USING THE MODEL OF MEASUREMENT INTANGIBLE ASSETS (INTELLECTUAL PROPERTY) TO EVALUATE COMPANIES IN BOSNIA-HERZEGOVINA

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ABSTRACT
In order to find out the full potential of a company in making profit in the future, it would be very useful to find out the value and level of the intangible assets of that company. Currently existing models of evaluation and measurement of intangible assets/intellectual property are inapplicable in Bosnia-Herzegovina, due to specific conditions in the country. So, the problem of determining the above mentioned model in the country is not only related to the specific nature of this entire resource (being intangible, immaterial, related to knowledge which is the basis of intellectual capital), but also to specific internal and external conditions under which the model is to be developed and applied. Among the problems of external nature is the inability to compare and determine the market value of companies, as the capital markets are not developed and the prices are not realistic. Non-risk rate of system risk β for shares on the market are not applicable. Internal problems of measuring are numerous, but mainly related to measuring of intellectual capital and the lack of adequate knowledge and experience in creating an own model for each company individually.
The model of measuring and evaluating of intangible assets/intellectual property in Bosnia-Herzegovina is based on ROI model, derived from fair assessment of values and interest rates on deposits with stable foreign banks, and it features a relatively simple success balance form.
The given model of evaluation is widely applicable and enables the managers not only in Bosnia-Herzegovina, but in all regions with similar problems, to manage and develop intangible assets/intellectual property in general, aiming for higher competitiveness and companies' profitability. Also, this model can be adopted very easily for the estimation and determination of the value and level all the elements of the intangible assets as a potential of the company to make profit in the future.
Keywords: intellectual property, intangible assets, success balance, projected net profit, fair value of companies

1. INTRODUCTION
What we can measure, we can manage successfully, no matter how hard or unfeasible it seemed when we saw it for the first time. However, today when we want to buy or sell a company, the elements not listed in business books, together with other external elements, affect greatly the final estimation of the company's price we plan to offer, that is the price a buyer will be ready to pay. It refers to the so-called: the client's assets, organizational and human assets who compose the entire assets, in the financial reports invisible, which is in the balance with the intellectual property of the company. In the greatest extent (so that it can be affiliated in value), in one word, it is an unrealized goodwill, i.e. the

positive difference the buyer needs or is ready to pay for the company and the net value accounting of the company according to the business books. For that purpose, it is necessary (with all the other elements of estimation of the existing items in the company's business books and their reduction to the real–fair values) to apply the model of estimation and measurement of the intangible assets–intellectual property. Due to specific problems in B&H, the model-methods (Direct Intellectual Capital methods–DIC, Market Capitalization Methods–MCM) used today are completely inapplicable or cannot be applied without certain adjustments (Return on Assets methods–ROA). Although there are rare companies in B&H that follow and evaluate their intellectual property, the awareness of the significance of the intangible assets/intellectual property is present among court estimators, financiers, banks, managers and potential investors.

The problem of determining the given model in B&H is related not only to the specific nature of this resource (immateriality, impalpability, relation to the knowledge which is the basis of the intellectual property), but also to the specific internal and external conditions and problems in which the model should be developed and applied, i.e. adjusted to the conditions and needs in B&H.

The **internal measurement problems** of the intellectual property/intangible assets are numerous, but we believe that the following should be emphasized:

1) Every company creates its own specific valuation model of the intellectual property/intangible assets through the measurement of certain elements of the intellectual property (Solution: to choose indexes for each element of the intellectual property depending on the specific comparative advantages of the company and connection to the basic index, e.g. ROA, which, as the target index, is related to the best company in the branch, environment, the competitive company or the strategic goals of the company, if that one is the most successful in the branch).

2) The constant reduction of the company's property to the fair value, as one of the solutions of the objectification and reduction of the company's value to the common denominator (Solution: obligatory reduction of the internal elements to the fair value in the balance sheet).

3) The company's success (Solution: to apply the model, before all, to the companies that run a positive business or have unrealized goodwill).

The **external problems** in determining the model of the monetary valuation of the intangible assets – intellectual property (related to the specific insufficiently developed economic conditions present in B&H, which is, more or less, a characteristic of all the countries in transition) are:

1) Comparison and identification of the company's value at the market is very difficult to do, because in B&H does not exist a developed capital market (Solution: to determine the company's value by combining the property estimation in the business books with the value estimation using the development elements of the intangible assets-intellectual property)

2) Measurement of the property with the non-risk rate of the system risk for the stocks at the stocks exchange (ß), cannot be used for the conditions in B&H and it is not a reliable index of the financial market (Solution: to use the interest rate for the year's fixed-term depositing in bigger banks for the amount of the involved capital in the given period and to compare with the realized increase of the capital in the given period).

Due to the all above mentioned, the Return on Assets methods – ROA, with the necessary adjustments (in accordance with the above given solutions) were our choice to form widely applicable models of the intangible assets-intellectual property valuation in the B&H companies.

