Chapter 5
Management of Working Capital

Working Capital

This section is addressed to the analysis of the efficiency of sample CSMs in managing their working capital. Working capital of a firm represents funds devoted to its routine operation like procurement of inputs and marketing of its outputs. It is thus distinct from fixed capital invested on fixed assets. Management of working capital is basically management of current liabilities.

Importance of Working Capital

Working capital, in general, forms a major chunk of the total capital employed in many business enterprises. Working capital is both large and volatile requiring constant monitoring. The decisions regarding working capital are to be taken so frequently that they consume a large part of a financial executive’s time and energy. Investments in fixed capital create capacity, whereas the working capital facilitates utilisation of the capacity. Working capital is regarded as the life-blood of a business enterprise for carrying on its day-to-day operations.

No business organisation can survive without working capital funds. “A firm must have adequate working capital for its survival. The alternatives are not pleasant. Bankruptcy is one alternative. Being acquired on unfavorable terms is another. Thus each firm must decide
how to balance the amount of working capital, it holds against the risk of failure”.

The policies of working capital management have a direct bearing on liquidity and profitability. Working capital has acquired a great significance and sound position for the twin objects of “profitability” and “liquidity”. The success of a business enterprise depends mainly upon proper management of working capital. So working capital management is considered as the driving seat of a financial manager. Inadequate working capital may inhibit business operation and weaken liquidity. Excessive working capital would raise cost of capital and reduce profitability.

Concept of Working Capital

Before analysing the management of working capital in the CSMs, it is relevant and necessary to understand the concept of working capital used here. There are two concepts of working capital (viz.) gross working capital and net working capital.

According to Walker, “The gross working capital refers to the amount of funds invested in current assets that are employed in the business process”. Gross working capital is thus the sum of current assets, comprising cash, stock, receivables and marketable investments. Guthman defined net working capital as “the excess of current assets over current liabilities”. Kennedy and McMullen held the same view, “ net working capital represents the amount of the current assets which
would remain, if all the current liabilities were paid”. Net working capital is the surplus of current assets over and above current liabilities and it represents long-term funds available as working capital. Net working capital is the guarantee of long-term funds for short-term creditors and therefore lenders are concerned with the net working capital of the business. On the other hand, management of the business finds gross working capital as crucial factor for uninterrupted flow of operations of the business like procurement of inputs and production and marketing of the output.

Current assets have been defined by the American Institute of Certified Public Account as “cash and other assets or resources commonly identified as those which are realised in cash or sold or consumed during the normal operating cycle of the business. On the other hand, current liabilities have been defined as obligations whose liquidation is reasonably expected to require the use of existing resources properly classified as current assets or the creation of other current assets or the creation of other current liabilities”.

The present study adopts managerial concept of working capital and proposes to evaluate management of gross working capital. In this exercise both adequacy of the gross working capital and efficiency of its management are sought to be studied for ensuring proper utilisation of current assets, successful sales and profitability.
There are four principal influences on management of working capital as shown below.

1] servicing to business
2] cost
3] security
4] liquidity

The mixture of the above elements should be optimum for successful and convincing business operations.

Working capital sustains a business by bridging the time lapse between incurring expenditure in the manufacturing and supply of products or services and receipt of revenues there from. There is always concomitant cost for any level of investment in the working capital, whether the funds are raised internally or from external sources. The facile conclusion is that the working capital should always be minimised to save financing or opportunity costs. But the risk of loosing sales as a result of inadequate stock is to be reconciled with profit maximisation. Controlling the funds is the most critical factor in the successful management of any enterprise. Profits and continued existence of a business, largely, depend on efficient conversion of cash. Kim, Mauer and Sherman (1998) have observed that corporate liquidity is affected by the operating cycle. A firm with long operating cycle is expected to have lower levels of liquidity and vice-versa.
Working capital has a circular flow in the business starting with cash. Working capital goes through four stages of operation before resuming the form of cash. When working capital is used for requirement of material inputs, it becomes raw material. When more funds are used for manufacturing cost, working capital in the form of raw-material moves through conversion process. Then it remains as finished goods in the godown awaiting sales. When goods are sold on credit, working capital becomes receivables. When receivables are collected working capital once again becomes cash and it is ready to repeat the circular journey\textsuperscript{11}.

Span of each stage is known as a cycle. Thus working capital goes through four cycles, (viz.) raw material cycle, conversion cycle, storage cycle and collection cycle. Procedure for computation of operating cycle can be found in Exhibit 5.1. Duration of each cycle indicates the time spent by working capital in the cycle. Thus raw material cycle indicates the time spent by working capital in the form of raw materials lying in the stores and awaiting conversion. When materials are bought on credit, the time spent by raw materials in stores is called gross raw material cycle. Duration of trade credit given by the suppliers should be subtracted from the duration of gross raw material cycle for computation of net raw material cycle. While gross raw material cycle is the time spent by raw materials in the stores, net raw material cycle is the time spent by working capital in the form of raw materials in stores\textsuperscript{12}. 
Exhibit 5.1

Computation of Operating Cycle

1. gross raw material cycle (no. of days)

   \[ \text{Average stock of raw materials} - \frac{\text{Average consumption of raw materials per day}}{\text{Average balance of sundry creditors}} - \frac{\text{Average value of credit purchase per day}}{\text{Gross raw material cycle} - \text{Trade credit cycle}} \]

2. trade credit cycle (no. of days)

   \[ \text{Conversion cycle (no. of days)} - \frac{\text{Average stock of work-in-progress}}{\text{Average cost of goods produced per day}} \]

3. net raw material cycle (no. of days)

   \[ \text{Storage cycle (no. of days)} - \frac{\text{Average stock of finished goods}}{\text{Average cost of goods sold per day}} \]

4. Collection cycle (no. of days)

   \[ \text{Operating cycle (no. of days)} - \frac{\text{Average sundry debtors}}{\text{Average value of credit sales per day}} \]

5. Net raw material cycle + conversion cycle + storage cycle + collection cycle

6. Turnover of working capital (no. of times)

   \[ \frac{365 \text{ days}}{\text{Operating cycle (No. of days)}} \]
Conversion cycle is the time spent by working capital in the form of work-in-progress during the process of conversion. Storage cycle represents the time spent by the working capital in the form of finished goods lying in the godown before sales. Enterprises produce goods in order to sell them in the market. Long storage cycle increases the inventory costs and short storage cycle is risky possibly resulting in stock-out costs.

Collection cycle is the time required for recovering dues from debtors. Long duration indicates the incapability of the management and calls for toning up of its system and procedures for collection. The sum of the duration of the net raw material cycle, conversion cycle, storage cycle and collection cycle is the duration of the operating cycle. The total length of the operating cycle will indicate the efficiency of working capital utilisation in the firm. The turnover rate of working capital shows the number of operating cycle in a year. If the duration of the operating cycles is 121 days, the turnover of the working capital will be 3 times (365 days / 121 days = 3 times) and if the duration is 61 days turnover will be 6 times. Thus duration of operating cycle and managerial efficiency are inversely related.

Turnover of working capital

The turnover of working capital ratio should stand at the maximum possible. When the rate is one, the current assets have been idle for a year and if the ratio is two, the assets have been idle for six months and so on.
In order to improve the turnover of the operating cycle, the major strategies to be adopted by the firm will be on the following lines.

Reduction in inventories held by the firm at all stages including raw materials, work-in-progress and finished goods.

Reduction of sundry debtors.

Increasing the consumption rate of raw materials.

Increasing sales.

Increasing sundry creditors.

The last option is not, however, preferable as excessive credit purchase and keeping the payments to-the creditors pending will spoil the creditworthiness of the organisation and thus it’s goodwill will be eroded.

Management can compare the turnover of working capital during the current year with those of the previous years within the firm or with those of similar other firms to assess how efficiently the working capital of the firm is being managed. Such exercise will yield some insights into the level of inventories to be maintained at each stage of process and the means of controlling the same.

If operating cycle of a business is 90 days, the working capital will have four cycles in a year resulting in annual business worth four times the amount of working capital. Therefore, requirement of additional working capital can be determined at 25 percent of the amount of additional business, aimed to be achieved. Thus operating
cycle can be a valuable instrument for forecasting requirement of working capital.

However, there may be season-wise and product-wise variations in the requirement of working capital and it will become necessary to compute activity-specific and season-specific operating cycle of working capital in order to make it the basis for forecasting of the requirements of working capital. Also it must be ensured that the existing operating cycle of working capital is the outcome of efficient management of working capital, otherwise, use of the existing operating cycle as the basis for estimation of the additional requirement of working capital will tend to perpetuate the existing inefficiency of management.

In the present exercise, season-specific and product-specific estimates could not be made due to inadequacy of data. The mill-specific exercise, as attempted in this study, will help to evaluate the efficiency of the management of working capital of the sample CSMs.

**Operating Cycle Analysis of Sample CSMs**

Ramanathapuram District Co-operative Spinning Mills Ltd., Achankulam (RSM)

Raw Material Cycle

The statement of operating cycle of RSM is furnished in Table 5.1. Gross raw material cycle was very long at 142 days and 154 days respectively in the first two years. However, the duration was continuously reduced and as a result, the duration of gross raw material
### Table 5.1
Ramanathapuram District Co-operative Spinning Mills Ltd., Achankulam (RSM)
Operating Cycle
I Raw Material Cycle

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs)</th>
<th>1990-91 (Rs)</th>
<th>1991-92 (Rs)</th>
<th>1992-93 (Rs)</th>
<th>1993-94 (Rs)</th>
<th>1994-95 (Rs)</th>
<th>1995-96 (Rs)</th>
<th>1996-97 (Rs)</th>
<th>1997-98 (Rs)</th>
<th>1998-99 (Rs)</th>
<th>1999-2000 (Rs)</th>
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<tr>
<td>1.  Opening stock of raw materials</td>
<td>89.12</td>
<td>115.42</td>
<td>81.41</td>
<td>50.97</td>
<td>30.60</td>
<td>94.93</td>
<td>81.40</td>
<td>39.38</td>
<td>30.65</td>
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<td>2.  Purchase of raw materials</td>
<td>290.55</td>
<td>198.24</td>
<td>321.34</td>
<td>416.48</td>
<td>469.83</td>
<td>587.60</td>
<td>777.87</td>
<td>606.99</td>
<td>594.01</td>
<td>513.44</td>
<td>479.01</td>
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<td>3.  Total [1 + 2]</td>
<td>379.67</td>
<td>313.66</td>
<td>402.75</td>
<td>467.45</td>
<td>500.43</td>
<td>682.53</td>
<td>859.27</td>
<td>646.37</td>
<td>624.66</td>
<td>530.18</td>
<td>507.73</td>
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<tr>
<td>5.  Raw materials consumed [3-4]</td>
<td>264.25</td>
<td>232.25</td>
<td>351.78</td>
<td>436.85</td>
<td>405.50</td>
<td>601.13</td>
<td>819.89</td>
<td>615.72</td>
<td>607.92</td>
<td>501.46</td>
<td>498.09</td>
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<tr>
<td>6.  Average value of raw materials consumed per day [5 / 365]</td>
<td>0.72</td>
<td>0.64</td>
<td>0.96</td>
<td>1.20</td>
<td>1.11</td>
<td>1.65</td>
<td>2.25</td>
<td>1.69</td>
<td>1.67</td>
<td>1.37</td>
<td>1.36</td>
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<tr>
<td>7.  Average stock of raw materials [(1+4)/2]</td>
<td>102.27</td>
<td>98.42</td>
<td>66.19</td>
<td>40.79</td>
<td>62.77</td>
<td>88.17</td>
<td>60.39</td>
<td>35.02</td>
<td>23.70</td>
<td>22.73</td>
<td>19.18</td>
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<td>9.  Average purchase per day [2 / 365]</td>
<td>0.80</td>
<td>0.54</td>
<td>0.88</td>
<td>1.14</td>
<td>1.29</td>
<td>1.61</td>
<td>2.13</td>
<td>1.66</td>
<td>1.63</td>
<td>1.41</td>
<td>1.31</td>
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<td>10. Average amount of sundry creditors</td>
<td>33.59</td>
<td>27.70</td>
<td>15.56</td>
<td>57.39</td>
<td>123.83</td>
<td>185.70</td>
<td>251.86</td>
<td>283.23</td>
<td>301.83</td>
<td>314.73</td>
<td>310.36</td>
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<td>11. Duration of trade creditors in days [10/9]</td>
<td>42</td>
<td>51</td>
<td>18</td>
<td>50</td>
<td>96</td>
<td>115</td>
<td>118</td>
<td>171</td>
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<td>12. Net raw material cycle in days [8-11]</td>
<td>100</td>
<td>103</td>
<td>51</td>
<td>(-16)</td>
<td>(-39)</td>
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<td>(-150)</td>
<td>(-171)</td>
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## Table 5.1 (Contd/-)

