

SOME ASPECTS REGARDING IMPLICATIONS OF IAS 2 "INVENTORY" IN ROMANIAN ACCOUNTING

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ABSTRACT: *This paper presents some aspects regarding inventories. In many business inventories are the most important assets. The accounting for inventories is a major consideration for many entities because of its significance on both the income statement (cost of goods sold) and the statement of financial position. The complexity of accounting for inventories arises from several factors like: the high volume of activity, the various cost flow alternatives that are acceptable and the classification of inventories.*

KEY WORDS: *inventories; assets; realizable value; cost of purchase; cost of inventories*

JEL CLASSIFICATION: *M41; M48; H22; K34.*

1. INTRODUCTION

Inventories are assets held for sale in the ordinary course of business, in the process of production for such sale or in the form of materials or supplies to be consumed in the production process or in the rendering of services.

Inventories shall be measured at the lower of cost and net realizable value.

The cost of inventories shall comprise all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition.

The costs of purchase of inventories comprise the purchase price, import duties and other taxes (other than those subsequently recoverable by the entity from the taxing authorities), and transport, handling and other costs directly attributable to the acquisition of finished goods, materials and services. Trade discounts, rebates and other similar items are deducted in determining the costs of purchase.

The costs of conversion of inventories include costs directly related to the units of production, such as direct labor. They also include a systematic allocation of fixed

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and variable production overheads that are incurred in converting materials into finished goods. Fixed production overheads are those indirect costs of production that remain relatively constant regardless of the volume of production, such as depreciation and maintenance of factory buildings and equipment, and the cost of factory management and administration. Variable production overheads are those indirect costs of production that vary directly, or nearly directly, with the volume of production, such as indirect materials and indirect labor.

The allocation of fixed production overheads to the costs of conversion is based on the normal capacity of the production facilities. 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. The amount of fixed overhead allocated to each unit of production is not increased as a consequence of low production or idle plant.

Unallocated overheads are recognized as an expense in the period in which they are incurred. In periods of abnormally high production, the amount of fixed overhead allocated to each unit of production is decreased 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.

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 there is a main product and a by-product. 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. Most by-products, by their nature, are immaterial. When this is the case, they are often measured at net realizable value and this value is deducted from the cost of the main product. As a result, the carrying amount of the main product is not materially different from its cost.

Other costs are included in the cost of inventories only to the extent that they are incurred in bringing the inventories to their present location and condition. For example, it may be appropriate to include non-production overheads or the costs of designing products for specific customers in the cost of inventories.

2. COSTS OF INVENTORIES

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, labor or other production costs;
- b) storage costs, unless those costs are necessary in the production process before a further production stage;
- c) administrative overheads that do not contribute to bringing inventories to their present location and condition;
- d) selling costs.

IAS 23 *Borrowing costs* identifies limited circumstances where borrowing costs are included in the cost of inventories.

An entity may purchase inventories on deferred settlement terms. When the arrangement effectively contains a financing element, that element, for example a difference between the purchase prices for normal credit terms and the amount paid, is recognized as interest expense over the period of the financing.

Cost of inventories of a service provider

To the extent that service providers have inventories, they measure them at the costs of their production. These costs consist primarily of the labor and other costs of personnel directly engaged in providing the service, including supervisory personnel, and attributable overheads. Labor 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 cost of inventories of a service provider does not include profit margins or non-attributable overheads that are often factored into prices charged by service providers.

Cost of agricultural produce harvested from biological assets

In accordance with IAS 41 *Agriculture* inventories comprising agricultural produce that an entity has harvested from its biological assets are measured on initial recognition at their fair value less estimated point-of-sale costs at the point of harvest. This is the cost of the inventories at that date for application of this standard.

3. TECHNIQUES FOR THE MEASUREMENT OF COST

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, labor, efficiency and capacity utilization. They are regularly reviewed and, if necessary, revised in the light of current conditions.

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. 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 inventory that has been marked down to below its original selling price. An average percentage for each retail department is often used.

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.

Specific identification of cost means that specific costs are attributed to identify items of inventory. This is the appropriate treatment for items that are segregated for a specific project, regardless of whether they have been bought or produced. However, specific identification of costs is inappropriate when there are large numbers of items of inventory that are ordinarily interchangeable. In such

circumstances, the method of selecting those items that remain in inventories could be used to obtain predetermined effects on profit or loss.

The cost of inventories shall be assigned by using the first-in, first-out (FIFO) or weighted average cost formula. 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.

For example, 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.

The FIFO formula assumes that the items of inventory that were purchased or produced first are sold first, and consequently the items remaining in inventory at the end of the period are those most recently purchased or produced. Under the weighted average cost formula, the cost of each item is determined from the weighted average of the cost of similar items at the beginning of a period and the cost of similar items purchased or produced during the period. The average may be calculated on a periodic basis, or as each additional shipment is received, depending upon the circumstances of the entity.

