

Financial Decisions

1. Operating Cycle and Short-term financial Policy

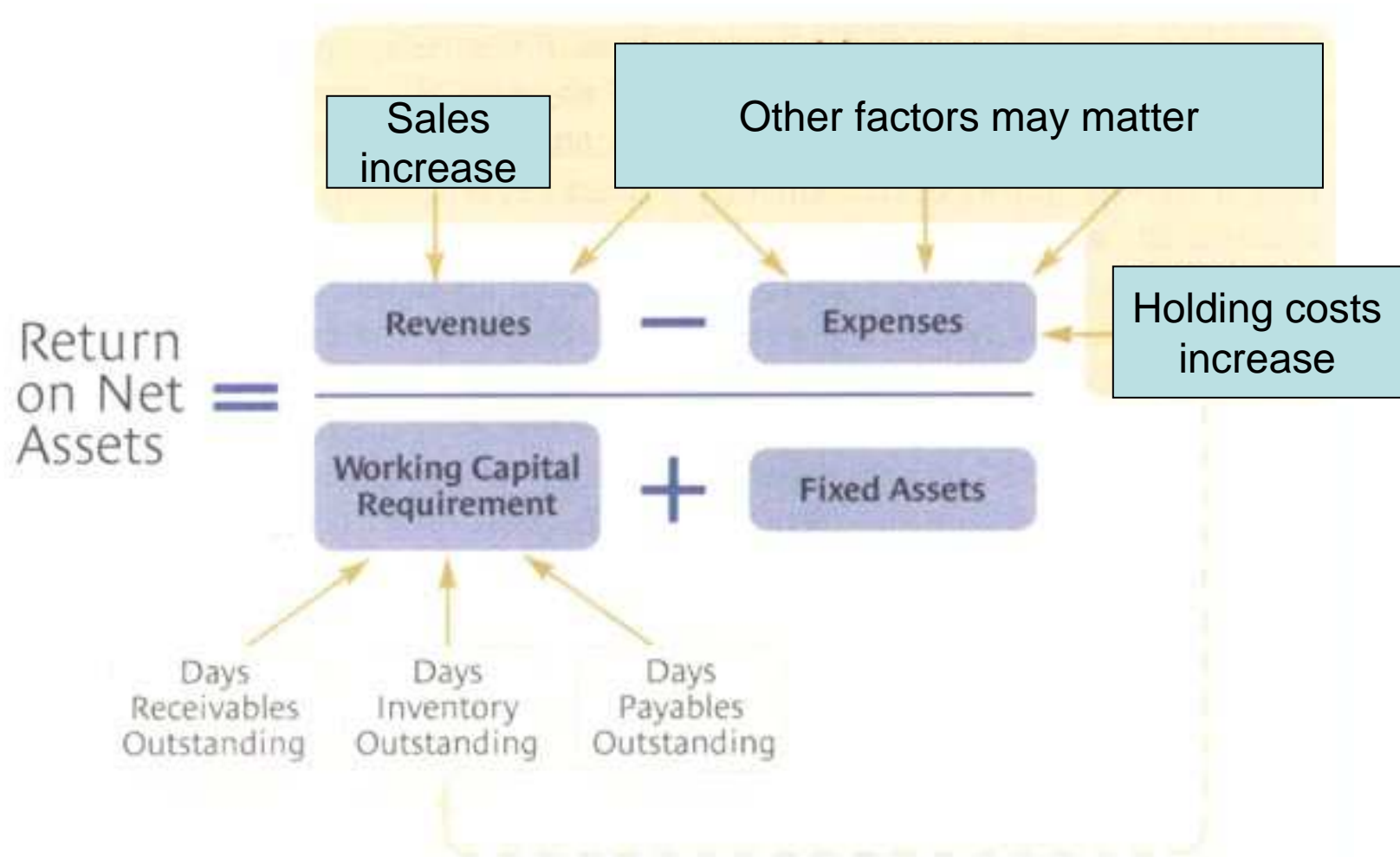
- Tracing Cash and Net Working Capital
- Operating Cycle and Cash Cycle
- Overview of Short-term financial policy

