

THE ECONOMIC RISK IN TRADING COMPANIES' VALUATION

Mircea Muntean

“Vasile Alecsandri” University of Bacău, Romania
mircea.muntean@ub.ro

Iulia Andreea Bucur

“Vasile Alecsandri” University of Bacău, Romania
iuliaandreea.bucur@gmail.com

Andrei Muntean

Mediterranean Agronomic Institute of Chania, Greece
andreimuntean1987@gmail.com

Abstract

The negative influence of internal and external factors on the enterprise's operating activity may lead to the realization of losses and economic-financial imbalance of the enterprise. Such situation leads to the economic risk, which can be avoided by diagnosis analysis. The manifestation of the economic risk has repercussions in: obtaining profit from operating activities, the maximization of the enterprise's value and the increase of the market share. The operational risk can be detected by the method of forecast analysis “cost-volume-profit” or via coefficient of lever exploitation. This paper aims, on the basis of the information of a commerce company, to reveal the influence of risk in assessing the enterprise, as well as the possibilities to maximize its value and the increase in economic and financial performance in a competitive environment. The results of the research demonstrate the impact of the circulating expenditure structure on the enterprise's financial results, as well as on equity.

Keywords

valuation; economic risk; maximization; economic value

JEL Classification

G32; M41

Introduction

The economic risk, also called operational firms expresses the enterprises' capacity to adapt operatively and with the lowest consumption of financial resources to the change of the economic and social environment. The presence of the economic risk leads to the reduction of the result and, implicitly, of the enterprise patrimony, with an effect on the enterprise market value. The consequences of the economic risk are “reflected in the reduction of the operating activity result, as a result of increasing the cost of acquisition of the raw materials, goods and tariffs for the provision of services, the payment of wages to staff in no connection with the turnover and labor productivity, the unjustified increase of fixed costs etc” (Muntean, 2006).

For the enterprise, the economic risk has significance in the elaboration of forecasts regarding the future of the operating activity, the determination of cost-effectiveness and, implicitly, the increase of the patrimony value. An estimation of the economic risk in business practice is carried out by the method of forecast analysis “cost-volume-profit”. The application of this method constitutes an instrument of management very useful in business performance analysis by fixing of profitability, the enterprise vulnerability analysis at risk factors that surrounds it and sensitivity analysis useful in the decision making process” (Jianu, 2007). According to this

method, there must be carried out the separation of business expenditure in variable costs and fixed costs, to determine the influence of these categories on profits and, implicitly, the value of the enterprise's patrimony.

The use of this method of forecast analysis allows the setting of the conditions necessary for the realization of the microeconomic balance which consists covering costs with income (balance point), the opportunity of making a profit and the maintenance or increase in patrimony value. The increase in the enterprise value supposes the overcoming of the break-even point by covering expenses and achieving a profit in the highest amount possible which would lead to an increase in equity and the net assets of the enterprise.

The correlation volume-cost-profit is, for the economic environment, a component that is part of the processes and techniques used for the purpose of drafting a financial-accounting diagnosis performance-oriented and the risks to which economic activities are subject to" (Petrescu, 2012) within the enterprise.

Risk is closely linked to the enterprise performance, correlation expressed by getting as high a profit volume or loss. The determining of enterprise risk or performance is an operation which contributes to the assessment of patrimony and, implicitly, of the capital invested by the owners, taking as a starting point the correlation between revenue and expenditure and the result of the financial year.

The setting of the enterprise situation may be determined by economic and financial diagnosis, thus carrying out an assessment of risk performance, and from here the findings concerning the past activity of the enterprise. On the basis of the information and assessment of the real situation, there will be determined the strategic decisions relating to the future of the enterprise. The drawing up of the financial and economic diagnosis requires the assessor's focus on some specific issues, such as: the study of net assets, the operating result, the economic balance, the financial equilibrium, as well as profitability of the enterprise activity etc" (Muntean & Bucur, 2014). The analysis, the determination and the assessment of the real situation of an enterprise contributes to the establishment of causes which have an effect on its performance, the risk occurrence, as well as the maximization of the enterprise value.

