CHAPTER III
CONCEPTS AND APPROACHES OF WORKING CAPITAL MANAGEMENT

In this chapter an attempt is made to present the structure and the theoretical determinants of Working Capital (WC) and the methods of forecasting the requirements, and the components of such Working Capital. This input may give proper insight into the theory, practice and the analysis of Working Capital Management (WCM). Working Capital Management often becomes a difficult task as the concept of Working Capital cycle gets disturbed for various reasons particularly when credit sales are disproportionate and creditors liability increase. (Choudary C.S.)

III.1 Significance of Working Capital

Working Capital is considered as the lifeblood and nerve centre of any business (Khan and Jain) In the present day modern industrial world the term Working Capital refers to the short term funds required for financing the entire duration of the operating cycle of a business known as “Accounting Year”. It is a trading capital not retained in the business in a particular form for more than a year. This is used for carrying out the routine or regular business operations consisting of purchase of raw materials, payment of direct and indirect expenses, carrying out production, investment in stock, etc. In short it represents the fund by which the day-to-day business is carried on (Gregfilbeck).

Working Capital refers to that part of the firm’s capital, which is required for financing short-term business requirements or Current Assets (CAs) such as Cash, marketable securities, debtors and inventories. Funds so invested in Current Assets keep revolving fast and are being constantly converted into Cash and this Cash turns out again in exchange for other Current Assets. Hence, it is also known as revolving or circulating or short-term capital (Gupta K. Shashi and Sharma R.K.) “Working Capital is the amount of funds necessary to cover the cost of operating enterprise”. Circulating capital means Current Assets of a company that are changed in the ordinary course of business from one form to another, Eg, from Cash to inventories; inventories to receivables, to cash.
III.2 Concept of Working Capital (V.K. Bhalla)

There are two possible interpretations for Working Capital
A. Balance Sheet Approach (BSA)
B. Operating Cycle Approach (OCA)

III.2.1. Balance Sheet Approach

There are two interpretations of Working Capital under the BSA, viz.,
(i) Gross Working Capital Approach (GWC), and  
(ii) Net Working Capital Approach (NWC)

In the broad sense, the term Working Capital refers to the Gross Working Capital and represents total amount of funds invested in Current Assets. Gross Working Capital is the capital invested in total Current Assets of the enterprise. Although Current Assets vary from industry to industry, they constitute between 50 to 60 per cent of the total assets of manufacturing concerns (Subhash Chander and Rajan Kumar)

Current Assets are those assets which, in the ordinary course of business, can be converted into Current Assets within a short period of time, say, one year. The constituents of Current Assets are:

- Cash in hand and bank balance
- Bills receivables
- Sundry debtors less provision for bad debts
- Short-term loans and advances
- Inventories of stock – Raw materials, work-in-progress, stores and spares, finished goods,
- Temporary investment of surplus funds
- Prepaid expenses, and
- Accrued incomes (Gupta K. Shashi and Sharma R.K.)

In a narrow sense, the term Working Capital refers to Net Working Capital. When accountants use the term Working Capital, they generally refer to Net Working Capital, which is the difference between Current Assets and Current Liabilities Van Horne. C. James and Wachowicz John M.(Jr).
Net Working Capital refers to the difference between Current Assets and Current Liabilities. Current Liabilities are those claims of outsiders that are expected to mature for payment within an accounting year and include the following:

- Bills Payables
- Sundry Creditors
- Accrued or outstanding expenses
- Short-term loans, advances and deposits
- Dividends payable
- Bank overdraft, and
- Provision for taxation, if it does not amount to appropriation of profits (Pandey I.M.)

The Net Working Capital may be positive or negative. A positive Net Working Capital will arise when Current Assets exceed Current Liabilities. Negative Net Working Capital occurs when Current Liabilities are in excess of Current Assets. (Srinivasan N.P. and Shakthivel Murugan.M). The Current Liabilities that amounted to 24 per cent unrepresented by Current Assets, which, in turn, drastically affected turnover levels of heavy engineering (Mukhapadhyay). The Gross Working Capital is a financial or going concern concept while Net Working Capital is an accounting concept of Working Capital. These two concepts of Working Capital are not exclusive. The Net Working Capital may be suitable only for proprietary form of organizations such as sole-trader or partnership firms. The gross concept of Working Capital, on the other hand, is suitable to the company form of organization where there is diverse between ownership, management and control (Gupta K. Shashi and Shrama R.K.)

### III.2.2 Operating Cycle Approach

In terms of liquidity, there is a difference between current and fixed assets. To recover the initial investment in fixed assets, a firm requires many years. On the contrary, investments in Current Assets are turned over many times in a year. Investments in Current Assets such as inventories and debtors (accounts receivables) are realized during the firm’s operating cycle, which is usually less than a year. (Moyer R.C. et.al).
Operating cycle is the time duration required to convert sales, after the conversion of resources into inventories and that into Current Assets. The operating cycle of a manufacturing company involves three phases.

