ANALYTICAL VIEW OF THE PROFITABILITY OF COMMERCIAL COMPANIES*

Agneša Víghová 1*, Iveta Košovská 2, Monika Hudáková 3

1,3 Bratislava University of Economics and Management, Department of Small and Medium Business, Furdekova 16, 851 04 Bratislava 5, Slovakia
2 Slovak University of Agriculture in Nitra, Faculty of Economics and Management, Trieda Andreja Hlinku 2, 949 76 Nitra, Slovakia

E-mails: 1*agnesa.vighova@vsemba.sk (Corresponding autor); 2iveta.kosovska@uniag.sk; 3monika.hudakova@vsemba.sk

Received 18 May 2023; accepted 26 September 2023; published 30 September 2023

Abstract: A reliable report on the company's financial situation can be obtained by analyzing costs, revenues, profit margin and the development of net profit. To study this information, we use a range of indicators from the financial analysis environment. The financial analysis results are interpreted and put into business practice by the accounting units. The basic information sources used in financial analysis are the financial statements of business companies. The article aims to point out the development of revenues, the total net profit of grain growers in the time horizon 2014-2022, as well as the profit margin of the industry for the period 2014-2022. The subject of the analysis was agricultural enterprises, from which we selected one accounting unit that operates in the agriculture sector. Within the industry, they focused our attention on the segment of cereal growers in Slovakia in the time horizon 2014-2022; the mentioned period is interesting because the COVID-19 pandemic and the war in Ukraine marked it. We presented the analysis results in the final part of the article.

Keywords: financial analysis; information sources; balance sheet; profit and loss statement; notes; profitability indicators; Slovakia


JEL Classifications: H83

1. Introduction

Effective management of costs, revenues, net profit and commercial margin in companies is critical in every accounting unit, as they are also related to profitability indicators. Profitability indicators express the performance of business efforts. The level and development of liquidity, activity and indebtedness are reflected in their level and growth. Profitability indicators have different forms, for example, profitability of assets, equity, and sales.

* This paper is an output of the science project VEGA no. 1/0429/22 with the title The assessment of property valuation impacts on the financial health of agricultural enterprises in the Slovak Republic
Some of the profitability indicators are very systematic and comprehensively express the essential characteristics of the company's performance. We also call profitability indicators indicators that describe and analyze the efficiency of business activity. Profitability indicators depend on other financial indicators, such as net profit and profit margin, which we use in business practice to assess the company's financial health and recommend effective management conclusions in financial decision-making.

2. Literature review

Costs and revenues represent the essential information when determining the result of the management of commercial companies. The financial statement in the profit and loss section contains information on costs, revenues, profit before tax and profit after tax of commercial companies. The balance sheet conveys information about the profit after tax through the line of the economic result; at the same time, this line is a connecting line between the balance sheet and the profit and loss statement. In the Slovak Republic, the financial statements include notes in addition to the balance sheet and profit and loss statement. The notes also include a cash flow statement. Financial statements are the primary information source for carrying out companies' financial analysis. The authors present these and other findings in their publications: Oreský & Rehák, 2019; Farkaš, 2020; Štangová et al 2012; Šuranová & Škoda, 2007; Šlosárová & Blahušiaková, 2020; Alex, 2005; Kajanová, 2014; Vlachynský et al 2009; Zalai, 2016; Štangová & Hajduchová, 2010; Pevná, 2017; Jeleníková & Procházková, 2018; Suhányiová & Fabian, 2010; Suhányiová et al., 2016; Suhányiová, 2009; Suhányiová, 2011.

