

Chapter

10

Working Capital

INTRODUCTION

Working capital management is also one of the important parts of the financial management. It is concerned with short-term finance of the business concern which is a closely related trade between profitability and liquidity. Efficient working capital management leads to improve the operating performance of the business concern and it helps to meet the short-term liquidity. Hence, study of working capital management is not only an important part of financial management but also are overall management of the business concern.

Working capital is described as the capital which is not fixed but the more common uses of the working capital is to consider it as the difference between the book value of current assets and current liabilities.

This chapter deals with the following important aspects of the working capital management.

- Meaning of Working Capital
- Concept of Working Capital
- Types of Working Capital
- Needs of Working Capital
- Factors determining Working Capital
- Computation of Working Capital
- Sources of Working Capital
- Working Capital Management Policy
- Working Capital and Banking Committee

MEANING OF WORKING CAPITAL

Capital of the concern may be divided into two major headings.

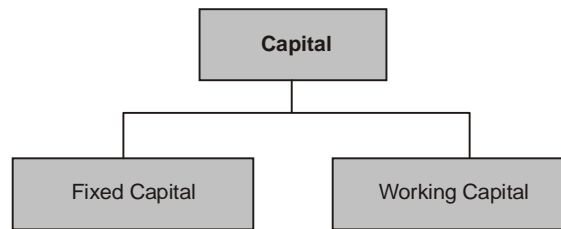


Fig. 10.1 Capital of the Business

Fixed capital means that capital, which is used for long-term investment of the business concern. For example, purchase of permanent assets. Normally it consists of non-recurring in nature.

Working Capital is another part of the capital which is needed for meeting day to day requirement of the business concern. For example, payment to creditors, salary paid to workers, purchase of raw materials etc., normally it consists of recurring in nature. It can be easily converted into cash. Hence, it is also known as short-term capital.

Definitions

According to the definition of **Mead, Baker and Malott**, “Working Capital means Current Assets”.

According to the definition of **J.S.Mill**, “The sum of the current asset is the working capital of a business”.

According to the definition of **Weston and Brigham**, “Working Capital refers to a firm’s investment in short-term assets, cash, short-term securities, accounts receivables and inventories”.

According to the definition of **Bonneville**, “Any acquisition of funds which increases the current assets, increase working capital also for they are one and the same”.

According to the definition of **Shubin**, “Working Capital is the amount of funds necessary to cover the cost of operating the enterprises”.

According to the definition of **Genestenberg**, “Circulating capital means current assets of a company that are changed in the ordinary course of business from one form to another, for example, from cash to inventories, inventories to receivables, receivables to cash”.

CONCEPT OF WORKING CAPITAL

Working capital can be classified or understood with the help of the following two important concepts.

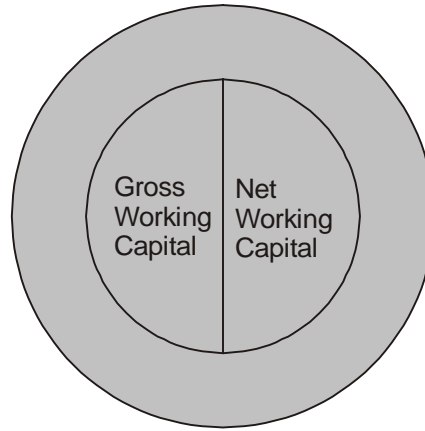


Fig. 10.2 Working Capital Concept

Gross Working Capital

Gross Working Capital is the general concept which determines the working capital concept. Thus, the gross working capital is the capital invested in total current assets of the business concern.

Gross Working Capital is simply called as the total current assets of the concern.

$$\boxed{\text{GWC} = \text{CA}}$$

Net Working Capital

Net Working Capital is the specific concept, which, considers both current assets and current liability of the concern.

