

WORKING CAPITAL CONCEPT

Definition of Working Capital:

1. The capital which is required to finance current assets is called working capital.
2. That is in operating daily business of the firm effectively, some resources are needed and the capital which are needed to finance, these resources is called working capital
3. “Working capital may be defined as all the short term assets used in daily operation”—John. J Harpton.
4. Short term assets of a firm means cash money, short-term securities, inventory, Bill receivable, note receivable, Debtors etc.
5. In operating daily business, fixed assets are also needed in addition to current assets.

Though some fixed assets help on the daily operation of a firm, these can't be told as working capital, because these can't be converted into cash in this current accounting period. So, the assets which can be converted into Raw Material from cash--R/M—Finished Goods—B/R—Cash and helps in operating daily business of the firm, is called working Capital.

Working capital is also called ‘Trading Capital’, Circulating capital/Short term capital /Short /Current Assets management.

Concepts of Working Capital:

There are two concepts of working capital. 1. Gross working capital. 2. Net Working capital.

1. **Gross Working Capital:** In fact, working capital means Gross Working Capital. It means the firm's investment in current assets. Current assets are the assets which be converted into cash within an accounting period or one year (normally).
2. **Net Working Capital:** Net working capital means the difference between current assets and current liabilities. Current liabilities means the liabilities which the firm has to pay within the one year (or actg period). e.g.—creditors(A/P, Purchase ledger Balance, Trade payable), outstanding expenses, Bills payable, Bank overdraft, etc. The result of net working capital may be Positive or also be a Negative.

If $CA > CL$ = Positive net working capital

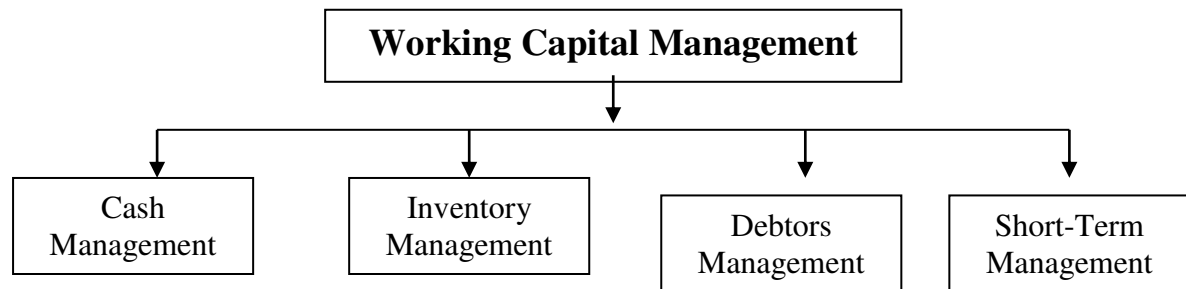
If $CA < CL$ = Negative working capital

“Every firm has to operate its business with the help of working capital.”

Difference between Gross working capital and Net Working Capital

<i>Gross Working Capital</i>	<i>Net Working Capital</i>
1..All Current Assets	1.Current Assets –Current Liabilities
2.How to Finance Current Assets	2.Appropriate amount of Current Assets to meet Current Liabilities
3.Zero(0) or Plus(+)	3.Zero(0), or Plus (+) or Negative(-)

Working Capital Management:



Classification of Working Capital:

Some portion of working capital is fixed natured and some portion fluctuates for some time. In the view point working capital classified in to 2 classes,

1. Fixed or permanent working capital
 2. Variable or temporary working capital
1. **Fixed or permanent working capital:** The fund, which is required to produce a certain amount of goods or services at a certain period of time, is called Fixed working capital. The minimum amount of cash money, A/R, which are kept to operate the business is called Fixed working capital.
 2. **Variable working capital:** When extra working capital is required then a addition to fixed working capital due to seasonal causes or increased production or sales, this working capital is variable working capital. So, the working capital which fluctuates with keeping the relation between production & Sales is variable working capital.

