

Analysis of the Development of Intangible Assets in the Czech Enterprises and their Impact on Financial Position and Performance

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Abstract

This paper deals with the problems of recognition and balancing of intangible fixed assets in an enterprise. The attention is given to the amount of intangible assets that is not included in company financial statements (balance sheet). These assets are usually produced in an enterprise and are not intended to sale. Identification of these assets is very difficult because it is impossible to allocate economical benefit arising from them. The aim of the paper is to find out the consequences of non-recognition of intangible assets for financial statements, the amount of balance sheet and the profit or loss of a company.

Keywords: *fixed assets, intangible fixed assets, tangible fixed assets, valuation method, accounting statements, profit and loss, financial fixed assets, owners' equity, goodwill, fair value*

JEL Classification: D21, M 21, M41

Introduction

The assets structure of an enterprise has a fundamental impact on its profit or loss as well as the overall prosperity. The ability to transform the company assets into other more valuable assets is the purpose and the financial objective of any enterprise. In financial theory, this objective is identified as the concept of preserving the assets base of a company (Wagenhofer, 2003), which expects achieving a higher value of the company net assets¹ at the end of the business year compared to the status at the beginning of the period. A company creates

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¹ Net assets are specified as total company assets after deduction of all the company's liabilities.

such assets structure that is optimal for carrying out its business, and at the same time it enables to increase its value in a longer time horizon. It is obvious that the creation of the optimal assets structure of a company will be primarily influenced by entrepreneurial activities and prospectuses as well as economic (but not only economic) environment (internal and external), in which the company exists. Changes in the assets structure will undoubtedly reflect the overall development of the business environment from globalisation of the economy, information technologies development and the knowledge economy to accounting policies and reporting company assets in financial statements.

The objective of this paper is to specify the intangible assets category in the company assets structure and point out the problems concerning their recognition and balancing, to consider impacts of their (non) recognition on financial statements, total amount of the balance sheet and profit or loss of a company.

1. Specification of the Assets Structure and the Intangible Assets Category

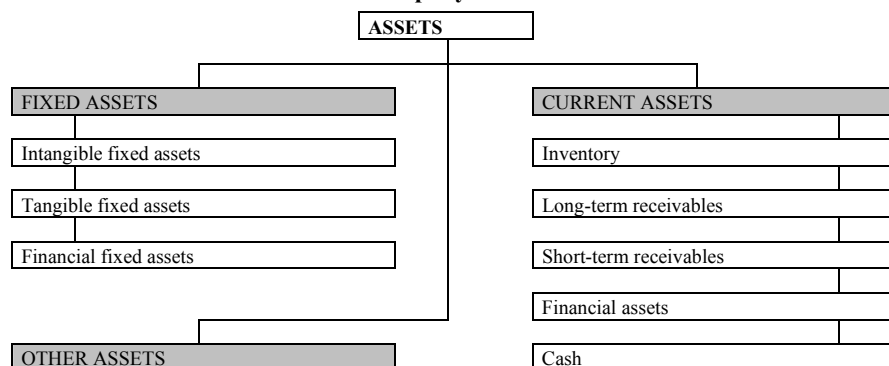
In the company assets balances, three basic categories of company assets (fixed, current and accrued company assets) are distinguished (Kovanicová, 2005) depending on the period of use. Fixed assets are further divided into intangible fixed assets (IFA), tangible fixed assets (TFA) and financial fixed assets (FFA) – see Picture 1. To include an asset in the company balance, the international accounting policies² have stipulated two conditions for recognition:

- it must be probable that the future economic benefit related to the concerned asset will flow into the company;
- it is possible to reliably determine the expenses related to acquisition of the asset.

An intangible asset differs from a tangible asset by absence of its material substance. Intangible assets entered into the company balance sheets much later than tangible assets, as soon as it had been proved that an enterprise is not just the aggregate of physically touchable assets but it disposes of a certain volume of intangible assets in the form of patents, know-how, goodwill, licenses, copyrights, results of research and development, software and so on, that are necessary for its business (Šlosárová and Šlosár, 2005). In the assets structure (the balance) intangible assets form a separate category of non-cash and long-term assets.

² Since January 1, 2003, International Accounting Standards (IAS) have been issued as International Financial Reporting Standards (IFRS) to highlight that it is the regulation of financial reporting not the regulation of accounting (Kolektiv, 2003).

Picture 1
Scheme of the Basic structure of Company Assets



Source: Adapted from Kovanicová (2005).

