ACCOUNTING DEPRECIATION VERSUS FISCAL DEPRECIATION

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Abstract: In the days of today's economy, we can say that a company is performing well when it produces finished products or provides high-quality services at an affordable price. For any company, the purchase of fixed assets that meet the above requirements is an effort. The calculation and reflection of depreciation is an important activity because it helps to determine the cost of production obtained. The present article provides a brief presentation of the concepts of accounting depreciation and fiscal depreciation as well as the differences between them.
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Introduction

For a non-financier, depreciation is a difficult concept, given that it is a calculated expense that does not involve a cash outflow from the company. The simplistic explanation is the following: certain purchases paid by the company, such as computers, furniture, machines, machinery, are assets and not expenses. The assets owned by the company contribute to the development of the activity and to the generation of value. For example, a production line machine contributes to the creation of end products for sale, thus obtaining revenue.

Acquisition of assets does not have an immediate impact on the company's profit, but in proportion to their lifetime (as long as the company expects to use the asset for optimal operating parameters).[1]

Depreciation represents, conceptually, the systematic allocation of the depreciable amount of an asset over its useful life. From this perspective, we can say that depreciation results in the application of the accrual accounting convention and the principle of linking expenses to the income of the period.[2]

In practice, both accounting and fiscal depreciation are used. Accounting depreciation has the effect of diminishing the company's profit, while fiscal depreciation has the effect of diminishing the fiscal result. The

differences between the two depreciation values can be determined by different inputs or different lifetimes or by different depreciation methods.

1. Input value

☐ From the accounting point of view, there is no condition regarding the minimum value that an asset should have in order to be recorded as a fixed asset and amortized as such. Thus, to the extent that we assume that an asset will be used for a period longer than one year, it may be classified as a fixed asset, respectively, physical assets from the accounting point of view.

☐ According to the Fiscal Code, the minimum input value of an asset is 2,500 RON. Lucian Cernusca in his paper states that this minimum value is a condition only for the establishment of fiscal depreciation, therefore there is the possibility that in the accounting to register tangible assets that meet from the accounting point of view the other conditions stipulated in art. (2) of the Fiscal Code, but have a value below 2,500 lei. At the same time, the Tax Code allows taxpayers to opt for tax depreciation of a fixed asset even if it is a value lower than the minimum set ceiling.[3]

2. Amortization time

☐Accounting depreciation implies the distribution of the fixed asset value at the expense according to the economic life of the asset. In accordance with paragraph 139 (3) of OMFP no. 1.802 / 2014 by the duration of economic use is meant the useful life.

☐Fiscal depreciation implies the distribution of the asset's value in the expense according to its normal useful life.

Thus, it is noted that there are no limitations to the accounting depreciation period, which is determined by the entity by reference to the economic life of the asset, which may be different from one company to the other for the same type of asset

3. Damping methods

The most common method used by companies is linear depreciation and is calculated by dividing the fixed asset value by the number of years it will be used. Accelerated and degressive depreciation is used when fixed assets are used more intensely in the first years of use. These types of depreciation generate higher depreciation costs in the early years. When calculating corporate income tax, tax deduction, not accounting, will be taken into account.

Research methodology, data, results and conclusions

I chose to analyze the depreciation of a company and propose the application of legal provisions related to tax and accounting depreciation.

For the depreciation of fixed assets, the company uses the straight-line method for tax depreciation, and for the accounting method the degressive method.

The company acquires an equipment with an entry value of 12,991.17 lei.

According to the Fixed Assets Catalog, the life of the machine may vary between 8 and 12 years. The company decided to depreciate the machine within 8 years from a fiscal point of view, and within 10 years from the accounting point of view. The purpose of the case study is to demonstrate why the company chose to use the straight-line method for tax depreciation and the degressive method for accounting depreciation.

To illustrate the difference between accounting and tax depreciation, I suggest comparing the two using the straight-line method, then passing the machine purchased through the other depreciation methods.