Sources of Working Capital:

The current assets which are used in running daily operation of a business is called working capital. Working Capital may be classified as Fixed working capital and Variable working capital. Both types of working capital help in running firm's daily operation. Fixed working capital should be financed from long-term sources & variable working capital from short term source. So variable from the following sources are as financed:

1. **Short term Bank Loan (STBC):**--It is a big source of w. cap. Usually firms finance through STBL to meet the need of variable WC and need in excess of FWC. Commercial banks give bank O/D, cash credit etc.
2. **Non Bank short term loan:** Relatives, Bankers, Govt. Institute are the non bank S.T. Loan
3. **Internal Source:** One of the main sources w. Cap for a firm in Internal sources. This is also called Self-financing.
4. **Long Term Sources (LTS):** Sometimes W. Cap is financed through LTS. Usually fixed working capital are share, debenture LT loan etc.
5. **Money Lenders:** When firms can't finance short-term need of w.cap from anywhere, they take loan form moneylenders.
6. **Trade Credit:** When firms purchase on credit & pay the money according to credit term, it is called Trade Credit. Normally Trade credit is used as a source of variable W. Cap.
7. **Selling out Excess of Fixed asset:** If any fixed asset is considered as extra than need, then that idle fixed asset is sold for working capital.

8. Other than the above sources, firms finances their working capital though paying debts in late (as much as possible) & Accrual etc.
9. Collect money/Receivable in the earliest time, pay as late as possible.

List of Current Assets and Current Liabilities:

Current Assets	Current Liabilities
Cash, Short-Term securities, Debtors (A/R, T/R, Book Debts/Good Debts/Sales Ledger Balance), Bill Receivable, Notes Receivable, Stock (Inventory—R/M, WIP, F/G), Prepaid expenses, etc.	Creditors (A/P, Purchase Ledger Balance, Trade Payable, Outstanding expenses, Bills Payable, Bank Overdraft, Etc.

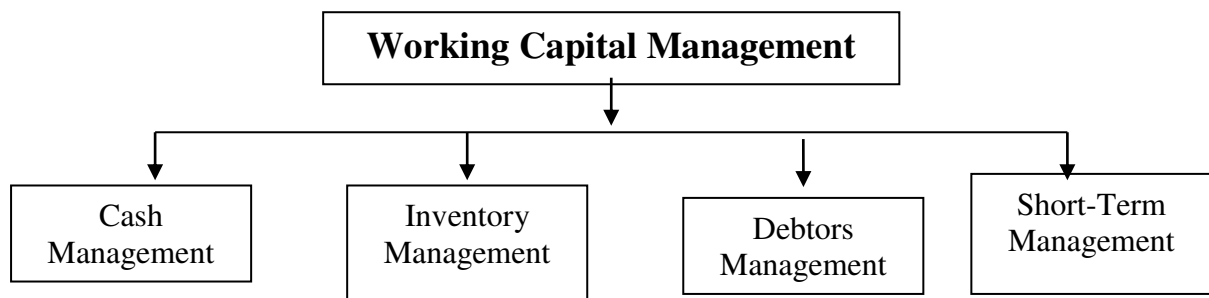
Four Components:

- a. Conversion of cash into inventory.
- b. Conversion of Inventory into Finished Goods.
- c. Conversion of Finished goods into account receivable
- d. Conversion of Account Receivable into cash.

Determinants of Working Capital:

- i. Nature of Business
- ii. Length of period of production
- iii. Terms of purchase and sales.
- iv. Ratio of sales to assets.
- v. Seasonal variations in Business
- vi. Facilities for converting working assets into cash.
- vii. Average stock required
- viii. Level of Taxes
- ix. Dividend Policy
- x. Price level changes.

Working Capital Management:



Disadvantage of Inadequate working capital

If a firm's level of working capital is very less or inadequate, then the firm has to face many problems like the following:

1. The business may be closed due to inadequate working capital
2. Fixed assets cannot be utilized properly, even firm may face problem in repair and maintenance
3. Firm may lose attractive cash discount given by sellers due to lack of working capital
4. Planning may not be implemented and the goal of profit is not achieved.
5. Growth of the firm is hampered; as a result, firm cannot take profitable project.
6. Liquidity is hampered due to inadequate capital
7. Firm's goodwill is reduced if the firm cannot pay its short-term liabilities.
8. Firm may be failure in dividend payment. As a result, dividend policy may be badly affected.
9. Firm's daily operation may be happened.

