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LICITATION SPREAD, INTERPOLATING THE CALCULATION

Abstract. The licitation spread is calculated to determine the market price for negotiation. It is beneficial in the case of selling real estate. Theoretically, we use an interpolation method. This method looks for the value of a property to find an approximate value at some interval. It can be used if the function values at specific interval points are either given in a table or obtained by measurement.

The Occam's razor principle states that a more straightforward explanation is more likely and simplifies problem-solving access and speed. To calculate the property's price, we will use a cost method; this method is based on the costs for acquiring the item or property. A revenue method is based on the actual return per year on the property to determine the value. Finally, we apply a comparison method based on comparing the valuation subject with the same or similar character.

After the calculations and analysis have been carried out, we will reach the licitation spread where the value of the valued assets is located.

Keywords: licitation spread, property price, cost method, yield method, comparison method.

Formulation of the problem.. The licitation spread is calculated to determine the market price for negotiation. It is beneficial in the case of selling real estate. Theoretically, we use an interpolation method. This method looks for the value of a property to find an approximate value at some interval. It can be used if the function values at specific interval points are either given in a table or obtained by measurement.

If we want to set the price of a property, we must examine the problem from the point of view of:

- History,
- Law,
- Philosophy,
- Political science,
- Sociology,
- Psychology,
- Economy.

In the following text, we will use the method of economic analysis and the

historical method. [6] There are several ways to obtain an interpolation interval.

Analysis of recent research and publications. Research problematics of the licitation spread, in an interdisciplinary dimension, engaged in many domestic and international experts.

Purpose of the article: explore the features of the licitation spread.

The empirical method is based on an immediate, vivid experience of reality. Therefore, it is a method by which it is possible to determine an object or phenomenon's specific unique characteristics. Usually, this method is divided into subgroups according to the way they are implemented. Commonly used are:

- Observation,
- Measurement,
- Experimentation.

Scientific research can be conducted by Kolb experimental cycle. [3]

The deduction method begins with the formulation of theoretical knowledge obtained mostly by studying abstract systems, and through their testing, new knowledge and experience are gained.

The Induction method is based on this experience. Its repeated observation (measurement) will lead to the formulation of general concepts, theories, and generalizations that explain past experiences and predict the system's future behavior.

Induction and deduction are used sequentially. [2] We begin with the question: "Why is something happening this way?" and induction leads us to a preliminary hypothesis. This hypothesis is accepted when it sufficiently satisfactorily explains the fact we are asking. By deduction, we then test this hypothesis as to whether it has general validity. Schematically, we can see it in Figure 1. [4]

Fig. 1. Kolb's experimental cycle

Occam's razor rule, i.e., a more straightforward explanation, is more likely to simplify problem-solving access and speed. When setting up analyses, you need to focus on factors that are important and dominant for decision-making.

Chart 1 The Gauss distribution

The known Gauss distribution is the distribution of specific quantities into **quartiles**, which divide the statistical set into quarters of 25 % in the horizontal axis. Even if we do not consider outside quartiles and only consider the central quartile, our hypotheses' accuracy will be within 68% probability. We can also apply this perspective to the property price and thus the licitation spread. [5]

A. Valuation methods

1. The usual (regular) price – is the price that would have been achieved in the sale of the same or similar assets or the provision of the same or similar service in the ordinary course of trade in the Czech Republic at the date of valuation. All circumstances affecting the price are considered. Still, we do not consider the market's extraordinary events, the seller or buyer's personal circumstances, or the sentimental value are not reflected. Extraordinary market circumstances mean, for example, the state of emergency of the seller or buyer, the consequences of natural or another calamity. Personal circumstances are property, family, or other personal relationships between the seller and the buyer. Special (sentimental) value means the influence of a bond between the seller with the tangible property or service. *The usual price expresses the value of the thing and is determined by comparison.*

2. Extraordinary price means the price to which the market's extraordinary circumstances, the seller or buyer's circumstances, or the influence of sentimental value were reflected.

