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## VALUE-BASED MANAGEMENT AND BUSINESS ANALYSIS – OPPORTUNITIES AND TASKS

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**Abstract:** The essence of value-based management (VBM) as a modern concept of business management has been clarified. Attention is focused on three main groups of factors that influence the value of the company - cash flows, cost of capital and capital structure. The main tasks of business analysis have been identified as an important tool of modern management for each of these groups. Specific approaches, models and indicators for analysis are proposed, on the basis of which the impact of these factors on the value of the enterprise can be assessed. The purpose is that the results of the analysis serve to make informed management decisions aimed at increasing value. Special attention is paid to the analysis and management of cash flows. In order to increase the value of the enterprise continuously, the management efforts must be directed to seeking opportunities for increasing sales, business efficiency, operating profit and ultimately increasing cash flows. All this is related to making various management, investment and business decisions and taking appropriate actions. The model of discounted future cash flows for business valuation is presented, which describes the relationship between cash flows and the value of the company. Models for determining cash flows and operating profit are also presented. Operating profit is seen as a function of two primary factors - sales revenue and sales profitability (operating profit margin). This model is extremely valuable for business management because it draws management's attention to seeking opportunities to increase sales on the one hand and increase business efficiency on the other. Important management decisions and actions to increase sales and business efficiency are discussed. The tasks of business analysis with regard to the cost of capital are mainly related to the choice of an appropriate model for determining the cost of equity, the assessment of the risks to the company - the level of financial and business risk, which are reflected in the beta used, the need for additional increase in the cost of equity due to the small size of the enterprise or other factors, etc. Damodaran models (CAPM - modifications) suitable for determining the cost of equity for firms in countries with underdeveloped capital markets are discussed. The tasks of business analysis with regard to the capital structure and the degree of financial risk of the enterprise are clarified. Guidelines and recommendations for optimizing the capital structure are given. The debt to equity ratio is optimal, when maximizing indicators ROE (Return on Equity) and EPS (Earnings per share), but at the same time three conditions, related to the profitability of the business and the degree of financial risk are met.

**Keywords:** Business Analysis, Value Based Management, Value Management, Cash Flows, Cost of Capital, Capital Structure

### 1. INTRODUCTION AND OBJECTIVE

Over the last 30 years, the business has been gradually realizing and adopting a new and progressive management concept - Value Based Management (VBM). Today, investors' interest is directed not only at achieving quick profits but above all at increasing the value and future prospects of the company. A company is considered successful only if it increases its value. This principle is universal and does not apply only to large publicly traded companies whose shares are traded on the stock markets. At present, some sectors have enormous potential for development and, naturally, investments are directed at them. A typical example is the IT sector, in which the value of some companies has increased tenfold in a short time. For example, Facebook just three years after its initial public offering in 2012 has reached a market capitalization of over \$ 250 billion, currently at \$ 550 billion. The two companies with the largest market cap in the world (Apple and Microsoft) are also currently in the IT field. Some other areas also have great potential for development and attract the attention of investors. These include communications, biotechnology, renewable electricity generation, electric vehicle manufacturing, e-commerce, medical equipment manufacturing and many more. The financial sector has also witnessed strong growth over the last ten years. The top 10 companies with the largest market cap in the world also include two financial sector companies. Even in Bulgaria there are already investment funds investing in passing technology companies as well as in companies from other attractive sectors.

Currently, the value of the enterprise is perceived as an important economic and financial indicator that is of interest to a wide range of individuals - owners, potential investors, management teams, financial analysts, investment intermediaries, lenders, business partners, competitors, etc. Prior to the advent of the VBM concept, the valuation of an enterprise was usually carried out only on specific occasions, such as comparative valuations of companies in investing in shares, changes in ownership - mergers, purchases and sales of shares or units, division of existing

business between partners, assessment of contributions in the equity capital and others. Today, the value of companies is very often valued without a specific reason, becoming a permanent indicator. In this way, business owners (share and unit-holders) measure the return on their investment, potential investors understand what it is worth to pay to acquire an entity or part of it, and management teams evaluate the result of their work.

This research aims to clarify the essence of value-based management (VBM) as a modern concept of business management and to identify the main tasks of business analysis as an important tool of modern business management with respect to each group of factors influencing the value of the company.

