ACCOUNTING AND TAX ISSUES RELATING TO DEPRECIATION OF TANGIBLE ASSETS

ZEFINESCU CARMEN-VERONICA
LECTURER PH.D., PETROLEUM-GAS UNIVERSITY OF PLOIESTI
carmen.zefinescu@gmail.com

Abstract
The article proposes a study on the financial and accounting implications of tangible assets depreciation. According to national accounting rules and IFRS, depreciation is the equivalent to irreversible impairment of assets. This amend character is given by correcting the fixed assets counting value to obtain the net counting value. The value of depreciation calculated by applying redemption quota to the counting value of the asset is included in operating expenses for the duration of its use until full recovery of input value and affects the outcome of the exercise.

Keywords: depreciation methods, residual value, depreciable value, the net accounting value

JEL Classification: M40, M41

1. Introduction

Under IAS 16, depreciation is the systematic allocation of the depreciable amount of an asset over its useful life. [2] Depreciation is the expression of physical and moral depreciation of fixed assets aimed at:
- restoration of capital so that at the end of life, they can be replaced;
- playing a true image of the assets of an undertaking at a time.
None of these goals is achieved because the depreciation policy is not the exclusive result of the decision of investors, depreciation is regulated both accounting and taxation; differences between accounting and tax regulations make it more difficult to achieve these objectives. [3]

Depreciation accounting is based on an amortization schedule prepared for the period from the date of commissioning of tangible and full recovery time value their input. Tax depreciation is calculated based on normal operating durations established catalog on classification and normal operation of fixed assets from the month following the depreciable tangible is switched. [1], [4]

O.M.F.P. no. 3055/2009 provides the following depreciation regims:
a) linear; b) digressive; c) accelerated; d) depreciation calculated per unit of product or service, when the nature of the asset justifies the use of such methods of depreciation. Depreciation method may be changed only where it is determined by an error in the estimation of consumption of the future economic benefits of the assets. [10]

It is estimated that the size of the amount calculated to allocate the depreciable amount of an asset is determined by three factors: the useful life, depreciable amount, the depreciation method used. [9]

Useful life is the period along which it is estimated that the company will use the asset subject to depreciation. In accounting operates with economic duration of use, not to be confused with the normal or legal duration operated with the tax return. [3]

According O.M.F.P. no. 3.055/2009, duration depreciation are:
a) the period over which an asset is expected to be available for use by an entity; or
b) the number of units of production or similar units that are expected to be obtained by the use of the asset by the entity. (section 68 (3)) [10]

The normal life of the operation is recovering from a tax perspective, value of the property by way of depreciation. [3]

Under IAS 16, the useful life of an asset is estimated based on professional judgment, taking into account factors such as the estimated level of production capacity utilization; expected physical wear caused by specific operating conditions (number of shifts); technical or commercial outdated arising from changes or improvements in production, or from a change in market demand for the product or service output of the asset; legal or similar limits on the use of the asset, such as the expiry dates of related leases. [2]

Management assetment of the company may impose a useful life of less than the economic asset, either by handing it after some time of use, or after its partial consumption. The estimated useful life of fixed assets should be reviewed periodically, at least at the end of each financial year and whether the estimates significantly differ from the
Taking account of the life, property and equipment are divided into two categories:
- assets with indefinite life, for example lands that are not depreciated;
- assets with limited life, other assets that are subject to amortization. [8]

The depreciable amount of an asset is the cost or revalued amount of the asset after deducting the residual value.

The accounting regulations harmonized with the European directives do not specify what is the residual value. As International Financial Reporting Standards, the residual value of an asset is the estimated amount that is obtained from disposal of the asset, after deducting the estimated costs of disposal, provided that the asset were already of the age and condition expected at the end of the useful life; residual value is deducted from the calculation of the depreciable amount only if it is a significant size. [3]

Coverage under the depreciation tax is restrictive – for example dismantling and removal costs to asset decommissioning and site restoration expenditures incurred subsequent to improve technical parameters, etc.).

Regarding the payback period, are more restrictive tax regulations.

Depreciation accounted in compliance with accounting regulations is deductible in calculating taxable profits. Extra-determining tax depreciation determined by the provisions of the Tax Code, the tax depreciation is considered tax deductible in calculating taxable profits. [12] It is necessary for economic entities to prepare a plan for each fixed asset accounting depreciation and tax depreciation plan.

Tax depreciation is calculated from the month following commissioning. For the period in which depreciable fixed assets are not used at least for a period of one month tax recovery of remaining unamortised is performed during the normal remaining starting next month re-running them, by recalculating the tax depreciation rate.

Tax deductions for depreciation is determined by the tax value of assets. [3]

2. Accounting depreciation of tangible assets

Depreciation of fixed assets amounted represents an accounting size, calculated and recorded based on the depreciation plan.