The maximization of the enterprise value established by assessment is the best market value at a given time and the possibility of increasing the wealth in the forthcoming period. It follows from the above that "the enterprise assessment is more than just establishing some property or goods from its assets, but also determining the enterprise capacity to generate flows (profit, cash-flow etc.)" (Anghel, 2010).

Always, the enterprise is considered to be the entity that has the ability to produce goods, and the role of assessment is: risk prevention, increase of economic, financial performances and maximization of patrimonial value.

The performance and maximization of the enterprise value is rendered by the size of the net profit and the value equity.

In our study we want, on the basis of the enterprise information, to show the influence of risk in the assessment of the commerce enterprise, possibilities to maximize its value and increasing the economic and financial performance in the competitive environment. The results of our research demonstrate the impact of the circulating expenditure structure on the financial results of the enterprise, as well as on equity.

The work is structured as follows. The methodology of research is presented in the second section, followed in third section by the diagnosis analysis and the interpretation of the results obtained. The final section of the paper contains a synopsis of our research and the main conclusions made on the basis of the results obtained and their interpretation.

The methodology of research

Specific to the commerce enterprises, the “break-even point is the volume of activity expressed by the critical turnover ($CA_{critical}$), starting at which there are covered the expenditure on goods (Ch_m), fixed costs (Ch_f) and the variable expenses (Ch_v) reported to this volume” (Muntean, 2006). The break-even point resulting from the confrontation between total expenses with the turnover and will be attained when the critical turnover balances expenses in the neutral point where the outcome of work is equal to zero ($B=0$). The determination of the break-even point taking into consideration that commerce enterprises have a diverse range of products and services, is made on the basis of the following relations:

$$CA_{critical} = CT = Ch_m + Ch_v + Ch_f$$

At the neutral point ($B=0$), the commercial margin is:

$$M_c = Ch_v + Ch_f \quad ; \quad M_c - Ch_v = Ch_f$$

By reporting the equality members to the turnover, we obtain:

$$\begin{aligned} \frac{M_c - Ch_v}{CA} \cdot 100 &= \frac{Ch_f}{CA} \cdot 100 \Rightarrow \frac{M_c}{CA} \cdot 100 - \frac{Ch_v}{CA} \cdot 100 = \frac{Ch_f}{CA} \cdot 100 \\ \Rightarrow \overline{A_c} - \overline{N_v} &= \frac{Ch_f}{CA} \cdot 100 \Rightarrow CA_{critical} = \frac{Ch_f}{\overline{A_c} - \overline{N_v}} \cdot 100 \end{aligned}$$

where: $CA_{critical}$ – critical turnover; Ch_m – expenses on merchandise;

CT – total expenses; B – profit; M_c – commercial margin;

Ch_v – variable expenses; Ch_f – fixed expenses;

$\overline{A_c}$ – quota of trade mark-up 100 lei turnover;

$\overline{N_v}$ – medium level of variable expenses at 100 lei turnover.

The break-even point is used in the evaluation of the enterprise for several purposes:

- (1) Laying down the conditions necessary for the recovery of expenditure of income without profit, in neutral point ($B=0$):

$$M_c = Ch_v + Ch_f \text{ and } CA_{critical} = \frac{Ch_f}{\overline{A_c} - \overline{N_v}} \cdot 100.$$

- (2) The determination of the safety margin (M_s) representing the difference between the turnover (CA) and the break-even point ($CA_{critical}$), expressing the enterprise capacity to adapt the economic activity to the requirements of the market. The higher the value of this indicator is, the higher the possibility of the enterprise to eliminate the operational risk and to ensure the development of the work in a safe manner. The safety margin is determined on the basis of the calculation relation:

$$M_s = CA - CA_{critical}$$

- (3) The calculation of safety period (I_s) by reporting the safety margin (M_s) to the break-even point ($CA_{critical}$), on the basis of the relation:

$$I_s = \frac{CA - CA_{critical}}{CA_{critical}} \cdot 100 = \frac{M_s}{CA_{critical}} \cdot 100 = \left(\frac{CA}{CA_{critical}} - 1 \right) \cdot 100$$

The operational risk is removed if the safety margin has higher values than the break-even point. The safety period reflects the position of turnover and expresses the enterprise capacity to adapt to market requirements and competitive environment.