Instructor: A. Ashta

References: Ross, Westerfield Jordan: Ch. 16

Emery, Finnerty & Stowe: Ch. 22

Value Added and Working Capital Management



Managers Who Deal with Short-Term Financial Problems

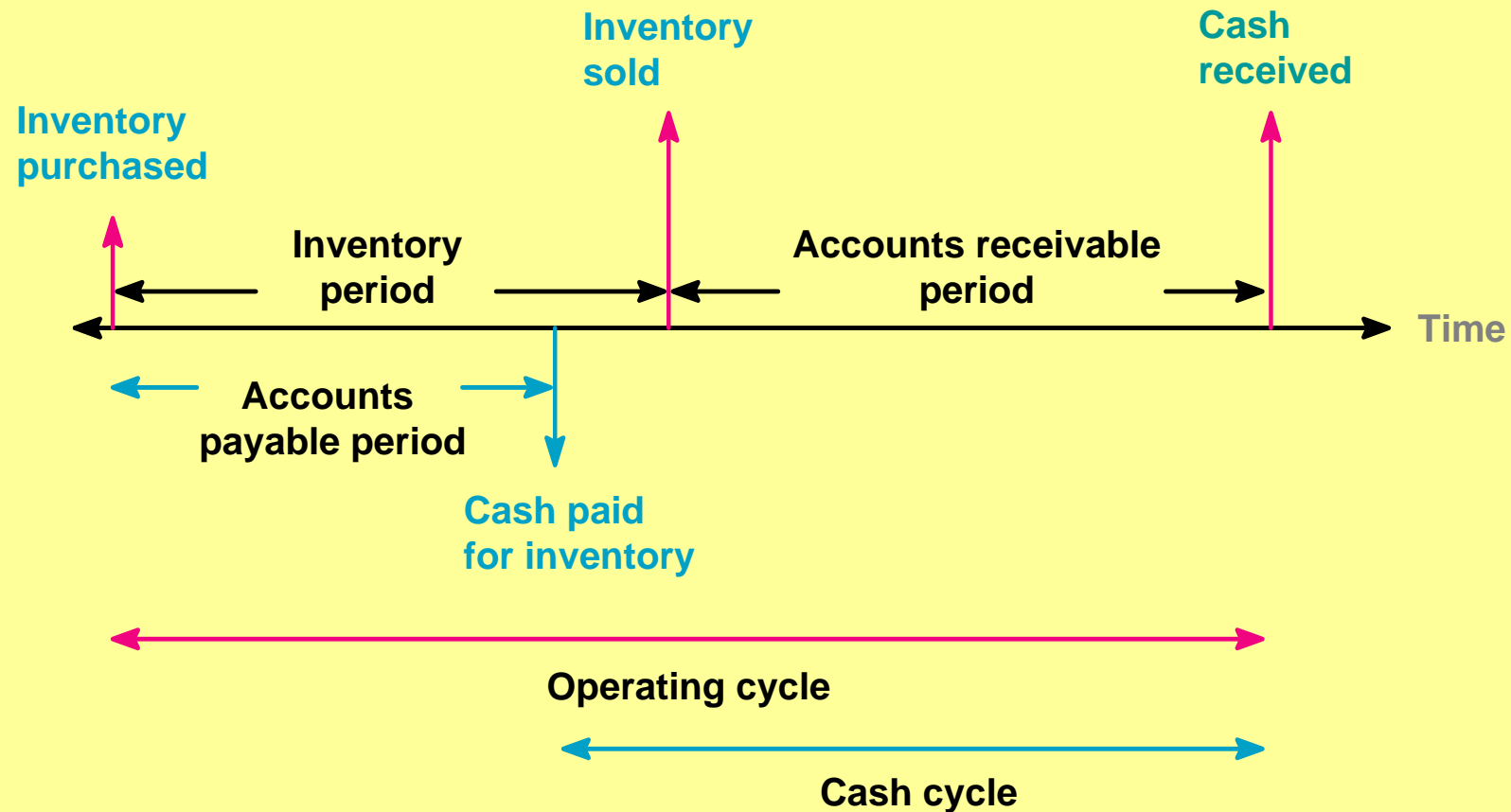
Title of manager	Duties related to short-term financial management	Assets/liabilities influenced
Cash manager	Collection, concentration, disbursement; banking relations	Cash, marketable short-term investments; short-term borrowing; securities, short-term loans
Credit manager	Monitoring and control of accounts receivable; credit policy decisions	Accounts receivable
Marketing manager	Credit policy decisions	Accounts receivable
Purchasing manager	Decisions on purchases, suppliers; may negotiate payment terms	Inventory, accounts payable
Production manager	Setting of production schedules and materials requirements	Inventory, accounts payable
Payables manager	Decisions on payment policies and on whether to take discounts	Accounts payable
Controller	Accounting information on cash flows; reconciliation of accounts payable; application of payments to accounts receivable	Accounts receivable, accounts payable

Source: Ned C. Hill and William L. Sartoris, *Short-Term Financial Management*, 2nd ed. (New York: Macmillan, 1992), p. 15.

Working Capital Management

- Working capital
= current assets – current liabilities
- Working capital management refers to choosing the levels and mix of:
 - cash, marketable securities, receivables and inventories.
 - different types of short-term financing.

Operating and Cash Cycles Illustrated



The operating cycle is the time period from inventory purchase until the receipt of cash.

