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**Article**

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# RESEARCH ON THE APPRAISAL OF INTANGIBLE ASSETS IN ROMANIAN COMPANIES\*

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**Abstract:** *Irrespective of the cultural environment in which companies operate (Europe, Asia, America or any other geographical area), intangible assets have a significant role in the development of a business since they contain knowledge that can be the engine of the respective business and they can offer competitive advantage. The current article is a study of companies listed on BVB under category I. We have considered the percentage of intangible assets that the latter companies have and that are present in financial statements, and their value under the circumstances in which the market value is higher than net assets.*

**Keywords:** *intangible assets, valuation, net assets*

**JEL Classification:** M40, M49

## INTRODUCTION

Two significant factors have led to major changes over the last decades: globalisation and technological changes (Maha, Donici and Maha, 2010). In this environment, intangible assets have a significant importance since they provide companies with significant competitive advantages. Nakamura (2001) approximated investment in intangible assets at \$ 1,000 billion per year, while Corrado, Hulten and Sichel (2006) estimated it at \$ 1,200 billion per year. Given the specificity of these assets, it is necessary to determine their value.

In order to establish the value of these assets according to IVS, the notion of market value is used. *Market value is the estimated sum for which ownership could be changed, on the date of the appraisal, between a buyer who is determined to buy and a seller who is determined to sell, in a transaction at an objectively determined price, after an appropriate marketing activity in which both parties acted in full awareness and without constraint* (IVS, 2011). This is the most frequent type of value that is resorted to in the process of evaluation.

Apart from the definition in IVS, other national or regional bodies have defined market value as well. Thus, the American Society of Appraisers (ASA) defines market value as the *amount at which ownership would change between a determined buyer and a determined seller, when neither*

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*acts under constraint and they both reasonably know relevant facts*, while the Appraisers' Foundation in the USA (a technical organisation of USA appraisers) defines market value as *the most likely price at which a property is brought in an open competition on the market, under all necessary conditions for a fair transaction, the seller and the buyer acting cautiously and in full awareness, supposing that the price is not affected by abnormal stimuli* (Stan, Anghel *et al.* 2009). European experts also consider market value, which is defined by TEGoVA in 2003 in the EVS 4 Standard, as *price at which land and buildings could be sold via private contract between a determined seller and a determined buyer, in a balanced transaction, at the date of the evaluation, supposing that the property is publicly displayed on the market, that the market allows a normal sale and that, depending on the nature of the property, it is available for a normal period for the negotiation of the sale*.

Financial reports use the notion of fair value. *Fair value* represents the *amount at which an asset can be traded or a liability can be cashed in, willingly, among parties who are familiar with it and within the framework of a transaction in which price is determined objectively* (IAS 38.7).

The appraisal of intangible assets supposes to approach some particular appraisal aspects, which have been determined mainly by the particular characteristic features of these assets.

## 1. THE APPRAISAL OF INTANGIBLE ASSETS

In what follows we shall consider specific aspects concerning evaluation both at theoretical and applied level.

Intangible assets that have been *purchased separately* are evaluated at the *acquisition cost*, which includes the purchasing price to which direct expenses that can be attributed to the respective asset are added: expenses for the registration of the assets (patents, brands etc.), testing expenses, non-refundable fees etc.

Intangible assets *internally generated* are evaluated at *production cost*, which includes expenses for used materials and services, salaries and other staff expenses, directly attributable expenses (fees, patent and license amortisation) and the share of indirect expenses.

Intangible assets *purchased in exchange of other assets and those purchased as part of enterprise combinations* are evaluated at their *fair value* on the purchase date. The initial setting of an intangible element against current expenses prevents the latter from being recognised subsequently as part of the cost of an intangible asset. In fact, subsequent expenses will increase the

value of an intangible asset only if they are going to generate future benefits that go beyond the initial performance level and which can be evaluated in a credible way.

Among intangible assets, one can identify three basic groups (Stan and Anghel, 1998), namely:

*Non-identifiable intangible assets which belong to the entity* that comprise, in general, intangible assets of an indeterminate life (i.e. they cannot be amortised), and which are evaluated, in general, as a whole. This does not mean that the non-identifiable assets of the business do not depend on the entity's effort, but that there is no way to determine the reduction of value (one of the requirements to establish the amortisation plan).

The main assets in this group are (Işfănescu et al., 2003):

- Availability of qualified staff;
- Systems, methods, control ways which have been developed as part of an operation;
- Existing customers;
- Covering initial loss (in general, this refers to normal expenses made up to the moment when profit was made);
- Promotion, advertising expenses;
- The advantage of location, which is reflected in the market value of real estate;
- Local, national, international reputation which can be analysed on the basis of (re)cognition by the public or customers, their dependence on entity (the quality of services and products), the price of services and products, the credit situation (banks, financial institutions etc.).

