

WORKING CAPITAL MANAGEMENT

**PREPARED BY
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CONCEPTS OF WORKING CAPITAL

Gross Working Capital Concept

Gross working capital is the capital invested in total current assets of the business concern.

Gross Working Capital = Current Asset

Net Working Capital Concept

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

Net Working Capital = Current Asset – Current Liabilities

KINDS OF WORKING CAPITAL

1. FIXED/PARMANENT 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.

2. VARIABLE/TEMPORARY WORKING CAPITAL

It is the amount of capital which is required to meet the Seasonal demands and some special purposes.

ADVERSE CONSEQUENCES OF INADEQUATE WORKING CAPITAL

1. Due to non-availability of funds, it may become difficult for the company to undertake profitable projects.
2. It may become difficult to execute plans.
3. Difficulty in meeting day to day commitments. This would further create operational inefficiency.
4. Due to insufficient working capital fixed asset may not be efficiently utilized.
5. Inadequacy of working capital may also prevent the company from availing attractive credit facilities.

DANGERS OF EXCESSIVE WORKING CAPITAL

1. When there is a redundant working capital, it may lead to unnecessary purchasing and accumulation of inventories causing more chances of theft, waste and losses.
2. Excessive Working Capital means idle funds which earn no profits for the business and hence the business cannot earn a proper rate of return on its investments.
3. Increased bad debts due to defective credit policy.
4. Leads to managerial inefficiency.
5. It may result into overall inefficiency in the organisation.

Factors determining the working capital requirement of a firm

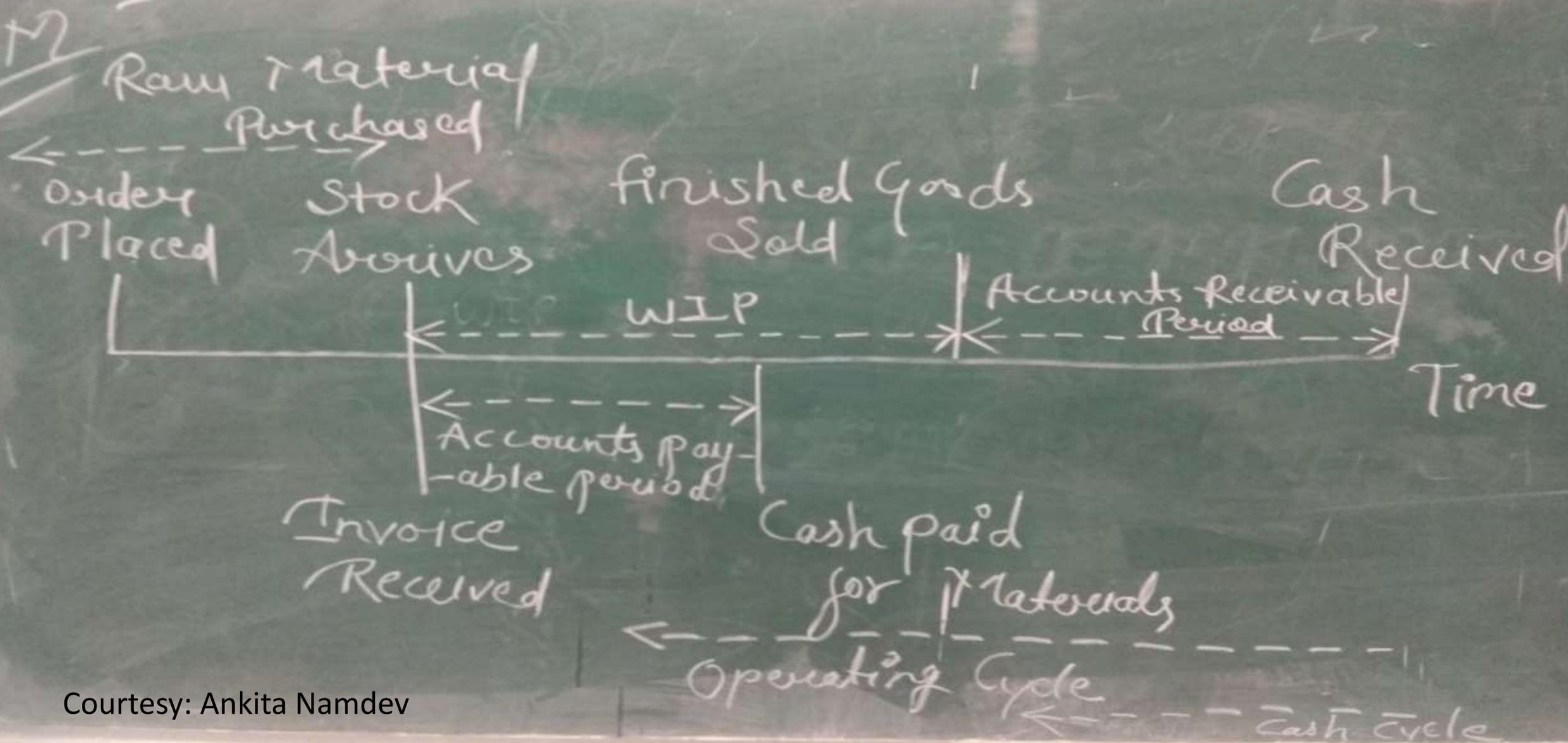
- 1. Nature of business:** A transport company maintains lesser amount of Working Capital while a construction company maintains larger amount of Working Capital.
- 2. Production cycle:** If the production cycle length is small, they need to maintain lesser amount of Working Capital. If it is not, they have to maintain large amount of Working Capital.
- 3. Business cycle:** 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:** If the company maintains the continues production policy, there is a need of regular Working Capital.

