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IMPACT OF WORKING CAPITAL MANAGEMENT ON CASH CONVERSION CYCLE – A STUDY OF THE RAYALASEEMA MILLS Ltd IN ANDHRA PRADESH

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Abstract:

Working Capital management is important for maintenance of liquidity and profitability of in any organization. In this study, to examine working capital management of the Rayalaseema Mills Limited. It was established 1945. In this paper evaluated current ratio, quick ratio, acid test ratio, working capital turnover ratio, cash turnover ratio, inventory turnover ratio, debtors turnover ratio during the study period. I conclude that the company focuses on much working capital management to generate more profitability of the company in the future.

Key words: Cash conversion cycle, debtor's turnover ratio, inventory turnover ratio, liquidity ratios and working capital ratio.

Introduction

Working Capital Management is concerned with the management of current assets and current liabilities and the inter relationship that existed between them. Efficient working capital management is essential for successful running of any company. SMEs' success much depends upon effective working capital management.SME businesses are the biggest contributors to the economy of any country and the same goes with Indian economy. In fact, SME sector is one of the most crucial sectors of Indian economy as far as the number of employments generated. As more than 65 Percent of Indian population lives in rural and semi-rural areas, small business became a major source of income for many residing in these areas.

Review of literature

Afaq Ahmed Khan. et. al. (2016) studied "Impact of cash conversion cycle on working capital through profitability: Evidence from cement industry of Pakistan" selected 19 cement companies in Pakistan data collected from 2008-2013. They found out negative relation between the variables. Niaz et.al (2011) studied relationship of cash conversion cycle with firm size, working

capital approaches and firm's profitability: A case of Pakistani industries. They found that CCC has negative relationship with sales, ROE and positive relationship with total assets, return on assets. Mishra (1975) studied the efficiency of working capital management in six sample public sector units. The study identified that management of various components of working capital in sample units was highly unsatisfactory. Suk, Seung and Rowland (1992) in their research conducted an in-depth survey to analyze the liquidity practices of ninety four sample Japanese companies operating in the United States. Sivarama (1999) in his study on working capital management in the Indian paper industry, found a close association between profitability and working capital efficiency. Ghosh and Maji (2003) made an empirical study on the relationship between utilization of current assets and operating profitability in the Indian cement and tea industries. Bardia (2004) conducted a study on the issue pertaining to the relationship between working capital management and profitability of a Navaratna steel manufacturing public sector enterprise. Prof. B. P. Singh (2012) investigated the relationship between the components of working capital and profitability. He observed that the telecom industry is operating below average so far as working capital is concerned. Pasupathi (2013) conducted a comparative study of WCM performance in commercial vehicles, passenger cars and multi utility vehicles and two and three wheelers sectors of Indian automobile industry. Utkarsh Goel et al. (2015) conducted a study to explore the impact of corporate governance practices on Working capital Management (WCM) in Indian firms. S. Selvanavaki et al. (2015) focused on evaluating the WCM practices adopted by the rice milling firms and analyzed its impact on profitability. Dr. Venkateswararao. Podile, Surva Chandra Rao.D and Hema Venkata Siva Sree.Ch (2017) examined working capital management in PL Plast Pvt Ltd. Dr. Venkateswararao.Podile and Hema Venkata Siva Sree.Ch (2018) examined working capital management in Sri Rama Chandra Paper Boards Ltd. Dr. Venkateswararao. Podile (2018) examined working capital management in Tulasi seeds Pvt.Ltd.. Dr. Venkateswararao. Podile and Hema Venkata Siva Sree.Ch (2018) studied working capital management in Sri Nagavalli solvent oils Pvt. Ltd. Dr. Venkateswararao. Podile and Hema Venkata Siva Sree. Ch (2018) analysed working capital management in Naga Hanuman Solvent Oils Private Limited. Dr. Venkateswararao. Podile (2018) examined working capital management in Cuddapah Spinning Mills Ltd. Dr. Venkateswararao. Podile and Hema Venkata Siva Sree.Ch (2018) studied working capital management in Kristna Engineering Works. Dr. Venkateswararao. Podile and Hema Venkata Siva Sree.Ch (2018) examined working capital management in Radhika Vegetables Oils Pvt. Ltd. Dr. Venkateswararao.Podile and Hema Venkata Siva Sree.Ch (2018) examined working capital management in Power Plant Engineering Works in Andhra Pradesh.

