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Analysis of Liquidity
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7.1 **INTRODUCTION**:

Liquidity of business is one of the key factors determining its propensity to succeed or fail. Both excess and shortage of liquidity affect the interests of the enterprise. By excess liquidity in a business enterprise, it is meant that it is carrying higher current assets than are warranted by the requirements of production. Hence, it indicates the blocking up of funds in current assets without any return. Besides, the enterprise has to incur costs to carry them overtime. Further the value of such assets would depreciate in times of inflation, if they are left ideally. Owing to the cornering of capital, the enterprise may have to resort to additional borrowing even at a fancy price.

On the other hand the impact of inadequate liquidity is more severe. The losses due to insufficient liquidity would be many. Production may have to be curtailed or stopped for want of necessary funds. As the enterprise will not be in a position to pay off the debts, the credit worthiness of the enterprise is badly affected. In general the smaller the amount of default, the higher would be the damage done to the image of the unit. In addition the enterprise will not be able to secure funds from outside sources and the existing creditors may even force the enterprise into bankruptcy. Further inefficient funds will not allow the concern to launch any profitable project or earn attractive rates of return on the existing investment.
Between the excess and inadequate liquidity, the later is considered to be more detrimental, since the lack of liquidity may endanger the very existence of the business enterprise. Besides, both the excess and inadequate liquidity adversely affect the profitability. If the enterprise is earning very low rate of return or incurring losses, there would be no funds generated by the operation of the enterprise which are essential to retire the debts. In fact there is a tangle between liquidity and profitability, which eventually determines the optimum level of investment in current assets. Of the liquidity and profitability the former assumes further importance since profit could be earned with ease in subsequent periods, once the image of the unit is maintained. But, if the enterprise losses its face in the market for wants of liquidity, it requires Herculean efforts to restore its position. Instances are not lacking of great industrial giants, with comfortable books profits coming to grief for want of liquidity.
Table No: 7.1
Current Ratio of the selected dairies under the study for the period of (2000-01 to 2007-08)

<table>
<thead>
<tr>
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<td>2.59</td>
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<td>1.09</td>
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<td>Anand</td>
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</table>
7.2 CURRENT RATIO:

(1) Current Ratio = Current Assets / Current Liability

➢ Introduction:

The current Ratio is an index of the concern’s financial stability since it shows the extent of working capital which is the amount by which the Current Assets exceed the current liabilities. A higher current Ratio would indicate inadequate employment of funds (under trading) while a poor current Ratio is a danger signal to the management regarding solvency. A high current ratio means excessive dependence on long term sources of raising funds. Long term liabilities are costlier than current liabilities and therefore this will result in considerably lowering down the profitability of the concern.

(1) Dudhsagar Dairy: (Mehsana)

The average current ratio of eight years of this dairy is 1.52 and its ranks third (3rd) compared with other selected dairies. The average current ratio of dudhsagar dairy of mehsana is lower than the ideal ratio which should be 2:1. Slightly less current ratio indicates efficient use of funds and this can be verified by fixed asset turnover ratio (sales / fixed assets ) in which dudhsagar dairy ranks second on the average compared with other selected dairies. Some what high liquidity compared with other dairies ranking third (3rd) is mainly due to high volume of business (Mehsana ranks first in total sales among all the dairies of Gujarat.)
(2) **Amul Dairy : (Anand)**

The average current ratio of Amul Dairy of Anand is 2.35 for eight years and Amul Dairy of Anand ranks first (1st) in current ratio on an average as compared with other selected dairies. Thus highest current ratio of Amul Dairy signifies inefficient use of funds because the average ratio is 2.35 which is above the ideal ratio which should be 2:1. Inefficient use of funds of Amul Dairy Anand is also evident on seeing Fixed Assets Turnover Ratio (Sales / Fixed Assets). This ratio is very poor in Amul Dairy Anand ranking fifth (5th) on the average. Highest liquidity of Anand Dairy as per current ratio leads to very poor Return On Net Worth where in this dairy ranks sixth (6th) in the average as compared with other dairies showing set-back in over all profitability. Higher liquidity has resulted in some what under trading.

