

Valuation Bases and Accounting System Entries in Financial Analysis of the Municipal Real Property

Daniela Feschiyan¹, Stela Raleva²

Abstract: The paper introduces a conceptual framework for an accounting of the municipal real property, and defines a respective system of indicators. The development of this framework is seen as an important prerequisite for the efficient property management. It aims to overcome the lack or poor accessibility of the information, and thus to ensure the successful municipal real property management in a strategic context. The developing of the applied approach implies that accounting indicators are divided into three main groups – values, revenues, and costs. Beside the above mentioned classification, the municipal revenues and costs are classified also as existing and proposed. The existing indicators are defined by International Accounting Standards in public sector, and some of them are considered as being appropriate for the inclusion in the financial analysis as accounting system entries. The proposed indicators are perceived as appropriate to carry out a detailed analysis of the municipal property at a lower level of desegregations. The first two paragraphs explain the main bases for the municipal property valuation - historical cost, current price, market value, present value, with a special emphasis on the use of the historical value, and the types of valuation respectively. The next three paragraphs are concentrated mainly on the accounting indicators for the municipal property assessment. The sixth paragraph represents several major accounting bases - an accounting value, a carrying value, a market value, an accumulated depreciation, revenues from the sale of assets and services, costs by economic elements, revenues from future periods and costs for future periods, and revenues from other events and costs for other events. The seventh section presents a brief comparative analysis of accounting systems of 6 municipalities in South-Eastern Europe and the last paragraph highlights the identified “good practices”.

Keywords: valuation bases; accounting indicators; financial analysis; municipal real property

JEL Classification: M41; G0; H82

Introduction

¹ Associate Professor, PhD, University of National and World Economy, Bulgaria, Address: University of National and World Economy, Department of Accounting and Analysis, Sofia 1700, Bulgaria, Studentski grad, Corresponding author: d.feschiyan@gmail.com.

² University of National and World Economy, Bulgaria, Address: University of National and World Economy, Department of Accounting and Analysis, Sofia 1700, Bulgaria, Studentski grad, e-mail: stela.raleva@gmail.com.

Usually the municipalities do not pay sufficient attention to the usage and management of their real property. This fact can be explained by the lack of financing and political commitments as well as through putting more emphasis on administrative and social functions of the real estates, rather than on the economic criteria. At the same time the underestimation of the above issue has an adverse effect on municipal budgets, which in turn is associated with reduced quality of rendered public services. Hence, the solution of pointed out problems requires the development of the integrated Municipal real property (MRP) management system that incorporates MRP inventory, Geographical information system (GIS) and municipal accounting system. The aim of the accounting system is to provide reliable financial information concerning the performance of the municipal property. The availability of such information will contribute to the successful management of the municipal property in a strategic context, where setting the objectives and operational management of the real estate are closely related to its monitoring system, including the accounting system.

The paper introduces a conceptual framework for an accounting of the MRP. This conceptual framework is developed in accordance with the principles of International accounting standards (IAS) in the public sector and in the same time it takes into account the peculiarities of the municipal real estates. The paper presents also a brief comparative analysis of the existing accounting systems in 6 municipalities in South-Eastern Europe.¹

1. Valuation Bases

The *valuation tool* comprises three major components:

- a) The object or event to be subject to valuation;
- b) The formation of a qualitative and/or a quantitative evaluation of the object;
- c) The scale or the gauge through which this valuation is arrived at.

The object or the event in this case is the components comprising the property of enterprise and the operations and processes taking part in it. These are the accounting objects that are to be valued.

The formation of a qualitative or quantitative evaluation of the object is the process of determining its value. The scale or the gauges through which the valuation is determined in monetary terms represent the price measure. The evaluation is a

¹ This analysis is based on the information collected under the project “PROMISE: Municipal PROperty Management in South-Eastern Cities” funded by South East Europe Program of EC. See <http://www.promise-project.net/>.

gauge for measuring and presenting the objects of the price gauge. Through it the assets of the enterprise acquire monetary valuation.

According to the applicable accounting standards, valuation is a process of determining the monetary amounts by which the items of the financial statements in the balance sheet and the income statement are recognized and reported. This presupposes a choice of a specific basis of evaluation. The evaluation basis is the specific type of evaluation that is applied in the recognition of assets, equity capital, liabilities, revenues and expenditures. The *valuation bases* are as follows:

- Historical cost;
- Current price;
- Market value;
- Present value.