- Acquisition of resources such as raw materials, labor, power and fuel.
- Manufacture of the product, which includes conversion of raw materials into work-in-progress, work-in-progress into finished goods.
- Sale may be either for Cash or on credit. Credit sales create accounts receivable for collection.

These phases affect Cash flows, which are neither synchronized nor certain. They are not synchronized because Cash outflows usually occur before Cash inflows. Cash outflows are relatively certain whereas the Cash inflows are difficult to be forecast due to the time gap between sales and collections. This requires the firm to invest in Current Assets for uninterrupted operations. Liquidity has to be maintained to purchase raw materials and pay expenses, as there is hardly a matching between Cash inflows and outflows. Cash is also held to meet any future obligations. Stock of raw materials and work-in-progress are kept to ensure smooth production and to guard against non-availability of raw materials and other components. The firm holds stock of finished goods to meet the demands of customers on continuous basis and sudden demand from some other customers. Debtors are created because goods are sold on credit for marketing and competitive reasons. Thus, a firm makes adequate investment in materials, and debtors, for smooth, uninterrupted production and sales.
The length of the operating cycle of a manufacturing firm can be defined as the sum of inventory conversion period (ICP) and debtor’s conversion period (DCP). (I.M. Pandey). The operating cycle ranges from 96 days to 158 days in Case of Lupin Laboratories Ltd. (Singh.P.K.)

**Inventory Conversion Period (ICP)**

It is the total time needed for producing and selling the product which includes raw materials conversion period (RMCP), work-in-progress conversion period (WIPCP) and finished goods conversion period (FGCP).

Raw Material Conversion Period refers to the period in which the raw materials are generally kept in stores before they are issued for manufacturing to production department. Work-in-Progress Conversion Period refers to the period for which the raw material remains in the manufacturing process before it is taken out as finished product. Finished Goods Conversion Period refers to the period for which finished products remain in stores before being sold to a customer.

**Debtors Conversion Period (DCP)**

It is the time required to collect the outstanding amount from customers.

**Gross Operating Cycle (GOC)**

The total of inventory conversion period and debtors’ conversion period is referred to as Gross Operating Cycle (GOC) and symbolically represented as

\[ GOC = RMCP + WIPCP + FGCP + DCP \]

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<thead>
<tr>
<th>RMCP =</th>
<th>Average Stock of Raw materials</th>
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<td>Raw materials consumption per day</td>
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<th>WIPCP =</th>
<th>Average Stock of Work-in-progress</th>
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<td>Total cost of production per day</td>
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<tr>
<th>FGCP =</th>
<th>Average Stock of Finished Goods</th>
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<td>Total cost of Sales per day</td>
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<th>DCP =</th>
<th>Average Accounts Receivable</th>
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<td>Net Credit Sales per day</td>
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However, a firm may acquire resources for production activities, on credit and temporarily postpone the payment of certain expenses, which can be invested in Current Assets. The Payable Deferred Period (PDP) is the length of time the firm is able to defer payments on various resource purchases. The difference between Gross Operating Cycle and the Payable Deffered Period is Net Operating Cycle (NOC) (Kishore M. Ravi)

Thus,

\[ NOC = GOC - PDP \]

Where,

\[ PDP = \text{Average Payments} \]

<table>
<thead>
<tr>
<th>PDP =</th>
<th>Net Credit Purchases per day</th>
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III.2.3 Classification of Working Capital on the basis of time

Working Capital, on the basis of time can be categorized as:

A. Permanent or Fixed Working Capital

B. Temporary or Variable Working Capital

The classification is shown in figure III. (2).

Figure III. (2) Classification of Working Capital


III.3.1 Permanent or Fixed Working Capital

It is the minimum amount required to ensure effective utilization of fixed facilities and for maintaining the circulation of Current Assets. There is always a minimum level of Current Assets, which is continuously required by the firm to carry out its normal business operations such as raw materials, work-in-progress, finished goods and cash balance. This minimum level of Current Assets, which is permanently blocked, is called permanent or fixed Working Capital (IM. Pandey).
It is further be classified as regular Working Capital and reserve Working Capital. Regular Working Capital, as the name implies, refers to the Working Capital required for regular conduct of operations. Reserve Working Capital is the excess over the requirements for regular Working Capital, which may be provided for contingencies, such as strikes and rise in prices.

III.3.2 Temporary or Variable Working Capital

It is the amount of Working Capital required to meet the seasonal demands and some special exigencies. (Kulkarni.P.V. and Satya Prasad B.G.). It can be further classified as seasonal Working Capital and special Working Capital. The capital needed to meet the seasonal needs of the business is termed as seasonal or variable working capital. It is that part of the Working Capital which is required to meet special exigencies, such as special campaign, conducting research and new product launch, which is known as special Working Capital (Kulparsi.P.V.). The requirements of the temporary Working Capital is shown in figure III. (3) and III (4).