The Czech accounting legislation³ specifies intangible fixed assets (IFA) as follows:

- Incorporation expenses (costs) related to establishment of a new company, such as judicial and notarial fees, agency commissions, travel expenses and so on, paid in the period preceding the company's incorporation (opening ledgers). Expenses related to acquisition of long-term assets, inventory, expenses for representation and expenses related to transformation of a company or a co-operative cannot be considered incorporation expenses. Incorporation expenses are depreciated for a period of up to five years.

- Research and development, it means results of successfully performed works that are not the subject of industrial and other valuable rights (whether they were or were not purchased or created by internal operation for the purpose of trading in them or for the purpose of their repeated sale). Results used only within internal operation, or results forming a part of long-term assets cannot be considered an intangible asset.

- Software, regardless whether it is or is not the subject of copyright, however on the condition that it has been purchased separately (i.e. it is not a part of the purchased hardware and its valuation) or has been created by internal operation for the purpose of trading with it (it is not custom-made software or a part of a hardware supply).

- Valuable rights that are manufacturing and technical knowledge (know-how), items of industrial rights, licences and other results of intellectual creative activity, which are the subjects of valuable rights, of both acquired and provided ones.

³ Decree No. 500/2002 Coll., implementing certain provisions of Act No. 563/1991 Coll., on Accounting, as amended, for accounting units that are entrepreneurs using double-entry bookkeeping.

- Goodwill, specified as the difference between the valuation of a company acquired in particular by purchasing, investment or valuation of assets and liabilities within the company's transformation (except for a change in the legal form) and the aggregate of individually re-valued items of the assets reduced by assumed liabilities.

2. Criterion for Recognizing Intangible Assets

In addition to generally valid terms for asset recognition (to include assets in the company assets), an intangible asset must comply with three basic conditions according to the international standards:⁴ *it is identifiable, control (management), future economic benefit.*

Asset is identifiable – it means that the asset is separable (for example it may be sold, licensed, assigned, leased or exchanged separately) or arises from contractual or other legal relationships as a separate asset. For example an operation system without which a computer cannot be used is considered a tangible asset, although it meets the separability criterion. On the contrary, the loyalty and moral of employees or relation to customers can be named and determined within a company and such relations may even be intensified and enhanced, however, they cannot be sold to another entity interested, therefore they are not considered an intangible asset. Another identifiability factor is the requirement of unambiguous separation of expenses for creation of an intangible asset from expenses for development of an enterprise as a whole. For example, in practice the commitment of employees, their knowledge and abilities are closely connected to customers' satisfaction, but it is impossible to allocate expenses to each item individually.⁵

Control (asset controlling, asset management) consists in the company's ability to achieve future economic benefit from an asset or to prevent other companies from access to such benefit. For example a patent granting its owner the right to use the related product or process without interference or limitation of other entities is an intangible asset. However, employees' knowledge, customers' loyalty, benefits from long-term training of the employees or a market share do not comply with the control criterion, because the company cannot

⁴ IAS 38 – Intangible assets, adopted as from January 1, 2005 for the needs of the EU Community legislation on the basis of the Commission Regulation No. 2236/2004 dated December 29, 2004.

⁵ There are different attitudes to consideration of identifiability, for example, unlike the Czech regulations international standards do not consider incorporation expenses to be an asset, because no future economic benefit can be allocated clearly to such asset.

prevent other companies from access to such benefit (employees or customers may leave for competitors). It is quite disputable whether the economic benefit will flow to a specific company indeed, thus these items cannot be considered an intangible asset.

Future economic benefit – can be in a form of revenues from products, goods and services, cost savings or other benefits arising from the company's use of such benefits.

If an asset fulfils the definition of an intangible asset including its features, it may be reported in the company's balance sheet on the condition that its acquisition cost can be determined reliably. In addition to that, the Czech accounting legislation requires the valuation higher than is the financial limit determined by the company, and gradual consumption of an intangible asset (depreciation).

3. Impact of Non-recognition of Intangible Assets on the Company's Value

The book value of a company is calculated as a difference between the balance sum (value of total assets) and all the company's liabilities (total debts) according to the following formula:

$$OE = A - D = EC + CF + FP +/- P/L \quad (1)$$

where

OE – the owners' equity,

A – total assets of the company,

D – total debts,

EC – equity capital,

CF – capital funds,

FP – funds from profit,

P/L – the economic result (profit or loss) of the company.

