

**Statement of  
Financial Accounting Standards  
No. 10**

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Translated by

**Hsihui Chang, Associate Professor**

**(University of Texas at Dallas)**

**Chung-Huey Huang, Professor**

**(National Taipei University)**

**Revised on 29 November 2007**

Translated by

**Henry Chung- Yuan Hsu, Professor**

**(National Chengchi University)**

**Financial Accounting Standards Committee**

**Statement of Financial Accounting Standards No.10**

**Inventories**

**I Introduction**

- (1) This Statement establishes the accounting standards for inventories.
- (2) This Standard applies to all inventories, except:
  - (a) Work in progress arising under long-term construction contracts, including directly related service contracts (follow the principles set out in the Statements of Financial Accounting Standards No. 11, *Long-term Construction Contracts*); and
  - (b) Financial instruments (follow the principles set out in the Statement of Financial Accounting Standards No. 34, *Financial Instruments: Recognition and Measurement* and No. 36, *Financial Instruments: Disclosure and Presentation*).

**II Definitions**

- (3) The definitions of terms used in this Statement are as follows:
  - (a) *Inventory*: assets (i) held for sale in the ordinary course of business; (ii) in the process of production for such sale; or (iii) in the form of materials or supplies to be consumed in the production process or in the rendering of services.

- (b) *Direct raw materials:* (also known as direct materials) the materials that can be reasonably identified as being consumed for the production of finished goods or become part of the finished goods. Materials with trivial costs are excluded.
- (c) *Direct labour:* labour costs that can be reasonably identified as being incurred for the production of finished goods.
- (d) *Manufacturing overhead:* all the manufacturing costs except direct raw materials and direct labour (eg, indirect raw materials, indirect labour, the depreciation and maintenance expenses of plant assets, and factory operating expenses, etc).
- (e) *Replacement cost:* the current cost of purchasing the same inventory.
- (f) *Net realizable value:* the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.
- (g) *Standard cost:* cost per unit of finished goods that should be incurred under the established efficiency standard.
- (h) *Fair value:* the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

### III Explanation

- (4) Inventories are among the most important assets of many companies. The measurement and presentation of inventories have significant influence on the appropriate presentation of the financial conditions and operating performance of a company.

#### Measurement of inventories

##### *Initial measurement of inventories*

- (5) The costs of merchandise, raw materials, and supplies inventory include the purchase prices of inventory (less purchase discounts and allowances) and other necessary expenditure and charges for bringing the inventory to the salable and useable condition and location.

The fixed and indirect variable costs incurred in the production process are usually considered necessary in bringing inventory to its salable location and condition, thus they should be regarded as manufacturing overhead.

- (6) Fixed costs must be allocated on the basis of the normal capacity of the production equipment instead of the actual capacity. Normal capacity is the production expected to be achieved on average over a number of periods or seasons under normal circumstances, taking into account the loss of capacity resulting from planned maintenance. The actual level of production may be used if it approximates normal capacity. Unallocated overheads due to low production or idle plant are recognized as costs of sales in the period in which they are incurred; therefore, the amount of fixed overhead allocated to each unit of production is not increased. In periods of abnormally high production, the amount of fixed overhead is allocated on the basis of the actual capacity so that inventories are not measured above cost.

Variable production overheads are allocated to each unit of production on the basis of the actual use of the production facilities.

- (7) A production process may result in more than one product being produced simultaneously. This is the case, for example, when joint products are produced or when a main product and a by-product are produced. When the costs of conversion of each product are not separately identifiable, they are allocated between the products on a rational and consistent basis. The allocation may be based, for example, on the relative sales value of each product either at the stage in the production process when the products become separately identifiable, or at the completion of production. When

by-products are immaterial, they are often measured at net realizable value and this value is deducted from the cost of the main product.

- (8) Examples of costs excluded from the cost of inventories and recognized as expenses in the period in which they are incurred are:
- (a) abnormal amounts of wasted materials, labour or other production costs;
  - (b) storage costs, unless those costs are necessary in the production process;
  - (c) expenditure that does not contribute to bringing inventories to their present condition and location; and
  - (d) selling expenses.

