EXPERIENCE WITH DEPRECIATION MODELS AND PROVISIONS FOR REPAIRS IN CZECH SMES

[Zkušenosti s odpisovými modely a rezervami na opravy v českých malých a středních podnicích]

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Abstract: The article aims to describe the process of gradual convergence of Czech accounting standards with International Financial Reporting Standards. One of the last steps was the introduction of residual value and component depreciation method in the field of accounting and reporting of long-term assets. The aim of the harmonization processes is to ensure comparability of financial statements on an international scale and clarity for users of financial information. Uniform rules for financial reporting lead to the credibility of financial statements to investors and ultimately affect the competitiveness of firms.

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Introduction

The accounting harmonization processes mean not only convergence of internationally recognized accounting standards, namely International Financial Reporting Standards (IFRS) and the General Accepted Accounting Principles (US GAAP), but also their gradual introduction in national modifications of other countries. The aim of these processes is to ensure clarity and comparability of financial statements on an international scale, which also indirectly affects the competitiveness of firms, especially from the viewpoint of obtaining additional funding sources of business processes.

An important step in this was the IFRS acknowledgement by the Council of the European Union, when the international accounting standards became a part of European directives, with the obligation for the EU member countries to prepare consolidated financial statements in accordance with IFRS starting from year 2005. For individual financial statements the international accounting standards are obligatory in our country only in trading companies issuing securities, registered on the regulated market of securities of the EU member countries (Act No. 563/1991 Coll, on Accounting, Section 19 Para. 9 and Section 23). Other accounting entities are still obliged to follow national accounting rules which, however, absorb elements of international standards step by step.

One of these steps was introduction of new accounting regulations by an amendment in 2011 to long-term assets depreciation. It is the so-called "residual value" which represents a value of long-term assets at the end of their economic life. Another new feature consists of a different approach to long-term assets depreciation in a form of the so called "method of

component depreciation". Both cases involve the rules taken over and adjusted by the international accounting standard IAS 16 – Property, Plant and Equipment.

1 Literature review

A large strand of literature has examined the connections between tax and financial accounting. Many authors identify increasing divergence in reported financial and taxable income, Blechová (2012), Desai (2003). Porcano and Tran (1998), Freedman (2004) and Hanlon and Shevlin (2005) discuss costs and benefits of a possible book-tax alignment. All of them emphasize disadvantages of such a development. Lamb et al. (1998) identify a strong tax influence on financial accounting regulations in Germany. Compared to other countries, Evans and Nobes (1996) describe a (implicit) strong emphasis on the conservatism principle in German financial accounting regulations, which is partly due to its closeness to tax accounting. Kanniainen and Södersten (1995) discuss investment incentives caused by a one-book or a two-book accounting system. Nobes (2004) and Nobes and Parker (2006) provide an overview of the literature dealing with the developments in national financial reporting systems. Barteczková (2003) deals with the issue of the accounting and tax harmonization in the area of SMEs in the Czech Republic before entry into the European Union.

Slemrod and Kopczuk (2002) provide a framework for measuring tax rate and tax-base effects and discuss the optimal complexity of taxable income. Barteczková (2008) analyzes the impact of the tax reform on income taxes intended to simplify the entrepreneurial environment. Koštuříková (2011) assesses corporate tax burden in the Czech Republic as an important factor of increasing competition among countries of the European Union. One of the difficult areas is also the area of deferred tax which is set by the International Accounting Standard IAS 12 – Income TaxES, that is generally in accounting applied for the income taxes, that means both for accounting of deferred tax and for accounting of payable tax receivables and obligations (Janoušková, 2007). Slemrod (2005) empirically measures the complexity of the tax systems of US states. Gupta and Mills (2003) find that non-uniformity among US states' tax systems increases corporations' compliance cost burdens; McLure (2008) identifies ongoing non-conformity and concludes that compliance costs will remain "needlessly high". Transferring these findings to the current German situation, one might argue that reporting three parallel income statements as it is required induces high compliance costs.

We can find a number of qualitative papers dealing with possible new determinations of taxable income for German companies. However, analyses quantifying the effects of alternative tax bases on the tax burden of companies are rare. Quantitative evidence is provided by Eberhartinger (2000), Gröning (2002), Spengel (2003) and Jacobs et al. (2005). Gröning (2002) analyzes differences between US GAAP and the current German tax base and finds that German companies would save taxes if German taxable income was connected to US GAAP. Spengel (2003) finds that the tax burden of companies would decline if uniform accounting based on IFRS was implemented. In Austria, Eberhartinger (2000) uses a business model simulation to analyze various tax bases, including the IFRS and US GAAP. But according to the most recent publications, there will be no uniform accounting based on IFRS or US GAAP either in Austria or in Germany.

