potravinárstvo®
OPEN ACCESS
Received: 14.8.2023
Revised: 27.10.2023
Accepted: 6.11.2023
Published: 1.12.2023

Slovak Journal of Food Sciences

Potravinarstvo Slovak Journal of Food Sciences
vol. 17, 2023, p. 972-985
https://doi.org/10.5219/1910
ISSN: 1337-0960 online
www.potravinarstvo.com

The impact of the application of the economic value-added method in the food company

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ABSTRACT

One of the most popular methods to measure the performance and success of the company has become the economic value added. EVA supports strategic planning, and management can measure and evaluate performance at the division level. Through it, you can find results that are important not only for the company's management and the owners but also for the company's shareholders. For businesses in the market, it is essential to measure and evaluate the performance of the business, as they are exposed to the risk of competition and, of course, pressure from the environment. However, many companies are underestimating this measurement due to time-consuming and evaluating business performance based on financial statements. Therefore, they can only assess traditional indicators, often insufficient to determine the company's performance. The paper aims to inform readers about all necessary information related to the EVA method and draw the calculation on a specific example. We have determined the application of the method to a particular company as our primary goal. Therefore, we can get information on the performance of the selected company. The applied values and data are further applied and interpreted, which results in how the company manages its assets and how it can continue to improve its performance.

Keywords: company performance, financial analysis, economic value added, weighted average cost of capital, EVA

INTRODUCTION

At the same time, with globalization and the development of capital markets, there is an increasing intensification of investment capital, which results in the sale of businesses and joint ventures. The negative consequence is the emerging problem related to the company's market valuation **[1]**. In the business world, the market environment is rapidly evolving and changing, which is often the result of changes in corporate governance **[2]**. Therefore, companies must continuously assess the results of their business activities and observe trends recorded through indicators. Business valuation methods can be divided into three primary groups: the company's yield methods, market methods, and asset valuation **[3]**. Over time, modern financial analysis methods have been launched to consider many financial aspects affecting business performance. One of the most popular methods to measure the performance and success of the company has become the economic value added **[4]**.

The EVA supports strategic planning, and management can measure and evaluate performance at the division level. Through it, you can find important results for the company's management, owners, and shareholders **[1]**.

For businesses in the market, it is very important to measure and evaluate their performance, as they are exposed to the risk of competition and, of course, pressure from the environment **[5]**.

However, many companies are underestimating this measurement due to time-consuming and evaluating business performance based on financial statements. Therefore, they can only assess traditional indicators that are often insufficient to assess the company's performance.

Scientific Hypothesis

The scientific goal of the paper is to find out which factors significantly impact the EVA performance indicator and which are insignificant based on the study of literary sources, own research, and the information declared in the financial statements of the investigated company. The scientific hypothesis is that the most significant impact on the EVA performance indicator in a given company is a change in short-term financial assets, long-term financial assets, and change in receivables. An insignificant impact of the average cost factor is expected.

MATERIAL AND METHODOLOGY

In this thesis, on the topic of the application of the EVA method in the company, we are focusing on the EVA method, which is one of the yield methods. We will select all published theoretical facts about the EVA method to highlight the major approaches to the topic. We will analyse chosen most essential facts out of many that can best approach the subject.

One of the company's main activities is to buy and sell dairy products and provide accompanying activities. Initially, the company traded solely on foreign markets, initially in Hungary and later expanded to the Czech Republic. It expanded to Slovakia in 2006. The company does not manufacture dairy products, it only provides trading. Their main vendors are from Poland and since 2015 also from Slovakia. Certificates IFS and BRC ensure high quality and safety demands on products of Polish manufacturers. Manufacturers established their private brands under which products are offered. The company aims to gain recognition on the domestic market based on high quality of its products, which would increase the customer base. The company's long-term strategy is to establish its trademark. It is intensely focused on investing in strengthening the brand in the domestic market. The company also tries to expand its network of retailers. Mentioned activities and efforts to promote its dairy products lead to increased revenues of the mentioned brand, which may, in turn, lead to positive economic results and an expansion of the company as a whole. The analyzed company will be Limited Liability Company, which will provide us with necessary information.

The analyzed company achieved a relatively high net turnover over the last 4 years, permanently increasing in individual years since 2019. In 2019, the company achieved a net turnover of € 109537693; in 2020, it was € 110192056; in 2021 € 117190996; and in 2022, it was € 118684961.