(3) **Sumul Dairy : (Surat)**

The average current ratio of sumul dairy of Surat is 1.02 for eight years ranking fifth (5th) among other selected dairies. This ratio is lower than the ideal ratio 2:1 indicating less liquidity and more efficient use of funds but not very high profitability as expected, although it ranks first (1st) on the average in Fixed Assets Turnover Ratio (Sales / Fixed Assets). Low profitability is meanly due to higher milk procurement, cooling, storing and processing expenses and also higher marketing expenses. Sumul Dairy faced crisis of net working capital for four years from 2003-04 to 2006-07 where in current liabilities were more than current assets resulting in negative net working capital.
(4) **Sugam Dairy : ( Baroda )**

The average current ratio of sugam dairy of Baroda is 0.98 for eight years which is the lowest ranking seventh (7th) among other selected dairies. This ratio is lower than the ideal ratio 2:1 indicating less liquidity and more efficient use of funds (over trading) but not very high profitability as expected, although it ranks third (3rd) on the average in Fixed Assets Turnover Ratio (Sales / Fixed Assets). Low profitability is mainly due to Salary and Wage expenses and also higher marketing expenses. Sugam Dairy faced crisis of net working capital for six years from 2002-03 to 2007-08 where in current liabilities were more than current assets resulting in negative net working capital.

(5) **Gopal Dairy : ( Rajkot )**

Gopal Dairy of Rajkot has its eight years average current ratio of 1.41 ranking fourth (4th) among selected dairies. The average current ratio of Rajkot which is 1.41 is less than ideal ratio of 2:1 indicating lower liquidity but more efficient use of funds (over trading) which is evident from fixed Assets Turnover Ratio where in Rajkot Dairy ranks fourth (4th) on the average. Thus efficient use of fund (over trading) has raised the profitability of Rajkot Dairy ranking first as regard Return on Net Worth and ranking second (2nd) sales related profitability. Thus lower liquidity has resulted in higher profitability for Rajkot Gopal Dairy.
(6)  **Uttam Dairy : ( Ahmedabad )**

Uttam Dairy of Ahmedabad has the current ratio of 0.99 on the average compared to other selected dairies ranking sixth (6th) and much less than the ideal ratio 2:1 signifying very low liquidity but very high profitability. Ranking first (1st) in sales related profitability and ranking third (3rd) on Return on Net Worth due to limited sales volume. Its average fixed assets turnover ratio is very low ranking seventh (7th) which requires improvement to reduce over stocking. Uttam Dairy faced crisis of net working capital for four years from 2000-01 to 2003-04 where in current liabilities were more than current assets resulting in negative net working capital.

(7)  **Vasudhara Dairy : ( Valsad )**

Average current ratio of eight years of Vasudhara Dairy Valsad is 1.87 which is very high ranking second (2nd) compared with other selected dairies. High liquidity of Vasudhara Dairy indicates inefficient use of funds which is even evident from Fixed Assets Turnover Ratio (Sales / Fixed Assets) where in its ranks sixth (6th) compared with other dairies which is very low. Thus for Vasudhara Dairy very high liquidity has resulted in very low profitability (sales related as well as Net Worth related). To increase profitability efficient use of funds is necessary besides reducing marketing expenses, administrative expenses and also interest expenditure.
7.2 (A) ANOVA TEST ON CURRENT RATIO

- Null Hypothesis:
  There is no any significant difference in current ratio of selected co-operative dairies.

- Alternative Hypothesis:
  There is significant difference in current ratio of selected co-operative dairies.