The cost of inventories may not be recoverable if those inventories are damaged, if they have become wholly or partially obsolete, or if their selling prices have declined. The cost of inventories may also not be recoverable if the estimated costs of completion or the estimated costs to be incurred to make the sale have increased. The practice of writing inventories down below cost to net realizable value is consistent with the view that assets should not be carried in excess of amounts expected to be realized from their sale or use.

Inventories are usually written down to net realizable value item by item. In some circumstances, however, it may be appropriate to group similar or related items. This may be the case with items of inventory relating to the same product line that have similar purposes or end uses, are produced and marketed in the same geographical area, and cannot be practicably evaluated separately from other items in that product line. It is not appropriate to write inventories down on the basis of a classification of inventory, for example, finished goods, or all the inventories in a particular operating segment. 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.

Estimates of net realizable value are based on the most reliable evidence available at the time the estimates are made, of the amount the inventories are expected to realize. 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.

Estimates of net realizable value also take into consideration the purpose for which the inventory is held. For example, the net realizable value of the quantity of inventory held to satisfy firm sales or service contracts is based on the contract price. If the sales contracts are for less than the inventory quantities held, the net realizable value of the excess is based on general selling prices. Provisions may arise from firm

sales contracts in excess of inventory quantities held or from firm purchase contracts. Such provisions are dealt with under IAS 37 *Provisions, contingent liabilities and contingent assets*.

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.

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 (i.e. the reversal is limited to the amount of the original write-down) so that the new carrying amount is the lower of the cost and the revised net realizable value. This occurs, for example, when an item of inventory that is carried at net realizable value, because its selling price has declined, is still on hand in a subsequent period and its selling price has increased.

4. RECOGNITION AS AN EXPENSE

When inventories are sold, the carrying amount of those inventories shall be recognized as an expense in the period in which the related revenue is recognized. The amount of any write-down of inventories to net realizable value and all losses of inventories shall be recognized as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, shall be recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs.

Some inventories may be allocated to other asset accounts, for example, inventory used as a component of self constructed property, plant or equipment. Inventories allocated to another asset in this way are recognized as an expense during the useful life of that asset.

5. VALUATION OF INVENTORIES

According to IAS 2, the primary basis of accounting for inventories is cost. *Cost* is defined as the sum of all costs of purchase, costs of conversion, and other costs incurred in bringing the inventories to their present location and condition. This definition allows for significant interpretation of the costs to be included in inventory.

For raw materials and merchandise inventory that are purchased outright and not intended for further conversion, the identification of cost is relatively straightforward. The cost of these purchased inventories will include all expenditures incurred in bringing the goods to the point of sale and putting them in a salable condition. These costs include the purchase price, transportation costs, insurance, and

handling costs. Trade discounts, rebates, and other such items are to be deducted in determining inventory costs; failure to do so would result in carrying inventory at amounts in excess of true historical costs.

Conversion costs for manufactured goods should include all costs that are directly associated with the units produced, such as labor and overhead. The allocation of overhead costs, however, must be systematic and rational, and in the case of fixed overhead costs (i.e., those which do not vary directly with level of production) the allocation process should be based on normal production levels. In periods of unusually low levels of production, a portion of fixed overhead costs must accordingly be charged directly to operations, and not taken into inventory.

Costs other than material and conversion costs are inventoriable only to the extent they are necessary to bring the goods to their present condition and location. Examples might include certain design costs and other types of preproduction expenditures if intended to benefit specific classes of customers. On the other hand, all research costs and most development costs would typically *not* become part of inventory costs. Also generally excluded from inventory would be such costs as administrative and selling expenses, which must be treated as period costs; the cost of wasted materials, labor, or other production expenditures; and most storage costs. Included in overhead, and thus allocable to inventory, would be such categories as repairs, maintenance, utilities, rent, indirect labor, production supervisory wages, indirect materials and supplies, quality control and inspection, and the cost of small tools not capitalized.

6. ALTERNATIVE VALUATION METHODE

There are instances in which an accountant must estimate the value of inventories.

Whether for interim financial statements or as a check against perpetual records, the need for an inventory valuation without an actual physical count is required. Some of the methods used, which are discussed below, are the retail method and the gross profit method.

Retail method. IAS 2 notes that the retail method may be used by certain industry groups but does not provide details on how to employ this method, nor does it address the many variations of the technique. The conventional retail method is used by retailers as a method to estimate the cost of their ending inventory. The retailer can either take a physical inventory at retail prices or estimate ending retail inventory and then use the cost-to-retail ratio derived under this method to convert the ending inventory at retail to its estimated cost.

This eliminates the process of going back to original invoices or other documents to determine the original cost for each inventoriable item. The retail method can be used under either of the two cost flow assumptions discussed earlier: FIFO or average cost. As with ordinary FIFO or average cost, the lower of cost or net realizable value (LCNRV) rule can also be applied to the retail method when either one of these two cost assumptions is used.

