

### Inventory Analysis

Objectives to control inventory	1. Safeguard inventory from damage/theft. 2. report inventory on financial statements
Purchase Order:	authorizes purchase of inventory from approved vendor
Receiving Report:	Establishes an initial record of the receipt of inventory
Subsidiary inventory ledger:	Recording inventory for perpetual inventory system
Physical Inventory:	Count of inventory should be taken near year-end to make sure quantity of inventory reported in financial statements is accurate
Average Unit Cost=	Total Cost of Units Available for Sale / Units Available for Sale

### Inventory Cost Flow Assumptions

#### specific identification inventory cost flow method

the unit sold is identified with a specific purchase

#### first-in, first out (FIFO) inventory cost flow method

the first units purchased are assumed to be sold first and the ending inventory is made up of the most recent purchases

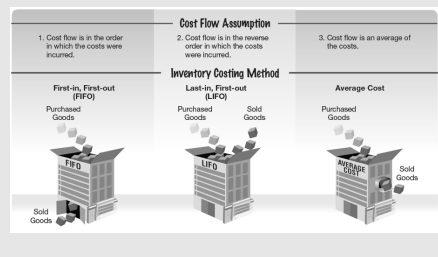
#### last-in, first out (LIFO) inventory cost flow method

the last units purchased are assumed to be sold first and the ending inventory is made up of the first units purchased

#### average inventory cost flow method

the cost of the units sold and in ending inventory is an average of the purchase costs

### Inventory Cost Flow Assumptions



### INVENTORY TURNOVER

Measures relationship between cost of merch sold and amount of inventory carried during the period

INVENTORY TURNOVER =  $\frac{\text{Cost of Merch Sold}}{\text{Average Inventory}}$

NUMBER of DAYS' SALES in INVENTORY =  $\frac{\text{Average Inventory}}{\text{Average Daily Cost of Merch Sold}}$

### FIFO

Three identical units of Item QBM are purchased during February, as shown below.

Item QBM	Units	Cost
Feb. 8 Purchase	1	\$ 45
15 Purchase	1	48
26 Purchase	1	51
Total	3	\$144
Average cost per unit \$ 48 (\$144 ÷ 3 units)		

Assume that one unit is sold on February 27 for \$70. Determine the gross profit for February and ending inventory on February 28 using the (a) first-in, first-out (FIFO); (b) last-in, first-out (LIFO); and (c) average cost methods.

	Gross Profit	Ending Inventory
a. First-in, first-out (FIFO)	\$22 (\$70 - \$48)	\$96 (\$48 + \$51)
b. Last-in, first-out (LIFO)	\$19 (\$70 - \$51)	\$93 (\$45 + \$48)
c. Average cost	\$22 (\$70 - \$48)	\$96 (\$48 × 2)

### PERPETUAL INVENTORY

Beginning inventory, purchases, and sales for Item ER27 are as follows:

Nov. 1	Inventory	40 units at \$5
5	Sale	32 units
11	Purchase	60 units at \$7
21	Sale	45 units

Assuming a perpetual inventory system and using the first-in, first-out (FIFO) method, determine (a) the cost of merchandise sold on November 21 and (b) the inventory on November 30.

	Cost of merchandise sold (November 21)	Inventory, November 30:
a.	8 units at \$5 \$ 40	\$161 = 23 units × \$7
	37 units at \$7 259	
	45 units \$200	

### PERPETUAL INVENTORY 2

#### Example Exercise 6-3 Perpetual Inventory Using LIFO

Beginning inventory, purchases, and sales for Item ER27 are as follows:

Nov. 1	Inventory	40 units at \$5
5	Sale	32 units
11	Purchase	60 units at \$7
21	Sale	45 units

Assuming a perpetual inventory system and using the last-in, first-out (LIFO) method, determine (a) the cost of the merchandise sold on November 21 and (b) the inventory on November 30.

	Cost of merchandise sold (November 21)	Inventory, November 30:
a.	\$315 = 45 units × \$7	\$ 40
		15 units at \$7 105
		23 units \$145



By **bonjourbubbles**

[cheatography.com/bonjourbubbles/](http://cheatography.com/bonjourbubbles/)

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Page 1 of 2.

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## Recording Merchandise Transactions

**Purchases:** of inventory are recorded in purchases account RATHER than in merchandise inventory account

**Purchase Discounts:** Normally recorded in separate purchases discounts account. Balance of purchases discounts account is recorded as deduction from PURCHASES for the period.

**Purchases Returns & Allowances:** Recorded in similar manner to purchase discounts

**Freight In:** When merchandise is purchased FOB shipping point, the buyer pays for the freight. Under the periodic inventory system, freight paid when purchasing merchandise FOB shipping point is debited to Freight In

## PERIODIC INVENTORY

**FIFO:** the earliest batch purchased is considered the first batch of merchandise sold. The physical flow does not have to match the accounting method chosen. This time we will be examining the periodic inventory system

**LIFO:** most recent batch purchased is considered the first batch of merchandise sold. The actual flow of goods does not have to be LIFO. For example, a store selling fresh fish would want to sell the oldest fish first (which is FIFO), even though LIFO is used for accounting purposes

## PERIODIC

Sometimes called the **weighted average method**. It uses the average unit cost for determining cost of merchandise sold and the ending merchandise inventory

**Average Unit Cost** = Total Cost of Units Avail for Sale / Units Avail for Sale

## AVERAGE COST METHOD

**Average Cost Method:** used in a perpetual system, an average unit cost for each item is computed each time a purchase is made

This unit cost is then used to determine the cost of each sale until another purchase is made and a new average is computed. This is called a **moving average**

## PERIODIC INVENTORY

### Example Exercise 6-4 Periodic Inventory Using FIFO, LIFO, Average Cost Methods

The units of an item available for sale during the year were as follows:

Jan. 1	Inventory	6 units at \$50	\$ 300
Mar. 20	Purchase	14 units at \$55	770
Oct. 30	Purchase	20 units at \$62	1,240
	Available for sale	40 units	\$2,310

There are 16 units of the item in the physical inventory at December 31. The periodic inventory system is used. Determine the inventory cost using (a) the first-in, first-out (FIFO) method, (b) the last-in, first-out (LIFO) method, and (c) the average cost method.

### Follow My Example 6-4

- First-in, first-out (FIFO) method:  $992 = 16 \text{ units} \times \$62$
- Last-in, first-out (LIFO) method:  $850 = (6 \text{ units} \times \$50) + (10 \text{ units} \times \$55)$
- Average cost method:  $924 (16 \text{ units} \times \$57.75)$ , where average cost =  $\$57.75 = \$2,310/40 \text{ units}$

## INVENTORY COSTING METHODS

## INVENTORY ERRORS