![Figure III. (3) Temporary Working Capital](image)

Adequacy of Working Capital

The maintenance of the required amount of Working Capital is termed as adequate Working Capital. The adequate Working Capital results in the following benefits, viz, protects business from adverse effects of shrinkage in the value of Current Assets, ensures to a great extent the maintenance of company’s credit standing and provides for emergencies like strikes (Vasudevan). It also permits the carrying of inventories at a level that will enable a business to serve satisfactorily to the need of its customers, enables a company to offer favourable credit terms to customers, to operate its business more efficiently as there is no delay in obtaining materials due to credit difficulties, to withstand in periods of depression smoothly, there can be operating losses or decreased retained earnings, there can be excessive non operating or ordinary losses. (Pandey.I.M.).

Inadequate Working Capital

It is a situation where the production facilities could not be utilized fully for want of Working Capital. This results in the following dangers.

- May not be able to take advantage of Cash discount facilities.
- Credit worthiness of the company can be jeopardized due to lack of liquidity.

May not be able to take advantage of profitable business opportunities.

Modernization and even routine repairs and maintenance facilities may be difficult to administer.

Will not be able to pay dividends due to non-availability of funds.

May have to borrow funds at exorbitant rates of interest.

Low liquidity will lead to low profitability.

Loses its reputation on account of not honouring its short-term obligations.

**Excessive Working Capital**

It refers to a situation of idle funds, which earn no profits for the firm. The evils of excessive Working Capital are:

- May be tempted to over trade and lose heavily.
- Unnecessary accumulation of materials.
- Imbalance between liquidity and profitability.
- High liquidity will involve a company to undertake greater production that may have a matching demand. It will find itself in a very embarrassing position; its marketing policies are not properly adjusted to boost up the market for its products (*Bhattacharya and Singh*).
- May invest in fixed equipment heavily, which will not be justified by actual sales of production leading to over capitalization.
- May lead to inefficiency of operations.

Determination of adequacy of Working Capital poses problems to both corporate and the banking sector (*Prasanna Chadra*).

Hence it is absolutely essential to maintain the right amount of Working Capital on a continuous basis, and then only a proper functioning of the business operations will be ensured. Sound financial and statistical techniques, supported by judgment, should be used to predict the quantum of Working Capital needed at different time periods. (*Pondey I.M.*)
III.4 Principles of Working Capital Finance

1. Principle of Risk Variation

Risk variation refers to an ability of a firm to maintain sufficient Current Assets to pay for its obligations. If Working Capital varied in relation to sales, the amount of risk that a firm assumes is also varied and the opportunity for gain or loss is increased. It means that there is a definite relationship between the degree of risk and the rate of return (Barida S.C.).

2. Principle of Equity Position

The amount of Working Capital invested in each component should be adequately justified by a firm’s equity position. Every paise contributed in the Working Capital must contribute the Net Working Capital of the firm (Barida S.C.).
3. Principle of Cost of Capital

It emphasizes the different sources of finance and each source has a different cost of capital. The cost of capital moves inversely with risk. As such additional risk capital results in the decline in the cost of capital (Kulkarni.P.V. and Satyaprasad.B.G.)

4. Principle of Maturity of Payments

A firm should make every attempt to relate maturities of payments to its flow of internally created funds. The failure to meet such a match of generation to outside demand would accentuate the risk (Vasudevan).

Sources of Working Capital

Working Capital can be procured from various sources by manufacturing concerns. A snapshot of the various sources is depicted in the following figure (Murthy).

III.5 Sources of financing Permanent or Fixed Working Capital

- **Shares**: The most important source for the permanent or long-term Working Capital is the issue of equity, preference and deferred shares.

- **Debentures**: Another important source for raising the permanent Working Capital is the issue of debentures, which means a debt where the debenture holder is considered as the creditor of the company.

- **Retained Earnings**: Otherwise called ploughing back of profits. It means the reinvestment by the company’s surplus earnings in its business.

- **Loans from Financial Institutions**: Financial institutions such as Commercial banks, Life Insurance Corporation of India, Industrial Finance Corporation of India, State Finance Corporation, Industrial Development Bank of India, etc., also provide term loans for Working Capital needs.

- **Public Deposits (Fixed)**: These deposits are fixed in nature and are accepted by a business enterprise directly from the public.

Sources of financing temporary or variable or short-term Working Capital

- **Commercial Banks**: The major portion of Working Capital needs is provided by the commercial banks. The different forms of credit offered by banks are loans and advances, cash credits, overdrafts and purchasing, factoring, forfeiting key Cash credit, transit receipt and discounting bills.

- **Indigenous Bankers**: Private moneylenders and other country bankers are also used to be a source of finance prior to the establishment of commercial banks. Even now, some business houses depend upon them.

- **Trade credit**: It refers to the credit extended by the suppliers of goods in the normal course of business. It may also take the form of an open account or bills payable.