- 5. Credit policy:** 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:** 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.

OPERATING CYCLE CONCEPT

The time period between purchase of inventory and conversion into cash is known as operating cycle.

$$\begin{aligned} \text{Operating Cycle} = & \text{Material Storage period} \\ & + \text{Production/Conversion Period} \\ & + \text{Finished Goods Holding Period} \\ & + \text{Average Collection Period} \\ & - \text{Average Payment Period} \end{aligned}$$



Courtesy: Ankita Namdev

Operating cycle method of forecasting working capital

1. Estimation of total operating expenses in the year.
All material, labour and overheads
2. Number of operating cycle in the year
Dividing 365 days by duration of one operating cycle.

$$1. \text{ Material Storage Period (days)} = \frac{\textit{Average Stock of Raw Material}}{\textit{Daily Average Consumption}}$$

$$\textit{Average Stock of Raw Material} = \frac{\textit{Opening Stock} + \textit{Closing Stock}}{2}$$

$$\textit{Daily Average Consumption} = \frac{\textit{Consumption for the year}}{365}$$

$$2. \text{ Conversion Period (days)} = \frac{\text{Average stock of semi-finished goods}}{\text{Average daily factory cost}}$$

$$\text{Average stock of semi-finished goods} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$$

$$\text{Average daily factory cost} = \frac{\text{Cost for the year}}{365}$$

Note: Conversion Period is Production Period

$$3. \text{ Finished Goods Storage Period (days)} = \frac{\textit{Average stock of finished goods}}{\textit{average daily cost of sales}}$$

$$\textit{Average stock of finished goods} = \frac{\textit{Opening Stock} + \textit{Closing Stock}}{2}$$

$$\textit{Average daily cost of sales} = \frac{\textit{Average daily for the year}}{365}$$

4. Average Collection Period (days)

$$= \frac{\textit{Average debtors/BR}}{\textit{Net credit sales per day}}$$

Average Debtors

$$= \frac{\textit{Opening Debtors+Closing Debtors}}{2}$$

Net Credit Sales per day

$$= \frac{\textit{Total credit sales for the year}}{365}$$

5. Average Payment Period

$$= \frac{\textit{Average Creditors/BP}}{\textit{Net credit purchase per day}}$$

Average Creditors`

$$= \frac{\textit{Opening Creditors + Closing credits}}{2}$$

Net Credit Purchase per day

$$= \frac{\textit{Total credit purchase for the year}}{365}$$

Operating Cycle = Material Storage period+ Production/Conversion Period+ Finished Goods Holding Period+ Average Collection Period- Average Payment Period

6. No. of Operating Cycle

$$= \frac{365}{\textit{Duration of one operating cycle}}$$

7. Working Capital

$$= \frac{\textit{Total Operating Expenses}}{\textit{Number of Operating Cycles}}$$

Example 1

The following are the data of Z Ltd. taken from the accounting records :

	₹
Average Stock of raw materials during the year	1,80,000
Average Stock of works-in-progress during the year	1,00,000
Average Stock of finished goods during the year	54,000
Average Balance of debtors	1,50,000
Average Balance of creditors	1,20,000
Average Daily sales	2,000
Average Daily cost of finished goods sold	1,800
Average Daily consumptions of raw materials	1,200

Average period of credit available from the suppliers is 100 days.

