

Models for Assessing the Profitability and Sustainable Growth of the Enterprise

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Abstract: *The substantiation of managerial decisions, particularly strategic ones, must take into account the evolution that economic indicators have recorded during previous periods, on the one hand and the prospects that the company has, on the other side. If a firm's past performance evaluation is based on reliable results and, therefore, poses no particular problem, the evaluation of future conditions where it will be active, and, implicit, its future performance is achieved with a certain degree of uncertainty. Here comes on large extend the manager's ability and experience. Consultancy firms offer informatic, customized solutions that facilitates strategic decision making, greatly reducing the risk of making wrong decisions. Even in the absence of such programs, managers, along with analysts who advise them have provided a number of patterns that have won over time and can be a "guide" in planning future work. In the following we have chosen three such models, inspired by financial theory. In the first part of our material, we reviewed the meaning and the calculation of the main rates of profitableness. Then, based on an example, we presented a brief analysis of economic and financial profitableness, as indicators of past performance, as well as sustainable growth opportunities for enterprise value.*

Key-words: *economic return, financial return, enterprise value, sustainable growth*

Introduction

The efficiency with which resources of a company are used depends on economic context and especially on managers' experience and talent. Managerial decisions essentially influence the enterprise's profitability. In planning future economic activities there must be taken into account the past performance of the company, performance expressed through various indicators such as turnover, profits, rates of return etc. Information on the trend seen by these indicators, coupled with information on the economic context in which the company has worked, is the starting point in assessing the possible future performance. In addition, the profitability of the company, plus its dividend policy influences the market value of its shares. The increase of enterprise value is the main goal of any investor. The present material aims to provide the calculation and interpretation of the main rates of return, as well as models for the interpretation of a company's growth value.

1. Theoretical Aspects Concerning Rates of Return

Rates of return reflect the company's ability to produce profit and are expressed in the form of ratios between results and efforts to obtain them. Effects (results) taken into account may be [1]: commercial margin, value added, operating results, gross or net result of the exercise etc. Depending on the denominator of the ratio, namely the means (efforts) put into action, we can talk about rates of return: trade, economic and financial. The last two, valid for any type of company, represent the subject of this paper. Unlike the profit, the rates of return, due the calculation method, allow the comparative analysis in space and in time of economic performance.

1) Economic return

Economic return measures the remuneration of invested capital, covering both its shareholders' and those lent [1].

Economic return, known as return on assets, is determined as the ratio between the economic result and economic means employed to achieve it. By expressing economic result it is desired that the rate is independent of the company's financial structure, of the State's fiscal policy and of any extraordinary items recorded during the exercise.

Specific literature mentions several models for calculating the economic return. Thus, the rate may be calculated:

- gross operating surplus as a ratio to total assets value:

$$R_e = \frac{\text{Gross operating surplus}}{\text{Total assets}} \times 100 \quad (1)$$

Expression of economic result by gross operating surplus allows the calculation of a rate independent of fiscal, financial and amortization policy as well as of extraordinary items. If the denominator, instead of total assets, takes into account only the assets financed by equity and debt into long term, then the ratio expresses the average return of invested, in equity and borrowed capitals.

- by reporting result of operating activity to the value of total assets:

$$R_e = \frac{\text{Operating earnings}}{\text{Total assets}} \times 100 \quad (2)$$

This rate, called in Anglo-Saxon literature, *Return on Assets* (ROA) or *Return on Total Assets* (ROTA), is a measure of efficiency of operational activity and shows how well managers have used the company's total assets to generate an operating surplus. The rate's amount so calculated must be compared with the interest's rate where borrowed resources were obtained. If the return exceeds the interest rate, the difference generates an additional profit and we are dealing with a positive effect of financial leverage. Otherwise, we talk of a negative effect of financial leverage, which generates a loss. Compared to the previous model, the rate value is influenced in this case by company policy on assets amortisation.

