

STUDY ON THE ASSESSMENT OF ASSETS BASED ON THE CAPITALIZATION METHOD

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Abstract: *This article aims to make a comparative analysis of the main related parameters for three distinct, comparable commercial spaces. At the same time, starting from the capitalization method, the research aims to estimate the present value related to cash flows from rents both in the context of a yearly periodicity, but also divided into semesters, quarters or months. In order to develop the current study, three commercial spaces located within the municipality of Arad were subject to selection. The aim was to achieve comparability taking into account the following considerations: area/location (central area of Arad); the corresponding surface (about 100 sqm each); category/description (street commercial space); other various parameters.*

Key words: *comparative study, assessment methods, cash flow, commercial spaces, parameters.*

INTRODUCTION

The valuation procedure is an activity that estimates the value of tangible or intangible assets, movable or immovable, of companies, participations in companies, etc [14].

There are three approaches to business assessment, namely: the asset-based approach (equity); the revenue-based approach (financial); the approach by market comparison [6].

The asset-based (equity) approach estimates, based on the principle of substitution, that the value of an asset is the sum of the costs of replacing all its components [1]. This approach is applicable for the assessment of majority holdings in companies valued on a basis other than the continuation of the activity or for companies that own properties intended for business or agricultural use [4]. If the holding company owns properties from which it receives certain economic income, for each property its market value will be estimated [2]. The valuation of a holding company will take into account the liquidity and the size of the holdings it holds [10].

Given the principle of anticipation, the (financial) revenue-based approach estimates that the value of a company, an interest in a company or an asset can be measured by calculating the existing value of future benefits [3]. This approach is particularly appropriate if it is based on the premise of the continued value of the business in the future [8]. It is also a very important method for the capital market investors who are interested in estimating future gains that are brought by the possession of purchased securities [15].

The market comparison approach assumes that the market is the most appropriate indicator of the value of a company, an interest in a company or an asset [5]. The justification is given by the fact that an investor will not agree to pay for a property more than the cost of a replacement property, available on the market [7]. This approach is indicated in the case of active capital markets, with significant transaction volumes or in the case of global markets in which acquisitions and mergers take place and the information held is credible and results from recent transactions [12]. In the case of assets, we recommend assets that have a relevant and dynamic secondary market, in which we can identify multiple transactions with comparable assets [16].

MATERIALS AND METHODS

The present study aims to perform a comparative analysis of the main related parameters for three distinct, comparable commercial spaces [11]. At the same time, starting from the capitalization method, the research aims to estimate the present value related to cash flows from rents both in the context of annual periodicity, but also divided into semesters, quarters or months [9].

From the point of view of the used research methodology, there could be mentioned the comparative analysis of the data and of the information, the synthesis of the data and of the information, the setting of hypotheses by induction or the testing of hypotheses by deduction [13].

In the present study, we aim to determine the present value of the estimated cash flows based on the capitalization method in the case of the three comparable commercial spaces.

For this purpose, the following calculation ratios were used [19]:

$$V_c = CF \cdot F_{cap}$$

V_c - the present value of the series of cash flows obtainable for a limited period;

F_{cap} - the capitalization factor.

$$F_{cap_{per}} = \frac{1 - (1+k/m)^{-n \times m}}{k/m}$$

$F_{cap_{per}}$ - the capitalization factor by period;

n - the number of years corresponding to the period in which it is estimated to obtain constant cash flows;

m - the number of fractions related to a year (semesters, quarters, months) in which the generation of constant cash flows is estimated;

k - the discount rate.

In order to perform the calculations, there was created an Excel working interface, being used in order to estimate the value of the cash flows based on the capitalization method applied over a half-yearly, quarterly and monthly time interval. At the same time, the Excel work interface also carries out a comparative analysis related to the values for the three commercial spaces.

RESEARCH RESULTS

In order to elaborate this material, there were submitted to the selection three commercial spaces located within the municipality of Arad.

The aim was to achieve comparability taking into consideration the following considerations: area/location (central area of Arad); the corresponding surface (about 100 sqm each); category/description (street commercial space); other various parameters.

In the following, there will be highlighted the main characteristics related to the commercial spaces that were subject to the selection.

Space 1 (The property listing)

1. Adress: Unirii Street, Arad (central area)
2. Location on the map:
3. Dimensions: 108 sqm.
4. Features: street space, 3 rooms and a multifunctional space, 1 bathroom.
5. Utilities: heating (central heating, radiators), water, sewerage, electricity (lighting), gas, internet.



