Inventory Management

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WHAT'S COVERED

In this lesson, you will learn about different inventory types and inventory accounting techniques. Specifically, this lesson will cover:

1. Inventory Types

Inventory management is a critical financial function, particularly for businesses that sell physical goods. One challenge with inventory management is that inventory is not all the same. Most companies divide inventory into three different types:

- **Raw materials:** Items that are used to make products that are going to be sold.
- **Work in process (WIP):** Items that include raw materials that have been started in the manufacturing process and not yet completed.
- **Finished goods:** Goods ready to be sold to customers.

> EXAMPLE Suppose a company manufactures button-down shirts. Raw materials would be the fabric, buttons, thread, etc. Work in process items would be half-stiched shirts. Finally, the finished good would be the completed shirt.

TERMS TO KNOW

Raw Materials
Materials and components scheduled for use in making a product.

Work In Process (WIP)
Materials and components that have begun their transformation to finished goods.

Finished Goods
Goods ready for sale to customers.

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2. Inventory Techniques

While these three types of inventory on the surface seem to be clear in their definition, measuring each of them in accounting can be a challenge. Different inventory techniques include:

Inventory Techniques	Description
FIFO	This method stands for First In, First Out. This means that older inventory items are recorded as being sold first, even though the exact physical items may not have been the ones used during the manufacturing.
LIFO	This method stands for Last In, First Out. This means that the most recent inventory items are recorded as being sold first. This is favorable to the company because, in a time of rising prices such as inflation, they realize a tax advantage by booking the expense of the more pricey inventory. However, because of this advantage, the International Financial Reporting Standards bar the use of LIFO. Most companies have gone back to using FIFO.
Average Cost	This method is fairly straightforward and takes the weighted average of all the units available in inventory during the accounting period. This method uses that average cost to determine the value of the cost of goods sold.
ABC Method	This method is used when a company has a need for very selective inventory control because it has items that vary greatly in value and inventory cost. Class A items may be very expensive finished products that are very tightly controlled down to the individual item level; they require very accurate recordkeeping. Class B items require a bit less control and less detailed record-keeping, and Class C items are much less expensive and require minimal individual control.

3. Reasons to Keep Inventory

There are several reasons why a company carries any quantity of inventory.

- *Time:* No supply chain is perfect and often enough time lags can ruin potential busy opportunities. Playing it safe and having certain items in stock ahead of time avoid lost opportunity cost.
- *Uncertainty:* Supply and demand are not perfectly predictable and uncertainty means keeping enough on hand as necessary to fill fluctuations in demand.
- *Economies of scale:* Many companies increase their profitability solely because they take the risk of buying a high volume of a given product at a lower price in the hope that they can mark up the price and sell each item individually to customers. This is sometimes called the economies of scale and, by nature, requires some storage in inventory. Grocery stores function this way.
- *Investment:* Some businesses keep inventory as an investment. Fine wines and fine foods, for example, will appreciate in value over time. The downside is it will cost money to keep them. Both fine wine and foods require appropriate temperature conditions in storage.

4. Inventory Challenges

Seasonality is an issue to consider in inventory management. Many industries are subject to dips and rises in the demand as a result of seasonality. Sourcing the same amount of each product every month is not practical for these industries. Inventory management and seasonality-impacted businesses can become quite complex, and the inaccuracy of forecasting can have a substantial impact on profitability.

Another challenge with inventory management is the issue of perishable goods. From food to fashion, some goods either simply go bad or lose most of the value for no other reason than culture has passed it by; this is called a perishable good. **Perishable goods** have an even greater opportunity cost when it comes to mismanaging inventory. If too much of a perishable good is ordered, not only will it cost the organization an unnecessary inventory fee, but it also adds to the risk of never being sold at all. It would end up being a complete sunk cost. Understanding shelf life or trend life can add a great deal to the profitability of a business.

Finally, a business must be able to determine its economic order quantity. This is the quantity that minimizes **holding costs** and ordering cost. Quantitative formulas to calculate the economic order quantity consider the following:

- Annual demand for the product
- Fixed cost per order, including shipping and handling
- Storage, warehouse, refrigeration, and insurance costs

TERMS TO KNOW

Seasonality
Fluctuations in demand based upon time of year.

Perishable Goods
Goods that will expire. This isn't just limited to food; clothes go out of fashion and technology becomes rapidly outdated.

Holding Costs
Money spent to keep and maintain a stock of goods in storage.

SUMMARY

In this lesson, you learned about different **types of inventory**: raw materials, work in process items, and finished goods. With different types of inventory, there are different **inventory techniques** that are used. There is the FIFO method (First In, First Out) and the LIFO method (Last In, First Out). Inventory can also be calculated on the basis of an average cost or companies can use the ABC method, which is also called selective inventory control.

A company **keeps inventory** to make sure that it has items on hand for sale when their supply chain does not deliver as planned, if their projections of supply and demand are inaccurate, or if there are economies of scale where they buy greater volumes at a lower price hoping to sell them individually at a higher price to individual customers. Finally, inventory is sometimes seen as an investment for products that appreciate over time. A company also must consider **inventory challenges** such as seasonality, perishability, and considering what the optimal order quantity is.

Best of luck in your learning!

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