THE ECONOMIC RATE OF RETURN – INSTRUMENT FOR MEASURING THE COMPANIES' FINANCIAL-ECONOMIC PERFORMANCE

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Abstract: Considering the present economic context, the measurement of performances has become a permanent preoccupation for organizations, since the whole process is based on it, offering the necessary feedback to identify both the positive actions which have led to favorable results for the organization, and the negative ones, in order to correct them in the future. To do this, we have to measure what is most importantly to measure. Starting from these considerations, the present paper approaches from a theoretical and practical point of view the economic rate of return as the indicator which synthesizes best an organization's financial-economic performance. We have calculated and analyzed the economic rate of return for a group of Ten Romanian Firms in the food industry, through different calculation relations, pointing out the advantages/disadvantages of each calculation method.

1. MEASURING THE FINANCIAL-ECONOMIC PERFORMANCE

Taking into account the market economy's stiff competition, the evaluation of the company's performance allows for the identification of the activity's strengths and weaknesses as well as of opportunities for their improvement in the future. Considering as starting point the principle according to which we cannot control or improve but what we know, we can say that measuring the financial-economic performance is the first step in assuring a company's efficiency, development and prosperity.

The process of measuring a company's performances must be seen as a dynamic, continuous process, which involves knowing the set goals/objectives and comparing them with the level of (own or external) achievements, in order to establish the extent to which the objectives have or have not been achieved. In this respect, performance is expressed through *a set of parameters or complementary indicators, and/or sometimes contradictory, but which describe the processes through which various types of outputs/results are achieved*[1]. Hence, the instruments for measuring performance are vital signs which tell managers how well they do in relation to what they have in mind.

The literature presents and develops a great deal of indicators for measuring the economic agents' financial-economic performance, but selecting, out of these all indicators the most representative ones, is a subjective process which involves knowing

the specifics of the company's activity and correlating these specifics with each indicator's content.

Performance is an organization's last test (Peter Drucker) and must not be mistaken for the indicators that describe it. Both in practice and academic field, the concept of performance encompasses notions such as rate of return, efficiency, effectiveness.

The French specialist, Bernard Colasse, associates the notion of yield *with that of profit, reflecting a company's capacity to produce a result expressed in monetary units[2],* while Elie Cohen, sees yield as *a technical approach of performance.* In his turn, Xavier Richet stated that yield encompasses an ensemble of synthetic indicators which allow the assessment of the extent to which the company capitalizes on the production factors that have been used.

Although, being yielding or being profitable doesn't mean being performant, we consider that the yield indicators are a part of the indicators that are to be taken into consideration when we analyze a company's performance.

Yield is a synthetic form of expressing the efficiency of a company's financial-economic activity, that is, of all means of production used and work force, during all stages of economic circuit: supply, production and distribution. The analysis of yield is carried out through the system of rates which expresses the relation between a result and the invested capital in order to obtain it. In other words, the rates of return are relative sizes which express the degree to which the capital generates profit.

In the ensemble of financial-economic indicators, the rates of return are among the most synthetic efficiency indicators of a company's activity. The rates of return, as performance indicators can have more forms of expression, depending on the way of relating an indicator of effects or outcomes (profit, EBE or other partial indicators of yield) with an indicator of overall flow of activity (turnover, operating income, added value) or with the economic means advanced or consumed to obtain the specific result (as effort indicators).

The different models used to express the rate of return have a different informative power, mirroring the efficiency of different sides of the company's economic activity. The indicators built depending on the advanced or employed capital express predominantly the investors' interests, while the indicators built on consumed resources express preponderantly the company's managers' interests.

The main rates of return used in the financial-economic analysis of the company are: economic rate of return, financial rate of return, commercial rate of return, consumed resources rate of return.

We consider that a great number of indicators hamper the understanding of presented information, and for this reason, we focus on one rate of return, and that is, *the economic rate of return.*

Further on we present different theoretical ways of expressing the economic yield and a practical case regarding the analysis of the return on assets for a group of Romanian industrial companies.