Ramanathapuram District Co-operative Spinning Mills Ltd., Achankulam (RSM)

Operating Cycle

II Conversion Cycle

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<tbody>
<tr>
<td>2. Raw materials consumed [1 - 5]</td>
<td>264.25</td>
<td>232.25</td>
<td>351.78</td>
<td>436.85</td>
<td>405.50</td>
<td>601.13</td>
<td>819.89</td>
<td>615.72</td>
<td>607.92</td>
<td>501.46</td>
<td>498.09</td>
<td></td>
</tr>
<tr>
<td>3. Manufacturing cost</td>
<td>147.68</td>
<td>152.86</td>
<td>158.74</td>
<td>178.03</td>
<td>187.83</td>
<td>219.53</td>
<td>283.50</td>
<td>294.90</td>
<td>306.91</td>
<td>303.60</td>
<td>328.54</td>
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<tr>
<td>4. Total [1 + 2 + 3]</td>
<td>420.93</td>
<td>394.11</td>
<td>518.88</td>
<td>630.07</td>
<td>603.61</td>
<td>831.61</td>
<td>1118.27</td>
<td>928.94</td>
<td>930.99</td>
<td>821.32</td>
<td>838.30</td>
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<tr>
<td>6. Cost of finished goods manufactured during the year [4–5]</td>
<td>411.93</td>
<td>385.75</td>
<td>503.69</td>
<td>619.79</td>
<td>592.66</td>
<td>816.73</td>
<td>1099.95</td>
<td>912.78</td>
<td>914.73</td>
<td>809.65</td>
<td>820.19</td>
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</tr>
<tr>
<td>7. Average cost of production per day [6 / 365]</td>
<td>1.13</td>
<td>1.06</td>
<td>1.38</td>
<td>1.70</td>
<td>1.62</td>
<td>2.24</td>
<td>3.01</td>
<td>2.50</td>
<td>2.51</td>
<td>2.22</td>
<td>2.25</td>
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<td>9. Average duration of conversion cycle in days [8 / 7]</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>7</td>
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Contd/-

134
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<th>1991-92 (Rs)</th>
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<th>1995-96 (Rs)</th>
<th>1996-97 (Rs)</th>
<th>1997-98 (Rs)</th>
<th>1998-99 (Rs)</th>
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<tbody>
<tr>
<td>1. Opening stock of finished goods</td>
<td>13.88</td>
<td>53.75</td>
<td>38.26</td>
<td>60.58</td>
<td>35.62</td>
<td>6.12</td>
<td>53.22</td>
<td>59.73</td>
<td>44.22</td>
<td>47.89</td>
<td>31.23</td>
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<tr>
<td>2. Cost of finished goods manufactured</td>
<td>411.93</td>
<td>385.75</td>
<td>503.69</td>
<td>619.79</td>
<td>592.66</td>
<td>816.73</td>
<td>1099.95</td>
<td>912.78</td>
<td>914.73</td>
<td>809.65</td>
<td>820.19</td>
</tr>
<tr>
<td>4. Total [1 + 2 + 3]</td>
<td>434.55</td>
<td>446.80</td>
<td>551.08</td>
<td>688.91</td>
<td>642.55</td>
<td>832.18</td>
<td>1165.59</td>
<td>1011.87</td>
<td>967.28</td>
<td>863.14</td>
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<td>5. Closing stock of finished goods</td>
<td>53.75</td>
<td>38.26</td>
<td>60.58</td>
<td>35.62</td>
<td>6.12</td>
<td>53.22</td>
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<td>44.22</td>
<td>47.89</td>
<td>31.23</td>
<td>83.37</td>
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<td>6. Cost of finished goods sold [4-5]</td>
<td>380.80</td>
<td>408.54</td>
<td>490.50</td>
<td>653.29</td>
<td>636.43</td>
<td>778.96</td>
<td>1105.86</td>
<td>967.65</td>
<td>919.39</td>
<td>831.91</td>
<td>775.23</td>
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<td>7. Average cost of finished goods sold per day [6 / 365]</td>
<td>1.04</td>
<td>1.12</td>
<td>1.34</td>
<td>1.79</td>
<td>1.74</td>
<td>2.13</td>
<td>3.03</td>
<td>2.65</td>
<td>2.52</td>
<td>2.28</td>
<td>2.12</td>
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<td>8. Average stock of finished goods [1+6 / 2]</td>
<td>33.75</td>
<td>45.92</td>
<td>49.33</td>
<td>47.96</td>
<td>20.68</td>
<td>29.61</td>
<td>56.43</td>
<td>51.75</td>
<td>45.84</td>
<td>39.47</td>
<td>57.24</td>
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<td>9. Storage cycle in days [8 / 7]</td>
<td>32</td>
<td>41</td>
<td>37</td>
<td>27</td>
<td>12</td>
<td>14</td>
<td>19</td>
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Table 5.1 (Contd/-)

Ramanathapuram District Co-operative Spinning Mills Ltd., Achankulam (RSM)
Operating Cycle
IV Collection Cycle

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<th>Particulars</th>
<th>1989-90 (Rs) (2)</th>
<th>1990-91 (Rs) (3)</th>
<th>1991-92 (Rs) (4)</th>
<th>1992-93 (Rs) (5)</th>
<th>1993-94 (Rs) (6)</th>
<th>1994-95 (Rs) (7)</th>
<th>1995-96 (Rs) (8)</th>
<th>1996-97 (Rs) (9)</th>
<th>1997-98 (Rs) (10)</th>
<th>1998-99 (Rs) (11)</th>
<th>1999-2000 (Rs) (12)</th>
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<tr>
<td>1. Annual sales</td>
<td>387.80</td>
<td>418.96</td>
<td>456.25</td>
<td>551.10</td>
<td>567.10</td>
<td>683.20</td>
<td>1020.88</td>
<td>899.24</td>
<td>833.76</td>
<td>694.22</td>
<td>689.70</td>
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<td>2. Average daily sales [1/365]</td>
<td>1.06</td>
<td>1.15</td>
<td>1.25</td>
<td>1.51</td>
<td>1.55</td>
<td>1.87</td>
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<td>3. Average amount of</td>
<td>90.60</td>
<td>90.22</td>
<td>109.21</td>
<td>141.66</td>
<td>152.96</td>
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<td>179.47</td>
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<td>178.39</td>
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<td>sundry debtors</td>
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<tr>
<td>4. Duration of collection cycle</td>
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<td>78</td>
<td>87</td>
<td>94</td>
<td>99</td>
<td>71</td>
<td>52</td>
<td>73</td>
<td>83</td>
<td>94</td>
<td>88</td>
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<td>in days [3 / 2]</td>
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Table 5.1 (Contd/-)

Ramanathapuram District Co-operative
Spinning Mills Ltd., Achankulam (RSM)

Operating cycle

<table>
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<tr>
<th>Sl. No.</th>
<th>Year</th>
<th>Net raw material cycle</th>
<th>Conversion cycle</th>
<th>Storage cycle</th>
<th>Collection cycle</th>
<th>Total Operating cycle</th>
<th>Turnover to working capital</th>
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<td>1</td>
<td>1989-90</td>
<td>100</td>
<td>8</td>
<td>32</td>
<td>85</td>
<td>225</td>
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<td>1990-91</td>
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<td>3</td>
<td>1991-92</td>
<td>51</td>
<td>9</td>
<td>37</td>
<td>87</td>
<td>184</td>
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<td>4</td>
<td>1992-93</td>
<td>(-)16</td>
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<td>88</td>
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<td>Mean</td>
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<td>24</td>
<td>82</td>
<td>49</td>
<td>(-)1.92</td>
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</tbody>
</table>

Source: computed by the researcher from the operating cycles of RSM
cycle varied between 27 days and 14 days in the last five years. Duration of trade credit ranged between 18 days and 51 days during the first four years and then rose sharply in the remaining period and it was 237 days in the last year. Thus the RSM caused undue delay in the last seven years. Net raw material cycle fluctuated between 103 days and 51 days in the first three years, because of long gross raw material cycle and short duration of trade credit. In the remaining years long delay in paying the suppliers caused negative net raw material cycle and in the last year it was 223 days. Therefore, the RSM should take steps to expedite settlement of dues to the suppliers.

**Conversion Cycle**

Duration of conversion cycles varied between 6 and 9 days. The duration was reduced from 9 days in 1991-92 to 7 days in 1999-2000, because of the orderly management of work-in-progress.

**Storage Cycle**

Storage cycle ranged between 27 days and 41 days during 1989-93 and between 12 days and 20 days during 1993-99. In the last year the cycle took 27 days. Continuous increase in sales from 1991-92 to 1994-95 helped to reduce the time lag of storage cycle and substantial fall in sales in 1999-2000 again extended the duration of storage cycle.

**Collection Cycle**

Collection cycle varied between 52 days and 99 days during the period under review. Since the dues must be collected within 30 days,
the RSM has to improve its management of debtors through vigorous and timely collection of dues.

**Conclusion**

The operating cycles took between 29 days and 230 days during the first six years. Long raw material cycle in the first two years and long collection cycle in the first six years were responsible for long duration of operating cycles, especially in the first three years. During the last five years the operating cycle was negative, because of the negative raw material cycle and in spite of long collection cycle. The RSM should take steps to reduce both duration of trade credit and duration of collection cycle.