- Level of significance:
  5% level

Table 7 - (A)

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<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
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</tbody>
</table>
CURRENT RATIO: (LIQUIDITY)

Calculated F Value = 0.29283
Table F Value = 2.216417
Result = Insignificant

The analysis showed the insignificant result. It can be seen from the table, that the calculated value of F was found as 0.29283, while the Table value of F was 2.216417, at 5% level of significance. The calculated value of F, being less than the Table value of F, the null hypothesis stood accepted and the alternative hypothesis got rejected at 5% level of significance. So it proves that the differences among the averages of this group were not much significant. And the average liquidity of the sub-groups of the co-operative dairies do not differ much.
Chart No : 7.1

Current Ratio of the selected dairies under the study for the period of (2000-01 to 2007-08)
Chart No : 7.2

Current Ratio of the selected dairies under the study for the period of (2000-01 to 2007-08)
### Table No: 7.2

**Liquid Ratio of the selected dairies under the study for the period of (2000-01 to 2007-08)**

<table>
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</thead>
<tbody>
<tr>
<td>Rajkot</td>
<td>1.08</td>
<td>1.01</td>
<td>0.84</td>
<td>0.95</td>
<td>0.99</td>
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<td>0.76</td>
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<td>Ahemadabad</td>
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<td>Total Average</td>
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<td></td>
<td>0.9518</td>
<td>0.9434</td>
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</table>
7.3 LIQUID RATIO:

(2) Liquid Ratio:

\[ = \text{Liquid Assets} / \text{Liquid Liabilities} \]

**Introduction:**

Liquid Ratio is necessary to overcome the limitation of the Current Ratio. In current ratio liquid position of concern is not said to be satisfactory if the current assets include stock which is outdated or out of fashion or insaleable even if the ratio is higher. On the other hand if the turnover is higher and collection is made speedily, the liquid position is said to be satisfactory even if ratio is not up to mark.

Liquid Ratio shows whether or not the concern is able to pay its debts immediately, when required.

**Formula:** Liquid Ratio = Liquid Assets / Liquid Liabilities.

Liquid Assets = Cash, Bank, Debtors, Bills Receivables and immediate saleable securities (stock is not included, remember)

Liquid liabilities include all the current liabilities excluding Bank overdraft.

Liquidity Ratio is an indicator of short-term solvency of the concern. A comparison of the current ratio to liquid ratio shall indicate the inventory (stocks) hold-ups. For example if two concerns have the same current ratio but different liquidity ratio, it indicates over-stocking by the concern having low liquidity ratio as compared to the concern which has a higher liquidity ratio.
(1) **Dudhsagar Dairy : (Mehsana)**

On looking at the average of eight years from 2000-01 to 2007-08 we find the liquidity ratio of this dairy to be 0.834 ranking fourth as compared with other selected dairies. The liquidity ratio of mehsana dairy is slightly less than the ideal ratio of 1:1. In case the collection from the debtors is quick some what less ratio does not matter. In milk dairy business credit sales are always less and credit period is always short so quick collection from debtors is not a problem. Consequently solvency problem does not arise for this dairy. But its liquid ratio is slightly less than its current ratio as found by comparing the ranks of this dairy in both the ratios. This indicates some what over stocking of inventory for this dairy.

(2) **Amul Dairy : (Anand)**

On looking at the average of eight years from 2000-01 to 2007-08 we find the liquidity ratio of this dairy to be 1.32 ranking second as compared with other selected dairies. The liquidity ratio of Amul dairy is slightly more than the ideal ratio of 1:1. Consequently solvency problem does not arise for this dairy. But its liquid ratio is slightly less than its current ratio as found by comparing the ranks of this dairy in both the ratios. This indicates some what over stocking of inventory for this dairy. High liquidity ratio may also indicate some what under trading and less profitability from return on net worth point of view.
(3) **Sumul Dairy : ( Surat )**

On looking at the average of eight years from 2000-01 to 2007-08 we find the liquidity ratio of this dairy to be 0.68 ranking seventh as compared with other selected dairies. The liquidity ratio of Sumul dairy is less than the ideal ratio of 1:1. Consequently solvency problem does arise for this dairy. But its liquid ratio is slightly less than its current ratio as found by comparing the ranks of this dairy in both the ratios. This also indicates some what over stocking of inventory for this dairy. Low liquidity ratio may also indicate some what over trading resulting in more profitability but this does not happen in sumul dairy due to higher salary and wage expenses and also higher milk procurement, cooling, storing and processing expenses besides higher marketing expenses.

