

WORKING CAPITAL MANAGEMENT OF TIRHUT MILK UNION: AN EMPIRICAL STUDY

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ABSTRACT

The Co-Operative movement in Bihar has played a significant role in the social and economic development. Dairy Co-operatives are directly helpful to rural poor farmer who are engaged in producing milk. The financial health of Dairy Co-operatives depends on good working capital management. Keeping in view, this paper highlights the working capital management of Tirhut Milk Union, Muzaffarpur. For this purpose, the data requirements for the study were collected from secondary sources, like annual reports and audited financial statements of the union. For analyzing the data we have used the ratio analysis technique and trend percentage technique. The result reveals the fact that the working capital management of union is not satisfactory. The union should improve their vision for effective utilization of financial resources.

KEYWORDS: Working Capital Management, COMFED, Tirhut Milk Union, Working Capital Turnover.

Introduction

Working Capital Management is the most important area in financial management due to the fact that it plays a pivotal role in keeping the wheels of a business enterprise running. Working capital management is concerned with short-term financial decisions. Shortage of funds for working capital has caused many businesses to fail and in many cases, has retarded their growth. Lack of efficient and effective utilization of working capital leads to earn low rate of return on capital employed or even compels to sustain losses. The need for skilled working capital management is necessary for success of a business enterprise. Working capital is defined as the excess of current assets over current liabilities. Current assets are those assets which will be converted into cash within the current accounting period. They are cash or near cash resources. These include – cash and bank balances, Receivables, Inventory, Prepaid Expenses, Short term advances, temporary investments. The value represented by these assets circulates among several items. Cash is used to buy raw materials, to pay wages and to meet other manufacturing and operating expenses. Finished goods are produced and these are held as inventories. When these are sold trade receivables are created. The collection of accounts receivable brings cash into the firm. Current liabilities are those liabilities which will be payable within a period of one year. For payment of current liabilities on due date sufficient current assets is necessary. Effective Working Capital Management has always increased profitability of the firm. So, efficient & effective working capital management is necessary for running a business enterprise in good manner.

A co-operative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. The dairy co-operatives are one of the longest and most important of food industries. It plays a more important role in socio economic development of our country. It improves the economic conditions of milk producers, especially of the weaker sections in rural areas. The financial soundness of dairy co-operatives depends on good working capital management.

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Review of Literature

Previous studies in the field of working capital management have underlined some critical issues which are writing about the working capital management practices in cooperative sector-rao, p. sarveswara (1992) studied the "working capital management of dairy industry in india" in this study two dairy units sangam dairy and heritage foods ltd. were studied from the point of view of the management of working capital. debtors turnover reveals that sangam dairy is following a little liberal credit policy than heritage. inventory turnover ratio conveyed that heritage is more efficient than sangam. working capital turnover ratio revealed that sangam is using its working capital more efficiently to improve sales. current and quick ratios showed that the creditors in heritage are more secured than that of sangam. the findings revealed that in certain areas of working capital management heritage foods (india) ltd is having better performance. it is inferred from the study that sangam dairy is better in working capital management besides protecting the interests of the milk producers:

- **Mathur, S.P., Swarnkar, R and Soni, y (2014)** studied the working capital management of rajasthan cooperative dairy federation ltd. in india and found that most of the union have no good working capital Management. Ajmer union has high liquidity position this is not good for union. Alwar union had high debt exposure and doesn't maintain good liquidity which may be a dangerous trend.
- **Kaur, M (2012)** Studied the Cash Management of Milk Cooperatives: A cooperative study of MILKFED and HDDCF. The study concluded that both the MILKFED and the HDDCF have shown improvement in their performance, and the performance of MILKFED was better than that of HDDCF during the period of study.
- **Carley and Ling (1991)** in their research paper evaluated the percentage of southern dairy farmers' perception regarding their cooperative or proprietary handlers' performance, level of satisfaction with the milk handlers and reasons for staying with the current milk handlers. The study showed that the dairy farmers were concerned about price, deductions, assessment and price farmers received appeared to be a significant factor which affected farmer's satisfactions level. The study also found a trade-off between price and deductions versus service and market and payment assurance. The study suggested that the dairy farmers needed a cooperative which provides an assured market for the members.
- **Misra and Fletcher (1993)** in their study analyzed the factors influencing farmer's degree of satisfaction with the overall performance of milk marketing corporative. The data for the study were obtained from dairy farmers located in 12southern states. They took a random sample of grade. A dairy farmers and mail survey was conducted among 5,660 dairy farmer's degree of satisfaction with the overall performance of their milk marketing cooperative. The analysis suggested that the southern dairy farmer's perceived cooperative ability to hold down operating and marketing costs to provide higher prices and competent field service. The study found that there were significant differences in the degree of satisfaction with the cooperatives among the dairy farmer's located in the 12 southern states.