When *historical cost* is used as an evaluation basis, assets are recognized by the value of the money or the money equivalents paid for them, or by the real evaluation adopted upon their acquisition, while liabilities are recognized by the overall revenues collected in exchange for the liability, and, in some cases, by the sum which is expected to be paid in cash or cash equivalents in order to settle the debt in the normal course of business activity. According to the manner of acquisition or arising, the object that is to be reported at historical cost may be:

- Acquisition cost – it is applied to the evaluation of the assets acquired upon purchase. The acquisition cost includes the purchase price of the asset and all expenses on bringing it in an appropriate form to use, along with all refundable taxes, duties, and excise duties. For instance, if we acquire a machine, its purchase price will include the purchase /invoiced/ price, transportation costs, loading and discharge costs, and assembly costs. If the enterprise is registered under the Value Added Tax (VAT) Law, VAT is a refundable tax and is not included in the acquisition cost, but if it is not registered under the VAT Law, VAT is not a refundable tax and is included in the acquisition cost. The acquisition cost does not include costs on the training of the personnel that have used this asset. The acquisition cost of liabilities is the value of the acquired assets or the costs which have given rise to the liability.
- Prime cost – it is applied to the evaluation of assets which have been acquired as a result of the production activity of the enterprise. Prime cost is the set of the evaluations of the basic/direct/ production costs. These are the costs for consumables, external services, depreciation charges, salaries and social security contributions payable to the personnel engaged in the production of the product. This is the so-called shortened prime cost. The shortened prime cost does not include the administrative and the management's costs, sales costs, financial or extraordinary costs. When liabilities are assessed by prime cost, the valuation is the value of the liability which arises for the enterprise and which corresponds to the

arisen costs, such as the liabilities to the personnel on the occasion of the salaries or social security contributions, taxes, and so on.

- Fair value – it is by this value that donations or the surpluses established upon stock-taking are recognized, as well as the in-kind contributions of the founders /owners/. Fair value is the price at which an asset may be replaced or a debt settled in a direct transaction between knowledgeable buyer and seller, who are willing to effect the transaction. According to the applicable accounting standards, this may be the sale price, the commodity exchange price or the market price.

For instance, to date in Republic Bulgaria the assets are normally recognized when historical price is used as a valuation base. In some cases, however, other valuation bases apply.

In case *the current value* is used as a valuation base, assets are valued according to the sum total of money and money equivalents which would be paid if the same asset, or some other equivalent asset, is acquired at that moment. Liabilities are valued by the undiscounted cash or money equivalents, which would be needed to settle the debt. When *market value* is applied, the assets are evaluated by the sum total of money or money equivalents, which could be possibly received upon the normal sale of the asset, whereas liabilities are assessed according to the price of their settlement, that is, the undiscounted sums in cash or money equivalents which are expected to be paid to settle debts in the normal course of business activity. When *the present value* is applied, the assets are valued according to the present discounted value of future net cash inflows which are expected to be created in the specific line item in the normal course of business activity, whereas liabilities are reported by the present discounted value of future net cash flows which are expected to be needed to settle the debt in the normal course of business activity.

2. Types of Valuation

According to the moment of their application, valuations are current and periodic. *Current valuation* is applied in the acquisition of assets or the arising of liabilities. The base of current valuation which has been adopted in the national and international accounting standards is historical price.

Periodic valuations are applied at the end of certain periods of time. These are subsequent valuations of accounting objects. They are used to establish the real value of the property of the enterprise. Subsequent valuations are carried out in compliance with the applicable accounting standards. They are realized by marketable value. As we have already pointed out, in relation to assets, this is the money or money equivalents which could be received upon the asset's sale. In relation to liabilities, this is the sum total of money or money equivalents, which

would presumably be paid to settle the liabilities in the normal course of business activity.