Srivilliputhur Co-operative Spinning Mills Ltd., Srivilliputhur (SSM)

**Raw Material Cycle**

The statement of operating cycle of SSM is furnished in Table 5.2. Gross raw material cycle fluctuated between 38 days and 53 days during the year 1989-95 and between 12 and 19 days in the remaining years. Accelerated production from 1994-95 onwards helped to shorten the duration of gross raw material cycle. Long delay in paying the suppliers, as embodied in sundry creditors resulted in long duration of trade creditors, especially in the last 3 years. Therefore net raw material cycle was negative during the entire period under review and in the last three years, it varied between 210 and 273 days.
Table 5.2
Srivilliputhur Co-operative Spinning Mills Ltd., Srivilliputhur (SSM)
Operating Cycle
I Raw Material Cycle

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs)</th>
<th>1990-91 (Rs)</th>
<th>1991-92 (Rs)</th>
<th>1992-93 (Rs)</th>
<th>1993-94 (Rs)</th>
<th>1994-95 (Rs)</th>
<th>1995-96 (Rs)</th>
<th>1996-97 (Rs)</th>
<th>1997-98 (Rs)</th>
<th>1998-99 (Rs)</th>
<th>1999-2000 (Rs)</th>
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<tbody>
<tr>
<td>1. Opening stock of raw materials</td>
<td>34.63</td>
<td>63.69</td>
<td>35.45</td>
<td>147.85</td>
<td>31.65</td>
<td>168.86</td>
<td>97.79</td>
<td>50.88</td>
<td>80.65</td>
<td>27.09</td>
<td>42.96</td>
</tr>
<tr>
<td>2. Purchase of raw materials</td>
<td>473.56</td>
<td>443.41</td>
<td>743.22</td>
<td>679.62</td>
<td>965.95</td>
<td>1177.66</td>
<td>1437.22</td>
<td>1267.74</td>
<td>1110.42</td>
<td>1081.61</td>
<td>875.70</td>
</tr>
<tr>
<td>3. Total [1 + 2]</td>
<td>508.19</td>
<td>507.10</td>
<td>778.67</td>
<td>827.47</td>
<td>997.60</td>
<td>1346.52</td>
<td>1535.01</td>
<td>1318.62</td>
<td>1191.07</td>
<td>1108.70</td>
<td>918.66</td>
</tr>
<tr>
<td>4. Closing stock of raw materials</td>
<td>63.69</td>
<td>35.45</td>
<td>147.85</td>
<td>31.65</td>
<td>168.86</td>
<td>97.79</td>
<td>50.88</td>
<td>80.65</td>
<td>27.09</td>
<td>42.96</td>
<td>23.94</td>
</tr>
<tr>
<td>5. Raw materials consumed [3-4]</td>
<td>444.50</td>
<td>471.65</td>
<td>630.82</td>
<td>795.82</td>
<td>828.74</td>
<td>1248.73</td>
<td>1484.13</td>
<td>1237.97</td>
<td>1163.98</td>
<td>1065.74</td>
<td>894.72</td>
</tr>
<tr>
<td>6. Average value of raw materials consumed per day [5 / 365]</td>
<td>1.22</td>
<td>1.29</td>
<td>1.73</td>
<td>2.18</td>
<td>2.27</td>
<td>3.42</td>
<td>4.07</td>
<td>3.39</td>
<td>2.92</td>
<td>2.45</td>
<td></td>
</tr>
<tr>
<td>7. Average stock of raw materials [(1+4) / 2]</td>
<td>49.16</td>
<td>49.57</td>
<td>91.65</td>
<td>89.75</td>
<td>100.26</td>
<td>133.33</td>
<td>74.34</td>
<td>65.77</td>
<td>53.87</td>
<td>35.03</td>
<td>33.45</td>
</tr>
<tr>
<td>9. Average purchase per day [2 / 365]</td>
<td>1.30</td>
<td>1.21</td>
<td>2.04</td>
<td>1.86</td>
<td>2.65</td>
<td>3.23</td>
<td>3.94</td>
<td>3.47</td>
<td>3.04</td>
<td>2.96</td>
<td>2.40</td>
</tr>
<tr>
<td>10. Average amount of sundry creditors</td>
<td>253.57</td>
<td>291.98</td>
<td>319.88</td>
<td>334.92</td>
<td>398.12</td>
<td>516.28</td>
<td>646.07</td>
<td>677.96</td>
<td>689.07</td>
<td>696.04</td>
<td>689.83</td>
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Contd/-
Table 5.2 (Contd/-)
Srivilliputhur Co-operative Spinning Mills Ltd., Srivilliputhur (SSM)
Operating Cycle
II Conversion Cycle

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs)</th>
<th>1990-91 (Rs)</th>
<th>1991-92 (Rs)</th>
<th>1992-93 (Rs)</th>
<th>1993-94 (Rs)</th>
<th>1994-95 (Rs)</th>
<th>1995-96 (Rs)</th>
<th>1996-97 (Rs)</th>
<th>1997-98 (Rs)</th>
<th>1998-99 (Rs)</th>
<th>1999-2000 (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Raw materials consumed [(1 - 5)]</td>
<td>444.50</td>
<td>471.65</td>
<td>630.82</td>
<td>795.82</td>
<td>828.74</td>
<td>1248.23</td>
<td>1484.13</td>
<td>1237.97</td>
<td>1163.98</td>
<td>1065.74</td>
<td>894.72</td>
</tr>
<tr>
<td>3. Manufacturing cost</td>
<td>281.67</td>
<td>306.77</td>
<td>315.98</td>
<td>387.75</td>
<td>447.91</td>
<td>520.02</td>
<td>567.18</td>
<td>645.62</td>
<td>720.39</td>
<td>608.68</td>
<td>573.56</td>
</tr>
<tr>
<td>4. Total [(1 + 2 + 3)]</td>
<td>737.56</td>
<td>790.54</td>
<td>961.87</td>
<td>1212.29</td>
<td>1295.88</td>
<td>1799.89</td>
<td>2115.41</td>
<td>1931.42</td>
<td>1964.14</td>
<td>1716.01</td>
<td>1489.40</td>
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<tr>
<td>5. Closing stock of work-in-progress</td>
<td>12.12</td>
<td>15.07</td>
<td>28.72</td>
<td>19.23</td>
<td>31.14</td>
<td>64.10</td>
<td>47.83</td>
<td>79.77</td>
<td>41.59</td>
<td>21.12</td>
<td>33.45</td>
</tr>
<tr>
<td>6. Cost of finished goods manufactured during the year [(4-5)]</td>
<td>725.44</td>
<td>775.47</td>
<td>933.15</td>
<td>1193.06</td>
<td>1264.74</td>
<td>1735.79</td>
<td>2067.58</td>
<td>1851.65</td>
<td>1922.55</td>
<td>1694.89</td>
<td>1455.95</td>
</tr>
<tr>
<td>7. Average cost of production per day [(6 / 365)]</td>
<td>1.99</td>
<td>2.12</td>
<td>2.56</td>
<td>3.27</td>
<td>3.47</td>
<td>4.76</td>
<td>5.66</td>
<td>5.07</td>
<td>5.27</td>
<td>4.64</td>
<td>3.99</td>
</tr>
<tr>
<td>8. Average stock of work-in-progress [(1+5) / 2]</td>
<td>11.76</td>
<td>13.60</td>
<td>21.90</td>
<td>23.98</td>
<td>25.19</td>
<td>47.62</td>
<td>55.97</td>
<td>63.80</td>
<td>60.68</td>
<td>31.36</td>
<td>22.29</td>
</tr>
<tr>
<td>9. Average duration of conversion cycle in days [(8 / 7)]</td>
<td>6</td>
<td>6</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>10</td>
<td>10</td>
<td>13</td>
<td>12</td>
<td>7</td>
<td>6</td>
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</table>

Contd/-
Table 5.2 (Contd/-)

Srivilliputhur Co-operative Spinning Mills Ltd., Srivilliputhur (SSM)
Operating Cycle
III Storage Cycle

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs)</th>
<th>1990-91 (Rs)</th>
<th>1991-92 (Rs)</th>
<th>1992-93 (Rs)</th>
<th>1993-94 (Rs)</th>
<th>1994-95 (Rs)</th>
<th>1995-96 (Rs)</th>
<th>1996-97 (Rs)</th>
<th>1997-98 (Rs)</th>
<th>1998-99 (Rs)</th>
<th>1999-2000 (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opening stock of finished goods</td>
<td>36.10</td>
<td>130.26</td>
<td>255.36</td>
<td>192.01</td>
<td>179.31</td>
<td>234.59</td>
<td>195.12</td>
<td>300.69</td>
<td>204.25</td>
<td>124.38</td>
<td>105.45</td>
</tr>
<tr>
<td>2. Cost of finished goods manufactured ( (1 - 6) )</td>
<td>725.44</td>
<td>775.47</td>
<td>933.15</td>
<td>1193.06</td>
<td>1264.74</td>
<td>1735.79</td>
<td>2067.58</td>
<td>1851.65</td>
<td>1922.55</td>
<td>1694.89</td>
<td>1455.95</td>
</tr>
<tr>
<td>4. Total ( (1 + 2 + 3) )</td>
<td>767.74</td>
<td>912.28</td>
<td>1197.49</td>
<td>1393.87</td>
<td>1458.60</td>
<td>1993.01</td>
<td>2280.43</td>
<td>2165.97</td>
<td>2138.65</td>
<td>1830.45</td>
<td>1571.66</td>
</tr>
<tr>
<td>5. Closing stock of finished goods</td>
<td>130.26</td>
<td>255.36</td>
<td>192.01</td>
<td>179.31</td>
<td>234.59</td>
<td>195.12</td>
<td>300.69</td>
<td>204.25</td>
<td>124.38</td>
<td>105.45</td>
<td>106.15</td>
</tr>
<tr>
<td>6. Cost of finished goods sold ( (4 - 5) )</td>
<td>637.48</td>
<td>656.92</td>
<td>1005.48</td>
<td>1214.36</td>
<td>1224.01</td>
<td>1797.89</td>
<td>1979.74</td>
<td>1961.72</td>
<td>2014.27</td>
<td>1725.00</td>
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</tr>
<tr>
<td>7. Average cost of finished goods sold per day ( (6 / 365) )</td>
<td>1.75</td>
<td>1.80</td>
<td>2.75</td>
<td>3.33</td>
<td>3.35</td>
<td>4.93</td>
<td>5.42</td>
<td>5.37</td>
<td>5.52</td>
<td>4.73</td>
<td>4.02</td>
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<tr>
<td>8. Average stock of finished goods ( (1+5) / 2 )</td>
<td>83.18</td>
<td>192.81</td>
<td>223.69</td>
<td>185.66</td>
<td>206.95</td>
<td>214.86</td>
<td>247.91</td>
<td>252.47</td>
<td>164.32</td>
<td>114.92</td>
<td>105.80</td>
</tr>
<tr>
<td>9. Storage cycle in days ( 8 / 7 )</td>
<td>48</td>
<td>107</td>
<td>81</td>
<td>56</td>
<td>62</td>
<td>44</td>
<td>46</td>
<td>47</td>
<td>30</td>
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Contd/-

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Table 5.2 (Contd/-)

Srivilliputhur Co-operative Spinning Mills Ltd., Srivilliputhur (SSM)
Operating Cycle
IV Collection Cycle

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<tr>
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</thead>
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<tr>
<td>1. Annual sales</td>
<td>662.53</td>
<td>678.87</td>
<td>913.78</td>
<td>1096.73</td>
<td>1197.13</td>
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<td>1846.44</td>
<td>1874.07</td>
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<tr>
<td>2. Average daily sales [1/365]</td>
<td>1.82</td>
<td>1.86</td>
<td>2.50</td>
<td>3.00</td>
<td>3.28</td>
<td>4.74</td>
<td>5.06</td>
<td>5.13</td>
<td>4.78</td>
<td>4.06</td>
<td>3.54</td>
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<tr>
<td>3. Average amount of sundry debtors</td>
<td>149.91</td>
<td>140.36</td>
<td>113.18</td>
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<td>175.26</td>
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<td>278.02</td>
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<td>4. Duration of collection cycle in days [3 / 2]</td>
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<td>75</td>
<td>45</td>
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<td>44</td>
<td>37</td>
<td>51</td>
<td>60</td>
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Table 5.2 (Contd/–)

Srivilliputhur Co-operative Spinning Mills Ltd.,
Srivilliputhur (SSM)
Operating cycle

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<th>Year</th>
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<table>
<thead>
<tr>
<th>Conversion cycle</th>
<th>Storage cycle</th>
<th>Collection cycle</th>
<th>Total Operating cycle</th>
<th>Turnover to working capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
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<tr>
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<td>107</td>
<td>75</td>
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<td>31</td>
<td>11.77</td>
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<td>56</td>
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<td>(-)33</td>
<td>(-)11.06</td>
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<tr>
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<td>62</td>
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<td>7</td>
<td>52.14</td>
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<td>44</td>
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<td>(-)12.17</td>
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<td>46</td>
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<td>(-)9.36</td>
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<td>(-)6.52</td>
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<td>11</td>
<td>26</td>
<td>39</td>
<td>(-)202</td>
<td>(-)1.81</td>
</tr>
</tbody>
</table>

Source: computed by the researcher from the operating cycles of SSM
Conversion Cycle

Duration of conversion cycle fluctuated between 6 and 9 days, except during 1994-98, when it fluctuated between 10 and 13 days. The spurt in the duration of conversion cycle was due to increase in the stock of work-in-progress, resulting from the inability of production process in handling increasing supply of material inputs.