The cash cycle is the time period from when cash is paid out, to when cash is received.

Operating and Cash Cycles

$$\begin{array}{ccccc} \text{Operating} & & \text{Inventory} & & \text{Receivables} \\ \text{cycle} & = & \text{conversion} & + & \text{collection} \\ & & \text{period} & & \text{period} \end{array}$$

$$\begin{array}{ccccccc} \text{Cash} & & \text{Inventory} & & \text{Receivable s} & & \text{Payables} \\ \text{conversion} & = & \text{conversion} & + & \text{collection} & - & \text{deferral} \\ \text{cycle} & & \text{period} & & \text{period} & & \text{period} \end{array}$$

Ross Q. 16.5

- Is it possible for a firm's cash cycle to be longer than its operating cycle? Explain why or why not.
- Answer

Inventory Conversion Period

- The inventory conversion period is the length of time from the purchase of inventory to the time the sales are made on credit.

$$\begin{aligned}\text{Inventory conversion period} &= \frac{\text{Inventory}}{\text{Cost of Sales}/365} \\ &= \frac{365}{\text{Inventory turnover}}\end{aligned}$$

Receivables Collection Period

- The receivables collection period is the average number of days it takes to collect on accounts receivable.
 - Equal to days sales outstanding (DSO)

$$\begin{aligned}\text{Receivable collection period} &= \frac{\text{Receivables}}{\text{Sales}/365} \\ &= \frac{365}{\text{Receivables turnover}}\end{aligned}$$

Payables Deferral Period

- The payables deferral period is the average length of time between the purchase of materials and labor and the payment of cash for the same.

$$\text{Payables deferral period} = \frac{\text{Accounts payable} + \text{Wages, benefits, payroll taxes payable}}{(\text{Cost of sales} + \text{Selling, general and administrative expenses})/365}$$

Example: Hermetic Inc

	<u>2001</u>	<u>2002</u>
Sales		710
COGS		480
Receivables	270	300
Inventory	340	365
Payables	225	245

Hermetic, Inc., Operating Cycle

1. The operating cycle

a) Finding the inventory period

$$\text{Inventory turnover} = \frac{\text{COGS}}{\text{Avg inventory}}$$

$$\text{Inventory period} =$$

Hermetic, Inc., Operating Cycle (concluded)

b) Finding the accounts receivable period

$$\text{Receivables turnover} = \frac{\text{Credit sales}}{\text{Avg receivables}}$$

$$= \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ turns}$$

$$\text{Receivables period} = \frac{365}{\text{turns}} = \underline{\hspace{2cm}} \text{ days}$$