## 2. THE ESSENCE OF VALUE-BASED MANAGEMENT (VBM)

Value-based management is a concept of business management whose main purpose is to maximize the value of the company and respectively. the welfare of its shareholders (owners). According to this concept, the company should be seen as a mechanism for creating value and prosperity for the owners. The value of the company depends mainly on its potential to generate income in the future, ie. discounted future cash flows. Value is created only when the rate of return on invested capital (ROIC) exceeds the weighted average cost of capital (WACC). Financial liabilities reduce the value of the company. Managers' attention should be focused on the key factors that can increase the value of the company (Key Value Drivers). These factors must be sought in the context of the three fundamental variables mentioned - cash flows, cost of capital and capital structure. The overall activity of the enterprise - operational, investment, financial, innovative, etc. it must be considered and managed through the prism of the main strategic goal - maximizing value. The tasks of business analysis in relation to value-based management can be divided into three main groups, depending on the three fundamental variables on which the value of the company depends - cash flows, cost of capital and capital structure.

## 3. ANALYZING AND MANAGING CASH FLOWS

In order to continually increase the value of company, management efforts must be directed towards seeking opportunities to increase sales, business efficiency, operating profit, and ultimately increase cash flow. All this is related to making various management, investment and business decisions and taking appropriate actions. The relationship between enterprise value and cash flow can be described using the discounted cash flow model (DCF-Valuation Model):

$$V_E = \sum_{i=1}^n \frac{FCFI_i}{(1+WACC)^i} + \frac{FCFI_n \cdot (1+g)}{(1+WACC)^n} + NOA - IBD$$

where:

$V_E$  - market value of equity;

$FCFI_i$  - free cash flow to investors from the activity for the  $i$ -th year of the forecast period;

$n$  - number of years in the forecast period;

$WACC$  - weighted average cost of capital of an enterprise (discount rate);

$FCFI_n$  - cash flow for the last year of the forecast period;

$g$  - expected annual average growth rate of free cash flow in the post-forecast period

$NOA$  – market value of non-operating assets;

$IBD$  - Interest-bearing Debt

The factors involved in the model are in fact the main direct factors on which the value of the company depends. Immediately it seems that the value of the enterprise will depend most on the amount of cash flows that can be determined on the basis of the following model:

$$FCFI = EBIT \cdot (1-T) + DA - \Delta OFA - \Delta W$$

where:

$EBIT$  - earnings before interest and taxes (gross operating profit from operations);

$DA$  - depreciation and amortization for the year;

$T$  - corporate tax rate;

$\Delta OFA$  - investments in operating fixed assets (OFA) during the year;

$\Delta W$  - working capital investments during the year (change in working capital during the year compared to the previous year)

The cash flow model (FCFI) shows that operating profit (EBIT) plays a major role in the size of cash flows. It can be presented as a function of two direct factors - Sales Revenue (SR) and Return on Sales (ROS):

$$EBIT = SR \times ROS$$

This way of presenting operating profit is extremely useful for managing a business. Its idea is simple: operating profit is a function of two main factors - sales revenue (SR) and the return on sales (ROS). This means that profits can be increased in two ways - by increasing sales and/or by increasing business efficiency, ie. changing the cost to sales ratio in favor of sales revenue. The model shows that managers are turning their attention to looking for opportunities to increase sales on the one hand and increase business efficiency on the other.

The operating profit model (EBIT) shows that management decisions to maximize profit and cash flow can be divided into two types:

- Solutions aimed at increasing sales;
- Solutions aimed at increasing business efficiency

The first type of solution can be related both to product and marketing policy, as well as to the enterprise's innovation and investment policy and strategy. For example, appropriate advertising, registration and promotion of a brand, expansion of the distribution network, development of new products or services, expansion of production capacity, introduction of credit sales (for some goods), exploration of export opportunities and agreements with foreign sales representatives, improving product quality, which would have a positive effect on long-term sales volume, etc.

The following actions can be taken to increase business efficiency and optimize the cost to sales ratio, respectively:

- Search for reserves to reduce the cost of products or services. Sometimes unexpected opportunities arise, such as supplies of materials at lower prices, improvement of the organization of the production process, improvement of technologies, reduction of losses from defective products, reduction of material consumption and energy intensity of production, etc. Some of these actions involve additional investments in new technologies and equipment that require additional funding. In most cases, the effect of such investments is well worth it and they return quickly.
- Closing loss-making or low-income industries and activities. Performance analysis by product type and activity is extremely useful in this regard. Individual products can be ranked by different metrics, e.g. sales revenue, operating profit, sales profitability, etc. Some of the products may prove to be highly effective, combining high revenue, operating profit and high operating margin (sales profitability). Other products may have high sales, but low profitability and low profits. Some of the products may be a loser. The most common reason for this is too high cost. A major problem with some manufacturing companies is the inaccurate calculation of the full cost (including administrative and sales costs) or lack thereof;
- Assessment of opportunities to increase productivity. One of the main problems of the business is the low productivity. This means a high cost of production and a low competitiveness of the manufacturer as it cannot compete with other producers in terms of price. It is known that the leading manufacturers in the world can maintain high quality at the lowest possible price. It is the combination of high quality and low price that increases sales and market share of the manufacturer. In some industries and activities, labor costs (wages and social security contributions) have a high share in the cost of production (services). Increasing productivity means with fewer workers producing more output. Thus, the enterprise can realize significant savings from salaries and social security contributions, which will directly increase the operating profit and business efficiency. In addition, increasing productivity leads to a decrease in the cost of production, which also allows for a reduction in sales prices. If the products are highly elastic in demand, this would increase sales. The main factors affecting labor productivity are the technologies used, the state of the machines and equipment, the degree of automation of production, working conditions, the organization of the production process, the motivation of the staff, the qualification and experience of the workers, the quality of the raw materials and materials used, and others. One of the most important factors for increasing productivity is the investment in new production and technological equipment and in the automation of production processes. These investments result in higher energy efficiency, lower production costs, lower operating costs, and a reduction in the number of workers. Experience has shown that such investments pay off quickly and in most cases the positive effect is well worth the effort.

#### 4. BUSINESS ANALYSIS TASKS CONCERNING THE COST OF CAPITAL

The cost of capital is an indicator of fundamental importance in modern financial and business analysis. It is used in the analysis of business profitability, value creation, capital structure optimization, determination of business value (fair value of shares and units), evaluation of financial efficiency of investments, etc. Definition of the Minimum Required Rate of Return (RRR) is a necessary condition for the application of the so-called VBM models (value-based models). This is the return that can be obtained from a similar investment with the same degree of risk. In most cases, RRR is identified with the enterprise's weighted average cost of capital (WACC).

Determining the cost of debt is simple, since the principle is that it depends on the interest rates on the debt. However, the same cannot be said for the cost of equity ( $R_E$ ), which is considered to be the minimum required rate of return from owners corresponding to the risk assumed. Correct pricing of the cost of equity is a real challenge for business analysts and appraisers. The reason is the existence of different approaches, methods and variants containing a large number of financial and other indicators for the capital market, the sector and the enterprise itself, which predetermines a large dose of subjectivity by analysts and appraisers and respectively different cost of equity even for the same enterprise.

The tasks of business analysis with regard to the cost of capital are mainly related to the choice of an appropriate model for determining the price of equity, the assessment of the risks to the company - the level of financial and business risk, which are reflected in the beta used, the need for additional increase in the cost of equity due to the small size of the enterprise or other factors, etc.

The most commonly used method for determining the cost of equity is based on the Capital Asset Pricing Model (CAPM). The following CAPM modifications, known as "Damodaran models" for countries with underdeveloped capital markets are used<sup>1</sup>:

$$1) R_E = R_f + \beta_L \cdot (R_{MRP}) + R_{CRP}$$

$$2) R_E = R_f + \beta_L \cdot (R_{MRP} + R_{CRP})$$

$$3) R_E = R_f + \beta_L \cdot R_{MRP} + \lambda \cdot R_{CRP}$$

$R_f$  - risk-free rate of return for a developed capital market;

$\beta_L$  – levered beta of the enterprise;

$R_{MRP}$  - average market risk premium for the developed capital market;

$R_{CRP}$  - country risk premium according to the country's credit rating;

$\lambda$  - exposure to country risk coefficient

Each of these three models differently incorporates country risk into the cost of equity, depending on the extent to which the particular entity is exposed to country risk. The cost of equity ( $R_E$ ) is highest for the second model and lowest for the third. The first model assumes that all firms in the country are equally exposed to country risk. It gives an average rating of  $R_E$  compared to the other two models, making it the most commonly used.

#### 5. BUSINESS ANALYSIS TASKS ON CAPITAL STRUCTURE AND FINANCIAL RISK

In this aspect, business analysis has two main tasks: first, regular checks of the capital structure for optimality, ie. regular determination of the optimal capital structure and signaling if there is a need of adjustments in one of two directions - increase or decrease of the debt to equity ratio and second - regular monitoring of the level of financial risk and respectively the financial sustainability of the enterprise<sup>2</sup> and making management recommendations where necessary actions aimed at reducing this risk and increasing financial sustainability.

