

## THE IMPORTANCE OF EVALUATION OF RISK MANAGEMENT IN BUSINESS

**SLOBODAN POPOVIĆ**

ASSISTANT PROFESSOR, INTERNAL AUDITOR, JKP GRADSKO ZELENILU, SUTJESKA 2,  
2100 NOVI SAD, SERBIA

e-mail: slobodan.popovic49@gmail.com

**JELENA TOŠKOVIĆ**

PHD STUDENT OF ECONOMIC SCIENCES, ERP SPECIALIST,  
AD MLEKARA ŠABAC, KRSMANOVAČA BB, 15000 ŠABAC, SERBIA

e-mail: toskovicjelena@yahoo.com

**RAJKO MACURA**

ASSOCIATE PROFESSOR, BANJA LUKA COLLEGE, MILOŠA OBILIĆA 30,  
78000 BANJA LUKA, BOSNA I HERCEGOVINA

e-mail: rajko.macura@nvo-syjetionik.org

**JUGOSLAV ANIČIĆ**

ASSOCIATE PROFESSOR, FACULTY OF ENTERPRENEURIAL BUSSINESS, UNIVERZITY  
UNION-NIKOLA TESLA 11000, BELGRADE, SERBIA,

e-mail: ajugoslav@yahoo.com

**DUŠAN ANIČIĆ**

MSTER, DSN Consulting, 11000, Beograd, SERBIA

e-mail: anicic.dusan@yahoo.com

### Abstract

Economies with dominant private ownership and developed market institutions build their prosperity on a firm's goal function in a form of maximization owner's wealth. Financial situation of business organization is most important indicate that shows level of financial health. The creation of value for the owners imply two matters simultaneously competitive advantage and the evaluation of economic effects.

Among economic activities, establishes the different types of addiction. In this work authors draw attention to two categories: the functional and stochastic. Case studies will be cash flows of investment and the contribution of the stochastic component of the risk of enterprise value. Methodological dominated analytical and descriptive methods.

Management in the process of evaluation of investment seen what happens behind the projections of cash flows and estimates of available chances for possible modifications. The purpose of the discussion in this section refers to the warning that the application of the rules of net present values does not mean the completion of the management process at the moment of the decision on the selection of investments. In this study, we analyze the influence of stochastic risk in the creation of enterprise value, especially if the risk is managed improperly.

In this connection, the starting hypothesis is that adequately compensate for risk has a positive effect on new investments and reduce the antagonism of shareholders and other creditors of the company.

**Keywords:** management, value, money means, risc, financial situation.

**Classification JEL :** G11, G32

## 1. Introduction

Observing the risk of doing business in today's economy is essential. Because management this topic pays great attention. Therefore, the objective of these activities is essential reduce business risk by applying various methods which will be used by the management. In this paper, tents draw attention to a certain pattern of behavior, which can improve operations in middle-income countries such as the Republic of Serbia.

Reducing the overall risk increases cash flows, and thus the value of the company, which requires an integrated approach to risk management in the company [1]. Therefore it is necessary to determine the impact and effects of compensating for the risks on the value of the company.

Investment risk is defined as the variability of its cash flows in relation to the expected value. The greater the variability, these are riskier investments and vice versa.

In addition to treating the general risk issues in the ordinary course of business company, you need to treat issues such as risk compensation. This question comes increasingly to the fore in times of economic crisis, which has the characteristics of the global crisis on all countries.

Accordingly compensation risk is a useful thing when it comes to business taxation. Because of the proportional tax structure more company loses when company profits before tax dropped by a certain amount than they get when they grow by the same amount.

Compensation risk is reduced variability of the profit and neutralizing the effects of taxation. Compensates risk generally decreases the probability of financial failure and liquidation. Reducing the cost of liquidity has resulted in an increase in borrowing capacity. Due to the increase of financial deleveraging company can realize the tax benefits of a larger raids debt/equity.

## 2. Risk measurement and expression

Stochastic investment risk is usually expressed by the expected value of the cash flow and dispersion measurements such as standard deviation ( $\sigma$ ), variance ( $\sigma^2$ ) and coefficient of variation (SV). This way of measuring risk investment involves a problem, which is reflected in the time dimension, because with the passage of time can be changed not only the expected value of cash flow but also the probability distribution. A possible solution to this problem is the approach using probability tree.

