CHAPTER IX

CASH MANAGEMENT

One of the main tasks of a financial manager is to hold and maintain an optimum cash balance. Cash is an obvious and inescapable input into company's operations and as such it has to be available in sufficient doses according to needs, on a continuing basis. Cash is also the major and much awaited output or result of the company's operations and there is the need for effective plan to deploy this liquid resources to utmost productive use.¹ In the last three decades, an ever increasing sophistication in cash management by corporations has shown a trend towards reducing cash to a minimum. The funds released are invested in earning assets. This trend can be attributed to rising interest rates on securities, which make the opportunity cost of holding cash more expensive. It is due also to innovations in cash management and to economies of scale in cash management as corporations grow larger.²

SCOPE OF CASH MANAGEMENT

The views of these two financial experts show that cash management deals with the provision of uninterrupted

supply of funds for the successful operations of firms. It is also concerned with the managing of (i) cashflows into and out of the firm, (ii) cash flows within the firm and (iii) cash balances held by the firm at a point of time. According to John Maynard Keynes, "it is the cash which keeps a business going. Hence every enterprise has to hold necessary cash for its existence". The effective management of cash is the key determinant of efficient working capital management. Cash, like blood stream in the human body gives vitality and strength to a business enterprise. The steady and healthy circulation of cash throughout the business operation is the basis of business solvency.

The cash management being such an important area, an attempt has been made in this chapter to evaluate the levels of holding cash, its efficient utilisation of and also the management/cash in general of public enterprises.

Cash is held by the individuals and corporate bodies to meet one or more of three motives. They are: (1) the

transactions motive; (2) precautionary motive and (3) the speculative motive.

The transaction motive arises from the ready funds to make payments following due in the ordinary course of business such as payment for purchases, wages operating expenses and also payment of taxes and dividends.

The precautionary motive comes from a desire to keep a cash cushion to meet unexpected contingencies. The degree of precaution will normally bear an inverse relationship to the degree of predictability of cash flows of the business. As a measure of precaution, firms establish a line of credit with bankers to fall back in times of emergency while releasing the available cash resources for remunerative applications.

The speculative motive covers instances where the intention is to hold cash to be able to take advantage of changes in security prices, arising from fluctuations in interest rates and other factors. This may be true in cases of finance and investment company's but may not be a common phenomenon. The manufacturing companies may hold cash to meet speculative motive to take advantage of
(1) an opportunity to purchase raw materials at a reduced price on payment of immediate cash (2) any other such opportunity. Therefore company's mainly concentrate upon transaction and precautionary motives of the cash.

After deciding the causes for holding liquid cash, the firm must decide the quantum of transactions and precautionary balances to be held.

THE OBJECTIVES OF CASH MANAGEMENT

The basic objectives of cash management are as follows:

i) to meet the cash disbursement needs; and
ii) to minimise the funds committed to cash balances.

These are conflicting and mutually contradictory. The task of cash management is to reconcile them. A shrewd finance manager is one who strikes a golden mean between the two conflicting goals of liquidity and profitability of the firm by managing cash flows into the company, cash flows out of the company and intra company cash flows as well as cash balances held by the company.6

FUNCTIONS OF CASH MANAGEMENT

In order to achieve the objectives of economical use of cash balances and minimising the funds committed to it, the firm should develop some strategies for cash management. The strategies that may be evolved to perform the four functions of cash management are: Cash planning, Managing cash flows, Investments of excess cash and Selection of securities.

Cash Planning: Cash inflows and outflows should be properly planned to project cash surplus or deficit for each period of the planning. Cash planning is a technique for planning and controlling the use of cash. It may be done on a daily, weekly or monthly basis. The popular methods of cash planning are: (a) Cash budget method; (b) the adjusted net income method; (c) Proforma balance sheet method; and (d) working capital extrapolation method. 7

A cash budget is a summary statement of the firm's expected cash inflows and outflows over a projected time period. While the cash budget method is

suited for short period, the adjusted net income
method suits for a longer period.

Short term cash forecasts are made to:

1) help determine the operating cash requirements;
2) help anticipate short term financing;
3) help manage money market investments; and
4) to help in guiding credit policies.

In the same way long term cash forecasts are
made to give an idea of the company's financial needs
in the distant future. The major uses of the long
term cash forecasts are:

1) they indicate a company's future financial
   needs especially for its working capital
   requirements;
2) help to evaluate proposed capital projects; and
3) help to improve corporate planning.

The second function of cash management is
Managing Cash flows. The efficient management, in this
regard, attempt to economize in the use of cash by such
means as synchronization of the inflows and outflows of
funds to the extent possible. The inflow of cash should
be accelerated while the outflow of cash should as far
as possible be decelerated.
The cash flow statement is an important planning tool and has an analytical value. It provides details of cash generations and applications during a period. "The cash flow statement can trace the various sources which bring in cash, such as operations, sale of current and fixed assets, issuance of share capital and long term borrowings etc., and the applications which cause outflow of cash such as, purchase of current and fixed assets, redemption of debentures, preference shares for cash and so on. The bottom line of the statement of cash flow, therefore, would indicate the increase or decrease in cash, rather working capital."

But, however, since the informations like profit or loss in the sale of fixed assets are not accounted for by the public enterprises, the cash is not analysed here with the help of the cash flow statement. Researchers on finance like Ghaneshyam Panda also of the view that it cannot be prepared by an outside analyst due to lack of access to details. 8

A firm can conserve cash and reduce its requirements if it can speed up its cash collections. Cash collections can be accelerated by reducing the lag or gap between the payment and collection of a cheque, by reducing the mailing and processing time. An efficient financial manager may be able to reduce the firm's deposit float by speeding up the mailing, processing and collection times. The greater the deposit float, the longer the time taken in converting cheques into usable funds. This can be reduced by resorting to decentralised collections and lock box system.