3. Price determined (by price regulation)

The price determined by applicable regulations in the Czech Republic, under Act No. 151/1997 Coll., on assets' valuation. [7] It shall apply where the competent authority provides within the framework of its authorization or if parties to a contract agreed.

- a) **The cost method** is based on the costs to acquire the valuation item at the place of valuation and according to its condition at the valuation date.
- b) **A revenue method** calculates the yield's value generally obtained from the valuation's subject-matter under the given conditions.

- c) **a comparative method** is based on a comparison of the subject-matter of the valuation with the same or similar object, and the price agreed at the time of its sale; it is also the valuation of the item by deriving from the price of another functionally related item,
- d) **nominal value** – is based on the stated or known price of the object of the valuation.
- e) **Book value** — is based on valuation methods established based on accounting rules.
- f) **Exchange rate value** – is based on the price recorded in the specified period on the regulated market.

4. The price agreed, the parties to the transaction have the freedom to negotiate prices unless the legal or price regulations provide otherwise. The price agreed for the transaction means an objective fact which expresses the consideration agreed upon by the parties for the assets transferred. [1]

B. HYPOTHETICAL INFORMATION ABOUT REAL ESTATE

To create the licitation spread and calculate from the abstract data, we need to specify and indicate the real method of calculating and determining its value. We will use actual values. For example, we will choose a hypothetical usual family house, which is in Prague.

B.1 *Localization of the property*

The hypothetical property we will be exploring is located 4 km west of Prague's center as the crow flies. We consider an imaginary family house with a convenient location. Ruzyně Airport is 9 kilometers by car. The Břevnov Monastery is about 250 m through the main road leading to the airport as the crow flies, on foot, it is about 600 m. Prague Castle is 4 kilometers on foot. There are two metro stations, Motol station, and Petřiny station, at about two kilometers on foot.

B.2 *Description of the property*

We assume that the construction of the family house was completed sometime around 1930. The most critical structural elements are original, so the end-of-life span of the building is approaching. The concrete foundations are cracking. The wall is soaked, moldy. The family home lacks drainage and proper insulation against water. Cracks appear in the structures, but on the first look, the house seems flawless. Compared to the surrounding houses, it has a nice outside façade. However, inside the damp, mold, and insufficient insulation. In the family house, there are two apartment units. The usable area is **262 m²**, the total built-up cubicle of the family house is 994.63 m³. Suppose that the building envelope area is 460 m².

The building's energy performance is 352 MWh/year and is classified in category E (as wasteful). The building does not comply with Act No. 406/2000 Coll., on Energy Management. [9] The brick perimeter walls are 45 cm in width; from the original relief of the façade, I deduce that there is no insulation. Despite the gas heating, it is necessary to heat the rooms in the second store by direct

heating in winter. According to the audit, the exterior walls and windows are to be dealt with. The state of the internal wiring is not known. There is an increased cost of energy consumption.

CALCULATION OF THE PRICE OF REAL ESTATE

The valuation of the property is carried out under Act No. 151/1997 Coll. on the Valuation of Assets and by Decree of the Ministry of Finance No. 441/2013 Coll., on the implementation of the Valuation Act (hereinafter referred to as the "OV") [8] considering the suitable correction of the author, who makes estimates of real estate according to this Decree as stated in his trade license.

B.3 *Determining the price of a family house by cost*

Cost method – based on the costs that would have to be incurred to re-acquire the subject of the valuation at a given place and time of valuation or to replace it with an object of equal usable value under its condition. Existing wear and tear and impairment of assets, i.e., cost (time) price / in-kind price = replacement (new) price – wear and tear, is deducted from the costs of re-purchase (reproduction) or replacement of the property. The cost method provides a reliable indicator of the value of assets in a stabilized economic environment. The cost of acquiring an asset corresponds to the revenues that the asset can produce. The in-kind value of the real estate is determined by calculation using indicators per unit of measure. Indicators determine the average cost per unit of measure (built-in space). This amount is adjusted using coefficients that consider the differences between the valued property and the average sample. Furthermore, an amount equal to the amount of wear and tear of the property under-assessed is deducted.

