Dutchess Community College

ACC 104 – Financial Accounting

Chapter 6 Quiz Prep

Reporting & Analyzing Inventory

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March 2007
Revised March 26, 2007

Disclaimer

This *Quiz Prep* is provided as an outline of the key concepts from the chapter.

It is not intended to be comprehensive or exhaustive.

Quizzes may include material from the classroom lectures, the text or the homework assignments.

Two Inventory Systems

Perpetual Inventory System– detailed records are maintained for the purchase cost and sale of every item in inventory. An auto dealer would be a good example of a company that would use a perpetual inventory system.

Periodic Inventory System – detailed records are not kept of each item in inventory. The cost of goods sold is determined *periodically* at the end of the accounting period when an inventory is taken.

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Two Inventory Systems

This *Quiz Prep* will focus on the

Periodic Inventory System

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Purchase Inventory

Purchase $11,000 of inventory

	Dr	Cr
Purchases	11,000	
Accounts Payable		11,000

Pay $500 freight on inventory purchase

	Dr	Cr
Freight In	500	
Cash		500

Freight costs are only relevant if **you** have to pay them.

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Return Purchased Inventory

Return $1,000 of defective inventory

	Dr	Cr
Accounts Payable	1,000	
Purchase Return & Allowance		1,000

This is a Contra-Purchase account

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Purchase Discounts

The supplier offers terms of **2/10 net 30**.
Assume that you pay within the 10 days.

Note that the discount is applicable only to the net amount owed after returns and allowances:

Purchases	$ 11,000
- Purchase Returns & Allowances	1,000
= Net Amount Owed	10,000
x Discount Rate	.02
= Discount	200

You must pay attention to all the dates!

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Purchase Discounts

Therefore, if you pay within 10 days the entry would be:

	Dr	Cr
Accounts Payable	10,000	
Cash		9,800
Purchase Discounts		200

This reduces your payable to the supplier

This is a Contra-Purchase account

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Record A Sale

You sell inventory for $20,000 **under a <u>periodic</u> inventory system**

	Dr	Cr
Accounts Receivable	20,000	
Sales Revenue		20,000

NOTE WELL: Sales under a **Periodic** Inventory System require **only 1 entry**

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Sales Return

Your customer returns $2,000 of inventory they did not want.

	Dr	Cr
Sales Returns & Allowances	2,000	
Accounts Receivable		2,000

Note that the debit is to ***Sales Returns & Allowances***, a ***contra-revenue*** account.

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Inventory Journal Entries

PERPETUAL		PERIODIC
Inventory Accounts Payable	Purchase	**Purchases** Accounts Payable
Inventory Cash	Shipping	**Freight In** Cash
Accounts Payable **Inventory**	Returns	Accounts Payable **Purchase Return & Allow.**
Accounts Payable Cash **Inventory**	Purchase Discount	Accounts Payable Cash **Purchase Discount**

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Inventory Journal Entries

PERPETUAL		PERIODIC
Accounts Receivable Sales Revenue **Cost Of Goods Sold** **Inventory**	Sale	Accounts Receivable Sales Revenue **NO ENTRY**
Sales Return & Allow Accounts Receivable **Inventory** **Cost Of Goods Sold**	Returns	Sales Return & Allow Accounts Receivable **NO ENTRY**
Cash Sales Discount Accounts Receivable	Sales Discount	Cash Sales Discount Accounts Receivable

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Multi-Step Income Statement

In a Periodic Inventory System COGS must be calculated

	Gross Sales
-	Less: Sales Returns & Allowances
-	Sales Discounts
=	**Net Sales**
-	Cost Of Goods Sold (COGS)
=	**Gross Profit**
-	Operating Expenses
=	**Operating Profit**
+/-	+/- Other Revenues & Losses
+/-	+/- Interest
=	**Earnings Before Taxes (EBT)**
-	Income Taxes
=	**Net Income**

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Periodic Inventory System COGS

	Purchases
-	Purchase Returns & Allowances
-	Purchase Discounts
=	Net Purchases
+	Freight In

	Beginning Inventory
+	Cost of Goods Purchased
=	Cost of goods available for sale
-	Ending Inventory
=	Cost of Goods Sold

Similar to Supplies, an end-of-period physical inventory count is required.

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Inventory

1 - Physical Inventory Count is made to determine the Quantity

2 – Determine who owns:

(a) Goods In-transit:

Free On Board (FOB) Destination = Seller

FOB Shipping Point = Buyer

(b) On Consignment = consignee

3 – Value the Inventory

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Physical Inventory Count

Example:

Beginning Inventory		Purchase 1		Purchase 2
Widget $25	+	Widget $30	+	Widget $35

= Goods Available For Sale = 3 @ $ 90 total cost

Ending Inventory Quantity determined by a Physical Inventory Count = 1 unit

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Inventory

1 - Physical Inventory Count is made to determine the Quantity

2 – Determine who owns:

(a) Goods In-transit:

Free On Board (FOB) Destination = Seller

FOB Shipping Point = Buyer

(b) On Consignment = consignee

3 – Value the Inventory

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Determine Who Owns

Example:

In this example it is assumed that all inventory is owned by the company.