- (4) The calculation of the efficiency surplus (S_e) that expresses the share of the safety margin in the turnover.

$$S_e = \frac{CA - CA_{critical}}{CA} \cdot 100 = \frac{M_s}{CA} \cdot 100$$

The reduction in the value of this indicator leads to a fall in the turnover to the level of the break-even point and the loss of profitability of operating activity. The

entry in the enterprise in losses area leads to the reduction in the amount of market value and financial position.

- (5) The determination of the sampling index (I_p) contributes to the setting of fixed expenses (Ch_f) in the total trade margin (M_c), being calculated according to the relation:

$$I_p = \frac{Ch_f}{M_c} \cdot 100$$

The low level of this indicator contributes to the easier achievement of break-even point, the increase of profitability, the financial position and the market value of the enterprise.

The diagnosis analysis and the interpretation of the results

The obtained results as a result of the diagnosis analysis for the trading enterprise “Alfa” - case study, are presented in *Table 1*.

Table 1 The calculation of the breakeven point of “Alfa”

- RON -

No.	Indicators	Period			
		n	n+1	n+2	n+3
0	1	2	3	4	5
1.	Turnover (CA)	2.790.815,7	3.033.606,9	2.358.296,3	1.782.112,2
2.	Expenses concerning goods (Ch _m)	2.094.943,0	2.266.481,1	1.754.125,9	1.311.418,7
3.	Commercial margin (M _c)	695.872,7	767.125,8	604.170,4	470.693,5
4.	Circulating expenses (Ch _c) (I.5 + I.6)	909.981,0	980.471,7	1.029.496,1	631.575,5
5.	Variable expenses (Ch _v)	491.283,7	559.027,5	501.715,3	337.577,0
6.	Fixed expenses (Ch _f)	418.697,3	421.444,2	527.780,8	293.998,5
7.	Profit afferent to turnover (P _{CA})	-214.108,3	-213.345,9	-425.325,7	-160.882,0
Medium quota of trade					
8.	mark-up ($\overline{A_c}$) (%) (I.2/I.1*100)	24,934	25,288	25,619	26,412
Medium level of variable					
9.	expenses ($\overline{N_v}$) (%) (I.5/I.1*100)	17,604	18,428	21,274	18,943
10.	Critical turnover (CA _{critical})	5.711.485,0	6.143.712,0	12.148.380,2	3.935.938,2
11.	Safety margin (M _s) (I.10 – I.1)	-2.920.669,3	-3.110.105,1	-9.790.083,9	-2.153.826,0
12.	Safety period (I _s) (%) (I.11/I.10*100)	-51,14	-50,62	-80,59	-54,72
13.	Efficiency increase (S _e) (%) (I.11/I.1*100)	-104,65	-102,52	-415,13	-120,86
14.	Sampling index (I _p) (%) (I.6/I.3*100)	60,17	54,94	87,36	62,46
15.	Other operating income	259.934,2	311.841,8	663.637,5	381.818,5
16.	Total operating income (I.1 + I.15)	3.050.749,9	3.345.448,7	3.021.933,8	2.163.930,7
17.	Total operating expenses (I.2 + I.4)	3.004.924,0	3.246.952,8	2.783.622,0	1.942.994,2
18.	Operating result (I.16 – I.17)	45.825,9	98.495,9	238.311,8	220.936,5
19.	Financial income	6.832,7	15.268,9	15.033,8	3.216,6

THE ECONOMIC RISK IN TRADING COMPANIES' VALUATION

20.	Financial expenses	863,8	13.060,4	2.500,2	0,0
21.	Financial result (l.19 – l.20)	5.968,9	2.208,5	12.533,6	3.216,6
22.	Extraordinary income	0,0	0,0	0,0	0,0
23.	Extraordinary expenses	0,0	0,0	0,0	0,0
24.	Extraordinary result (l.22 – l.23)	0,0	0,0	0,0	0,0
25.	Total income (l.16 + l.19 + l.22)	3.057.582,6	3.360.717,6	3.036.967,6	2.167.147,3
26.	Total expenses (l.17 + l.20 + l.23)	3.005.787,8	3.260.013,2	2.786.122,2	1.942.994,2
27.	Gross result of the financial year (l.25 – l.26)	51.794,8	100.704,4	250.845,4	224.153,1
28.	Profit tax (16% *l.27)	8.287,2	16.112,7	40.135,3	35.864,5
29.	Net result of the financial year (l.27 – l.28)	43.507,6	84.591,7	210.710,1	188.288,6

