

THE PROBLEM OF ACCOUNTING METHODS IN COMPANY VALUATION

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Abstract

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Valuation of a company is not only a calculation but it represents complex set of processes which are mutually interconnected and which are more or less important in the process of company valuation in dependence of the value category inquired. One of these processes is the financial analysis which objective is not only to prove, subsequently the strategic analysis, going concern of a company, but its outcomes are the starting-point of financial plan preparation that is needed in order to apply income-based methods of company valuation.

It is generally accepted that results of financial ratios differ in implications of applied accounting methods. The objective of this paper is to frame an influence of accounting methods on the income-based value of a company while the stress is put on the methods of inventory measurement in the context of both, in context of the Czech accounting law as well as of the International Financial Reporting Standards.

accounting measurement, activity ratios, company valuation, income-based methods of valuation, inventories

Determination of value of a business entity is the complex expert process that cannot be subordinated to any unambiguous algorithm. Even if some general recommended procedure exists, every step of this procedure is filled in with a range of algorithms that are met and modified on the bases of expert knowledge and skills which are subjective views on current state and possible future development of a company, especially when the income-based methods of company valuation are applied.

Income-based methods of company valuation are applied on the prerequisite of going concern of a company while their application is based on the financial position and performance of a company in past, at present and in predicted future that is the synthesis of past development and available information about the factors which would possibly influence this financial position in future.

The view on financial position and performance of a company is provided mainly by outcomes of financial accounting, i.e. by financial statements and analyses of data presented here. Then it is

objectively clear that basic view on financial position and performance of a company is strongly influenced by accounting methods applied. This way, accounting methods applied are reflected also to a value of company, even if the company value should primarily be based on economic data not only on accounting data. In the environment of the Czech Republic, the situation is even complicated with the fact that Czech accounting system still prefers a legal form over an economic content of transaction. Inevitable influence comes out also from applied methods of property valuation and possibilities of fair value revaluation of property.

OBJECTIVE OF THE PAPER AND METHODOLOGY

Objective of this paper is to determine the influence of applied principles of financial reporting on income-base value of a company while this objective is related to application of the Czech accounting law and the International Financial Reporting Standards (IFRS). The paper comes out

from both, qualitative and quantitative analyses of differences between the Czech accounting law and the IFRS and subsequent differences in the view on financial position and performance. Financial position and performance were measured with the standard methods of financial analysis while these methods have been applied on data included in financial statements prepared under the Czech accounting law and under the IFRS. These analyses have been elaborated on the statistical sample of 70 legal business entities keeping their accounts in double entry accounting system. Analysed legal business entities are limited companies and joint-stock companies from production industries. Financial statements of these companies prepared under the Czech accounting law have been transformed in accordance with the IFRS and both sets of the financial statements of each company were compiled with the methods of financial analysis, especially with the ratio analyses while the differences in the ratios' values were calculated. These differences were subsequently analysed with relevant statistical methods, especially with methods of descriptive statistics and analysis of dependence while the correlation analysis has been employed. These differences have also been projected into the simplified income-based value of these business entities.

For purposes of this article, the simplified income-based value of company is defined as a value of company without growth possibilities, i.e. companies valued base on the principles of present value of perpetual annuity. The perpetual annuity here is considered as the sum of net operating profit and fixed assets depreciation. Moreover, net operating profits here were reduced for items which are included in the operating part of the profit in accordance with the Czech accounting law but which are not parts of usual purpose of the real operating activities. Typical item here are e.g. sales of fixed assets and material, net book value of the fixed assets and materials sold, and other operating revenues if they are reported in abnormal amounts. This sum can be also considered as a "quick" cash-flow that is used here as the free cash flow. Then, financial position and performance of the company is reflected not only in this approximate free cash flow, but also in the discount rate which is calculated by the use of INFA methodology.

View on Financial Position and Performance of Business Entities

In the literature focused on classification of accounting systems (e.g. d'Arcy, 2001), two major directions of accounting standardization have been observed. These are European cluster and North American cluster while the North American cluster is more oriented to capital market and investors, and that is why it includes also IASB. Based on this, Nobes (2001) has defined two main reasons of differences between IFRS and national

accounting standards. These differences consist in comprehensiveness and capital market orientation.

The problem of comprehensiveness arises from some inconveniences in national accounting standards because national accounting standards don't cover all the rules that are included in the IFRS or these rules are only optional under the national accounting standards. Other question is strength of interconnection between accounting and the tax regulation (Näsi & Virtanen, 2003).