Disadvantage of Excessive Working Capital:

Excess working capital is not also desirable. The disadvantages of keeping excessive working capital are as follows:--

1. Inventory may be stocked unnecessarily and theft, spoilage etc increased () and profit reduced ().
2. Balance is not available between liquidity and profitability.
3. It indicates defective credit policy.

Trade-Off between Profitability and Risk

In evaluating a firm's net working capital, an important consideration is the trade off between profitability and risk.

The term risk is defined as the possibility that a firm will become technically insolvent so that it will not be able to meet its obligation when they become due for payment.

Net Working Capital, as measure of liquidity, is not only very useful for comparing the performance of different firms, but it is also quite useful for internal control.

In evaluating the profitability –risk trade off, there are three assumptions:-

1. We are dealing with manufacturing firm.
2. Current assets are less profitable than fixed assets.
3. Short-term are less expensive than long term funds.

Working Capital Cycle:

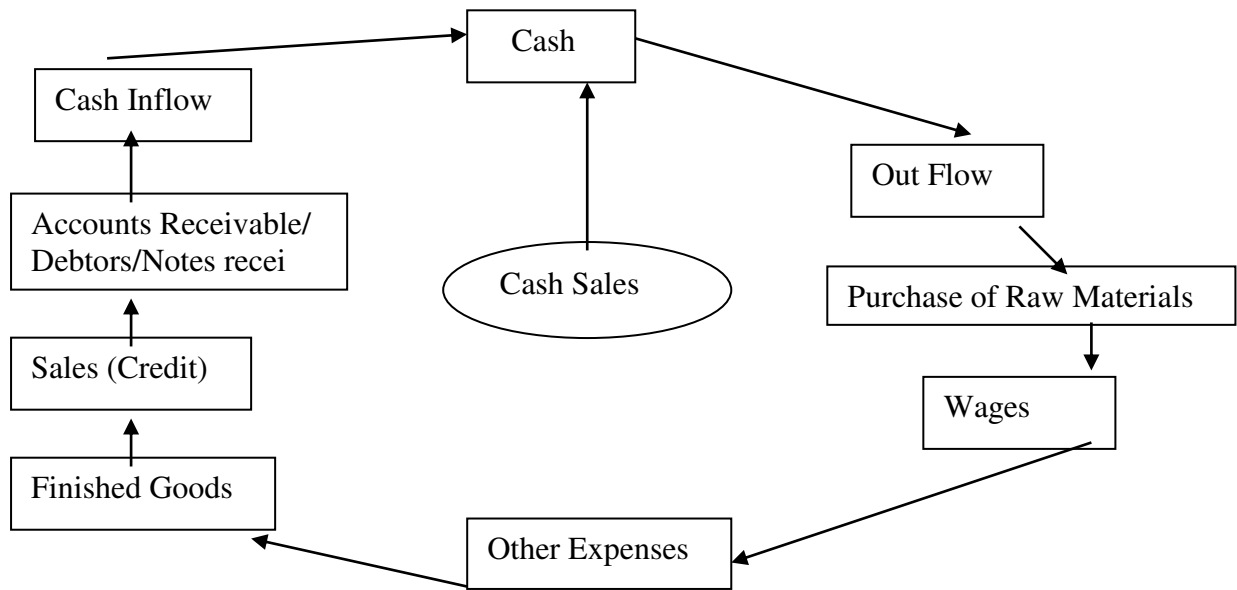


Fig: The Working Capital Cycle

Determination of Net Working Capital:

SL	Particulars	Amount Tk	Total Tk
	A. Current Assets:		
	1. Cash in Hand/at Bank	xxx	
	2. Raw Materials	xxx	
	3. Work-In-Progress:	xxx	
	i. Raw Materials	xxx	
	ii. Direct Labour	xxx	
	iii. Overhead	xxx	
	4. Finished Goods	xxx	
	5. Debtors	xxx	
	6. Prepaid Expenses	xxx	xxx
	7. Others	xxx	
	Total Current Assets (TCA)		xxx
	B. Current Liabilities:		
	1. Creditors	xxx	
	2. Accounts Payables	xxx	
	3. Arrear	xxx	
	4. Advance Income	xxx	xxx
	Total Current Liabilities (TCL)		xxx
	Net Working Capital (A-B)(TCA-TCL)		xxx

Working Capital Management Problems.

