

# To Evaluate Working Capital Management of Renuka Sugar Pvt. Ltd.

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**Abstract**—A well designed and implemented working capital management has a significant contribution for firm's profitability as well as to maintain liquidity powers. Working capital management (WCM) is the management of short-term financing requirements of a firm which includes maintaining optimum balance of working capital components – receivables, inventory and payables and using the cash efficiently for day-to-day operations. The objective of this paper is to evaluate the working capital management of Renuka Sugar Pvt. Ltd. and to examine the management pattern of inventory, liquidity, cash position and receivables management. This also finds the relationship between Working Capital Efficiency and Profitability and Ratios. This finding reveals that financial position of Renuka sugar Pvt. Ltd was seeing to be sound because the companies tries to maintain their working capital and a same time Renuka sugar Pvt. Ltd should adopt other efficient and effective ways for managing working capital management.

**IndexTerms**— Working Capital, Liquidity, Profitability, Inventory, Ratios

## 1. INTRODUCTION

In accounting “Working capital is the difference between the inflow and outflow of funds.” In other words it is the net cash inflow. Working capital is defined as excess of current assets over current liabilities and provision. It is also defined as “net current assets or net working capital.” Working capital can be defined broadly in two different ways i.e. gross working capital and Net working capital. **Gross working capital** refers to organizations investment in total current assets. Current assets are the assets, which can be, convert in to cash with in an accounting year and include cash, marketable securities, intently etc. it is also known as circulating capital. **Net working capital** refers to the different between current assets and current liabilities are those claims of outsiders, which are accepted to mature for payment within an accounting year and include creditors, bills payable and outstanding expenses.

Symbolically,

$$NWC = CA - CL$$

Where,

NWC = Net working Capital

CA = Current Assets

CL = Current Liabilities

Net working capital can also be defined as that portion of firm's current assets, which is financed by long-term funds.

## 2. PROBLEM STATEMENT

The problem is related to whether efficient management of working capital is necessary or not and whether Renuka Sugar is having efficient management of working capital? Working Capital is necessary for business because excessive working capital result in block of funds on the contrary inadequate working capital disturbed the day-to-day operation of business. So, satisfactory level of working capital is necessary for business for this purpose management of working capital be necessary.

## 3. OBJECTIVE OF THE STUDY

1. To know how to manage current assets and current liabilities so that satisfactory level of working capital is maintained.
2. To know how to manage receivable, inventory and cash.
3. To study the different sources of financing working capital.
4. To study the liquidity position of Renuka Sugar Pvt. Ltd.
5. To look at possible remedial measures if any on the basis of which tied-up funds in working capital could be used effectively and efficiently.
6. To suggest, if possible on the basis of conclusion some modification to meet the situation.

## 7. METHODOLOGY

The primary aim of this paper is to investigate the impact of Working Capital Management on profitability of Renuka Sugar Pvt. Ltd. The study focuses exclusively on the Renuka Sugar Pvt. Ltd. The data used in this paper were collected for a period of 2005 to 2009. As a part of study, it is designed to analyze profitability and working capital management from financial reports. My methodology is divided in three parts namely:

1. Statement of change in working capital.
2. Analysis of Working Capital Assembly
3. Working Capital Ratios

## 4. RESULT ANALYSIS

### 1. STATEMENT OF CHANGE IN WORKING CAPITAL

#### 1. From Year 30-09-2005 to 30-09-2006

Table 1 – Statement showing changes in Working Capital between 30-09-2005 to 30-09-2006

Sr. No.	Particulars	30-09-2005	30-09-2006	Increase	Decrease
(A)Current Assets	Inventories	1123.46	1121.83		1.63
	Sundry debtors	198.30	539.12	340.82	
	Cash & Bank balance	627.02	171.66		455.36
	Other current asset	113.03	32.88		80.15
	Loan & Advance	124.44	774.66	650.22	
	Total (a)	2186.25	2640.15		
(B) Current Liabilities	Current Liabilities	1624.54	916	708.54	
	Provisions	157.35	319.25		161.9
	Total (b)	1781.89	1235.25		
Working Capital	(a-b)	404.36	1404.9		
Net increase in W.C		1000.54			1,000.54
Total of N.W.C		1404.9	1404.9	1,699.58	1,699.58

*Amounts are in millions of Indian Rupees*

Above table shows a continuous increase in the Net Working Capital during the year 30-09-2005 to 30-09-2006. So, this is due to increase in the debtors and decreasing the current liabilities and provisions.

