



Working Capital Management in Sugar Mills in Chittoor District of Andhra Pradesh

KEYWORDS

Current Assets, Networking Capital, Operating Cycle, Quick assets etc.

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ABSTRACT *Sugar Industry faces many problems such as fluctuations in the production due to inadequate availability of sugarcane and power failure. The profitability of the sugar industry comparatively very low because of high cost of production. In fact, some units are incurring losses continuously. The industry has failed to retain more profits, consequently been forced to define more on external sources. Hence, it is necessary to study the working capital management practices in various sugar mills. To analyze the working capital management, the present study focused on Sri Venkateswara Co-operative Sugar Factory limited and Sagar Sugars & Allied Products Limited in Chittoor district of Andhra Pradesh.*

1. INTRODUCTION

Sugar Industry is one of the major agro-based industries in India, which has been instrumental in mobilization of resources, generation of employment opportunities, income generation and providing social infrastructure in rural areas. In the global context Indian sugar industry ranked 4th amongst the sugar producing countries in the world. Sugar mills in co-operative, private and public sectors have been instrumental in initiating a number of entrepreneurial activities in rural India.

Financial management is directly concerned with the overall management of an enterprise and it involves taking policy decisions related to the line of business, size of the firm, varieties of equipments used, extent of debt, liquidity etc., which in turn determined the level of profitability. Therefore, financial management is crucial and significant for every industry.

Every firm needs working capital irrespective of their nature. Manufacturing organization require much working capital than the trading organization. Efficient management of working capital is important for the successful of enterprise, where as inefficient management of working capital may caused to various problems such as reducing of liquidity position, loosening of profits and utility that leads to winding of company. Therefore, adequate working capital is required for uninterrupted of organization activities. Need for the working capital depends on operating cycle.

2. STATEMENT OF THE PROBLEM

Sugar Industry faces many problems such as fluctuations in the production due to inadequate availability of sugarcane and power failure. The profitability of the sugar industry comparatively very low because of high cost of production. In fact, some units are incurring losses continuously. The industry has failed to retain more profits, consequently been forced to define more on external sources. That indicates unbalancing capital structure of the sugar mills it directly reflects on the maintenance of the liquidity position.

3. NEED FOR THE STUDY

The sugar industry has been facing the problems like improper supply of raw material, low crushing capacity, limited financial resources, systematic working capital management, lack of utilisation of technology etc. To cope with the present day situations a thorough understanding of financial management is necessary to utilize the available limited resources, mobilization of resources efficiently and effectively. Hence, it is necessary to study the working capital management practices in various sugar mills. To analyse the working capital management, the present study focused on Sri Venkateswara Co-operative Sugar Factory limited and Sagar Sugars & Allied Products Limited in Chittoor district of Andhra Pradesh.

4. OBJECTIVES

- To analyse the working capital structure in select sugar mills in Chittoor District.
- To examine the status and structure of Current Assets and Current Liabilities.
- To evaluate the operating cycle.

5. METHODOLOGY

The present study is confined to two sugar mills in chittoor district of Andhra Pradesh. The two sugar mills namely Sagar Sugars & Allied Products Limited (SS&APL) located at Nelovay and Sri Venkateswara Co-operative Sugar Factory limited (SVCSFL) located at Gajulamandem. The present study covers important aspects of working capital management like current assets, current liabilities, operating cycle etc.

The present study mainly depends upon secondary data collected from the annual reports of Sagar Sugars & Allied Products Limited and Sri Venkateswara Co-operative Sugar Factory limited. The data has been analyzed with the help of financial and statistical tools like ratio analysis, averages and other statistical tools. Graphs and diagrams are presented to illuminate the facts and figures.

6. ANALYSIS AND INTERPRETATION

In order to maintain flows of revenue from operations, every firm needs certain amount of current assets. For e.g. Cash is required either pay for expenses or to meet obligations for services receive of goods purchased by a firm. Similarly inventories are required to provide the linkage between production and sale. Accounts receivable are a raised when goods are sold on credit etc. Working capital management is concerned with that arise in attempting to manage the current assets, the current liabilities and the inter relation ship that exists between them.

6.1 STRUCTURE OF WORKING CAPITAL

The various components of working capital viz., cash, debtors, inventory and other current assets. The structure of working capital of two sugar mills is presented in Table 1.