In the frame of the Czech accounting system, it is possible to find fundamental differences from the IFRS especially in following domains:

- Leases (IAS 17);
- Intangible Assets (IAS 38);
- Employees Benefits (IAS 19);
- Construction Contracts (IAS 11);
- Share-based Payments (IFRS 2).

Moreover, the areas where the use of fair value is required under IFRS exist there and form other direction of differences between IFRS and Czech (or national) accounting law. IFRS require/allow fair value measurement/accounting in the following areas:

- Property, Plant and Equipment (IAS 16);
- Impairment of Assets (IAS 36);
- Financial Instruments (IAS 39/IFRS 7);
- Investment Property (IAS 40);
- Biological Assets (IAS 41);

and also in about mentioned categories of employees benefits, respectively pension assets and liabilities, and share-based payments.

Entering the financial leases in accounting is the typical example from the Czech accounting law which documents that the formal side is still preferred to the content. (Beranová *et al.*, 2010) In this area, the accounting rules for financial leases are completely different not only from the rules under IFRS but also from the rules of the most EU countries, Slovak Republic included. While the payments of financial lease are accounted as costs under the Czech accounting law, under IFRS the property covered with the financial lease is recognized as an asset, and over this asset, long-term liability is recognized and decreased according to the lease payments. As costs affecting the profit only depreciation of the asset and interest related to the long-term liability are accounted. It is obvious that this approach has substantial influence on the profit, on the amount of fixed assets and subsequently on the total assets, on the sum of long-term liabilities and consequently on total capital which are the crucial inputs of the most economic analyses. If an ordinary potential investor would like to make relevant analysis of a company reporting under the Czech accounting law, all the property under financial leases is hidden to him/her.

In the area of intangible assets, the standard IAS 38 relatively strictly states that an intangible asset shall be recognized only when it will probably entail

future economic benefits and when the cost of this asset can be measured reliably. The first problematic point that appears under the Czech accounting law is the recognition of company's set-up costs as the intangible asset. IAS 38 emphasizes that these expenses shall not be recognized as an asset but have to be accounted for costs of the period when these expenses were realized. In this context a disagreement could appear in the question of the "future economic benefits". From some point of view, the set-up costs might be understood as the amounts that have to be spent in order the asset – company would start to exist, and as the future economic benefits future profits of a company could be perceived. But this point of view collides with the probability of the future economic benefits that have to be "more likely than not". In this case, the potential assets is not measured reliably neither. Then it is possible to suppose that recognition of set-up costs as the intangible asset leads to overestimation of total assets. This affects the overall view on company's financial position again.

The goal of standard IAS 38 is to minimize risks connected with recognition and measurement of the intangible assets. But this cannot be stated in frame of the Czech accounting legislation where the problem is handled rather shallow. The main differences arise from the approach to recognition and measurement of intangible assets under the Czech accounting law. Within the question of recognition, one of the greatest differences is treatment with goodwill. Under the Czech accounting law, goodwill is always amortized, and the amortization is for five years. In this consequence, there is another problem which consists in impossibility to recognize a new intangible asset at business entity acquisition. Disputable is also the area of internally generated intangible assets. According to the Czech accounting law, intangible assets generated for the internal needs of a company are recognized only as costs in the period when they have been spent. This can affect the amount of profit substantially in more than one accounting periods. Therefore the view on financial position and performance of a company is affected again. Another question about intangible assets is the amounts spent on research and development. As a basis for reasoning, the future economic benefits which are "more likely than not" are considered. Related to the IFRS, the cost of research may not be capitalized and these amounts are reported as costs. Capitalization of the amounts spent in the stage of development is then contingent on a range of premises fulfilment. Accounting solution of the cost of research and development in the Czech Republic is relatively wide and variable. It is especially because of the taxation rules connected with these expenses. If the

research and development should be recognized as an asset in the balance sheet item "Intangible Results of Research and Development" under the Czech GAAP, these have to be results of an effort finishes successfully, while these results¹:

- are generated internally in order to trade them repeatedly, or
- are purchased separately, i.e. they are not a part of purchase and measurement of fixed assets.

In the domain of the intangible assets it is possible to measure an intangible asset at the fair value in no case under the Czech accounting law. On the other hand, the fair value accounting is accentuated within the IFRS which are oriented on the capital market. It is especially because of the fair value incorporates more information into the financial statements and makes the statements more useful to potential investors (Lantto & Sahlström, 2009). This can be regarded as an approximation of accounting data to economic data. Therefore, the IASB considers and emphasizes fair value to be the most relevant measurement basis.

