
TAXATION AND THE COST OF LEASING IN ROMANIA: AN ANALYTIC EXAMINATION

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Abstract

The leasing agreements represent an important share within the operations of capital assets financing. However, from the standpoint of the user, the nominal costs implied by lease may appear as superior to those incurred in case of financing through the buy-and-borrow alternative. Based on the provisions of the Romanian Fiscal Code, the paper tries to analyze the influence of taxation over the implied costs from the user's viewpoint. Considering financial lease as an alternative to long-term borrowing, the first part of the article tries to point out the influence of tax regulations upon the cost of the financial leasing. The second part of the paper is dedicated to the features and fiscal implications of the operating lease, presenting various situations, the cash flows related to taxation influencing the amount of the requested rental payments.

Key words: financial leasing, operating leasing, profit tax, fiscal depreciation, tax on incomes of micro-enterprises.

JEL Classification: H25, G32

Introduction

The cost of funding represents a basic criterion in the financing sources selection process. Since some borrowing expenses reduce the taxable corporate profit, in computing of the real cost of funding sources, the tax shields have to be also integrated.

In the corporate leasing policy, the fiscal considerations play an important role (Smith and Wakeman, 1985; Brealey, Myers and Allen, 2014; Zefinescu et al., 2015), but the tax incentives differ from a country to another.

In Romania, the lease operations are regulated through the Government Ordinance (hereafter referred to as O.G.) no. 51/1997 on leasing operations and leasing companies,

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republished, with subsequent amendments. According to the first article of the above-named regulation (that is, O.G. no. 51/1997), the leasing operations consist in the transmission of the right of use on a good, for a definite period, by the lessor/financier (that is, the owner of the respective good), to the lessee/user, at the request of the latter, who promises to make a series of payments to the owner. At the end of the lease contract, the lessor undertakes to respect the user's right, either to purchase the good (the good may be purchased before the end of the lease period, subject to certain conditions, but not earlier than 12 months), either to extend the lease without changing the nature of the lease, or to terminate the contract. Currently, the aforementioned regulation no longer contains the definitions regarding the types of leasing, but stipulates that one of the mandatory elements of the agreement is represented by the clause on defining it as financial or operating lease. According to the Law no. 227/2015 of the Fiscal Code, there are bounded the two types of leasing, by defining the agreements of financial lease (the art. 7 pt. 7), and operating lease (the art. 7 pt. 8), respectively.

1. Main features, tax implications and the cost of financial leasing

According to the provisions of the Fiscal Code, a financial leasing agreement must fulfil at least one of the following conditions:

- at the moment of entering into force of the lease contract, the risks and benefits of ownership rights over the leased good are transferred to the user;
- the contract specifically provides the user's rights to exert the purchase option over the leased asset, at the moment of the contract expiry;
- the total value of the lease payments, except for ancillary expenses, is at least equal to the initial cost of the asset;
- at the moment of contract expiry, the lessee has the option to buy the good, provided that the salvage value, expressed as percentage, is at most equal to the difference between the maximum service life of the asset and the period of the leasing agreement, divided by the maximum service life, expressed as percentage;
- the leasing period exceeds 80% of the maximum service life of the leased good. For the purposes of this definition, the leasing period includes any period for which the contract may be extended.

Analyzing the provisions of the art. 29 in the Fiscal Code results that, in case of the financial leasing, in calculation of taxable profit, the following rules apply:

- for tax purposes, the user is treated as owner;
- the depreciation of an asset, subject of a financial lease contract, is recognized as a deductible expense for the user, which is entitled to deduct the value of the depreciation from the taxable profit;
- the user is allowed to deduct the lease interest in calculating of the taxable profit.

According to Government Ordinance no. 51/1997 republished, in case of financial leasing, the lease payments consist from “the share of the initial cost of the asset plus the lease interest; the latter is calculated as a result of the interest rate agreed by the parties”. The provisions of the art. 29 of the Fiscal Code stipulate that, in case of financial leasing, in calculation of the user’s taxable profit, only the leasing interest is fully deductible, but not the entire lease payment. This avoids the double deduction of the initial cost of the fixed asset, since the user is entitled to deduct the fiscal depreciation from the taxable income.

In case of profit tax payers which take part in the financial leasing agreements, the exemption from the tax on profits reinvested in the assets referred to in art. 22 par. (1) of the Fiscal Code, namely: technological equipment, electronic computers and peripheral equipment, household machinery and appliances, is granted to the user (art. 22 of the Fiscal Code).

