WEYGANDT • KIMMEL • KIESO

FOURTH EDITION

MANAGERIAL ACCOUNTING

TOOLS FOR BUSINESS DECISION MAKING

CHAPTER 8

Pricing

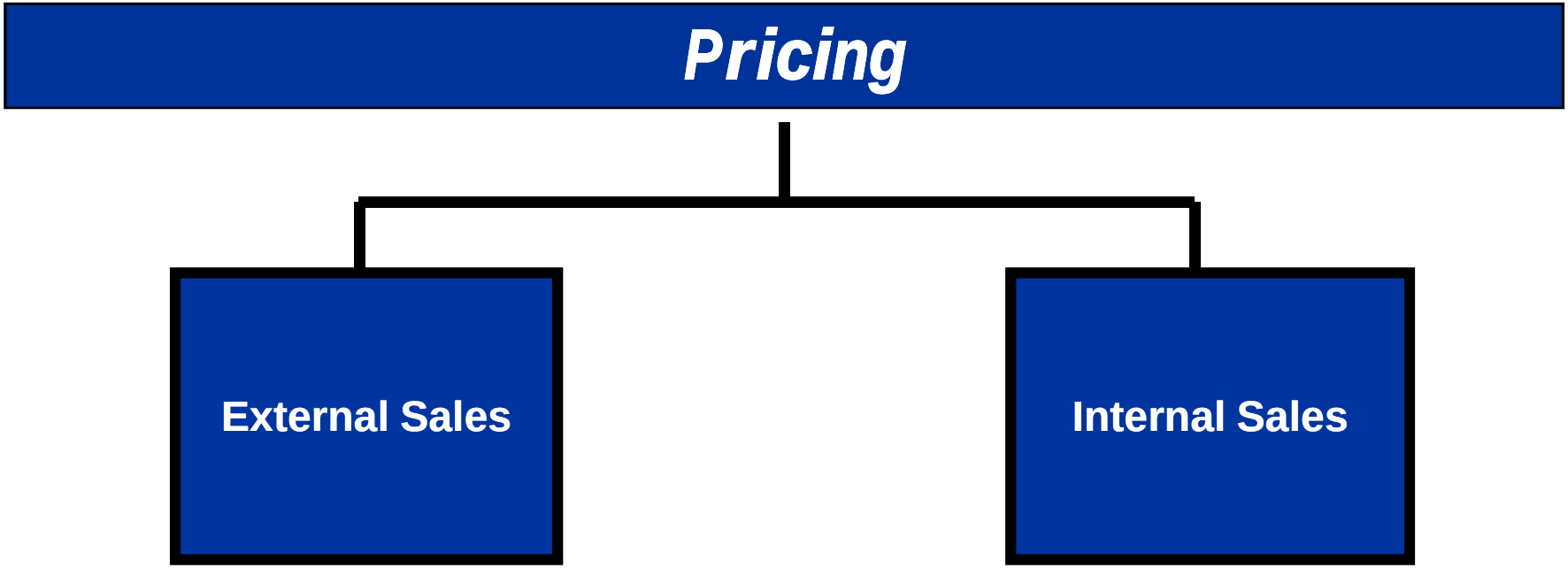
Managerial Accounting, Fourth Edition

Study Objectives

1. Compute a target cost when the market determines a product price.
2. Compute a target selling price using cost-plus pricing.
3. Use time-and-material pricing to determine the cost of services provided.
4. Determine a transfer price using the negotiated, cost-based, and market-based approaches
5. Explain issues involved in transferring goods between divisions in different countries.

Preview of Chapter

- Few management decisions are more important than setting prices.
- Prices must be high enough to cover costs and ensure a reasonable profit, but not so high that the product fails to sell.
- Two types of pricing are examined in this chapter:
  - Pricing to sell to external parties
  - Pricing to sell to other divisions within the same company