The decentralised collection procedure, also called concentration banking is a system of operation through a number of collection centres, instead of a single centralised collection centre. In this system the firm will have a large number of bank accounts operated in the areas where the firm has its branches. The collection centres will be required to collect cheques from the customers and deposit them in their local bank accounts. The collection centres will transfer funds above certain limit to a control or
concentration bank account, generally, at the firms head office, each day. A concentration bank is one where the firm has a major bank account usually the disbursement account. 9

Another technique of speeding up mailing and processing and collection times still further is 'Lock box system'. Lock box system helps the firm to eliminate the time between the receipt of cheques and their deposit in the bank. In a lock box system the firm establishes a number of collection centres considering customer locations and volume of remittances. At the centre the firm hires a post office box and instructs its customers to mail their remittances to the box. The firms local bank is given the authority to pick up the remittances directly from the lock box. The bank pick up the mail several times a day and deposits the cheques in the firms account. For the internal accounting purposes of the firm, the bank prepares the detailed records of the cheques picked up. The major advantage of accelerated collections is to reduce the firms total financing requirements.

Yet another function of Cash Management is the Investment of excess cash in marketable securities. Basically this is a task of balancing liquidity and profitability needs. The firm purchases marketable securities that can easily be converted into cash with a minimum of difficulty or transactions costs. At the same time, the firm seeks a reasonable return at an acceptable risk level. There is a close relationship between cash and marketable securities. Excess cash should normally be invested in marketable securities which can be conveniently and promptly converted into cash. Cash in excess of Working Cash balance requirements may be held for two reasons. Firstly, the working cash requirements of a firm fluctuate because of the elements of seasonality and business cycles. The excess cash may build up during slack seasons but it would be needed when the demand picks up. Thus, excess cash during slack seasons is idle temporarily, but has predictable requirement later on. Secondly, excess cash may be held as a buffer to meet un-predictable financial needs. A firm holds extra cash because cash flows

cannot be predicted with certainty. Cash balance held to cover the future exigencies is called the precautionary balance and usually is invested in marketable securities until needed.\textsuperscript{11}

Instead of holding excess cash for the above purposes, the firm may meet its precautionary requirements as and when they arise by making short term borrowings. The excess amount of cash held by the firm to meet its variable cash requirements and future contingencies should be temporarily invested in marketable securities which can be regarded as near moneys. Among the available marketable securities, the financial manager should decide about the portfolio of marketable securities in which the firm's surplus cash should be invested.

SELECTING SECURITIES

A firm can invest its excess cash in many types of securities. As the firm invests its temporary transaction balances or precautionary balances or both, its primary criteria in selecting a security will be its quickest convertibility into cash, when the need for

cash arises. Besides this, a firm would also be interested in the fact that when it sells the security, at least, it gets the amount of cash equal to the cost of security. Thus in choosing among alternative securities, the firm should examine the four basic features of security, safety, maturity and marketability.

After identifying the cash required for meeting the transactions and precautionary motives, the basic responsibility of a finance manager is to maintain sufficient liquid resources so that the current obligations of a company is settled at the proper time. Determining the appropriate level of cash balances involves fundamental decisions with respect to the company's liquidity and its cash payables. Such decisions are influenced by a trade off between risk and profitability. However, the following models may help in determining the optimum level of cash balances: 1) Inventory Model 2) Stochastic Model; and (3) The miller and/or orr model.

THE INVENTORY MODEL OF CASH MANAGEMENT

In determining the optimum level of cash of a firm, economic order quantity model can be used as in the standard inventory situation. According to this
model, optimal level of cash should be determined by balancing carrying cost of holding cash against fixed cost of securing cash from capital market. The level at which cost of carrying the inventory of cash and cost of going to the market for satisfying cash requirements is minimum, will be the optimal size of cash inventory.

The carrying cost of holding cash refers to the interest foregone on marketable securities whereas, cost of going to the market means cost of liquidating marketable securities into cash.

STOCHASTIC MODEL

This model is based on the basic assumption that cash balances change randomly over a period of time both in size and direction and form a normal distribution as the number of periods observed increases. The stochastic nature of cash balances resembles the figure 9.A.

The model prescribes two control limits—upper limit and lower limit. When the cash balances reach the upper limit a transfer of cash to investment account should be made and when cash balances reach the lower limit a portion of securities constituting investment account of the company should be liquidated to return the cash balances to its return point.

The upper and lower limits of control are set after taking into account fixed cost associated with converting securities into cash and vice versa, and the cost of carrying stock cash.

The Miller and Orr have provided the simplest model to determine the optimal behaviour in a stochastic situation. The model is essentially a control limit model designed to determine the time and size of transfers between an investment account and cash account.\(^\text{13}\)

This model specifies two control limits designating 'h' for upper limit and 0 (Zero) for the lower limit as shown in Figure 9.B.

\[\text{Fig. 9.B: Control Limit Model}\]

\(^{13}\) Ibid., p.527.
According to this model when cash balances of the company reach the upper limit, cash equal to $h-z$ should be invested in marketable securities (i.e. Investment account) so that new cash balances touches $Z$ point. If the cash balances touch 0 point, the finance manager should immediately liquidate that much of the Investment portfolio which could return the cash balance to $Z$ point.

It may be interesting to note that cash balances are allowed to wander in between $h, z$ space and no control is called for so long as the cash balances stay there. The model sets "Z" as the target cash balance level. $Z$ and $h$, therefore, become levels determined to maximise profits. The optimal value of $Z$ is derived by using the following formula:

$$Z = 3 \frac{3b}{4K}$$

Where,

- $b = \text{Fixed cost associated with a security transaction}$
- $\sigma^2 = \text{variance of daily net cash flows.}$
- $K = \text{Interest rate per day on marketable securities.}$

The optimal value of "$h$" is simply three times of $Z$.