Strouhal et al. (2012) discuss the issues of accounting harmonization in the Czech Republic comparing the local legislature with IFRS and focusing on the aspects of possible implementation of globalized standards there. They stress the attention on the limitation of

fair value approach in the Czech Republic because of the lack of transparency of the local capital markets.

2 Residual value

According to present book (and tax) depreciation, long-term assets are depreciated over their estimated useful life from the purchase price to zero. At their disposal - if fully depreciated - they therefore have zero residual value.

Example
On 20 May 2008, an entity purchased a car in the amount of 480,000 CZK. According to the depreciation schedule, the useful life is estimated to be four years. Depreciation begins from the following month of the car put into use. The depreciation procedure for individual years will be as follows:

Table 1: Book Depreciation Calculation. Source: own calculation

Year	Depreciation Calculation	Depreciation in CZK
2008 – 7 months	(480,000 : 48) = 10,000 x 7	70,000
2009 – 12 months	(480,000 : 48) = 10,000 x 12	120,000
2010 – 12 months	(480,000 : 48) = 10,000 x 12	120,000
2011 – 12 months	(480,000 : 48) = 10,000 x 12	120,000
2012 – 5 months	(480,000 : 48) = 10,000 x 5	50,000
Total Depreciation for 48 Months		480,000

Source: own work

International accounting standards (and now also Czech accounting regulations, but so far only as an optional alternative) are based on the assumption that long-term assets which expired at the scheduled time of use and have to be disposed may still have some value. For instance, they can be sold, components taken to pieces, or used otherwise. They thus define the so-called "**depreciable amount**" which consists of *"the cost of an asset or other amount substituted for cost in the financial statements, less its residual value"* (IFRS, 2005, p. 861). **Residual value** is then *"the estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life"* (IFRS, 2005, p. 861). In this sense, we can now modify the previous example.

During the use of long-term assets, market conditions or entity's intentions with this property as well as the residual value and depreciable amount are subject to change. Hence, IAS 16 states: *"The residual value and the useful life of an asset should be reviewed at least at each financial year-end and, if expectations differ from previous estimates, any change is accounted for prospectively as a change in estimate under IAS 8"* (IFRS, 2005, p. 869). IAS 16 takes into account that the situation on the long-term assets market can change radically, and its residual value will rise more than expected. Accordingly, the standard states: *"The residual value of an asset may increase to an amount equal to or greater than the asset's carrying amount. If it does, the asset's depreciation charge is zero unless and until its residual value subsequently decreases to an amount below the asset's carrying amount"* (IFRS, 2005, p. 869). However, the Czech accounting regulations do not go into such details and do not address a possible change in the amount of residual value.

It is obvious that this is a change in approach to the book depreciation of long-term assets and not to tax depreciation. There are strict rules and there is no reason to change them. Introduction of residual value in accounting is another reason for entities to pay sufficient attention to depreciation schedules and not to practice the tax depreciation method in accounting.

3 Component Depreciation

Czech accounting depreciation so far has worked with individual items of long-term assets as a whole, irrespective of the fact that its individual parts can be of different useful life and will have to be repaired or replaced. In case of long-term assets, where their individual parts will be replaced during the period of the use, the parts ready for replacement are filed, as a rule, as spare part inventories in inventories on hand. Their replacement will not influence the residual value of long-term assets but it is reported directly into consumption and will influence the costs by a single application. Let us demonstrate it on the following example:

Example

By 1 January of the accounting period monitored, a construction company bought and put into use drilling equipment in the amount of 10,000,000 CZK, the useful life of which is estimated to be four years. A part of the drilling set is a removable cap (component) in the amount of 1,000,000 CZK with an estimated useful life two years and has to be replaced at the beginning of the third year.

The company uses an even method of book depreciation.

In the following table the procedure according to the valid Czech accounting regulations will be calculated for individual years. A component represents a spare part registered as an inventory, which is in the exchange accounted under expenses. For simplicity, we do not consider the residual value.

Table 2: Components as Inventories. Source: own calculation

Year	Equipment Depreciation	Component	Equipment Book Value	Impact upon RE
1	2,500,000		7,500,000	- 2,500,000
2	2,500,000		5,000,000	- 2,500,000
3	2,500,000	1,000,000	2,500,000	- 3,500,000
4	2,500,000		0	- 2,500,000
Total	10,000,000	1,000,000		- 11,000,000

Source: own work

The above example shows unequal load of retained earnings at the time of the repair. Upon Czech regulation companies obviously create a provision for repairs of long-term assets in the years preceding the expected year of the repair (component replacement). It is only a partial solution as illustrated in the example bellow. The provision continuously creates a source for such repairs with a debit of expense, so that in the year of their execution the retained earnings are not loaded by a single application in the amount of the costs spent on repairs.