When calculating the company's performance, we will use the base of the financial statements for the last 5 years, i.e., 2018-2022. It is the period in which pre-Covid, Covid and post-Covid years alternate. We were interested in the development and results achieved in individual monitored indicators in the monitored period, alternating between years without external influences and years marked by COVID-19 and post-COVID-19 years.

Collecting necessary data will be the first step to start the practical part. In the practical part, we will use the comparison; we will compare the collected data and information over the last five years. We will also apply the analysis, using only selected data necessary for calculations by reducing a large data set.

Based on the results we will use the induction. We will use induction because we will reach a general conclusion from the calculated results of the indicators, which will be considered as our starting assumptions, and we will be able to evaluate the performance. We will also use the prediction method to predict future business performance.

The main purpose of the thesis is to apply the method to the company, by which we obtain the performance data of the selected company. The applied values and data are further applied and interpreted, which leads to the conclusion of how the company manages its assets and how it can continue to improve its performance.

The status of the investigated topic

In addition to financial analysis, we use several other methods to determine the company's financial situation. These multidimensional models work with several criteria and are also assigned a specific weight. Subsequent acquisition of an aggregate statement with one number identifies the state of the company that evaluates the degree of financial health of the business. These aggregate indices are aimed at determining the performance of a business in terms of value creation, which serves the company's owners and investors. These are credit indicators. On the other hand, we can also evaluate the company's ability to repay its commitments based on these indicators. This is a prediction that the company will not be approaching bankruptcy shortly. In this case, they are bankruptcy indicators **[5]**. Performance is commonly used. It is used in several fields. The performance characterizes the course or manner in which the investigated or observed object realizes a certain activity based on the similarity with the reference approach of the course of the given activity. Explaining this characteristic requires comparing the reference and the investigated phenomenon from the aspect of the established criterion scale **[6]**. Great importance is currently attached to determining the company's value; therefore, if the company's management needs to know the company's value or a certain part, it must request an expert opinion, which will be prepared exclusively by the expert organization. An expert organization or institute uses one method to determine a

company's general value when making an expert opinion. There are the property method, yield (business) method, combined method, liquidation method, comparative method, and others **[7]**.

The thesis focuses on newer, more modern methods, applying market characteristics and the EVA (Economic Value Added) indicator. Internal financial and external factors were applied when determining the analyzed company's performance. Internal factors were primarily focused on the company's ability to repay obligations, the efficiency of asset utilization, the optimization of the capital structure and its impact on the company's stability, the company's activity and the ability to manage its resources, and the ability to maintain an optimal turnover cycle of funds.

EVA method (economic value added)

The company's value and its increase over a period are determined by changes in expectations regarding the growth of the company's cash flows and changes in the company's risks that lead to changes in the discount rate. Accounting reflects only the history of the company **[8]**. The Profit and Loss Statement reflects what happened during the year, and the balance sheet reflects the assets and liabilities of the company at a certain time, which is also historical data. Consequently, it is impossible to identify and measure value creation solely based on the accounting statements. However, it is easy to verify with a quantitative point of view when it is necessary to analyze the relationship between the creation of a shareholder's value or the value added of the shareholder and EVA, economic gain, and value added **[9]**.

We can use the EVA method in several situations, such as:

- setting business goals,
- measuring the performance of separate units,
- communicating with investors and shareholders,
- motivating managers,
- evaluating the business,
- capital budgets,
- or the analysis of capital itself **[10]**.

Stern Stewart & Co. has declared that the EVA method is a tool that correctly takes into account the creation or, on the contrary, the destruction of the company value. It is proven that increasing the value of EVA is key to increasing company value creation. Therefore, EVA is an indicator directly linked to generating wealth for shareholders. Coca-Cola's CEO also said that the EVA method is a way of controlling the company **[9]**.

In the business world, therefore, in the last few years, great attention has been paid to the Economic Value Added – the EVA method. In 1991, the consulting company Stern, Stewart & Co developed and published its concept of Economic Value Added as an operating profit that is reduced by the cost of the capital used to produce this given profit. Therefore, we can say that the main stimuli and motives came from the USA at the beginning of the 1990s.

EVA is a concept that is expressed simply and defined as a method of assessing real profitability. EVA is a strict financial model. Therefore, it intends to analyze and propose how to increase the value of shareholders, for which a financial culture of value is needed, which conceptually assists all those involved in decision-making in the company, aligning strategies and goals that implicitly create value **[11]**.

