

ACCOUNTING AND TAX ISSUES RELATING TO DEPRECIATION OF TANGIBLE ASSETS

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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

previous ones, proceeded to adjustment, and the change must be accounted for in accordance with IAS 8 „Accounting Assetments, Changes in accounting Estimates and Errors”. [9]

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.

The depreciation in accounting regulation, $Ca = 1 / DUE \times 100$; (1)

The depreciation in the tax legislation, $Ca = 1 / DNU \times 100$. (2)

DUE = economic life of which is determined by expertise, depending on the specific use in each entity, and reviewed;

DNU = normal duration of use, ie the duration established by administrative regulations that does not account for conditions of use. [3]

The tax legislation requires amortization regime based on tangible nature.

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 (3)
- Depreciable value = acquisition cost - salvage value = $560.000 - 54.846 = 505.154$ lei (4)
- Economic life = 7 years
- Annual depreciation = $505.154 / 7 \text{ years} = 72.165$ lei (5)

Recording depreciation:

6811	=	281	72.165
<i>Operating charges for depreciation of the fixed assets</i>		<i>Depreciation on tangible asset headings</i>	

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 (6)

Monthly accounting depreciation is $42.000 / 12 = 3.500$ lei (7)

Annual tax depreciation is $168.000 / 8 = 21.000$ lei (8)

The monthly tax depreciation $21.000 / 12 = 1.750$ lei (9)

Table no. 1 Accounting and Tax Depreciation Plan

Year of use	Accounting Depreciation		Tax Depreciation	
	Annual Depreciation	Accounting value remaining	Annual Depreciation	Tax amount remaining
1	42.000	126.000	21.000	147.000
2	42.000	84.000	21.000	126.000
3	42.000	42.000	21.000	105.000
4	42.000	-	21.000	84.000
5			21.000	63.000
6			21.000	42.000
7			21.000	21.000
8			21.000	-

Year 2012

Record accounting depreciation 28.000 ($42.000 \times 8/12$). Tax implications:

Expenses not deductible accounting depreciation = 28.000 lei

Tax deductions for depreciation in 2012 = $21.000 \times 8/12 = 14.000$ lei (10)

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 = $21.000 \times 4/12 = 7.000$ lei (11)

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 (12)

3. Tax implications of depreciation methods

Depreciation of fixed assets amounts 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 = $100/\text{length of economic use}$ (13)

Annual depreciation = The carrying amount of input $\times$ Annual linear rate of depreciation (14)

Net accounting value = input accounting value - cumulative depreciation (15)

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.

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

$$\text{Annual depreciation} = 20\% \times 30.000 = 6.000 \quad (17)$$

$$\text{Monthly depreciation} = 6.000/12 = 500 \quad (18)$$

Table no. 2 Tax Depreciation Plan

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Month	Input value	Monthly depreciation	Cumulative depreciation	Actual value
June 2011	30.000	500	500	29.500
July 2011	30.000	500	1.000	29.000
August 2011	30.000	500	1.500	28.500
...	...	...	...	...
January 2016	30.000	500	28.000	2.000
February 2016	30.000	500	28.500	1.500
March 2016	30.000	500	29.000	1.000
April 2016	30.000	500	29.500	500
May 2016	30.000	500	30.000	0
TOTAL		30.000		

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

- 1,5 tangible asset headings with the normal duration of use between 2 and 5 years including;
- 2,0 for tangible asset headings with the normal duration of use between 5 and 10 years including;
- 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.

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

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

Table no. 3 Accounting Depreciation Plan

-lei-

Year of operation	Declining annual depreciation	The annual linear depreciation	Monthly depreciation
1	$30.000 \times 30\% = 9.000$	$30.000/5 = 6.000$	$9.000/12 = 750$
2	$(30.000-9.000) \times 30\% = 6.300$	$(30.000-9.000)/4 = 5.250$	$6.300/12 = 525$
3	$(21.000-6.300) \times 30\% = 4.410$	$(21.000-6.300)/3 = 4.900$	$4.900/12 = 408,33$
4		4.900	408,33
5		4.900	408,33

Table no. 4 Tax Depreciation Plan

-lei-

Month	Input value	Monthly depreciation	Cumulative depreciation	Actual value
June 2011	30.000	750	750	29.250
July 2011	30.000	750	1.500	28.500
August 2011	30.000	750	2.250	27.750
...	...	...	...	...

April 2012	30.000	750	8.250	21.750
May 2012	30.000	750	9.000	21.000
June 2012	30.000	525	9.525	20.475
July 2012	30.000	525	10.050	19.950
...	...	...	...	...
April 2016	30.000	408,33	29.591,67	408,33
May 2016	30.000	408,33	30.000	0
TOTAL		30.000		

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,

Accelerated depreciation in the first year = $50\% \times 30.000 = 15.000$ lei (20)

(Monthly Depreciation = $15.000 / 12 = 1.250$ lei) (21)

The annual depreciation for each of the next 4 years = $15.000 / 4 = 3.750$ (22)

(Monthly Depreciation = $3.750 / 12 = 312,5$ lei) (23)

Table no. 5 Tax depreciation plan

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Month	Input value	Monthly depreciation	Cumulative depreciation	Actual value
June 2011	30.000	1.250	1.250	28.750
July 2011	30.000	1.250	2500	27.500
August 2011	30.000	1.250	3.750	26.250
...	...	...	...	...
April 2012	30.000	1.250	13.750	16.250
May 2012	30.000	1.250	15.000	15.000
June 2012	30.000	312,5	15.312,5	14.687,5
July 2012	30.000	312,5	15.625	14.375
...	...	...	...	...
April 2016	30.000	312,5	29.687,5	312,5
May 2016	30.000	312,5	30.000	0
TOTAL		30.000		

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

-lei-

	Depreciation method		
	linear	the declining-balance	accelerated
The amount of depreciation for the first year	6.000	9.000	15.000

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

accordance with the terms of use and the conditions for their use. Depreciation should be correlated with the use of tangible asset so less accelerated depreciation method used for accounting purposes.

Compared with linear method, the digressive and accelerated depreciation method allows recovery in a short period of time a larger part of the value of the tangible assets. However these two methods provide a tax advantage by delaying the payment of income tax, depreciation related to growth in the first years of using tangible. [5]

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

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