It can be noticed from the table 1 that the investment in inventory is playing a dominant role in the total current assets of Sri Venkateswara Co-operative Sugar Factory Limited. On an average the company proportion of inventory to its current assets stood at 67.66 per cent. Other current assets are playing next role, its proportion in total assets have an average of 20.41 per cent. The proportion of debtors stood at 6.82 per cent on an average during the study period. The share of cash is having lesser proportion which had an average around 5 per cent. In Sri Venkateswara Co-Operative Sugar Factory Limited huge amount of funds were blocked in inventories that lead to less liquidity position and lower quick ratio.

In the case of Sagar Sugars and Allied Products Limited, Proportion of inventory to the total current assets is 6.4 per cent during the initial period of the company i.e., 2002-03, it was increased 34.9 per cent during 2005-06 later on it declined. The average inventory share in the current assets is 38.25 per cent for the entire study period. Debtors occupied an important role, it also contributes around 27.66 per cent towards current assets. Its proportion to total current assets varies between 15.7 per cent and 71.5 per cent during the study period. Other current assets also playing an important role its proportion to current assets varies between 11.2 per cent to 51.2 per cent. The share of other assets stood at 29.52 per cent on an average during the study period. The proportion of cash is around 4.5 per cent on an average during the study period.

6.2 FINANCING OF WORKING CAPITAL

Financing of working capital indicates whether a firm is cautious or offensive in rising loans particularly loans for day-to-day transactions. Financing of working capital in SVCSFL and SS&APL is shown in Table 2.

It is evident from Table 2 that the financing of working capital in Sri Venkateswara Co-Operative Sugar Factory Limited for the study period. The above table reveals that net working capital of the SV Co-operative sugar mill is negative during 2003-04 and 2004-05. It means that not only the entire amount of current assets but a portion of fixed assets also financed by the current liabilities. In the remaining years of the study period the net working capital is positive but not satisfactory. The company's working capital financing policy was highly aggressive causing poor short term solvency. The problem was so severe during that two years because of negative net working capital. During the study period the net working capital not showed constant growth. The percentage of net working capital to the current assets varies between 4.7 per cent and 60.89 per cent. The average of percentage of net working capital to the current assets stood at 28 per cent.

The net working capital and working capital finance of Sagar Sugars and Allied Products Limited for the study period 2002-03 to 2010-11 is shown in Table 2. The Table reveals that the amount of working capitals showing increasing trend from 2002-03 to 2006-07, later on it shows declining trend for the rest of the study period. The current assets also showing same trend during the study period. Net working capital to the current assets varies between 31 per cent and 82 per cent. The average net working capital to the current assets stood at 56.46 per cent. The table is evidenced that during study period the financing policy of the firm was conservative the net working capital could not be maintained consistently for all the years. The funds mobilized through long term sources were used in acquisition of fixed assets, at the same time some portion is invested in current assets also. The net working capital is having increasing trend about 1925.53 during 2006-07 later on it declined 988.11 over the base year. It means that the current assets are financed not only with the short term liabilities but also with long term sources during the study period.

6.3 CURRENT RATIO

Current ratio is the popular ratio which is used to judge the short term financial strength of an enterprise. This ratio explains the relation ship between current assets and current liabilities. Table 3 presents Current ratio of SVCSFL and SS&APL.

The current ratio of Sri Venkateswara Co-Operative Sugar Factory Limited for the study period i.e., 2001-02 to 2010-2011. During the study period the current ratio is varied between 1.05 and 2.58. The average current ratio for the entire study period of 10 years is stood at 1.75:1, which indicates the firm's liquidity position is poor. Except 2001-02, 2008-09 and 2009-2010 the current ratio is below the standard norm of 2:1. Hence, the firm's capacity towards payment of current liabilities is not satisfactory.

The current ratio of Sagar Sugars and Allied Products Limited varies between 1.44:1 and 5.65:1. The average of current ratio of study period stood at 2.94:1 that implies the liquidity portion of the firm is good because it is more than standard norm of 2:1. Current ratio during 2003-04, 2006-07, 2007-08 and 2010-11 is above the standard ratio and during other years it is below standard norm. The overall liquidity position of the firm is satisfactory.

