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ECONOMIC EVALUATION OF THE POSITION OF SUGAR COMPANIES COMPARED TO FOOD PRODUCERS (THE CASE OF CZECH REPUBLIC)

The article explores in detail the selected financial ratios during 2007–2011 for sugar companies. Their development is compared with the selected indicators for food companies. The data source is benchmarking diagnostic system of financial indicators INEA. This model is processed by the Ministry of Industry and Trade of the Czech Republic. Other sources of data are financial statements of the analyzed companies. The financial ratios are calculated according to the methodology of the Ministry of Industry and Trade. This procedure enables comparison between sugar and food companies. In general, it is possible to state that sugar companies exhibit good values of the selected financial ratios.

Keywords: sugar companies; financial analysis; food companies; profitability; debt ratio; liquidity. JEL classification: M10, M21, L10.

Джозеф Краузе

ЕКОНОМІЧНЕ ОЦІНЮВАННЯ ПОЗИЦІЙ ВИРОБНИКІВ ЦУКРУ СЕРЕД ВИРОБНИКІВ ПРОДУКТІВ ХАРЧУВАННЯ (ЗА ДАНИМИ ЧЕХІЇ)

У статті детально проаналізовано окремі фінансові показники виробників цукру Чеської Республіки за 2007–2011 роки, які порівняно з аналогічними показниками виробників продуктів харчування. В аналізі фінансових індикаторів головним методом став бенчмаркінг. Аналогічна модель застосовується і Міністерством промисловості та торгівлі Республіки Чехія. Для авторської калькуляції використано дані фінансової звітності цукровиробників. У цілому можна констатувати, що на загальному фоні сектору продуктів харчування цукровиробники демонструють значні успіхи.

Ключові слова: виробники цукру; фінансовий аналіз; харчові компанії; прибутковість; коефіцієнт заборгованості; ліквідність.

Форм. 6. Рис. 5. Табл. 1. Літ. 11.

Джозеф Краузе

ЭКОНОМИЧЕСКАЯ ОЦЕНКА ПОЗИЦИЙ ПРОИЗВОДИТЕЛЕЙ САХАРА СРЕДИ ПРОИЗВОДИТЕЛЕЙ ПРОДУКТОВ ПИТАНИЯ (ПО ДАННЫМ ЧЕХИИ)

В статье подробно проанализированы отдельные финансовые показатели производителей сахара Чешской Республики за 2007–2011 годы, которые сравнены с аналогичными показателями производителей продуктов питания. В анализе финансовых индикаторов главным методом выступил бенчмаркинг. Аналогичная модель применяется и Министерством промышленности и торговли Республики Чехия. Для авторской калькуляции использованы данные финансовой отчетности сахаропроизводителей. В целом можно сказать, что на общем фоне сектора продуктов питания сахаропроизводители демонстрируют значительные успехи.

Ключевые слова: производители сахара; финансовый анализ; пищевые компании; прибыльность; коэффициент задолженности; ликвидность.

Introduction

Evaluation of financial performance can be carried out, among others, by employing financial analysis. One of the most common techniques of financial analysis is the evaluation based on ratios. These ratios focus on individual areas of a com-

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pany. We distinguish 5 basic categories of ratios: profitability, liquidity, activity, debt, and capital market performance (Higgins, 2007; Scholleova, 2012; Kislingerova, Hnilica, 2008; Synek et al., 2011).

According to the Ministry of Agriculture of the Czech Republic, sugar production takes place in 7 sugar factories operated by 5 sugar companies. These sugar companies are Cukrovary a lihovary TTD, a.s., Moravskoslezske cukrovary, a.s., Hanacka potravinarska spolecnost, s. r. o., Litovelska cukrovarna, a.s., and Cukrovar Vrbatky a.s. (Ministry of Agriculture, 2012a; 2012b).

In the Czech Republic, the classification of economic activities CZ-NACE is used, which divides all economic activity in various sections, subsections, groups and subgroups. According to this classification, sugar production ranks into C-Manufacturing, section 10 – Manufacture of food products, subsection 108 – Manufacture of other food products, group 1081 – Manufacture of sugar, subgroup 10810 – Manufacture of sugar.

