

# **IMPLICATIONS DAMPING SYSTEM USED IN ROMANIA ON SELF-FINANCING CAPACITY**

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**Abstract:** : On this paper we highlighted the importance and role of depreciation in a company based on the amortization regime applied by each company separately and its implications for self-financing capacity. I also highlighted the tax savings resulting from the amortization process, making the final comparison between tax savings and equivalent amount of short-term bank loans, resulting from this comparison because of the economy and the credit neapelării by these companies.

**JEL classification:** G01, C13,

**Key words:** critical; depreciation, amortization regime, self-financing capacity, tax, discount, inflation

## **1. INTRODUCTION**

Since ancient times the companies it confunted with various problems in terms the good organization of their activities. The most common problem of this is but of financial. Regardless of how is organized one companies needs in first time the financial resources.

Financing problem of activity of an enterprise became even more acute after 2008, in this year in romania economy appeared the financial crisis.

The main objectiv of this paper is determining influence of the amortization regim on self-financing capacity, with out you can financing activities of own sources. I also highlighted the influence wich has the amortization on profit tax, in other words the tax saving wich brings the amortization and the benefit brings of this for current activity of companie. Practically by tax saving also reduces volum of loans from various banking companies. So in other word tax saving result after depreciation is used for financing current activities so no need to credit on banking companies for that amount. Given the depreciation benefits on the end proved that it brings an economy following to avoid credit.

## **2. METHODOLOGY AND RESEARCH METHOD**

The paper titled "Implications depreciation regime in Romania on the ability of self-financing" is done on a sample of four publicly traded companies, each with different areas of activity, such as metal processing industry, manufacture of chemicals and chemical products, construction, transport by pipeline. The choice of these companies came from avoiding the inconvenience of not finding the necessary data for the survey research.

Research subject is the 2007-2011 period, a period in my opinion, representative, because it comes both pre and post-crisis economic crisis.

Applied in determining annual depreciation of self-financing capacity is calculated by adding depreciation of property, resulting in each group separately. Next we took the average site BNR reference interest rate and inflation totdată during 2007-2011. These two rates were used to calculate savings from necreditării and totdată tax savings calculation adjusted for average inflation rate.

### **3. THEORETICAL CONCEPTS OF DEPRECIATION REGIME AND SELF-FINANCING CAPACITY**

#### **3.1. DEPRECIATION REGIMES USED IN ROMANIA**

The literature depreciation is defined by three concepts: legal, accounting, economic and financial. Whatever the concept refers to an irreversible reduction depreciation of their assets due to depreciation. That, in using these techniques for work, the phenomenon called attrition which leads to their depreciation. So to recover the lost value of the asset depreciation is recorded.

More broadly, the economic literature depreciation is defined as a complex process of quantifying the physical and moral wear and expression of a particular financial policies of that period.<sup>1</sup>

Tangible and intangible assets of an entity in Romania are amortized using three damping modes: linear damping regime, degressive and accelerated. This applies to the type restraint, to a lifetime of times taken from the catalog use and classification of assets.

*Linear depreciation regime* means that the value of the asset to be divided during its normal operation resulting in redemption value. If you want a percentage of depreciation expression obtained from the input value of depreciation rules apply.

*Degrressive depreciation regime* involves first determining the standard of degressive depreciation by applying the rule of a linear correction factor. Degressive depreciation rule is applied to the remaining depreciated value of the asset until the resulting annual amortizarea is less than or equal to the ratio of remaining to be recovered and the number of working years left. Correction coefficient applicable standard linear damping the following values:

- 1.5 for a fixed period of 2-5 years
- 2.0 for a fixed period of 5-10 years
- 2.5 for fixed duration over 10 years.

*Accelerated depreciation regime* involves applying a 50% first year entry value in the years applying linear damping regime. Note that system of depreciation, is that it applies only to the ruling General Meeting and notice the territorial body of the Ministry of Finance.

#### **3.2. SELF-FINANCING CAPACITY**

Sources of financing a business activity, is the most important decision for the manager of the company, often leading to imbalances and financial strain. Funding should be but so source of funding and financing resources have similar time period. Activității financing can be done either from own resources or borrowed resources.

