PROFITABILITY EVALUATION METHODS – A STRATEGY FOR ROMANIAN COMPANIES TO AVOID INSOLVENCY.

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Abstract

   Addressing economic strategies for determining the stability and financial position of the companies has become a very topical issue in recent years due to the financial crisis manifested worlwide in 2008 and which led to the start of insolvency proceedings for a considerable number of Romanian companies , which often resulted in bankruptcy for the firms concerned. Beside the international macroeconomic context, another issue that we consider essential and which led to the bankruptcy of Romanian companies is the lack of emphasis on financial analysis and diagnostic methods in determining a company's profitability and financial prospects of development in the short, medium and long term. Precisely for this reason a large number of Romanian companies fall prey to unsustainable financial commitments, often have low liquidity and the rate of equity return (ROE) is below the industry average thus denoting a lack of real competitive capabilities.
   This article seeks to highlight the positive contribution that can be implemented in the awareness of management regarding stability and the financial position of the company wchich is evaluated in order for the managers to make the necessary arrangements in time for the recovery, efficiency and sustainable implementation of a medium and long term business plan by analyzing the concepts of capitalization and upgrading but also but also by analyzing the evaluation method based on determining the beneficiary capacity; cash flow and discounted cash flow method.

Keywords: evaluation methods, profitability, financial analysis, insolvency.

JEL Classification: G32, G33

1. Introduction

   In recent years world economy has suffered many blows and has had to make serious adjustments not only at a conceptual level but at a functionality level as well. Sure these reverberations felt in the global economy also affected the emerging economies,as is the case of Romania, where national economies begin to develop a relatively fragile symbiosis with european economies, respectively with the united european market, all this in the context of world wide globalisation. The effects of the economic contraction experienced amid international economic and financial events have led to a strong decrease in consumption, often even an excessive consumer providence, which of course were felt directly in business and financial relations, both between businesses and consumers but also between private entities and financial institutions. Consumption contracted and the reluctance of banks to no longer give funding to small and medium enterprises, in addition to a rigid fiscal policy, have pushed many companies into insolvency and, most often, ultimately bankruptcy.

   In the specialty literature, evaluation methods have been often presented as not only procedures for determining the value of an asset or the value of an entity-as a whole- at one time but, along with financial analysis, as a tool that can be effective in evaluating the financial condition and financial position of a company at a given moment. By using profitability evaluation methods, we believe that romanian companies can cope more easily with the variations within the romanian economic environment, may adopt timely effective strategies for economic recovery (where it is already the case), insure efficiency and stabilization.

   Profitability assessment methods are commonly used in enterprises assessment, *based on profit calculation, the discount rate or capitalization*, through the eyes of a dynamic approach based on the time factor. Since the profitability assessment methods, also called *financial evaluation methods*, operate in the dynamic field of evaluation the necessity to clarify two basic concepts occurs: *upgrading and capitalization*.

2. Defining the upgrading and capitalization techniques

   Upgrading is the process of calculating the present value of revenues that will be obtained in the future. It is the reverse process of revenues composition, answering the question "what today's money worth *(Sn)* which I will receive in *n* years, taking into account that if I had it today, I could capitalize it with a return *r*? "
   Present value *(PV)* of the sum *Sn* is determined as follows:

$$PV = \frac{S_n}{(1+r)^n} \qquad\qquad (1)$$

Basically, this value reflects the lost opportunity by delaying the possession of the amount.
The discount rate *r* is equated with the opportunity cost of capital held.

Capitalization is the technique of transforming a single stream in capital, unlike upgrading, which summs up annual flows for a set period.
The capitalization formula is expressed as follows:

$$C_{vr} = \frac{F}{C} \qquad\qquad (2)$$

where:
Cvr = Capital value return;
F = Flow qualification;
C = Capitalization rate.
The mathematical relation between the discount rate and the capitalization rate is:

$$i = c - g \qquad\qquad (3)$$

in which:
i = discount rate;
c = capitalization rate;
g = annual growth rate.

3. The evaluation method based on determining the beneficiary capacity

Beneficiary capacity is defined as net revenues that can be generated by the enterprise, for capital providers, calculating the net flow to be capitalized or upgraded, preferring that the financing structure be taken into account in determining the discount rate.
The formula for calculating the beneficiary capacity (*BC*):

$$BC = (PB - Fe).(1-T) \qquad\qquad (4)$$

in which:
PB = expected taxable income;
Fe = financial expenses for medium and long term loans;
T = corporate tax rate.
Enterprise value estimated based on beneficiary capacity can be determined using the two techniques presented above:
→ annual upgrading when changes are anticipated regarding the beneficiary capacity in the forecast period;
→ capitalization when the beneficiary capacity is expected to remain constant or increase at a constant annual rate.
Income capitalization method
Consists in applying to the evaluated company's beneficiary capacity (BC), a capitalistic multiplier *y* namely:

$$V = y \; x \; BC \qquad\qquad (5)$$

Depending on the significance of the coefficient multiplier *y* result the following situations:

a) $y = 1/i \; when \; V = \frac{BC}{i}$ (6) which means that the *value of the company is directly proportional to its ability to emit profit* and inversely proportional to the neutral rate of investment (i) of available funds in the financial market;

b) *y* - represents a number of units / year due to updating a series of constant benefits (discount rate *t*) up to year *n* and is calculated by the formula:

$$(7)$$

$$a_n = \frac{1 - \dfrac{1}{(1+t)^n}}{t}$$

In this case, the company evaluation formula becomes:

$$V = a_n \; x \; BC \qquad\qquad (8)$$

T discount rate consists of the basic rate (neutral) plus the risk premium. It is noted that in case "*n*" tends to infinity, the evaluation formula becomes:

(9)

$$V = \frac{BC}{t}$$

c)　　　*y* = PER, is when, for determining the multiplier coefficient the stock coefficient PER (Price Earnings Ratio) intervenes, the company evaluation formula becoming:

$$V = PER \; x \; BC \qquad\qquad (10)$$

PER is determined as the ratio between the stock's exchange rate and its dividend and signifies the period in which the investment made by purchasing shares is recovered, based on the dividends received.