This model allows that instead of a net present value of the collected information on the entire probability distribution of the NPV (net present value) in the reporting interval [2]. In doing so, discounting cash flows is done at a rate that does not contain risk, and in order to study the risks. The rate that does not include the risk is only used for the isolation of the time value of money. For that positive expected value of the net present value can not be used as a clear signal for the admission of investment, because it does not represent the equivalent of the created value of the enterprise.

Sensitivity analysis begins with the basic situation of the case. This situation has a projected or expected values of variables that are relevant for calculating the NPV of investment. Pragmatically, it may be sales per unit, selling price, fixed and variable costs etc. The expected values of these variables are the values of the base case, and calculated the net present value is called the NPV of the base case.

The essence of the sensitivity analysis is that each variable varies by a certain percentage above and below its expected value, other assumptions unchanged, and followed by a new calculation of NPV. The analysis also contains limitations, which are reflected in the fact that the project risk depends on two factors: the sensitivity of the NPV of the project to changes in key variables and a range of likely values of these variables that are reflected in their probability distributions. Scenario analysis takes into consideration both these factors [3].

Projections of key variables to calculate the NPV of investment is made in three versions: "poor", "good" and "most likely". This method has two serious disadvantages, because it considers only a few discrete values for NPV although virtually infinite number of options and assumes that the variables are in perfect positive correlation. Therefore, scenario analysis to overestimate the extremes - the worst case for the NPV is too low, and the best case is too high.

The most popular analytical technique for checking the layout diversified group of business units constructed a matrix business portfolio (business portfolio matrix) as a two-dimensional graphical portrait of the comparative position of different jobs. The first matrix business portfolio, introduced by the Boston Consulting Group (BCG) [4], is structured as a four fields matrix with axes whose characteristics or parameters: the rate of market growth (industry) and relative market share. When this matrix is basically a one-dimensional approach in which each axis describes one parameter. GE matrix as a 9-field was developed by General Electric with the help of McKinsey & Company.

When GE-matrix it is a multidimensional approach, because instead of one parameter, each axis describe sets of parameters, which in this case describes the complex characteristics: competitive strength and attractiveness of the market.

Graphic portrait of comparative position may be imparted by four fields matrix (Four-cell matrix, Matrix Vie-Felder) or nine fields matrix (Nine-cell matrix, Nun Matrix-Felder) that develop dividing the total scale axis into two or three equal parts whole axis on which are written, quantitatively or qualitatively expressed characteristics.

Analytically determined value on the ordinate and abscissa coordinates to create the appearance of (product, strategic business units) are allocated to one of four or nine fields. In considering approaches to the analysis of the strategic position of the company noted the existence of univariate and multivariate procedures.

The first is associated with the BCG matrix and the other with GE-matrix business portfolio. How do you assess that the individual parameters of one-dimensional approach to the elements of aggregate parameters in a multi-dimensional approach is sound start a presentation with the one-dimensional approach. The process can be demonstrated by the following example.

The business unit operates in a niche market with an average rate of market growth of 10% and has the following data on total sales and sales of the largest competitors and the data on the size and growth rates of sales for each product, as follows:

Table No. 1: **Balance product sales of strategic business units (SBUs)**

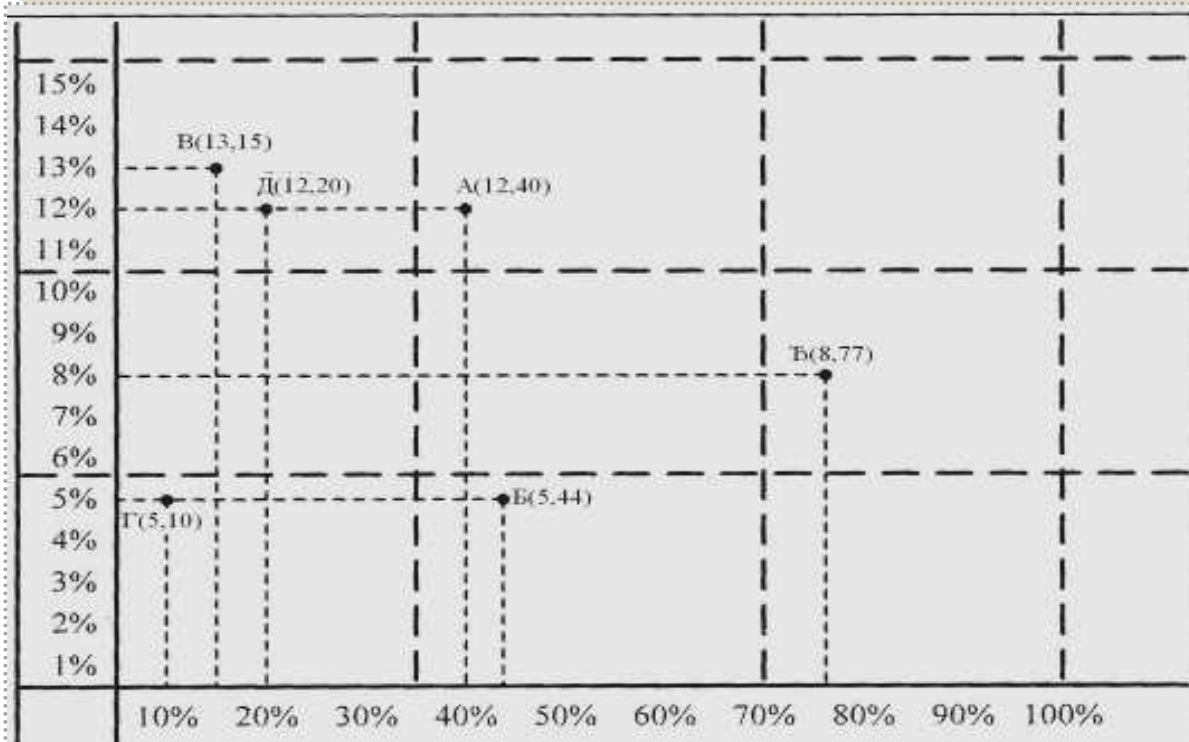
Product	The value of goods sold			The share of total sales (%)	Relative to the size of its main competitor	The growth rate of their own sales (%)
	SBU	Chief competitor	Total market			
1	2	3	4	5 (2:4)	6 (2:3)	7
A	800	1.000	2.000	40	0,80	12
B	2.000	2.000	4.500	44	1,00	5
V	400	800	2.700	15	0,50	13
G	500	900	5.000	10	0,56	5
D	800	2.000	4.000	20	0,40	12
Đ	6.000	1.500	7.800	77	4,00	8

Source: Production authors.

BCG matrix is constructed as graphs, which combines two simple parameter in this case are:  
 1. The rate of market growth, with estimated 15% increase in total sales in the overall market and individual growth rates for each product (column 7) analyzed SBU (strategic business unit) and the division of the ordinate it agrees, and  
 2. Market share as the ratio of sales of a particular product SPJ and total sales of all products of the same supplier (Column 5 = 2/4).

The third element relevant to the graphic display product portfolio represents the ratio of the size of sales SPJ and its main competitor, the corresponding coefficients can be found in column 6, and they determine the size of the circle indicates the individual product. The unit size is the size of a competitor and in the graph it is labeled the product "B". Although numerical data allow some insight graphic form of expression of the influence of both parameters is much more visual. Figure 1 shows that.

Figure 1: **The product portfolio of strategic business units**



Source: Production authors.

The construction of a portfolio of hits separates products into nine qualitatively different groups. If the stages of the life cycle of products moving in a clockwise direction if in the meantime they collapse, it is possible to consider their present position and with the appropriate support, their fate. The greatest competition is exposed to the product "F." with the same share as the main competitor and a common covering 77% of the market.

By the nature of the position of this product is the candidate for changing the position and direction of change depends on the life cycle of competitive products. Products "A", "C" and "D" are of interest at high rates of growth, but also by the low share, but weakness could be a scope. Competitors have taken leading positions can be seen from the size of the circle.

Basing estimates initial strategic position requires deepening the analysis not only for accurate estimates but also for establishing strategy and in particular for the later stages of evaluation of alternative strategies [5]. A multi-dimensional procedure is based on a combination of multiple size or measurement parameters that create any of the aggregates. Common multidimensional were relative competitive ability and attractiveness of the market. It may be noted that analyzes characteristics of one-dimensional portfolio only individual parameters in aggregated multi-dimensional characteristics. This enables the integration of assessment of the overall aggregate. Based on this analysis determines the position of the SBU "A" in portfolio companies.

