range of 3.92 and 14.14 respectively. The position of Mills-B₄ and B₉ with the average ratio of 14.94 times and 11.90 times respectively might be termed as good as these were neither very high nor very low. Mill-B₇ had a satisfactory ratio of 8.22, 10.32, 8.73 and 8.60 during 1989-90, 1993-94, 1994-95 and 1995-96 respectively but it had abnormally high in 1996-97 i.e., 2366.29 due to very small working capital making the highest yearly average ratio of 294.18 among all. Mill-B₁₀ had a deficiency of working capital in 1992-93 but it formed a good ratio of 5.86 times in 1993-94. The ratio declined to 1.29 times in 1994-95 and again increased to 1.61 times in the last year. However, the yearly average ratio in this mill was very low i.e. only 0.40 times which indicates a more working capital fund was invested in this particular mill. The private sector average was positive in five years while it was negative in the other five years.

The above analysis depicts a better efficiency of private sector mills in managing working capital as compared to the public sector mills.

6.4.2 Inventory Turnover Ratio :

“The inventory turnover ratio measures corporate efficiency in employing inventory. It is computed by dividing cost of goods sold by average inventory”¹⁰. This ratio gives the rate at which inventories are converted into cash. Thus the inventory turnover ratio measures the speed of movement of stock. A high ratio indicates that the stock is fast moving and investment in it is minimum. A lower ratio denotes that the stock is not consumed in more quantity, it is going out of demand and has led to over stocking. Generally the higher the inventory turnover,

Table 6.11: Turnover of Inventory of Finished Goods of the Selected Cotton Textile Mills
(In Times)

Mills	Year s	1987- 88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	Average	Range
	PUBLIC SECTOR												
A ₁		97.00	73.07	36.10	15.58	1.05	1.96	4.54	6.80	11.55	2.82	25.05	95.95
A ₂		26.44	42.83	17.11	10.67	1.73	1.56	4.20	10.38	2.70	2.01	11.96	41.27
A ₃		38.79	65.57	262.57	77.02	75.15	107.74	9.49	10.15	8.69	4.30	65.95	258.27
A ₄		125.36	96.70	30.73	41.16	24.09	2.96	5.29	38.00	10.54	5.94	38.08	122.40
A ₅		74.69	56.21	39.66	68.06	14.28	5.04	6.63	45.43	19.03	7.94	33.70	69.65
A ₆		42.94	54.14	60.48	90.08	27.36	5.51	6.70	20.52	13.27	9.45	33.05	84.57
A ₇		25.02	34.40	126.29	32.13	2.71	2.55	3.02	9.19	47.65	10.21	29.32	123.58
A ₈		23.80	40.46	171.75	62.12	4.26	2.50	2.72	7.71	10.26	4.29	32.99	169.25
A ₉		58.96	72.90	12.00	15.47	1.74	3.22	9.51	24.18	13.88	14.45	22.63	71.16
A ₁₀		31.89	43.89	36.81	12.34	1.39	2.30	5.67	13.97	15.10	6.09	16.95	42.50
Ave		54.49	58.01	79.35	42.46	15.38	13.53	5.78	18.63	15.27	6.75	30.97	73.57
PRIVATE SECTOR													
B ₁		14.87	22.81	19.44	9.70	10.82	7.74	8.48	16.79	11.98	12.86	13.55	15.07
B ₂		NA	2.91	4.33	5.70	7.45	9.34	7.85	12.59	11.38	2.35	7.10	10.24
B ₃		46.98	61.61	23.22	14.90	19.83	15.47	10.95	11.19	11.27	8.73	22.42	52.88
B ₄		36.54	36.14	47.08	55.66	94.82	29.24	13.01	13.83	12.53	12.29	35.11	82.53
B ₅		-	-	NA	1780.92	52.68	11.61	14.71	86.43	254.29	91.89	327.50	1769.31
B ₆		-	-	46.44	90.16	85.72	23.48	15.97	17.92	19.20	19.56	39.81	74.19
B ₇		-	-	23.50	26.21	20.62	12.92	16.88	12.74	7.96	5.68	15.81	20.53
B ₈		-	-	-	10.94	17.03	7.72	8.68	18.89	24.29	22.25	15.69	16.57
B ₉		-	-	-	-	NA	17.56	22.24	36.80	13.65	20.55	22.16	23.15
B ₁₀		-	-	-	-	NA	7.89	9.95	21.98	28.02	15.96	16.76	20.13
Ave		32.80	30.87	27.34	249.27	38.62	14.30	12.87	24.92	39.46	21.21	49.17	236.40