The actual calculation of the EVA indicator depends on the availability of information and data, the method of determining the cost of capital. An important question is also whether our goal is to establish relative or, on the contrary, absolute value. The basic formula for calculating this indicator, "economic value added," consists of three values:

$$EVA = NOPAT - C \cdot WACC \tag{1}$$

Where:

EVA – is economic value added, $NOPAT$ (Net Operating Profit After Tax) represents net profit after tax, C is the total capital invested (Capital), which is tied in assets for operational activities of the company, the capital is expressed by the sum of equity capital (equity) with interest-bearing foreign resources, $WACC$ represents the weighted average cost of invested capital (Weighted Average Cost of Capital) **[12]**.

There is also a second method for expressing the EVA value, which is based on the accounting data; however, the results of this calculation may be less accurate than those of the previous calculation **[13]**. The advantage is that we can link the EVA indicator to the internal accounting. It is about economic profitability, and Value Spread does this EVA expression. This method is calculated as follows **[6]**:

$$E = (ROE - WACC) \times C \text{ or } EVA = ((NOPAT/C) - WACC) \times C \quad (2)$$

Market value added (MVA) is another value closely related to the economic value added. We use this indicator to measure business performance and the effectiveness of the managerial work **[5]**. Only those companies whose shares are traded on the stock exchange may use the MVA indicator. It reflects the wealth of the owners or shareholders. EVA indicator is directly connected with the MVA. MVA represents the present value of the amount that investors expect. Therefore, if we subtract the invested capital from the market value of the share, we get the result of the MVA indicator. According to the definition, MVA is the present value of the expected future value of the EVA. Market value added is calculated as follows **[14]**:

MVA = market value of the share–invested capital (3) or

MVA = value of a company – total invested capital (4)

EVA equity

The Value Spread method is associated with the EVA equity variant and compares the cost-effectiveness (re) and return of equity (ROE). The difference between these two variables (ROE-re) makes the Value Spread or value range. The EVA equity is calculated by multiplying the Value Spred (the difference between the return on equity and cost-effectiveness of equity capital) and equity. One of the biggest advantages is that the EVA equity indicator can be estimated from publicly available accounting data. On the other hand, the EVA estimate may be distorted because we consider an accounting model that is not adapted to the economic model. The indicator is calculated as follows:

$$(ROE - \text{re}) \times VI = EVA\ Equity \quad (5)$$

EVA entity

The Capital Charge method is associated with the EVA entity variant, and to calculate the EVA indicator using this method, it is necessary to quantify the amount of NOPAT (net operating profit), NOA (net operational assets), and the amount of the average cost of capital **[15]**. In the conditions of the Slovak Republic, however, this is where the problem, or more precisely, mismatch, between the accounting information available and the accounting information required, occurs. The EVA entity variant is calculated as the difference between the net operating profit (before the interest payment) and the cost of capital by which the profit was achieved. The EVA entity indicator is calculated as follows **[11]**:

$$NOPAT - WACC \times NOA = EVA\ Entity \quad (6)$$

On the territory of the Slovak Republic, and under the terms of the Slovak legal order, we consider the Value Spread method to be the most appropriate, even though the Capital Charge method is more accurate. Its disadvantage is the necessity of several modifications that are too complex even for experts **[16]**, **[17]**. Relating Value Spread method, we beg to leave to state that it does not require modifications to the accounting data, which is time-consuming, and, at the same time, the method of basic accounting is preserved and respected **[18]**. For the reason mentioned above, the Value Spread method is considered more suitable and often used in practice than Capital Charge in SR conditions.

RESULTS AND DISCUSSION

Stern Stewart Corporation developed EVA method as a synthetic measure of financial performance. According to Stern Stewart Corporation (2002), EVA is a financial performance metric most directly linked to creating shareholder value over time **[19]**.

As the benchmark for measuring business performance, the EVA indicator is the subject of many scientific studies **[20]**. Business success depends on the quality of methods and techniques used for performance measurement, as well as on the ability of managers to manage the internal state and results of a company **[21]**.

Although increasingly complex methods have been developed, they failed to fully integrate (scientifically and practically) the 'multidimensional' feature of performance **[22]**. The concept of EVA is not new. However, due to EVA's heavy reliance on Capital Invested, it is best used for asset-rich companies rather than companies dominated by intangible assets such as technology businesses **[23]**.

