

## Designing a Complete Model for Evaluating Companies in "The Modern Economy" and Refining Financial-Accounting Information

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### Abstract

*The limitations of current evaluation methods call for the expansion of approaches to identifying new solutions for representing the value of ICT companies. Features "The modern economy", the imperative of eliminating the inflection points, the necessity formulating an equidistant definition of value and the absence of a degree correlation refining the accounting regulations on intangible assets with development economic and social based on intellectual capital are as many arguments for the emergence of a new representation of value. The new FMV (Future Market Value) method provides economic information in its dynamics and value in its evolution. Concerns practitioners in the field over the last decade reflect a consistency with the premises of our research.*

**Key words:** evaluation, intangible assets, goodwill, intellectual capital

**J.E.L. classification:** M41, G11

### 1. Introduction

Within this chapter we will realize the logical construction of a complete model of a companies in the "new economy" stricto sensu for the companies in the field IT, and lato sensu, of companies that record an important amount of invisible (or intangible) assets. The investigative analysis carried out in view of achieving the above goals will allow the identification of specific factors determines the performance of companies in the "new economy," will validate its existence a new evaluation model for these companies and will isolate and exemplify it the implications for the presentation of the information in order to provide the data for applying the new model. Companies whose operations are based on knowledge have identified in the theories of intellectual capital the opportunity to report intangible resources that are not disclosed in the financial statements in related documents by means of particular mechanisms and methods (Andrikopoulos, 2005). These related documents have the quality to provide information additional to those permitted by international accounting standards (de example IAS 38), while raising the issue of relevance from the point of view of value of financial statements complying with national or international standards accounting. (Zambon et al. 2003, p. 15) seeks the source of this problem on three dimensions: a first dimension consisting in the absence of a conceptual framework for identifying, collecting and analyzing data for purposes the company's internal management; a second dimension of reporting external financial assets, represented by the difficulty the determination of costs for the recognition of intangible assets and the third one dimension, absent at the time of study, of conceptual frameworks, instruments and agencies for collecting microeconomic data and Macroeconomic. The difficulty in determining costs is resumed by ( Bessieux - Ollier et al. 2006) which emphasizes the restrictiveness of the recognition required by IFRS, making it the main impediment of the recognition of intangible assets relative to human capital and identifies 5 future research directions (Bessieux-Ollier et al., p. 50):

- integrating existing guides into a commonly agreed framework
- worldwide allowing the valuation and publication of intangible assets;

- studying the efforts to innovate personal experience and skills to improve the competitiveness of enterprises;
- developing models that allow structured information on intangible assets and representation of how they interact with other assets of companies in value creation processes;
- assessing organizational factors that stimulate or inhibit transmission of knowledge;
- researching the way in which the assessment of intangible assets responds the needs of companies and, at the same time, the need for standardization of the information published in the ICS.

We note that the first three directions suggested by Bessieux-Ollier et al. correspond our investigation during this chapter. Importance of generators value not captured by financial-accounting information is also noted by Lee and (Lin .2010) showing the relationship between the company 's governance skills and market value of Taiwanese companies. In the same range, we retain the study conducted by (Kallunki et al. 2007) whose efforts are directed at determining the influence of the R & D activities on the market value of the companies in merger and acquisition processes. In our opinion, the examples above provides the basics necessary for the development of our study proposes to identify the main terms responsible for company performance in the ICT sector thus directly contributing to the determination of a new one evaluation model.

## 2. Literature review

Investigation of specialized literature and aspects encountered in practice reveals a number of prerequisites commonly accepted as follows:

1. observing a relationship between the information included in the financial reports and market value of tradable securities issued by companies;
2. Variations in the value of titles in relation to internal life events companies and external macroeconomic events;
3. the existence of a relationship between temporality and the value of titles;
4. the existence of an influence of the perception of the public and of their influence with the value of titles;
5. an influence of the level of standardization of the presentation of information on premises referred to in point 3.

