# INVENTORIES

A. **Definition of inventory**
*inventory for a merchandising business consists of all goods owned and held for sale.
*inventory for a manufacturer consists of raw materials, work in process, and finished goods.

B. **These two questions must be answered to measure income properly and to comply with the matching rule:**

1. How much of the asset has been used up (expired) during the current period and should be transferred to expense?
2. How much of the asset is unused (unexpired) and should remain on the balance sheet as an asset?

C. There must be a sufficient amount of inventory on hand to satisfy customer demand yet not so much as to be overly costly to maintain and store.

D. Many companies, in an attempt to reduce their inventory, are changing to a **just-in-time** operating environment. They work closely with suppliers to coordinate and schedule shipments so that the goods arrive just in time to be used or sold.

## GOODS FLOW VS. COST FLOW

**Inventory Cost** is the purchase price of the inventory minus purchase discounts, plus freight-in, and taxes or other costs.
Goods in transit should be included in inventory only if the company has title to, or ownership of, the goods. (recall FOB shipping point/FOB destination). Goods that have been sold but are still on hand should not be included in the seller's inventory account.

When goods are held on **consignment**, the consignee (who earns a commission on making the sale) has possession of the goods, but the **consignor** still owns the goods, and thus includes the goods in its inventory.

When identical items of merchandise are purchased at different prices during the year, it is usually impractical to monitor the actual **goods flow** and record the corresponding costs. Instead, the accountant makes an assumption of the **cost flow** and uses one of the following methods:

1. **Specific Identification Method** = the units of ending inventory can be identified as having come from specific purchases. The flow of costs reflects the actual flow of goods in this case.

2. **Average-Cost Method** = the average cost per unit is figured for the goods available for sale during the period. (Cost of Goods available divided by units available for sale) Then, the average cost per unit is multiplied by the number of units in ending inventory to get the cost of ending inventory.

3. **First-In, First-Out (FIFO) Method** = the cost of the first items purchased is assigned to the first items sold. Therefore, ending inventory cost is determined from the prices of the most recent purchases. During periods of rising prices, FIFO yields the highest net income of the four methods. During periods of falling prices, the reverse is true. However, it provides a more up-to-date ending inventory figure for the balance sheet.

4. **Last-In, First-Out (LIFO) Method** = the cost of the last items purchased are assigned to the first items sold. Therefore, the ending inventory cost is determined from the prices of the earliest purchases. During periods of rising prices, LIFO yields the lowest net income of the four methods. During periods of falling prices, the reverse is true. However, it best matches the current merchandise costs with current sales prices. (matching rule)

*Because the cost of ending inventory is needed to compute the cost of goods sold, it affects net income dollar for dollar. It is important to match the cost of goods sold with sales so that net income is reasonably accurate.

*This year's ending inventory automatically becomes next year's beginning inventory. Because beginning inventory also affects net income dollar for dollar, an error in this year's ending inventory results in misstated net income for both this year *and* next year.

a) When ending inventory is understated, net income for the period is understated.
b) When ending inventory is overstated, net income for the period is overstated.
c) When beginning inventory is understated, net income for the period is overstated.
d) When beginning inventory is overstated, net income for the period is understated.

## PERIODIC VS PERPETUAL INVENTORY SYSTEMS

When the periodic inventory system is used, a physical inventory is taken at the end of the period, and the cost of goods sold is calculated by subtracting ending inventory from the cost of goods available.

Under the perpetual inventory system, a continuous record is kept of the balance of each inventory item. As the goods are sold, costs are transferred from the inventory account to the Cost of Goods Sold account.

### Lower-Of-Cost-Or-Market Rule

The market value of inventory (current replacement cost)can fall below its cost as a result of physical deterioration, obsolescence, or decline in price level. Accordingly, it should be valued at the *lower of cost or market*. The two basic methods of valuing inventory at the lower of cost or market are the **item-by-item method** and the **major category method**.

## ESTIMATING THE COST OF ENDING INVENTORY USING THE RETAIL AND GROSS PROFIT METHODS

### Retail Method

This method can be used when the cost and sale prices of goods is a constant percentage over a period of time.
To apply the retail method, goods available for sale are figured both at cost and at retail. Next, a cost-to-retail ratio is computed. Sales for the period are then subtracted from goods available for sale at retail, to produce ending inventory at retail. Finally, ending inventory at retail is multiplied by the cost-to-retail ratio to produce an estimate of ending inventory at cost.

### Gross Profit Method

This method assumes that the gross margin for a business remains relatively stable from year to year. This method is used when inventory records are lost or destroyed, and when records of

beginning inventory and purchases are not kept at retail.

To apply the gross profit method, the cost of goods available for sale is determined by adding purchases to beginning inventory. Then the gross margin is estimated by multiplying sales times the gross margin percentage. Subtracting Gross Margin from sales gives Cost of Goods Sold. Finally, the estimated Cost of Goods Sold is subtracted from the cost of goods available for sale to arrive at the estimated ending inventory.