(4) **Sugam Dairy : ( Baroda )**

On looking at the average of eight years from 2000-01 to 2007-08 we find the liquidity ratio of this dairy to be 0.71 ranking fifth as compared with other selected dairies. The liquidity ratio of Sugam dairy is less than the ideal ratio of 1:1. Consequently solvency problem does arise for this dairy to some extent. But its liquid ratio is slightly more than its current ratio as found by comparing the ranks of this dairy in both the ratios. This indicates no much problem of over stocking of inventory for this dairy. Low liquidity ratio may also indicate some what over trading resulting in more profitability but this does not happen in sugam dairy due to higher salary and wage expenses and also higher marketing expenses.
(5) **Gopal Dairy : ( Rajkot )**

On looking at the average of eight years from 2000-01 to 2007-08 we find the liquidity ratio of this dairy to be 0.99 ranking third as compared with other selected dairies. The liquidity ratio of Gopal dairy is very near the ideal ratio of 1:1. Consequently solvency problem does not arise for this dairy. But its liquid ratio is slightly more than its current ratio as found by comparing the ranks of this dairy in both the ratios. This indicates no problem of over stocking of inventory for this dairy. Sound liquidity ratio may also indicate some what under trading resulting in some what less profitability but this does not happen in Gopal dairy due to proper management of expenses.

(6) **Uttam Dairy : ( Ahemadabad )**

On looking at the average of eight years from 2000-01 to 2007-08 we find the liquidity ratio of this dairy to be 0.70 ranking sixth as compared with other selected dairies. The liquidity ratio of Uttam dairy is very low compared to ideal ratio of 1:1. Consequently solvency problem does arise for this dairy. But its liquid ratio is slightly more than its current ratio as found by comparing the ranks of this dairy in both the ratios. This indicates no problem of over stocking of inventory for this dairy. Poor liquidity ratio may also indicate some what over trading resulting in more profitability.

(7) **Vasudhara Dairy : ( Valsad )**

On looking at the average of eight years from 2000-01 to 2007-08 we find the liquidity ratio of this dairy to be 1.375 ranking first as compared with other selected dairies. The liquidity ratio of Vasudhara
dairy is much higher compared to ideal ratio of 1:1. Consequently solvency problem does not arise for this dairy. But its liquid ratio is slightly more than its current ratio as found by comparing the ranks of this dairy in both the ratios. This indicates no problem of over stocking of inventory for this dairy. Higher liquidity ratio may also indicate under trading resulting in poor profitability.

7.3 (A) ANOVA TEST ON LIQUID RATIO

➢ Null Hypothesis:

There is no any significant difference in liquid ratio of selected co-operative dairies.

➢ Alternative Hypothesis:

There is significant difference in liquid ratio of selected co-operative dairies.

➢ Level of significance:

5% level

<table>
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<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
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</thead>
<tbody>
<tr>
<td>Between Groups</td>
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<td>0.021109</td>
<td>0.154366</td>
<td>0.99255</td>
<td>2.216417</td>
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<td>Within Groups</td>
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</table>

Table 7-(B)

ANALYSIS OF VARIANCE TEST (ANOVA)
ON LIQUID RATIO AMONG SUB-GROUPS OF CO-OPERATIVE MILK DAIRIES.
⇒ LIQUID RATIO : (LIQUIDITY)

Calculated F Value = 0.154366

Table F Value = 2.216417

Result = Insignificant

The analysis showed the insignificant result. It can be seen from the table, that the calculated value of F was found as 0.154366, while the Table value of F was 2.216417, at 5% level of significance. The calculated value of F, being less than the Table value of F, the null hypothesis stood accepted and the alternative hypothesis got rejected at 5% level of significance. So it proves that the differences among the averages of this group were not much significant. And the average liquidity of the sub-groups of the co-operative dairies do not differ much.
Chart No.: 7.3
Liquid Ratio of the selected dairies under the study for the period of (2000-01 to 2007-08)