Storage Cycle

Storage cycle of SSM was gradually reduced from 1992-93 onwards and the results were more perceptible during 1997-2000, when the duration was one month or less. Substantial increase in sales during 1994-98 and control over stocks during 1998-2000 were responsible for-minimising the storage cycle.

Collection Cycle

Duration of collection cycle ranged between 37 and 82 days. Though the duration of collection cycle continuously decreased, the length of the cycle was more than one month in 1999-2000, indicating the need for continuous efforts in improving the collection cycle.

Conclusion

The operative cycles were negative except in two years (1991 - 92 and 1993-94), because of negative net raw material cycle. Even though SSM posted better performance than TSM, enormous delay in paying the suppliers caused unjustifiably long duration of trade credit, far exceeding the sum of conversion cycle, storage cycle and collection...
cycle. Therefore the delay in paying suppliers was not completely due to inadequate inflow of cash. Thus procedure for paying suppliers should be accelerated and the problem of suppliers should be redressed.

**Thiruchirapalli District Co-operative Spinning Mills Ltd., Karur (TSM)**

**Raw material cycle**

Particulars of operating cycle for TSM can be found in Table 5.3. Duration of gross raw material cycle was 41 days in the first year (1989-90). However from 1991-92 onwards the duration varied between 13 and 18 days only. Duration of trade credit, which was 124 days in the first year, reached the maximum 1247 days in 1996-97 and thereafter gradually went down to 353 days in 1999-2000. In 5 years the delay in settlement of creditors was more than one year and it was more than two years at least in two years. As a result, net raw material cycle was negative during the entire period under review. Procurement of cotton for the CSMs is done by the Department of Handloom and Textiles, who pays the suppliers in time. The dues from the sample CSMs are owed to the Department of Handloom and Textiles. Therefore the huge arrears do not hamper the subsequent procurement. Long storage cycle was responsible for the inability of the CSM to pay the suppliers in time.

**Conversion Cycle**

Conversion cycle took 3 to 8 days during the period under review. The sharp fall in production in 1995-96 and 1996-97 raised duration of conversion cycle to 8 days and 7 days respectively. Again,
<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs)</th>
<th>1990-91 (Rs)</th>
<th>1991-92 (Rs)</th>
<th>1992-93 (Rs)</th>
<th>1993-94 (Rs)</th>
<th>1994-95 (Rs)</th>
<th>1995-96 (Rs)</th>
<th>1996-97 (Rs)</th>
<th>1997-98 (Rs)</th>
<th>1998-99 (Rs)</th>
<th>1999-2000 (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opening stock of raw materials</td>
<td>36.89</td>
<td>90.46</td>
<td>38.11</td>
<td>24.24</td>
<td>34.38</td>
<td>43.60</td>
<td>22.95</td>
<td>30.17</td>
<td>22.40</td>
<td>54.01</td>
<td>14.40</td>
</tr>
<tr>
<td>2. Purchase of raw materials</td>
<td>624.48</td>
<td>529.58</td>
<td>793.61</td>
<td>784.73</td>
<td>796.17</td>
<td>898.99</td>
<td>552.08</td>
<td>513.40</td>
<td>1019.53</td>
<td>824.29</td>
<td>608.43</td>
</tr>
<tr>
<td>3. Total [1 + 2]</td>
<td>661.37</td>
<td>620.04</td>
<td>831.72</td>
<td>808.97</td>
<td>830.55</td>
<td>942.59</td>
<td>575.03</td>
<td>543.57</td>
<td>1041.93</td>
<td>878.30</td>
<td>622.83</td>
</tr>
<tr>
<td>4. Closing stock of raw materials</td>
<td>90.46</td>
<td>38.11</td>
<td>24.24</td>
<td>34.38</td>
<td>43.60</td>
<td>22.95</td>
<td>30.17</td>
<td>22.40</td>
<td>54.01</td>
<td>14.40</td>
<td>28.48</td>
</tr>
<tr>
<td>5. Raw materials consumed [3-4]</td>
<td>570.91</td>
<td>581.93</td>
<td>807.48</td>
<td>774.59</td>
<td>786.95</td>
<td>919.64</td>
<td>544.86</td>
<td>521.17</td>
<td>987.92</td>
<td>863.90</td>
<td>594.35</td>
</tr>
<tr>
<td>6. Average value of raw materials consumed per day [5/365]</td>
<td>1.56</td>
<td>1.59</td>
<td>2.21</td>
<td>2.12</td>
<td>2.16</td>
<td>2.52</td>
<td>1.49</td>
<td>1.43</td>
<td>2.71</td>
<td>2.37</td>
<td>1.63</td>
</tr>
<tr>
<td>7. Average stock of raw materials ([1+4]/2)</td>
<td>63.68</td>
<td>64.29</td>
<td>31.18</td>
<td>29.31</td>
<td>38.99</td>
<td>33.28</td>
<td>26.56</td>
<td>26.29</td>
<td>38.21</td>
<td>34.21</td>
<td>21.44</td>
</tr>
<tr>
<td>9. Average purchase per day [2/365]</td>
<td>1.71</td>
<td>1.45</td>
<td>2.17</td>
<td>2.15</td>
<td>2.18</td>
<td>2.46</td>
<td>1.51</td>
<td>1.41</td>
<td>2.79</td>
<td>2.26</td>
<td>1.67</td>
</tr>
<tr>
<td>10. Average amount of sundry creditors</td>
<td>212.02</td>
<td>323.66</td>
<td>411.42</td>
<td>486.13</td>
<td>695.94</td>
<td>1060.10</td>
<td>1437.89</td>
<td>1758.93</td>
<td>1902.25</td>
<td>1248.74</td>
<td>589.94</td>
</tr>
<tr>
<td>11. Duration of trade creditors in days [10/8]</td>
<td>124</td>
<td>223</td>
<td>190</td>
<td>226</td>
<td>319</td>
<td>431</td>
<td>952</td>
<td>1247</td>
<td>682</td>
<td>553</td>
<td>353</td>
</tr>
<tr>
<td>12. Net raw material cycle in days [8-11]</td>
<td>(-)183</td>
<td>(-)183</td>
<td>(-)176</td>
<td>(-)212</td>
<td>(-)301</td>
<td>(-)418</td>
<td>(-)934</td>
<td>(-)1229</td>
<td>(-)668</td>
<td>(-)539</td>
<td>(-)340</td>
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Table 5.3 (Contd/–)
Thiruchirapalli District Co-operative Spinning Mills Ltd., Karur (TSM)
Operating Cycle
II Conversion Cycle

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs) (2)</th>
<th>1990-91 (Rs) (3)</th>
<th>1991-92 (Rs) (4)</th>
<th>1992-93 (Rs) (5)</th>
<th>1993-94 (Rs) (6)</th>
<th>1994-95 (Rs) (7)</th>
<th>1995-96 (Rs) (8)</th>
<th>1996-97 (Rs) (9)</th>
<th>1997-98 (Rs) (10)</th>
<th>1998-99 (Rs) (11)</th>
<th>1999-2000 (Rs) (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Raw materials consumed [1 - 5]</td>
<td>570.91</td>
<td>581.93</td>
<td>807.48</td>
<td>774.59</td>
<td>786.95</td>
<td>919.64</td>
<td>544.86</td>
<td>521.17</td>
<td>987.92</td>
<td>863.90</td>
<td>594.35</td>
</tr>
<tr>
<td>3. Manufacturing cost</td>
<td>341.01</td>
<td>339.67</td>
<td>361.06</td>
<td>397.66</td>
<td>495.06</td>
<td>479.18</td>
<td>379.88</td>
<td>417.03</td>
<td>585.97</td>
<td>578.58</td>
<td>521.54</td>
</tr>
<tr>
<td>4. Total [1 + 2 + 3]</td>
<td>921.40</td>
<td>930.17</td>
<td>1182.25</td>
<td>1193.35</td>
<td>1298.01</td>
<td>1424.02</td>
<td>941.65</td>
<td>961.65</td>
<td>1588.00</td>
<td>1465.23</td>
<td>1124.38</td>
</tr>
<tr>
<td>6. Cost of finished goods manufactured during the year [4-5]</td>
<td>912.83</td>
<td>916.46</td>
<td>1116.15</td>
<td>1177.35</td>
<td>1272.81</td>
<td>1407.11</td>
<td>918.20</td>
<td>947.54</td>
<td>1566.25</td>
<td>1456.74</td>
<td>1114.79</td>
</tr>
<tr>
<td>7. Average cost of production per day [8 / 365]</td>
<td>2.50</td>
<td>2.51</td>
<td>3.18</td>
<td>3.23</td>
<td>3.49</td>
<td>3.86</td>
<td>2.52</td>
<td>2.60</td>
<td>4.29</td>
<td>3.99</td>
<td>3.05</td>
</tr>
<tr>
<td>9. Average duration of conversion cycle in days [8 / 7]</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>3</td>
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</table>