From the analysis of the provisions of the Fiscal Code on profit taxation results that, in the case of financial lease, although the lesser keeps the rights of ownership during the leasing contract, for accounting and tax purposes the user is treated as owner. The assets subject to financial lease are to be reflected in the user’s accounts of intangible or tangible assets, as appropriate. Within the accounting of the owner, the same assets are to be registered as fixed receivable accounts. According to the provisions of Order of the Ministry of Public Finances (hereafter referred to as O.M.P.F.) no. 1802/2014, in case of financial lease, the user is entitled to keep the accounts regarding the depreciation of the assets subject to leasing agreements. The interests afferent to payments appear as expenses in the accounts of the lessee; conversely, in case of the lesser, the interests appear in the corresponding income account.

As regards the regime of the value added tax (VAT), the transmission of the right of usage of equipments under a lease contract is treated as a delivery of services. The leasing payments and commissions are included in the tax basis of value added tax. At the end of the contract, the transfer of ownership from the owner to the user is treated a supply of goods, at the nominal amount of the transaction (that is, the salvage value).

A financial leasing contract is equivalent to a secured loan to finance the purchase of the leased asset, corresponding to the choice „lease versus borrow” (Brealey, Myers and Allen, 2014, p. 654). “From the financial point of view, the leasing is an alternative to financing through a long-term secured loan”. (Stancu, Obreja Braşoveanu and Stancu, 2015, p. 256)

Based on the above considerations, the cost of financial lease is compared to the cost of the long-term loan, considering the two financing arrangements as mutually exclusive. According to the general formula (eq. 1) used in calculation of the cost of a founding source, k , is determined under the condition that the amount of the funds received to be equal to the amount of the discounted funds paid (Hutin et al., 2010, p. 456):

$$M = \sum_{i=0}^n V_i (1 + k)^{-i} \quad (1)$$

in which:

M – Cash inflow (cash borrowed or unpaid amount in case of financial lease);

V_i – Cash outflow (refunds, leasing payments, financial expenses, commissions, etc., all considered *after-tax*) at the end of the i -th period.

The expenditures (financial expenses, commissions, etc.), which are deductible in the calculation of the taxable profit, through the diminution of the taxable profit, generate tax shields.

In the case of long-term borrowing (e.g. from a bank) by a profit tax payer, the cost, denoted by k_d , results a solution of equation (2):

$$S_0 = \sum_{i=0}^n [R_i + (1-t)D_i + (1-t)C_i](1+k_d)^{-i} \quad (2)$$

where:

S_0 – The initial cash inflow (the amount borrowed);

R_i – The stream of cash outflows (amount reimbursed at the end of the i -th period);

D_i – Interest paid at the end of the i -th period;

C_i – Commissions and other expenses related to the administration of the loan;

t – Profit tax rate.

Since the interest, commissions, administration and other loan-related costs are deductible in calculation of the taxable profit, is considered their after-tax amount.

In establishing the cost of the financial leasing, in case of a user which is profit tax payer, there are considered the following hypotheses:

- the user does not pay the value of the purchased asset, which is analyzed as a cash inflow;
- the user due to the lesser a series of payments;
- the lease payments consist of the share of the initial cost of the asset (principal) and the lease interest;
- the financial lease agreement may also provide for payment of commissions, such as analysis and administration commissions, etc.;
- the user deducts the lease interest and commissions from the taxable profit;
- the transfer of ownership of the asset to the lessee is provided to take place at the expiry of the leasing contract, in exchange of payment (by the user) of the salvage value.

In this case, the financial cost of the user, denoted by k_l , results as a solution of the equation (3):

$$VI = \sum_{i=0}^n [P_i + (1-t)DI_i + (1-t)CI_i](1+k_l)^{-i} + VR(1+k_l)^{-n} \quad (3)$$

in which:

VI – The initial cost of the good/asset;

P_i – Share of the initial cost of the asset (capital quota/principal) paid by the user at the end of the i -th period;

DI_i – Leasing interest paid by the user at the end of the i -th period;

CI_i – Fees levied by the locator/financier;

VR – The salvage value of the asset agreed by the parties;

t – Profit tax rate.

In equation (3), the value added tax does not appear, considering that the lessee is a tax payer which is allowed to deduct the full fee due or paid for purchases.