- **Installment credit**: Under this source the assets are purchased and possession of goods is taken immediately but the payment is made in installment over a period of time.

- **Advances**: Receiving of payment in advance from customers and agents against order of goods.
• **Accrued Expenses**: The expenses, which have been incurred but not yet due and hence not yet paid.

• **Deferred Income**: Incomes received in advance before supplying goods.

• **Commercial Papers**: It represents unsecured promissory notes issued by firms to raise short-term funds, the maturity period ranging from 91 to 180 days.

### III.6 Approaches for financing Working Capital

Depending on the mix of short and long term financing, there are three basic approaches. They are:

- Matching approach/Hedging approach
- Conservative approach
- Aggressive approach

#### III.6.1 Matching or Hedging Approach

The term hedging is very often used in the sense of risk reducing investment strategy involving transactions of a simultaneous but opposing nature so that the loss arising out of one transaction is likely to offset in the other due to the financing mix. The term hedging can be said to refer to the process of matching maturities of debt with the maturities of financial needs. That is why it is called matching approach. According to this approach, the maturity of the sources of funds should match the nature of the assets to be financed. For analytical purpose Current Assets can be broadly classified into:

- Those, which require certain amount for given level of operation and hence do not vary over time.
- Those, which fluctuates over time.

This approach suggests that long-term funds should be used to finance the fixed portion of Current Assets requirements as spelt out in a manner similar to the financing of fixed assets.

The purely temporary requirement that is the seasonal variation over and above the permanent financing needs should be appropriately financed with short-term funds or Current Liabilities (*John Hampton*).
III.6.2 Conservative Approach

The financing policy of the firm is said to be conservative when it depends more on long-term funds for financing needs. Under this approach, the firm finances its permanent assets and also a part of temporary Current Assets with long-term financing. In the periods when the firm has no need for temporary Current Assets, the idle long-term funds can be invested in tradable securities to conserve liquidity. This is shown in figure III. (8).

III.6.3 Aggressive Approach

A firm may be said to be adopting an aggressive policy when it used more of short-term financing than warranted by the matching plan. Under this approach, the firm finances a part of its permanent Current Assets with short-term financing. Some extremely aggressive firms may even finance a part of their fixed assets with short-term financing. Relatively more the use of short-term financing makes the firm more risky (Pandey I.M.). The aggressive financing is shown in figure III. (9).


III.7 Liquidity Vs. Profitability: Risk-return trade-off

The firm would make just enough investment in Current Assets if it were able to estimate Working Capital needs exactly. Under perfect certainty, the Current Assets holdings would be at the minimum level. Large investment in Current Assets under certainty would mean low rate of Return on Investments (ROI) of the firm, as excess investments in Current Assets will not earn enough return. A smaller investment in Current Assets, on the other hand, would mean interrupted production and sales, because of frequent stock-outs and inability to pay to its creditors in time due to restrictive policy. The higher the turnover, the greater will be the profitability of the company (Narware).

The firm must decide about the levels of Current Assets to be carried for which a firm’s technology and production policy, sales and demand condition, operating efficiency is taken into consideration in the policy decision. It may follow a conservative risk-return trade-off (Van Horne). The rank correlation of liquidity and profitability were inversely related to each other. It implies that as the liquidity increases and profitability decreases, and the rank correlation of Can Bank factor is stronger than SBI factor (Reddy, Y.V.).

A conservative policy means lower return and lower risk, while an aggressive policy produces higher return and higher risk. The two important aims of the Working Capital Management are profitability and solvency. Solvency refers to the firm’s continuous ability to meet maturity obligations. To ensure solvency, the firm should be very liquid, which means larger Current Assets holdings enabling in meeting its obligations towards creditors so as to fill all sales orders resulting in smooth production operations. Even though the risk of insolvency is very less, taking into account the cost associated in maintaining the liquidity as the firm’s funds gets tied up in Current Assets becoming idle, it leads to reduction in profit. To have higher profitability, the firm may sacrifice solvency and maintain a relatively low level of Current Assets. When the firm does so, its profitability will improve as less funds are tied up in idle Current Assets, but its solvency is affected. Hence, Working Capital policy has to solve the solvency and profitability tangle and trade-off between risk and return (Pandey I.M.).
The liquidity maintained by the Steel Authority of India Ltd., is year-to-year and changes on the relationship with profitability. The liquidity and profitability are found to move in the same direction (Bardia. S.C.).

III.8 Determinants of Working Capital

There is no set of universally acceptable rules to ascertain the Working Capital needs of a business organization. The following is the description of factors, which generally influence the Working Capital requirements of firms.

**Nature of Business** The Working Capital requirements of a firm basically depends upon the nature of its business. Public utility undertakings like Electricity, Water Supply and Railways need very limited Working Capital because they offer only cash sales and supply services. As such no funds are tied up in inventories and receivables. On the other hand, trading and financial firms require less investment in fixed assets, but have to invest large amount in Current Assets like materials, receivables and Cash. The manufacturing firms also require sizable Working Capital along with fixed investments.