The methodology is based on technical and economic indicators. This way, we can determine the value of buildings. It is necessary to add the land and accessories' value based on the building land's average prices in the locality to the previously calculated value. The usual price is derived by comparison from the comparable prices available. The value of the land is added to the price of the construction and accessories. The value of the real estate is the sum of the values of individual properties. The distribution and quantity of the built-up space can be seen from the project documentation. The property is not in satisfactory technical condition. Wear is estimated at a rate of about 50%. The building's age is 90-100 years, and some elements have their lifespan and will need to be replaced entirely.

The size of the built-up space is multiplied by the minimal price and subsequently adjusted and corresponding coefficients (these coefficients reflect the technical parameters of buildings, the location of buildings, but also, e.g., moral wear). Furthermore, a write-down due to technical wear is applied. To the resulting value for constructing buildings, the appraiser's value adds the estimated value of other accessories of buildings and land.

The real estate also includes the land under the building. Buildings partly cover the land; there are paved areas on other parts, and there is a small garden.

The determination of the price of land already built up in a stabilized location is based on price maps of land, which is CZK 12700/m². It could also be found on

the indexation method and the share of the land value in the value of the whole property. This method is used on a larger scale when we do not know the land price and know the value of the building, but here it is the opposite, we see the price of the land, and we calculate the family house price.

Valuation according to § 10 OV – Valuation of the building in a cost-effective manner

$$CS = CS_N \times pp$$

CS = price of the building

CS_N = cost (price) of the construction

pp = coefficient of the adjustment of the price by location and market

Valuation according to § 13 OV – Family house,

$$ZCU = ZC \times K_4 \times K_5 \times K_i$$

By Act No. 151/1997 Coll. on the Valuation of Assets, the ratio of individual structural elements to the property's price is given.

	Element		Status	Correction	Share
1	Concrete foundations	0,043	Under	0,46	0,02
2	Vertical construction of masonry 45 cm in width	0,243	Under	0,46	0,112
3	Ceilings	0,093	included	1	0,093
4	Roofing wooden truss	0,042	included	1	0,042
5	Roof coverings asphalt shingles	0,03	included	1	0,03
6	Tinsmith structures - zinc	0,007	included	1	0,007
7	Inner plaster	0,064	included	1	0,064
8	Façade plasters	0,033	included	1	0,033
9	Exterior tiles - ceramic	0,004	included	1	0,004
10	Interior tiles - ceramic	0,024	included	1	0,024
11	Stairs	0,039	included	1	0,039
12	Doors - doorframes, wooden doors	0,034	included	1	0,034
13	Wooden windows, caste	0,053	Under	0,46	0,024
14	Floors of living rooms	0,023	included	1	0,023
15	Other rooms	0,014	included	1	0,014
16	Heating - gas	0,042	included	1	0,042
17	Wiring	0,04	included	1	0,04
18	Lightning rod	0,005	Included	1	0,005
19	Water distribution	0,028	included	1	0,028

20	Hot water source	0,016	included	1	0,016
21	Gas installation	0,005	Included	1	0,005
22	Drain	0,029	Included	1	0,029
23	Kitchen equipment	0,005	Included	1	0,005
24	Inner hygienic equipment	0,05	Included	1	0,05
25	Toilet	0,004	Included	1	0,004
26	Other	0,03	NO	0	0
Total		1			0,787

Table 1 of construction and equipment.

ZC = base price in CZK per m³ of the built-up building space according to Annex No. 11 OV, according to Table 1 and Table 2

ZC = type D = 1,900, - CZK/m³

ZC = type C = 1,900, - CZK/m³

x coefficient from Table 2 = 1,075

ZC = 1,900 x 1,075 = 2,042.50 CZK

K₄ = coefficient of construction equipment according to Annex No 21, Table 3 of the OV

K₄ = 1 + (0.54 x n)

n = sum of the price shares of structures and equipment

K₄ = 0.787

K₅ = position coefficient according to Annex No 20 OV, table 1 item 1

K₅ = other statutory cities = 1.25

K_i = coefficient of change in construction prices according to Annex No 41 OV 1121 46.21.11.2

K_i = 2,250

	Zc	K ₄	K ₅	K _i	ZCU
Rd	2.042,50	0,787	1,25	2,250	4502,95

Table 2 of the ZCU

ZCU = CZK 4502.95/m³

Wear

According to § 30 OV Wear, a simplified modified linear method is determined according to Annex No. 21 OV.

