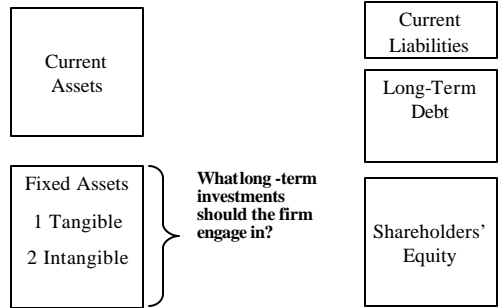


**Chapter 26**  
**Short-Term Finance & Planning**

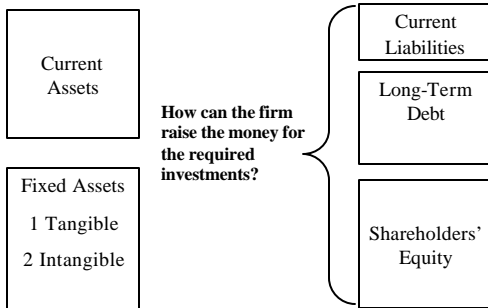
**Chapter Organization**

- Tracing Cash and Net Working Capital
- Defining Cash in Terms of Other Elements
- The Operating Cycle and the Cash Cycle
- Some Aspects of Short-Term Financial Policy
- Cash Budgeting
- The Short-Term Financial Plan
- Summary & Conclusions

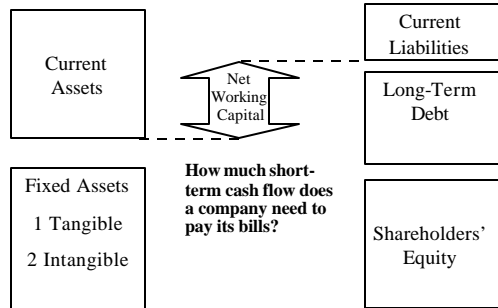
**The Balance-Sheet Model of the Firm**  
**The Capital Budgeting Decision**



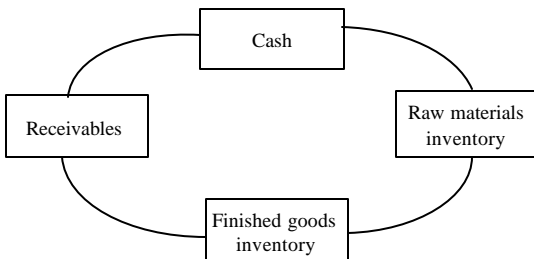
**The Balance-Sheet Model of the Firm**  
**The Capital Structure Decision**



**The Balance-Sheet Model of the Firm**  
**The Net Working Capital Investment Decision**



**Net Working Capital**  
**Cycle of Operations**



**Tracing Cash & Net Working Capital**

- Current Assets are cash and other assets that are expected to be converted to cash with the year.
- 
- 
- 
- 
- Current Liabilities are obligations that are expected to require cash payment within the year.
- 
- 
-

### Defining Cash in Terms of Other Elements

$$CA + \text{Fixed Assets} = CL + \text{LT Debt} + \text{Equity}$$

$$CA - CL + \text{Fixed Assets} = \text{LT Debt} + \text{Equity}$$

$$\text{Net Working Capital} + \text{Fixed Assets} = \text{LT Debt} + \text{Equity}$$

$$NWC = \text{Cash} + \text{Other Current Assets} - CL$$

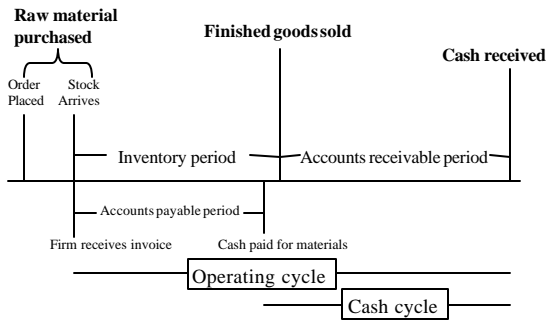
$$\text{Cash} = \text{LT Debt} + \text{Equity} - NWC - \text{Fixed Assets} \quad (\text{excluding cash})$$

### Defining Cash in Terms of Other Elements

$$\text{Cash} = \text{Long-Term Debt} + \text{Equity} - \text{Net Working Capital (excluding cash)} - \text{Fixed Assets}$$

- An increase in long-term debt and/or equity leads to an increase in cash
- A decrease in fixed assets and/or in the non-cash components of net working capital leads to an increase in cash.
- The Sources and Uses of Cash Statement follows from this reasoning.
- See example in text.

