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Mixed methods for valuation of enterprises – value subjectivism determinants – case study

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ABSTRACT

The article presents multiplicity of aspects and complexity of the notion of enterprises valuation and factors that may distort identification of a fair value. On the basis of a real situation (case study), there was an attempt undertaken within the scope of mixed methods - to verify the hypothesis on existence of factors that enable application of wide subjectivist in estimation of property value. There is a presentation of causes for the contemporary thrust crisis to methodology of enterprises valuation, and a necessity to improve the valuation standard is emphasized.

Keywords: finances of enterprises; property valuation; mixed methods

1. INTRODUCTION

A process that is intended to identify value of an enterprise is its valuation. The term enterprises valuation means that the valuation is applied to an organizational unit separated in economic and legal terms, disposing of a specific potential in a form of fixed and current assets, as well as various values and factors of a non-material nature. Valuation can be treated as an opinion, justification, estimation of how much something is worth (Zarzecki 1999). According to Miles, valuation is an opinion related to value, usually drawn up in writing, and at the same time it is also a process of estimating value of cost of an asset, a group of assets or

all assets owned by the business or a given investment (Miles 1984). The need for valuation is a function of economic development. Together with globalization of economy, accompanied by capital flow to an increasing number of countries, valuation is becoming a strategic element of management. In the general sense, purpose for company valuation is always to facilitate a decision of an organizational or investment character. Valuation enables selection of ownership both ownership and financial options, in case of assets and liabilities. However, despite such an enormous function that is played by enterprises valuation within the economy, among others as an indicator of effective operations, its specificity brings plenty of problems. It is related to numerous conditions and multiple procedures and methods intended to value enterprises.

2. THE ESSENCE AND OBJECTIVES OF ENTERPRISES VALUATION

The essence of enterprises valuation is to provide its value expressed in particular monetary units with agreed marks, principles and analyses. In economic practice, enterprises are assessed through the prism of two essential aspects of perceiving their property and its value:

- 1) in categories of so-called material substance (fixed and current property reflected in enterprise's assets),
- 2) as non-material elements resulting from the manner, in which the enterprises utilize its both material and non-material property, this deciding about the company's capability to multiply the invested capital (including human potential, a brand respected by a client, know-how, etc.).

Table 1 comprises of objectives for enterprises valuation as a result of various conditions what shows the fundamental significance for operation of a business enterprise.

Table 1. Goals for valuation of an enterprise.

Internal	External	Internal-external
<ul style="list-style-type: none"> - Monitoring of owner's capability to multiply the invested capital - Measurement of the shares value in order to present them - Acceptance of new shareholders or excluding a part of the previous ones - Dividing the enterprise 	<ul style="list-style-type: none"> - Dimensions of taxes - Specification of contribution, notary charges, etc. - Specification of insurance premiums - Determination of compensations resulting from insurance policies 	<ul style="list-style-type: none"> - Purchase or sales of an enterprise - Privatization and reprivatization - Transferring an enterprise for lease, franchise or leasing - Merger of enterprises - Securing credits and loans

Source: own work on the basis of: (Machala 2009).

Contemporary realities of market economy together with the globalization process caused that enterprises valuation is of fundamental significance for economic processes. Additionally, the growing need for information has led to development of numerous methods for valuation. The determinants of selection of the enterprises valuation method include:

- objective of valuation,
- who is the ordering party (recipient),
- type of an enterprises regarding its usability,
- economic condition of the company and its surroundings (economy, sector, region),
- type, scale and differentiation of the object of operation,
- type and number of assets,
- perspectives for operation and development of an enterprise,
- type and quality of information that can be obtained about a company and risk,
- types and values of valuation within an enterprise.

