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Investigation of rented immovable real estate right

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SUMMARY

Real estate occupies an important place in the economic life of society not only as a commodity of long-term use, but also as an object of investment, collateral, taxation, etc. and, thus, becomes a thing for which a number of legal relations are formed. In fact, property in civil law is interpreted as a separate thing and related rights and obligations. This interpretation is fundamental for real estate because, due to the impossibility of being moved, it requires a special method of transfer from one owner to another - through the transfer of ownership of this property. That is why when real estate is valued, the object of evaluation is not real estate as a physical thing, but the rights to it, which are actually traded on the market (Perovych L., Hubar Yu., 2016). When valuing real estate, it is necessary to clearly define the rights that may pass from one person to another. Traditionally, such rights include: property rights, collateral rights, lease rights, building rights, easements, real obligations, and so on. The most complete set of powers is the right of ownership, the value of which, in essence, reflects the value of real estate. In International Valuation Standards, it is interpreted as an unconditional unrestricted right that includes the right to use, occupy, develop, share, sell, lease, inherit, exchange, bestow, use all or any of these powers. them, transferring the rest to other persons or the state or abandoning them altogether. That is, the right of ownership allows by law to own, use and dispose of the property of the owner of this right at its discretion, regardless of the intentions of others. The owner of this right may create smaller benefits based on the distribution of real estate rights by financial interests (eg, equity and debt) and / or physical interests (eg, land lease, building ownership, etc.). Such rights, in contrast to property rights, are called partial. At the same time, the owner retains his interest in the property as a landlord, mortgagor (Kharryson H.S., 1994; Drapikovskyi O.I. et al, 2015). Partial rights are derived from property rights and provide for at least two interests: the interest of the owner who transferred part of his powers, and the interest of the person to whom they are transferred. The value of interests that correspond to partial rights depends on the terms of the contracts under which they are formed. Valuation of real estate is based on the assumption that the value of this property is formed by income from its use, which in turn depends on the completeness of real estate rights. The most complete in terms of powers is the right of ownership, which allows the owner of this right to own, use and dispose of real estate within the law at its discretion. Based on this right, derivative rights are formed, including the right to lease (Malashevskyi M. et al, 2018).

Introduction

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Method and Theory

It is well known that real estate is accessed not only through the market of purchase and sale, but also through the market of rent. By acquiring the right of ownership, the owner of the real estate object actually acquires the right to own unlimited real estate income, the amount of which is regulated by the unilateral obligations of the owner to comply with the permitted use and to pay real estate tax (Sai V. et al, 2020). The right of use provides its owner with the opportunity to receive regular cash flows by obtaining net operating income from real estate, and the right of disposal - the ability to receive a one-time cash flow, for example, during its sale after the end of the term:

$$PV_0 = \sum_{i=1}^{n} \frac{I_0^m}{(1+Y)^t} + \frac{FV_0}{(1+Y)^o}, \quad (1)$$

where PV_0 - the current value of real estate ownership; I_0^m - net operating income from market rent for real estate; FV_0- terminal value of real estate at the end of the forecast period (t = 1 ÷ n); Y - the discount rate that corresponds to the rate of return.

In essence, the value of property, unencumbered by the interests of third parties or obligations to them, corresponds to the value of real estate as a physical thing and is an imperative to determine the market value of interests in other types of real estate rights. In this case, each derivative right will have at least two interests: for example, in the lease right - the interest of the landlord and the interest of the tenant, the value of which is additive to the value of the property right. Thus, the value of real estate leased can be described by cash flow models that reflect:

- interest of the landlord, the value of which PV_0^{lf} corresponds to the current value of regular income of net operating income from contractual rent I_0^k during the term of the contract and one-time income from the possible sale of real estate upon its completion FV_0

$$PV_0^{lf} = \sum_{i=1}^{n} \frac{I_0^k}{(1+Y)^t} + \frac{FV_0}{(1+Y)^c} \qquad , (2)$$

- the interest of the lessee, the value of which PV_0^{lh} is the difference between the value of the interest of the property owner PV_0 and the value of the interest of the lessor PV_0^{lf}, which determines the derivative (residual) nature of the lessee's interest in the lease

$$PV_0^{lh} = \sum_{i=1}^{n} \frac{I_0^k - I_0^k}{(1+Y)^t}. \qquad (3)$$

Therefore, the value of the lessee's interest will be positive only if the net operating income from the contractual rent is less than the similar income from the market rent. In the case of approaching the amount of contractual rent to the market level, the value of this interest will decrease, and in case of excess - will become negative. The value of the landlord's interest in such conditions will be greater than the market value of real estate.Lease interests may be related to the alienation of the rights of the owner not only of the improved real estate, but also of the owner of the land free from development, when the latter is provided for development or other use. Similar to improved real estate when renting land:

- the value of the landlord's interest PV_L^{lf} is determined by the current value of net operating income from the contractual fee for land use I_L^k during the term of the contract and the current value of one-time income from the hypothetical sale of land FV_L upon its completion (4)

$$PV_L^{lf} = \sum_{i=1}^{n} \frac{I_L^k}{(1+R_L)^t} + \frac{FV_L}{(1+R_L)^n}, \qquad (4)$$

- the value of the lessee's interest PV_L^{lh} is the current value of the difference between the net operating income from the market and the contractual fee for land use $\left(I_L^m - I_L^k\right)$ (5).

$$PV_L^{lh} = \sum_{i=1}^{n} \frac{I_L^m - I_L^k}{(1+R_L)^t}. \qquad (5)$$

The negative value of the lessee's interest in accordance with International Valuation Standards is considered perfectly legitimate and should not be ignored or offset by the positive market value of other property. It is evidence that the value of the lessor's interest will exceed the value of the property right unencumbered by the lease. However, the absence of reversion as a component of the value of the lessee's interest indicates only that the lessee does not have the authority to dispose of the property. Instead, reverse income from the lessee may arise in the event of early termination of the lease or sale of the sublease right. However, the value of full ownership will not necessarily be equal to the sum of the value of the lessor's right and the value of the lessee's right. This is due to the fact that the value of these rights will depend on the terms of the contract. This value will be affected by: the conditions for the distribution of liabilities for the payment of operating costs and land tax; conditions for reviewing the amount of rent, early termination of the lease, etc. In addition, the rights of the landlord and tenant are characterized by different risks and, consequently, different levels of profitability. Contractual rental income is always less risky than market rental income because it has more certainty. Therefore, the discount rate for calculating the current rental rate is taken 1-2% lower than the market capitalization rate and which determines the value of full ownership.