### The Operating Cycle & Cash Cycle



### The Operating Cycle & the Cash Cycle

$$\text{Cash cycle} = \text{Operating cycle} - \text{Accounts payable period}$$

$$\text{Cash cycle} = \text{Inventory Period} + \text{Accounts Receivable Period} - \text{Accounts payable period}$$

- In practice, the inventory period, the accounts receivable period, and the accounts payable period are measured by days in inventory, days in receivables and days in payables.

### Operating Cycle & Cash Cycle

$$\text{Days in Inventory} = \frac{\text{average inventory}}{\text{annual COGS}/365}$$

$$\text{Days in Receivable} = \frac{\text{average accounts receivable}}{\text{annual sales}/365}$$

$$\text{Days in Payables} = \frac{\text{average accounts payable}}{\text{annual COGS}/365}$$

### Example - Cash Cycle

Given the aggregate balance sheet and income statement for US Manufacturing firms, calculate the cash cycle.

Income Statement	Balance Sheet		
		End 1stqtr '98	End of 1stqtr '99
Sales 3,968	Inventory	470	468
COGS 3,518	A/R	471	481
	A/P	304	303

Given the aggregate balance sheet and income statement for US Manufacturing firms, calculate the cash conversion cycle.

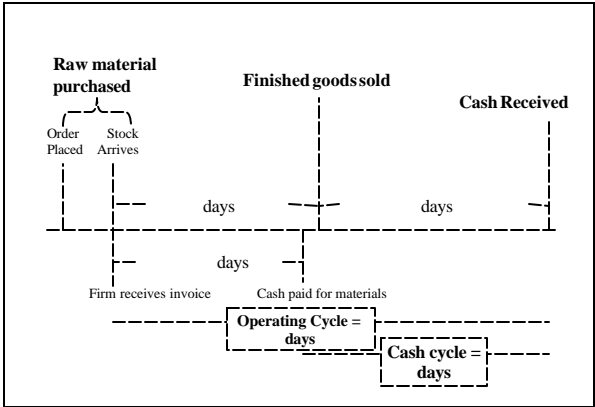
Income Statement	Balance Sheet	
	qr '98	qr '99
Sales 3,968	Inventory 470	468
COGS 3,518	A/R 471	481
	A/P 304	303

**Cash Cycle**

Days in Receivables =  $\frac{\text{average accounts receivable}}{\text{annual sales}/365}$

Days in Inventory =  $\frac{\text{average inventory}}{\text{annual COGS}/365}$

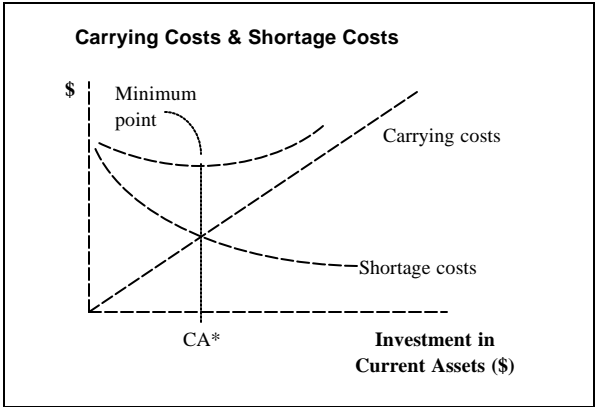
Days in Payables =  $\frac{\text{average accounts payable}}{\text{annual COGS}/365}$