The average cash balances cannot be determined in advance.
However, approximate figure will be $Z + h/3$.

Cash management not only deal with procuring of adequate amount of funds and disburse them according to the needs, nor investment of excess funds, but it also deal with financing of cash shortage.

Shortage of cash is a situation which indicate the excess of cash outflows over cash inflows during certain period. Carelessness on the part of the management to deal properly with this situation may throw the concern into liquidation inspite of its substantial anticipated cash inflows in the future. "Cash flow statement is made to show the impact of various transactions on the cash position of a firm, it takes into consideration only such transactions that have relationship with cash".\(^\text{14}\)

In other words, a cash flow statement reveals the repercussions of transactions involving movement of cash. In case of excess of outflows over inflows of cash, the concern may procure funds from anyone or more of the following sources:–

1. falling back upon the line of credit opened earlier.
2. liquidating marketable securities
3. by raising loans, deposits from financial institutions

4. by delaying payments
5. by disposing of surplus fixed assets etc.

As a matter of fact, when a cash shortage situation is expected, it does not automatically and necessarily imply a search for external financing. Initially depending upon the factors, steps may be taken to avoid or to minimise the undesirable situation by effective control of the internal resources. This can be made possible by taking decision on such matters as:

a) increased efforts to speed up collections
b) reduction of purchasing excess inventory
c) increasing cash sales
d) sale of excess assets
e) sale of short term investments
f) deferment of capital expenditure; and finally
g) postponing and delaying payments etc.

Because these can be done economically/financing or by utilizing bank credit line. Even if an external source has to be found, this might be seen as bridging operation pending the ability to bring on streams an alternative internal source. 15

---

COST OF RUNNING OUT OF CASH

If a concern faces un-anticipated shortage of cash, it has to incur various costs on account of running out of cash. No concern is, afforded to run into a situation wherein it is subjected to various types of pressures affecting managements' morale causing damage to its financial reputation, and to lose cash discount on prompt payment, sometimes the enterprises are not able to negotiate with suppliers on a strong footing. Because of this, the enterprises invariably are forced to enter into further negotiations with banks and even borrow funds on a higher rate of interest.

ADEQUACY OF CASH

Every concern have to keep adequate cash to (1) meet their daily operational requirements, and (2) to maintain liquidity and solvency continually. These are important and inevitable for every business for its very existence. Computation of various ratios have been suggested to find out the liquidity and solvency position of business enterprises. Of these, the two very popular ones are related to computation of the
current and quick ratio. 16

Professor James E. Walter has proposed that instead of matching current assets with current liabilities, better results can be obtained by matching current obligations with net cash flows. 17 Net cash flows are more important because they are flows, whereas current liabilities indicate the outstanding obligations on a particular date which are continually being replaced. Hence, he has also suggested the computation of coverage of current liabilities ratio, which takes into account the turnover rate of current liabilities and margin of profit on sales. He calls computation of this only as the tests of actual liquidity while the current ratio and quick ratios are only tests of technical solvency and liquidity.

In another study R.K. Mishra 18 held out a view that an enterprise, to be actually liquid, and solvent, should have 100 per cent or more net cash flows to current liability ratio.

THE OPERATIONAL ADEQUACY OF CASH

The operational adequacy of cash may differ from industry to industry and from concern to concern due to differences in quantum of production, pattern of demand, payrolls, availability of short, intermediate and long term credit and prices of raw materials, stores and spares etc. But, however, financial analysts of the opinion that a business enterprise should keep its cash and near cash reserves below the requirements of one month's normal expenditure. If cash and near cash reserves happen to be more than this limit, it can be considered as excess cash held in the business.¹⁹ Turnover of cash and cash in terms of number of days operational requirements indicate good results regarding operational adequacy of cash. For this purpose, turnover of cash ratio can be calculated by dividing the total operating expenses by cash and bank balances. Cash in terms of number of days requirements, can also be calculated by dividing 365 days by cash turn over ratio.²⁰


CASH MANAGEMENT PRACTICES IN THE PUBLIC ENTERPRISES

The cash management practices of the public enterprises of Tamil Nadu are that they keep cash to meet obligations and also for meeting any other contingencies. The optimum level of cash balance is determined by means of cash budget. They are not in the habit of preparing cash reports on a regular basis. Whenever their cash balances go down, they utilize the bank credit line or liquidate the investments and also they get ways and means advance from Government. The excess cash if any, is normally invested in Government securities or paying short and long term liabilities. For the purpose of collection of cash, generally the public enterprises resorts to centralized cash collection centres.

With this back ground the cash management of the public enterprises of Tamil Nadu is analysed.

CONTROL OF CASH FLOWS

One of the major objectives of cash management is to economize the cash holdings without impairing the overall liquidity requirements of the concern. This is possible by effecting tighter control over cash flows.
The following ratios have been used to analyse the control of cash flows:

1) cash to current assets ratio;
ii) cash turnover ratio; and
iii) liquid funds to current liabilities ratio.

CASH TO CURRENT ASSETS RATIO

Holding of excess cash adversely affects the profitability of a concern, since idle cash as an asset is not only devoid of earning power, but, on the contrary also involves cost in retaining it. In an economy more prone to inflation, cash looses purchasing power as well. A downward trend in this ratio over a period indicates the tight control while an upward trend reveal a slack control over cash resources.\(^{21}\) The cash to current assets ratios of public enterprises are shown in Table IX,1.