Comparing the two calculations, the difference between the cost of long-term borrowing and financial lease is particularly influenced by the amount of interest and commissions, not by the tax regime of the two alternative sources of funding. In calculating of the effective cost of after-tax funding, the tax shield related to interest and commissions is integrated in both cases of borrowing and of financial lease.

In case of a lessee which is a micro-enterprise, and consequently it is a payer of tax on incomes, the lessee is not allowed to deduct the expenditures in establishing of the calculation of the payable tax. According to Romanian applicable law, this type of economic entities are not entitled to deduct any expenses, as they not calculate taxable profit; this imply that the micro-enterprises do not have the opportunity to reduce the costs through the tax shields, in both cases of financial lease or borrowing. In this situation:

- The cost of the long-term loan (k_d) results from the equation (2'):

$$S_0 = \sum_{i=0}^n [R_i + D_i + C_i](1 + k_d)^{-i} \quad (2')$$

- The cost of financial lease (k_l) appear as result of the equation (3'):

$$VI = \sum_{i=0}^n [P_i + DI_i + CI_i](1 + k_l)^{-i} + VR(1 + k_l)^{-n} \quad (3')$$

The lessee which is a tax payer on incomes of micro-enterprises has a higher financing cost, both for borrowing and financial lease, in comparison to the user which is a profit tax payer; consequently, the former do not benefit from tax advantages and cannot differentiate the cost of the two alternative sources of financing.

In order to exemplify the influence of the tax shield upon the financial leasing, assume a company which has decided to acquire by financial lease a fixed asset with a service life of 5 years. The cost of leasing will be determined on the basis of the following information:

- the initial cost of the asset = 24,000 RON, price excluding VAT;
- financing period = 48 months;
- first payment due at the signing of the contract = 3,600 RON (15% of the initial costs of the asset);

- the leasing payments are presented in Table 1, which, for simplification, are considered at the end of the year;
- the ownership transfer takes place at the salvage value (10% of the initial costs) of the asset, that is, 2,400 RON excluding VAT;
- the administration commission of 600 RON, excluding VAT, is due at the signing of the agreement.

Assuming that the user has the right to deduct the VAT, the initial cost of the asset and the payments, including the salvage value considered for calculating of the cost of lease, are VAT free.

**Table no. 1. Cash flows generated by financial lease for the user
(hypothetical data in RON)**

Year	0	1	2	3	4
Initial cost of asset (VI)	24,000				
Commissions (CI _i)	-600				
Payments in advance (P ₀)	-3,600				
Lease payments, of which:		-5,468	-5,470	-5,469	-5,442
- Capital rate (P _i)		-4,111	-4,365	-4,633	-4,891
- Lease interest (DI _i)		-1,357	-1,105	-836	-551
Salvage value (VR)					-2,400

Source: authors

Based on the above information, the cost of financial leasing is calculated in both the situations when the user is a tax payer on the income of micro-enterprises, and a profit tax payer, respectively.

To determine the cost of financial leasing incurred by a user that is a tax payer on the incomes of micro-enterprises, equation (3') is solved as follows:

$$24,000 = 4.200 + 5,468(1+k_1)^{-1} + 5,470(1+k_1)^{-2} + 5,469(1+k_1)^{-3} + 5,442(1+k_1)^{-4} + 2,400(1+k_1)^{-4} \Rightarrow k_1 = 8.12\%$$

If the user is a profit tax payer, equation (3) is applied, considering a 16% profit tax rate:

$$24,000 = 3,600 + 600 \cdot (1 - 0.16) + [4,111 + 1,357(1 - 0.16)] \cdot (1 + k_1)^{-1} + [4,365 + 1,105(1 - 0.16)] \cdot (1 + k_1)^{-2} + [4,633 + 836(1 - 0.16)] \cdot (1 + k_1)^{-3} + [4,891 + 551(1 - 0.16)] \cdot (1 + k_1)^{-4} + 2,400 \cdot (1 + k_1)^{-4} \Rightarrow k_1 = 6.8\%$$

The financial leasing cost for a profit tax payer user is lower than that incurred by the user which is a tax payer on the incomes of micro-enterprises, as result of commission and interest tax shields, calculated by multiplying these deductible expenses with the profit tax rate. It has to be pointed out that the user benefits from tax shield under the condition to declare a taxable profit. If the lessee declares financial loss, which has to be recovered from the taxable profit to be attained in the coming years (up to 7 consecutive years), the user will benefit from tax shield in the year when the financial loss is recovered; in this case, the discounted value of tax shield is reduced, and the financial lease cost increases accordingly.

