WORKING CAPITAL MANAGEMENT OF APGENCO LTD - A STUDY

Dr. B. Prasad

Abstract: The present paper examines the Working Capital management of APGENCO Ltd., working capital plays role in every organization just as the role of heart in human body. Power generation and transmission corporations are not exception to this. In the scenario of privatization of power sector, cut-throat competition has emerged from private participants. Therefore, the effort of an organization depends largely in this ability to manage its working capital. This study analysis of Working Capital management of APGENCO, relevant data has extracted from the annual reports between financial years 2000-01 to 2009-10 of the company.

Keywords: Liquidity, Selected ratio, Trend growth rates, Working capital

INTRODUCTION

Working capital is meant to support the day to day normal operations of an enterprise. This working capital generates the important elements of cost viz., material, wages and expenses. This cost usually leads to production and sales in case of manufacturing concern and sales alone in case of others. One of the distinguishing features of the fund employed as working capital is that is constantly changes its form to drive the business wheel. It is also known as circulating capital which means current assets of a company that are changed in the ordinary course of business from one form to another form. Basically there are two type of working capital concept. They are balance sheet concept and operating cycle concept. According to the balance sheet concept, working capital is meant by gross working capital (i.e., the difference between total current assets and total current liabilities). On the other hand, according to the operating cycle concept, working capital is meant to support all the operational activities of the firm and cost there off. Here operating cycle represents the period during which investment of one unit of money will remain blocked in the normal course of operation till recovery out of revenue.

POWER INDUSTRY IN INDIA

India is the fifth largest electricity generation capacity in the world. The total installed capacity of India is -150,000 MW, of which the majority of generation, transmission and distribution capabilities lie either with public sector companies or with State Electricity Boards (SEBs). The overall power generation in the country has increased from 723.793 billion unit (BU) during 2008-09 to 771.551 BU during the year 2009-10. In the month of August 2011, the Total Installed Capacity of state, central and private sector is 181,558.12. The power is generating through various sources such as Thermal, Hydro (Renewable), Nuclear, Renewable Energy Sources, each contributing a percentage of 65.21, 21.04, 2.63, and 11.10 respectively.

The Profile of APGENCO

Andhra Pradesh Power Generation Corporation Limited (APGENCO) is the electricity generation company of the Government of Andhra Pradesh state in India. APGENCO came into existence on 28.12.1998 and commenced operations from 01.02.1999 after unbundling the activities relating to Generation, Transmission and Distribution of Power. The installed capacity of APGENCO as on 30.01.2011 is 8384.9 MW comprising 4382.50 MW Thermal, 3790.40 MW Hydro and 2 MW Wind power stations, and contributes about half the total Energy Requirement of Andhra Pradesh. It is the Third Largest Power Utility in India and Second highest Hydel Installed Capacity in India. Apart from operation & Maintenance of the power plants it has undertaken the execution of the ongoing & new power projects scheduled under capacity addition programme and is taking up renovation & modernization works of the old power stations. APGENCO has an equity base of Rs.2107 crores with 11,000 dedicated employees as on 30.06.2009. The company has earned a net profit of Rs.288.66 crores as against a profit Rs.246.46 Crores for the previous year 2008-2009.

OBJECTIVES OF THE STUDY

The main objective of the study are :

To examine item wise analysis of each component of Gross working capital.

To study liquidity position of the APGENCO Ltd.

To evaluate the liquidity management through ratio

analysis.

METHODOLOGY

The present study is a case method of research for which the required data has been collected from the secondary sources comprising of published annual reports of the APGENCO Ltd., from 2000-01 to 2009-10, and various studies made available trough library works. For assessing the performance of working capital position, in this study the technique of ratio analysis have been used. The collected data have been analysed in four ways.

a)Analysis of components of Gross working capital ,b)Analysis of liquidity positions,c) Analysis of liquidity ratio,and d) Liquidity ranking.The collected data is processed, tabulated and analyzed in a systematic manner and for the data analysis various statistical methods have been applied such as percentages, growth rates, mean, standard deviation co-efficient of variations in this study.

