INVENTORY CONTROL

The two primary objectives of control over inventory are

- ***Safeguarding the inventory from damage or theft.*** *Companies use a variety of techniques to safeguard inventory, special forms for inventory control, controlling who has access to the inventory, protecting expensive items by locking in display shelves, along with a whole slew of cameras, security tags, guards and much more.*
- ***Reporting inventory in the financial statements.*** *By recording inventory using a perpetual inventory in a Subsidiary Ledger allows for efficient maintenance of inventory levels and.*
  - ***Subsidiary Ledger*** *A subsidiary ledger provides a company a detailed record of specific items that are included in the balance of a general ledger controlling accounting. In a merchandising company, subsidiary ledgers are used to track the quantities of products in inventory.*
- ***Physical inventory:*** *counting the merchandise to ensure the accuracy of the amount of inventory reported in the financial statements*
- ***Perpetual inventory system:*** *the physical inventory is compared to the recorded inventory in order to determine the amount of shrinkage or shortage. Each time an inventory item is sold, it is removed from the inventory control sheets and the cost of goods sold is calculated.*

Accumulated depreciation is a contra -asset, used to record the reduction in value of the asset account.

INVENTORY COST FLOW ASSUMPTIONS

Inventory may be purchased at different price levels at different times, we are all aware of the jump in the price of gasoline when rumors circulate about a cut in supply. To account for the changing levels of pricing we use three inventory cost flow assumptions:

- ***Specific identification*** *he specific identification method is normally used by automobile dealerships, jewelry stores, and art galleries*
- ***First-in, First-out (FIFO)*** *The cost flow is in the order in which the costs were incurred, meaning that we assume that the first gallon of milk I bought is sold first.*
- ***Last-in, First-out (LIFO)*** *The cost flow is in reverse order in which the costs were incurred, meaning that the last gallon of milk I bought is sold first.*
- ***Average Cost*** *In weighted average we simply determine the average cost of all gallons of milk and then assign the costs to the sales based on that average.*

The following inventory was purchased during May:

		Units	Cost
May 10	Purchase	50	$ 16.00
18	Purchase	32	16.75
Total		82	$32.75

The following sales were made in May:

		Units	Cost
May 13	Sale	75	$ 20.00
15	Sale	19	21.00
Total		94	$40.00

First-in, First-out *the company had a beginning balance of 47 units at a cost of 14.95*

Date	Purchases			Cost of Goods Sold			Inventory		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
May 1							47	14.95	702.65
May 10	50	16.00	800.00				47	14.95	702.65
							50	16.00	800.00
May 13				75	20.00	1500.00	22	16.00	352.00
May 15				19	21.00	399.00	3	16.00	48.00
May 18	32	16.75	536.00				3	16.00	**48.00**
							32	16.75	**356.00**
May 31	**Balances**					**$1,899.00**			**$404.00**

Last-in, First-out *the company had a beginning balance of 47 units at a cost of 14.95*

Date	Purchases			Cost of Goods Sold			Inventory		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
May 1							47	14.95	702.65
May 10	50	16.00	800.00				47 50	14.95 16.00	702.65 800.00
May 13				75	20.00	1500.00	22	**14.95**	328.90
May 15				19	21.00	399.00	3	**14.95**	48.00
May 18	32	16.75	536.00				3 32	**14.95** 16.75	**44.85** **356.00**
May 31	**Balances**					**$1,899.00**			**$400.85**

Average Cost *the company had a beginning balance of 47 units at a cost of 14.95*

Date of Purchase		Quantity	Unit Cost	Total Cost
May 1	Beginning Balance	47	14.95	702.65
May 10	Purchase	50	16.00	800.00
May 18	Purchase	32	16.75	356.00
		129		$1,858.65

$$\frac{\text{Total Price}}{\text{Total Quantity}} = \frac{\$1,858.65}{129} = \$14.408 \text{ average price per unit}$$

Cost of Goods Sold 94 × $14.408 = $**1,354.54**

Ending Inventory 129 – 94 = 35; 35 × $14.408 = **$504.35** (1354.54 + 504.35 = $1858.89 rounding)

Periodic inventory system:

Revenue is recorded each time a sale is made. No entry is made at the time of the sale to record the cost of the merchandise sold. At the end of the accounting period, a physical inventory is taken to determine the cost of the inventory and the cost of the merchandise sold. The same cost flow assumption must be made when identical units are acquired at different unit costs during a period. In such cases, the FIFO, LIFO, or average cost method is used.

Comparing inventory systems

All three inventory systems generate different values for Cost of Goods Sold, Ending Inventory, Gross Profit and Net Income.

First-in, First-out

This method provides for a low Cost of Goods Sold, since the older goods are sold first. This increases Ending Inventory, Gross Profit and Net Income.

Last-in, First-out

This method provides for a High Cost of Goods Sold, since the newest goods are sold first. This decreases Ending Inventory, Gross Profit and Net Income.

Average Cost

This method results in a Cost of Goods Sold, Ending Inventory, Gross Profit, and Net Income that is somewhere between FIFO and LIFO.

Balance Sheet Inventory Valuation

Lowest of Cost or Market

If the cost of replacing the inventory is less than the inventory can be priced at the market price.

Valuation at Net Realizable Value

Out of date, spoiled, or damaged goods can be sold only at a price below its original cost, should be valued at its net realizable value. (Estimated Selling Price – Direct Costs of Disposal)

Effects if Inventory Valuation Errors

Income Statement: *Inventory errors will misstate the amounts for cost of merchandise sold, gross profit, and net income.*

Balance Sheet: *Inventory errors misstate the merchandise inventory, current assets, total assets, and owner's equity.*

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Financial Analysis and Interpretation

Inventory Turnover	*Cost of Merchandise Sold* / *Average Inventory*	=	*1,899* / *(702.65+404.00) ÷ 2*	=	***3.4 times a year***
Number of Days Sales in Receivables	*Average Inventory* / *Average Daily Cost of Goods Sold*	=	*(702.65+404.00) ÷ 2* / *1,899.00 ÷ 365*	=	***106 days to collect***