

Accounting Fundamentals Lesson 6

6.0 Inventory & Cost of Sales

Inventory - A current asset whose ending balance should report the cost of a merchandiser's products waiting to be sold.

The inventory of a manufacturer should report:

- The cost of its raw materials
- Work-in-process
- Finished goods

The cost of inventory should include all costs necessary to acquire the items and to get them ready for sale.

Inventory is merchandise purchased by merchandisers (retailers, wholesalers, distributors) for the purpose of being sold to customers.

Inventory or Merchandise Inventory - account that reports the cost of merchandise purchased but not yet sold.

Inventory is reported as a current asset on the company's balance sheet.

Inventory is a significant asset that needs to be monitored closely.

Too much inventory can result in:

- Cash flow problems
- Additional expenses (e.g., storage, insurance)
- Losses if the items become obsolete.

Too little inventory can result in:

- Lost sales
- Lost customers

Inventory is reported on the balance sheet at the amount paid to obtain (purchase) the merchandise, not at its selling price.

Cost of Goods Sold

Cost of goods sold is the cost of the merchandise that was sold to customers.

The cost of goods sold is reported on the income statement when the sales revenues of the goods sold are reported.

A retailer's cost of goods sold includes:

- The cost from its supplier
- Any additional costs necessary to get the merchandise into inventory and ready for sale

For example:

Let's assume that Corner Shelf Bookstore purchases a college textbook from a publisher for \$80 for the textbook plus \$5 in shipping costs.

Corner Shelf reports \$85 in its Inventory account until the book is sold.

When the book is sold, the \$85 is removed from inventory and is reported as cost of goods sold on the income statement.

When Costs Change

If the publisher increases the selling prices of its books, the bookstore will have a higher cost for the next book it purchases from the publisher. Any books in the bookstore's inventory will continue to be reported at their cost when purchased.

For example:

If the Corner Shelf Bookstore has on its shelf a book that had a cost of \$85, Corner Shelf will continue to report the cost of that one book at its actual cost of \$85 even if the same book now has a cost of \$90. The cost principle will not allow an amount higher than cost to be included in inventory.

Let's assume the Corner Shelf Bookstore had one book in inventory at the start of the year 2011 and at different purchased four identical books. During the year 2011 the cost of these books increased due to a paper shortage. If the Corner Shelf Bookstore sells only one of the five books, which cost should Corner Shelf report as the cost of goods sold?

Should it select \$85, \$87, \$89, \$89, \$90, or an average of the five amounts and which cost should Corner Shelf report as inventory on its balance sheet for the four books that have not been sold?

Accounting rules allow the bookstore to move the cost from inventory to the cost of goods sold by using one of three cost flows:

- First In, First Out (FIFO)
- Last In, First Out (LIFO)
- Average

These are cost flow assumptions. This means that the order in which costs are removed from inventory can be different from the order in which the goods are physically removed from inventory. In other words, Corner Shelf could sell the \$85 book that was on hand but could remove from inventory the \$90 cost of the book purchased in December 2011 (if it elects the LIFO cost flow assumption).

Each of the three cost flow assumptions listed above can be used in either of two systems (or methods) of inventory:

- A. Periodic
- B. Perpetual

A. Periodic inventory system.

Under this system the amount appearing in the Inventory account is not updated when purchases of merchandise are made from suppliers. Rather, the Inventory account is commonly updated or adjusted only once—at the end of the year. During the year the Inventory account will likely show only the cost of inventory at the end of the previous year.

Under the periodic inventory system, purchases of merchandise are recorded in one or more Purchases accounts. At the end of the year the Purchases account(s) are closed and the Inventory account is adjusted to equal the cost of the merchandise actually on hand at the end of the year. Under the periodic system there is no Cost of Goods Sold account to be updated when a sale of merchandise occurs.

In short, under the periodic inventory system there is no way to tell from the general ledger accounts the amount of inventory or the cost of goods sold.

B. Perpetual inventory system.

Under this system the Inventory account is continuously updated. The Inventory account is increased with the cost of merchandise purchased from suppliers and it is reduced by the cost of merchandise that has been sold to customers. (The Purchases accounts do not exist.)

Under the perpetual system there is a Cost of Goods Sold account that is debited at the time of each sale for the cost of the merchandise that was sold.

