### LAND'S VALUATION. CASE STUDY

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Abstract: Valuation of urban or outside town land is governed by ANEVAR law (methodological guide for valuing land GME1 realized and recognized in the entire world). Indicated methodology is agreed with international valuation standards (EVS) published by International Valuation Standards Council (IVSC). Valuation methods of vacant land, occupied by facilities or constructions are: CMA extraction market allocation, technical residual capitalization current rent / lease land (rent) and cash flow analysis updated (analysis plotting and development). The methods listed are derivation of traditional methods of approach to real estate (market, income and cost). The case study in this paper comply evaluation guide showing all the steps specified by international standards agreed by ANEVAR.

**Keywords:** land's market value, valuation methods, direct comparison

#### 1. Introduction

Evaluation of urban or outside town land is governed by ANEVAR law (methodological guide for valuing land GME1 realized and recognized in the entire world). Indicated methodology is agreed with international valuation standards (EVS) published by International Valuation Standards Council (IVSC).

**ANEVAR** approved methods for valuing land are the following:

**Direct comparison** is used to assess land available or considered to be free for evaluation purposes. The market value of the land is obtained from evidence of market trading price of some land similar or market value may be obtained from the analysis of market prices of land free comparable in the same area market were traded at a date close to the valuation date (IVS 2011).

Stages for evaluation using the direct comparison method of applying are:

- A. collecting information from the market area of land subject about recent sales or the sale offers and purchase requests for similar land;
  - B. checking the reliability and objectivity of the collected information:
  - C. selecting comparison unit used by market participants (cost/ha or m<sup>2</sup>);
- D. identification of differences in land characteristics comparable to those of land selected and subject;
- E. correction in land prices comparable to reflect differences between characteristics of the terrain and subject. The corrections can be applied on the total price of comparable land on their unit prices or both.

**Extraction method** of marketing is to determine land value free as a figure remaining after the current price sale of the entire property (land plus construction) was low net replacement cost of buildings and establishments (IVS 2011).

Allocation method is based on the principle of balance and the contribution.

according to which there is an acceptable percentage ratio between land value and the value of the whole property, specific to different categories of properties.

**Residual technique** (the technique of direct capitalization of net operating income allocated land) is recorded in the income approach and is used when the income stream is generated by construction and land.

**Direct capitalization of rent** / land lease (rent) applies where the income is obtained from assignment of the right to use the land in return for rents / leases or rents. It is applicable for land with agricultural use assessment and evaluation of leased land .

Analysis of discounted cash flow (analysis plotting and development) consists of placing evaluator in position hypothetical a developer of an undeveloped land, considering that the improvements designed is the most likely land use (IVS, 2011; Real Estate Property Edition 13th ANEVAR 2012).

### 2. Case study

Theme of study: Valuing a land of 6170.97 square meters, located in Jassy, str. Gral Toma Dumitrescu no. 4, meaning the land of Vânătorul restaurant, in Exposition Park at two dates (2 reports - on 27.05.2004 and the present) at market value in order to determine the proper contribution to capital, asked by AVAS.

## 2.1. Area description

Real property appraised land is located in the middle area of the Jassy municipality, in a mixed area with shops, schools, single-family homes, free land. In the area of real property is valuing Vânătorul Restaurant situated in Exhibition Park near Botanical Garden and Copou Park (fig.1, 2).



Fig. 1. Land's Map



Fig. 2. Terrain View

Municipal facilities and existing services in the area are urban networks (electricity, water-sewage, gas, phone, internet and TV cable). Characteristics of the area reflects positively on real property being valued land.

### 2.2. Site description

- Land use category evaluated: construction yard;
- Location: the median municipality of Jassy, str. Gral Toma Dumitrescu no. 4, county of Jassy;
- Zone type: the location of the property is occupied mainly with commercial, educational institutions, single-family homes, free land;
- Information about title to the property: the land belongs evaluated with full ownership;
- Physical features of the site: land size: 6170.97 square meters; configuration of the land regular shape in plan;
  - Topography: flat slope full;
  - Access to land: the site has access to paved auto road, str. Gral Toma Dumitrescu.

### 2.3. Market data area, city, neighbourhood and location

Jassy is situated in the eastern part of Moldova, Moldavian Plain. By extending its legendary surname "Town of the Seven Hills": Citadel, Galata, Copou, Bucium-Păun, Sorogari fast and Breazu, with altitudes ranging between 40 m and 400 m Bahlui Meadow, Păun and Repedea Hill. The main hills are Copou fortress, Tătărași and Galata. The city is crossed by the river Bahlui and creek Nicolina Sorogari (called the Middle Ages Cacaina because here throwing garbage); east of town, Ciric river, which are created three artificial lakes for recreational purposes.