For wear and tear purposes, the year of completion of 1930 is considered, so its age of the house is about 90 years. The expected lifespan for single-family houses is expected to be 100 years. Due to the repair of some elements, the lifespan is partially extended. On the contrary, the façade, although it looks preserved from the outside, will have to be made again due to the need for thermal insulation.

Wear of the house is determined by the linear method at 50%.

Wear of the house is 50%

$$K_{OP} = (100-70) / 100 = 0.5$$

$$CS = CS_N \times pp = CS_N \times I_T \times I_P$$

Market Index

- Annex No 3, Table 1 of the OV

$I_T = P_6 \times P_7 \times P_8 \times P_9 \times (1 + \sum p_i)$		
	Demand higher	0,06
	land in co-ownership	0
	changes in the surrounding area - without influence	0
	legal relations	
	without further influences, it is necessary to warm up	0,02
	Zone 1	1
	Importance of the municipality	1.2
	location of the municipality	1,15
	amenities of the municipality - complex	1
T		1,44

Position index - Annex No 3, Table 3 of the OV

$I_P = P_1 \times (1 + \sum p_i)$		
	residential, municipality over 2000 ob	1
	Predominant development - residential	,04
	Location in the village	,03
	Network connection option	
	Civic amenities	0
	Transport accessibility	0,01
	Public transport, Metro	0,03
	Bargain	0
	Population - trouble-free	0
	Unemployment - average	0
	Influences other - Prague capital	0,03
	Pi	0,14
I_P		1,14

Table No. 3 Calculation I_T

$$Kick = 0.3$$

$$I_T = 1.44$$

$$I_P = 1.14$$

Table No. 4 Calculation I_P

Calculation of price without wear new building $Kop = 1$

	ZCU	Kick	I_T	I_P	ZCU
Rd	4502,95	1	1,03	1,14	5287,36

Table 5 adjusted ZCU without wear

Price determined without wear = $CS \times m^3 = 5287.36 \times 994.63 = 5,258,970$, - CZK

	ZCU	Kick	I_T	I_P	ZCU
Rd	4502,95	0,5	1,03	1,14	2643,68

Table 6 of adjusted ZCU with wear and tear

Price found = $CS \times m^3 = 2643.68 \times 994.63 = 2,629,485$, - CZK

B.4 Determining the price of a family house by comparison

Comparison method (market comparison approach) – is based on comparing the subject of valuation with the same or similar items and the prices achieved during their sales. It may also be an appreciation of a thing by deriving from the price of another functionally related thing.

The comparison method is most used and usually preferred. It is quite accurate, and, in many cases, it is very close to the real estate's real value. This method is based on a comparison of valued real estate with a selected sample of real estate with similar parameters and is or has already been traded on the real estate market. When using this method, it is essential to select samples, which should approach the valued property by their parameters. The comparison is then based either on some well-identifiable and telling unit of measure (quantitative analysis), nor the property is assessed by qualitative research.

A method of comparing indirect with a group of similar selected real estate for which, using comparative coefficients and adjustments, the price is adjusted to the flat price and then recalculated to the valued property's price using the weighted average. As a comparison unit of measure, I have determined the area of the plot.

The valued properties consist of family houses with accessories and land. The real estate is valued. By comparison, it is assessed with comparable real estate from the surrounding municipalities. In this case, these are RD properties in the broader center of Prague.

The main price comparison coefficients include (a type of transaction, location, technical factors, economic factors, number of floors, use of real estate, non-real estate factors, legal relationships). As a specific comparison unit, the usable area that carries the value of the property is determined.