c) Operating cycle = Inventory period + Receivables period

$$= \underline{\hspace{2cm}} \text{ days}$$

Hermetic, Inc., Cash Cycle

2. The cash cycle

a) Finding the payables turnover

$$\text{Payables turnover} = \frac{\text{COGS}}{\text{Avg payables}}$$

$$= \frac{\$}{\$} = \text{_____ turns}$$

$$\text{Payables period} = \frac{365}{\text{turns}} = \text{_____ days}$$

$$\text{b) Cash cycle} = \text{Operating cycle} - \text{Payables period}$$

$$= \text{_____ days}$$

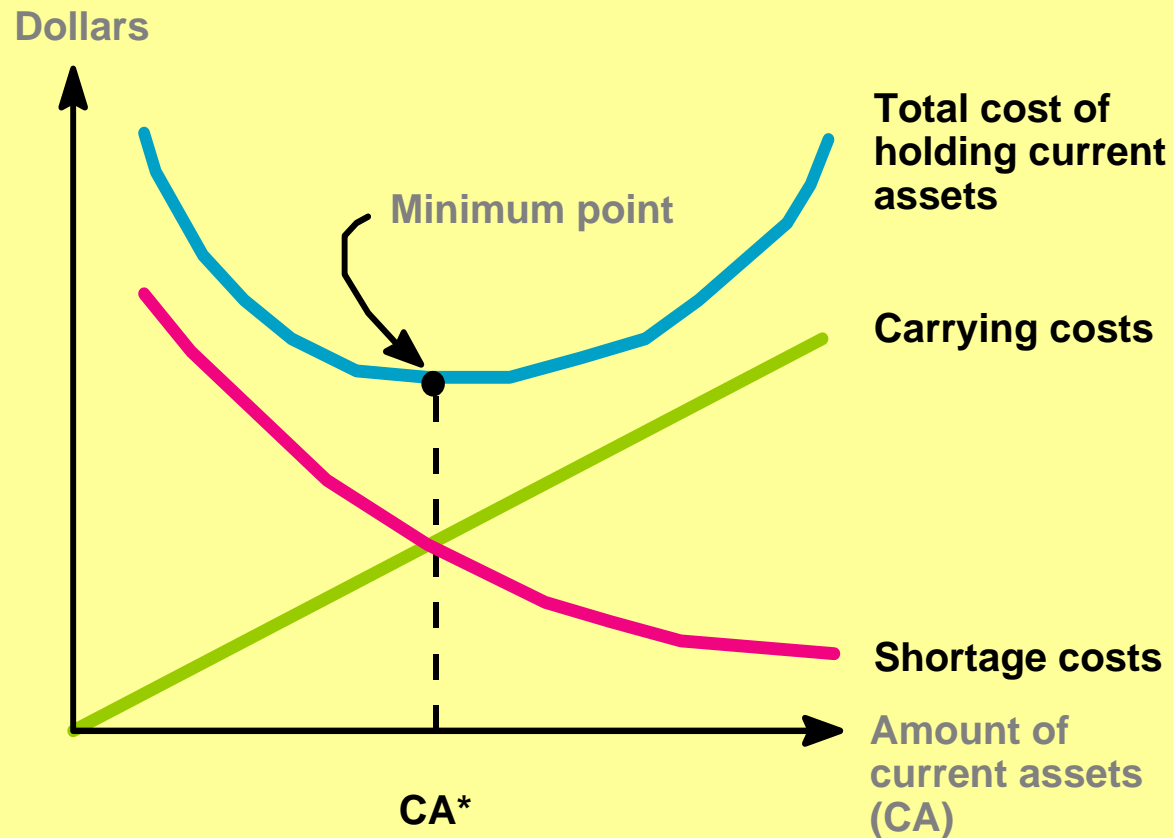
Carrying Costs and Shortage Costs

Carrying costs increase with the level of investment in current assets. They include the costs of maintaining economic value and opportunity costs (Eg., Interest, warehousing costs)

Shortage costs decrease with increases in the level of investment in current assets. They include trading costs and the costs related to being short of the current asset (for example, sales lost as a result of a shortage of finished goods inventory).

Carrying Costs and Shortage Costs

Short-term financial policy: the optimal investment in current assets.



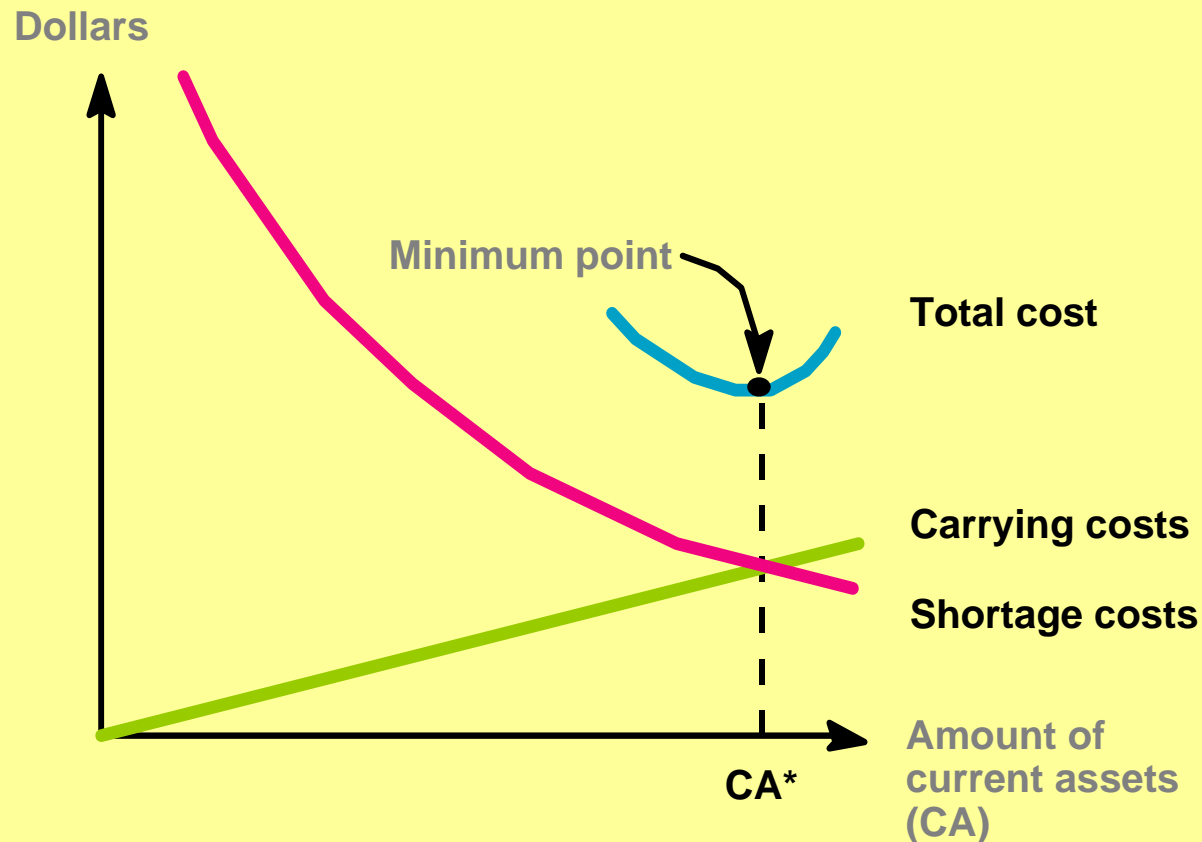
CA^* represents the optimal amount of current assets.
Holding this amount minimizes total costs.