Situation 1. Using the linear method for accounting depreciation
This method is calculated according to the following formulas:

$$Cal = \frac{1}{DVU} * 100$$

$$Amzc = Va * Ca$$

Ca = annual amortization rate;
Amz = annual depreciation;
Va = the depreciable amount;
DVU = useful life.
In our case, annual depreciation will be:

$$Cal = \frac{1}{10} * 100 = 10\%$$

$$Amzc = 12.991,17 * 10\% = 1.299,12$$

Situation 2. Using the straight-line method for tax depreciation
From a fiscal point of view, things are alike. It should be noted that this method is used when economic units decide through accounting policies an accounting period (useful life) different from the fiscal duration (normal operating time). The difference in the amortization charge between the two durations is that at the fiscal one instead of the useful life we will have the normal running time.

Thus, the linear fiscal depreciation is determined:

$$Caf = \frac{1}{DNF} * 100$$

$$Amzf = Va * Caf$$

$$Caf = \frac{1}{8} * 100 = 12,5\%$$
$$Amzf = 12.991,17 * 12,5\% = 1.623,89$$

In the following, I propose to treat in different cases the impact of the depreciation duration, respectively the economic and the normal operating conditions.

A. If the economic duration is less than normal:

In order to demonstrate why the company has chosen the amortization periods specified above, I propose to solve a contradictory example. In this case, the economic duration will be 8 years, and the normal one will be 10 years. Thus, the accounting depreciation will be:

$$Amzc = \frac{12.991,17}{8} = 1.623,89$$

And fiscal depreciation will be:

$$Amzf = \frac{12.991,17}{10} 1.299,12$$

In the following table we can see to what extent the depreciation expenses are deductible:

The fiscal year	Accounting depreciation	Tax depreciation	Tax deductible amount	Non-deductible tax amount
1	1.623,89	1.229,12	1.229,12	394,77
2	1.623,89	1.229,12	1.229,12	394,77
3	1.623,89	1.229,12	1.229,12	394,77
4	1.623,89	1.229,12	1.229,12	394,77
5	1.623,89	1.229,12	1.229,12	394,77
6	1.623,89	1.229,12	1.229,12	394,77
7	1.623,89	1.229,12	1.229,12	394,77
8	1.623,89	1.229,12	1.229,12	394,77
9	-	1.229,12	1.229,12	-
10	-	1.229,12	1.229,12	-
total	**12.991,12**	**12.991,12**	**12.991,12**	**3.158,16**

Table 1.1- Where the economic duration is less than the normal operating time

B. If the economic duration is higher than the normal running time

In this situation is our company. Thus, accounting depreciation will be equal to:

$$Amzc = \frac{12.991,17}{10} = 1.299,12$$

And the tax will be equal to:

$$Amzf = \frac{12.991,17}{8} = 1.623,89$$

The fiscal year	Accounting depreciation	Tax depreciation	Tax deductible amount	Non-deductible tax amount
1	1.299,12	1.623,89	1.623,89	-
2	1.299,12	1.623,89	1.623,89	-
3	1.299,12	1.623,89	1.623,89	-
4	1.299,12	1.623,89	1.623,89	-
5	1.299,12	1.623,89	1.623,89	-
6	1.299,12	1.623,89	1.623,89	-
7	1.299,12	1.623,89	1.623,89	-
8	1.299,12	1.623,89	1.623,89	-
9	1.299,12	-	-	1.229,12
10	1.299,12	-	-	1.229,12
total	**12.991,12**	**12.991,12**	**12.991,12**	**2.458,24**

Table 1.2 - If the economic duration is higher than the normal operating time

To determine deferred tax expense, I propose the following table:

Data	Accounting depreciation	Tax depreciation	Accounting basis	Tax base	Taxable temporal difference	Total debt with deferred tax	Default debt with deferred tax	Expenses with deferred income tax
(0)	(1)	(2)	(3)	(4)	(5)=(3)-(4)	(6)=(5)*16%	(7)=sold final ct 4412	(8)=(6)-(7)
31.12.2019	1.299,12	1.623,89	11.692	11.367,2	324,77	51,96	0	51,96
31.12.2020	1.299,12	1.623,89	10.392,88	9.743,34	649,54	103,93	51,96	51,96
31.12.2021	1.299,12	1.623,89	9.093,76	8.119,45	974,31	155,89	103,93	51,96
31.12.2022	1.299,12	1.623,89	7.794,64	6.495,56	1.299,08	207,85	155,89	51,96
31.12.2023	1.299,12	1.623,89	6.495,52	4.871,67	1.623,85	256,82	207,85	51,96
31.12.2024	1.299,12	1.623,89	5.196,40	3.247,78	1.948,62	311,78	256,82	51,96
31.12.2025	1.299,12	1.623,89	3.897,28	1.623,89	2.273,39	363,74	311,78	51,96
31.12.2026	1.299,12	1.623,89	2.598,16	-	2.598,16	415,71	363,74	51,96
31.12.2027	1.299,12	-	1.299,12	-	1.299,12	207,86	415,71	51,96