Liquidity: 0.0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.2, 1.4, 1.6, 1.8, 2.0

Legend:
- Rajkot
- Valsad
- Mahesana
- Surat
- Baroda
- Ahemadabad
- Anand
Chart No.: 7.4

Liquid Ratio of the selected dairies under the study for the period of (2000-01 to 2007-08)
### Table No: 7.3

Acid Test Ratio of the selected dairies under the study for the period of (2000-01 to 2007-08)

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Rajkot</td>
<td>0.14</td>
<td>0.86</td>
<td>0.18</td>
<td>0.22</td>
<td>0.13</td>
<td>0.17</td>
<td>0.25</td>
<td>0.12</td>
<td>0.2588</td>
<td>6</td>
</tr>
<tr>
<td>Valsad</td>
<td>0.27</td>
<td>0.3</td>
<td>0.33</td>
<td>0.21</td>
<td>0.27</td>
<td>0.26</td>
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<td>0.39</td>
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<tr>
<td>Mahesana</td>
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<td>0.09</td>
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</tr>
<tr>
<td>Surat</td>
<td>0.54</td>
<td>0.45</td>
<td>0.43</td>
<td>0.57</td>
<td>0.35</td>
<td>0.42</td>
<td>0.37</td>
<td>0.56</td>
<td>0.4613</td>
<td>2</td>
</tr>
<tr>
<td>Baroda</td>
<td>0.64</td>
<td>0.5</td>
<td>0.46</td>
<td>0.49</td>
<td>0.46</td>
<td>0.51</td>
<td>0.59</td>
<td>0.24</td>
<td>0.4863</td>
<td>1</td>
</tr>
<tr>
<td>Ahemadabad</td>
<td>0.073</td>
<td>0.12</td>
<td>0.16</td>
<td>0.39</td>
<td>0.29</td>
<td>0.32</td>
<td>--------</td>
<td>--------</td>
<td>0.2255</td>
<td>7</td>
</tr>
<tr>
<td>Anand</td>
<td>0.45</td>
<td>0.58</td>
<td>0.36</td>
<td>0.84</td>
<td>0.28</td>
<td>0.16</td>
<td>0.31</td>
<td>0.24</td>
<td>0.4025</td>
<td>3</td>
</tr>
<tr>
<td>Average</td>
<td>0.319</td>
<td>0.4071</td>
<td>0.2871</td>
<td>0.46</td>
<td>0.2729</td>
<td>0.3314</td>
<td>0.435</td>
<td>0.325</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Average</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.3547</td>
<td>0.3492</td>
<td></td>
</tr>
</tbody>
</table>
7.4 ACID TEST RATIO OR QUICK RATIO:

Acid Test Ratio or Quick Ratio = Quick Assets / Liquid Liabilities

Quick Assets = Current Assets – Stock – Debtors
Liquid Liabilities = Current Liabilities - Bank overdraft

➢ Introduction:

It is useful to know whether or not any enterprise is able to payback its debts very immediately. Instead of liquid ratio, acid test ratio gives us this information more accurately. From current assets, stock and debtors, both are deducted and quick liquid assets are found out.

To get quick liquid assets, debtors also are deducted. It is possible that collection may not be made immediately as and when required.

Use: It is useful to know whether or not any enterprise is able to pay back its debts very immediately, if it is required suddenly.

Ideal Proportion:

It should be below 1: 1 sometimes 2 : 3 is also considered to be an ideal ratio. If liquid (Quick) assets are 2/3 of the liquid liabilities, it is satisfactory.