#### 2. From Year 30-09-2006 to 30-09-2007

Table 2 – Statement showing changes in Working Capital between 30-09-2006 to 30-09-2007

Sr. No.	Particulars	30-09-2006	30-09-2007	Increase	Decrease
(A)Current Assets	Inventories	1121.83	1001.69		120.14
	Sundry debtors	539.12	386.85		152.27
	Cash & Bank balance	171.66	306.71	135.05	
	Other Current Assets	32.88	323.32	290.44	
	Loan & Advance	774.66	1,333.83	559.17	
	Total (a)	2,640.15	3352.4		
(B) Current	Current	916	822.32	93.68	

<b>Liabilities</b>	Liabilities				
	Provisions	319.25	389.77		70.52
	Total (b)	1235.25	1212.09		
<b>Working Capital</b>	(a-b)	1,404.90	2,140.31		
<b>Net increase In W.C</b>		735.41			735.41
<b>Total of N.W.C</b>		2140.31	2140.31	1,077.84	1,077.84

*Amounts are in millions of Indian Rupees*

Above table shows a continuous increase in the Net Working Capital during the year 30-09-2006 to 30-09-2007. So, this is due to decrease in the current liabilities and provisions.

### 3. From Year 30-09-2007 to 30-09-2008

Table 3 – Statement showing changes in Working Capital between 30-09-2007 to 30-09-2008

Sr. No.	Particulars	30-09-2007	30-09-2008	Increase	Decrease
<b>(A)Current Assets</b>	Inventories	1001.69	1869.08	867.39	
	Sundry debtors	386.85	486.40	99.55	
	Cash & Bank balance	306.71	133.86		172.85
	Other Current Asset	323.32	853.86	530.54	
	Loan & Advance	1,333.83	1,994.07	660.24	
	Total (a)	3352.4	5337.27		
<b>(B)Current Liabilities</b>	Current Liabilities	822.32	1644.35		822.03
	Provisions	389.77	530.93		141.16
	Total (b)	1212.09	2175.28		
<b>Working Capital</b>	(a-b)	2140.31	3,161.99		
<b>Net increase in W.C</b>		1021.68			1,021.68
<b>Total of N.W.C</b>		3161.99	3161.99	2,157.72	2,157.72

*Amounts are in millions of Indian Rupees*

Above table shows that the net increase in working capital is Rs.1,021.68, this is due to major increase in Inventory and other Current Assets.

### 4. From Year 30-09-2008 to 30-09-2009

Table 4 – Statement showing changes in Working Capital between 30-09-2008 to 30-09-2009

Sr. No.	Particulars	30-09-2008	30-09-2009	Increase	Decrease
<b>(A)Current Assets</b>	Inventories	1869.08	10023.2	8154.13	
	Sundry debtors	486.4	1,042.65	556.25	
	Cash & Bank balance	133.86	2,102.83	1,968.97	
	other current asset	1,123.17	3,930.98	2,807.81	
	Loan & Advance	1,723.96	2,769.28	1,045.65	
	Total (a)	5,336.47	19,868.94		
<b>(B)Current</b>	Current Liabilities	1644.35	8435.26		6,791.91

<b>Liability</b>	Provisions	530.93	1,004.10		473.17
	Total (b)	2,175.28	9,439.36		
Working Capital	(a-b)	3,161.19	10,429.58		
<b>Net increase in W.C</b>		7,267.73			7,267.73
<b>Total of N.W.C</b>		10429.58	10429.58	14,532.81	14,532.81

*Amounts are in millions of Indian Rupees*

Above table shows that the net increase in working capital during 30-09-2008 to 30-09-2009 is Rs.7267.73 due to so much increase in the current assets.

