

5.1 INTRODUCTION

In financial management, two important decisions are very vital and crucial. They are decision regarding fixed assets/fixed capital and decision regarding working capital/current assets. Both are important and a firm always analyzes their effect to final impact upon profitability and risk.

Fixed capital refers to the funds invested in such fixed or permanent assets as land, building, and machinery etc. Whereas working capital refers to the funds locked up in materials, work in progress, finished goods, receivables, and cash etc.

Thus, in very simple words, working capital may be defined as "capital invested in current assets." Here current assets are those assets, which can be converted into cash within a short period of time and the cash received is again invested into these assets. Thus, it is constantly receiving or circulating. Hence, working capital is also known as circulating capital or floating capital.

5.2 CONCEPT OF WORKING CAPITAL

There are two concepts of working capital. These are:

1. Gross working capital: (Total Current Assets)

The gross working capital, simply called as working capital refers to the firm's investment in current assets. Current assets are the assets, which can be converted into cash within an accounting year or operating cycle. Thus, Gross working capital, is the total of all current assets. It includes

- 1. Inventories (Raw materials and Components, Work-in-Progress, Finished Goods, Others)
- 2. Trade Debtors
- 3. Loans and Advance
- 4. Cash and Bank Balances
- 5. Bills Receivables.
- 6. Short-term Investment

2. Net Working Capital: (Total Current Assets – Total Current Liabilities)

Net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders, which are expected to mature for payment within an accounting year. Net working capital may be positive or negative. A positive net working capital will arise when current assets exceed current liabilities and a negative net working capital will arise when current liabilities exceed current assets i.e. there is no working capital, but there is a working capital deficit. It includes

- 1. Trade Creditors.
- 2. Bills Payable.
- 3. Accrued or Outstanding Expenses.
- 4. Trade Advances
- 5. Short Term Borrowings (Commercial Banks and Others)
- 6. Provisions
- 7. Bank Overdraft

"Working Capital represents the amount of current assets that have not been supplied by current, short term creditors."¹⁰

"Gross working capital refers to the amount of funds invested in current assets that are employed in the business process while, Net Working Capital refers to the difference between current assets and current liabilities." ¹¹

"Working Capital is the excess of current assets that has been supplied by the long-term creditors and the stockholders."¹²

The two concepts of working capital, gross working capital and net working capital are exclusive. Both are equally important for the efficient management of working capital. The gross working capital focuses attention on two aspects How to optimize investment in current assets? and How should current assets be financed? While, net working capital concept is qualitative. It indicates the

¹⁰ James C. Van Horne & John M. Wachowicz, Jr. – "Fundamentals of Financial Management",

¹¹ M. Y. Khan & P K Jain, - "Financial Management – Text and Problems",

¹² Prasanna Chandra – "Financial Management – Theory and Practice"

liquidity position of the firm and suggests the extent to which working capital needs may be financed by permanent sources of funds.

5.3 IMPORTANCE OF WORKING CAPITAL

Working capital is one of the important measurements of the financial position. The words of H. G. Guthmann clearly explain the importance of working capital. *"Working Capital is the life-blood and nerve centre of the business."* In the words of Walker, "A firm's profitability is determined in part by the way its working capital is managed." The object of working capital management is to manage firm's current assets and liabilities in such a way that a satisfactory level of working capital is maintained. If the firm cannot maintain a satisfactory level of working capital, it is likely to become insolvent and may even be forced into bankruptcy. Thus, need for working capital to run day-to-day business activities smoothly can't be overemphasized.

5.4 REQUIREMENTS OF WORKING CAPITAL

There are no set rules or formula to determine the working capital requirements of the firms. A large number of factors influence the working capital need of the firms. All factors are of different importance and also importance change for the firm over time. Therefore, an analysis of the relevant factors should be made in order to determine the total investment in working capital. Generally the following factors influence the working capital requirements of the firm:

- Nature and size of the business
- Seasonal fluctuations
- Production policy
- Taxation
- Depreciation policy
- Reserve policy
- Dividend policy
- Credit policy:
- Growth and expansion
- Price level changes
- Operating efficiency
- Profit margin and profit appropriation

5.5 WORKING CAPITAL ANALYSIS OF GSRTC

With a view to appraise working capital and liquidity position of GSRTC, the analysis has been made from the point of view of short term creditors, efficiency in the use of working capital, and investment in working capital.

Short-term creditors are primarily interested in liquidity position or the shortterm solvency of the firm while, the management is interested in efficient utilization of available working capital. The analysis throws the light on the following questions:

- 1. Will GSRTC be able to pay its current obligations promptly?
- 2. Can GSRTC effectively utilize the capital available?
- 3. Is the liquidity position of GSRTC improving?

To evaluate the performance of working capital of GSRTC and answer above questions, three fold analyses are undertaken as shown under:

- A. An Analysis of Working Capital Trend in GSRTC
- B. An Analysis of Working Capital Efficiency in GSRTC
- C. An Analysis of Liquidity Position of GSRTC

A. AN ANALYSIS OF WORKING CAPITAL TREND IN GSRTC

The working capital trend analysis represents a picture of variations in current assets, current liabilities and working capital of GSRTC over a period of time. Trend Analysis is a tool of financial analysis where changes are compared to the base year, keeping the base year as 100. Such an analysis helps us to study upward / downward trends in current assets and current liabilities and its effect on working capital. The following analysis was carried out to find out working capital trend in GSRTC

- 1. Current Assets Trend Analysis
- 2. Current Liabilities Trend Analysis
- 3. Working Capital Trend Analysis

1. Current Assets Trend Analysis

Table 5.1

Trend of Current Assets (per cent) (Base Year 1996-97) in GSRTC

From 1996-97 to 2005-06 (Rs. in lacs)

Sr. No.	Year	Stores & Inventories	Loans & Advances	Sundry Debtors	Cash on hand & at Bank	Current Assets	Trend
1	1996-97	3206.85	2772.65	6097.06	6097.17	18173.73	100.00
2	1997-98	3162.64	3123.76	6424.94	4506.41	17217.75	94.74
3	1998-99	2801.50	3561.50	7355.53	4587.83	18306.36	100.73
4	1999-00	3140.78	4974.60	8002.04	12270.22	28387.64	156.20
5	2000-01	2859.94	7191.54	19006.32	5102.46	34160.26	187.97
6	2001-02	2453.05	5285.94	18086.62	3154.23	28979.84	159.46
7	2002-03	1801.37	1733.60	37310.12	2324.75	43169.84	237.54
8	2003-04	1752.53	2017.35	37833.77	3096.64	44700.29	245.96
9	2004-05	1996.32	2080.23	36799.49	4551.09	45427.13	249.96
10	2005-06	2534.39	3920.73	36023.43	6782.38	49260.93	271.06

Source: Computed from the annual reports and accounts of GSRTC, Ahmedabad.