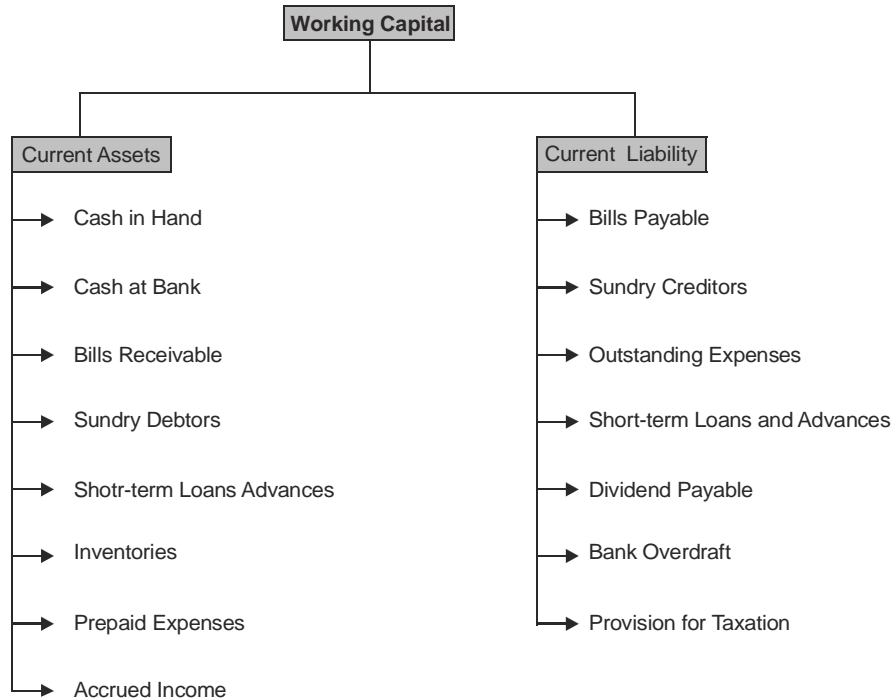
Net Working Capital is the excess of current assets over the current liability of the concern during a particular period.

If the current assets exceed the current liabilities it is said to be positive working capital; it is reverse, it is said to be Negative working capital.

$$\boxed{\text{NWC} = \text{CA} - \text{CL}}$$

Component of Working Capital

Working capital constitutes various current assets and current liabilities. This can be illustrated by the following chart.



TYPES OF WORKING CAPITAL

Working Capital may be classified into three important types on the basis of time.

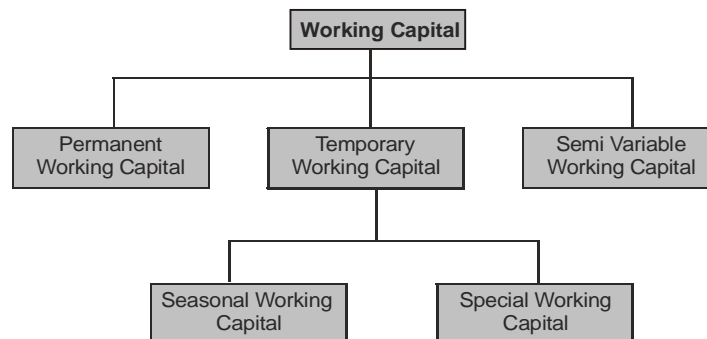


Fig. 10.3 Types of Working Capital

Permanent Working Capital

It is also known as Fixed Working Capital. It is the capital; the business concern must maintain certain amount of capital at minimum level at all times. The level of Permanent Capital depends upon the nature of the business. Permanent or Fixed Working Capital will not change irrespective of time or volume of sales.

NEEDS OF WORKING CAPITAL

Working Capital is an essential part of the business concern. Every business concern must maintain certain amount of Working Capital for their day-to-day requirements and meet the short-term obligations.

Working Capital is needed for the following purposes.