Liquidity Management in APGENCO Ltd.

This ection present the liquidity management in APGENCO Ltd., focusing on examining the components of working capital, liquidity position using different liquid ratios for the study period.

Components of Working Capital

The components of gross working capital presented in Table-I for the selected company to examine the gross working capital funds are locked up and to find out the factors responsible for significant changes in the working capital for different years. It can be observed that the working capital consists of inventory sundry debtors (including the current assets/receivables), cash & bank balances and loans & advances.

Out of the four components of working capital, on an average more than 3/4th of the sundry debtors contributed with proportion from 59.51 per cent in 2001-02 to 86.18 per cent in 2004-05. This evidences that the working capital blocked up due to increase in debtors. This may also indicate a liberal credit policy with chances of bad debts and collection charges. Inventory occupied the second position in the gross working capital and varied from 8.12 per cent in 2001-02 to 13.97 in 2009-10 with an average of 11.04 per cent Loan & advances ranked third, decreasing from 27.54 per cent in 2000-01 to 0.70 per cent in 2009-10 with an average' of 9.43 per. cent. The share of cash & bank balances in the gross working capital increased from 1.52 per cent in 2000-01 to 2.89 per cent in 2009-10 with an average share of 1.87: per cent. In a comfortably financed business, cash & bank balances will probably run not less than 5 to 10 per cent of the current assets, Since the current liabilities are not expected to exceed half of the current! assets where as the cash percentage should run under 10 to 20 per cent of the same. This shows that the company understudy had not been maintaining sufficient cash & bank balances and this definitely adversely affects on the liquidity of the company

Table – I

Composition of Gross working capital of APGENCO Ltd (Rs. in crores)

Year	Inventory	Debtor	Cash and Bank balance	Loan & Advances	Total
2000-01	259.07	1348-94	34.56	624.24	2266.81
	11.43%	59.51%	1.52%	27.54%	100%
2001-02	175.92	1460.87	33.43	496.51	2166.73
	8.12%	67.42%	1.54%	22.92%	100%
2002-03	206.20	1450.26	463.59	497.71	2200.76
	9.37%	65.90%	2.12%	22.62%	100%
2003-04	287.92	1986.65	62.03	127.39	2463.99
	11.69%	80.63%	2.52%	5.17%	100%
2004-05	228.32	2134.04	16.81	97.22	2476.39
	9.22%	86.18%	0.68%	3.93%	100%
2005-06	288.85	2277.90	70.73	87.04	2724.52
	10.60%	83.51%	2.60%	3.19%	100%
2006-07	262.39	2150.65	37.08	156.55	2606.67
	10.07%	82.51%	1.42%	6.01%	100%
2007-08	393.88	2425.35	39.83	34.51	2893.57
	13.61%	83.62%	1.38%	1.19%	100%
2008-09	430.97	2936.79	69.74	35.94	3473.41
	12.41%	84.55%	2.01%	1.03%	100%
2009-10	577.17	3405.38	119.32	29.01	4130.88
	13.97%	82.44%	2.89%	0.70%	100%
Mean	311.07	2157.68	5.01	218.61	2740.37
	11.04%	77.66%	1.87%	9.43%	100%

Source : Annual Reports of APGENCO Ltd.