- by reporting net result of operating activity to the value of net assets:

$$R_e = \frac{\text{Net operating earnings}}{\text{Net assets}} \times 100 \quad (3)$$

The total assets value include certain assets that are not participating in forming the operations result (for example financial restraint, short-term financial investments, other non-operating assets). Consequently, the return calculated by the first two relationships is to some extent diminished. If the analyst has access to sufficient information, it is advisable to perform calculations taking into account only the operating assets. Equation (3) takes into account net operating assets, as the expression of invested capital, which is obtained based on operating profit. Net operating assets represent the difference between operating assets and liabilities relating to the operation. A quick calculation of the value of these assets, based on financial statements, may be made by subtracting current liabilities from total assets. With regard to gender balance sheet, these findings are even the sum of equity and long-term debt, invested capital expression. Regarding the net result of operations, namely the numerator relationship, this is the result (profit) after taxing.

- by reporting the gross result (Earnings before Income Tax) to total assets value:

$$R_e = \frac{\text{Earnings before Income Tax}}{\text{Total assets}} \times 100 \quad (4)$$

This calculation model has the disadvantage that it provides a result affected by assets depreciation policy and the financial and extraordinary enterprise activity. But it is a useful model for managers, because it can lead to a greater rate value and therefore to a better picture of the enterprise in terms of economic performance.

It is preferable that in the above relations the average value of assets, not their final balance will be used. By using average values it takes into account any changes interfered during the financial year in assets value.

Economic return must meet certain conditions:

- to be at least at the minimum rate of return in the economy (average interest rate), otherwise it is preferable to invest capital in the financial-banking market than in the economy;
- to be higher than the average cost of borrowed capital, so that the enterprise benefit from the leverage effect of borrowing;
- to be higher than the inflation rate, so that the increase in shareholders' equity to be real.

2) Financial return (Return on equity)

Return on equity measures the net remuneration of shareholders' equity, respective the efficiency on financial investment that the shareholders made by buying company's shares.

The key interest point to business owners is investment's profitableness. Investors are also interested in the distribution of profits which they belong, namely of what part of the profit is reinvested and what part is distributed as dividends. Finally, investors are concerned about the effect of company results on the market value of the investment, especially for listed companies.

The relationship existing between obtained profits and shareholders' investment is tracked by financial analysts, through a series of indicators such as: *return on own capitals* and *return on social capitals*, as measures of total shareholders investment and *earnings per share*, as a measure of participation of each units of investment in enterprise profits.

The most used formula for calculating financial return links the net exercise result (Net Income) with shareholders' equity („return on equity” - ROE):

$$R_f = \frac{\text{Net Income}}{\text{Shareholders' equity}} \times 100 \quad (5)$$

In interpreting the rate should be borne in mind that the net result may be affected by any extraordinary items which are totally random.

Net obtained profit belongs entirely to ordinary and preferred shareholders owners. Shareholders who hold ordinary shares may issue claims on residual income after the payment of priority dividends. If holders of preferred shares typically receive a fixed dividend (advantage that financial creditors also have, which benefit from a fixed return of the granted financing), holders of common shares are not guaranteed a certain return on investment.

To make a company's shares more attractive and to increase their rate of exchange, financial returns should exceed the average interest rate.

Net return on equity (R_{fn}) expresses the net remuneration of share capital through dividends:

$$R_{fn} = \frac{\text{Dividends}}{\text{Capital}} \times 100 \quad (6)$$

This rate is a relevant indicator in assessing the company's position on the market. A pay in increase of invested capital indicates a development capacity of company and enhances the investors' confidence in the current or future investment performance. We may talk about a performing enterprise, in terms of investors, when financial return exceeds the returns that they expect.

We insisted more on economic return as it stays at the basis of financial return. The difference between the two rates depends on the amount of borrowed capitals, therefore depends on the debt policy of the company. The relationship between them is as follows:

$$R_f = R_e - (R_e - i) \times \frac{D}{E} \quad (7)$$

where:

- R_f - financial return
- R_e - economic return - calculated by equation (3)
- i - net cost of borrowing (interest rate after taxes)
- D - amount of debt
- E - value of shareholders' equity.

