

Inventory and Cost of Goods Sold

(Cheat Sheet)



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Inventory

Inventory is usually the most significant current asset of a retailer or manufacturer. Generally, inventory is reported on the balance sheet at its cost (or lower). When the items in inventory are sold, their costs will move from inventory to the *cost of goods sold* on the income statement.

Inventory is important for a company's profitability and survival. For instance, if a retailer or manufacturer does not have sufficient inventory of requested items, the result can be lost sales and lost customers. If a company has too much inventory, the company may encounter a cash flow problem and/or losses due to obsolescence.

Inventory also means some *accounting complexities* due to the changing costs of the items in inventory.

Cost of Goods Sold

For a retailer or manufacturer the *cost of goods sold* is likely to be its most significant expense on its income statement. When the costs of its items in inventory are continuously increasing (perhaps from inflation or scarcity), a decision must be made as to which of the costs in inventory should become the cost of goods sold. For instance, should the oldest (or first costs) be moved out of inventory, thereby leaving the most recent costs in inventory? Or, should an average cost be used? U.S. companies may decide that the most recent costs will be moved out of inventory, thereby leaving the oldest costs in inventory. The decision involves the flowing of costs (which can be different from the physical flow of the goods being removed from the warehouse).

Cost Flow Assumptions

When the costs of the items in inventory are changing, a cost flow assumption must be made. If a company elects to first flow the oldest costs to the cost of goods sold, they are choosing the cost flow assumption known as *first-in, first-out (FIFO)*. This means the most recent costs of items remain in inventory.

In the U.S. a company may instead choose to use the *last-in, first-out (LIFO) cost flow assumption*. This means that the most recent costs will be the first costs moved from inventory to become the cost of goods sold. Under this assumption, the oldest costs will remain in inventory. The LIFO cost flow assumption can be used even if the goods that are removed from inventory are the oldest units. This is why it is a cost flow *assumption*.

Another option is to use an *average cost* of the items purchased in the current period along with the costs in inventory from the prior accounting period. The average cost per item is then used to determine both 1) the cost of the items remaining in inventory, and 2) the cost of goods sold.

It is important to understand that these are *cost flow assumptions* and that the physical goods may flow differently. With continuous inflation, LIFO (compared to FIFO) will result in lower gross profits, lower net income, and lower taxable income. Hence, since 1960 many profitable U.S. corporations have elected the LIFO cost flow assumption.

Inventory Systems

For the recording of inventory transactions in the general ledger, there are two main types of inventory systems:

- periodic
- perpetual

When combined with a cost flow assumption, some of the many options for computing the cost of inventory and the cost of goods sold are:

- periodic FIFO
- periodic LIFO
- periodic weighted-average cost
- perpetual FIFO
- perpetual LIFO
- perpetual moving average
- specific identification
- others (such as a retailer's dollar-value retail LIFO system)

As the list indicates, the calculation of inventory and the cost of goods sold amounts can vary from company to company.

Periodic Inventory System

Under the periodic inventory system, the general ledger account Inventory will NOT be updated with each transaction. (Neither the cost of goods purchased nor the cost of goods sold are recorded in the inventory account.) Instead, the cost of the inventory items purchased will be recorded in a temporary account entitled Purchases. Then at the end of the accounting year, the Inventory account balance will be adjusted so that its balance is equal to the cost of the inventory items that are actually on hand. In other words, during the accounting year the balance in the Inventory account will be dormant and will show only the ending balance from the previous accounting year.

Perpetual Inventory System

Under the perpetual inventory system, the general ledger account Inventory will be increased with the cost of each purchase of goods and decreased with the cost of each sale of goods. In other words, the *balance in the Inventory account will be perpetually changing*. In the perpetual system there will be a general ledger account Cost of Goods Sold that will be debited at the time of each sale for the cost of the goods that are sold.

Estimating Ending Inventory

There are occasions when a company needs to estimate the cost of its inventory. Two examples are:

- Filing an insurance claim for the inventory that was destroyed by a fire, tornado, etc.
- Calculating the estimated cost of its ending inventory for its monthly balance sheets and the related cost of goods for the income statements

Two common methods for estimating the cost of a company's inventory are:

- Gross profit method
- Retail method

Gross Profit Method of Estimating Ending Inventory

The gross profit method allows you to estimate the amount of ending inventory by using the following information: sales, purchases, and gross profit percentage since the last physical inventory was taken. For example, if the company had sales of \$100,000 and its gross profit was 30% the cost of goods sold must have been 70% of sales, or \$70,000:

Sales	\$100,000	100.0%
Cost of goods sold		
Beginning inventory		
+ Purchases		
Cost of goods available		
- Ending inventory		
= Cost of goods sold	<u>70,000</u>	<u>70.0%</u>
Gross profit	30,000	30.0%

If the prior physical inventory had a cost of \$25,000 and purchases were \$60,000, the resulting *costs of the goods available* would be \$85,000. The goods available of \$85,000 minus the cost of goods sold of \$70,000 means that the estimated amount of ending inventory is \$15,000. It is easier to understand when the information is arranged as follows:

Sales	\$100,000	100.0%
Cost of goods sold		
Beginning inventory	25,000	
+ Purchases	<u>+ 60,000</u>	
Cost of goods available	85,000	
- Ending inventory	<u>- 15,000</u>	
= Cost of goods sold	<u>70,000</u>	<u>70.0%</u>
Gross profit	30,000	30.0%

Retail Method of Estimating Ending Inventory

The retail method can be used when a company has records showing both the cost and the retail prices of the merchandise.

Since there are many variations of the retail method including the FIFO average cost method and the dollar-value retail LIFO method, it is best to study this topic from an intermediate accounting book. In order to apply the various retail methods you must understand the terms such as additional markups, markup cancellations, markdowns, returns, etc.