An attempt is made in the table-II to examine the liquidity position; of the company. The current assets have, been reached 1.82 (i.e. 82 per cent growth) times over a decade period i.e. increased from Rs. 2266.81 crores in 2000-01 to Rs.413.0.88 crores in 2009-10. The coefficient of variation 21.37 per cent shows consistency in growing the current assets during the decade period Almost the same trend has been continuing in liquid assets with a growth of 77 per cent (1.77 times), standard deviation was Rs.480.46 and coefficient of variation was 19.78 percent during the same period. On the other hand, current liabilities increased with a growth rate of 46%, which were moved from Rs. 2070.98 crores to Rs.3023.57 crores during the study period from 2000-01 to 2009-10. The standard deviation was Rs.594.95 crores and co-efficient of variation was 31.75 per cent, which is evident that more" flexibility in current liabilities than the current assets and quick assets during the decade period. Of the several measures, net working capital (NWC) itself provides, a margin of safety or 'cushion' of protection provided for creditors. The table shows that the company had positive networking capital throughout the period except 3 years 2006-07, 2007-08 and 2008-09. The more the amount of net working capital the greater the liquidity of the firm. NWC increased from\Rs.l95.82 crore to Rs. 1107.31 crore, registered with a growth rate of 4.65 percent over the selected decade period.In fact, the measure of net working capital does not indicate the true ability to pay current debts when they become due. Net working capital being the excess of current assets over current liabilities and since these current assets comprise illiquid inventory, the measure of 'quick net working capital' (QNWC), i.e., quick/liquid assets less current liabilities has been adopted as more relevant than the measure of NWC. Quick assets refer to current assets less inventory. The QNWC figures computed for the company clearly shows that the selected company had a positive 'margin of safety' or 'cushion' of protection provided for creditors from quick/liquid assets throughout the period of the study. The quick net working capital of APGENCO Ltd., also did not show any definite trend of neither rise nor fall. On average, the company had positive QNWC. Hence, the measure of QNWG shows that the company has the capability of paying current debt during the study period.

Table – II

Liquidity position of APGENCO Ltd (Rs in crores)

Year	Current Assets	Quick / Liquid Assets	Current Liabilities	Net working capital	Insurance/ Decrease in NWC	QWC	I/d in QWC
2000-01	2266.81	2007.74	2070.98	195.82	-	-63.24	-
2001-02	2166.73	1990.81	1880.48	286.25	90.43	110.33	173.57
2002-03	2200.76	1994.56	1784.48	416.28	130.03	210.08	99.75
2003-04	2463.99	2176.07	1361.72	1102.28	686.00	814.35	64.27
2004-05	2476.39	2248.07	1187.76	1288.63	186.35	1060.31	245.96
2005-06	2724.52	2435.67	1157.11	1567.41	278.78	1278.56	218.25
2006-07	2893.57	2499.69	2025.30	868.27	-236.60	474.39	368.09
2007-08	2893.57	2499.69	2025.30	868.27	-236.60	474.39	368.09
2008-09	3473.41	3042.47	2747.25	726.16	-142-11	295.22	179.17
2009-10	4130.88	3553.71	3023.57	1107.31	381.15	530.14	234.92
Mean	2740.37	24293.31	1874.05	866.33	101.28	555.26	65.93
Growth Rate	82	77	45	5.65	-	8.38	-
S.D.	568.23	480.46	594.95	429.97	344.82	434.91	330.1
C.V.%	21.37	19.78	31.75	49.63	340.47	78.32	505.09

Source : Annual Reports of APGENCO Ltd.

Analysis of liquidity ratios

An attempt has also been made to examine the liquidity position by taking the liquidity ratios' and similar measures, which are presented in the table-III.

CURRENT RATIO

Current ratio expresses the precise relation between current assets and current liabilities. The ratio is also known as working capital ratio in APGENCO the current ratio varied from the lowest 1.09 times in 2000-01 to "the highest 2.35 times in 2005-06 with an average 1.55 times the standard deviation was 0.43 and the coefficient of 'variation was 27.74 percent which shoves this' liquidity position of the company was not satisfactory from the point of view of creditors Moreover, the ratios were always less than the hypothetical norm of 2:1, except in the years 2J004-05 and 2005-06. As per the ideal current ratio, the liquidity position of the selected company is not 'sound', and the company prevailed position was illiquid.

Acid Test or Quick Ratio

Recognizing that inventory might not be very liquid, this ratio takes the quickly realizable assets and measures them against current liabilities. It is calculated by dividing quick assets by current liabilities.