In co-operative milk dairies acid test ratios are much below the ideal ratio. The main reason for low ratio is due to delay in collecting receivable and loans from debtors and loan takers. Ideal ratio should be 1 : 1 or 2 : 3 (0.67 : 1)
(1) **Dudhsagar Dairy : ( Mehsana )**

Compared to other selected dairies the average acid test ratio of Mehsana Dairy for the eight years under study is much higher ranking second. But this ratio is 0.34 which is much less than the ideal ratio of 0.67: 1. Its liquid ratio was 0.83 which was very near ideal ratio. But acid test ratio is low which indicates application of strict policy for collecting arrears.

(2) **Amul Dairy : ( Anand )**

Compared to other selected dairies the average acid test ratio of Amul Dairy for the eight years under study is the highest ranking first. But this ratio is 0.40 which is less than the ideal ratio of 0.67: 1. Its liquid ratio was 1.32 which was some what higher than ideal ratio. But acid test ratio is low which indicates application of strict policy for collecting arrears.

(3) **Sumul Dairy : ( Surat )**

Compared to other selected dairies the average acid test ratio of Sumul Dairy for the eight years under study is rather high ranking third. But this ratio is 0.271 which is much less than the ideal ratio of 0.67: 1. Its liquid ratio was 0.68 which was not very lower than ideal ratio. But acid test ratio is much low which indicates application of strict policy for collecting arrears.

(4) **Sugam Dairy : ( Baroda )**

Compared to other selected dairies the average acid test ratio of Sugam Dairy for the eight years under study is rather low ranking sixth.
This ratio is 0.257 which is much less than the ideal ratio of 0.67: 1. Its liquid ratio was 0.71 which was not very lower than ideal ratio. But acid test ratio is much low which indicates application of strict policy for collecting arrears.

(5) **Gopal Dairy : ( Rajkot )**

Compared to other selected dairies the average acid test ratio of Gopal Dairy for the eight years under study is rather low ranking fifth. This ratio is 0.259 which is much less than the ideal ratio of 0.67: 1. Its liquid ratio was 0.98 which was very near to the ideal ratio. But acid test ratio is much low which indicates application of strict policy for collecting arrears.

(6) **Uttam Dairy : ( Ahmedabad )**

Compared to other selected dairies the average acid test ratio of Uttam Dairy for the eight years under study is the lowest ranking seventh. This ratio is 0.23 which is very less than the ideal ratio of 0.67: 1. Its liquid ratio was 0.70 which was not very lower than ideal ratio. But acid test ratio is the lowest which indicates application of strict policy for collecting arrears.

(7) **Vasudhara Dairy : ( Valsad )**

Compared to other selected dairies the average acid test ratio of Vasudhara Dairy for the eight years under study is neither so high nor so low ranking fourth. But this ratio is 0.270 which is much less than the ideal ratio of 0.67: 1. Its liquid ratio was 1.375 which was higher than the ideal ratio. But acid test ratio is much low which indicates application of strict policy for collecting arrears.
7.4 (A) ANOVA TEST ON ACID TEST RATIO

➢ Null Hypothesis:
There is no any significant difference in acid test ratio of selected co-operative dairies.

➢ Alternative Hypothesis:
There is significant difference in acid test ratio of selected co-operative dairies.

➢ Level of significance:
5% level

Table 7- (C)

ANALYSIS OF VARIANCE TEST (ANOVA)
ON ACID TEST RATIO AMONG SUB-GROUPS OF CO OPERATIVE MILK DAIRIES.

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
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<td>7</td>
<td>0.033193</td>
<td>0.779565</td>
<td>0.607628</td>
<td>2.216417</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1.958616</td>
<td>46</td>
<td>0.042579</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.190966</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ACID TEST RATIO: (LIQUIDITY)

Calculated F Value = 0.779565
Table F Value = 2.216417
Result = Insignificant

The analysis showed the insignificant result. It can be seen from the table, that the calculated value of F was found as 0.779565, while the Table value of F was 2.216417, at 5% level of significance. The calculated value of F, being less than the Table value of F, the null hypothesis stood accepted and the alternative hypothesis got rejected at 5% level of significance. So it proves that the differences among the averages of this group were not much significant. And the average liquidity of the sub-groups of the co-operative dairies do not differ much.
Chart No: 7.5

