Survey of Accounting, 9e

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Chapter 6

Receivables and Inventories

Learning Objectives

- Describe the common classifications of receivables

- Describe the nature of and the accounting for uncollectible receivables

- Describe the direct write-off method of accounting for uncollectible receivables

- Describe the allowance method of accounting for uncollectible receivables

- Describe the common classifications of inventories

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Learning Objectives (continued)

- Describe three inventory cost flow assumptions

- Compare and contrast the use of the three inventory costing methods

- Describe how receivables and inventory are reported on the financial statements

- Metric-Based Analysis: Describe and illustrate the accounts receivable turnover and inventory turnover in assessing a company's liquidity and operations

Learning Objectives 1

Describe the common classifications of receivables

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Classification of Receivables

- The term **receivables** includes money claims against other entities, including people, companies, and other organizations

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                    Classification of
                       receivables
        Accounts                              Other
        receivable                          receivables

                        Notes
                      receivable
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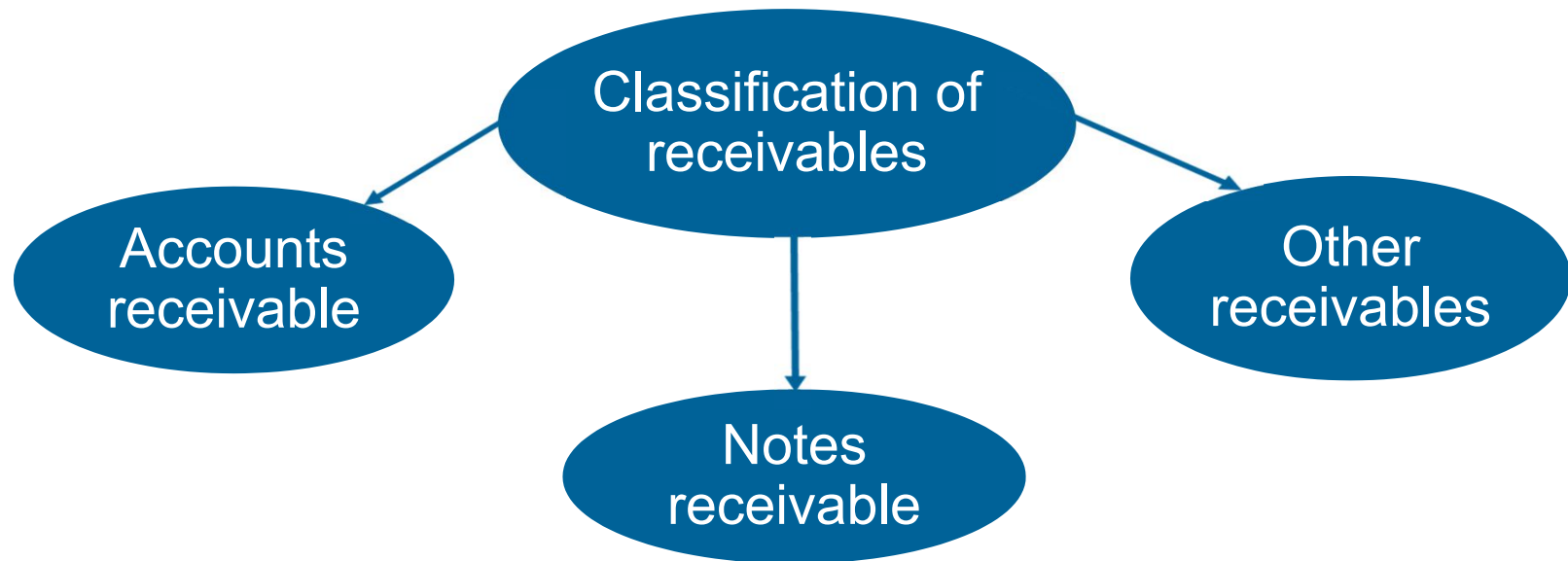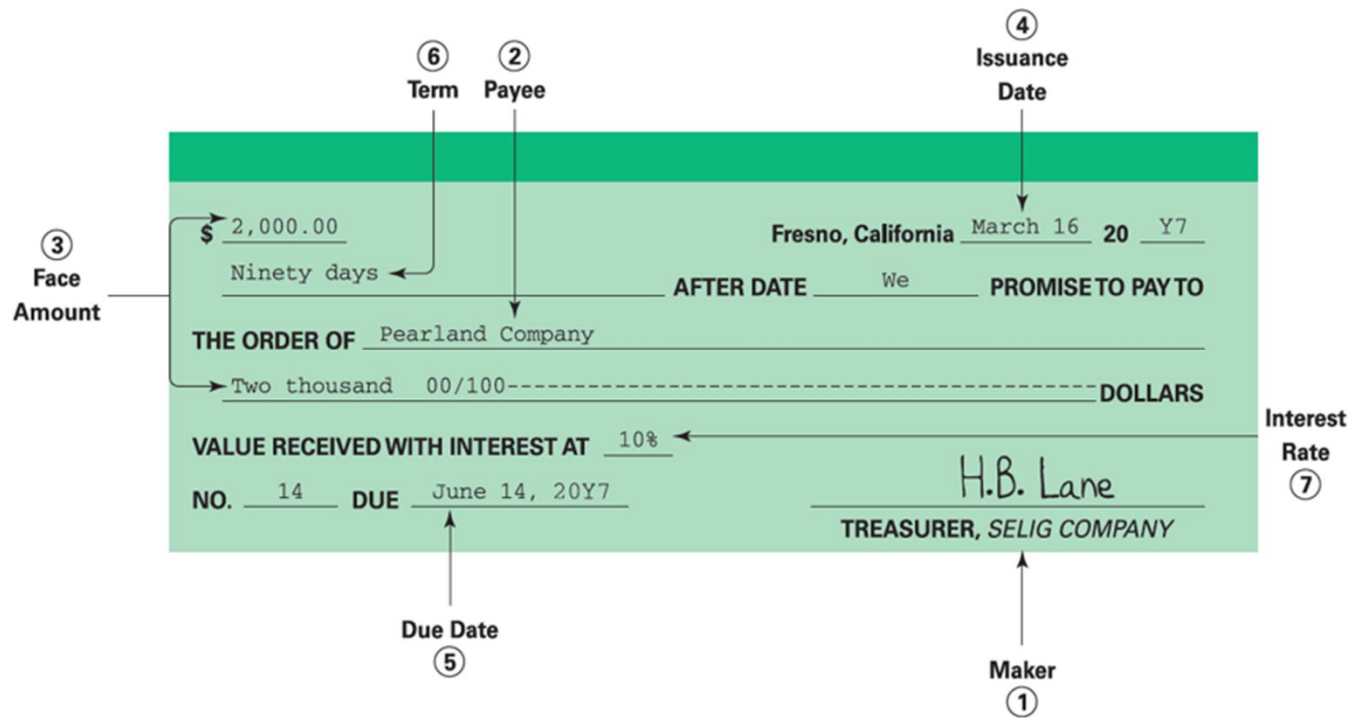
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Exhibit 1: Promissory Note