- 1. Purchase of raw materials and spares:** The basic part of manufacturing process is, raw materials. It should purchase frequently according to the needs of the business concern. Hence, every business concern maintains certain amount as Working Capital to purchase raw materials, components, spares, etc.
- 2. Payment of wages and salary:** The next part of Working Capital is payment of wages and salaries to labour and employees. Periodical payment facilities make employees perfect in their work. So a business concern maintains adequate the amount of working capital to make the payment of wages and salaries.
- 3. Day-to-day expenses:** A business concern has to meet various expenditures regarding the operations at daily basis like fuel, power, office expenses, etc.
- 4. Provide credit obligations:** A business concern responsible to provide credit facilities to the customer and meet the short-term obligation. So the concern must provide adequate Working Capital.

Working Capital Position/ Balanced Working Capital Position.

A business concern must maintain a sound Working Capital position to improve the efficiency of business operation and efficient management of finance. Both excessive and inadequate Working Capital lead to some problems in the business concern.

A. Causes and effects of excessive working capital.

- (i) Excessive Working Capital leads to unnecessary accumulation of raw materials, components and spares.
- (ii) Excessive Working Capital results in locking up of excess Working Capital.
- (iii) It creates bad debts, reduces collection periods, etc.
- (iv) It leads to reduce the profits.

B. Causes and effects of inadequate working capital

- (i) Inadequate working capital cannot buy its requirements in bulk order.
- (ii) It becomes difficult to implement operating plans and activate the firm's profit target.
- (iii) It becomes impossible to utilize efficiently the fixed assets.
- (iv) The rate of return on investments also falls with the shortage of Working Capital.
- (v) It reduces the overall operation of the business.

FACTORS DETERMINING WORKING CAPITAL REQUIREMENTS

Working Capital requirements depends upon various factors. There are no set of rules or formula to determine the Working Capital needs of the business concern. The following are the major factors which are determining the Working Capital requirements.

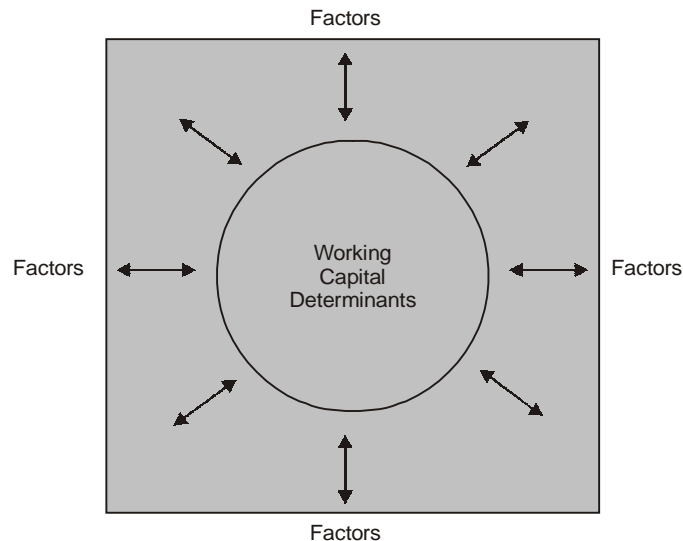


Fig. 10.7 Factors Determining Working Capital Requirements

1. **Nature of business:** Working Capital of the business concerns largely depend upon the nature of the business. If the business concerns follow rigid credit policy and sell goods only for cash, they can maintain lesser amount of Working Capital. A transport company maintains lesser amount of Working Capital while a construction company maintains larger amount of Working Capital.
2. **Production cycle:** Amount of Working Capital depends upon the length of the production cycle. If the production cycle length is small, they need to maintain lesser amount of Working Capital. If it is not, they have to maintain large amount of Working Capital.
3. **Business cycle:** Business fluctuations lead to cyclical and seasonal changes in the business condition and it will affect the requirements of the Working Capital. In the booming conditions, the Working Capital requirement is larger and in the depression condition, requirement of Working Capital will reduce. Better business results lead to increase the Working Capital requirements.
4. **Production policy:** It is also one of the factors which affects the Working Capital requirement of the business concern. If the company maintains the continues production policy, there is a need of regular Working Capital. If the production policy of the company depends upon the situation or conditions, Working Capital requirement will depend upon the conditions laid down by the company.

