Performance Analysis according to the Czech Accounting Standards and IFRS for SMEs and its Impact on Company Value

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Abstract: Financial analysis derives needed data from accounting statements while fundamental architecture of basic ratios has been already accepted and broadly used. Utilization rate of financial ratios for managerial purposes is directly linked and truly based on the relevance to accounting data. To increase, harmonize and unify the accounting principles within European Union is one of the core objectives of IFRS implementation. The main aim of this paper is perform and suggest convenient comparison study of the financial results which were calculated according to the rules of IFRS for SMEs and Czech Accounting Standards (CAS). Paper includes study, which is based on real data of a selected Czech company and impact on company value is highlighted. Comparison methodology is described and obtained results are analyzed.

Key-Words: Performance analysis, comparison study, Czech accounting Standards, IFRS for SME, company value

1 Introduction and Literature review
Based on differences between IFRS and national accounting standards is evident that it is very important to build in these conditions to the system of financial analysis which needs to be adjusted to the new informational environment [8], [1]. We strive to aim our research on key areas of accounting transformational process towards to the successful implementation of IFRS for SMEs, which are estimated to account in the future for over 95 per cent of all companies around the world.

The main differences of IFRS for SMEs comparing to the “full IFRS” consist in the simplification of certain rules, skipping of the irrelevant rules for SMEs and reducing the requirements for disclosure of notes to the financial statements [5], [7], [12]. The procedure for the preparation of financial statements in accordance with IFRS for SMEs is as follows:

- recognize all assets and liabilities whose recognition is required by IFRS for SMEs;
- don’t report items such as assets or liabilities if IFRS for SMEs, do not allow them;
- reclassify assets and liabilities which were recognized under the previous financial reporting systems as one type of asset or liability in line with IFRS for SMEs;
- apply this standard for evaluating of all recognized assets and liabilities.

According to [10] SMEs sector plays a very important role in economy; it is a driving force of business, of growth, innovations as well as competitiveness. The biggest obstacle is the existence of 27 different systems of accounting within the European Union, which have to be harmonized [7], [13], [17], [2].

In the Czech Republic only listed entities are required to prepare consolidated financial statements according to IFRS. For statutory fillings the preparation of financial statements according to IFRS is not permitted and companies who prepare financial statements according to IFRS prepare them voluntarily and in addition to the financial statements under CAS [15].

Financial statements prepared in compliance with international standards may provide a high level of transparency and comparability [12], [13]. [8], [10], [11], [12], [14] already pointed out the importance of harmonization and discussed the possible impacts to the performance indicators. [11] performed empirical analysis concerning reporting for financial instruments and documented the existence of a high similarity degree among IFRS and Czech Regulation. One of the main objectives of financial analysis is to ensure the comparability...
of analyzed data. Despite all the efforts it is very difficult to achieve this objective, particularly at international level, where the legislation, economic environment, accounting policies and many other factors differ.

Important sense of the world's leading IFRS is to compare statements prepared in conformity with IFRS rather than statements drawn up in accordance with the national accounting regulations of the country. IFRS provides users in many cases with quite a lot of freedom, e.g. choice of several correct options of accounting transaction and therefore, differences might arise in the same items of financial statements of different companies.

Ensuring full comparability among similar companies is therefore never possible, even if the world recognized IFRS seeks the greatest possible comparability [8]. Due to the differences between IFRS and CAS, financial statements prepared in line with CAS cannot be reasonably compared with financial statements based on other systems without detailed knowledge of Czech accounting legislation. CAS is also more linked to tax and other legislation whether IFRS is more focused on the substance of the transactions. Mainly foreign stakeholders prefer if the company can provide them with full IFRS or IFRS for SMEs financial statements they can understand. This is welcomed not only by company shareholders, but also by banks, customers or suppliers. Usually companies with foreign owners are used to prepare reporting packages and have some knowledge of IFRS at the moment. Other companies with Czech ownership are usually less informed about IFRS and if they are required to show financial statements under IFRS they are not capable to prepare them.

When the company is able to prepare IFRS for SMEs financial statements which are understandable to foreign investors and foreign banks, it has more possibilities to get finance if needed. Also some companies prefer to submit IFRS for SMEs financial statements because their financial position and profit or losses are more accurate than financial statements under CAS [15].

Two research projects that focus on voluntary adoption of IFRS in Czech companies were performed at the Faculty of Management and Economy, Tomas Bata University in Zlin, Czech Republic. First research with the sample of 177 Czech companies was held in 2007. The second research with the sample of 89 Czech companies was held in 2009 and is part of an ongoing GA CR project. Usage of IFRS was stated by 2% of companies in 2007 and 6% of companies in 2009 [6], [18].