Computation of Due Date of a Note

- Maker of the note: Selig Company
- Payee: Pearland Company
- Face value of the note is $2,000
  - Issuance date: March 16, 20Y7
  - Term of the note: 90 days with a due date of June 14, 20Y7 as calculated below:

Days in March	31 days
Minus issuance date of note	(16)
Days remaining in March	15 days
Add days in April	30
Add days in May	31
Add days in June (due date of June 14)	14
Term of note	90 days

Computation of Due Date of a Note (continued)

- Interest = Face Amount × Interest Rate × (Term/360 days)
- Interest on the note = $2,000 × 10% × (90/360) = $50
- **Maturity value** of the note = $2,000 + $50 = $2,050

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Learning Objective 2

Describe the nature of and the accounting for uncollectible receivables

Uncollectible Receivables

- Part of the accounts receivable that becomes uncollectible

- Companies avoid uncollectible receivables by:
  - Shifting the risk to other companies
  - Selling their receivables

- **Bad debt expense**: Operating expense recorded from uncollectible receivables

Uncollectible Receivables (continued)

- Indications that an account may be uncollectible
  - Receivable is past due
  - Customer does not respond to the company's attempts to collect
  - Customer files for bankruptcy
  - Customer closes its business
  - Company cannot locate the customer

# Methods of Accounting for Uncollectible Receivables

- **Direct write-off method**: Records bad debt expense only when an account is determined to be worthless
- **Allowance method**: Records bad debt expense by estimating uncollectible accounts at the end of the accounting period