Based on the above data, state :

- (a) Average period of raw materials holding in stores;
- (b) Credit period available to customers;
- (c) Average period for which finished goods stay in godowns;
- (d) Average period of conversion raw materials into finished goods;
- (e) Working Capital Cycle (in days).

Solution

- Material Storage Period (days) = $\frac{\textit{Average Stock of Raw Material}}{\textit{Daily Average Consumption}}$
- Average Collection Period (days) = $\frac{\textit{Average debtors/BR}}{\textit{Net credit sales per day}}$
- Finished Goods Storage Period (days) = $\frac{\textit{Average stock of finished goods}}{\textit{average daily cost of sales}}$
- Conversion Period (days) = $\frac{\textit{Average stock of semi-finished goods}}{\textit{Average daily factory cost}}$
- Payment period = 100 days

Using operating cycle method, calculate Working Capital required by X Ltd. from the information given below :

- (i) Estimated Sales 20,000 units p.a. @ ₹ 5 per unit.
- (ii) Production and Sales quantities coincide and will be carried on evenly throughout the year.
- (iii) Production Cost is estimated as under :
 - Materials ₹ 2.50 per unit
 - Labour ₹ 1.00 per unit
 - Overheads ₹ 17,500
- (iv) Customers are given 60 days' credit and 50 days' credit availed from suppliers.
- (v) 40 days' supply of raw materials and 15 days' supply of finished goods are kept in store.
- (vi) Production cycle is 20 days and all the materials are issued at the commencement of each production cycle.
- (vii) $\frac{1}{3}$ of average other Working Capital is kept as cash balance for contingencies.

Solution

(A) *Total Operating Expenses for the year :*

Raw Materials : 20,000 units @ ₹ 2.50	₹ 50,000
Labour : 20,000 units @ ₹ 1	20,000
Overheads	17,500
	<u>87,500</u>

(B) *Period of Operating Cycle :*

	<i>Days</i>
Materials Storage period	40
Finished Goods Storage period	15
Production Cycle period	20
Average Collection Period	60
	<u>135</u>
<i>Less : Average Payment Period</i>	<u>50</u>
	<u>85</u>

(C) *No. of Operating Cycle in the year* = $\frac{365}{85} = 4.3$

(D) Working Capital $\left(\frac{87,500}{4.3} \right)$ ₹ 20,349

Add : Reserves for contingencies (1/3)

