

The Utility Rates in Firm's Profitability Analysis

Gabriela CIURARIU

Petre Andrei University of Iasi, ROMANIA

gciurariu@yahoo.com

Abstract: Built in a general manner by using the ratio between one of the results (gross operating surplus, operating profit/loss, profit or loss, etc.) and the global flow of the activity (the turnover) or the means used (economic capital, equity, costs), return ratios show the net operating result of the combined effects of liquidity, asset management and debt management. The usefulness of these ratios is justified by the fact that they enable comparisons between companies in terms of certain industry averages or averages by certain fields of activity, as well as time comparisons for the same company. Return ratios are calculated based on the data included in the income statement and the balance sheet of the enterprise.

Keywords: economic return ratio, return on equity ratio, financial return ratio

Introduction

The Romanian accounting regulations in operating states those indicators of profitability express the entity's efficiency to obtain profit from the available funds (OMFP 3055/2009).

Depending on the factors taken into account for determining the return ratios, economic practice operates with a wide range of ratios. Thus, the profitability of the company's activity is assessed from two perspectives:

- a) In relation to the turnover;
- b) In relation to the invested capital.

According to French literature [13, 48], the concept of profitability has a subjective side, in the sense that determining and interpreting it differs depending on certain foreground issues of the company's activity and the objectives of the persons interested in its profitability. In terms of this aspect, J. Richard [10, 436] believes that there are several types of return ratios, according to whose point of view they express:

- of the manager, who is concerned with the level of profitability of the capital employed in the current activities; the return on the overall capital employed (global return ratio) is significant for him;
- of the banks, which assess the attractiveness of financial investment in that company based on the profitability of the borrowed capital (Return On Debit);
- of the owners, through the ratio between the profit that corresponds to a given period and the capital employed during that period. The most significant indicator from the perspective of private enterprises is the financial return ratio (Return on equity), which is the ratio between the net profit or loss of the financial year and the equity.

The report outlines the return on equity ratio through the effect of the global management of the company. A high level of this ratio ensures both the return on risk capital, as well as the requirements regarding enterprise development, as it ensures the distribution of dividends and self-financing.

1. Analysis of operating return ratios

The Anglo-Saxon system expresses the efficiency of the economic capital employed in the productive activity using the return on assets ratio, also known as the Return on Investment Ratio, which enables the assessment of the performance achieved within the current (production and commercial) activity, by reflecting the efficiency of the operating management [1, 251]:

$$ROI = \frac{\text{Profit or loss}}{\text{Total assets}}$$

In financial practice, economic profitability is usually expressed in terms of the economic capital [11, 64] (assets employed in the operating process and the necessary operating working capital). The most commonly used models for calculating the economic return ratio are:

- *Return on economic capital employed:*

$$Re = \frac{EBE}{\text{Economic capital}}, \quad Re = \frac{\text{Operating profit or loss}}{\text{Economic capital}}, \text{ where:}$$

Gross operating surplus = (Added value + Operating subsidies)-(Personnel expenses + Taxes and similar liabilities).

A gross operating surplus that is large enough will enable the company to renew its assets through depreciation, to cover the risks based on provisions and to ensure its financing.

- In case the assets include the depreciation and provisions, we use the gross economic capital; otherwise, we use the net economic capital. *The gross and net economic return ratios* are determined based on the gross and net operating profit or loss:

$$\text{Gross Re} = \frac{EBE}{\text{Operating profit or loss}}, \quad \text{Net Re} = \frac{\text{Operating profit or loss}}{\text{Net economic capital}}$$

Gross economic return ratio measures the ability of the economic capital to ensure capital renewal and its remuneration. Gross economic return is used for comparisons between companies as it is not affected by the decisions regarding depreciation.

The assessment of the capital employed at the net value regards a patrimonial approach, based on current values from the financial theory. If it is not possible to determine a market value of the assets, the net book values, updated for inflation, are to be used.

- *Return on capital employed :*

$$Re = \frac{EBE}{i + \frac{Ct + Cs}{Kr}}$$

Kr=working capital turnover ratio, i= assets;
Ct= third party expenses;
Cs= personnel expenses.