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<sup>1</sup> Nicolae Sighiea, Marcel Drăcea, Tudor Ciurezu, Dorel Berceanu, Laura Giurcă Vasilescu, Gestiunea financiară a întreprinderii, Ed. Universitaria, Craiova, 2001, p.92

Self-financing enterprise capital contributes to growth, but not the increase in profit than if investment returns exceed the return on projects claimed by shareholders.<sup>2</sup>

As a method for calculation of self-financing capacity is determined in two ways:

1 - the deductive method, based on gross operating surplus plus other income less other expenses monetary and monetary.<sup>3</sup>

$$CAF = EBE + \text{Other Monetary Income} - \text{Other monetary expenses}$$

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2 - additive method, based on its net result of adding categories exercițiuluiși computers but unpaid expenses (depreciation expenses and provisions) and also calculated by subtracting from it but unearned income (income from provisions)<sup>4</sup> as follows:

$$CAF = \text{Net result of the exercices}$$

+ Charges calculated

- Income calculated

+ The net book value of assets disposed of elements

- Income from sale of assets

or a simple calculation relationship:  $CAF = \text{Net income} + \text{depreciation} + \text{provisions}$

Self-financing capacity is an indicator that expresses the ability of each firm to finance its own resources any investment. From relations calculation that depends on the amount of capacity to finance itself: business profitability, investment policy, method of depreciation of fixed assets.

#### **4. DATA ANALYSIS AND INTERPRETATION**

The starting point for the analysis of self-financing capacity and damping regime is the financial and accounting documents of the companies surveyed. Research period is 5 years, from 2007 to 2011, a period in our view relevant because it comes before the economic crisis year and the years to come.

Value of fixed assets from which we started in calculating depreciation is the date of the balance sheet in 2007, the calculation is made tangible in detail each part, using as a mean duration of use, time taken and calculated from the catalog on the Functioning and use of assets.

Towards the end of the main economies work went from recording depreciation expense as non-monetary, ie tax savings resulting from the fact that non-monetary depreciation expense is tax deductible, but the economy resulting from the fact that these companies, with these savings, use them as a source of funding, no longer are needed using other funding sources generating additional costs. are several common clues that can help define these concepts. In this section, these concepts are defined and their differences are identified. The analyses of findings have been discussed under the following sub-heads.

##### **4.1 Calculation of payment and cash flow capacity**

To determine the annual amortismentelor according to mode damping, I left in 2007-current assets broken down by asset type separately. I took using software and

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<sup>2</sup> Marilena Mironiuc, *Gestiunea financiar-contabilă a întreprinderii*, Editura sedcomlibris, 2007, p.44

<sup>3</sup> Marian Siminică, *Diagnosticul financiar al firmei*, Editura Sitech, Craiova, 2010, p. 153

<sup>4</sup> Relationship for calculating of Exercices d Analyse financiere, Beatrice et Francis Grandguillot, 6e edition, 2011-2012, p.85

calculated according to lifetime, for each balance sheet item of fixed assets depreciation regime. The results obtained were then listed in a table for all 8 companies.

