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INDICATION, SOLUTION, PREVENTION: A HOLISTIC APPROACH TO FINANCIAL, INDUSTRIAL ENGINEERING, AND BUSINESS PROBLEM ANALYSIS

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Purpose: The research aims to provide a guide for businesses, with the help of which the financial problems that the business usually encounters are diagnosed in time. This paper also contains recommendations for improving the solvency and financial situation of the company, which contribute to increasing the values of profitability indicators.
Design/methodology/approach: The approach to the topic includes an analysis of the current state of financial problems in companies using individual groups of financial indicators.
Findings: Profitability indicators are used to measure the company's ability to acquire new resources. In the financial analysis, ROA, ROE, and ROS indicators for 2021 had higher values than for 2022, but they are still within a safe range. Since every company tries to maximize its profit, it is necessary for the company to constantly try to increase the values of these indicators, maximize revenues, and minimize costs, which will also be reflected in the company's profit.
Practical implications: The practical benefit is in the detection of financial problems of a specific company, in the form of indication - solution - prevention, while the indication will be determined using the ratio indicators of the selected company. It will be a simple and quick financial analysis, with the help of which the company will be able to analyze its financial health. The years 2021 and 2022 will be compared.
Originality/value: The originality of the paper contains verification of the indication-solution-prevention model based on the data of a specific company.

Keywords: financial analysis, financial problems, financial ratios.

Category of the paper: research paper, general preview.

1. Introduction

Financial analysis does not only concern financial management itself, but has a significant impact on the development of enterprises (Chimucheka, Rungani, 2011, Mazur et al., 2021; Zada, Yukun, Zada, 2021) and even on society (Cisko, 2013). In the company it constitutes, among others, significant contribution of analyzing the company's strengths and weaknesses, opportunities and threats (SWOT analysis). When working with financial analysis and processing the results of financial analysis, deficiencies and weaknesses in the company's health are identified. These deficiencies can cause problems in the future. The strengths are related to the possible future appreciation of the company's capital and its growth (Furdygiel, 2020). These data must correspond not only to the quality but also to the complexity, therefore it is necessary to capture all data promptly that could in any way embellish the results of the assessment of the financial situation and health of the company (Kasajová, 2018).

According to Růčková (2011), it is generally true: the better methods are applied, the more reliable conclusions are obtained and thus the risks of wrong decisions are eliminated and thus there is a greater chance of success.

In addition to the choice of the analysis method, it is essential to know for whom the outputs from the given analysis are intended and to adapt the resulting presentation accordingly (Krajčovič, 2012; Trebuňa, 2019). The person who assigns the analysis does not pay attention to how the conclusions were reached, but to what these conclusions and results from the given method of analysis can mean for the given company. Visualization is also necessary, which will help to navigate the outputs of the given financial analysis more easily. It is recommended to process the information graphically, which will help people who do not know financial analysis to navigate the given issue (Buckova, 2020). Figure 1 shows the procedure for evaluating the financial analysis. It includes evaluating the company's past, and present and predicting the future financial situation of the company.

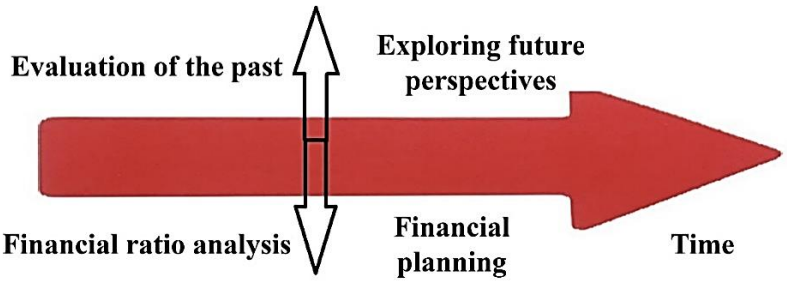

Figure 1. Scheme of the time point of view of the evaluation of financial analysis information
Source: Own study.

Financial indicators are the basis of financial analysis methods. They usually consist in presenting economic processes (Antoniuk, 2021) at a specific time, based on financial statements such as the income statement, balance sheet and statement of cash flows. The term

financial indicator can also be understood as a numerical characterization of the company's economic activity. Indicators taken directly from accounting statements are usually given in monetary units, but with the help of arithmetic operations, it is possible to define the obtained results in other units, e.g., in percentages or units of time. The choice of the type of indicator is defined by the purpose and goal of the given financial analysis. The purpose is mainly about who the given outputs from the analysis will serve, while the goal is given in advance by the business purpose and the conditions under which the given purpose is processed. Financial analysis is not only used for the financial management of the company but also evaluates the strengths and weaknesses of the company and the financial health of the company.