The second term of relation, called the financial leverage of borrowing, can be positive or negative as economic profitability is higher or lower than the cost of borrowed capital. As higher is the difference ($R_e - i$), the more convenient the debt is. Certainly, however, there should not be neglected the negative effects of indebtedness above the normal range (associated risks, difficulties in obtaining new financing etc.).

Financial return on equity can also be used in company assessment. Theoretically, the value of a share can be calculated by updating annual undistributed profits, according to the relation [3]:

$$M_t = V_t + \frac{NP_{t+1} - k \times V_t}{1 + k} + \frac{NP_{t+2} - k \times V_{t+1}}{(1 + k)^2} + \dots \quad (8)$$

where:

M_t - the market value of share at time t

V - book value of the share

NP - net profit

k - cost of shareholders' equity (the return required by investors)

Knowing that the net profit is equal to the product of financial return and shareholders' equity value (from equation 5) and substituting in the above relation, we obtain:

$$M_t = V_t + \frac{(Rf_{t+1} - k) \times V_t}{1 + k} + \frac{(Rf_{t+2} - k) \times V_{t+1}}{(1 + k)^2} + \dots \quad (9)$$

Equation (9) confirms that a financial return superior to profitability required by investors generates a further increase in enterprise value, as compared to increase given only once by the carrying amount of the shares.

2. Models of Sustainable Value Growth

The value of the enterprise can be considered as net updated value of the undistributed profits (gross margins of self-financing). In an efficient market, the action flow is representative of future gross margins of self-financing, generated by current and forthcoming investment [6]. Comparing this flow of action with its mathematical value (calculated by reporting the net book asset to the number of shares) can we know whether or not we have an increase in value. Interpretation of the enterprise value growth can be made by various models. Next, we briefly introduce three such models, derived from financial theory. These models, developed by different consulting firms, represent important tools in strategic planning business.

a) The model developed by *Strategic Planning Associates*

The model connects the report M/E (market value/shareholders' equity value), as an indicator of future performance strategies, to the ratio Rf/k (financial return/cost of capital), also called *leverage value* [2], which is a performance indicator of past strategies.

The analysis of company's position is based on the following form:

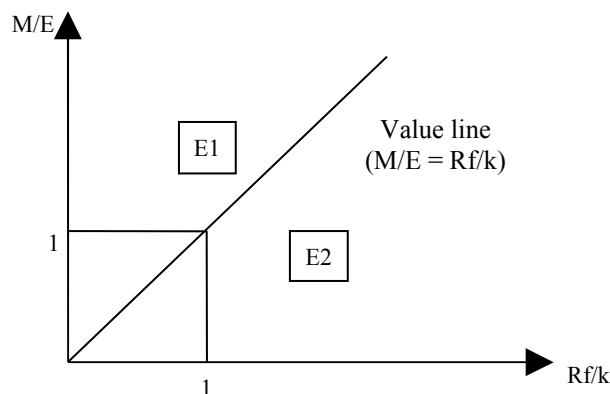


Figure 1. Strategic Planning Associates evaluation model

Firms in the left side of the value line (zone E1) are those which will record in future better performance than those recorded in the past. Those located on the right side (zone E2) will record in future lower performance than those recorded in the past.

b) The Marakon Associates growth model

Marakon Associates consulting firm has developed a model that specifies that the company's activity is represented and interpreted according to two factors:

- the difference between return on shareholders' equity (R_f)¹ and its cost (k), as a measure of past performance;
- the difference between the rate of increase of activity volume (g) (growth rhythm of turnover) and its market growth rate (g_m), as an expression of future performance [4].