The book value of the enterprise (*OE*) then will be influenced by the company's assets and liabilities amount and the profit or loss created in the course of the business year.⁶ In the course of its operation, the company incurs certain expenses to achieve future economic benefit. If as a result of this no asset is acquired that meets conditions for recognition, then the balance sum does not rise and such expenses even become a cost reducing the economic result, thus the book value of the company drops as well. Compared to the expected increase

⁶ Unless we take into consideration a change in the equity capital or capital funds due to other investments from external sources.

of the proportion of fixed intangible assets in creating a value in connection with introducing information technologies and extending knowledge, in many cases such assets are not recognized, surprisingly, although they co-create the economic benefit of the company. The assets that are not considered fixed intangible assets due to not meeting criteria for recognition, include in particular:

- a) Advertising and promotion expenses,
- b) Staff retraining expenses,
- c) Expenses for relocation or reorganization of the whole company or its part,
- d) Research expenses,
- e) Computer software,
- f) Know-how,
- g) Logos,
- h) Formulas, models, designs and prototypes,
- i) Employees' knowledge,
- j) Management's abilities,
- k) Lists of (portfolio) customers,
- l) Mortgage rights,
- m) Import quotas,
- n) Licenses,
- o) Customer relations,
- p) Supplier relations,
- q) Customer loyalty,
- r) Market share,
- s) Marketing rights,
- t) Goodwill etc.

If the assets are the ones stated under subsections d) through t) created by internal operation and are not primarily intended to sale, then the main reasons for their non-recognition are impossibility of their reliable valuation and unambiguous allocation of economic benefit to individual assets. Although such assets do not individually meet the conditions for their inclusion in the company balance sheet, it is obvious that in connection with other assets they participate in the development and prosperity of the company. The goodwill may be one example, expressing the company's ability to make profit above the level corresponding to usual ability to make profit. The amount exceeding the market value of net assets on acquisition of a company by purchasing or on the combination companies (merger) is considered the reliable valuation of the goodwill, because the acquirer expects future gains higher than is the usual yield of such assets. The value of the goodwill can be then determined in two manners:

– as the current value of anticipated surplus profit discounted for the period for which its duration is expected,

– as a difference between the market price of the company as a whole and the amount of fair values allocated to the individual assets and liabilities forming the company.

Goodwill thus represents the value of the expected economic benefit arising as a result of synergy between the acquired identifiable net assets as well as from intangible assets that do not comply with the criteria for recognition, but which the acquirer is willing to pay for on acquisition of the company. If it is not so-called secondary goodwill obtained on acquisition, and it is the primary goodwill created by the company, it cannot be reported in the balance sheet, as well as other intangible assets with uncertain lifespan, because the company cannot lease, sell, exchange or divide concrete future economic benefit arising thereof without losing the future benefit arising from other assets used by the company. The company's balance sheet will then include only the purchased goodwill, the value of which gradually drops,⁷ while the existing primary goodwill further developed by the company is not considered the future benefit, and it forms the expenses of the concerned period.

The criteria for reporting intangible fixed assets, included in the accounting principles thus enable to recognize and include in the company's balance sheet only a part of intangible assets, while the other intangible assets existing in the company and participating in creation of the future benefit will not appear in the asset balance. It is logical that on the knowledge development, the weight of fixed intangible assets rises in the company balance sheets (as well as in non-balanced ones) as stated in Table 1, which records the development of the assets structure in Czech enterprises⁸ in 1997 – 2007 (www.czso.cz/csu/2002, 2006, 2009).

The indices of growth of the selected company asset items are demonstrated in Graph 1, in which fixed assets show the highest growth and in them intangible assets. This trend is supported by new investments in intangible fixed assets, whose growth pace shows a multiple excess of year-on-year indices calculated for acquired tangible fixed assets in the monitored period. The existing intangible assets not recorded in the Table reduce the value of the overall company assets and thus reduce its book value minimally in the volume of the expenses incurred to achieve the economic benefit, which were not activated, but accounted for as expenses of the current accounting period.

⁷ The Czech accounting legislation stipulates the duty of depreciation of acquired goodwill on a straight-line basis for the period of five years.

⁸ They are business entities with prevailing industrial operation without financial institutions. The research included all medium and large enterprises with 100 and more employees, there were 55% of small entities with 10 up to 99 employees selected, and approximately 2.6% of micro-enterprises with 0 up to 9 employees were included in the selection.