The (Steward, 1995) elaborated the cash conversion cycle in a very simple manner he is on the view that CCC is the average days or time to converting the dollar invested in the raw material into the dollar collected from the customers. Stine and Moss, (1993) investigated the cash conversion cycle as the difference of the time lag between the accounts receivable and accounts payable. The cash conversion cycle (CCC) is the number of inventory days to supply plus the account receivable minus the account payable (Schilling and Seonen, 1993). The CCC is one of the important metric for calculating the liquidity of the firm also helps in the evaluation of the firm. The CCC is also important metric for the supply chain analysis because its works like a bridge, its start its cycle from the suppliers of inventories or raw material and carry until the final products is reach to the customers and cash is receive from the customers and paid to supplier for their inventories (Farris II and Huchison, 2002). The firms who manage the cycle efficiently can manage its short terms debts easily and can increases its sale and profit (Stine and Moss, 1993).

Objectives of the study:

• To examine the working capital management of the Rayalaseema Mills Ltd.

- To study the efficiency of management in the company during the study period.
- To evaluate cash conversion cycle of the company.

Hypothesis:

H0: There is no significant impact of working capital management on cash conversion cycle. H1: There is significant impact of working capital management on cash conversion cycle.

Sources of data:

The present study typically based on secondary data. The data is taken from the financial statements of the Rayalaseema Mills Ltd.

Period of the Study:

The period of study is ten years from 2010-11 to 2019-2020.

Tools of the study:

Liquidity ratios, working capital ratios, debtor's turnover ratio, inventory turnover ratio and cash conversion cycle.

Particulars	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Current										
Assets								100		
Cash &	7.85	11.86	8.93	12.87	8.23	18.43	19.75	9.68	12.85	16.56
Bank							100			
balances										
% of TCA	2.20	3.07	2.22	2.82	1.69	3.67	3.97	1.85	2.53	3.09
Debtors	10.34	22.63	78.23	86.23	68.97	53.24	47.56	42.56	42.94	36.23
% of TCA	2.90	5.86	19.44	18.88	14.13	10.61	9.55	8.13	8.44	6.75
Loans &	98.65	82.46	84.88	102.46	160.89	178.84	158.34	198.46	226.48	288.96
Advances										
% of TCA	27.68	21.35	21.10	22.43	32.97	35.64	31.81	37.90	44.52	53.86
Inventory	239.50	269.26	230.41	255.22	249.89	251.33	272.08	272.89	226.37	194.68
% of TCA	67.22	69.72	57.24	55.87	51.21	50.08	54.67	52.12	44.51	36.30
TCA	356.34	386.21	402.45	456.78	487.98	501.84	497.73	523.59	508.64	536.43
Current										
Liabilities										
Sundry	88.98	56.43	50.46	86.88	102.45	18.96	5.46	12.45	18.62	54.68
Creditors										
% of TCL	89.70	83.68	81.78	91.11	81.76	56.11	24.44	33.96	66.40	82.96
Other	10.22	11.00	11.24	8.48	22.86	14.83	16.88	24.21	9.42	11.23
current										
liabilities										
% of TCL	10.30	16.32	18.22	8.89	18.24	43.89	75.56	66.04	33.60	17.04
TCL	99.20	67.43	61.70	95.36	125.31	33.79	22.34	36.66	28.04	65.91
Net Working	257.14	318.78	340.75	361.42	362.67	468.05	475.39	486.93	480.60	470.52
Capital										

Table No 1 Working capital structure of the Rayalaseema Mills Ltd (Rs in lakhs)

Source: Annual Reports of the Rayalaseema Mills Ltd.

Table No 1 depicts that working capital structure of the Rayalaseem Mills Ltd during the study period from 2011 to 2020. It is observed that cash & bank balances were 1.69 which was least in 2015 and highest 3.97 in 2017. Debtor's was least in 2011 (2.90) and highest in 2013(19.44), loans and advances least percentage is 21.10 in 2013 and highest percentage in 53.86 (2020) and inventory least percentage is 36.30 in 2020 and highest percentage is 69.72 in 2012 out of total

current assets. Sundry creditors least percentage is 24.44 in 2017 and highest percentage is 91.11 in 2014 and other current liabilities least is 8.89 in 2014 and highest percentage is 75.56 in 2017 out of total current liabilities during the study period. Inventory occupied highest percentage 69.72 (2012) and least percentage occupied cash & bank balances 1.69 (2015) in total current assets. Sundry creditors engaged highest percentage 91.11 in 2014 and other current liabilities employed least percentage 8.89 in 2014 out of total current liabilities during the study period.

The net working capital highest was 486.93 in 2018 and least 257.14 in 2011. The net working capital was gradually increased from 257.14 (2011) to 486.93 (2018) after that decreased during the period of study.