Acid Test Ratio of the selected dairies under the study for the period of (2000-01 to 2007-08)
Acid Test Ratio of the selected dairies under the study for the period of (2000-01 to 2007-08)
### Table No: 7.4

**Net Working Capital Turnover Ratio** of the selected dairies under the study for the period of (2000-01 to 2007-08)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Rajkot</td>
<td>23.01</td>
<td>20.6</td>
<td>42.62</td>
<td>31.09</td>
<td>50.24</td>
<td>31.06</td>
<td>166</td>
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<tr>
<td>Mahesana</td>
<td>17.39</td>
<td>16.73</td>
<td>19.58</td>
<td>66.78</td>
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<td>8.57</td>
<td>7.48</td>
<td>8.76</td>
<td>20.713</td>
<td>6</td>
</tr>
<tr>
<td>Surat</td>
<td>36.34</td>
<td>77.87</td>
<td>87.61</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>31.93</td>
<td>58.438</td>
<td>2</td>
</tr>
<tr>
<td>Baroda</td>
<td>30.32</td>
<td>95.1</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>62.71</td>
<td>1</td>
</tr>
<tr>
<td>Ahemadabad</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>46.36</td>
<td>65.85</td>
<td>--------</td>
<td>--------</td>
<td>56.105</td>
<td>3</td>
</tr>
<tr>
<td>Anand</td>
<td>5.21</td>
<td>4.79</td>
<td>3.95</td>
<td>5.8</td>
<td>5.6</td>
<td>7</td>
<td>10.51</td>
<td>7.1</td>
<td>6.245</td>
<td>7</td>
</tr>
<tr>
<td>Average</td>
<td>24.103</td>
<td>38.448</td>
<td>33.378</td>
<td>31.48</td>
<td>29.404</td>
<td>26.374</td>
<td>54.945</td>
<td>21.422</td>
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</tr>
<tr>
<td>Total Average</td>
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<td></td>
<td></td>
<td></td>
<td>32.444</td>
<td>39.653</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Asterisk indicates negative figures.*
7.5 NET WORKING CAPITAL TURNOVER RATIO:

Introduction

A study of working capital is of major importance to internal and external analysis because of its close relationship with current day-to-day operations of business. Inadequacy or mismanagement of working capital is the leading cause of business failures. The working capital of a concern is the life-blood which flows through the veins and arteries of the structure. It engages every part of the structure, gives courage, and morale to brain (management) and muscles (personnel), digests to the best degree the raw material used by its constant and regular, flow and return to the heart (cash flow) for another journey and so when working capital is lacking or slows down, the financial body dies and has value only as junk.

The efficiency of a firm in managing its working capital is ascertained by computing Net Working Capital Turnover Ratio which is arrived at if one divides the year-end net sales by the figures of net working capital at the end of the year.

Thus,

Net Working Capital Turnover Ratio = Net Sales / Net Working Capital

In the denominator of this ratio net working capital is the excess of current assets over current liabilities. This ratio indicates the quantum of net working capital utilized to generate a stipulated volume of sales. That is to say, it indicates the efficiency or otherwise in the utilization of short-term funds in marketing sales.
An attempt has been made here to analyse the efficiency of the selected co-operative dairies in regard to working capital management through the ratio of net working capital turnover (see table: 18) The faster the net working capital turnover, the lower is the total investment but greater the profits. However, a very high turnover of working capital may in some cases denote deficiency in working funds for the given volume of business which if allowed to persist will result into less production and sales and ultimately also the profitability.

(1) **Dudhsagar Dairy : ( Mehsana )**

Average net working capital turnover ratio of this dairy of eight years from 2000-01 to 2007-08 is 20.71 ranking sixth (6th) among the selected dairies and indicating under trading with higher liquidity. In spite of highest total sales the proportion of working capital is somewhat more leading to some what less efficiency of working fund.