Usually fixed assets are assessed upon their original acquisition by the purchase price from which the depreciation charges and the accumulated loss from devaluation are subtracted. This is the so called *Acquisition Price Model (APM)*. Such assets may be represented also by *the revaluation model*. The latest amendments in the IAS consider these two models as equal APM. However, the revaluation model is applicable if the asset's fair value could be reliably determined. If this condition is met, the enterprise may report the assets by revaluation value, which is the fair value at the date of revaluation, reduced by the subsequently charged depreciation charges and devaluation loss.

In connection with the periodical evaluation of assets /non-current and current/ it is necessary to define the following concepts (classes) of value:

3. Municipal Property Values

- Depreciation – the process of systemic distribution of the depreciable value of the asset within its assumed useful life;
- Depreciable value – the value of the assets subject to depreciation within its assumed useful life. It is defined as the difference between the accounting value of the asset and its residual value;
- Depreciation quota – the part of its depreciable value which is distributed among the separate accounting periods;
- Accounting value – the value by which the enterprise reports the asset in its accounting statements. This may be the historical price of acquisition at which the asset has been entered (or its revaluated price /if it has been valued after its original accounting recognition);
- Carrying value - the value by which an asset is represented in the balance sheet. This may be the acquisition price, production cost or the fair value at the asset's recognition minus the depreciation charges and the devaluation loss;
- Recoverable value – the higher value between the net sale value of an asset and its value in use;
- Net transactional value – it's an assumed sale price in the normal course of business, reduced by the needed costs for the completion of the production cycle and the costs necessary for carrying out the transaction. If the accounting value of materials (current assets) as of the date of the financial statement is higher than the net transactional value, then it is reduced to the net transactional value. The difference is recognized as cost from a subsequent valuation of assets;

- Loss from devaluation of an asset – the amount by which the asset’s carrying value exceeds its recoverable value;
- Residual value – the net amount that the enterprise expects to obtain for the asset upon the expiry of its useful life, after the expected costs related to its decommissioning are deducted.

4. Municipal Property Revenues

a) Existing indicators

The most important classification of revenues to meet the needs of financial and accounting analysis in the public sector falls into the following groups:

- Revenues from taxes and fees - this group of revenues has been included in the analysis since most of the properties in the public sector are financed through tax revenues;
- Revenues from the sale of assets and services, from participation and donations from abroad - this group of revenues includes revenues both from the sale of municipal property and from its acquisition by donation;
- Financial revenues - the group includes such revenues are the revenues which take the form of funding in foreign exchange for the acquisition of municipal property, from the revaluation of the currencies, and from the differences in the foreign exchange rates;
- Revenues from privatization and other financial operations, aid, transfers and transferred assets - for instance some of the revenues from the group are related to the transfer of property between the state and the municipalities;
- Revenues from transfers, donations and free funds - this group of revenues includes for example the donations of real estate to the municipality, made by the state and by internal and foreign persons;
- Revenues for future periods - this group of revenues contains prepaid rents for a usage of the municipal property and other types of prepayments received from the municipalities. They are formed with regard to the observance of the principle of comparability of revenues and expenditures. These are revenues obtained as cash flow during the current accounting period, but the expenditures for whose obtaining will arise over the next accounting periods;
- Revenues from other events (contingent revenues) – it includes revenues from shortfalls, liquidations and scrapping of the municipal property.

b) Proposed indicators

- Revenues connected with the object of analysis such as: rent by both preferential and market-oriented prices; rent received if the property could be utilized on the free real estate market (opportunity cost); rent saved (not paid) by the municipality due to the ownership (opportunity cost); leased payment; revenues from rent, paid by the tenants of land; revenues generated through the sales of goods and services; actual and potential revenues from the creation of the right of construction; revenues from granting concessions and from from the usage of technical infrastructure; income from dividends; fines and property penalties interest payable on outstanding debt; damages, etc.