If for the first 4 premises their validation can occur from determinations made over longer periods of time (such as decades), last the premise demonstrated its validity especially during the period 2000-2008 punctuated by the emergence of the Sarbanes-Oxley (2002) law or the identification of causes crisis occurred in the last quarter of 2008, in the absence of regulations specific operational or regulatory relaxation financial-accounting reporting in the U.S. In this situation, the lack of standardization in the field may, in our opinion, be manifested in the matter perception of PER or other terms, discussion of the relationship between the predicted future value of a company and its market value. note, also a tendency to omit the evaluation process through other approaches and related methods when the company is quoted on a stock market. Even the issue of liquidity on a certain stock market was many times omitted in the context of the free movement of capital. In this context we consider that identifying and formalizing a cumulative and explanatory causal relationship for premise 1-5 is timely and beneficial. To determine this, we'll use a construct that includes statements and determinations based on the empirical study. The ads have their origins the absorption in the present work of the subjective theory of the value that is the more appropriate value theory that can explain the presence of elements like the background commercial goodwill and intangible assets identified at that time business combinations. Expanding in terms of typology and others the amount of intangible assets to the detriment or complementarity goodwill requires migration to an equidistant value theory , but it does not eliminate the character of subjectivity the perception of value, possibly when the characteristics are incorporated the perception of time in the economy. So the standardization surplus that would resulting from the use of a new model and, implicitly, of a new method would not eliminate the advantages of temporal use but would use, in a simplified way: a reduction in the risk of determining the value of the company on a term

long; a goodwill substitution with clear components identified, controlled and evaluable as intangible assets of the company at the time of its trading and anticipating the evolution of these elements by component time.

We will continue to build the complete company rating model of the new economy with an emphasis on the ICT sector based on the following conclusions from the study of value theories.

C 1. The value is dependent on a complex of endogenous and exogenous factors in this is contextual. Present value coincides with future value only in exceptionally. The logic of this statement lies in the clear difference between the active and income-based. Starting from the latter, the DCF method confirms, on an axis of time that does not extend to infinity, that for different values in time the projection will be different. In the presence of a system with very positive entropy all terms of the calculation will undergo changes. However, this has only a beneficial influence on stock markets as the differences between real and presumed diminishes by correlating with the lower probability of some possible shocks or crises. Economic liberalism is not undermined the question as endogenous factors (controllable at a higher level by company) may be the subject of variations resulting from strategic or tactical management. But the question is whether the sum of the internal variations of companies does not actually mean changing market conditions. In these conditions the solution comes from designing the presumed value on the time axis.

C 2. Companies are doing activities that create or destroy value both both present and future. These activities involve the exploitation of some resources combines in operational processes. Interpreting the above assertion does not exclude the simultaneous creation and destruction within the perimeter of the same company. Ideally any company could to be unique in the value-generating processes. This thing but would exclude two important prerequisites for the new economy: a search heuristic methods and imperfect and inhomogeneous markets. The above provides migration from the ideal plan into the concrete one for economies, markets and companies. Extreme optimization would lead exclusively to processes creating value, which in turn would lead to the achievement of the framework perfect markets. Consequently, within the same company, we will find it with great probability large, both value-creating processes and value-loss processes. It remains questionable to determine the value of the landmark, namely that in the ratio with which the positive or negative variation can be identified. Of course, the answer is obvious, that is, this value is the sum of the values reference intermediates for those processes. Determining this values are made by reference to market momentum conditions. For example, the conclusion of a loan agreement to finance an investment may oscillation between positive and negative by reference to the conditions of the financial market (as would be an average cost relative to the borrowed amount). A financing obtained at cost higher than those applicable in the market for similar situations would result in a negative influence on the value of the company.

C 3. Profit generation is based on competitiveness through optimizing client access procedures, type - dependent procedures markets, disposable income and macroeconomic forecasts Specialty literature has established the link between customer satisfaction and the stability of the company's market. In our opinion, this is just one criterion to determine the potential generating future benefits and not a fact determinant. The feature of the current economy is the stratification of markets and, in As a consequence, the attack of the market must be refined and adapted. The specialization of products and services, the provision of integrated services lead to identify companies and reduce the number of actors in the market through the tendency to individualize and the procurement operations.

The relationship between generating future benefits and disposable income is direct as customers, under the conditions of the new economy characterized by innovation at the level of the products but and distribution methods (such as e-commerce) do not have one a clear and unequivocal reference in price appreciation, but rather a comparison the asking price with the available revenue to buy the necessary products. In fact, this precept can also be included in the tendency to create a monopoly to obtain the corresponding overlapping. Positive macroeconomic forecasts may show decisive influence on distribution policy and competitiveness. The simple reason of economic growth creates the premises for an income available higher correlated with the

increased opportunity of leverage leading to a higher appetite for consumption and consequently increase the company's market.