#### ***Subsequent measurement of inventories***

- (9) When there is an impairment of asset value due to a decline in the net realizable value of inventories, inventories shall be measured at the lower of cost and net realizable value.
- (10) Net realizable value refers to the net amount that an entity expects to realize from the sale of inventory in the ordinary course of business. Fair value reflects the amount for which the same inventory could be exchanged between knowledgeable and willing buyers and sellers in the marketplace. The former is an entity-specific value; the latter is not. Net realizable value for inventories may not equal net fair value (fair value less costs to sell).
- (11) Inventories are usually written down to net realizable value item by item. It is not appropriate to write inventories down on the basis of a classification of inventory such as all finished goods or all the inventories in a particular operating segment. In some circumstances, however, it may be appropriate to group similar or related items. Items of inventory could be classified in the same group if, and only if:

- (a) they are relating to the same product line that have similar purposes or end uses;
- (b) they are produced and marketed in the same geographical area; and
- (c) they cannot be practicably evaluated separately from other items in that product line.

Service providers generally accumulate costs in respect of each service for which a separate selling price is charged. Therefore, each such service is treated as a separate item.

- (12) Materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. However, when a decline in the price of materials indicates that the cost of the finished products exceeds net realizable value, the materials are written down to net realizable value. In such circumstances, the replacement cost of the materials may be the best available measure of their net realizable value.
- (13) The cost of inventories may not be recoverable if those inventories are damaged or obsolete, if the estimated costs of completion have increased, if their selling expenses have increased, or if their selling prices have declined. When cost of inventories exceeds net realizable value of them, inventories shall be written down below cost to net realizable value. This application is consistent with the view that assets should not be carried in excess of amounts expected to be realized from their sale or use.

#### **Measurement of cost**

- (14) Specific identification of cost means that specific costs are attributed to identified items of inventory. This is the appropriate treatment for bought or produced items that are segregated for a specific project.

However, specific identification of costs is inappropriate when there are large numbers of items of inventory that are ordinarily interchangeable, since the method may make it easier to manage earnings.

- (15) Inventories used in one operating segment may have a use to the entity different from the same type of inventories used in another operating segment. However, a difference in geographical location of inventories or in the respective tax rules, by itself, is not sufficient to justify the use of different cost formulas.

#### **Financial Statements disclosure requirements**

- (16) Cost of sales consists of those costs previously included in the measurement of inventory that has now been sold and unallocated production overheads, abnormal amounts of production costs of inventories, and loss for value decline (or gains from value recovery). The circumstances of the entity may also warrant the inclusion of other amounts, such as distribution costs.
- (17) The sub-classifications of inventories in the financial statements help readers understand the dollar amount and the periodic changes of inventories. The common sub-classifications are raw materials, supplies, work-in-progress, finished goods and merchandise.

### **IV Accounting standards**

#### **Measurement of inventories**

##### ***Initial measurement of inventories***

- (18) The costs of inventories are necessary expenditures and charges for bringing the inventory to the salable and useable condition and location.

- (19) The costs of finished goods and work-in-progress inventory must include direct raw materials, direct labour and manufacturing overhead. Manufacturing overhead shall be allocated according to a rational and systematic method. Fixed costs must be allocated on the basis of the normal capacity of the production equipment. The actual level of production may be used if it approximates normal capacity. Unallocated overheads resulted from low production or idle plant are recognized as costs of sales in the period in which they are incurred. In periods of abnormally high production, the amount of fixed overhead is allocated on the basis of the actual capacity.

Variable production overheads are allocated to each unit of production on the basis of the actual use of the production facilities.

- (20) To the extent that service providers have inventories, they measure them at the costs of their production. These costs consist primarily of the labour and other costs of personnel directly engaged in providing the service and attributable overheads. Labour and other costs relating to sales and general administrative personnel are not included but are recognized as expenses in the period in which they are incurred. The costs of inventories of a service provider do not include profit margins or non-attributable overheads.

##### ***Subsequent measurement of inventories***

- (21) Inventories shall be measured at the lower of cost and net realizable value. Inventories are usually written down to net realizable value item by item. However, the comparison of cost and market value could be made on the basis of classified items in accordance with paragraph 11. The chosen approach shall be applied consistently to each period.

The amount of any write-down of inventories to net realizable value shall be recognized as cost of sales.

- (22) Materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or

above cost. However, when a decline in the price of materials indicates that the cost of the finished products exceeds net realizable value, the materials are written down to net realizable value.