Through financial analysis, business companies can calculate financial indicators to identify the company's financial health. The category of most used financial indicators includes profitability indicators; in practice, we often use the form of ROA, ROE, ROS, which provide information on the profitability of assets, equity and sales. The development of these indicators tells about profitability and will help predict the future development of profitability, which will help management make effective decisions. The authors provide information about these facts: Grünwald & Holečková, 2007; Nita, & Oleksyk, 2020; Tawiah & Gyapong, 2021; Stewart & Connolly, 2021; Sacer & Zynarska-Dworczak, 2020; Henrique et al. 2020; Frinrup, 2020; Gernon, 2001; Hellmann & Patel, 2021; Kubíčková & indřichovská, 2015; Kotulič et al., 2018; Hillebrandt & Leino-Sandberg, 2021; Pavic, 2020; Silva et al., 2021a, 2021b.

In addition to profitability, the net profit and profit margin indicators provide valuable information. The amount of net profit is affected by corporate income tax in individual states, as profit before taxation is taxed by accounting units with corporate income tax. The corporate income tax rate is different in individual states. The general assembly of commercial companies decides on the use of net profit. Profit after tax represents the ratio of total profit to revenues, expressed as a percentage. The authors of the following publications wrote about it: Kieso & Weygandt, 2007; Riahi-Belkaoui, 2000; Jenčová & Rákoš, 2010; Jakubec & Kardoš, 2016; Miah, 2021; Natalizi, 2020; Roca, 2021; Wijekoon et al. 2021; Lombardi et al 2020; Miah et al 2021, Savina et al 2021; Kainth & Wahlstrom, 2021.

3. Basic characteristics and information sources of financial analysis

The financial situation of the company may be of interest to a large number of business entities. This fact is reflected in the different purposes, tasks, and methods used to process financial analysis (Grünwald et al. 2007). We divide the financial analysis into internal and external. External financial analysis is processed based on publicly available data; internal financial analysis is processed by analysts of the given business company based on internal data (Jenčová & Rákoš, 2010). The basic task of financial analysis is to identify the company's weaknesses, which could lead to problems in the future, and strengths, which the company can rely on in the future (Šuranova et al. 2007). It follows from the above that the financial analysis is the starting point for making the right decisions about the company's future.
One of the sources of information for the company's financial analysis is the financial statements. In the Slovak Republic, this area is regulated by Act No. 431/2002 Coll. on accounting as amended (Zalai, 2016). Financial statements are a structured presentation of facts that are the subject of accounting, provided to persons who use this information (users). The financial statements form a single unit and have the requirements prescribed by law. The most common sources of information for financial analysis in the double-entry bookkeeping system are the following components of the financial statements:
- balance sheet,
- profit and loss,
- notes to the financial statements, which include an overview of cash flows and other information that explains and supplements the data in the balance sheet and the profit and loss statement (Kotulič et al., 2007).

The **balance sheet** is a basic accounting statement that captures the state of assets (property) and liabilities (resources of property coverage) in monetary terms on a specific date. When drawing up a balance sheet, the basic balance principle applies - assets are equal to liabilities. From the point of view of the formal arrangement of the balance sheet, the balance sheet may take the form of:
- horizontal form - the balance sheet has the form of a double-sided table that expresses the basic balance equation,
- vertical form - balance sheet items are arranged in columns. Liabilities are listed after assets.

The **profit and loss statement** for users of information from the financial statements is a source of information about the financial results of the activity of the accounting unit. It captures the total movements of revenues and costs of individual activities carried out by the company, which participate in the management of the current accounting period (Růčková, 2019). According to the Accounting Act, income means an increase in the economic benefits of the accounting unit in the accounting period, which can be reliably estimated (Farkaš, 2020). The Accounting Act defines costs as a reduction in the economic benefits of the accounting unit in the accounting period that can be reliably estimated. The task of the profit and loss statement is to explain the creation of the economic result in the company for a precisely defined accounting period. The result of management practically represents the difference between revenues and costs. If the value of the economic result is positive, it is a profit (Alex, 2005). On the contrary, if the value of the economic result is negative, i.e., costs are more significant than revenues, it is a loss. We define the operating result in the context of the pre-tax operating result, which represents the accounting operating result and the after-tax operating result, the so-called net profit.