Despite EVA's straightforward formula and advantages over other earnings measures in terms of performance management and superior relationship with market value, in practice, it is riddled with the same challenges associated with corrections and adjustments that users believe are needed to mitigate distortions by accounting

standards **[24].** Economic Value Added improves firms' efficiency and value production. EVA uses accounting statement data to calculate the value growth of a company **[25]**. EVA combines the familiar concept of residual income and the principle of modern corporate finance **[26]**. The EVA is independent of capital or equity level, and the relative company's performance is measured **[27]**. EVA is a key method and has a significant impact on business performance. The use of EVA necessitates various approaches depending on the company´s specifics **[28]**. Most scholars and practitioners do not question that businesses exist to create profit for their owners; they argue that economic value added (EVA) is the best metric available. EVA measures residual income, which means it measures the difference between a firm's return and cost on capital **[29]**. The ideological basis of this indicator can be found in microeconomics, which states that the purpose of business is to maximise profits **[30]**. However, it is not accounting but economic profit created only when its range exceeds the so-called normal profit derived from the average cost of capital incurred by creditors (interest cost) and the owners. In these shareholders, it is the opportunity cost **[31]**.

Economic Value Added (EVA) is an internal management performance measure that compares net operating profit to total cost of capital **[32]**. Economic value added (EVA) is also called economic profit **[33]**. Economic value added (EVA) is a kind of residual income that takes into account the cost of capital in the course of operations **[34]**. According to the theory of EVA, the value of economic added value created by a corporation is the net operating profit after tax minus the total cost of capital **[35]**. The EVA model informs us that profitability, size, growth ability, and intangible business activities are substantially and positively linked. In contrast, the opposite is true concerning the capital structures of a business **[36]**. Prosperous businesses tend to employ the EVA methodology less than those in a defensive situation. Under such circumstances and with the help of commercial processes, it adds value, which is generally one of the main motivational factors for conducting business **[37]**. A business has value-added where EVA is positive, whereas if it is negative, it does not. The reason for this may lie in expected high investment costs in the future. There is a relationship with a leverage effect; if it does not function positively, it negatively influences business performance **[38]**. Through the Economic-Value-Added (EVA) valuation model, the expected market value of equity can be determined by adding the book value of equity with the present value of expected EVAs under the assumption of constant required return and constant return on equity **[39]**. EVA is recognized as an important tool for performance measurement and management worldwide, particularly as a component of corporate strategy in advanced economies **[40]**. Concepts such as EVA or ROIC permanently become an element of measuring performance **[41]**. Economic added value or economic value added (EVA) is a financial method to estimate the economic profit of a business. It is the value created by shareholders' required return and is closely linked to the return on capital employed **[42]**. The EVA indicator is also a significant part of bankruptcy models or indicators **[43]**.

One of the company's main activities is buying and selling dairy products and providing accompanying activities. Initially, the company traded solely on foreign markets, initially in Hungary, and later expanded to the Czech Republic. It expanded to Slovakia in 2006.

Calculation of EBIT

In this section, based on financial statements and internal data from the company's management, we will describe the procedure for calculating all the components needed to calculate the EVA. As mentioned above, this analysis will cover the last 5 years, i.e., from 2018 to 2022.

The economic result from ordinary activities before interests and taxes is EBIT. We have calculated it as the sum of the cost of the interest and profit or loss for the accounting period, as you can see in the following Table 1.

Table 1 shows that EBIT is negative only in the year 2021. In other years, EBIT is positive, i.e., the company makes a profit. At the beginning of the analyzed period (year 2018), EBIT had a high value, which decreased by 75% later. Therefore, this indicator's evolution is variable and changes every year.

Table 1 Calculation of the EBIT.

	YEAR				
	2018 (€)	**2019 (€)**	**2020 (€)**	**2021 (€)**	**2022 (€)**
The economic result before taxes	292706	71407	304866	- 336096	276230
Interest expense	550	0	0	219	934
EBIT	293256	71407	304866	- 335877	277164

Note: EBIT – Earnings Before Interest and Taxes. Source: Author´s own elaboration.

Calculation of the NOA component

The balance sheet is the starting point for calculating the capital invested. We have determined the amount of capital invested based on the assets reported in the balance sheet. We had to activate individual items that were not in the balance sheet, allocate assets of a non-operative character, and finally set aside assets with non-interest-bearing foreign capital. When activating items, we have included items that are not assets. However, the company uses them for its core business.

Marketing

We should take into account also marketing when calculating the EVA method. As far as marketing is concerned, costs also include advertising costs.

Table 2 Marketing.