Fair value accounting is closely connected with recognition of the impairment losses. These categories are unknown under the Czech accounting law which is based on historical costs. In accordance with the Czech accounting standards, revaluation on the fair value is applied only on some chosen financial instruments. Related to the changes in assets value under the Czech accounting law, only decrease in the value is recognized through a value adjustment. In fact, even if adjustment is recognized, in the accounting books historical costs are still kept because this adjustment is booked and reported separately from given asset's item.

Substantial differences between accounting entries and the economic reality exist also in other domains; especially in those mentioned above. Causes of these differences are possible to be found in different historical movements of countries which have undoubtedly stigmatized the economic way of thinking and the paradigms forming the bases of accounting systems, not only in the Czech Republic. Then these differences exist on the continental level as well.

Differences in View on Financial Position and Performance of Business Entities in the Context of Entity Value

As defined in the methodology applied, financial statements of analysed companies prepared under the Czech accounting law have been transformed in accordance with the IFRS. With transformation of financial statements the profit/loss of a company has been changed substantially. Then, this change has a great impact on the analysis of profitability when the ratio of Return on Assets (ROA) increased for 0.13

¹ According to the Code No. 500/2002 which explains some rules given by the Accounting Law No. 563/1991; § 6, article 3, letter b) in the accepted text of the law.

per cent point (p.p.) in average. This minor change is caused by the fact that most of the transformations steps have impacted assets and profit of the year. Higher but negative change has been observed in the Return on Equity (ROE); the average change here is -9.18 p.p. Investigating the reasons of this fact has quite logic outcomes consisting in increases in retained profits, especially due to differences in the financial leases presentation. Return on Sales has decreased as well, while the average change is for -3.87 p.p.

Transformation of financial statement has caused the also decreases in results of liquidity ratios. These ratios decreased for 5.86 p.p. in average. Results of current ratio in the analysed companies have decreased for 5.59 p.p. in average. Other liquidity ratios have decreased as well, net working capital included. These changes are caused especially by reclassification of assets into short-term and long-term instead of fixed and current assets. Also current liabilities are increasing by recognition of the short-term parts of long-term debts. This is also proved by the increase in ratio of creditors' payment period that is for 2.41 p.p. in average.

What is important, these are the changes in indebtedness that subsequently impacts the discount rate reflecting the financial risk of a business entity. In summary, values of the debt ratio have decreased for 21.04 p.p. especially due to the increase of retained profit in equity. This way the share of debts in capital structure has decreased. On the other side, transformation of financial leases has caused substantial increases in interest costs which mean decreases in values of the time interest earned ratio that is for 22.19 p.p. in average.

When the changes in view on financial position and performance presented above are interfaced with the company's value, it has to be said that transformation of financial statements of the companies analysed has impacted both, the free cash flow and the discount rate as well. The average change in the discount rate defined as the weighted average cost of capital (WACC) is increase for 5.85 per cent, while the free cash flow, here defined as the sum of net operating profit and depreciation for the non-growing companies, was increase for 12.5 per cent in average. Consequently, the average change of the entities' value is increase for 6.27 per cent. Moreover, it is necessary to point out the correlations between these variables and the company value. The value of Pearson's correlation coefficient between company value and WACC in the sample of companies analysed is only 0.0042 that is not possible to be reflected as any statistical dependence. Nevertheless, the Pearson's correlation coefficient measures only the linear dependence and as the discount rate is the denominator of the company's value calculation, it is possible to suppose that there would the statistical dependence of another type exist. Even higher linear correlation is observed in case of relation between company's value and free cash flow, where the Pearson's

correlation coefficient has the value of 0.9676 that shows significant linear statistical dependence.