It is clear from Table-III, that the quick ratio fluctuated between 0.97 times in 2001-02 to 2.10 times in 2005-06. Moreover, the ratio was always' .more than one (average 1.38 times) throughout the period of the study except in the year 2000-01, which shows over dumping of liquid funds than the required, resulting in a negative impact on profitability. Consequently to this a low earning capacity, decline in share value, raising the price of power per unit, lower wage as well as adverse working conditions are seen in the sample company.

Absolute Liquidity Ratio

Absolute liquidity ratio; is the refinement of the concept of eliminating inventory. From liquid assets because of their uncertain value at the liquidation. Although receivables are generally much more liquid in nature than inventories, some doubt may exist concerning their liquidity as well. So, by eliminating receivables are inventories from the current assets, another measure of liquidity is derived by relating the sum of cash and marketable securities to the current liabilities. It's norm is 0.5:1 i.e., half the current assets to be maintained to meet the current liabilities.

Table-III exhibits the absolute liquidity ratio varied from the lowest 0.014 in 2004-05 to the highest 0.046 in 2003-04 over the decade period. On average, this ratio was 0.029 times. The standard deviation was 0.015 and the Coefficient of variation was 51.72 per cent. This table shows that the cash position of the company was not satisfactory, which was lower in current assets as compared with the norm of 0.5:1 during the decade period. This adversely affect on the goodwill of the company.

Inventory Turnover Ratio

This, ratio establishes a relationship between the sales and average stock kept by a concern during a period. It focuses on the inventory control policy adopted by a concern. Table III evidences that the inventory turnover ratio registered a fluctuating trend i.e. varied between from the lowest 11.15 times in 2009-10 to the highest 22.52 times in 2001-02, where as the average ratio was 15.63 times during the period under study. The standard deviation was 3.61 and the coefficient of variation was 23.10 per cent.

Age of inventory

The movement of the inventory or the stock during a year can be known from this, ratio. The lower the age of the inventory, the better the liquidity position and vice versa. The age of the inventory fluctuated from the lowest 16 days in 2()01-02 to the highest 32 days in 2009-10 with the overall average of 24 f days. The standard deviation was 5.28 and the coefficient of variation was 22 per cent

Debtors turnover ratio

This ratio focus on the credit and collection policy adopted by a concern. It indicates the number of times the debtors are . turned during a year. Since debtors constitute a major element of current assets/ the credit and collection policy of a concern must be under continuous watch. The higher the value of the debtor's turnover, the more efficient is the management of assets and vice versa. The ratio exhibited in the Table-Ill, registered a fluctuating trend from the highest 2.82 in 2002-03. to the lowest 1.71 times in 2005-06 with an average of 2.19 times which is not satisfactory in the; selected company and this was much lower than the standard set by CMIE Whereas the standard deviation was 0.42 and the coefficient of variation was 19.18 per cent. It is not a good sign from the liquidity point of view.

Average collection period

Average collection period shows the number of days that lapse between the date of actual credit sales to the debtors and the date of actual payment made by the debtors for

the dually, a high collection period implies an inefficient collection performance, which in turn, adversely affects the liquidity or short-term paying rapacity of a firm out of its current liabilitiesTable-III reveals the average collection period shows a fluctuating trend from the highest collection period 213 days in 2005-06 and the lowest collection period 129 days in 2000-01 and 2002-03 with an average of 171 days. This may indicate the liberal credit policy adopted by the company. The standard deviation was 29 and the co-efficient of variation was 16.26 per cent.

Working capital turnover ratio

The working capital of a concern is directly related to sales. This ratio is computed by dividing the net sales by the net working capital. Is shows the number of times the net working capital turned over a particular accounting period. The working capital turnover ratio helps to measure the efficiency of the utilization of net working capital.It is depicted from table-III that the working capital turnover ratio recorded a significant decreasing trend over a decade period from 19.39 in 2000-01 to 5.81 in 2009-10, however the same varied from the lowest 2.48 (2005-06) to the highest 19.39 (2000-01) within an average of 7.60, standard deviation 5.45 and coefficient of variation was 71.71 percent. This shows that the sudden decreasing and high degree of variation is also not good to the company.