5. **Credit policy:** Credit policy of sales and purchase also affect the Working Capital requirements of the business concern. If the company maintains liberal credit policy to collect the payments from its customers, they have to maintain more Working Capital. If the company pays the dues on the last date it will create the cash maintenance in hand and bank.
6. **Growth and expansion:** During the growth and expansion of the business concern, Working Capital requirements are higher, because it needs some additional Working Capital and incurs some extra expenses at the initial stages.
7. **Availability of raw materials:** Major part of the Working Capital requirements are largely depend on the availability of raw materials. Raw materials are the basic components of the production process. If the raw material is not readily available, it leads to production stoppage. So, the concern must maintain adequate raw material; for that purpose, they have to spend some amount of Working Capital.
8. **Earning capacity:** If the business concern consists of high level of earning capacity, they can generate more Working Capital, with the help of cash from operation. Earning capacity is also one of the factors which determines the Working Capital requirements of the business concern.

COMPUTATION (OR ESTIMATION) OF WORKING CAPITAL

Working Capital requirement depends upon number of factors, which are already discussed in the previous parts. Now the discussion is on how to calculate the Working Capital needs of the business concern. It may also depend upon various factors but some of the common methods are used to estimate the Working Capital.

A. Estimation of components of working capital method

Working capital consists of various current assets and current liabilities. Hence, we have to estimate how much current assets as inventories required and how much cash required to meet the short term obligations.

Finance Manager first estimates the assets and required Working Capital for a particular period.

B. Percent of sales method

Based on the past experience between Sales and Working Capital requirements, a ratio can be determined for estimating the Working Capital requirement in future. It is the simple and tradition method to estimate the Working Capital requirements. Under this method, first we have to find out the sales to Working Capital ratio and based on that we have to estimate Working Capital requirements. This method also expresses the relationship between the Sales and Working Capital.

C. Operating cycle

Working Capital requirements depend upon the operating cycle of the business. The operating cycle begins with the acquisition of raw material and ends with the collection of receivables.

Operating cycle consists of the following important stages:

1. Raw Material and Storage Stage, (R)
2. Work in Process Stage, (W)
3. Finished Goods Stage, (F)
4. Debtors Collection Stage, (D)
5. Creditors Payment Period Stage. (C)

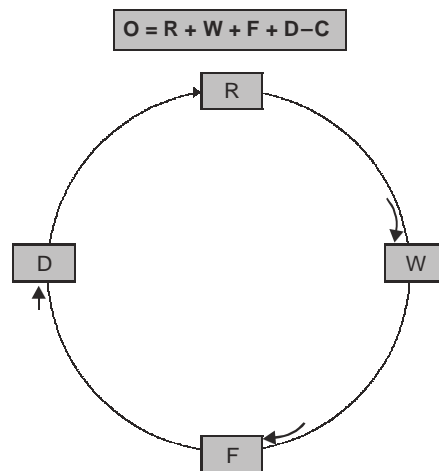


Fig. 10.8 Working Capital Cycle

Each component of the operating cycle can be calculated by the following formula:

$$R = \frac{\text{Average Stock of Raw Material}}{\text{Average Raw Material Consumption Per Day}}$$

$$W = \frac{\text{Average Work in Process Inventory}}{\text{Average Cost of Production Per Day}}$$

$$F = \frac{\text{Average Finished Stock Inventory}}{\text{Average Cost of Goods Sold Per Day}}$$

$$D = \frac{\text{Average Book Debts}}{\text{Average Credit Sales Per Day}}$$

$$C = \frac{\text{Average Trade Creditors}}{\text{Average Credit Purchase Per Day}}$$

Exercise 1

From the following information extracted from the books of a manufacturing company, compute the operating cycle in days and the amount of working capital required:

Period Covered	365 days
Average period of credit allowed by suppliers	16 days
Average Total of Debtors Outstanding	480 00
Raw Material Consumption	4,400 00
Total Production Cost	10,000 00
Total Cost of Sales	10,500 00
Sales for the year	16,000 00
Value of Average Stock maintained:	
Raw Material	320 00
Work-in-progress	350 00
Finished Goods	260 00

(ICWA Final, JUNE, 1986 adapted)

Solution

Computation of Operating Cycle

(i) *Raw material held in stock:*

$$\begin{aligned} \frac{\text{Average stocks of raw materials held}}{\text{Average consumption per day}} &= \frac{320}{4,400 \times 365} \\ &= \frac{320 \times 365}{4,400} = 275 \text{ days} \end{aligned}$$

$$\text{Less: Average credit period granted by Suppliers} \quad \frac{16 \text{ days}}{11 \text{ days}}$$

(ii) *Work-in-progress:*

$$\begin{aligned} \frac{\text{Average WIP maintained}}{\text{Average cost of production per day}} &= \frac{350}{10,000/365} \\ &= \frac{365 \times 320}{10,000} = 13 \text{ days} \end{aligned}$$

(iii) *Finished good held in stock:*

$$\begin{aligned} \frac{\text{Average finished goods maintained}}{\text{Average cost of goods sold per days}} &= \frac{260}{10,500/365} \\ &= \frac{260 \times 365}{10,500} = 9 \text{ days} \end{aligned}$$

(iv) *Credit period allowed to debtors:*

$$\begin{aligned} \frac{\text{Average total of outstanding debtors}}{\text{Average credit sales per day}} &= \frac{480}{16,000 \times 365} \\ &= \frac{365 \times 480}{16,000} = 11 \text{ days} \end{aligned}$$

Total operating cycle period: (i) + (ii) + (iii) + (iv) = 44 days

Number of Operating cycles in a year = $365/44$
= 8.30

$$\begin{aligned} \text{Amount of Working Capital required} &= \frac{\text{Total operating cost}}{\text{Number of operating cycles in a year}} \\ &= 10,500/8.3 \\ &= \text{Rs. 1,265} \end{aligned}$$

Alternatively, the amount of working capital could have also been calculated by estimating the components of working capital method, as shown below:

Value of Average Stock Maintained	320
Raw Material	350
Work-in-progress	<u>260</u>
Finished Goods	480
Average Debtors Outstanding:	<u>1,410</u>
Less: Average Creditors Outstanding	<u>145</u>
	1,265

WORKING CAPITAL MANAGEMENT POLICY

Working Capital Management formulates policies to manage and handle efficiently; for that purpose, the management established three policies based on the relationship between Sales and Working Capital.

1. Conservative Working Capital Policy.
2. Moderate Working Capital Policy.
3. Aggressive Working Capital Policy.

1. Conservative working capital policy: Conservative Working Capital Policy refers to minimize risk by maintaining a higher level of Working Capital. This type of Working Capital Policy is suitable to meet the seasonal fluctuation of the manufacturing operation.

2. **Moderate working capital policy:** Moderate Working Capital Policy refers to the moderate level of Working Capital maintenance according to moderate level of sales. It means one percent of change in Working Capital, that is Working Capital is equal to sales.
3. **Aggressive working capital policy:** Aggressive Working Capital Policy is one of the high risky and profitability policies which maintains low level of Aggressive Working Capital against the high level of sales, in the business concern during a particular period.