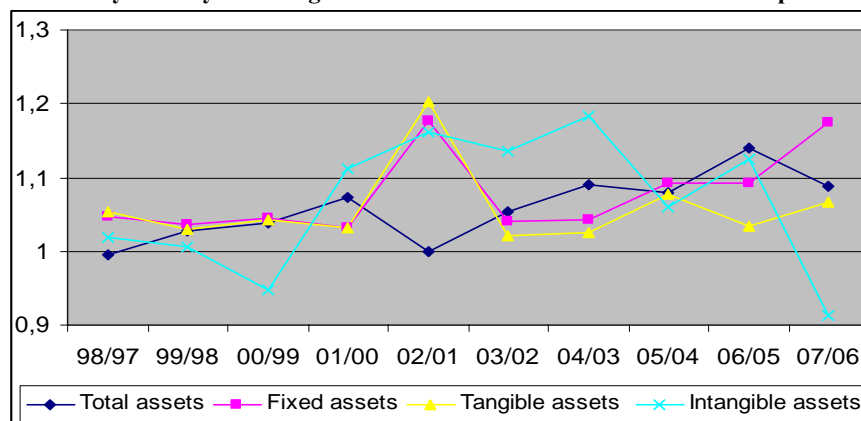
Table 1
Development of Assets of Enterprises (CZK billion)

Assets	1997	1998	1999	2000	2001	2002
Total assets	2 099.2	2 088.7	2 147.9	2 229.0	2 392.6	2 392.1
Fixed assets	1 051.5	1 101.0	1 141.8	1 191.8	1 228.7	1 445.8
Of which: tangible	923.5	973.0	1 001.3	1 044.1	1 077.8	1 295.8
intangible	16.6	16.9	17.0	16.1	17.9	20.8
financial	111.4	111.1	123.5	131.6	133.0	129.2
Current assets	1 047.7	987.7	1 006.1	1 037.2	1 163.9	946.3
Acquisition of tangible assets	192.7	186.7	210.7	195.9	220.4	170.9
Acquisition of intangible assets	4.3	5.4	6.5	6.8	7.9	7.5

Assets	2003	2004	2005	2006	2007	2007/1997
Total assets	2 529.1	2 758.2	2 977.9	3 392.3	3 688.1	1.7569
Fixed assets	1 504.9	1 570.0	1 714.1	1 873.7	2 202.7	2.0948
Of which: tangible	1 322.1	1 356.2	1 460.5	1 510.5	1 611.6	1.7451
intangible	23.6	27.9	29.6	33.3	30.4	1.8313
financial	159.2	185.9	224.0	329.9	360.7	3.2378
Current assets	1 024.2	1 188.2	1 263.8	1 518.6	1 485.4	1.4178
Acquisition of tangible assets	176.5	197.2	205.5	204.1	230.7	1.1972
Acquisition of intangible assets	10.4	10.4	29.4	36.2	18.8	4.3721

Source: The Czech Statistic Office (1998 – 2008).

Graph 1
Indices of year-on-year changes of selected items of assets of Czech enterprises



Source: The Czech Statistic Office (1999 – 2008); own calculations.

4. Market Value versus Book Value of an Enterprise

As a rule, intangible assets were considered only in connection with tangible assets, and as a separate group within the company balance sheets, they were separated not long ago.⁹ The value of this asset group in company balance sheets

represents a fragment of the tangible assets value as stated in Table 2, in which the ratio indices of assets structure of Czech enterprises are calculated. It confirms the fact that the weight of fixed intangible assets in a company balance rises slightly (the quote of intangible assets has grown from 1.80% to 1.88%) as the proportion of investments in intangible assets has grown boldly from 25.90% to 61.84%.

Table 2
Percentage of Assets in Czech Enterprises in 1997 – 2007

Assets structure indices (%)	1997	1998	1999	2000	2001	2002
Fixed assets/total assets	50.09	52.71	53.16	53.47	51.35	60.44
Tangible assets/total assets	87.83	88.37	87.69	87.61	87.72	89.62
Intangible assets/total assets	1.58	1.54	1.49	1.35	1.46	1.44
Financial assets/total assets	10.59	10.09	10.82	11.04	10.82	8.94
Intangible assets/tangible assets	1.80	1.74	1.70	1.54	1.66	1.60
Current assets/total assets	49.91	47.29	46.84	46.53	48.65	39.56
Acquisition of tangible assets/total assets	20.87	19.19	21.04	18.76	20.45	13.19
Acquisition of intangible assets/total assets	25.90	31.95	38.23	42.24	44.13	36.06