Source : Computed from Appendix-10 and Annual Reports of BTMC and Member Mills of BTMA.

Notes : i) '-' indicates the period before establishment and commencement of production,
ii) NA= Not Available.

the more efficient the inventory management of a firm¹¹. Thus, the higher inventory turnover indicates the better efficiency of management in operating the enterprise with a relatively small average locking up of funds. In our analysis turnover of inventory of finished goods has been calculated by dividing the amount of cost of goods sold by the amount of average inventory of finished goods. Table-6.11 provides the turnover of inventory of finished goods in the selected cotton textile mill under public and private sector individually along with the average position during the period under study.

A look at Table-6.11 shows no clear trend either upward or downward could be said to have been established in inventory turnover ratio both in public and private sector. The average turnover of inventory of finished goods in all the public mills taken together was 54.49 times in 1987-88 which increased to 79.35 times in 1989-90 but thereafter, it showed a declining trend and came down to 5.78 times in 1993-94. The turnover again improved to 18.63 times in 1994-95 but could not maintain the level during the later years and it declined to 6.75 times in 1996-97. The yearly average turnover of inventory of finished goods was higher than the public sector combined average in Mills-A₃, A₄, A₅, A₆ and A₈ while it was lower than the combined average in Mills-A₁, A₂, A₇, A₉ and A₁₀. The yearly average turnover of inventory of finished goods was the highest in Mill-A₃ with 65.95 times followed by Mill-A₄ with 38.08 times, Mill-A₅ with 33.70 times, Mill-A₆ with 33.05 times and Mill-A₈ with 32.99 times which indicate more consumption of inventory of finished goods and thus minimum investment in inventory in these particular public sector mills while in the other cases the lower turnover denotes comparatively slow movement of inventory of finished goods and maximum investment in it.

In the private sector, the average turnover of inventory of finished goods was 32.80 times in 1987-88. It became abnormally high i.e., 249.27 times in 1990-91 due to very high ratio in Mill-B₅ resulting from a very low stock of finished

goods during the year. The average turnover ratio declined thereafter and came down to 12.87 times in 1993-94. Again it improved in 1994-95 and 1995-96 but further declined to 21.21 times in 1996-97. The yearly average turnover ratio in private sector was the highest in Mill-B₅ with 327.50 times, abnormally high due to very low inventory in 1990-91 and 1995-96 followed by Mill-B₆ with 39.81 times and Mill-B₄ with 35.11 times indicates the stock was consumed in more quantity than the other mills. However, the private sector average ratio of inventory turnover was lower than that of public sector during 1987-88 to 1989-90 but it was higher than public sector during the remaining years. Thus, it can be infer that inventory of finished goods was utilised more efficiency in the selected private sector mills during 1990-91 to 1996-97 and thus better performance of the mills for being operated with a smaller average locking up of funds in inventory of finished goods during the years.

6.5 INVENTORY AS PERCENTAGE OF GROSS WORKING CAPITAL

It is an indication of the amount of gross working capital invested in total inventory. Inventories are important to the management of an enterprise primarily because of the direct impact, which they have upon the firm's profits. Too much or too little inventories affect the firm's return on investment.

A glance at Table-6.12 indicates that the inventories occupied a major proportion of the gross working capital in most of the public sector mills in many of the years under study. It is found that in case of three public sector mills viz., A₅, A₈ and A₉ the inventories comprised more than 70% of the gross working capital, while three mills viz., A₃, A₄ and A₁₀ had 60% to 70% of the same and four mills viz., A₁, A₂, A₆ and A₇ had 30% to 45%. Mill-A₉ had the highest percentage of inventories to gross working capital of 72.52% varying in a range of

Table 6.12: Inventory as Percentage of Gross Working Capital.