Table No.2: Relative competitive ability SBU "A"

No.	Description of the parameter	Scale of evaluations								
		1.	2.	3.	4.	5.	6.	7.	8.	9.
1.	The relative market share									
2.	Financial strength									
3.	Technical know - how									
4.	Cost advantage									
5.	Quality of products									
6.	Potential innovations									
7.	Licensed relationship									
8.	Eligibility staff									

Qualification reviews	String	Median	High
-----------------------	--------	--------	------

Source: Production authors.

The second unit is the attractiveness of the market.

Table No. 3: The attractiveness of the market SBU "A"

No.	Description of the parameter	Scale of evaluations								
		1.	2.	3.	4.	5.	6.	7.	8.	9.
1.	The relative market share									
2.	Growth markets									
3.	Profitability									
4.	Power competition									
5.	The intensity of investment									
6.	Risk of substitution									
7.	Security impairment									
8.	Risks intervention									
Qualification reviews		String			Median			High		

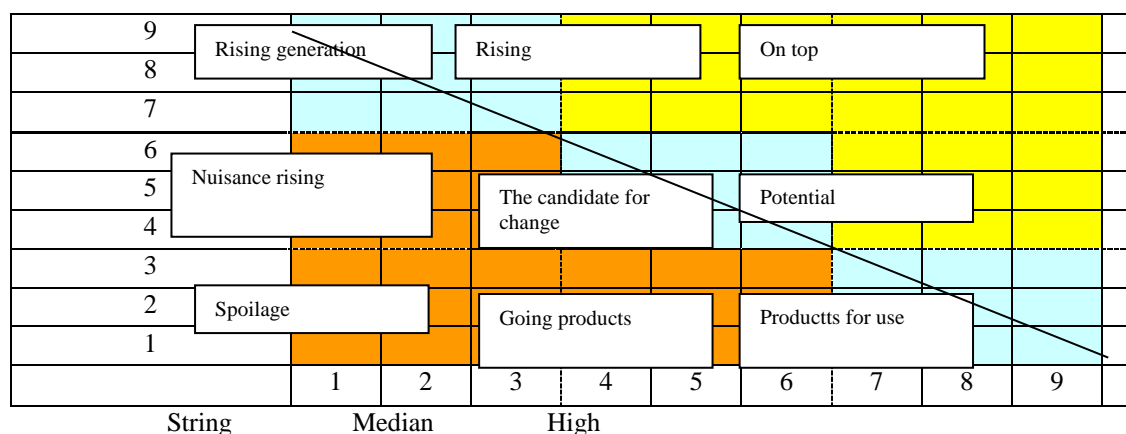
Source: Production authors.

Compressing systematized score for the individual parameters of aggregates shall be established by an aggregate assessment.

For example, for an aggregate relative competitive ability of the sum total score is 52, which divided by 8 provides an average score of 6.5 because of a total possible 72 points 52 makes 72%, and the aggregate market attractiveness sum total score is 44 points, which divided by 8 giving an average score of 5.5 because of a total possible score of 72 points was attributed 44 to 61%.

Based on these data it is possible the graphic image matrix business portfolio companies allocate SPJ "A" with the established coordinates (5.5 and 6.5), as follows:

Figure 2: Position SBU "A" in the business portfolio companies



Relative competitive strength

Source: Tintor, 2001.

Coordinates SBU "A" determined her place "Potential" which means that, like all SBUs whose strategic position is located above the diagonal belong to the group "Investment and growth". This means that their competitive ability contains a relevant force in combination with factors from the aggregate "The attractiveness of the market" creates an opportunity for the company. In contrast drawn imaginary SBU in the area below the diagonal belong to the group of SBU "Excluding the divestiture" that indicates the position of "no chance for success in the future" and, at the end of all

SBUs, which are like imaginary plotted in fields which runs diagonal belonging to the group "Selection" which requires strategy and measures that will be the focus of investment and expansion or divestment and abandonment.

### 3. Discussion of risk portfolio

Owners diversify their portfolios more complete than the company itself [6]. From this we can conclude that the project risk and enterprise are important for maximizing the profit of the owner. Several reasons speak to the contrary. First, no diversification owners (including owners of small enterprises) are more interested in business risk than market risk. Second, many investors do not exclude the risk of illiquidity, which depends on the risk of the company.

Thirdly, the stability of the company is important not only to shareholders but also other stakeholders such as managers, employees, customers, suppliers and the like. Because of the risk of insolvency, companies tend to attract and retain good managers and workers.