	YEAR				
	2018 (€)	**2019 (€)**	**2020 (€)**	**2021 (€)**	**2022 (€)**
Annual Marketing Expenses (costs)	399655	398511	400611	402360	406583
Straight-line depreciation of expenses from 2018	79931	79931	79931	79931	79931
Straight-line depreciation of expenses from 2019	-	79702	79702	79702	79702
Straight-line depreciation of expenses from 2020	-	-	80122	80122	80122
Straight-line depreciation of expenses from 2021	-	-	-	80472	80472
Straight-line depreciation of expenses from 2022	-	-	-	-	81317
Total depreciation	79931	159633	239755	320227	401544
Accumulated expenses	399655	798166	1198777	1601137	2007720
Accumulated depreciation	79931	239564	479320	799547	1201091
The residual value of marketing expenses as of 31.12. (accumulated expenses - depreciation)	319724	558602	719457	801590	806629

Note: Source: Author´s own elaboration.

The EVA method aims to capitalize advertising costs, set as long-term intangible assets and depreciated. In Table 2, we can see that the advertising costs are approximately € 400,000 every year during the five analyzed years. For the calculation procedure, we performed a 5-year straight-line depreciation by dividing each year's annual marketing expenses (costs) by the 5 years.

Leasing

Leasing is another indicator that needs to be included in these calculations. Leasing does not exist in the original accounting statements. In the case of the EVA method, leasing is taken into account only if the company owns the property acquired through leasing. For this reason, we cannot use leasing at this company in the EVA method, and the values related to leasing in further calculations will be zero.

Calculation of the non-operating assets

When calculating non-operating assets, it is necessary to determine which assets are operative and are, therefore, necessary for the company's main earning activity. In addition to the the balance sheet adjustment, including marketing costs, working capital, and leasing, we had to exclude non-operating assets. In the following Table 3, the modified balance sheet on the asset side can be seen. We included the marketing costs and working capital determined by deducting excess funds and foreign capital from current assets.

Table 3 Adjustment of assets.

Assets	YEAR				
	2018 (€)	**2019 (€)**	**2020 (€)**	**2021 (€)**	**2022 (€)**
Long-term assets (accounting)	767778	700908	686386	924831	971282
Activated marketing	319724	558602	719457	801590	806629
Non-operating assets	- 6006	- 5971	- 5971	- 5971	- 5971
Working capital	- 1389728	- 851790	- 1703997	- 2164673	- 445808
Total	- 308232	401749	- 304124	- 444223	1326132

Note: Source: Author´s own elaboration.

Table 4 Adjustment of liabilities.

LIABILITIES	YEAR				
	2018 (€)	**2019 (€)**	**2020 (€)**	**2021 (€)**	**2022 (€)**
Equity (accounting)	351126	57752	294540	29838	2216408
Reserves	-	-	-	-	-
Equivalents (activated marketing costs)	659358	343 997	- 598664	- 474061	- 890276
Interest-bearing foreign capital from the balance sheet	-	-	-	-	-
Total	- 308232	401749	- 304124	- 444223	1326132

Note: Source: Author´s own elaboration.

Subsequently, we made adjustments to the balance sheet on the liabilities side. Assets and liabilities must be equal even after adjustments, as shown in Tables 3 and 4.

We acquire the non-operating assets through the following components (Table 5):

- Operationally necessary amount of funds – the liquidity should be from 0.2 to 0.6. We want the liquidity to be 0.4; then, the operational amount of the funds is calculated as the product of liquidity (0.4) and short-term liabilities from the balance sheet.
- Surplus cash – we deduct the operationally necessary amount of cash from short-term financial assets. The company has a high value.
- Other assets that are not necessary for operational activities – long-term financial assets that the company has in the same value for 4 years, and by approximately € 35 more in 2018.

After entering the values in Table 6, we enumerated the NOA.

Table 5 Calculation of non-operating assets

	YEAR				
	2018 (€)	**2019 (€)**	**2020 (€)**	**2021 (€)**	**2022 (€)**
The operationally necessary amount of funds	1920972	2007414	1914581	1568463	787920
Surplus cash (excess funds)	969170	204486	1310008	1267959	1689759
Other assets that are not necessary for operational activities (non-operating assets)	6006	5971	5971	5971	5971
Non-operating assets Total	975176	210457	1315979	1273930	1695730

Note: Source: Author´s own elaboration based on the financial statements.

Table 6 NOA enumeration.