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Learning Objective 3

Describe the direct write-off method of accounting for uncollectible receivables

Effect of Direct Write-Off Method on Financial Statements

- On May 10, a $4,200 account receivable from Markieff Carson has been determined to be uncollectible
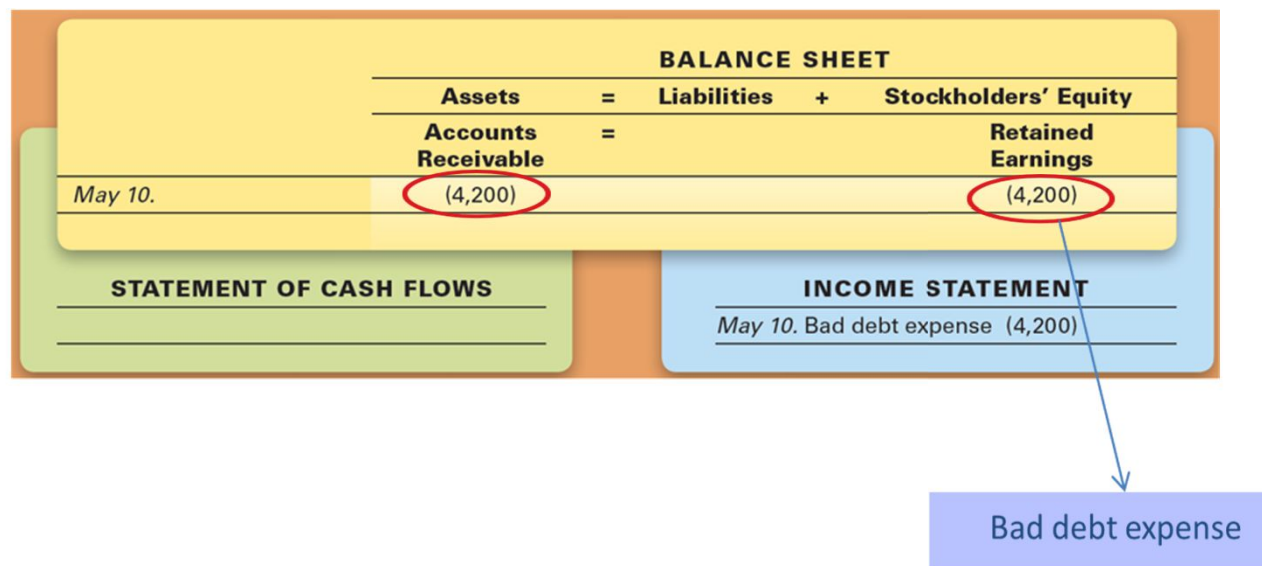
Metric Analyses

- Liquidity metric

$$\text{Days' Sales in Receivables} = \frac{\text{Average Accounts Receivables}}{\text{Average Daily Sales}}$$

- Profitability metric

$$\text{Return on Sales} = \frac{\text{Operating Income}}{\text{Sales}}$$

Transaction Metric Effects

LIQUIDITY

Days' Sales in Receivables   Decrease

PROFITABILITY

Return on Sales   Decrease

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Reinstatement and Receipt of Cash

- Markieff Carson account of $4,200 written off on May 10 is later collected on November 21
  - Reinstate account

Reinstatement and Receipt of Cash (continued)