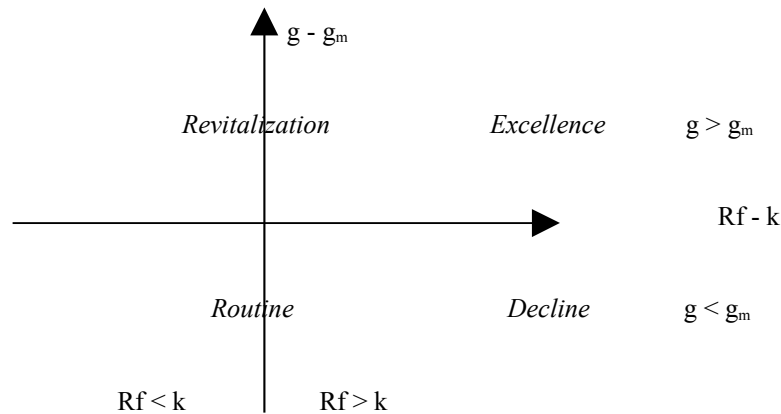


Figure 2. Marakon Associates Matrix

Revitalization Zone corresponds to those companies whose future performance will be superior to the past ones. *Excellence Zone* corresponds to enterprises that will maintain previous good performance in future periods.

In *Routine Zone* we find enterprises that fail to improve past performance, which were mediocre. *Decline Zone* characterises the enterprises that, although have performed well in the past, do not have prospects in maintaining it, but towards their decline.

c) The Zakon-BCG growth model

The model highlights the maximum growth that a company may incur. It was found that some companies have had difficulties as a result of too rapid growth in the volume of activity, namely when the pace of development has exceeded the company's ability to generate the necessary resources to finance expansion.

Depending on the undistributed profits level, the maximum sustainable growth percentage (SG) is calculated as follows:

$$SG = \frac{p \times P}{E} \quad (10)$$

where:

- p - percent of profits retention
- P - profit after tax
- E - value of shareholders' equity

Profit after tax can be calculated as:

$$P = Re(D + E) - i \times D \quad (11)$$

where:

- Re - return on assets after tax
- D - amount of debt
- i - interest rate after taxes

Substituting in equation (11), we obtain the maximum expression of growth that the company can support with the present means that it owns [5]:

$$SG = \frac{p}{E} \times [Re(D + E) - i \times D] = Re \times p + \frac{D}{E} \times (Re - i) \times p \quad (12)$$

¹ Instead of financial return, some authors use the economic asset return (see *Caby et Hirigoyen, "La creation de valeur de l'entreprise", Economica 1997, p.22*)

Performance analysis must consider not only the specific values of profitability indicators but also their evolution. Just maintaining in time the level of profitability will assure the development and prosperity of the enterprise.

3. Example of Calculation and Interpretation

To illustrate the above, we chose the data presented in the annual accounts of a medium-sized company, unlisted, an active company in the market of building materials and interior decorating. The analysis covered the period 2005-2009.

Economic and financial return calculation

Table 1.

No.	Indicator	Year				
		2005	2006	2007	2008	2009
1	Operating earnings	10.757	13.476	13.930	27.638	52.222
2	Net profit	8.081	8.865	11.355	25.978	52.294
3	Total assets	26.501	41.735	78.546	126.120	221.334
4	Shareholders' equity	15.681	26.383	31.738	53.881	101.857
5	Economic return (%) (1/3)	41	32	18	22	24
6	Financial return (%) (2/4)	52	34	36	48	51
7	Interest rate (%)	8	9	8	10	8
8	Average inflation rate (%)	9	5	7	4	4
9	Distributed dividends	0	8.283	5.955	10.906	15.819
10	Capital	171	14.671	14.694	14.694	35.000
11	Net financial return (%) (9/10)	0	56	41	74	45

Graphically, the trend of the return is as follows:

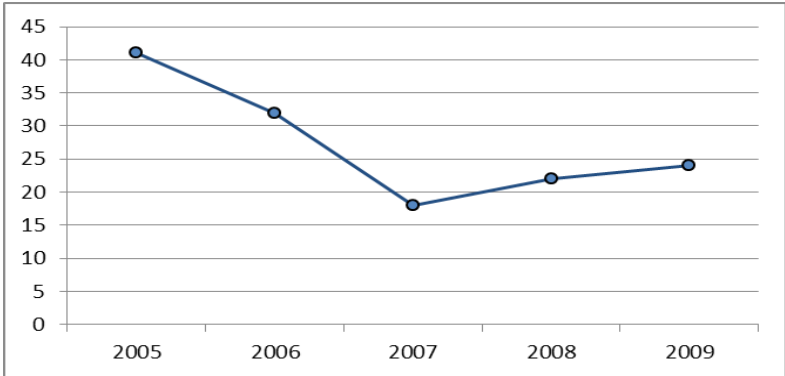


Figure 3. Economic return trend

Considerations on economic return: Although there was no uniform trend in the period under review (downward trend between 2005-2007 period, followed by an upward trend over the next two years) economic return was higher than both the average interest rate and average rate inflation. This performance allows increasing the shareholders' equity and economic substance of the company.