Year	CR	QR	ATR
2011	3.59	1.18	0.08
2012	5.72	1.73	0.18
2013	6.52	2.78	0.14
2014	4.80	3.08	0.13
2015	3.89	1.90	0.06
2016	14.85	7.41	0.54
2017	22.38	10.10	0.88
2018	14.28	6.83	0.26
2019	18.14	10.06	0.49
2020	8.14	5.18	0.25

Table No 2 Liquidity Ratios

Source: Annual Reports of the Rayalaseema Mills Ltd.

Table No 2 inferred that liquidity ratios of the Rayalaseema Mills Ltd during the study period from 2011 to 2020. Current ratios was highest 22.38 in 2017 and least 3.59 in 2011, quick ratio was highest 10.10 in 2017 and least in 1.18 in 2011 and acid test ratio was highest 0.88in 2017 and least 0.06 in 2015. The company maintains current ratio and quick ratio was more than the standard norms of the same ratios. It means that the company has more idle current assets; it is not good for the company. The company not maintains standard norms of acid test ratio at first five years, after that it maintain standard norms in study period. On the whole the company has maintained good liquidity position.

	0						
Year	WCTR	ITR	ICP	DTR	DCP	CTR	CPP
2011	3.81	4.10	87.80	94.85	3.80	8.78	41.00
2012	2.72	3.22	111.80	38.33	9.40	11.43	31.50
2013	2.80	4.15	86.75	12.22	29.46	12.02	29.95
2014	2.17	3.07	117.26	39.10	9.20	6.32	56.96
2015	2.76	4.00	90.00	14.50	24.82	7.72	46.63
2016	1.53	2.85	126.32	13.45	26.76	30.92	11.64
2017	1.60	2.80	128.57	16.07	22.40	23.80	15.13
2018	1.84	3.28	109.75	21.06	17.10	55.13	6.53
2019	1.80	3.82	94.24	20.14	17.88	30.88	11.65
2020	1.90	4.60	78.26	24.73	14.55	11.25	32.00

Table No 3 Management efficiency Ratios

Source: Annual Reports of the Rayalaseema Mills Ltd.

Table No 3 refers that management efficiency ratio of the Rayalaseema Mills Ltd during the study period from 2011 to 2020. Working capital turnover ratio was highest in 2011 (3.81) and least 1.53 (2016), Inventory turnover ratio was highest 4.15 in 2013 and least 2.80 in 2017, debtor's turnover ratio was highest in 94.85 (2011) and least 12.22 in 2013, creditor's turnover ratio was highest 55.13 in 2018 and least 6.32 in 2014, debtor's collection period was highest 29.46 and least 3.80 in 2011 and creditor's payable period was highest 56.96 in 2014 and least 6.53 in 2018 during the study period. From the above table, observed that the company was utilized more efficiently working capital, inventory, debtors and creditors in study period. It means that the company management efficiency is good.

Table No 4 Cas		(in days)		
Year	ICP	DCP	CPP	CCC
2011	87.80	3.80	41.00	50.60
2012	111.80	9.40	31.50	89.70
2013	86.75	29.46	29.95	86.26
2014	117.26	9.20	56.96	69.50
2015	90.00	24.82	46.63	68.19
2016	126.32	26.76	11.64	141.44
2017	128.57	22.40	15.13	135.84
2018	109.75	17.10	6.53	120.32
2019	94.24	17.88	11.65	100.47
2020	78.26	14.55	32.00	60.81

Source: Annual reports of the Rayalaseema Mills Ltd.

Table No 4 refers that cash conversion cycle of the Rayalaseema Mills Ltd during the study period from 2011 to 2020. Inventory conversion period was highest 128.57 in 2017 and least in 78.26 (2020), debtor's collection period was highest 29.46 in 2013 and least 3.80 in 2011, creditors payable period was highest 56.96 in 2014 and least 6.53 in 2018 and cash conversion cycle was highest 141.44 in 2016 and least 50.60 in 2011. The company taken more time to convert inventory into finished goods i.e. 128.57 days and least days 78.26, collect amount from the debtors in 3.80 days and highest 26.76 days and 6.53 days taken to pay amount to the creditors which is least and highest 56.96 days taken to pay amount to the creditors. The company was collected the amount from the debtors and pay the amount to the creditors within the time. Hence, The Company was maintained stringent credit policy. The cash conversion cycle main objective is assessing working capital management efficiency. The shorter the cash conversion cycle is better to the company at selling inventories and recovering cash from these sales while paying suppliers. In this study the company has shortest cash conversion cycle from 2011 to 2015. It means that the company has maintained working capital management efficiency. From 2016 to 2019 the company not maintained working capital management efficiency during the study period.