- Markieff Carson account of $4,200 written off on May 10 is later collected on November 21
  - Collected account
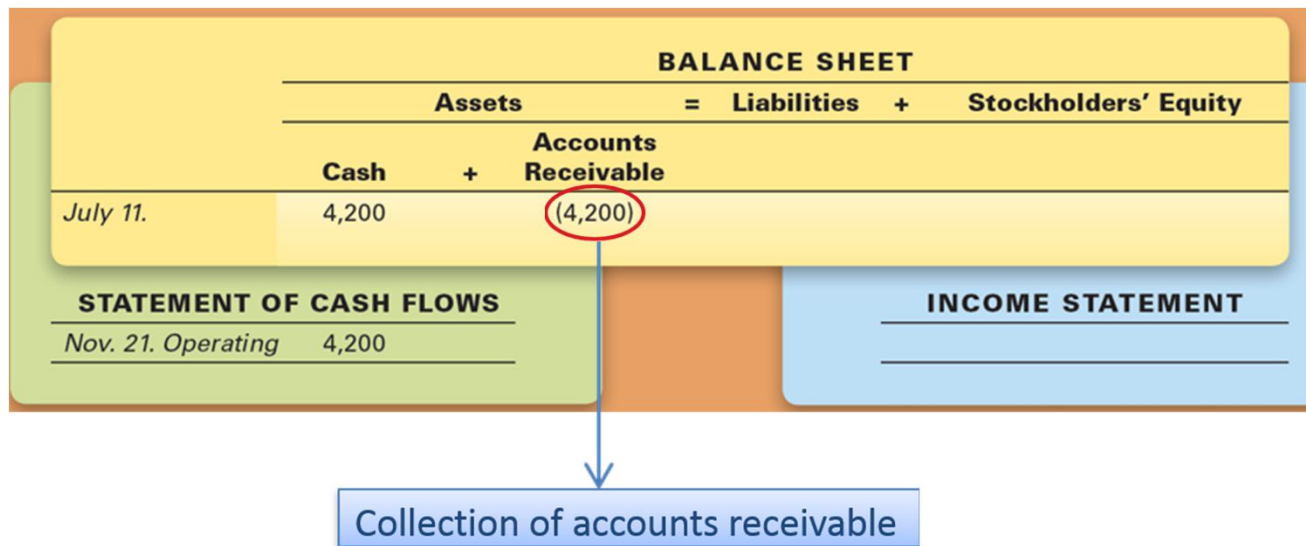
Reinstatement and Receipt of Cash: Transaction Metric Effects

Date	Description	Liquidity Days' Sales in Receivables	Profitability Return on Sales
Nov. 21	Reinstate account	Increase	Increase
21	Collected cash	Decrease	No effect

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Learning Objective 4

Describe the allowance method of accounting for uncollectible receivables

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Allowance Method

- Records bad debt expense by an adjustment
    - **Allowance for doubtful accounts**: Contra asset account created by a company when it cannot categorize customer accounts on the basis of their collectability

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Allowance Method (continued)

- DPS Company estimates that $30,000 of the December 31 accounts receivable will be uncollectible

Adjustment Metric Effects

LIQUIDITY

Days' Sales in Receivables   Decrease

PROFITABILITY

Return on Sales   Decrease

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Write-Offs to the Allowance Account

- Writing off Chandler Somers's account of $6,000 with DPS Company

- Transaction metric effects

Reinstatement and Collection

- Reinstate account

- Collected cash

Transaction Metric Effects: Reinstatement and Collection

Date	Description	Liquidity Days' Sales in Receivables	Profitability Return on Sales
June 10	Reinstate account	No Effect	No Effect
10	Collected cash	Decrease	No Effect

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Estimating Uncollectibles

- Based on past experience, industry averages, and forecasts of the future
- Two methods used for estimation
  - Percent of sales method
  - Analysis of receivables method

Percent of Sales Method: Illustration

- The data for DPS Company on December 31, 20Y7, before any adjustments are as follows:

Balance of Accounts Receivable	$240,000
Balance of Allowance for Doubtful Accounts	$(3,250)
Total credit sales	$3,000,000
Bad debt as a percent of credit sales	¾%

- Bad Debt Expense = Credit Sales × Bad Debts as a Percent of Credit Sales

$$= \$3,000,000 \times \frac{3}{4}\% = \$22,500$$

Percent of Sales Method: Illustration (continued)

- Adjustment metric effects

Exhibit 2: Aging-of-Receivables Schedule, December 31, 20Y7

	A	B	C	D	E	F	G	H	I
			Not			Days Past Due			
			Past						Over
	Customer	Balance	Due	1–30	31–60	61–90	91–180	181–365	365
4	Ashby & Co.	1,500			1,500				
5	B. T. Barr	6,100					3,500	2,600	
6	Brock Co.	4,700	4,700						
21									
22	Saxon Woods Co.	600					600		
23	Total	240,000	125,000	64,000	13,100	8,900	5,000	10,000	14,000
24	Percent uncollectible			2%	5%	10%	20%	30%	50%	80%
25	Estimate of uncollectible accounts	26,490	2,500	3,200	1,310	1,780	1,500	5,000	11,200