**Size of Business/Scale of Operation** The greater the size of a business unit, the larger will be the requirements of Working Capital. In some cases a smaller concern may also need more Working Capital due to high overhead charges, inefficient use of available resources and other economic disadvantages of small size.

**Production Policy** The demand is subject to wide fluctuations due to seasonal variations, where the requirement of Working Capital depends upon the production policy. Production could be kept either steady by accumulating inventories during slack periods with a view to meet high demand during the peak season or the production could be curtailed during the slack season and increased during the peak season. If the policy is to keep production steady by accumulating inventories it will require higher Working Capital.

**Manufacturing Process or Length of Production Cycle** The requirement of Working Capital increases in direct proportion to the length of manufacturing process. The longer the process period of manufacture, the greater will be the amount of Working Capital required.
**Seasonal Variations** In certain industries raw materials are not available throughout the year. They have to buy raw materials in bulk during the season to ensure an uninterrupted flow and process it during the entire year. A huge amount is blocked in the form of material inventories during such season which gives rise to more Working Capital requirements. Generally, during the busy season, a firm requires larger Working Capital than in the slack season.

**Working Capital Cycle** In a manufacturing concern, the Working Capital cycle starts with the purchase of raw materials and ends with the realization of Cash from the sale of finished products. The speed with which the Working Capital completes one cycle determines the requirement of Working Capital. The larger the period of cycle, the greater will be the requirement of Working Capital.

**Rate of Stock Turnover** There is a high degree of inverse relationship between the quantum of Working Capital and the velocity or speed with which the sales are affected. A firm having a high rate of stock turnover will need lower amount of Working Capital as compared to a firm having a low rate of turnover.

**Credit Policy** A firm, which purchases its requirements on credit and sells its product or services on cash requires lesser amount of Working Capital. On the other hand, a concern buying its requirements for cash and allowing credit to its customers shall need a larger amount of Working Capital.

**Business Cycle** Business cycle refers to alternate expansion and contraction in general business activity. The period of boom needs larger amount of Working Capital. On the contrary, in times of depression firms may also require large amount of Working Capital.

**Rate of Growth of Business** The Working Capital requirements of a concern increases with the growth and expansion of its business activities. In a fast growing concern large amount of Working Capital is required even though the relationship between the growth in the volume of business and the growth in the Working Capital is difficult to determine.
Earning Capacity and Dividend Policy Firms with high earning capacity may generate cash profits from operations and contribute to the Working Capital. Likewise, a firm that maintains a steady high rate of cash dividend, irrespective of its quantum of profits, needs more Working Capital.

Price Level Changes Generally the rising prices will require the firm to maintain larger amount of Working Capital as more funds will be required to maintain the same Current Assets. Some firms may be affected much while some others may not be affected at all by the rise in prices.

Other factors Certain other factors such as operating efficiency, management ability, irregularities of supply, import policy, assets structure, importance of labor and banking facilities also influence the requirements of Working Capital (Gupta K. Sasi and Sharma R.K.)

III.9 Committees and their Recommendations on Working Capital

To regulate and control bank finance the Reserve Bank of India (RBI) has been issuing directions and guidelines to the banks from time to time on the recommendations of certain specially constituted committees entrusted with this task. The important recommendations of the various committees are discussed below.

III.9.1 Dehejia Committee Report (1968) The national credit council constituted a committee under the chairmanship of Sri. V. T. Dehejia in 1968 to determine ‘the extent to which credit needs of industry and trade are likely to be inflated and how such trends could be checked’.

Recommendations:

1. The banks should finance the industry on the basis of the study of borrower’s total operations rather than on security basis alone.
2. The customer should be required to confine his dealings to one bank only.
3. The total credit requirements of the borrower should be segregated into ‘Hard core and Short term’ component. The hard-core component, which represents the minimum level of inventories where the industry was required to hold for maintaining the given level of production, should be put on a formal term loan basis and subject to repayment schedule.
III.9.2 Tandon Committee Report (1974) This committee was set up under the chairmanship of Sri. P. L. Tandon in July 1974. The terms of reference of the committee were to suggest the guidelines for commercial banks to follow up and supervise credit from the point of view of ensuring proper end use of funds.

Recommendations:

1. A proper financial discipline has to be observed by the borrower. He should supply to the banker information about his operational plans well in advance. The banker must carry out a realistic appraisal of such plans.

2. The banker should know the end use of bank credit i.e., it is used only for the purpose for which it is made available.

3. The lending norms have been suggested under three alternatives.
   a) The borrower will have to contribute a minimum of 25 per cent of the Working Capital gap from long-term funds i.e. owned funds and term borrowings. This will give the current ratio of 1.71:1.
   b) A minimum of 25 per cent of the total Current Assets that will give the current ratio of 1.33:1 is to be provided by the borrower. Those who are in the category two should move towards category three and shall not fall into category one.
   c) The borrower’s contribution from long-term funds will be to the extent of the entire core Current Assets and a minimum of 25 per cent of the balance Current Assets should be provided by them so that the current ratio can be 1:1, which is an ideal one. The term core Current Assets refers to the absolute minimum level of investment in all Current Assets, which is required at all times to carry out minimum level of business activities.

