How do finance and accounting perceive relationship value?

Work-in-progress

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Introduction

In the field of financial accounting, numerous studies were published that dealt with valuation. These highlighted the paradigm clash between accountants - proponents of historical value – and financial analysts preferring the future cash flow generation mechanism (Barberis and Thaler 2002).

The value beyond financial statements insinuates that value exists beyond what is recorded in the books of a company. Usually, **such "assets" are not owned, nor possessed, but rather they are an attribute that can be managed.** Therefore, quantification poses a severe problem – a problem that w shall not attempt to tackle in this paper. Rather, we wish to draw attention to the importance of such assets, which, we will attempt to organise into a framework that fits the traditional firm valuation mentality that economists are familiar with.

Quasi-Assets

Strategy, corporate culture, business relationships and human resources are the most important quasi-assets that an enterprise "possesses." As introduced above, these invisible elements are "quasi" assets as their property does not allow them to be actually owned by the companies. They are rather attributes, intangible relations that have the power to influence performance. There are four invisible assets. These invisible assets could be set in a framework for valuation purposes. The paper proposes a simple but comprehensive logical model for the valuation of these quasi-assets.

Beyond the valuation problem of invisible capital there is a more general question. How can we evaluate knowledge itself? What does knowledge mean for the organisation? What is the role of tacit knowledge and how is it possible to manage it? The problem of management assumes the question of measuring. What are the means of measuring tacit knowledge be with the use of financial and accounting tools?

Introduction

In our paper, we introduce the valuing of enterprises from an untraditional perspective. In the field of financial accounting, numerous studies were published that dealt with valuation. These highlighted the paradigm clash between accountants - proponents of historical value – and financial analysts preferring the future cash flow generation mechanism. (Barberis and Thaler 2002)

The concept of invisible capital embodies a value beyond financial statements. Part of this resource is none the less acknowledged by accounting in the form of intagible assets. See table 1 for the balance sheet structure. In the accounting paradigm, an enterprise can be viewed from two distinct perspectives. A view that shows where its assets come from, and it is known as the liabilities. Another perspective, that reveals in what specific assets the capital is manifested in. This part is called the assets of the firms.

The concept of value beyond financial statements insinuates that value exists beyond what is recorded in the books of a company. Usually, such "assets" are not owned, nor possessed, but rather they are an attribute that can be managed. Therefore, quantification poses a severe problem – a problem that we shall not attempt to tackle. Rather, we wish to draw attention to the importance of such assets, which, we will attempt to organise into a framework that fits the traditional firm valuation mentality that economists are familiar with.

Assets	Liabilities
Tangible assets	Equity
Intangibles	Debt

1. Table Balance Sheet structure

1. Invisible Capital

We introduce the concept of invisible capital as a broader perspective of relationship value. **Invisible capital is a liability that manifests on the asset side of the balance sheet as "quasi-assets."** The elements described in this paper are the most important quasi-assets that an enterprise "possesses." See table 2 for an extended enterprise balance sheet model including the invisible element. As introduced above, the invisible capital appears as "quasi-assets" as their property does not allow them to be actually owned by the companies. They are rather attributes, intangible relations that have the power to *influence performance*. We highlight three distinct categories of invisible capital which we set in a framework for valuation purposes. Then, we introduce four types of quasi-assets, and later, connect the asset and liability side. **The paper proposes a simple but comprehensive logical network-based model for the valuation of quasi-assets.**

Total Assets	Total Liabilities
Book Value of Assets	Book Value of Liabilities
Quasi-Assets	Invisible Capital

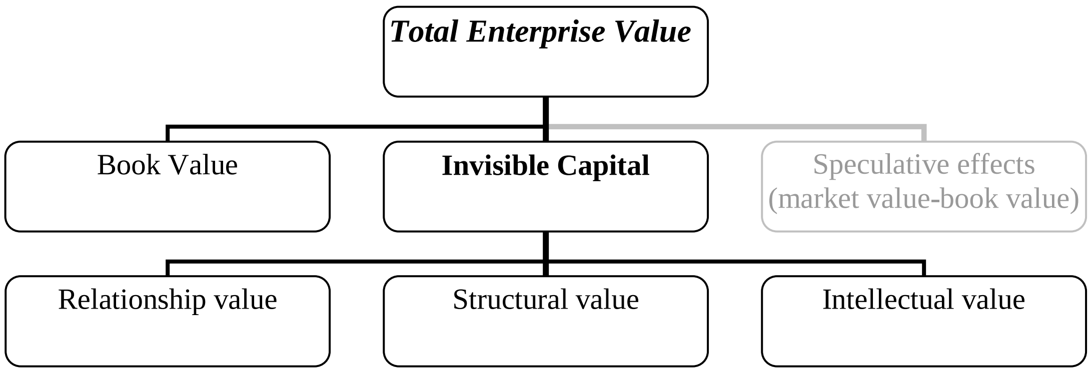
2. Table Enterprise balance sheet extended with quasi-assets