2.1. Case study 1

A company acquires a building at a cost of 560,000 lei. It is estimated economic life span of the building at 20 years, and the company anticipates selling the building after 7 years. The market value of the building over 7 years is 63,000, the annual rate of price increase of 2%.

- Acquisition cost = 560,000 lei
- Salvage value = market value updated depending on the index of inflation = 63,000/(1 + 2%)^7 = 54,846 lei
- Depreciable value = acquisition cost - salvage value = 560,000 - 54,846 = 505,154 lei
- Economic life = 7 years
- Annual depreciation = 505,154 / 7 years = 72,165 lei

Recording depreciation:

\[
\begin{align*}
\text{Operating charges for depreciation of the fixed assets} & = 6811 \\
\text{Depreciation on tangible asset headings} & = 281 \\
\end{align*}
\]

\[\text{Operating charges for depreciation of the fixed assets} = \text{Depreciation on tangible asset headings} = 72,165 \]

For depreciable fixed assets, depreciation deductions are determined without taking into account depreciation accounting. Gains or losses from the sale or retirement of these assets is calculated on the basis of their tax, less tax depreciation. [3]
2.2. Case study 2

Company X buys on 3 April 2012 a means of transport at a cost of 168,000 lei. Amortization period in the catalog is 8 years, but intend to use the means of transport only 4 years. Depreciation method of the means of transport is linear, both accounting and taxation. On 30 April 2014, Company X sells the means of transport at a cost of 35,000 lei. It will calculate accounting and tax depreciation to date of sale and will review the situation at the time of sale.

Annual accounting depreciation is 168,000 / 4 = 42,000 lei  
Monthly accounting depreciation is 42,000 / 12 = 3,500 lei  
Annual tax depreciation is 168,000 / 8 = 21,000 lei  
The monthly tax depreciation 21,000 / 12 = 1,750 lei

<table>
<thead>
<tr>
<th>Year of use</th>
<th>Accounting Depreciation</th>
<th>Accounting value remaining</th>
<th>Tax Depreciation</th>
<th>Tax amount remaining</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>21,000</td>
<td>147,000</td>
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<td>126,000</td>
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<td>105,000</td>
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<td>-</td>
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<td>8</td>
<td>21,000</td>
<td></td>
<td>21,000</td>
<td>-</td>
</tr>
</tbody>
</table>

Year 2012
Record accounting depreciation 28,000 (42,000 x 8/12). Tax implications:
Expenses not deductible accounting depreciation = 28,000 lei  
Tax deductions for depreciation in 2012 = 21,000 x 8/12 = 14,000 lei

Year 2013
Record accounting depreciation 42,000 lei.
Tax implications:
Expenses not deductible accounting depreciation = 42,000 lei.
Tax deductions for depreciation in 2013 = 21,000 lei.

April 30, 2014
Record accounting depreciation of 7,000 lei for the first four months of 2013.
Tax implications:
Expenses not deductible accounting depreciation = 7,000 lei.
Tax deductions for depreciation for the first four months of 2014 = 21,000 x 4/12 = 7,000 lei

Record sale of the asset, generating an income of 35,000 lei and an expense depreciated accounting value of 105,000 lei.
Tax implications:
Taxable income = 35,000 lei
Expenses recognized tax assets sold = 168,000 - (14,000 + 21,000 + 7,000) = 126,000 lei

3. Tax implications of depreciation methods

Depreciation of fixed assets amountes to be calculated from the following month and placed into operation until full recovery of their value. Depreciation amounted to are considered terms of use and the conditions for their use. (section 110 (2)) [10]

Linear depreciation method lies in the calculation and allocation of the accounting value of fixed assets amounted during the whole operation, expressed in years. In this method, depreciation charges are constant over time, but the expenses with maintenance and repairs increase as depletion of life. [8]

The annual depreciation rate linear = 100/length of economic use  
Annual depreciation = The carrying amount of input x Annual linear rate of depreciation  
Net accounting value = input accounting value - cumulative depreciation
In case of the linear method, depreciation is determined by applying the linear declining – balance at the tax value of the taxpayer's entry into the asset depreciable assets.

**Case study**

Company X acquires and put into service on 4 May 2011 at a price of 30,000 lei, the normal duration of use being 5 years.

The annual depreciation rate = $\frac{100}{5} = 20\%$ \quad (16)

Annual depreciation = $20\% \times 30,000 = 6,000$ \quad (17)

Monthly depreciation = $6,000/12 = 500$ \quad (18)

<table>
<thead>
<tr>
<th>Table no. 2 Tax Depreciation Plan -lei-</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Month</strong></td>
</tr>
<tr>
<td>June 2011</td>
</tr>
<tr>
<td>July 2011</td>
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<tr>
<td>August 2011</td>
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<td>...</td>
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<tr>
<td>January 2016</td>
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<tr>
<td>April 2016</td>
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<tr>
<td>May 2016</td>
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<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

In case of a **digressive depreciation**, depreciation is calculated by multiplying the linear depreciation rates with one of the following coefficients:

a) 1,5 tangible asset headings with the normal duration of use between 2 and 5 years including;

b) 2,0 for tangible asset headings with the normal duration of use between 5 and 10 years including;

c) 2,5 if the normal use of restraint equipment is more than 10 years.