Figure 1. Location on the map for the first commercial space

Source: Google maps

Space 2 (The property listing)

1. Adress: Mihai Eminescu Street, Arad (central area)
2. Location on the map:

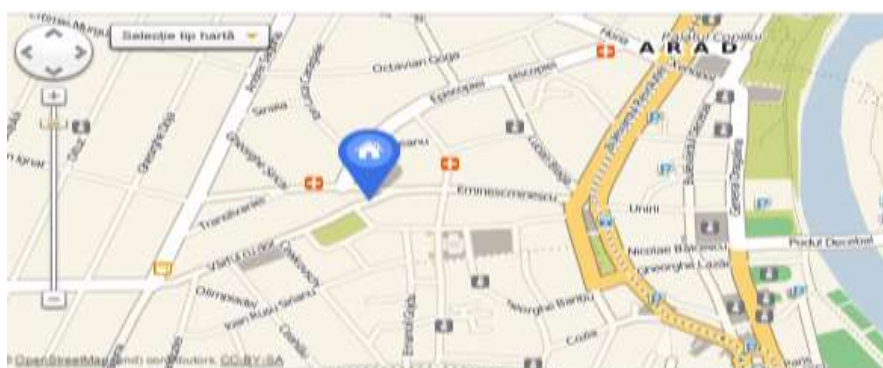


Figure 2. Location on the map for the second commercial space

Source: Google maps

3. Dimensions: 104 sqm.
4. Features: street space, open space of 80 sqm, 2 rooms and a multifunctional space, 1 bathroom.
5. Utilities: heating (central heating, radiators), water, sewerage, electricity (lighting), gas, internet.

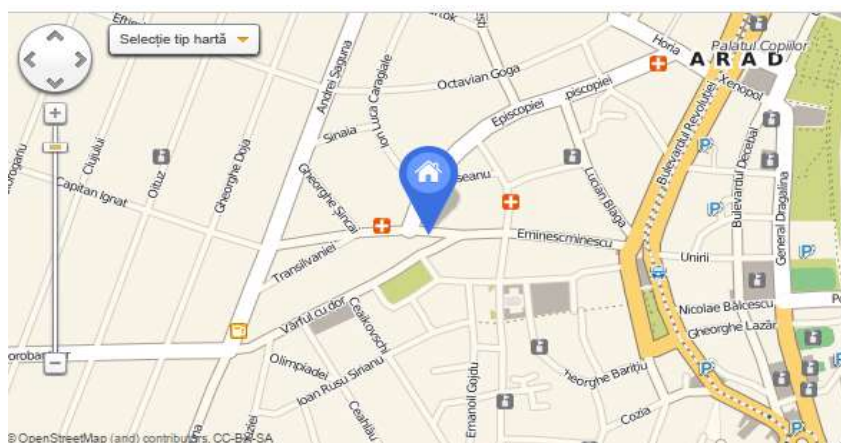


Figure 3. Location on the map for the third commercial space

Source: Google maps

Space 3 (The property listing)

1. Address: Mihai Eminescu Street, Arad (central area)
2. Location on the map:
3. Dimensions: 104 sqm.
4. Features: street space, 2 offices and a multifunctional space, 1 bathroom.
5. Utilities: heating (central heating, radiators), water, sewerage, electricity (lighting), gas, internet.

By centralizing the information related to the three commercial spaces, there is generated the following table structure (Table 1).

Table 1.

Characteristics of the three commercial spaces

No.	Area	Surface	Description	Price/ Sqm	Height	Parking zone	Finishes	Utilities
1.	Central (Unirii Street)	108 sqm	Street commercial space	10€/sqm/month	4 m	Street	Necessary	Heating, water, electricity, gas, internet
2.	Central (Mihai Eminescu Street)	104 sqm	Street commercial space	6€/sqm/month	2,6 m	Street	Accomplished	Heating, water, electricity, gas, internet
3.	Central (Mihai Eminescu Street)	104 sqm	Street commercial space	7€/sqm/month	3 m	Street	Accomplished	Heating, water, electricity, gas, internet

Source: own research

Taking into consideration the fact that the value of the monthly rent/sqm for each of the three comparable commercial spaces, at the same time estimating a number of 3 years in which the cash flows from rents are obtained continuously and, also, estimating a discount rate of 5%, the following values were generated (in €):

Space 1:

Table 2.