Contd/–

148
<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs)</th>
<th>1990-91 (Rs)</th>
<th>1991-92 (Rs)</th>
<th>1992-93 (Rs)</th>
<th>1993-94 (Rs)</th>
<th>1994-95 (Rs)</th>
<th>1995-96 (Rs)</th>
<th>1996-97 (Rs)</th>
<th>1997-98 (Rs)</th>
<th>1998-99 (Rs)</th>
<th>1999-2000 (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opening stock of finished goods</td>
<td>54.93</td>
<td>192.66</td>
<td>396.94</td>
<td>320.80</td>
<td>401.55</td>
<td>516.38</td>
<td>879.23</td>
<td>954.10</td>
<td>1057.34</td>
<td>1118.13</td>
<td>60.36</td>
</tr>
<tr>
<td>2. Cost of finished goods manufactured</td>
<td>912.83</td>
<td>916.46</td>
<td>1161.15</td>
<td>1177.35</td>
<td>1272.81</td>
<td>1407.11</td>
<td>918.20</td>
<td>947.54</td>
<td>1565.25</td>
<td>1456.74</td>
<td>1114.79</td>
</tr>
<tr>
<td>3. Distribution expenses</td>
<td>19.30</td>
<td>22.25</td>
<td>23.97</td>
<td>18.21</td>
<td>20.20</td>
<td>26.24</td>
<td>14.97</td>
<td>0.11</td>
<td>0.31</td>
<td>38.20</td>
<td>0.28</td>
</tr>
<tr>
<td>4. Total [1 + 2 + 3]</td>
<td>987.06</td>
<td>1131.37</td>
<td>1582.06</td>
<td>1516.36</td>
<td>1694.56</td>
<td>1949.73</td>
<td>1812.40</td>
<td>1901.75</td>
<td>2622.90</td>
<td>2613.07</td>
<td>1175.43</td>
</tr>
<tr>
<td>5. Closing stock of finished goods</td>
<td>192.66</td>
<td>386.94</td>
<td>320.80</td>
<td>401.55</td>
<td>516.38</td>
<td>879.23</td>
<td>954.10</td>
<td>1057.34</td>
<td>1118.13</td>
<td>60.36</td>
<td>41.82</td>
</tr>
<tr>
<td>6. Cost of finished goods sold [4 - 5]</td>
<td>794.40</td>
<td>734.43</td>
<td>1261.26</td>
<td>1114.81</td>
<td>1178.18</td>
<td>1070.50</td>
<td>858.30</td>
<td>844.41</td>
<td>1504.77</td>
<td>2552.71</td>
<td>1133.61</td>
</tr>
<tr>
<td>7. Average cost of finished goods sold per day [6 / 365]</td>
<td>2.18</td>
<td>2.01</td>
<td>3.46</td>
<td>3.05</td>
<td>3.23</td>
<td>2.93</td>
<td>2.35</td>
<td>2.31</td>
<td>4.12</td>
<td>6.99</td>
<td>3.11</td>
</tr>
<tr>
<td>8. Average stock of finished goods [(1+5) / 2]</td>
<td>123.80</td>
<td>294.80</td>
<td>358.87</td>
<td>361.18</td>
<td>458.97</td>
<td>697.81</td>
<td>916.67</td>
<td>1005.72</td>
<td>1087.74</td>
<td>589.25</td>
<td>51.09</td>
</tr>
<tr>
<td>9. Storage cycle in days [8 / 7]</td>
<td>57</td>
<td>147</td>
<td>104</td>
<td>118</td>
<td>142</td>
<td>238</td>
<td>390</td>
<td>435</td>
<td>264</td>
<td>84</td>
<td>16</td>
</tr>
</tbody>
</table>

Contd/-
Table 5.3 (Contd/-)

Thiruchirapalli District Co-operative Spinning Mills Ltd., Karur (TSM)
Operating Cycle
IV Collection Cycle

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs) (2)</th>
<th>1990-91 (Rs) (3)</th>
<th>1991-92 (Rs) (4)</th>
<th>1992-93 (Rs) (5)</th>
<th>1993-94 (Rs) (6)</th>
<th>1994-95 (Rs) (7)</th>
<th>1995-96 (Rs) (8)</th>
<th>1996-97 (Rs) (9)</th>
<th>1997-98 (Rs) (10)</th>
<th>1998-99 (Rs) (11)</th>
<th>1999-2000 (Rs) (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Annual sales</td>
<td>849.11</td>
<td>792.81</td>
<td>1142.35</td>
<td>946.76</td>
<td>1028.35</td>
<td>843.89</td>
<td>613.28</td>
<td>685.14</td>
<td>1366.02</td>
<td>2254.30</td>
<td>957.85</td>
</tr>
<tr>
<td>2. Average daily sales [1/365]</td>
<td>2.33</td>
<td>2.17</td>
<td>3.13</td>
<td>2.59</td>
<td>2.82</td>
<td>2.31</td>
<td>1.68</td>
<td>1.88</td>
<td>3.74</td>
<td>6.18</td>
<td>2.62</td>
</tr>
<tr>
<td>3. Average amount of sundry debtors</td>
<td>17.54</td>
<td>18.44</td>
<td>25.33</td>
<td>48.73</td>
<td>64.68</td>
<td>30.09</td>
<td>9.78</td>
<td>11.02</td>
<td>11.75</td>
<td>71.26</td>
<td>90.07</td>
</tr>
<tr>
<td>4. Duration of collection cycle in days [3 / 2]</td>
<td>8</td>
<td>9</td>
<td>8</td>
<td>19</td>
<td>23</td>
<td>13</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>12</td>
<td>34</td>
</tr>
</tbody>
</table>
Table 5.3 (Contd/-)

Thiruchirapalli District Co-operative Spinning Mills Ltd.,
Karur (TSM)
Operating cycle

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Year</th>
<th>Net raw material cycle</th>
<th>Conversion cycle</th>
<th>Storage cycle</th>
<th>Collection cycle</th>
<th>Total Operating cycle</th>
<th>Turnover to working capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1989-90</td>
<td>(-)83</td>
<td>4</td>
<td>57</td>
<td>8</td>
<td>(-)14</td>
<td>(-)26.07</td>
</tr>
<tr>
<td>2</td>
<td>1990-91</td>
<td>(-)183</td>
<td>4</td>
<td>147</td>
<td>9</td>
<td>(-)23</td>
<td>(-)15.87</td>
</tr>
<tr>
<td>3</td>
<td>1991-92</td>
<td>(-)176</td>
<td>5</td>
<td>104</td>
<td>8</td>
<td>(-)59</td>
<td>(-)6.19</td>
</tr>
<tr>
<td>4</td>
<td>1992-93</td>
<td>(-)212</td>
<td>6</td>
<td>118</td>
<td>19</td>
<td>(-)69</td>
<td>(-)5.29</td>
</tr>
<tr>
<td>5</td>
<td>1993-94</td>
<td>(-)301</td>
<td>6</td>
<td>142</td>
<td>23</td>
<td>(-)130</td>
<td>(-)2.81</td>
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<tr>
<td>6</td>
<td>1994-95</td>
<td>(-)418</td>
<td>5</td>
<td>238</td>
<td>13</td>
<td>(-)162</td>
<td>(-)2.25</td>
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<tr>
<td>7</td>
<td>1995-96</td>
<td>(-)334</td>
<td>8</td>
<td>390</td>
<td>6</td>
<td>(-)530</td>
<td>(-)0.69</td>
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<tr>
<td>8</td>
<td>1996-97</td>
<td>(-)1229</td>
<td>7</td>
<td>435</td>
<td>6</td>
<td>(-)781</td>
<td>(-)0.47</td>
</tr>
<tr>
<td>9</td>
<td>1997-98</td>
<td>(-)668</td>
<td>4</td>
<td>264</td>
<td>3</td>
<td>(-)397</td>
<td>(-)0.92</td>
</tr>
<tr>
<td>10</td>
<td>1998-99</td>
<td>(-)539</td>
<td>4</td>
<td>84</td>
<td>12</td>
<td>(-)439</td>
<td>(-)0.83</td>
</tr>
<tr>
<td>11</td>
<td>1999-00</td>
<td>(-)340</td>
<td>3</td>
<td>16</td>
<td>34</td>
<td>(-)287</td>
<td>(-)1.27</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td>(-)462</td>
<td>5</td>
<td>181</td>
<td>13</td>
<td>(-)263</td>
<td>5.70</td>
</tr>
</tbody>
</table>

Source: computed by the researcher from the operating cycles of TSM
a significant reduction of purchase and of consumption of inputs in 1999-2000 brought down average stock of work-in-progress and conversion cycle occupied 3 days only. In other years duration of conversion cycle ranged from 4 to 6 days.

**Storage Cycle**

Duration of storage cycle continuously increased from 57 days in 1989-90 to 435 days in 1996-97 and then shrank to 16 days in 1999-2000. A severe slump in sales during three years (1994-97) caused substantial increase in the storage cycle which exceeded one year during 1995-97. Again a significant reduction of production in 1999-2000 helped to clear the stock bringing storage cycle down to 16 days. Storage cycle, shows the inability of the CSM in marketing. Consequently fall in sales raised storage cycle, which could be brought down by a cut back in the volume of production. Thus marketing efforts failed to trim the storage cycle. Long duration of the storage cycle adversely affected the inflow of cash causing long delay in paying the suppliers.

**Collection Cycle**

Duration of collection cycle was less than one month in ten years and 34 days in the last year. In six out of eleven years, collection cycle was less than 10 days. The handloom co-operative societies, who are the main customers, are able to pay for the yarn in time. Thanks to the working capital loan extended by co-operative banks.
**Conclusion**

It is true that the operating cycles were negative during the entire period under review, but it was due to long duration of trade credit, which in turn was caused by the unwidely storage cycle. The analysis shows the effects of lackluster performance of the TSM. Because of the difficulties in marketing, storage cycles were quite long, reducing the inflow of cash. Consequently duration of trade credit was very long.

Because of the stagnation in sales, storage cycle could be reduced only through reduction of production. Even though sharp reduction in sales during 1994-97 was overcome in the next two years, the last year (1999-2000) witnessed another fall in sales. Hence the need for energetic marketing.

**Anna Co-operative Spinning Mills Ltd., Andipatty (ASM)**

**Raw Material Cycle**

The statement of operating cycles of ASM is furnished in Table 5.4. Gross raw material cycles posted wide variation from 14 days to 70 days. Despite significant increase in the purchase of raw materials during 1991-93, 1995-96 and 1997-98, gross raw material cycles were relatively short varying between 14 days and 28 days, because of the considerable increase in production during those years. On the other hand, reduction in the value of purchase, as in 1996-97 and 1999-2000, could not prevent increase in the duration of gross raw material cycles because of the decrease in the volume of production. Duration of trade
Table 5.4
Anna Co-operative Spinning Mills Ltd., Andipatti (ASM)
Operating Cycle
I Raw Material Cycle