*A person's non-identifiable intangible assets* which include unique elements in association with persons in the business. In most cases they are considered to have a non-determinable life. Most important assets in this group are:

- Employees' or business owners' personal reputation for the general public, clients, employees, other owners or crediting institutions;
- Employee's skills and specific abilities, including technical knowledge, financial ability;
- Employees', managers' and share-holders' general ability to deal with customers, managerial spirit, abilities for administrative work.

*Identifiable intangible assets which belong to the entity* and which comprise intangible assets which can be evaluated individually and which, regularly, have an indeterminable life. To this group belong: the brand; the product's name; secret methods and processes; copyright; contracts

(with employees, purchase, sale, financing, advertising contracts, etc.); information, lists of suppliers, clients etc.; secret formulas; licences; patents; franchise; rights over oil fields, fishing areas etc.

Assets in the three groups can be present in a business, but this does not mean that in any situation they determine a non-material value of the business.

Always, the choice of method for a certain case, in a specific situation, depends on circumstances. In most cases it is necessary to use several methods of appraisal due to the need to self-check results. Also, we should not exclude the possibility that evaluators could develop their own techniques and methods, specific for a certain case, by using elements from several methods (Pierre and Besançon, 2004).

In evaluating intangible assets, methods from all 3 groups of approaches to appraisal are used, as follows:

### **1.1. Appraisal methods based on comparing markets**

The approach by comparing sales consists in determining the market value of intangible assets by referring to their transaction prices on *an active market* (an active market, according to IAS 38.14, exists when the traded elements are homogeneous; on active markets there are buyers and sellers at any moment and prices are accessible to the public) or via “*multiples of evaluation*” (determined by setting the intangible asset’s transaction price against a financial indicator (the turnout generated by the intangible asset, the profit generated by the respective asset after deducing certain expenses connected to its use, the current gross profit or the gross operational profit before deducing amortisation)). The chosen financial indicators can refer to the current year, to the previous or to the next year, in case the market is not active. The most frequently used are the method of the purchase cost and the method of assimilation.

*The method of the purchase cost.* Occasionally, an intangible asset can be purchased on the market at a price considered the equivalent of its value. Thus, it is recommended to use testing methods, such as: cost economy, creation cost, profit advantage. In its turn, the purchase cost can be useful as a test for the value of licences and franchises. A series of intangible assets are sold and purchased on the market, but the information obtained on this market must consider every type of intangible asset. Thus, this method is applied only when there is an active market for that intangible asset.

*The method of assimilation* according to which evaluators, starting from precise and certain information, take into account transactions closed under circumstances that are appropriate to the specific case that they analyse, and consider corrections (which can be positive or negative, based on their experience) depending on the circumstances in which the transactions taken as a standard for comparison were closed.

## **1.2. Revenue-based appraisal methods**

The approach via revenue supposes the evaluation of an intangible asset by converting into value a form of revenue allocated only to this asset. The estimation of the income flow can be derived from several sources (Stan, 2008):

- The increase in the volume of sales and collateral effects (decreasing fixed expenses per unit as a result of the increase in the volume of production, obtaining a sale price that is better than the competitors', acquiring the position of a leader or even a position of monopoly on a product's market, introducing new products on the market, entering new markets, making customers faithful);
- The direct reduction of variable expenses per unit (for raw materials, manufacturing costs, recruiting and training personnel, publicity and advertising, stocking, elimination or reduction of rejected products and waste, design, data processing etc.)

The common methods used in the approach based on revenue are based either on the technique of actualisation or on that of capitalisation:

*The method of royalty economy* (the effect of cost reduction) is not applicable, first of all, for the evaluation of patents or brands and it starts from the hypothesis that, in the absence of ownership on an intangible asset, the latter should be purchased through a licence of franchise contract for which royalty will have to be paid. In most cases, it is a percentage applied to the volume of sales generated by the use of intellectual property. Usually, royalty economy is determined after deducing tax on this economy. The royalty rate is selected depending on the rates used in previous contracts whose object was the asset under evaluation or the ones used on the market for an identical or similar asset.

*The method of actualising / capitalising the economic profit generated by a non-tangible asset* (the effect of direct cash-in which corresponds to the respective asset). This method to evaluate identifiable intangible assets can be applied in case it is possible to estimate, at a reasonable accuracy level, the advantage of owning and using intangible assets. Such an advantage is expressed

synthetically via profit or additional cash flow (an excess of sale price or the reduction of some expenses).