When assessing land use rights, it should be borne in mind that the land always has land improvements, in respect of which there are also relevant economic interests. This, on the one hand, complicates the valuation procedure, because it must be borne in mind that land and land improvement have different economic nature and characteristics, and on the other - it is the distribution of economic interests by physical components requires an assessment of property rights (Hubar Yu., 2020; Stupen M. et al, 2020; Stupen N., 2019).

Results of investigations

It is known that the owner of a commercial institution has entered into an agreement for the lease of retail space (4000 m^2) for 10 years, according to which annually will receive a net operating income from contractual rent in the amount of 1,000 thousand USD. It is also known that the net operating income from market rent is 1,200 thousand USD, the rate of return -11,99%, the term of economic life of land improvements - 20 years, and the value of real estate at the end of the economic life of land improvements will be - 2,500.0 thousand USD. It is necessary to determine the value of the interests of the landlord and tenant in the right to lease commercial space for 10 years. The calculations are performed in tables 1-3.

Table 1 *Calculation of the market value of real estate (the value of full ownership to a commercial object)*

Elements of calculation	The result of the calculation
Net operating income from market rent, USD	1 200 000
Factor of the current value of the PVAF annuity (11.99%; 20)	7,474128
Current value of regular income, USD	8 968 954
Future value of real estate, USD	2 500 000
Factor of the current unit cost of PVF (11.99%; 20)	0,1039
Current reversion value, USD	259 750
The cost of ownership of real estate, USD	9 228 704

Table 2 *Calculation of the terminal value of real estate at the end of the lease term*

Elements of calculation	The result of the calculation
Net operating income from market rent, USD	1 200 000
Factor of the current value of the PVAF annuity (11.99%; 10)	5,652537
Current value of regular income, USD	6 783 044
Future value of real estate, USD	2 500 000
Factor of the current value of the PVF unit (11.99%; 10)	0,322261
Current reversion value, USD	805 652
Terminal value of real estate, USD	7 588 696

Thus, the market value of a commercial object at the end of the lease term (terminal value) is 7,588,696 USD.

Table 3 *Calculation of the value of the landlord's interest in the lease*

Elements of calculation	The result of the calculation
Net operating income from contractual rent, USD	1 000 000
Factor of the current value of the PVAF annuity (11.99%; 10)	5,652537
The current value of regular income from contractual rent for 10 years, USD	5 652 537
Terminal value of real estate, USD	7 588 696
Factor of the current value of the PVF unit (11.99%; 10)	0,322261
Current reversion value, USD	2 445 541
The cost of interest of the landlord, USD	8 098 078

Thus, the value of the landlord's interest in the lease is 8,098,078 USD.

The value of the tenant's interest can be calculated by two methods:

1. As the difference between the value of the property right and the value of the landlord's interest:

   $PV_0^{lh} = PV_0 - PV_0^{lf} = 9228704 - 8098078 = 1130626$ USD, or

2. As the present value of the difference between the regular income from market and contractual rent:

$$PV_0^{lh} = \left(I_0^m - I_0^k\right) \times PVAF(11{,}99\%; 10) = (1200000 - 1000000) \times 5.652537 =$$
$$= 1130626 \text{ USD.}$$

Thus, the value of the tenant's interest in the lease is 1 130 626 USD. The cost of ownership 9 228 704 USD is distributed between the value of the landlord's interest 8 098 078 USD and the value of the tenant's interest 1 130 626 USD.

The risk of earning regular income can also be taken into account by adjusting the discount rate. Thus, the discount rate for calculating the current value of the lessor's interest will usually be lower than the market rate, and the discount rate for calculating the current value of the lessee's interest will be higher than the market rate. In other words, the discount rate used to determine the value of the lessee's interest should equalize differences in cash flows. This would be logical in terms of the greater risk of the lessee's income compared to the risk of investing in full ownership.

Recommendations and conclusions

It should be noted that the tenant's income can be formed not only due to the difference between market and contractual rents, but also by the tenant concluding a sublease agreement. In this case, for the lessee's interest to acquire a positive value, the lessee must receive a profitable rent from the subtenant, is one that will be higher than the basic rent that he, the tenant, pays to the property owner. Under such conditions, the value of the lessee's interest will be determined by the cash flow of the rental income during the term of the remaining lease agreement. In addition, it should be borne in mind that the tenant's income may change during the lease term due to the revision of both the basic rent and the sublease. And if the time of review or proportions of payments under lease and sublease agreements do not coincide, the rate of change of the lessee's income (income rent) as a balance will differ from the rate of change of the parameters that determine it. In this case, the tenant has the opportunity to leverage, for example, when under inflation, market rents increase (ie there are grounds for increasing sublease), and the basic rent remains unchanged.

Thus, the peculiarity of the models that describe the value of interests in the lease is that the regular cash flows in them form a net operating income from both market and contractual rent. In this case, the object of lease can be both improved real estate and land free from development.

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