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs)</th>
<th>1990-91 (Rs)</th>
<th>1991-92 (Rs)</th>
<th>1992-93 (Rs)</th>
<th>1993-94 (Rs)</th>
<th>1994-95 (Rs)</th>
<th>1995-96 (Rs)</th>
<th>1996-97 (Rs)</th>
<th>1997-98 (Rs)</th>
<th>1998-99 (Rs)</th>
<th>1999-2000 (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opening stock of raw materials</td>
<td>96.33</td>
<td>55.99</td>
<td>73.04</td>
<td>19.10</td>
<td>47.61</td>
<td>92.12</td>
<td>119.78</td>
<td>129.24</td>
<td>175.29</td>
<td>88.92</td>
<td>213.59</td>
</tr>
<tr>
<td>2. Purchase of raw materials</td>
<td>471.91</td>
<td>477.12</td>
<td>785.42</td>
<td>902.55</td>
<td>757.79</td>
<td>788.36</td>
<td>1200.83</td>
<td>1122.47</td>
<td>1174.05</td>
<td>1388.15</td>
<td>1195.24</td>
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<td>3. Total [1 + 2]</td>
<td>568.24</td>
<td>533.11</td>
<td>858.46</td>
<td>921.65</td>
<td>805.40</td>
<td>880.48</td>
<td>1320.61</td>
<td>1251.71</td>
<td>1349.34</td>
<td>1477.07</td>
<td>1408.83</td>
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<tr>
<td>4. Closing stock of raw materials</td>
<td>55.99</td>
<td>73.04</td>
<td>19.10</td>
<td>47.61</td>
<td>92.12</td>
<td>119.78</td>
<td>129.24</td>
<td>175.29</td>
<td>88.92</td>
<td>213.59</td>
<td>238.57</td>
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<tr>
<td>5. Raw materials consumed [3-4]</td>
<td>512.25</td>
<td>460.07</td>
<td>839.36</td>
<td>874.04</td>
<td>713.28</td>
<td>760.70</td>
<td>1191.37</td>
<td>1076.42</td>
<td>1260.42</td>
<td>1263.48</td>
<td>1170.26</td>
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<tr>
<td>6. Average value of raw materials consumed per day [5 / 365]</td>
<td>1.40</td>
<td>1.26</td>
<td>2.30</td>
<td>2.39</td>
<td>1.95</td>
<td>2.08</td>
<td>3.26</td>
<td>2.95</td>
<td>3.45</td>
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<td>7. Average stock of raw materials [1+4] / 2</td>
<td>76.16</td>
<td>64.52</td>
<td>46.07</td>
<td>33.36</td>
<td>69.87</td>
<td>105.95</td>
<td>124.51</td>
<td>152.27</td>
<td>132.11</td>
<td>151.26</td>
<td>226.08</td>
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<td>8. Gross raw material cycle in days [7 / 6]</td>
<td>54</td>
<td>51</td>
<td>20</td>
<td>14</td>
<td>36</td>
<td>51</td>
<td>38</td>
<td>52</td>
<td>38</td>
<td>44</td>
<td>70</td>
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<tr>
<td>9. Average purchase per day [2 / 365]</td>
<td>1.29</td>
<td>1.31</td>
<td>2.15</td>
<td>2.47</td>
<td>2.08</td>
<td>2.16</td>
<td>3.29</td>
<td>3.08</td>
<td>3.22</td>
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<td>10. Average amount of sundry creditors</td>
<td>33.08</td>
<td>37.83</td>
<td>69.41</td>
<td>129.67</td>
<td>142.21</td>
<td>187.70</td>
<td>405.45</td>
<td>527.33</td>
<td>434.52</td>
<td>399.58</td>
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<td>11. Duration of trade creditors in days [10 / 9]</td>
<td>26</td>
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<td>32</td>
<td>53</td>
<td>68</td>
<td>87</td>
<td>123</td>
<td>171</td>
<td>135</td>
<td>105</td>
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Contd/
Table 5.4 (Contd/-)

Anna Co-operative Spinning Mills Ltd., Andipatty (ASM)
Operating Cycle
II Conversion Cycle

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs)</th>
<th>1990-91 (Rs)</th>
<th>1991-92 (Rs)</th>
<th>1992-93 (Rs)</th>
<th>1993-94 (Rs)</th>
<th>1994-95 (Rs)</th>
<th>1995-96 (Rs)</th>
<th>1996-97 (Rs)</th>
<th>1997-98 (Rs)</th>
<th>1998-99 (Rs)</th>
<th>1999-2000 (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opening stock of work-in-progress</td>
<td>16.77</td>
<td>22.01</td>
<td>25.35</td>
<td>28.54</td>
<td>30.67</td>
<td>38.32</td>
<td>47.84</td>
<td>15.08</td>
<td>30.84</td>
<td>23.43</td>
<td>29.73</td>
</tr>
<tr>
<td>2. Raw materials consumed [1 - 5]</td>
<td>512.25</td>
<td>460.07</td>
<td>839.36</td>
<td>874.04</td>
<td>713.28</td>
<td>760.70</td>
<td>1191.37</td>
<td>1076.42</td>
<td>1260.42</td>
<td>1263.48</td>
<td>1170.26</td>
</tr>
<tr>
<td>3. Manufacturing cost</td>
<td>265.16</td>
<td>273.11</td>
<td>297.44</td>
<td>313.70</td>
<td>350.62</td>
<td>328.68</td>
<td>433.73</td>
<td>485.24</td>
<td>587.56</td>
<td>597.47</td>
<td>622.50</td>
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<tr>
<td>4. Total [1 + 2 + 3]</td>
<td>794.18</td>
<td>755.19</td>
<td>1162.15</td>
<td>1216.28</td>
<td>1284.57</td>
<td>1127.70</td>
<td>1672.94</td>
<td>1576.74</td>
<td>1878.82</td>
<td>1884.38</td>
<td>1822.49</td>
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<tr>
<td>5. Closing stock of work-in-progress</td>
<td>22.01</td>
<td>25.35</td>
<td>28.54</td>
<td>30.67</td>
<td>38.32</td>
<td>47.84</td>
<td>15.08</td>
<td>30.84</td>
<td>23.43</td>
<td>29.73</td>
<td>35.98</td>
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<tr>
<td>6. Cost of finished goods manufac-</td>
<td>772.17</td>
<td>729.84</td>
<td>1133.61</td>
<td>1185.61</td>
<td>1056.25</td>
<td>1079.86</td>
<td>1657.86</td>
<td>1545.90</td>
<td>1855.39</td>
<td>1854.65</td>
<td>1786.51</td>
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<tr>
<td>tured during the year [4 - 5]</td>
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<td></td>
<td></td>
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<tr>
<td>7. Average cost of production</td>
<td>2.12</td>
<td>2.00</td>
<td>3.11</td>
<td>3.25</td>
<td>2.89</td>
<td>2.96</td>
<td>4.54</td>
<td>4.24</td>
<td>5.08</td>
<td>5.08</td>
<td>4.89</td>
</tr>
<tr>
<td>per day [6 / 365]</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Average stock of work-in-</td>
<td>19.39</td>
<td>23.68</td>
<td>26.95</td>
<td>29.61</td>
<td>34.50</td>
<td>43.08</td>
<td>31.46</td>
<td>22.96</td>
<td>27.14</td>
<td>26.58</td>
<td>32.86</td>
</tr>
<tr>
<td>progress [(1+5) / 2]</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9. Average duration of conversion</td>
<td>9</td>
<td>12</td>
<td>9</td>
<td>9</td>
<td>12</td>
<td>15</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>cycle in days [8 / 7]</td>
<td></td>
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</tr>
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</table>

Contd/-
155
### Anna Co-operative Spinning Mills Ltd., Andipatty (ASM)

**Operating Cycle**

**III Storage Cycle**

(Rs. in lakhs)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opening stock of finished goods</td>
<td>32.93</td>
<td>97.11</td>
<td>140.66</td>
<td>217.29</td>
<td>98.16</td>
<td>34.74</td>
<td>93.51</td>
<td>187.03</td>
<td>183.08</td>
<td>162.64</td>
<td>205.65</td>
</tr>
<tr>
<td>2. Cost of finished goods manufactured</td>
<td>772.17</td>
<td>729.84</td>
<td>1133.61</td>
<td>1185.61</td>
<td>1056.25</td>
<td>1079.86</td>
<td>1657.86</td>
<td>1545.90</td>
<td>1855.39</td>
<td>1854.65</td>
<td>1786.51</td>
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<tr>
<td>3. Distribution expenses</td>
<td>2.02</td>
<td>5.85</td>
<td>3.49</td>
<td>7.98</td>
<td>3.38</td>
<td>1.58</td>
<td>1.37</td>
<td>3.04</td>
<td>1.91</td>
<td>0.63</td>
<td>34.14</td>
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<tr>
<td>4. Total [1 + 2 + 3]</td>
<td>807.12</td>
<td>832.80</td>
<td>1277.76</td>
<td>1410.88</td>
<td>1157.79</td>
<td>1116.18</td>
<td>1752.74</td>
<td>1735.97</td>
<td>2040.38</td>
<td>2017.92</td>
<td>2026.30</td>
</tr>
<tr>
<td>5. Closing stock of finished goods</td>
<td>97.11</td>
<td>140.66</td>
<td>217.29</td>
<td>98.16</td>
<td>34.74</td>
<td>93.51</td>
<td>187.03</td>
<td>183.08</td>
<td>162.64</td>
<td>205.65</td>
<td>113.44</td>
</tr>
<tr>
<td>6. Cost of finished goods sold [4 – 5]</td>
<td>710.01</td>
<td>692.14</td>
<td>1060.47</td>
<td>1312.72</td>
<td>1123.05</td>
<td>1022.67</td>
<td>1565.71</td>
<td>1552.89</td>
<td>1877.74</td>
<td>1812.27</td>
<td>1912.86</td>
</tr>
<tr>
<td>7. Average cost of finished goods sold</td>
<td>1.95</td>
<td>1.90</td>
<td>2.91</td>
<td>3.60</td>
<td>3.08</td>
<td>2.80</td>
<td>4.29</td>
<td>4.25</td>
<td>5.14</td>
<td>4.97</td>
<td>5.24</td>
</tr>
<tr>
<td>per day [6 / 365]</td>
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<tr>
<td>8. Average stock of finished goods</td>
<td>65.02</td>
<td>118.89</td>
<td>178.98</td>
<td>157.73</td>
<td>66.45</td>
<td>64.13</td>
<td>140.27</td>
<td>185.06</td>
<td>172.86</td>
<td>184.15</td>
<td>159.55</td>
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<tr>
<td>[(1+5) / 2]</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Storage cycle in days [8 / 7]</td>
<td>33</td>
<td>63</td>
<td>62</td>
<td>44</td>
<td>22</td>
<td>23</td>
<td>33</td>
<td>44</td>
<td>34</td>
<td>37</td>
<td>30</td>
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Contd/-

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Table 5.4 (Contd/-)

Anna Co-operative Spinning Mills Ltd., Andipatty (ASM)
Operating Cycle
IV Collection Cycle

<table>
<thead>
<tr>
<th>Particulars (1)</th>
<th>1989-90 (Rs) (2)</th>
<th>1990-91 (Rs) (3)</th>
<th>1991-92 (Rs) (4)</th>
<th>1992-93 (Rs) (5)</th>
<th>1993-94 (Rs) (6)</th>
<th>1994-95 (Rs) (7)</th>
<th>1995-96 (Rs) (8)</th>
<th>1996-97 (Rs) (9)</th>
<th>1997-98 (Rs) (10)</th>
<th>1998-99 (Rs) (11)</th>
<th>1999-2000 (Rs) (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Annual sales</td>
<td>759.47</td>
<td>756.20</td>
<td>1034.78</td>
<td>1229.58</td>
<td>1157.73</td>
<td>984.83</td>
<td>1470.55</td>
<td>1610.53</td>
<td>1943.45</td>
<td>1844.08</td>
<td>1931.14</td>
</tr>
<tr>
<td>2. Average daily sales</td>
<td>2.08</td>
<td>2.07</td>
<td>2.84</td>
<td>3.37</td>
<td>3.17</td>
<td>2.70</td>
<td>4.03</td>
<td>4.41</td>
<td>5.32</td>
<td>5.05</td>
<td>5.29</td>
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<tr>
<td>[1/365]</td>
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</tr>
<tr>
<td>3. Average amount of</td>
<td>68.94</td>
<td>86.64</td>
<td>78.07</td>
<td>112.43</td>
<td>115.37</td>
<td>77.71</td>
<td>148.21</td>
<td>240.12</td>
<td>309.97</td>
<td>302.14</td>
<td>264.16</td>
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<td>sundry debtors</td>
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<td></td>
</tr>
<tr>
<td>4. Duration of collection cycle in days [3 / 2]</td>
<td>33</td>
<td>42</td>
<td>27</td>
<td>33</td>
<td>36</td>
<td>29</td>
<td>37</td>
<td>54</td>
<td>58</td>
<td>60</td>
<td>50</td>
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</table>
Table 5.4 (Contd/-)

