European Journal of Accounting, Finance & Business

Volume **3**/2015 ISSN 2344-102X
Issue (2)/ June 2015 ISSN-L 2344-102X

THE FINANCIAL LEVERAGE MODEL – TOOL USED FOR FINANCIAL POLICY DECISION MAKING

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Abstract

The leverage effect results from the financial structure imbalance, its existence can highlight a wide range of adopted decision. Rising significantly the debt coefficient, the company chooses to not reinvest the results (profit) in the enterprise. It is noted that the model of financial leverage can be considered a tool in decision making financial policy, meant to contribute to the choice of optimal capital structure, to analyze the opportunities for increasing the equity of the enterprise or to use alternative funding sources, considering the perspectives of operating activities. In this paper the author performs an analysis of the activity between the economic rates of profitability and the financial rates of profitability through the financial structure of the company, highlighting the effect of financial leverage, registered at the studied enterprise.

Keyword: capital structure; financial leverage; financial structure imbalance; profitability; the economic profitability rate; financial profitability rate.

JEL Classification: M41

I. Introduction

Profitability is a prime mechanism of market economy and an important outset for guiding production in relation to the requirements of the consumers, assuming that they will obtain higher income than incurred expenses and reflecting the company's ability to

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Volume 3/2015 ISSN 2344-102X
Issue (2)/ June 2015 ISSN-L 2344-102X

make profits. If we relate in financial terms, the concept of profitability reflects the efficiency of the entire business of the company.

The approach of the profitability logically integrates the investigation of the "efficiency" and "effectiveness" of a business enterprise, favouring a monetary assessment of the performances. The ability of businesses to emit a monetary surplus must be analyzed by taking into account the means that have competed in achieving this surplus.

The interpretation and determination of profitability is differently approached directly related to the persons that are thereby concerned. Thus, managers will follow the way of achieving economic profitability, being concerned with the profitability of capital invested by the current activity. Shareholders will be particularly interested in financial profitability, which will provide them the information needed for their capital disposal, being concerned in this regard of the size of net earnings and the size of the assignment of the dividends. Those who borrow capital will be particularly interested in profitability of borrowed funds, calculated as the ratio of total interest income and loan capital, following the profitability of the company that they are financing it, in order to be convinced that they will be able to recover the funds invested.

The rate of profitability is one of the efficiency indicators, such as effect / effort indicator (Moroşan, 2002, p. 134). The effect is expressed through the profit by its various ways of calculation: gross profit, net profit, operating profit, current profit, etc. The effort is reflected in various forms of capital (the company's equity and invested capital), the consumed resources, the entire assets or parts thereof, the income etc. According to the factors related to this theme, the economic theory and practice operate with several forms of expression of the profitability.

The profitability of an enterprise is considered a significant stage in the financial analysis and represents the most commonly used concept that can be generally expressed as a rate of profitability, as the ratio of income obtained during a given period of time and total capital invested in the same period (Petrescu, 1995, p. 279).

II. The Analysis of the Economic Profitability

In order to quantify the economic rate of profitability on financial theory, there are two ways of determination (Tudose, 2006, p. 256):

- Economic profitability, which measures the performance of the company's total assets and is determined as follows: REC = (Gross Profit / Total Assets) xl00;

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Volume 3/2015 ISSN 2344-102X
Issue (2)/ June 2015 ISSN-L 2344-102X

- Economic profitability, which measures the performance of the invested capital of the company and is determined as follows: REC = (Gross Profit / Invested Capital) x 100.

The version that takes into account the performance of total assets of the enterprise becomes more representative because the related gross profit is achieved as a result of the participation of all capital, regardless of the term for which is in the enterprise. Therefore, the rate of the economic profitability essentially aims at measuring the performance of the company's total assets starting from an economic result (RBE-Gross operating outcome, RE - Operating outcome) and all the used means. Following these two results, here are the two alternatives of calculation the economic rates of profitability:

a) $R_e = \frac{\text{Gross operating Profit/Loss}}{\text{Total assets}} \times 100$

b) $R_e = \frac{\text{Operating Profit/Loss}}{\text{Total assets}} \times 100$

Building the rate of profitability based on the operating outcome shall determine an independent rate of both fiscal and structural capital (financing policy) and extraordinary flows. The analysis of the economic profitability rate reveals a number of issues regarding business management (Petcu, 2003, p. 379), as follows: correlation between the achieved rate of profitability and targets established on the basis of the business assets and their structure; correlation between investments and market capacity: assessing the size of investments (over/under investment); positioning of the achieved rate of profitability towards the average rate of the sector and towards the rate of other firms in the same sector; domestic dynamics in comparison with the sector and key competitors.