5. Municipal Property Costs

a) *Existing indicators*

The most important classification of costs to meet the needs of financial and accounting analysis in the public sector falls into the following eight groups:

- Costs by economic elements - for instance, the costs for maintenance and repair of MRP;
- Accounting value of sold inventories, fixed assets, and property confiscated or acquired through mortgage - in case of sale of the municipal property, its carrying value is recognized as an expense included in this group;
- Financial costs - for instance, interests on leases, costs for other interests, costs for insurance, etc;
- Expenditures for pensions, social benefits, and compensations and subsidies - for example, this group contains costs as insurance expenses for workers, who repair the municipal administrative building;
- Capital expenditures – the group includes costs on the acquisition of assets, current repair and overhaul of the municipal property;
- Expenditures for provisions - such expenses are the costs for provisioning of receivables from MRP;
- Expenditures for future periods - the costs included are formed in connection with the observance of the principle of comparability of revenues and expenditures. These are expenditures covered during the current period whose effect will arise over the following accounting periods;
- Expenditures for other events (contingent expenditures) - they include written off costs for receivables, associated with the use of municipal property, the cost for shortages, as well as the costs for removal of the effects on MRP from fires, floods, etc.;

b) *Proposed indicators*

- Costs related to the object of analysis such as: costs for potential acquisition of MRP; transaction costs for the acquisition; costs for space configuration and for construction; costs for overhaul and reconstruction; costs for internal restructuring of premises and the change of their purpose; costs for repair of damage; costs for removal of fault/defect; rent paid; leased payment; payments on mortgage; expenses for insurance; expenses for security system and for guarding; expenses for information systems; expenses for salaries of MRP management; expenses for cleaning, sanitary and hygiene materials; expenses for electricity consumption; expenses for central heating; expenses for water supply; expenses for telephones and telecommunications; costs for internet; expenses for lifts, etc.

6. List of Accounting System Entries in the Financial Analysis

Among the above mentioned accounting bases for the analysis of the municipal property, the following indicators could be outlined as the most important ones:

- Accounting value;
- Accumulated depreciation;
- Carrying value;
- Market value;
- Revenues from the sale of assets and services, from participation and donations from abroad:
 - Revenues from rent (including revenues from the mantling of advertising facilities and information boards);
 - Revenues from sales;
 - Revenues from the creation of servitudes;
 - Revenues from dividends;
 - Revenues from concession fees;
 - Other revenues;
 - Revenues for future periods;
 - Revenues from other events (contingent revenues);
 - Costs by economic elements (expenses);
 - Costs on consumables;

- Costs on external services - expenses for security and information systems, for salaries of the MP management, for electricity consumption, for central heating, for water supply, etc.;
- Depreciation charges;
- Costs on salaries and related pay – expenses for salaries of the MRP management, for repairs, made by own workers, etc;
- Costs on social security contributions and other social benefits – expenses for social security contributions of the respective groups;
- Other costs - for instance, for business trips of MRP management;
 - Expenditures for future periods;
 - Expenditures for other events (contingent expenditures).

The selection of these entries is consistent with:

a) the requirements of international accounting standards in the public sector, which are applied or will be applied in most of the countries in South and East Europe;

b) the characteristics of existing accounting systems in the municipalities, analyzed both through information gathered from consultations with the representatives of the accountant departments of some cities from different countries in the region.

The proposed entries allow the construction of derived indicators in the financial analysis, that will be used to assess the effectiveness of the use of municipal property and thus to contribute to making successful management decisions in its management and disposal.

7. Comparative Analysis of the Accounting Systems of Some Municipalities in South-Eastern Europe

The analysis is based on the peculiarities of the existing accounting systems in six municipalities – Municipality of Athens, Municipality of Bucharest, Municipality of Sofia, Municipality of Zagreb, Municipality of Tirana and Municipality of Cajetina.

The data gathered show that all municipalities use “*double-entry*” accounting system as an obligation evolving from their national legislations. According to their national law in most of the countries this kind of accounting system is applied to all of the corporate firms and public institutions, as well as to non-corporate firms with an annual turnover above a certain minimum size.

The accounting systems provide information for the assets and liabilities of the municipalities, as well as for their revenues and expenditures, related to the owned real estate. In addition to the presented characteristics of the accounting system, municipalities demonstrate a close similarity between the contents of their financial statements. They usually contain four documents: the balance sheet, the income statement, the cash flow statement, and the equity statement. Along with the common components, the financial statement of the Municipality of Tirana comprises also annexes, which contain a presentation of the accounting methods used and other explanatory text. Just like the Municipality of Tirana, Municipality of Bucharest also includes annexes as additional components in their financial statements. The purpose of these annexes is to make the description of accounting policies and to give some explanatory notes.