Summarizing, although the tax shields in case of the profit tax payers result in a diminution of the effective cost of financial lease, the taxation does not represent a decisive factor in the corporate decision to finance investments through this technique, as alternative to borrowing, since in both cases the profit tax payers are entitled to deduct the interests and commissions paid from the taxable profit. In addition, both the owner of the asset, either purchased by borrowing or using own funds or other sources of financing, as well as the user of an asset subject to a financial lease, will apply the same rules of deduction of fiscal depreciation in the calculation basis of the profit tax. For this reason, equation (3), used to calculate the cost of financial leasing does not include tax shield related to depreciation, which is considered when calculating the treasury flows generated by the investment project, in order to determine the net present value (NPV) of the investment.

2. Features, fiscal treatment and evaluation of the operating leasing

The operating leasing comprise both the rental of goods, as well as other services, such as the maintenance and insurance of the goods, of whose costs are included in the rents paid by the lessee. In the case of operating lease, the users' choice is „lease versus buy” for the asset subject of the agreement. An operating lease contract is attractive for the lessee if the rent is lower than the user's equivalent annual cost of buying the equipment (Brealey, Myers and Allen, 2014, p. 654).

According to the provisions of article 7 pt. 8 of the Romanian Fiscal Code, the operating lease represents any leasing agreement between an owner and a user, which does not fulfil the conditions of a financial lease, except the transfer to the lessee of the risks and benefits of the ownership, less the risk of trading the asset at the salvage value. Thereby, for tax purposes, during the agreement of operating lease, the user of the asset is not treated as owner.

According to article 29 of the Fiscal Code, in calculation of the taxable profit, in case of operating leasing are applied the following provisions:

- the lesser keeps the ownership and deducts the depreciation of the asset subject to the contract; the depreciation is deductible in accordance with the provisions of art. 28 of the Fiscal Code;
- the lessee deducts the rent (lease payments).

In the case of operating lease, according to the Government Ordinance no. 51/1997 republished, the lease payment is represented by the rent, as it results from the agreement of the parties. In addition, the lesser benefits from the tax exemption for reinvested profits, according to the provisions of the art. 22 of the Fiscal Code.

From the O.M.P.F. no. 1802/2014 results that, regarding the accounting for leasing operations, the lesser must keep the books for the assets subject of operating lease agreement(s), in the accounts of intangible or tangible assets, as appropriate. In the books of the lessee, the assets subjects of operating lease appear in the accounts of non-balance sheet. In the accounts of the lesser, the rents received or receivable from the operating lease agreements appear as income; conversely, in the accounts of the lessee, the amounts paid or payable appear as expenses in the profit and loss account.

Based on the Romanian applicable law, in the Table no. 2 are presented the main cash flows generated by the operating lease, in both the cases of owner and user; the cash flows are compared to those implied by purchasing of an asset subject of depreciation, as the alternate situation when the user does not opt for operating lease. The tax implications of the two mutually exclusive decisions are also described, considering that the lesser is a profit tax payer, and the user of the asset (either as a lessee or as owner) is a profit tax payer or a tax payer on incomes of micro-enterprises.

Table no. 2. Description of cash inflow (+) and outflow (-) determined by operating lease versus buying of asset by the user

Explanation	Operating leasing		Purchasing of the asset		
	Owner/ Lesser payer of IP	User/Lessee payer of:		Owner/User payer of:	
		IP	I VM	IP	I VM
0	1	2	3	4	5
Purchasing of the depreciable asset	-INV	-	-	-INV	-INV
Tax exemption for the reinvested profits ¹⁾	+ t·INV	-	-	+ t·INV	-
Depreciation tax shield from the <i>i</i> -th period	+ t·A _{<i>i</i>}	-	-	+ t·A _{<i>i</i>}	-
Rent from the operating lease agreement for the <i>i</i> -th period	+ L _{<i>i</i>}	- L _{<i>i</i>}	- L _{<i>i</i>}	-	-

Profit tax afferent to received payments	$-t \cdot L_i$	-	-	-	-
Tax shield afferent to lease payments	-	$+t \cdot L_i$	-	-	-
Maintenance and insurance expenses for the i -th period	$-M_i$	-	-	$-M_i$	$-M_i$
Tax shield from maintenance and insurance expenses	$+t \cdot M_i$	-	-	$+t \cdot M_i$	-
Salvage value of asset after-tax ²⁾ , at the end of the contract	$+VRd_i$	-	-	$+VRd_i$	$+VR^*d_i$