Chart 5.1 Relative Share of Current Assets in GSRTC







Table 5.2

Average Current Assets in GSRTC From 1996-97 to 2005-06 (Rs. in lacs)

No	Particular	Average Amount	Percentage
1	Stores and Inventories	2570.00	08
2	Loans and Advances	3666.20	11
3	Sundry Debtors	21293.93	65
4	Cash on Hand and at Bank	5247.32	16
	Total	32777.45	100

Table 5.2 and Chart 5.1 reveal that current assets in GSRTC include four main components. From above data, it is apparent that stores and inventories (stock in hand, stores and loose parts, material adjustment ledger, work in progress etc.) have the minimum share of 8% in the current assets of the corporation, whereas, sundry debtors (income earned but not received, interest due but not received, debts from other corporations etc.) have the biggest contribution of around 65% to the current assets.

Thus, current assets of GSRTC mainly comprise of sundry debtors. As such, the trend of current assets is largely followed by the trend of sundry debtors in GSRTC.

Table 5.1 and Chart 5.2 reveal that current assets in GSRTC show an increasing trend except in the year 1997-98 and 2002-03. It ranged between 94.69 per cent in the year 1997-98 and 271.06 per cent in the year 2005-06 with an average trend of current assets to be 180.36.

Though, current assets in GSRTC show an increasing trend during the study period, it was lower than average trend in current assets up to the year 1999-00. Then after, it was higher than average current assets trend till the ending year of the study period.

As presented in Chart 5.3 a sudden hype in the current assets is encountered during the year 1999-00 (**39.68%** increase in the level of Loans and Advances and **167.45%** in Cash on Hand and at Bank in comparison to last year). The possible reasons behind these may be:

- 1. Excessive advanced payment of Income Tax around Rs. 2, 27,710 during the year.
- An advanced payment made towards a number of purchase orders worth Rs. 3643.00 lacs placed during the year.
- 3. Security deposits (5% to 10% of amount of tender) received against limited and open tenders from various suppliers and manufacturers.
- Cash received around Rs. 720.77 lacs from the sell of scrap vehicles and materials through a number of auctions done by central workshop, Ahmedabad.
- An increase in the Equity Capital (around Rs. 2500 lacs), Loan (around Rs. 33244.53 lacs), Fund (around Rs. 5966.11 lacs), Provisions (around Rs. 5592.57 lacs) during the year.

As presented in Chart 5.2 a sudden hype in the current assets is also encountered during the year 2002-03 (**106.29%** increases in sundry debtors in comparison to last year). The possible reasons behind these may be:

- During the year, provisions of reimbursement to be received from Government on account of loss due to Student Concession, un-economic routes, city services etc. worked out.
- During the year the corporation has created casual contracts. However, casual contract kms. Operated decreased from lacs 67.14 to 65.03 lacs but the revenue increased by around Rs. 643.87 lacs due to the revised rates of casual contracts during the year.

2. Current Liabilities Trend Analysis

Table 5.3

Trend of Current Liabilities (per cent) (Base Year 1996-97) in GSRTC

From 1996-97 to 2005-06 (Rs. in lacs)

Sr. No.	Year	O/S Debt for Capital Expenditure	Revenue Liabilities	Gratuity	Diff. In closing stores	Provident Fund	Outstanding Interest:	Provisions	Current Liability	Trend
1	1996-97	2519.05	24208.03	0.00	0.00	0.00	107.52	1651.68	28486.29	100.00
2	1997-98	3148.00	43132.21	0.00	56.81	0.00	201.50	2194.47	48733.00	171.08
3	1998-99	1807.11	52818.60	0.00	0.00	0.00	311.71	2554.79	57492.22	201.82
4	1999-00	1404.95	78488.14	9.48	0.00	0.00	423.36	3037.80	83363.73	292.65
5	2000-01	3543.96	106102.77	34.39	0.00	0.00	535.02	5405.75	115621.90	405.89
6	2001-02	1919.22	117768.47	0.63	0.00	308.01	646.67	3134.71	123777.72	434.52
7	2002-03	2684.10	27639.46	1873.51	40.41	3827.14	758.33	34.51	36857.45	129.39
8	2003-04	7553.50	24975.68	2466.53	30.47	1340.28	869.99	23.64	37260.09	130.80
9	2004-05	6860.79	26944.98	2831.17	0.00	5892.85	981.64	23.01	43534.44	152.83
10	2005-06	8472.94	30824.10	1954.14	0.00	17423.82	1093.24	57.99	59826.23	210.02

Sorce: Computed from the annual reports and accounts of the GSRTC, Ahmedabad

Chart 5.3 Relative Share of Current Liabilities in GSRTC







Table 5.4 Average Current Liabilities in GSRTC From 1996-97 to 2005-06 (Rs in lacs)

No	Particular	Avg. Amount	Percentage
1	O/S Debt for Capital Expenditure	3991.36	06
2	Revenue Liabilities	53290.24	84
3	Gratuity	916.98	1
4	Difference in Closing Stores	12.77	0
5	Provident Fund	2879.21	5
6	Outstanding Interest	592.90	1
7	Provisions	1811.84	3
Total		63495.31	100

Table 5.4 and Chart 5.3 reveal that current liabilities in GSRTC include seven main components. From the above data, it is apparent that difference in closing stores is almost negligible in the current liabilities of the corporation, whereas, revenue liability has the biggest contribution of around 84% to the current liabilities. Thus, current liability of GSRTC mainly comprises of revenue liability. As such, the trend of current Liabilities is largely followed by the trend of revenue liabilities in GSRTC.

