# THE RELATION BETWEEN COST, MARKET VALUE AND TRANSACTION PRICE, IN THE CURRENT CONTEXT OF THE RESIDENTIAL REAL ESTATE MARKET

**Carmen Maria Dindiri Master 's Student**
**University of Craiova**
**Faculty of Economics and Business Administration**
**Craiova, Romania**

**Abstract:** The material approaches the complex relation between cost, value and price in case of real estate properties, analyzed in the context of evaluation mission exercised by a specialist in the field. Therewith, this material illustrates the influence of particularities of the real estate market on the establishment of the market value of residential properties and also the specific elements which the evaluation shall consider within the professional approach in order to formulate an opinion. This shall consider, in addition to the previsions of evaluation standards, the self-regulating mechanism of the market by means of the report between demand and offer, and the inter-relation, in this context, between the three concepts mentioned.

**JEL classification: D23, D46, O12**

**Key words: cost, value, price, real estate market, demand, offer.**

## 1. INTRODUCTION

"The market represents the assembly of sale-purchase relations which appear between the economic agents who offer and demand goods, according to the demand and offer law"[24]. Theoretically, the market should be in equilibrium, respectively to exist a demand level equal with the offer level, forming in this way the price. But, this stage is difficult to reach, even impossible in the context of active markets, considering the fact that the demand and the offer are influenced by many factors and the model of the perfect market is valid only at theoretical level.

In general, the real estate markets are characterized trough disequilibrium. On short time, the offer remains relatively fixed, and the demand adapts the price to it. If the demand for a certain type of property increases, the offer should be aligned to the level of the demand, thus building new real estates. But, until these are finished, it's possible that the demand change its tendency. In this way, the real estate market can aim to equilibrium only on long term.

In current context, the demand from the market is lower than the offer, the market being one in which the buyer is the main decision maker. He gives a large importance to the price in the selection process of a property to the detriment of another one, and he won't pay more for a property, just its value recognized by the market. In these conditions, the seller shall formulate since the beginning adequate offers in order to obtain a positive feedback. Contrarily, if the property is promoted

[24] Gh. Pirvu, Ramona Constantina Georgescu "Microeconomics", Craiova 2009.

with a price offer inadequate for its real market value, the effective transaction price will suffer decreases, assimilated to the time interval needed for repositioning.

## 2. INFLUENCE OF REAL ESTATE MARKET CHARACTERISTICS ON THE ESTABLISHMENT OF THE MARKET VALUE OF A RESIDENTIAL REAL ESTATE PROPERTY

In current real estate market, the prices are in a continuous change. In an active market, we meet two cases of report between demand and offer. The first, in which the demand is bigger than the offer and the market is of the seller, and the second in which the demand is lower than the offer and the market is of the buyer. The difference between the seller's market and the buyer's market is explained by Claudiu Hațegan, broker/owner of Klauss & Partners Agency, thus: in the first case, the demand for houses is bigger than the offer, reason for which the seller becomes the decision factor in a transaction and he "dictates" the price. In such a situation, the buyers take the decision to rapidly acquire, on emotional background, dictated by the fear that the offers rapidly "fly" from the market. The most aimed factors are the location and the physical characteristics and less the price. What happens in such a market is that the prices artificially increase, without taking into account the "reality" and the equilibrium between the offer and the demand. On the other hand, in a market of the buyer, the demand is lower than the offer, fact which determines him to be the decisive factor in the conclusion of the transaction. Since he has several options, the buyer searches for a long time the adequate offer and its perspective is much more rational. The factor which influences the most the acquisition decision and the choosing of a property in the detriment of other property is the price. In such a situation, in order to sell, the owners shall be aligned to the market tendencies.

During the last years, the real estate market was characterized by major fluctuations, passing through both stages. During the years 2006-2008, because of the increased demand and of rapid alignment of the offer, the prices increased without being controlled, reason for which the period was characterized as a real estate boom. On the background of the economic crisis which followed immediately, the purchase power decreased significantly and the offer remained more overweight to the demand, reaching to the decrease of payments.