Accessibility is assured by National Road DN28 (from Roman) and DN24 (from Vaslui), Railway, Airport.

According to the census of 2011, Jassy count 263.410 inhabitants and was thus the fourth largest city in Romania. Jassy Metropolitan Area, which includes 13 neighbouring localities, had a population of approximately 400,000 inhabitants.

City of Jassy is an important economic centre of Romania. Main industries are metallurgy (SC ArcelorMittal Tubular Products, S.C. Techno Steel), medications (SC Antibiotice S.A.), textiles (SC IasiConf S.A., SC Iasitex S.A.) and the food industry. Banking and information sector have boomed in recent years, many banks and software companies are present in the city. Also, the city is an important regional shopping center, here there are many shopping centres (Iulius Mall, Moldova Mall, Palas, Felicia Shopping Center, Era Shopping Center, Central Hall, Axis, Niciman etc.) and more hyper and supermarkets (Metro, Selgros, Carrefour, Kaufland, Auchan, Billa, Lidl, Praktiker, Dedeman, Arabesque, Baumax, Mobexpert, Mr. Bricolage). Other projects are in progress (Maximall, Green Plaza Iasi, etc.).

After 1989 and the events since then, all companies that made up the Industrial Area have been declining - Nicolina, CUG, Terom, Tepro - and there were no other industries to replace. This has created problems of unemployment, low income people, families with overdue maintenance and a large number of retirees.

These issues have helped the city to fall behind the cost of public services is high and investment effort to be even bigger for us today. Jassy is a university town and is the second centre in the country undergraduate. This means that schools and high schools kids come here not only in the city or in the county, but throughout Moldova.

Unemployment in Jassy is constant in recent months. At the end of April 2014, was recorded an unemployment rate of 5.16%. According to data provided by the County Agency for Employment (CEA) was recorded a total of 15 262 people without a job. Another big social issue, but has a big economic number of pensioners is increasing relative to the number of employees. This trend is visible at the national level, not only in Jassy and this leads to extreme pressure to ensure budgeting salaries. The structure of the large age groups reveals a relevant decrease in the young population (0-14 years) in urban areas, an increasing trend of the adult population (15-59 years) and a slight increase in the elderly population (60 years and over) on the entire area of the city. In the future it predicts a decline in the young population and the demographic and economic effects of this development will be felt in time and changes will result in various under-populations (the school population, the population of childbearing age, the elderly).

In the past 10 years housing fund has increased in the city due to hundreds of millions of Euro invested in real estate large projects (Green Park, Panoramic, Palas, Copou Bellevue, Dream Village, etc.), projects they have changed and that will radically change the city's architecture.

The area where the property is located is an area mainly assessed residential real estate, with schools, hospitals, medical canters, police, shops, the institutions of worship.

Rents in the area is above the national average due to the students, we deduce that period when rents are falling, i.e. summer holidays. In the case of single-family homes with one or two rooms, the price paid by tenants starts from  $300 \, \text{Euro} / \text{month}$ , up to  $350 \, \text{Euro} / \text{month}$  for commercial spaces on the ground floor of block of flats.

The value of newly built commercial properties in the area is high, given the commercial venue, the abundance of parks and green spaces, tranquillity and clean air, unpolluted. The customer base of this market are people with high incomes who have senior positions or jobs rated in terms of financial or middle-income people who can call on a mortgage or own businesses. Like most real estate market, the specifically analysed area has experienced a strong boom since years 2002-2004, reaching a peak in 2008. Currently, due to the post crisis situation, strong real estate market is in decline, the buyer becoming more

cautious and more demanding and can express market as one of the buyer, the seller was forced to accept a lower price. Demand for real estate is similar medium, because of the economic situation generated by the economic crisis but also by the housing market downturn.

# 2.4. Market activity

The level of activity in any market will fluctuate. While it may be possible to identify a normal level of market activity over a long period of time, in many markets there will be periods in which the activity is significantly more intense or lower compared to the normal level.

When demand is greater than supply, expect prices to rise, thus tending to attract more market entry sellers and therefore an increase in market activity. The opposite is the case when demand is low and prices fall. However, different levels of activity are rather a response to price movement than a cause of it. Transactions can take place and take place in markets which, currently, are less active than normal and what is important, prospective buyers will have in mind a price they are willing to enter the market.

## 2.5. Market participants

References in EVS, the market participants are made to all persons, companies or other entities that are involved in current transactions or intending to enter into a transaction with a specific type of asset. The decision to sell any views attributed to market participants are those specific buyers and sellers and potential buyers and sellers active on a market on the valuation date and not those specific to certain entities its people.