In the last decades the proportion of tangible assets to enterprise market value has decreased significantly, from 62% 25 years ago to 10-15% today. According to a US research only 20% of enterprise market value appears in the balance sheet, as opposed to 98% 20 years ago. Invisible elements are estimated to account for 60-75% of enterprise value. (Testimony, 2002)

A result of the difficulties concerning the measurement of invisible capital is that, in the case of mergers and acquisitions, the parties are often not aware of the company's real value. As invisible capital becomes more and more significant, profit and loss calculation has to change, as e.g. the costs invested in knowledge are incurred today, while they generate profit in the future, so a future-oriented attutide is essential.

What does enterprise value consist of?

Elements of Total Enterprise Value



1. Figure

We note that book value can be historical or fair value depending on the accounting policies adopted by the reporting company. Speculative effects, however correct book value to the actual market price in the case of a traded security. Market capitalisation is by no means a reflection of enterprise value, as it represents only price of equity, and only the price of one share. The aggregate of all (majority of) shares cannot be purchased for this price. Therefore, we disregard market capitalisation from valuation of quasi-assets.

We can see that the book value of a company, which appears in its balance sheet, is merely an item in its total value. In order to be able to determine a company's total value, it is not enough to know the value of tangibles, because there is an invisible value beyond. Enterprise value is influenced by speculative effects as well, although these cannot be regarded as company assets.

It is important to note that invisible elements mentioned above are not equal to the *intangible assets* recognised by accounting.

'Invisible capital' is a term that has various definitions from different theories of management and economics and is most often referred to as *intellectual capital*. A well-known categorisation of it is the following (OECD, 2006):

- relational capital, (e.g. supplier and customer relationships)
- structural capital, (e.g. strategy and corporate culture)
- tacit knowledge (e.g. human resources)

Naturally, neither relational, nor structural capital can entirely be separated from tacit knowledge, i.e. human resources. These inter-connect and influence each other.

Tacit knowledge refers to knowledge related to work, know-how, skills and qualifications, innovation ability, working morale and different attitudes (e.g. reaction to challenges, willingness to work in a team, level of motivation etc.) (based on Gősi, 2007). We use the term 'intellectual value' for this, as capital and resources/assets are not synonyms.

The term capital reflects the attitude of the capitalistic society, when there was capital scarcity, while resources/assets refer to an approach which considers costs and expenses related to labour force

investment.
The intellectual values related to labour force are ability, skill, aptitude and competence (Laáb, 2007b).

Abilities are potential assets which can become skills when mixed with routine. Aptitudes are features, characteristics difficult to change. Competences develop from aptitudes and skills. An important aspect of competences is authority.

Knowledge can refer to two things. One of them is the general or company-specific *explicit knowledge,* which is characterised by tangibility, such as copyrights, patents, education materials. (Szatmáriné, 2002). This kind of knowledge is recognised by accounting as *intellectual property*.

The other form of knowledge is harder to grasp. It is called *tacit knowledge* or *tacit knowing* – the term was first used by *Michael Polanyi*, philosopher of Hungarian origin, in his book 'Personal knowledge'. He stated that people know more than they are able to speak about. (Polanyi, 1998)

One approach states that tacit knowledge is the background of explicit knowledge and can only evolve through social interactions. This way it connects to another item of invisible elements, structural value, as intra-organisational interactions take place within the organisational structure.

Some emphasise the passive nature of tacit knowledge, while others relate it to personal experience or stress that as this form of knowledge is not documented, consists of beliefs, mental models, convictions and is difficult to communicate, it can hardly be of strategic importance, although around 80% of knowledge accumulated in a company belongs to tacit knowledge. (Mihály, 2007)

Tacit knowledge cannot be separated from the individual and it is very difficult to transfer, so in most cases the company possesses this form of knowledge only as long as it employs the individual.