2. BASIS OF THE INTANGIBLE ASSETS VALUATION MODEL IN B&H

The basic assumptions for the application of the intangible assets-intellectual property valuation model can be divided in external and internal.

External assumptions are: -Non-existence of inflation, i.e. maintaining the currency at the given level with Euro (which is a fulfilled condition in B&H thanks to the Currency Committee), -Equal tax rate for the gross profit of a company, -Exclusion of benefits or monopolistic benefits that a company might have.

Internal assumptions are: -In order to state the amount of money of the intangible assets of the company, all resources in the balance sheet of the company should be adjusted to the fair value, -In order to state the amount of money of the intangible assets, the company should run its business with success and to have a desire to keep that success, -In order to state the amount of money of the intangible assets, the realized net profit, as well as the profit expected to be realized, should be higher than the amount got by multiplying the involved property and interest rates for the bound foreign

currency account approved by bigger banks (if this is not the case, than the company does not have intangible assets-intellectual property which could be used in the evaluation of the company's value), - To have accepted re-engineering of the company according to the type of a flexible and market oriented company with clearly developed and fixed profit centers and to monitor their success according to the given prices, -To have a strategically focused organization, -To have a clear and real mission, vision and strategy of the company.

The given model is divided in two parts:

- The model of the monetary and currency value of the intangible assets (intellectual property) and

- The model to measure and evaluate the intangible assets through the monitoring of the success in achieving the strategic goals of the company, i.e. through the judgment of the development of certain elements of the intellectual property.

The basic postulate in the model of **the monetary valuation of the intangible assets** is that the ROA (which is set either in the value of the best in the branch or the region or aimed at something else) is greater than the amount that would be theoretically realized if the amount of the involved property is with the fixed-termed depositing in one of the bigger foreign banks for a year. In the basis of **the valuation model of the success of the intangible assets** as an instrument used to monitor the Balanced Scorecard. The indexes of the original model of the balanced scorecard are related to the elements of the intangible assets in the following manner:

1. Financial indexes……………………………………………...= Financial indexes
2. Outlook of employee specialization and efficient power growth | Human assets indexes
3. Outlook of internal business process………….…..……..= Organizational assets indexes
4. Outlook of buyers…………………………………………..= Customer assets indexes

For all the given indexes there is a menu serving only as a possibility for the most suitable index choice related to the strategy and specific advantages of every company.

Indexes of financial outlook, in the balanced scorecard, as an tracking instrument of a company's success, is considered to be the most important part since it represents the final result influenced by all the other elements and measured by financial indexes (actually it is the target ROA).

Indexes of human assets represent, in the given model, the prospect of human property as an element of the intangible assets and they show skills, knowledge and satisfaction of employees.

Indexes of organizational assets in when measuring the success of the intangible assets must ensure adequate monitoring of the promotion of internal relations, removal of bottlenecks, re-designing of certain actions, shortening of the performance cycle by introducing more efficient equipment and innovations, organizational solutions which, as a specific benefit, contribute the image of the organization and its greater success in running business.

Indexes of customer assets estimate the values that products and services have for customers. These are indexes which are connected to the buyers' evaluation of satisfaction and everything related to it.

3. IMPLEMENTATION OF THE VALUATION MODEL OF INTANGIBLE ASSETS IN B-H

In the implementation model there are two sub-models: 1. Model of intangible assets for targeted achievement and 2. Model of intangible assets for comparison of what is realized in the current period in comparison to the previous one.