Table 5.3 and Chart 5.4 reveal that current liabilities in GSRTC show an increasing trend, except in the year 2002-03. It ranged between 100 per cent in the year 1996-97 and 434.52 per cent in the year 2001-02 with an average trend of current liabilities to be 222.90. Though, current liabilities in GSRTC show an increasing trend during the study period, it was lower than average trend in current liabilities except in the year 1999-00 to 2001-02.

As presented in Chart 5.4 current liabilities show a huge fall in the year 2002-03 because during the year corporation has decreased current liabilities, (**76.51%** decrease in the level of **revenue liabilities** around Rs. 90129.01 lacs as well as **98.90%** decrease in the **provisions** around Rs. 3100.20 lacs, in comparison to last year, this decrease may be due to decrease in staff cost & super annuation (as decrease in staff), taxes, depreciation, traffic, stationary, lease rent, uniform, electric power, clothing interest etc.

3. Working Capital Trend Analysis

Table 5.5Trend of Working Capital (per cent) (Base Year 1996-97) in GSRTCFrom 1996-97 to 2005-06 (Rs. in lacs)

Sr No	Voor	Current	Current	Working Capital	Adding Constant	Working Capital
SI. NO.	Tear	Assets	Liabilities	(CA-CL)	Value 94797.89	Trend
1	1996-97	18173.74	28486.29	-10312.55	84485.34	100.00
2	1997-98	17208.37	48733.00	-31524.63	63273.26	74.89
3	1998-99	18306.37	57492.22	-39185.85	55612.04	65.82
4	1999-00	28387.64	83363.73	-54976.09	39821.80	47.13
5	2000-01	34160.26	115621.90	-81461.64	13336.25	15.79
6	2001-02	28979.83	123777.72	-94797.89	0.00	0.00
7	2002-03	43169.83	36857.45	6312.38	101110.27	119.68
8	2003-04	44700.29	37260.09	7440.20	102238.09	121.01
9	2004-05	45427.13	43534.44	1892.69	96690.58	114.45
10	2005-06	49261.00	59826.23	-10565.23	84232.66	99.70
	Average	32777.45	63495.31	-30717.86	94213.17	75.85

Source: Computed from the annual reports and accounts of the GSRTC, Ahmedabad

Chart 5.5 Current Assets and Current Liabilities in GSRTC

From 1996-97 to 2005-06







Chart 5.5 reveals that, in GSRTC, current liabilities are greater than current assets during the whole study period except in the year 2002-03, 2003-04 and 2004-05. From the data presented in Table 5.5, it is apparent that difference between current liabilities and current assets is minimum around **18.35%** (45427.13 – 43534.44) in the year 2004-05, whereas, highest around **919.25%** (28979.83 – 123777.72) in 2001-02.

Working capital is negative in major years of the study period except in the year 2002-03, 2003-04 and 2004-05. Thus, current Liability of GSRTC is normally higher than its current Assets.

Table 5.5 and Chart 5.6 indicate that working capital in GSRTC show decreasing trend except in the years 2002-03 and 2003-04. It ranged between –919.25 per cent in the year 2001-02 and 72.15 per cent in the year 2003-04 with an average trend of working capital -297.87.

Though, working capital in GSRTC show decreasing trend during the study period, it was higher than average trend except in the year 2002-03, 2003-04 and 2004-05.

As a whole, it may be concluded that **working capital trend is positive from the year 2002-03,** as current assets are higher than current liabilities from that year.

B. EFFICIENCY ANALYSIS OF GSRTC

Efficiency analysis examines how efficiently different working capital components are used in an enterprise. Working capital may have various components. Efficient turnover of these components results into higher efficiency which in turn results into higher profitability. In GSRTC, to measure efficiency in the utilization of working capital following ratios have been calculated:

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- 1. Working Capital Turnover Ratio
- 2. Debtors Turnover Ratio
- 3. Creditors Turnover Ratio

1. Working Capital Turnover Ratio

The working capital is required for the smooth running of day to day operations of the business. Hence, it has utmost importance in analysing business operation both internally and externally. Inadequacy or mismanagement of working capital leads towards business failure.

The working capital of a company is the life blood which flows through the veins and arteries of the structure. as like the lacking or slow down of blood results into a death, the lacking or slow down of working capital results into a death of financial body (brain - management and muscles – personnel) of a business and becomes just junk.

The Working Capital Turnover Ratio is one of the best measures to analyse the efficiency of a firm in managing its working capital. It is figured as shown below:

Working Capital Turnover Ratio = $\frac{\text{Net Sales (Net Revenue)}}{\text{Working Capital}}$

As GSRTC is a service sector, net sales is replaced by net revenue. Moreover, in the present study, working capital is taken as the excess of current assets over current liabilities.

The faster the working capital turnover, the lower is the total investment and is greater the profit. However, a very high turnover of working capital may, in some cases, denote deficiency of working funds for the given volume of business, which ultimately adversely affects the profitability.