Current assets to sales ratio

This ratio is applied to measure the turnover and profitability of the total current assets employed to conduct the operations of a firm. The ratio is calculated by diving the amount of sales by the amount of current assets. The idea behind the current assets turnover ratio is to give an overall impression of how rapidly the total investment in current assets is being turned and is thought of by some as index of "efficiency" or "profitability".

Finally Table-III gives an idea of the turnover of current assets employed by the company under study. In the company, the current assets turnover ratio fluctuating from 1.42 times in 2005-06 to 1.86 times in 2002-03 with the overall average of 1.67 times. The standard deviation was 0.13 and the coefficient of variation was 7.78 percent, which shows the use of current assets is more consistent over a decade period.Table – III reveals that out of the eight different parameters of liquidity management, current assets to sales is most consistent followed by average collection period, debtors to sales, age of inventory, inventory to sales, current ratio, liquid ratio, absolute liquid ratio and working capital turnover ratio of which working capital turnover ratio and absolute liquid ratios are mover variate over the selected decade period of study.

Current assets to total assets ratio

Indicates the extent of funds invested for working capital purpose and thus express the relationship between the amounts of current assets to the amount of investment in total assets. The management of current assets is of great importance as the size of investment in current assets was observed to be significant in sample company.Table – IV : Reveals the percentage of each current assets. The liquidity ranking in case of debtors (including other current assets) to current assets ratio, loans and advances to current assets ratio and cash & bank balance to current assets ratio, a high value indirect relatively favourable position and ranking has been done in that order. On the other hand, low inventory to current assets ratio shows unfavourable position and here ranking has been done in that order. Final liquidity rank for the 10 years shows that it was most sound liquidity position in the year 2007-08. The least liquidity rank position was in 2008-09. This yearly ranking indicates that there has been an improvement in the liquidity performance of the company.

Table – III

SELECTED LIQUIDITY RATIOS OF APGENCO Ltd.

Year	Current ratios	Quick Ratio	Absolute Liquidity ratios	Inventory Turnover ratio	Age of Inventory	Debtors Turnover Ratio	Average Collection period	Working Capital Turnover ratios	Current assets to sales ratios
2000-01	1.09	0.97	0.017	14.66	23	2.81	129	19.39	1.67
2001-02	1.15	10.06	0.018	22.52	16	2.71	134	13.84	1.83
2002-03	1.23	1.12	0.026	19.86	18	2.82	129	9.84	1.86
2003-04	1.81	1.60	0.046	14.19	25	0.06	177	3.71	1.66
2004-05	2.08	1.89	0.014	18.28	19	1.96	186	3.24	1.68
2005-06	2.35	2.10	0.061	13.46	27	1.71	213	2.48	1.42
2006-07	1.74	1.56	0.025	16.01	22	1.95	186	3.80	1.61
2007-08	1.43	1.23	0.020	11.72	31	1.90	191	5.31	1.59
2008-09	1.26	1.11	0.025	14.46	25	2.12	172	8.58	1.79
2009-10	1.36	1.18	0.039	11.15	32	1.89	193	5.81	1.56
Mean	1.55	1.38	0.029	15.63	24	2.19	171	7.60	1.67
S.D.	0.43	0.39	0.015	3.61	5.28	0.42	29	5.45	0.13
C.V	27.74	28.26	51.72	23.09	21.83	19.18	16.96	71.71	7.78

Source : Annual Repots of APGENCO Ltd.

Table – IV

Liquidity Ranking of APGENCO Ltd.