C 4. There is a causal ratio deduced from a correlation high enough to be formalized between generating economic benefits, resource management, the value of the company and the trading price on a stock market. The generation of future benefits lies not only in revenue growth but also in reducing costs based in particular on cost reductions. Therefore resource management is crucial to optimizing the flow of benefits. The way the company's resources (which we do not determine on the basis of that the classical approach to the factors of production) are used can decisively influence on future benefits. For this reason, the company can be regarded as one a set of projects that produce its value and the resource allocation ratio, which are limited, must be optimized. Often, especially at the onset of new ones projects that are viewed with confidence by the public or investors, the value the company's stock exchange is positively influenced, as estimated projects have low chances of success have a negative echo in the stock market performance.

C 5. A modern management system is built starting from identification strategic (measurable) objectives, allocation of resources to generating elements value based on strategic objectives and identifying correlations between value generators and EGR. Since in the new economy classical production factors are filled in the inclusion of information and intellectual capital, and the laws of the economy classical, respectively decreasing yield laws are no longer validated, it is it is necessary that the correlation between objectives and resources is correctly determined. Thus, strategic objectives need to be evaluated before determines how the allocation of resources will be achieved. The value is not proportional to the way resources are combined, it can records polynomial variations, it is important for the organization to be in measure these variations and set their goals according to opportunities to maximize the value function. In a stable environment with projects reached the maturity phase, the values of the value function are flattened by leading to a proportional evolution. That is why identifying objectives must be achieved before the allocation of resources. How to allocate a they can be a determinant for exploiting the points of which the ratio is value - resources is no longer proportional. EGR is dependent on a series of factors that represent the growth potential of the company. EGR expresses two main trends of company activity:

- increasing efficiency by optimizing output
- consuming resources;
- a degree of growth determined on the basis of the project portfolio stages which represents the company's operations.

C 6. Observing the tendency to use financial-accounting reports it is necessary to evaluate the company's performance potential includes in these reports the presentation of the estimated value of the business on a temporal scale The correlation between the items presented in the financial statements and the stock exchange value of a company is relevant in terms of the value of the situations financial. A number of studies show little relevance in terms of value especially for ICT companies. The model you are going to we will continue to detail this work in order to increase this relevance by introducing the results obtained by applying the model proposed in the financial statements.

### 3. Construction of the evaluation model

We will build the new model of evaluation based on three principles:

#### Principle I

1) Observing how resources are used at a companies, and formalize the generating value of the company.

Determining the generation of value based on the elements obtains the following set of equations:

$${}^t V = j_t V (\text{NET RESOURCES}) + j_t V (\text{RESOURCES PROCESSING}) \quad (1.1),$$

where:

${}^t V$  = the value of the company at time  $t$ ,

$j_t$  = the value generated by the NET AND RESOURCES contribution items

PROCESSING RESOURCES at time  $t$ ,

Transforming the equation (1.1) according to the following, we obtain the following equality:

$$t V = jt V (\text{NET ACTIVE}) + jt V (\text{RESULTS NERECUNOSCUTE}) + jt V (\text{RESULTS}) \quad (1.2) \text{ and}$$

$$t V = jt V (\text{ACTIVE NETE}) + jt V (\text{RESURSE NERECUNOSCUTE}) + jt V (\text{RESURSE NETE } 2) \quad (1.3),$$

where:

NET RESOURCES 2 are the net resources obtained from the results less the flows leaving the company following the assignment processes

$$t V = jt V (\text{ACTIVE NETE } 1) + jt V (\text{RESERVE NERECUNOSCUTE } 1) +$$

$$jt V (\text{ACTIVE NETE } 2) + jt V (\text{RESOURCES NERECUNOSCUTE } 2) \quad (1.4)$$

Equation (4.2) is a synthetic version of the model's "foundation equation"

LID (Ohlson, 1995):

$$(1), \text{ where } P = 0 \text{ and } + 1 b jt B + 2 b jt X + 3 b jt u + jt e \quad (1.5)$$

where:

$j P$  is the value of a company, and the terms dependent on the information accounting, namely:

$jt B$  represents the carrying amount of equity (net asset),

$jt X$  represents the net profit,

$jt$  represents "additional information" available to the public but not included in the financial statements and is the residual variable of mean 0.

The above assertion is based on the following assimilations:

$jt V (\text{ACTIVE NETE})$  is  $1 b jt B$

$jt V (\text{URGENT RESOURCES})$  is  $3 b jt u$

$jt V (\text{RESULT})$  is  $2 b jt X$ .