Notes to the financial statements
The notes also include a cash flow statement. The cash flow statement provides information about cash receipts (positive cash flows) and cash expenditures (negative cash flows) that occurred in the accounting unit during the accounting period and caused the balance of cash and cash equivalents at the end of the accounting period to change in comparison with the state of cash and cash equivalents at the beginning of the accounting period (Šlosárová, 2006).

The cash flow statement is usually structured into the following areas:
- operational area,
- investment area,
- financial area (Štangová et al 2012).

The individual parts of the accounting statements, which are the balance sheet, profit and loss statement and cash flow (part of the notes), form the so-called three-balance sheet system, which expresses the connection of these statements (Table 1).
Table 1. Three-balance system

<table>
<thead>
<tr>
<th>CASH FLOW</th>
<th>BALANCE SHEET</th>
<th>PROFIT AND LOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial cash balance</td>
<td>expenses</td>
<td>Assets excluding cash</td>
</tr>
<tr>
<td>Incomes</td>
<td>Final balance of funds</td>
<td>=</td>
</tr>
</tbody>
</table>

*Source: Financial analysis of the company (Kotulič, Király, Rajčániová, 2018)*

4. Analytical view of profitability indicators

Among the basic indicators of the company's financial health, we primarily include profitability. In the professional literature, profitability is the ability of the company to evaluate the invested funds in the form of profit. Profitability indicators are also often referred to as profitability indicators or return indicators. Based on this fact, profitability is the ability of the entity to make a profit through invested capital. It follows from the above that profitability can be analyzed in connection with the profitability of assets, equity, and sales. In the case of profitability analysis, it is necessary to characterize the terms that we use under the abbreviations EAT, EBT, EBIT, EBITDA:

- **EAT** - represents profit after tax. The amount of this profit depends primarily on the profit before tax and on the amount of the tax rate. In our conditions, we can talk about the so-called result of business management (Pevná, 2017).
- **EBT** - profit before tax is defined as the so-called gross profit of the company. This form of profit is suitable for comparing management results within individual tax rates.
- **EBIT** - the company's profit before deducting income tax and interest costs. However, it is generally referred to as the so-called operating profit. It is primarily used to analyze a company's main activities without capital structure costs and tax costs affecting income (Kieso & Weygandt, 2007).
- **EBITDA** - is translated as profit before interest, taxation, depreciation and amortization. This indicator determines the company's gross profit without the company's overhead costs.

Among the most common profitability indicators, we include:
- return on assets,
- return on equity,
- return on sales.

**Return on assets (ROA)**

It compares the company's profit and total assets regardless of their financing sources. This indicator is primarily considered vital for this reason, as the result tells us how many cents of profit per euro of invested capital (Jeléniková et al. 2018).

\[
\text{ROA} = \frac{\text{EBIT}}{\text{assets}}
\]
Return on equity (ROE)  
It reflects the total return on equity. This information is essential for business owners. The calculated figure shows how many cents of profit per euro of retained equity. An increase in this indicator can create a higher profit, a reduction in the interest rate of foreign capital, a decrease in the share of equity in the company's total capital, and a combination of the above (Jeléníková et al. 2018).

\[
\text{ROE} = \frac{\text{EAT}}{\text{own capital}}
\]

Return on sales (ROS)  
Through the profitability of sales, the profitability of profit in relation to sales is determined. We can replace profit with EBIT, EBT, and EAT values in the calculation at the reader's place. Sales for own services and goods, or total revenues, can represent sales in the denominator. The obtained data tells us how many cents of profit are generated in the company for one euro of sales (Kubičková & indřichovská, 2015).

\[
\text{ROS} = \frac{\text{profit}}{\text{revenues}}
\]

4.1 Analysis of the development of profitability in a selected agricultural company in the Slovak Republic and the agricultural sector

We solved the research project in the framework of several agricultural enterprises. Still, in the mentioned article, we numerically present the selected company, representing the problems occurring in the profitability field and its management in most of them. In addition to the chosen company, we also present data from the agriculture sector (Table 2).