Hence, a few studies has been carried out in the area working capital management of Dairy Cooperatives moreover, no comprehensive indices were formed to examine the relationship between every components of working capital. So, the present study will pay attention to the existing literature.

Objectives of the Study

- To introduce the Tirhut Milk Union, Muzaffarpur (Muzaffarpur Dairy).
- To know about various components of current assets and current liabilities of Dairy business.
- To analyses the working capital management in Tirhut Milk Union.
- To offer suggestions based on findings of the study.

Research Hypothesis

Good Working Capital Management is necessary for a successful organization. It improves both liquidity and profitability position of business concern. It is also true in case of dairy co-operatives because better working capital management directly helpful to large number of people (farmer and worker) engaged in dairy sector.

Research Methodology

This paper is basically descriptive and analytical in nature. The study has been carried out by selecting a Milk Union namely Tirhut Dugdha Utpadak Sahkari Sang Ltd. (Tirhut Milk Union) popularly

known as Muzaffarpur dairy, which is one of the leading milk producers co-operatives of COMFED (Bihar state Milk Producers Federation Ltd.) in Bihar. The data required to complete the study has been collected from the published annual reports of selected dairy co-operative. Taking in to account, the availability of data we have chosen the study period of 10 years from 2005-06 to 2014-15. For the purpose of data analysis and interpretation suitable mathematical and statistical technique have been used like ratio analysis, Trend percentage, averages etc.

Tirhut Milk Union (Muzaffarpur Dairy): A Brief Profile

Muzaffarpur Dairy was established in the year 1982 by the help of Freedom from Hunger campaign a voluntary organization of U.K. and Government of Bihar. Muzaffarpur Dairy was registered as a co-operative organization in 1989 and its management handed over to Tirhut Milk Union in 1991. Tirhut Milk Union, Muzaffarpur (Muzaffarpur Dairy) is affiliated to COMFED. COMFED is a state level organization came in to existence in April 1983 as the implementing agency of operation Flood (OF) programmed of airy development on Annual Pattern in state.

The Muzaffarpur Dairy is involved in procurement and processing milk and making various kinds of milk products such as – Paneer, Peda, Gulab Jamun, Dahi, Lassi, Surbhi, Balusahi etc under the Brand name 'SUDHA'. Till Jan, 2016 total 3161 Dairy Co-operatives Societies (DCS) functioning under Tirhut Milk Union (Muzaffarpur Dairy). The authorized state capital and paid-up share capital of Tirhut Dugdha Utpadak Sahkari Sangh Ltd. (Muzaffarpur Dairy) are 30000000 and 15263700 respectively.

Components of Current Assets and Current Liabilities of Dairy Business

The major components of working capital are inventories, accounts receivables and cash. There are two concepts of working capital. Gross working capital and Net working capital. The sum total of all the items of current assets taken altogether is termed as Gross Working Capital and on the other hand the difference between total current assets and current liabilities is being termed of Net Working Capital. In the context of Dairy Co-operatives components of working capital may be enumerated as mentioned below.