Assets structure indices (%)	2003	2004	2005	2006	2007
Fixed assets/total assets	59.50	56.92	57.56	55.23	59.72
Tangible assets/total assets	87.85	86.38	85.20	80.61	75.16
Intangible assets/total assets	1.57	1.78	1.73	1.78	1.38
Financial assets/total assets	10.58	11.84	13.07	17.61	16.37
Intangible assets/tangible assets	1.78	2.06	2.02	2.20	1.88
Current assets/total assets	40.50	43.08	42.44	44.76	40.27
Acquisition of tangible assets/total assets	13.35	14.54	14.07	13.51	14.31
Acquisition of intangible assets/total assets	44.07	37.27	99.32	108.70	61.84

Source: The Czech Statistic Office (1998 – 2008); own calculations.

For comparison, let us state the development of the rate of fixed assets in Slovak enterprises¹⁰ in the same period (Zimková and Úradníček, 2004; www.statistics.sk/pls/). The trend of development of tangible and intangible fixed assets is similar to development in the Czech Republic it means that the proportion of tangible assets in fixed assets drops while the proportion of intangible assets rises. Although the proportion of intangible assets in fixed assets remains low (2.52%), the quote of intangible assets has grown as well as

⁹ In balance sheets of U.S. capital companies, this asset group appeared separately in 1970 for the first time (Samuelson and Nordhaus, 1992).

¹⁰ They are industrial enterprises with 20 employees and over, enterprises with up to 19 employees entered in the Commercial Register and individuals operating on the basis of a trade license, building firms, trade and transport companies. The fixed asset category distinguishes the total assets and out of them intangible assets (Šlosárová and Šlosár, 2005).

in Czech enterprises from the previous value 0.99% to 2.58%. The proportion of annual investments in acquisition of intangible fixed assets amounts to double values on average compared to tangible assets.

Table 3

Development of Fixed Assets and their Structure in Slovak Enterprises in 1997 – 2007

Indices (SKK billion, %)	1997	1998	1999	2000	2001	2002
Fixed assets	1 288.9	1 291.2	1 328.0	1 517.2	1 567.5	1 669.4
Of which: tangible	1 276.3	1 277.4	1 310.1	1 497.1	1 541.8	1 631.9
intangible	12.6	13.8	17.9	20.1	25.7	37.5
Acquisition of tangible assets	164.7	177.0	143.3	171.6	157.0	167.0
Acquisition of intangible assets	3.4	4.3	5.2	6.7	5.2	10.8
Tangible assets/fixed assets	99.02	98.93	98.65	98.68	98.56	97.75
Intangible assets/fixed assets	0.98	1.07	1.35	1.32	1.64	2.25
Intangible assets/tangible assets	0.99	1.08	1.37	1.34	1.66	2.30
Acquisition of tangible assets/ tangible assets	12.90	13.85	10.94	11.46	10.18	10.23
Acquisition of intangible assets/ intangible assets	26.98	31.16	29.05	33.33	25.36	28.80

Indices (SKK billion, %)	2003	2004	2005	2006	2007
Fixed assets	1 804.5	2 056.9	2 278.9	2 589.6	2 774.7
Of which: tangible	1 761.4	2 009.0	2 222.7	2 523.0	2 704.9
intangible	43.1	47.9	56.2	66.6	69.8
Acquisition of tangible assets	240.3	239.2	308.3	567.1	323.2
Acquisition of intangible assets	10.2	10.9	12.4	13.1	9.6
Tangible assets/fixed assets	97.61	97.67	97.53	97.43	97.48
Intangible assets/fixed assets	2.39	2.33	2.47	2.57	2.52
Intangible assets/tangible assets	2.45	2.38	2.53	2.64	2.58
Acquisition of tangible assets/ tangible assets	13.64	11.91	13.87	22.47	11.95
Acquisition of intangible assets/ intangible assets	23.66	22.75	22.06	19.67	13.75

Source: The Czech Statistic Office (1998 – 2008); own calculations.

Intangible assets included in company balance sheets passed the recognition test, but their value depends on specific accounting policies adopted by individual companies for valuation and depreciation. The research conducted in Czech enterprises in 2005¹¹ showed significant differences in identification of intangible assets, when the limit for recognition of intangible asset ranged from CZK 300 up to CZK 150,000 and the period of use from 2 up to 11 years. The specification of items of the acquisition cost of such assets and the depreciation method

¹¹ In the project of the Czech Science Foundation (GA ČR) 42/04/1430 Impact of Accounting Policies on Reporting a Company Performance, carried out at the Faculty of Economics and Administration of Masaryk University in Brno (MU ESF) carried out in 2004 – 2005 (Sedláček, Křížová and Hýblová, 2005).

chosen by the company varied as well. As a consequence, such differences then affect the net asset value and the book value of a company.