- For the enterprise to be able to fully benefit from the efforts made for the proper development of the activity, economic profitability must be higher than the inflation rate. The economic return ratio must ensure the remuneration of the capital employed in real terms at the level of the minimum return ratio in the economy, namely the average interest rate, and must cover the economic and financial risk of the investors, shareholders or creditors. In the context of increased inflation, which characterizes the Romanian economy, the *real economic return* (Rr), calculated using the Fisher formula, is substantially lower than the nominal return (Rn).

$$Rr = \frac{Rn - Ri}{1 + Ri}$$

If inflation remains within the normal range (lower than 10%), the real ratio is expressed as follows:

$$Rr = Rn - Ri$$

For a finer analysis of the company's economic return ratio, one shall use ratio chains; the previous relationship is decomposed into two formal components:

$$R_e = \frac{EBE}{\text{Turnover}} \times \frac{\text{Turnover}}{\text{Economic capital}} \quad (1)$$

where:

EBE / Turnover = RMB = Gross margin ratio

Turnover / Economic capital = RCE = Capital turnover ratio

$$R_e = R_{MB} \times R_{CE}$$

Table no. 1 Patrimonial Balance Sheet of ALFA COMPANY

ACTIV	N		N+1		PASIV	N		N+1	
	RON	%	RON	%		RON	%	RON	%
Total assets	30042477	100.00	34861496	100.00	Total liabilities	30042477	100.00	34861496	100.00
Long term assets	19636056	65.36	21692044	62.22	Equity	14287481	47.55	13809210	39.61
Intangible assets	30632247	1.56	416487	1.92	Social capital	8858238	62.00	10537808	76.31
Tangible assets	19243334	98.00	20867746	96.19	Reserves	3216112	22.51	2239854	16.22
Financial assets	8639865	0.44	407811	1.89	Profit (loss) for the period	2213131	15.49	1031548	7.47
Current assets	7406421	34.64	1016945	37.78	Provisions for risks and expenses	1294830	4.31	805301	2.31
Inventories	3540270	47.80	4637270	45.60	Debt > 1year	6572400	45.45	7938843	39.21
Customers	2310803	31.20	4444051	43.70	Deferred income	114235	0.73	9921023	0.49
Other claims	171088	2.30	274575	2.70	Suppliers	1953568	13.51	3500704	17.29
Investments	977648	13.20	294914	2.90	Fiscal and social debt	1998395	13.82	14820793	7.32
Liquid assets	406612	5.50	518642	5.10	The part < 1 year of the long-term loans	380302	2.63	3336703	16.48
					Current loans	3441266	23.80	19271081	19.21
					Total debt	14460166	52.45	20246985	60.39

Equation (1) highlights the existence of a quantitative factor that influences the economic return ratio – the gross margin and a qualitative factor – the capital turnover. The economic return ratio can be improved by using two opposing business strategies:

- High gross margin, thus high price policy and low sales volume;
- Low price policy correlated with an accelerated capital turnover and an important sales volume.

The second model of factorial decomposition emphasizes the influence of the profitability of labor through the value added margin ratio a (as the difference between the value added and personnel expenses), the influence of the fixed assets productivity expressed through the value added for 1 RON fixed assets b and the influence of the investment structure through the strategic investment coefficient c (level of capital immobilization):

$$\frac{\text{EBE}}{\text{Economic capital}} = \frac{\text{EBE}}{\text{Value added}} \times \frac{\text{Value added}}{\text{Fixed assets}} \times \frac{\text{Fixed assets}}{\text{Economic capital}}$$

$$R_e = a \cdot b \cdot c, \text{ where:}$$

a = Gross operating surplus / Value added;

b = Value added / Fixed assets;

c = Fixed assets / Economic capital.

Table 2 systemizes the data used for calculating the economic return ratio.

Table no. 2 Data used for calculating the economic return ratio of ALFA Company for the period N-N+2 (RON)

Indicators	N	N+1	N+2
Gross assets	4730142	26073121	30695214
Net assets	4257011	24014501	26627101
Current assets	4319132	6513412	9053144
Total revenues	4815762	1045682	16411304
Total expenses	4378180	9577416	15416596
Equity	5611253	25828561	31004273
Value added	2135481	4810041	9883157
Subsidies for operating activities	-	-	-
Personnel expenses	1697252	4051312	5911499
Taxes	126581	190151	253190
Net profit	219258	346819	2104568
Gross operating surplus (EBE)	311648	568578	3718468

The decomposition of the economic return ratio of ALFA Company is shown in table 3.