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Inventory

1 - Physical Inventory Count is made to determine the Quantity

2 – Determine who owns:

(a) Goods In-transit:

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(b) On Consignment = consignee

3 – Value the Inventory

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Valuing Inventory

The 4 inventory valuation techniques that you are required to know are:

1 - Specific Identification

2 - First-In-First-Out (FIFO)

3 - Last-In-First-Out (LIFO)

4 - Average Cost

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Valuing Inventory

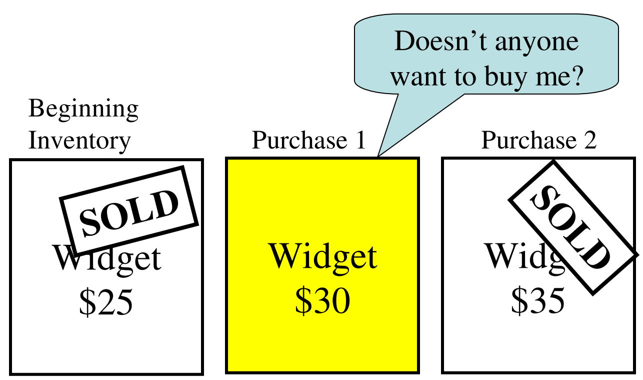
1 - Specific Identification

Each item's cost is tracked individually; i.e., it is a perpetual inventory system.

Valuing Inventory

1 - Specific Identification

Example: The item in the ending inventory is Purchase 1 which has a cost of 30.



Valuing Inventory

2 - First-In-First-Out

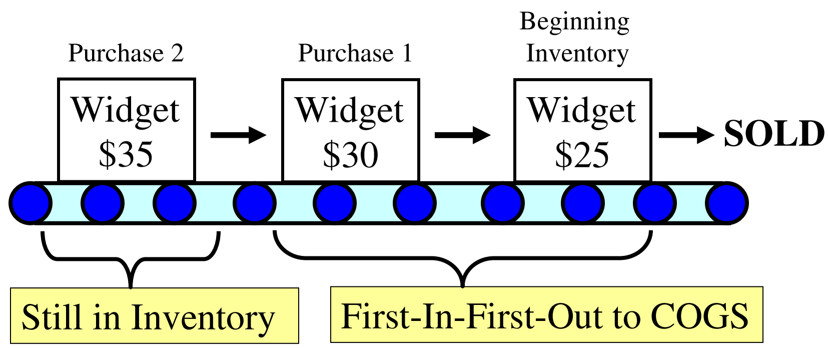
The First item put into inventory is the first to be sold; i.e., become Cost Of Goods Sold

Therefore, the last items purchased are still in inventory.

Valuing Inventory

2 - First-In-First-Out

Example: Conveyor Belt: last items acquired are still in inventory



Valuing Inventory

3 - Last-In-First-Out

The Last item put into inventory is the first to be sold; i.e., become Cost Of Goods Sold

Therefore, the first items purchased are still in inventory.

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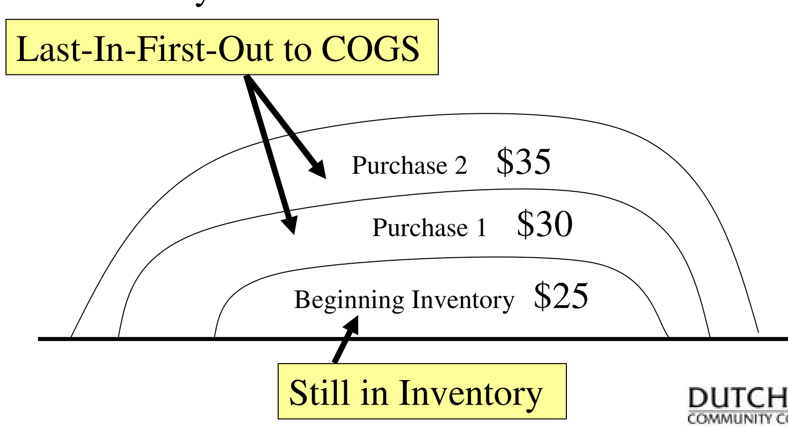
Valuing Inventory

3 - Last-In-First-Out

Example: Gravel Pile: First items acquired are still in inventory.



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Valuing Inventory

4 - Average Cost

The cost of the beginning inventory and all purchases during the period are averaged.

