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True Art of Valuation

Valuation Series

7 – Valuation of Inventory

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Introduction to Inventory

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Inventory overview

- Inventory refers to the collection of raw materials used in production and the finished goods available for sale.
- It is a crucial asset for a company as the turnover of inventory generates revenue and earnings for shareholders.
- On a company's balance sheet, inventory is classified as a current asset.
- There are three main types of inventories: raw materials, work-in-progress, and finished goods.

Definition of the inventory

Held for sale in the normal course of business i.e., finished goods

Goods which are in the production process i.e. work in progress

Raw materials which are consumed during production process or rendering of services (including consumable stores item)

Explanation

- Inventory specifically pertains to goods and assets that are not subject to depreciation and is distinct from Property, Plant, or Equipment.
- Therefore, any spare parts or assets that are exclusively used in connection with fixed assets, have irregular usage, and are classified as property, plant, or equipment should not be considered as inventory.
- For instance, a vehicle would be categorized as inventory for a vehicle manufacturer but would be classified as a fixed asset for an entity that includes it as part of its fleet.

Inventory Valuation

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What is Inventory Valuation?

1. Inventory valuation is a crucial accounting process that involves assigning a value to a company's inventory.
2. Given that inventory often constitutes a significant portion of a company's assets, it is vital to consistently measure its value.
3. Proper inventory valuation ensures accurate representation of inventory value in financial statements and plays a significant role in maximizing profitability.
4. Choosing and implementing an appropriate inventory valuation method requires careful analysis and due diligence, as once selected, it is generally not possible to change the method midway.
5. To ensure compliance and standardization, inventory valuation follows specific accounting standards and regulations.
6. Since inventory is a primary current asset of a business entity, accurate valuation is essential.
7. This process facilitates timely procurement and sale, minimizing waste and enabling effective cost control.

What Are the Objectives of Inventory Valuation?

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- The valuation of inventory is performed at the end of each fiscal year to determine the cost of goods sold and the value of unsold inventory. This process is crucial as it directly impacts a company's production and profitability.
- Following are the objective of inventory valuation:

Evaluate Capital Investment	Inventory valuation helps assess the capital invested in the business, including both fixed assets (stores, warehouses, etc.) and variable assets.
Sales Velocity	For small eCommerce businesses, inventory valuation provides insights into the number of items sold during a specific time period, indicating the sales velocity of the company.
Determine MOQ & EOQ	By evaluating inventory, businesses can identify the quantity of products sold and determine the minimum order quantity (MOQ) and economic order quantity (EOQ) to optimize inventory management.
Valuation-Based Loans	Banks often require access to a company's balance sheet, including inventory valuation, to assess eligibility for loans related to business expansion and infrastructure investment.
Gross Income Calculation	Inventory valuation helps determine the cost of goods sold, which, when matched with revenue, provides insights into gross profit.
Reflect Financial Position	Inventory is considered a current asset and plays a crucial role in presenting the financial position of a business on the balance sheet. Accurate valuation is essential to avoid presenting a false image of the company's working capital and overall financial status
Identify Asset-Liability Gaps	By understanding the value of assets through inventory valuation, businesses can compare it with liabilities and implement strategies to reduce gaps, such as optimizing warehouses, eliminating non-performing assets, and streamlining the supply chain.

Inventory Valuation as per IND AS

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Ind AS 2 prescribes that the inventories shall be measured at 'lower of Cost and Net Realisable Value'.

1 Costs

Cost of Purchase

- The costs associated with the purchase of inventories include the purchase price of the items, import duties, and applicable taxes (excluding any taxes recoverable from taxing authorities).
- Additionally, costs related to transportation, handling, and other expenses directly linked to the acquisition of finished goods, materials, and services are considered part of the purchase costs.
- When calculating the costs of purchase, trade discounts, rebates, and similar items are subtracted.