Table no. 3 Economic return ratios of ALFA Company for the period N-N+2

Indicators	N	N+1	N+2
Gross economic return:			
- In nominal terms *	0.037	0.048	0.141
- In real terms	-0.411	-0.041	-0.108
Net economic return:			
- In nominal terms **	0.075	0.086	0.096
- In real terms	-0.42	-0.35	-0.17
Gross economic return, decomposed into:			
- Gross margin ratio	0.039	0.063	0.205
- Capital turnover ratio	0.935	0.752	0.685
Gross economic return, decomposed into:			
- Value added margin ratio (a)	0.058	0.095	0.234
- Fixed assets productivity (b)	0.985	0.763	0.642
- Level of capital immobilization (c)	0.647	0.686	0.938

*Is calculated as the ratio between EBE/(Gross assets + Necessary Working Capital)

** EBIT – Earnings before interest and taxes $(1-t)/AE0$, EBIT=Total revenues – Total expenses (except interest and current income tax), AE0=Net assets + Necessary Working Capital

Nominal gross economic return is characterized by an upward trend during the period N-N+2; in real terms, this trend is due to high inflation. The nominal growth from 3.7% to 14.1% is due to the increase in the gross margin and the capital turnover slowdown. Fixed assets productivity is characterized by a downward trend; however, this trend is balanced by the significant increase in the value added margin and the level of capital immobilization.

The slow growth in the net economic return compared to the gross return (1% during the financial year N+2 in regard to year N+1 and, respectively, 9.3%) is explained by the influence of the depreciation expenses and the interest on the gross operating surplus.

The results of the analysis are presented in table 4.

Table no. 4 Results of the factorial analysis regarding the economic profitability

Indicators	ALFA Company (%)
Variant (1)	
Economic return in the current period ** (Re1)	4.8
Economic return in the reference period (Re0)	3.7
The variation of the economic return ratio (ΔRe) due to:	1.1
• The influence of the gross margin ratio (ΔRMB)	2.24
• The influence of the capital turnover ratio (ΔRCE)	-1.14

* The indicators were calculated based on the data from table 2

** The current period refers to the financial year N+2; the previous period refers to the financial year N+1

Variant (1) highlights the fact that economic profitability can be increased by accelerating the asset turnover or by increasing the margin. These two options are being turned to advantage by the managers in different ways, depending on the object of activity of each enterprise. Thus, the sphere of distribution is characterized by a higher margin ratio (10-14%), while the asset turnover ratio is lower (2-3 rotations/year); in the field of commerce, the situation is reversed, meaning that the low margin (1-2%) is offset by a quick asset turnover (7-8 rotations/year).

The results of the factorial analysis of the economic profitability show that during the period N-N+2 the economic profitability of ALFA Company had an upward trend, although it had little significance in terms of value (3.7% in year N and 4.8% in year N + 2). This can obstruct ALFA Company's possibilities to meet both the shareholders' expectations, which have to be remunerated for their risk capital, as well as the company's requirements in terms of economic growth.

The positive influence is exclusively due to the increase in the gross margin ratio, reflected in an increase in the economic return ratio of 2.24%. The increase of 2.4% in the gross margin during year N+1 compared to year N and of 14.2% during year N+2 compared to year N+1 were due to the increase of 20.48% in the gross operating surplus and the increase of 82.62% in the turnover during year N+1 compared to year N.

The decrease in the capital turnover had a negative impact on the economic profitability (the economic return ratio decreased by 1.15%); the influence of this factor was surpassed by the positive effect of the gross margin. In order to ameliorate the negative influence, it is necessary to accelerate the capital turnover by:

- Optimizing the structure of the economic capital;
- Reducing the duration and cost of investment in progress;
- Reducing the inventories and the duration of the manufacturing cycle for the work in progress;
- Reducing the claims and the average collection period.

