Volume : 3 | Issue : 4 | April 2014 • ISSN No 2277 - 8160

Research Paper Commerce

Working Capital Management in Power Distribution Companies in Andhra Pradesh – An Empirical Study

Mr. N. Gurumurthy Research Scholar, Dept. of Commerce, S.V. University, Tirupati-517502, Andhra Pradesh, India.

Dr. K. Jayachandra Reddy Associate Professor, Dept. of Commerce, S.V. University, Tirupati-517502, Andhra Pradesh, India.

ABSTRACT

Finance plays a vital role in any entity's success and survival. For the smooth functioning of an enterprise sufficient amount of working capital is an essential element of funds. The appropriate levels of working capital play a key role in the success of power distribution companies of Andhra Pradesh state. Four power distribution companies APSPDCL, APEPDCL, APNPDCL and APCPDCL came into force and started function from 1st April 2000. The working capital performance of all the four distribution companies is not up to the satisfactory level. The present research paper highlights the status and size of current assets, current liabilities, working capital and the liquidity position as well as the working capital performance in terms of sales achievements during the study period.

KEYWORDS : Working Capital, Current Assets, Current Liabilities.

Introduction

Working capital is appropriately regarded as the life-blood and nerve centre of any organization and it is as essential to a firm either manufacturing or service organization as the circulation of blood, is to the human body to keep it alive. Working capital is an essential input for the smooth functioning of any business organization, irrespective of its size and status, so that it can carry out its operations and to reach its goals. It is sure that without adequate working capital and its prudent use, no business unit can achieve its targets in the present competitive business world. Effective and efficient management of working capital resources will make sure not only liquidity but also enhance profitability, which reflects on the growth and development of an organization. Particularly in power distribution companies the efficient management of working capital is crucial for the uninterrupted supply of power and to satisfy all categories of consumers in the society.

Infrastructure is an essential factor for the economic development of any country. The growth and development of infrastructure facility is a vital input to keep up the economic growth in all sectors of the economy. It is fact that the power sector is the most important constituent of infrastructure of an economy. Irrespective of the status of economic development the performance of power sector directly affects the overall economic development of any country. The failure in provision of qualitative infrastructure facility in any economy, especially in major areas such as power, reduces productivity and drastically affects the quality of life.

Reforms in Power Sector

India is one of the fastest growing economies and the second largest populated country, and represents an attractive destination for the power industry. The power sector reforms initiated almost all the countries around the world since mid 1990s with a view to increasing efficiency and thus reducing prices. Reforms that have been undertaken typically involve power sector restructuring to separate potentially competitive activities (generation and supply) from natural monopolies (transmission and distribution), setting up of an independent regulator, privatization and market liberalization. In order to revitalize the sector and to improve its techno-economic performances, with a view to transforming the State Electricity Boards (SEBs) from bankruptcy to bank ability, and that fuel choices should be made on the basis of long-term viability and national energy security, indigenous resources and costs, are not short-term considerations of bridging the energy gap, Government of India has initiated restructuring process in 1991. The reform process started with the October 1991 amendment of the Electricity (Supply) Act to allow the private sector entry into generation. As per the advice of the World Bank, Orissa was the first state under taken comprehensive power sector reform in 1995, involving (a) an independent regulatory commission, (b) unbundling of the State Electricity Board into separate generation, transmission and distribution entities, and (c) eventual privatization particularly of distribution. This World Bank pattern of power sector reform has been followed by Andhra Pradesh, Haryana, Rajasthan, Uttar Pradesh and Karnataka.

The power sector restructuring process in Andhra Pradesh initiated in the year 1999. Until it was split in to Andhra Pradesh Power Generation Corporation Limited (APGENCO) and Transmission Corporation of Andhra Pradesh Limited (APTRANSCO) in February 1999 under a Government Order (GO) issued in consonance with the new reform Act, APSEB was responsible for electricity generation, and distribution in the state. Andhra Pradesh State Electricity Board (APSEB) was formed on 1st April 1959 and it is similar to other SEBs in the country, it had a monopoly in the power sector and functioned under the overall guidance of the state government, interacting with the central power agencies for planning and co-ordination. Apart from its own generation capacity, APSEB drew power from the central sector generating stations like National Thermal Power Corporation (NTPC), Independent Power Producers (IPPs) and other private sector plants. At the time of unbundling APSEB controlled 100 per cent power distribution and around 70 per cent of the generation capacity in the state. Since its formation and up to its unbundling in to corporatized entities in the year 1999 APSEB contributed greatly to the economic development of the state.