This paper aims to assess the development of the selected ratios of financial analysis of sugar producers and to compare them with ratios of food companies.

Materials and methods

The data source was the benchmarking diagnostic system of financial ratios INFA, which is operated by the Ministry of Industry and Trade of the Czech Republic. The data source for this model are statistical surveys of the Czech Statistical Office. This system can be used for comparison of average financial ratios for the industry. In this system, it is possible to obtain the values of selected financial ratios for individual NACE sections (Ministry of Industry and Trade, 2013 a,b).

Another source of data was the Albertina database, which contains information about companies and entrepreneurs in the Czech Republic. The Commercial Register was another data source. The Commercial Register is kept by the Ministry of Justice of the Czech Republic and is available at www.justice.cz.

As mentioned in the introduction, in the Czech Republic, sugar production is run by 5 sugar companies. The Albertina database and the Commercial Register provided information on these sugar companies. Subsequently, this data was used to calculate the selected ratios of financial analysis according to the methodology of the Ministry of Industry and Trade of the CR for the calculation of the INFA system (Ministry of Industry and Trade, 2013a).

From the data of the Ministry of Industry and Trade, it was possible to obtain the values of financial analysis ratios for companies of section NACE 10 – Manufacture of food products (further only as food companies). This paper contains comparison of the selected ratios and their development for sugar companies and food companies (Ministry of Industry and Trade, 2013b).

Characteristics and design of selected financial ratios of the financial analysis

Profitability ratios measure the company's ability to achieve profit from one Czech crown of invested capital or realized sales. The basic ratios of profitability are return on equity, return on assets, and profit margin (return on sales).

The return on equity (ROE) ratio is designed as after-taxes profit (net income) divided by equity. It indicates critical information about how much net money can the company create using one Czech crown of equity. Companies usually strive to maximize this ratio.

$$ROE = \frac{\text{profit after taxes}}{\text{equity}} \quad (1)$$

Return on assets provides information about how much net money can a company create using one Czech crown of assets (capital).

$$ROA = \frac{\text{earnings before interest and taxes}}{\text{assets}} \quad (2)$$

Based on the accounting statements in the Czech Republic, according to the methodology used, profit before interest and tax is identical with operating profit. For companies, it is advantageous to achieve maximum value of this ratio.

Return on sales gives information on how much profit the company gets from every Czech crown of sales. The methodology of the Ministry of Industry and Trade uses the concept of margin, in which margin is calculated as profit before interest and tax divided by turnover.

$$\text{Margin} = \frac{\text{earnings before interests and taxes}}{\text{turnover}} \quad (3)$$

Turnover is based on the values from Czech accounting statements and is calculated as the sum of sales of goods and services (Ministry of Industry and Trade, 2013a).

Debt ratios give information on the extent to which the company uses its own or borrowed capital. The basic ratio of indebtedness is total indebtedness.

$$\text{TotalDebt} = \frac{\text{debts}}{\text{total resources}} \quad (4)$$

For this ratio, there are certain recommended values. High debt means higher risk for the company. On the other hand, low debt may mean inefficient use of own resources (Ministry of Industry and Trade, 2013a).

Liquidity ratios show the company's ability to meet its obligations. There are 3 fundamental ratios of liquidity: cash ratio (L1), quick ratio (L2), and current ratio (L3). In the following text, only the current ratio will be presented.

$$\text{Liquidity L3} = \frac{\text{current assets}}{\text{current liabilities} + \text{short-term bank loans}} \quad (5)$$

A high value of liquidity ratios shows the high ability of the company to meet its obligations. At the same time, however, high levels of these ratios may indicate certain inefficiency in the use of resources (Ministry of Industry and Trade, 2013a).