The Size of the Firm's Investment in Current Assets

- Determined by its short-term financial policies.
- These financial policies can be flexible or restrictive
- Flexible policy actions include:
 - Keeping large cash and securities balances
 - Keeping large amounts of inventory
 - Granting liberal credit terms
- Restrictive policy actions include:
 - Keeping low cash and securities balances
 - Keeping small amounts of inventory
 - Allowing few or no credit sales

Carrying Costs and Shortage Costs

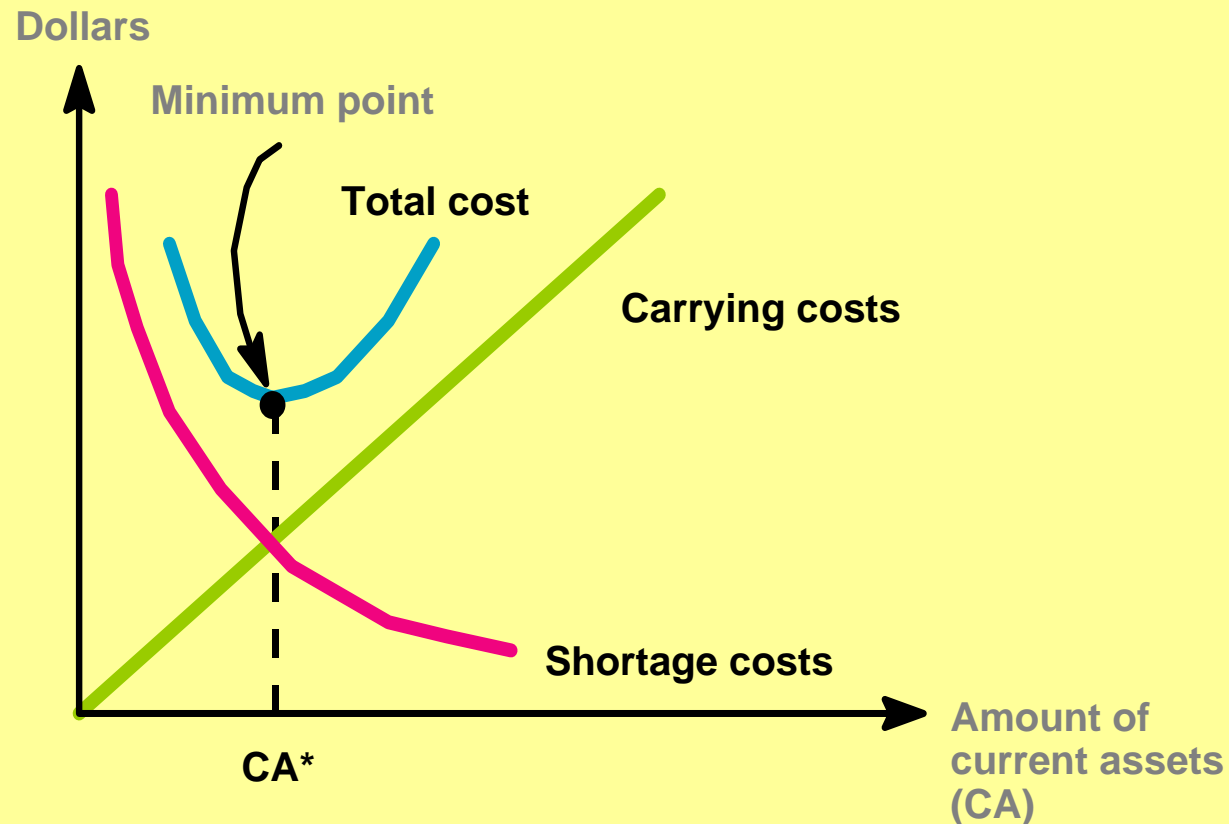
A. Flexible policy



A flexible policy is most appropriate when carrying costs are low relative to shortage costs.