The value of the existing intangible assets that has not been included in the balance sheet will be reflected only on the company's market valuation, which also includes the goodwill and other separable items of intangible assets. An expert or a valuation body carry out the valuation by the appropriate method (Damodaran, 2001), for example the economic value added (EVA)¹² by so-called equity method (Maříková and Mařík, 2001). The market value of the owners' equity is determined according to the following formulas:

$$V = OE_0 + \sum_{t=1}^T \frac{EVA_t}{(1+r_e)^t} + \frac{EVA_{T+1}}{r_e(1+r_e)^T} + A_0 \quad (2)$$

$$V = OE_0 + \sum_{t=1}^T \frac{P/L_t - r_e \cdot OE_{t-1}}{(1+r_e)^t} + \frac{P/L_{T+1} - r_e \cdot OE_T}{r_e(1+r_e)^T} + A_0 \quad (3)$$

$$r_e = r_f + r_{la} + r_{po} + r_{fi} \quad (4)$$

where

- V – market value of the owners' equity,
- OE_v – value of the owners' equity as at the valuation date,
- EVA_t – economic value added in year t ,
- T – number of years planned by EVA,
- P/L_t – net profit or loss of monitored enterprises in year t ,
- r_e – owners' equity expenses,
- r_f – risk-free assets return,
- r_{la} – risk surcharge for lower liquidity of a share at the market,
- r_{po} – risk surcharge for entrepreneurial risk,
- r_{fi} – risk surcharge for financial risk,
- A_0 – other non-operating assets.

The source data for estimation of the market value of the owners' equity in the monitored group of enterprises are summarized in Tables 4 and 5. Owing to the fact that the valuation is not carried out for specific conditions of joint-stock companies, the value r_f in a form of yield of government bonds for convergent purposes 10R according to the Czech National Bank (CNB) statistics, the value r_{fi} estimated according to interest rates from loans to non-financial enterprises and r_{po} estimated depending on a change of the entrepreneurial environment will be used in calculation of owners' equity costs.

¹² For details, see also (Kislingerová a kol., 2004) as for valuation of the owners' equity or (Vlachynský, Královič and Markovič, 2002) as for economic concept of expenses.

Table 4

Source Data for Calculation of the Economic Value Added in 1997 – 2007

Item	1997	1998	1999	2000	2001	2002
Owners' equity (CZK million)	921 827	941 810	937 175	980 096	1 112 678	1 156 009
Net profit or loss (CZK million)	-2 717	14 777	170	52 478	88 142	103 372
r_r (%)	10.53	12.12	7.57	6.77	5.97	4.94
r_{po} (%)	0.11	0.24	0.33	0.85	1.01	1.39
r_{fl} (%)	2.69	0.74	1.12	0.69	1.22	1.78
r_e (%)	13.33	13.10	9.02	8.31	8.20	8.11

Item	2003	2004	2005	2006	2007
Owners' equity (CZK million)	1 241 249	1 412 313	1 552 655	1 780 661	1 929 753
Net profit or loss (CZK million)	129 970	179 481	183 616	248 501	307 672
r_r (%)	4.12	4.75	3.53	3.77	4.28
r_{po} (%)	1.87	1.85	2.30	2.28	2.42
r_{fl} (%)	1.83	0.60	2.56	2.54	3.28
r_e (%)	7.82	7.20	8.39	8.59	9.98

Source: The Czech Statistic Office (1998 – 2008); Ministry of Finance of CR; own calculations.

To calculate the expected economic value in the future period, it is necessary to determine the values of the source data for the 2008 – 2012 period. By extrapolation of the time series of values of OE and P/L stated in Table 4, it is possible to determine their future values (Cyhelský, Kaňoková and Hindls, 1996), for example by means of the linear function:

$$Y_t = a_0 + a_1 t \quad (5)$$

where the constants will be calculated by the following equations:

$$a_0 = \frac{1}{n} (\sum y_t - a_1 \sum t) \quad (6)$$

$$a_1 = \frac{n \cdot \sum t \cdot y_t - \sum t \sum y_t}{n \cdot \sum t^2 - (\sum t)^2} \quad (7)$$

Time variable t takes the values $t = 1, 2, \dots, 11$. After substituting the calculated constants in the equation (5), we obtain equations for calculation of expected values of the owners' equity:

$$OE_t = 706,455 + 93,867 t$$

and the profit or loss:

$$P/L_t = -63,144 + 30,303 t$$

By solution of the equations (6) and (7) we calculated the necessary input values – see Table 5.