The key to applying the retail method is determining the cost-to-retail ratio. The calculation of this number varies depending on the cost flow assumption selected. Essentially, the cost-to-retail ratio provides a relationship between the cost of goods available for sale and the retail price of these goods.

The retail method is an acceptable method of valuing inventories for tax purposes in some, but not all, jurisdictions. The foregoing examples are not meant to imply that the method would be usable in any given jurisdiction; readers should ascertain whether or not it can be used.

Gross profit method. The gross profit method can be used to estimate ending inventory when a physical count is not possible or feasible. It can also be used to evaluate the reasonableness of a given inventory amount. The cost of goods available for sale is compared with the estimated cost of goods sold.

The gross profit method, if used, should be limited to making interim reporting estimates, for analyses conducted by auditors, and for making estimates of inventory lost in fires or other catastrophes. The method is generally not acceptable for either tax or annual financial reporting purposes.

Fair value as an inventory costing method. In general, inventories are to be carried at cost, although, as has been explained in the preceding sections of this chapter, cost may be ascertained by a variety of methods under IAS 2, and when recoverable amounts do not equal cost there is the further need to write down inventory to reflect such impairment. However, under defined circumstances, inventories may be carried at fair value, in excess of the actual cost of production or acquisition. Currently, IAS 41 provides that agricultural products that are carried in inventory are to be reported at fair value, subject to certain limitations. Under the provisions of IAS 41, all biological assets are to be measured at fair value less expected point-of-sale costs at each date of the statement of financial position, unless fair value cannot be measured reliably. Agricultural produce is to be measured at fair value at the point of harvest less expected point-of-sale costs. Because harvested produce is a marketable commodity, there is no "measurable reliability" exception for produce.

Furthermore, the change in fair value of biological assets occurring during a reporting period is reported in net profit or loss, notwithstanding that these are "unrealized" as of the date of the statement of financial position. IAS 41, however, does provide an exception to this fair value model for biological assets for situations where there is no active market at time of recognition in the financial statements, and no other reliable measurement method exists. In such instances, it provides that the cost model is to be applied to the specific biological asset for which such conditions hold, only. These biological assets should be measured at depreciated cost less any accumulated impairment losses.

7. CONCLUSIONS

IAS 2 sets forth certain disclosure requirements relative to inventory accounting methods employed by the reporting entity. According to this standard, the following must be disclosed:

- the accounting policies adopted in measuring inventories, including the costing;

- methods employed;
- the total carrying amount of inventories and the carrying amount in classifications;
- appropriate to the entity;
- the carrying amount of inventories carried at fair value less costs to sell;
- the amount of inventories recognized as expense during the period;
- the amount of any write-down of inventories recognized as an expense in the period;
- the amount of any reversal of any previous write-down that is recognized in profit or loss for the period;
- the circumstances or events that led to the reversal of a write-down of inventories;
- to net realizable value.

The type of information to be provided concerning inventories held in different classifications is somewhat flexible, but traditional classifications, such as raw materials, work in progress, finished goods, and supplies, should normally be employed. In the case of service providers, inventories (which are really akin to unbilled receivables) can be described as work in progress.

In addition to the foregoing, the financial statements should disclose either the cost of inventories recognized as an expense during the period (i.e., reported as cost of sales or included in other expense categories), or the operating costs, applicable to revenues, recognized as an expense during the period, categorized by their respective natures.

Costs of inventories recognized as expense includes, in addition to the costs inventoried previously and attaching to goods sold currently, the excess overhead costs charged to expense for the period because, under the standard, they could not be deferred to future periods.

REFERENCES:

- [1]. **Epstein, B.; Jermakovicz, E.** (2010) *Interpretation and Application of International Financial Reporting Standards*, Ed. John Wiley & Sons, New York
- [2]. **Nedels, B.; Powers, M.; Crosson, S.** (2008) *Financial and Managerial Accounting*, Ed. Houghton Mifflin Company, New York
- [3]. **Bunget, O.C.; Dumitrescu, A.C.** (2008) *Prudence principle and accuracy of financial information*, *Lucrări Științifice Management Agricol*, seria I, vol X (3), Editura Agroprint, Timișoara
- [4]. **Cotleț, D.; Megan, O.; Pistol, I.** (2007) *Raportările financiare ale entităților economice*, Editura Mirton, Timișoara
- [5]. **Megan, O.** (2006) *Adopting European Union Accounting Directives – a new challenge for Romanian managers*”, Simpozionul internațional „Strategijki Menadzment”, mai 2006, Subotica, Serbia
- [6]. **Megan, O.; Caciuc, L.; Popa, A.** (2006) *The application of IAS/IFRS by the Romanian enterprises that wanted to be listed on the capital market*, June, Izmir, Turcia