Problem No: 1

The board of Directors of XYZ Co requests to prepare statement showing the working capital management for a level of activity at 1,56,000 units of production, The following information is available for your calculation:

A.

Details	Per Unit (Tk)
Raw Materials	90
Direct Labour	40
Overhead	75
Total	205
Profit	60
Selling price	265

- B.
- i) Raw material are stock on average for 1 month
 - ii) Materials are in process WIP, which is 50%, completed on average for 4 weeks.
 - iii) Finished goods are in stock, on average, for 1 month.
 - iv) Time lag in payment from debtors is 2 months.
 - v) Credit allowed by Suppliers is 1 month.
 - vi) Average lag in payment of wages is 1.5 weeks.
 - vii) Average lag in payment of overhead is 1 month.

20% of the output is sold against cash. Cash is hand and in Bank is expected to be Tk 60,000. It is to be assumed that production is carried on evenly throughout the year, wages & overhead accrue similarly and a time period of 4 weeks is equivalent to a month.

Problem No :2

While preparing a project report on behalf of a client, you have to collect the following facts. Estimate the net working capital required for the project. Add 10% to your computed figure to allow for contingencies:

Estimated cost per unit of production: (Amount per unit)

Raw material	80	Tk
Direct Labour	30	Tk
Overhead (including depreciation Tk 5)	65	Tk
Total Cost	175	Tk

Additional Information:

Selling price	Tk. 200 per unit
Level of activity	1,04,000 units of production p.a.
Raw material in stock	Average 4 weeks
Work in progress (assume full unit of R/M required in the beginning of manufacturing; other conversion cost are 50%)-----	Average 2 weeks
Finished goods in stock	----- Average 4 weeks
Credit allowed to debtors	-----Average 8 weeks
Credit allowed to Suppliers	-----Average 4 weeks
Lag in payment of wages	-----Average 1.5 weeks
Cash at Bank (desired to be maintained)	----- Tk. 25,000

You may assume that the production is carried on evenly throughout the year (52 weeks) and wages/overheads accrue similarly. All sales are on a credit basis only.

Problem No: 3 From the following projection of ABC Co. for the next year, you are required to work out the working capital of the company:

Annual Sales	Tk 14,40,000
Cost of Production (Including depreciation Tk 1,20,000)	Tk 12,00,000
\Raw Materials Purchases	Tk 7,05,000
Monthly Expenses	Tk 25,000

Anticipated opening stock of Raw materials	Tk 1,40,000
Anticipated closing stock of Raw materials	Tk 1,25,000

Inventory Norms:

Raw Materials	---2 months
Work-In –Progress	---15 Days
Finished Goods	---1 Month

The firm enjoys a credit of 15 days on its purchases and allows one month's credit on its supplies. The company has received an advance of Tk 15,000 on sales orders. You may assume that production is carried on evenly throughout the year, and minimum cash balance desired to be maintained is Tk 10,000.

Problem No: 4

XYZ manufacturing co Ltd. sells its products on a gross profit on 20% of sales. The following information is extracted from its annual accounts for the current year ended 31st December:

Sales at 3 months credit (Debtors)	Tk 40,00,000
Raw Materials	Tk 12,00,000
Wages Paid (average time lag 15 days)	Tk 9,60,000
Manufacturing expenses paid (one moth in arrear)	Tk 12,00,000
Administration Expenses paid (one month in arrear)	Tk 4,80,000
Sales promotions expenses (Payable half yearly in advance)	Tk 2,00,000

The company enjoys one month's credit from the suppliers of raw materials and maintains a 2 months stock of raw-materials and one and half month's stock of finished goods. The cash balance is maintained at Tk 1.00,000 as a precautionary measure. Assuming a 10% margin, find out the working capital requirements of XYZ manufacturing co.