Table 5

Source Data for Calculation of the Economic Value Added in 2008 – 2012

Item	2008	2009	2010	2011	2012
OE (CZK million)	1 832 859	1 926 726	2 020 593	2 114 460	2 208 327
P/L (CZK million)	300 492	330 795	361 098	391 401	421 704

Source: Own calculations.

After substituting the calculated data in the equation (3), we obtained market values of the owners' equity of the monitored enterprises in the individual years – see Table 6. The calculation does not take into consideration other non-operating assets of a material nature, for example professional literature co-creating the value of a company, but they are not entered in the account balance. The difference between the market value and the book value of the owners' equity of a company stated in Table 6 then represents the intangible assets owned by the company, but not stated in the account balance, because in the monitored companies they do not meet the recognition criterion. On the basis of the comparison of balanced and non-balanced intangible fixed assets, it is obvious that the volume of assets that are not reported in the company statements shows multiple excess over the value of assets included in the account balance. The exception is the year 1998, in which the economic loss from the previous period exceeded the included profit.

Table 6

Estimation of Value of Intangible Assets of Enterprises not Included in the Account Balance

Item	1998	1999	2000	2001	2002
V (CZK million)	546 661	1 340 180	1 538 547	2 124 397	2 789 951
OE (CZK million)	941 810	937 175	980 096	1 112 678	1 156 009
IFA _n (CZK million)	-395 149	403 005	558 547	1 011 719	1 633 942

Item	2003	2004	2005	2006	2007
V (CZK million)	2 853 303	3 708 750	3 489 721	3 828 807	3 644 505
OE (CZK million)	1 241 249	1 412 313	1 552 655	1 780 661	1 929 753
IFA _n (CZK million)	1 611 787	2 296 437	1 937 066	2 048 146	1 714 752

Source: The Czech Statistic Office (1999 – 2008); own calculations.

5. Impact of Underestimation of Company Assets on Profit or Loss

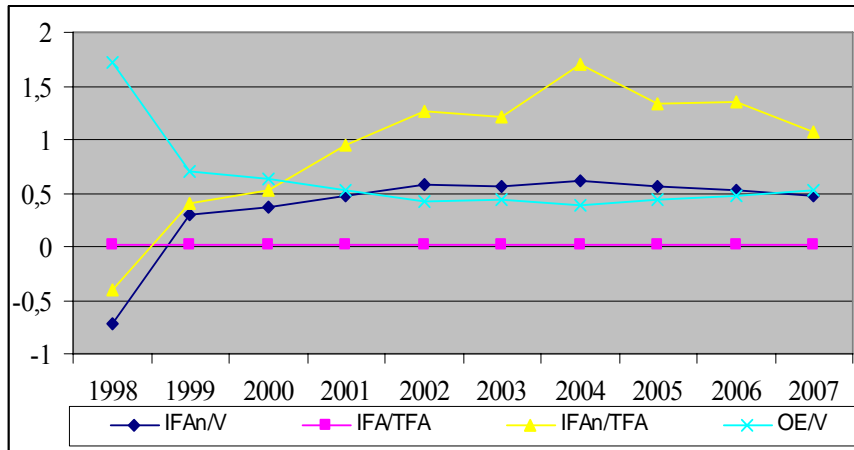
Assets that are not identifiable in accounting reduce the balance amount of a company as well as the economic result in the concerned period by expenses incurred in the concerned accounting period. As a result of this, there arises

a significant difference between the book value of a company (owners' equity) and its market value. Materially, such difference includes so-called goodwill and other components of the intangible fixed assets that are not possible to balance in accounting and can be separated from the goodwill, for example a logo, expenses for research, know-how, computer software etc. If any expense incurred to acquire (create) such asset was not accounted for in the current period, but activated into the assets, the economic result achieved in the concerned period would be reduced by the value of the yearly depreciation only. The costs burden incurred to create an asset would not be a single one, but it would be spread according to the chosen depreciation method to the whole period of using the intangible asset. Companies would report higher asset values as well as higher profit and the book value of company owners' equity would approach to the market valuation. Assuming such intangible assets created by a company in the account balance would better fulfil the accounting principle of true and fair view of the facts.