Activity ratios reflect the company's ability to use its assets. These ratios are usually expressed by turnover rate and turnover time. One of the basic ratios of turnover rate is the turnover rate of assets.

$$\text{Asset turnover rate} = \frac{\text{turnover}}{\text{assets}} \quad (6)$$

In this case, turnover is again calculated according to the methodology of the Ministry of Industry and Trade as the sum of sales of goods and services. Companies should strive to achieve high levels of activity ratios (Ministry of Industry and Trade, 2013a).

The last group of ratios are the ratios of capital market. These ratios can be calculated only when companies are traded at the stock exchange. They provide information especially for potential investors in specific companies. This paper will not address these ratio any further.

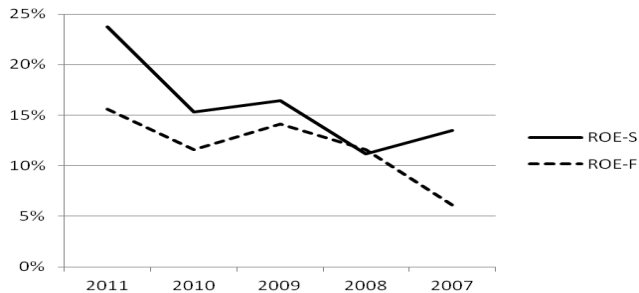
The financial analysis includes a variety of other methods and techniques, such as composite indices (Camska, 2012). In the presented text, attention will be paid only to ratio analysis.

Economic results of sugar producers can be influenced by climatic conditions that affect the yield of sugar beet in a particular year. Although sugar companies can use various financial derivatives as insurance against these risks, their efficiency is rather low (Spicka, Hnilica, 2012). Their use is then reflected in accounting (Strouhal, 2012), which is the essential information source for financial analysis.

In the article hypothesis is also tested that sugar producers have a higher ROE and ROA than firms in food industry. For the testing, a significant level of 0.05 is required.

Results and discussion

Figure 1 shows the development of return on equity and return on assets for sugar companies and companies of section NACE 10 – Manufacture of food products.



Source: Developed by the author according to the data by Albertina and MIT.

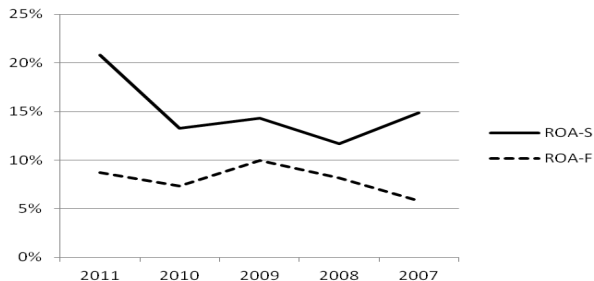
Note: ROE-S = return on equity for sugar companies.

ROE-F = return on equity for food companies – NACE 10.

Figure 1. Development of return on equity for sugar and food companies

Figure 1 clearly demonstrates that sugar companies, except for 2008, achieve higher return on equity than companies producing food products. Between 2007 and 2011, the return on equity of sugar companies increased from about 13% to 24%. As for food companies, their return on equity increased from 6% in 2007 to 16% in 2011.

Figure 2 shows the development of the return on total capital of the monitored group of companies.



Source: Developed by the author according to the data by Albertina and MIT.

Note: ROA-S = return on total capital for sugar companies.

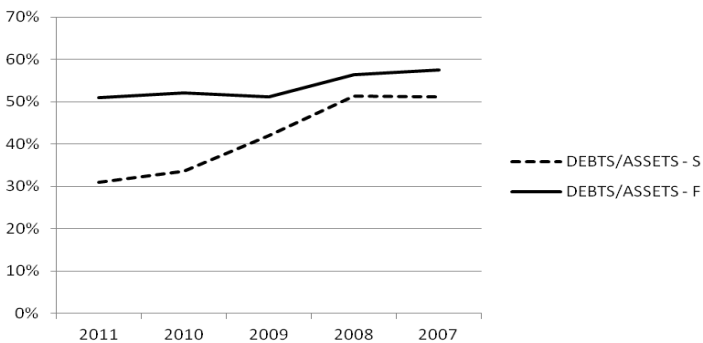
ROA-F = return on total capital for food companies.