Mills	Years	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	Average	Range
	PUBLIC SECTOR												
A ₁		29.11	27.38	32.85	58.82	71.24	59.66	22.23	10.99	32.85	30.29	37.54	60.25
A ₂		36.60	29.08	44.43	32.97	54.47	77.03	27.04	11.14	29.30	57.39	43.95	65.89
A ₃		65.39	61.56	78.19	77.14	51.10	59.43	84.99	14.37	75.45	58.73	62.64	70.62
A ₄		64.77	80.07	70.49	56.35	63.09	80.97	51.10	48.08	74.54	53.83	64.33	32.89
A ₅		76.56	69.71	74.19	72.52	76.58	79.48	60.16	64.51	72.35	61.88	70.79	19.32
A ₆		31.03	33.00	34.19	24.69	33.77	46.85	32.32	19.79	33.92	19.66	30.92	27.19
A ₇		17.42	12.87	38.87	45.64	97.77	63.15	53.80	10.93	38.92	40.05	41.88	86.84
A ₈		76.97	68.18	66.81	62.68	82.33	85.70	80.91	46.67	78.67	71.05	72.10	39.03
A ₉		58.06	60.54	75.88	80.87	93.45	87.88	82.17	65.25	73.53	47.52	72.52	45.93
A ₁₀		75.52	78.93	70.38	64.64	82.12	78.53	70.54	35.96	61.99	58.15	67.68	46.16
Ave		53.14	52.13	58.63	57.63	70.59	71.87	56.53	32.77	61.15	49.86	56.43	39.10
PRIVATE SECTOR													
B ₁		49.72	39.15	41.61	39.12	55.42	71.62	58.53	51.33	59.39	41.47	50.74	32.50
B ₂		68.86	66.08	54.13	67.93	33.29	36.98	50.70	37.18	42.51	67.41	52.51	35.57
B ₃		69.90	75.37	71.93	73.70	73.11	78.88	65.96	74.72	66.04	65.52	71.51	13.36
B ₄		44.31	43.79	48.43	38.83	62.43	53.78	58.77	60.47	54.76	42.70	50.83	23.60
B ₅		-	-	NA	31.67	65.25	77.12	71.89	15.82	5.45	7.97	39.31	71.67
B ₆		-	-	82.78	91.25	96.39	83.65	75.23	68.75	60.14	66.88	78.13	36.25
B ₇		-	-	55.38	54.60	52.07	60.74	41.14	46.18	44.41	44.99	49.94	19.60
B ₈		-	-	71.05	75.51	66.12	78.54	70.17	84.99	56.55	75.31	72.28	28.44
B ₉		-	-	-	-	NA	62.19	38.83	35.22	65.02	34.56	47.16	30.46
B ₁₀		-	-	-	-	NA	56.51	54.41	40.18	47.90	52.82	50.36	16.33
Ave		58.20	56.10	60.76	59.08	63.01	66.00	58.56	51.48	50.22	49.96	57.34	15.78

Source : Computed from Table-6.1 and Annual Reports of BTMC and Member Mills of BTMA.

- Notes : i) '-' indicates the period before establishment and commencement of production.
ii) NA = Not Available.

45.93 from 47.52% to 93.45%. The average percentage in all the public sector mills taken together varied in a range of 39.10 from 32.77%, being the lowest in 1994-95 to 71.87% in 1992-93, the highest.

In the private sector, three mills (viz., Mills-B₃, B₆ and B₈) had the average inventories comprising more than 70% of gross working capital, while four mills (viz., Mills-B₁, B₂, B₄ and B₁₀) had 50% to 60% and three mills (viz., Mills-B₅, B₇ and B₉) had 30% to 50% of the same. Mill-B₆ had the highest percentage of inventory to gross working capital of 78.13% varying in a range of 36.25 from 60.14% to 96.39%. The combined position of all the private sector mills taken together varied in a range of 16.04 from 49.96% in 1996-97 to 60.00% in 1992-93. Thus, the above analysis indicates that there was no significant difference in total inventory management among the mills under both public and private sector, which means that the other components of inventory i.e., raw materials, work-in-process and store and spares were not utilised efficiently in both public and private sector mills.