All of the studied municipalities register the real properties by applying the *code system*. The code systems in these cities have been organized by using different ways of the construction of the codes and different levels of the municipal property disaggregation. The code system in different municipalities has been organized in accordance with the diverse modes of the code's composition. The account numbers used in Municipality of Athens, Municipality of Tirana and Municipality of Bucharest have been composed of a few numbers of digits for the base categories and some extensions for given subcategories. The rest three municipalities demonstrate some resemblances in the composition of their code systems. Municipality of Sofia, City of Zagreb, and Municipality of Cajetina compose only one-figure codes for the respective assets and do not use any extensions in the structure of their account numbers. In this case it cannot be interpreted as an indicator showing that there is no desegregation at all.

Municipality of Athens uses 7-digits code - the first four digits describe the main groups of revenues and expenses, whereas the rest three digits represent an extension. The extensions of the revenues refer to the locations of the real estates, while the extensions of the expenses concern the locations of the property or the subdivision of the base expenses. The reported data refer to aggregations, but not to the individual objects. Municipality of Tirana also utilizes up to 7-digit code for its expenditures. The difference with the municipality of Athens is that the first three digits refer to the major groups of expenditures, while the extension of up to four characters displays the relevant subgroups. As regards the assets, the code consists of up to 6 characters – three for the main types of real estates, and from one to three digits for the respective subcategories. The practice in Greece shows that there is a possibility of adding second or even third extension in the code, related to the lower level of disaggregation. This example gives also an idea for inserting costs for particular real estate as the last extension of the account number. Among the studied municipalities, the similar situation is observed in Bucharest, where the code of the assets comprises two extensions - each with two digits. It reflects the

classification and the normal functioning life of the fixed assets, as the second extension shows the division of the municipal property into two main groups – public-law and private-law real estates. What concerns the code of the revenues, an information given does not show an existence of any extensions.

The account numbers in Cajetina consist of 6 digits. The first three digits correspond to the class, category and group of the property, and the rest digits are for the respective subgroups. Zagreb's codes are composed of 5 digits. The first digit relates to the main types of the municipal property, while the next parts of the code refer to subcategories of the four different levels of disaggregation. Despite of the fact that City of Zagreb does not apply any extensions in its account numbers, its code system may be assessed as being the most complex one among six municipalities in terms of the levels of property subdivision. The real estate in Municipality of Sofia is recorded in the accounting system using 4-digit code. Its first two characters represent the group of the long-term assets as a whole, the third digit describes the major subgroups, and the fourth component is related to the classes of municipal property included.

Most of the municipalities, and especially Sofia Municipality, City of Zagreb, and Municipality of Bucharest pay a special attention to *the potential of MRP to get revenues*, if this property could be utilized on the free real estate market. Municipality of Bucharest and Sofia municipality underline the importance in this respect of the comparison between revenues, generated by property and the revenues, generated by similar properties on the free market. Both Sofia municipality and Municipality of Bucharest use another classification of the property - according to their different functions, which is considered as being important for MRP management.

The code systems, applied in the municipalities under consideration are open ones and provide possibilities for creating new codes for specific purposes. City of Zagreb has a possibility to monitor and to manage the usage of *the individual properties*, because each property has prescribed code which is added to the code of the synthetic accounts. Such a correspondence between aggregated information and individual data is typical also for Municipality of Cajetina. Both Municipality of Athens and Sofia municipality show the inability to monitor the incomes from and the costs for the individual objects or groups of municipal facilities on the level of municipalities as a whole. Like the above two municipalities, Municipality of Bucharest accounts only aggregated financial data and it doesn't do that for individual objects. A specific characteristic of Municipality of Athens is its disposal of information for revenues and expenses by the location of the objects. Data for individual objects in Athens is possessed by the MRP department, whereas in Sofia it is hold by the local districts.

From the management point of view municipalities may introduce additional *classification of the municipal property revenue* as it has been done by Sofia municipality. In accordance with the given above criterion its total revenues are parcelled out to: financial income (from the sale of financial assets); property income (from the sales of property and land); other income (revenue from the sale of goods and services and concession). The municipal property related revenues in Municipality of Bucharest are included in a group of incomes, called “non-fiscal incomes”. It is developed analytically, grounded on the budget classification structure, and comprises: incomes from property, and incomes from the sale of assets and services.