	YEAR				
	2018 (€)	**2019 (€)**	**2020 (€)**	**2021 (€)**	**2022 (€)**
Total assets	6237109	6220015	6229049	5687784	5827228
+ leasing	0	0	0	0	0
+ activation of marketing costs (reduced by depreciation)	319724	558602	719457	801590	806629
- Non-operating assets	6006	5971	5971	5971	5971
- Non-interest-bearing foreign capital	5885969	6162230	5934488	5657928	3610820
- Surplus funds	969170	204486	1310008	1267959	1689759
- **Accruals**	3920	4181	2164	1739	1175
NOA	**- 308232**	**401749**	**- 304124**	**- 444223**	**1326132**

Note: NOA – Net Operating Assets. Source: Author´s elaboration.

Calculation of the NOPAT Component

The net operating profit after taxes deduction is NOPAT. When calculating NOPAT, it is important to follow the same procedure as it is set for the NOA. Therefore, if we included the company´s activities and assets corresponding to these activities in the NOA, we have to include their revenues and costs in the NOPAT calculation. When determining the value of the NOPAT, we decided to work with the economic result from ordinary activities, which is before taxes and is adjusted by non-deductible and deductible items (Table 7).

Table 7 Calculation of the NOPAT Component.

Tax 21%	YEAR				
	2018 (€)	2019 (€)	2020 (€)	2021 (€)	2022 (€)
the economic result from ordinary activities	292706	71407	304866	-336096	276230
marketing – deduct expenses	399655	398511	400611	402360	406583
marketing – add depreciation	-79931	-159633	-239755	-320227	-401544
NOPBT	612430	310285	465722	-253963	281269
tax	61468	14995	64022	0	58008,3
NOPAT	550962	295290	401700	-253963	223261

Note: NOPAT – Net Operating Profit After Taxes; NOPBT – Net Operating Profit Before Taxb. Source: Author´s own elaboration.

Calculation of the WACC component

The last component for calculating the economic value added is the WACC. When calculating the WACC component, it is necessary to express the costs of the foreign capital and the costs of the equity. To quantify the cost of foreign capital, the company must have a bank loan, an overdraft loan, or a lease. However, the company does not have foreign capital of any kind. The company has financial assistance that we could use in the calculation. However, this financial assistance is in the form of non-interest-bearing loans; we would not be able to identify the market value of the debt; in that case, it is impossible to express the cost of foreign capital (Table 8).

Table 8 The economic result after distribution.

	YEAR				
	2018 (€)	2019 (€)	2020 (€)	2021 (€)	2022 (€)
The economic result (after taxes)	232741	50449	236788	- 264703	216068
Allocation to the reserve fund	664	664	664	0	664
Allocation to the social fund	108.62	58.97	47.27	0	48.64
The economic result after the distribution	231968	49726	236077	-264703	215355

Note: Source: Author´s elaboration based on the financial statements.

The equity costs in Table 9 are expressed by dividing the economic result after distribution by equity.

Table 9 Enumeration of the costs of equity capital

	YEAR				
	2018 (€)	2019 (€)	2020 (€)	2021 (€)	2022 (€)
E	351126	57752	294540	29838	2216408
C	6237109	6220015	6229049	5687784	5827228
Re	66.06%	86.10%	80.15%	-889.52%	9.72%

Note: E – Own Capital; C – Total Capital; Re – Costs of Equity Capital. Source: Author´s elaboration based on the financial statements.

Table 10 Enumeration of the WACC.

	Percentage				
	2018 (%)	2019 (%)	2020 (%)	2021 (%)	2022 (%)
WACC	3.72	0.80	3.79	-4.67	3.7

Note: WACC – Weighted Average Cost of Capital. Source: Author´s elaboration.

Calculation of the EVA

In the previous sections, we have calculated all necessary EVA components. In this section, there is a concrete calculation of economic value added. In Table 11, the EVA entity is calculated. There are two ways to calculate this indicator. If we chose the calculation method through the sum of equity and foreign interest-bearing resources, we would choose a formula with a C value, which represents capital invested in the long term. However, we have decided to calculate it by the value of the NOA, which is the sum of net working capital and non-current assets. We have expressed the EVA entity using the NOPAT, NOA, and WACC values. This calculation is also the basic calculation for the EVA method. It is calculated as a deduction NOA from NOPAT multiplied by WACC. The EVA Equity is an indicator in which the ROE value must be calculated first. We determined it as the share of profit and equity. Subsequently, we subtracted the cost of equity capital from the ROE value and multiplied the result by equity, thus obtaining the EVA Equity value. Table 13 shows this calculation.