#### 5. Net Working Capital Position Of Company

Table 5– Summary of Last Five Years

Year	Net Working Capital	Increase in Net Working Capital
30-09-2005	404.36	-----
30-09-2006	1404.9	1000.54
30-09-2007	2,140.31	735.41
30-09-2008	3,161.99	1,021.68
30-09-2009	10,429.58	7,267.73

*Amounts are in millions of Indian Rupees*

It implies that every year company's working capital is increasing to fulfill the demands due to growth and expansion of business. The standard ratio between current assets and liability is also maintained which ensures short term solvency of business.

#### 1. Working Capital Assembly

Table 6 – Working Capital Assembly of Last Five Years

Particulars	Years				
	2005	2006	2007	2008	2009
<b>Current Assets</b>					
1) Inventories	1123.5	1121.8	1001.7	1869.1	10023
2) Sundry Debtors	198.3	539.12	386.85	486.4	1042.7
3) Cash & Bank Balance	627.02	171.66	306.71	133.86	2102.8
4) Loans & Advances	124.44	774.66	1333.3	1994.1	2769.6
5) Other current Assets	113.03	32.88	323.32	853.86	3930.6
<b>Total Current Assets (A)</b>	2186.3	2640.2	3352.4	5336.5	19869
<b>Current Liabilities</b>					
1) Current Liabilities	1624.5	916	822.32	1644.4	8435.3
2) Provision	157.35	319.25	389.77	530.93	1004.1
<b>Total Current Liabilities (B)</b>	1781.9	1235.3	1212.1	2175.3	9439.4
<b>Net Working Capital (A-B)</b>	404.36	1404.9	2140.3	3161.2	10930

*Rupees in Million*

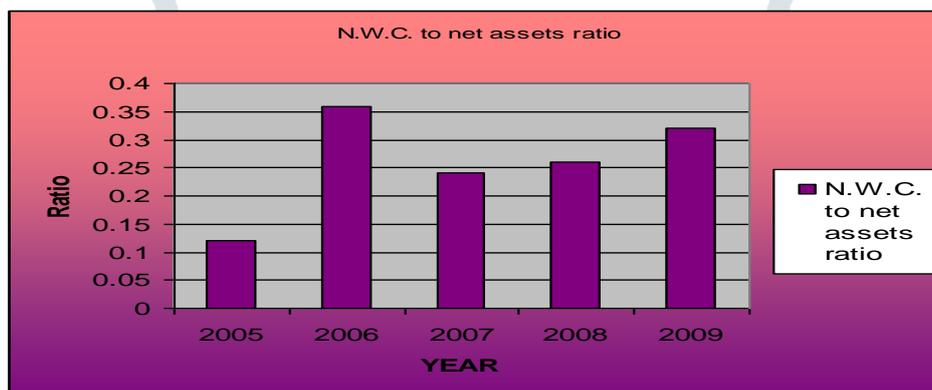
In this, Working Capital is increasing year to year to fulfill the demands due to growth and expansion of business. The standard ratio between current assets and liability is also maintained which ensures good short term solvency of business.

## 2. Net Working Capital to Net Assets Ratio

Net Working Capital is difference between current assets and current liabilities. This ration measure firm's potential reservoir funds relate to net assets.

Table 7– Summary of Last Five years

Year	Net Working Capital	Net assets	Ratio (times)
2005	404.36	3241.18	0.12:1
2006	1,405	3833.67	0.36:1
2007	2,140	8975.43	0.24:1
2008	3,161	12248.03	0.26:1
2009	10,430	32437.84	0.32:1