When the interrelations between the company's value and various ratios presenting the financial position and performance are investigated, the significance of these dependences is logically different. One of the highest linear dependences has been observed in case of liquidity ratios where the correlation coefficients are about -0.40. This negative value means that the lower liquidity the higher company's value. This relation would have its reason in the free cash flow because it is possible to suppose that lower liquidity also means lower investments to working capital. But in principle, the decrease in liquidity was concerned to increase in current liabilities, not to decrease in resources bounded in current assets. But even higher interconnection measured by the Pearson's correlation coefficient was observed between company's value and the ratio of financial leverage, i.e. the ratio of debts to equity; value of the correlation coefficient here is 0.5732. This phenomenon agrees the financial theory when it is said that employment of debts in the capital structure of a company increases the effectiveness or profitability, mainly in respect to the return on equity that is very important ratio also to potential investors. But if taking the return on equity itself, the correlation between changes in this ration and changes in company's value is only 10.42 per cent which is not dependence of statistical significance. Nevertheless, these results are just results of the pilot study and analyses. The subsequent research of the author focuses on step by step analyses of differences in specific areas of financial reporting and on other types of statistical dependences between variables analysed as well.

CONCLUSION

Financial reporting is very important tool of making image of a company, its performance and financial position that are taking substantial place in considerations about possible value of this company. Of course, financial reporting, respectively the information reported in the financial statement are created at application of certain accounting methods differing by countries. Objective of this article was to frame a possible influence of accounting methods on the income-based value of a company. In this regard, the differences between the Czech accounting law and the IFRS and their impact to the view on the financial position and performance of company were investigated as well as subsequent influence of these differences on the company's value.

Transformation of the financial statements prepared under the Czech accounting law to statements in accordance with the IFRS has the highest impact to the view on company's liquidity. Subsequently, the changes in liquidity have also shown one of the highest correlations with the

changes in company's value. But the highest correlation was observed between the changes in financial leverage and the company's value that could be supposed as a hypothesis about what is the real effectiveness of employment of debts in the capital structure of a company. Examination

of this question would be also the part of future research of the issue on company's value concerned to its financial position and performance evaluation based on the financial statements prepared under a given accounting methods.

SUMMARY

Determination of value of a business entity is the complex expert process that cannot be subordinated to any unambiguous algorithm. Even if some general recommended procedure exists, every step of this procedure is filled in with a range of algorithms that are met and modified on the bases of expert knowledge and skills which are subjective views on current state and possible future development of a company, especially when the income-based methods of company valuation are applied. Income-based methods of company valuation are applied on the prerequisite of going concern of a company while their application is based on the financial position and performance of a company in past, at present and in predicted future that is the synthesis of past development and available information about the factors which would possibly influence this financial position in future. The view on financial position and performance of a company is provided mainly by outcomes of financial accounting, i.e. by financial statements and analyses of data presented here.

Objective of this paper was to determine the influence of applied principles of financial reporting on income-base value of a company while this objective is related to application of the Czech accounting law and the International Financial Reporting Standards (IFRS). The paper comes out from both, qualitative and quantitative analyses of differences between the Czech accounting law and the IFRS and subsequent differences in the view on financial position and performance. For purposes of this article, the simplified income-based value of company is defined as a value of company without growth possibilities, i.e. companies valued base on the principles of present value of perpetual annuity.

By the financial statements transformation, within the statistical sample of 70 business entities, the ROE has decreased for 9.18 p.p in average, ROS has decreased for 3.87 p.p in average, and average decreases in liquidity ratios observed have been for 5.59 p.p. On the opposite, the increases were observed in debt ratio, 21.04 p.p. in average, while the time interest earned ratio decreased for 22.19 p.p. in average. Subsequently the WACC increased for 5.85 in average. Nevertheless, income-based value of analysed companies has increased for 6.27 p.p. in average. Consequently, when the statistical significance of influences on the income-based company value was investigated, the highest linear dependence has been observed between company's value and liquidity ratios. The correlation coefficients are about -0.40 while this negative value means that the lower liquidity the higher company's value. Because the lower liquidity could mean lower working capital, this relation would have its reason in the free cash flow. Observed decrease in liquidity was concerned to increase in current liabilities, not to decrease in resources bounded in current assets, nevertheless the working capital really decreased. But even higher interconnection measured by the Pearson's correlation coefficient was observed between company's value and the ratio of financial leverage; value of the correlation coefficient here is 0.5732. This agrees the financial theory stating that employment of debts in the capital structure of a company increases the effectiveness or profitability if WACC, i.e. the discount rate here, decreases. But observed change in WACC has shown the increase in this variable. In this context, the main influence on the increase in income-based value was the growth of free cash flow. In subsequent research it would be necessary to analyse the influences on the view on free cash flow. Nevertheless, these results are just results of the pilot study and analyses. The subsequent research of the author focuses on step by step analyses of differences in specific areas of financial reporting and on other types of statistical dependences between variables analysed as well.

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