**Table no. 1 Level depreciation according to the depreciation rules applied to companies**

Company	Amortization regime	2007	2008	2009	2010	2011
Armatura	linear regime	984,388	984,388	984,388	984,388	984,388
	degressive regime	2,066,685	1,723,993	1,447,057	1,236,602	1,059,293
	accelerated regime	7,596,488	542,353	542,353	542,353	542,353
TMK Artrom	linear regime	82,369	82,369	82,369	82,369	82,369
	degressive regime	58,581,504	46,978,054	37,965,175	34,800,793	30,980,194
	accelerated regime	171,541,384	15,979,184	15,979,184	15,979,184	15,979,184
Antibiotice	linear regime	6,296,814	6,296,814	6,296,814	6,296,814	6,296,814
	degressive regime	13,847,101	11,863,074	10,334,761	9,120,249	8,135,717
	accelerated regime	62,204,602	3,449,774	3,449,774	3,449,774	3,449,774
Azomures	linear regime	5,575,847	5,575,847	5,575,847	5,575,847	5,575,847
	degressive regime	17,749,915	14,964,002	12,713,221	11,499,811	10,270,923
	accelerated regime	32,670,341	3,149,531	3,149,531	3,149,531	3,149,531
Dafora	linear regime	14,047,955	14,047,955	14,047,955	14,047,955	14,047,955
	degressive regime	29,519,985	23,790,498	19,320,008	17,711,041	15,777,460
	accelerated regime	86,610,152	7,996,546	7,996,546	7,996,546	7,996,546
Transilvania Constructii	linear regime	1,971,258	1,971,258	1,971,258	1,971,258	1,971,258
	degressive regime	4,131,065	3,496,283	2,991,189	2,781,205	2,537,434
	accelerated regime	17,939,032	1,098,592	1,098,592	1,098,592	1,098,592

Transelectrica	linear regim	0	251,894,189	251,894,189	251,894,189	251,894,189
	degressiv regim	0	481,765,249	377,594,345	304,678,386	273,041,226
	accelerated regim	0	1,418,163,982	147,532,642	147,532,642	147,532,642
Transgaz	linear regim	152,703,087	152,703,087	152,703,087	152,703,087	152,703,087
	degressiv regim	260,922,540	199,417,210	155,925,550	163,642,018	158,649,699
	accelerated regim	818,972,482	92,211,981	92,211,981	92,211,981	92,211,981

Sources: Create your own

Given the reduction in the value obtained for each mode damping in hand, and taking the net profit of the company financial and accounting documents, then we pass to the calculation of the self-financing capacity. And then I went in a data table for the 8 companies.

Table no. 2 Ability to self-financing companies

Company	CAF value	2007	2008	2009	2010	2011
Armatura	CAF liniar	-3,150,502	-74,937	-3,377,666	-5,429,453	-1,115,544
	CAF degressiv	-2,068,205	664,668	-2,914,997	-5,177,239	-1,040,639
	CAF accelerated	3,461,598	-516,972	-3,819,701	-5,871,488	-1,557,579
TMK Artrom	CAF liniar	21,483,222	-64,402,981	-33,254,099	-10,814,967	67,585,630
	CAF degressiv	79,982,357	-17,507,296	4,628,707	23,903,457	98,483,455
	CAF accelerated	192,942,237	-48,506,166	-17,357,284	5,076,056	83,476,653
Antibiotice	CAF liniar	38,752,821	16,869,570	18,213,621	18,835,914	26,595,723
	CAF degressiv	46,303,108	22,435,830	22,251,568	21,659,349	28,434,626
	CAF accelerated	94,660,609	14,022,530	15,366,581	15,848,695	23,608,504

Azomures	CAF liniar	61,190,323	56,152,395	15,050,036	159,534,694	370,772,288
	CAF degressiv	73,364,391	65,540,550	22,187,410	165,458,658	375,467,364
	CAF accelerated	88,284,817	53,726,079	12,623,720	157,108,378	368,345,972
Dafora	CAF liniar	45,927,108	29,171,422	29,552,017	36,242,787	30,104,085
	CAF degressiv	76,871,169	48,656,509	40,096,123	43,568,959	33,563,095
	CAF accelerated	104,441,350	9,072,058	9,452,653	16,143,423	10,004,721
Transilvania Constructii	CAF liniar	12,052,696	9,475,193	4,245,494	4,277,682	5,028,453
	CAF degressiv	16,372,309	12,525,242	6,285,355	5,897,575	6,160,804
	CAF accelerated	43,988,243	7,729,861	2,500,162	2,532,350	3,283,121
Transelectrica	CAF liniar	0	256,391,789	257,443,937	258,029,779	261,451,613
	CAF degressiv	0	481,765,249	377,594,345	304,678,386	273,041,226
	CAF accelerated	0	1,418,163,982	147,532,642	147,532,642	138,721,958
Transgaz	CAF liniar	376,709,541	2,291,639,408	976,461,615	979,499,461	942,270,095
	CAF degressiv	484,928,994	438,424,300	454,557,091	539,995,004	538,221,164
	CAF accelerated	1,042,978,936	331,219,071	390,843,522	467,239,238	470,457,717