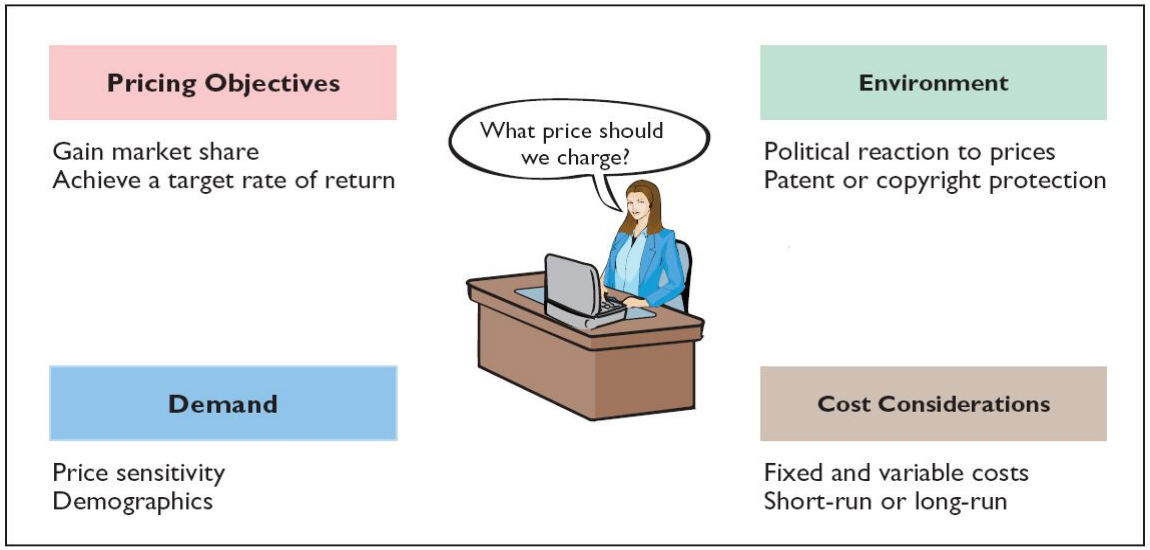


- Target costing
- Cost-plus-pricing
- Variable-cost pricing
- Time-and-material pricing

- Negotiated transfer prices
- Cost-based transfer prices
- Market-based transfer prices
- Effect of outsourcing on transfer pricing
- Transfers between divisions in different countries

External Sales

- The price of a good or service is affected by many factors, such as those shown below.



- Regardless of the factors involved, the price must cover the costs of the good or service as well as earn a reasonable profit.

External Sales

- To determine an appropriate price, a company must have a good understanding of market forces.
- Where products are not easily differentiated from competitor goods, prices are not set by the company, but rather by the laws of supply and demand – such companies are called ***price takers***.

- Where products are unique or clearly distinguishable from competitor goods, prices are set by the company.

STARBUCKS

Target Costing

- In a highly competitive industry, the laws of *supply and demand significantly affect product price*.
- No company can affect the price to a significant extent so, to earn a profit, companies must *focus on controlling costs*.
- This requires setting a target cost that will provide the company's desired profit

LO 1: Compute a target cost when the market determines a product price.

Target Costing

- Target cost: Cost that provides the desired profit on a product when the market determines a product's price

Market Price	–	Desired Profit	=	Target Cost

- If a company can produce its product for the target cost or less, it will meet its profit goal

LO 1: Compute a target cost when the market determines a product price.

Target Costing - Steps

- First, a company should identify its *market niche* where it wants to compete.
- Second, the company conducts market research to determine the *target price* – the price the company believes will place it in the optimal position for the target consumers.
- Third, the company determines its target cost by setting a desired profit.
- Last, the company assembles a team to develop a product to meet the company's goals.

LO 1: Compute a target cost when the market determines a product price.

Let's Review

Target cost related to price and profit means that:

a. Cost and desired profit must be determined before selling price.

b. Cost and selling price must be determined before desired profit.

c. Price and desired profit must be determined before costs.

d. Costs can be achieved only if the company is at full capacity.

LO 1: Compute a target cost when the market determines a product price.

Cost-Plus Pricing

- In an environment with little or no competition, a company may have to set its own price
- When a company sets price, the price is normally a function of product cost: *cost-plus pricing*
- This approach requires establishing a *cost base* and adding a *markup* to determine a *target selling price*
- The size of the markup (the **"plus"**) depends on the desired return on investment for the product:

ROI = net income ÷ invested assets

LO 2: Compute a target selling price using cost-plus pricing.

Cost-Plus Pricing

- In determining the proper markup, a company must consider competitive and market conditions

- The cost-plus formula is expressed as:

$$\text{Cost} + \left(\text{Markup Percentage} \times \text{Cost}\right) = \text{Target Selling Price}$$

LO 2: Compute a target selling price using cost-plus pricing.

Cost–Plus Pricing

Example – Cleanmore Products

- Manufactures wet/dry shop vacuums
- Per unit variable cost estimates:

	Per Unit
Direct materials	$23
Direct labor	17
Variable manufacturing overhead	12
Variable selling and administrative expenses	8
Variable cost per unit	$60

LO 2: Compute a target selling price using cost-plus pricing.