The ways of calculation of rates of economic profitability for a certain entity, SC ALFA SA, lead to written information enlisted in Table 1, and drawings entered in Fig. no. 1.

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Issue (2)/ June 2015 ISSN-L 2344-102X

Figure 1. The Evolution of economic profitability rate by the two variants of calculation

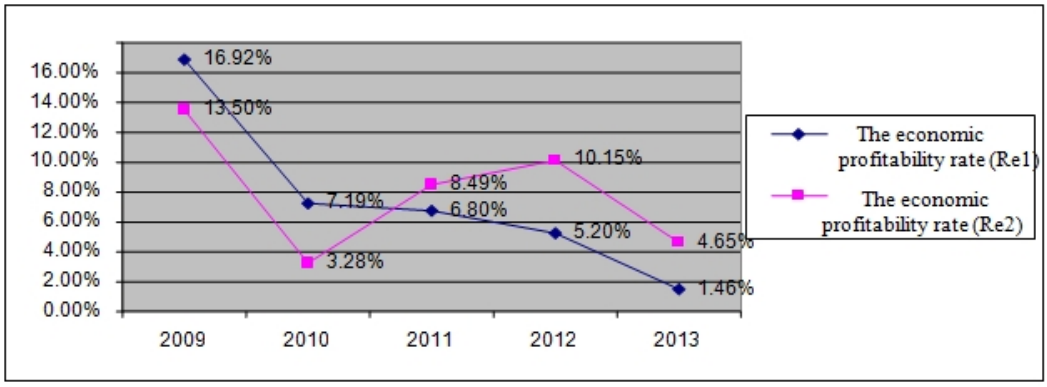

Table 1. The evolution of economic profitability rates

No. Crt.	Specification	Analyzed period				
		2009	2010	2011	2012	2013
1.	Gross operating profit/loss	1.197.016	538.921	522.627	406.381	138.709
2.	Operating profit/loss	955.220	245.716	652.149	792.998	441.184
3.	Total Assets	7.076.379	7.491.759	7.686.227	7.814.702	9.482.968
4.	The economic profitability rate (Re1)	16,92%	7,19%	6,80%	5,20%	1,46%
5.	The economic profitability rate (Re2)	13,50%	3,28%	8,49%	10,15%	4,65%

Throughout the entire period of analysis the rate of economic profitability calculated by both variants falls, reflecting thus a decrease in the ability of the invested capital to produce gross profit, as well as a lower remuneration of the invested capital on account of gross profit, permanently positioning well below the indicative value of 20%. In order to carry on its processes of production and merchandising, the company must

make investments, which implies the existence of financial resources and taking into account a certain risk, but also the release of a profit to justify the assumption of this risk. Modern technology of financing the assets by means of the total resources of the company, without special damage (pool of funds) allows the identification of two main categories of investments: industrial investments and commercial investments - which are the operating assets of the company - and financial investments.

When assessing the economic profitability, one must take into account that the profitability must have a size that allows the company to pay its shareholders and creditors, in accordance with the level of risk they have assumed by investing in the company or by giving it credit (Niculescu, 1997, p. 313).

Gross economic profitability, without being disturbed by decisions regarding the depreciation, is frequently used in external analysis because it allows comparisons between companies of the same sector or different sectors as form of ownership, regardless of their size, (Vintilă, G, 1997, p. 159)

The rate of gross economic profitability measures the ability of the economic capital to ensure its constant renewal and repayment of its fees in a short a period of time.

III. The Analysis of the Financial Profitability

The rate of financial profitability is an important indicator available for the owners of capital for assessing the effectiveness or appropriateness of maintaining their investments in the company, which often involves strengthening the company's equity through the participation of old or new shareholders (Dumitrean, Scorţescu, et al., 2002, p. 219).

The main role of the capital relates to achieving, based on his use, of a higher profit, thus the capital is an economic category that expresses all material resources that in combination with other factors of production participate in the development of new economic assets in order to obtain profit (Mihalciuc, 2003, p. 452)

The financial profitability is the ability of enterprises to evolve net profit from company's equity involved in its activity, reflecting the ultimate goal of the company's shareholders (and general owners or partners), expressed by the rate of remuneration of equity investment made by them in the process of purchasing the shares of the company or total / partial reinvestment of the profits that they are entitled to (Colasse, 1987, p. 9)

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Volume 3/2015 ISSN 2344-102X
Issue (2)/ June 2015 ISSN-L 2344-102X

The rate of financial profitability represents the indicator that expresses the ratio between profit and capital as sources of financing their business activity (10).