Total W. C. Required

₹ 6,783
27,132

SOURCES OF FINANCING WORKING CAPITAL

Long Term Sources

Owned Sources

Issue of Shares

Retained Earnings

Reserves

Sale of fixed assets

Borrowed Sources

Debentures

Long-term loans

Short-term sources

1. Trade Credit
2. Bank loans
3. Certificate of Deposit
4. Advance from customers

New Sources

1. Factoring
2. Convertible Debentures
3. Commercial Papers

STRATEGIES FOR FINANCING WORKING CAPITAL

CONSERVATIVE STRATEGY

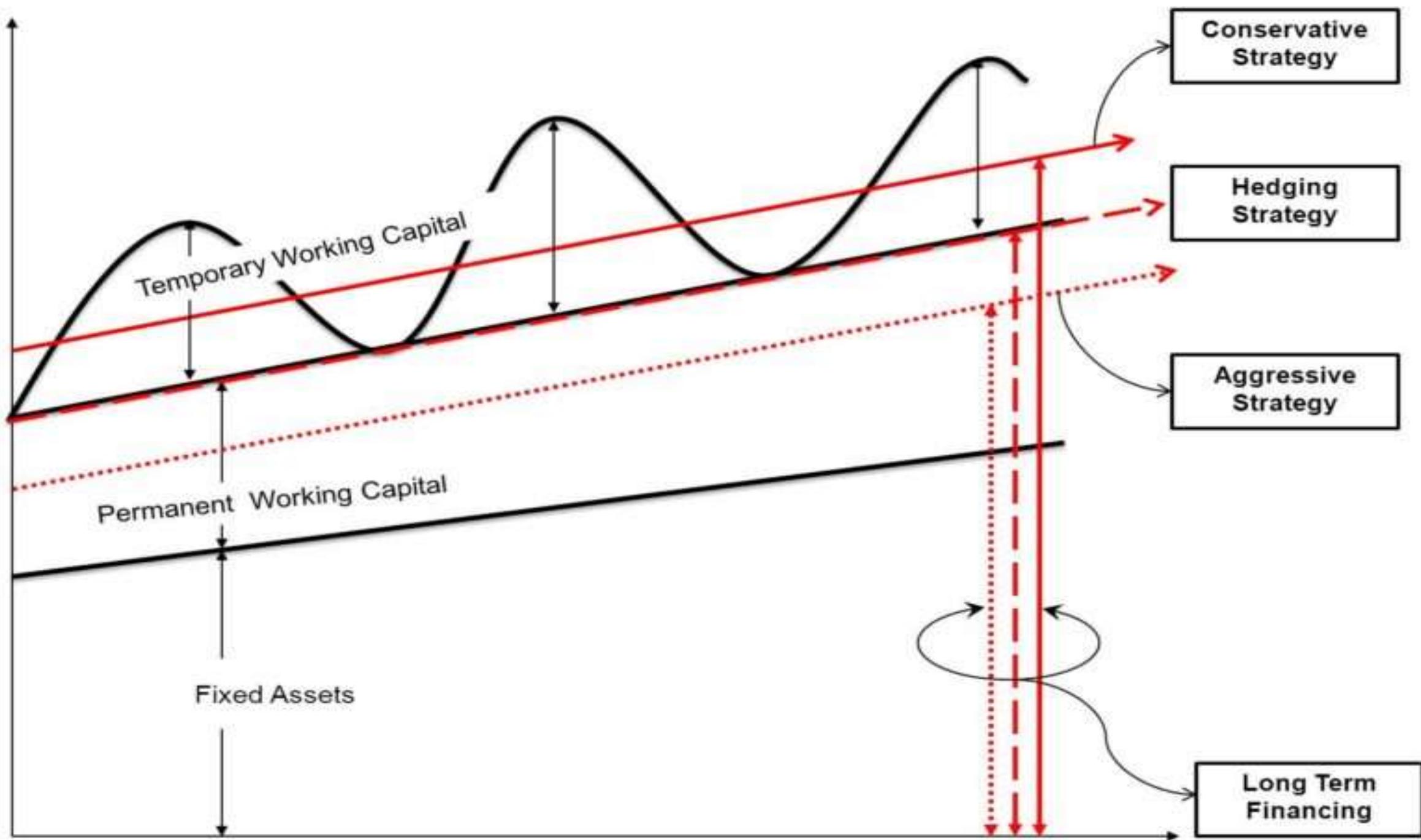
- In this strategy, apart from the fixed assets and permanent current assets, a part of temporary working capital is also financed by long-term financing sources.
- **Long Term Funds will Finance >> FA + PWC + Part of TWC**
Short Term Funds will Finance >> Remaining Part of TWC

AGGRESSIVE STRATEGY

- The complete focus of the strategy is in profitability. It is a high-risk high profitability strategy.
- In this strategy, the dearer funds i.e. long term funds are utilized only to finance fixed assets and a part of the permanent working capital.
- Complete temporary working capital and a part of permanent working capital also are financed by the short-term funds.
- **Long Term Funds will Finance >> FA + Part of PWC**
Short Term Funds will Finance >> Remaining Part of PWC + TWC

HEDGING (MATURITY MATCHING) STRATEGY

- This is a meticulous strategy of financing the working capital with moderate risk and profitability.
- Hedging strategy works on the cardinal principle of financing i.e. utilizing long-term sources for financing long-term assets i.e. fixed assets and a part of permanent working capital and temporary working capital are financed by short-term sources of finance.
- **Long Term Funds will Finance >> FA + PWC**
Short Term Funds will Finance >> TWC



**TONDON COMMITTEE
REPORT**



TONDON COMMITTEE REPORT 1975

RBI formed constituted a committee in July, 1974 under the chairmanship of Mr. Prakash Tondon. The committee was formed with an aim to formulate guidelines for bank credit. These are

1. To issue guidelines for banks for ensuring proper use of funds, improving the safety of credit system.
2. To suggest the type of operational data and other information that may be obtained by banks periodically from borrowers.
3. To make suggestions for prescribing inventory norms for different industries both in private and public sectors.
4. To suggest criteria regarding satisfactory capital structure and sound financial basis in relation to borrowings.
5. To make recommendations regarding sources of financing the minimum working capital requirement
6. To review and suggest modification in the existing system of financing working capital.