Profitability, also called return on invested capital, serves to measure how a company can create new resources and how it can make a profit using invested capital. Profitability indicators are most often based on the profit and loss account and the balance sheet, while more attention is paid to the profit and loss account because in some sources the term profitability is replaced by the term cost-effectiveness (Furmannova, 2021). In the case of profitability indicators, there is usually a flow quantity in the numerator and a state quantity in the denominator. What is important, profitability indicators are intended to evaluate the overall efficiency of the determined activity (Vavrík, 2022). Investors and shareholders are usually interested in these indicators, and they should have an increasing tendency in a certain period. In general, profitability is therefore expressed by the ratio of profit to the amount of invested capital.

In the global economy, the demand for a higher level of production and product quality is still growing, which has a direct impact on the optimal condition of production facilities. For this reason, the maintenance of every business must have adequate tools for planning, monitoring, and updating costs and deadlines, as well as for the performance of other important functions. In the past, the economic view of quality-focused primarily on the possibility of reducing costs associated with quality. However, the current approach compares costs associated with quality, maintenance, production itself, and economics. Benefits from these spheres are an essential part of summarizing individual information from the mentioned areas.

Therefore, for these reasons, in the following analysis, attention will be paid to profitability indicators and liquidity indicators. As part of this analysis for individual indicators, areas are selected from the point of view of economy, maintenance, quality, and production, for the reason that companies and individual employees of companies come into contact with these areas the most. Proposals in the form of indication-solution-prevention within these areas are analyzed in the tables of this article in the results section.

2. Methods

In the chapter, the financial problems of companies today will be discussed in more detail. Their identification and questions that the company most often deals with during its activity. Here, the company can find a quick guide to solving its problems, as well as answers to the questions it needs to solve.

2.1. Profitability indicators

According to Růčková (2011), when it comes to profitability indicators, the company most often looks for answers to questions such as:

- How effectively does the company use its assets?
  The answer to the above question is provided by the ROA indicator, because the higher the ROA value, the more efficient the resulting use of assets.
- How can the company achieve an adequate margin?
  The answer to the above question is provided by the ROS indicator, because the higher the ROS value, the stronger the company will be in terms of making a profit.
- What will be the return on individual investments for the company?
  The answer to the above question is provided by the ROE indicator, because the higher the ROE value, the higher the efficiency of the company.

2.2. Liquidity indicators

According to Zuzik (2020), when it comes to liquidity indicators, the company is most often looking for answers to questions such as:

- How can the company deal with short-term liabilities? Is it a capable enterprise to pay off short-term liabilities?
  The answer to the above question is provided by the liquidity indicator of the company, and the answer can also be found using cash flows.
- Does the business have sufficient capital to operate the company properly?
  The answer to the above question comes from the total amount of working capital because the lower the value of working capital, the greater financial problems can arise in the company.
- How big will the risk be if the business is unable to pay interest to creditors?
  The answer to the above question comes with interest coverage, because the higher the value of this coverage, the lower the risk.

3. Results

In the chapter selected financial problems that the company tends to encounter most often will be discussed, while these financial problems were selected based on the book by Klučka (1998). The design solution will be designed in the form of an indication of possible problems - solutions - and prevention. This procedure will be applied to selected financial problems associated with profitability indicators, cash flow indicators, activity indicators, and indebtedness indicators.

3.1. Financial problems associated with profitability indicators

Possible problems are in achieving liquidity, a decrease in profit, or a decrease in sales. Symptoms:

- profit reduction,
- growth of direct and overhead costs,
- deficit of resources (material, financial), which is related to the fact that production cannot be expanded,
- decrease in demand for manufactured products or provided services.

Possible causes of problems with profitability indicators are clearly shown in Table 1, from which it is possible to see the possible areas, as well as the causes from these areas that can lead to the emergence of the given problem.

Examining specific Table 1, Table 2 and Table 3 are crucial when considering individual indicators since monitoring these indicators can assist the company in identifying issues that are frequently concealed in the background. This effort aids the company in promptly diagnosing these problems by utilizing the distinct symptoms associated with each indicator. Moreover, this undertaking contributes to the company's ability to address the financial challenges it is currently facing.