Steps 1–3

Step 4 → 23

Step 5 → 24

Step 6 → 25

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Analysis of Receivables Method: Illustration

- DPS Company sold merchandise to Saxon Woods Co. on August 29, 20Y7, with terms 2/10, n/30
  - Due date: September 28, 20Y7
  - Total number of days past due: 94 days
  - Account receivable: $600
  - Desired adjusted balance for Allowance for Doubtful Accounts: $26,490
  - Unadjusted balance in the allowance account: ($3,250)
    - Amount to be added to this balance: $(23,240)

Analysis of Receivables Method: Illustration (continued)

- Adjustment metric effects

Exhibit 3: Differences between Estimation Methods

Estimation Method	Focus of Method	Financial Statement Emphasis	DPS Company Example	
			Bad Debt Expense (Adjusting Entry Amount)	Allowance for Doubtful Accounts (After Adjusting Entry)
Percent of Sales Method	Bad Debt Expense Estimate	Income Statement	$22,500	$(25,750)* ($22,500 + $3,250)
Analysis of Receivables Method	Allowance for Doubtful Accounts Estimate	Balance Sheet	$23,240* ($26,490 − $3,250)	$(26,490)

*Indicates that the estimate was derived (sometimes called "plugged") from the estimate on which this method focuses.

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Learning Objective 5

Describe the common classifications of inventories

Inventory

- Merchandise on hand (not sold) at the end of the period
- Inventory sold becomes the cost of goods sold
- Cost of inventory = Purchase price − Purchase discounts
- Includes other costs, such as freight, import duties, property taxes, and insurance costs
- Inventory is a large asset for most retail companies

Learning Objective 6

Describe three inventory cost flow assumptions

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Inventory Cost Flow Assumptions

- An accounting issue arises when identical units of inventory are acquired at different unit costs during a period

- When an item is sold, it is necessary to determine its cost using a cost flow assumption and related inventory cost flow method

Exhibit 5: Inventory Cost Flows

Cost Flow Assumption

1. Cost flow is in the order in which the costs were incurred.

2. Cost flow is in the reverse order in which the costs were incurred.

3. Cost flow is an average of the costs.

Inventory Costing Method

First-in, First-out (FIFO)

Purchased Goods

FIFO

Sold Goods

Last-in, First-out (LIFO)

Purchased Goods

Sold Goods

LIFO

Average Cost

Purchased Goods

AVERAGE COST

Sold Goods

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Specific Identification Inventory Cost Flow Method

- Used when the merchandise can be identified with a specific purchase
  - Ending inventory consists of the remaining units on hand

			Units	Cost
May	10	Purchase	1	$ 9
	18	Purchase	1	13
	24	Purchase	1	14
Total			3	$36

Average cost per unit: $12 ($36 ÷ 3 units)