Table 1.3 - Situation at the end of the first 9 years

From the above table we note that as the tax base decreases, the tax difference increases, due to the tax deductibility of the tax depreciation, reaching the end of 2026 having a taxable temporal difference of 2,598.16 lei, which represents the maximum difference over the amortization period. At the end of 2027, the temporal difference decreases, reaching 1.299,12, equal to the yearly amortization, due to the completion in 2026 of the normal operating period.

We note that the total deferred tax debt increases as the temporal difference increases. Thus, it takes maximum values at the end of 2026, when the time difference is the maximum.

In the case of the original deferred tax debt, we note that it has a maximum value at the end of 2027 as this debt represents the final balance of the final debt of the previous year.

Deferred income tax expense is consistent with the depreciation period, with the expense amounting to RON 51.96. This is the result of the difference between the two debts.

Deferred income tax expense shall be recorded in the accounts at each year end in the following manner: 692 = 4412 51,96

C. If the two depreciation durations are equal

In this case, I will take as an example the situation in which the machine will be depreciated both in terms of tax and accounting for a period of 9 years. Thus, the accounting depreciation will be:

$$Amzc = \frac{12.991,12}{9} = 4.330,37 \quad = \quad Amzf = \frac{12.991}{9} = 4.330,37$$

In this case, the depreciation expense will be fully deductible for the purpose of determining the taxable profit.

Methods of amortization
1. Liner method

As the application of this method has been applied above, I only propose the recall of the results in order to compare these with the other depreciation methods. Thus we have:

$$Amzc = 1.299,12 \qquad și \qquad Amzf = 1.623,89$$

2. Degressive method

This method is calculated by completing the following formulas:

I. $Cad = Cal * k$;
II. $AD = VR * Cad$;
III. $VR = Vi\text{-}AD$;

Where:
-Cad = the rate of degressive depreciation;
    -k= multiplication factor is 2.0 for the duration of 6-10 years;
    -AD = depreciation;
    -Vi = the input value of the asset subject to depreciation;
    -VR = the remaining amortized value;

It should be noted that with the calculation of the depreciation depreciation the monthly depreciation is also calculated.
This is because at the moment when the decrease of the digressive depreciation rate is less than the linear depreciation rate, it will be the linear one determined by the following formula:

$$AL = \frac{VR}{DVUR}$$

In this case, VR represents the remaining amortized value and the DVUR represents the useful life remaining amortized. Having a useful life of 10 years, we will apply to our machine the coefficient with the value 2. Thus we will result:

$$Cad = 10\% * 2 = 20\%$$

$$AD1 = 12.991{,}17 * 20\% = 2.598{,}23$$

$$VR1 = 12.991{,}17 - 2.598{,}23 = 10.392{,}94$$

For better centralization, the results can be seen in the table.

YEAR	VI	AMZ ANNUAL	AMZ CUMULATION	VAL REMAINING
1	12.991,17	2.598,23	2.598,23	10.392,94
2	12.991,17	2.078,59	4.676,82	8.314,35
3	12.991,17	1.662,87	6.339,69	6.651,48
4	12.991,17	1.330,30	7.669,99	5.321,18
5	12.991,17	1.064,24	8.734,23	4.256,94
6	12.991,17	851,39	9.585,62	3.405,55
7	12.991,17	851,39	10.437,01	2.554,16
8	12.991,17	851,39	11.288,4	1.702,77
9	12.991,17	851,39	12.139,78	851,39
10	12.991,17	851,39	12.991,17	0,00

Table 1.4 - On the results of degressive depreciation

3. Accelerated method
    The accelerated method involves calculating, for the financial year (12 months), a depreciation of up to 50% of the input value. In the following

exercises, the annual amortization is calculated according to the linear mode by reporting the remaining value to the number of years of use remaining. In our case, things are as follows:

$$Amza1 = \frac{12.991,17}{2} = 6.495,56$$

$$Amza2 = \frac{6.495,56}{9} = 721,73$$

Depreciation for the years 3,4,5,6,7,8,9 and 10 will be equal to the amortization for the year 2, ie 721,73 lei.