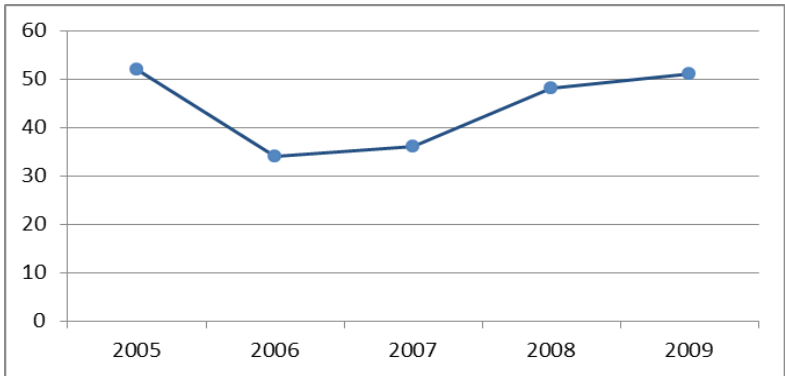


Figure 4. Financial return trend

Considerations concerning financial profitability: The registered values (in the range 34%-52%) indicate a higher shareholders' equity compensation of the average interest rate on money market. Except for 2005, when the company did not distribute dividends, the net financial return registered significant values (over 41%) which show a distribution dividends policy favourable to enterprise owners. Being a closed society, there is no question of pooling funds from capital market and, therefore, dividend policy does not take into consideration any other rates or the stock exchange.

Since the company is non-listed, to determine the sustainable growth of its value we will consider Zakon-BCG model:

Determining of sustainable growth by Zakon-BCG model

Table 2.

No.	Indicator	Year				
		2005	2006	2007	2008	2009
1	Net turnover	80.132	108.143	143.263	195.602	290.375
2	Turnover growth (%)	-	35	32	37	48
3	Net profit	8.081	8.865	11.355	25.978	52.294
4	Retained profit	8.081	581	1.400	8.071	20.476
5	Profit retention rate (%)	100	7	12	31	39
6	Shareholders' equity	15.681	26.383	31.738	53.881	101.857
7	Long-term debts	515	57	1.572	20.056	26.494
8	Long-term borrowing rate (%) (7/6)	3	0	5	37	26
9	Maximum sustainable growth (%) (4/6)	52	2	4	15	20

The data in Table 2 show that the analyzed company has registered since 2006 an increase in the volume of activity (turnover) higher than the maximum sustainable growth percentage. Management's strategic decisions will be substantiated in order to avoid further increasing of this gap. As a result of insufficient own resources, the company turned to long-term loans, borrowing rate increasing significantly in the last two years. Without looking bad in itself, especially given the conditions where financial leverage (the difference between economic profitability and interest rate) is positive, the debt must still be maintained at a reasonable level that does not create financial problems related to interest rates and repayment.

Conclusions

Profitability is an expression of the efficiency with which the entity's resources are used. Economic return is an indicator of efficiency in operation activities. Its calculation model allows the determination of economic performance independent from company's financial structure and state fiscal policy. Financial return measures the net payment on shareholders' equity and also constitutes a relevant indicator in assessing the company's position on the market. A financial return above the cost of capital generates an increased enterprise value. Analysis and interpretation of this value increase can be made on the basis of sustainable growth models, most of which are based on financial theory. The results of this analysis must be at the basis of decisions' grounding concerning the enterprise's future activity in order to maintain competitive advantages and to avoid repeating mistakes.

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