Cost of Conversion

- The cost of conversion includes direct costs. They also involve the systematic allocation of both fixed and variable production overheads that are incurred during the transformation of materials into finished goods.
- Fixed overheads refer to indirect production costs that remain relatively stable irrespective of production volume, such as expenses for factory building depreciation, equipment maintenance, and factory management and administration.
- Variable production overheads refers to indirect production costs that fluctuate in proportion to the volume of production, such as expenses for indirect materials and indirect labour.

Other Cost

- The costs related to inventories include expenses that are necessary for bringing the assets to their current location.
- Other costs are incorporated into the inventory's cost only if they are incurred in bringing the inventories to their present location and condition.
- For instance, it may be appropriate to include non-production overhead costs or the expenses associated with designing products for specific customers in the inventory's cost.

Exclusion

- Abnormal Waste
- Storage Cost
- Admin Overheads
- Selling and distribution Cost
- Interest Cost

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2 Net Realisable Value

- The Net Realizable Value (NRV) refers to the estimated selling price of inventories in the normal course of business, minus the estimated costs of completion and the estimated costs associated with making the sale.
- The estimation of NRV plays a crucial role in inventory valuation.
- If the NRV is lower than the cost, then the inventories are recorded at the NRV.
- This practice of writing down inventories below cost to their net realizable value aligns with the principle that assets should not be carried at amounts exceeding what is expected to be realized from their sale or use.
- The estimation of NRV is based on the most reliable evidence available at the time the estimates are made, reflecting the amount expected to be realized from the sale of the inventories.

Importance of Inventory Valuation for Businesses

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Impact on Cost of Goods Sold

- The valuation of inventory directly affects the cost of goods sold. If a large volume of goods is sold during the inventory valuation period, the cost of goods sold will be higher, indicating that a significant portion of the inventory has been sold.
- Conversely, if the inventory is valued lower, it will result in higher holding costs and an increased overall cost of goods sold, impacting profit levels reported.

Impact on Financial Records

- Accurate and timely inventory valuation is crucial to avoid recording errors that can carry over into subsequent accounting periods.
- Incorrect ending balances in one period can lead to recurring errors in the beginning inventory balance of the next reporting period.
- This can result in multiple errors in reported profits over consecutive quarters or years, causing imbalances in the balance sheet.

Impact on Loan Ratio

- When seeking a loan for business purposes, the valuation of inventory becomes relevant as lenders often base loan decisions on company valuation. Loan agreements may include restrictions on the allowable proportions of current assets to current liabilities. Failing to meet these target ratios can result in the lender cancelling the loan.
- Since inventory is a significant component of the current ratio, accurate inventory valuation is essential in maintaining a healthy loan ratio.

Impact on Income Taxes

- Inventory valuation methods can impact the amount of income tax paid by a company. The choice of inventory valuation method, such as the Last-in, First-out (LIFO) approach, can influence income tax calculations. LIFO is commonly used during periods of rising prices to lower income taxes.
- By matching current sales with the most recent costs, LIFO increases the cost of goods sold, leading to higher tax deductions and lower taxable income.

Valuation Methods

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1 FIFO (First-In, First-Out)

- The FIFO inventory valuation method operates on the principle that the first inventory purchased or produced should be the first to be sold. This approach assigns the cost of goods sold to the oldest inventory, while the remaining inventory is valued based on the most recently acquired assets.
- FIFO is a commonly used method in eCommerce, due to its simplicity and ease of implementation. During inflation, FIFO tends to provide a more accurate representation of costs. It results in a higher valuation of remaining inventory, lower cost of goods sold, and higher gross profit.

Example

- Let's say a business bought laptops at different timing and prices

1 *10 Laptops @ $ 1,000 each* → 2 *5 Laptops @ $ 1,100 each*

After selling 8 laptops COGS balance → *8 Laptops X $ 1,000 FIFO Cost = $ 8,000*

Accounting balance of Inventory account = *2 Laptops (each at $ 1,000)* + *5 Laptops (each at $ 1,100)* = *$ 7,500*

Pros of FIFO

The cost of goods sold (COGS) is not affected by any inventory carried over from the previous fiscal year as this method aligns the costs with the actual cash flow and physical movement of goods in the warehouse.