Chart–N.W.C to Net Assets Ratio

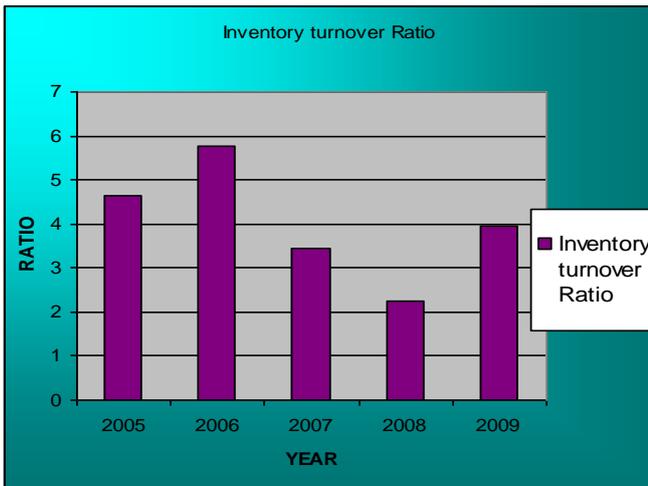
## 3. Management of Inventory

Inventory constitute major portion of Current Assets of Public Ltd. Companies in India .The manufacturing companies hold inventories in the form of Raw material, work-in-process and finish good.

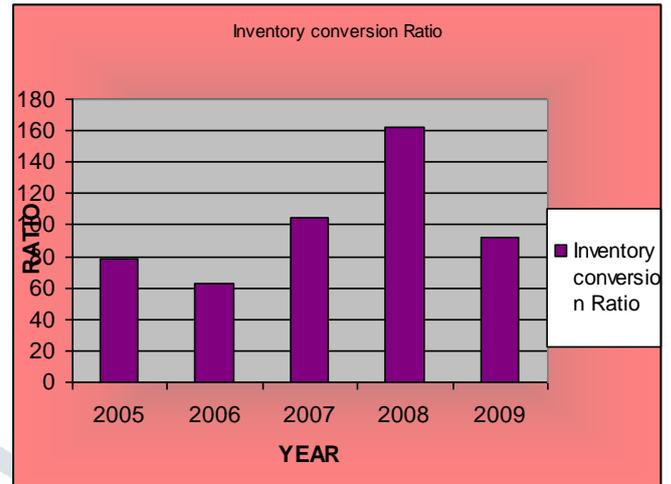
Table 8– Summary of Inventory Management of Last Five years

Inventory Management					
Item	2005	2006	2007	2008	2009
Average Inventory	1123.5	1061.3	1435.4	5946.1	5011.6
Total Current Assets	2186.3	2640.2	3352.4	5336.5	<b>19869</b>
Cost of Goods Sold	5199.1	6124.9	4967.7	13409	<b>19917</b>
Ratio (%)					
Inventory to Gross Working Capital (1/2)	0.51	0.4	2.43	1.11	<b>0.25</b>
Inventory Turnover (3/1)	4.63.	5.77	3.46	2.26	<b>3.97</b>

Inventory Conversion Period (365/b) days	79	63	105	162	92
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Chart–Inventory Turnover Ratio



Chart–Inventory Conversion Ratio

Average inventory conversion ratio is 90 days which is satisfactory looking at various constraints for sugar producing companies as they have to work as per government norms and guidelines. On an average in 1 year inventory gets converted 4 times which is satisfactory for such sensitive sector’s firm.

**4. Management of Receivable**

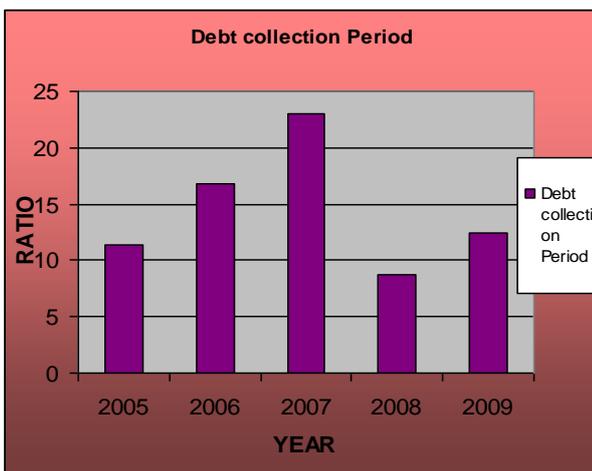
**Debtors Turnover Ratio:** -This is also called “Debtors velocity” or “Receivable Turnover”. A firm sells goods on credit and cash basis. When firm extends credit to its customers, book debts are created in firms. A/c debtors expected to convert in to cash over short period and thus included in current assets. It is used to measure liquidity of the receivables or to find out period over, which receivables remain uncollected.