Figure 2. Development of return on total capital for sugar and food companies

It should be emphasized that the development of the return on total capital is similar to the return on equity. In all the years monitored, the return of sugar companies was higher than that of food companies. In these years, the return of sugar companies increased from about 15% to about 21%. Food companies registered the return on total capital increasing from about 6% to about 9%.

In terms of the development of the monitored returns, 2008 provided interesting results. In this year, the return on equity (11%) and total capital (12%) of sugar companies reached their lowest levels in the monitored period. These low values resulted from the fact that in that year the Czech Republic processed the least quantity of sugar beet for the last 10 years.

Figure 3 shows the development of the total debt of sugar and food companies from 2007 to 2011.

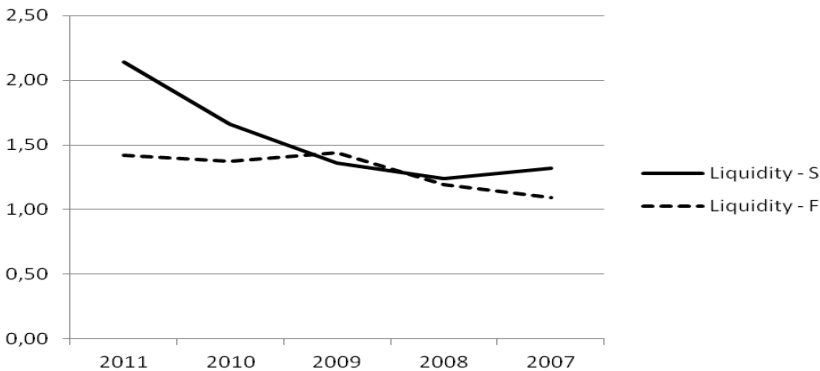


Source: Developed by the author according to the data by Albertina and MIT.

Figure 3. Development of debt for sugar and food companies

In both groups, companies demonstrate the same trend in debt. From 2007 to 2011, their indebtedness declined. For sugar companies, the debt decreased from about 51% in 2007 to around 31% in 2011. For food companies, the debt decreased from about 58% in 2007 to around 51% in 2011. The indebtedness of sugar companies reaches relatively low values, indicating their good financial stability.

Figure 4 shows the development of liquidity "L3" of the monitored group of companies.

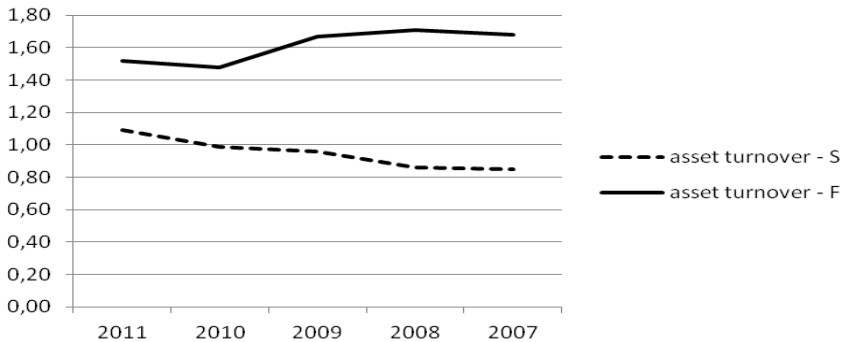


Source: Developed by the author according to the data by Albertina and MIT.

Figure 4. Development of liquidity "L3" of food and sugar companies

Except for 2009, sugar companies managed to achieve a higher value of the selected ratio of liquidity L3 during all the examined years than food companies. The graph also shows a clear trend of increasing levels of liquidity in both groups of companies. The development of this ratio is thus identical with the development of the ratio of total debt.

Figure 5 shows the development of the asset turnover rate of sugar and food companies from 2007 to 2011.



Source: Developed by the author according to the data by Albertina and MIT.