6.4 WORKING CAPITAL TURNOVER RATIO

The efficiency with which the working capital is used to generate sales can be judged with the help of working capital turnover ratio. Table 4 presents working capital turnover ratio in SVCSFL and SS&APL.

The working capital turnover ratio of SVCSFL is not satisfactory through out the study period except few years, this ratio is less than 1 time, that indicates working capital was not adequate and sales volume have been accelerated in terms of working capital. The average of debtors turnover ratio for the entire study period is 0.8 times. This low ratio indicates excess of working capital or over investment in element assets. The working capital turnover ratio varies between 0.37 times to 1.84 times.

It is evident from the Table 4 that SS&APL, working capital turnover ratio varies in between 0.63 times to 2.21 times through out the study period, it shows fluctuating trend. The average working capital turnover ratio in the case of SS&APL stood at 1.05 times. It indicates that the SS&APL could not accelerate the sale volume in proportion to the increased investment in working capital. On the other hand, it is evidenced that the excessive of working capital or particularly in non-operating inventory.

6.5 OPERATING CYCLE

The most important technique used in measuring the adequacy and efficiency of working capital is operating cycle. The operating cycle of SVCSFL and SS&APL is presented in Table 5.

Table 5 reveals that inventory holding period is lengthy during the study period. The creditors payment period is satisfactory during the study period except in 2003-04 in Sri Venkateswara Sugar Factory limited.

The trend of operating cycle of Sagar Sugars and Allied Products Limited is presented in Table 5. It can be noticed that operating cycle shows negative values for 2002-03, 2004-05, 2008-09 and 2009-10, this is due to lengthy creditors payment period. It implies that the firm gets liberal credit from creditors or creditors suppliers of raw material follows liberal credit policy towards SS&APL is well. For calculating operating cycle period for the SS&APL work in progress is not consider. However operating cycle period varies from 13 days to 191 days. Such high operating cycle period indicates a slow turnover and the consequent liquidity problem and delayed payment to suppliers which is harmful to the company in terms of credit worthiness.

In Sagar Sugars and Allied Products Limited the operating cycle for few years shows negative figures because of it was newly formed company at the same time it get more credit on liberal basis from the creditors. To test the efficiency in managing the working capital position only by observing the changes in operating cycle is not good enough, the inference drawn with the help of that results is not impressive. Hence, trend in operating cycle and changes in working capital are studied to assess the efficiency of the management. If both operating cycle and gross working capital trend shows an increasing trend, that implies an inefficiency of the management in managing the working capital. Length of operating cycle indicates firm's inefficiency in acquiring raw-materials, production process, demand forecasting and selection of a customer. On the other hand, increasing gross working capital indicates high opportunity cost of funds blocked up in various current assets.

**TABLE : 1
STRUCTURE OF WORKING CAPITAL**

Year	Cash (Rs. in lakhs)		Debtors (Rs. in lakhs)		Inventory (Rs. in lakhs)		Other Current Assets (including Loans & Advances)		Total (Rs. in lakhs)	
	SVCSFL	SS&APL	SVCSFL	SS&APL	SVCSFL	SS&APL	SVCSFL	SS&APL	SVCSFL	SS&APL
2001-2002	102.76 (2.59)		206.16 (5.19)		3175.75 (79.90)		489.86 (12.33)		3974.50	
2002-2003	142.93 (4.23)	160.39 (11.8)	200.26 (5.93)	853.09 (62.8)	2550.05 (75.53)	87.56 (6.4)	483.01 (14.31)	257.85 (19)	3376.25	1359
2003-2004	12.77 (0.77)	209.71 (6.6)	193.67 (11.65)	2262.06 (71.5)	1033.12 (62.19)	335.64 (10.6)	421.74 (25.39)	354.78 (11.2)	1661.24	3162
2004-2005	90.16 (4.91)	870.70 (9.5)	184.00 (10.02)	2940.16 (32.2)	964.22 (52.49)	3968.48 (43.5)	598.58 (32.59)	1339.34 (14.7)	1836.96	9119
2005-2006	218.00 (7.43)	746.32 (4.8)	242.79 (8.28)	4174.78 (26.8)	1877.84 (64.03)	8556.37 (54.9)	593.97 (20.25)	2116.22 (13.6)	2932.60	15594
2006-2007	300.79 (10.80)	511.57 (3.3)	225.47 (8.10)	2463.43 (15.7)	1621.27 (58.23)	6918.82 (44.2)	639.90 (22.98)	5776.71 (36.9)	2784.43	15670
2007-2008	226.98 (6.02)	659.09 (4.5)	222.47 (5.90)	3175.48 (21.7)	2608.54 (69.16)	3294.66 (22.5)	714.00 (18.93)	7492.55 (51.2)	3771.99	14622
2008-2009	335.11 (7.33)	289.74 (2.3)	214.04 (4.68)	2657.10 (21.1)	3194.28 (69.90)	5411.48 (43.1)	826.13 (18.08)	4204.50 (33.5)	4569.56	12563
2009-2010	140.27 (4.69)	835.13 (6.4)	266.96 (8.92)	2984.88 (22.9)	161.53 (53.88)	4888.52 (37.5)	972.92 (32.51)	4317.35 (33.1)	2992.68	13026
2010-2011	99.40 (2.14)	172.96 (1.4)	261.78 (5.65)	5440.65 (44.2)	3376.48 (72.81)	3805.75 (30.9)	899.55 (19.40)	2903.79 (23.56)	4637.21	12323
Average	166.92 (5.13)	495.07 (4.57)	221.76 (6.82)	2994.63 (27.66)	2201.41 (67.66)	4140.84 (38.25)	663.97 (20.41)	3195.90 (29.53)	3253.74	10826.44