As a result of restructuring the APSEB, the Andhra Pradesh Power Generation Corporation Limited (APGENCO) & Transmission Corporation of Andhra Pradesh Limited (APTRANSCO) are come into existence on 01.02.1999. Further the Transmission Corporation (APTRANSCO) restructured on Friday 31st March 2000 by establishing Four Distribution Companies (DISCOMS) to operate in all 23 districts of the state viz., AP Southern Power Distribution Company Limited (APSPDCL) and it covers 6 districts, AP Northern Power Distribution Company Limited (APNPDCL), it covers 5 districts, AP Eastern Power Distribution Company Limited (APEPDCL) covers 5 districts, and AP Central Power Distribution Company Limited (APCPDCL), it covers 7 districts.

Objectives

The following are the specific objectives of the present research.

To present the status of current assets and current liabilities of the Power Distribution Companies in Andhra Pradesh.

To review the status and growth of working capital in four DISCOMS

To analyze the Working Capital performance in terms of turnover.

Study Area

The present study aims to investigate Working Capital Management of the four Power Distribution Companies in Andhra Pradesh. Census method of study is adopted to evaluate the working capital management of power distribution companies. In the state of Andhra Pradesh there are four power distribution companies exists viz., APSPDCL,

APEPDCL, APNPDCL and APCPDCL, all the four companies considered as the units of study.

Source of Data

The major part of the present study depends on the secondary data. The audited and published annual reports of APSPDCL, APEPDCL, APNPDCL and APCPDCL, were collected to study the status and progress of working capital in power distribution companies. The relevant theoretical and statistical information was collected from various books, journals, State Government, Ministry of Power, Planning Commission, all India statistical reports etc.

Tools of analysis

To assess the liquidity position and working capital performance current ratio and working capital turnover ratios used in the study. In addition the statistical tools like mean, standard deviation, co-efficient of variance and growth rate used to interpret the data meaningfully in the present research paper.

Size and Status of Current Assets

All the four power distribution companies in the state of Andhra Pradesh viz., APSPDCL, APEPDCL, APNPDCL and APCPDCL hold and manage different components of current assets in the ordinary course of business operation. The size and growth of current assets during the study period of 2002-03 to 2011-12 are disclosed in the following table. It is evident from the table that the size of current assets during the study period registered an increasing trend in all the DISCOMS. In detail analysis the current assets in APSPDCL increased from Rs.694.61 crore to Rs.6711.97 crore with an average of Rs. 2627.09 crore and registered a growth rate of 25.46 per cent during 10 years of study. In APEPDCL current assets varied between Rs.401.36 crore in 2002-03 and Rs.4670.30 crore with an average of Rs.1449.09 crore and registered a growth rate of 27.81 per cent. It is interesting to note that among the four distribution companies the APNPDCL maintains a low growth rate of 13.80 per cent during the study period. The size of current assets ranges from Rs.681.70 crore to Rs.4655.29 crore with an average of Rs.1844.73 crore. The current assets in APCPDCL varied between Rs.1371.92 crore and Rs.12109.53 crore with an average of Rs.4737.13 crore and register a growth rate of 24.33 per cent. The variance in the size of current assets in all the four companies is significant and it is high in APCPDCL. Further it is evident from the table that the APCPDCL is maintaining the current assets consistently than the other distribution companies, its co-efficient of variation is stood at 0.71.