(Component of Gross working capital %)

Year	Inventory	Debtors	Cash & Bank balance	Loans and Advances	Liquidity Rank				Total Rank	Final Rank
					1	2	3	4		
2000-01	11.43	59.51	1.52	27.54	7	10	7	1	25	3
2001-02	8.12	67.40	1.54	22.92	2	8	6	2	18	9
2002-03	9.37	65.90	2.12	22.62	4	9	4	3	20	6.5
2003-04	11.69	80.63	2.52	5.147	8	7	3	5	23	4
2004-05	9.22	86.18	0.68	3.93	3	1	10	6	20	6.5
2005-06	10.60	83.61	2.60	3.19	6	4	2	7	19	8
2006-07	10.07	82.51	1.42	6.01	5	5	8	4	22	5
2007-08	13.61	83.62	1.38	1.19	9	3	9	8	29	1
2008-09	12.41	84.55	2.01	1.03	1	2	5	9	17	10
2009-10	13.97	82.44	2.89	0.70	10	6	1	10	27	2

Source: Annual Reports of APGENCO Ltd.

CONCLUSION

Findings of the study revealed that the average proportion component of sundry debtors crossed the 3/4th and the cash and bank balance proportion has not been reached the required balance, which adversely affects on the liquidity position of the APGENCO Ltd., in the light of private participation in the power industry. Another significant finding was that the average current ratio was 1.55 which shows insufficiency of current assets to meet the current or short-term obligations. This clears that the Power Generation has not been maintaining the optimum liquidity management during the study period. Further, there is an immense need to take stringent measures by the Andhra Pradesh government in maintaining optimum financial policy to overcome shortages and difficulties and for smooth power generation for meeting the demand of power in the state on par with the private power-sector companies in the liberalized scenario.

ACKNOWLEDGEMENT

I would like to express my deep sense of gratitude to my teacher and supervisor Prof. K. Krishna Reddy, Department of Commerce and Business Management, Kakatiya University, Warangal for his help and encouragement.

I would like to express my heartful thanks to Sri D. Prabhakar Rao, Director (Finance) APGENCO Ltd, Hyderabad for his encouragement and valuable help.

I would like to express my gratitude to the organization secretary, ICMBE – 2013 giving me an opportunity to present the paper

REFERENCES

1. Banerjee, B.(1995). "Financial Policy & Management Accountancy". 5th Edition The World Press Private Ltd., Kolkata. pp 74 146,
2. Annual reports of APGENCO Ltd., from 2000-01 to 2009-10.
3. Kannadhasan, M.(2007). "Working Capital Management in a Public Ltd. Co.-A Case Study", The Icfaian Journal of Management Research, Vol.6, No.5, May Issue, pp.20-33.
4. Mukhopadhyay, D.(2004). "Working Capital Management in Heavy Engineering Firms- A Case Study", The Management Accountant, I.C.W.A.I.
5. Ganesan, V.(2007). "An Analysis of Working Capital Management Efficiency in Telecommunication Equipment Industry", Rivier Academic Journal, Vol.3, No.2, Fall Issue.
6. Jafar, Amir and Sur, Debasish (2006). "Efficiency of Working Capital Management in Indian Public Enterprise during the Post Liberalization Era: A Case Study of NTPC", The Icfaian Journal of Management Research, Vol.5, No.6, June Issue.
7. Pedro, Juan, et. al. (2007). "Effects of Working Capital Management on SME Profitability", International Journal of Managerial Finance, Vol.3, Issue 2.
8. Bhunia, Amalendu (2007). "Liquidity Management of Public Sector Iron & Steel Enterprise in India", Vidyasagar University Journal of Commerce, Vol.12, March Issue.
9. Dash, Mihir and Ravipati, Rani (2009). "A Liquidity Profitability Trade-Off Model for Working Capital Management", Working Paper Series, Social Science Research Network (SSRN).

***

UGC-Post Doctoral Fellow
Department of Commerce and Business, Management
Kakatiya University, Warangal, Andhra Pradesh
Email: dr.bprasadku@yahoo.com