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Exhibit 6: Inventory Costing Methods
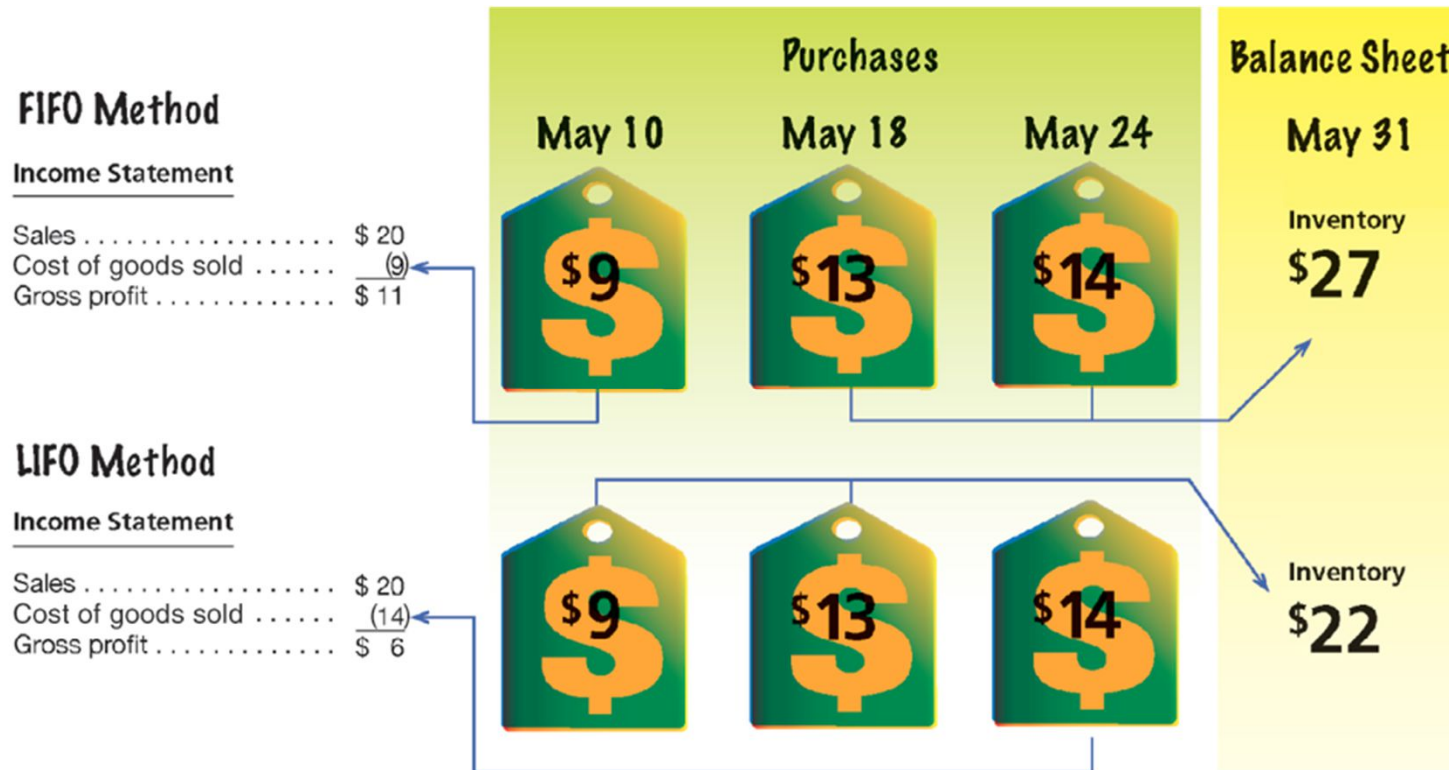
Exhibit 6: Inventory Costing Methods (continued)
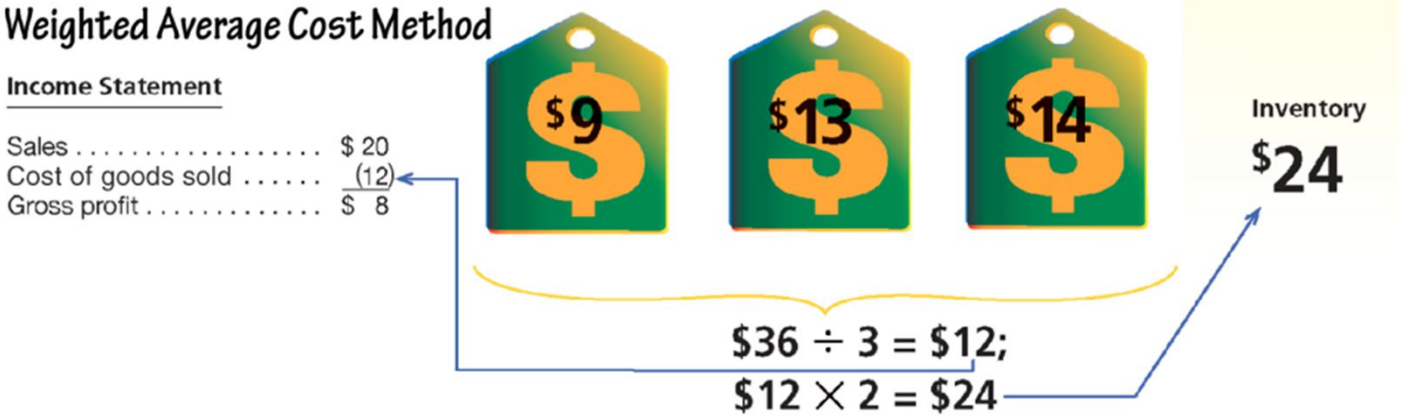
Learning Objective 7