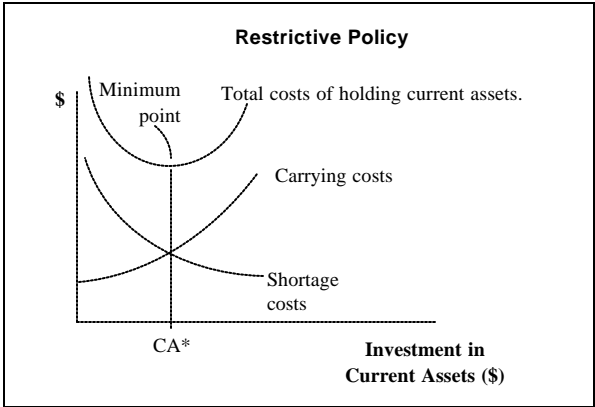
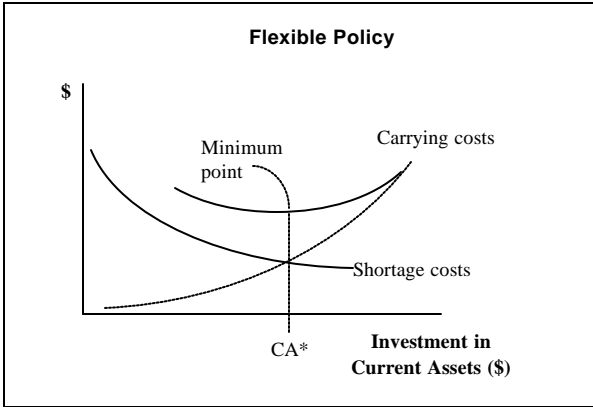


- Some Aspects of Short-Term Financial Policy**
- Two elements of the policy that a firm adopts for short-term finance.
  - Size of the Firm's Investment in Current Assets
    - Usually measured relative to the firm's level of total operating revenues.
    - 
    -
  - Financing Policies for Current Assets
    - Usually measured as the proportion of short-term debt to long-term debt.
    - 
    -

- The Size of the Investment in Current Assets**
- A **flexible** short-term finance policy would maintain a high ratio of current assets to sales.
    - Keeping large cash balances and investments in marketable securities.
    - Large investments in inventory.
    - Liberal credit terms.
    - Why is this flexible??
  - A **restrictive** short-term finance policy would maintain a low ratio of current assets to sales.
    - Keeping low cash balances, no investment in marketable securities.
    - Making small investments in inventory.
    - Allowing no credit sales (thus no accounts receivable).
    - Why is this restrictive??

- Carrying Costs & Shortage Costs**
- Managing short-term cash flows involves the minimization of costs.
  - The two major costs are:
    - 
    -
  - The objective of managing short-term finance and short-term financial planning is to find the optimal tradeoff between these two costs.

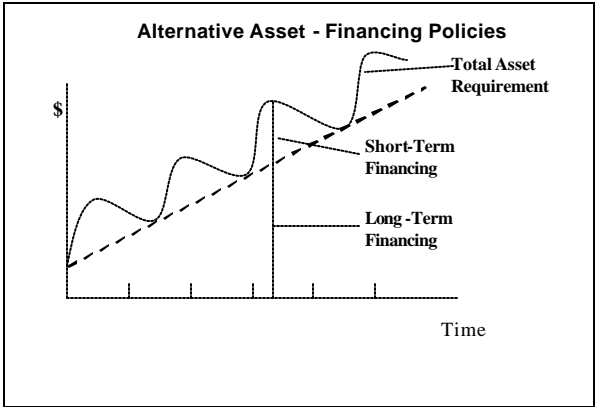
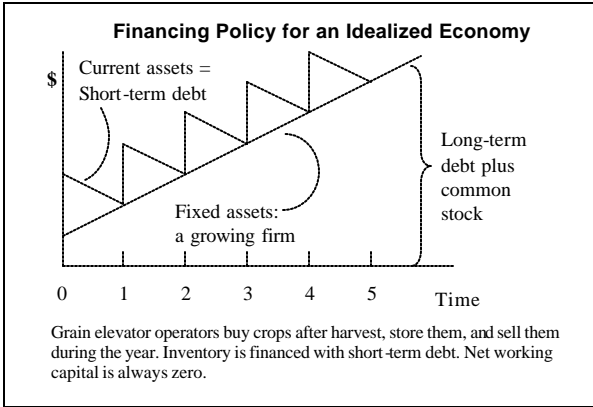




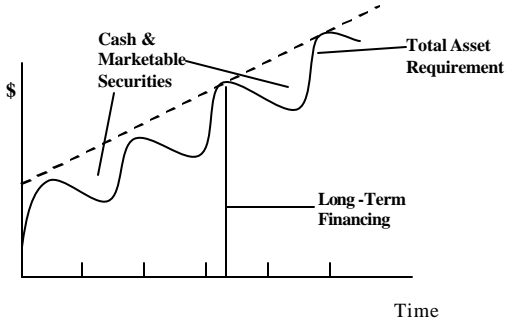
### Determinants of Corporate Liquid Asset Holdings