Problem No: 5 While preparing a project report on behalf of a client, you have to collect the following facts. Estimate the net working capital required for the project.

Estimated cost per unit of production: (Amount per unit)

Raw material	80	Tk
Direct Labour	40	Tk
Overhead (including depreciation Tk 5)	60	Tk
Total Cost	180	Tk

Additional Information:

Selling price	Tk. 210 per unit
Level of activity	1,05,000 units of production per annum.
Raw material in stock	-----Average 4 weeks
Work in progress	-----Average 2 weeks

Finished goods in stock	----- Average 4 weeks
Credit allowed to debtors	-----Average 8 weeks
Credit allowed to Suppliers	-----Average 4 weeks
Lag in payment of wages	-----Average 2 weeks
Cash at Bank (desired to be maintained)	----- Tk. 50,000

You may assume that the production is carried on evenly throughout the year (52 weeks) and wages/overheads accrue similarly. All sales are on a credit basis only.

Problem No: 6

The management of PQR Ltd. has called for a statement showing the working capital needed to finance a level of activity of 3,00,000 units of output for the year. The cost structure for the company’s product for the above mentioned activity level , is given below:

	Cost per unit
Raw Material	Tk 20
Direct Labour	Tk 5
Overheads	Tk 15
Total Costs	Tk 40
Profits	Tk 10
Selling Price	TK 50

Past trends indicate that the raw materials are held in stock on an average for 2 months, WIP 50% completed will approximate to half-a-months production.

Finished goods remain in the warehouse, on an average for a month

Suppliers of materials extend a month’s credit, 2 months credit is normally allowed to debtors and minimum cash balance o f Tk 25,000 is expected to be maintained.

The production pattern is assumed to be even during the year. Prepare the statement of Working Capital Management.

Problem No: 7

Azim Fashion Group of industry has an inventory conversion period of 60 Days, a receivables collection period of 36 Days and a payable deferral period of 24 Days.

Required:

- a). What is the length of the firm’s cash conversion cycle?
- b). If Azim Fashion annual sales are Tk 39,60,000 and all sales are on credit , what is the average balance in A/R?

Problem No 8:

Newtex Company is a leading UK producer of automobiles batteries. It turns out 1,500 batteries a day at cost of Tk 6 per battery for materials and labor. It takes the firm 22 days to convert raw materials into finished battery. It allows its customers 90 days in which to pay for the batteries and the firm generally pays its suppliers in 30 days. What is the length of Newtax co’s cash conversion cycle?

Some Rules and Formulations:

1. Raw Materials Inventory (In Amount/In Units)=

Budgeted Production x Cost of Raw Materials x Average Inventory Holding Period

12 Months/ 52 Weeks/365 Days

2. Work In Process=

Budgeted Production x Estimated WIP cost PU x Average Time span of WIP Inventory

(Excluding Dep) (Month/Days)

12 Months/ 52 Weeks/365 Days.

3. Finished Goods Inventory:=

Budgeted Production x Manufacturing cost per unit x Finished Goods holding periods
In units (Excluding Dep) (Months/Days)

12 Months/ 52 Weeks/365 Days

4. Debtors:=

Budgeted Credit sales x Cost of Sales per unit x Average debtors collection period
in Units (Excluding Dep) (months/Days)

12 Months/ 52 Weeks/365 Days.

5. Trade Creditors:=

Budgeted Yearly Production X Raw Materials Requirement X Credit period allowed
(In Units) (per units) by
creditors(Month/Days)

12 Months/ 52 Weeks/365 Days

6. Direct Wages:=

Budgeted yearly Production x Direct labor cost per unit x Average time-lag in payments

(Months/Day)

of wages

12 Months/ 52 Weeks/365 Days.

7. Overhead (Other Than Depreciation):=

Budgeted yearly production x Overhead Cost per unit x Average time-lag in payments
of

Overhead (Months/Days)

12 Months/ 52 Weeks/365 Days.