Carrying Costs and Shortage Costs

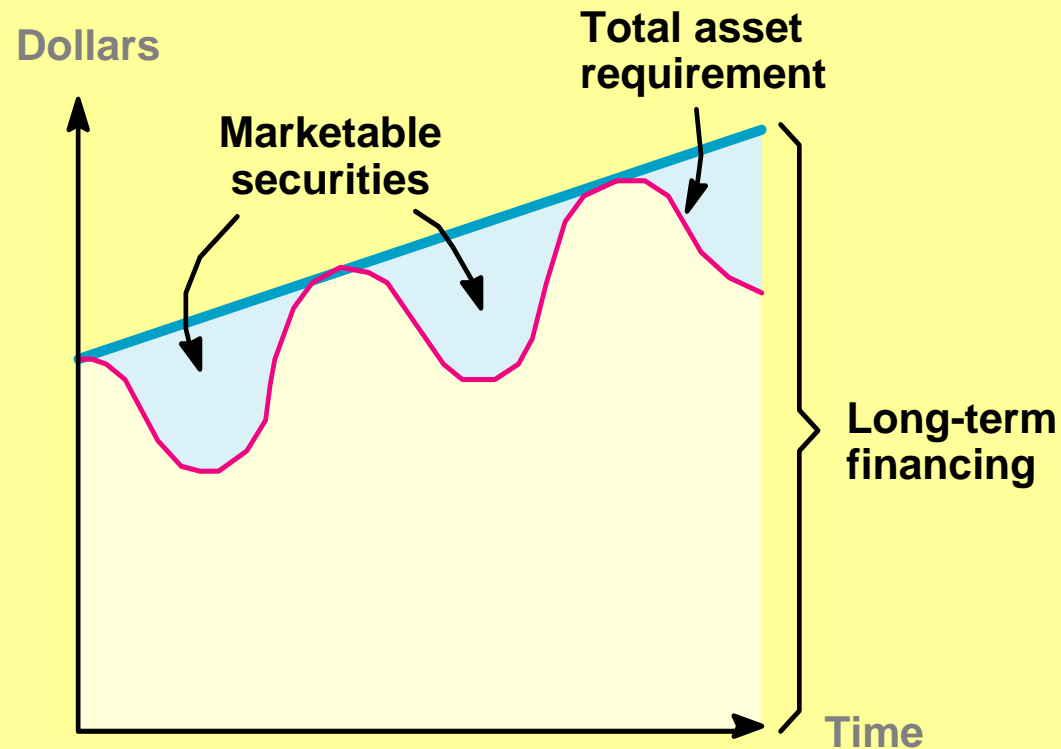
B. Restrictive policy



A restrictive policy is most appropriate when carrying costs are high relative to shortage costs.

Alternative Asset Financing Policies

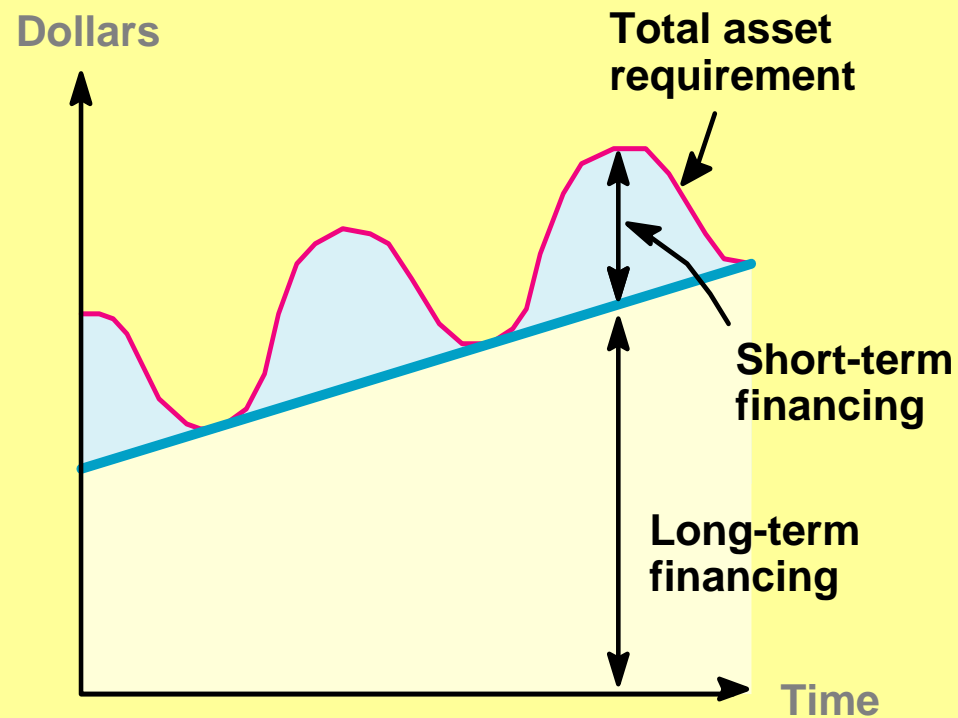
Flexible Policy = conservative



Flexible Policy always implies a short-term cash surplus and a large investment in cash and marketable securities.