6.6 GRAPHICAL HIGHLIGHTS

Fig. 6.1 : Average Current Assets and Current Liabilities of the Cotton Textile Industry

(Source : Table-6.6)

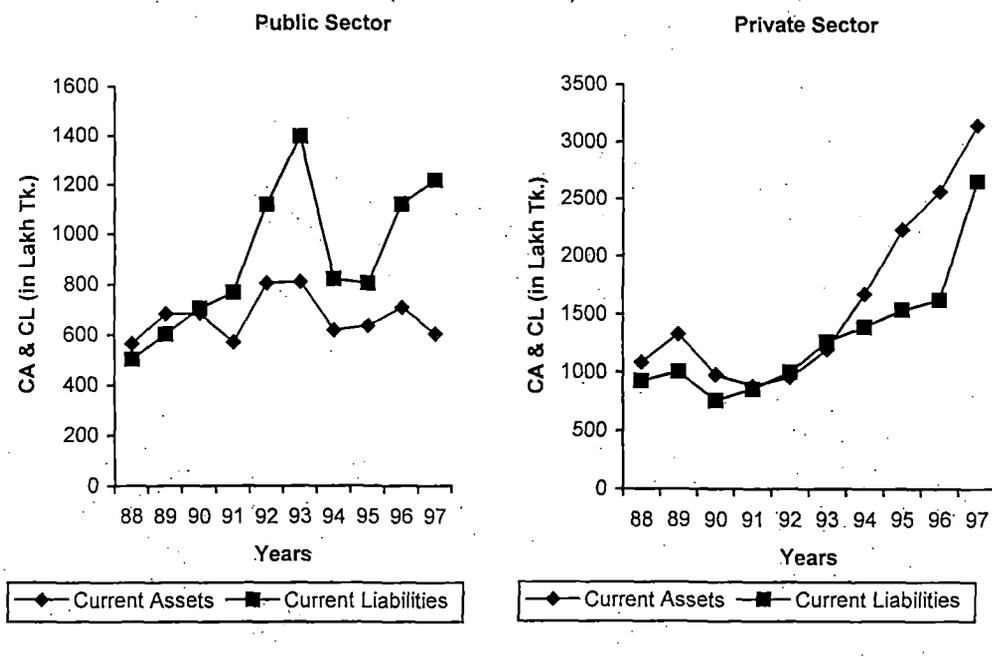


Fig. 6.2 : Average Liquidity of the Cotton Textile Industry

(Source : Table-6.6 & 6.8)

