**Inventory Script**

Slide 1: In this video presentation, we will be discussing the asset Inventory and ways to establish its value. This is an excellent companion to the two part video presentation on merchandising businesses.

Slide 2: The reason it is so important to have the most accurate value assigned to inventory is that for most retailers, inventory represents the biggest investment in assets. In fact, for the average retailer, inventory can account for about 80% of total assets. We will, in short order, be looking at four different ways to assign value to inventory. Before we get to them, let’s consider some other factors.

When goods are in transit, or going between the seller and purchaser, how do we determine who includes the goods in their ending inventory? We learned about shipping terms in Merchandising Part 2, and this provides the answer.

If the shipping terms are FOB Shipping Point – where the purchaser is responsible for paying the freight – ownership passes to the purchaser when the goods leave the seller’s location (the ‘shipping point’). As such, the purchaser will include in their inventory.

If the shipping terms are FOB Destination – where the seller is responsible for paying the freight – ownership passes to the purchaser when the goods arrive at the purchaser’s place of business (the ‘destination’). As such, the seller would include in their inventory.

Next, we need to consider goods on consignment. If a Business A has goods on consignment at Business B, the goods are still part of Business A’s inventory. Business B is simply providing a service and has not acquired the goods.

Finally, we need to consider obsolete or damaged goods. The principle of conservatism comes into play here: if these goods are worth less that what was paid for them, they need to be marked down to their “net realizable value” or whatever they would be worth on the market today. We treat this in similar fashion to Lower of Cost or Market, which we will discuss at the end of this presentation.

Slide 3: Also helpful to us is this relationship: Beginning Inventory plus Purchases equals Cost of Goods Available for Sale. Cost of Goods Available for Sale is equal to Cost of Goods Sold plus Ending Inventory.

From this relationship, we can then say that Cost of Goods Available for Sale less Ending Inventory equals Cost of Goods Sold.

If, then, we have four different ways to value ending inventory, we would arrive at four different Cost of Goods Sold figures and ultimately four different Net Income figures. Therefore, the proper method for valuing ending inventory is critical due to the downstream implications.

Slide 4: As mentioned before, we will be looking at four inventory valuation methods. The four methods are First In, First Out (FIFO); Last In First Out (LIFO), Weighted Average (WA) and Specific Identification (SI). These are also known as Cost-Flow assumptions. Please keep in mind that the cost flow assumption doesn’t necessarily match the *physical flow* of goods, but it often does.

For example, a First In, First Out physical flow means that older goods go out first and newer goods follow in chronological order. I like to think of milk at the grocery store – the store manager wants the older stuff sold first, as the newer milk will keep longer. A similar approach goes to fashion – another perishable asset, if you will. It’s likely that the grocery store would use the same cost flow assumption…

Slide 5: Here, we have some sample purchase and sale transactions that we will use with each of the four methods. Please note that, for specific identification method, the units issued at sale have been specifically identified.

Slide 6: Before we figure out the ending inventory values under each method, we need to do a couple of quick calculations. First, we need to figure out the number of Units Available for Sale and the Cost of Goods Available for Sale. We also need to figure the number of units in ending inventory. Again, please note that, no matter which method we use, we will start with the same beginning inventory, have the same Cost of Goods Available for Sale and the same number of units in ending inventory.

Slide 7: Before we begin with FIFO, if you’d like to work along, these worksheets are available in “Inventory Worksheet Blanks.” I’ve included the beginning inventory amounts on each.

We want to add the purchase from the 3rd; this gives 400 to choose from for the upcoming sale on the 10th. Since we’re using FIFO, we want to issue the oldest units first – in our case, those are from beginning inventory. After that, we are left with the 200 units from the 3rd. Next, we add the purchase on the 20th and again have 400 units available to us. On the 27th, we need to issue 300 units for sale. Since we’re using FIFO, we issue the units from the 10th first, then 100 units from the 20th. This leaves us with 100 units from the 20th at a cost of 16 each. As such, our ending value is 1,600.

Slide 8: We will start out the LIFO worksheet similarly: We want to add the purchase from the 3rd to beginning inventory; this gives 400 to choose from for the upcoming sale on the 10th. Since we’re using LIFO, we want to issue the newest units first – in our case, these would be the units from the purchase on the 3rd. We are left with the 200 units from beginning inventory. Next, we add the purchase on the 20th and once again have 400 units available to us. On the 27th, we need to issue 300 units for sale. Since we’re using LIFO, we issue the 200 units from the 20th (those that cost 16 each) and then take the remaining 100 from beginning inventory. This leaves us with 100 units at a cost of 12 each. As such, our ending inventory value is 1,200.

Slide 9: If we want a value that’s somewhere between the FIFO and LIFO numbers, we can use the weighted average method. With this method, we compute the weighted average cost each time we bring in a purchase, then use that when we next issue units for sale.

We will start out the LIFO worksheet similarly: We want to add the purchase from the 3rd this gives 400 to choose from for the upcoming sale on the 10th. This time, however, we compute the weighted average cost per unit by dividing the 5,200 cost for all units by 400. This gives us a weighted average cost per unit of 13.00. When we issue 200 units on the 10th, we use that cost per unit. As well we assign the 200 units still in inventory the same per unit cost.

On the 20th, we’ll bring in 200 more units. This gives us 400 units with a cost of 5,800. These new units increase our weighted average cost to 14.50 per unit. When we issue units for sale on the 27th, we use that 14.50 per unit for all 300 units issued and assign that same amount to the remaining 100 units in ending inventory for an ending inventory value of 1,450 (which is, as I indicated, between the 1,200 for LIFO and 1,600 for FIFO).

Slide 10: For Specific Identification, we begin as we have for the other methods by adding the purchase on the 3rd to beginning inventory. As before, this gives 400 to choose from for the upcoming sale on the 10th. What’s different here is that the units to be sold have been specifically identified. So, let’s issue 50 units from beginning inventory and 150 units from the purchase on the 3rd. This leaves use with 150 units from beginning inventory and 50 units from the 3rd. To these, we’ll add the purchase on the 20th to bring us back to 400 units in inventory. For the sale on the 27th, we are told to use 150 units from beginning inventory (at 12 each) and 150 units from the purchase on the 20th (at 16 apiece). This leaves us with 50 units from the purchase on the 3rd and 50 units from the purchase on the 20th – as we’d expect, 100 units in ending inventory. Our ending inventory value, in this case, is 1,500.

Slide 11: Here’s a quick comparison of the different methods, the ending inventory values they yield, and the resulting differences in Cost of Goods Sold.

In deciding which method to use, you may wish to consult with management, with your tax professional / CPA and/or talk with others in your industry and seek their opinion.

Slide 12: Before we end this presentation, I want to talk about something known as Lower of Cost or Market (LCM). I mentioned this earlier when we were discussing adjusting your inventory to Net Realizable Value in the case of damaged or obsolete inventory.

To apply LCM, we need to check what we paid for our inventory against current market prices. Using the Principle of Conservatism, we chose whichever is lower. If we go down the list here, we see that our cost for Pants, Shirts and Socks is lower and that the market price for Belts and Hats is lower. We extend theses costs to come up with a new ending inventory value. We take the difference of this value and the extended cost and prepare the adjustment shown. This way the value of our inventory, and thus our total assets is not overstated.

I hope this helps to understand a little more about the valuation of inventory and, by extension, a little more about merchandising. Good luck with your studies.