We need to summarize all available information about other properties sold with similar parameters in a similar location. There are several properties on offer in Prague in Prague's broader center, the offer price of which ranges from CZK 9-

16 million (different sizes). Since these are bid prices, these prices are reduced by 10-30 % due to the assumption of a price reduction during the price negotiations or the length of time for which the property is offered. In the direct sale, the price of the commission is withered to the real estate agency. However, this method has a disadvantage; it is difficult to know how much the property is sold.

The Ministry of Finance has more information about this matter. It would be advisable to include this information in the new version of the Decree of the Ministry of Finance No. 441/2013 Coll. on implementing the Valuation Act. The price increases with proximity to tourist and visitor sites. Residential areas near city centers are priced higher, thanks to prestige and proximity to full civic amenities and work opportunities. Another factor is whether the property is in the street part or is a corner building. Such property has a higher value than a terraced property or the one in a yard and atrium.

In the first table, we will quantitatively specify the property as much as possible to approach the real conditions for comparison. In the second table, we will deal with the property qualitatively.

Subject of award	Family house in question	1[11]	2[11]	3[11]	4[11]	5[11]
Site designation	Prague 6	Prague 6 Vokovice 1	Prague 6 Vokovice 2	Prague 6 Břevnov	Prague 6 - Řepy	Prague 6 Řepy
Transaction date	IV.20	II.19	IV.20	from 2/20	IV.20	from 12/20
Transaction type		Offer	Offer	Offer	Offer	Offer
Floor	2 + attic	1+attic	3+attic	2 + attic	2+attic	2+attic
Number of floors	basement	cellar	1	basement	1	basement
Construction:	Brick	Brick	Brick	Brick	Brick	Brick
Area of land:	406	380	380	379	150	361
Built-up area	95	87	99	120	99	206
Building + land		19 500 000	19 500 000	18 200 000	12 400 000	12 900 000
Correction per offer		10 %	10 %	10 %	10 %	10 %
With the cost of transactions		10 %	10 %		10 %	
Building + land (CZK)		15 600 000	15 600 000	16 380 000	9 920 000	11 610 000
Value of m ² of land (CZK)	12 700	12 700	12 700	12 700	12 700	12 700
Deduction of the value of the land	5 156 200	4 826 000	4 826 000	4 813 300	1 905 000	4 584 700
Price of construction		10 774 000	10 774 000	11 566 700	8 015 000	7 025 300
Number of units:	262	300	322	332	375	206
Price per unit		35 913	33 460	34 839	21 373	34 103

Table 7 correction of real estate

1. Attractiveness of the site	Excellent	Similar	Similar	Similar	Worse	Similar
relative adjustment		0 %	0 %	0 %	10 %	0 %
2. Transport accessibility	very good	Similar	Similar	Similar	Similar	Similar
relative adjustment		0 %	0 %	0 %	0 %	%
3. External part of the building	very good	Worse	Similar	Similar	Worse	Similar
relative adjustment		10 %	0 %	0 %	10 %	0 %
4. Interior part of the building and equipment	very good	Worse	Similar	Worse	Worse	Similar
relative adjustment		10 %	0 %	10 %	10 %	0 %
6. Infrastructure-network (electric, water)	yes/yes	yes/yes	yes/yes	yes/yes	yes/yes	yes/yes
relative adjustment		0 %	0 %	0 %	0 %	0 %
6. Infrastructure-networks (gas, sewer)	yes/yes	yes/yes	yes/yes	yes/yes	yes/yes	yes/yes
relative adjustment		0 %	0 %	0 %	0 %	0 %
7. Limited property rights	No	Similar	Similar	id 1/2	Similar	Similar
relative adjustment		20 %	0 %	10 %	30 %	0 %
price before correction		35913	33460	34839	21373	34103
Adjusted price per unit CZK / m²		28 730	33 460	27 871	14 961	34 103

Figure 1 Qualitative correction

Average utility area price per m²

$$PCUP = (28730 + 33460 + 27871 + 14961 + 34103) / 5 = \mathbf{27825 \text{ CZK / m}^2}$$