Table 11 Calculation of the EVA ENTITY indicator.

	YEAR				
	2018 (€)	**2019 (€)**	**2020 (€)**	**2021 (€)**	**2022 (€)**
NOPAT	550962	295290	401700	-253963	223261
NOA	-308232	401749	-304124	-444223	1326132
WACC	3.72%	0.80%	3.79%	-4.67%	3.70%
EVA Entity	562428	292076	413226	-274708	174194

Note: EVA – Economic Value Added; NOA – Net Operating Assets; NOPAT – Net Operating Profit After Taxes; WACC – Weighted Average Cost of Capital. Source: Author´s elaboration based on the financial statements.

Table 12 Enumeration of the ROE indicator.

	YEAR				
	2018 (€)	**2019 (€)**	**2020 (€)**	**2021 (€)**	**2022 (€)**
profit	232741	50449	236788	- 264703	216068
E	351126	57752	294540	29838	2216408
ROE	0.6628	0.8735	0.8039	-8.8713	0.0975

Note: E **–** Own Capital; ROE – Return on Equity. Source**:** Author´s elaboration based on the financial statements.

Table 13 shows the final calculation of the EVA equity indicator using return on equity.

The EVA equity had a slightly decreasing trend since 2018. The highest value was € 772 in 2018, and the lowest € 665 in 2022.

Table 13 The EVA Equity.

	YEAR				
	2018 (€)	**2019 (€)**	**2020 (€)**	**2021 (€)**	**2022 (€)**
ROE	0.6628	0.8735	0.8039	-8.8713	0.0975
E	351126	57752	294540	29838	2216408
Re	0.6606	0.861	0.8015	-8.8952	0.0972
EVA Equity	772	722	707	713	665

Note: ROE - Return on Equity; Re – Costs of Equity Capital; EVA - Economic Value Added; E – Own Capital. Source: Author´s elaboration.

Sensitivity analysis

By sensitivity analysis, we can find out how sensitive, in our case, the EVA indicator is related to changes in the individual factors. The factors represent this top indicator. In the sensitivity analysis, we change the original value or factor and determine its effect on the EVA. All factor values are changed by 10%. In Table 14, this sensitivity analysis is shown. Factors with low impact on the EVA indicator, i.e., the EVA value change is not very significant, we will consider less significant. We can also conclude that the sensitivity of the EVA indicator to changes in these less significant factors is low. We will consider factors whose same 10% change causes a significant impact on the EVA value to be significant factors.

Table 14 Sensitivity analysis.

	YEAR				
	original values of the indicator (year 2022)	**Increase in value by 10%**	**Original EVA**	**New EVA**	**Change in the EVA**
Long-term tangible assets	965311	1061842	174194	184895.92	10702
Long-term intangible assets	806629	887292	174194	182843.92	8650
Long-term financial assets	5971	6568	174194	175200	1006
Inventory	234756	258232	174194	390592.72	216399
Receivables	2122266	2334493	174194	415001.08	240807
Short-term financial assets	2477679	2725447	174194	419597.11	245403
Short-term liabilities	3610820	3971902	174194	340863.59	166670
Additional Value/ sales	1.98%	2.178%	174194	200868.02	26674
Personal costs/sales	0.09%	0.099%	174194	169481.7	-4712
Depreciation/sales	0.57%	0.627%	174194	172846.33	-1348
Other revenues-other costs/ sales	0.13%	0.143%	174194	172817.45	-1377
Sales	15162471	16678718	174194	193538.74	19345
Costs of OC	9.72%	10.692%	174194	166587.95	-7606
WACC	3.70%	4.07%	174194	166587.95	-7606
OC/C	38.04%	41.84%	174194	166587.95	-7606
NOA	1326132	1458745	174194	188637.79	14444
RONA	16.63%	18.29%	174194	193538.74	19345

Note: EVA – Economic Value Added; WACC – Weighted Average Cost of Capital; OC – Own Capital; C – Capital; NOA – Net Operating Assets; RONA – Return on Net Assets. Source: Author´s elaboration.

The sensitivity analysis aims to find out how the value of the EVA changes in 2022 due to changes in individual factors by 10%. Table 14 shows that the EVA is the most sensitive to the change in short-term financial assets when its value increases by € 245403, and to the change in receivables, where the EVA is increased by € 240807. On the contrary, the most significant factor that affects the EVA negatively is the WACC factor, i.e., the weighted average cost of capital, whose 10% change caused the EVA to decline by € 7606 in 2022.