*The method of actualising the cash flow allotted to the intangible asset* (the effect of income revenue). The previous method is based on profits that have been generated directly by intangible assets. Yet, there are situations when the advantage of the unit price cannot be determined because there is no available information and estimations of this advantage, at a reasonable precision level cannot be done. In practice, there are cases in which intangible assets determine profit at the level of the entity which owns it (they cannot be directly attached to an intangible asset as in the previous case). The method supposes the estimation of the net profit / net cash flow by deducing from the total net profit of the one corresponding to the other assets. The method is applied for the evaluation of non-finalized research and development projects, brands, advantageous contracts and licences.

In such a situation, the essential problem is the starting point in the development of the evaluation technique. On the basis of a study, the evaluator can have certain information available: for instance, the information that a product under the brand name "Y" has a high sales volume in comparison with products under brands "X" and "Z" on the same market. In this case we start from the profit contribution resulting from extra sales. In this case value is obtained by capitalising a series of constant benefits.

The methods outlined above often generate problems for the appraiser in supporting the values obtained because subjective presumptions are quite frequent and hard to support. The result must always be realistic, credible and able to be supported.

### **1.3. Cost-based evaluation models**

The cost of intangible assets considers the price that an investor will pay for such an asset when buying a new one. It will be established by taking into account:

- The replacement cost, respectively, the cost of achieving an identical or similar asset;
- The balance of the intangible asset's life: up to the end of the development stage; regulated by certain stipulations; written down in contracts; technical.

In practice, there can emerge situations when intangible assets must be evaluated, which have not yet been developed and recognised by the market, for which there is not sufficient information that could allow the estimation, at a reasonable probability rate, of the flows that their ownership would generate. Under this category we can include: a new invention, a research-development project, an entity's practices and procedures, trained workforce, the distribution network etc. In

general, in such cases, the assessor resorts to methods from the group of methods based on costs because they have the highest relevance and credibility in particular cases.

Given the specificity of these assets and the limited number of transactions of such assets, their adjustment is difficult to justify. This is why, IAS 38 stipulates that re-evaluation of intangible assets is allowed only if there is an active market.

The presented methods (Stan, 2008) are a few standard techniques for the evaluation of intangible assets, but we should specify that, in order to evaluate such an asset, several methods can be used, and the appraiser correlates the results derived from the use of two or several methods in order to check the ensuing result.

## 2. COMPANIES LISTED ON BVB – CASE STUDY

In what follows we shall analyse the situation of intangible assets in companies listed on the Bucharest Value Stock-exchange under category I (26 companies). The lines of business of the companies which enter this category are presented in Table no. 1. In the analysis that we have carried out we considered financial information for 2009-2011. We focused on whether the value of intangible assets presented in financial statements has a significant percentage in the owned assets and if the value of these fixed assets is important in case the market value is higher than net assets (Anghel, 2008).

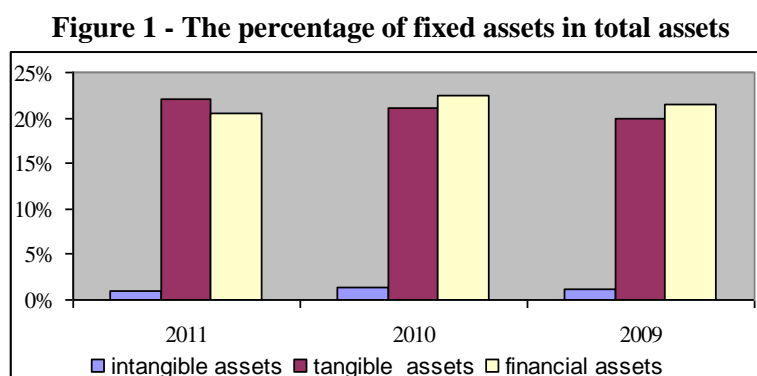
**Table 1 - Structure of activities of the companies listed under category I on BVB**

Line of business	No. companies
Retail trade of pharmaceutical products, in specialised shops	1
Constructions	1
Real estate development (promotion)	1
Carbohydrate extraction	1
Manufacturing aeroplanes and space ships	1
Manufacturing instruments and devices to measure, check, control, navigate	1
Manufacturing concrete products for constructions	1
Manufacturing chemical substances and products	4
Mutual funds and other similar financial entities	1
Metallurgical industry	1
Financial intermediations	9
Manipulations	2
Electricity production and manufacturing	1
Pipe transportation	1
<b>Total</b>	<b>26</b>

Sursa: BVB, <http://www.bvb.ro/>



Following the analysis carried out, we noticed that the market in Romania does not observe the tendency registered by large companies, where the weight of intangible assets is significant (Mc`Donalds 71%, Coca Cola 51% - Austin, 2007). As can be seen in the graph presented in Figure no. 1, for the analysed period, the value of these assets is insignificant (maximum 1,28 % in 2010, 1,26 % in 2009), with a decreasing tendency of 0,88% in 2011.



