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Concise aspects regarding the accounting treatment for property, plant and equipment in according with IAS 16

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ABSTRACT: The objective of this paper is to describe the accounting treatment for property, plant and equipment, in according with the IAS 16, including: timing of the recognition of assets, determination of asset carrying amounts using both the cost model and a reevaluation model, depreciation charges and impairment losses to be recognized in relation to these values.

The accelerating process of capital free market's development and also the accentuating of the globalization phenomenon have imposed the continuous development of the Romanian accounting system. The goal was to fully harmonize the Romanian accounting with the European Directives and with the International Accounting Standards.

Thus, the Romanian accounting system evolved and starting with 2006 the Romanian organizations and institutions apply accounting regulations fully harmonized with the European Directives (The 4th and 7th Directive)¹, regulated by OMF 1752/2005.

In this paper I want to discuss concisely about the main aspects of IAS 16 (Property, plant and equipment). The main issue for accounting of property, plant and equipment is to identify the moment of its recognition, the amount value and the relevant depreciation.

The IAS 16 standard deals with all property, plant and equipment, including those which is held as lessee under a finance lease according with IAS 17 (Leases) and property that is being constructed or developed for future use as investment property according with IAS 40 (Investment property).

It is important to specify that the IAS 16 does not apply to:

1. property, plant and equipment that is clasified as held for sale according with IFRS 5 (Noncurrent assets held for sale and discontinued operations);
2. biological assets related to agricultural activity according with IAS 41 (Agriculture);
3. mineral rights and mineral reserves, such as oil or natural gas, or similar nonregenerative resources;
4. recognition and evaluating the exploitation assets according with IFRS 6 (Exploitation and evaluating the mineral reserves).

The property, plant and equipment will be recognized as assets only if they fulfil both of the following criteria:

1. it is probable that future economic benefits associated with the items will flow to the entity;
2. the cost of the items can be mesured reliably.

An entity prove that one asset satisfy the first criterion by establishing the degree of certainty for the future economic benefits based on the available evidence in the initial recognition moment. Thus, the entity must undertake even the benefits and the losses relevant to the asset.

The second criterion – reliability measuring cost of the items – is usually satisfied because the acquisition cost is known and the costs directly attributable to the purchased

¹The 4th Directive was adopted in 1978 and it offers the European Union Member States a series of options concerning the financial statements formats, the assessment rules and the requirements concerning financial communications.

assets is certainly identified.

For self constructed asset the cost could be objective determined considering the materials, labor and other inputs necessary for its production.

Safety and environmental assets qualify as property, plant and equipment if they enable the entity to increase future economic benefits from related assets in excess of what it could derive if they had not been acquired (for example, chemical protection equipment). Insignificant items such as molds and dies could be aggregated as single asset items. Specialized spares and servicing equipment are accounted for as property, plant and equipment.

Any recognized item of property, plant and equipment must be measured at the initial cost, which includes:

- its acquisition price and duties paid;
- any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in its intended manner²;
- the initial estimate of the costs of dismantling and removing the asset and restoring the site according with IAS 37 (Provisions, contingent liabilities and contingent assets). These costs is reflected in accounting through an adequate provision which will grow the assets value, afterwards year by year this value will be recovered through the depreciation;
- materials, labor and other inputs for self constructed assets.

The cost of an item of property, plant and equipment excludes start-up costs and general and administrative expenses. The initially losses from use of the asset before reaching the planning indicators are recognized as expenses..

The cost of an item of property, plant and equipment might include the effects of government grants (according with IAS 20 - Accounting for government grants and disclosure of government assistance) deducted from cost or set up as deferred income and even the effects of self-constructed assets which include materials, labour and other inputs.

Subsequent to initial recognition, an entity should choose either the cost model or the revaluation model as its accounting policy for items of property, plant and equipment and should apply that policy to an entire class of property, plant and equipment.

The cost model presume that the carrying amount of an item of property, plant and equipment is its cost less acumulated depreciation and impairment losses.

The revaluation model presume that the carrying amount of an item of property, plant and equipment is its fair value less subsequent accumulated depreciation and impairment losses. If an item of property, plant and equipment is revalued then the entire class of property, plant and equipment to which that asset belongs should be revalued. Assets should be regularly revalued so that carrying value does not differ materially from fair value. Increases determined by revaluation should be credited directly to equity under the heading of revaluation surplus. A reversal of a previous loss for the same asset is taken to the income statement. Decreases should be recognized (debited) in profit or loss. A reversal of a profit previously taken to equity can be debited to equity.

Both of the models presume that assets classified as held for sale are shown at the lower of fair value less costs to sell and carrying value.

Depreciation of an asset is recognized as an expense unless it is included in the carrying amount of a self-constructed asset. It should be applied the following principles:

- the depreciable amount is allocated on a systematic basis over the useful life;
- the method reflects the pattern of expected consumption;
- each part of an item of property, plant and equipment with a cost that is significant in relation to the local cost of the item should be depreciated separately at appropriately

² Examples of costs directly attributable: the initial cost of delivery and handling, the assembling cost, wages of the speciality staff (architects, engineers and so on).

different rates;

- component parts are treated as separate items if the related assets have different pattern.

The depreciation method applied to an asset should be reviewed at least at each financial year-end and, if there has been a significant change in the expected pattern of consumption of the future economic benefits embodied in assets, the method should be changed to reflect the changed pattern. Such a change should be accounted for as a change in an accounting estimate in accordance with IAS 8 (Accounting policies, changes in accounting estimates and errors).