In a given competitive system, a company must develop oneself, invest, and this investment must be financed (11). Often the financing process entails strengthening the company's equity, either through the contribution of the existing shareholders or the contribution of other new shareholders. This incitement to invest is limited by a convenient remuneration of the company's equity. In addition, if the remuneration rate is high, the shareholders accept easily to leave a part of their profit to the company's disposal, thus ensuring the means of development. For managers, the financial profitability represents a fundamental objective, an essential condition of their strategy to maintain power.

The rates of financial profitability involve the calculation of the following rates: the rate of financial profitability; rate of net financial profitability; rate of financial profitability before tax; productivity of the company's equity.

1. The rate of financial profitability is calculated in two ways:

a) The rate of financial profitability on company's equity;

b) The rate of financial profitability on invested capital

a) $$R_f = \frac{\text{Profit/Loss of the financial year}}{\text{Company's equity}} \times 100$$

b) $$R_f = \frac{\text{Profit/Loss of the financial year}}{\text{Invested capital}} \times 100$$

Profit/Loss of the financial year – profit (result) before tax;

Invested capital – total amount of company's equity and medium and long term loans.

The method of calculating the rate of financial profitability on equity and invested capital of the company SC ALFA SA, for the period under review, led to the results enlisted in Table no. 2.

Table 2. The evolution of the rate of financial profitability on equity and invested capital

No. crt.	Specification	Analyzed period				
		2009	2010	2011	2012	2013

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1.	Profit/Loss of the financial year	1.197.016	538.921	522.627	406.381	138.709
2.	Equity	7.076.379	7.491.759	7.686.227	7.814.702	9.482.968
3.	Invested capital	7.076.379	7.491.759	7.686.227	7.814.702	9.482.968
4.	The rate of financial profitability on company's equity	15,56%	6,00%	4,95%	4,32%	0,97%
5.	The rate of financial profitability on invested capital	15,56%	6,00%	4,95%	4,32%	0,97%
6.	Index of evolution of the result for the year	100%	40,81%	84,58%	88,80%	27,21%
7.	Equity index evolution	100%	105,87%	102,60%	101,67%	121,5%
8.	The average interest rate (%)	28,47%	18,83%	20.27%	9.60%	8,75%

The evolution of the rate of financial profitability on equity and its proximity to the benchmark are shown in Figure no. 2.

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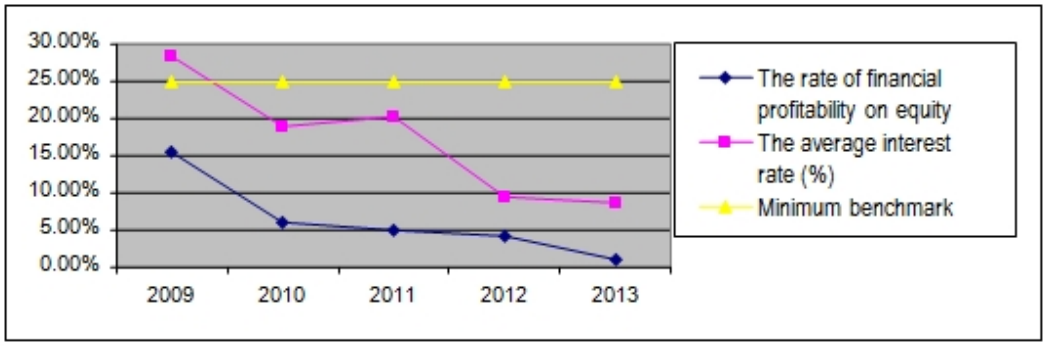
Figure 2. The evolution of the rate of financial profitability on equity and its proximity to the benchmark



During the analyzed period, the rate of financial profitability on equity and invested capital showed a downward trend that equals a weak recovery in net income of own resources, respectively a capacity reduction in equity to create net profit. In fact, this trend is due to a reduced net margin rate and the velocity of equity by turnover, as confirmed by the faster decrease in net profit against the dynamics of the company's equity.

The level recorded last year (0,97%) shows that 100 lei return to 0,97 lei profit. The lower level of the indicator against the economic profitability is due to the negative income tax. The levels recorded in the period under review does not provide a good recovery on equity only on account of net profits, much less in the years 2011, 2012 and 2013 when it recorded the lowest values of the indicator, and it is known that the minimum value is 25 %, which ensures recovery of equity in four years. Also, the rate of financial profitability on equity and invested capital is below the average interest rate (which reflects the minimum rate of productivity per economy) throughout the period under review.