Conclusions

The case study was done to find out why the company chose to depreciate the straight-line for tax depreciation and degressive for accounting.

According to the calculations, it notes that, linearly, the value of the accounting depreciation is less than that of the tax depreciation with 324.77 lei. This means that the entity will have a higher tax deductibility than the expenses generated by the accounting depreciation, but for a shorter period than the actual depreciation of the equipment. Since the company wants to have the highest deductibility, it is understandable why it decided to use the straight-line method for tax depreciation.

If the entity had decided to depreciate its equipment in an economic life less than its normal operating life, the amortization would be higher than the taxable amount by 324.77 lei.

This case generates an expense of 394.77 lei non-deductible tax during the depreciation period, 8 years in the presented case.

The case where the company applies a longer economic life than the normal operation of the machine is the case actually applied by the company. The reason is that while the deductibility will also be for a period of 8 years, this is higher being 1,623.89 lei. It is true that not only the deductible amounts are increasing, but also the non-deductible ones amounting to 1,229.12 lei, but these will only manifest for a period of 2 years. Also, cumulative over the 10 years, the deductible expenses are higher than the non-deductible expenses by 699.92 lei. This is the fact that non-deductible expenses in the 2 years are covered by the deductible.

Since the entity applies the aforementioned durations, we considered it necessary to determine the amount of the deferred profits tax. Thus, we notice that in the following years the company will have to pay a constant amount of 51.96 lei per year representing deferred tax expense.

If the two durations are equal, we notice that the depreciation will be equal to 4,330.37 lei.

What is to be remembered here is that there will be no non-deductible expenses. In this situation, a period of 9 years has been used.

To detail the depreciation methods calculated above, I propose to centralize the results in a table:

Years	Straight-line depreciation	Digressive amortization	Accelerated depreciation
1	1.299,12	2.598,23	6.495,56
2	1.299,12	2.078,59	721,73
3	1.299,12	1.662,87	721,73
4	1.299,12	1.330,30	721,73
5	1.299,12	1.064,24	721,73
6	1.299,12	851,39	721,73
7	1.299,12	851,39	721,73
8	1.299,12	851,39	721,73
9	1.299,12	851,39	721,73
10	1.299,12	851,39	721,73

Table 1.5 - Centralization of all depreciation methods

Thus, we can observe that the machine is linearly depreciated with a constant value during the 10 years, amounting to 1.299,12 lei. From the point of view of the degressive depreciation it is noted that during the first years of operation of the machine there is a higher expense with the depreciation compared to the last years when it gets to linearly amortize. Year 6 is the year in which the value of linear depreciation is greater than that of degressive depreciation, which is why the change is made to the linear one.

Depreciation depreciation is the one used by the company to account for accounting depreciation. The reason is that the entity expects to obtain revenue from the machine in the first years of its life.

Note that using the accelerated method half of the input value of the asset is depreciated in the first year of operation of the machine. For the remaining years the linear regime will be used, the equipment being depreciated annually with a value of 721.73 lei. This method is not approved by the company because the regime is specific to very profitable companies that change their technologies as they emerge and do not use a lifetime of long-term depreciation.

Therefore, using the linear tax and depreciation method for the accounting one, namely 8 years for the first scheme and 10 for the second one, the company manages to achieve its fiscal interests in terms of depreciation.

Thus, the company will record an expense with tax fiscal deductible for a period of 8 years, a constant expense amounting to 1,623.89 lei, and an amortization of RON 2,598.23 in the first year, taking the values in Table 1.9 for the other years. This depreciation regime was also wanted due to deferred tax. Thus, the company will record an annual expense of 51.96 lei for 9 years.

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