

## ANALYSIS OF THE DYNAMICS OF ECONOMIC PROFITABILITY RATE AND RATE OF RETURN ON PERMANENT CAPITAL IN A COMMERCIAL COMPANY

Adriana IACOB (ZAVINCU)<sup>12</sup>,  
IOSUD-SDSE Valahia University of Targoviste, Romania,

Elena Liliana COMAN<sup>13</sup>,  
IOSUD-SDSE Valahia University of Targoviste, Romania,

Ionel CIOBANU<sup>14</sup>,  
IOSUD-SDSE Valahia University of Targoviste, Romania

**ABSTRACT:** *The current focus on managerial concerns for the consolidation and development of businesses involves a logic grounded in scientific methodological considerations, aimed at facilitating the identification of factors and respective causes that explain a specific economic and financial state of the company. This ensures the necessary conditions for implementing the best decisions that lead to an increase in financial performance and, based on this, the strengthening of the functional state of the business operator. In this context of opportunity, the analysis of the dynamics of the economic profitability rate and, respectively, the rate of return on permanent capital is presented. The influences of the factors considered are quantified within specific factorial relationships, and conclusions are formulated.*

**Keywords:** *economic profitability rate, rate of return on permanent capital, equity, borrowed or foreign capital, fixed assets, current assets, total assets*

**JEL Classification:** *G10, G15, G39*

### 1. INTRODUCTION

The rates of return are relative indicators that succinctly summarize the economic and financial performance of a business operator. The magnitude of the economic profitability rate is directly determined by the efficiency of utilizing the assets of the commercial company, both fixed and current. Meanwhile, the magnitude of the rate of return on permanent capital expresses the efficiency of using both equity and borrowed capital.

Analyzing these relative profitability indicators provides the opportunity to identify the strengths and weaknesses in the commercial company's operations, forming the basis for corrective measures. From an economic motivation standpoint, it is worth noting that:

---

<sup>12</sup> PhD Student, IOSUD-SDSE Valahia University of Targoviste, Romania, zavincu\_adriana@yahoo.com

<sup>13</sup> PhD Student, IOSUD-SDSE Valahia University of Targoviste, Romania, lilicomman1978@gmail.com

<sup>14</sup> PhD Student, IOSUD-SDSE Valahia University of Targoviste, Romania

- The economic profitability rate expresses the efficiency of utilizing the total assets of a commercial company, and an increase in this indicator directly reflects in the magnitude and dynamics of the financial profitability rate;

- The efficiency of using current assets, with their main component being current assets, exerts a determinant influence on the economic profitability rate and plays a crucial role in achieving competitive economic and financial performance.;

- The way in which capital is utilized serves as a measure of the efficiency of managerial decision-making.

The considerations presented can provide the basis for conducting a study aimed at gathering useful information to support decisions intended to promote functional progress and financial performance of the business operator.

The accounting information that will be used to conduct the analysis of the dynamics of the economic profitability rate and the rate of return on permanent capital pertains to the activities of a business operator with a productive profile, as presented in Table 1.

**Tabelul 1. The system of economic and financial indicators for analyzing the dynamics of the economic profitability rate and the rate of return on permanent capital**

Indicators	M.U.	Natations	Base period (2021)	Calculati on period (2022)
1- Turnover (Sold Production)	lei	$CA = \Sigma qp$	500.000	540.000
2- Operating Expenses Related to Turnover	lei	$C = \Sigma qc$	440.000	475.000
3- Operating Profit (Result) Related to Turnover	lei	$Re$	60.000	65.000
4- The production sold during the calculation period expressed in: - the delivery prices applied in the base period - in complete unit costs from the base period		$\Sigma q_1 p_0$ $\Sigma q_1 c_0$	- -	510.000 420.000
5- Equity" or "Owner's Equity	lei	$Cp$	300.000	300.000
6- Foreign Capital (Liabilities: amounts payable in a period greater than one year)	lei	$CS$	150.000	220.000
7- Permanent Capital (line 5 + line 6)	lei	$Cperm$	450.000	520.000
8 Total assets - Fixed assets - Current assets	lei	$Act$ $Aim$ $Acu$	480.000 430.000 50.000	545.000 493.000 52.000
9- The Return on Investment (Return on Total Assets)	%	$Rre = \frac{Re}{Act} \cdot 100$	12,50	11,93
10- The Rate of Return on Permanent Capital	%	$Rrcp = \frac{Re}{Cperm} \cdot 100$	13,33	12,50