Variables	Minimum	Maximum	Mean	Standard
				Deviation
Net Working Capital	257.14	486.93	402.22	83.46
Current Ratio (CR)	3.59	22.38	10.23	6.67
Quick Ratio (QR)	1.18	10.10	5.02	3.40
Acid Test Ratio (ATR)	0.06	0.88	0.30	0.26

Table No 5 Descriptive Statistics

Working Capital Turnover Ratio (WCTR)	1.53	3.81	2.30	0.72
Inventory Turnover Ratio (ITR)	2.80	4.60	3.58	0.62
Debtors Turnover Ratio (DTR)	12.22	94.85	29.44	24.90
Creditors Turnover Ratio (CTR)	6.32	55.13	19.82	15.50
Debtors Collection Period (DCP)	3.80	29.46	117.53	8.41
Inventory Conversion Period (ICP)	78.26	128.57	103.07	17.87
Creditors payable Period (CPP)	6.53	56.96	28.30	16.82
Cash Conversion Cycle (CCC)	50.60	141.44	92.31	31.69

Table No 5 refers that descriptive statistics of the Rayalaseema Mills ltd for a period of ten years from 2011 to 2020. The minimum and maximum value of net working capital 257.14 and 486.93 and mean and standard deviation is 402.22 and 83.46. Current ratio minimum is 3.59, maximum is 22.38, mean is 10.23 and standard deviation is 6.67, quick ratio minimum is 1.18, maximum is 10.10, mean is 5.02 and standard deviation is 3.40. Minimum and maximum of acid test ratio is 0.06 and 0.88 while mean and standard deviation is 0.30 and 0.26 respectively. Working capital turnover ratio minimum and maximum is 1.53 and 3.81 whereas mean and standard deviation is 2.30 and 0.72. Inventory turnover ratio minimum is 2.80, maximum is 4.60, mean is 3.58 and standard deviation is 0.62. Minimum and maximum value of debtor's turnover ratio is 12.22 and 94.85 and mean and standard deviation is 29.44 and 24.90 respectively. Creditors turnover ratio minimum is 6.32, maximum is 55.13, mean is 19.82 and standard deviation is 15.50. Minimum and maximum of debtors collection period is 3.80 and 29.46 respectively while mean and standard deviation is 117.53 and 8.41. The company takes minimum (78.26) and maximum (128.57) days to inventory conversion period at the same time as mean is 103.07 days and standard deviation is 17.87. Creditor's payable period minimum is 6.53 and maximum is 56.96 as mean is 28.30 and standard deviation is 16.82. Minimum and maximum of cash conversion cycle is 50.60 and 141.44 respectively while mean is 9231 and standard deviation is 31.69.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.664 ^a	.441	.371	66.18706

"R" value is 0.664 shows that there is a correlation between dependent variable net working capital and independent variable cash conversion cycle.

"R square" value indicates 44.10 percent of variation in net working capital is caused by independent variable is cash conversion cycle.

"Adjusted R" square value indicates 37.10 per cent variation is caused by predictors considering number of observations and the number of predicted variable.

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	27643.565	1	27643.565	6.310	.036 ^b

Residual	35045.814	8	4380.727	
Total	62689.379	9		

The calculated value of "F" is greater than the table value of "F". It refers that there is significant impact of working capital management on cash conversion cycle. Therefore, the null hypothesis is rejected i.e. there is no significant impact of working capital management on cash conversion cycle. Alternative hypothesis accepted that there is impact of working capital management on cash conversion cycle.

Limitation and scope for further study

This study is conducted in The Rayalaseema Mills Limited which is one of the small scale companies in Andhra Pradesh but further conducted in any small scale company and select small scale industries in other states as well as India. Select one company; it is the limitation of this study.

Conclusion:

The above study depicts that inventory occupied first place followed by loans and advances, debtors and cash and bank balances as percentage of current assets in The Rayalaseema Mills Ltd during the study period. Creditors occupied first place as percentage of current liabilities.

The company has short- term credit worthiness as increased net working capital gradually during the study period. Liquidity position of the company was good because liquidity ratios are maintained more than standard norms. Inventory turnover ratio, debtor's turnover ratio and creditors' turnover ratio more since, management efficiency of the company was good. The first five years of cash conversion cycle is shorter, the company took less time to selling inventories and receiving cash from these sales while paying suppliers.

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