The usage of IFRS has slightly increased in the Czech Republic, mainly due to the fact, that Czech companies are more and more important parts of foreign groups and their owners require them to report its financial statements according to group accounting rules based on IFRS. IFRS financial statements are also more frequently required during mergers and acquisitions. On the other hand most of the Czech Companies do not see the opportunities that IFRS could bring them and if the opportunities are seen, the fact that financial statements prepared according to IFRS have to be prepared besides Czech financial statements discourages the companies to use IFRS [16].

When analyzing the performance of a company, financial statements provide key source of information. When monitoring indistinguishable measurements organizations will exacerbate the feeling of their individuals that measures are not to work with, but only to report, [20] states. Therefore, measures need to be cascaded so that employees are given the opportunity to directly affect the monitored measures and control the outcome of their actions. If this emphasis is reached then higher focus will be generated towards finding appropriate measures for each layer of the organization. Pyramidal breakdowns of key indicator (such as return on equity) might be used for the need to cascade and monitor. Such concepts definitely positively support overall performance and value of a company.

2 Problem Formulation

In the financial statements are presented the absolute values of each item. In order to analyze the interactions and connections between indicators, we put different absolute values into the mutual relationships. This logic creates the ratios that basically allow the comparison with other business or with industry averages, respectively competitors or accounting system (Czech regulation towards IFRS for SMEs). Thousands of slightly different financial ratios can be found in a variety of sources, some of which differ in only minor modifications and added to ROE pyramidal breakdown. However practical usage selected a group of generally accepted indicators, which allow creating a basic understanding of the financial situation of the enterprise.

Two systems of accounting derive sometimes two different inputs for financial analysis. When we
have different inputs we evaluate the potential of a company differently. Future potential of a company and the competitive strength of a company is sometimes assessed thorough the results of financial indicators, indicators of its financial stability, efficiency, utilization and profitability.

The goal is to set up a clear methodology for comparison of both accounting system based on previously selected and published measures and present deep results of analysis, show results of sensitivity analysis, spider analysis and conduct result synthesis.

3 Comparative Analysis

Profitability is a comprehensive expression of business performance, which is the final result of interaction of many operational and non-operational performance factors. To identify these factors, measure their impact and level of influence are important parts of financial management. To be able to perform above mentioned activities could be beneficial to use a procedure from financial analysis, well know as the decomposition of the indicators of profitability. The most famous is the one called “Du Pont” decomposition of company’s profitability. [4] states that the starting point is an indicator of profitability ROE, which expresses business performance globally and is the result of three basic factors that can be measured individually:

- profitability of sales (profit / sales);
- turnover (intensity of use) of total assets (sales / assets);
- financial leverage, i.e. the effect of cheaper debt capital (liabilities / equity).

Selected basic indicators can be further extended. Combining these factors, or by extending the magnitude of other parameters on an individual business can be separately analyzed the influence of individual factors or their groups and analyze the sensitivity up to the top indicator. [4] states that through the properly conducted pyramidal analysis is possible to evaluate past, present, and future business performance.

Generally, the profitability indicators are among the mostly used variables, since their results are influenced by corporate debt, liquidity and activity of the entity. Within the parameters of modern value management is a suitable alternative pyramidal decomposition of Economic Value Added.

Pyramidal decomposition of ROE as well as other indicators of financial analysis uses information provided by the accounting system.

Financial ratios are the core of financial analysis. They affect the main characteristics of the financial situation and relatively reliably identify the strengths and weaknesses. Ratios are closely linked to elements of the business plan; their calculation is relatively simple and time-saving. Ratios use the data immediately from statement, usually without any correction. Theoretically it is possible to create unlimited number of ratios - depending on the purpose for which analysis is prepared.

Ratios are used both individually and in groups of interconnected ratios in order to affect the financial situation from the different perspectives or globally. These “systems of linked indicators” specifically include such parameters which indicate performance of desirable processes on which the system is directed, and which allow a prediction of future development. These “systems of indicators” affect important aspects of the financial situation and evaluate them according to the financial situation of the company as a whole. Linkages between individual indicators inside the “system of indicators” enable to analyze its mutual interactions and consider effects of individual changes on system as a whole. Pyramidal systems of indicators always implement functional links between decomposed ratios.

Comparative analysis is based on structure of pyramidal breakdown that is derived partially from the recommendation of Ministry of Industry and Trade of the Czech Republic and can be seen of the following figure 1.

