Chapter 7

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Reporting and Interpreting Cost of Goods Sold and Inventory

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The primary goals of inventory management are to have sufficient quantities of high-quality inventory available to serve customer's needs while minimizing the costs of carrying inventory (production, storage, obsolescence, and financing).

Nature of Inventory and Cost of Goods Sold

Inventory is tangible property that is either

1. Held for sale in the normal course of business
2. Used to produce goods or services for cell

Merchandisers (wholesale or retail business) often hold

1. Merchandise inventory
   a. Goods(or merchandise) held for resale in the normal course of business. The goods usually are acquired in a finished condition and are ready for sale without further processing.

Manufacturing Businesses hold three types of inventory

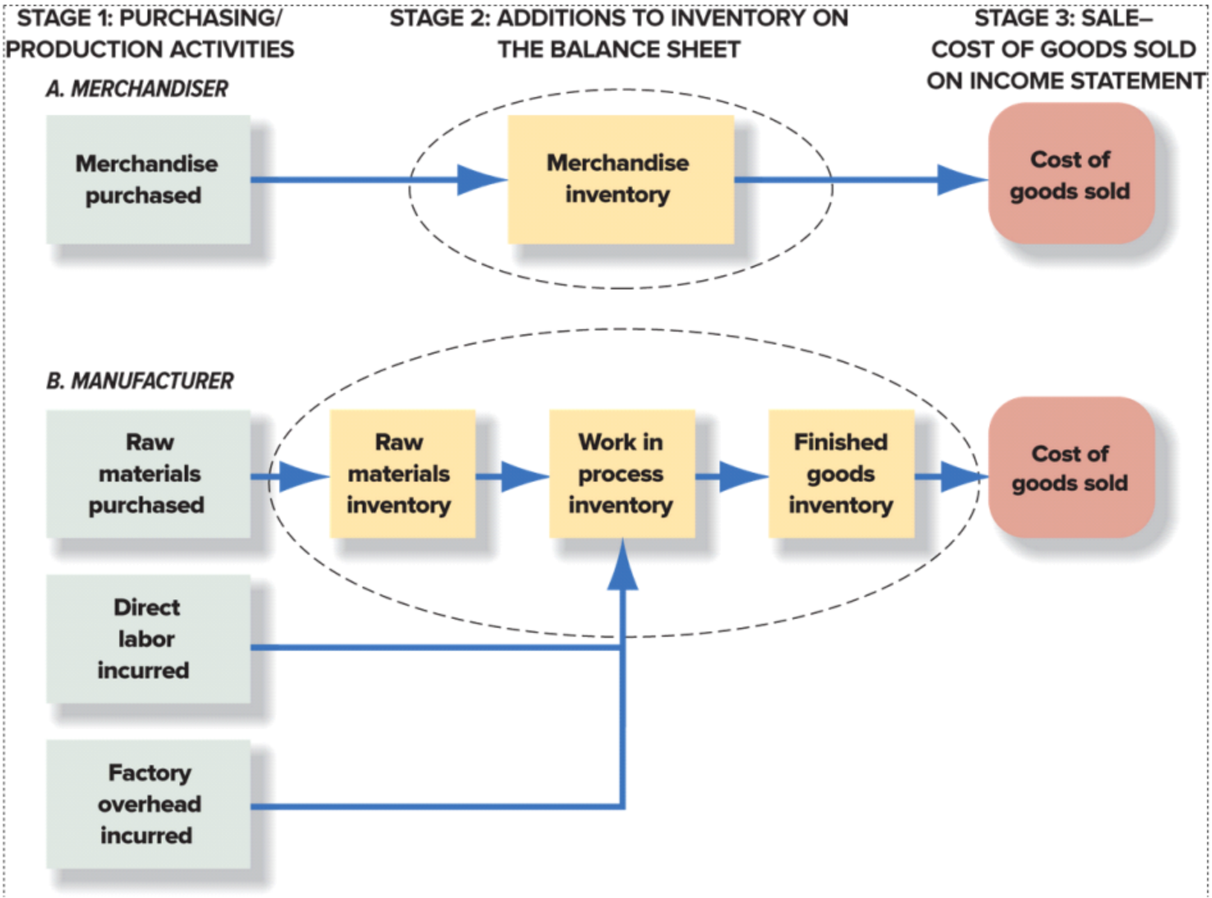
1. Raw Materials Inventory
2. Work in process inventory
3. Finished goods inventory