Source: Own calculations

From the analysis of the submitted data there results:

- profit afferent to turnover registered negative values, contributing thus to the reduction of patrimony value and the financial position of the enterprise in the competitive environment;
- evolution of the turnover registered values that contributed to the diminishing of the market position and the reduction of equity;
- safety margin has negative values, generated by the increase in fixed expenses in relation to the evolution of the turnover, at the expense of variable expenses and lack of consistency in the evolution of the three indicators;
- the safety period shows negative values as a result of reduced share in critical turnover and the loss recorded in the carrying out of the turnover;
- the index of profitability has recorded negative values due to the high break-even point;
- the sampling index has high level as a result of the large share of fixed costs in the circulating expenses;
- the operating activity recorded profit by disinvestment of fixed assets.

The operating risk influence on the assessment of the enterprise may be determined on the basis of the operating lever coefficient also called the degree of balancing the enterprise operation, where it “expresses sensitivity of the operating result to variations in sales. Being the elasticity which measures the percentage increases of this result in response to an increase in the percentage of sales” (Petrescu, 2004). This coefficient (CEL) is “the indicator by which the economic risk is assessed, i.e. the enterprise inability to adapt in time and with a minimum of effort to the variations in conditions of the economic and social environment” (Epuran, Băbăiță & Grosu, 1999). The calculation of operating lever coefficient for commerce has in view the relative change of the operating result afferent to turnover (RE) in relation to relative change of commercial margin (MC).

The coefficient of the operating lever (CLE) is determined according to the calculation relation:

$$CLE = \frac{MC_v}{RE}$$

where: MC_v – margin of variable expenses.

The risk of exploitation is the larger and can influence the value of the enterprise, as the amount of circulating expenses is close to the value of trade margin and the difference contributes to the reduction or cancellation of the operating activity profit.

This risk:

- is at its maximum, when the circulating expenses cancels the trade margin and reduces the enterprise value;
- does not exist, when the result of the turnover is at a maximum and increase the value of the enterprise.
- decreases with the increase of the trade margin and reduces the circulating expenses, in particular of fixed expenses, a fact that generates the increase of the enterprise value.

The economic risk is determined by the trading margin, the share of fixed expenses and the occurrence of the turnover as opposed to the critical point.

The dependency of the operating lever coefficient towards the critical point is emphasised according to the calculation relation of turnover and of the result generated by additional turnover above the balance point, as follows:

$$CLE = \frac{CA}{MS}$$

where: MS – safety margin.

Table 2 The calculation of the operating lever coefficient of “Alfa”

No.	Indicators	Period			
		n	n+1	n+2	n+3
		2	3	4	5
0	1				
1.	Commercial margin (M _c)	695.872,7	767.125,8	604.170,4	470.693,5
2.	Variable expenses (Ch _v)	491.283,7	559.027,5	501.715,3	337.577,0
3.	Margin of variable expenses (MC _v) (I.1 – I.2)	204.589,0	208.098,3	102.455,1	133.116,5
4.	Operating result afferent to turnover (RE)	-214.108,3	-213.345,9	-425.325,7	-160.882,0
5.	Coefficient of operating lever (CLE) (I.3 / I.4)	-0,95	-0,97	-0.24	-0.82
6.	Turnover (CA)	2.790.815,7	3.033.606,9	2.358.296,3	1.782.112,2
7.	Safety margin (MS)	-2.920.510,1	-3.118.631,1	-9.802.551,6	-2.153.610,7
8.	Coefficient of operating lever (CLE) (I.6 / I.7)	-0,95	-0,97	-0.24	-0.82

Source: Own calculations

From the data presented (*Table 2*) there results that the operating activity is subject to operational risk as a result of the variable expenses uncorrelated bias with trade margin. In these circumstances, the enterprise value decreases with the increase of the operating risk. The avoidance of the operating risk may be carried out by an increase in turnover and trade margin to a percentage higher than variable expenses, and fixed expenses to be kept fairly constant. By avoiding the operating risk of exploitation there is ensured the increase in the value of the enterprise, the consolidation of its position on the market and the financial position in the competitive environment.