$$\text{Receivable turnover Ratio} = \frac{\text{Total Sales}}{\text{Average Debtors}}$$

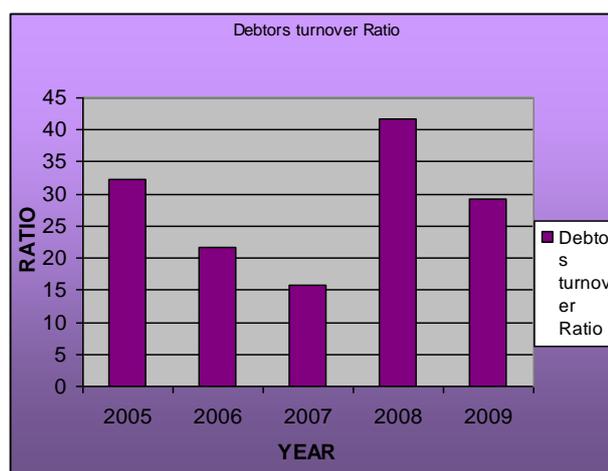
$$\text{Debt collection period} = \frac{365}{\text{Receivable turnover ratio}}$$

Table 9– Summary of Receivable Management in Company

Year	Sales Rs.in million	Avg. Debtors Rs.in million	Ratio [times]	Collection Period[days]
2005	6392.47	198.3	32.24	11.32
2006	8015.85	368.71	21.74	16.79
2007	7323.69	462.985	15.82	23.07
2008	18241.69	436.625	41.78	8.74
2009	22342.17	764.525	29.22	12.49



Chart–Debtors Collection Period



Chart–Debtors Turnover Ratio

5.  
6.

## 5. Management of Cash

Table 10– Summary of Cash Management in Company

ITEM	YEAR				
	2005	2006	2007	2008	2009
Cash & Bank Balance	627.02	171.66	306.71	133.86	2,102.83
Total Current Assets	2186.25	2640.15	3352.4	5336.47	19869.28
Total Current Liabilities	1781.89	1235.25	1212.09	2175.28	9439.36
<b>Ratio (%)</b>					
Cash to Current Asset Ratio (1/2)	0.286	0.06	0.09	0.025	0.1

Cash to current ratio is fluctuating so it needs some attention but one reason may be that it has been invested in inventory. Portion of cash in total current assets is fluctuating year to year.

## 6. ANALYSIS THROUGH WORKING CAPITAL RATIOS

### 1. Ratios relating to liquidity of working capital

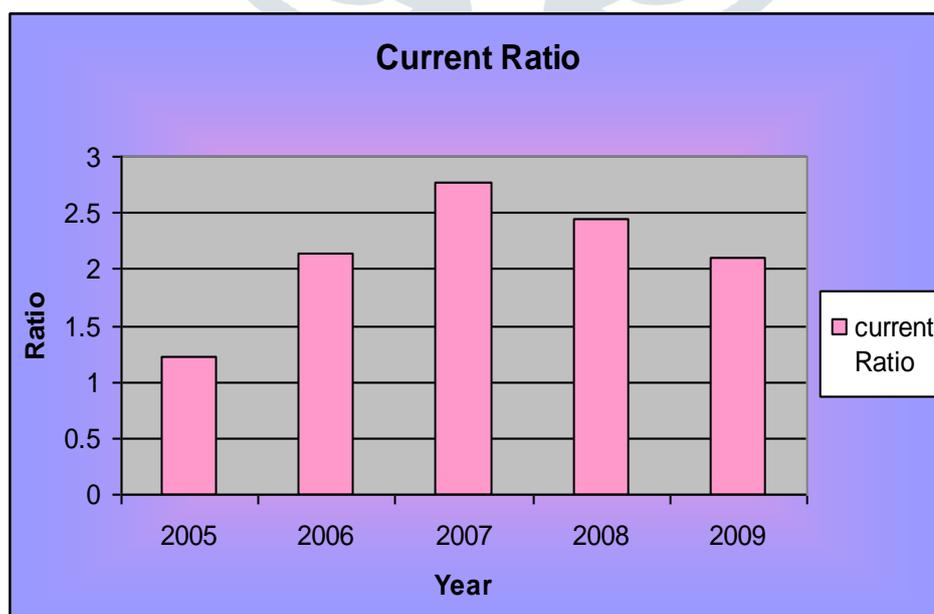
Liquidity ratios are used to measure the ability of firm to pay its maturing obligation in time. This ratio is helpful for both short-term creditors and internal management of the firm. The following are types of ratios relating to liquidity of working capital.

