
ECONOMICS OF ENTERPRISE

© SERGEY V. LYUBIMOV¹, ALEXEY V. DOLGIKH²

¹Dr. Econ. Sci., Professor, Head of Economics
and Property Evaluation Department, Institute for Economics, Management and Law
(Surgut branch), Tyumen State University

²Cand. Econ. Sci., Associate Professor, Economics and Property Evaluation Department,
Institute for Economics, Management and Law (Surgut branch), Tyumen State University

dolgihav@consalko.ru

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PROBLEMS OF IMPROVING INFORMATION PROVISION IN REAL ESTATE VALUATION ACTIVITY

SUMMARY. Development of the institution of property in the post-crisis period presupposes both harmonization and adaptation of methodological approaches and practical aspects in the national valuation activity to global standards. The major direction of reforms in the management of property and increasing their efficiency is the introduction of relative statistical methods in the practice of evaluation. This requires the establishment (on the basis of a systematic approach) of uniform and accurate information and legal framework on all real estate, designed to provide optimum conditions for economically reasonable taxation. The problems linked with the development of the information base and creation of a sequential algorithm are discussed in this article. Statistical Office of the variability in valuation processes based on the created information base accompanied by statistical records enables continuous monitoring and assessment of its adequacy and reliability. An example of calculating a capitalization factor for real estate located in Tyumen is provided in the article. This calculation reflects the market value assessment and can be used in the regional market for the objects belonging to different classes and segments of the real estate market.

KEY WORDS. Valuation activity, information provision, problems of development of the institute of valuation, statistical methods.

In the present situation with real estate in Russia the most significant problem is that Russian legislation is not finalized, vague, and inconsistent. Meanwhile, macroeconomic conditions are deteriorating in the developing economic crisis. Russia's joining the WTO involves adapting a giant block of international law and guarantees in real estate, approaches and methods of real estate valuation procedures

to domestic conditions. Implementation of the principles and methods of cost-effective management of variability in valuation processes, improving the quality of socio-economic development of the real estate market forecasts will help to overcome the negative trends. Regardless of the implemented approaches and methods of valuation, the required accuracy and reliability of the result valuations cannot be achieved without adequate market information.

This fact was frequently observed in the domestic literature on real estate valuation and in European and international standards [1], [2], [3]. Unlike Western valuers, who have access to information and analytical services, supplying them with the required information, Russian valuers are not provided with the information to the necessary extent. Only recently, the development of valuation for IFRS (International Financial Reporting Standards), estimation of collateral in lending and other assessment work began to create relatively civilized methods of activity in the market. This process is extremely difficult, as the market valuation is structured in such a way that its adequacy cannot be achieved without improving the system and, above all, without improving the transparency of information sources and the quality of services [4], [5].

The most important problem for further development of the institution of valuation is “closed” market sources of information that prevent, due to legal restrictions, the implementation of, for example, interval valuations into the practice of valuation. Having a variety of information sources, according to the requirements of the law in obtaining the value of a single result, assessors manipulate it, adapting to circumstances that affect the valuation process. This result, corresponding to the market price range, may be true, but at the same time have different meanings, depending on the purpose of valuation. Such information that defines the difference in value may have different interpretations, and, moreover, be the subject of litigation, which is what happens in practice.

Providing the necessary level of valuation quality and reliability of the information used in determining the value of an object is the primary objective of various systems of regulation and control of stochastic processes in valuation. Some strategies are currently being used to address these issues, such as: legal and regulatory issues; standardization, certification of valuation services, certification of valuers, systems of accreditation and certification of organizations; systems of education of valuers and accreditation of educational institutions.

However, the practice of examination of valuation reports in advisory councils, in public management and governance facilities, in the courts, as well as a heated discussion about the quality of valuation reports, their transparency, suggest that all of these systems do not fully provide solutions to these issues [6].

The structure and composition of the information security of valuation activity is largely determined by the objectives, types of assessed objects, methods of valuation, the place of each particular work in economic practice. Generalized information support for complex valuation activity is constructed based on the systematic character of these works, which is understood as classification of employed databases built on common principles. At the same time, the limited availability of individual clusters and classes of the real estate market in the region, its information “intransparency”,

in some cases, do not allow to identify the correctness of the use of market indicators, such as, for example, the capitalization factor.