Table 5.6 Working Capital Turnover Ratio (times) in GSRTC From 1996-97 to 2005-06 (Rs. in lacs)

Sr. no.	Year	Net Revenue	Working Capital	Ratio
1	1996-97	80868.41	-10312.55	-7.84 : 1
2	1997-98	86208.27	-31524.63	-2.73 : 1
3	1998-99	94939.69	-39185.85	-2.42 : 1
4	1999-00	107233.27	-54976.09	-1.95 : 1
5	2000-01	124854.28	-81461.64	-1.53 : 1
6	2001-02	122666.38	-94797.89	-1.29 : 1
7	2002-03	130824.01	6312.38	20.72 : 1
8	2003-04	141540.43	7440.20	19.02 : 1
9	2004-05	137070.71	1892.69	72.42 : 1
10	2005-06	143016.76	-10565.23	-13.54 : 1
Average		116922.22	-30717.86	8.09
S D		23099.90	36598.77	25.05
CV %		19.76	-119.14	309.83
Compound Annual Growth Rate %		10.49	7.70	5.61

Source: Computed from the annual reports and accounts of the GSRTC, Ahmedabad

Working Capital Analysis





The Working Capital Turnover Ratio of GSRTC is presented in Table No. 5.6. In GSRTC, the ratio shows a fluctuating trend. It ranged between 72.46 times in the year 2004-2005 and -13.54 in the year 2005-2006 with an average ratio of 8.09 times.

As presented in the Chart 5.7 the ratio shows an increasing trend except in the year 2003-04 and 2005-06. Moreover, it was below the average ratio during the whole study period excluding in the year from 2002-03 to 2004-05

The coefficient variation in the ratio is 309.83, which indicates that there is very high dispersion in the ratio of GSRTC over the period.

It can also be concluded that over 10 years of study period from 1996-97 to 2005-06, the ratio has risen from -7.84 to 13.54. Its compound annual growth rate is 5.61%.

As a whole, from the Working Capital Turnover Ratio, it may be concluded that the working capital utilization is satisfactory during the years 2002-03 to 2004-05. However, it was very poor in the rest of the years.

2. Debtors Turnover Ratio

The Debtors Turnover ratio is also termed as Debtors speed ratio. It indicates the quickness in realization of sundry debtors. The main object of this ratio is to know how much credit time is allowed and capital blocked in debtors. Debtors' turnover ratio also shows the effectiveness in collection of debts due. Generally, higher ratio is the indication of efficient management of liquidity. However, a firm should maintain a balance between the debtors outstanding and the amount of interest incurred on the blocked funds. It is figured as shown below:

Debtors Turnover Ratio = $\frac{\text{NetSales (Net Revenue)}}{\text{Debors}}$

As in working capital turnover ratio, net sales are replaced by net revenue in debtors turnover ratio also.

Table 5.7Debtors Turnover Ratio (times) in GSRTC

From 1996-97 to 2005-06 (Rs. in lacs)

Sr. no.	Sr. no. Year		Debtors	Ratio
1	1996-97	80868.41	6097.06	13.26 : 1
2	1997-98	86208.27	6424.94	13.42 : 1
3	1998-99	94939.69	7355.53	12.91 : 1
4	1999-00	107233.27	8002.04	13.40 : 1
5	2000-01	124854.28	19006.32	6.57 : 1
6	2001-02	122666.38	18086.62	6.78 : 1
7	2002-03	130824.01	37310.12	3.51 : 1
8	2003-04	141540.43	37833.77	3.74 : 1
9	2004-05	137070.71	36799.49	3.72 : 1
10	2005-06	143016.76	36023.43	3.97 : 1
Average		116922.22	21293.93	8.13
S D		23099.90	14243.79	4.55
CV %		19.76	66.89	56.01
Compound A Growth Rate	nnual %	10.49	7.70	-11.36

Source: Computed from the annual reports and accounts of GSRTC, Ahmedabad





The coefficient variation in the ratio is 56.01, which indicates that there is 56.01 per cent dispersion in the ratio of GSRTC over the period.

It can The Debtors Turnover Ratio of GSRTC has been presented in Table No. 5.7. In GSRTC, the ratio shows a fluctuating trend. It ranged between 5.67 times in the year 2003-04 and 1.04 in the year 2001-2002 with an average ratio of 3.08 times.

As presented in the Chart 5.8 though the ratio was decreasing, it shows fluctuating trend during the whole study period. Moreover, it was too above the average ratio in the initial four years. Then after, it was below the average ratio till the ending year.

also be concluded that over the course of 10 years of study period from

1996-97 to 2005-06, the ratio has fallen from 13.26 to 3.97. Hence, its compound annual growth rate is negative 11.36%.

As a whole, from the Debtors Turnover Ratio, it may be concluded that during the initial years the GSRTC was efficiently managing its liquidity and revenue. However, it continuously becomes worse over the time.

3. Creditors Turnover Ratio

The Creditors Turnover ratio is also termed as Debtors speed ratio. It indicates the quickness in realization of sundry debtors. The main object of this ratio is to know how much credit time received by the firm from its trade creditors. Creditors' turnover ratio shows the breathing time received by the firm in terms of payment of credit purchase. Hence, the effectiveness lies in whether the firm is enjoying the actual credit period promised by suppliers. It is calculated by dividing the amount of purchases by creditors. Here it has been assumed that all of the purchases have been made as credit purchases. It is figured as shown below:

Creditors Turnover Ratio = $\frac{\text{NetSales (Net Revenue)}}{\text{Creditors}}$

Table 5.8 Creditors Turnover Ratio (times) in GSRTC From 1996-97 to 2005-06 (Rs. in lacs)

Sr. no.	Year	Net Revenue	Creditors	Ratio
1	1996-97	80868.41	24208.03	3.34 :1
2	1997-98	86208.27	43132.21	2.00 : 1
3	1998-99	94939.69	52818.60	1.80 : 1
4	1999-00	107233.27	78488.14	1.37 : 1
5	2000-01	124854.28	106102.77	1.18 : 1
6	2001-02	122666.38	117768.47	1.04 : 1
7	2002-03	130824.01	27639.46	4.73 : 1
8	2003-04	141540.43	24975.68	5.67 :1
9	2004-05	137070.71	26944.98	5.09 : 1
10	2005-06	143016.76	30824.10	4.64 : 1
Average	Average		53290.24	3.08
S D		23099.90	35259.67	1.81
CV %		19.76	66.17	58.67
Compound Annual Growth Rate %		10.49	7.70	3.34

Source: Computed from the annual reports and accounts of the GSRTC, Ahmedabad





The Creditors Turnover Ratio of GSRTC has been presented in Table No. 5.8. In GSRTC, the ratio shows decreasing trend. It ranged between 5.67 times in the year 2003-04 and 1.04 in the year 2001-2002 with an average ratio of 3.08 times.