Fair value is an amount of money that a given asset could be replaced for if the transaction is carried out in market conditions between the interested parties that are not related to each other, and which hold information that enable full assessment of the value of the transaction subject (Adamkiewicz 2001). At the same time, valuation of an enterprises is a complex process, which is incapable of picturing a real and fair value of the company only if its carried out in accordance with so-called features of fair value, which include (Borowiecki, Czaja and Jaki 2005):

- Correspondence of valuation to facts,
- Currentness of data, its transparency and relative simplicity,
- Clearly identified purpose of valuation,
- Based on financial data of the enterprise,
- Not carried out only on the basis of the enterprise's assets value, unless it is related to the so-called liquidation method,
- Considers income and non-material factors,
- Considers developmental forecasts of the company and risk factors,
- Considers all significant information available within the process of the valuation preparation,
- Is objective and reliable.

While the selection of valuation method itself poses the most significant elements of the process of an enterprise real fair value estimation, and it must be suited to the objective and subject of valuation. Despite the fact that a wide set of practitioners evaluate enterprises every day, the process still must be completed (Wojtaszek 2016).

3. AN ANALYSIS OF VALUATION METHODS FOR DETERMINATION OF VALUE SUBJECTIVISM

From the historical perspective, the property methods are the oldest concept for valuation of economic entities, assuming that the assets pose the basis for determining the enterprise value. It means that an enterprises is worth as much as its assets. In case of these methods, the element that is estimated is the market value of an enterprise, understood as a sum of values of the enterprise's assets liquidation. The first and at the same time the simplest valuation of assets was carried out with the net accounting method (registration). Information included in the balance-sheet was applied directly. The form of valuating enterprises with the net registration method (Knight 1998):

$$WP = A - P_o = KW$$

WP – value of the enterprise (net accounting value),
A – total balance-sheet value of assets,
P_o – balance-sheet value of foreign liabilities,
KW – balance-sheet value of equity.

However, the accounting value of assets and liabilities is usually not equal to their market value, what in contemporary rapidly changing market conditions, especially in the high technology sector, can cause significant differences in values, which become unacceptable in terms of determining a current fair value.

Valuation based on market values of held assets and liabilities is called the adjusted net assets method. The form of valuating enterprises with the adjusted net method:

$$WP = AW - POW = KWW$$

AW – total value of the adjusted assets,
POW – value of the adjusted foreign liabilities,
KWW – value of adjusted equity.

Currently, it is the most commonly applied method for valuation of enterprise assets.

Purpose of the replacement method is to estimate the sum of financial outlays that would be necessary to replace particular elements of assets of the valued enterprise. This method is often adopted by entrepreneurs that make a decision on whether it is more advantageous to purchase an enterprise or to develop it independently. The form of enterprise valuation with a replacement method (valuation of infrastructure enterprises - the main asset component is infrastructure, e.g. power plants):

$$W_{ON} = W_{OB} (1 - Z_f)(1 - Z_m)$$

W_{ON} – net replacement value (value of fixed asset, with consideration of its physical and moral utilization),
W_{OB} – gross replacement value (value of a new fixed asset),
Z_f – physical (technical) utilization indicator, $0 \leq Z_f$,
Z_m – moral utilization indicator (change of technology, aging) $Z_m \leq 1$.

A special case is enterprise valuation with a liquidation method (for the needs of a bankruptcy procedure), but then we deal with a fair value.

Methods of income consist in estimation of an enterprise market value, understood as a sum of pure profits that can the enterprise can bring in the future. General form of enterprise valuation with a profit-based method (Nita 2007):

$$WP = \sum_{i=1}^n a_t * D_t$$

t – year of analysis,

a_t – discount rate for year t,

D_t – income in year t.

In practice, a profit-based method that is applied most commonly is to base valuation on discounted cash flows.

The form of valuating enterprises with the discounted cash flows method:

$$W_d = \sum A_t * NCF_t + RV$$

W_d – profit-based value,

A_t – discount rate for year t,

NCF_t – net cash flows for year t,

RV – residual value.