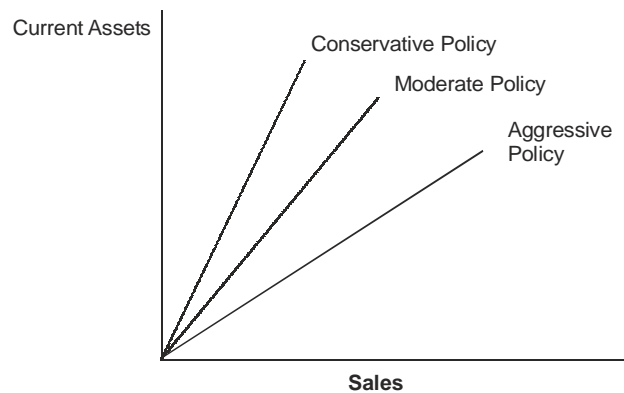


Fig. 10.9 Working Capital Policies

SOURCES OF WORKING CAPITAL

Working Capital requirement can be normalized from short-term and long-term sources. Each source will have both merits and limitations up to certain extent. Uses of Working Capital may be differing from stage to stage.

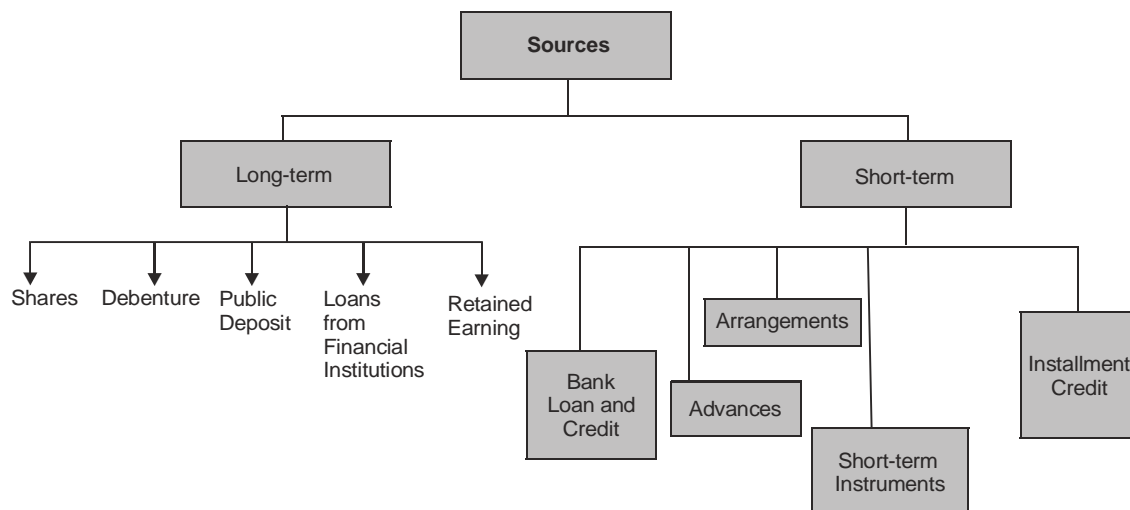


Fig. 10.10 Sources of Working Capital

The above sources are also classified into internal sources and external sources of working capital.

Internal sources such as:

- Retained Earnings
- Reserve and Surplus
- Depreciation Funds etc.

External sources such as:

- Debentures and Public Deposits
- Loans from Banks and Financial Institutions
- Advances and Credit
- Financial arrangements like Factoring, etc.

Determining the Finance Mix

Determining the finance mix is an important part of working capital management. Under this decision, the relationship among risk, return and liquidity are measured and also which type of financing is suitable to meet the Working Capital requirements of the business concern. There are three basic approaches for determining an appropriate Working Capital finance mix.

1. Hedging or matching approach
2. Conservative approach
3. Aggressive approach.

Hedging Approach

Hedging approach is also known as matching approach. Under this approach, the business concern can adopt a financial plan which matches the expected life of assets with the expected life of the sources of funds raised to finance assets.

When the business follows matching approach, long-term finance shall be used to fixed assets and permanent current assets and short-term financing to finance temporary or variable assets.