Customers and suppliers are refusing to cooperate with such companies. The problem is the additional debt that can be realized only at high interest rates. Finally, risky enterprises have difficulties in maintaining research - development programs, marketing programs and the like. All these factors tend to reduce the profitability of the venture company, and thus its value.

The integrated approach to the management of the overall risk company aims to justify the practice of risk compensation enterprises. While the overall risk does not necessarily affect the required returns of investors, large unsystematic risk can significantly reduce the value of the company. This is particularly true if the stochastic risk is managed improperly.

Optimal risk profile of the company is based on a compromise between the cost of downloading the entire (or partial) Enterprise Risk and costs of compensating risks. In doing so, the focus of analysis should be at risk of insolvency. For this purpose, companies are available two analytical tools: (1) model worst-case scenarios, and (2) model inadequacy of cash. Model worst case scenario is based on the identification of different types of risks and projection of cash flows for each category of risk, assuming what the worst can happen. Information about the conference of cash flows may be used to calculate the probability distribution end cash balances at the end of the recession.

The next step is to compare the balance between fixed obligations of the enterprise. With each increment of debt, can determine the probability of insolvency based on the probability distribution of the final balance of cash. Derivatives such type of securities have several important implications for practicing managers and shareholders. Given that the derivatives market has become "perfect and complete", managers are able to focus on core competencies and increase the yield, based on comparative advantages, rather than on events that are beyond their control and experience.

On the other hand, the risk can now be shared more easily and at lower institutional costs. This causes an increase in market risk appetite [7]. From the standpoint of maximizing the value of enterprise, the use of derivatives has become a popular but controversial practice. Shareholders as diversified investors are most interested in systematic risk does not disappear in diversified portfolios [8]. They are more concerned that the company compensate systematically, but stochastic risk. It is important that diversified investors as a class is a winner only if the systematic risk of transforming "outside the system". Management of the company is constantly searching for the way to better control of the company that it manages. One of the ways of improving management is to observe the activity of enterprises observe multidisciplinary [9], which is particularly important in the medium and large companies [10,11].

This means that when a company is compensated for risk, it was not done at the expense of company B, in which diversified shareholders also own shares. If the risk is not transferred outside the system, then the risk exposure of the average diversified invested remains the same. However, if the company is compensated for the risk transfer it closed corporation, or a foreign company in which investors have no shares, then the average diversified shareholder can be a win-win. However, the biggest benefit of compensating for the risk it is that a company can create and share to shareholders through increasing expected returns.

### 4. Conclusion

The study was fully confirmed the hypothesis that adequately compensate for risk has a positive effect when it comes to new investments when it comes to conflict of shareholders and other creditors of the company. The main reason for this is that establishing better control and risk management in the company. Shareholders thus gain more flexibility for changing business operations, without fundamental changes of the overall risk.

When it comes to rewarding management and employees there is a positive correlation between earnings with the value of the company. If the value of the company is higher and it operates well, then employees generally have higher earnings than if the company operates poorly. The principle of uncertainty wages compensates shareholders for the risk of doing business.

Compensates risk their own initiative shareholders is not a substitute for offsetting risk by management, since it has a legitimate demand for financial instruments such as derivatives, that can be used to control risk.

## 5. References

- [1] **Van Horne J, Wachowicz J.**, Fundamentals of financing management, Data status, Beograd, 2007;
- [2] **Vučičević, R.**, Teorija verovatnoće sa osnovama teorije masovnog odlučivanja, V.A. Beograd, 2003;
- [3] **Brigham, E., and Gapenski L.**, Financial Management, The Dryden Press, Harcourt Brace College Publishers, Orlando, 1994;
- [4] **Tintor J.**, Анализа пословања предузећа, Економски факултет, Осијек, 2001;
- [5] **Meigs, R. and Meigs W.**, Računovodstvo temelj poslovnog odlučivanja, Mate, Zagreb, 1999;
- [7] **O'Regan P.**, Financial Information Analysis, Univesity of Limerick, 2001;
- [8] **Beaver W. and Wolfson M.**, Risk Management, MC Graw–Hill, 1995;
- [9] **Popović S.**, Socio-ekonomski faktori ograničenja razvoja agrara, Monografija, Fimek, Novi Sad, 2014;
- [10] **Soltani B.**, Revizija, Međunarodni pristup, Mate, doo Zagreb, 2009;
- [11] **Titman S., Wei J., and Xie F.**, Capital investments and stock returns. Journal of Financial and Quantitative Analysis, 39, 677–700, 2004;