The rate of financial profitability has the following characteristics: (12)

- remunerates the company's owners by assigning the dividends and by increasing reserves which in fact represents an increase of the property of the owners;
- is influenced by the method of procurement of capital and is therefore sensitive to the financial structure, namely the debt situation of the companies;

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- it is desirable that this rate is higher than the average market interest rate to make attractive the shares of their businesses and increase the exchange rate of the shares.

2. *Rate of net financial profitability*

$$\text{Rate of net financial profitability} = \frac{\text{Net Profit/Loss of the financial year}}{\text{Company's equity}} \times 100$$

The company's equity does not include the retained profit.

The financial accounting does not include the concept of gross profit, for which, in practice, one can use "profit before tax" or "profit or loss before deducting financial expenses, or interest and income tax" (13).

Calculations regarding the rate of net financial profitability for the company under review lead to the results enlisted in Table no. 3:

Table 3. Evolution of the rate of net financial profitability

No. crt.	Specified	Analyzed period				
		2009	2010	2011	2012	2013
1.	Net result for the year	1.101.178	449.427	380.145	337.554	91.847
2.	Equity	7.076.379	7.491.759	7.686.227	7.814.702	9.482.968
3.	The rate of net financial profitability	15,56%	6,00%	4,95%	4,32%	0,97%
4.	Evolution index of the rate of net financial profitability	100%	38,56%	82,50%	87,27%	22,45%
5.	Variation of the rate of net financial profitability	0%	-61,44%	-17,50%	-12,73%	-77,55%

3. *Rate of financial profitability before taxes*

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$$\text{Rate of financial profitability before taxes} = \frac{\text{Current Profit/Loss before taxes}}{\text{Company's equity}} \times 100$$

The company's equity does not include the retained profit.

Calculations regarding the rate of net financial profitability before taxes for the company under review lead to the results enlisted in Table no. 4:

Table 4. Evolution of the rate of financial profitability before taxes

Nr. crt.	Specification	Analyzed period				
		2009	2010	2011	2012	2013
1.	Current profit/loss before taxes	1.197.016	538.921	522.627	406.381	138.709
2.	Equity	7.076.379	7.491.759	7.686.227	7.814.702	9.482.968
3.	the rate of net financial profitability before taxes	16,92%	7,19%	7,08%	5,20%	1,46%
4.	Evolution index of the rate of net financial profitability before taxes	100%	42,49%	98,47%	73,45%	28,08%
5.	The variation of the rate of net financial profitability before taxes	0%	-57,51%	-1,53%	-26,55%	-71.92%

4. *Rate on company's equity*

$$\text{Rate on company's equity} = \frac{\text{Dividends}}{\text{Company's equity}} \times 100$$

The company's equity does not include the retained profit.

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Volume 3/2015 ISSN 2344-102X
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Calculations regarding the rate on company's equity for the enterprise under review lead to the results enlisted in Table no. 5:

Table 5. Evolution of the rate on company's equity

Nr. Crt.	Specification	Analyzed period				
		2009	2010	2011	2012	2013
1.	Dividends	275.295	129.974	114.044	0	64.293
2.	Equity	7.076.379	7.491.759	7.686.227	7.814.702	9.482.968
3.	The rate on company's equity	3,89%	1,73%	1,48%	0%	0,68%
4.	Evolution index of the rate on company's equity	100%	44,47%	85,55%	0%	0%
5.	Variation of he rate on company's equity	0%	-55,53%	-14,45	-100%	-100%

The main feature of this rate is given by the fact that although widely used in the financial analysis, this rate must consider the methodology of the net profit, respectively the regime for calculating depreciation and provisions, deductible and non-deductible expenditures considered in determining the basis for calculating the corporate tax.

The financial structure of the company, whose establishment is an important objective of the financial management at the entity level, reflects the composition of its capital. Establishing an optimal financial structure is a decision related to the company's financial period, placing first, the problem of deciding how financial allocation to be made between short-term loans and invested capital, and the second problem is to decide how the allocation should be made between its own funds and the medium and long term borrowed funds.

The rate of the financial profitability is a relevant indicator in assessing the company's market position. An increasing remuneration of the investigated capital ensures as follows (14):

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Issue (2)/ June 2015 ISSN-L 2344-102X

- an easy access to financial resources due to trust of the current owners to reinvest in the company and of the potential investors - holders of financial resources available for investment;
- the capacity of development.

Therefore, the financial health of a company and the quality of its management are expressed by an appropriate increasing size of the rate of financial profitability.

The analysis of correlation between the rate of economic profitability and the rate of financial profitability through the company's financial structure reveals the financial leverage registered by a company.