- (23) A new assessment is made of net realizable value in each subsequent period. When the circumstances that previously caused inventories to be written down below cost no longer exist or when there is clear evidence of an increase in net realizable value because of changed economic circumstances, the amount of the write-down is reversed (ie the reversal is limited to the amount of the original write-down). The amount of any reversal of any write-down of inventories shall be recognized as a reduction in cost of sales in the period in which the reversal occurs.
- (24) When unusual circumstances occur, such as a flood or fire, and result in the loss of the accounting certificates and records and the computation of costs becomes difficult, inventory may be valued by the gross profit method.
- (25) If the net realizable value of inventory is lower than the cost due to damage or obsolescence, it is necessary to reduce the cost to the level of the net realizable value.

#### Measurement of cost

- (26) The cost of inventories of items that are not ordinarily interchangeable and goods or services produced and segregated for specific projects shall be assigned by using specific identification of their individual costs.

The cost of inventories, other than those described above, shall be assigned by using the first-in, first-out (FIFO) or weighted average cost formula other than specific identification.

- (27) An entity shall use the same cost formula for all inventories having a similar nature and use to the entity. For inventories with a different

nature or use, different cost formulas may be justified.

- (28) Techniques for the measurement of the cost of inventories, such as the standard cost method or the retail method, may be used for convenience if the results approximate cost. Standard costs take into account normal levels of materials and supplies, labour, efficiency and capacity utilisation. They are regularly reviewed and, if necessary, revised in the light of current conditions.
- (29) The retail method is often used in the retail industry for measuring inventories of large numbers of rapidly changing items with similar margins for which it is impracticable to use other costing methods mentioned in paragraph 26. The cost of the inventory is determined by reducing the sales value of the inventory by the appropriate percentage gross margin. The percentage used takes into consideration the effect of the measurement of the lower of cost and net realizable value. An average percentage for each retail department is often used.

#### Measurement of net realizable value

- (30) Net realizable value should be determined on the balance sheet date. Estimates of net realizable value are based on the most reliable evidence available at the time the estimates are made. These estimates take into consideration fluctuations of price or cost directly relating to events occurring after the end of the period to the extent that such events confirm conditions existing at the end of the period.
- (31) The calculation of net realizable value should be based on the estimated selling price in the normal course of business. However, if the inventory is held for sales contracts, its valuation must be based on the contract price.

#### **Disposal of inventories**

- (32) When inventories are sold, the carrying amount of those inventories shall be recognized as cost of sales in the period in which the related

revenue is recognized. The amount of any loss of inventories shall be recognized as an expense in the period the loss occurs.

### Financial Statements disclosure requirements

- (33) The financial statements shall disclose the following information related to inventories:
- (a) the accounting policies adopted in measuring inventories, including the cost formula used.
  - (b) the total carrying amount of inventories and the carrying amount in classifications appropriate to the entity. Common classifications of inventories are merchandise, materials, production supplies, work in progress and finished goods. The inventories of a service provider may be described as work in progress.
  - (c) the amount of inventories recognized as an expense during the period.
  - (d) the amount of any write-down of inventories recognized as cost of sales during the period.
  - (e) the amount of any reversal of any write-down that is recognized as a reduction in cost of sales during the period.
  - (f) the circumstances or events that led to the reversal of a write-down of inventories.
  - (g) the carrying amount of inventories pledged as security for liabilities.

- (34) This Statement was issued on May 20, 1987, with the first revision on November 29, 2007. The first revised provision of this Statement shall be effective for financial statements with fiscal years beginning on or after January 1, 2009. Earlier adoption is permitted.

Entities which originally prepared the financial statements in accordance with this Statement and applied the Last-in, first-out (LIFO) cost formula shall recalculate cost of inventories by using the first-in, first-out (FIFO) or weighted average cost formula, when they adopt this first revised provision. The difference between the result of recalculation and the carrying amount shall be recognized as the cumulative effect of a change in accounting principle; restatement, however, is not necessary. Entities need not to measure the cumulative effect of any other change in accounting principle due to the adoption of this first revised provision.

- (35) After this first revised provision is effective, changes need to be made in the following Statements: all references to the phrase "Statement of Financial Accounting Standards No.10, *Valuation and Presentation of Inventory*" appearing in other Statements shall hereby be replaced by the phrase "Statement of Financial Accounting Standards No.10, *Inventories*"; all references to the phrase "the Last-in, first-out (LIFO) cost formula" appearing in other Statements shall hereby be deleted; all references to the phrase "market value of inventories" appearing in other Statements shall hereby be replaced by the phrase "net realizable value of inventories"; paragraph 105 of the Statement of Financial Accounting Standards No. 1 "*Conceptual Framework for Financial Accounting and Preparation of Financial Statements*" shall be deleted.

The provisions of this Statement need not be applied to immaterial items.

## V Notes