Table 3: Creating of Provisions for Repairs – Component Replacement (Source: own calculation)

Year	Equipment Depreciation	Creation of and Accounting for Provisions	Release of Provisions	Equipment Book Value	Impact upon RE
1	2,500,000	500,000		7,500,000	- 3,000,000
2	2,500,000	500,000		5,000,000	- 3,000,000
3	2,500,000	-1,000,000	1,000,000	2,500,000	- 2,500,000
4	2,500,000			0	- 2,500,000
Total	10,000,000	1,000,000	1,000,000		- 16,560,000

Source: own work

The above example proves that creation of provision does not solve evenness of the retained earnings load. In the third year, the provision is released and no longer created.

International accounting standards (IFRS) do not recognize the creation of provision for repairs; according to these standards provision is "*a liability of uncertain timing or amount, at the same time it is a present obligation of the accounting entity arising from the past events, the settlement of which is expected to result in an outflow from the enterprise of resources embodying economic benefits*" (IFRS, 2005, p. 1561). In addition, the present value of future expenditures, inevitable for liability settlement, is a part of the amount of provision. Thus the amount of provision as a long-term liability is discounted. The provision for repairs of long-term assets does not correspond to these rules.

IFRS (and now also Czech accounting regulations) solve different periods of wear of individual parts of long-term assets by means of component depreciation, but so far only as an optional alternative to the existing traditional method of depreciation. In connection with this IAS 16 states: "*Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item shall be depreciated separately. An entity allocates the amount initially recognized in respect of an item of property, plant and equipment to its significant components and depreciates separately each such part. For example, it may be appropriate to depreciate separately the airframe and engines of an aircraft, whether owned or subject to a finance lease.*" (IFRS, 2005, p. 868).

Then our example would look like as follows (for simplicity, we do not consider the residual value):

Table 4: Component Depreciation. Source: own calculation

Year	Equipment Depreciation	Component Depreciation	Equipment Book Value	Component Book Value	Impact upon RE
1	2,250,000	250,000	6,750,000	750,000	- 2,500,000
2	2,250,000	250,000	4,500,000	500,000	- 2,500,000
3	2,250,000	250,000	2,250,000	250,000	- 2,500,000
4	2,250,000	250,000	0	0	- 2,500,000
Total	9,000,000				

Source: own work

According to IAS 16, the long-term assets are divided into individual components also in the case when these components have the same expected period of life. In this case IAS 16 states: *"A significant part of an item of property, plant and equipment may have a useful life and a depreciation method that are the same as the useful life and the depreciation method of another significant part of that same item. Such parts may be grouped in determining the depreciation charge."* (IFRS, 2005, p. 868).

Component depreciation in international accounting standards can be hampered by the choice of the valuation base because valuation of long-term assets by means of a real value can be chosen. In this case the assets are re-valued as of the final accounts date. In connection with this IAS 16 states: *"When an item of property, plant and equipment is re-valued, any accumulated depreciation at the date of the revaluation is treated in one of the following ways:*

a) restated proportionately with the change in the gross carrying amount of the asset so that the carrying amount of the asset after revaluation equals its re-valued amount. This method is often used when an asset is re-valued by means of applying an index to determine its depreciated replacement cost.

b) eliminated against the gross carrying amount of the asset and the net amount restated to the re-valued amount of the asset. This method is often used for buildings." (IFRS, 2005, p. 867).

The Czech accounting system does not allow revaluation of long-term assets to fair value and thus such a problem cannot appear. Nevertheless, the introduction of the component method of depreciation is the next step to ensure convergence of Czech accounting standards with international accounting standards. It is useful mainly for accounting entities which are not obliged to report in accordance with international financial reporting standards but which have an owner who requires them to report according to IFRS for the needs of consolidation.

4 Research outlet

Empirical research was carried out using questionnaires aimed to determine whether entities use component depreciation and if you are a legal provision for repairs of fixed assets.

