
□ Working Capital: Definition

Working Capital refers to the capital used in the day-to-day operations of a business. It is the difference between **current assets** and **current liabilities**.

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

It ensures the business has sufficient cash flow to meet short-term obligations and operating expenses.

□ Components of Working Capital

Working capital includes **current assets** and **current liabilities**.

1. Current Assets

These are assets that can be converted into cash within one year. Key components include:

- Cash and bank balances
- Accounts receivable (debtors)
- Inventory (raw materials, WIP, finished goods)
- Prepaid expenses
- Short-term investments
- Bills receivable

2. Current Liabilities

These are obligations due within one year. Key components include:

- Accounts payable (creditors)
- Bills payable
- Outstanding expenses
- Short-term loans
- Bank overdrafts
- Accrued liabilities

□ Operating Cycle

The **Operating Cycle** refers to the time duration between the acquisition of inventory and the collection of cash from receivables.

Stages of the Operating Cycle:

1. **Purchase of Raw Materials**
2. **Production Process** (Conversion of raw materials to finished goods)
3. **Storage of Finished Goods**
4. **Sales of Goods** (Cash or credit)
5. **Collection from Debtors**

Formula for Operating Cycle:

Operating Cycle=Inventory Conversion Period+Receivables Collection Period**Where:**

1. **Inventory Conversion Period (ICP):**

$$\text{ICP} = \text{Average Inventory} / \text{Cost of Goods Sold (COGS)} \times 365$$

This measures how many days it takes to sell inventory.

2. **Receivables Collection Period (RCP):**

$$\text{RCP} = \text{Average Accounts Receivable} / \text{Net Credit Sales} \times 365$$

This measures how many days it takes to collect cash from customers after a sale.

Notes:

- The **shorter** the operating cycle, the **more efficient** the business is at converting its investments into cash.
- A **longer** operating cycle may indicate poor cash flow management or slow-moving inventory.

Example:

If a company has:

- Average Inventory = ₹500,000
- COGS = ₹2,000,000
- Average Accounts Receivable = ₹300,000
- Net Credit Sales = ₹3,000,000

Then:

- **ICP** = $(500,000 / 2,000,000) \times 365 = 91.25$ days
- **RCP** = $(300,000 / 3,000,000) \times 365 = 36.5$ days
- **Operating Cycle** = $91.25 + 36.5 = 127.75$ days

Factors Influencing Working Capital

1. **Nature of Business**
 - Trading firms need less WC; manufacturing firms need more.
2. **Business Cycle**
 - Boom periods increase WC needs; during recessions, it reduces.
3. **Production Cycle**
 - Longer cycles demand higher WC.
4. **Credit Policy**
 - Liberal credit to customers increases WC.
5. **Inventory Policy**
 - High inventory levels require more WC.
6. **Operating Efficiency**
 - Efficient use of resources reduces WC needs.
7. **Growth and Expansion**
 - Rapid growth increases WC requirements.
8. **Availability of Credit**
 - Easy supplier credit reduces WC needs.
9. **Seasonal Factors**
 - Seasonal businesses need higher WC during peak seasons.

Determining / Forecasting Working Capital Requirements

1. Percentage of Sales Method

Assumes a fixed percentage of sales is required as WC based on past data.

$$\text{WC Required} = \text{Estimated Sales} \times \text{WC \%}$$

2. Operating Cycle Method

Estimates WC based on the duration of the operating cycle and daily operating expenses.

$$\text{WC} = \text{Daily Operating Cost} \times \text{Operating Cycle (in days)}$$

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3. Cash Budget Method

Forecasts inflow and outflow of cash to estimate the WC needed to maintain liquidity.

4. Balance Sheet Method

Forecasts current assets and liabilities individually to find the net working capital.

$WC = \text{Estimated Current Assets} - \text{Estimated Current Liabilities}$

5. Regression Analysis / Statistical Methods

Used in advanced forecasting by analyzing historical data patterns.

Summary Table

Aspect	Description
Definition	Difference between current assets and current liabilities
Components	Current Assets (cash, debtors, inventory) and Current Liabilities (creditors, short-term debt)
Operating Cycle	Time from purchase of inventory to collection from debtors
Influencing Factors	Nature of business, credit policy, inventory level, business cycle, etc.
Forecasting Methods	Percentage of sales, Operating cycle, Cash budget, Balance sheet method

Problem 1: Calculation of Working Capital**

Question:

A company has the following balances:

* Cash: ₹20,000

* Debtors: ₹1,00,000

* Inventory: ₹1,50,000

* Creditors: ₹70,000

* Outstanding Expenses: ₹30,000

Calculate the Net Working Capital.