2. ECONOMIC RATE OF RETURN: DEFINITION AND CONTENT

The economic rate of return (ROA, the Anglo-Saxon term "Return on Assets") expresses the capacity of a company to produce a financially favorable outcome as a result of exploiting its own economic means. It measures the performances of the resources employed in the operating process without taking into consideration the terms

and conditions of financing (the origin of financing sources), exceptional result and fiscal incidence (profit tax).

In economic practice and theory (both in our country and abroad) there are presented several ways of calculating the economic rate of return. A synthesis of the various ways of calculating this rate is presented in the following table:

Table no.1: Ways of calculating the economic rate of return

No.	Economic rate of return	Calculation relation	Observations
1.	**Rec1**	Pb/At, and: Pb = Gross profit At = Total assets	Measures the efficiency of using the company's total or operating assets. Its level is of interest especially for the company's managers.
2.	**Rec2**	Re/At, and: Re = Operating result At = Total assets	
3.	**Rec3**	EBIT/At, and: EBIT = Earnings before interest and tax At = Total assets	Expresses the capacity of the company assets to produce monetary results during the operating process], irrespective of the fiscal policy and way of financing of the activity, being used in comparisons between companies.
4.	**Rec4**	Re/Ae, and: Re = Operating result Ae = Economic asset Ae = Fixed assets + overall WCN + Liquid assets WCN = working capital need	It is a rate of return which is independent of the fiscal and financial policies and the company's extraordinary flows.
5.	**Rec5**	GOS/Ae, and: GOS = Gross operating surplus Ae = Economic asset	It is a rate which besides the above-mentioned elements is independent also of the technical capital depreciation policy
6.	**Rec6**	Pn/Ae, and: Pn = Net profit Ae = Economic asset	It is dependent on the company's financing policy because it takes into account the interests on loan capital. It is less comparable with other similar companies' rates
7.	**Rec7**	(EBIT-Ip)/Ae, and: EBIT = Earnings before interest and tax Ip = Profit tax Ae = Economic asset	This rate measures the capacity of the asset to insure both its renewal and the remuneration for the capital investors.

8.	**Rec8**	Pb/Kinv, and: Pb = Gross profit Kinv = Capital invested	The rate of return on capital employed measures the efficiency of the management of capital employed, being useful both to managers and present and potential investors.
9.	**Rec9**	GOS/Kinv, and: GOS = Gross operating surplus Kinv = Capital invested	

Taking into account the methods of calculation presented in table no. 1, we can conclude that we can determine both a gross rate of return and a net rate of return, as we can speak either of rate of return on assets (when the effort is represented by the total or economic asset) or of rate of return on capital employed (when we take into consideration the whole capital for which the company owes remuneration: equity capital and loan capital).

But irrespective of the method of calculation used, the economic rate of return measures how efficiently the financial and material means allocated for a company's activity are used, being frequently used in comparative analyses between companies belonging to the same field of activity.

Out of the ensemble of calculation methods that can be used to determine the economic rate of return we focus on the relation according to which:

$$R_{ec} = \frac{EBIT}{\overline{At}} \qquad (1)$$

We consider that using "earnings before interest and tax (EBIT)" in the calculation of the economic rate of return determines certain advantages in the field of analysis comparatively with the company's other results, that can be used, such as:

independence of the financial structure and state fiscal policy on tax profit;

if the company's two activities (financial and extraordinary) bring profit, a higher corresponding level of this rate will be obtained.

The denominator of the relation is represented by the average balance of total assets ($\overline{At}$), determined as an average of the sums reported at the beginning and the end of the analyzed financial period.

We can say that such a rate of return expresses the capacity of the company's asset to obtain a profit independently of the fiscal and financial policies, a profit that will assure the development of the company and the remuneration for the capital investors (shareholders and creditors).

It is the capital invested in the company's activity that has to be remunerated, but unlike the equity capital (remunerated depending on the profit obtained) the loan capital must be remunerated irrespective of the company's results. A company that benefits from loan capital (especially bank loans), will meet the expenses that will diminish its possibilities of self-financing. But at the same time, a company that takes out bank loans will benefit from the tax reduction determined by the deductible character of the interest expenses.

