# Inventory valuation considerations in the forecasted economy

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## Introduction

With demand remaining strong, middle market firms have been increasing their inventories during the current quarter, with just under a majority expecting to do so over the next six months. As noted in RSM's recent The Real Economy Blog, inventories are now growing at twice the rate of sales on a composite basis inside the manufacturing and trade ecosystems, according to composite data from the U.S. Census.

The surge in inventories raises the possibility that firms will be caught with excess supplies just as demand begins to slow down this year.

Given the general uncertainty over economic activity and the ability of U.S. households to sustain the recent strong pace of spending, the growth of inventories highlights the risks that middle market firms are facing. Entities may need to reassess their projected sales and the potential impact of revised forecasts on the realizable value of existing inventory. Also, as a result of excess inventory, entities may curtail their planned production levels. Such reductions may impact the allocation of fixed overhead costs to inventory, which also creates potential accounting implications.

**Spotlight**

In the past year, costs of raw materials, component parts, freight, labor and overhead that are capitalized in inventory have increased. If an entity is unable to pass higher costs on to customers, the carrying amount of the inventory may not be recoverable, requiring the entity to assess the realizable value of its inventory as a result. In addition, while some entities have been increasing inventory levels, the Federal Open Markets Committee has been increasing interest rates to stem consumer demand. As a result, some entities may need to increase their sales incentive programs to move inventory, which may also raise questions about the realizability of inventory valuations.

In accounting for inventories, a loss must be recognized whenever the utility of goods is impaired by damage, deterioration, obsolescence, *changes in price levels* [emphasis added], or other causes.

Under the Financial Accounting Standards Board's Accounting Standards Codification (ASC) Topic 330, inventory is generally carried at its production or acquired cost, which represents the price paid or consideration given to acquire the asset. However, entities must assess whether the inventory's cost exceeds its expected market or net realizable value, as applicable.

Inventory measured using the last-in, first-out (LIFO) or retail inventory (RIM) cost methods is carried at its lower of cost or market value (LCM) while inventory measured using all other costing methods, such as first-in, first-out (FIFO), weighted average or specific identification, is carried at the lower of cost or net realizable value (NRV). When evidence exists that the inventory's NRV or market value (as applicable) is lower than its cost, the difference is recognized as a loss in earnings in the period in which it occurs.

Both the NRV and LCM rules can be applied on an individual inventory item or at a group or pool level, depending on the character and composition of the inventory. The entity's subsequent measurement of inventory should assure that losses on inventory are not inappropriately deferred and should be consistently applied.

## Applying the lower of cost or NRV rule

NRV is the estimated selling price of inventory in the ordinary course of business, less reasonably predictable costs of completion and disposal (which includes transportation costs). Determining NRV is a relatively straight-forward exercise for finished goods inventory. However, when determining NRV for raw material and work-in-process (WIP) inventory, an entity must estimate its costs to convert raw materials and WIP into sellable inventory. This exercise requires judgment. The following example illustrates the application of the lower of cost or NRV rule:

| Inventory | Cost (a) | Estimated Costs to Complete (b) | Completed Cost (c) = (a)+(b) | Estimated Selling Price (d) | Estimated Disposal Costs (e) | Net Realizable Value (f) = (d)-(e)-(b) | Write-down (Loss) (g) = (a)-(f) |
|---|---|---|---|---|---|---|---|
| Raw material | $5 | $12 | $17 | $16 | $2 | $2 | $3 |
| Work-in-process | $8 | $8 | $16 | $16 | $2 | $6 | $2 |
| Finished products | $15 | N/A | $15 | $16 | $2 | $14 | $1 |

Entities should consider all available data in determining NRV. For example, an entity should consider whether its sales incentives, such as volume discounts or rebates, will result in a loss on the sale of the product that may indicate an impairment of existing inventory. If the sales incentive is temporary and limited to only some of the existing inventory, the entity should not adjust the estimated sales price when it applies the lower of cost or NRV rule described above. However, when a sales price reduction is other than temporary, that reduction should be reflected in the impairment assessment.

An entity should also look at changes in selling price that occur after year-end but before financial statements are issued or available to be issued. Such price changes provide evidence as to whether impairment is other than temporary. While ASC 330 does not provide explicit guidance for determining whether an impairment is other than temporary, it does state that no loss should be recognized unless the evidence indicates clearly that a loss has been sustained.

## Applying the lower of cost or market rule

Entities using the LIFO or RIM methods must assess inventory for impairment using the LCM rule. Under the LCM rule, an entity should recognize an impairment (i.e., record a loss) when the cost of the inventory exceeds its 'market' value.

In determining whether an impairment charge is warranted, the first step is to determine the market value. For purposes of applying the LCM rule, market is one of the following, depending upon the circumstances:

- Replacement cost
- Net realizable value, which is the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion and disposal (the "ceiling")
- Net realizable value reduced by the entity's normal profit margin (the "floor")

If the replacement cost is between the ceiling and the floor, it is used as market. If replacement cost exceeds the ceiling, the ceiling is used as market. If replacement cost is less than the floor, the floor is used as market.

The following example illustrates how the market value is determined in applying the LCM rule:

| Inventory Item | Replacement Cost | NRV (the "Ceiling") | NRV, Less 10% Profit Margin (the "Floor") | Market Value |
|---|---|---|---|---|
| A | $20 | $25 | $22 | $22 |
| B | $50 | $53 | $47 | $50 |
| C | $100 | $95 | $86 | $95 |

After the market value for the inventory is determined, the entity then compares the cost of its inventory to its market value and records an impairment charge, as necessary, when the inventory's LIFO or RIM cost basis exceeds its market value.

## Other considerations

### Recoveries of previously recognized write-downs

The provisioning guidance described above applies to both interim and annual reporting. However, under ASC 270, *Interim Reporting*, no write-down is required if the entity reasonably expects that the NRV/market price of the inventory will recover before the earlier of when it is sold or the end of the fiscal year. Recoveries of write-downs taken in earlier interim periods can be recorded in subsequent interim periods of the same fiscal year, up to the amount previously recorded. However, an inventory impairment charge creates a new cost basis for the inventory. Accordingly, an entity cannot reverse a write-down if the recovery occurs in the subsequent fiscal year.

### Allocation of overhead costs

Some manufacturers either are or are planning to curtail their operations to deal with the excess inventory threat. Such production cuts will not impact the accounting for variable overhead costs but could impact the capitalization of fixed overhead costs to inventory.

Fixed production overhead should be allocated to inventory based on the normal capacity of the production facilities. When determining normal capacity for a production facility, an entity should consider

the production levels it expects to experience over several periods or seasons under usual and customary conditions, including the loss of capacity resulting from planned maintenance. While some variation in production levels from period to period is expected and is included in the range of normal capacity, the relevant range generally would not change when unusual production expenses and inefficiencies arise, such as reduced production levels due to significant demand reduction. Judgment is required in assessing when a level of production is considered to be outside the acceptable range.

For example, assume an entity that does not experience sales or production seasonality manufactures 100 million units each quarter on average over the past three years. This 100-million-unit production level is considered “normal capacity of production.” The entity then significantly reduces production for a quarter due to declining sales, producing only 10 million units that quarter. In accordance with ASC 330-10-30-6, the amount of fixed overhead costs allocated to each of the 10 million units produced during the quarter should not be increased as a result of the abnormally low production. In other words, the overhead capitalization rate based on the normal capacity of the production facilities should not be increased. Instead, the unallocated fixed overhead costs should be recognized as an expense during the period in which they are incurred.

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