III.9.3 Chore Committee Report (1979) This committee was appointed under the chairmanship of Sri. K.B. Chore to review the working of cash credit system in recent years with a particular reference to the gap between sanctioned limits and the extent of their utilization and to suggest alternative types of credit facilities, which should ensure greater credit discipline.
Recommendations

- The banks should obtain quarterly statements in the prescribed format from all the borrowers showing Working Capital credit limits of Rs.50 lakh and above.
- The banks should undertake a periodical review of limits of Rs.10 lakh and above.
- The banks should not bifurcate cash credit accounts into demand loan and cash credit components.
- If a borrower does not submit the quarterly returns in time the banks may charge penal interest of one per cent on the total amount outstanding for the period of default.
- Banks should discourage sanction of temporary limits by charging additional percentage interest over the normal rate on these limits.
- The bank should fix separate credit limits for peak level and non-peak level, wherever possible.
- Banks should take steps to convert cash credit limits into bill limits for financing sales. (RBI Report).

III.9.4 Marathe Committee Report (1982) This committee was appointed under the chairmanship of Shri. Marathe to review the working of credit authorization scheme and suggest measures for giving meaningful directions to the credit management functions of the RBI.

Recommendations

1. The third method of lending as suggested by the Tandon Committee has to be dropped. In future the banks would provide credit for Working Capital according to the second method of lending.

2. A fast track system should be introduced to improve the quality of credit appraisal in banks. The banks can realize without prior approval of the RBI for 50 per cent of the additional credit required by the borrowers after satisfying the following conditions:
a. The estimates or projections with regard to production, sales, chargeable as Current Assets, other Current Assets, Current Liabilities other than bank borrowings and net Working Capital are reasonable in terms of the past trends and assumptions regarding most likely trends during the future projected period.
b. The classification of assets and liabilities as current and non-current is in conformity with the guidelines issued by the RBI.
c. The projected current ratio is not below 1.33: 1.
d. It is to be ensured that the borrower submits quarterly information and operating statements for the past six months within the prescribed time and undertakes to do the same in future also.
e. The borrower undertakes to submit to the bank his annual accounts regularly and promptly. Further, the bankers are required to review the borrower’s facilities at least once in a year even if the borrower does not need enhancement in credit facilities (RBI Report).

III.9.5 Chakravarty Committee Report (1985) This committee was appointed under the chairmanship of Shri. Sukhamoy Chakravarty to review the working of the monetary system of India in 1985.

Recommendations

1. Penal interest for delayed payments: The government must insist that all public sector units, large private sector units and government departments must be included with penal interest clause in contracts for the payments delayed beyond a specified period. The penal interest may be fixed at two per cent higher than the minimum lending rate of the supplier’s bank.

2. Classification of credit limit under three different heads are:
   - Cash credit I – to include supplier to government.
   - Cash credit II – to cover special circumstances.
   - Normal working limit – to cover the balance credit facilities (RBI Report)

III.9.6 Kannan Committee Report (1997) The Indian Banks Association (IBA) constituted a committee headed by Sri. K. Kannan to examine all the aspects of Working Capital finance including assessment of maximum permissible bank finance (MPBF).
Recommendations:

1. The arithmetical rigidities imposed by Tandon Committee and reinforced in the Chore Committee in the form of MPBF computation which has so far been in practice should be scrapped.

2. Freedom is given for each bank with regard to creating its own system of Working Capital finance for a faster credit delivery so as to serve various borrowers more effectively.

3. The Line of Credit System (LCS) as practiced in many advanced countries should replace the existing system of assessment/fixation of sub limits within total Working Capital requirements.

4. To shift emphasis from Liquidity Lending (Security Based Lending) to the cash Deficit Based Lending called Desirable Bank Finance (DBF).

These recommendations were favourably considered and implemented by the RBI in its Working Capital financing (Gupta K. Sasi and Sharma R.K.).

III.10 Optimal Level of Working Capital Investment

The Working Capital policy of a concern plays a prominent role in maximizing the shareholders wealth, even though Working Capital is also an investment made by the shareholders. To achieve this goal a sound policy of Working Capital Requirement (WCR) is essential. The policy determination is not an easy one, as it is a function of such factors including the variability of sales and Cash flows and the degree of operating and financial leverage employed by the firm. The firm need not be concerned about the level of Current Assets but has to determine the properties of short and long-term debt to be used in financing the Current Assets. These Current Assets financing decision also involves trade-off between profitability and risk. The requirement of Working Capital is vibrant, based on each firm’s characteristics; the exact determination of an optimum level is not easy.