Source: authors

IP = profit tax; t = profit tax rate; IVM = tax on incomes of micro-enterprises

¹⁾ According to art. 22 of the Fiscal Code

²⁾ VR^*d_i = Income from selling of asset – IVM rate · Income from selling of asset

VRd_i = Income from selling of asset – $t \cdot$ (Income from selling of asset – Non-depreciated fiscal value)

The profit tax payers owe a tax equal to 16% of the taxable profit, calculated, in principle, as a difference between taxable income and deductible expenditures. In their case, the tax shield related to deductible expenses (depreciation, equipment maintenance and insurance expenses, rent payments), as well as the tax exemption for the profits reinvested in equipment (of which the taxpayer may benefit under the conditions stipulated in art. 22 of the Fiscal Code) are considered as revenues, as they diminish the amount of the payable tax.

Payers of tax on incomes of micro-enterprises owe a tax representing 1% or 3% (depending on the number of employees) of the taxable base (equal, in principle, with the income from any source, since the expenses are not deductible for tax purposes) and do not benefit from tax exemption for reinvested profits.

The determinants of establishing the value of rents/payments in the leasing contracts are widely examined in the literature (Schallheim et al., 1987). The minimum amount of the rent (L_{MIN}) requested by the lesser is equal to the equivalent of annual cost calculated as the discounted net cash flows generated by the acquisition, ownership and rental of the asset at a real discount rate (r); this rate also includes a premium for the risk of purchasing and preserving of the asset intended to be leased, including the risks of the asset off-lease and idle, with no possibility to deduct the depreciation (Mieilă, 2009, p. 190), or that the lessee to exercise the cancellation clause.

In case of the operating lease, „the owner keeps the risks of the asset off-lease and idle” (Stancu and Stancu, 2012, p. 464), on a period ranged between the expiry of a contract and the signing of a new agreement or resale the asset.

Assuming a series of cash flows at the end of each year, during the normal service life of the asset subject to depreciation, and based on the cash flows, as appear in the first column

in Table no. 2, the minimum payment requested by the owner (the breakeven after-tax rent) results as a solution of the equation (4):

$$L_{\text{MIN}} \cdot (1-t) \cdot \left[\frac{1}{r} - \frac{1}{r(1+r)^n} \right] = \text{INV} - \frac{t \cdot \text{INV}}{1+r} - \sum_{i=1}^n \frac{t \cdot A_i}{(1+r)^i} + \sum_{i=1}^n \frac{(1-t) \cdot M_i}{(1+r)^i} - \frac{\text{VRdi}}{(1+r)^n} \quad (4)$$

Since the lesser is a profit tax payer, the equation (4) comprises the influences over the rent as result of both the tax exemption for the reinvested profit and of the depreciation tax shield.

According to the provisions of the Romanian Fiscal Code, the firms are allowed to choose damping method used in preparation of own financial statements. In order to calculate the depreciation for tax purposes, there are regulated three methods: straight-line, accelerated, and reducing balance depreciation method. The initial cost of the asset has to be fully amortized over the normal service life. Currently, the normal service life of assets is regulated according to the provisions Romanian Government Decision (hereafter, referred to as R.G.D.) no. 2139/2004. According to the mentioned law, in order to qualify for deductibility (for tax purposes), in case of tangible assets, the damping regime is considered according to the following rules:

- in case of constructions, has to be applied the straight-line depreciation method;
- the taxpayer may opt for either straight-line, accelerated or reducing balance depreciation method, in case of technological equipment (namely, machinery, tools, and working facilities), as well as for computers and their peripherals;
- in case of any other fixed assets, the taxpayer may opt for either the straight-line or reducing balance depreciation method.

For the straight-line depreciation, the annual depreciation is calculated by multiplying the straight-line depreciation rate by the carrying amount (for tax purposes) of the asset. The straight-line depreciation rate appears as result of dividing one with the number of years of remained (normal) service life of the asset.

According to the reducing balance depreciation method, the annual depreciation is calculated by applying the decreasing depreciation rate to the initial cost (recognized for tax purposes) of the fixed asset enters the taxpayer's patrimony for the first year. For the following years to the remaining value of the fixed asset, until the depreciation thus calculated is less than or equal to the fiscal remained value divided by the remaining normal life of the asset. From that year on, the straight-line depreciation of the remaining fiscal value for the remaining duration of use is employed. The reducing balance depreciation rate is calculated by multiplying the straight-line depreciation rate with a coefficient, as follows:

- 1.5, if the normal service life of the fixed asset is between 2 and 5 years;
- 2, if the normal service life of the fixed asset is between 6 and 10 years;
- 2.5, if the normal service life of the fixed asset is more than 10 years.