Note : Figures given in parentheses indicates percentages.

Source : Annual and Audit Reports of S.V.Sugars and Sagar Sugars (different issues).

TABLE : 2 : FINANCING OF WORKING CAPITAL

Year	Current Assets (Rs. in lakhs)		Net Working Capital (Rs. in lakhs)		% of Net Working Capital to Current Assets		Trend compare to the base year 2001-2002	
	SVCSFL	SS&APL	SVCSFL	SS&APL	SVCSFL	SS&APL	SVCSFL	SS&APL
2001-2002	3974.50		2349.94		59.13		100	
2002-2003	3376.25	1358.90	1320.96	669.88	39.13	49.30	56.62	100
2003-2004	1661.24	3162.19	(392.92)	2506.12	(23.66)	79.25	(16.72)	374.11
2004-2005	1836.96	9118.68	(515.82)	4035.91	(28.08)	44.26	(21.95)	602.48
2005-2006	2932.60	15593.69	1065.23	7130.90	36.32	45.73	45.33	1064.50
2006-2007	2784.43	15670.53	130.75	12898.73	4.70	82.31	5.56	1925.53
2007-2008	3771.99	14622.08	1555.45	11711.62	41.24	80.10	66.19	1748.32
2008-2009	4569.56	12562.82	2782.49	5380.66	60.89	42.83	118.41	803.23
2009-2010	2992.68	13025.89	1654.57	3994.14	55.29	30.66	70.41	596.25
2010-2011	4637.21	12323.17	1653.25	6619.13	35.65	53.71	70.35	988.11
Average	3253.74	10826.44	1160.39	6105.23	28.06	56.46		

Note : Figures given in brackets indicates negative values.

Source : Annual and Audit Reports of S.V.Sugars and Sagar Sugars (different issues).

Table : 3 : Current Ratio in Sri Venkateswara Co-operative Sugar Factory Limited and Sagar Sugars and Allied Products Limited

Year	Current Assets (Rs. in lakhs)		Current Liabilities (Rs. in lakhs)		Current Ratio (CA/CL)	
	SVCSFL	SS&APL	SVCSFL	SS&APL	SVCSFL	SS&APL
2001-2002	3974.50		1624.56		2.45	
2002-2003	3376.25	1358.90	2055.29	689.02	1.64	1.97
2003-2004	1661.24	3162.19	1268.24	656.08	1.31	4.82
2004-2005	1836.96	9118.68	1321.14	5082.77	1.39	1.79
2005-2006	2932.60	15593.69	1867.37	8462.79	1.57	1.84
2006-2007	2784.43	15670.53	2653.68	2771.80	1.05	5.65
2007-2008	3771.99	14622.08	221654	2910.46	1.70	5.02
2008-2009	4569.56	12562.82	1787.07	7182.16	2.58	1.75
2009-2010	2992.68	13025.89	1338.11	9031.76	2.24	1.44
2010-2011	4637.21	12323.17	2983.96	5704.04	1.55	2.16
Average	3253.74	10826.44	1911.60	4721.21	1.75	2.94

Source : Annual and Audit Reports of S.V.Sugars and Sagar Sugars (different issues).