Pn	1	2	3	4	5
CZN	CZK 7,527,365	CZK 8,766,520	CZK 7,302,254	CZK 3,919,808	CZK 8,934,986
CSP	CZK 5,156,200	CZK 5,156,200	CZK 5,156,200	CZK 5,156,200	CZK 5,156,200
total price	CZK 12,683,565	CZK 13,922,720	CZK 12,458,454	CZK 9,076,008	CZK 14,091,186

Table No. 8 – Price of the property under sale recalculated from several offers

PN - Comparison property

PCZN - Recalculated the price of the property under question

CZP - Price of the land under survey

B.5 *Determining the price of a family house by yield method*

The return method (yield method) is based on the returns of the subject of the valuation achieved or the revenues that can usually be obtained from the subject of the valuation under the given conditions. These revenues are discounted or capitalized at the valuation date. The yield method is mainly used for commercial real estate rentals. The yield methodology considers the property's price by its profitability in its life cycle and thus its factual purpose for the owner. Investors and owners buy real estate for various purposes, including housing and relaxation, others for investment and business plans. The yield method's basis and inputs are the financially quantified values that the property brings to the owner/user. Other operands in the calculation are the costs that the operation and maintenance of the property entail. After the income and costs are calculated, we can calculate the property's net monthly/annual yield. We will then transfer this one using the capitalization rate and find out the property's price by using the yield methodology. The capitalization rate considers inflationary effects, opportunity investment opportunities, risk levels, and other economic indicators that affect the capitalization rate's upward or downward size.

The calculation of the yield value of the property is based on the rental income of the property. In our case, it is used as a residential building for renting residential space. For the calculation, the valuer used the usually achieved monthly rent, which depends mainly on the usable area, the condition of the property, lucrativeness, and location.

There are available areas with about 224 m² of space in the building, which we can consider for monthly rent. In the future, we assume rent of 223 - CZK/m². Today we set 135 CZK/m² in the calculation. Rent is considered at a lower level. The revenue rates are thus determined to correspond to the expected usual returns on the given location's real estate market.

Due to the site's technical condition, character, and lucrative nature, we estimate the potential risk of revenue shortfalls of 5-10% when rents increase. To calculate regular annual costs, the author estimates these costs. The capitalization rate is set by expert estimates considering inflationary effects, interest rates, the level of risk, and the property's characteristics, including its location in a variant between 4-6%.

Due to lower interest rates and low money prices, and the availability of finance in the financial market, these rates are currently at historic lows. Simultaneously, it is a building in a good location, where there is an assumption of a lower risk of investing in this property and a very low probability of loss of value. The real estate is not in good technical condition. For further and trouble-free rental, it is necessary to make significant construction modifications.

Replacement price	CZK 10,415,171		
		Existing	Potential
The monthly yield on rent under consideration.		30,506 CZK	50,000 CZK
Potential gross annual return on real estate		CZK 366,072	600,000 CZK
An estimate of rent shortfall %	10		60,000 CZK
Effective gross annual return		CZK 366,072	\$20,000
Property tax estimate		2,069 CZK	2,069 CZK
Real estate insurance estimate	3,500 CZK	3,500 CZK	3,500 CZK
Property management estimate		5,000 CZK	5,000 CZK
Operating costs estimate	5,000 CZK	5,000 CZK	5,000 CZK
Repair Fund	0,25 %	30,000 CZK	30,000 CZK
Net annual revenue		381 503 Kč	494 431 Kč
Determination of the capitalization rate %	4	CZK 9,537,575	CZK 12,360,775
	5	CZK 7,630,060	CZK 9,888,620
	6	CZK 6,358,383	CZK 8,240,517

Table No. 8 Yield method.

The price of the property using the yield method is CZK 9,619,322.

B.6 Land

Price map of land in Prague as of January 2, 2021[10] map sheet 44, parcel group 2560, the land price is set at CZK 12700/m².

The hypothetically determined area of land is 406 m² in total.