The conditions for the increase in the economic return ratio in terms of this model are:

- $IEBE > IVA$, increasing the share of the gross operating surplus in the value added;
- $IVA > IAF$, increasing the value added obtained for the value unit of the fixed assets;
- $IAF > ICE$, the growth rate of the fixed assets must be higher than the modification of the capital employed.

The margin ratios are used in order to assess the efficiency of the various stages of the activity regarding the profit or loss obtained; they are calculated as the ratio between the margins and the turnover or the value added.

The commercial margin ratio expresses the commercial profitability of the company; it is used for comparisons between companies from the same area of activity or from different areas.

$$\text{Commercial margin ratio} = \frac{\text{Commercial margin}}{\text{Sales of goods}} = \frac{\text{Sales of goods} - \text{Purchase price of the goods sold}}{\text{Sales of goods}}$$

The commercial margin ratio highlights the commercial strategy of the company.

The *Gross operating surplus ratio* reflects the ability of the operating activity to generate profit and shows the level of the gross operating profit or loss independently of the incidence of the company's investment, financial or fiscal policy.

$$R_{EBE} = \frac{\text{Gross operating surplus}}{\text{Turnover}}$$

The decrease in the gross operating surplus ratio, in the context of a constant commercial margin ratio, reflects an increase in the operating costs, while its increase indicates productivity growth, provided that it is not the consequence of an increase in the commercial margin ratio. It is worth noting that companies characterized by a rapid technological process and sustained investment efforts are concerned with the increase in the gross operating surplus in relation to the value added.

In comparison with the Gross operating surplus ratio, the *Gross operating surplus after financial expenses ratio* reflects the impact of external funding upon the enterprise.

The operating profit or loss ratio expresses the efficiency of the operating activity in industrial, administrative and commercial terms.

$$R_{RE} = \frac{\text{Operating profit or loss}}{\text{Turnover}}$$

The *net margin ratio* expresses the overall efficiency of the enterprise, its ability to achieve net profit and to withstand competition.

$$R_{MN} = \frac{\text{Net profit or loss}}{\text{Turnover}}$$

The net margin ratio is characterized by the simplicity of calculations, it has the advantage of not requiring the prior processing of the data and it is successfully used for small enterprises and for short periods of time due to the fact that the net profit or loss is not exclusively a result of the operating activity; it can be obtained as a result of exceptional or financial operations.

The *self-financing margin ratio* is characterized by low sensitivity towards the firm's depreciation policy, compared to the net margin ratio.

$$R_{MAF} = \frac{\text{Self - financing capacity}}{\text{Turnover}}$$

The self-financing margin ratio measures the surplus of resources in the control of the enterprise for its development and the remuneration of the capital contributors.

The cash operating surplus ratio reflects the monetary surplus resulting from the operating activity, which is used for the enterprise's development, compulsory expenses, the remuneration of shareholders and the reimbursement of borrowed capital.

The analysis of the ratios in table 5 leads to the following conclusions:

- One may note the decrease in the degree of external dependence (by 11.68% in financial year N+1 compared to the previous year and by 11.11% in financial year N+2) and the significant increase in labor productivity (by 176.94% in financial year N+1 and by 380.87% in financial year N+2).
- The upward trend of the gross operating surplus ratio and the operating profit or loss ratio is significant during the period N-N+2 since the activity of ALFA Company is profit-generating.
- The difference between the operating surplus ratio and the gross operating profit or loss after financial expenses ratio shows a low leverage ratio (this aspect is also highlighted by the upward trend of the self-financing margin ratio);
- The self-financing margin ratio had an upward trend during the period N-N+2 due to the fact that the growth rate of the self-financing capacity was higher than the growth rate of the turnover. In this regard, we note the increase in the resources available for remunerating the shareholders, which is also highlighted by the increase in the gross operating surplus after interest ratio;
- The upward trend of the net margin ratio reflects the overall efficiency of the company, which has covered cost increases through price increases;
- The return on investment ratio (ROI) shows an upward trend, meaning that it increases during financial year N+1 compared to the previous year from 2.45% to 8.4% and to 11.97% during financial year N+2). This evolution was influenced by two factors: the operating profit or loss ratio and the asset turnover ratio: in financial year N + 1, the significant increase in the operating profit or loss ratio ameliorated the relative decrease by 22.68% in the total asset turnover. During the following financial year, the increase by 20.07% of the operating profit or loss ratio together with the relative increase in the asset turnover coefficient by 18.67% led to the relative increase of ROI by 42.5%;
- A similar trend characterizes the efficiency of using the total assets (Return on Total Assets) ROA: the downward trend in year N+1 compared to financial year N is explained by the modification in the same direction of the net margin ratio (due to the increase in the asset turnover period) and the asset turnover ratio. During financial year N+2, the unfavorable effect of the increase in the asset turnover period is offset by the significant increase in the net margin (from 4.81% to 13.86%); the

