Busi 293 Notes
Chapter Eight
Reporting and interpreting Cost of Goods Sold and Inventory

Inventory is usually the largest current asset on the Statement of Financial Position. Inventory is a tangible asset that is either held for sale or used to produce goods for resale. Manufacturing companies usually disclose three types of inventory:

- Raw materials
- Work-in-process
- Finished goods

The cost of inventory is equal to its purchase price plus any other costs incurred in bringing the inventory to its intended location ready for sale.

Control of Inventory

Inventory should be stored in a safe and controlled environment. Only authorized personnel should have access and proper records should be maintained to account for the movement of inventory. Physical inventory counts should be done on a periodic basis to compare amounts shown in the accounting records to actual inventory amounts on hand.

Inventory Systems

There are two inventory systems commonly encountered - **perpetual and periodic**. In a perpetual inventory, management keeps a detailed record of each product. The records could track quantity, cost or both. Management may at any time determine the number/cost of any items in stock. This information is important to those industries that either carry expensive or unique items or require up-to-date inventory levels.

Perpetual Inventory

In a **perpetual inventory** system the inventory account is updated each time new inventory is purchased or inventory is sold. Such recording allows for the preparation of timely information. The journal entry to purchase inventory is:

Dr Inventory
Cr Accounts payable

When inventory is sold, there are two journal entries. Note there is an entry for the sale and an entry to record the cost of goods sold:

Record the Sale

Dr Trade receivables
Cr Sales revenue

Record the Cost of goods sold (sales)

Dr Cost of goods sold (sales)
Cr Inventory

Periodic Inventory

A **periodic system** does not maintain up-to-date records. Rather inventory levels are only determined when an inventory count is completed – generally at year end. In a periodic system, the inventory account is only adjusted at year end when the count is completed.

Periodic Inventory continued

At the beginning of the year, the inventory amount is equal to the amount determined by the inventory count completed at the end of the previous year. The balance in the inventory account will not change until the closing process at the end of the year.

The following journal entry is made when inventory is purchased:

Dr Purchases
Cr Accounts Payable

When inventory is sold there is only one entry – i.e. the recording of the sale:

Dr Trade receivables
Cr Sales revenue

There are no entries for cost of goods sold as sales are recorded. Cost of goods sold will be determined at the end of the year as follows:

Beginning inventory
+ Net Purchases in the year (*)
Cost of Goods Available for Sale
Less Ending inventory (amount determined by the physical count)
Cost of Goods Sold

(*) Net purchases equal purchases minus purchase allowances, discounts and returns.

Notice that the Cost of Goods Available for Sale must be split between Ending Inventory (Statement of Financial Position) and Cost of Goods Sold (Statement of Earnings).

Purchase Discounts, Allowances and Returns

In a perpetual system any purchase discounts taken, any purchase allowances granted or any returns to the suppliers will be deducted directly from the inventory account. Examples of the journal entries follow:

Purchase discount

Dr Accounts payable
Cr Inventory
Cr Cash

In the above noted entry any purchase discount taken by the company due to early payment will reduce the cost of the inventory.

Purchase Allowance

Dr Accounts payable
Cr Inventory

In the above noted entry the supplier has granted the company a purchase allowance – perhaps the allowance was granted due to an incorrect color or imperfection in the item purchased

Purchase Return

Dr Accounts payable
Cr Inventory

In the above noted entry the company has simply returned inventory to its supplier.

Purchase Discounts, Allowances and Returns continued

In a periodic system any purchase discounts taken, any purchase allowances granted or any returns to the suppliers are tracked in separate accounts. Examples of the journal entries follow:

Purchase discount

Dr Accounts payable
Cr Purchase discounts
Cr Cash

In the above noted entry any purchase discount taken by the company due to early payment will reduce the cost of the inventory.

Purchase Allowance

Dr Accounts payable
Cr Purchase allowances

In the above noted entry the supplier has granted the company a purchase allowance – perhaps the allowance was granted due to an incorrect color or imperfection in the item purchased

Purchase Return

Dr Accounts payable
Cr Purchase returns

In the above noted entry the company has simply returned some inventory to its supplier

Notice in the periodic system the inventory account is not directly affected but rather the three accounts purchase discounts, purchase allowances and purchase returns will be deducted from the purchases account to determine net purchases.

Inventory Errors

Inventory errors arise because of errors in the inventory count and/or the pricing of ending inventory. If ending inventory is understated then cost of goods is overstated. Conversely if ending inventory is overstated then cost of goods sold is understated. An over or understatement in cost of goods sold results in a direct under or overstatement of earnings. Refer to Textbook reference A which discusses the effect on inventory and cost of goods sold when errors arise.