Depreciation starts when the asset is ready for use and ends when the asset is derecognized or classified as held for sale.

When assets are exchanged and the transaction has commercial substance, items are recorded at the fair value of the assets received. In other cases, items are recorded at the carrying amount of the assets given up.

The amount expected to be recovered from the future use or sale of an asset, including its residual value on disposals, is referred to as the recoverable amount. The carrying amount should be compared with the recoverable amount whenever there is an indication of impairment. If the latter is lower, the difference is recognized as an expense according with IAS 36 (Impairment of assets).

The original costs of acquired fixed assets are usually recognized over time by systematically writing down the asset's book value on the balance sheet and reporting a commensurate expense on the income statement. The systematic expensing of the original cost of physical assets over time is called depreciation. The systematic expensing recognition of the original cost of natural resources over time is called depletion. The systematic recognition of the original cost of intangible assets over time is called amortization expense. Essentially, all three of these concepts are the same. The cost of acquiring land is never depleted, however, because land does not get used up over time, but if it does it is depreciated.

Depreciation is a method of expensing the original acquisition cost of physical assets over their useful lives. It is neither a means of adjusting the asset to its fair market value nor a means to provide funds for the replacement of the asset being depreciated.

There are several methods of determining depreciation expense for fixed assets on the financial statements. In some countries, these depreciation methods include straight-line, sum-of-the-years' digits, double-declining balance, and units-of-production (service hours). Regardless of the terminology used, the principles that should be applied in IFRS financial statements are that:

- the depreciable amount is allocated on a systematic basis over the useful life;
- the method used must reflect the pattern of expected consumption.

The straight-line depreciation method is generally used worldwide to determine IFRS depreciation. Both sum-of-the-years' digits and the double-declining balance methods are classified as accelerated depreciation (or rather, accelerated consumption-pattern methods; they are often used for tax purposes and do not comply with IFRS if they do not reflect the pattern of the expected consumption of the assets).

In some countries, management has more flexibility than is permitted by IFRS when deciding whether to expense or capitalize certain expenditure which could result in the recognition of an asset that does not qualify for recognition under IFRS or the expensing of a transaction that would otherwise qualify as an asset under IFRS. This flexibility will impact the balance sheet, income statement, a number of key financial ratios, and the classification of cash flows in the statement of cash flows. Consequently, the analyst must understand the financial data effects of the capitalization or expensing choices made by management.

Management must make three choices when deciding how to depreciate assets. They must decide about:

- the method of depreciation that will be used (straight-line, accelerated consumption, or depletion in early years);
- the useful life of the asset, which is the time period over which the depreciation will occur;
- the residual value of the asset.

In IFRS financial statements, these choices are determined by the application of the principles in IAS 16. In some countries, however, management has greater flexibility. These choices affect the asset values reported on the balance sheet and the income reported on the income statement. They also affect several key financial ratios. The analyst should be aware of the effects of these choices.

The easiest way to understand the impact of using straight-line versus accelerated depreciation is as follows: an accelerated consumption method will increase the depreciation expense in the early years of an asset's useful life relative to what it would be if the straight-line method were used. This lowers reported income and also causes the book value of the long term assets reported on the balance sheet to decline more quickly relative to what would be reported under the straight-line method. As a result, the shareholders' equity will be lower in the early years of an asset's life if accelerated depreciation is used compared with what it would be if the straight-line method is used. Furthermore, the percentage impact falls more heavily on the smaller income value than on the larger asset and shareholders' equity values. Many of the key financial ratios that are based on income, asset values, or equity values will also be affected by the choice of depreciation method.

No matter which depreciation method is chosen, however, the total accumulated depreciation will be the same over the entire useful life of an asset. Thus, the effects for the early year/years of an asset's life tend to reverse over time. However, these reversals apply to the depreciation effects associated with an individual asset. If a company's asset base is growing, the depreciation applicable to the most recently acquired assets tends to dominate the overall depreciation expense of the entity. Only if an entity is in decline and its capital expenditures are low will the reversal effects be noticeable in the aggregate.

The choice of the useful life of an asset affects financial statement values and key financial ratios. All other factors being held constant, the shorter the useful life of an asset, the larger its depreciation will be over its depreciation life. This will raise the depreciation expense, lower reported income, reduce asset values, and reduce shareholders' equity relative to what they would be if a longer useful life were chosen. Reported cash flow, however, will not be affected, because depreciation is not a cash expense. Key financial ratios that contain income, asset values, and shareholders' equity will, however, be affected. A shorter useful life tends to lower profit margins and return on equity, while at the same time raising asset turnover and debt-to-equity ratios.

Choosing a large residual value has the opposite effect of choosing a short useful life. All other factors being constant, a high residual value will lower the depreciation expense, raise to what they would be if a lower residual value had been chosen. Cash flow, however, is unaffected because depreciation is a noncash expense. As a result of a high residual value, an entity's profit margin and return on equity increase, whereas its asset turnover and debt-to-equity ratios decrease.

When depreciation is based on the historical cost of assets, it presents a problem during periods of inflation. When the prices of capital goods increase over time, the depreciation accumulated over the life of such assets will fall short of the amount needed to replace them when they wear out. So the accumulated depreciation will be less than what is required to physically restore the entity to its original asset position. In other words, the real cost of the equipment is higher, and the reported financial statements are distorted. So during periods of inflation, depreciating physical assets on the basis of historical cost, in accordance with the financial capital maintenance theory of income, tends to understate the

true depreciation expense. As such, it overstates the true earnings of an entity from the point of view of the physical capital maintenance (replacement cost) theory of income.

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