Table: 4
Working Capital Turnover Ratio in Sri Venkateswara Co-operative Sugar Factory Limited and Sagar Sugars and Allied Products limited

Year	Sales (Rs. in lakhs)		Working capital gross (Rs. in Lakhs)		Working Capital Turnover Ratio (in times)	
	SVCSFL	SS&APL	SVCSFL	SS&APL	SVCSFL	SS&APL
2001-2002	2302.79	---	3974.50	---	0.58	---
2002-2003	2261.82	852.79	3376.25	1358.90	0.67	0.63
2003-2004	1874.95	3601.5	1661.24	3162.19	1.13	1.14
2004-2005	1283.28	11838.76	1836.96	9118.68	0.70	1.30
2005-2006	1088.78	25670.08	2932.60	15593.69	0.37	2.21
2006-2007	2882.48	13227.33	2784.43	15670.53	1.04	0.84
2007-2008	1953.40	11637.76	3771.99	14622.08	0.52	0.80
2008-2009	3336.77	8481.74	4569.56	12562.82	0.73	0.68
2009-2010	5505.00	9989.72	2992.68	13025.89	1.84	0.77
2010-2011	2155.68	14939.61	4637.21	12323.17	0.46	1.12
Average	2464.50	11137.70	3253.74	10826.14	0.80	1.05

Source : Annual and Audit Reports of S.V.Sugars and Sagar Sugars (different issues).

Table: 5 : Operating Cycle in Sri Venkateswara Co-operative Sugar Factory Limited & Sagar Sugars Limited

Year	Inventory Holding Period(A)		Debtors collection Period(B)		Creditors Payment Period(C)		Total Operating Cycle (A+B)-C		Cash Turnover	
	SVCSFL	SS&APL	SVCSFL	SS&APL	SVCSFL	SS&APL	SVCSFL	SS&APL	SVCSFL	SS&APL
2001-2002	608.33		32.68		24.91		616.10		22.41	
2002-2003	424.42	74.34	32.32	365.13	37.59	645.75	419.15	(206.28)	15.82	5.32
2003-2004	358.82	37.11	37.79	229.88	323.89	114.02	72.72	152.97	146.82	17.17
2004-2005	368.69	79.70	52.33	90.65	45.40	179.68	375.62	(9.33)	14.23	13.60
2005-2006	598.36	107.44	81.39	59.36	42.54	153.35	637.21	13.45	5.00	34.40
2006-2007	206.21	247.35	28.55	67.98	29.82	124.78	204.94	190.55	9.58	25.86
2007-2008	305.00	194.88	41.68	99.87	22.86	145.34	323.82	149.41	8.61	17.66
2008-2009	536.76	181.84	23.41	114.34	43.20	530.14	516.97	(233.96)	9.96	29.27
2009-2010	175.48	174.54	17.70	109.06	12.07	370.12	181.11	(86.52)	39.25	11.96
2010-2011	341.12	173.99	44.32	132.92	24.33	183.88	361.11	123.03	21.69	86.38
Average	392.32	141.24	39.22	141.02	60.66	271.90	370.88	10.37	29.34	26.85

Note : Figures given in brackets indicates negative values.

Source : Annual and Audit Reports of S.V.Sugars and Sagar Sugars (different issues).

REFERENCES

1. Donald E. Miller (2008), "The Managing Full Interpretation of Financial Statements – The Causes and Effects Ratio Approach", Kisan World, Chennai. | 2. Das Gupta (2010), Working Capital Management, Kitab Mahal Agencies, Allahabad. | 3. Gupta, R.K. (2004), "Profitability, Financial Structure and Liquidity", Print well Publishers, Jaipur. | 4. Khan M.Y. Jain, P.K. (2010) "Financial Management", Tata McGraw-Hill Publishing Company Ltd, New Delhi. | 5. Raj Kishore, Pani (2007), Working Capital Management in Textile Mills, Finance India, Jaipur. | 6. Ravi M. Kishore (2011), Working Capital Management Practices, Banking Finance, Kolkata.