4. Cash flow method

The return value of a company is also calculated considering the cash flow which forms the company's self financing capacity (SFC), or the cash flow margin (CFM) to which a multiplier is applied which can take a default value or a value by reference to other businesses:

$$V = K \; x \; SFC \quad or \qquad\qquad V = K \; x \; CFM \qquad\qquad (11)$$

4.1. Discounted cash flows method

As shown in previous presentations, liquidities mean cash flow that an asset or business emit. In determining its size one starts from the beneficiary capacity expressed by the net profit to which are added all other money availabilities created by the company through amortization and provisions, minus the financing needs of current activities. (maintaining the company's curent investment potential and the variation in regulatory working capital)

Noting the variation with „Δ",we always have the algebraic sum:

$$\Delta \, CF = \Delta \, OCF + \Delta \, ICF + \Delta \, FCF \qquad\qquad (12)$$

where:

OCF　　= Operating cash flow =
　　　　= Revenues - Expenses (excluding amortization, provisions, including profit) - Δ NCF;
Δ NCF = Variation of the necessary working capital =
　　　　= Δ inventories + Δ receivables - Δ current liabilities;
ICF　　= Investments cash flow;
FCF　　= Financing cash flow.

The main evaluation methods using the discounted cash flows technique are:
a) the updating technique:

(13)

$$V = \sum_{k=1}^{n} \frac{CF_k}{(1+i)^k} + R_v x \frac{1}{(1+i)^k}$$

b) the capitalization technique:　　　　　　　　　　　　　　　　　　　*(14)*

$$V = \frac{CF}{c - g}$$

in which:
CFK = cash flow in year *k;*
i = discount rate;
k = forecasted year;
c = the capitalization rate;

g = annual growth rate;
Rv = residual value.

Regardless of the formula used, the stages of methods based on cash flow are:
⇒ *estimating annual cash flows for each year of the forecast following the formula:*
CF = Net income + Amortization - Investment – Working capital growth

⇒ establishing the forecasting period, between 2-12 years depending on: the life cycle of products, availability of information, the average remaining life of the facilities, the estimated time of return.
⇒ estimating the discount rate, according to the rule: if the forecasts are expressed in the current currency rate the actualisation is implemented using the inflationary rate and if they are expressed in a constant currency the actualisation is done using the non-inflationary rate; the ralation between the two rates is:

in = (ii - f) / (1 + f)
where:
in = non-inflationary rate;
ii = inflationary rate;
f = inflation rate.

⇒ Calculation of the efficiency value:
The formula used for calculating the value of efficiency using the method of updating future liquidity flows is as follows:

(15)

$$R_v = \sum_{k=1}^{n} \frac{CF_k}{(1+i)^k}$$

where:
CFK = net flow of cash in the year *k*;
i = discount rate;
Rv = residual value.

There are required some clarifications *regarding the calculation of the residual value:*
a) if the company's shares are listed, the residual value is given by the resale price (usually considered equal to the purchase price);
b) if the prediction was made indefinitely (n=∞), the residual value is 0;
c) if the prediction was made for a limited period, the residual value can be:
✓ value of the net flows resulting from the continued operation of the business, so:

(16)

$$R_v = \frac{Np}{i_1}$$

where:
Np = net profit in year *n*;
i1 = the capitalization rate = discount rate (i) + additional risk.
✓equity value at the end of the forecasting (in the year *n*), according to:

(17)

$$R_v = BNA_0 + \sum_{k=1}^{n} \left(P_{inv} + A_{fisc} - Inv_{ment} \right)$$

where:
BNA_0 = Basic net assets in the year„o" (the evaluation date);
P_{inv} = Prifit invested in each year;
A_{fisc} = Fiscal amortization in each year;
Inv_{ment} = investments for maintaining the company's capacity.

5. Conclusions

Profitability evaluation methods have become a necessity for the Romanian economic environment still fragile and dependent on Western economies and European, due to instability and uncertainty still very present in the world economy. Using early and consistent profitability assessment methods Romanian companies can cope more easily with the dynamics of the European economic environment on the one hand, and on the other hand may adopt sustainable, effective policies and strategies to progress in the medium and long term.

The Romanian volatile business environment presents a challenge for Romanian companies, they often having to face a lack of predictability combined with a relatively low consumer consumption, aspects which make their presence felt in the financial result of any economic agent, but by implementing a diagnostic analysis system and evaluation methods, based on the financial statements making these companies efficient becomes possible thus avoiding debt accumulation, increasing rate of receivables, the start of insolvency proceedings and ultimately avoiding bankruptcy.

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