In this respect, we endorse the conclusion formulated by Ion Stancu [1], according to which the economic rate of return as well as the value of the indebted company are nevertheless influenced by the structure of the company's capital (equity capital and loan capital). The economic yield of an indebted company will register

higher values in comparison with the economic rate of return of a company which is similar both technologically and economically, but not in debt, depending on the size of the fiscal saving obtained through the deductible character of the interest expenses.

3. CASE STUDY REGARDING THE ANALYSIS OF THE ECONOMIC RATE OF RETURN

Taking into account the aspects previously presented, our goal is to determine the economic rate of return, in three different situations, for a group of 10 Romanian Firms that carry out their activity in the food industry:

a) *independently of the firm's structure and the state fiscal policy:*

$$R_{ec_a} = \frac{EBIT}{\overline{At}} \qquad (2),$$

and:

$$EBIT = Pb + Ch\,dob \qquad (3),$$

Pb = Gross profit,
Ch dob = Interest expenses

b) *taking into account a net profit earned before payment of interest and tax:*

$$R_{ec_b} = \frac{EBIT(1-t)}{\overline{At}} \qquad (4),$$

and:

t = profit tax rate (16%)

c) *taking into account also the tax saving determined by the interest expenses deductibility:*

$$R_{ec_c} = \frac{EBIT(1-t)+(Ch\,dob \cdot t)}{\overline{At}} \qquad (5)$$

The reason for such an analysis is to identify the advantages/disadvantages of determining and using in the decisional activity the economic rate of return, calculated either as a gross value or a net value or a net value that takes into account the tax saving due to the deductibility of interest expenses.

The ten firms for which we have determined and analyzed the economic rate of return, in each of the three different situations, are presented in table no. 2:

Table no. 2: Analyzed firms

No.	Firm name	No. of employees	CAEN code - 10 – Food industry
1	INTERSNACK ROMANIA SRL	514	1031 – Processing and preserving of potatoes
2	TABCO-CAMPOFRIO SA	680	1011 - Processing and preserving of meat
3	INDUSTRIALIZAREA LAPTELUI MURES SA	399	1051 – Cheese and dairy products manufacturing
4	CARNIPROD SRL	400	1013 - Meat products manufacturing (including fowl)
5	GALMOPAN SA	500	1071 – Manufacture of bread, cakes and fresh pastry goods
6	AGRO COMPANY SRL	793	1011 - Processing and preserving of

			meat
7	ZAHARUL LIESTI SA	441	1081 – Manufacture of sugar
8	PAN GROUP SA	993	1071 - Manufacture of bread, cakes and fresh pastry goods
9	PRINCIPAL COMPANY SA	490	1011 - - Processing and preserving of meat
10	PRODLACTA SA	469	1051 - Cheese and dairy products manufacturing

For this analysis we have used the data from the financial statements published by the analyzed firms for the fiscal years 2007-2008, statements from the online database www.amadeus2.bvdep.com.

The analyzed data refer to the indicators that are necessary for the calculation of the economic rate of return: gross profit and interest expenses, to determine the EBIT level as well as the average value of total assets. The levels of these indicators for each of the ten firms analyzed are presented in the following table:

Table no. 3: Financial indicators

Nr. crt.	(1) Gross profit (Gp)		(2) Interest expenses(Ch dob)		(3)=(1)+(2) EBIT		(4) Average value of total assets (At)	
	2007	2008	2007	2008	2007	2008	2007	2008
1	2.193.958	764.705	6.599.943	5.932.668	8.793.901	6.697.373	46.156.932	55.345.469
2	11.865.771	4.218.670	2.593.450	4.433.765	14.459.221	8.652.435	86.989.188	90.829.486
3	4.581.828	226.417	1.733.273	5.953.433	6.315.101	6.179.850	66.255.206	77.644.961
4	19.800.316	15.149.213	5.001.034	7.368.370	24.801.350	22.517.583	83.085.016	91.663.277
5	1.103.431	1.242.370	7.959.216	10.156.892	9.062.647	11.399.262	147.578.188	243.349.760
6	677.319	138.852	2.762.478	3.700.312	3.439.797	3.839.164	55.274.901	76.883.920
7	2.426.878	848.348	867.094	10.771.012	3.293.972	11.619.360	90.269.751	131.121.140
8	782.091	1.515.749	3.517.903	5.138.392	4.299.994	6.654.141	83.192.967	173.380.399
9	910.747	746.411	2.008.239	2.282.591	2.918.986	3.029.002	55.075.930	61.821.193
10	600.079	2.123.908	733.111	1.848.647	1.333.190	3.972.555	40.308.919	55.592.889