Under the perpetual system a sale of merchandise will result in two journal entries:

- One to record the sale and the cash or accounts receivable
- One to reduce inventory and to increase cost of goods sold.

| | <u>Periodic</u> | | | <u>Perpetual</u> | | |
|--------------------|-----------------|--------------|--------------|------------------|--------------|-----------------|
| | <u>FIFO</u> | <u>LIFO</u> | <u>Avg.</u> | <u>FIFO</u> | <u>LIFO</u> | <u>Avg.</u> |
| Sales | \$ 110 | \$ 110 | \$ 110 | \$ 110 | \$ 110 | \$ 110 |
| Cost of goods sold | <u>-85</u> | <u>-90</u> | <u>-88</u> | <u>-85</u> | <u>-89</u> | <u>-87.50</u> |
| Gross profit | <u>\$ 25</u> | <u>\$ 20</u> | <u>\$ 22</u> | <u>\$ 25</u> | <u>\$ 21</u> | <u>\$ 22.50</u> |
| Ending Inventory | <u>\$355</u> | <u>\$350</u> | <u>\$352</u> | <u>\$355</u> | <u>\$351</u> | <u>\$352.50</u> |

6.1 Estimating Ending Inventory

It is very time-consuming for a company to physically count the merchandise units in its inventory.

In fact, it is not unusual for companies to shut down their operations near the end of their accounting year just to perform inventory counts. The company may assign one set of employees to count and tag the items and another set to verify the counts. If a company has outside auditors, they will be there to observe the process. (Even if the company's computers keep track of inventory, accountants require that the computer records be verified by actually counting the goods.)

If a company counts its inventory only once per year it must estimate its inventory at the end of each month in order to prepare meaningful monthly financial statements.

In fact, a company may need to estimate its inventory for other reasons as well. For example:

If a company suffers a loss due to a disaster such as a tornado or a fire, it will need to file a claim for the approximate cost of the inventory that was lost. (An insurance adjuster will also compute this amount independently so that the company is not paid too much or too little for its loss.)

Methods of Estimating Inventory

1. Gross Profit Method
2. Retail Method

1. **Gross Profit Method.** The gross profit method for estimating inventory uses the information contained in the top portion of a merchandiser's multiple-step income statement:

| | | | |
|-------------------------|---------------|-------------------------|---------------------|
| Sales | | \$100,000 | 100.0% |
| Cost of goods sold | | | |
| Beginning inventory | \$ 22,000 | | |
| Purchases - net | <u>83,000</u> | | |
| Cost of goods available | 105,000 | | |
| Less: Ending inventory | <u>25,000</u> | | |
| Cost of goods sold | | <u>80,000</u> | 80.0% |
| Gross Profit | | <u>\$ 20,000</u> | <u>20.0%</u> |

| | | | | | | |
|----------------|--------------------------------|---|---|---|-------------------------|--|
| Step 1. | Cost of Goods Available | = | Beginning Inventory | + | Net Purchases | |
| | Cost of Goods Available | = | \$25,000 | + | \$46,000 | |
| | Cost of Goods Available | = | \$71,000 | | | |
| | | | | | | |
| Step 2. | Gross Profit | = | Gross Profit Percentage (or Gross Margin) | x | Sales | |
| | Gross Profit | = | 20% | x | \$56,000 | |
| | Gross Profit | = | \$11,200 | | | |
| | | | | | | |
| Step 3. | Cost of Goods Sold | = | Sales | - | Gross Profit | |
| | Cost of Goods Sold | = | \$56,000 | - | \$11,200 (from Step 2.) | |
| | Cost of Goods Sold | = | \$44,800 | | | |

| | | | | |
|-------------------------|---|-------------------------|---|--------------------|
| Ending Inventory | = | Cost of Goods Available | - | Cost of Goods Sold |
| Ending Inventory | = | \$71,000 | - | \$44,800 |
| Ending Inventory | = | \$26,200 | | |

2. **Retail Method.** Retailers who have their merchandise records in both cost and retail selling prices can use the retail method. A very simple illustration for using the retail method to estimate inventory is shown here:

| | Cost | Retail |
|---|-----------------|----------------|
| Beginning inventory | \$ 11,000 | \$ 15,000 |
| Purchases - net | + 69,000 | + 85,000 |
| Goods avail. & <i>cost ratio</i> | 80,000 | 100,000 |
| Less: Sales at retail | | - 90,000 |
| Est. ending inventory at retail | | 10,000 |
| Est. ending inventory at cost | \$ 8,000 | |

The Goods Available amounts are used to compute the cost-to-retail ratio. In this case the cost of goods available of \$80,000 is divided by the retail amount of goods available (\$100,000). This results in a cost-to-retail ratio, or cost ratio, of 80%

To arrive at the estimated ending inventory at cost, we multiply the estimated ending inventory at retail (\$10,000) times the cost ratio of 80% to arrive at \$8,000.