Cash to current assets ratio of the selected public enterprises shows that the percentages of cash and bank balances are not uniform among all the public enterprises. This may be, because of the varied nature of the industry, the level of production of the public enterprises and a host of other factors. But even

---

TABLE - IX.1

CASH TO CURRENT ASSETS RATIO IN SELECTED PUBLIC ENTERPRISES OF TAMILNADU

<table>
<thead>
<tr>
<th>Years</th>
<th>TANSI</th>
<th>SSLtd</th>
<th>TACEL</th>
<th>TASCO</th>
<th>TAMIN</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979-80</td>
<td>0.53</td>
<td>1.41</td>
<td>4.12</td>
<td>31.36</td>
<td>56.73</td>
<td>8.64</td>
</tr>
<tr>
<td>1980-81</td>
<td>2.99</td>
<td>1.09</td>
<td>5.00</td>
<td>6.19</td>
<td>18.02</td>
<td>3.41</td>
</tr>
<tr>
<td>1981-82</td>
<td>2.33</td>
<td>0.88</td>
<td>2.69</td>
<td>4.61</td>
<td>4.97</td>
<td>2.54</td>
</tr>
<tr>
<td>1982-83</td>
<td>3.09</td>
<td>0.49</td>
<td>4.63</td>
<td>1.39</td>
<td>6.99</td>
<td>2.55</td>
</tr>
<tr>
<td>1983-84</td>
<td>2.20</td>
<td>2.28</td>
<td>3.05</td>
<td>20.16</td>
<td>24.00</td>
<td>5.43</td>
</tr>
<tr>
<td>1984-85</td>
<td>3.80</td>
<td>2.13</td>
<td>18.29</td>
<td>28.77</td>
<td>10.99</td>
<td>8.32</td>
</tr>
<tr>
<td>1985-86</td>
<td>0.92</td>
<td>6.33</td>
<td>15.12</td>
<td>10.65</td>
<td>15.96</td>
<td>4.80</td>
</tr>
<tr>
<td>1986-87</td>
<td>2.75</td>
<td>1.02</td>
<td>12.88</td>
<td>11.41</td>
<td>11.41</td>
<td>4.60</td>
</tr>
<tr>
<td>1987-88</td>
<td>3.64</td>
<td>0.94</td>
<td>33.46</td>
<td>40.52</td>
<td>40.85</td>
<td>11.90</td>
</tr>
<tr>
<td>1988-89</td>
<td>0.90</td>
<td>0.22</td>
<td>25.02</td>
<td>12.64</td>
<td>46.36</td>
<td>9.60</td>
</tr>
<tr>
<td>Average</td>
<td>2.32</td>
<td>1.68</td>
<td>12.43</td>
<td>16.77</td>
<td>23.63</td>
<td>6.18</td>
</tr>
</tbody>
</table>

Source: Computed from the annual reviews of state BPE
within themselves also there is no uniformity during the period. The percentage of cash balances changes from year to year without showing any direction or tendency.

The unit wise analysis reveals that in TANSI the percentage ranges from 0.53 (in the year 1979-80) to 3.64 (in the year 1987-88). The year wise balances are 0.53 per cent, 2.99 per cent, 1.33 per cent, 3.09 per cent, 2.20 per cent, 3.80 per cent, 0.92 per cent, 2.75 per cent, 3.64 per cent and 0.90 per cent respectively. On an average TANSI had cash balances to an extent of 2.32 per cent during this period.

The trend in the Indian manufacturing industries is to keep the cash and bank balances at 6 per cent of the total current assets.22 TANSI's cash and bank balances reveal that this is not as per the trends in India. Though the declining trend of cash balances is appreciated, TANSI does not show such a tendency also. On the other hand when it is judged from the adequacy point of view, it is not sufficient. In a comfortably

financed business, it will probably run not less than 5 to 10 per cent of the current assets. Since current liabilities are not expected to exceed one half of the current assets, cash percentage should not run under 10 to 20 per cent of the current assets. Judged from this, angle also the percentage of cash balances in TANSI is not adequate.

The trends in the Indian manufacturing industries, the differing views of the financial analysts shows, that there can be no uniformity in the cash requirements of the manufacturing enterprises. The public enterprises cannot be an exception to this. Applying this criteria to the cash reserves position of TANSI, it can be considered as an indication to suggest that it is efficient in managing this part of the working capital, in so far as, its business activity has not been affected by the dearth of cash and bank balances.

The cash balances position of Southern Structural Limited also exhibits a poor share in the current assets. Cash balances in this unit is the lowest among the

selected public enterprises. The year wise percentage shares are 1.41 per cent, 1.09 per cent, 0.88 per cent, 0.49 per cent, 2.28 per cent, 2.13 per cent, 6.33 per cent, 1.02 per cent, 0.94 per cent and 0.22 per cent. On an average the cash balances over this period is 1.68 per cent of the current assets of Southern Structural Limited. Judged from both angles stated earlier, the cash balances held by it is not adequate. Applying the criteria adopted to TANSI, SSL also evidences efficiency in the management of cash and bank balances.

In TACEL, the percentage shares of cash balances are 4.12 per cent, 5.00 per cent, 2.69 per cent, 4.63 per cent, 3.05 per cent, 18.29 per cent, 15.12 per cent, 12.88 per cent, 33.46 per cent and 25.02 per cent respectively during the period. The ten years average has been 12.43 per cent. Judged from both the angles the cash balance position is satisfactory.

The cash balance position of TASCO is comfortable. This also has been varying from year to year. There are years in which the percentage shares of cash in current assets are low (6.39 per cent) and high (40.52 per cent). The year wise shares are 31.86 per cent, 6.19 per cent, 4.16 per cent, 1.39 per cent, 20.16
per cent, 28.77 per cent, 10.65 per cent, 11.41 per cent, 40.52 per cent and 12.64 per cent respectively. On an average, it had been 16.77 per cent during this period.