There are numerous types of valuation with the DCF (discounted cash flow) method, different in terms of the level of details, structure of cash flows and determination of the discount rate (Panfil 2009). According to the DCF method, value of an enterprise equals the sum of cash flows discounted with a certain cash flows rate, which after being accumulated and added up create a joint cash flow that remains at the owners' disposal (Mączyńska 2005).

The asset-based methods that currently also employ the practices of comparative methods seem to be objective and compliant with the concept of striving for determination of a fair value to the greatest extent. While the profit-based methods require improvement towards creation of good practices and standards, at least in case of determination of discount rates and the number of years adopted for estimations. As these are the factors, among others, which allow too extensive subjectivity of valuation.

Comparative methods consist in estimation of market value, which is determined on the basis of known purchase and sales transactions. The principle of this method is adopted at valuation of assets, whose prices are adjusted to market values. However, the comparative valuation method is also the method based on market multiples, what leans on an assumption that the best information for an enterprises valuation is provided by a financial market. Selection of multiples and their application belong to subjective determinants of valuation, causing numerous controversies (Fernandez 2002).

Mixed methods for an enterprise valuation are intended to combine the asset- and profit-based methods. This results from an assumption that value of a company is influenced not only by its assets but also its ability to generate profits. However, these methods are related to a possibility of over- or underestimation, resulting from different relations of the assets value and profitability within the proposed formulas. Table 2 consists of examples of valuation for various mixed methods, based on the example of factual data presented in court reports in

Katowice and Cracow. The examples have been adjusted to the same assumptions related to the profit-based valuation method. According to the order of examples, the valuers selected the Switzerland, German and Stuttgart method respectively

Table 2. An example of valuation value with different mixed methods.

Method	Based on assets and based on profits	Stuttgart Formula: $W = M + (5r/1+5r) (D - M)$	Anglo-Saxon Formula: $W = M + [1 - 1/(1 + r)^n] (D - M)$	German Formula: $W = (M + D)/2$	Switzerland Formula: $W = (2D + M)/3$
Valuation value (in thousand PLN)	M = 120 D = 410	216	230	265	313
	M = 98 D = 546	247	268	322	397
	M = 290 D = 110	230	221.5	200	170

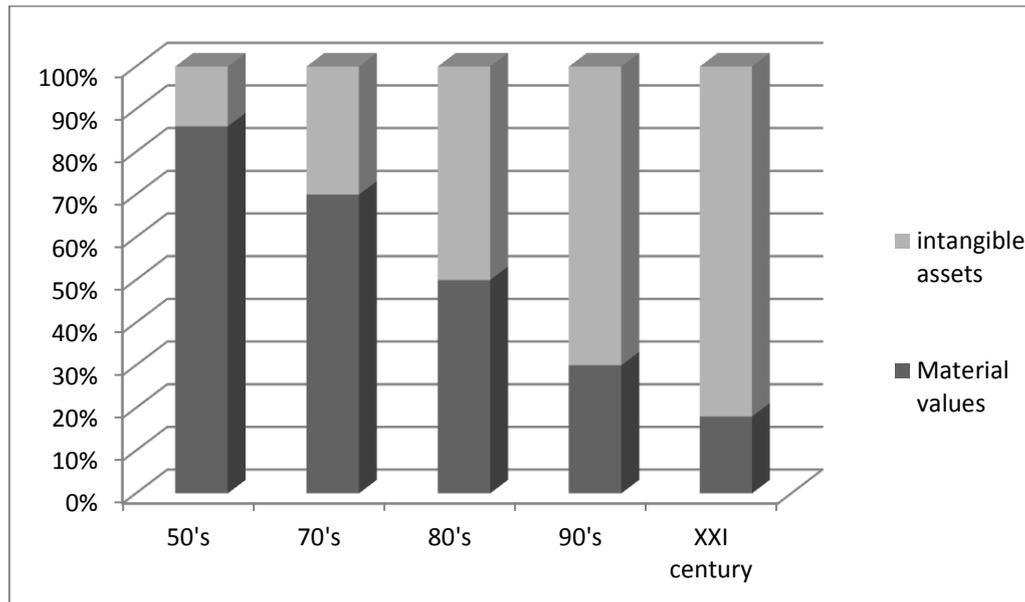
Source: own work on the basis of: valuations developed by valuers at the District Courts of Katowice and Cracow.