## 2. ANALYSIS OF THE DYNAMICS OF ECONOMIC PROFITABILITY RATE (RETURN ON TOTAL ASSETS), CALCULATED BASED ON OPERATING PROFIT RELATED TO TURNOVER

In the context of analyzing the dynamics of economic profitability rate, consideration is given to a relationship that allows for the assessment of the influences caused by the modification of factors included in the following equation:

$$Rre = \frac{Re}{Act} \cdot 100 = \frac{\Sigma qp - \Sigma qc}{Aim + Acu} \cdot 100, \text{ namely,}$$

1- total assets, of which:

1a- fixed assets

1b- current assets

2- operating profit related to turnover, of which:

2a- physical volume of turnover, of which:

2a<sub>1</sub>- The relative level of turnover change due to the physical volume.

2a<sub>2</sub>- The structure of the physical volume of turnover

2b- delivery prices

2c- full unit costs

The system of calculations required for the factorial analysis of the dynamics of economic profitability rate is based on the method of successive substitutions, as follows:

The absolute change in economic profitability rate:

$$\Delta = \left[ \frac{Re_1}{Act_1} - \frac{Re_0}{Act_0} \right] \cdot 100 = 11,93 - 12,50 = -0,57 \text{ percentage points}$$

$$\Delta = \Delta(Act) + \Delta(Re) = -1,49 + 0,92 = -0,57 \text{ percentage points}$$

in care:

1- The impact of changing the total assets,

$$\begin{aligned} \Delta(Act) &= \left[ \frac{Re_0}{Act_1} - \frac{Re_0}{Act_0} \right] \cdot 100 \\ &= \left[ \frac{60.000}{545.000} - \frac{60.000}{480.000} \right] \cdot 100 = 11,01 - 12,50 = -1,49 \text{ percentage points} \\ \Delta(Act) &= \Delta(Aim) + \Delta(Acu) = -1,45 - 0,04 = -1,49 \text{ percentage points} \end{aligned}$$

of which:

1a- the impact of changing the value of fixed assets,

$$\begin{aligned} \Delta(Aim) &= \left[ \frac{Re_0}{Aim_1 + Acu_0} - \frac{Re_0}{Aim_0 + Acu_0} \right] \cdot 100 = \\ &= \left[ \frac{60.000}{493.000 + 50.000} - \frac{60.000}{430.000 + 50.000} \right] \cdot 100 = \\ &= 11,05 - 12,50 = -1,45 \text{ percentage points} \end{aligned}$$

1b- The impact of changing the value of current assets

$$\Delta(Acu) = \left[ \frac{Re_0}{Aim_1 + Acu_1} - \frac{Re_0}{Aim_1 + Acu_0} \right] \cdot 100 =$$

$$= \left[ \frac{60.000}{493.000 + 52.000} - \frac{60.000}{493.000 + 50.000} \right] \cdot 100 =$$

$$= 11,01 - 11,05 = -0,04 \text{ percentage points}$$

2- The impact of changing the result (profit) from operations related to turnover,

$$\Delta(Re) = \left[ \frac{Re_1}{Act_1} - \frac{Re_0}{Act_1} \right] \cdot 100 = \left[ \frac{65.000}{545.000} - \frac{60.000}{545.000} \right] \cdot 100 =$$

$$= 11,93 - 11,01 = +0,92 \text{ percentage point}$$

$$\Delta(Re) = \Delta(q) + \Delta(p) + \Delta(c) = +5,50 + 5,51 - 10,09 = +0,92$$

din care:

2a- The impact of changing the physical volume of turnover

$$\Delta(q) = \left[ \frac{\Sigma q_1 p_0 - \Sigma q_1 c_0}{Act_1} - \frac{\Sigma q_0 p_0 - \Sigma q_0 c_0}{Act_1} \right] \cdot 100 =$$

$$= \left[ \frac{510.000 - 420.000}{545.000} - \frac{60.000}{545.000} \right] \cdot 100 =$$

$$= 16,51 - 11,01 = +5,50 \text{ percentage points}$$

$$\Delta(q) = \Delta(I_{(q)}^{CA}) + \Delta(s) = +0,22 + 5,28 = +5,50 \text{ percentage points}$$

of which:

2a1- The impact of changing the relative level of turnover due to the physical volume.

$$\Delta(I_{(q)}^{CA}) = \left[ \frac{Re_0 \cdot I_{(q)}^{CA} - Re_0}{Act_1} \right] \cdot 100 = \left[ \frac{60.000 \cdot 1,02 - 60.000}{545.000} \right] \cdot 100 =$$

$$= \frac{61.200 - 60.000}{545.000} \cdot 100 = +0,22 \text{ percentage points}$$

Note. The index of dynamics for the physical volume of turnover, used in calculating this influence, has the following value:

$$I_{(q)}^{CA} = \frac{\Sigma q_1 p_0}{\Sigma q_0 p_0} = \frac{510.000}{500.000} = 1,02$$

2a2- The impact of changing the structure of the physical volume of turnover.

$$\Delta(s) = \left[ \frac{(\Sigma q_1 p_0 - \Sigma q_1 c_0) - Re_0 \cdot I_{(q)}^{CA}}{Act_1} \right] \cdot 100 =$$

$$= \left[ \frac{(510.000 - 420.000) - 60.000 \cdot 1,02}{545.000} \right] \cdot 100 =$$

$$= +5,28 \text{ percentage points}$$

2b- The impact of changing delivery prices,

$$\begin{aligned}\Delta(p) &= \left[ \frac{\Sigma q_1 p_1 - \Sigma q_1 c_0}{Act_1} - \frac{\Sigma q_1 p_0 - \Sigma q_1 c_0}{Act_1} \right] \cdot 100 = \\ &= \left[ \frac{540.000 - 420.000}{545.000} - \frac{510.000 - 420.000}{545.000} \right] \cdot 100 = \\ &= 22,02 - 16,51 = +5,51 \text{ percentage points}\end{aligned}$$

2c- The impact of changing full unit costs,

$$\begin{aligned}\Delta(c) &= \left[ \frac{\Sigma q_1 p_1 - \Sigma q_1 c_1}{Act_1} - \frac{\Sigma q_1 p_1 - \Sigma q_1 c_0}{Act_1} \right] \cdot 100 = \\ &= \left[ \frac{65.000}{545.000} - \frac{540.000 - 420.000}{545.000} \right] \cdot 100 = \\ &= 11,93 - 22,02 = -10,09 \text{ percentage points}\end{aligned}$$

### 3. ANALYSIS OF THE DYNAMICS OF THE RATE OF RETURN ON PERMANENT CAPITAL, CALCULATED BASED ON THE OPERATING PROFIT (RESULT) RELATED TO TURNOVER

The rate of return on permanent capital, through its analytical calculation form, highlights the influence of the changes in factors formalized in the relationship:

$$Rrcp = \frac{Re}{Cperm} \cdot 100 = \frac{\Sigma qp - \Sigma qc}{Cp + CS} \cdot 100, \text{ specifically}$$

1- permanent capital, of which:

1a- owner's equity

1b- foreign capital (Liabilities: amounts payable in a period greater than one year)

2 - rezultatul (profitul) din exploatare aferent cifrei de afaceri, din care:

2a- operating result (profit) related to turnover, of which:

2a<sub>1</sub>- the relative level of turnover change due to the physical volume

2a<sub>2</sub>- the structure of the physical volume of turnover

2b- delivery prices

2c- Full unit costs

The system of calculations required for the factorial analysis of the dynamics of the rate of return on permanent capital is operationally supported by the method of successive substitutions and is conducted as follows:

The absolute change in the rate of return on permanent capital:

$$\begin{aligned}\Delta &= \left[ \frac{Re_1}{Cperm_1} - \frac{Re_0}{Cperm_0} \right] \cdot 100 = 12,50 - 13,33 = -0,83 \text{ percentage points} \\ \Delta &= \Delta(Cperm) + \Delta(Re) = -1,79 + 0,96 = -0,83 \text{ percentage points}\end{aligned}$$

of which:

1- The influence of changing permanent capital

$$\Delta(Cperm) = \left[ \frac{Re_0}{Cperm_1} - \frac{Re_0}{Cperm_0} \right] \cdot 100 = \left[ \frac{60.000}{520.000} - \frac{60.000}{450.000} \right] \cdot 100 =$$

$$= 11,54 - 13,33 = -1,79 \text{ percentage points}$$

$$\Delta(Cperm) = \Delta(Cp) + \Delta(CS) = 0,00 - 1,79 = -1,79 \text{ percentage points}$$

of which:

1a- The influence of changing equity

$$\Delta(Cp) = \left[ \frac{Re_0}{Cp_1 + CS_0} - \frac{Re_0}{Cp_0 + CS_0} \right] \cdot 100 =$$

$$= \left[ \frac{60.000}{300.000 + 150.000} - \frac{60.000}{300.000 + 150.000} \right] \cdot 100 =$$

$$= 13,33 - 13,33 = 0,00 \text{ percentage points}$$

1b- The influence of changing foreign capital,

$$\Delta(CS) = \left[ \frac{Re_0}{Cp_1 + CS_1} - \frac{Re_0}{Cp_1 + CS_0} \right] \cdot 100 =$$

$$= \left[ \frac{60.000}{300.000 + 220.000} - \frac{60.000}{300.000 + 150.000} \right] \cdot 100 =$$

$$= 11,54 - 13,33 = -1,79 \text{ percentage points}$$

2- The influence of changing the result (profit) from operations related to turnover,

$$\Delta(Re) = \left[ \frac{Re_1}{Cperm_1} - \frac{Re_0}{Cperm_1} \right] \cdot 100 = \left[ \frac{65.000}{520.000} - \frac{60.000}{520.000} \right] \cdot 100 =$$

$$= 12,50 - 11,54 = +0,96 \text{ percentage points}$$

$$\Delta(Re) = \Delta(q) + \Delta(p) + \Delta(c) = +5,77 + 5,77 - 10,58 =$$

$$= +0,96 \text{ percentage points}$$

of which:

2a- The impact of changing the physical volume of turnover

$$\Delta(q) = \left[ \frac{\Sigma q_1 p_0 - \Sigma q_1 c_0}{Cperm_1} - \frac{\Sigma q_0 p_0 - \Sigma q_0 c_0}{Cperm_1} \right] \cdot 100 =$$

$$= \left[ \frac{510.000 - 420.000}{520.000} - \frac{60.000}{520.000} \right] \cdot 100 = 17,31 - 11,54 =$$

$$= +5,77 \text{ percentage points}$$

$$\Delta(q) = \Delta(I_{(q)}^{CA}) + \Delta(s) = +0,23 + 5,54 = +5,77 \text{ percentage points}$$

of which:

2a1- The impact of changing the relative level of turnover due to the physical volume (the relative level of dynamics in the physical volume of turnover).

$$\Delta(I_{(q)}^{CA}) = \left[ \frac{Re_0 \cdot I_{(q)}^{CA} - Re_0}{Cperm_1} \right] \cdot 100 =$$

$$= \left[ \frac{60.000 \cdot 1,02 - 60.000}{520.000} \right] \cdot 100 = \frac{61.200 - 60.000}{520.000} \cdot 100 =$$

$$= +0,23 \text{ percentage points}$$

2a<sub>2</sub>- The impact of changing the structure of the physical volume of turnover

$$\Delta(s) = \left[ \frac{(\sum q_1 p_0 - \sum q_1 c_0) - Re_0 \cdot I_{(q)}^{CA}}{Cperm_1} \right] \cdot 100 =$$

$$= \left[ \frac{(510.000 - 420.000) - 60.000 \cdot 1,02}{520.000} \right] \cdot 100 =$$

$$= +5,54 \text{ percentage points}$$

2b- The impact of changing delivery prices

$$\Delta(p) = \left[ \frac{\sum q_1 p_1 - \sum q_1 c_0}{Cperm_1} - \frac{\sum q_1 p_0 - \sum q_1 c_0}{Cperm_1} \right] \cdot 100 =$$

$$= \left[ \frac{540.000 - 420.000}{520.000} - \frac{510.000 - 420.000}{520.000} \right] \cdot 100 =$$