Currently, the real estate market is one of the buyer and it seems to be stabilized at national level, after the prolonged crisis. Compared with the first term since 2013, the first months of the year 2014 brought a decrease of prices of only 0,6%. In respect to the top moment registered in the second term from 2008, the prices of the houses were reduced with 41%, thus the current level of the market is similar with that from 2006.

"The demand as expression of the buyer's behavior reflects his preferences and availability for the acquisition of certain goods and services, in quantities determined at a certain price"[25]. On the real estate market, the demand depends on the population from the market area in which the property is (respectively the size and the number of households), their income, the percentage of owners and tenants, the level of savings and the credit conditions, the urbanism plan and the directions in which the town is developed (or, contrariwise, its decay), physical attractive factors, facilities from the area.

"The offer represents the maximum quantity from a good or service which can

[25] Gh. Pirvu, Ramona Constantina Georgescu "Microeconomics", Craiova 2009.

be sold on the market in a certain period of time and at certain unit price, accepted by the buyer and considered by the seller as minimum price, which educes him the desire to sell that good"[26]. In turn, the offer can be influenced by the quantity and the quality of the properties which are competitive on the market, by the number of new or in progress constructions (both those competitive and those complementary), by the construction costs, occupation by the owners in respect to the occupation by the tenants, the non-occupation degree and the non-occupation cause, the availability of credits and financing for constructions, the impact of the construction standards, of local regulations regarding the systematization and of other regulations regarding the volume and the costs of constructions.

Each of the participants from the market, in quality of bidders and claimants of goods, oppose one to another, following the own interest. They will react at each influence factor and will try to establish, depending on the price of the market, an adequate price for their properties, depending on the own understanding on the value of the good. As a rule, there are four economic factors which create the value: utility, rarity, desire and purchasing power. All the factors shall be present to a real estate property in order to this be considered competitive on the market and, as a consequence, to have value.

Being general, the value concept cannot be rigorously defined. It is subjective, always influenced by the part who formulates it, from where is explained the value as being an opinion, not a fact. In case of a real estate property, this is an opinion on the most probable price which will be paid on the market, for a change. An objective and competent opinion on such a value can be formulated by an authorized assessor, who will estimate a market value through the specific techniques and procedures of the evaluation.

The market value is defined as "the estimated amount for which an asset can be changed on the evaluation date, between a convinced buyer and a convinced seller, in a fair transaction, after an adequate marketing and where the parts acted each of them informed, prudently and without constraint."[27]

The definition of the market value applies according with the European framework which provides that, through "convinced buyer" we understand a buyer who is motivated, but not obliged to buy. This buyer is not impatient or decided to buy at any price. Herewith, this buyer is a person who rather purchases according to the reality and to the expectations of current market than with those of an imaginary and hypothetical market, whose existence cannot be demonstrated or anticipated. The hypothetical buyer wouldn't pay a higher price than the price required on the market. The current owner is included among those who form "the market". On the other hand, "the convinced buyer" is not an impatient seller or a seller ready to sell at any price or one prepared in order to resist to a price which is considered to be irrational on the current market. The convinced seller is motivated to sell the asset, under the market conditions, at the best accessible price from the free market, after an adequate market, regardless the price. The factual circumstances of the current owner aren't part of these considerations because the convinced seller is a hypothetical owner.

The evaluation process which leads to the estimation of a market value is an

[26] Gh. Pirvu, Ramona Constantina Georgescu "Microeconomics", Craiova 2009.
[27] International Valuation Standards Council – International Evaluation Standards, Bucharest, 2011.

elaborated process and consists in several stages which approach the formulation of the final opinion. Is started with the identification of the property and of all its relevant characteristics. Then, is collected information about the market area, specific information about the property and about other comparable properties. All this information is analyzed and is determined the best use of the property, according to which is proceeded to the effective calculation of the value, through the use of some specific approaches in evaluation.