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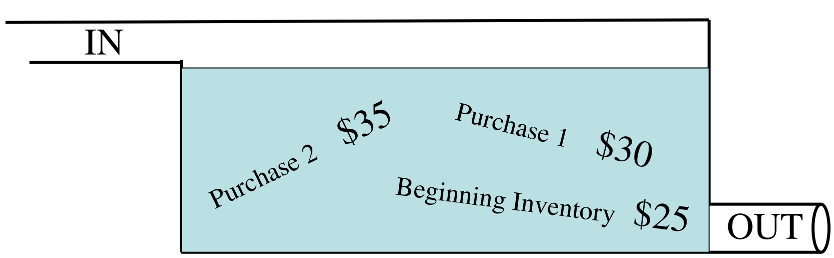
Valuing Inventory

4 - Average Cost

Example: Gas Tank: The average cost is

(25 + 30 + 35) / (1 + 1 + 1) = 30 per unit

30 per unit x 1 unit = 30



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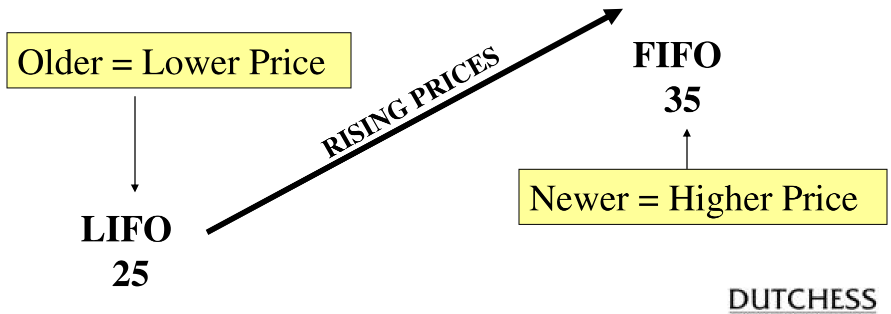
Impact of Inventory Valuation

Therefore,

In a rising price scenario (as in this example)

LIFO Inventory Value < FIFO Inventory Value



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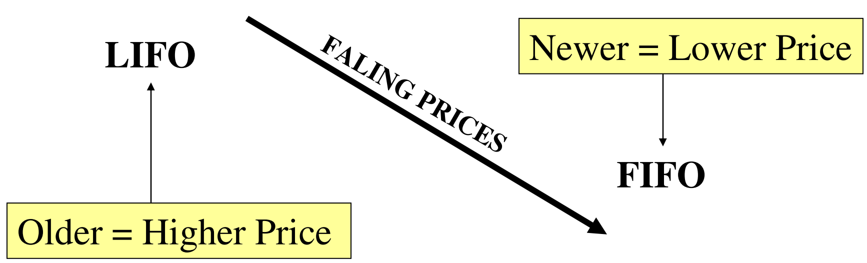
Impact of Inventory Valuation

In a falling price scenario

LIFO Inventory Value > FIFO Inventory Value



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Impact of Inventory Valuation

Recall that: Goods available for Sale

– Ending Inventory

= COGS

Therefore,

Inventory ↑ = COGS ↓ = Gross Profit ↑ = Net Income ↑

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Impact of Inventory Valuation

Example: Assume the sales price for the 2 items sold was 50 each for a total Sales Revenue of 100.

	Inventory Value	COGS	Gross Profit
FIFO	35	55 (90 - 35)	45 (100 – 55)
LIFO	25	65 (90 – 25)	35 (100 – 65)
Average	30	60 (90 – 30)	40 (100 – 60)

Sum = 90 = Goods Available For Sale

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Impact of Inventory Valuation

Example: Assume the sales price for the 2 items sold was 50 each for a total Sales Revenue of 100.

	Inventory Value	COGS	Gross Profit
FIFO	35	55 (90 - 35)	45 (100 – 55)
LIFO	25	65 (90 – 25)	35 (100 – 65)
Average	30	60 (90 – 30)	40 (100 – 60)

Sum = 100 = Sales Revenue

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Impact of Inventory Valuation

Inventory Valuation affects:

Inventory	Working Capital Current Ratio
COGS	Inventory Turnover Ratio Days in Inventory
Gross Profit	Gross Profit Rate
Net Income	Profit Margin

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Lower of Cost or Market

Inventory should be valued at the lower of the

- Cost
- Market Value; which is the replacement cost of the inventory

This is consistent with the *Conservatism Constraint*.

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Inventory Turnover Ratio

$$\text{Inventory Turnover} = \frac{\text{COGS}}{\text{Average Inventory}}$$

Higher is Better

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Days In Inventory

$$\text{Days In Inventory} = \frac{365}{\text{Inventory Turnover}}$$

Lower is Better

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