The company cannot practice ownership rights over its employees as it can over all the assets appearing in the balance sheet. Determining the value of employees, individuals can be considered offensive, as it might recall slavery. Of course we are not talking about the value of the individual, but the value of the knowledge possessed by him or her, concerning the role it plays in the company's value-creating process. In some cases company-specific knowledge (be it explicit or tacit) is a value-creating resource at one company, while does not represent any value for another.

Let us consider the asset side of invisible capital. It is manifested in the following quasi-assets.

Quasi-Assets

a. Strategy

The strategy includes the main guideline set to achieve the company's mission statement. It is put forth by management as a long-term direction setting, broken down to shorter-term strategies. Strategies are difficult to be drawn up if no objectives are set. Often times, the objectives of an enterprise are themselves contradictory in the sense that maximising shareholder value and maintaining going concern are conflicting ideas; promoting growth, while reducing cost of capital is also an instance. These are examples of desired objectives whose strategic implementation will lead to contradicting strategy plans. Therefore, a sound corporate strategy will try to balance the needs in a trade-off model. Whether the optimum has been found or missed, will be reflected in the valuation of invisible assets.

b. Corporate culture

The corporate culture is not defined by written rules. It is the set of moral standards prevalent at an organisation imposed by the corporate community upon its members. It is an element that is difficult to change. Corporate culture includes how members relate to one another, and what collective behaviour rules apply. Corporate morale can be boosted through team-building, but can be shattered with a destructive compensation package or bonus calculation scheme. An example would be if higher bonuses can only be earned at the expense of other colleagues' remuneration.

c. Supplier & Customer Relationship

Referring to the **interactive model** (Hakansson 1982) **business relationship is considered as an interactive exchange relation between two organisations.** More exactly between two groups of involved people, the members of the buying centre at buyer side and the members of the selling centre at the vendor side. Exchange episodes are building the business relationship from the first, initiative steps till the end of it. To create a business relationship demands a certain amount of resources, mainly special skills, imagination and strategy.

Maintaining a partnership requires much more. In today's **B2B environment, technological advances have allowed for full integration of the supply chain.** Suppliers are able to monitor inventories at our stores and allowing for reorders, while invoicing and settlements with customers is done automatically. **The establishment of long-term relationships among supply chain entities allows for investment in such integrated work-models embedded into networks.** These in turn ensure a reliable partnership than can be counted on in times of economic distress. Suppliers, for instance, are a convenient form of financing and alleviating debt; therefore an established relationship network involving suppliers or customers is loaded with intangible value.

d. Human resources

The human resources are the driving force behind a firm. This is especially true in services-oriented business where the end-product is dependant on the human factor. Management consultants often cite the expression, a firm can only get as good as its weakest person in the team is. The services rendered with material products were gaining preference in the past few decades. Customers were not only looking for a property to buy from the real-estate agency, but they also looked for their expertise, advice and service. The relationship of a firm with its workers is a two-edged sword. Loyalty can be rewarding while bad feelings, distrust can be a source of negative value to the firm.

Enterprise Value Extended

The book value recorded in accounts shows the price of each asset individually, the enterprise value, on the other hand, represents a sum that also accounts for quasi-assets as well. Therefore, market value carries the implied meaning of intangible elements already discussed. Parts of these quasi-assets are recognised by accounting in the form of intangible assets. The traditional accounting formula states:

Enterprise Value = Σ Tangible Assets + Intangible Assets +Other Assets

To clear out any possible misunderstanding regarding terminology, tangible assets refer to fixed-assets that serve the long term in the balance sheet excluding intangible assets. The intangibles may be positive or negative as they include the goodwill ledger. In case it is positive, constituents would comprise the value of brand names, intellectual property, and accounting goodwill.
Accounting goodwill as defined by the Accounting Act for the year 2000 in Hungary is the difference between the market price and the book value of total assets or liabilities. (Accounting Act 2000: 3§ (5) 1.) In other words, intangible assets of a firm, that are quantifiable can be measured

based on expense recognition. Other intangible assets, that cannot be easily quantified, but only add to the cash flow generating capability of the firm, and are valued by the buyer, are called the goodwill. Goodwill is exactly the amount by how much more a firm spends on acquiring another than the total (historical) amount of its assets. If the firm was bought for less, then a negative goodwill may lead to a negative intangible assets ledger in the balance sheet. On a side note, we have to mention that a negative intangibles account is only technically possible in a financial model of an analyst. In accounting, strict rules determine the presentation of negative goodwill. It is placed in the liabilities side and labelled as badwill.