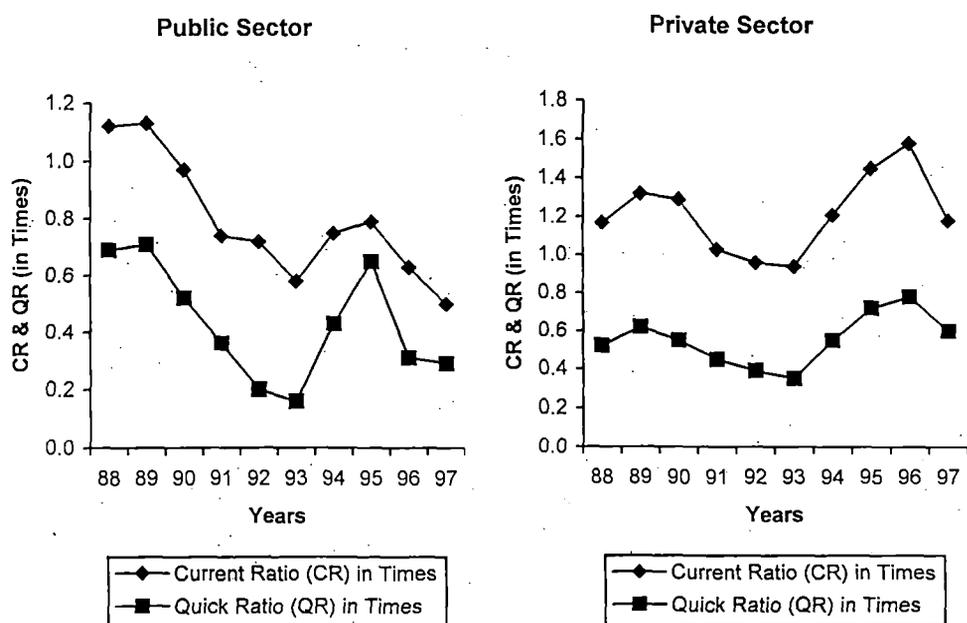


Table 6.13: Mean and 't'-values of the Performance indicators for Public and Private Sector : 1987-88 to 1996-97.

Table Nos.		P ₁ 6.1	P ₂ 6.2	P ₃ 6.3	P ₄ 6.4	P ₅ 6.6	P ₆ 6.8	P ₇ 6.9	P ₈ 6.10	P ₉ 6.11	P ₁₀ 6.12
PUBLIC SECTOR	1987-88	565.08	48.65	61.92	(11.76)	1.12	0.69	19.34	(6.84)	54.49	53.14
	1988-89	684.34	40.56	80.52	(7.36)	1.13	0.71	19.22	(0.73)	58.01	52.13
	1989-90	685.62	38.21	(19.69)	(5.46)	0.97	0.52	15.11	(2.14)	79.35	58.63
	1990-91	571.30	33.43	(197.98)	(13.68)	0.74	0.36	8.22	(1.31)	42.46	57.63
	1991-92	806.74	41.05	(19.76)	(5.56)	0.72	0.20	9.35	(117.43)	15.38	70.59
	1992-93	812.67	42.86	(586.97)	(32.39)	0.58	0.16	5.91	0.66	13.53	71.87
	1993-94	620.89	38.17	(202.82)	(37.27)	0.75	0.43	11.72	(2.73)	5.78	56.53
	1994-95	636.67	39.07	(51.44)	(32.60)	0.79	0.65	19.28	(2.16)	18.63	32.77
	1995-96	708.05	41.18	(241.54)	(42.10)	0.63	0.31	4.41	14.83	15.27	61.15
	1996-97	603.25	38.05	(615.01)	(86.89)	0.50	0.29	3.70	(0.57)	6.75	49.86
	X ₁	669.46	40.12	(179.28)	(27.51)	0.79	0.43	11.63	(11.84)	30.97	56.43
	SD ₁	87.99	3.95	248.06	25.16	0.22	0.20	6.26	37.53	25.66	11.05
	V ₁	7741.69	15.56	61531.56	633.02	0.05	0.04	39.14	1408.21	658.23	122.19
PRIVATE SECTOR	1987-88	1085.46	60.44	159.62	4.87	1.17	0.52	9.22	(3.73)	32.80	58.20
	1988-89	1331.28	46.76	323.31	8.95	1.32	0.62	5.56	13.50	30.87	56.10
	1989-90	981.03	33.12	223.40	5.99	1.29	0.55	8.20	8.46	27.34	60.76
	1990-91	883.22	29.46	24.47	(1.21)	1.03	0.45	6.91	0.92	249.27	59.08
	1991-92	958.64	25.46	(44.56)	(2.94)	0.96	0.39	5.88	(3.98)	38.62	63.01
	1992-93	1199.37	25.63	(70.38)	(2.03)	0.94	0.35	4.38	(22.89)	14.30	66.00
	1993-94	1683.69	31.14	289.40	3.14	1.21	0.55	4.86	1.04	12.87	58.56
	1994-95	2236.86	32.37	694.34	5.87	1.45	0.72	5.63	(0.76)	24.92	51.48
	1995-96	2575.75	31.20	937.03	7.73	1.58	0.78	4.42	(78.86)	39.46	50.22
	1996-97	3155.32	30.67	483.69	8.36	1.18	0.60	3.18	239.92	21.21	49.96
	X ₂	1609.06	34.63	302.03	3.87	1.21	0.55	5.82	15.36	49.17	52.04
	SD ₂	788.01	10.81	325.42	4.45	0.21	0.14	1.84	83.15	70.89	17.33
	V ₂	620954.24	116.90	105895.73	19.77	0.04	0.02	3.38	6914.51	5025.38	300.20
t-values	3.747*	1.511	3.720*	3.884*	4.452*	1.576	2.814*	0.943	0.763	0.676	