In the case of TAMIN, the cash balance position is a little more from the point of standards used. In TAMIN also the cash and bank balances have been changing from year to year. The year wise positions are as follows: 56.73 per cent, 18.02 per cent, 4.97 per cent, 6.99 per cent, 24 per cent, 10.99 per cent, 15.96 per cent, 11.41 per cent, 40.85 per cent and 46.36 per cent respectively. In this the changes are violent (from 4.97 per cent to 56.73 per cent). The average is 23.64 per cent. This shows that TAMIN keeps more of cash and bank balances than the trends in the manufacturing industry in India as well as the norms.

On the whole, the cash to current assets ratios have shown that the cash reserves are efficiently managed in two of the five public enterprises and in another two it is just sufficient, in one (TAMIN) the cash balances are excessively maintained.

The combined cash to current assets ratio is also fluctuating between 2.54 per cent (81-82) and 11.90
per cent (67-68). On an average, it is 6.18 per cent. This shows that the cash and bank balances of public enterprises are as per the trends in the Indian Manufacturing Industries, but less than the other norms.

The test of actual liquidity of a firm may better be studied with the help of cash position ratio or liquid funds to current liabilities ratio. It analyses the level of liquid resources in relation to current obligations. The liquid funds include cash and bank balances and marketable securities.

The liquid funds in the public enterprises of Tamil Nadu consist of cash and bank balances and occasionally the liquidation of investments in Government securities. The credit worthiness of a customer is normally appraised by the suppliers of material beforehand, but in the case of public enterprises, the suppliers are accustomed to the redtapism, and do not normally assay them by their capacity to pay at a particular point of time. However, to test whether the public enterprises have adequate liquid funds to meet their current liabilities or not the cash position ratio is prepared and presented in Table IX.2.
TABLE - IX.2

LIQUID FUNDS TO CURRENT LIABILITIES RATIO

<table>
<thead>
<tr>
<th>Years</th>
<th>TANSI</th>
<th>SSLtd</th>
<th>TACEL</th>
<th>TASCO</th>
<th>TAMIN</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979-80</td>
<td>0.01</td>
<td>2.91</td>
<td>1.14</td>
<td>3.80</td>
<td>3.12</td>
<td>0.99</td>
</tr>
<tr>
<td>1980-81</td>
<td>0.08</td>
<td>0.42</td>
<td>2.38</td>
<td>5.73</td>
<td>6.78</td>
<td>0.78</td>
</tr>
<tr>
<td>1981-82</td>
<td>0.07</td>
<td>0.79</td>
<td>1.69</td>
<td>4.51</td>
<td>4.96</td>
<td>0.84</td>
</tr>
<tr>
<td>1982-83</td>
<td>0.07</td>
<td>0.97</td>
<td>1.87</td>
<td>4.70</td>
<td>5.42</td>
<td>0.83</td>
</tr>
<tr>
<td>1983-84</td>
<td>0.03</td>
<td>5.87</td>
<td>1.66</td>
<td>3.81</td>
<td>6.45</td>
<td>1.17</td>
</tr>
<tr>
<td>1984-85</td>
<td>0.05</td>
<td>3.88</td>
<td>2.80</td>
<td>1.97</td>
<td>4.43</td>
<td>0.90</td>
</tr>
<tr>
<td>1985-86</td>
<td>0.01</td>
<td>2.04</td>
<td>2.60</td>
<td>4.96</td>
<td>3.93</td>
<td>1.02</td>
</tr>
<tr>
<td>1986-87</td>
<td>0.04</td>
<td>1.42</td>
<td>2.27</td>
<td>5.24</td>
<td>5.98</td>
<td>1.32</td>
</tr>
<tr>
<td>1987-88</td>
<td>0.13</td>
<td>2.55</td>
<td>1.80</td>
<td>0.72</td>
<td>7.86</td>
<td>2.06</td>
</tr>
<tr>
<td>1988-89</td>
<td>0.01</td>
<td>6.54</td>
<td>0.80</td>
<td>3.97</td>
<td>4.96</td>
<td>2.37</td>
</tr>
</tbody>
</table>

Average 0.05 2.74 1.90 4.74 5.39 1.23

Source: Computed from the annual reviews of state BPE
The analysis of the table reveals that the liquid funds to current liabilities ratios change from unit to unit and hence there is no uniformity in the maintenance of liquidity to pay for the current liabilities. The cursory glance at the table reveals that there is no consistancy even within the units over the period.

The examination of the table reveals that in TANSI the liquidity in terms of current liabilities fluctuates between 0.01 in the years 1979-80, 1985-86 and 1988-89 and 2.13 (in the year 1987-88). On an average the ratio is 0.05. This means that for every liability worth Re. one, the liquid funds are available upto paisa 0.05 only. This shows that while TANSI is solvent it is not liquid enough to pay for its creditors at a particular point of time.

In Southern Structural Limited also the ratio fluctuates between 0.42 in the year 1980-81 and 6.54 (in 1988-89). On an average the liquid funds to current liabilities ratio is 2.74. This shows that the liquid funds are available nearly three times of the current liabilities. Interpreted in another way, this shows that
nearly 1.74 times of the liquid assets are kept idle in the form of cash and bank balances without profitably investing them in some income-earning assets.

In TACEL, also, the liquid funds are more than the current liabilities. The liquid funds fluctuate in between 0.80 (1988-89) and 2.80 times in the year 1984-85. On an average, the liquid funds are 1.90 times as that of the current liabilities. This shows that TACEL is liquid but its liquid funds are more than warranted by the current liabilities. This is also an indication of excess liquidity foregoing income from the investments of it.

In TASCO, it fluctuates between 1.97 in the year 1984-85 and 8.72 in the year 1987-88. On an average, the liquid funds are 4.74 times as that of the current liabilities, pointing out that it maintains more of liquid assets than warranted by current liabilities foregoing income from investments of excess cash and bank balances.