In cases of application of the accelerated depreciation method:

- for the first year of operation, the depreciation will not exceed 50% of the net book value of the fixed asset at the moment of acquisition;
- for the next years of operation, the depreciation is calculated by dividing the written-down value of the fixed asset to its remaining useful life.

To exemplify the influence of the depreciation method on the minimum rent amount required by the owner in the case of operating leasing, assume a fixed asset with an initial cost of 48,000 RON, excluding VAT. The provisions of the R.G.D. no. 2139/2004 establish a grid regarding the normal (regulated) service life of assets, suppose, in our case of 4 years. The assumed discounting rate (the cost of capital), which includes the risks incurred by the lesser, is 10% and for the considered asset, the lesser can opt for the accelerated depreciation method, being allowed also to benefit from tax exemption for reinvested profits, in accordance with the art. 22 of the Fiscal Code. Nevertheless, for tax purposes, the above mentioned provisions are not applicable cumulatively that is, the taxpayer can choose either for apply the accelerated depreciation method, either to benefit from the tax exemption of the reinvested profit. The lesser is a profit tax payer ($t = 16\%$), without taking into account of the VAT, since operating leasing represents a taxable delivery of services and the lesser is deemed to deduct the tax associated with the purchase. The maintenance, insurance, and administrative expenses of the lesser are estimated at 1,000 RON annually. To simplify, the payments are assumed at the end of the year, and the salvage value is equal to zero. Based on the hypothetical information presented above, the minimum annual rent, excluding VAT, is:

Table no. 3. Calculation of rent for NPV=0 (equivalent annual cost) – straight-line depreciation method (hypothetical data in RON)

Years	0	1	2	3	4
Initial cost of the asset (INV)	- 48,000				
Depreciation (for tax purposes) (A)		12,000	12,000	12,000	12,000
Depreciation tax shield ($t \cdot A$)		1,920	1,920	1,920	1,920
Maintenance and insurance expenses, after-tax = $(1 - t) \cdot M$		- 840	- 840	- 840	- 840
Net cash flows	- 48,000	1,080	1,080	1,080	1,080
PV at 10% = - 44,577 RON					
Rent (lease payments) (L_{MIN})		16,742	16,742	16,742	16,742
Tax on payments ($t \cdot L_{MIN}$)		2,679	2,679	2,679	2,679

Rent (after-tax) = $(1 - t) \cdot L_{MIN}$		14,063	14,063	14,063	14,063
Present value (PV) of (after-tax) rents at 10% = 44,577 RON					

Source: authors

- 16,742 RON, if the lesser applies the straight-line depreciation method (Table no. 3), since the current net value of payments for the acquisition and administration of the asset (considering the depreciation tax shield), at 10% discount rate is 44,577 RON;
- 14,119 RON, if the lesser applies the straight-line depreciation method and opts for the tax exemption for reinvested profits, under art. 22 of the Fiscal Code; in this case, in the first year, is considered in addition the tax exemption: $16\% \times 48,000 \text{ RON} = 7,680 \text{ RON}$;
- 16,677 RON, if the lesser applies the reducing balance depreciation method (Table no. 4);

Table no. 4. Calculation of rent for NPV=0 (equivalent annual cost) – reducing balance depreciation method (hypothetical data in RON)

Years	0	1	2	3	4
Initial cost of the asset (INV)	- 48,000				
Depreciation (for tax purposes) (A)		18,000	11,250	9,375	9,375
Depreciation tax shield ($t \cdot A$)		2,880	1,800	1,500	1,500
Maintenance and insurance expenses, after-tax = $(1 - t) \cdot M$		- 840	- 840	- 840	- 840
Net cash flows	- 48,000	2,040	960	660	660
PV at 10% = - 44,405 RON					
Rent (lease payments) (L_{MIN})		16,677	16,677	16,677	16,677
Tax on payments ($t \cdot L_{MIN}$)		2,668	2,668	2,668	2,668
Rent (after-tax) = $(1 - t) \cdot L_{MIN}$		14,009	14,009	14,009	14,009
Present value (PV) of rents after-tax at 10% = 44,405 RON					

Source: authors

- 14,055 RON, if the lesser applies the reducing balance depreciation method and opts for the tax exemption for reinvested profits, under art. 22 of the Fiscal Code, since in the first year, the tax exemption is also considered, in amount of 7,680 RON;
- 16,629 RON if the lesser applies the accelerated depreciation method (Table no. 5). It is noticeable that, in case of using the accelerated depreciation method, the lesser has to renounce the option to benefit from the tax exemption for reinvested profits.