Firms may have an optimum level of Working Capital that maximizes their value. Large inventory and a generous trade credit policy lead to high sales. Larger inventory reduces the risk of stock - out. Trade credit may increase sales because it allows customers to assess product and quality before paying. Another component of
Working Capital is it is accounts payable. Delaying payments to suppliers allows a firm to assess the quality of bought products, and can be an inexpensive and flexible source of financing the firm. On the other hand, late payment of invoices can be very costly if the firm is offered a discount for early payment (Srinivasan M.P. and Sathivel Murugan)

III.11 Methods of Working Capital (WC) Estimation

No business can be successfully run without an adequate amount of Working Capital. An estimate of Working Capital Requirement should be made in advance, in order to procure adequate Working Capital and thereby avoid shortage of it. A large number of factors have to be considered in estimation, viz., cost of material and operating cycle. The following criteria can be adopted in its estimation.

a) Working Capital as a percentage of net sales.

b) Working Capital as a percentage of total assets or fixed assets.

c) Working Capital estimation based on operating cycle.

d) Working Capital estimation based on Regression Analysis.

III.11.1 Working Capital as a percentage of Net Sales

This method is based on the fact that the Working Capital for any business is directly related and linked to sale volume of the business. The assumption here is that the higher the sales level; the greater would be the need for Working Capital. As such the Working Capital is solely dependent on sales forecast, which is expressed as a percentage of expected sales for a particular period. The steps involved in the estimation of Working Capital are: an estimate of total Current Assets as percentage of estimated net sales; an estimate of Current Liabilities as percentage of estimated net sales. The difference between the two represents the Net Working Capital under this method.

III.11.2 Working Capital as a percentage of total assets or fixed assets

Under this method, estimation of Working Capital is based on the fact that the total assets of the firm consists of fixed assets and Current Assets. A relationship between total Current Assets and total fixed assets or total assets of the firm is established on the basis of past experience. The total Current Assets represents Gross
Working Capital or Net Working Capital, which is Current Assets minus Current Liabilities. The estimation of Working Capital is also determined as a percentage of fixed assets, even though fixed assets determination is a capital budgeting decision. But the efficient and optimal way of using the fixed assets solely depends upon the availability of Working Capital, which in turn makes the Working Capital Requirement resorting to a percentage of total fixed assets.

III.11.3 Working Capital estimation based on operating cycle

Under this method the Working Capital is estimated on the basis of operating cycle as the length varies from one industry to another. The components used for calculation of the operating cycle are Current Assets and Current Liabilities. Current Assets here means cash and bank balance, inventory and receivables. Current Liabilities represents creditors for purchases and expenses.

III.11.4 Working Capital estimation based on Regression Analysis

A statistical technique can also be used for estimating Working Capital R. The Working Capital estimation is made after establishing the average relationship between sales and Working Capital and its various components in the past years. The relationship between sales (X) and Working Capital (Y) is given by equation:

\[ Y = a + bx \]

The value of ‘a’ and ‘b’ can be obtained by the method of simultaneous linear equations which are given below.

\[ \Sigma y = na + b\Sigma x \]
\[ \Sigma xy = ax + b\Sigma x^2 \]

Where,
\[ a = \text{fixed component} \]
\[ b = \text{variable component} \]
\[ x = \text{sales} \]
\[ y = \text{inventory} \]
\[ n = \text{number of observations.} \]

(Srinivasan N.P. and Sakthivel Murugan).
III.12 Impact of Inflation on Working Capital Requirement

When the inflation rate is high, it will have its direct impact on the requirement of Working Capital as explained below:

- Inflation will figure at a higher level even when there is no increase in the quantity of sales. The higher sales means the higher the levels of balances in receivables.
- Inflation will result in the increase of raw material prices and hike in the payment for expenses and as a result, increase in balances of trade creditors and creditors for expenses.
- Increase in valuation of closing stocks results in showing higher profits but without realizing it into cash, causing the firm to pay higher taxes, dividend and bonus. This will lead the firm to serious problems of fund shortage to meet its short-term obligations.
- Increase in requirement in Current Assets means the increase in requirements of Working Capital without corresponding increase in sales or profitability of the business firm.
- Considering the above mentioned factors, the finance manager should be careful about the impact of inflation in the assessment of Working Capital Requirement and its management.