### 3. THE ESTIMATION OF THE MARKET VALUE OF REAL ESTATE PROPERTIES ACCORDING TO THE INTERNATIONAL EVALUATION STANDARDS

As it is known, the International Evaluation Standards (IVS, edition 2011) illustrate specific approaches in order to estimate the value of the real estate properties, namely: the approach through the market (or direct comparison), the approach through the cost and the approach through the income. Each of these three approaches treats the property in a different way, fact for which are obtained different values and the authorized assessor chooses the one who represents the best the property.

In order to exemplify the three approaches, we chose a residential property formed of land and construction, located in the area A of Craiova municipality, Craiovița street, no. 50, with the following characteristics: ground floor height regime, land surface 670 sqm, net area of the construction 165 sqm, street front 11 m, construction year 1960, renewed in 2004, finishing quality – average, general good condition.

*Within the approach through the market*, are chosen from the market area properties compared with the analyzed property, as closes as possible in respect to the characteristics, to which is known the transaction price (or offer). The market area is selected depending on the limits until which the similar properties can compete with the analyzed property, in the vision of a potential buyer. Because of the fact that it is impossible that two properties are identical, corrections are made on the price of each comparable, depending on the comparison elements used, thus all be brought, from the point of view of characteristics, to the level of the analyzed property. In the end, the corrected value of the comparable property with the smallest number of corrections and the lowest total gross correction is chosen as being the market value of the subject property.

In case of an analyzed property, we selected 5 comparable to which we made corrections in order to be located within the market area, the surface of the land and of the construction, the street front of the land, and the presence or the absence of some facilities considered useful. The market value thus estimated through this approach, through the comparison method on data pairs, was 120.000 €.

We shall pay a big attention within this approach to the prices, transaction or offer prices of the comparable properties selected. A deficiency of the transaction price, which is declared in the sale-purchase agreement, is that this can be erroneously declared, respectively smaller than the real price, in order to reduce the value of the transaction tax. This problem could be corrected through the alignment of grids used by the notaries at the real value of properties from the market, through the performance of an evaluation at each transaction. Even so, it would be needed a relatively long period of time in order to create such a data base, which shall be consistent and relevant and which the notaries and the assessors would access with confidence.

On the other hand, a failure of the offer price is that this can be higher than the real value of the respective property, the difference consisting in the negotiation margin which the seller anticipates and other costs which appear during the promotion of the property. As a consequence, the assessor, through his professional reasoning, shall adjust the prices of the comparable thus reflecting the real current market values.

*The approach through the cost* is based on the principle according to which a careful buyer won't pay for a property more than the purchasing cost of a similar site and construction of a building with equivalent demand and utility. Thus, the current replacement or reconstruction cost of the analyzed property is calculated. From this, we take possible depreciation (physical, functional or external), thus resulting the current value of the building. To this, we add the value of the land, leading to an indication on the market value of the entire property.

A calculation method of the total cost is the devices methods. This starts from the gross effective replacement cost, which includes the expenses directly related to the construction, the infrastructure (foundation and basement), the super-structure (number of floors, attics), roof and coating, interior and exterior finishing and functional installations (electric, sanitary and heating). To these are added the indirect expenses, namely other unpredictable expenses, administrative and profit costs, other indirect expenses and the developer's profit.

In case of the analyzed property, the gross replacement cost of the building was 62.100 €, to which we added a percentage of 5% related to unpredictable expenses, 12% for administrative and profit costs and 10% the developer's profit, resulting a total cost of 80.000 €. From these, we took the total depreciation, in percentage of 60% (physical depreciation related to the effective age of the building, 30 years), leading to a construction value of 32.000 €. Adding the value of the land (determined through the comparison method) of 92.300 €, we arrived to a market value estimated through the cost approach of 124.300 €.