The increase in the result of the financial year from the operating activity contributes to the increase in equity and implicitly, of the enterprise value under the conditions of financing the activity of their own financial sources. Thus, the operating activity is not subject to financial risk.

The determination of the net result of the financial year and its contribution to the change of equity and implicitly of the net assets is realised by the calculation model (Oprean, 1997):

Net result = Total income – Total expenses = [(Turnover + Fixed production + Variation of stocks + Other operating income) + Financial income + Extraordinary income] – [(Variable expenses + Fixed expenses) + Financial expenses +

Extraordinary expenses] – Tax profit = [(Safety margin + Critical turnover + Fixed production + Variation of stocks + Other operating income) + Financial income + Extraordinary income] – [(Variable expenses + Fixed expenses) + Financial expenses + Extraordinary expenses] – Tax profit = Equity at the end of the financial year – Equity at the beginning of the financial year – Capital infusion during the financial year.

Through this model of calculation there is emphasised a correspondence of certain indicators presented in the profit and loss accounts, reflecting the contribution of economic flows generating income and expenditure on the financial structure and the value of the enterprise.

Table 3 The determination of the result of the financial year of “Alfa”

- RON -

Period	Total income	Total expenses	Equity at the end of financial year	Equity at the beginning of financial year	Capital infusion during the financial year	The result of the financial year (col.1-col.2 or col.3-col.4-col.5)
0	1	2	3	4	5	6
n	3.057.582,6	3.014.074,9	512.395,5	885.475,1	-416.587,3	43.507,7
n+1	3.360.717,6	3.276.125,9	489.349,5	512.395,5	-61.545,7	84.591,7
n+2	303.697,6	92.987,4	271.983,3	489.349,5	-73.869,2	210.710,2
n+3	216.714,3	1.978.858,6	349.471,1	271.986,3	-110.803,9	188.288,7

Source: Own calculations

Conclusions

The avoidance of the economic risk economic is possible by changing the profitability in relation to turnover and removing the negative influence of the factors with action directly or indirectly on the enterprise activities. The removal of the economic risk has a positive consequence on: the profitability of operating activities, the increase in the enterprise patrimony and the financial position on the market. The relationship risk – profitability should emphasize the enterprise opportunities in economic growth and hence of operational profit from operating activities. The achievement of these goals will contribute to the evaluation of the enterprise and its consolidation in the competitive environment.

From the data presented (*Tables 1-3*), the financial result afferent to turnover recorded over the whole period negative values having influence on the reduction of the enterprise value: the positive values of the financial year result from operation activities are carried out due to the income resulted from the disinvestment of fixed assets with negative influence in the evaluation of the enterprise.

As a result of reducing the value of the fixed assets, the equity and the enterprise value decreased.

The increase in the enterprise value is carried out by avoiding the operating risk, the increase in turnover by increasing the revenues and reducing the afferent expenditure on financial results of the financial year in question.

Specific to the commerce enterprises is the increase of trade margin in conjunction with decreasing fixed expenses and increasing profit from operating activity. This is possible by the achievement of the turnover with stocks of goods with trade margin to cover circulating expenses achieving a higher profit to contribute to the increase in equity.

References

- Anghel, I. et al (2010), *Evaluarea întreprinderii*, București, Editura Economică.
- Epuran, M., Băbăiță, V., Grosu, C. (1999), *Contabilitate și control de gestiune*, București, Editura Economică.
- Jianu, I. (2007), *Evaluarea, prezentarea și analiza performanței întreprinderii*, București, Editura CECCAR.
- Muntean, M. (2006), *Analiza echilibrului economico-financiar al întreprinderilor comerciale*, Bacău, Editura EduSoft.
- Muntean, M., Bucur, I. A. (2014), *Evaluarea întreprinderii*, Bacău, Editura Alma Mater.
- Oprean, I. (1997), *Întocmirea și auditarea bilanșului contabil*, Deva, Editura Intelcredo.
- Petrescu, S. (2004), *Diagnostic economico-financiar*, Iași, Editura Sedcom Libris.
- Petrescu, S. (2012), *Performanță și risc în afaceri*, Iași, Editura Universității “Alexandru Ioan Cuza”.