As presented in the Chart 5.9 the ratio shows decreasing trend during the whole study period except in the year 2002-03 and 2003-04. Moreover, it was above and too above the average ratio in the first year and last four years respectively. It was below the average ratio in the rest of the years.

The coefficient variation in the ratio is 58.67, which indicates that there is 58.67 per cent dispersion in the ratio of GSRTC over the period.

It can also be concluded that over the course of 10 years of study period from 1996-97 to 2005-06, the ratio has risen from 3.34 to 4.64. Hence, its compound annual growth rate is 3.34%.

As a whole, from the Creditors Turnover Ratio, it may be concluded that during the initial years the creditors' turnover was poor. However it was improving from the year 2002-03 till the ending year.

C. AN ANALYSIS OF LIQUIDITY POSITION OF GSRTC

Liquidity is a prerequisite for the very survival of a firm. The short-term creditors of the firm are interested in the short-term solvency or liquidity of a firm. Liquidity means the ability of an asset to be converted into cash without a significant price concession. Liquidity has two dimensions: the time required for converting the asset into cash and the certainty of the price realized.

The liquidity ratios measure the ability of a firm to meet its short-term obligations and reflect the short-term financial strength/solvency of a firm. It is very important for a firm to meet its current obligations as they become due. Though, liquidity analysis is better understood by cash budget and cash flow

and fund flow statement, liquidity ratios give quick measures of liquidity. They do so by comparing cash and current assets to current obligations. From these ratios, much insight can be obtained into the present solvency of the firm and the firm's ability to remain solvent in the event of adversity.

Liquidity implies that funds are idle or they earn very little. A proper balance should be maintained between two contradictory requirements liquidity and prodigality. A firm suffers from lack of liquidity cannot meet its obligations in time, which results in poor creditworthiness, lack of creditor's confidence, closure of company due to legal tangles. If a firm keeps higher level of liquidity, the firms fund will be unnecessarily tied up in current assets, which earns nothing.

Therefore, a firm should maintain proper balance between lack of liquidity and high liquidity. For analyzing liquidity position of GSRTC, following ratios have been computed:

- Current Ratio
- Quick Ratio
- Cash Ratio / Super Quick Ratio
- Interval Measure Ratio / Defensive Interval Ratio
- Cash flow Coverage Ratio

4. Current Ratio

The Current Ratio is one of the best known measures of financial strength. It is figured as shown below:

Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

The main question this ratio addresses is: **"Does the business have enough** current assets to meet the payment schedule of its current debts with a

margin of safety for possible losses in current assets, such as inventory shrinkage or collectable accounts?"

Thus, current ratio measures firm's short-term solvency. It indicates firm's ability to cover its current liabilities with its current assets. In a more specific manner, it indicates the availability of current assets in rupees for every one rupee of current liability. As such, higher the current ratio, the larger is the amount of rupees available per rupee of current liability, the more is the firm's ability to meet current obligations and greater is the safety of funds of short-term creditors. Thus, current ratio measures margin of safety to the short-term creditors.

The current ratio is calculated by dividing current assets by current liabilities. Current assets include cash and those assets, which can be converted into cash within one year such as marketable securities, debtors, inventories, and prepaid expenses. Current liabilities include all obligations those are matured within a year such as creditors, bills payable, accrued expenses, short-term bank loan, income tax liability and long-term debt maturing in the current year.

A current ratio of **2** : **1** or more is considered satisfactory. But, whether or not a specific ratio is satisfactory depends on the nature of the business and the characteristics of its current assets and liabilities. The minimum acceptable current ratio is obviously 1:1, but that relationship is usually playing it too close for comfort.

However, it may happen that the firm having higher current ratio may be struggling to meet its obligations and in reverse firms having lower current ratio may be doing well. This is because current ratio only measures total current assets and total current liabilities and does not measure qualities of current assets and current liabilities. So we cannot solely depend upon the current ratio. But at the same time we cannot ignore it because it is the crudeand-quick measure of the firm's liquidity.

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Table 5.9

Current Ratio (times) in GSRTC From 1996-97 to 2005-06 (Rs. in lacs)

Sr. no.	Year	Current Assets	Current Current Assets Liability	
1	1996-97	18173.74	28486.29	0.64 : 1
2	1997-98	17208.37	48733.00	0.35 : 1
3	1998-99	18306.37	57492.22	0.32 : 1
4	1999-00	28387.64	83363.73	0.34 : 1
5	2000-01	34160.26	115621.90	0.30 : 1
6	2001-02	28979.83	123777.72	0.23 : 1
7	2002-03	43169.83	36857.45	1.17 : 1
8	2003-04	44700.29	37260.09	1.20 : 1
9	2004-05	45427.13	43534.44	1.04 : 1
10	2005-06	49261.00	59826.23	0.82 : 1
Average		32777.45	63495.31	0.64
S D		12394.26	33392.05	0.39
CV %		37.81	52.59	60.54
Compound Annual Growth Rate %		10.49	7.70	2.51

Source: Computed from the annual reports and accounts of the GSRTC, Ahmedabad

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The Current Ratio of GSRTC has been presented in the Table No. 5.9. In GSRTC, the Current Ratio shows fluctuating trend. It ranged between 0.23 times in the year 2001-2002 and 1.20 times in the year 2003-2004 with an average ratio of 0.64 times.

The ratio shows decrease trend during the whole study period, except in the year 2002-2003 and 2003-2004. Moreover, the GSRTC had not maintained the standard ratio of **2:1** times during the whole study period.

Current ratio as presented in Chart 5.10 was below the average current ratio up to the year 2001-2002. From the year 2002-03, it was above the average current ratio till the end year. However, it was too below from standard current ratio during whole study period.

As shown in Chart 5.10 the current ratio show a huge jump in the year 2002-03 due to two fold reasons, current assets increased by **48.97%** and current liabilities decreased by **70.22%**. The possible reasons are discussed here before while explaining the trend of current assets and current liabilities.