Zero Level Working Capital (ZLWC)

Zero Level Working Capital is one of the latest trends of Working Capital Management, which is practiced by modern corporate firms. The modern corporate firms are said to have Zero Level Working Capital when the Current Assets are equal to Current Liabilities. This avoids maintaining excess investment in Current Assets and the business firm is able to meet its Current Liabilities. The firm also saves opportunity cost in excess investment in Current Assets and as bank cash credit limits are linked to the inventory levels; interest costs are also saved. There would be a self-imposed financial discipline on the business organization to manage their activity within their Current Assets and Current Liabilities, which avoids tendency of over borrowing.
Zero Level Working Capital ensures a smooth and uninterrupted Working Capital Cycle (WCC), which would help the finance manager to improve the quality of the Current Assets at times to keep them 100 per cent realizable. There would be constant displacement in Current Liabilities and the possibility of having overdue may diminish. The tendency to postpone payments towards Current Liabilities has to be curbed and Working Capital should always be the maintained at zero level. Zero Level Working Capital would create a time balancing act in financial management and would bring success in the financial health of the business organization (Srinivasan N.P. and Sathivel Murugan)

III.13 Working Capital Management Efficiency (WCME)

To measure Working Capital Management Efficiency, there are major indices viz., Performance Index, Utilization Index and Efficiency Index are used.

III.13.1 Performance Index (PI)

Performance Index of Working Capital Management represents average Performance Index of the various Current Assets. A company may be said to have managed its Working Capital efficiently if the proportionate rise in sales is more than the proportionate rise in Current Assets during a particular period (Santanu Kr.Ghosh and Santi Gopal Maji).

\[
\text{Where } I_x = \text{sales index defined as: } \frac{S_t}{S_{t-1}}
\]

\[\text{Wi = individual group of Current Assets.}\]
\[\text{N = number of Current Assets group and } \]
\[i = 1,2,3,\ldots,N\]

III.13.2 Utilization Index (UI)

While Performance Index represents the average overall performance in managing the components of Current Assets, Utilization Index indicates ability of the company for the utilization of its Current Assets as a whole for the purpose of
generating sales. If an increase in total Current Assets is coupled with more than a proportionate rise in sales, the degree of utilization of these assets with respect to sales is said to have been improved and vice versa. This ultimately reflects in the operating cycle of the firm. This can be shortened by means of increasing the degree of utilization. Thus, a value of Utilization Index >1 is desired. (Santanu Kr. Ghosh and Santi Gopal Maji).

III.13.3 Efficiency Index (EI)

Efficiency Index is a measure of performance, which reflects the combined effect of both the Performance Index and Utilization Index i.e., this is the product of the Performance Index and Utilization Index and measures ultimately the efficiency of the Working Capital Management of a firm. Hence, the values of Utilization Index >1 is desirable. Efficiency Index of Working Capital Management (EIWCM) can be calculated by multiplying The Overall Performance Index of Working Capital Management with the Working Capital Utilization Index. Thus Efficacies Index of Working Capital Management = PI Working Capital Management x UI Working Capital Management. (Santanu Kr. Ghosh and Santi Gopal Maji).

III.13.4 Profitability

Profit is the difference between revenue and expenses. The profit and loss account (P & L A/c) or income and expenditure statement shows the profitability of the firm by giving details about revenue and expenses, during a period of time and measures its profitability. Some companies calculate profit before depreciation, interest and taxes as their gross profit. The difference between the revenue (sales value) and cost of goods sold is called the gross profit. When all the other expenses are deducted (including interest and taxes form gross profit), the profit after taxes (PAT) or net profit (NP) is obtained.

Operating profit is the difference between gross profit and operating expenses consisting of general, administrative, selling expenses and depreciation. It is also known as profit or earnings before interest and taxes (EBIT).
III.14 Incentives in Financing Working Capital to Textile Industry

The textile and clothing sector is the largest employer after agriculture and its importance in India’s economy is recognized for its contribution to industrial production and export earnings. In order to enable Indian textile industry to compete in the global market, the government of India (GOI) have set up a ‘reconstruction fund’ with the objective of reducing the cost of capital of existing textile units in the organized sector. This effort will bring down the ultimate rate of interest to borrowers to around 7-8 per cent. The ‘Technology Upgradation Fund Scheme (TUFS)’ presently operated by GOI through Industrial Development Bank of India (IDBI) extends interest subsidy on new loans for modernization/technology upgradation in the textile industry. The aim of the reconstruction fund will be to reconstruct the industry’s existing high cost rupee loans tied up in the past. It is proposed that all existing term loans, excess drawing of Working Capital and unpaid interest (which would be converted into term loans) would be eligible to be converted under the fund. As a part of restructuring exercise, FIs/Banks would reduce the rate of interest on their existing term loans to 14 per cent p. a. (if the existing rates are lower, they would be maintained at that level). The rate of interest on Working Capital would be brought down to Prime Lending Rate (PLR). An incentive of maximum 6 per cent would be extended on the rate of interest leading to final interest cost to the textile units on term borrowings at 7-8 per cent p. a. while the textile units would pay interest at the rate of 7-8 per cent, interest incidence of upto 6 per cent would be compensated to FIs/Banks out of the proposed fund. The loans converted under TUFS and FC loans would not be eligible under the fund.

A Textile Reconstruction Fund (TRF) would be constituted. The fund size would be in the range of Rs. 4000 – 5000 crore spread over a period of 7-8 years. The institutional term loan/Working Capital TL to eligible units will be so restructured that such repayment is tailored to suit project cash flows within stipulations.