<table>
<thead>
<tr>
<th>YEAR</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Assets (ROA)</td>
<td>3.78 %</td>
<td>14.67 %</td>
<td>8.7 %</td>
<td>6.93 %</td>
<td>10.52 %</td>
</tr>
<tr>
<td>Return on Equity (ROE)</td>
<td>6.56 %</td>
<td>25.56 %</td>
<td>18.76 %</td>
<td>10.28 %</td>
<td>18.72 %</td>
</tr>
<tr>
<td>Return on Sales (ROS)</td>
<td>5.69 %</td>
<td>15.42 %</td>
<td>11.15 %</td>
<td>8.59 %</td>
<td>1.25 %</td>
</tr>
</tbody>
</table>

*Source: Own processing based on the accounting statements of the agricultural company*

**Return on assets (ROA)** is one of the fundamental indicators, as it expresses how much profit falls on all the capital used in the company. The origin of this capital plays almost no role in this case. In this case, it is both own capital and foreign capital. To eliminate the influence of different financial structures of the company in the industry and the analyzed company, the EBIT numerator was used to calculate ROA (EBIT = profit of the company before deduction of income tax and interest costs). The analyzed company showed the highest return on assets in 2019, more than double the industry's value. In 2020, it is possible to observe a decline in the company and the industry. In this case, the company recorded more than three times the ROA value compared to the industry. In 2021, the values stabilized below 7 percent, and in 2022, the company reported the second-highest result.
As for the calculation of return on equity (ROE), net profit was used. If you look at the values in the table, it is clear that the company achieved much better than the industry in 2019. Investors and company owners will most appreciate this information, as their capital is effectively valued. Only in 2021 did the industry slightly outperform the company’s values, caused by a rare dip in the company's profit.

**Return on sales (ROS)** is then calculated through EBIT. In this case, it is an indicator that represents the company's margin. In this case, too, the trend will be the same as for the previous indicators. Values of 11 to 18 percent can be rated as good. Figures of 15 to 14 percent are excellent, especially for industry figures less than half for 2019 and 2020.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Assets (ROA)</td>
<td>7.4%</td>
<td>7.23%</td>
<td>2.34%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Return on Equity (ROE)</td>
<td>11.05%</td>
<td>13.25%</td>
<td>0.85%</td>
<td>10.67%</td>
</tr>
<tr>
<td>Return on Sales (ROS)</td>
<td>7.15%</td>
<td>6.45%</td>
<td>2.52%</td>
<td>6.73%</td>
</tr>
</tbody>
</table>

*Source: Own processing based on accounting statements published at www.finstat.sk*

### 4.2 Analysis of the development of sales, total net profit and profit margin for grain growers in Slovakia

The primary function of agriculture is the production of food and industrial food raw materials. In agriculture, the most significant uncertainty is the weather and its influence on vegetation development, which is largely conditioned primarily by the amount and distribution of precipitation. Agricultural enterprises cannot influence the mentioned uncertainty, but they must try to use its positive effects and soften the negative ones. Of course, all business risks are also reflected in financial indicators.

In addition to one selected company, we provide summary information on the profitability indicators of the agriculture industry and the total sales of cereal growers in the period 2014-2022, the total net profit of cereal growers in the period 2014-2022, the profit margin of the industry for the period 2014-2022.

#### 4.2.1 Revenue development of grain growers in the Slovak Republic in the period 2014 - 2022

The subject of the research was 1,200 enterprises that are engaged in the cultivation of grain in Slovakia. Graph 1 shows the increase in revenues in 2022.