Replacing the level of these indicators in the calculation relations that were previously presented, the following values have been obtained for the economic rate of return:

Table no. 4: Economic rate of return values

No.	ECONOMIC RATE OF RETURN					
	EBIT/AT		EBIT(1-t)/At		EBIT(1-t)+(Dob*t) /At	
	2007	2008	2007	2008	2007	2008
1	19,05%	12,10%	16,00%	10,16%	18,29%	11,88%
2	16,62%	9,53%	13,96%	8,00%	14,44%	8,78%
3	9,53%	7,96%	8,01%	6,69%	8,43%	7,91%
4	29,85%	24,57%	25,07%	20,64%	26,04%	21,92%
5	6,14%	4,68%	5,16%	3,93%	6,02%	4,60%
6	6,22%	4,99%	5,23%	4,19%	6,03%	4,96%

7	3,65%	8,86%	3,07%	7,44%	3,22%	8,76%
8	5,17%	3,84%	4,34%	3,22%	5,02%	3,70%
9	5,30%	4,90%	4,45%	4,12%	5,04%	4,71%
10	3,31%	7,15%	2,78%	6,00%	3,07%	6,53%

Analyzing the results from table 4 we can observe that the economic rate of return has, for each firm, different vales depending on the calculation method used, the relation between these values being the following:

$$R_{ec_a} = \frac{EBIT}{\overline{At}} > R_{ec_c} = \frac{EBIT(1-t)+(Dob \cdot t)}{\overline{At}} > R_{ec_b} = \frac{EBIT(1-t)}{\overline{At}} \qquad (6)$$

In other words, the highest level of rate of return was obtained when we calculated it as a gross rate of return (R_{ec_a}), followed by the level of rate of return calculated on the basis of the net result increased by the tax saving obtained from the deductibility of interests (R_{ec_a}) and finally the level of rate of return calculated on the basis of the overall result before tax (R_{ec_a}).

At the same time, building the rate of return on the basis of a certain level of earnings before interest and tax (EBIT) determines a vision specific to the significance of each result:

◊ Relating earnings before interest and tax (EBIT) with the firm's assets ($\overline{At}$) we obtain a rate of return which measures the rate of return on capital employed, independently of the fiscal policy and the capital structure. This rate of return allows making direct comparisons between similar firms that use different financing strategies or have different tax situations. Thus, for similar technical and economic capacities, a higher economic rate of return characterizes an increased efficiency of the firm's operating assets. The level of this rate is important both for the enterprise management and for present or potential capital investors (shareholders and creditors);

◊ Using an indicator like (EBIT (1-t))-earnings before interest and tax, we obtain a measurement of how efficiently a firm uses its assets to generate income independently of the way of financing these assets. The economic yield calculated in this way can be considered a net rate of return dependent on the tax regime implemented by the firm, and for this reason it is less used in comparisons between firms. This rate of return is useful both to managers and present and potential investors.

◊ Using a net profit earned before payment of interest and tax, together with fiscal saving determined by the deductibility of interests (EBIT(1-t)+(Dob*t)) is a less used type of economic yield, but useful especially for the enterprise management. It measures the combined effects of asset management, financial structure and taxes on the firm's net results.

In conclusion, we can state that economic rate of return, as a synthesis indicator of a firm's performance, can express a specific vision on the efficiency of resources employed depending on the elements taken into account in accordance with the decision-maker's need for information.

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