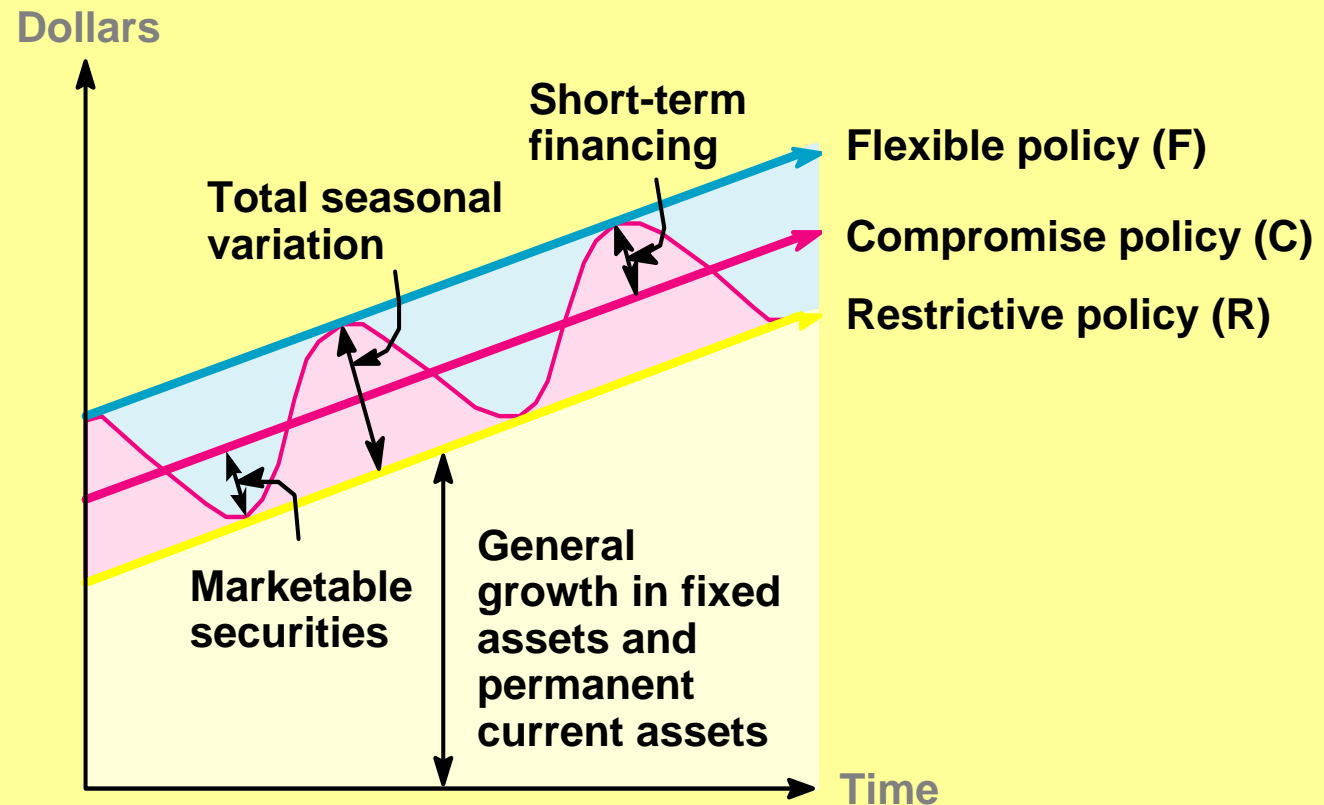
Alternative Asset Financing Policies

Restrictive Policy = aggressive



Restrictive Policy uses long-term financing for permanent asset requirements only and short-term borrowing for seasonal variations.

A Compromise Financing Policy



With a compromise policy, the firm keeps a reserve of liquidity which it uses to initially finance seasonal variations in current asset needs. Short-term borrowing is used when the reserve is exhausted.