Compare and contrast the use of the three inventory costing methods

Comparing Inventory Costing Methods

Method	Income Statement Effect	Balance Sheet Effect	Result
FIFO	Under inflationary conditions, lower cost of goods sold (COGS) and higher gross profit	Under inflationary conditions, ending inventory amount is similar to current replacement cost	In a period of declining prices, lower gross profit
LIFO	Under inflationary conditions, higher COGS and lower gross profit	Under inflationary conditions, lower inventory values	Under inflationary conditions, current costs match current revenues
Weighted average	Averaged gross profit	Averaged inventory value	Compromise between LIFO and FIFO

LIFO and Taxes

LIFO conformity rule

- If a company elects to use LIFO inventory valuation for tax purposes, then the company must also use LIFO for external financial reporting

LIFO reserve

- Estimated difference between the LIFO inventory and the inventory if FIFO has been used
- Noted in financial statements

LIFO and Taxes (continued)

- Most inventories owned by Deere & Company and its U.S. equipment subsidiaries are valued at cost, on the "last-in, first-out" (LIFO) basis
  - If all inventories had been valued on a FIFO basis, estimated inventories by major classification at October 31 in millions of dollars would have been as follows:

INVENTORIES

	Year 2	Year 1
Raw materials and supplies	$ 1,559	$ 1,724
Work in process	450	654
Finished goods and parts	3,234	3,360
Total FIFO value	$ 5,243	$ 5,738
Less adjustment to LIFO value	(1,426)	(1,528)
Inventories	$ 3,817	$ 4,210

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Financial Statement Effects of Using FIFO Rather Than LIFO

BALANCE SHEET				
Assets	=	**Liabilities**	+	**Stockholders' Equity**
Inventory* **(FIFO)**	=			**Retained Earnings**
Higher				Higher

STATEMENT OF CASH FLOWS

INCOME STATEMENT	
Sales	No Effect
Cost of goods sold	Lower
Net income	Higher

*Assuming rising prices.

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Transaction Metrics for Inventory Cost Flow

- Selection of an inventory cost flow method affects a company's liquidity and profitability metrics

- Liquidity metric: **Days' sales in inventory**

$$\text{Days' Sales in Inventory} = \frac{\text{Average Inventory}}{\text{Average Daily Cost of Goods Sold}}$$

- Profitability metric: **Return on sales**

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Transaction Metric Effects (continued)

- Assuming rising prices, the effects of selecting FIFO instead of LIFO on the liquidity and profitability metrics are as follows:

LIQUIDITY	
Days' Sales in Inventory	Increase

PROFITABILITY	
Return on Sales	Increase

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Learning Objective 8

Describe how receivables and inventory are reported on the financial statements

Exhibit 7: Receivables and Inventory on the Balance Sheet

Crabtree co.
Balance Sheet
December 31, 20Y3

Assets

Current assets:		
Cash and cash equivalents.		$119,500
Notes receivable		250,000
Accounts receivable.	$445,000	
Less allowance for doubtful accounts	(15,000)	430,000
Interest receivable		14,500
Inventory—at lower of cost (first-in, first-out method) or market		216,300

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Receivables

- Classified as current assets if cash is expected to be realized within one year
- Receivables reported on a recent Johnson & Johnson (JNJ) balance sheet

Assets (in millions)	Year 2	Year 1
Current assets:		
Cash and cash equivalents.	$14,523	$20,927
Marketable securities.	18,566	8,279
Accounts receivable, net of allowances of $275 in Year 2 and $333 in Year 1	10,985	11,713
Inventories.	8,184	7,878
Prepaid expenses and other current assets.	7,053	7,610
Total current assets.	$59,311	$56,407

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Receivables (continued)

- Other disclosures related to receivables
  - Presented on the face of the financial statements or in the notes
  - Include the market (fair) value of the receivables if significantly different from the reported value
  - Nature of the risks should be disclosed if unusual credit risks exist within the receivables

Inventory Valuation

- Cost is the primary basis for valuing and reporting inventories in the financial statements

- **Lower-of-cost-or-market (LCM) method**
  - Market refers to the **net realizable value** of the inventory

    Net Realizable Value = Estimated Selling Price − Direct Costs of Disposal
    - Direct costs of disposal include selling expenses such as special advertising or sales commissions on the sale

Computation of Net Realizable Value

- Assume the following data about an item of damaged merchandise:

Original cost	$1,000
Estimated selling price	800
Selling expenses	150

- The merchandise should be valued at its net realizable value of $650 as follows:
  - Net Realizable Value = $800 − $150 = $650

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Lower-of-Cost-or-Market Method

- Applied by determining the cost, market price, and any declines for one of the following:
  - Each item in the inventory
  - Each major class or category of inventory
  - Total inventory as a whole

- Assume the following data for 400 identical units of Item A in inventory on December 31, 20Y4:

Unit purchased cost	$10.25
Replacement cost on December 31, 20Y4	9.50

Exhibit 8: Determining Inventory at Lower of Cost or Market

	A	B	C	D	E	F	G
1			Cost	Market Value		Total	
2		Inventory	per	per Unit			
3	Item	Quantity	Unit	(Net Realizable Value)	Cost	Market	LCM
4	A	400	$10.25	$ 9.50	$ 4,100	$ 3,800	$ 3,800
5	B	120	22.50	24.10	2,700	2,892	2,700
6	C	600	8.00	7.75	4,800	4,650	4,650
7	D	280	14.00	14.75	3,920	4,130	3,920
8	Total				$15,520	$15,472	$15,070
9							

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Lower-of-Cost-or-Market Method (continued)

- Financial statement effects

BALANCE SHEET			
Assets	**= Liabilities +**		**Stockholders' Equity**
Inventory	**=**		**Retained Earnings**
Lower			Lower

STATEMENT OF CASH FLOWS

INCOME STATEMENT	
Sales	No Effect
Cost of goods sold	Higher
Net income	Lower

- Transaction metric effects

LIQUIDITY	
Days' Sales in Inventory	Decrease

PROFITABILITY	
Return on Sales	Decrease

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Learning Objective 9

Metric-Based Analysis: Describe and illustrate the accounts receivable turnover and inventory turnover in assessing a company's liquidity and operations

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Accounts Receivable and Inventory

- Large current assets for many companies
- Objective of managing receivables and inventory is to convert them to cash by collecting receivables and selling inventory
- Useful measures of liquidity and efficiency of operations
  - Accounts receivable turnover
  - Inventory turnover

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Accounts Receivable Turnover and Days' Sales in Receivables

- Accounts receivable turnover

$$\text{Accounts Receivable Turnover} = \frac{\text{Sales}}{\text{Average Accounts Receivable}}$$

- Days' sales in receivables

$$\text{Days' Sales in Receivables} = \frac{365 \text{ Days}}{\text{Accounts Receivable Turnover}}$$

Inventory Turnover and Days' Sales in Inventory

- Inventory turnover

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

- Days' sales in inventory

$$\text{Days' Sales in Inventory} = \frac{\text{365 Days}}{\text{Inventory Turnover}}$$

Computation of Accounts Receivable Turnover for Downing Inc.

- Assume the following data for Downing Inc. for the year ending December 31, 20Y4:

Sales for 20Y4	$9,125,000
Accounts Receivable, Jan. 1, 20Y4	400,000
Accounts Receivable, Dec. 31, 20Y4	600,000

$$\text{Accounts Receivable Turnover} = \frac{\$9{,}125{,}000}{(\$400{,}000 + \$600{,}000) \div 2} = \frac{\$9{,}125{,}000}{\$500{,}000} = 18.3^*$$

* Rounded to one decimal place.

$$\text{Days' Sales in Receivables} = \frac{365 \text{ Days}}{\text{Accounts Receivable Turnover}} = \frac{365 \text{ Days}}{18.3} = 20 \text{ days}^*$$

* Rounded to nearest day.

Computation of Inventory Turnover for Downing Inc.

- Assume the following data for Downing Inc. for the year ending December 31, 20Y4:

Cost of goods sold for 20Y4 $4,745,000
Inventory, Jan. 1, 20Y4   285,000
Inventory, Dec. 31, 20Y4   339,000

$$\text{Inventory Turnover} = \frac{\$4,745,000}{(\$285,000 + \$339,000) \div 2} = \frac{\$4,745,000}{\$312,000} = 15.2^*$$

*Rounded to one decimal place.

$$\text{Days' Sales in Inventory} = \frac{365 \text{ Days}}{\text{Inventory Turnover}} = \frac{365 \text{ Days}}{15.2} = 24 \text{ days}^*$$

*Rounded to nearest day.

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End of Chapter 6

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