**A). Current Ratio:** It is most common measure for measuring liquidity. It is also called “Working Capital Ratio

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

Table 11– Summary of Current Ratio

Year	Current Assets	Current Liabilities	Current Ratios
2005	2186.25	1781.89	1.27:1
2006	2640.15	1235.25	2.14:1
2007	3352.4	1212.09	2.77:1
2008	5336.47	2175.28	2.45:1
2009	19869.28	9439.36	2.10:1



Chart–Current Ratio

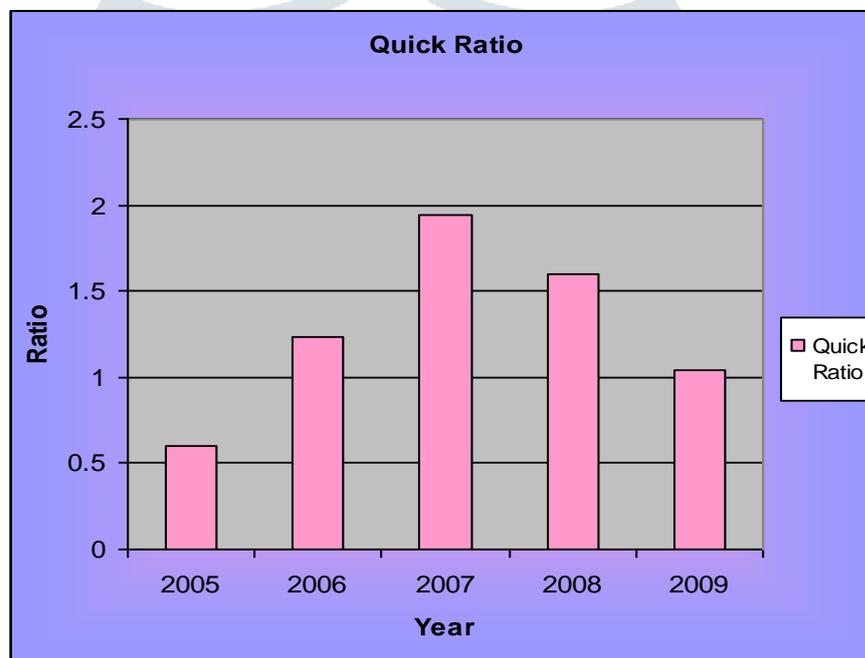
The acceptable norms for this ratio is 2:1 considering this it can be said that company has maintained sound ratio over Five year.

**B). Quick Ratio:**It is also known as liquid ratio or acid test ratio. It is a relation between quick assets and quick liabilities. It is more useful in knowing the liquidity of firm than current ratio.

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

Table 12–Summary of Quick Ratio

Year	Quick Assets	Current Liabilities	Quick Ratios
2005	1062.79	1781.89	0.59
2006	1518.32	1235.25	1.22
2007	2350.71	1212.09	1.93
2008	3467.39	2175.28	1.59
2009	9846.07	9439.36	1.043



Chart–Quick Ratio

The acceptable norm for this ratio is 1:1 but the company has already maintained it above the norms from year 2006 onwards, which indicate sound financial position.