Items of Current Assets	Items of Current Liabilities
1. Fixed Term Deposit	1) Advance for supply of Milk & Milk Product.
2. Stocks & Stores	2) Outstanding Expenses.
3. Closing Stock	3) Retention Money.
4. Deposit (Assets)	4) Security Money
5. Loans Advances (Assets)	5) Duties and Taxes
6. Sundry Debtors	6) Provisions
7. Cash in Hand	7) Sundry Creditors
8. Bank Accounts etc.	

Working Capital Performance of Tirhut Milk Union

To analyses the working capital performance of Tirhut Milk Union (Muzaffarpur Dairy), the technique of ratio analysis, trend percentage and statistical techniques has been used. The ratios which are taken into consideration are as follows:

- **Current Ratio:** The current ratio is a measure of the firm's short-term solvency. It indicates the rupees of current assets available for each rupee of current liability. By this ratio we can see the stability of firms or short term financial position of the firm. It is calculated by dividing current assets by current liabilities.

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

Table 1: Showing the Current Ratio of Tirhut Milk Union

Year	Current Assets (Rupees in lakh)	Trend % of Current Assets	Current Liabilities (Rupees in lakh)	Trend % of Current liabilities	Current Ratio	Trend % of Current Ratio
2005-06	1010.5	100	720.87	100	1.40	100
2006-07	887.09	88	2948.85	409	0.30	21
2007-08	874.48	81	665.6	92	1.22	87
2008-09	968.28	96	1046.7	145	0.93	66
2009-10	1536.64	152	330.55	46	4.65	332
2010-11	1912.85	189	2291.68	318	0.83	99
2011-12	2616.23	259	2644.23	367	0.99	71
2012-13	17256.8	1263	3668.53	509	3.48	249
2013-14	4357.2	431	4836.67	671	0.90	64
2014-15	8925.33	883	5681.08	788	1.57	112
Mean	4028.53	354	2483.48	345	1.63	116

Source: Compiled from the Annual reports of Tirhut Milk Union

According to the standards the current ratio of firm should be 2:1, but the ratios of the Tirhut Milk Union couldn't reach the target during the years 2005-06 (1.40), 2006-07 (.30), 2007-08 (1.22), 2008-09 (0.93), 2010-11 (0.83), 2011-12 (0.99), 2013-2104 (0.90), 2014-15 (1.57). The ratios are above standard during the years 2009-10 (4.65) and 2012-13(3.48). The average current ratio during the period of study was 1.63 which was the below of standard conventional rule 2:1. A low current ratio represents that the cooperative liquidity position is not good which indicates the Union did not meet its short-term obligation during the study period.

- **Quick/Liquid/Acid Test Ratio:** It establishes the relationship between quick assets and current liabilities. An asset is liquid if it can be converted into cash immediately. Quick assets include cash in hand, cash at Bank, Receivables and short-term investment. Quick Ratio shows the short term liquid position of firm. It is calculated by dividing Quick Assets by Current liabilities.

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

Table 2: Showing the Quick Ratio of Tirhut Milk Union

Year	Quick Assets (Rs. in lakh)	Trend % of Quick Assets	Current Liabilities (Rs. in lakh)	Trend % of Current liabilities	Quick Ratio	Trend % of Quick Ratio
2005-06	402.97	100	720.87	100	0.056	100
2006-07	384.9	96	2948.85	409	0.13	23
2007-08	305.6	76	665.6	92	0.46	82
2008-09	460.6	114	1046.7	145	0.44	79
2009-10	713.4	177	330.55	46	2.16	386
2010-11	898.88	223	2291.68	318	0.39	70
2011-12	1326.49	329	2644.23	367	0.50	89
2012-13	1255.57	312	3668.53	509	0.34	61
2013-14	2343.5	582	4836.67	671	0.48	86
2014-15	3947.7	980	5681.08	788	0.69	123
Mean	1203.96	299	2483.48	345	0.62	111

Source: Compiled from the Annual reports of Tirhut Milk Union

The ideal quick ratio of the firm should be 1, but the ratios of Tirhut Milk Union never reached one except 2009-10 (2.16) during the study period. The average quick ratio was 0.62 which was also the below of standard ratio 1. Hence, the short term solvency position of Union in terms of quick ratio is not satisfactory by maintaining the adequate working capital.