Cost–Plus Pricing

Example – Cleanmore Products

- Cleanmore also has the following fixed costs per unit at a budgeted sales volume of 10,000 units

	Total Costs	÷	Budgeted Volume	=	Cost Per Unit
Fixed manufacturing overhead	$280,000	÷	10,000	=	$28
Fixed selling and administrative expenses	240,000	÷	10,000	=	24
Fixed cost per unit					$52

LO 2: Compute a target selling price using cost-plus pricing.

Cost–Plus Pricing

Example – Cleanmore Products

- Markup = 20% ROI of $1,000,000
- Expected ROI = $200,000 ÷ 10,000 units
- Sales price per unit = $132

	Per Unit
Variable cost	$ 60
Fixed cost	52
Total cost	112
Desired ROI	20
Selling price per unit	**$132**

LO 2: Compute a target selling price using cost-plus pricing.

Cost–Plus Pricing

Example – Cleanmore Products

- To use markup on cost to set a selling price:

  1) Compute the markup percentage to achieve a desired ROI of $20 per unit:

Desired ROI Per Unit	÷	Total Unit Cost	=	Markup Percentage
$20	÷	$112	=	17.86%

  2) Using this markup compute the target selling price:

Total Unit Cost	+	(Total Unit Cost	×	Markup Percentage)	=	Target Selling Price Per Unit
$112	+	($112	×	17.86%)	=	$132

LO 2: Compute a target selling price using cost-plus pricing.

Limitations of Cost-Plus Pricing

- **Major advantage** of cost-plus pricing:

  Easy to compute

- **Disadvantages:**

  Does not consider demand side:

  Will the customer pay the price?

  Fixed cost per unit changes with change in sales volume:

  At lower sales volume, company must charge higher price to meet desired ROI

LO 2: Compute a target selling price using cost-plus pricing.

Limitations of Cost-Plus Pricing

Example - Cleanmore Products

- Reduce budgeted sales volume from 10,000 to 8,000 units

  Variable costs per unit will remain the same

  Fixed cost per unit will increase to $65 per unit

	Total Costs	÷	Budgeted Volume	=	Cost Per Unit
Fixed manufacturing overhead	$280,000	÷	8,000	=	$35
Fixed selling and administrative expenses	240,000	÷	8,000	=	30
Fixed cost per unit					$65

- Cleanmore's 20% ROI now results in a $25 ROI per unit [(20% x $1,000,000) ÷ 8,000 units]

Limitations of Cost-Plus Pricing

Example - Cleanmore Products Cont'd

- Cleanmore will now compute the new selling price as:

	Per Unit
Variable cost	$ 60
Fixed cost	65
Total cost	125
Desired ROI	25
Selling price per unit	**$150**

- The *lower* the budgeted volume, the *higher* the per unit price

  Fixed costs and ROI spread over fewer units

  Fixed costs and ROI per unit increase

  Opposite effect occurs if budgeted volume is higher

LO 2: Compute a target selling price using cost-plus pricing.

Variable-Cost Pricing

- Alternative pricing approach:

  Simply add a markup to variable costs

- Avoids the problem of uncertain cost information related to fixed-cost-per-unit computations
- Helpful in pricing special orders or when excess capacity exists
- Major disadvantage:

  Managers may set the price too low and fail to cover fixed costs

LO 2: Compute a target selling price using cost-plus pricing.

Let's Review

Cost-plus pricing means that:

a. Selling price = variable cost + (markup percentage + variable cost).

b. Selling price = cost + (markup percentage X cost).

c. Selling price = manufacturing cost + (markup percentage + manufacturing cost).

d. Selling price = fixed cost + (markup percentage X fixed cost).

LO 2: Compute a target selling price using cost-plus pricing.

Time-And-Material Pricing

- An approach to cost-plus pricing in which the company uses *two* pricing rates:
  - One for the *labor* used on a job
    - Includes direct labor time and other employee costs
  - One for the *material*
    - Includes cost of direct parts and materials and a material loading charge for related overhead
- Widely used in service industries, especially professional firms such as
  - Public Accounting, Law, Engineering

LO 3: Use time-and-material pricing to determine the cost of services provided.

Time-And-Material Pricing

Example – Lake Holiday Marina

Budgeted data:

LAKE HOLIDAY MARINA
Budgeted Costs for the Year 2008

	Time Charges	Material Loading Charges*
Mechanics' wages and benefits	$103,500	–
Parts manager's salary and benefits	–	$11,500
Office employee's salary and benefits	20,700	2,300
Other overhead (supplies, depreciation, property taxes, advertising, utilities)	26,800	14,400
Total budgeted costs	$151,000	$28,200

*The material loading charges exclude the invoice cost of the materials.