The largest part of the municipal revenues in Bucharest comes from rents, which forms over 60% of the total revenues. The second place is occupied by revenues from concessions of the land, whereas the rest real estate’s related revenues are of relatively low importance. Buildings are the most important type of real estate with a relative share of 62,2%, within which the dominant contribution is due to the non-amortizable buildings. In terms of municipality’s revenues from various kinds of MRP in Sofia, empirical data shows that the first place belongs to the right of built, followed by the rents, the sale of land, and the concessions. The leading position among the buildings holds the group of administration buildings, while the second place is occupied by the residential ones. Other important components of the balance sheet assets in terms of their values are long-life assets, withdrawn from use, and plots of lands and forests, while the relative shares of the engineering infrastructure objects and the linear objects are relatively low.

Costs of real estate in Sofia municipality are divided into the following major groups: costs of expropriation of property; operational costs for the managed buildings (overheads); maintenance costs (including running repairs); capital expenditures (including expenditures for major repairs of buildings and for a construction of new buildings); acquisition costs of land, buildings and construction right.

8. Identified “Good Practices”

The comparative analysis of the accounting systems for municipal property in the surveyed cities allows highlighting the following good practices;

- Recording municipal property by using a code system, which is usually an open one and which presents different levels of disaggregation;
- A valuation of the municipal property by utilizing as many valuation bases as possible;

- An application in the accounting system of a detailed structure of the municipal properties' values, costs and revenues, and a creation of different groups and subgroups;
- Monitoring and managing the usage of individual objects, and making correspondence between aggregated information and individual data;
- Provision of the governing bodies of the municipalities with information for the individual objects, that is supposed to be of much importance for the management decision making;
- Paying a special attention to the potential of the property to get revenues if this property could be utilized on the free real estate market;
- Separation and classification of the costs into as many categories as possible.

Conclusions

Efficient use and management of municipal property is possible only if there is a reliable and comprehensive accounting system for its reporting. Although currently existing accounting systems are not designed specifically to provide information to property management, they contain some opportunities for the realization of this goal. One of these opportunities may be related to finding ways for further disaggregation of accounting data to the individual property's level. This will enable establishing a close connection with a property inventory base as a prerequisite for a setting the property management in a strategic context. The next option concerns the application of the widest possible accounting bases for the assessment of the real estates, as well as to the specification and classification of both municipal revenues and costs into as many categories as possible.

References

- AICPA Special Committee on Financial Reporting (1994). *Improving Business Reporting*. American Institute of Certified Public Accountants.
- American Institute for Certified Public Accountants (1994). *Special Committee on Financial Reporting*. Improving Business Reporting.
- Bond, S. & Dent, P. (1998). Efficient management of Public Sector Assets: The Call for Correct Evaluation Criteria and Techniques. *Journal of Property Valuation & Investment*, 16(4), pp. 369-385.
- Caperchione, E. & Mussary, R. (2000). *Comparative Issues in Local Government Accounting*. Springer.
- Carpenter, A.; Corrigan, M., R.; Levitt, P. Stephen (2005). *Ten Principles for Creating Value from Local Government Property*. Washington: Urban Land Institute.
- Feschian, D. (2008). *Budgetary Accounting*. Stopanstvo, Sofia: University Publishing Company.

- Jones, R. & Pendlebury, M. (2000). *Public Sector Accounting*. 5th ed. Pearson Education Limited.
- Penman, S. (1992). Return to Fundamentals. *Journal of Accounting, Auditing and Finance*, Vol. 7.
- Watts, R. (1994). *Positive Research in Accounting*. New York: University of Rochester.
- Weatherhead, M. (1997). *Real Estate in Corporate Strategy*. London: Macmillian.
- European System of National Accounts (ESA 95).
- International Accounting Standards Committee (IASC) (2000). *International Accounting Standards*.
- International Accounting Standards Board (IASB) (2001). *International Financial Reporting Standards*.
- International Accounting Standards (IAS) in Public Sector (2010). *Institute for International Public Sector Accounting Standards (IPSAS)*. Online Available at: http://www.ipsas.org/en/ipsas_standarts.htm, Assessed at June, 2.
- System of National Accounts (1993). *United Nations (SNA 93)*.