In practice, the implementation of the second model is prior to the introduction of the first and basic model in the previous year. The key notion in the model is decision for adequate indexes per element and adjusted with the strategy and goals of the company. The more proportionate specificities and more adjusted to the given strategy, we will have the more realistic results of the model and greater reflection on the success of the company. In the first phase of the model realization, the influence structure of individual elements of the intangible assets is given in equal percentages (which is ideal). In the second phase of the model realization, the set values are being corrected according to the achieved indexes at the end of the period, for which the given value is being set. In that way, the real element structure of the intangible assets in percentages is shown. By multiplying the given percentages with the realized intellectual property, which represents the passive end, i.e. the source of these resources, we will get the height (value) of the intangible assets realized for the current period, and most likely in different percentages of the ideal–initial value. So, in the end, we will have the entire value and structure per elements of the estimated value of the intangible assets – intellectual property of the company.
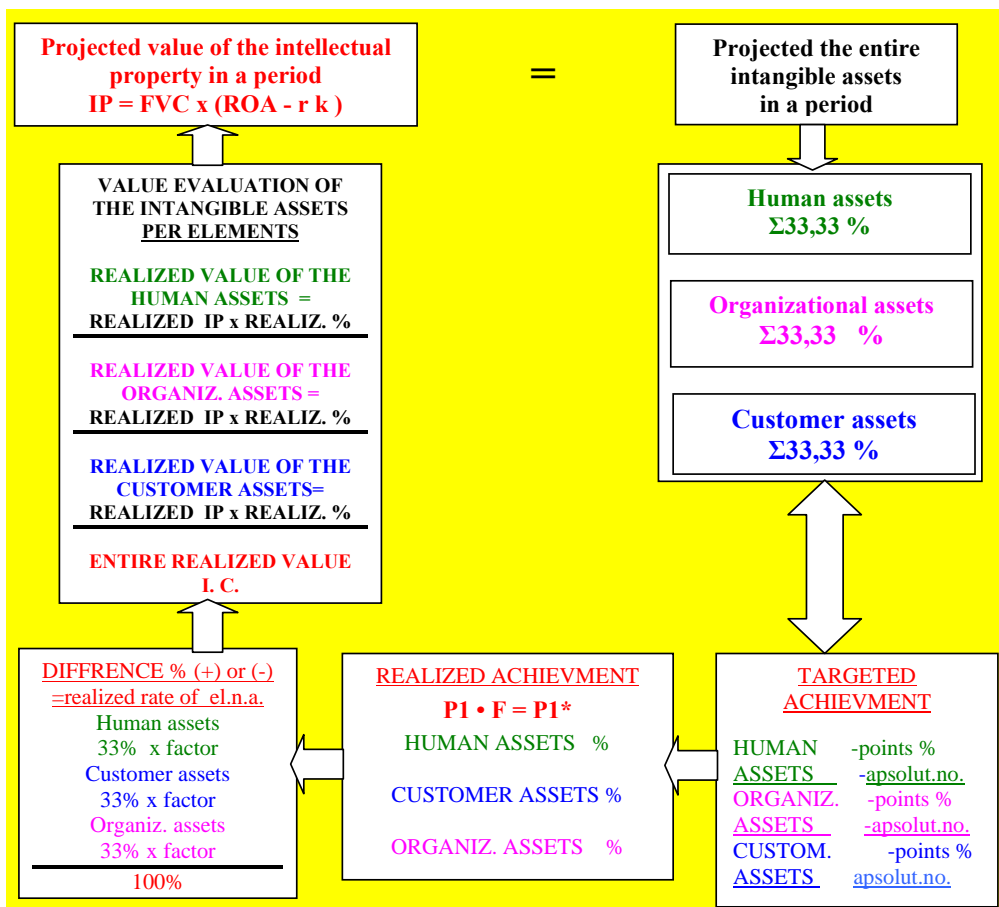
Projected value of the intellectual property in a period
IP = FVC x (ROA - r k)

=

Projected the entire intangible assets in a period

VALUE EVALUATION OF THE INTANGIBLE ASSETS PER ELEMENTS

REALIZED VALUE OF THE HUMAN ASSETS =
REALIZED IP x REALIZ. %

REALIZED VALUE OF THE ORGANIZ. ASSETS =
REALIZED IP x REALIZ. %

REALIZED VALUE OF THE CUSTOMER ASSETS=
REALIZED IP x REALIZ. %

ENTIRE REALIZED VALUE I. C.

Human assets
Σ33,33 %

Organizational assets
Σ33,33 %

Customer assets
Σ33,33 %

DIFFRENCE % (+) or (-)
=realized rate of el.n.a.
Human assets
33% x factor
Customer assets
33% x factor
Organiz. assets
33% x factor
100%

REALIZED ACHIEVMENT
P1 • F = P1*
HUMAN ASSETS %

CUSTOMER ASSETS %

ORGANIZ. ASSETS %

TARGETED ACHIEVMENT

HUMAN ASSETS   -points %   -apsolut.no.
ORGANIZ. ASSETS   -points %   -apsolut.no.
CUSTOM. ASSETS   -points %   apsolut.no.

Figure 1. Schematic display of the valuation model of the intangible assets (intellectual property)
IP-the expected intellectual property, FVC-fair value of the company, ROA-targeted Return on Assets, rk-interest rate for the fixed-term depositing of foreign currency resources at greater foreign banks, P1-targeted % structure/100%, F-correction factor, P1*-realized %/Σ realized %

4. CONCLUSION

Valuation and measurement models of the intangible assets/intellectual property that currently exist, due to the specific conditions in B&H are inapplicable. In order to fulfill the double assignment of the monetary valuation of the entire and per elements (human, organizational, customer assets) intangible assets/intellectual property, but at the same time provide the court estimators, banks, financiers, managers and investors with an instrument to monitor and evaluate of the intangible assets/intellectual property through realizations of qualitative and quantitative indexes related to the success of the company, we divided the model in two parts. In the first part, we have shown the formula to calculate the entire value of the intangible assets/intellectual property, and in the second part of the model, through a pretty simple form of balanced scorecard we have enabled the identification of the value per individual element of the intangible assets/intellectual property, as well as monitoring of their influence on the success of the company. The process of the forming of intangible assets model should be approached carefully and with respect to the specificity of every company.

5. REFERENCES

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