Revenues are an important indicator that is also the basis for calculating profit before tax and net profit. As part of the analysis, we analyzed the development of revenues in the given segment. The analysis shows a significant increase in the revenues of the researched companies from 2014 to 2022. A trading company based in the Nitra Region reported the most significant revenues in the given segment, which is 42,000,000 Euros.
4.2.2 Development of the net profit of grain growers in the period 2014–2022

The financial indicator net profit, which in practice represents profit after tax, is related to revenues. The research shows that the highest after-tax profit in the industry was achieved by a trading company based in the Nitra Region, which in 2022 reached a net profit of more than 10 million Euros. The reason for reporting a higher net profit is that the prices of agricultural commodities grew at the highest rate in the last decade, mainly contributed by the high prices of industrial fertilizers and plant protection products. To maintain the rentability of production, the analyzed company applied rationalization measures, which consisted of increasing the scale of production, modernizing the production process, introducing new energy-saving technologies and reducing commodity stocks.
4.2.3 Profit margin of the industry in the period 2014-2022

Another indicator related to revenues and net profit is the profit margin. The profit margin is a percentage of the company's net profit after deducting costs.

The research results prove the connection between revenues and net profit with the rising tendency of the profit margin in the analyzed company. In 2022, the profit margin had an excessive upward trend. The reason was an excessive increase in revenues and net profit.

5. Final evaluation and recommendations

As part of the research project, based on the performed analysis, we found the following facts:

5.1. Analyzed agricultural society and the agriculture sector

It reported recommended results in the case of profitability analysis, which showed that, except for the unfavorable year 2018, which the company experienced, it consistently achieved higher values than the industry except for one result. The value of the ROA indicator doubled in 2019 and even more than tripled in 2020. As for the following year, there was a decrease, and the values almost leveled off. ROA values were calculated using EBIT to remove the influence of different financial structures. The company achieved the highest ROE in 2019, reaching 25.56%; the ROS indicator was subsequently the highest in 2019 at 15.42%. In the case of the profitability of payable capital, there was a similar development trend. From the results in this case, we can notice a downward trend in 2020 and 2021, when all indicators of the analyzed company decreased. Also, for this reason, the year 2022 was more than important when the values came closest to the values from 2019.
The following recommendation for the analyzed company follows from the above results. It is a reduction in the total volume of inventory that the company had on average in the years we examined. Their amount was reflected in a negative way in several analyzed areas, which significantly burdened the financial stability and performance of the company we examined. The effects of holding a large amount of inventory undoubtedly had a significant impact on the company's liquidity.

5.2. Grain growers in Slovakia

According to statistical data, approximately 1,300 legal entities are engaged in the cultivation of cereals in the Slovak Republic. In 2022, the total revenues of cereal growers rose above one billion euros. In 2021, the revenues of these legal entities amounted to EUR 877 million, which means an increase of 21%. These businesses also saw a rise in net profit. Companies in this sector reported a net profit of 154 million euros in total, resulting in a profit margin of 14%. Compared to last year, this is a 10% increase.

Our recommendation, which results from the performed analysis, is to maintain the upward trend of net profit and the profit margin in the analyzed industry despite risks such as the weather and the development of market prices of agricultural inputs and commodities.

References


Funding. This paper is an output of the science project VEGA no. 1/0429/22 with the title The assessment of property valuation impacts on the financial health of agricultural enterprises in the Slovak Republic.

Author contributions: The authors contributed equally; they have read and agreed to the published version of the manuscript.
Agneša Víghová, Assoc prof. PhD. is head of Bratislava University of Economics and Management, Department of Small and Medium Business, Furdeková 16, 851 04 Bratislava 5, Slovakia. Scientific field: Accounting, Taxation, Statutory audit. ORCID ID: https://orcid.org/0000-0001-8094-0067

Iveta Košovská, Ing. PhD., Vice-dean for Education, Faculty of Economics and Management, Institute of Accounting and Informatics, Trieda Andreja Hlinku 2, 949 76 Nitra, Slovakia. Scientific field: Accounting, Taxation. ORCID ID: https://orcid.org/0000-0001-6131-7405

Monika Hudáková, prof.h.c. prof. Ing. PhD. MBA, Vice Chancellor for science and research is head of Bratislava University of Economics and Management, Department of Economics and Finance, Furdeková 16, 851 04 Bratislava 5, Slovakia. Scientific field: economy and business management, crisis management, management. ORCID ID: https://orcid.org/0000-0003-0454-9626