The liquid funds maintained by TAMIN is the highest of all the other public enterprises examined. The liquid funds in terms of current liabilities are fluctuating between 3.12 in the year 1979-80 and
7.86 times in the year 1987-88. On an average the liquidity position is 5.39 times than the current liabilities. This shows the solvency and excess liquidity of TAMIN foregoing income from investments of excess cash and bank balances at the same time incurring interest charges on such excess cash balances.

The combined ratio of liquid funds to current liabilities of the public enterprises is also fluctuating between 0.78 times and 2.37 times. On an average the ratio is 1.23. This shows that the public enterprises as a whole have liquid funds 0.23 times more than that of the current liabilities. By and large this ratio reveals that the public enterprises as a whole are liquid, capable of paying the current liabilities at any time, but still have some excess liquidity.

The exception is the TANSI. In this unit the percentage of cash to current assets is on an average just 2.32, liquid funds to current liabilities is on an average 0.05 paise for every liability worth Re.1/- The current ratio being satisfactory (as is found in chapter IV) the poor share of cash and bank balances may develop anxiety for the creditors. They may impose
stricter terms of credit or may go to the extent of fixing higher prices. But since so far TANSI has not experienced such adverse treatment, it has to be construed as a sign of efficient management of cash and near cash resources.

The operational adequacy of cash is measured in terms of number of days operational requirements of the public enterprises. For this purpose, the cash in terms of number of days requirements is calculated by dividing 365 days by cash turnover ratio.* The cash turnover ratio is calculated by dividing the total operating expenses by cash and bank balances. This may be able to evaluate whether the public enterprises have cash and near cash reserves just equivalent to one month's operational expenditure as prescribed by the norm, or more or less.

The cash in terms of number of days of operational requirements of the public enterprises of Tamil Nadu is presented in Table IX.3.

* loco cit. P. &\text{32}.
TABLE IX.3

CASH IN TERMS OF NUMBER OF DAYS OPERATIONAL REQUIREMENTS

<table>
<thead>
<tr>
<th>Years</th>
<th>TANSI</th>
<th>SSLtd</th>
<th>TACEL</th>
<th>TASCO</th>
<th>TAMIN</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979-80</td>
<td>3</td>
<td>299</td>
<td>338</td>
<td>598</td>
<td>570</td>
<td>207</td>
</tr>
<tr>
<td>1980-81</td>
<td>15</td>
<td>245</td>
<td>294</td>
<td>456</td>
<td>332</td>
<td>159</td>
</tr>
<tr>
<td>1981-82</td>
<td>11</td>
<td>283</td>
<td>276</td>
<td>336</td>
<td>354</td>
<td>146</td>
</tr>
<tr>
<td>1982-83</td>
<td>12</td>
<td>235</td>
<td>317</td>
<td>392</td>
<td>348</td>
<td>136</td>
</tr>
<tr>
<td>1983-84</td>
<td>9</td>
<td>429</td>
<td>312</td>
<td>468</td>
<td>456</td>
<td>217</td>
</tr>
<tr>
<td>1984-85</td>
<td>4</td>
<td>521</td>
<td>405</td>
<td>912</td>
<td>424</td>
<td>372</td>
</tr>
<tr>
<td>1985-86</td>
<td>9</td>
<td>640</td>
<td>365</td>
<td>1140</td>
<td>521</td>
<td>445</td>
</tr>
<tr>
<td>1986-87</td>
<td>21</td>
<td>553</td>
<td>350</td>
<td>1043</td>
<td>474</td>
<td>429</td>
</tr>
<tr>
<td>1987-88</td>
<td>3</td>
<td>445</td>
<td>365</td>
<td>1738</td>
<td>570</td>
<td>507</td>
</tr>
<tr>
<td>1988-89</td>
<td>6</td>
<td>521</td>
<td>151</td>
<td>1259</td>
<td>664</td>
<td>529</td>
</tr>
</tbody>
</table>

Average: 9, 417, 317, 834, 471, 315

Source: Computed from the annual reviews of state BPE
The cursory glance of the table reveals, that depending upon the nature of business and levels of production activity the cash requirements are different. But there is no consistency over the period in the respective units. The analysis of the cash balances of individual units may throw more light on the levels of cash in terms of number of days operational requirements.

The ratio in TANSI is lowest in the years 1979-80 and 87-88 i.e. the cash balances are just equivalent to 3 days operational requirements only and highest 21 days in the year 1986-87. On an average, the cash balances are equivalent to 9 days operational requirements only per annum during this period. While the financial experts (Guthman and others) say that it should not exceed one month's requirements, the cash and bank balances available in TANSI is just equivalent to 9 days operational requirements. The low levels of cash to current assets, low liquid funds to current liabilities and lower levels of cash in terms of number of days operational requirements, prove that the cash and bank balances available in TANSI is the minimum. If it has managed the business with this little amount of funds,
without adversely affecting it, it is a sign of efficient management of cash.

The cash in terms of number of days operational requirements available in Southern Structural Limited depicts a different picture. It holds high levels of cash. The lowest (235 days requirements) is in the year 1982-83 and the highest (640 days requirements) is in the year 1985-86. On an average, the cash and bank balances available in Southern Structural Limited is equivalent to 417 days operational requirements. When judged it from the norm of not exceeding one months requirements, Southern Structural Limited holds cash and bank balances equivalent to nearly one year and two months requirements. The investment pattern, of Southern Structural Limited has shown that it has invested the surplus funds in Government securities only once over the period (1984-85) and that too a small sum of Rs.1000/- only. This shows the poor attention paid to the management of excess cash and bank balances.