Integration to current accounting standards

As mentioned, invisible capital is the force that bonds an enterprise's material assets into an entity that is more valuable than a mere sum of its parts. Accounting has realised this fact and has allowed for the recognition of elements of invisible capital. The international accounting standard that deals with the definition and recognition criteria of intangibles is called the IAS 38 (International Accounting Standard on Intangible Assets). It defines intangible asset in the following way:

Intangible asset: An identifiable non-monetary asset without physical substance. An asset is a resource that is controlled by the enterprise as a result of past events (for example, purchase or self-creation) and from which future economic benefits (inflows of cash or other assets) are expected. Thus, the three critical attributes of an intangible asset are: [IAS 38.8]

- identifiability
- control (power to obtain benefits from the asset)
- future economic benefits (such as revenues or reduced future costs)

Recognition criteria. IAS 38 requires an enterprise to recognise an intangible asset, whether purchased or self-created (at cost) if, and only if: [IAS 38.21]

- it is probable that the future economic benefits that are attributable to the asset will flow to the enterprise; and
- the cost of the asset can be measured reliably.

This requirement applies whether an intangible asset is acquired externally or generated internally. IAS 38 includes additional recognition criteria for internally generated intangible assets.

The probability of future economic benefits must be based on reasonable and supportable assumptions about conditions that will exist over the life of the asset. [IAS 38.22] The probability recognition criterion is always considered to be satisfied for intangible assets that are acquired separately or in a business combination. [IAS 38.33]

As far as invisible elements are concerned, the company does not have sufficient control over these, so they do not fulfil the recognition criteria according to IAS 38.

The definition of accounting goodwill raises the question that if this ledger is **a collective account for all values not stated in the tangible assets, then why is there need to discuss values beyond the balance sheet?** The answer to this question is tricky. Does market price that is determined by the forces of demand and supply reflect the whole value of a company? Certainly there are invisible assets that are not owned by the enterprise, but can only benefit the firm. These unseen elements can be managed, and unfortunately they can also be mismanaged. They possess value creating potential. They include the possible synergies with the acquiring company. Therefore, it does make sense not to place them on the balance sheet. On the other hand, it makes more sense to place them in a framework when valuing a company, for the use of strategists and management.

In a new concept that includes the value creation by management tools, mentioned in this essay, we shall introduce the concept of Total Enterprise Value that can be defined as follows:

$$Total\ Enterprise\ Value = \Sigma\ Tangible\ Assets_i + Intangible\ Assets + Quasi\text{-}Assets$$

We distinguish quasi-assets as being the part not recognised by accounting standards, but are important to the value of a firm. If we represent the firm as a circle, the dark boundaries show the traditional accounting value. The goodwill is part of the balance sheet; therefore, it is within the green circle. Now, as we discovered the off-balance sheet elements, we acknowledge the value they bear, and add them to the circle. These include the firm's strategy, corporate culture, supplier and customer relationships, and human resources amongst many others. As figure 1 shows, these elements enlarge our value circle. Proportions in the figure are deliberately made to reflect the relative size of each element. The distance from the centre of the circle represents the risk associated with quantifying these elements.

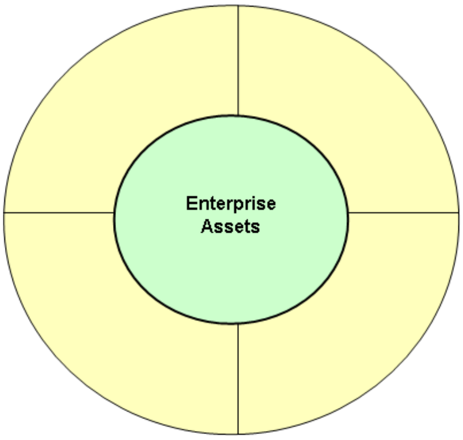


Figure 1 Enterprise value enlarged by invisible elements to give Total Enterprise Value.

Intellectual Balance Sheet

There are two main approches in measuring intellectual value. One of them prefers value determination, using financial indices, while the other finds non-financial indices more important and wants to grasp the change in value.