Errors in ending inventory of the current year affect net earnings of the current year and net earnings of the following year. For example, an overstatement in ending inventory in the current year understates cost of goods sold in the current year which overstates net earnings in the current year. As a result of the error, opening inventory of the following year is now overstated resulting in cost of goods sold of the following year being overstated and net earnings of the following year being understated.

Assuming there are no further inventory errors, the error corrects itself by the end of the following year. Retained Earnings at the end of the following year is properly stated but the allocation of earnings between the two years will be affected.

Please refer to Appendix B of my Inventory Example File which I have posted on connect.ubc.ca.

Inventory Cost flow Assumptions

As noted above, the real issue with inventory and cost of goods sold is how costs are to be allocated between the two accounts. Remember that Cost of Goods Available for Sale is equal to Beginning inventory + Net Purchases. When the purchase cost of items is constant, all cost methods will produce the same net earnings for each period. However when costs of items purchased for inventory is changing (as is usually the case) the selection of a cost flow assumption will have a direct effect on the valuation of Inventory and Cost of Goods Sold and Net Earnings. In Canada there are three different cost flow assumptions used in practice.

Before outlining each assumption remember that the physical flow of goods may be different than the cost flow assumption adopted by the entity.

First-in,first-out (FIFO)

Under this method, the first items purchased into Inventory are assumed to the first ones allocated to Cost of Goods Sold. In a period of rising prices, this means the oldest prices (i.e. the cheapest ones) are included in Cost of Goods Sold while the most recent prices (i.e. the higher ones) are included in Inventory. In a period of rising prices, FIFO will result in the highest net earnings and the highest inventory amount. **Calculations under both a perpetual and periodic system will yield identical results.**

Specific identification

This method tracks specific costs with specific goods. It is usually chosen for expensive or unique goods. Cost of Goods Sold is determined, as the name implies, specifically with the goods sold in the period while inventory is determined based on the specific items remaining in inventory. Use of this cost flow assumption requires very detailed information and is therefore expensive. **Calculations under both a perpetual and periodic system will yield identical results**.

Weighted average

This method determines the average unit cost by dividing the cost of goods available ($) for sale by the number of units available (#). The average unit cost is then used to determine the amounts for ending inventory and for cost of goods sold. You simply multiply the number of units sold and the number on hand by the average cost per unit. In a perpetual system this is commonly known as moving weighted average. **Calculations under a perpetual and periodic system will yield different results.**

Now that you understand the alternative costing methods, please refer to Reference textbook B. Be very careful in determining how costs are tracked in both the perpetual and periodic systems. In periodic, the calculations are essentially done at the end of the period while in a perpetual system the calculations are done throughout the period.

Please refer to Appendix A of my Inventory Example File which is posted on connect.ubc.ca for more detailed examples of these costing and inventory methods.

Selection of an Inventory Cost Flow policy

The choice of a cost flow assumption is left to management. The objective should be the selection of the most representationally faithful inventory costing method - another professional judgment call! Once adopted, consistency requires management to maintain a chosen policy unless there is a good reason to change. Different categories of inventory could be accounted for by different cost flow assumptions.

Another method allowed under US Accounting Principles is last-in, first-out (LIFO). Under this method the most recent costs are assumed to be assigned to cost of goods first. In a period of rising prices this produces a higher cost of goods sold amount and therefore a lower net income. This would minimize current income taxes. I have included this method (for illustration only as LIFO is not examinable) in Appendix A of my Inventory Example File posted on connect.ubc.ca.

Valuation at Lower of Cost and Net Realizable Value (LCNRV)

Unless advised otherwise, the value of inventory on the Statement of Financial Position should be its cost as determined by one of the cost flow assumptions discussed above. Should the company be unable to recover the stated cost, prudence dictates that management should reduce the value to an amount which is expected to be realized. This is the concept of LCNRV. NRV is usually calculated as selling price less costs of selling associated with the sale.

The journal entry to record such a write-down is:

Dr Cost of goods sold or Write down of inventory
Cr Inventory or Inventory Valuation account

While inventory can never be written up above its initial cost, a previous write down could be reversed in a future period should selling prices increase under IFRS. This will be discussed in more detailed in Intermediate Accounting classes

Financial Ratio

Management needs to determine whether it is carrying excessive or inadequate levels of inventory- i.e. is it managing inventory effectively? The **inventory turnover ratio** attempts to help an entity gauge its performance on inventory management.

Calculation

= Cost of Goods Sold/Average inventory

A higher number indicates that inventory is turning over more quickly. A lower number or a trend downwards may be indicative of old or obsolete inventory or excessive inventory levels.

The turnover ratio is often expressed in another format known as the **average days' supply in inventory**.

Calculation

= 365/Inventory turnover ratio

The higher the number, the more concerned management should be that they have excessive levels of inventory and/or obsolete items.