Table 1.
Causes of problems with profitability indicators

		Possible causes of problems		
Possible areas	**Economic area**	Different structures in real and planned costs	Insufficient financial resources	Insufficient inventory due to lack of funds
	Maintenance area	The maximum capacity of individual devices is not used	Individual technical devices are outdated	The devices do not have predictive maintenance in place
	Quality area	Products and services are not of sufficient quality	Products and services are not in demand in the market due to the absence of quality improvement	High incidence of defective products
	Production area	The company is insufficiently and poorly organized	Production planning and management are not organized	Absence of innovative changes in production

Source: Own study.

Table 2 shows solving problems with profitability indicators from different economic points of view.

Table 2.
Solving problems with profitability indicators

		Possible solutions to problems		
Possible area	**Economic area**	Removing products and services that are unprofitable	Finding new customers and subscribers	Regular control and adjustment of prices and modification of the marketing mix
	Maintenance area	Using the maximum capacity of individual devices	Purchase of new powerful and technical equipment	Implementing predictive maintenance and avoiding post-failure maintenance
	Quality area	Producing a product of the required quality, which is determined by the customer	Launching a new product on the market or ensuring the modification of an existing product with sufficient quality	Focusing on eliminating the occurrence of defective products
	Production area	Creating a detailed production strategy	Making strict changes in the company in the area of production planning and management	Implementing tools to help with implementations and help increase productivity and profit

Source: Own study.

Table 2 is followed by Table 3, where possible prevention against the occurrence of problems is displayed. Alternatively, it can help the company to completely avoid individual financial problems. Therefore, the objective of condensing the information from these tables is to furnish businesses with a straightforward, lucid, and all-encompassing guide that encapsulates all relevant knowledge cohesively. The most important output is these tables, which help entrepreneurs and companies to collect all the necessary information from different areas.

Table 3.
Prevention of problems with profitability indicators

		Possible prevention against the occurrence of problems		
Possible area	**Economic area**	Permanent analysis of the market and market situation	Adjusting the marketing mix to the market situation	Management and evaluation of costs regularly
	Maintenance area	Paying attention to the overall efficiency of the equipment	Ensuring constant modernization of equipment	Avoiding production downtime
	Quality area	Management of investment policy following quality goals and company goals	Not introducing a product to the market that will not demonstrate the required quality	Increasing the company's competitiveness in the area of quality
	Production area	Regular optimization and management of production processes	Introduction of service-diverse processes in production	Ensuring the best possible deployment of employees and machines in production

Source: Own study.

3.2. Financial problems associated with liquidity indicators and cash flow indicators

Possible problems that may arise are a deficit of financial flows and a deficit of cash.

Symptoms:

- lack of funds to cover obligations,
- lack of financial means to ensure one's needs (purchase of material, raw materials and payment of liabilities to suppliers, employees, and the state).

Causes of the problem:

- non-alignment (non-synchronization) of cash inflow and cash outflow,
- inequality between income and expenditure,
- the company is unable to dispose of cash at an acceptable level (incorrect cash management),
- the company invests money in activities whose return is either long-term or not,
- no effect.

Solution:

- obtaining additional resources (issuing bonds, issuing shares, obtaining a loan),
- reduction of unnecessary assets or their sale or lease (inventories, machines, buildings),
- ensuring and managing cash flow so that the due date is moved as far as possible,
- active communication with customers about their requirements.

Prevention:

- analyzing the company's internal processes,
- analyzing customers, maintaining contact with them, and evaluating their corresponding ratings,
- analyzing decision-making regarding individual investments,
- optimization of financial resources,
- reduction the scope of the order,
- reduction the number of items in stock,
- increasing demand for products using discounts,
- application of just-in-time (JIT) strategy.

4. Discussion

The chapter will discuss the financial problems of a specific company, in the form of indication-solution-prevention. The indication will be determined using the indicators of the selected company. It will be a simple and quick financial analysis through which the company will be able to assess its financial condition. The years 2021 and 2022 will be compared. The company's ratios will also be discussed. It will also be a simple financial analysis of the

company and an analysis of individual indicators that are important for the selected group of ratio indicators. Analysis of these metrics will represent symptoms or signs of the company's problem areas. At the end of Chapter 4, three indicators will be used to indicate of problem areas of the company, which provides a quick and accurate response for the company.

4.1. Characteristics of the company

The analyzed company is located in the Žilina region. The company's main activity is mail order and online sales, operating in the form of an online store. The company sells clothes. It currently has approximately three to four employees. The company was founded in December 2017, so the age of the company is approximately 6 years. The legal form of the company is a limited liability company.