LO 3: Use time-and-material pricing to determine the cost of services provided.

Time-And-Material Pricing - Example

Step 1: Calculate the labor charge

Express as a rate per hour of labor

Rate includes:

- Direct labor cost (includes fringe benefits)
- Selling, administrative, and similar overhead costs
- Allowance for desired profit (ROI) per hour

Labor rate for Lake Holiday Marina for 2008 based on:

- 5,000 hours of repair time
- Desired profit margin of $8 per hour

Time-And-Material Pricing – Example Cont.

Lake Holiday Marina.xls

File Edit View Insert Format Tools Data Window Help

	A	B	C	D	E	F
1	Per Hour	Total Cost	÷	Total Hours	=	Per Hour Charge
2	Hourly labor rate for repairs					
3	Mechanics' wages and benefits	$103,500	÷	5,000	=	$20.70
4	Overhead costs					
5	Office employee's salary and benefits	20,700	÷	5,000	=	4.14
6	Office overhead	26,800	÷	5,000	=	5.36
7	Total hourly cost	$151,000	÷	5,000	=	30.20
8	Profit margin					8.00
9	Rate charged per hour of labor					$38.20
10						

The marina multiplies the rate of $38.20 by the number of labor hours used on any particular job to determine the labor charges for the job.

Time-And-Material Pricing – Example Cont.

Step 2: Calculate the material loading charge

Material loading charge added to invoice price of materials

Covers the costs of purchasing, receiving, handling, storing + desired profit margin on materials

Expressed as a percentage of estimated costs of parts and materials for the year:

$$\frac{\text{Estimated purchasing, receiving, handing, storing costs}}{\text{Estimated costs of parts/materials}} + \text{desired profit margin on materials}$$

Time-And-Material Pricing – Example Cont.

Lake Holiday Marina.xls

File Edit View Insert Format Tools Data Window Help

	A	B	C	D	E	F
1		Material Loading Charges	÷	Total Invoice Cost, Parts and Materials	=	Material Loading Percentage
2	Overhead costs					
3	Parts manager's salary and benefits	$11,500				
4	Office employee's salary	2,300				
5		13,800	÷	$120,000	=	11.50%
6						
7	Other overhead	14,400	÷	120,000	=	12.00%
8		$28,200	÷	120,000	=	23.50%
9	Profit margin					20.00%
10	Material loading percentage					43.50%
11						

LO 3: Use time-and-material pricing to determine the cost of services provided.

Time-And-Material Pricing – Example Cont.

Step 3: Calculate charges for a particular job

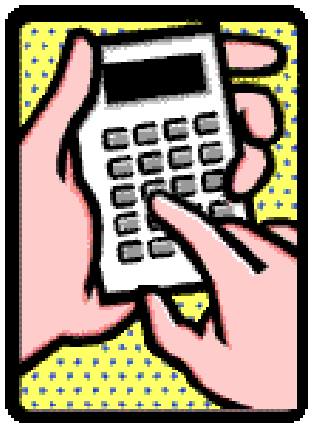
Labor charges

+

Material charges

+

Material loading charge



LO 3: Use time-and-material pricing to determine the cost of services provided.

Time-And-Material Pricing – Example Cont.

A price quote to refurbish a pontoon boat:

Estimated 50 hours of labor

Estimated $3,600 parts and materials

LAKE HOLIDAY MARINA

Time-and-Material Price Quotation

Job: Marianne Perino, repair of 28-foot pontoon boat		
Labor charges: 50 hours @ $38.20		$1,910
Material charges		
Cost of parts and materials	$3,600	
Material loading charge (43.5% × $3,600)	1,566	5,166
Total price of labor and material		$7,076

LO 3: Use time-and-material pricing to determine the cost of services provided.

Let's Review

Crescent Electrical Repair has decided to price its work on a time-and-material basis. It estimates the following costs for the year related to labor.