Anna Co-operative Spinning Mills Ltd., Andipatty (ASM)

Operating cycle

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Year</th>
<th>Net raw material cycle</th>
<th>Conversion cycle</th>
<th>Storage cycle</th>
<th>Collection cycle</th>
<th>Total Operating cycle</th>
<th>Turnover to working capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1989-90</td>
<td>28</td>
<td>9</td>
<td>33</td>
<td>33</td>
<td>103</td>
<td>3.54</td>
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<tr>
<td>2</td>
<td>1990-91</td>
<td>22</td>
<td>12</td>
<td>63</td>
<td>42</td>
<td>139</td>
<td>2.63</td>
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<tr>
<td>4</td>
<td>1992-93</td>
<td>(-)39</td>
<td>9</td>
<td>44</td>
<td>33</td>
<td>47</td>
<td>7.77</td>
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<tr>
<td>5</td>
<td>1993-94</td>
<td>(-)32</td>
<td>12</td>
<td>22</td>
<td>36</td>
<td>38</td>
<td>9.61</td>
</tr>
<tr>
<td>6</td>
<td>1994-95</td>
<td>(-)36</td>
<td>15</td>
<td>23</td>
<td>29</td>
<td>31</td>
<td>11.77</td>
</tr>
<tr>
<td>7</td>
<td>1995-96</td>
<td>(-)85</td>
<td>7</td>
<td>33</td>
<td>37</td>
<td>(-)8</td>
<td>(-)46.00</td>
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<tr>
<td>8</td>
<td>1996-97</td>
<td>(-)119</td>
<td>5</td>
<td>44</td>
<td>54</td>
<td>(-)16</td>
<td>(-)23.00</td>
</tr>
<tr>
<td>9</td>
<td>1997-98</td>
<td>(-)97</td>
<td>5</td>
<td>34</td>
<td>58</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>1998-99</td>
<td>(-)61</td>
<td>5</td>
<td>37</td>
<td>60</td>
<td>41</td>
<td>8.90</td>
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<tr>
<td>11</td>
<td>1999-00</td>
<td>(-)58</td>
<td>7</td>
<td>30</td>
<td>50</td>
<td>29</td>
<td>12.59</td>
</tr>
<tr>
<td>Mean</td>
<td>(-)44</td>
<td>9</td>
<td>39</td>
<td>42</td>
<td>45</td>
<td>-</td>
<td>0.72</td>
</tr>
</tbody>
</table>

Source: computed by the researcher from the operating cycles of ASM
credit gradually increased from 26 days and reached the peak of 171 days in 1996-97 and tapered off to 128 days in the last year. Therefore net raw material cycles, which stood at 28 days and 22 days respectively in the first two years, became negative in the remaining years.

The ASM has to regulate its purchase on the basis of realistic estimates of production. Also delay in settlement of dues to the suppliers should be kept below 30 days, as against 105-171 days in the last five years.

**Conversion Cycle**

The length of conversion cycles varied between 5 and 15 days. The cycle became longer, because of significant decline in the line of production as in 1990-91 and during 1993-95. It can be noticed that gross raw material cycles also had a spurt in these three years. Therefore raw material cycles and conversion cycles show the need for proper planning in procurement and production.

**Storage Cycle**

The storage cycles ranged between 22 days and 63 days. From 1993-94 onwards the CSM managed to maintain sales level to reducing storage cycle. Significant increase in production during 1995-2000 did not cause any serious problem of storage, because of adequate increase in sales during the period. Thus the CSM could improve production and sales from 1993-94 onwards.
Collection Cycle

Collection cycle took between 27 days and 60 days during the period under review. However from 1996-97 onwards substantial increase in sales raised the duration of collection cycles also to 50 - 60 days, whereas the cycles were far shorter upto 1995-96 onwards. Thus the CSM has to improve its collection procedure, bringing down the collection cycles to 30 days or less.

Conclusion

The operative cycles of ASM varied between 139 days and 29 days during eight out of eleven years. During this period negative raw material cycles and reduction of storage cycles and collection cycles helped to reduce the duration of operating cycles from 1991-92 onwards. Negative net raw material cycle was equal to the total duration of other cycles in 1997-98, resulting in zero value of net raw material cycle, while it caused negative raw material cycles during 1995-97. As already noted the CSM has to plan its procurement and production more carefully, reducing gross raw material cycles and improve collection procedure for shortening collection cycles. It is also important to ensure timely payment to suppliers.

The South India Co-operative Spinning Mills Ltd., Pettai, Tirunelveli (PSM)

Raw Material Cycle

The statement of operating cycles of PSM is furnished in Table 5.5. Gross raw material cycles varied between 13 and 45 days during the last four years. The duration ranged between 13 and 28 days,
Table 5.5
The South India Co-operative Spinning Mills Ltd., Pettai, Tirunelveli (PSM)
Operating Cycle
I Raw Material Cycle

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs) (2)</th>
<th>1990-91 (Rs) (3)</th>
<th>1991-92 (Rs) (4)</th>
<th>1992-93 (Rs) (5)</th>
<th>1993-94 (Rs) (6)</th>
<th>1994-95 (Rs) (7)</th>
<th>1995-96 (Rs) (8)</th>
<th>1996-97 (Rs) (9)</th>
<th>1997-98 (Rs) (10)</th>
<th>1998-99 (Rs) (11)</th>
<th>1999-2000 (Rs) (12)</th>
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</thead>
<tbody>
<tr>
<td>1. Opening stock of raw materials</td>
<td>159.19</td>
<td>106.43</td>
<td>97.30</td>
<td>78.33</td>
<td>90.48</td>
<td>202.08</td>
<td>421.74</td>
<td>133.66</td>
<td>57.55</td>
<td>72.14</td>
<td>112.11</td>
</tr>
<tr>
<td>2. Purchase of raw materials</td>
<td>1183.20</td>
<td>1248.28</td>
<td>1698.23</td>
<td>1796.80</td>
<td>1748.95</td>
<td>2733.54</td>
<td>2438.12</td>
<td>1813.78</td>
<td>1909.51</td>
<td>2031.62</td>
<td>2066.47</td>
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<tr>
<td>4. Closing stock of raw materials</td>
<td>106.43</td>
<td>97.30</td>
<td>78.33</td>
<td>90.48</td>
<td>202.08</td>
<td>421.74</td>
<td>133.66</td>
<td>57.55</td>
<td>72.14</td>
<td>112.11</td>
<td>193.41</td>
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<tr>
<td>6. Average value of raw materials</td>
<td>3.39</td>
<td>3.44</td>
<td>4.70</td>
<td>4.89</td>
<td>4.49</td>
<td>6.89</td>
<td>7.47</td>
<td>5.18</td>
<td>5.19</td>
<td>5.46</td>
<td>5.44</td>
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<td>consumed per day [5 / 365]</td>
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<tr>
<td>7. Average stock of raw materials</td>
<td>132.81</td>
<td>101.87</td>
<td>87.82</td>
<td>84.41</td>
<td>146.28</td>
<td>311.91</td>
<td>277.70</td>
<td>95.61</td>
<td>64.85</td>
<td>92.13</td>
<td>152.76</td>
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<td>[(1+4) / 2]</td>
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</tr>
<tr>
<td>8. Gross raw material cycle in days</td>
<td>39</td>
<td>30</td>
<td>19</td>
<td>17</td>
<td>33</td>
<td>45</td>
<td>37</td>
<td>18</td>
<td>13</td>
<td>17</td>
<td>28</td>
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<tr>
<td>7 / 6</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>10. Average amount of sundry creditors</td>
<td>268.87</td>
<td>151.66</td>
<td>289.80</td>
<td>436.11</td>
<td>551.41</td>
<td>759.42</td>
<td>1015.56</td>
<td>1113.08</td>
<td>1024.49</td>
<td>1090.12</td>
<td>1328.06</td>
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<tr>
<td>12. Net raw material cycle in days [8 - 11]</td>
<td>(-)44</td>
<td>(-)14</td>
<td>(-)43</td>
<td>(-)72</td>
<td>(-)82</td>
<td>(-)56</td>
<td>(-)115</td>
<td>(-)206</td>
<td>(-)183</td>
<td>(-)179</td>
<td>(-)207</td>
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Contd/-

161
<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs) (2)</th>
<th>1990-91 (Rs) (3)</th>
<th>1991-92 (Rs) (4)</th>
<th>1992-93 (Rs) (5)</th>
<th>1993-94 (Rs) (6)</th>
<th>1994-95 (Rs) (7)</th>
<th>1995-96 (Rs) (8)</th>
<th>1996-97 (Rs) (9)</th>
<th>1997-98 (Rs) (10)</th>
<th>1998-99 (Rs) (11)</th>
<th>1999-2000 (Rs) (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opening stock of work-in-progress</td>
<td>41.52</td>
<td>36.98</td>
<td>26.40</td>
<td>59.62</td>
<td>32.67</td>
<td>38.73</td>
<td>70.09</td>
<td>81.36</td>
<td>76.45</td>
<td>91.44</td>
<td>69.87</td>
</tr>
<tr>
<td>3. Manufacturing cost</td>
<td>621.25</td>
<td>730.67</td>
<td>762.40</td>
<td>799.89</td>
<td>871.31</td>
<td>1093.41</td>
<td>1173.48</td>
<td>1177.54</td>
<td>1249.32</td>
<td>1319.67</td>
<td>1382.14</td>
</tr>
<tr>
<td>4. Total [1 + 2 + 3]</td>
<td>1898.73</td>
<td>2025.06</td>
<td>2506.00</td>
<td>2644.16</td>
<td>2541.53</td>
<td>3646.02</td>
<td>3969.77</td>
<td>3148.79</td>
<td>3220.69</td>
<td>3402.76</td>
<td>3437.18</td>
</tr>
<tr>
<td>5. Closing stock of work-in-progress</td>
<td>36.98</td>
<td>26.40</td>
<td>59.62</td>
<td>32.67</td>
<td>38.73</td>
<td>70.09</td>
<td>81.36</td>
<td>76.45</td>
<td>91.44</td>
<td>69.87</td>
<td>83.17</td>
</tr>
<tr>
<td>6. Cost of finished goods manufactured during the year [4-5]</td>
<td>1861.75</td>
<td>1998.66</td>
<td>2446.38</td>
<td>2611.49</td>
<td>2502.60</td>
<td>3575.93</td>
<td>3888.41</td>
<td>3072.34</td>
<td>3129.25</td>
<td>3332.89</td>
<td>3354.01</td>
</tr>
<tr>
<td>8. Average stock of work-in-progress [(1+5)/2]</td>
<td>39.25</td>
<td>31.60</td>
<td>43.01</td>
<td>46.15</td>
<td>35.70</td>
<td>54.41</td>
<td>75.73</td>
<td>78.91</td>
<td>83.95</td>
<td>80.66</td>
<td>76.52</td>
</tr>
<tr>
<td>9. Average duration of conversion cycle in days [8/7]</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>9</td>
<td>10</td>
<td>9</td>
<td>8</td>
</tr>
</tbody>
</table>

Contd/−
Table 5.5 (Contd/-)

The South India Co-operative Spinning Mills Ltd., Pettai, Tirunelveli (PSM)
Operating Cycle
III Storage Cycle