Regarding subjective selection of a method by a valuer, significant differences can be noticed in case of final valuation, with minor values of the enterprise. Therefore, there is a need to strive for standards that can embrace adequate profit and asset ration, i.e. permissible methods (formulas) for particular sectors or cases.

Another element, which influences the problems in establishment of a fair value is an increase in the intellectual capital significance. This is caused by global technological and organizational transformations, which have lead to a knowledge-based economy. The intellectual capital consists of, among others, legal values, technology and relations with client, etc. At the same time, the notions of intellectual capital embrace multiple vague and differing relationships corresponding to both the theory and practice. Figure 1 presents changes in the significance of enterprises assets for their valuation.

Therefore, regarding certain difficulties in valuation of non-material and legal value, which currently have the greatest impact on the company value, especially of the enterprises with great technological advancements, we deal with difficulties related to the correct, so-called fair value of an enterprise. The valuation methodology for non-material and legal values undergoes continuous transformations, seeking for a universal method. These days, a conclusion can be drawn that particular assets influencing the company value must be valued with different methods, most suitably reflecting the character of their value, in order to carry out the best valuation possible.

Figure 1. Significance of material and non-material assets within the course of years.



Source: own work on the basis of data: Eurostat, <http://europa.eu/statistics/> (10.08.2016).

4. CONCLUSIONS

The article, based on conclusions deriving from enterprises valuation, verified and - thanks to a logical analysis of particular cases - confirmed the hypothesis on occurrence of critical elements of valuation, which determine value of the property, and at the same time do not allow objectivity of valuation, intended to identify a fair value. A highly significant factor within the enterprises valuation procedure is a proper selection of methods. This selection is conditioned not only with the purpose of valuation and situation of the valuated subject, but also with a character of the enterprise and specificity of its economic activity areas. Economic situation of enterprises, i.e. their market position, property and financial conditions, ability to generate profits, is a part of determinants, which influence the valuation method selection. Furthermore, during analyses of information related to the valuated subject, as well as within the scope of application of the same method, we deal with so-called critical valuation points, i.e. elements that are subject to subjective selection. Adequate determination of a company financial condition may pose a source of differences, based on the persons that carries out the valuation and information that is available. Furthermore, it also needs to be stressed that each sector is characterized with certain specificity, which has great influence on numerous elements, which determine the valuation process. Occurrence on numerous subjective factors that have influence on valuation can lead to frauds, pressure and the willingness to influence the decisions made by valuers, causing distortion of the fair value. Therefore, the threats and problems to be solved in the future are as follows:

- freedom in selection of input data,
- application of wide subjectivity in the general procedure of valuation,

- subjectivity in selection of valuation methods and internal parameters,
- lack of cohesion in parameters estimation,
- no legal regulations and valuation standards.

Therefore, in order to facilitate enterprises valuation, there is a need to develop a synthetic, universal and at the same time cohesive methodology for basic parameters estimation. It also requires implementation of adequate regulations or standard related to widely acceptable methods of enterprises valuation. Works towards this direction are carried out thanks to gathering a group of specialists and practitioners. One of measurable results of the operation for elimination a series of threats is the submitted New Interpretative Note No 5 - General Rules for Enterprises Valuation. Summing up, it can be concluded that an adequate models for an economic entity valuation should not only inform about the total value, but also present the structure of sources for its creation. Therefore, methods of companies valuation should consider as many assets influencing company value as possible, In the future, such tool will lead to a desired unification of the methodology for estimation of basic parameters for valuation, and the degree, which will provide the recipients of this information with a possibility to choose the right variant of decision in the future.

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