As we can see, all factors impacted the EVA, but the least significant factor was the long-term financial asset, which in 2022 caused the increase of the EVA only by € 1006. Therefore, we can conclude that this factor is the least significant. The smallest change in the EVA related to the decline in value added is due to the write-off of revenues, which would reduce the EVA by € 1348.

Based on an analysis of modern indicators, we found out that the company created an economic value added for its owners during the four years of the analyzed period. In the following Table 15, there is an analysis of two basic modern indicators to determine whether the company was creating value for its owners or not. In 2021, the company did not create value for its owners.

Table 15 presents modern indicators for the monitored period.

	YEAR				
	2018 (€)	**2019 (€)**	**2020 (€)**	**2021 (€)**	**2022 (€)**
EVA Entity	562428	292076	413226	-204128	174194
RONA	76.85%	73.15%	31.08%	40.53%	16.63%

Note: EVA – Economic Value Added; RONA – Return on Net Assets. Source: Author´s elaboration.

The core objective of the company should be to increase its value. It is precisely to achieve this goal that an analysis of the economic added value is appropriate. The company created added value for its owners in 2022. However, it has been the lowest among the previous years. We would suggest setting the increase of the economic value added by at least € 200000 as the main goal for the year 2023. In this case, the goal is to have the EVA indicator of at least € 350000 in 2023.

By improving the other factors affecting the EVA, the company will be able to reach this goal again.

Table 16 Suggested Company Goals.

	YEAR	
	2022 (€)	**Goal by 2023 (€)**
Economic value added	174194	350000
Sales	15162471	17000000
Costs/sales	105.25%	88.24%
Advertising (marketing)	406583	206583
Non-interest-bearing foreign capital	3610820	1772819
NOA	1326131	1927306
Work productivity	134823	148305

Note: NOA - Net Operating Assets, **Source:** Author´s elaboration

Another factor contributing to the increase in value added is the indicator of net operating assets, which should be higher in the future. For example, this could be achieved in the company by reducing non-interest-bearing foreign capital by at least 17%, which represents a reduction of € 600000 after calculation. In this case, the NOA value would increase to 1927306 €. By not investing in advertising and services in a proportion just like in previous years, their profits will increase, and the amount of free money will also increase. Therefore, loans can be repaid in the form of non-interest-bearing foreign capital.

In the case of the net working capital, reducing liabilities by paying invoices faster, for example, before the due date, would positively affect the company, improving working capital. The company should strive for a decrease in high receivables, which would mean faster repayment of invoices from customers, thus returning money for products to them faster than before.

To support the growth of sales and the decrease of the company's costs, the productivity of the company's employees should also increase. The company can achieve this goal through added value and the number of employees. In 2022, this share was for €134823, and to achieve better employee productivity, we can set this target value at, for example, €148305, which represents an increase of 10%. The company will achieve this goal by improving its premises' equipment and renewing computer systems for employees, which was implemented in 2021. It is also expected to increase the motivation and qualification of employees.

CONCLUSION

In this thesis, we worked with the EVA method. The benefit was the evaluation of the company's performance. In addition to competitive pressures and other negative influences on the market, the company needs to perform this analysis. With internal data, we proceeded further in the analysis by applying them to the sub-indicator calculations necessary to enumerate the top indicator, specifically the economic value added. Through the analysis, we discovered the company's problems during the monitored period. It was positive for the company that the economic result was positive in almost all years, i.e., it was in profit. In 2019, the economic result was negative. This did not only mean a loss but also affected the EVA indicator negatively, by which we found out that the company did not create value for the owners during that year. In recent years, the company has created value. After the evaluation, we proposed the EVA concept for the next period of the company's operation on the market. We proposed how the company should continue in the future using the method of economic value added, implement and realize the results of the analysis in the company, pay attention to reducing costs, and increase the value of the company. When evaluating the EVA, we found out that there is a common problem with measuring performance based on accounting data only. If we applied only these data to the EVA, the resulting values would be distorted, and thus, it would not be possible to determine the economic value added. If the company wants to succeed, it is necessary to include in the analysis components not included in the financial statements. Therefore, it must be activated as an asset. The method we used is a true image of the company. It shows the process of creating a company's value and managing business effectively.

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Funds:

This research received no external funding.

Acknowledgments:

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Conflict of Interest:

No potential conflict of interest was reported by the author(s).

Ethical Statement:

This article does not contain any studies that would require an ethical statement.

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