All methods aiming to determine intellectual value approach it from the asset side, thus only dealing with intellectual value exploited. However, the 'resource' side of intellectual value is not equal to the elements manifesting in intellectual resources i.e. assets. Intellectual capital, the source of intellectual resources/assets is special, as it is constantly renewing itself, it is reproduced and unrestricted. If a company manages its intellectual resources, it can generate profit, which is the manifestation of intellectual capital. However, we cannot even estimate the extent of losses arising from improper management of intellectual value.

So the passive part of intellectual value is intellectual capital and the active part is intellectual assets/resources. We can easily decide which elements of knowledge would appear on the asset and which on the capital side of an intellectual balance sheet. Abilities and aptitudes belong to the capital side, while skills and competences are on the asset side. However, it is important to recognise the difference between the two sides (i.e. unexploited knowledge) as a loss.

Intellectual Balance Sheet

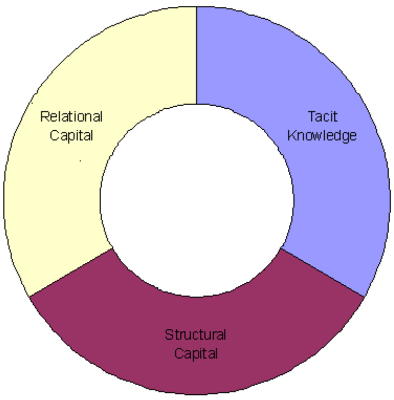
Quasi-Assets (intellectual resources)		Intellectual Capital
Skill	<	ability/talent
Competence		Aptitude

Relationship between the Elements of Invisible Capital

It is possible to demonstrate the relative importance of the direction of value through this model as well. As seen from figure 1, the increase in value has an elasticity of more than 1. From figure 4, we see that a reduction in value has also a greater effect on the Actual Total Enterprise Value. This can possibly be explained by the effect the value of an extra element of yellow has on itself when joined with the other attributes of the firm. If we have stable contracts with customers, then firm value is added. If this is joined by motivated workers, the customer satisfaction and workers loyalty will cause extra value that was not seen when valued separately. The same applies to the negative assets. An enterprise that has negative invisible assets redefines its total enterprise value. When strained with lousy human resources, the negative impact will affect its yellow area more severely than being valued on its own. A rotten apple is a negative value, when placed in a box with other apples; the negative will affect the healthy apples, making the outcome (grey area) larger.

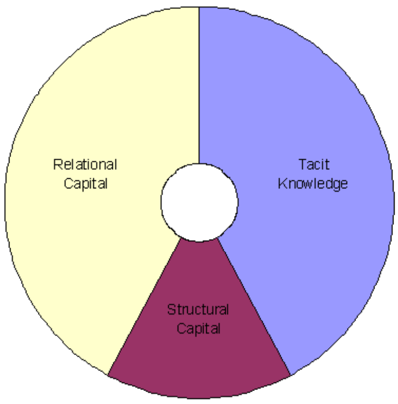
The nature of the invisible assets draws attention to their behaviour when integrated. Their co-behaviour is what we will call the correlation of quasi-assets. In case of positive correlation, the same direction of the relationship can amplify the effect of one factor. On the opposite, the negative correlation can eliminate some effect of one element. A negative correlation between quasi-assets is a “natural diversification” that will reduce risk incurred from any invisible capital.

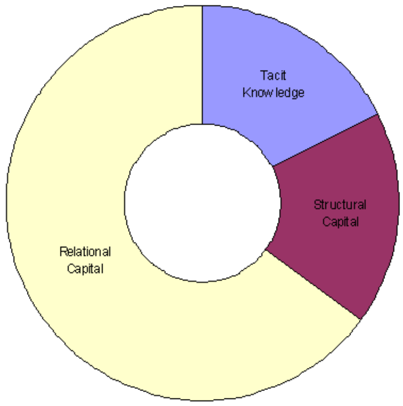
Let us consider the basic model where a moderate enterprise value (inner white circle) is extended by invisible capital in its three forms.



2. Figure The Basic Total Enterprise Value Model

In the following models we try to illustrate the relative importance of each element of invisible capital relative to one another. Moreover, the size of the inner circle relative to the outer one represents the amount of quasi-assets recognised by accounting. Each enterprise can be related to a model of capital allocation that best fits its operations and industry. We present two possible models, one with a dominant invisible capital and one with dominant relationship capital. The measure of the size of invisible capital to total enterprise value and internal partition between the elements is a topic that requires further research.