Table No.1 Current Assets in Power Distribution Companies of Andhra Pradesh. (Rs. in Crore)

Year	APSPDCL	APEPDCL	APNPDCL	APCPDCL
2002-03	694.61	401.36	1277.55	1371.92
2003-04	949.20	534.77	681.70	1903.91
2004-05	1084.78	706.95	740.63	2136.45
2005-06	1385.57	1174.23	843.75	2894.91
2006-07	1435.06	1002.29	1442.25	2881.18
2007-08	1463.58	997.85	1118.34	2841.40
2008-09	3134.97	2161.60	912.56	5220.56
2009-10	4136.13	2722.54	3072.22	6911.44
2010-11	5275.12	4119.10	3703.09	9100.01
2011-12	6711.97	4670.30	4655.29	12109.53
Mean	2627.09	1449.09	1844.73	4737.13
SD	1986.90	1312.92	1353.26	3389.62
CV	0.75	0.90	0.73	0.71
CGR	25.46	27.81	13.80	24.33

Source: Annual Reports of Power Distribution Companies in AP from 2002-03 to 2011-12

Size and Status of Current Liabilities

The size of current liabilities plays a significant role in the operational promotion of an enterprise. In the present study the size of current liabilities in four power distribution companies of the state of Andhra Pradesh revealed in the below table no.2.

The size of current liabilities in the distribution companies varying significantly during the study period of 2002-12. The current liabilities in APSPDCL ranges from Rs.487.18 crore to Rs. 5687.29 crore with an average of Rs. 1768.69 crore and register a growth rate of 27.86 per cent. The APEPDCL's current liabilities varied between Rs.369.17 crore and Rs.2178.33 crore with an average of Rs.1070.69 crore by recording a growth rate of 19.42 per cent. The current liabilities in APNPDCL registered a highest growth rate of 31.20 per cent and vary from Rs.443.02 crore to Rs.6694.23 crore with an average of Rs.1610.34 crore.

Table No.2 Current Liabilities in Power Distribution Companies of Andhra Pradesh. (Rs. in Crore)

Year	APSPDCL	APEPDCL	APNPDCL	APCPDCL
2002-03	487.18	369.17	443.02	1249.75
2003-04	714.03	530.02	589.31	1827.88
2004-05	867.15	649.83	716.50	1928.51
2005-06	1216.67	802.58	831.70	2606.68
2006-07	1186.89	896.22	1477.90	2695.70
2007-08	1252.60	951.29	1017.18	2624.36
2008-09	1680.49	1177.85	1432.58	3964.15
2009-10	1965.51	1511.91	1427.99	4630.27
2010-11	2629.17	1639.70	1473.04	5563.76
2011-12	5687.29	2178.33	6694.23	11527.98
Mean	1768.69	1070.69	1610.34	3861.90
SD	1435.94	532.44	1735.20	2853.62
CV	0.81	0.49	1.07	0.73
CGR	27.86	19.42	31.20	24.88

Source: Annual Reports of Power Distribution Companies in AP from 2002-03 to 2011-12

In APCPDCL the current liabilities ranged between Rs.1249.75 and Rs.11527.98 crore with an average of Rs.3861.90 crore and registered a growth rate of 24.88 per cent. Further it is evident from the table that the APNPDCL is less consistent (co-efficient of variation is 1.07) in managing the current liabilities than the other three distribution companies in Andhra Pradesh.

Liquidity Status

To assess the liquidity position of an enterprise the current ratio is used and 2:1 is the standard norm of current ratio generally maintained by a firm. In the present research paper the current ratio of four distribution companies are examined in the table given below to find the liquidity position during the study period of 10 years.

Table No.3 Current Ratio in Power Distribution Companies. (in times)

Year	APSPDCL	APEPDCL	APNPDCL	APCPDCL
2002-03	1.42	1.08	1.21	1.09
2003-04	1.32	1.00	1.51	1.04
2004-05	1.25	1.08	1.03	1.10
2005-06	1.13	1.46	1.01	1.11
2006-07	1.20	1.11	0.97	1.06
2007-08	1.16	1.05	1.09	1.08
2008-09	1.86	1.83	1.42	1.31
2009-10	2.10	1.80	2.15	1.49
2010-11	2.00	2.51	2.51	1.63
2011-12	2.02	2.14	0.69	1.05
Mean	1.54	1.50	1.35	1.19
SD	0.37	0.50	0.53	0.19
CV	24.02	33.33	39.25	15.96