Sources: Create your own

The results obtained from linear damping regime indicates that depreciation has a significant influence on the structure of self-financing capacity, it finally came, as an expense in accounting terms, with a net result of the company's surplus. Degressive depreciation regimes is noted that in 2008 the one that dominates the structure of self-financing capacity is paying off, and that's because this year the company recorded a loss even less how to depreciation. The same can be said for accelerated depreciation regime, which in 2007 recorded depreciation value twice the value of the net result mode.

TMK-Artrom society we can say that although the terms of the activity profile is the same reinforcement, after applying the three regimes of damping results in a greater influence of damping on self-financing capacity.

In terms of depreciation Antibiotice is different from the two companies, the share of self-financing capacity reduction in the value in being more representative. In the case of the linear damping holds the largest share in 2008, this is explained by the loss incurred by the company from 2007. The same can be said for degressive depreciation regime when more than 50% of the self-financing capacity due to depreciation.

To accelerated depreciation regime the situation is more favorable in the first year, which is explained by the significant proportion of the value of property recovered, 50% depreciation under this regime. What is observed with this system is that amortization in 2008 compared with the years immediately following, amortization holds an important position in the structure of self-financing capacity.

It seems that the company Azomures situation is more favorable depreciation in 2009, but nevertheless the largest share in the self-financing capacity has the net profit obtained by the firm. Only in the case of the degressive depreciation in 2009 is greater influence on CAF depreciation, but that much due to a decrease in profit compared to 2008.

Dafora company generally reflect a higher share of depreciation in the structure of self-financing capacity than net income. As the object of the company is dealing with crude oil and so this could be an explanation to the depreciation in value far above the property reflected in other companies. Greatest influence amortization recorded in 2008, when societății profit drops by about 60%.

In the construction we see that by the year 2008 inclusive, CAF holds significant share of the net profit from financial and accounting documents, and from 2009 until the end of the period under investigation the situation changes dramatically, the share of depreciation, if all three regimes depreciation, being more significant. We could say that with the advent of the economic crisis situation is familiar with construction companies, real estate market generally very affected. Their situation seemed to improve in mid-2010 but in 2011 it appears that they are facing the same problems as in 2009.

Transelectrica Society presents a situation similar to that of Dafora society, but we can say that in this case the depreciation charge without discussion an important position in the structure of self-financing capacity. Lack of data at this company have made an exception in terms of the period under investigation, which is from 2008 to 2011. According to the results obtained during this period, the share of depreciation in CAF in all three regimes depreciation is 90%. We would be tempted to believe that this is due to declining net profit, but the financial statements show that, on the contrary, it is growing from year to year.

Transgaz reflects a situation which Depreciation charge an average share of 30% in the structure of self-financing capacity. Only in 2007, has a relatively high damping opposed to profit, but in the aftermath of the net profit is increasing, thus outpacing depreciation CAF structure.

At the end of this paper we calculated the self-financing capacity based on net profit of individual companies and also the cumulative reduction in the value of these companies in 2011. This was done in an effort to highlight each share in the structure of self-financing capacity as a starting point with the real values of cumulative depreciation up to that year.

### **Table no. 3 Share amortization and net profit self-financing capacity**

Company	Amortization	Net profit	CAF	share Amo	sharea Pn
Armatura	1.151.139	-2.099.932	-948.793	-121,33%	221,33%
TMK-Artrom	21.896.169	67.503.261	89.399.430	24,49%	75,51%
Antibiotice	19.745.281	20.298.909	40.044.190	49,31%	50,69%
Azomures	24.655.159	365.196.441	389.851.600	6,32%	93,68%
Dafora	15.650.243	2.008.175	17.658.418	88,63%	11,37%
Transilvania	4.551.612	1.085.936	5.637.548	80,74%	19,26%
Transelectrica	633.977.660	9.557.424	643.535.084	98,51%	1,49%
Transgaz	972.217.845	379.571.465	1.351.789.310	71,92%	28,08%

Sources: Create your own

Following the calculations made in the last year noted that a significant share of depreciation in cash flow ability is reflected throughout the company Transelectrica, followed by Dafora and Transylvania. Reinforcement companies, TMK-Artom, Antibiotics and Azomureş remain on average the same weight.