According to modern financial theory, the optimal capital structure is that minimizes the weighted average cost of capital (WACC) and maximizes the value of the company. However, this definition ignores the degree of financial risk to the entity, which varies with the different debt-to-equity ratio. Analysts need to apply restrictive conditions to the degree of financial risk in optimizing capital structure. For example, such a condition may be a restriction on increasing debt at interest coverage ratio (ICR) values below a set minimum, for example  $ICR_{min} = 3$ . In other words, EBIT should cover interest expense (i) more than three times. Optimizing the financial (capital) structure of

<sup>1</sup> Damodaran A, Measuring Company Exposure to Country Risk: Theory and Practice, 2003, [http://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/valquestions/CountryRisk.htm](http://pages.stern.nyu.edu/~adamodar/New_Home_Page/valquestions/CountryRisk.htm)

<sup>2</sup> Тодоров Л., Съвременни модели за оценка на бизнеса, Нова звезда, 2014, София, стр. 198-221 (Todorov L., Modern methods of business valuation, Nova Zvezda, 2014, Sofia, pg. 198-221)

an enterprise, ie the debt to equity ratio depends on a number of factors. More important factors are the cost of individual capital sources, the profitability of the business and the degree of business risk. The influencing factors are constantly changing, which means that the optimum ratio may also be different at any moment. From what has been said here, it is clear that in order to determine the optimal capital structure of an enterprise at a given moment, it is not enough to simply find a ratio that minimizes WACC. The goal of management is to maximize the leverage effect, maximize ROE (Return on equity) and EPS (Earnings per share) indicators while maintaining financial risk at a reasonable level. An increase in the relative share of debt in all capital under equal other conditions leads to an increase in profitability for owners, ie up to ROE and EPS and provides higher dividend per share options with the same Payout ratio. This effect is known as the Financial Leverage Effect (FLE). The problem is that the increase in debt cannot be infinite, since above a certain level of debt-to-equity ratio, there is a significant increase in the financial risk for the company, which reflects in a higher beta and respectively higher cost of equity. In other words, the increase in financial risk also increases the minimum required return by the shareholders (partners). In addition, when debt to equity ratio is high, then the ICR indicator and resp. the credit rating of the enterprise go down. Access to credit markets becomes more difficult and the price of debt will be higher.

The optimal debt-to-equity ratio (DER) can be determined by analyzing the behavior of key business profitability indicators (ROA, ROE, EPS, ROIC), cost of capital ( $R_E$ ,  $R_D$ , WACC) and financial risk (ICR) when there is a change in the debt to equity ratio. The DER ratio is optimal, when maximizing ROE and EPS, but at the same time the following two conditions are met:

- 1) ( $ROIC > R_D$ )
- 2) ( $ICR > 3$ )

The first condition is related to the leverage effect. When  $ROIC < R_D$ , the company exerts a negative leverage effect, and therefore, debt in the structure is extremely disadvantageous. The second condition is related to the degree of financial risk of the company. The ICR - Interest Coverage Ratio is at the heart of individual company credit rating, as well as one of the methods for determining the cost of debt - Synthetic Rating Approach<sup>3</sup>. Fulfillment of this condition guarantees that the enterprise will have no problem servicing its debts. In order to maintain a lower financial risk, the ICR indicator may be higher than 3.

In optimizing the capital structure, it is desirable that managers also comply with the other two additional conditions, which are the criteria for creating value in the enterprise:

- ( $ROE > R_E$ ) Return on equity (ROE) is higher than cost of equity ( $R_E$ );
- ( $ROIC > WACC$ ) Return on invested capital (ROIC) is higher than the weighted average cost of capital (WACC)<sup>4</sup>.

Many businesses do not have a high enough profitability for the business and do not meet the criteria for value creation. Of course, this does not mean that they should not be financed through debt.

## CONCLUSION

As a summary of the study, it is concluded that business analysis, as a tool of company's management, plays a significant role in managing the value of the company. On the one hand, through various methods and models, the analysis is able to monitor both the value creation process in the enterprise and to determine the fair value of equity and, respectively, the fair price per share at a given time. On the other hand, through specific indicators, methods and models, it is able to identify the negative tendencies and problem areas in the business, to draw the management's attention to the search for reserves and opportunities for increasing the operating profit and cash flows, to signal in the presence of imbalances and problems regarding the capital structure and financial sustainability of the company. It has a rich arsenal of scientific methods and knowledge to study economic processes in the enterprise and business environment, through which complex issues facing management are resolved. With the help of business analysis results, managers justify their decisions and actions. The issue of value management is related to the overall activity of the company - operational, financial and investment, and in the end, the results of business analysis in this sense provoke and substantiate almost all important management decisions, incl. strategic decisions.

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