Testing of Hypothesis

A study of the time wise variance of current ratio of GSRTC would be of interest. This may be studied by applying t-test.

Null Hypothesis:	There is no significance difference between the			
	current ratio of GSRTC over the time Ho: $\mu = 1$			
Alternative hypothesis:	There is significance difference between the			
	current ratio of GSRTC over the time $H_1: \mu \neq 1$			
Level of Significance:	5 percent			
Critical Value:	±2.262			
Degree of Freedom:	9			

After making necessary calculation from the data given in Table 5.9, the t-test is presented in the following table.

Table 5.10

t - test

x	σs	CV %	d.f.	't' Ratio Calculated Value	't' Ratio Table Value
0.64	0.39	60.54	9	-2.938	±2.262

Table 5.10 indicates that the observed value of t is -2.938, which is in the rejection region, as such H₀ is rejected at 5 per cent level of significance and we can conclude that, there is significant difference in the current ratio of GSRTC over the period.

The coefficient variation in current ratio is 60.54, which indicates that there is 60.54 per cent dispersion in the current ratio of GSRTC over the period.

It can also be concluded that over the course of 10 years of study period from 1996-97 to 2005-06, the current ratio has risen from 0.64 to 0.82. Its compound annual growth rate is 2.51%.

As a whole, from the current ratio, it may be concluded that:

- The GSRTC has very few current assets against current liabilities (average current assets of Rs. 0.64 against current liabilities of Rs. 1.)
- The GSRTC does not have enough current assets to meet the payment schedule of its current debts.
- The margin of safety to the short-term creditors is lower around 39%, this situation is not advisable from the viewpoint of short-term creditors.
- The liquidity position of GSRTC is not Sound.
- The liquidity position of GSRTC is improving from the year 2002-03.
- The compound annual growth rate is 2.51%.

1. Acid-Test (Quick) Ratio

The Quick Ratio is sometimes called the "acid-test" ratio and is one of the best measures of liquidity. It is figured as shown below:

Quick Ratio = $\frac{\text{Current Assets - Inventory}}{\text{Current Liabilities}}$

The quick ratio measures firm's current financial condition. It indicates a firm's ability to meet its current liabilities with its most liquid (quick) assets. The quick ratio is calculated by dividing quick assets (current assets – inventories) by current liabilities.

Quick assets are those current assets which can be converted into cash immediately or at a short notice without diminution of value such as cash, marketable securities, debtors, and bills receivables excluding inventories. This is so, because it requires some time for converting into cash, addedly their values tend to fluctuate.

Current liabilities include all obligations, which mature within a year such as creditors, bills payable, accrued expenses, short-term bank loan, income tax liability and long-term debt excluding bank overdraft, all of which quickly mature in the current year.

This ratio serves as a supplement to the current ratio in analyzing liquidity. This ratio is same as current ratio except it excludes inventories – presumably the least liquid portion of current assets. A quick ratio of **1** : **1** is considered as satisfactory.

The Quick Ratio is a much more exact measure than the Current Ratio. By excluding inventories, it concentrates on the really liquid assets, with value that is fairly certain. It helps answer the question: **"If all sales revenues should disappear, could the business meet its current obligations with the readily convertible `quick' funds on hand?"**

Table 5.11

Quick Ratio (times) in GSRTC From 1996-97 to 2005-06 (Rs. in lacs)

Sr. no.	Year	Current Assets	Inventory	Current Liabilities	Ratio
1	1996-97	18173.74	3118.25	28486.29	0.53 :1
2	1997-98	17208.37	3044.70	48733.00	0.29 : 1
3	1998-99	18306.37	2732.96	57492.22	0.27 : 1
4	1999-00	28387.64	3106.99	83363.73	0.30 : 1
5	2000-01	34160.26	2824.36	115621.90	0.27 : 1
6	2001-02	28979.83	2387.12	123777.72	0.21 : 1
7	2002-03	43169.83	1748.11	36857.45	1.12 : 1
8	2003-04	44700.29	1717.24	37260.09	1.15 : 1
9	2004-05	45427.13	1965.00	43534.44	1.00 : 1
10	2005-06	49261.00	2460.11	59826.23	0.78 : 1
Average		32777.45	2510.48	63495.31	0.59
S D		12394.26	546.13	33392.05	0.38
C V %		0.42	0.21	0.66	64.65
Compound Annual Growth Rate %		10.49	-2.34	7.70	3.94

Source: Computed from the annual reports and accounts of the GSRTC, Ahmedabad

Working Capital Analysis





Quick ratio as presented in Table 5.11 the Quick Ratio also shows fluctuating trend. It ranged between 0.21 times in the year 2001-2002 and 1.15 in the year 2003-2004 with an average ratio of 0.59 times.

The Ratio shows decreasing trend except in the year 1999-00, 2002-03 and 2003-04. Moreover, the GSRTC had maintained more than the standard ratio of **1:1** in the year 2002-2003, 2003-04 and equal to the standard Ratio in the year 2004-05.

Quick ratio as presented in the Chart 5.11 was below the average quick ratio up to the year 2001-02. From the year 2002-03, it was above the average quick ratio. However, it was too below from standard quick ratio during whole study period except in the year 2002-03 to 2004-05.

As shown in Chart 5.11 the quick ratio show a huge jump in the year 2002-03 due to two fold reasons: first, current assets increased by **48.97%** and second, current liabilities decreased by **70.22%**. The possible reasons are discussed in previous section while explaining the trend of current assets and current liabilities.

Testing of Hypothesis

A study of the time wise variance of quick ratio of GSRTC would be of interest. This may be studied by applying t-test.