Costs Included in Inventory Purchases

1. Invoice price to be paid plus other expenditures related to the purchase
   a. Freight charges to deliver the items to the warehouse (freight-in)
   b. **Purchase returns and allowances** or purchase discounts taken are subtracted
   c. Any cost before this inventory is **ready to use**

Flow of Inventory Costs

EXHIBIT 7.2 Flow of Inventory Costs



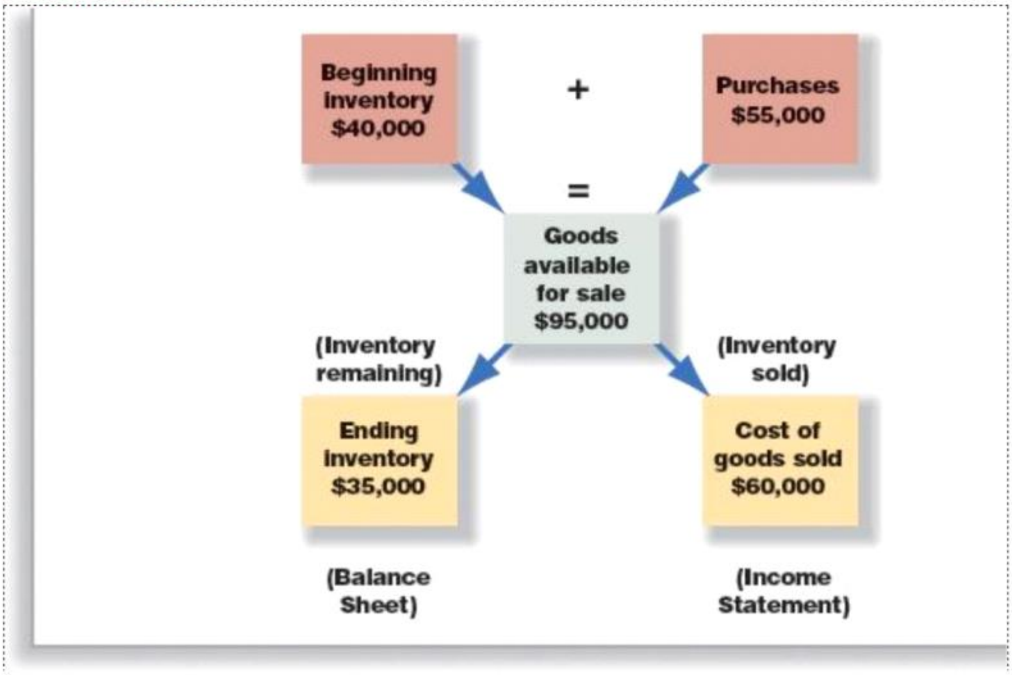
<u>Direct Labor Cost</u> - earnings of employees who work directly on the products being manufactured.
<u>Factory Overhead Cost</u> - all other manufacturing costs. (e.g. factory supervisor's salary, cost of heat, light, and power, etc.)

Cost of Goods Sold Equation

BI(Beginning Inventory) + P(Purchase) - EI(Ending Inventory) = CGS(Cost of Goods Sold)

Merchandise Inventory (A)			
Beginning inventory	40,000		
Add: Purchases of inventory	55,000	Deduct: Cost of goods sold	60,000
Ending inventory	35,000		

EXHIBIT 7.3 Cost of Goods Sold for Merchandise Inventory



Perpetual Inventory System

1. Purchase transactions are recorded directly in an inventory account.
2. When each sale is made (and recorded to the income statement), a companion cost of goods sold is also recorded, decreasing inventory and recording cost of goods sold.
    a. As a result, information on costs of goods sold and ending inventory is available on a continuous(perpetual) basis.
3. A detailed record would be maintained(on a transaction-by-transaction basis) for each type of merchandise stocked, showing
    a. Units and costs of the beginning inventory
    b. Unit and cost of each purchase
    c. Units and cost of the goods for each sale
    d. Units and cost of the goods on hand at any point in time

Cost, quality, and customer service pressures brought on by increasing competition, combined with dramatic declines in the cost of information systems, have made sophisticated perpetual inventory systems a requirement at all but the smallest companies. So we will continue to focus on perpetual inventory systems throughout the book.

