

Weighted Average Method

by Sophia



WHAT'S COVERED

This tutorial will cover the inventory cost flow assumption known as the weighted average method.

Our discussion breaks down as follows:

1. Weighted Average Method

The weighted average method is an inventory valuation method based on average cost per unit. It helps to provide information about cost of goods sold and ending inventory based on average cost per unit.

The weighted average method is based on total cost and total units. The total cost of inventory units available for sale is divided by the total units that are available for sale, to provide the average cost per unit.

For the weighted average method, there is no concern for the timing of inventory purchases. It doesn't matter if inventory was purchased at the beginning of the period or at the end of the period--it's all based on the average cost per unit.

The argument for using the weighted average method is that inventory is very complex and it can be difficult to determine which exact units you're selling. Are you selling the units you purchased at the beginning of the period, or are you selling the units purchased at the end of the period? As you can see, it can be difficult to monitor and measure the exact flow of your inventory.

2. Weighted Average Method and Cost of Goods Sold

Before we discuss the weighted average method and cost of goods sold, let's revisit the cost of goods sold calculation. We start with beginning inventory and add cost of goods purchased to give us goods available for sale. Then, we subtract out ending inventory to equal cost of goods sold.

$$\begin{array}{r}
 \text{Beginning Inventory} \\
 + \text{Cost of Goods Purchased} \\
 \hline
 \text{Goods Available for Sale} \\
 - \text{Ending Inventory} \\
 \hline
 \text{Cost of Goods Sold}
 \end{array}$$

Let's walk through an example of calculating cost of goods sold using the inventory valuation method of FIFO. Below you will see a spreadsheet outlining the cost of goods sold calculation. We will begin with the first line, beginning inventory. Beginning inventory is pulled from our balance sheet or from our trial balance. You can also see there is a schedule, detailing beginning inventory and purchases.

Cost of Goods Sold Calculation				
		Beginning Inventory		\$500
		+ Cost of Goods Purchased		
		= Goods Available for Sale		
		- Ending Inventory		
		= Cost of Goods Sold		
Beginning Inventory and Purchases				
Date	Explanation	Units	Cost/Unit	Total Cost
1/1	Beginning Inventory	50	\$10	\$500
Ending Inventory				

Once we have plugged in beginning inventory, we need to determine cost of goods purchased. If you look at the detail of all the purchases made, you can see that we made three purchases throughout the year.

Purchase Total
= \$5400

Now we need to determine our ending inventory. So, how do we calculate our ending inventory in the weighted average method? Well, we need to know the average cost per unit. Therefore, we take our total cost of \$5,900 and divide by the 450 total units to calculate the average cost per unit.

The average cost per unit is \$13.11.

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by our average cost per unit (\$13.11) to get the total cost of our ending inventory, which is \$1,311.

Cost of Goods Sold Calculation				
		Beginning Inventory		\$500
		+ Cost of Goods Purchased		\$5400
		= Goods Available for Sale		\$5900
		- Ending Inventory		\$1311
		= Cost of Goods Sold		
Beginning Inventory and Purchases				
Date	Explanation	Units	Cost/Unit	Total Cost
1/1	Beginning Inventory	50	\$10	\$500
4/1	Purchase	150	\$12	\$1800
7/1	Purchase	200	\$14	\$2800
10/1	Purchase	50	\$16	\$800
	Total	450		\$5900
		Units		Total Cost
		450		\$5900
	Average Cost Per Unit = \$5900 / 450 =			\$13.11
Ending Inventory*				
		Units	Cost/Unit	Total Cost
	Total	100	\$13.11	\$1311
*assume 100 units left in ending inventory				

Then, we take that ending inventory number and drop it into the cost of goods sold calculation, and subtract it from our goods available for sale to give us our cost of goods sold, which in this case is \$4,589.

Cost of Goods Sold Calculation				
			Beginning Inventory	\$500
			+ Cost of Goods Purchased	\$5400
			= Goods Available for Sale	\$5900
			- Ending Inventory	\$1311
			= Cost of Goods Sold	\$4589
Beginning Inventory and Purchases				
Date	Explanation	Units	Cost/Unit	Total Cost
1/1	Beginning Inventory	50	\$10	\$500
4/1	Purchase	150	\$12	\$1800
7/1	Purchase	200	\$14	\$2800
10/1	Purchase	50	\$16	\$800
	Total	450		\$5900
		Units		Total Cost
		450		\$5900
	Average Cost Per Unit = \$5900 / 450 =			\$13.11
Ending Inventory*				
		Units	Cost/Unit	Total Cost
	Total	100	\$13.11	\$1311
*assume 100 units left in ending inventory				



SUMMARY

Today we learned about an inventory valuation method known as the **weighted average method**. The weighted average method is based on dividing total cost by total units to provide an average cost per unit. We also performed a calculation of **cost of goods sold using the weighted average method**

Source: Adapted from Sophia instructor Evan McLaughlin.