#### 2.6. Calculation

The calculation itself is carried and is considering tabular comparison of similar lands in the real estate market (direct comparisons method) and is shown in Table 1. Corrections were applied to the notification of the lands favourable or unfavourably differences compared in the criterion analysed.

Table 1. Estimated value using direct comparisons method

| Elements of comparison |                                    | Real property assessed   | Estimated value using direct comparisons method |                         |                                    |
|------------------------|------------------------------------|--|---|-------------------------|------------------------------------|
|                        |                                    |  | Real property 1                                 | Real property 2         | Real property 3                    |
|                        | Location                           | Jassy, str. G-ral<br>Toma Dumitrescu,<br>nr. 4, la restaurant<br>Vanatorul,<br>Exposition Park | Jassy, Sadoveanu<br>Alley                       | Jassy, Aurora<br>Street | Jassy, Frederic<br>Street, Plateau |
| 1                      | Price offered by real estate (EUR) |  | 20.00   | 65.00                   | 50.00                              |
| 2                      | Usable area ( m <sup>2</sup> )     | 6,170.97   | 4,000.00  | 1,000.00                | 500.00                             |
| 3                      | Туре                               |  | offer   | offer                   | offer                              |

| Correction %                            |   | -5%   | -5%  | -5%                          |  |  |
|---|---|---|--|------------------------------|--|--|
| Price adjusted to area (EUR)            |   | 19.00   | 61.75  | 47.50                        |  |  |
|   |   |   |  |                              |  |  |
| Localisation                            | Jassy City  | Jassy City  | Jassy City   | Jassy City                   |  |  |
| Correction                              |   | 30%   | -10%   | -5%                          |  |  |
| Corrected Price                         |   | 24.70   | 55.58  | 45.13                        |  |  |
| Physical<br>Characteristics             |   |   |  |                              |  |  |
| Surface                                 | 6,170.97  | 4,000.00  | 1,000.00   | 500.00                       |  |  |
| Correction                              |   | 0%  | -10%   | -10%                         |  |  |
| Topography                              | gentle slope,<br>plan   | Slope, plan   | plan   | plan                         |  |  |
| Correction                              |   | 20%   | 0%   | 0%                           |  |  |
| Corrected Price                         |   | 29.64   | 50.02  | 40.61                        |  |  |
| Opening                                 | Paved road  | causeway  | Paved road   | Paved road                   |  |  |
| Correction                              |   | 10%   | 0%   | 0%                           |  |  |
| Corrected Price                         |   | 32.60   | 50.02  | 40.61                        |  |  |
|   |   |   |  |                              |  |  |
| orrection total net % sale value        |   | 63%   | -23%   | -19%                         |  |  |
| tal gross correction % sale value       |   | 73%   | 23%  | 19%                          |  |  |
| The market value adopted/m <sup>2</sup> | It was choose comparable C  |   | 40.61  |                              |  |  |
| Est                                     | imated market value   | 250.619 €   |  |                              |  |  |
| 11                                      | Euro BNR = 4.5 lei  | 1,127,786 lei   |  |                              |  |  |
| l                                       | Price adjusted to area (EUR)  Localisation Correction Corrected Price Physical Characteristics Surface Correction Topography Correction Corrected Price Opening Correction Corrected Price orrection total net % sale value al gross correction % sale value The market value adopted/m² Esti | Price adjusted to area (EUR)  Localisation Jassy City  Correction  Corrected Price  Physical Characteristics  Surface 6,170.97  Correction  Topography gentle slope, plan  Corrected Price  Opening Paved road  Correction  Corrected Price  Orrection  Corrected Price  Orrection  Corrected Price  Opening Paved road  Correction  Corrected Price  Orrection total net % sale value  all gross correction % sale value The market value  It was choose | Price adjusted to area (EUR)  Localisation Jassy City Jassy City Correction 30% Corrected Price 24.70  Physical Characteristics  Surface 6,170.97 4,000.00  Correction 70% Correction Correction 20% Corrected Price 29.64 Opening Paved road Correction 10% Corrected Price 32.60  Corrected Price 32.60  Provertion total net % sale value al gross correction % sale value The market value adopted/m² Estimated market value  Estimated market value | Price adjusted to area (EUR) |  |  |

### 3. Conclusions

Direct Comparison Method assume some possibilities or situations, after case, by example, negotiation within the limits of 5-10% of the price, location of compared land to similar conditions do not reflect exactly the site or facilities of any kind.

Addressing land evaluation is performed most correctly using the market value (price) approach.

# 4. References

- 1. \*\*\* Ghid ANEVAR GEV 500 (SEV 100-103, SEV 230, SEV 310, GME 630);
- 2. \*\*\* Cod Fiscal 2015.