## 2. Ratios relating to Circulation or Productivity of Working Capital

This ratio highlighted the efficiency with which working capital is being utilized. It is commonly used to know turnover of working capital and the turnover of its components to indicate the efficiency of working capital management.

**A). Circulation of Gross Working Capital:** The method is used to examine the effectiveness of gross working capital. It is circulated as:

$$\text{Circulation of Gross Working Capital} = \frac{\text{Net Sales}}{\text{Total Gross W.C.}}$$

Table 13–Summary of Circulation of Gross Working Capital

Year	Net Sales	Total Gross W.C.	Ratio (times)
2005	6392.47	2186.25	2.92
2006	8015.85	2640.15	3.04
2007	7323.69	3352.4	2.18

2008	18241.69	5336.47	3.42
2009	22342.17	19869.28	1.12

This ratio tells whether there is an improvement in the utilization of net working capital or not.

B). **Circulation of Net Working Capital:** The method used to measure the effectiveness of net working capital is to divide net sales by net working capital. The ratio is computed as follows:

$$\text{Circulation of Net Working Capital} = \frac{\text{Net Sales}}{\text{Net W.C.}}$$

Table 14–Summary of Circulation of Net Working Capital

YEAR	SALES	NET WORKING CAPITAL	RATIO (TIMES)
2005	6392.47	404.36	15.81
2006	8015.85	1404.9	5.71
2007	7323.69	2140.31	3.42
2008	18241.69	3161.19	5.77
2009	22342.17	10929.92	2.04

Sales & N.W.C are in Rs.in million

This ratio tells whether there is an improvement in the utilization of net working capital or not.

### 3). Other Ratio

A). **Cash Position Ratio:** -This ratio is variation of quick ratio. It measures the relationship between cash and near cash it's on the one had, and immediately maturing obligations on the other. The inventory and debtors are excluded from current assets, to calculate this ratio.

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

B). **Return on Fixed Assets-** This ratio indicates a return on fixed assets. It can be calculated as

$$\text{Return on Fixed Assets} = \frac{\text{Net Profit After Tax}}{\text{Net Fixed Assets}} \times 100$$

Table 15–Summary of Return on Fixed Assets

Year	Net profit after tax Rs.in million	Net Fixed Assets Rs.in million	Ratio (%)
2005	334.63	1054.93	32
2006	555.8	1193.52	47
2007	544.33	5623.03	9.7
2008	927.86	6911.56	13
2009	2235.55	14149.08	16

From the above calculation it is clear that return on fixed assets is decreasing from year 2007 as compare to return of year 2006. Though, company is able to earn higher return on investment in business than the investment made in the outside deposit.

**C).Current Liabilities to Total Assets Ratio-** This ratio shows the relationship between current liability and total assets [Net Fixed Assets + Investment + Current Assets]

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

Table 16–Summary of Current Liabilities

Year	Current Liabilities	Total Assets	Ratio (times)
2005	1781.89	3241.18	0.55
2006	1235.25	3833.67	0.32
2007	1212.09	8975.43	0.14
2008	3161.19	12248.03	0.26
2009	9439.36	32437.84	0.29

**D). Current Assets to Total Assets Ratio-** The ratio brings out the percentage of current assets to total net assets of the business. This ratio indicates the extent of liquidity nature of assets required in comparison with total net assets. The formal for ratio is given below.

$$\text{Current Assets to Total Assets Ratio} = \frac{\text{Current Assets}}{\text{Total Assets}}$$

Table 17–Summary of Current Assets to Total Assets Ratio

Year	Current Assets Rs.in million	Total Assets Rs.in million	Ratio (times)
2005	2186.25	3241.18	0.67
2006	2640.15	3833.67	0.69
2007	3352.4	8975.43	0.37
2008	5336.47	12248.03	0.44
2009	19869.28	32437.84	0.61