Land price = 406 x 12700 = 5.156.200, - CZK

C. CONCLUSION, THE LICITATION SPREAD PRICE ESTABLISHED

Property price is determined in several ways.

1	Land price determined from price map	CZK 5,156,200
2	Cost method without land for 80 years	CZK 2,629,486
3	Cost method of the new house without land	CZK 5,258,971
4	Cost method 80 years old house with land	CZK 7,785,686
5	Cost method new house with land	CZK 10,415,171
6	Average house price (by yield method)	CZK 9,002,655
7	4 % capitalization of existing rent	CZK 9,537,575

8	5 % of the capitalization of the existing rent	CZK 7,630,060
9	6 % of the capitalization of the existing rent	CZK 6,358,383
10	4% capitalization increased rent	CZK 12,360,775
11	5% capitalization increased rent	CZK 9,888,620
12	6% capitalization increased rent	CZK 8,240,517
13	Comparison pattern - house No.1	CZK 12,683,565
14	Comparison pattern - house No.2	CZK 13,922,720
15	Comparison pattern - house No.3	CZK 12,458,454
16	Comparison pattern - house No.4	CZK 9,076,008
17	Comparison pattern - house No.5	CZK 14,091,186
Average		CZK 10,054,099

Table 9 determination of the property's values in several ways

In the case of price determination, the author is inclined towards the resulting usual price of real estate, which oscillates around the average calculated value, which is the price of CZK 10,054,099.

The cost and revenue methods have similar valuation results. The comparison method has higher results.

The results suggest an older, lucrative location, but the construction requires considerable investment to meet the escalating energy requirements and greater demands on modern housing. The property is near the center of Prague, with good access to public transport.

The methods mentioned earlier (if there is sufficient data) are usually used to calculate and estimate the usual price, the comparison method being the primary method. Usually, the closest to the actual market value and, consequently, the achieved and realized sales prices. This method indicates the market environment and the specific supply of real estate the most. State methods tend to be controlled and, in most cases, draw certain constraints and price level limits. Simultaneously, if the deviations of the methods used are not too high, it is possible to lean towards the results of the comparison method. The shortcoming of this method is that real estate agencies sometimes overvalue real estate by more than 30%. You can watch how long the property is on offer. Overvaluation results from 10% of the real estate agent's commission, and they also have a 10-20% reserve for a discount. When a property is offered for more than two months, I will make a 10% price reduction.

Should the derogations be more significant, it is necessary to carry out a more in-depth analysis of such differences, involve several aspects of the survey, and determine the resulting market value with caution and appropriate, considering the results of other methods. When the property is older, it is necessary to lean towards the yield method and make a qualified estimate between the yield and comparison methods, considering the cost method's age and condition.

In some cases, the price of the older properties is determined only by the land price on the price map of Prague (Czech capital city). When older properties are unsatisfactory, the cost of demolishing the building goes into millions of CZK.

Considering the calculations and analyses carried out, I believe that the price level of the assets is in the approximate range: from CZK 8 million to CZK 14 million. This is called the licitation spread.

Licitation spread

Chart 1 Licitation spread

Conclusion. Since the author of the article had sufficient samples of a similar nature when using the comparison method, adequate safety coefficients were applied, at the same time, a comparable value is given by the yield method, it is possible to base the comparison value and the valuer will consider it as corresponding to the market value.

From the available materials from the past, there is an increase in the usual prices of real estate. Due to the significant boom in the market in recent years, there has been an increase in the real estate value in good locations in Prague by order of 5-15% per year. During the pandemic, residents rushed into real estate purchases. They want to ensure their savings, take advantage of low-interest rates, and save on the abolished transfer tax. The Czech Republic is thus experiencing the highest demand for mortgages in history. However, the Czech National Bank (CNB) comes with a warning that apartments and houses' prices are often overvalued by up to a quarter. And some banks also provide mortgages that clients cannot pay. The calculation reflects a 25% overpricing of the real estate market. It is also impossible to credibly determine how much the property was sold for. We can only correct it by a qualified estimate.

Therefore, we can state that the property's price is in the middle of the **licitation spread**.

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