effect was the increase in the return on assets ratio from of 3.16% to 12.33%. The fact that the values of the return on assets ratios exceed the industry average of 3% is explained by the large profit margins in relation to the turnover, which neutralize the negative effect of the small values of the total asset turnover.

Table no. 5 Operating return ratios of ALFA Company during the period N-N+2 (%)

Indicators	N	N+1	N+2	Evolution indicators		
				N	N+1	N+2
Beneficiary margin ratios						
Degree of external dependence (CA/VA) (CA – annual turnover, VA – value added)	2.14	1.89	1.68			
Degree of vertical integration (VA/CA)	46.53	5276	59.32			
• share of the depreciation in the turnover	3.93	4.23	10.42			
• share of personnel expenses	42.6	48.53	48.9			
Labor productivity ratio (thousand lei/person)	1453	4024	6987			
Gross operating surplus ratio ($R^{EBE} = EBE/CA$)	7.11	5.02	25.65			
Gross operating surplus ratio after financial expenses ratio	6.46	4.56	23.42			
Operating profit or loss ratio ($R^{RE} = \text{Operating profit or loss}/CA$)	2.53	11.21	13.46			
Net margin ratio ($R^{MN} = \text{Net profit or loss}/CA$)	5.13	4.21	13.86			
Self-financing margin ratio ($R^{MAF} = \text{Self-financing capacity}/CA$)	8.79	8.92	23.01			
Return on assets ratios						
Return on investment ratio (ROI=Operating profit or loss/Total assets)	2.45	8.40	11.97			
• Operating profit or loss ratio (Operating profit or loss/ CA)	2.53	11.21	13.46			
• Asset turnover ratio (CA /Total assets)	0.97	0.75	0.89			
Return on assets ratio (ROA=Net profit or loss/Total assets)	4.97	3.16	12.33			
• Net margin ratio ($R^{MN} = \text{Net profit or loss}/CA$)	5.13	4.21	13.86			
• Asset turnover ratio (CA /Total assets)	0.97	0.75	0.89			

2. Analysis of Financial Return Ratios

Financial return ratios express the company's ability to generate net profit through the equity employed. In the case of joint stock companies, return on equity is expressed using the following model:

$$R_f = \frac{\text{Net profit}}{\text{Equity}} \quad (2)$$

$$R_f = \frac{\text{Dividends}}{\text{Equity}} \quad (3)$$

Equation (2) expresses the net financial return and equation (3) expresses the return on equity, thus the profitability of the shareholders' placement in the shares issued by the company. So financial profitability remunerates the shareholders under the form of dividends or by increasing the reserves; their incorporation into the capital determines the increase in the intrinsic value of the shares [3, 254].

If the invested capital includes, besides equity, medium and long term loans, financial profitability is determined using the following model:

$$\text{Financial return on permanent capital} = \frac{\text{Net profit}}{\text{Permanent capital}} \quad (3)$$

Financial profitability is therefore influenced by the source of the capital invested; it varies depending on the financial structure of the company.