A special case has Transgaz that records high values if we consider the data from last year, this resulting from the lack of detailed information on each asset separately.

At the end of the paper point out the impact that it has actually recording depreciation on profit and income tax default.

So to highlight what brings tax savings to pay income tax depreciation, we applied the reduction in the value system of depreciation resulting from tax rate of 16%. Basically depreciation, had it not been accounted for as a tax deductible expense, would have led to an increase in revenues equal to its value. I corrected results then the average inflation rate given by NBR also passing them in a table to be easier to follow.

**Table no. 4 Economy based tax depreciation regime**

Company	Amortization regim	Tax saving 2007	Tax saving 2008	Tax saving 2009	Tax saving 2010	Tax saving 2011
Armatura	linear regim	157.502	157.502	157.502	157.502	157.502
	degressiv regim	330.670	275.839	231.529	197.856	169.487
	accelerated regim	1.215.438	86.776	86.776	86.776	86.776
TMK Artrom	linear regim	13.179	13.179	13.179	13.179	13.179
	degressiv regim	9.373.041	7.516.489	6.074.428	5.568.127	4.956.831
	accelerated regim	27.446.621	2.556.669	2.556.669	2.556.669	2.556.669
Antibiotice	linear regim	1.007.490	1.007.490	1.007.490	1.007.490	1.007.490
	degressiv regim	2.215.536	1.898.092	1.653.562	1.459.240	1.301.715



	accelerated regim	9.952.736	551.964	551.964	551.964	551.964
Azomures	linear regim	892.135	892.135	892.135	892.135	892.135
	degressiv regim	2.839.986	2.394.240	2.034.115	1.839.970	1.643.348
	accelerated regim	5.227.255	503.925	503.925	503.925	503.925
Dafora	linear regim	2.247.673	2.247.673	2.247.673	2.247.673	2.247.673
	degressiv regim	4.723.198	3.806.480	3.091.201	2.833.767	2.524.394
	accelerated regim	13.857.624	1.279.447	1.279.447	1.279.447	1.279.447
Transilvania Constructii	linear regim	315.401	315.401	315.401	315.401	315.401
	degressiv regim	660.970	559.405	478.590	444.993	405.989
	accelerated regim	2.870.245	175.775	175.775	175.775	175.775
Transelectrica	linear regim	0	40.303.070	40.303.070	40.303.070	40.303.070
	degressiv regim	0	77.082.440	60.415.095	48.748.542	43.686.596
	accelerated regim	0	226.906.237	23.605.223	23.605.223	23.605.223
Transgaz	linear regim	24.432.494	24.432.494	24.432.494	24.432.494	24.432.494
	degressiv regim	41.747.606	31.906.754	24.948.088	26.182.723	25.383.952
	accelerated regim	131.035.597	14.753.917	14.753.917	14.753.917	14.753.917

*Sources: Create your own*

Starting from the idea that our societies would pay the state budget gap resulting from the failure to tax depreciation, and the idea that to finance its activities would resort to short-term bank loans to emphasize the value of savings and earnings resulted from necreditării, so basically I consider tax savings as the value of a loan.

Interest considered is the average interest rate of NBR calculated given reference year for the entire period from 2007 to 2011.

**Table no. 5** The average interest rate reference National Bank of Romania

Indicator	2007	2008	2009	2010	2011
average interest rate of NBR reference	20.46%	19.46%	19.33%	16.66%	16.25%

*Sources: Create your own*

At the end of each year, we calculated the savings tax savings actually considered as a loan value by applying the average rate reference value returned by individual companies.