*Within the third approach, the approach through income,* are estimated the revenues generated by the property and the expenses incurred with its exploitation, through difference resulting the net income from exploitation. According to the direct capitalization method, the net exploitation income is multiplied with a capitalization rate (taken from the market), in order to obtain the market value.

In case of the analyzed property, we selected 5 comparable properties for which were formulated rental offers and, after the corrections, resulted the price of 350 €/month obtained from the rent of the property. Then, we calculated the net exploitation income, of 2.680 €, through the difference between the gross effective income, of 4200€ and the total of exploitation expenses, represented by the fixed expenses (duties and taxes - 170 €, mandatory insurances - 20 € and allocations for replacements in the quote of 20% from the annually amortized value - 490 €). The variable expenses weren't included because it is considered that these will be paid by the lessee. Through the division of the net exploitation income with the capitalization rate (obtained from the formula VNE/price, applied in the case of the 5 comparable properties used to the approach through the market), we obtained an estimation on the market value of the property of 103.100 €.

The conclusions obtained as a result of the evaluation process were the following:

- the estimated value of the land, through the comparison method: 92.300 €

- the estimated value of the property, through the cost approach, devices method: 124.300 €

- the estimated value of the properties, through the market approach, the comparison method on data pairs: 120.000 €

- the estimated value of the properties through the income approach, direct capitalization method:103.100 €

In case of residential properties, the market approach is the most adequate from the three approaches, because it directly takes into account the realities and the tendencies from the market, reason for which we chose 120.000 € as market value.

## 4. THE INTERACTION BETWEEN THE EFFECTIVE CONSTRUCTION COST AND THE MARKET VALUE ESTIMATED BY THE EVALUATOR AND THEIR INFLUENCE ON THE TRANSACTION PRICE

The three concepts are defined by the international evaluation standards as it follows:

1. The cost is the amount of money needed in order to purchase or to produce the asset. When that asset was purchased or produced, its cost becomes a concrete situation. The price is correlated with the cost, because the price paid for an asset becomes its cost for the buyer.
2. The value is not a fact, but an opinion: either on the most probable price which would be paid for an asset, within a change, or on the economic benefits resulted from the holding of an asset.
3. The price is the amount of money asked, offered or paid for an asset. Because of the financial capacities, of motivations or special interests of a certain buyer or seller, the price paid can be different from the value which could be assigned to the asset by other persons.

In this context, we can affirm that only in the conditions of a perfect market, the cost, the value and the price of o property will be equal.

In case of residential real estate properties, the determination of the construction cost is part of the approach through the cost and, as a consequence, competes with the other information in order to estimate the market value. This cost is calculated in the hypothesis in which would be purchased a site similar with the existing one, on which can be build a building with identical characteristics with the one analyzed. Total costs are calculated depending on the current medium levels of the prices recognized on the market, not depending on the effective construction costs of the existing building, because not always the construction costs, either higher or smaller, directly influence the value of the property. For example, the choosing of some materials with a superior quality, compared with the current requirements, or the endowments and the additional finishing which won't be recognized by a possible buyer from the point of view of utility, will be of no use. The cost increased in this way won't be directly proportional reflected in the market value, because of the subjective perception of the buyers, in respect to the physical characteristics.

With this in view, supposing that the construction is finished before the sale, with a cost of 10.000 €, finally will be obtained a value surplus of maximum 5.000€. At the opposite side, a construction physically depreciated (which isn't renewed) can have a market value higher than another similar construction, because of the importance which the buyer gives to other aspects, ignoring the physical aspects. For example, if the property will need repairs, in the amount of 10.000€, this doesn't mean that a possible buyer will pay a price diminishes with this cost. In his vision, maybe the superior location will balance more in the detriment of the cost of future repairs, and will arrive to pay a final price increased by the characteristic he considers important.