Sursa: BVB, <http://www.bvb.ro/>

At individual level, the highest value was registered by Transelectrica in 2009 (14,45%), but the drop was very abrupt in 2011, namely 0,28 %. The rather low percentage of intangible assets for the analysed firms is also influenced by the fact that the Property Fund and SIFs do not have intangible assets. Since they are financial intermediary units, the highest percentage belongs to financial assets.

By analysing the information presented in Table no. 2, we can notice that the indicators have registered an increasing tendency except for stock exchange capitalisation, which plummeted in 2011.

**Table 2 - Financial information on the 26 companies under category I among firms listed on BVB**

Indicator	2011	2010	2009	%2011	%2010
Total assets	156.244.951.406	146.839.062.086	134.205.115.855	6,41%	9,41%
Total equity	61.869.066.190	36.406.818.137	33.063.307.040	69,94%	10,11%
Operating revenue	59.442.398.596	50.680.932.579	44.791.658.996	17,29%	13,15%
Profit before tax	8.013.567.687	4.051.036.216	3.907.066.223	97,82%	3,68%
Capitalisation	70.782.200.350,27	102.442.620.945,15	80.074.496.089,64	-30,91%	27,93%

Sursa: BVB, <http://www.bvb.ro/>

Variations from one period to another are quite high, mainly for the profit before tax and for capitalisation. At the level of the analysed companies, the situation is quite different. Thus, Cocefa

has the highest value of variations for capitalisation in 2011 (1167,39%), while Turbomecanica has the lowest (-51,72%). For profit before tax Impact developer & Contractor has the lowest value (-3625,66%) in 2010, while Azomureş has the highest (1742,63%) in 2010.

Table no. 3 features the results of the carried out analysis regarding the percentage of intangible assets in the total assets.

**Table 3 - The percentage of intangible assets for the 26 companies under category I among firms listed on BVB**

Indicator	2011	2010	2009	%2011	%2010
Intangible assets	1.379.554.874	1.886.631.290	1.692.051.954	-26,88%	11,50%
Intangible assets/Total assets value	2,03%	2,86%	2,96%	-28,99%	-3,22%
Capitalisation	70.782.200.350	102.442.620.945	80.074.496.089	-30,91%	27,93%
Net asset	86.241.801.017	63.031.266.036	56.689.727.845	36,82%	11,19%
Indicated intangible value (not recorded in balance sheet)	-15.459.600.667	39.411.354.909	23.384.768.244	-139,23%	68,53%
Indicated intangible value /Capitalisation	-21,84%	38,47%	29,20%	-156,77%	31,74%
Market Value /Asset Value	0,82	1,63	1,41	-49,50%	15,06%

Sursa: BVB, <http://www.bvb.ro/>

Given the sample that we have analysed we can mention that the value of intangible assets has oscillated: there was an increase in 2010, but in 2011 there was a significant reduction of 26,88 %. Stock exchange capitalisation registered a similar evolution. In what concerns the weight of intangible assets in the total amount of fixed assets, we can notice that it is low, at about 2-3% in comparison with tendencies from large companies and that it has registered a decrease of 29 % in 2011. It is only net assets that registered an increasing trend, of 36,82 % in 2011. At the level of the analysed companies, the situation is quite different. The highest percentage of intangible assets was registered by Transelectrica in 2009, while SIFs and Proprietatea Fund do not hold intangible assets.

The data in Table 3 show the gap between the market value of the analysed companies' own capital and their net assets. The small value of intangible assets presented in financial statements could be due to a financial market which has not reached maturity yet, to the effects of the financial crisis which, in Romania, were felt later and, to a certain extent, to the stipulations in IAS 38, according to which intangible assets generated domestically are not recognised. Since a market of fusions and business acquisitions does not exist, when the IFRS 3 stipulations are applied, intangible assets cannot be recognised.

## CONCLUSION

In the context of globalisation and increasingly stronger competition, intangible assets could offer a competitive advantage. Also, information connected to these assets is important in the decision-making process concerning the allocation of investment and for investors in decisions concerning value versus price.

In the study that we have carried out we have considered twenty six companies quoted on BVB under category I. In order to establish the importance of intangible assets we determined the percentage of intangible assets in the total assets and we noticed that from an accounting point of view, it is very little (0,28 % in 2011). By analysing the market value we noticed that their percentage is much higher (38,47 % in 2010). In 2011, due to the decrease in stock exchange capitalisation, their value is much lower. The tendency at global level is to increase the percentage of non-tangible assets, a tendency which, unfortunately, we could not identify among the companies that we have analysed.

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