Source: Annual Reports of Power Distribution Companies in AP from 2002-03 to 2011-12

The above table no.3 portrays the current ratios four DISCOMS, in APSPDCL it is varied between 1.13 times and 2.10 times with an average of 1.54 times and the liquidity position is weak in first seven year of the study period. The ratio ranged from 1.00 times to 2.51 times in APEPDCL with an average of 1.50 times and the ratio below standard norm in all the years except during last two years of study. In APNPDCL the current ratio varied between 0.69 times and 2.51 times with an average

of 1.35 times, and the liquidity condition is very weak. The current ratio in APCPDCL is less than the standard norm in all the years of study and it is varied from 1.04 times to 1.63 times with an average of 1.19 times. Further it is found from the table that the APNPDCL records a better consistency in liquidity management than the other three companies even the ratio is below standard norm during the study period.

Working capital status

The volume of working capital is the essential input required to any enterprise to carry out the business activities without any interruption. The size and status of working capital in four power distribution companies of Andhra Pradesh presented in the following table.

Table No.4 Working Capital in Power Distribution Companies of Andhra Pradesh. (Rs. in Crore)

Year	APSPDCL	APEPDCL	APNPDCL	APCPDCL
2002-03	207.43	32.19	834.53	122.17
2003-04	235.17	4.75	92.39	76.03
2004-05	217.63	57.12	24.13	207.94
2005-06	168.09	371.65	12.05	288.23
2006-07	248.17	106.07	-35.65	185.48
2007-08	210.98	46.56	101.16	217.04
2008-09	1454.48	983.75	-520.02	1256.41
2009-10	2170.62	1210.63	1644.23	2281.17
2010-11	2645.95	2479.4	2230.05	3536.25
2011-12	1024.68	2491.97	2038.96	581.55
Mean	858.32	778.40	642.18	875.22
SD	882.66	942.72	932.60	1104.25
CV	1.02	1.21	1.45	1.26
CGR	17.32	54.48	9.34	16.89

Source: Annual Reports of Power Distribution Companies in AP from 2002-03 to 2011-12

The table no.4 reveals a significant fluctuation in the working capital of power distribution companies under review. In APSPDCL the working capital varied between Rs.168.09 crore and Rs.2645.95 crore with an average of Rs.858.32 crore, in APEPDCL it ranging from Rs.4.75 crore to Rs.2491.97 crore with an average of Rs.778.40 crore, in APNPDCL the working capital ranging from Rs.12.05 crore to Rs.2230.05 crore with an average of Rs.642.18 crore but during the years 2006-07 and 2008-09 the working capitals are negative. Finally in the APCPDCL the working capital varying between Rs.76.03 crore and Rs.3536.25 crore with an average of Rs.875.22 crore. Further, it is found from the table that in all the distribution companies there is an inconsistency in management of working capital; however, the APSPDCL is better than the other three companies in terms of consistency in maintaining working capital during the study period.

Working Capital Turnover ratio

In general the efficiency of an enterprise is measured with the help of turnover ratios. In the present study of working capital management of power distribution companies in the state of Andhra Pradesh, the working capital turnover ratio are determined and presented in the below table to assess the performance of working capital funds.

Table No.5 Working Capital Turnover Ratio in Power Distribution Companies. (in times)

Year	APSPDCL	APEPDCL	APNPDCL	APCPDCL
2002-03	9.45	43.97	12.31	27.00
2003-04	8.11	325.46	12.53	46.24
2004-05	9.15	30.86	50.05	19.64
2005-06	13.40	5.58	100.04	15.59
2006-07	9.89	21.08	35.26	26.61
2007-08	14.41	55.17	14.71	27.05
2008-09	2.21	2.78	2.63	5.15
2009-10	1.75	2.46	1.18	3.42
2010-11	1.86	1.40	1.15	2.78
2011-12	5.89	1.59	25.03	26.02
Mean	7.61	49.03	25.48	19.95
SD	4.36	93.96	29.01	12.95
CV	57.29	191.63	113.85	64.91

Source: Annual Reports of Power Distribution Companies in AP from 2002-03 to 2011-12