![Fig. 1 Used structure of ROE pyramidal breakdown](image)

Source: [19]

Figure 1 describes the mathematical relations between each single indicator. The way of each computation is shown and published in authorspaper
4 Methodology Description

Calculations according to the figure 1 with the data equivalent for CAS and IFRS for SMEs were done and each ratio is represented now with two results. We performed mathematical and statistical analysis on calculated ratios. Desirable structure of final data is as follows on figure 2.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Ratio no. 1 - 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>In accordance with CAS</td>
</tr>
<tr>
<td>B</td>
<td>In accordance with IFRS for SMEs</td>
</tr>
<tr>
<td>C</td>
<td>Difference between CAS and IFRS for SMEs</td>
</tr>
<tr>
<td>D</td>
<td>Discrete yield</td>
</tr>
<tr>
<td>E</td>
<td>Influence on Top Ratio (ROE)</td>
</tr>
</tbody>
</table>

![Fig. 2 Structure of analysed results](image)

Source: Authors

Methodology how to substitute values according to the CAS and IFRS for SMEs was already presented. Difference between both systems was calculated as its simple absolute difference.

$$C = A - B \quad (1)$$

Discrete yield was calculated according to the following formula:

$$D = \frac{B}{A} - 1 \quad (2)$$

For „E“ calculation we had to apply one of the methods of influence quantification on selected profitability ratio. Influence quantification analysis was made by applying functional method. Influences of individual indicators on basic ratio were calculated and compared.

Functional method can be introduced on the demonstrative multiplication of just only two ratios $A_1$ and $A_2$. Implementation of the method to our case was done analogically to the following:

$$X = A_1 \ast A_2 \quad (3)$$

$$\Delta x_{A_1} = \frac{1}{R_{A_1}} \left( R_{A_1} + \frac{1}{2} R_{A_2} R_{A_1} \right) \Delta y_x \quad (4)$$

$$\Delta x_{A_2} = \frac{1}{R_{A_2}} \left( R_{A_2} + \frac{1}{2} R_{A_2} R_{A_1} \right) \Delta y_x \quad (5)$$

where

$$R_x = \Delta x_{x_0}$$

is discrete yield of x ratio and

$$R_{A_1} = \frac{\Delta A_{A_1}}{A_{A_1,0}}$$

is discrete yield of ratio $A_1$.

5 Results Synthesis – Pyramidal Breakdown

Based on the proposed methodology and its application (in case study) to specific business conditions it was proved that the conversion of the statements from CAS to IFRS for SMEs affects the results of financial ratios. Main ratio “ROE” decreased by 0.74%. In terms of other indicators, 7 ratios were decreased and 12 indicators increased.

When examining the proportion of the difference to the ratio’s results is the average value of 1.29%, i.e. the average deviation is below 1.5% of the value of indicators. These differences can be then considered as insignificant. The examination was performed on a particular company. In this case study we didn’t find significant differences between CAS and the application of IFRS for SMEs. There was proposed possible methodology for transition that would facilitate the conversion process from Czech to IFRS for SMEs. The main aim was to present convenient methodology for relevant comparison of both accounting systems which is done through the ROE pyramidal breakdown and influence quantification analysis that is well described.

5.1 Sensitivity analysis

Sensitivity analysis, i.e. monitors the impact of differential reporting systems (IFRS for SMEs and CAS) on ROE. Pyramidal breakdown can be extended by the simulations of individual changes (i.e. changes of only one parameter out of 19 parameters of pyramidal breakdown) and measuring the strength of impact of the individual indicators to the top one - ROE. For this purpose can be generally advised to use sensitivity analysis as a convenient method. Generally the sensitivity analysis is a technique, that systematically change variables in a model and tries to determine the effect of such changes. The results obtained in our analysis are shown in the following table number 4.

The result of sensitivity analysis (by applying a constant percentage changes in individual indicators, while the assumption of constant remaining indicators) is the finding that the effects of changes in indicators 12, 14, 15 and 19 were statistically significant and the top ROE was
influenced more strongly by them than by remaining indicators. Ratio number 13 is just only “helpful” indicator and appears in pyramidal breakdown only from the mathematical reasons. It measures portion between revenues and revenues and must be always equal to 1. That’s why no simulation was done concerning parameter 13. Results of sensitivity analysis are confirmed by performing Spider analysis and its results.

Table 1 Sensitivity analysis of individual parameters from suggested pyramidal breakdown

