The UNIVERSITY of VERMONT

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Notes – Topic 5

Inventories and Cost of Goods Sold

I. What is Inventory?
   a. Goods to be sold.
   b. Current asset on the balance sheet.
   c. Acquisition of items for resale or adding value.

II. Significance
   a. It's dropped from 15% of assets to about 5% presently.
   b. Shift in the economy away from heavy industry
   c. More efficient at managing inventory
      i. Integrated supply chain perspective
      ii. More money to be made when working with others in the supply chain instead of focusing only on the immediate sale.
   d. Information Technology.
      i. Know what's needed to respond to shifts in demand in the future.
      ii. MRP. Material Resource Planning
      iii. MRP2. Manufacturing Resource Planning. Includes labor
      iv. ERP. Enterprise Resource Planning. Designed to integrate systems.
   e. Change in attitude about inventory. It's not just an asset – it's money that could be invested better otherwise. Inventory gets no return.

III. Costs
   a. Storage and logistics
   b. Spoilage and obsolescence
   c. Shrinkage
   d. Opportunity Cost. The biggest!
   e. Manufacturing
      i. Direct Costs
         1. Material
         2. Labor
      ii. Overhead. Indirect cost. Can't be directly associated with specific products.
      iii. Raw materials, work in progress, finished goods.
   f. Merchandising
      i. Invoice Price
      ii. Inbound Transportation Costs
         1. FOB Shipping Point
            a. Buyer owns it as soon as it leaves the seller. Buyer is responsible for costs, insurance, etc.
            b. It's "free" at the shipping point.
            c. Part of inventory as soon as it's shipped.
         2. FOB Destination
            a. Seller pays shipping costs.
            b. It's "free" at the destination.
            c. Counted in inventory only when it arrives.

IV. Two Main Systems
   a. Perpetual
      i. Every transaction has an entry impacting inventory value and quantity
      ii. Always (perpetually) up to date.
   b. Periodic
      i. No records during the period
      ii. Cost of Goods Sold = Beginning Inventory + Purchases - Ending Inventory.
      iii. Much greater significance in the past than the present. Information technology makes perpetual inventory too easy.

V. Journal Entries

a. Purchases
    i. Perpetual DR Inventory. CR A/P
    ii. Periodic DR Purchases. CR A/P
b. Transportation
    i. Perpetual DR Inventory. CR Cash
    ii. Periodic DR Freight In. CR Cash
c. Returning Merchandise to Supplier
    i. Perpetual DR A/P, CR Inventory
    ii. Periodic DR A/P, CR Purchase Returns
d. Purchase Discounts and Payment
    i. Perpetual DR A/P, CR Inventory and Cash
    ii. Periodic DR A/P, CR Purchase Discounts and Cash
e. Sales
    i. Perpetual
        1. DR A/R, CR Sales.
        2. DR Cost of Sales, CR Inventory
    ii. Periodic
        1. DR A/R, Sales.
        2. No other transaction. The closing entry stands alone.
f. Returns
    i. Perpetual
        1. DR Sales Returns, CR A/R
        2. DR Inventory, CR Cost of Sales
    ii. Periodic DR Sales Returns, CR A/R
g. Closing Entry. Periodic Only.
    i. DR Inventory, Purchase Returns, Freight Discounts. CR Freight In, Purchases
    ii. The DR to Inventory is the net of all the other categories – it adjusts inventory for the known transactions.
    iii. DR Cost of Sales, CR Inventory for the difference between Inventory's balance and the physical period-end count.

VI. Inventory Valuation
a. Specific Identification
    i. Actually count items for their specific values.
    ii. Good for unique, expensive items.
    iii. Art, cars, jewelry. Easily identifiable.
b. FIFO
    i. The easiest to use.
    ii. By far the most popular method.
c. LIFO
    i. Layers
        1. Old inventory builds up in layers as time progresses.
        2. The oldest layer can become significantly cheaper than the newer.
    ii. Inventory Liquidation
        1. When production falls for whatever reason, really old layers might be accessed.
        2. The gross margin will become over-inflated due to the lower costs of those old layers.
    iii. LIFO Reserve
        1. FIFO Inventory – LIFO Reserve = LIFO Inventory
        2. Adjustment from transactions done in FIFO to get LIFO figure.
d. General Considerations in Selecting a Method
    i. Consistency
    ii. Practicality (how easy or reasonable is the selected method to use?)
e. Lower of Cost or Market
    i. Market Test

1. Market cost is the replacement cost.
    a. Ceiling = Net Realizable Value = Selling Price – Selling Cost (note that Selling Cost does not include Cost of Goods Sold)
    b. Floor = Net Realizable Value – "Normal Profit"
2. Compare Market Cost to original cost . Lower price is recorded.
3. If market is lower, record a write-down. DR Devaluation Loss, CR Inventory.
4. Never write up. If the market price is higher gross margin will simply be higher due to the "too low" recorded price.

VII. Inventory Management.

a. Excess is bad!
b. Imagine money sitting in crates in a warehouse.
c. Inventory Turns = Cost of Goods Sold / ½(Beginning Inventory – Ending Inventory)
d. More turns = better. Less excess.