The simplicity and intuitive nature of FIFO result in the inventory being valued in the order it was purchased and sold

FIFO is a popular inventory valuation method among e-commerce firms due to its simplicity. It ensures that the cost of each item sold is consistent, preventing any manipulation of revenue by selecting specific items to sell.

Cons of FIFO

It is common for product prices to increase over time in the field of economics, especially for agricultural goods affected by factors like extreme weather and climatic conditions.

In some cases, FIFO inventory valuation may lead to a mismatch between expenses and income since the calculated values do not align with the actual inflated figures.

Even under normal inflation assumptions, FIFO can result in inflated profits, leading to a higher tax burden compared to alternative methods.

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2 LIFO (Last-In, First-Out)

- The LIFO inventory valuation method works in contrast to FIFO, where the newest inventory is sold first, while the older inventory remains in stock.
- LIFO is not widely adopted by businesses due to the potential increase in holding costs and obsolescence of older inventory. This method is typically used when businesses anticipate rising inventory costs due to inflation.
- By allocating high-cost inventory to the cost of goods sold, companies can reduce their declared profit levels, resulting in lower tax payments.

Example

- Let's say a business bought laptops at different timing and prices

1 *10 Laptops @ $ 1,000 each* → 2 *5 Laptops @ $ 1,100 each*

After selling 2 laptops COGS balance → *2 Laptops X $ 1,100 LIFO Cost = $ 2,200*

Accounting balance of Inventory account = *3 Laptops (each at $ 1,100)* + *10 Laptops (each at $ 1,000)* = *$ 13,300*

Pros of LIFO

During inflation LIFO results into higher COGS and lower balance of inventory, due to the lower earrings businesses can pay less tax.

This method aligns more closely with profitability as it considers the most recent costs and evaluates actual profits of the businesses.

LIFO leads to lower profits due to the low net income. Accountants and regulators consider it a valuable tool for assessing management's profitability.

Cons of LIFO

Realistic inventory systems generally do not LIFO method. Companies dealing with perishable goods, prefer to sell the freshest inventory before older inventory.

When the most recent purchases are used as the cost of goods sold in accounting or finance, it can lead to a situation where a group of older inventory remains unsold.

The use of LIFO for inventory valuation is disapproved by several accounting authorities, including US GAAP.

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3 Weighted Average Cost Method

- The weighted average cost method calculates the average cost per unit based on the total cost of inventory goods divided by the sum of total units in inventory. This method is employed when it is difficult to track the cost of individual items or when the items are indistinguishable from each other.
- It is commonly used to determine inventory valuation for items that cannot be individually identified. However, it may not provide an accurate valuation for businesses requiring precise cost allocation.

Example

- Let's say a business bought laptops at different timing and prices

1 *10 Laptops @ $ 1,000 each* → 2 *5 Laptops @ $ 1,100 each* = *15 Laptops (10+5)* → *$ 15,500 (10,000 + 5,500)*

Weighted Average Cost per Laptop = *$ 15,500 cost / 15 Laptops = $ 1,033*

After selling 13 laptops COGS balance → *13 Laptops X $ 1,033 = $ 13,433*

Accounting balance of Inventory account = *2 Laptops* × *$ 1,033 average cost* = *$ 2,066*

Pros of Weighted Average Cost Method

This method is suitable for the business that have a large quantity of inventory of identical products.

Only the price at which the transactions were completed is taken into account when using the weighted average cost method.

This method is most appropriate when the items being evaluated are difficult to distinguish.

Cons of Weighted Average Cost Method

The limitation of this method is the possibility of selling items at a loss. This occurs because the pricing of the products may not accurately reflect their value when costs suddenly increase, and a typical mark-up of cost of goods sold (COGS) is used to determine prices.

The cost of inventory often differs from the market price of the products, which can lead to questions and challenges due to the complex calculations.