Following the pyramid scheme analysis, the causes that determine the level and evolution of the return on equity are shown. In this sense, it is decomposed in the following chain of ratios:

$$R_f = \frac{\text{Net profit}}{\text{Equity}} = \frac{\text{Net profit}}{\text{Turnover}} \times \frac{\text{Turnover}}{\text{Equity}}$$

$$R_f = R_{MN} \times R_{CP}$$

where:

RMN = net margin ratio;

RCP = equity turnover.

$$R_f = \frac{\text{Net profit}}{\text{Equity}} = \frac{\text{Net profit}}{\text{Turnover}} \times \frac{\text{Turnover}}{\text{Total assets}} \times \frac{\text{Total liabilities}}{\text{Equity}}$$

$$R_f = R_{MN} \times R_{AT} \times R_{IG}$$

RIG = total leverage ratio

Thus, *financial profitability = economic profitability x total leverage ratio*

Financial profitability, with origins in economic profitability, is influenced by the same factors:

- Net margin ratio, a quantitative factor which measures the company's profitability; it is an essential industrial policy indicator;
- Total assets turnover, a qualitative factor; it is an important commercial policy indicator;
- Total leverage ratio, a qualitative factor; it is an indicator that regards the financial structure of the company.

The total leverage ratio can also be determined based on the following model:

$$\frac{\text{Total liabilities}}{\text{Equity}} = \frac{\text{Equity} + \text{Total debt}}{\text{Equity}} = 1 + Lf$$

Lf ratio, which reflects the company's debt level, is called financial leverage ratio. The multiplier effect of the leverage ratio shows the fact that loans are a financial leverage that influence the return on equity ratio. The higher the financial return ratio is compared to the average interest in the market, the more attractive becomes investing in that company than in bank deposits, since the amount that exceeds the interest rate is proportional to the risk premium brought forward to the investor by the company's economic environment.

In Anglo-Saxon literature, the profit used for determining the economic profitability is called gross surplus before interest and taxes (EBIT – Earnings before interest and taxes); it is determined by using the following relationship:

$$\text{EBIT} = \text{Total revenues} - \text{Total expenses (except interest and income tax)}$$

In this sense, economic profitability can be calculated using the following model:

$$R_e = \frac{\text{EBIT}(1-t)}{AE_0}$$

t = average income tax rate resulted from the calculation.

The relationship of interdependence between Re, Rf and Rd can be determined using the weighted arithmetic mean:

$$R_e = R_f \frac{CP_0}{AE_0} + R_d(1-t) \frac{DAT_0}{AE_0}$$

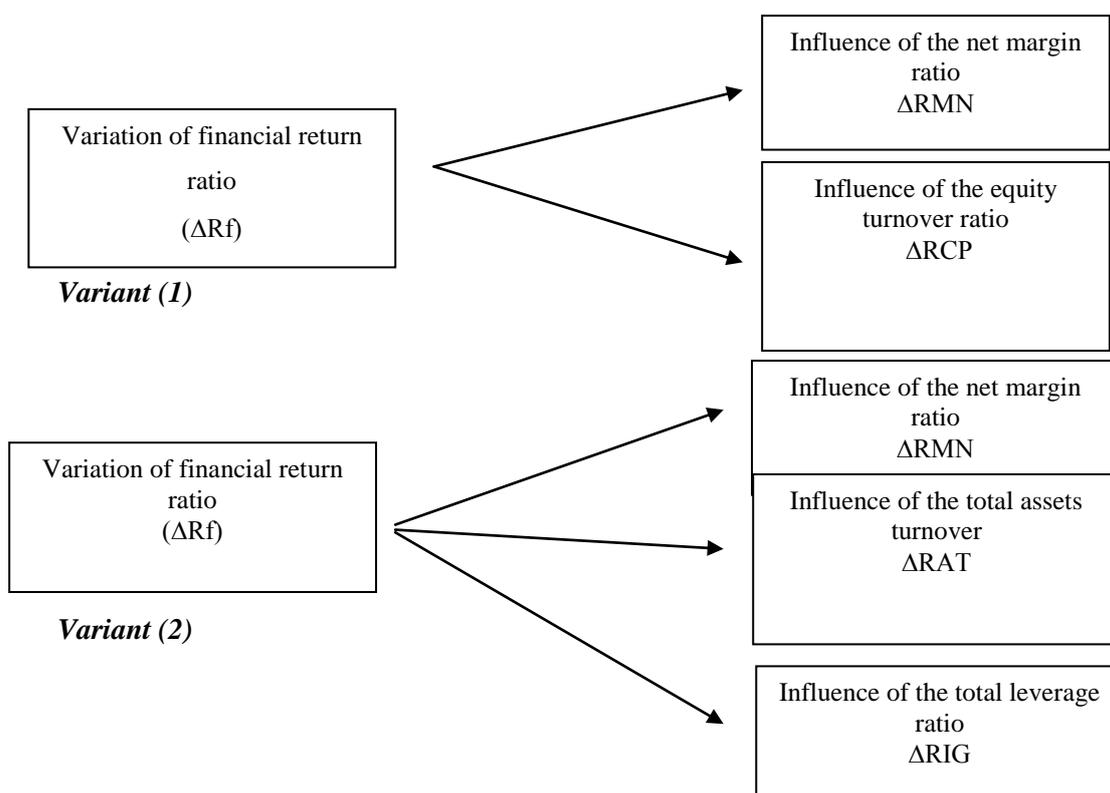


Figure no. 1 Factorial model of the financial return ratio analysis

The results of the factorial analysis of the financial return ratio - variant (1) are presented in table no. 6

Table no. 6 Evolution of ALFA Company's financial profitability

Indicators	N	N+1	N+2
Return on equity (Rf = RMN x RCP)	0.032	0.110	0.117
Return on equity, decomposed into:			
- Net margin ratio (RMN)	0.024	0.114	0.178
- Equity turnover (RCP)	1.352	0.685	0.657

The upward trend in the financial profitability from 3.2% to 11.7% reflects the high degree of equity capitalization during financial year N+2 compared to the previous years. One may note the negative influence of the leverage ratio upon the return on equity; this influence will be explained in detail within the chapter regarding the analysis and assessment of financial risk. Despite its upward trend, the financial return ratio is lower than the interest rate in the money market.

Conclusions

Assessing the quality of the company's financial activity requires comparing the indicators at different balance sheet closing dates, or comparing them at the same date with the indicators of the efficient enterprises from the same field of activity.

The inventory assessment and the depreciation methods can distort the comparisons between companies; thus, if working with rented equipment, based on leasing contracts, in the accounting records the assets have a lower value than the sales, due to the fact that the leased equipment is not included in the balance sheet and the obligations associated with the leasing contract may not appear as debt. Thus, both the asset turnover and the leverage ratio are improved artificially.

The return on assets and, consequently, the return on capital employed are affected by the variability of the profit or loss, thus the risk faced by the company. Financial risk, resulted in increased vulnerability of the treasury, increases economic risk and generates difficulties regarding the company's solvency, meaning that it increases the risk of insolvency.

References

- [1] Ballada S., Coille S.C., (1992), *Financial management tools and mechanisms*, Maxima, Paris
- [2] Brealey R.A., Myers S.C., *Principles of Corporate Finance*, Third Edition, Mc Graw-Hill International Editions
- [3] Ciurariu, G., *Business Valuation. Methodological elements and applications*, Tehnopress, Iași, 2013
- [4] Cohen E., (1990), *Financial analysis*, Economica Publishing House, Paris
- [5] Conso P., (1985), *Financial management of the enterprise*, Dunod, Paris
- [6] Halpern P., Weston J.F., Brigham E.F., (1998), *Managerial finance*, Economica Publishing House, Bucharest
- [7] Helfert, E.A. (2006), *Technique of Financial Analysis- a guide to value creation*, BMT Publishing House, Bucharest
- [8] Pilverdier-Latrete J., (1993), *Enterprise finance*, 6th Edition, Economica Publishing House, Paris
- [9] Radu, F., Taicu, M., (2009), *Considerations on the concept and economic-financial performance indicators*, in Supliment of Theoretical and applied economics, Bucharest
- [10] Richard J., (1989), *Means of performance analysis*, Imprimerie VIC Services, Paris
- [11] Solnic, Bruno, (2005), *Financial management*, Dunod Publishing House, Edition no 6, Paris
- [12] Stancu I., Bran P., Ilie V., (1989), *Finance of the economic unit through the active training method*, Third Edition, Academy of Economic Studies, Bucharest
- [13] Thibaut J.P., (1989), *Enterprise diagnostic, Practical guide*, SEDIFOR, Paris
- [14] White G., Sandhi A., Fred D., (1998), *The Analysis and Use of Financial Statements*, John Wiley & Sons, second edition