Another example can be the case of real estate properties analyzed, where the total replacement cost of the construction was calculated at the level of 80.000€. Through the decrease of the estimated depreciation, was obtained a value of the construction of 32.000€. The evaluation methodology supposes the determination of the market value through the accumulation of the construction value with the land value. The market value thus obtained was of 124.300€ (32.000€+92.300€). If the construction was new and the physical depreciation wasn't deducted, the market value would have been 172.300€ (80.000€+92.300€). The difference of 48.000 €, between the value obtained through the cost approach and this last value won't be totally paid by the buyer, even if it shows the real renovation costs.

In respect to the price as a general concept, the answers in time to the question – what the price measures – lead to the formulation of several theories on it, namely: the classical theory considered that the price level is determined by the work made in order to obtain the product, the neoclassical theory provides that the price is subjective and it is determined by the marginal utility and rarity of the good and the contemporary theory takes into account "the reality that the two previous perspectives of interpretation of the price aren't opposed. We start from the finding that, if the change is the unit between the demand and the offer, of the utility of the goods and the purchasing power, then the economical value of a good is determined by the work made in order to obtain it and by the utility given to the consumer"[28].

Continuing with the determination process of the price of the analyzed property, supposing that the market value was reported to the seller by the assessor, he will use it in order to formulate a transaction offer. With this in view, the seller, starting from 120.000€, will add to the price about 10%, percentage represented by the negotiation margin with a possible buyer. Moreover, if the transaction is realized through a real estate agent, the price will be increased also with the commission practiced by him. In this last variant, it's preferable that the seller chose just one real estate agent which represents him, contrarily the property will be listed at different prices, aspect which will lead to the misleading of the buyer and, as a consequence, the offer will lose from its credibility.

During the stay of the property on the market, if he will find that the level of the demand is not high, in order to sell the property, the seller will decided the decrease of the price step by step, until the possible buyers will consider that the report between the price and the utility will be optimum in order to make an investment. We shall mention the fact that the residential real estate properties aren't transacted with a high frequency because they represent long term investments, reason for which the possible buyers are very careful to all the details they consider relevant and adequate in relation to their desires and needs, especially in a market of the buyer, where the preferences are dictated in a large measure by the price.

Thus, the real market value of the property will be different from the transaction price. The price will be higher than the market value because of other costs

[28] Gh. Pirvu, Ramona Constantina Georgescu "Microeconomics", Craiova 2009.

which occur during the promotion of the property or because of the apparition of a "special buyer, for which the asset will have a special value, because of the advantages resulted from the property on it, and which won't be available for another buyer on the market"[29]. On the other hand, the price will be lower than the market value if the seller will accept a negotiation in the sense of a diminution over the limits, or if he will formulate, since the beginning, an unrealistic offer because of the over-evaluation, which will lead to diminutions of the price in trenches.

## 5. Conclusions

The construction cost, the market value and the transaction price are in a permanent interaction, which determines the modification of individual levels, depending on the regulations from the field of constructions, on the level of prices and of financing conditions in this field, on the report between the demand and the offer from the market and on the subjectivity of buyers and sellers.

The effective construction cost of a residential real estate property can be formed by a significant component for the determination of its value, but not directly proportional, because the market doesn't recognize major fluctuations of value depending on the cost components.

The market value can be calculated in a competent and realistic way only by an authorized assessor, who, thorough the specific techniques and procedures of evaluation science, will express his opinion in this respect.

Being objective, the market value is usually different from the price at which the transaction is concluded, because this price is decided between the seller and the buyer, each of them can bring a subjective influence which can change the price.

In order to formulate an offer, the seller shall have realistic expectations, uncorrelated with the effective construction costs of the property, if these are high. An offer price which isn't in line with the market tendencies can attract a diminution of the effective transaction price, because of the prolongation of the period of time in which the property remains unsold.

A potential buyer won't pay for a property a higher price than the maximum market value of a similar property.

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