Model of dominant invisible capital

Model of dominant relational capital

3. Figure Differnet models of capital allocation

The above models, showing Total Enterprise Value would fit the world of Miller and Modigliani (1958). Nevertheless, as Stiglitz (1969) highlights, the real world is far from perfect. Propositions of perfect markets, no informational asymmetry, non risk-avert behaviour of investors, no taxes and transaction costs and many other suppositions do not hold in the real world. Therefore, we take our model a step further to introduce a new concept.

Actual Total Enterprise Value is Total Enterprise Value minus related costs. These related costs comprise of transaction cost and valuation fees incurred from market frictions, but also include possible negative items from the balance sheet. Again, we have to denote, that in a strict accounting paradigm, no such technical solution is acceptable, but since financial modelling deals with net accounts (i.e. asset minus related debt) we will allow for negative items on the asset side of the balance sheet as they mainly derive from the invisible assets identified in this essay. The invisible assets that cannot be possessed but only managed and benefited from, can, as mentioned previously be mismanaged. We stress this as we wish to underline that by mismanagement they can turn into a menace and therefore possess negative value. For this end, we extend the depiction of enterprise value by cutting off part of the invisible asset (yellow area) by a grey gloomy colour. The new Actual Total Enterprise Value is bordered by the broken red line in figure 4 below.

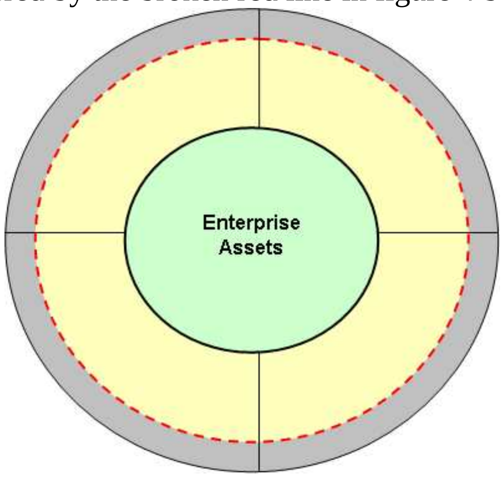


Figure 4 Total Enterprise Value including incurred costs gives us the Actual Enterprise Value

The negative elements (grey) are existent by default. In case of non-negative assets, the grey represents transaction costs such as brokerage fees, costs incurred by listing in bourses, and valuation related fees arising from the cost of carrying out due diligence, making measurements for fair-value accounting, and the like. The grey area can be enlarged when invisible assets include negative items, such as binding contracts with suppliers or customers, an inefficient strategy, or a destructive corporate culture. Strong labour unions often in the strike-mood can be also considered an example.

At times invisible capital is just there but does not serve core operations. An example could be relationship with previous customers or supplier, who are currently not business partners anymore. Such value is there, it exists, however should be excluded from valuation of current processes. Therefore, it can be considered as an option for future disposal. This also represented by the grey area. A currently out-of-the-money option with no intrinsic value does retain time value (the possibility of being in-the-money again.)

Conclusion

In exploring the value beyond financial reporting, we aim at discovering elements that contribute to the value of a company, yet are difficult to capture through traditional valuation methods. Once we recognise the existence of invisible capital explored in this paper, strategists and firm managers can be aware of quasi-assets adding or decreasing value of their firms. The perception of out-the-money relationship capital is included in the grey area should not be forgotten when valuing a firm, and thus, the Actual Total Enterprise Value concept, as simple as it is, highlights imminent positive or negative values that are often leaped over in valuations. Through this paper, we attempted to show invisible capital in the corporate sector that is seldom accounted for. It is easy to see how or why managers overlook the quasi-asset and transaction-cost areas. They are intangible and therefore invisible.

Relationship value, structural capital and tacit knowledge are of the most substantial resources today. It is also reflected in the fact that only 20% of a company's Actual Total Value appears in its balance sheet. The current accounting regulation regards intellectual value as costs, so instead of asset growth there is profit reduction. Recognition of relationship value among assets comes up against several obstacles both at national and international level. The source of intellectual value i.e. intellectual capital is constantly renewing, so there is not a balance between the asset and the capital side of the intellectual balance sheet, it would be necessary to determine the losses arising from unexploited abilities and aptitudes.

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