## Findings

Table 18–Summary of all Ratio of Five years

Ratio	YEAR WITH RATIOS					AVERAGE RATIO
	2005	2006	2007	2008	2009	
Net W.C. to Net Assets	15.81	5.71	3.72	5.77	2.14	<b>6.63</b>
Inventory to Gross W.C.	0.51	0.4	2.43	2.11	0.25	<b>1.14</b>
Inventory Turnover	4.63	5.77	3.46	2.26	3.97	<b>4.018</b>
Inventory Conversion period (days)	79	63	105	162	92	<b>100.2</b>
Debtors Turnover	32.24	21.74	15.82	41.78	29.22	<b>28.16</b>
Debt collection Period (days)	11.32	16.79	23.07	8.74	12.49	<b>14.48</b>
Cash to Current Assets.	0.29	0.065	0.091	0.025	0.11	<b>0.12</b>
Current ratio	1.27	2.14	2.77	2.45	2.1	<b>2.15</b>
Quick Ratio	0.6	1.23	1.94	1.59	1.04	<b>1.28</b>
Circulation of Gross Working Capital	2.92	3.04	2.18	3.42	1.12	<b>2.54</b>

<b>Circulation of Net Working Capital</b>	15.81	5.71	3.42	5.77	2.04	<b>6.55</b>
<b>Return on fixed Assets</b>	32	47	9.7	13	16	<b>23.54</b>
<b>Current liabilities to Total Assets</b>	0.55	0.32	0.14	0.26	0.29	<b>0.31</b>
<b>Current Assets to Total Assets</b>	0.67	0.69	0.37	0.44	0.61	<b>0.56</b>

Following are the findings of the above study:

- Gross working capital:** - Gross working capitals of company i.e. current asset are increasing over a period of study. It was 0.11% in 2000-01 and increased to 22.18 in 2002-03 so there is increased of 22.07%
- Net working capital to Net asset Ratio:** The average ratio is 6.63 for period under study. It means there is a reserve of Rs.663. The average net working capital turnover ratio is 6 times. Every year it is decreasing but it is because of increase in sales of company.
- Inventory to Gross Working Capital Ratio:** -This ratio is increasing as compared to year 2005 from 0.51 to 1.14 in 2009.
- Inventory Turnover:** This ratio has been increased over the five years from 4.63 in 2005 to 4.08 in 2009. So it can be said that company has taken steps to increase the inventory turn over ratio.
- Inventory Conversion Period:** -It refers to the period when manufacturing unit takes to clear a lot of stock. There has been an increasing and decreasing in conversion period simultaneously. It means conversion period is 79 days in 2005 63 days in 2006 and again 92 in 2009 in SRSL it is 100 days on an average..
- Debtors Turnover Ratio:** -This ratio shows the period of which the receivable remain uncollected. The ratio is decrease in 2009 as compared to 2005, because in 2005 ratio is 32.24 while in 2009 it is 29.22. So it is good for SRSL.
- Debt Collection Period:** -It is the time period required by company to recollect its payment. Company has made speedy collection of debt. Average collection period over 5 years is 14 days.
- Cash to Current Asset Ratio:** -This ratio indicates the extent to which the current assets are represented by cash&bank balance. There is a decrease in the ratio over the five years. It was decreased by 10% in 2005 compared to 2009. so, the company is not maintaining adequate cash in its current assets
- Current Ratio:** -It is a quick measure of the firm's liquidity, which remained between 1.27 to 2.10 through out the period understudy. It is over the acceptable norm i.e.2:1 so company has sufficient liquidity to meet short-term obligation
- Quick Ratio:** -This ratio is above the standard norm of 1:1 throughout study period so it can be said that it has satisfactory liquidity position. For 5 years it is average 1.28:1 for SRSL.
- Circulation of Gross Working Capital:** -The ratio shows upward trend over the five-year period. It means there is lower investment in current asset as compared to sales. Some say that there is an improvement in working capital utilization. and circulation of gross working capital is about 3 times during period of 1year. it is satisfactory for sugar companies generally.
- Circulation of Net Working Capital:** -The ratio shows a decreasing trend over 5 years, which means there is no any need for an improvement in utilization of Net Working Capital during the period.

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