The following figure 2 shows the company's net operating profit after tax and its development in €

Figure 2. Net operating profit after tax of the company for a certain period.

Source: Company internal materials, 2023.

It can be seen from Figure 2 that in 2017 the company operated for 1 month and did not show a profit. Also, the company did not report a profit in 2018. The first profit was reported in 2019 for approximately €9,000. In 2020, the increase was approximately €45,000. In 2021 the profit was approximately €42,000 and for 2022 it was approximately €29,000.

In the following Figure 3, it is possible to see a graph of sales, including the sales of fixed assets and securities.

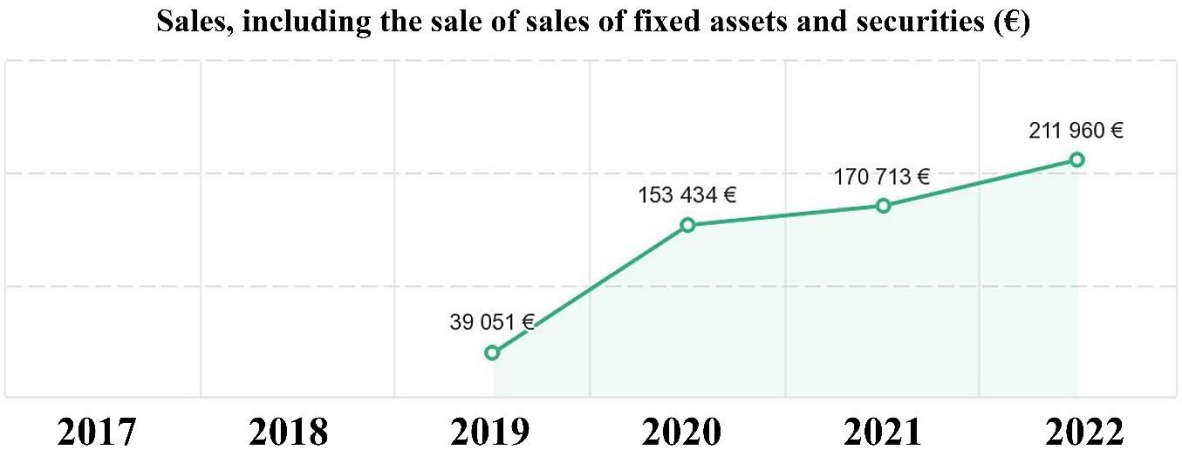

Figure 3. Sales, including the sale of sales of fixed assets and securities for a certain period.
Source: Company internal materials, 2023.

From Figure 3, it is possible to see the sales that were not there in 2017, because the company only operated for 1 month this year, as it was founded in December 2017. It also did not get any sales in 2018. The first sales can be seen in 2019, where reached the amount of approximately €39,000. In the following years, the sales had an upward trend, as in 2020 it was approximately €153,000, in 2021 it was approximately €170,000 and in 2022 it was approximately €211,000.

4.2. Indication of company problems using ratio indicators

Profitability indicators Return on Assets (ROA) indicator

Values of the ROA indicator for 2021 and 2022 are shown in Table 4.

Table 4.
Values of the ROA indicator for 2021 and 2022

	Year 2021	Year 2022
ROA indicator	32.90%	19.90%

Source: Company internal materials, 2023.

According to Table 4, it can be seen that the value of the ROA indicator for 2021 was 32.90% and for 2022 it was 19.90%. As explained in the theoretical part, the higher the value of the indicator, the better. This means that the company used its assets more efficiently in 2021 than in 2022. This indicator therefore serves to evaluate the efficiency of assets.

Profitability indicators Return on Sales (ROS) indicator

Values of the ROS indicator for 2021 and 2022 are shown in Table 5.

Table 5.
Values of the ROS indicator for 2021 and 2022

	Year 2021	Year 2022
ROS indicator	24.60%	13.90%

Source: Company internal materials, 2023.

According to Table 5, the ROS value for 2021 was 24.60% and for 2022 it was 13.90%. As explained in the theoretical part, the higher the value of the indicator, the better. Furthermore, the value of this indicator must be above 10%. This means that the company in 2021 was stronger in terms of making a profit per €1 of sales than in 2022. The value of the indicators in both cases is higher than 10%.

Profitability indicators Return on Equity (ROE) indicator

Values of the ROE indicator for 2021 and 2022 are shown in Table 5.