Rate multiplied by the applicable depreciation remaining value. The application is running until the depreciation so calculated is equal to or less than the calculated linear depreciation determined as the ratio between the amount remaining to be recovered and the number of years remaining. [3]

Through this method the unit can recover more quickly on account of expenditure, an amount greater than the amount calculated by the linear method.

The method of digressive depreciation is applied in two variants: with and without the influence of outdated (AD2/AD1).

It is considered the same as initial data in linear depreciation method.

The annual depreciation rate = $\frac{100}{5} = 20\%$

Declining-balance depreciation rate = $20\% \times 1,5 = 30\%$ \quad (19)

<table>
<thead>
<tr>
<th>Table no. 3 Accounting Depreciation Plan -lei-</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year of operation</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table no. 4 Tax Depreciation Plan -lei-</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Month</strong></td>
</tr>
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<tr>
<td>July 2011</td>
</tr>
<tr>
<td>August 2011</td>
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<tr>
<td>...</td>
</tr>
</tbody>
</table>
Accelerated depreciation method is included in operating costs in the first year a quota of up to 50% of the accounting value of tangible assets. In subsequent years the depreciation is calculated using the linear method, by reporting the remaining depreciation amount by the number of years of use left. [5], [8]

Considering the initial data the same as the previous methods,

\[ \text{Accelerated depreciation in the first year} = 50\% \times 30.000 = 15.000 \text{ lei} \] (20)

\[ \text{Monthly Depreciation} = 15.000 / 12 = 1.250 \text{ lei} \] (21)

\[ \text{The annual depreciation for each of the next 4 years} = 15.000 / 4 = 3.750 \] (22)

\[ \text{Monthly Depreciation} = 3.750 / 12 = 312.5 \text{ lei} \] (23)

### Table no. 5  Tax depreciation plan -lei-

<table>
<thead>
<tr>
<th>Month</th>
<th>Input value</th>
<th>Monthly depreciation</th>
<th>Cumulative depreciation</th>
<th>Actual value</th>
</tr>
</thead>
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<tr>
<td>June 2011</td>
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<td>1.250</td>
<td>1.250</td>
<td>28.750</td>
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<tr>
<td>July 2011</td>
<td>30.000</td>
<td>1.250</td>
<td>2.500</td>
<td>27.500</td>
</tr>
<tr>
<td>August 2011</td>
<td>30.000</td>
<td>1.250</td>
<td>3.750</td>
<td>26.250</td>
</tr>
<tr>
<td>April 2012</td>
<td>30.000</td>
<td>1.250</td>
<td>13.750</td>
<td>16.250</td>
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<tr>
<td>May 2012</td>
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<td>1.250</td>
<td>15.000</td>
<td>15.000</td>
</tr>
<tr>
<td>June 2012</td>
<td>30.000</td>
<td>312.5</td>
<td>15.312.5</td>
<td>14.687.5</td>
</tr>
<tr>
<td>July 2012</td>
<td>30.000</td>
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<td>15.625</td>
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<td>April 2016</td>
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</tr>
<tr>
<td>May 2016</td>
<td>30.000</td>
<td>312.5</td>
<td>30.000</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>30.000</td>
<td></td>
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</tbody>
</table>

### Table no. 6  The analyse of first year depreciation plan corresponding to the depreciation methods -lei-

<table>
<thead>
<tr>
<th>Depreciation method</th>
<th>6.000</th>
<th>9.000</th>
<th>15.000</th>
</tr>
</thead>
</table>

Analyzing the calculated values by using the three methods there are the following conclusions:
- by using the linear depreciation method, in the first year you get a value of depreciation = 6.000 lei;
- by using the declining-balance method of depreciation in the first year you get a value of depreciation = 9.000 lei, resulting in an expense of 3.000 lei, which has tax implications, has the effect of reducing corporation tax;
- by using the method of accelerated depreciation in the first year you get a value of depreciation = 15.000 lei, additional expenditure of 12.000 lei compared to the linear depreciation method and 6.000 lei compared with the declining balance depreciation method. This also has the effect of reducing corporation tax.

According to the tax code are only deductible tax depreciation charges. [12] When the accounting depreciation charges differ from tax depreciation charges shall be made to the reprocessing outcome accountant to determine the result. [9]

### 4. Conclusions

Depreciation shall be recovered through physical and moral wear of fixed assets due to the inclusion of its value in the value of the products, works, services. Depreciation of fixed assets amounted to calculate and include in the annual depreciation plan starting next month and placed into operation until the full recovery of the input value, in
Depreciation is an expense that affects the outcome of the exercise, but also an element of amending the accounting value of fixed assets amounted to, which can be found in the balance sheet.

5. References