Technician wages and benefits	$100,000
Office employee's salary/benefits	$ 40,000
Other overhead	$ 80,000

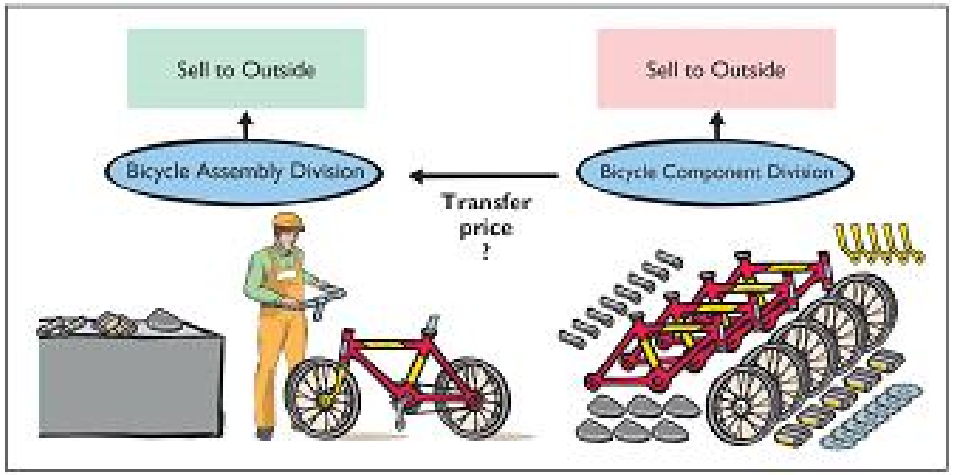
Crescent desires a profit margin of $10 per labor hour and budgets 5,000 hours of repair time for the year. The office employee's salary, benefits, and other overhead costs should be divided evenly between time charges and material loading charges. Crescent labor charge per hour would be:

a. $42
b. $34
c. $32
d. $30

LO 3: Use time-and-material pricing to determine the cost of services provided.

Internal Sales

- Vertically integrated companies – grow in either direction of its suppliers or its customers
- Frequently transfer goods to other divisions as well as outside customers



- How do you price goods *"sold"* with in the company?

LO 4: Determine a transfer price using the negotiated, cost-based, and market-based approaches.

Internal Sales

- ***Transfer price*** - price used to record the transfer between two divisions of a company

- Ways to determine a transfer price:
  - **Negotiated transfer prices**
  - **Cost-based transfer prices**
  - **Market-based transfer prices**

- *Conceptually* - a negotiated transfer price is best

- Due to *practical considerations*, companies often use the other two methods

LO 4: Determine a transfer price using the negotiated, cost-based, and market-based approaches.

Negotiated Transfer Prices

Determined through agreement of the division managers when no external market price is available

LO 4: Determine a transfer price using the negotiated, cost-based, and market-based approaches.

Negotiated Transfer Price - Example

- Alberta Company now sells hiking boots as well as soles for work & hiking boots
- Structured into two divisions: Boot and Sole

  Sole Division - sells soles externally

  Boot Division - makes leather uppers for hiking boots which are attached to purchased soles
- Each Division Manager compensated on division profitability
- Management now wants Sole Division to provide at least some soles to the Boot Division

Negotiated Transfer Price – Example Cont.

- Divisional computation of contribution margin per unit when Boot Division purchases soles from outside suppliers:

Boot Division		Sole Division	
Selling price of hiking boots	$90	Selling price of sole	$18
Variable cost of manufacturing boot (not including sole)	35	Variable cost per sole	11
Cost of sole purchased from outside suppliers	17		
Contribution margin per unit	**$38**	**Contribution margin per unit**	**$ 7**
	Total contribution margin per unit	**$45** ($38 + $7)	

What would be a fair transfer price between the Sole and Boot Divisions?

Negotiated Transfer Price – Example Cont.

- Sole Division has *no excess capacity*
- If Sole sells to Boot, payment must ***at least*** cover *variable cost per unit* ***plus*** *its lost contribution margin per sole (opportunity cost)*
- The minimum transfer price acceptable to Sole is:

Variable Cost	+	Opportunity Cost	=	Minimum Transfer Price
$11	+	$7	=	$18

LO 4: Determine a transfer price using the negotiated, cost-based, and market-based approaches.

Negotiated Transfer Price – Example Cont.

Maximum Boot Division will pay is

what the sole would cost from an

outside buyer: $17

LO 4: Determine a transfer price using the negotiated, cost-based, and market-based approaches.

Negotiated Transfer Price – Example Cont.

- Sole Division has *excess capacity*
- Can produce 80,000 soles, but can sell only 70,000
- Available capacity of 10,000 soles
- Contribution margin of $7 per unit is not lost
- The minimum transfer price acceptable to Sole:

Variable Cost	+	Opportunity Cost	=	Minimum Transfer Price
$11	+	$0	=	$11

LO 4: Determine a transfer price using the negotiated, cost-based, and market-based approaches.

Negotiated Transfer Price – Example Cont.

Negotiate a transfer price between **$11** (minimum acceptable to Sole) and **$17** (maximum acceptable to Boot)

LO 4: Determine a transfer price using the negotiated, cost-based, and market-based approaches.