Altogether 112 accounting entities participated in the questionnaire enquiry. The entities were asked three questions:

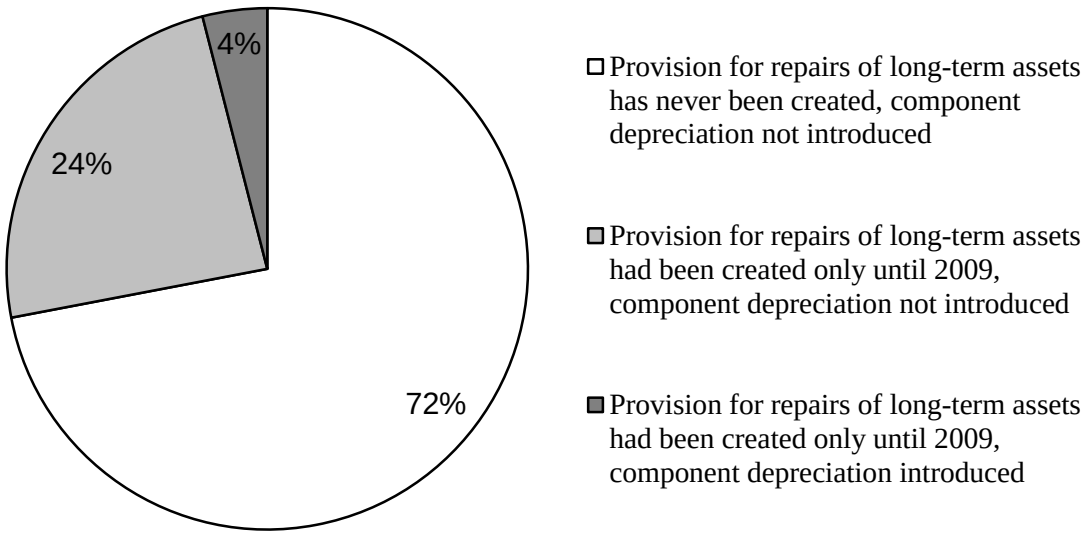
[1] Had you created a legal provision for repairs of long-term assets before 2009 (without the obligation to transfer money to a special account)?

[2] Have you created a legal provision for repairs of long-term assets after 2009 (with an obligation to transfer money to a special account)?

[3] Do you use component way of depreciation of long-term assets or are you going to use it?

Answers are summed-up in the Fig. 1:

Figure 1: Component Depreciation versus Provisions for Repairs of Long-term Assets.



Source: Mullerová, Paseková, 2011

From the answers it follows that 26 % of accounting entities had created a provision for long-term assets until 2009. By that time entities could have used the money created for provision for other purposes. After changing the act, when the entities have to put money aside to a special account and cannot dispose of the money free, they do not create a reserve for provision of long-term assets.

About 4 % of entities do not create a provision according to new legal regulations but they introduce component way of depreciation. Majority, i.e. 72 % of entities have never created a provision for repairs of long-term assets, neither have their introduced the method of component depreciation which should contribute to authentic and honest illustration of assets in their accounting. Any enterprise created a provision for repairs of long-term assets after 2009.

Conclusion

The harmonization processes reflected in the Czech accounting rules the provisions of the residual value and component depreciation that are used by IFRS. Indeed, the introduction of rules is not completely identical in both cases. It should, however, be considered as another step in the convergence of accounting rules on an international scale. The Accounting Act declares the obligation to keep accounts so that the financial statements give a true and fair view of the accounting and financial situation of the entity (Act No. 563/1991 Coll., on Accounting, Section 7 Para. 1). The true and fair view may look completely different, if the financial statements are prepared in accordance with the Czech legislation, or under IFRS. Gradual convergence of the Czech accounting rules with the international also results in convergence of the true and fair view, increases the credibility of financial statements for foreign investors and ultimately the competitiveness of trading companies.

There are two possibilities how to ensure an evenly spread impact of long-term assets depreciations into income in Czech accounting legislation. Either component depreciation or creations of provisions for repairs of long-term assets are allowed. The creation of provisions for repair of long-term assets is in a contradiction to recommendation of the IFRS – IAS 37 -

Provisions, Contingent Liabilities and Contingent Assets. The survey showed that the component method of depreciation not being mandatory by Czech accounting legislation is not utilized by Czech SMEs. It appears to be too administrative demanding for them. Also the creation of provisions for repairs of long-term assets is not considered to be profitable because the financial means are devoted just for given particular fund purpose.

If accounting entities cannot dispose of their money free, they are not interested in creating a provision for repairs of long-term assets, even if its creation is tax-efficient. Accounting method of component depreciation which is not applicable for tax purposes is not sufficiently advantageous for entities, but on the contrary, its introduction would result in increasing administrative load without corresponding tax effect. In our opinion, if the act on income tax does not react to accounting regulations, entities will avoid component way of depreciation.

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