Null Hypothesis:	There is no significance difference between the			
	quick ratios of GSRTC over the time Ho: $\mu = 1$			
Alternative Hypothesis:	There is significance difference between the			
	quick ratios of GSRTC over the time $H_1: \mu \neq 1$			

After making necessary calculation from the data given in Table 5.11 the t-test is presented in the following table"

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Table 5.12
t - test

x	٩	CV %	d f		't' Ratio	
	03	01 /0	u	Calculated Value	Table Value	
0.59	0.38	64.65	9	-3.347	±2.262	

Table 5.12 indicates that the observed value of t is -3.347, which is in the rejection region, as such H_0 is not accepted at 5 per cent level of significance and we can conclude that there is significant difference in the quick ratio of GSRTC over the period.

The coefficient variation in quick ratio is 64.65, which indicates that there is 60.54 per cent dispersion in the quick ratio of GSRTC over the period.

It can also be concluded that over the course of 10 years of study period from 1996-97 to 2005-06, the quick ratio has risen from 0.53 to 0.78. Its compound annual growth rate is 3.94%.

As a whole, from the Quick ratio, it may be concluded that:

- The GSRTC has very few Quick assets against current liabilities (average quick assets of Rs. 0.59 against current liabilities of Rs. 1).
- The GSRTC is not able to meet its current obligations with the readily convertible 'quick' assets.
- The short-term solvency of GSRTC is poor.

2. Cash Ratio / Super Quick Ratio:

The cash ratio measures firm's current financial condition. It indicates a firm's ability to meet its current liabilities with cash and those assets, which are equivalent to cash such as trade investment or marketable securities. This ratio is the variation of quick ratio. This ratio is most vigorous measure of liquidity position. However, it is not widely used in practice. The cash ratio is calculated by dividing (cash + marketable securities) by current liabilities. It is figured as shown below:

Cash Ratio = $\frac{\text{Cash} + \text{Marketable Securities}}{\text{Current Liabilities}}$

Table 5.13

Cash Ratio (times) in GSRTC From 1996-97 to 2005-06 (Rs. in lacs)

Sr.no.	Year	Cash & Marketable Securities	Current Liabilities	Ratio	
1	1996-97	6102.29	28486.29	0.21 : 1	
2	1997-98	4511.53	48733.00	0.09 : 1	
3	1998-99	4592.95	57492.22	0.08 : 1	
4	1999-00	12270.34	83363.73	0.15 :1	
5	2000-01	5102.57	115621.90	0.04 : 1	
6	2001-02	3154.23	123777.72	0.03 : 1	
7	2002-03	2324.75	36857.45	0.06 : 1	
8	2003-04	3096.64	37260.09	0.08 : 1	
9	2004-05	4551.09	43534.44	0.10 : 1	
10	2005-06	6782.38	59826.23	0.11	
Average		5248.88	63495.31	0.10	
S D		2817.27	33392.05	0.05	
CV %		53.67	52.59	50.00	
Compound A Growth Rate	Annual 9 %	1.06	7.70	-6.26	

Source: Computed from the annual reports and accounts of the GSRTC, Ahmedabad

Working Capital Analysis





The Cash Ratio of GSRTC has been presented in the table no 5.13 and Chart 5.12. In GSRTC the Cash Ratio ranged between 0.03 times in the year 2001-2002 and 0.21 in the year 1996-1997 with an average ratio of 0.10 times.

The Ratio shows fluctuating trend during the study period. It shows decreasing trend up to the year 2001-02 except in the year 1999-00, then after it shows increasing trend from the year 2002-03 onwards.

Cash ratio as presented in the chart 5.12 was below the average cash ratio during whole study period except in the year 1996-97, 1999-00 and 2005-06. It was near to the average cash ratio in the year 1997-98 and 2004-05. However, it has been continuously increasing from the year 20001-02 till the end year.

As shown in Chart 5.12, the inverse relationship of cash and current liabilities examined more inverse changes during the year 1997-98, 1999-00 and 2000-01.

- 1. The cash ratio show a huge fall in the year 1997-98 and 2000-01. The possible reasons may be:
 - Repayment of various term loans around Rs. 935.90 lacs and Rs. 726.16 lacs respectively.
 - Purchase of land, building, passenger vehicles, departmental vehicles, plant machinery and instruments etc. around Rs. 1275.32 lacs and Rs. 457.51 lacs respectively.
 - Increase in current liabilities due to various expenses around Rs. 19131.08 lacs.
- 2. On the contrary, Cash Ratio examines a sudden hype in the year 1999-00, as cash received around Rs. 700.65 lacs from the sell of scrap vehicles and materials through number of auctions done by central workshop, Ahmedabad.

It can also be concluded that over the course of 10 years of study period from

1996-97 to 2005-06, in GSRTC the cash ratio has fallen from 0.21 to 0.11. Hence, its compound annual growth rate is negative 6.26%

As a whole, from the cash ratio, it may be concluded that:

- The GSRTC has very few cash against current liabilities (average cash of Rs. 0.10 against current liabilities of Rs. 1).
- The GSRTC is not able to meet its current obligations with its super quick assets.
- The compound annual growth rate is negative (-6.26%).

1. Interval Measure Ratio/Defensive Interval Ratio

Current ratio, quick ratio and cash ratio throw light on the ability of a firm to pay its current liabilities. Interval Measure Ratio measures liquidity in terms of a firm's ability to meet its regular cash expenses from operations. It is calculated as shown below:

Interval Measure Ratio = $\frac{\text{Current Assets - Inventory}}{\text{Average Daily Operating Expenses}}$

Where,

Average Daily Operating Expenses =
$$\frac{\text{Total Operating Expenses}}{\text{Number of Days in a Year}}$$

It is calculated by dividing current assets excluding inventories by average daily operating expenses. Daily operating expense includes expenses such as selling administrative and general expenses, less depreciation and other noncash expenditures. Average daily operating expenses are derived by dividing total operating expenses by number of days in the year (360).

Thus, Interval measure Ratio relates liquid assets to average daily operating cash outflows. This ratio measures the time span for which a firm can operate on present liquid assets without resorting to next year's income.