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs) (2)</th>
<th>1990-91 (Rs) (3)</th>
<th>1991-92 (Rs) (4)</th>
<th>1992-93 (Rs) (5)</th>
<th>1993-94 (Rs) (6)</th>
<th>1994-95 (Rs) (7)</th>
<th>1995-96 (Rs) (8)</th>
<th>1996-97 (Rs) (9)</th>
<th>1997-98 (Rs) (10)</th>
<th>1998-99 (Rs) (11)</th>
<th>1999-2000 (Rs) (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opening stock of finished goods</td>
<td>142.70</td>
<td>125.41</td>
<td>287.72</td>
<td>298.18</td>
<td>150.28</td>
<td>190.61</td>
<td>360.73</td>
<td>530.63</td>
<td>385.41</td>
<td>186.85</td>
<td>472.34</td>
</tr>
<tr>
<td>2. Cost of finished goods manufactured [II - 6]</td>
<td>1861.75</td>
<td>1998.66</td>
<td>2446.38</td>
<td>2611.49</td>
<td>2502.60</td>
<td>3575.93</td>
<td>3888.41</td>
<td>3072.34</td>
<td>3129.25</td>
<td>3332.89</td>
<td>3354.01</td>
</tr>
<tr>
<td>3. Distribution expenses</td>
<td>36.54</td>
<td>31.11</td>
<td>46.07</td>
<td>45.85</td>
<td>45.18</td>
<td>62.90</td>
<td>63.90</td>
<td>19.63</td>
<td>0.47</td>
<td>37.44</td>
<td>47.99</td>
</tr>
<tr>
<td>4. Total [1 + 2 + 3]</td>
<td>2040.99</td>
<td>2155.18</td>
<td>2780.17</td>
<td>2955.52</td>
<td>2698.06</td>
<td>3829.44</td>
<td>4313.04</td>
<td>3622.60</td>
<td>3515.13</td>
<td>3557.18</td>
<td>3874.34</td>
</tr>
<tr>
<td>5. Closing stock of finished goods</td>
<td>125.41</td>
<td>287.72</td>
<td>298.18</td>
<td>150.28</td>
<td>190.61</td>
<td>360.73</td>
<td>530.63</td>
<td>385.41</td>
<td>186.85</td>
<td>472.34</td>
<td>210.35</td>
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<tr>
<td>6. Cost of finished goods sold [4 - 5]</td>
<td>1915.58</td>
<td>1867.46</td>
<td>2481.99</td>
<td>2805.24</td>
<td>2507.45</td>
<td>3468.71</td>
<td>3782.41</td>
<td>3237.19</td>
<td>3328.28</td>
<td>3084.84</td>
<td>3663.99</td>
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<tr>
<td>8. Average stock of finished goods [(1+5) / 2]</td>
<td>134.06</td>
<td>206.57</td>
<td>292.95</td>
<td>224.33</td>
<td>170.45</td>
<td>275.67</td>
<td>445.68</td>
<td>458.02</td>
<td>286.13</td>
<td>329.59</td>
<td>341.35</td>
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Table 5.5 (Contd/-)

The South India Co-operative Spinning Mills Ltd., Pettai, Tirunelveli (PSM)
Operating Cycle
IV Collection Cycle

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1989-90 (Rs) (1)</th>
<th>1990-91 (Rs) (2)</th>
<th>1991-92 (Rs) (3)</th>
<th>1992-93 (Rs) (4)</th>
<th>1993-94 (Rs) (5)</th>
<th>1994-95 (Rs) (6)</th>
<th>1995-96 (Rs) (7)</th>
<th>1996-97 (Rs) (8)</th>
<th>1997-98 (Rs) (9)</th>
<th>1998-99 (Rs) (10)</th>
<th>1999-2000 (Rs) (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Annual sales</td>
<td>2044.42</td>
<td>1895.47</td>
<td>2293.79</td>
<td>2449.54</td>
<td>2429.60</td>
<td>3222.95</td>
<td>3438.45</td>
<td>3025.00</td>
<td>2952.09</td>
<td>2535.43</td>
<td>3145.59</td>
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<tr>
<td>2. Average daily sales</td>
<td>5.60</td>
<td>5.19</td>
<td>6.28</td>
<td>6.71</td>
<td>6.66</td>
<td>8.83</td>
<td>9.42</td>
<td>8.28</td>
<td>8.09</td>
<td>6.95</td>
<td>8.62</td>
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<tr>
<td>[1/365]</td>
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<td></td>
<td></td>
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<tr>
<td>3. Average amount of</td>
<td>211.95</td>
<td>226.57</td>
<td>263.35</td>
<td>193.71</td>
<td>193.69</td>
<td>225.98</td>
<td>221.10</td>
<td>257.00</td>
<td>269.34</td>
<td>243.61</td>
<td>243.32</td>
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<tr>
<td>sundry debtors</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Duration of collection cycle</td>
<td>38</td>
<td>44</td>
<td>42</td>
<td>29</td>
<td>29</td>
<td>26</td>
<td>23</td>
<td>31</td>
<td>33</td>
<td>35</td>
<td>28</td>
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<tr>
<td>in days [3/2]</td>
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</table>

(Rs. in lakhs)
Table 5.5 (Contd/-)

The South India Co-operative Spinning Mills Ltd.,
Pettai, Tirunelveli (PSM)

Operating cycle

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Year</th>
<th>Net raw material cycle</th>
<th>Conversion cycle</th>
<th>Storage cycle</th>
<th>Collection cycle</th>
<th>Total Operating cycle</th>
<th>Turnover to working capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1989-90</td>
<td>(-)44</td>
<td>8</td>
<td>26</td>
<td>38</td>
<td>28</td>
<td>13.00</td>
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<tr>
<td>2</td>
<td>1990-91</td>
<td>(-)14</td>
<td>6</td>
<td>40</td>
<td>44</td>
<td>76</td>
<td>4.80</td>
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<tr>
<td>3</td>
<td>1991-92</td>
<td>(-)43</td>
<td>6</td>
<td>43</td>
<td>42</td>
<td>48</td>
<td>7.60</td>
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<tr>
<td>4</td>
<td>1992-93</td>
<td>(-)72</td>
<td>6</td>
<td>29</td>
<td>29</td>
<td>(-)8</td>
<td>(-)45.63</td>
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<tr>
<td>5</td>
<td>1993-94</td>
<td>(-)82</td>
<td>5</td>
<td>25</td>
<td>29</td>
<td>(-)23</td>
<td>(-)15.87</td>
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<td>6</td>
<td>1994-95</td>
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<td>29</td>
<td>26</td>
<td>5</td>
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<td>7</td>
<td>1995-96</td>
<td>(-)115</td>
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<td>43</td>
<td>23</td>
<td>(-)42</td>
<td>(-)8.69</td>
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<tr>
<td>8</td>
<td>1996-97</td>
<td>(-)206</td>
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<td>52</td>
<td>31</td>
<td>(-)114</td>
<td>(-)3.20</td>
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<tr>
<td>9</td>
<td>1997-98</td>
<td>(-)183</td>
<td>10</td>
<td>31</td>
<td>33</td>
<td>(-)109</td>
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<td>10</td>
<td>1998-99</td>
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<td>35</td>
<td>(-)96</td>
<td>(-)3.80</td>
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<td>11</td>
<td>1999-00</td>
<td>(-)207</td>
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<td>28</td>
<td>(-)137</td>
<td>(-)2.66</td>
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<tr>
<td>Mean</td>
<td></td>
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<td>7</td>
<td>36</td>
<td>33</td>
<td>(-)34</td>
<td>1.38</td>
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</table>

Source: computed by the researcher from the operating cycles of PSM
because of the reduction in the volume of purchase. The duration of trade credit fluctuated between 44 days and 89 days during 1989-93 and between 101 days and 235 days during 1993-2000. The amount of sundry creditors registered sharp increase during 1995-2000, bringing about substantial increase in the duration of trade credit. In this CSM also net raw material cycles were negative in the entire period, because of long duration of trade credit, especially from 1995-96 onwards. Therefore this CSM also has to improve its management of creditors.

**Conversion Cycle**

Conversion cycles spanned between 5 days and 10 days. Slump in the level of production during 1996-99 and raise in the stock of work-in-progress during 1995-99, because of increase in purchase during 1994-96, caused increase in the duration of conversion cycles during 1996-99.

**Storage Cycle**

Duration of storage cycles fluctuated from 25 days to 52 days during the period under review. Slump in sales caused spurt in the duration of storage cycles in 1990-91 and 1996-97, while abrupt increase in production raised the storage cycle in 1991-92 and 1995-96. Significant increase in sales achieved during 1991*93 and again during 1994-96 could not be sustained in the subsequent years. Therefore, the CSM should address itself to the task’ of securing stable growth in sales, in order to control the duration of storage cycles.

Again volume of production should be decided on the basis of realistic
estimates of sales, in order to avoid enlargement of storage cycle as in 1991-92 and 1995-96.

**Collection Cycle**

Duration of collection cycles varied between 23 days and 44 days. During the first three years, the cycles took between 38 and 44 days. From 1993-94 to 1995-96, the CSM raised sales bringing down the collection cycles to less than one month.

**Conclusion**

The duration of operating cycles ranged between 5 days and 76 days in four years and in the remaining years, it was negative, because of negative net raw material cycles. In this CSM also, duration of trade credit was quite long, especially in the last five years and it must be rectified. Also the CSM should achieve stable growth of sales to regulate its storage cycle.

**Summary**

Analysis of operating cycles of five sample CSMs pinpoint the lines of remedial action. All the sample CSMs had negative raw material cycles, because of the enormous delay in paying the suppliers. The dues of the sample CSMs are owed to the Department of Handlooms and Textiles, which undertakes procurement for the co-operative spinning mills. Huge arrears tarnish the image and reputation of the CSMs and also causes misleading picture of the operating cycles. Therefore, the CSMs should tone up the management of sundry creditors and this will
require improvement in sales and collection of dues which alone can augment inflow of cash resources, facilitating timely settlement of dues, to the sundry creditors.

One disturbing finding of the operating cycle is the incredibly short durations of conversion cycle, varying between 4 and 15 days. Sound operations of the spinning plants need adequate inventory of work-in-progress in various machineries like blow room, carding, draw frame and simplex, in order to ensure full utilisation of the spindles. Optimum duration of conversion cycle will be between 15 and 20 days. In most of the years under review, the sample CSMs had conversion cycle of less than 10 days. It shows that the plants were operated without adequate inventory of work-in-progress and this would result in under-utilisation of spindleage with several frames of spindles running without bobbin and feed stock.

The sample CSMs should maintain adequate inventory of work-in-progress, balance production process and avoid empty running of spindles for reducing cost of production and wear and tear.

Storage cycle was quite short in all the CSMs, except during 1994-98 in TSM. However, collection cycle requires careful monitoring, since timely collection of dues will be essential for sound management of finance in general and for reduction of duration of trade credit in particular. Only when negative raw material cycles are removed through timely repayment of dues, rate of turnover of working capital will
facilitate correct assessment of the management of working capital. Hypothesis about management of working capital assumed that the operating cycles of working capital would be very long primarily due to long duration of storage cycles and collection cycles. The analysis has not proved the hypothesis. Especially storage cycles and collection cycles were reasonably short. However the compact size of operating cycles and especially negative operating cycles were primarily due to long duration of trade credit and inadequacy of inventory of work-in-progress which must be avoided.
References