Negotiated Transfer Price

Variable Costs

- In the minimum transfer price formula,

  variable cost is the variable cost of units sold internally

- May differ - higher or lower - for units sold internally versus those sold externally
- The minimum transfer pricing formula can still be used – just use the internal variable costs

Negotiated Transfer Price - Summary

- Transfer prices established:
  - Minimum by selling division
  - Maximum by the purchasing division
- Often not used because:
  - Market price information sometimes not easily obtainable
  - Lack of trust between the two divisions
  - Different pricing strategies between divisions
- Therefore, companies often use simple cost- or market-based information to develop transfer prices

LO 4: Determine a transfer price using the negotiated, cost-based, and market-based approaches.

Cost-Based Transfer Prices

- Uses costs incurred by the division producing the goods as its foundation
- May be based on variable costs alone *or* on variable costs plus fixed costs
- Selling division may also add markup
- Can result in improper transfer prices causing:

  Loss of profitability for company

  Unfair evaluation of division performance

LO 4: Determine a transfer price using the negotiated, cost-based, and market-based approaches.

Cost-Based Transfer Prices – Example

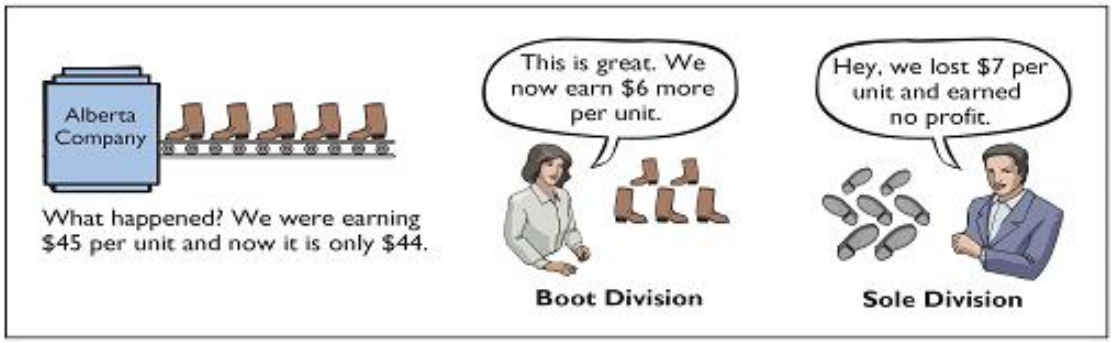
Alberta Company

Boot Division		Sole Division	
Selling price of hiking boots	$90	Selling price of sole	$11
Variable cost of manufacturing boot (not including sole)	35	Variable cost per sole	11
Cost of sole purchased from sole division	11	**Contribution margin per unit**	**$ 0**
Contribution margin per unit	**$44**		
Total contribution margin per unit		**$44** ($44 + $0)	

- Cost-based pricing is bad deal for Sole Division – no profit on transfer of 10,000 soles to Boot Division and loses profit of $70,000 on external sales
- Boot Division is very happy; increases contribution margin by $6 per sole

Cost-Based Transfer Prices – Example Cont.

- If Sole Division has excess capacity, the division reports a zero profit on these 10,000 units and the Boot Division gains $6 per unit
- Overall, the Company is worse off by $60,000



- Does not reflect the division's true profitability nor provide adequate incentive for the division to control costs

LO 4: Determine a transfer price using the negotiated, cost-based, and market-based approaches.

Market-Based Transfer Prices

- Based on existing market prices of competing goods
- Often considered best approach because:
  - Objective
  - Provides proper economic incentives
- *It is indifferent* between selling internally and externally if can charge/pay market price
- Can lead to bad decisions if have excess capacity

Why? No opportunity cost

- Where there is not a well-defined market price, companies use cost-based systems

Let's Review

The Plastics Division of Weston Company manufactures plastic molds and then sells them for $70 per unit. Its variable cost is $30 per unit, and its fixed cost per unit is $10. Management would like the Plastics Division to transfer 10,000 of these molds to another division within the company at a price of $40. The Plastics Division is operating at full capacity. What is the minimum transfer price that the Plastics Division should accept?

a. $10

b. $30

c. $40

d. $70

LO 4: Determine a transfer price using the negotiated, cost-based, and market-based approaches.

Effect Of Outsourcing On Transfer Pricing

- Contracting with an external party to provide a good or service, rather than doing the work internally
- Companies that outsource all of their production:

Virtual Companies

- Use incremental analysis to determine if outsourcing is profitable
- As companies increasingly rely on outsourcing,

fewer components are transferred internally thereby reducing the need for transfer pricing

LO 4: Determine a transfer price using the negotiated, cost-based and market-based approaches.