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Starting Value of analysed parameter</th>
<th>Increase of 15 %</th>
<th>Original ROE</th>
<th>New ROE</th>
<th>Coefficient of ROE change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0.0090466085</td>
<td>0.070403</td>
<td>9.10%</td>
<td>10.47%</td>
<td>15.00%</td>
</tr>
<tr>
<td>3</td>
<td>0.653262998</td>
<td>0.271252</td>
<td>9.10%</td>
<td>10.47%</td>
<td>15.00%</td>
</tr>
<tr>
<td>4</td>
<td>2.018366137</td>
<td>2.321621</td>
<td>9.10%</td>
<td>10.47%</td>
<td>15.00%</td>
</tr>
<tr>
<td>5</td>
<td>0.761835923</td>
<td>0.876111</td>
<td>9.10%</td>
<td>10.47%</td>
<td>15.00%</td>
</tr>
<tr>
<td>6</td>
<td>0.090631176</td>
<td>0.104226</td>
<td>9.10%</td>
<td>10.47%</td>
<td>15.00%</td>
</tr>
<tr>
<td>7</td>
<td>1.892493336</td>
<td>2.176367</td>
<td>9.10%</td>
<td>10.47%</td>
<td>15.00%</td>
</tr>
<tr>
<td>8</td>
<td>0.345186419</td>
<td>0.396964</td>
<td>9.10%</td>
<td>10.47%</td>
<td>15.00%</td>
</tr>
<tr>
<td>9</td>
<td>1.017904109</td>
<td>1.170601</td>
<td>9.10%</td>
<td>10.47%</td>
<td>15.00%</td>
</tr>
<tr>
<td>10</td>
<td>0.102264969</td>
<td>0.117629</td>
<td>9.10%</td>
<td>10.47%</td>
<td>15.00%</td>
</tr>
<tr>
<td>11</td>
<td>0.576584094</td>
<td>0.663072</td>
<td>9.10%</td>
<td>10.47%</td>
<td>15.00%</td>
</tr>
<tr>
<td>12</td>
<td>0.029743505</td>
<td>0.034205</td>
<td>9.10%</td>
<td>7.68%</td>
<td>-15.66%</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>1.05774</td>
<td>9.10%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>14</td>
<td>0.009068824</td>
<td>1.045574</td>
<td>9.10%</td>
<td>-1.52%</td>
<td>-116.70%</td>
</tr>
<tr>
<td>15</td>
<td>0.524049506</td>
<td>0.028257</td>
<td>9.10%</td>
<td>2.98%</td>
<td>67.23%</td>
</tr>
<tr>
<td>16</td>
<td>0.046634668</td>
<td>0.053613</td>
<td>9.10%</td>
<td>8.56%</td>
<td>5.98%</td>
</tr>
<tr>
<td>17</td>
<td>0.113727331</td>
<td>0.130786</td>
<td>9.10%</td>
<td>7.78%</td>
<td>-14.59%</td>
</tr>
<tr>
<td>18</td>
<td>0.030391632</td>
<td>0.03495</td>
<td>9.10%</td>
<td>8.75%</td>
<td>-3.90%</td>
</tr>
<tr>
<td>19</td>
<td>0.194578866</td>
<td>0.223762</td>
<td>9.10%</td>
<td>6.83%</td>
<td>-24.97%</td>
</tr>
</tbody>
</table>

5.2 Spider analysis

Spider analysis is a graphical method of inter-company comparisons, which represents the second stage of data processing, based on the financial ratios. It represents a procedure that allows not only to compare the financial situation of several companies, but also to quantify the differences between calculated values in their order. Spider analysis uses a comparison of the assessed characteristics through the radial diagram, the so-called "spider chart". This allows comparison of multiple indicators, both visual and comparable with the situation in the enterprises that are used as an appropriate benchmark.

In the following part of a paper is spider analysis used as an additional tool for comparing performance results for selected ratios depending on the financial (accounting) reporting system. [9] describes in his book, the process of selecting key performance indicators of the company. In our case, indicators have been chosen in way that the higher value always means and represents higher performance, or generally better financial results.

For the purpose of comparison of the effects of reporting under different accounting systems on company performance as the appropriate tool seems to be a "spider analysis." Applying that on the analyzed data (application of both accounting systems to the one Czech company) leads to the results, which are shown in the following figure number 3 and 4. Data on the figure 1 represent the first analyzed year and the figure 4 shows the following year.

Fig. 3 Influence of accounting system on selected performance indicators analyzed through Spider analysis in 2010

Source: author’s analysis
Fig. 4 Influence of accounting system on selected performance indicators analyzed through Spider analysis in 2011
Source: author’s analysis

Selected performance indicators were following:
- Returns on Equity (ROE), Assets (ROA) and Sales (ROS) → (A1 – A3),
- Current, Quick and Cash Ratios (B1 – B3),
- Equity to Assets, Asset Coverage Ratio, Interest Coverage Ratio (C1 – C3),
- Asset Turnover, Receivable Turnover, Current Liability Turnover (D1 – D3).

6 Conclusion
While maintaining the same procedure of calculation of all used indicators is evident that in both years, the indicator of ROA and ROS were improved significantly, while the entity uses IFRS for SMEs. The opposite situation, significantly lower values were obtained for ROE indicator and interest coverage. Values of other indicators calculated for CAS and IFRS for SMEs are mutually comparable with the slight differences. Interesting is that these comparable ratios are usually slightly undervalued by IFRS for SMEs compared to CAS.

In conclusion to that part we can proclaim and confirm that it is necessary for the financial analyst to start his activities with analysis of origin and methodology used within accounting statements. For most indicators significant differences can be expected. Individual companies and their specifics will always require individual solutions and procedures to maintain comparability of results.

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