Table no. 5. Calculation of rent for NPV=0 (equivalent annual cost) – accelerated depreciation method (hypothetical data in RON)

Years	0	1	2	3	4
Initial cost of the asset (INV)	- 48,000				
Depreciation (for tax purposes) (A)		24,000	8,000	8,000	8,000
Depreciation tax shield (t·A)		3,840	1,280	1,280	1,280
Maintenance and insurance expenses, after-tax = (1 - t)·M		- 840	- 840	- 840	- 840
Net cash flows	- 48,000	3,000	440	440	440
PV at 10% = - 44,278 RON					
Rent (lease payments) (L _{MIN})		16,629	16,629	16,629	16,629
Tax on payments (t·L _{MIN})		2,661	2,661	2,661	2,661
Rent (after-tax) = (1 - t)·L _{MIN}		13,968	13,968	13,968	13,968
Present value (PV) of rents after-tax at 10% = 44,278 RON					

Source: authors

Based on of the above hypothetical data, the minimum rent requested by the owner is ranged between 14,055 and 16,742 RON, as result to allowed tax exemptions, upon the option of the depreciation method and the tax exemption for reinvested profits. Under these circumstances, the lesser may opt to pass to the lessee some of own tax benefits, through the diminution of the requested rent.

It is noticeable that in the absence of the corporate profit tax, the fiscal depreciation does not affect the value of rent. The discounted tax advantage, as result of depreciation, increases with the increase of the profit tax rate and decreases with the discount rate and the regulated life of the asset (Teodorescu and Mihai, 2015). In addition, the amount of tax benefits depends on the ability of the lesser to generate profits from all the activities, in

order to take advantage of these benefits. For example, the tax exemption for reinvested profits is granted within the limit of the payable tax by the taxpayer during the fiscal period of construction, provided that the profit covers the value of the investment.

With respect to the option of the user for purchase or to use the asset through the operating leasing, from the financial point of view, the decision of purchase is justified in cases when the equivalent annual cost of ownership and administration of the asset is lower than of the most advantageous rental/leasing option available from an outsider. The equivalent annual cost represents the maximum acceptable rent for the lessee, in case of operating leasing. In other terms, the user purchases the asset if through this operation has the possibility to “rent to itself” cheaper than a third party would lease (Brealey, Myers and Allen, 2014, p. 645).

Based on the cash flows described in Table no. 2, columns 2, 4 and 3, 5, the maximum acceptable rent payable by the lessee, at the end of each year during the leasing agreement period of m years, depends on their tax regime:

- If the lessee is a profit tax payer, the maximum rent appears as solution of the equation (5):

$$L_{MAX} \cdot (1-t) \cdot \left[\frac{1}{r} - \frac{1}{r(1+r)^m} \right] = INV - \frac{t \cdot INV}{1+r} - \sum_{i=1}^m \frac{t \cdot A_i}{(1+r)^i} + \sum_{i=1}^m \frac{(1-t) \cdot M_i}{(1+r)^i} - \frac{VRdi}{(1+r)^m} \quad (5)$$

- If the lessee is a tax payer on the incomes of micro-enterprises, the maximum rent appears as solution of the equation (6):

$$L_{MAX} \cdot \left[\frac{1}{r} - \frac{1}{r(1+r)^m} \right] = INV + \sum_{i=1}^m \frac{M_i}{(1+r)^i} - \frac{VR^* di}{(1+r)^m} \quad (6)$$

In case the asset is needed for a short period, the user opts for operating leasing; if the asset is needed for a longer period (e.g., up to 80% of the maximum normal/operating duration, as above this percentage, the contract falls under the category of financial leasing), the user can opt between the operating lease or purchasing of the asset. The option in favour of lease depends upon the cost of this operation. As there has been above presented, the tax shield for the lesser may lead to a diminution of the requested rent. If the lesser enjoys higher tax benefits than the lessee, “in a competitive market, the lesser will request a reduced rent to reflect the tax shield” (Ross, Westerfield and Jaffe, 2005, p. 748).