- **Cash to Current Assets Ratio:-** This ratio indicates the level of cash maintained by the company. Lower the ratio greater will be the profitability of the concern. Here, cash means cash and Bank. Cash to current assets ratio = $\frac{\text{Cash}}{\text{Current Assets}}$

Table 3: Showing the Cash to Current Assets Ratio of Tirhut Milk Union

Year	Cash (Rupees in lakh)	Trend % of Cash	Current Assets (Rupees in lakh)	Trend % of Current Assets	Cash to Current Assets	Trend % of Cash to Current Assets
2005-06	78.30	100	1010.35	100	.08	100
2006-07	64.75	83	887.09	88	0.07	88
2007-08	43.02	55	814.48	81	0.05	63
2008-09	52.26	67	968.28	96	.05	63
2009-10	32.18	41	1536.64	152	.02	25
2010-11	35.82	46	1912.85	189	.02	25
2011-12	106.10	136	2616.23	259	0.04	50
2012-13	13.09	17	12756.8	1263	.001	1
2013-14	115.05	147	4357.2	431	.03	38
2014-15	130.41	167	8925.33	883	.01	13
Mean	67.10	86	3578.53	354	0.04	50

Source: Compiled from the Annual reports of Tirhut Milk Union

The above table indicates that cash to current assets ratio is not satisfactory for business carried out by the Union because it is in decreasing trend.

Inventory Turnover Ratio

Inventory Turnover Ratio refers to the relationship between cost of goods sold and Average Inventory. It measures the liquidity position and efficient management of inventory. It is expressed in form of times.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods sold}}{\text{Average Inventories}}$$

Table 4: Showing the Inventory Turnover Ratio of Tirhut Milk Union

Year	Cost of goods sold (Rs. in lakh)	Trend % of Cost of goods sold	Average Inventories (Rs. lakh)	Trend % of Average Inventories	Inventory Turnover Ratio (Times)	Trend % of Inventory Turnover Ratio
2005-06	4567.58	100	607.47	100	7.52	100
2006-07	5439.65	119	554.83	91	9.80	120
2007-08	5195.7	114	505.54	83	10.27	137
2008-09	6165.71	135	508.28	84	12.13	161
2009-10	9380.83	205	665.34	110	14.10	188
2010-11	11761.45	257	918.61	151	12.80	170
2011-12	12060.5	264	1151.86	190	10.47	139
2012-13	15831.39	347	1868.30	308	8.47	113
2013-14	22858.66	500	2230.26	367	10.25	136
2014-15	22761.52	503	3235.5	533	7.10	94
Mean	11622.30	254	1224.60	202	10.29	137

Source: Compiled from the Annual reports of Tirhut Milk Union

As per Table: 4, Inventory Turnover Ratio of Tirhut Milk Union shows an increasing trend except in the year 2014-15. Inventory turnover ratio varies between 7.10 times to 14.10 times with an average of 10.29 times. Thus, Inventory Turnover Ratio of Tirhut Milk Union shows efficient management of inventory.

- **Receivable Turnover Ratio:** Receivable Turnover Ratio indicates the velocity of debt collection of firm. It shows number of times the receivables rotate in a year in times of sales and how quickly debtors are converted into cash. Higher the ratio is better, since it indicate that debts are being collected more promptly. Receivable turnover can be calculated by dividing total sales by closing balance of debtors.