The estimations stated in Table 6 that were derived from the market valuation of a company and include impacts identifiable and calculable with difficulties only, will probably not be reflected in the profit or loss, because they do not represent the actually incurred expenses, however they should be reflected in the value of the owners' equity of a company on its transformation or sale.

Graph 2

Development of Proportions of Elements of Selected Assets in the Market Value of Czech Enterprises



Source: Own calculations.

As stated in Graph 2 prepared according to the data in Table 6, the intangible assets not included in company balance sheets represent the main item of the estimated market value of companies (index IFA_n/V), and since 2002 their proportion has even exceeded the impact of the owners' equity (net assets) on the market value (OE/V). If the proportion of the reported intangible assets in company balances (IFA/TFA) grows only slightly (see Table 2), then the growth of the proportion of non-included assets is much faster (IFA_n/TFA) and in the absolute amount, the non-included assets have not exceeded the book value of the total fixed assets from 2002 to 2006 (see Tables 1 and 6).

At present, the bookkeeping aims at making balances of assets and liabilities real by adjustment of valuation and depreciation policies,¹³ which in fixed intangible assets enable for example:

a) To revalue an intangible asset to the fair value, if it can be determined at the active market. If the revaluation increases the book value of an intangible asset, the difference (revaluation surplus) is accounted for as an increase of the company owners' equity.

b) To classify an intangible asset as an asset with an indefinable life. Such asset is expected to create economic benefit flowing into the company for an unlimited period. It cannot even be depreciated, but it is subject to value-reduction testing carried out through comparing its current book value with the re-achievable amount.¹⁴ The value-reduction tests must always be carried out when there is the indication that the value of an intangible asset could drop. It is for example purchased or invested goodwill to be amortized into expenses according to the Czech policies, although in addition to it the company creates the primary goodwill, the value of which rises again. A trademark, license, know-how and so on, which were purchased for an indefinite period of time, may be classified accordingly.

c) To extend the range of balanced intangible assets by newly arising assets, e.g. issue rights, web sites and so on.

d) Of assets that are not individually identifiable form groups to whom it is possible to assign the economic benefits that will bring in the future. If it is not possible to determine the appropriate share on the economic benefits generated by the company it is possible to estimate the relationship to other assets respectively the level of influence and to include the asset according to importance to the group.

¹³ For more details, see IAS 38 – Intangible Assets.

¹⁴ The re-achievable amount is specified as the higher one from the net selling price and value from use, i.e. the amount based on the present value of flows related to the use of the concerned asset.

Such changes of accounting principles even more accentuate valuation on the basis of market values and represent partial elimination between the accounting and market conception of intangible assets. Using the fair value is also recommended for tangible fixed assets (Dietrich, Harris and Muller, 2000; Herrmann, Saudagaran and Thomas, 2006) that the company acquired in the previous years already. If the market valuation of an asset increases its book value, in general this difference cannot be considered as increasing the economic result of a company, but it will be reflected as an increase of the owners' equity value.

Conclusion

Nowadays, at a fictitious scales pan of companies, the intangible assets quite obviously exceed the tangible ones. The importance of previously much-appreciated material assets in the form of lands, buildings, machinery, fixtures and fittings and inventory falls and they are the assets without the material substance that become prominent, being of intellectual nature and untouchable. Nowadays, so-called soft factors such as human capital (the level of knowledge of the management and employees), corporate culture, creativity, innovativeness, competitiveness and so on participate in a company's prosperity (Veber a kol., 2000). Although they are factors that can be quantified with difficulties, if only, there are attempts to identify such factors, evaluate them and include the same in the balance of the company assets.

Such trend is confirmed by company balance sheets of the recent years, in which the proportion of intangible assets rises, compared to the drop of tangible assets (Aboody, Barth and Kasznik, 1999). They are certainly only assets the recognition and balancing of which are permitted by accounting policies, thus they represent a fragment of the actual value of such company ownership. Nevertheless, as shown by international standards, there are certain ways of how to distinguish such assets from expenses for a company's development and how to keep its value by e.g. creating the category of non-depreciated intangible assets or the category of assets revaluated by fair value. Intangible assets that do not meet the eligibility criteria could enter into the balance sheet according to the method of their grouping into groups that corresponded to evaluating their mutual influence in relation to induced economic benefits. The accounting theory has already inclined to market valuation of fixed assets, however, in the accounting practice of Czech enterprises this possibility could not be applied yet.

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