Table 5.14

Interval Measure Ratio (days) in GSRTC

From	1996-97	to 2005-06	(Rs. in	lacs)
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sr. no.	Year	Current Assets	Inventory	Daily Operating Expenses	Ratio
1	1996-97	18173.74	3118.25	85582.30	63.33
2	1997-98	17208.37	3044.7	103744.78	49.15
3	1998-99	18306.37	2732.96	105977.13	52.90
4	1999-00	28387.64	3106.99	136045.40	66.90
5	2000-01	34160.26	2824.36	145406.43	77.58
6	2001-02	28979.83	2387.12	147876.31	64.74
7	2002-03	43169.83	1748.11	143037.57	104.25
8	2003-04	44700.29	1717.24	142724.98	108.42
9	2004-05	45427.13	1965	142026.20	110.17
10	2005-06	49261.00	2460.11	148362.11	113.56
Avera	ge	32777.45	2510.48	130078.32	81.10
S D		12394.26	546.13	22721.68	25.37
C V %		37.81	21.75	17.47	31.29
Comp Annua Rate ^o	ound al Growth %	10.49	-2.34	5.66	6.01

Source: Computed from the annual reports and accounts of the GSRTC, Ahmedabad

Chart 5.13 Interval Measure Ratio in GSRTC From 1996-97 to 2005-06



The Interval Measure Ratio of GSRTC is presented in the Table No. 5.14. In GSRTC the Interval measure Ratio ranged between 49.15 days in the year 1997-98 and 113.56 days in the year 2005-2006 with an average ratio of 81.10 days.

The Interval Measure Ratio as shown in the table 5.14 indicates that in the year 1996-97 the firm has sufficient liquid assets to finance its operating expenses for 63.33 days. Then after, it was decreased to 49.15 and 52.90 days in the next years. In the year 1999-00, again it increases to 77.58 and with slight decrease 64.74 in the year 2001-02. From the year 2002-03 it was continuously increasing and stopped with the 113.56 days in the ending year.

Interval measure Ratio, as presented in the chart 5.13, shows increasing trend till the end year except in the year 1997-98 and 2001-02. however, it was below the average up to the year 2001-2002 and then after it was above the average ratio till the ending year.

As shown in Chart 5.13, the inverse relationship of current assets and daily operating expenses examined more inverse changes during the year 2002-03 because the reimbursement to be received from Government on account of loss due to Student Concession, un-economic routes, city cervices etc. worked out and at the same time the revenue from casual contracts increased by around Rs. 643.87 lacs due to the revised rates during the year.

On the contrary, daily operating expenses reduced to around Rs. 16441.02 lacs due to decrease in staff cost, super annuation, taxes, depreciation traffic, stationary, lease rent, uniform, electric power, clothing, interest etc. This reduced the ratio of interval measure.

The coefficient variation in interval measure ratio is 31.29, which indicates that there is 31.29 per cent dispersion in the interval measure ratio of GSRTC over the period.

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It can also be concluded that over the course of 10 years of study period from 1996-97 to 2005-06 the Interval Measure Ratio has risen from 63.33 to 113.56. Its compound annual growth rate is 6.01%

As a whole, from the interval measure ratio, it may be concluded that:

- The GSRTC can operate for average 81.10 days without resorting on next year's income.
- The compound annual growth rate is 6.01%.

2. Cash flow Coverage Ratio

Conceptually the ability of the business to pay off its current obligations can be measured by calculating current, quick or cash ratio. But considering the real life scenario, current obligations are always met by using cash flow generated from business operations.

Hence, the actual liquidity and solvency should be measured on the basis of its cash flow. Cash flow Coverage Ratio measures the potentiality of the firm in meeting the current obligations on the basis of cash flow originating from the business operations. It is figured as shown below:

Cash flow Coverage Ratio = $\frac{\text{Net Profit} + \text{Non Cash Expenses}}{\text{Current Liabilities}} \times 100$

In GSRTC,

Net profit = EBT = EBIT - Depreciation & interest

Non Cash Expenses = Depreciation.

This is so because due to losses suffered by GSRTC, the amount of tax is absent during the tenure of study period.

Table 5.15

Cash flow Coverage Ratio (percentages) in GSRTC From 1996-97 to 2005-06 (Rs. in lacs)

Sr. no.	Year	Cash Flow	Current Liability	Ratio
1	1996-97	-2925.63	28486.29	-10.27
2	1997-98	-17038.98	48733.00	-34.96
3	1998-99	-10775.52	57492.22	-18.74
4	1999-00	-30214.51	83363.73	-36.24
5	2000-01	-23348.18	115621.90	-20.19
6	2001-02	-29011.35	123777.72	-23.44
7	2002-03	-9875.22	36857.45	-26.79
8	2003-04	-1720.92	37260.09	-4.62
9	2004-05	-10619.60	43534.44	-24.39
10	2005-06	-8634.04	59826.23	-14.43
Average		-14416.40	63495.31	-0.21
S D		10133.50	33392.05	0.10
CV %		-70.29	52.59	-46.94
Compound Growth Rat	Annual e %	10.49	7.70	-19.10

Source: Computed from the annual reports and accounts of the GSRTC, Ahmedad

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Chart 5.14 Cash flow Coverage Ratio in GSRTC From 1996-97 to 2005-06



The Cash flow Coverage Ratio of GSRTC is presented in Table No. 5.15. In GSRTC, the ratio shows a fluctuating trend. It ranged between -4.62 per cent in the year 2003-2004 and -36.24 per cent in the year 1999-00 with an average ratio of -21.41 per cent.

As presented in the Chart 5.14 the ratio shows fluctuating trend during the whole study period. Moreover, it was below the average ratio during the year 1997-98, 1999-00, 2001-02, 2002-03 and 2004-05 and above the average during rest of the years.

The coefficient variation in the ratio is -46.94, which indicates that there is around 47 % dispersion in the ratio of GSRTC over the period.

It can also be concluded that over the 10 years of study period from 1996-97 to 2005-06, the ratio has fallen from -10.27 to -14.43 per cent. Hence, Its compound annual growth rate is negative 19.10%.

As a whole, from the Cash flow Coverage Ratio, it may be concluded that the liquidity position of GSRTC is worst as it has negative cash flow during whole study period.

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