The major problems here are the following: limited use of analogies, as a consequence – the manipulation of the value under the income approach; incorrect attribution to a market segment, as a consequence – the use of an incorrect indicator (not attributable to the segment of the market the assessed object really belongs to) of capitalization factor; incorrect accounting of the volume of occupancy and of costs associated with the operation of facilities. The above-mentioned issues are widespread, affecting the activity of both metropolitan and regional professionals of the valuation services market.

Thus, the fundamental problems of information provision development in the Russian Federation include:

- The lack of uniformity of approaches to the selection of information sources;
- The need to standardize terminology and valuation tools;
- The lack of a uniform system of classification of market objects;
- Closed and dispersed sources of information.

The need for taxonomy in assessment work is also related to the fact that, on the one hand, any valuation activity is largely individual concerning the composition of real estate objects, the specific problem being solved, and valuation techniques being implemented, and, on the other hand, all valuation work has a common base in the form of rules and standards for their performance, including uniform requirements for the information used. Regulation is necessary for the reason that the valuation activity is one of the tools for implementing the civil turnover of property rights and, therefore, arbitrary valuation procedures are not allowed. It means that a professional is to search for the “best solution”, considering both real characteristics of an assessed facility and standard rules of valuation.

Information provision of assessment activity can be divided into two interrelated levels:

- Information support of the whole complex of assessment work performed in the country;
- Information support of each individual valuation activity.

The task of making a common information base that meets the needs of many types of valuation activity requires organizing and ordering large numbers of objects of valuation, linking them to clusters of valuation methods.

As practice shows, valuers employ a variety of techniques and methods of valuation. There is a need to select and identify the correct and appropriate valuation methods by means of testing them to meet the quality requirements of the results. It is also sufficient to create rational and compact easy-to-use information support [7].

Solutions to the first set of issues can be found by means of the following sequential algorithm of steps:

Stage 1. Developing the criteria for uniform classification of real estate facilities. The absence of a unified view on the classification of real estate market facilities can lead to varying interpretations of calculated indicators.

Stage 2. Formation of a unified terminology for clear understanding and use of valuation procedure guidelines.

Stage 3. Defining a list of the studied parameters, data collection methods and the methods of their calculation. Along with this, each observed indicator is calculated individually for each market segment, for each class, according to the generated standard classification.

Stage 4. Organization of collection and systematization of information. Here the use of automated systems for data processing and interpretation is possible.

Stage 5. Approbation, approval and publishing of materials.

Solutions to the second set of issues is directly related to the formation of a unified database. A conceptual model of the all-Russian database (DB) provide information necessary for valuation activity:

— Organization of a user-friendly system of information resources for valuation activities, including international, national, regional and municipal bases, as well as due to the formation of databases;

— Valuation techniques in the model structure with reference to objects of valuation and solved valuation tasks.

Positive factors derived from the sale and implementation of a uniform database could be the formation of:

— Indices and regulatory factors used in making decisions based on valuation results, with reference to the objects of valuation and current valuation tasks;

— Laws and regulations on valuation activities with reference to specific sections of objects and current valuation tasks.

The present stage observes increased requirements to the infrastructural support of regulating land and property relations, which includes maintenance of the state land cadastre, unified real estate cadastre, monitoring of lands, their valuation, technical inventory and registration of real estate facilities, territorial and household infrastructure, land surveying, transition from one category into another, etc. All of these control mechanisms of land and property relations require improvement, particularly with regard to establishing an effective system of taxation, excluding diversity in establishing the tax base for real estate facilities.

World tax law pays great attention to the concept of “market value”. The criteria for the recognition of the market value for tax purposes in transactions between related affiliates, as well as value adjustments were developed (the limits of transaction price diversion from market prices for more than 20% were established). It should be considered that the Russian system of cost accounting for accounting purposes, tax and investment do not coincide [8], [9].

In this regard, in improving the information base of cadastral/inventory accounting for different segments of real estate market, it is necessary to apply adequate mathematical tools to probable market processes. Developed competitive companies whose business is related to the management of mass processes widely employ Shuhert’s checklists [10]. Statistical Process Control is the tool designed to provide continuous monitoring and diagnostics of any business processes, including adequacy checks of inventory valuation.

In the context of improving the information security of valuation activities, the suggested approach can ensure its effective management. As an example of the imperfection of the applied approaches and indicators calculated using indirect (non-market) methods one can mention empirical calculations of the market capitalization factor employing the method of market extraction for real estate facilities in the Tyumen region.