Periodic Inventory System

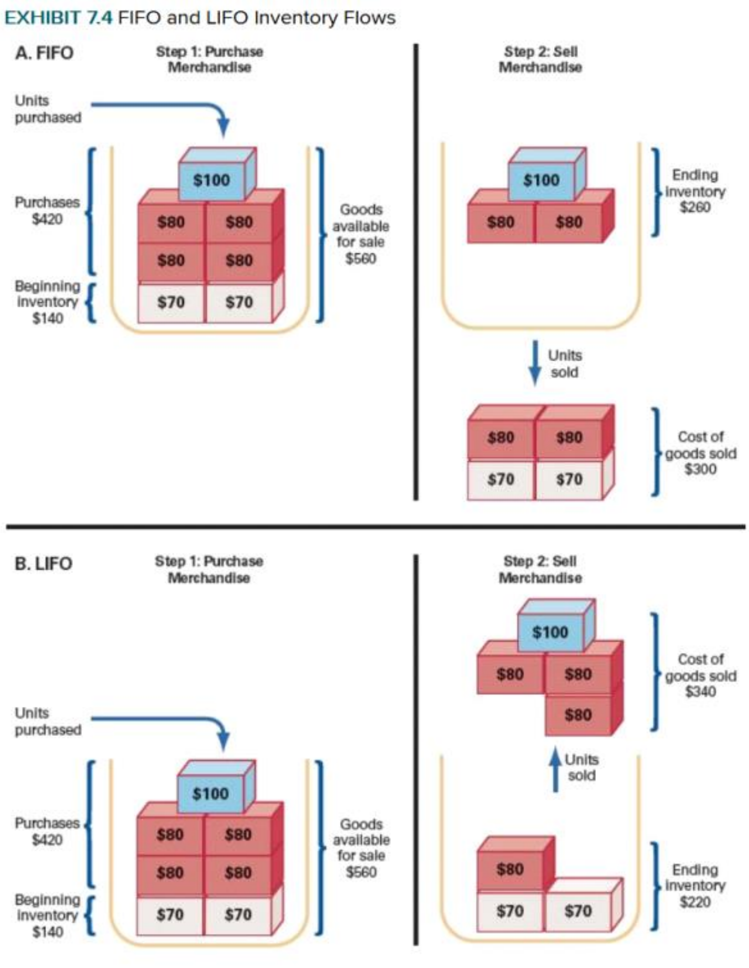
1. No up-to-date record of inventory is maintained during the year
2. Actual physical count of the goods remaining on hand is required at the end of each period.
    a. Number of units of each type of merchandise on hand is multiplied by unit cost to compute the dollar amount of the ending inventory.
3. Amount of cost of goods sold cannot be reliably determined until the inventory count is complete.
4. Lack of inventory information. Managers not informed about low or excess stock situations.

Inventory Costing Methods

Prices of most goods do change.

Four generally accepted inventory costing methods are available for determining cost of goods sold.

1. Specific Identification
    a. Cost of each item is individually identified and recorded
    b. Impractical when large quantities of similar items are stocked.
2. Average Cost
    a. Uses the weighted average unit cost of goods available for sale for both cost of goods sold and ending inventory.
    b. $\text{Average Cost} = \dfrac{Cost\ of\ goods\ available\ for\ sale}{Number\ of\ units\ available\ for\ sale}$
3. First In, First Out (FIFO)
    a. Earliest goods purchased are the first goods sold.
4. Last In, First Out (LIFO)
    a. Most recently purchased goods are sold first



Perpetual Inventory Systems and Cost Flow Assumptions in Practice

1. FIFO inventory and cost of goods sold are the same whether computed on a perpetual or periodic basis.
2. Accounting systems usually keep track of cost of goods sold on a FIFO or average cost basis, regardless of its cash flow assumption used for financial reporting.

a. Companies who wish to report with a LIFO assumption will need to provide an adjusting entry at the end of the accounting period.

Note: US GAAP allows FIFO or LIFO and different assumptions for different goods. But IFRS only allows FIFO.

Effects of Inventory Methods on the Financial Statement

Increasing Costs: Normal Financial Statement Effects

	FIFO	**LIFO**
Cost of goods sold on income statement	Lower	Higher
Net income	Higher	Lower
Income taxes	Higher	Lower
Inventory on balance sheet	Higher	Lower

Decreasing Costs: Normal Financial Statement Effects

	FIFO	**LIFO**
Cost of goods sold on income statement	Higher	Lower
Net income	Lower	Higher
Income taxes	Lower	Higher
Inventory on balance sheet	Lower	Higher

So managers would usually choose FIFO if we have decreasing inventory values, and LIFO if the inventory value is increasing. BUT - owners may want the assets to be high so that they can declare dividends.

Valuation At Lower Cost Or Net Realizable Value(Overrides Inventory Flow Assumption)

Inventories should be measured initially at their purchase cost in conformity with the cost principle. When the net realizable value (NRV) (sales prices - costs to cell) of goods remaining in ending inventory falls below cost, these goods must be assigned a unit cost equal to their current estimated net realizable value. This rule is called measuring inventories at the lower of cost or net realizable value.