Transfers Between Divisions In Different Countries

- Going global increases transfers between divisions located in different countries
- 60% of trade between countries is estimated to be transfers between divisions
- Different tax rates make determining appropriate transfer price more difficult

LO 5: Explain issues involved in transferring goods between divisions in different countries.

Transfers Between Divisions in Different Countries - Example

- Boot Division is in a country with 10% tax rate and Sole Division is located in a country with a 30% rate
- The before-tax total contribution margin is $44 *regardless* of whether transfer price is $18 or $11
- However, the after-tax total is

  $38.20 using the $18 transfer price, and

  $39.60 using the $11 transfer price

Why? *More of the contribution margin is attributed to the division in the country with the* ***lower*** *tax rate*

All About You

Is the Price Right?

- In some cases, we can influence the price by our behavior (buying airline tickets online rather than through a travel agent); sometimes we can't (price we pay for cable TV).
- Marketing managers rated pricing issues as their biggest problem
- Some 40 percent of rebates do not get redeemed – simply not bothering, complex redemption rules, short expiration periods, etc.

Is the Price Right?

- Brand makes a difference – especially when price differences narrow.
- Price-optimization software allows retailers to better assess difficult situations.
- Customers may be buying a low-price product because they need that type of product not because of product price.

All About You

What do you think?

- Can drug companies expect people to pay very high prices for some life-saving drugs?
- How can a drug sold in the United States often sell for much less in another part of the world?

Appendix: Other Cost Approaches to Pricing

Absorption-Cost Pricing

- Consistent with GAAP: *includes* both variable and fixed manufacturing costs as product costs
- Both variable and fixed selling and administrative costs are *excluded* from product cost base
- **Steps in approach**:
  - Compute the unit manufacturing cost
  - Compute the markup percentage – must cover the desired ROI as well as selling/administrative expenses
  - Set the target selling price

LO 6: Determine prices using absorption-cost pricing and variable-cost pricing.

Appendix: Other Cost Approaches to Pricing

Absorption-Cost Pricing - Example

Step 1: Compute the unit manufacturing cost

	Per Unit
Direct materials	$23
Direct labor	17
Variable manufacturing overhead	12
Fixed manufacturing overhead ($280,000 ÷ 10,000)	28
Total unit manufacturing cost (absorption cost)	$80

The information regarding selling and administrative expenses and ROI is also available:

Variable selling and administrative expenses	$8
Fixed selling and administrative expenses ($240,000 ÷ 10,000)	$24
Desired ROI per unit	$20

Appendix: Other Cost Approaches to Pricing

Absorption-Cost Pricing – Example Continued

Step 2: Compute the markup percentage

Desired ROI Per Unit	+	Selling and Administrative Expenses Per Unit	=	Markup Percentage	×	Manufacturing Cost Per Unit
$20	+	$32	=	MP	×	$80

$$MP = (\$20 + \$32) \div \$80 = 65\%$$

LO6: Determine prices using absorption-cost pricing and variable-cost pricing.

Appendix: Other Cost Approaches to Pricing

Absorption-Cost Pricing - Example

Step 3: Set the target selling price

Manufacturing Cost per Unit	+	(Markup Percentage	×	Manufacturing Cost Per Unit)	=	Target Selling Price
$80	+	(65%	×	$80)	=	$132

Because of fixed costs, if more than 10,000 units are sold, the ROI will be greater than 20% and vice versa

Most companies that use cost-plus pricing use absorption (or full) cost as the basis

LO 6: Determine prices using absorption-cost pricing and variable-cost pricing.

Appendix: Other Cost Approaches to Pricing

CLEANMORE PRODUCTS, INC.
Budgeted Absorption-Cost Income Statement

Revenue (10,000 units × $132)	$1,320,000
Cost of goods sold (10,000 units × $80)	800,000
Gross profit	520,000
Selling and administrative expenses [10,000 units × ($8 + $24)]	320,000
Net income	$ 200,000

Budgeted ROI

$$\frac{\text{Net income}}{\text{Invested assets}} = \frac{\$200{,}000}{\$1{,}000{,}000} = 20\%$$

Markup Percentage

$$\frac{\text{Net income + Selling and administrative expenses}}{\text{Cost of goods sold}} = \frac{\$200{,}000 + \$320{,}000}{\$800{,}000} = 65\%$$

LO 6: Determine prices using absorption-cost pricing and variable-cost pricing.