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4 Specific Identification Method

- The specific identification method involves individually tracking and recording each item in the inventory from its acquisition until its sale.
- This method is primarily utilized for items with distinct features and costs, often found in high-value or unique products.
- It requires the ability to trace and identify items through means such as RFID tags or serial numbers.
- While providing a high level of accuracy in inventory valuation, this method is limited to valuing specific, high-value items that require meticulous tracking procedures.

Pros of Specific Identification Method

The method has the advantage of having a much higher degree of accuracy when it comes to the actual number of items in inventory and, of course, a higher degree of accuracy when it comes to the amount of money made in revenue or profit, as well as any lost revenue if items are damaged, lost, or returned.

Because of its accuracy, such a system almost eliminates the possibility of losing or misplacing inventory.

Cons of Specific Identification Method

It demands a firm grasp of how to quickly and reliably identify every single item in an organization's inventory, keep track of their costs, and produce them upon sale or the promise of sale.

Because of the enormous volume that bigger firms, like big box retailers, transport every day, it is exceedingly difficult for them to accomplish the procedure.

The cost of the item and the money obtained from the item's sale must be related to a particular item with some kind of unique identifier that marks it out.

Smaller firms do not typically encounter this problem, which explains why these businesses are the ones that use the specific identification approach most frequently.

Challenges in Inventory Valuation

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Determining the Remaining Inventory	• Determining the remaining inventory can be a complex task, especially when considering products in transit. Businesses have to decide whether to include these products in their inventory valuation. Some companies utilize a periodic inventory management system, evaluating inventory at the end of each accounting period. Alternatively, a perpetual inventory system tracks every purchase order and sale, regularly updating inventory to reflect these transactions.
Incorporating Related Costs	• During inventory valuation, it is crucial to include not only the costs of the products but also the expenses associated with procuring and maintaining inventory. These expenses can encompass transportation costs, inventory holding costs, delivery costs, insurance costs, packing and picking costs, and even the electricity utilized to store the inventory. Determining the exact value of these expenses in relation to the remaining inventory can present challenges for sellers.
Valuating Damaged Products	• Monetarily evaluating damaged products can be difficult, as their market value decreases. Sellers may try to sell damaged products as refurbished items during sales or offer them to second-hand dealers. Similarly, perishable products lose value over time, as storing them becomes more expensive compared to the revenue they generate in a competitive market. Perishable items often require special warehousing facilities with temperature control and specialized containers.
Identifying Stock Discrepancy	• Stock discrepancy refers to the difference between physically available stock and the inventory recorded in the system. • To determine accurate inventory valuation, sellers must reconcile the differences by contacting the manufacturer, reviewing old bills, and conducting thorough checks. In some cases, the missing inventory may remain unaccounted for, leading to waste and affecting the final valuation.
Valuing Seasonal Items	• The value and pricing of seasonal items fluctuate over time. When a season ends, manufacturers often offer heavy discounts, resulting in price variations compared to the initial purchase price. For instance, in the case of a garments seller, if coats are sold during winter but demand is lower than anticipated due to milder weather, the seller must store the remaining inventory until the next winter season. This can lead to potential damage or obsolescence as newer designs are introduced to the market.

Ind AS 2 Vs US GAAP – ASU 2015-11

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Item	Ind AS	US GAAP
Inventory Costing	• The cost of inventories, other than that which is not ordinarily inter-changeable, shall be assigned by using the first-in first-out formula (FIFO) or weighted average cost formula. LIFO is not permitted.	• The cost of inventories can be assigned by using the first in-first out (FIFO), last in-first out (LIFO) or weighted average cost formula.
Inventory Measurement	• Inventory is measured at the lower of cost and net realisable value. • Net realisable value is estimated selling price less cost of completion of sale.	• Inventory that is measured using method other than LIFO or the retail inventory method is measured at lower of cost and net realisable value. • Inventory that is measured using LIFO or the retail inventory method is measured at lower of cost or market value. • Market Value is defined as current replacement cost subject to an upper limit of net realisable value and a lower limit of net realisable value less a normal profit margin.
Reversal of Inventory write-downs	• Reversals of Inventory write downs are permitted for subsequent recoveries.	• Reversals of write-downs are prohibited.

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Thank You

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