**Table no. 6 Credit amount to be reimbursed**

<b>Company</b>	<b>credit amount to be reimbursed 2007</b>	<b>credit amount to be reimbursed 2008</b>	<b>credit amount to be reimbursed 2009</b>	<b>credit amount to be reimbursed 2010</b>	<b>credit amount to be reimbursed 2011</b>
<b>Armatura</b>	169.252	172.402	172.197	167.992	167.346
	355.338	301.933	253.131	211.034	180.080
	1.306.110	94.985	94.873	92.556	92.200
<b>TMK Artrom</b>	14.162	14.426	14.409	14.057	14.003
	10.072.269	8.227.548	6.641.172	5.938.964	5.266.633
	29.494.139	2.798.530	2.795.207	2.726.944	2.716.461
<b>Antibiotice</b>	1.082.649	1.102.799	1.101.489	1.074.589	1.070.458
	2.380.815	2.077.651	1.807.839	1.556.425	1.383.072
	10.695.210	604.180	603.462	588.725	586.461
<b>Azomures</b>	958.689	976.531	975.372	951.552	947.894
	3.051.849	2.620.735	2.223.898	1.962.512	1.746.057
	5.617.208	551.596	550.941	537.486	535.420
<b>Dafora</b>	2.415.349	2.460.303	2.457.381	2.397.368	2.388.152
	5.075.548	4.166.573	3.379.610	3.022.495	2.682.168
	14.891.403	1.400.483	1.398.820	1.364.659	1.359.413
<b>Transilvania Constructii</b>	338.930	345.238	344.828	336.407	335.114
	710.279	612.325	523.243	474.629	431.364
	3.084.365	192.403	192.175	187.481	186.761
<b>Transelectrica</b>	0	44.115.741	44.063.347	42.987.255	42.822.012
	0	84.374.439	66.051.824	51.995.195	46.417.008
	0	248.371.567	25.807.590	25.177.331	25.080.549
<b>Transgaz</b>	26.255.158	26.743.808	26.712.046	26.059.698	25.959.525
	44.861.978	34.925.132	27.275.745	27.926.492	26.970.449

	140.810.853	16.149.638	16.130.457	15.736.528	15.676.037
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*Sources: Create your own*

I could not conclude this paper without providing several conclusions on the impact of depreciation regime applied in Romania, the self-financing capacity and economic activity brings on companies based course of study on the 8 companies listed on the stock exchange, and with different fields of activity.

## 5. CONCLUSIONS

As a result of this research study that took place on the 8 Romanian companies, listed companies, I pulled some conclusions about the impact of depreciation brought amortization resulting from the regime used by individual companies, the self-financing capacity. Considering the results obtained, the following conclusions can be drawn:

- Depreciation, as well as non-monetary expenditure plays an important role in the life of any enterprise, helping the managers to reduce their company's revenues so that the resulting income is considered as a basis for income tax to be as small and so the tax due to be paid to the state budget should also be as small, thereby bringing savings of corporation tax;

- Also proved that the economy entails tax savings due to bank necreditării, so in other words companies, with the damping effect, no calls, or rather, turn to bank loans but with a smaller amount the difference with a tax economy;

- After the update I noticed that the actual amount of tax savings is that resulting from the corrected mathematical calculations but inflation period;

- Depreciation regime practiced by individual companies also play a role, so if you want a higher self-financing capacity early investment can achieve through the application of the fast, but if it has notified the territorial body representative of the Ministry Finance, or practice degressive system;

- Regardless of the applied amortization, depreciation result is influenced by the specific activity of each undertaking that its technical endowment level;

- The company with the largest impact of the reduction in the value of self-financing capacity emerged as SEPS, a company that has as main activity electricity transmission, followed by Dafora, a company dealing with crude oil;

- Also a big influence on the reduction in the value of self-financing capacity is found in the construction industry, the study Transylvania Construction Company further strengthened this;

- A special situation I can say have TMK-Artrom and reinforcement companies, which although industrialized societies, the share of depreciation is insignificant compared to the profit share of self-financing capacity.

As a final conclusion I can say that depreciation is nothing but reward the technical work properly factor used in the business, because of their production process. The damping is not simply to recover the unrecoverable immobilization of the occurrence of the phenomenon of wear.

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