Appendix: Other Cost Approaches to Pricing

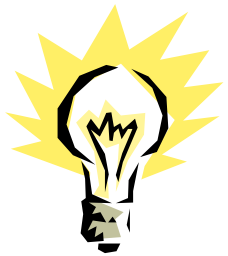
Summary: Absorption-Cost Pricing

- Used by most companies that use cost-plus pricing
- **Reasons:**

  Information readily available – cost effective

  Use of only variable costs may result in too low a price – suicidal price cutting

  Most defensible base for justifying prices



Appendix: Other Cost Approaches to Pricing

Variable-Cost Pricing

- Cost base consists of all *variable costs* associated with a product – manufacturing, selling, administrative
- Since fixed costs are ***not*** included in base,

markup must provide for fixed costs (manufacturing, selling, administrative) and the target ROI

- Useful for making short-run decisions because variable and fixed cost behaviors are considered separately

Appendix: Other Cost Approaches to Pricing

Variable-Cost Pricing

- **Steps in variable-cost pricing:**

  Compute the unit variable cost

  Compute markup percentage

  Set target selling price

LO 6: Determine prices using absorption-cost pricing and variable-cost pricing.

Appendix: Other Cost Approaches to Pricing

Variable-Cost Pricing - Example

Step 1: Compute the unit variable cost

	Per Unit
Direct materials	$23
Direct labor	17
Variable manufacturing overhead	12
Variable selling and administrative expense	8
Total unit variable cost	$60

LO 6: Determine prices using absorption-cost pricing and variable-cost pricing.

Appendix: Other Cost Approaches to Pricing

Variable-Cost Pricing - Example

Step 2: Compute markup percentage

Desired ROI Per Unit	+	Fixed Costs Per Unit	=	Markup Percentage	×	Variable Cost Per Unit
$20	+	($28 + $24)	=	MP	×	$60

$$\text{MP} = \frac{\$20 + (\$28 + \$24)}{\$60} = 120\%$$

LO 6: Determine prices using absorption-cost pricing and variable-cost pricing.

Appendix: Other Cost Approaches to Pricing

Variable-Cost Pricing - Example

Step 3: Set target selling price

Variable Cost Per Unit	+	(Markup Percentage	×	Variable Cost Per Unit)	=	Target Selling Price
$60	+	(120%	×	$60)	=	$132

Using the $132 target price produces the desired 20% ROI at a volume level of 10,000 units.

Appendix: Other Cost Approaches to Pricing

CLEANMORE PRODUCTS, INC.
Budgeted Variable-Cost Income Statement

Revenue (10,000 vacuums × $132)		$1,320,000
Variable costs (10,000 vacuums × $60)		600,000
Contribution margin		720,000
Fixed manufacturing overhead (10,000 vacuums × $28)	$280,000	
Fixed selling and administrative expenses (10,000 vacuums × $24)	240,000	520,000
Net income		$ 200,000

Budgeted ROI

$$\frac{\text{Net income}}{\text{Invested assets}} = \frac{\$200{,}000}{\$1{,}000{,}000} = 20\%$$

Markup Percentage

$$\frac{\text{Net income + Fixed costs}}{\text{Variable costs}} = \frac{\$200{,}000 + \$520{,}000}{\$600{,}000} = 120\%$$

LO 6: Determine prices using absorption-cost pricing and variable-cost pricing.

Appendix: Other Cost Approaches to Pricing

Summary: Variable-Cost Pricing

- Avoids blurring effects of cost behavior on operating income
- Reasons for variable-cost pricing:
  - More consistent with CVP analysis
  - Provides data for pricing special orders by showing incremental cost of accepting one more order
  - Avoids arbitrary allocation of common fixed costs to individual product lines

LO 6: Determine prices using absorption-cost pricing and variable cost pricing.

Chapter Review – Brief Exercise 8-2

Gruner Corporation produces snowboards. The following per unit cost information is available:

Direct materials	$12
Direct labor	$8
Variable manufacturing overhead	$6
Fixed manufacturing overhead	$14
Variable selling and administrative expenses	$4
Fixed selling and administrative expenses	$12

Using a 32% markup percentage on total per unit cost, compute the target selling price.

Chapter Review – Brief Exercise 8-2

Variable Cost per unit:	
Direct materials	$12
Direct labor	8
Mfg. Overhead	6
Selling & Admin.	4
Total	$30

Fixed Cost per unit:	
Mfg. overhead	$14
Selling & Admin.	12
Total	$26

Total per unit Cost = $30 + $26 = $56

Target selling price = $56 + ($56 X 32% markup)

= $56 + $17.92

= **$73.92**

Copyright