The position prevailing in the other public enterprises like TACEL, TASCO and TAMIN is not different from Southern Structural Limited. The difference is only in degree and not in kind.
In TACEL, the lowest level (157 days requirements) is in the year 1988-89 and the highest (405 days requirements) is in the year 1984-85. The levels are fluctuating in between these two bounds. On an average the levels are equivalent to 317 days operational requirements. This is more than approximately ten times of the norm. This shows that TACEL has neither attempted to synchronise the cash flows properly, nor projected the cash surplus, nor planned properly to invest the surplus funds so as to earn some income out of the excess cash flows and reduce the cost of maintaining such high levels of cash and bank balances.

Of all, TASCO is the poorly managed unit with reference to holding of cash and bank balances. The lowest is 335 days requirements in 1981-82 and highest is 1738 days requirements in the year 1987-88. On an average, equivalent to 834 days operational requirements. TASCO also have proved that over the period, in only one year (1981-82) it has invested the surplus cash balances in the Government securities, that too a small sum of Rs.15,000/- only. Therefore, TASCO also have neither planned the cash flows nor projected the cash surplus nor planned to invest the surplus cash in a
profitable manner. It has not attempted to reduce the cost in maintaining such high liquidities too.

TAMIN also had the lowest (332 days operational requirements) in the year 1980-81 and highest (664 days requirements) in the year 1988-89. The levels of cash and bank balances are fluctuating in between these two limits. On an average, it is equivalent to 471 days operational requirements.

This shows that TAMIN also has not planned its cash flows properly nor has adopted the practice of investing the surplus funds in some securities, which is profitable and is also capable of being converted into cash shortly without loss of value.

On the whole the public enterprises have proved that, they are not maintaining the cash and bank balances less than one months operational requirements nor invest the surplus funds in some income earning and easily convertible securities. They hold the cash and bank balances in varying degrees ranging from 136 days operational requirements to 529 days requirements. On an average they hold cash and bank balances equivalent to 315 days expenditure. This shows, while some amount
of efficiency is visible in one unit (TANSI) the other units have not properly planned their cash flows, nor have developed the practice of investing the surplus funds in profitable securities. They have not taken into consideration the cost of maintaining excess levels of liquidity or attempted to reduce it either by reducing its levels to the optimum. This confirms the hypothesis that the public enterprises prefer to play a safe game by holding excess levels of cash and bank balances.

The ratio which can be used to measure the effectiveness of the control of cash flows is the cash turnover ratio and/or also known as cash to sales ratio.

CASH TURN OVER RATIO

Cash turnover ratio can be calculated by dividing the sales by cash. "The increase in sales is generally associated with larger bank balances".25 According to T. Carlet Willard, the cash and bank balances will decrease as the size of business increases.26 If a business can turnover its cash, larger number of times, it can finance a greater volume of sales with relatively lesser cash resources. This will increase the profitability


of a concern. On the other hand a declining trend in the cash turnover ratio will show that the firm has failed to utilise its cash resources profitably. The cash turnover ratio of the public enterprises of Tamil Nadu is presented in Table IX.4 for analysis.

The cash turnover ratios of the public enterprises show different patterns. There is no uniformity in their turnover within the units over the period of study.

The cash turnover ratio of TMSI shows that it ranges from 19.79 times (1984-85) to 127.04 times (1988-89). On an average the cash and bank balances have turned over 51.73 times in an year. This is better than some of the other public enterprises.

The lower share of the cash and bank balances in the total current assets, the low liquidity and the small amount in terms of number of days operating expenses held by TANSI, have reflected in the high turnover the cash and bank balances.

The cash turnover ratio in Southern Structural Limited is the highest. It ranges between 32.36 times
<table>
<thead>
<tr>
<th>Years</th>
<th>TANSI</th>
<th>SSLtd</th>
<th>TACEL</th>
<th>TASCO</th>
<th>TAMIN</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979-80</td>
<td>116.25</td>
<td>80.92</td>
<td>23.92</td>
<td>2.69</td>
<td>1.13</td>
<td>8.32</td>
</tr>
<tr>
<td>1980-81</td>
<td>21.96</td>
<td>32.36</td>
<td>24.13</td>
<td>17.19</td>
<td>7.76</td>
<td>20.33</td>
</tr>
<tr>
<td>1981-82</td>
<td>28.86</td>
<td>58.10</td>
<td>40.33</td>
<td>16.58</td>
<td>24.24</td>
<td>26.65</td>
</tr>
<tr>
<td>1982-83</td>
<td>27.70</td>
<td>117.69</td>
<td>26.27</td>
<td>97.77</td>
<td>19.16</td>
<td>34.79</td>
</tr>
<tr>
<td>1983-84</td>
<td>34.57</td>
<td>89.70</td>
<td>39.65</td>
<td>6.54</td>
<td>6.36</td>
<td>20.04</td>
</tr>
<tr>
<td>1985-86</td>
<td>77.41</td>
<td>18.05</td>
<td>7.82</td>
<td>13.58</td>
<td>14.61</td>
<td>21.02</td>
</tr>
<tr>
<td>1986-87</td>
<td>40.35</td>
<td>65.06</td>
<td>7.67</td>
<td>13.58</td>
<td>17.46</td>
<td>23.73</td>
</tr>
<tr>
<td>1987-88</td>
<td>23.34</td>
<td>106.15</td>
<td>3.06</td>
<td>5.84</td>
<td>4.41</td>
<td>10.09</td>
</tr>
<tr>
<td>1988-89</td>
<td>127.04</td>
<td>734.84</td>
<td>0.83</td>
<td>14.26</td>
<td>2.28</td>
<td>14.53</td>
</tr>
</tbody>
</table>

Average  51.73  135.39  18.06  19.22  11.56  16.72

Source: Computed from the annual reviews of state BPE.
and 734.84 times. On an average it turnover 135.39 times per annum during this period.

In this unit also the low share of the cash and bank balances in the total current assets is able to substantiate the fact that it was in different forms (turnover).