This departure from the cost principle is based on the **conservatism constraint**, which requires special care to avoid overstating assets and income. It is particularly important for two types of companies:

1. High-tech companies that manufacture goods for which costs of production and selling prices are declining.
2. Companies that sell seasonal goods such as closing, the value of which drops

dramatically at the end of each selling season (fall or spring)

Evaluating Inventory Management

Inventory Turnover Rate

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

Inventory Methods and Financial Statement Analysis

Note: Converting and comparing financial statement analysis is made easy by U.S. requirement that public companies have to report beginning and ending inventory on a FIFO basis in the notes when they are actually reporting on LIFO basis if the FIFO values are materially different.

Beginning inventory	**Different**
+ Purchases of merchandise during the year	**Same**
− Ending inventory	**Different**
Cost of goods sold	**Different**

LIFO reserve - "Excess of FIFO over LIFO" - disclosed by LIFO users in their inventory footnotes.

HARLEY-DAVIDSON, INC.
Notes to Consolidated Financial Statements
2. ADDITIONAL BALANCE SHEET AND CASH FLOWS INFORMATION
Inventories, net (in thousands)

	2017	2016	
. . .			
Inventory at lower of FIFO cost or net realizable value	590,557	548,184	
Excess of FIFO over LIFO cost	(52,355)	(48,267)	*LIFO Reserve*
Total inventories, net	$538,202	$499,917	*Inventory reported on the balance sheet*

Control of Inventory

Inventories are vulnerable to theft...
So we need great control strategies for inventories, and those include:

1. Separation of Responsibilities for inventory accounting and physical handling of inventory
2. Storage of inventory in a manner that protects it from theft and damage.
3. Limiting access to inventory to authorized employees
4. Maintaining perpetual inventory records (described earlier in this chapter)
5. Comparing perpetual records to periodic physical counts of inventory

Effect of Inventory on Statement of Cash Flows

Yeah so usually we purchase inventory and use an account payable or note payable to pay instead of using cash.

1. When a net decrease in inventory for the period occurs
   a. Sales are greater than purchases, thus the decrease must be added in computing cash flows from operations
2. When a net increase in inventory for the period occurs
   a. Sales are less than purchases, thus the increase must be subtracted in computing cash flows from operations
3. Net Decrease in Account Payable
   a. Payment to suppliers are greater than purchases, thus the decrease must be subtracted in computing cash flows
4. Net increase in Account Payable
   a. Payment to suppliers are less than new purchases, thus the increase must be added in computing cash flows.

HW Note

Required information

[The following information applies to the questions displayed below.]

Jaffa Company prepared its annual financial statements dated December 31 of the current year. The company applies the FIFO inventory costing method; however, the company neglected to apply lower of cost or net realizable value to the ending inventory. The preliminary current year income statement follows:

Sales revenue		$286,000
Cost of goods sold		
Beginning inventory	$ 33,600	
Purchases	190,000	
Goods available for sale	223,600	
Ending inventory (FIFO cost)	56,484	
Cost of goods sold		167,116
Gross profit		118,884
Operating expenses		62,600
Pretax income		56,284
Income tax expense (30%)		16,885
Net income		$ 39,399

Assume that you have been asked to restate the current year financial statements to incorporate lower of cost or NRV. You have developed the following data relating to the current year ending inventory:

		Acquisition Cost		
Item	Quantity	Unit	Total	Net Realizable Value Per Unit
A	3,110	$3.60	$ 11,196	$ 4.60
B	1,560	5.60	8,736	4.10
C	7,160	2.10	15,036	4.10
D	3,260	6.60	21,516	4.60
			$ 56,484	

Required:

1. Prepare the income statement to reflect lower of cost or net realizable value valuation of the current year ending inventory. Apply lower of cost or NRV on an item-by-item basis. **(Round your answers to nearest dollar amount.)**

Answer is complete and correct.

JAFFA COMPANY		
Income Statement (Corrected)		
For the Year Ended December 31, Current Year		
Sales revenue		$ 286,000
Cost of goods sold:		
Beginning inventory	33,600	
Purchases	190,000	
Goods available for sale	223,600	

Purchases	190,000	
Goods available for sale	223,600	
Ending inventory	47,624	
Cost of goods sold		(175,976)
Gross profit		110,024
Operating expenses		(62,600)
Pretax income		47,424
Income tax expense		14,227
Net income		$ 33,197