For example, suppose a company that needs an asset in similar financial conditions to the above presented example, for a longer period of time, assume for 3 years; the company may opt either for buying of the asset or to hire it under an operating leasing agreement. In case of purchase option, the cost is 48,000 RON excluding VAT, with maintenance and insurance expenses of 1,000 RON annually; after 3 years of usage, the estimated salvage value is 12,000 RON excluding VAT. The amount of the salvage value is equal to the

depreciation for one year, calculated under the straight-line method. Using a discounting rate of 10%, if the user opts for an operating lease agreement for a period of 3 years, results the maximum rent the lessee may agree to pay at the end of each year; this value excludes VAT, assuming that the user exercise the right to deduct the VAT. For simplicity, the asset price, maintenance and insurance expenses, as well as the discount rate are considered equal to those in the above presented example for calculation of the minimum rent requested by the lesser.

- If the user is a tax payer on the income of micro-enterprises, with a rate of 1%, the maximum rent, calculated using equation (6), is 16,712 RON:

$$L_{MAX} \cdot \left[\frac{1}{0.1} - \frac{1}{0.1(1+0.1)^3} \right] = 48,000 + \sum_{i=1}^3 \frac{1,000}{(1+0.1)^i} - \frac{12,000 - 120}{(1+0.1)^3} \Rightarrow L_{MAX} = 16,712 \text{ RON}$$

- If the user is a tax payer on the income of micro-enterprises, with a rate of 3%, the maximum rent is 16,785 RON, since the income tax from selling the equipment raises to 360 RON.
- If the user is a profit tax payer, the maximum rent, calculated upon the equation (5), depends on the depreciation method and on the tax exemption for reinvested profits, ranging from 13,965 to 17,376 RON. If the user benefits from a tax exemption for profits reinvested in equipment, in case of purchase, results a maximum rent of 14,034 RON, under the application of the straight-line depreciation method; if using the reducing balance depreciation method results a value of 13,965 RON; and, in case of not benefit from tax exemption, the maximum amount calculated by the user reaches 17,376 RON and 17,308 RON respectively. Applying the accelerated depreciation method results a maximum rent of 17,255 RON.

From the analysis of the influence of taxation on the minimum rent calculated by the lesser, and the maximum payment acceptable for the user, respectively, based on the two examples presented, results that the operating lease is more advantageous than the acquisition of the asset, in the case of a user which does not benefit from tax advantages, if the lesser benefits from such advantages and passes some of the tax benefits to the lessee through the diminution of the requested payment. Thus, for a user/lessee of the asset which is a tax payer on incomes of micro-enterprises, and consequently, is not entitled to deduct any expenditures in establishing of the taxable profit, and does not benefit from other tax incentives, as well as for a user which is a profit tax payer but does not generate enough profit to benefit from the tax exemption for reinvested profits, the operating leasing is more advantageous than purchasing of the asset, if the lesser agree to transfer a part of own tax benefits in order to reduce the amount of requested rent.

Conclusions

The Romanian Fiscal Code and the accounting regulations provide criteria for bounding between the financial and operating leasing contracts, with consequences on the deduction of expenses in the calculation of the taxable profit. Under these regulations, the lessee is treated as the owner of the asset in case of financial lease, whilst in case of the operating lease, the ownership is recognized to the owner. In case of financial leasing, the user is entitled to deduct the fiscal depreciation from the taxable profit, whilst in case of operating leasing the right to deduct the depreciation is granted to the lesser. Under the conditions of art. 22 of the Fiscal Code, in case of financial lease the user benefits from tax exemption for reinvested profits, whilst in case of operating lease, the owner is allowed to use the advantage of the exemption. In situation of financial leasing, the user is not entitled to fully deduct the lease payments, but in the case of operating leasing, the lessee is allowed to deduct the leasing rent at the calculation of the taxable profit.

The deduction of the lease interests and commissions from the calculation of the taxable profit results in tax shields, which reduce the cost of financial lease. Nevertheless, the tax benefits are insignificant when opting between borrowing and financial lease, ensuring the neutrality of the profit tax in relation to the two alternative sources of funding.

In the case of operating leasing, the lesser, as a profit tax payer, may transfer a part of the tax advantages received (depreciation tax shields; tax exemption for profits invested in the asset subject of the lease agreement, if the conditions provided for in art. 22 of the Fiscal Code are fulfilled) to the lessee, by diminishing the amount of requested rent.

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