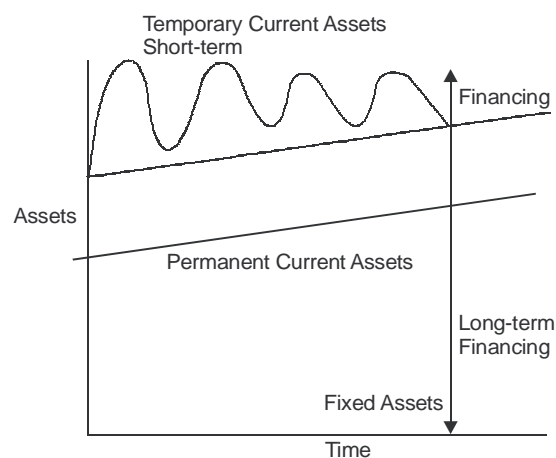


Fig. 10.11 Financing under Matching Approach

Conservative Approach

Under this approach, the entire estimated finance in current assets should be financed from long-term sources and the short-term sources should be used only for emergency requirements. This approach is called as “Low Profit – Low Risk” concept.

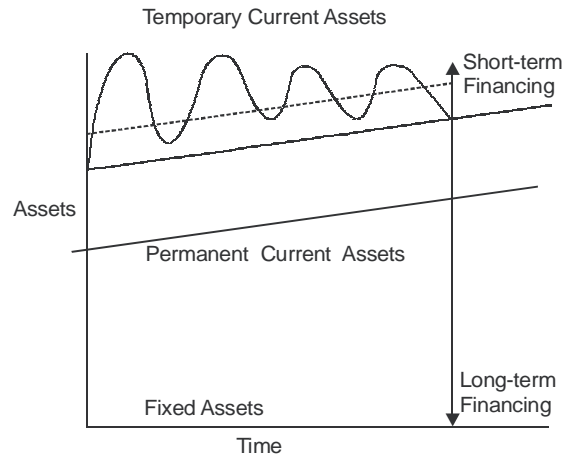


Fig. 10.12 Conservative Approach

Aggressive Approach

Under this approach, the entire estimated requirement of current assets should be financed from short-term sources and even a part of fixed assets financing be financed from short-term sources. This approach makes the finance mix more risky, less costly and more profitable.

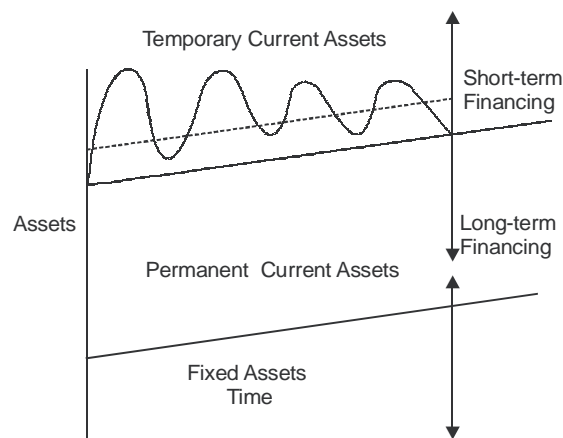


Fig. 10.13 Aggressive Approach

WORKING CAPITAL AND BANKING COMMITTEE

Banking finance to working capital requirements is a very important part of the business concern. Banks provide finance to business concerns to meet the requirements. To regulate and control bank finance, RBI constitute committees. These committees submit reports with findings and recommendations to formulate the finance policy of the banks. The major committee and the recommendations are as follows:

Committee	Year	Major Recommendations
DEHEJIA	1969	Appraisal of credit applications received by banks for granting loan.
TANDON	1975	Banks must carry out the realize appraisal for granting loan Fixation of norms for bank lending to industry.
CHORE	1980	No bifurcation of cash credit accounts separate limits for peak level and non peak level requirements.
MARATHE	1984	Second method of lending to industry, introduction of fast track concept.
KANNAN	1997	Regular conduct with the borrowers, periodical monitoring the credit disposition.

MODEL QUESTIONS

1. What is working capital? Define it.
2. Discuss the concept of working capital?
3. What are the types of working capital.
4. Explain the needs of working capital.
5. Critically explain the factors affecting the requirement of working capital.
6. Explain the working capital management policy.