$$\text{Receivable Turnover Ratio} = \frac{\text{Sales}}{\text{Debtor}}$$

Table 5: Showing the Receivable Turnover Ratio of Tirhut Milk Union

Year	Sales (Rs. in lakh)	Trend % of Sales	Receivable (Rs. in lakh)	Trend % of Receivable	Receivable Turnover Ratio (times)	Trend % of Receivable Turnover Ratio
2005-06	5018.35	100	2.83	100	1773.27	100
2006-07	6036.25	120	24.22	855	249.23	14
2007-08	5710.39	114	22.45	793	254.36	14
2008-09	7008.68	140	0.63	22	11124.89	627
2009-10	10546.99	210	0	0	10546.99	595
2010-11	13064.4	260	6.14	217	2127.75	120
2011-12	13814.54	275	0	0	13184.54	744
2012-13	17457.01	348	9.64	341	1810.89	102
2013-14	24777.72	498	144.39	5102	172.99	10
2014-15	25223.06	503	21.64	765	1165.58	66
Mean	12885.74	257	23.19	820	4241.05	239

Source: Compiled from the Annual reports of Tirhut Milk Union

The trend analysis in this connection reveals the fact that as an average the trend on sales have increase to 157 percents, Receivables have increased to 720 per cent and Receivable Turnover Ratio has also increase the 139 per cent. The Receivable Turnover Ratio of Union varies between 172.99 times to 11124.89 times with an average of 4241.05 times. During the period of study the trend of sales shows better position but Unions credit sales is also show the increasing trend which can be further become a bad debts. So, management should attention in this regard.

- **Working Capital Turnover Ratio**

Working Capital Turnover Ratio indicates the velocity of Net Working Capital. This ratio indicates the number of times the working capital is turned over in the course of a year. This ratio measures the efficiency with which the working capital is being used by a firm. A higher ratio indicates efficient utilization of working capital and a low ratio indicates otherwise. But a very high ratio is not a good symptom. It can be calculated by following formula:

$$\text{Working Capital Turnover Ratio} = \frac{\text{Net Sales}}{\text{Net Working Capital}}$$

Table 6: Showing the Net Working Capital Turnover Ratio of Tirhut Milk Union

Year	Sales (Rs. in lakh)	Trend % of Sales	Working Capital (Rs. in lakh)	Trend % of Working Capital	Working Capital Turnover (Times)	Trend % of Working Capital Turnover Ratio
2005-06	5018.35	100	289.46	100	17.34	100
2006-07	6036.25	120	163.75	57	36.86	213
2007-08	5710.39	114	148.88	51	-89.37	-515
2008-09	7008.68	140	-78.42	-27	8.74	50
2009-10	10546.99	210	1206.09	417	-34.49	-199
2010-11	13064.4	260	-378.83	-131	-493.37	-2845
2011-12	13814.54	275	-28	10	1.92	11
2012-13	17457.01	348	9088.25	3140	-52.09	-300
2013-14	24777.72	498	-479.48	-166	7.77	45
2014-15	25223.06	503	3244.25	1121	-5.59	-32
Mean	12885.74	257	1317.60	455	-60.23	-347

Source: Compiled from the Annual reports of Tirhut Milk Union

From Table 6, it is observed that this ratio shows fluctuating trend during the study period. The ranged of ratio between -493.37 in 2010-11 to 36.86 in 2006-07 with an average of -60.23. This indicates the working capital utilization of Union during the study period. Negative working capital Turnover Ratio and Negative average trend highlight the bad working capital management of concern.

Summary of the Findings and Conclusion

- The Current Ratio and Quick Ratio of Union never reached the standard level i.e. 2:1 and 1:1 respectively which shows that the Union has not good liquidity position.
- The inventory ratio as well as Receivable turnover ratio shows near about satisfactory performance during the study period.
- The negative trend of Working Capital turnover ratio indicates the unsatisfactory position of Working Capital.

On the basis of above findings, it may be concluded that the Working Capital Management of Tirhut Milk Union is not satisfactory during the period under study. The Union should have attention the maintaining of good liquidity position. For this study ten years of financial statements i.e. Balance Sheet and Profit & Loss accounts have been taken for ratio analysis and trend analysis to check the liquidity and efficiency position for managing working capital of Tirhut Milk Union, Muzaffarpur.

Direction of Future Research

The present study is limited to the extent of single Milk Union. Hence, further research may be conducted to reflect the overall view of Working Capital Management in all Milk Union of Bihar which comes under the control of COMFED.

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