Figure 5. Development of the asset turnover rate of sugar and food companies

In all the monitored periods, food companies achieved higher asset turnover rate than sugar companies. The asset turnover rate in food companies fluctuated around 1.6. In the monitored period of 5 years, it is possible to see a slight downward trend in the values of this ratio. The asset turnover rate of sugar companies ranged in 2007 over 0.8. In all the following years, the graph shows a slightly rising trend, with the rate in 2011 reaching about 1.1.

Table 1 shows the significant value for the tested hypotheses. This hypotheses were that sugar producers have higher ROE and ROA than other food producers.

Table 1. The significance levels for the confirmation of the tested hypotheses

Year	2011	2010	2009	2010	2011
Significant value – ROE	0,00	0,05	0,40	0,32	0,05
Significant value – ROA	0,00	0,00	0,00	0,01	0,01

Source: Developed by the author.

Based on statistical analysis, it can be concluded that in all the years in the research sugar producer have higher ROA than food producers. With regards to the values of ROE, sugar producers have significant higher value than food producers in 2011, 2010 and 2007.

Conclusion

Based on the analysis, it can be concluded that sugar companies achieve positive values of the monitored ratios of financial analysis. In the monitored period (except for 2008), the return on equity of sugar companies grew and reached higher values than food companies. A similar trend was also in return on total capital. In the monitored period, the debt of food and sugar companies reduced, with sugar companies registering lower values in all the monitored years. Similar to this development was the improvement of liquidity in both groups of companies. Only the ratio of turnover

rate was lower for sugar than for food companies. At the same time, however, the value slightly improved over these years.

Summary

The aim of the article was to evaluate the development of the selected indicators of financial analysis for sugar companies and compare their position in relation to food businesses. Benchmarking diagnostic system of financial ratios INFA was used to meet this aim. The database Albertina was another source of data. Basic indicators of financial analysis were used. These indicators were return on equity, return on assets, total debt, liquidity and asset turnover. The evaluation of sugar companies in comparison with food producers is general very good. Almost in all the years sugar companies had better values than food producers. The values of ROE and ROA were statistically tested. The values of ROA of sugar producers were statistically higher in all monitored years than the values of food producers. The values of ROE were statistically higher 2011, 2010, 2007.

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References:

- Benchmarkingovy diagnosticky system financnich indikatoru INFA. Ministry of Industry and Trade of the Czech Republic. Available at: <http://www.mpo.cz/cz/infa.html>.
- Camska, D.* (2012). National View of Bankruptcy Models. In: International Days of Statistics and Economics. Slany: Melandrium, p. 268–278.
- Higgins, R.C.* (2007). Analysis for financial management. 8th ed. Boston: McGraw-Hill/Irwin, 430 p.
- Metodicka cast pro benchmarking s klasifikaci CZ-NACE. Ministry of Industry and Trade of the Czech Republic. <http://www.mpo.cz/cz/infa-cznace-metodika.pdf>.
- Kislingerova, E., Hnilica, J.* (2008). Financni analyza – krok za krokem. 2nd ed., Prague: C. H. Beca, 135 p.
- Scholleova, H.* (2012). Ekonomicke a financni rizeni pro neekonomy. 2nd ed., Prague: Grada Publishing, 268 p.
- Situacni a vyhledova zprava – cukr a cukrova repa. Prague: Ministry of Agriculture of the Czech Republic, 2012a, 39 p.
- Spicka, J., Hnilica, J.* (2012). Efficiency of Financial Weather Contracts in Czech Agriculture. In: Advances in Economics, Risk management, Political & Law Science. Atheny: WSEAS Press, p. 317–322.
- Strouhal, J.* (2012). Derivaty v ucetnictvi podnikatelu. Danovy expert, 8 (6), p. 38–48.
- Synek, M. et al.* (2011). Manazerska ekonomika. 5th ed. Prague: Grada, 471 p.
- Zprava o stavu zemedelstvi Ceske republiky za rok 2010. Prague: Ministry of Agriculture of the Czech Republic, 2012b, 224 p.

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