Table 6.
Values of the ROE indicator for 2021 and 2022

	Year 2021	**Year 2022**
ROE indicator	41.40%	22.50%

Source: Company internal materials, 2023.

According to Table 6, the ROE value for 2021 was 41.40% and for 2022 it was 22.50%. As explained in the theoretical part, the higher the value of the indicator, the better. This means that the company had a better rate of return on equity in 2021 than in 2022, and thus the return on capital is higher in 2021 than in 2022.

Liquidity indicators

The quick ratio is the liquidity of the first degree. The values of the quick ratio indicator for 2021 and 2022 can be seen in the following Table 7.

Table 7.
Values of the quick ratio for 2021 and 2022

	Year 2021	**Year 2022**
The value of the quick ratio (L1)	4.02	5.84

Source: Company internal materials, 2023.

The recommended value of ready liquidity should be in the interval ‹0.2-0.6›.

The cash ratio is the liquidity of the second degree. The values of the cash ratio indicator for 2021 and 2022 can be seen in the following Table 8.

Table 8.
Values of the cash ratio for 2021 and 2022

	Year 2021	**Year 2022**
The value of the cash ratio (L2)	4.17	6.37

Source: Company internal materials, 2023.

The recommended value of current liquidity should be in the interval ‹1.0-1.5›.

The current ratio is the liquidity of the third degree. This is total liquidity. The values of the current ratio indicator for 2021 and 2022 can be seen in the following Table 9.

Table 9.
Values of the current ratio for 2021 and 2022

	Year 2021	Year 2022
The value of the current ratio (L3)	4.22	6.59

Source: Company internal materials, 2023.

The recommended value of total liquidity should be in the interval ‹2.0-2.5›.

Liquidity indicators provide a reliable statement about whether the company can meet its obligations. All these indicators, which are listed above, have their recommended value. Since each indicator has an even higher value than recommended, it follows that the company could fulfill its obligations and is stable in covering its obligations.

However, it is necessary to note that the company would function optimally if the values of indicators L1, L2, and L3 were in the recommended ranges of values listed above. However, if these values were below the interval, it would mean that the company has cash problems, as these values are too low.

However, the high values of the indicators are also not good, because it indicates an inefficient distribution of funds in the company.

Therefore, when 2022 is taken into account in the order of values L1 - L2 - L3, it looks like this: 5.84 - 6.37 - 6.59. This means for L1 (5.84) that the firm can cover short-term liabilities only with money on account and in cash. For L2 (6.37), it means the firm's ability to cover short-term obligations, in addition to money on account and in cash, thanks to receivables.

And for L3 (6.59) it means the ability to cover short-term liabilities in addition to money on account and cash and receivables through the use of inventory. It is the same for the year 2021. However, at L1 it can be seen that the values are well above the recommended values and therefore it follows that the company has financial resources in the account. Therefore, if the company keeps its funds in this way, it is an inefficient management of financial resources.

5. Summary

This chapter will summarize the overall evaluation of the company's financial analysis for 2021 and 2022, which was carried out in this article. Recommendations that will serve to improve the financial situation and financial activities of the company is also mentioned here.

Profitability indicators are used to measure the company's ability to acquire new resources. In the financial analysis, ROA, ROE, and ROS indicators for 2021 had higher values than for 2022, but they are still within a safe range. Since every company tries to maximize its profit, it is necessary for the company to constantly try to increase the values of these indicators, maximize revenues, and minimize costs, which will also be reflected in the company's profit.

Liquidity indicators provide a relevant statement about the company's financial situation and its ability to cover its obligations. Prompt, regular liquidity showed a surplus value, which means that the company could meet its obligations and is stable in covering its obligations. However, unnecessarily high values of these indicators may mean that the company does not use its assets efficiently and there is an inefficient distribution of financial resources in the company.

The research carried out was carried out to help the company with its financial problems. This work can help the company diagnose these problems promptly using the individual symptoms that were mentioned in the individual ratio indicators. Furthermore, it can help the company to solve the financial problems it is dealing with at the given time. Alternatively, it can help the company to completely avoid individual financial problems. Therefore, the article aimed to provide readers with a simple, clear, and comprehensively written manual that includes all knowledge in a simple whole.

Individual tables for profitability and activity indicators are a basis for entrepreneurs. They help entrepreneurs and companies that do not have enough time to study economics, production, quality, and maintenance to gather all the necessary information from various areas. They are also of great importance in that they allow problems to be detected in time, to solve the problems that have arisen correctly, or to prevent them completely.

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