The cash turn ratio of TACEL shows its slowness in its movements. The ratio has been fluctuating between 0.83 times in the year 1988-89 and 40.33 times (1981-82). On an average cash has been turning over 18.06 times. The high levels of cash and bank balances kept to meet the operating expenses is reflected in the slow turnover of cash.

TASCO, which held highest levels of cash and bank balances in terms of number of days operating expenses also reveals the slow cash turn over. The ratio has been fluctuating over the period between 2.69 times (in 1979-80) and 97.77 times (in 1982-83). On an average the cash turned over 19.22 times per annum during this period. Even though this can be accepted in view of the fact that TASCO belongs to a seasonal industry, the high levels of cash balances held in the
idle form might have prevented it from profitably using the cash and bank balances.

TAMIN is one of the sample public enterprise which has the lowest turnover of cash and bank balances. In this unit also the ratio had been fluctuating between 1.13 times (1979-80) and 24.24 times (1981-82). On an average the cash and bank balances turned over 11.56 times per annum over this period. The higher share of the cash and bank balances in the total current assets, the high liquidity and the higher number of days operating expenses held in the form of ready cash, might have caused for the slower turnover. This further reveals that it has not profitably used the cash and bank balances.

The combined ratio also has been fluctuating between 8.32 times (1979-80) and 34.79 times (1982-83). On an average the cash and bank balances of the public enterprises turned over 16.72 times per annum during this period. The wide variation in the turnover among the public enterprises shows that there is still room for profitable utilization of the cash and bank balances in them.
One of the main tasks of a finance manager is to hold and maintain adequate cash. It is the input into company's operations and also the much awaited output and hence has to be deployed to utmost productive use. Cash management is concerned with cash flows into and out of the firm, within the firm and the cash balances held by the firm at a point of time.

Its objectives are: (1) to meet the cash disbursement needs; and (2) to minimise the funds committed to cash balances. Even though these appear as conflicting and mutually contradictory, a shrewed finance manager has to reconcile them. He has to strike a balance between the two conflicting goals of liquidity and profitability of a firm by managing cash flows into the company, out of the company and intra company and cash balances held by them.

The functions of the cash management are: (1) cash planning, (2) managing cash flows; (3) investment of excess cash in marketable securities etc.

After identifying the cash requirements, the finance manager has to maintain sufficient liquid resources.
to meet them. Determining that appropriate levels of cash balances involves trade off between risk and profitability. In this process the inventory, stochastic and the Miller and Orr models may help the finance manager.

Cash management not only deals with procuring of adequate amount of funds and disbursing them according to the needs, it also deals with financing of cash shortage.

Cash shortage situation need not necessarily lead to search for external financing, but can also deal with taking decisions for speeding up of collections.

In short every concern has to keep adequate cash to meet their daily operational requirements and to maintain liquidity and solvency continually. The operational adequacy of cash may differ from industry to industry and concern to concern depending upon the production and a host of other requirements. But, however, financial analysts are of the opinion that a business enterprises should keep its cash and near cash resources below the requirements of one month's normal expenditure. Turnover of cash and cash in terms of number of days
operational requirements indicate good results regarding operational adequacy of cash.

The public enterprises of Tamil Nadu admit that they decide the optimum level of cash balances by means of preparing cash budget. Whenever the cash balances fall below the optimum level they admit that this will be made good by falling back upon a line of credit that have been established or liquidate their investments in Government securities, or they approach the Government for ways and mean advances. Likewise the excess cash if any, is invested in government securities, or for paying short and long term liabilities.

The cash management of the public enterprises are analysed with the help of control techniques and cash turnover ratio. When the cash management is evaluated with the help of control techniques the following conclusions are arrived at:

(i) the cash to current assets ratio has revealed that they maintain different levels of cash and bank balances. On an average they maintain 2.32, 1.68, 12.43, 16.77 and 23.63 per cents of the current assets as cash and bank balances. This has further revealed that there was no
uniformity in any of them over the period. In TANSI and SSL the cash and bank balances are lesser than the norm, but in TAMIN it was more than the norm. TACEL and TASCO are found to have cash and bank balances as per the norms. But however, the combined ratio being 6.18 per cent evidenced that the public enterprises keep cash and bank balances as per the trends in the Indian Manufacturing industries.

(ii) the liquid funds to current liabilities ratio also has revealed that there is no uniformity either among themselves, or over the period in any of them. On an average they hold 0.05, 2.74, 1.90, 4.74 and 5.39 times of liquid funds as that of the current liabilities. This has further revealed that except TANSI, all the other public enterprises are capable of meeting their current liabilities at any point of time. The combined ratio being 1.23 also shows that they are not only capable of liquidating their current liabilities at any time but also have excess cash and bank balances.

(iii) cash in terms of number of days operational expenditure of public enterprises also shows two opposite extremes. In one unit (TANSI) the cash and bank balances
are on an average sufficient to nine days operational requirements, where as in all the other sample units, they fluctuate from 151 days requirements (TACEL in 1988-89) to 1738 days (TASCO 1987-88) requirements. The combined ratio also proves that the cash and bank balances are on an average sufficient to ten months requirements. This exhibits the excess levels of cash balances held by the public enterprises without profitably investing them. They have paid poor attention to the cost of maintaining such high levels of cash and bank balances.

(iv) when the efficiency of the cash management is analysed in terms of cash turnover ratio, a mixed trend is available. In two units (TANSI and SSL) where the level of cash balances in terms of current assets are low, the turnover is high. In the other three, where they are found to have surplus balances and excess liquidity, the turnover is low. The combined turnover being 16.72 times, and the average turnover in them ranging from 11.56 and 135.39 proves that there is every possibility for the public enterprises to invest the surplus funds profitably and use the cash and near cash resources in an effective manner.