In this context, it remains to determine the influence of resources unrecognized. This influence must be determined in a way separate and sufficiently detailed to remove significant disturbances induced by subjective components. For this reason we will identify in the row unrecognized resources and the influences of exogenous factors. One such the approach would ensure comparability at company, sector and on - level levels time intervals. Andrikopoulos (2005), conducts an investigation into ICS in to determine value generators for companies with operations centered on knowledge starting from the equation (also recognized through Tobin's indicator  $q$ ):

$$IC = MV - BV \quad (1.6)$$

where:

IC is the intellectual capital,

MV is the market value and

BV is the net asset value of the accounting, providing a calculation solution for calculating the subjective component of the investor (investor sentiment).

Synthesizing the above, we identify on the basis of the Ohlson Model (1995) adapted by the author, four categories at which we will investigate the existence and influences of value generators: Net Assets, Results, Resources unrecognized (on balance sheet) and Exogenous Factors.

## Principle II

Use the equation (1.2) and the LID model in determining the value of companies has been proven by a number of authors in papers I have considered relevant for our purpose of determining valuable generators related to the ICT sector, the results of which are summarized below:

Park and Park (2004) support the development of a new a technologies using the notion of technology evaluation (VOT) and technology market value (VOM) identifying value generators whose share is determined according to the opinions of the specialists, the value from the capacity technology to create profit surplus through additional revenue or through cost reduction. Value generators have an intrinsic, assimilable factor of the net resources from the above proposed equations (degree of protection, level technology, lifetime of technology, degree of standardization) and a factor dependent on the application of technology assimilable to the processing of resources (type technology, contribution rate, applicability area and completeness). The importance of e -

commerce is also recognized by Evanschitzky et al. (2004, p. 245) which in their study finds that the indicators proposed by Szymanski and Hise (2000) can represent to a moderate the perceptions of German consumers. These indicators are grouped in five categories (transaction convenience, product offer, level of information on products, site design, financial security of the transaction). Number of theoretical value generators used in the 2008 study of Joshi and Ubha (2010) is extended to a cardinal of 39 of which only 14 are detained in situations information provided by the sample of 15 ICT companies in India. Zambon et al. (2003) reaffirms the importance of intellectual capital in explaining of the value of companies quoting the results of investigations conducted by Edvinsson and Malone (1997) starting from the equation: Organizational Intellectual Capital =  $i * C$  (1.7), where:

- i is the coefficient representing the organization's efficiency in capital use intellectually and,
- C is the optimal intellectual capital.

Edvinsson and Malone (1997) group the 21 contributing indicators determining C in six categories, as follows: the development of new business, investment in computer systems, development of customer relationships, development human resources, partnerships, intellectual property and branding. Baklouti et al. (2007) lead a study that highlights the importance of investment in fixed assets intangible or intangible assets in relation to the share price starting from the constituent elements of intellectual capital according to the classical definition: human capital, structural capital and relational capital. In order to determine an appropriate model of evaluation we will take into account value generators identified to provide an equidistant definition of the value (definition which, in our opinion, offers a perspective that may have the advantage of limiting the occurrence of inflection points) and we will include the proposed generators in the works mentioned above in order to determine a value dependency relationship quantifiable generators and to formulate the necessary statistical regression.

### Principle III

The measure of the feasibility of constructing a system that allows projection of value on temporal units have been given, in our opinion, early on by Abrams (2005). The method allows the creation of an instrumentation that also includes the methodology management of growth strategies, contributing to our investigation through completing the set of value generators. Thus, Future Market Value, FMV (Future Market Value) at the time n, it is

$$FMV_n @ 1.10 \times 0 \text{ Inc} \times x \times n \text{ g} \text{ } 1 (+ x \acute{u})$$

where:

Inc. represents the income, g is the growth rate, CapExpend represents the capital expenditures, Since depreciation, IncrNWC is the increase in net working capital and r represents the discount rate.

## 4. Conclusions

This method has an advantage which consists in the fact that if the majority traditional methods offer calculation methods for current value, value useful for tax, legal or merger and acquisition purposes, FMV offers managers or investors tools for managing value creation. The applicative feature of the model is to identify a balance that should be reached by developing companies. This balance is manifests both at the level of income growth (growth that should ideally be to be accelerated), but also to managing cash flows (which also in ideally they should not be adversely affected by revenue growth). The usefulness of Abrams' approach from the point of view of our research is a complement to the portfolio of value generators.

The information presented in Principles I, II and III helps us to build an appropriate set of value generators whose influence on the change in market value we will use it in constructing our model, also relying on the Model LID of Ohlson (1995) and the division of the company's breakdown into a portfolio concurrently running projects, a portfolio where we identify a number of value generators, used on the value of companies in the new economy.

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