IV. The Model of Financial Leverage Efect

Measuring the financial risk is interesting for both creditor and shareholder, this problem is specific to the analysis of the financial situation of the company. Any decision regarding the process of financing the activity of the company becomes founded if the proposed solution provides a good risk and if the expected benefits justify the incurred effort (15). The creditor shall particularly study, in this regard, the activity carried out by the company in order to establish the state of liquidity, being less interested in working capital analysis. The competence of current assets and short-term commitments becomes, therefore, more important than information on fixed assets and long-term commitments. The creditor is also interested in the capacity of the company to release profit. The shareholders rank first in the list of their objectives the concept of value creation, with particular emphasis on the reliability of the forecast balance sheet and profit and loss account.

The financial leverage effect expresses the influences of the debt has the profitability on equity of the company under review. If the economic profitability of an investment is higher than the cost of debt (loan), the leverage effect increases the financial profitability. The profitability on equity is based on the company's financial structure and the difference between economic profitability of the investment and the cost of debt. Formally, leverage can be expressed as:

Before tax benefit available to the company is: $(r_p \times AT) - (i \times CI)$

The rate of financial profitability on equity CP is equal to:

$$r_f = \frac{(r_p \times AT - i \times CI)}{CP} = \frac{r_p \times (CI + CP) - i \times CI}{CP} = \frac{CI(r_p - i) + r_p \times CP}{CP} = L(r_p - i) + r_p$$

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Volume 3/2015 ISSN 2344-102X
Issue (2)/ June 2015 ISSN-L 2344-102X

Whereas:

r_f – rate of financial profitability;

CI – borrowing capital;

AT – total assets;

i – rate of borrowing interest;

r_p – rate of profitability of the assets (of investment);

L – indebtedness rate CI/CP.

Examination of this formula allows two remarks (16):

a) Indebtedness "brings" a further increase in profitability on equity, if and only if the economic profitability on investment is higher than the cost of debt (interest). There are three possible cases, as shown in Table no. 6:

Table 6. Cases associated to borrowing

No. crt.	Cases	Explanations
1.	$r_p > i$	Leverage works for the company. The rate of profitability is an increasing function of leverage, the company can increase its profitability by increasing the rate of indebtedness;
2.	$r_p = i$	Recourse to debt does not change the profitability on capital, and this is equal to that of investment
3.	$r_p < i$	Leverage act unfavourable, the profitability on investment being lower than the cost of debt, the profitability on equity decreasing when the company increases its leverage.

Leverage has therefore a favorable or unfavorable amplification effect on profitability on equity, depending on the performances of the activity carried out by the company.

b) But the risk of the company increases together with the level of indebtedness, any enterprise bears a risk of the economic activity, and the indebted enterprise incurs an additional risk, the financial risk related to the interest payments. A

downturn of the activity enhances the losses of an indebted company, because the financial expenses are inelastic.

V. Conclusion

The rate of economic profitability is an important indicator in assessing the company's performance in the evaluation of the recovery of invested capital, the source of remuneration of such placed resources, and must be situated at least at the level of invested capital (any overflow resulting in the increase of self financing) and thus required to be greater than the interest rate. This is a reference indicator in assessing the choice of the investment destination, comparing the results generated by other various investment opportunities. The rate of profitability, by its level, is important both for shareholders, that in conditions of increasing value agree to let some of their profit at the company's disposal, but also for managers, representing a prerequisite in the strategy of maintaining the power.

The ultimate goal in the use of leverage is to increase the company's profitability. Businesses that call on borrowed resources should consider the following three elements: the relative level (average)of interest rate in relation to the rate of profitability before taxes; the stability of the economic activity - leverage is positive only if the rate of profitability before taxes remains higher than the effective interest rate (actual cost of borrowed capital); possibility of placing the saved capital because of resorting to debt under satisfactory profitability conditions.

Leverage results from the lack of equilibrium of the financial structure. The existence of leverage can also highlight a wide range of adopted decisions. Indeed, by significantly increasing its debt ratio, the company chooses not to reinvest the results (the profit) in the entity. It is noted that the model of financial leverage can be considered an important tool in the process of making fiscal policy decision, in order to contribute to the choice of an optimal structure of the capital, to analyze the opportunities to increase the company's equity or call alternative funding sources, with perspectives in operating activities (17). Leverage can also occur in the case of dynamic businesses, growing, profitable, but with negative cash aspect. Insufficient domestic funds would justify the process of increasing their own funds by attracting new partners to strengthen the financial structure.

European Journal of Accounting, Finance & Business
Volume **3**/2015 ISSN 2344-102X
Issue (2)/ June 2015 ISSN-L 2344-102X

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