When calculating the following data were used. We adopted an average figure of 12% of the actual gross income in the data range of 10-15% of the total rent for facilities, including operating costs in rent. We took a figure in the range of 8-10% of the DVD for facilities, partially including operating expenses (for example, excluding electricity, telephone, and the Internet), on the grounds that these costs in total operating expenses have a share of 2-5% depending on the conditions of operation. Such data were presented as the results of a research conducted by «Colliers International» consulting company [11].

After calculating the capitalization factors for analogy objects, the average, the weighted average, a median were calculated. An average index of these data will fully reflect the actual capitalization factor in each segment of the market, due to the fact that there will be a slight difference between the maximum and minimum values. To determine the representativeness of the sample total, as well as the reliability of the acquired values, standard deviation and error were calculated [10], [12].

Estimation of the variance and standard deviation of a random figure in the sample is calculated according to the formulas:

$$D = \sum \frac{(C_i - \bar{C})^2}{(N - 1)}, S = \sqrt{D}$$

where C_i is characteristic value of a set of objects,

\bar{C} is average value in the aggregate,

N is sample volume,

S is standard deviation.

Estimation of the error in determining the index value according to a representative sample of its random variables is always calculated with an error, the value of which depends on two factors: their own range of values in the sample and the sample volume. If the range is measured by the value of the standard deviation S , then an approximate estimation of the error in the determination of the average sample is equal to 0.95:

$$\delta = \pm(2S/\sqrt{(N - 1)})$$

The standard deviation indicator enables clearing the sampling total from “pop-up” values, the use of which may distort the results. Thus, we excluded the extreme values that are below the minimum / maximum values, meanwhile, the number of pairs of objects used in the calculation remained in the required amount for the representativeness of the sample total (the amount of remaining pairs is shown in Table 1).

Table 1

**Calculation of recommended capitalization factors by segments
and classes of total sample**

Facility type	The number of facilities in units	The average ratio, %	D of the total sample	The minimum value, %	Weighted average value, %	Median, %	Maximum value, %	Error, %	Probable range of capitalization ratio, %	Recommended value, %
Office space in residential buildings	51	8.3	1.52	5.25	8.07	8.3	11.69	5.3%	7-9.74	8.22
Retail space in residential buildings	46	8.31	1.64	5.25	8	8.19	11.69	5.8%	6.53-9.81	8.17
Office space in administrative buildings	17	7.97	1.27	6.43	8.43	7.59	11.18	8.3%	6.73-9.27	8
Retail space in administrative buildings	11	8.29	0.94	7.26	8.64	7.91	9.71	8.0%	7.34-9.22	8.28
Detached buildings	17	8.26	1.52	5.98	7.58	7.62	11.38	9.8%	6.3-9.34	7.82
Administrative buildings	1	6.78	-	6.78		6.78	6.78	-	-	-
Office spaces in office buildings of A class	-	-	-	-		-	-	-	-	-
Office spaces in office buildings of B+ class	-	-	-	-		-	-	-	-	-
Office spaces in office buildings of B class	15	7.78	1.24	6.44	7.56	7.42	11.15	8.9%	6.35-8.83	7.59
Office spaces in office buildings of C class	10	7.9	0.74	6.33	7.61	7.82	9.84	9.4%	7.04-8.52	7.78
Shopping centers	1	14.27	-	14.27		14.27	14.27	-	-	-

It is not possible to calculate the capitalization factor for all market segments, due to the lack of facilities offered for sale / lease. This can be applied to such segments as administrative buildings, premises in office centers of class A, B +, as well as for retail space in shopping centers and malls.

We managed to calculate the capitalization factor for the remaining market segments observing all the principles of calculation. Therefore, the proposed recommended value can be used when calculating the capitalization factor for the facilities located in the city of Tyumen.

In the absence of the possibility of calculating the capitalization factor for such market segments as administrative buildings, office spaces in office centers of A, B +

Class, shopping centers and shopping malls, the calculation of capitalization rate should be considered acceptable.

The calculations allow to test the technology of the capitalization factor calculation, compared to subjective methods of determining the capitalization rate. The proposed calculation procedure is close to market-based pricing and can be used in the regional market to determine the value of the objects belonging to different classes and segments of the real estate market.

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