Note : i) P = Performance Indicator; ii) * denotes significant at 0.05 level of significance.

6.7 MEAN AND 't' VALUES OF THE PERFORMANCE INDICATORS AND SIGNIFICANCE OF MEAN DIFFERENCES

The actual values, mean and 't' values of the indicators used for comparing working capital position and efficiency of management of the public and private sector textile mills are provided in Table-6.13. It is evident from Table-6.13 that the differences between the mean values of five indicators are significant at 0.05 level of significance, which are as under:

P_1 = Average gross working capital

P_3 = Average net working capital

P_4 = Percentage of net working capital to total assets

P_5 = Current assets to current liabilities

P_7 = Percentage of cash to current assets

The 't' values of the above ratios or indicators are greater than the table value of t (2.101) at 0.05 level of significance. The table further reveals that the mean differences of the quick ratio (P_6) and the ratios (P_8 , P_9 and P_{10}) relating to efficiency of working capital are not significant at 0.05 level of significance.

6.8 SUMMING UP

Our investigation into working capital management of the selected cotton textile mills in Bangladesh during the period of 1987-88 to 1996-97 highlights the fact that the working capital position in the public sector mills was poor as compared to private sector textile mills. The average gross working capital in all the private sector mills was much higher than that of public sector mills during all the years under study. It is surprising that there was a large amount of net working capital deficit in eight public mills as their current liabilities exceeded the current

assets during all the years except one or two in a very few cases which constantly affected the liquidity and solvency of the particular mills. The position was more serious in some mills in which their net working capital deficit registered an upward trend. On the other hand, only four private sector mills experienced working capital deficit during most of the years under study. But the liquidity position was unsatisfactory in almost all the mills under both public and private sector, as their current and quick ratios were below the standard norms in majority of the years. There was surplus cash lying with the four public sector mills (viz., Mills-A₁, A₂, A₃ and A₆) and with the two private sector mills (viz., Mills-B₄ and B₇) in more than half of the years which affected their profitability adversely. As regards efficiency of working capital, turnover of working capital was negative in eight public mills during all the years under study with a very few exceptions. Comparatively better efficiency was achieved in managing working capital in private sector mills. Only in four mills the turnover was negative in many of the years. Our investigation also finds that on average the inventory of finished goods utilised more efficiently or consumed in more quantity in public sector mills up to 1989-90 but private sector mills achieved more efficiency in managing inventory of finished goods during all the years these after. Thus the higher average turnover of private sector mills showed better performance of the mills which had been operated with a relatively smaller average locking up of funds as in inventory of finished goods. But it is evident from our further analysis of total inventory as percentage of gross working capital that almost all the textile mills in both public and private sector had a sizeable investment in total inventory during many of the years under study which adversely affected their operational efficiency and income and therefore, profitability.

As regards shortage of working capital, low sales, poor collection from debtors and excess inventory accumulation have been cited as the major reason for working capital deficiency by the concerned mill authorities of both public and private sector. The policy of increasing working capital should be adopted in the

particular mills under public and private sector. Some of the mill authorities of public sector mentioned that there was a lack of co-ordination between sales and production, which was the root of all inventory management problems. They also mentioned that administered pricing policy, high cost of production and availability of foreign yarn in the market at lower price were the main causes of poor sales performance and higher locking up of funds in inventory. Moreover, a proper inventory management techniques are not applied in both public and private sector mills. Measures should be taken to increase the turnover of inventory and to minimise the blockage of inventory in both public and private sector textile mills.

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