Calculations for the first commercial space (lei)

The yearly rent amount	12960			
The half-yearly rent amount	6480			
The quarter-yearly rent amount	3240			
The monthly rent amount	1080			
The rate of return	0.05			
The half-yearly capitalization factor	0.0250	1.0250	1.159693	5.51
The quarter-yearly capitalization factor	0.0125	1.0125	1.160755	11.08
The monthly capitalization factor	0.0042	1.0042	1.161472	33.37
Present value of the half-yearly cash flows	35692.65			
Present value of the quarter-yearly cash flows	35896.97			
Present value of the monthly cash flows	36034.96			

Source: own research

Space 2:

Table 3.

Calculations for the second commercial space (lei)

The yearly rent amount	7488			
The half-yearly rent amount	3744			
The quarter-yearly rent amount	1872			
The monthly rent amount	624			
The rate of return		0.05		
The half-yearly capitalization factor	0.0250	1.0250	1.159693	5.51
The quarter-yearly capitalization factor	0.0125	1.0125	1.160755	11.08
The monthly capitalization factor	0.0042	1.0042	1.161472	33.37
Present value of the half-yearly cash flows		20622.42		
Present value of the quarter-yearly cash flows		20740.47		
Present value of the monthly cash flows		20820.2		

Source: own research

Space 3:

Table 4.

Calculations for the third commercial space (lei)

The yearly rent amount	8736			
The half-yearly rent amount	4368			
The quarter-yearly rent amount	2184			
The monthly rent amount	728			
The rate of return		0.05		
The half-yearly capitalization factor	0.0250	1.0250	1.159693	5.51
The quarter-yearly capitalization factor	0.0125	1.0125	1.160755	11.08
The monthly capitalization factor	0.0042	1.0042	1.161472	33.37
Present value of the half-yearly cash flows		24059.49		
Present value of the quarter-yearly cash flows		24197.22		
Present value of the monthly cash flows		24290.23		

Source: own research

In a comparative manner, the cash flow occasioned by the rent, for each comparable space, in actual sizes, but also in absolute and relative deviations is highlighted in the following (Table 5).

Table 5.

Comparative study on the three commercial spaces (lei)

	Space 1	Space 2	Space 3	Absolute deviation space 1 and space 2	Absolute deviation space 1 and space 3	Absolute deviation space 2 and space 3	Relative deviation space 1 and space 2	Relative deviation space 1 and space 3	Relative deviation space 2 and space 3
Present value of the half-yearly cash flows	35692.65	20622.421	24059.49	15070.23	11633.16	-3437.07	1.730769	1.483516	0.857143
Present value of the quarter-yearly cash flows	35896.97	20740.472	24197.22	15156.5	11699.75	-3456.75	1.730769	1.483516	0.857143
Present value of the monthly cash flows	36034.96	20820.198	24290.23	15214.76	11744.73	-3470.03	1.730769	1.483516	0.857143

Source: own research

CONCLUSIONS

Over time, a number of ways of approaching the value of the companies, from different perspectives, have been developed. Some of them refer to the equity aspect of the companies, estimated as resulting from the addition of the value of assets, and other ways reveal exclusively the profit potential.

There are also approaches that track the historical transactions with the issuer's securities or the securities of other comparable companies, and, finally, other categories study the impact of the intangible assets or of the intellectual capital on the value.

All approaches, regardless of which category they belong to, have as their ultimate goal the identification of the ways for estimating the value of the business through various assessment methods and procedures.

The assessment method of a company, participation in business or of an asset is the specific way of a certain approach aimed at estimating the value of the object or package of goods valued. The assessment procedure is the way to go through the stages of an assessment method.

Within the analysis of the value of a company, we differentiate between two levels constituted in two possible assessment bases: the value of the equity (shareholders' funds) and the value of the entire company, including its debts.

Referring to the accomplished study, we could conclude that the assessment of the real estate invoices (commercial spaces) benefits from comparability from the point of view of numerous parameters, such as: the location, the area, the type, the utilities offered, etc.

Equally, with regard to the estimation of the cash flows, it is noticeable the return of close values, regardless of whether we consider an annual periodicity or a fractional one by semesters, quarters or months.

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