$$= 23,08 - 17,31 = +5,77 \text{ percentage points}$$

2c- The impact of changing full unit costs,

$$\Delta(c) = \left[ \frac{\sum q_1 p_1 - \sum q_1 c_1}{Cperm_1} - \frac{\sum q_1 p_1 - \sum q_1 c_0}{Cperm_1} \right] \cdot 100 =$$

$$= \left[ \frac{65.000}{520.000} - \frac{540.000 - 420.000}{520.000} \right] \cdot 100 =$$

$$= 12,50 - 23,08 = -10,58 \text{ percentage points}$$

#### 4. CONCLUSIONS

The results of the calculations allow us to conclude on the dynamics of economic profitability rate, in light of the factors that explain it:

- the economic profitability rate decreased during the calculation period compared to the base period, by 0.57 percentage points, as a result of the negative influence exerted by the increase in total assets value. The increase in fixed assets value by 14.65% caused a decrease in economic profitability rate by 1.45 percentage points, while the increase in current assets value by 4.00% led to a decrease in economic profitability rate by 0.04 percentage points;

- during the time period covered by the analysis, the operating profit related to turnover increased by 8.33%, leading to an increase in economic profitability rate by 0.92 percentage points;

- It is notable, therefore, that the value of fixed assets increased at a faster pace compared to the rate of operating profit related to turnover. This situation reflects a decrease in the efficiency of utilizing fixed assets;

- The positive impact of the increase in operating profit related to turnover on the economic profitability rate is explained by the growth in the physical volume of sales (+5.50 percentage points) as well as the rise in delivery prices (+5.51 percentage points). However, these favorable changes were offset by the increase in full unit costs (-10.09 percentage points). It is evident that in this case, an investigation into the causes of the rise in full unit costs is

necessary in order to specify the expense categories where intervention is possible and necessary for rationalization.

The calculations provide the opportunity to make the following assessments:

- The decrease in the rate of return on permanent capital by 0.83 percentage points during the calculation period, compared to the base period, reflects an inefficiency in the use of foreign capital. In the time interval under consideration, foreign capital shows an increase of 46.67% and surpasses the operating result (profit) related to turnover by 35.38%. Under these circumstances, decision-makers are advised to monitor how the new loans contracted during the calculation period are being used, if the investments are being executed according to the projected timelines to become operational, and if the new technologies contribute as expected to the increase in turnover and, respectively, profit growth:

- Since the analysed commercial company maintained a constant level of equity in the two compared periods, this factor did not cause a change in the rate of return on permanent capital;

- The increase in operating result (profit) related to turnover by 8.33% favored the increase in the rate of return on permanent capital by 0.96 percentage points. However, as observed, this does not compensate for the negative influence of the increase in foreign capital (-1.79 percentage points);

- The positive influence of the increase in operating result (profit) related to turnover on the rate of return on permanent capital is explained by the growth in the physical volume of sales (+5.77 percentage points) as well as the rise in delivery prices (+5.77 percentage points). However, these favorable changes were significantly diminished by the increase in full unit costs (-10.58 percentage points);

- The increase in the rate of return on permanent capital due to the growth in the physical volume of sales is supported by both the positive change in the relative level of turnover due to the physical volume (+0.23 percentage points) and the modification in the structure of the physical volume of sales (+5.54 percentage points). It is notable that there is an increase in the proportion of physical sales in those assortments that have a higher unit profitability level compared to the average level associated with the assortments of turnover.

The obtained results allow us to observe that, in the case of analyzing the dynamics of the rate of return on permanent capital, the negative influence of full unit costs is identified. This alerts decision-makers to intervene in a targeted manner by implementing measures with clear effects of rationalization and relative reduction. Additionally, it clearly demonstrates the necessity to produce more of those assortments assimilated by the market and with higher unit profitability.

## REFERENCES

1. Gheorghiu Alexandru – *Financial Analysis at the Microeconomic Level*, Economic Publishing House, Bucharest, 2004.
2. Mihăilescu Nicolae, Răducan Mihaela – *Financial and Economic Activity Analysis*, Victor Publishing House, Bucharest, 2008
3. Robu Vasile, Anghel Ion, Șerban Elena-Claudia – *Financial Analysis of the Company*, Economic Publishing House, Bucharest, 2014