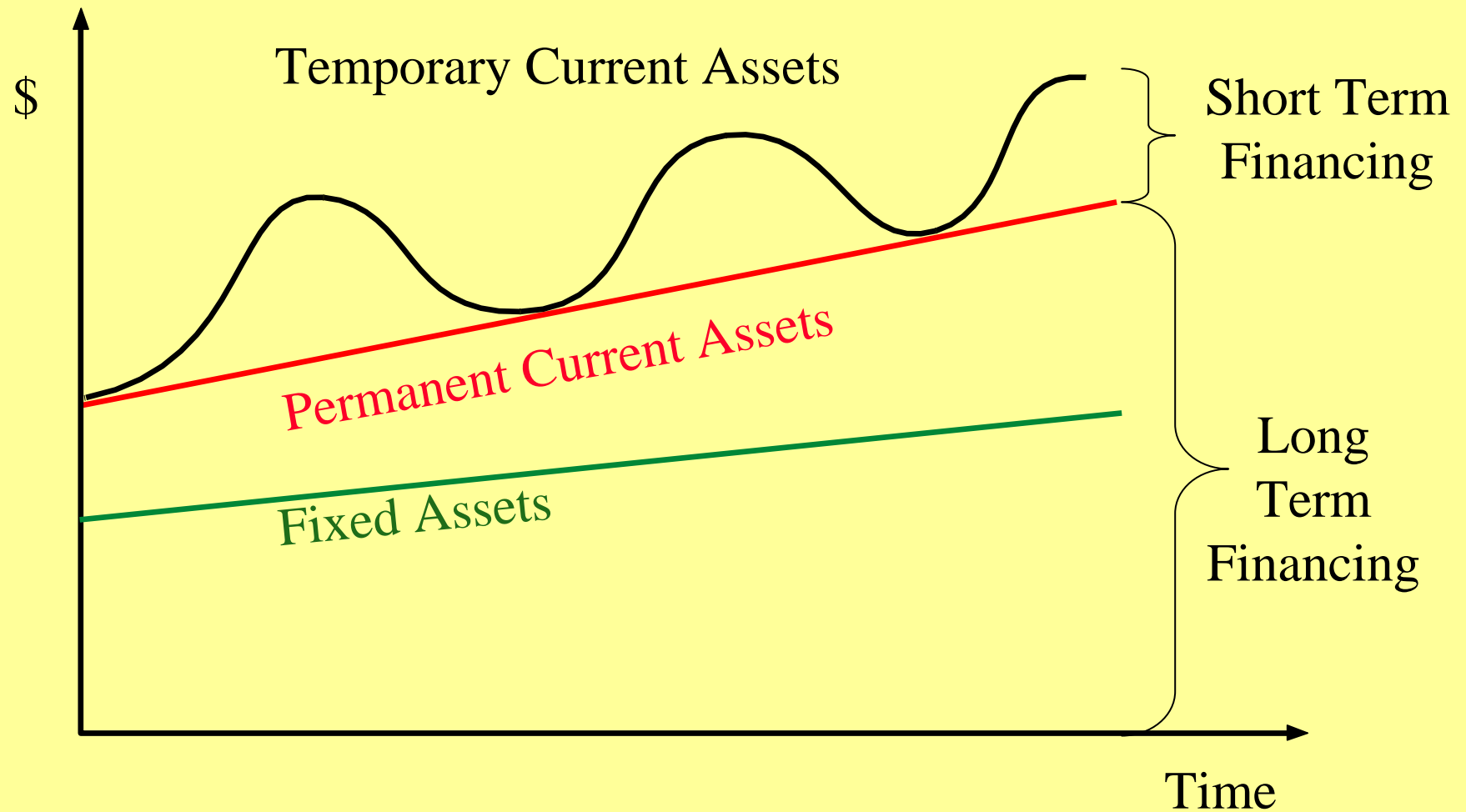
Which Financing Policy is Best?

- **Cash Reserves**
 - + Low chance of Financial Distress
 - + Less Time in searching ST financing
 - Do not earn any interest
- **Maturity Hedging**
 - + Use LT financing for LT assets and ST financing for ST assets
 - ST interest rates are more volatile: so avoid using ST financing for LT assets
- **Relative Interest Rates**
 - If LT interest rates are lower, finance core part of ST needs from LT funds
 - If ST interest rates are lower, better to use ST financing

Maturity Matching Approach

- Hedge risk by matching the maturities of assets and liabilities.
- Permanent current assets are financed with long-term financing, while temporary current assets are financed with short-term financing.
- There are no excess funds.

Maturity Matching Approach



Quick Quiz

1. What is “short-term finance”?
2. What is the importance of the cash cycle to the financial manager attempting to increase firm value?
3. Why are interest rate levels important to the short-term financial manager?

Problem 16.7 of Ross

- Consider the following financial statement information for the Windbag Balloon Corporation:

Item	Beginning	Ending
Inventory	\$8,152	\$10,300
Accounts receivable	6,537	7,147
Accounts payable	10,128	10,573
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Net Sales	\$93,125	
Cost of goods sold	46,152	

Calculate the operating and cash cycle