Firms with <b>High</b> Levels of Liquid Assets will have:	Firms with <b>Low</b> Levels of Liquid Assets will have:
<ul style="list-style-type: none"> <li>• High-growth opportunities</li> <li>• High-risk investments</li> <li>• Small firms</li> <li>• Low-credit firms</li> </ul>	<ul style="list-style-type: none"> <li>• Low-growth opportunities</li> <li>• Low-risk investments</li> <li>• Large firms</li> <li>• High-credit firms</li> </ul>

- ### Alternative Financing Policies for CA
- A flexible short-term finance policy means low proportion of short-term debt relative to long-term financing.
  - A restrictive short-term finance policy means high proportion of short-term debt relative to long-term financing.
  - Why?
  - In an ideal world, short-term assets are always financed with short-term debt and long-term assets are always financed with long-term debt.
  - In this world, net working capital is always zero.



### Alternative Asset - Financing Policies



### Cash Budgeting

- A cash budget is a primary tool of short-run financial planning.
- Record the estimates of cash receipts and disbursements.
- Cash Receipts
  - Arise from sales, but need to estimate when actually collected.
- Cash Outflow
  - Payments of Accounts Payable
  - Wages, Taxes, and other Expenses
  - Capital Expenditures
- Cash balance tells the manager what borrowing or investing is required in the short-run.

### Steps to Preparing a Cash Budget

- Step 1 - Forecast the sources of cash.
- Step 2 - Forecast uses of cash.
- Step 3 - Calculate whether the firm is facing a cash shortage or surplus.

### Cash Budgeting Example

Stetson Webdrivers							
Cash Budget							
For the Period June to September 2001							
	April	May	June	July	August	September	
Sales		291,000	365,000	387,000	329,000	238,000	145,000
Collections							
Cash				154,800	131,600	95,200	58,000
First Month				164,250	174,150	148,050	107,100
Second Month				43,650	54,750	58,050	49,350
<b>Total Collections</b>				<b>362,700</b>	<b>360,500</b>	<b>301,300</b>	<b>214,450</b>
Purchases		50%	182,500	193,500	164,500	119,000	72,500
Payments							
First Month				116,100	98,700	71,400	43,500
Second Month				73,000	77,400	65,800	47,600
<b>Total Payments</b>				<b>189,100</b>	<b>176,100</b>	<b>137,200</b>	<b>91,100</b>

### Cash Budgeting Example (cont)

<b>Total Payments</b>				<b>189,100</b>	<b>176,100</b>	<b>137,200</b>	<b>91,100</b>
Collections				362,700	360,500	301,300	214,450
<i>Less Disbursements</i>							
Inventory Payments				189,100	176,100	137,200	91,100
Wages	20%			77,400	65,800	47,600	29,000
Lease Payments				10,000	10,000	10,000	10,000
Interest				30,000	0	0	30,000
Dividend (Common)				50,000	0	0	0
Taxes				25,000	0	0	25,000
Capital Outlays				0	200,000	0	0
<b>Total Disbursements</b>				<b>381,500</b>	<b>451,900</b>	<b>194,800</b>	<b>185,100</b>

### Cash Budgeting Example (cont)

<b>Total Disbursements</b>				<b>381,500</b>	<b>451,900</b>	<b>194,800</b>	<b>185,100</b>
Beginning Cash Balance				20,000	15,000	15,000	121,500
Collections - Disbursements				(18,800)	(91,400)	106,500	29,350
Unadjusted Cash Balance				20,000	(1,200)	(76,400)	121,500
Current Borrowing				0	13,800	91,400	0
<b>Ending Cash Balance</b>				<b>20,000</b>	<b>15,000</b>	<b>15,000</b>	<b>150,850</b>
Notes:							
Minimum Acceptable Cash	15,000						

### **The Short-Term Financial Plan**

- The most common way to finance a temporary cash deficit to arrange a short-term loan.
- Unsecured Loans
  - Line of credit at the bank
- Secured Loans
  - Accounts receivable financing can be either *assigned* or *factored*.
  - Inventory loans use inventory as collateral.
- Other Sources
  - Banker's acceptances
  - Commercial paper.