FINDING OF THE COMMITTEE

1. Borrowers decide as to how much to borrow. Bankers could not provide any credit plan because they don't have knowledge as how much they would lend.
2. Bank credit has been considered as first source of loan.
3. Bank credit has been granted on the basis of collateral rather than on the basis of business plans and operations.

RECOMMENDATIONS OF THE COMMITTEE:

Recommendations are based on 3 principles:

1. Borrowers has to maintain a strict financial discipline. The borrower has to furnish complete information of the business plan to the banker for getting loan.
2. The prime function of a bank as a lender is to maintain the borrowers current asset at an acceptable level
3. The banker should have knowledge about the end use of bank credit.

Major Recommendations

- 1. Norms for inventory and receivables:** Borrowers Should maintain a reasonable level of current asset, particularly inventory and receivables to ensure rational allocation of resources and to avoid unwanted financing of current asset.
 - a) The banker should finance only reasonable inventory based on production plan and should not finance any excessive inventory
 - b) Only those receivables should be financed which are in tune with borrower's firms.
- 2. Lending Norms:** the recommendation is related to lending by commercial banks to borrowers. The current asset to be financed by banks must be reasonable and based on norms. A part of current asset must be financed by long term funds and the banker is required to finance only the remaining part.
- 3. Style of Credit:** the committee recommended the decomposition of credit into two parts- fixed and fluctuating.
- 4. The information provided by bank** was required to be appropriately used by banks to follow up and supervise the use of credit.

5. Maximum Permissible Bank Finance: the committee suggested the following three methods of determining the level of working capital to be financed by bank borrowings:

First Method: The borrower has to finance 25% of the working capital gap through long –term sources. The remaining 75% will be financed from bank.

$$\text{Formula} = 0.75(\text{CA}-\text{CL})$$

Second Method: According to this method at least 25% of the current asset should be arranged through long term sources. The remaining gap will be provided by bank

$$\text{Formula} = (0.75\text{CA})-\text{CL}$$

Third Method: the borrower has to contribute the entire hard core current asset and a minimum of 25% of the balance of the current asset of the firm.

$$\text{Formula} = 0.75(\text{CA}-\text{CCA})-\text{CL}$$

Suppose projected Balance Sheet of X Ltd. containing only current assets and current liabilities is as under :

Current Liabilities

Creditors	100
Other Current Liabilities	<u>50</u>
	150
Bank borrowings	<u>200</u>
	<u><u>350</u></u>

Current Assets

Stock : Raw Materials	200
W.I.P.	20
Finished goods	90
Receivables	50
Other current assets	10
	<u><u>370</u></u>

of these 95 are core current assets

Maximum Permissible levels of bank finance as per three methods may be presented as under :

<i>First Method</i>		<i>Second Method</i>		<i>Third Method</i>	
Total Current Assets	370	Total Current Assets	370	Total Current Assets	370
Less : Current liabilities other than bank borrowings	<u>150</u>	Less : 25% from long-term sources	92	Less : Core current assets from long-term sources	<u>95</u>
Working Capital gap	<u>220</u>	Less : Current liabilities other than bank borrowings	150	Less : 25% of 275 from long-term sources	<u>69</u>
25% of 220 from long-term sources	55		128		<u>206</u>
Maximum Permissible borrowings (75%)	<u>165</u>	Working Capital gap	<u>220</u>	Less : Current liabilities other than bank borrowings	<u>150</u>
Excess borrowings	<u>35</u>	Maximum Permissible bank borrowings	128		<u>56</u>
		Excess borrowings	<u>72</u>	Working Capital gap	<u>220</u>
				Maximum Permissible Bank Borrowings	<u>56</u>
				Excess borrowings	<u>164</u>
Or $0.75 (370 - 150) = ₹ 165$		$(0.75 \times 370) - 150 = ₹ 127.50$		$0.75(370 - 95) - 150$	
		or ₹ 128		$= ₹ 56.25$ or ₹ 56	

Namaste beta.. hum hain
Modigliani and Miller



Franco Modigliani
(June 18, 1918 – September 25, 2003)



Merton Howard Miller
(May 16, 1923 – June 3, 2000)



TOH.. AAO KABHI HAVELI PE.

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Detailed explanations and fekology is expected from students

Source: S.P. Gupta