(2) **Amul Dairy : ( Anand )**

Average net working capital turnover ratio of this dairy of eight years from 2000-01 to 2007-08 is 6.25 ranking seventh (7th) among the selected dairies and indicating under trading with higher liquidity. In spite of second highest total sales the proportion of working capital is much more leading to less efficiency of working fund.

(3) **Sumul Dairy : ( Surat )**

Average net working capital turnover ratio of this dairy of eight years from 2000-01 to 2007-08 is 58.44 ranking second (2nd) among the selected dairies and indicating over trading with low liquidity. In
this dairy from the year 2003-04 up to 2006-07 that is for four years there was lack of net working capital and current liability exceeded current assets which means net working capital was negative indicating liquidity crisis.

(4) **Sugam Dairy : (Baroda)**

Average net working capital turnover ratio of this dairy of eight years from 2000-01 to 2007-08 is 62.71 ranking first (1st) among the selected dairies and indicating over trading with low liquidity. In this dairy from the year 2002-03 up to 2007-08 that is for six years there was lack of net working capital and current liability exceeded current assets which means net working capital was negative indicating severe liquidity crisis.

(5) **Uttam Dairy : (Ahmedabad)**

Average net working capital turnover ratio of this dairy of eight years from 2000-01 to 2007-08 is 56.11 ranking third (3rd) among the selected dairies and indicating over trading with low liquidity. In this dairy from the year 2000-01 up to 2003-04 that is for four years there was lack of net working capital and current liability exceeded current assets which means net working capital was negative indicating liquidity crisis.

(6) **Gopal Dairy : (Rajkot)**

Average net working capital turnover ratio of this dairy of eight years from 2000-01 to 2007-08 is 51.38 ranking fourth (4th) among the selected dairies and indicating mediocre trading efficiency with some
what higher liquidity. The proportion of working capital is some what more leading to some what less efficiency of working fund.

(7) Vasudhara Dairy : ( Valsad )

Average net working capital turnover ratio of this dairy of eight years from 2000-01 to 2007-08 is 21.98 ranking fifth (5th) among the selected dairies and indicating under trading with higher liquidity. In spite of high total sales the proportion of working capital is some what more leading to some what less efficiency of working fund.

7.5 (A) ANOVA TEST ON NET WORKING CAPITAL TURNOVER RATIO :

➢ Null Hypothesis :
There is no any significant difference in net working capital turnover ratio of selected co-operative dairies.

➢ Alternative Hypothesis :
There is significant difference in net working capital turnover ratio of selected co-operative dairies.

➢ Level of significance :
5% level
Table 7-(D)

ANALYSIS OF VARIANCE TEST (ANOVA)
ON NET WORKING CAPITAL TURNOVER RATIO AMONG
SUB-GROUPS OF CO-OPERATIVE MILK DAIRIES.

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
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<tbody>
<tr>
<td>Between Groups</td>
<td>3490.594</td>
<td>7</td>
<td>498.6563</td>
<td>0.441177</td>
<td>0.868677</td>
<td>.312738</td>
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<tr>
<td>Within Groups</td>
<td>36169.18</td>
<td>32</td>
<td>1130.287</td>
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<tr>
<td>Total</td>
<td>39659.77</td>
<td>39</td>
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⇒ NET WORKING CAPITAL TURNOVER RATIO:
(LIQUIDITY)

Calculated F Value = 0.441177
Table F Value = 0.312738
Result = Insignificant

The analysis showed the significant result. It can be seen from the table, that the calculated value of F was found as 0.441177, while the Table value of F was 0.312738, at 5% level of significance. The calculated value of F, being more than the Table value of F, the null hypothesis stood rejected and the alternative hypothesis got accepted at 5% level of significance. So it proves that the differences among the average of this group were very much significant. And the average liquidity of the sub-groups of co-operative dairies differed substantially.
Net Working Capital Turnover Ratio of the selected dairies under the study for the period of (2000-01 to 2007-08)
Net Working Capital Turnover Ratio of the selected dairies under the study for the period of (2000-01 to 2007-08)