Solution:

Step 1: Current Assets

= Cash + Debtors + Inventory

= ₹20,000 + ₹1,00,000 + ₹1,50,000

= ₹2,70,000

Step 2: Current Liabilities

= Creditors + Outstanding Expenses

= ₹70,000 + ₹30,000

= ₹1,00,000

Step 3: Working Capital

= Current Assets - Current Liabilities

= ₹2,70,000 - ₹1,00,000

= ₹1,70,000

Answer: ₹1,70,000

Problem 2: Estimating Working Capital using Operating Cycle

Question:

A company has the following data:

- * Raw material holding period: 30 days
- * WIP holding period: 15 days
- * Finished goods holding period: 20 days
- * Debtors collection period: 30 days
- * Creditors payment period: 25 days
- * Daily operating cost: ₹10,000

Calculate the working capital requirement using the operating cycle method.**

Solution:

Step 1: Operating Cycle

$$\begin{aligned}\text{Operating Cycle} &= \text{RM holding} + \text{WIP holding} + \text{FG holding} + \text{Debtors} - \text{Creditors} \\ &= 30 + 15 + 20 + 30 - 25 \\ &= 70 \text{ days}\end{aligned}$$

Step 2: Working Capital Requirement

$$\begin{aligned}&= \text{Daily operating cost} \times \text{Operating cycle days} \\ &= ₹10,000 \times 70 \\ &= \mathbf{₹7,00,000}\end{aligned}$$

Answer:** ₹7,00,000

Problem 3: Estimating Working Capital using % of Sales Method

Question:

company expects sales of ₹50,00,000 next year. Based on past data, it requires 25% of sales as working capital.

****Calculate the estimated working capital.****

Solution:

Estimated WC = 25% of ₹50,00,000

= ₹12,50,000

Answer: ₹12,50,000

Problem 4: Identify Working Capital Components

Question:

From the following, identify which are current assets and which are current liabilities:

- * Bills Payable
- * Debtors
- * Bank Overdraft
- * Inventory
- * Prepaid Expenses
- * Creditors
- * Accrued Expenses
- * Cash in Hand

****Solution:****

Current Assets:

- * Debtors
- * Inventory
- * Prepaid Expenses
- * Cash in Hand

Current Liabilities:

- * Bills Payable
- * Bank Overdraft
- * Creditors
- * Accrued Expenses

✓**Tip:** Current assets = Expected to convert into cash within a year; liabilities = Due within a year.

—W## ✓**Problem 5: Impact of Business Factors on Working Capital**

Question:

A company plans to offer longer credit to customers and increase inventory levels. What will be the impact on working capital?

Solution:

Longer credit to customers** → Increase in debtors → **Higher working capital needed**

* **More inventory** → Higher investment in stock → **Increase in working capital**

✓**Answer:** Working capital requirement will **increase**.

✓**Problem 6: Working Capital Forecast Using Balance Sheet Approach

Question:

Forecast the working capital requirement for a company with the following estimates:

Estimated Current Assets:

- Inventory: ₹4,00,000
- Debtors: ₹2,50,000

- Cash: ₹1,00,000
- Prepaid Expenses: ₹50,000

Estimated Current Liabilities:

- Creditors: ₹2,00,000
 - Outstanding Expenses: ₹1,00,000
 - Short-term Loans: ₹50,000
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Solution:

Current Assets Total

$$= ₹4,00,000 + ₹2,50,000 + ₹1,00,000 + ₹50,000$$
$$= ₹8,00,000$$

Current Liabilities Total

$$= ₹2,00,000 + ₹1,00,000 + ₹50,000$$
$$= ₹3,50,000$$

Working Capital Requirement

$$= ₹8,00,000 - ₹3,50,000$$
$$= ₹4,50,000$$

✓ **Answer:** ₹4,50,000

✓ **Problem 7: Operating Cycle Time Estimation**

Question:

A manufacturing company provides the following data:

- Raw material storage: 25 days
- Processing time: 10 days
- Finished goods storage: 15 days
- Collection from customers: 20 days
- Credit allowed by suppliers: 10 days

Calculate the operating cycle in days.

Solution:

Operating Cycle = RM storage + Processing + FG storage + Collection from customers - Credit period from suppliers
= 25 + 10 + 15 + 20 - 10
= **60 days**

✓ **Answer:** 60 days

✓ **Problem 8: Cash Budget-Based Working Capital Estimation**

Question:

A firm expects the following monthly cash flows (in ₹):

Particulars	Amount
Cash Receipts	₹8,00,000
Cash Payments	₹6,50,000
Opening Cash Balance	₹50,000

What is the cash surplus or deficit, and what is the working capital implication?

Solution:

Net Cash Flow = ₹8,00,000 - ₹6,50,000 = ₹1,50,000

Closing Cash = Opening + Net Cash = ₹50,000 + ₹1,50,000 = ₹2,00,000

✓ **Answer:** Surplus of ₹1,50,000.

Working capital is **strong**, as cash balance increases.

✓ **Problem 9: Conceptual MCQ**

Question:

Which of the following will **not** increase the working capital requirement?

- A) Increasing credit sales
 - B) Increasing inventory holding
 - C) Reducing credit period from suppliers
 - D) Selling fixed assets
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Answer:

D) **Selling fixed assets** – it may increase cash, reducing WC requirement.

✓ **Correct Option: D**

✓ **Problem 10: Effect of Seasonal Business on WC**

Question:

A company manufactures woollen garments. Its sales peak during November to January. What should the working capital strategy be?

Solution:

- During peak season, **inventory and receivables increase**.
- Working capital requirement will be **higher** during this period.
- Company should arrange **seasonal or temporary working capital** (like bank overdraft or short-term loans).

✓ **Answer:** Seasonal businesses need **flexible working capital management**, with higher WC during busy periods.