It is crystal clear from the above table that the working capital balances in all the distribution companies are fluctuating in a high degree of variance during the study period and it is not a favourable sign for the smooth functioning of DISCOMS. The working capital turnover ratio in APSPDCL varying between 1.75 times and 14.41 times with an average of 7.61 times, in APEPDCL ranging from 1.40 to 325.46 times with an average of 49.03 times, in APNPDCL varied from 1.15 times to 100.04 times with an average of 25.48 times and in APCPDCL it varied between 2.78 times and 46.24 times with an average of 19.95 times during the study period. Further, it is found that the APEPDCL is maintaining the working capital turnover ratio inconsistently than the other three DISCOMS in Andhra Pradesh.

Findings and Suggestions

From the present research study of working capital management in power distribution companies of Andhra Pradesh, the following observations and suggestions are made.

- It is found from the study that the current assets of four distribution companies fluctuating significantly and there is an inconsistency in maintaining the current assets during the study period. It is recommended that the distribution companies should maintain appropriate levels of current assets consistently to carry the distribution functions uninterruptedly.
- It is identified from the present study that all the distribution companies maintaining the current liabilities very inconsistently during the period of study. It is suggested that the distribution companies should maintain a consistent level of current liabilities to exercise profitable working capital management and to reduce the role of long-term finance in financing the current assets.
- It is observed from the study that the liquidity position of all the distribution companies in the state is very weak because the current ratio is below standard norm of 2:1 in almost all the years of study. It is advised that the distribution companies should maintain considerable amount of currents assets to improve the liquidity position and to discharge the liabilities on the due dates without any difficulties.
- The working capital balances of the distribution companies are highly fluctuating and are very inconsistent during the study period. It is recommended that all the power distribution companies must concentrate on the volume of working capital and maintain the appropriate working capital balances to operate the companies smoothly and to cater the needs of the customers without any interruptions.
- It is found from the study that the working capital performance of all the four distribution companies are not satisfactory because the turnover ratio varying significantly and very low in some year of the study. It is suggested based on the present observation in the present study that the turnover ratios of all the companies should be improved and maintained consistently. Particularly the working capital performance in terms of sales is very poor in all the companies during the study period and it should be improved by maintaining consistent levels of working capital by all the companies in the state.

Conclusion

The power sector in any country plays a vital role in the economic development and well being of the general public. The power sector reforms initiated in India after 1990 and the same restructuring programmes initiated in the state of Andhra Pradesh also. As a result the Transmission and Generation Corporations came into existence in the place of erstwhile State Electricity Board. The transmission corporation unbundled into four distribution companies to improve the distribution power in the state. In the present research investigation the working capital management of four distribution companies examined and analyzed critically to tone up the problems of working capital management. The efficiency of working capital in all the distribution companies is not up to the mark. It is time to look into the above said findings and to initiate appropriate measures to overcome the working capital problems and to improve the financial health of the power distribution companies in Andhra Pradesh.

REFERENCES

1. Agarwal N.K., Management of Working Capital, Sterling Publishers Pvt. Ltd. New Delhi, 1983 | 2. James, C. Van Horne, John, M. Wachowicz, Jr., Fundamentals of Financial Management, Prentice Hall of India Pvt. Ltd., New Delhi, 1996. | 3. Khan M.Y., and Jain, P.K., Financial Management Text and Problems, Tata Mc Grow Hill Publishing Co., Ltd., New Delhi, 2nd Edition, 1992. | 4. Leslie R. Howard., Working Capital- Its Management and Control MacDonald & Evans Ltd., London. | 5. Ram Kumar Mishra., Problems of Working Capital (with special reference to selected public undertakings in India), Somaiya Publications Pvt. Ltd. New Delhi. | 6. Ramanoorthy, V.E., Working Capital Management, Institution for Financial Management and research, Madras. | 7. Sharma R.K., Shashi K. Gupta. Financial Management, Kalyani Publishers, Ludhiana New Delthi. | 8. Srinivasan S., Cash and Working Capital Management, Vikas Publishing House, New Delhi, 1998. | 9. William M. Bernek., Working Capital Management, Wadsworth Publishing Company. |