Strategies and Development Policies of Territories: International, Country, Region, City, Location Challenges

Tools Designed to Analyze the Enterprise Economic Risk and its Usefulness for Forecasting and Managerial Control

Camelia Cătălina MIHALCIUC

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Tools Designed to Analyze the Enterprise Economic Risk and its Usefulness for Forecasting and Managerial Control

Camelia Cătălina MIHALCIUC¹*

Abstract

Risk is a challenge for any enterprise, because at the time when we identify the risk, it cannot be totally canceled, being assumed different depending on the different attitude. Thus, in the study of risk analysis, it is appreciated that, essentially, there are two categories of variables that cause the greatest sensitivity of the result indicators: the cost structure, being considered the main cause of the economic risk, and the financial structure of the enterprise, which has the potential to determine the financial risk. The size of the operating risk is conditioned by the enterprise’s ability to efficiently manage the cost structure and to take into account the fact that it develops unequal sensitivity to activity level variations because some expenditure vary (proportionally or non-proportionally) to the volume of activity, being categorized as variable costs, and another category of expenditure is low or almost of insignificant variability depending on the volume of activity variation, being considered as fixed or structure expenditure, these costs lead to a decrease in enterprise flexibility as they do not have the property to adapt when the volume of activity is changing. Based on these considerations, in the methodological approach of this paper we considered the way of determining the economic risk for two economic entities, which operate in the same geographical area, having the same object of activity, through the instrumentation used in cost-volume analysis, this model of analysis is also a useful tool for forecasting and managerial control.

Keywords:
Economic risk, break-even point, coverage factor, the leverage coefficient.

¹ Associate Professor PhD, Stefan cel Mare University of Suceava, Suceava, Romania, cameliam@seap.usv.ro

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Corresponding Author: Camelia Cătălina MIHALCIUC
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Introduction

The changes in the global economic environment, which are taking place, lately, at an unpredictable rate, are highlighting the fact that the operating methods that were available in the 20th century are no longer successful in the 21st century. The accelerated changes that occur in any activity make today’s strategy no longer effective for tomorrow. The only way to deal with such a demanding and uncertain business environment is to develop the internal ability to plan, organize, and to use the necessary resources with caution. For this, it is necessary to define strategies, which must reflect the way in which the competitiveness parameters such as speed, flexibility, cost, quality, etc. will be, simultaneously, fulfilled.

"Experts from Western countries on the risk analysis topic consider that there are, basically, two categories of variables that cause the highest sensitivity of the output indicators: the cost structure and the financial structure of the enterprise" [1]. As regards the cost structure, it is considered to be the main cause of economic risk, and the financial structure of the enterprise has the potential to determine the financial risk.

Analysis of economic risk (operating risk)

"The economic activity of an enterprise, obviously, implies the existence and manifestation of the economic (operational) risk, as a result of the fact that cannot be correlated and, with certainty, anticipated the elements of the operating activity result (quantity, cost, price) with the elements of the operating process (supply, production, sales). [2]. "In other words, the operating risk is the probability that the results generated by the economic activity will not exceed the operating expenses, consequence of their structure.

"The economic risk is related to the structure of operating costs (fixed and variables) and depends on the higher or lower share of fixed expenditures in the total expenditures." [3]

The economic (operating) risk is determined by the incapacity of the enterprise to adapt the volume of activity to the cost structure, without damaging the result. Any variation in the volume of activity influences the outcome of the enterprise, particularly by generating changes in the cost structure, proving to be risky for the enterprise.

"The risk depends not only on the general factors (sales price, cost, turnover), but also on the costs structure and their behavior towards the volume of activity." [4]
The size of the operating risk is conditioned by the company's ability to efficiently manage the cost structure and to take into account the fact that it develops unequal sensitivity to the variations of the activity levels. Therefore, some expenditure varies (proportionally or non-proportionally) towards the volume of activity, being classified as variable expenses/costs. Another category of expenditures presents small or almost insignificant variability depending on the volume of activity, being considered fixed or structured expenditures. Fixed expenditures lead to a decrease of the enterprise flexibility because they do not have the property to adapt to the changes of the activity volume.

"The study of the relation between the turnover, the variable costs, the fixed costs and the result of the enterprise led to the elaboration of the cost-volume-profit model (Break-Even Analysis), which quantifies the effects of the turnover change on the operating result. The mathematical quantification of this change is achieved using the calculation of the operating leverage."[1] Thus, "cost-volume-profit analysis is oriented towards the determination of the break-even point, meaning the point where the total turnover (total revenues) and the total costs of a certain volume of the enterprise activity are equal and the result determined as the difference between these values is null.

"This model of analysis is an effective tool in risk analysis, because the break-even point can also be categorized as a measure of the company's flexibility in relation to the fluctuations in its activity. [2] The cost-volume-profit analysis is also a useful tool for forecasting and for managerial control.

**Determination of the break-even point and its importance in delimiting the economic risk of the enterprise**

The break-even point (equilibrium point) reflects the minimum level of activity that the business must achieve in order to not record losses. A positive result can be obtained, only, at a level of activity above the break-even point. The lower the break-even point is, the lower the operating risk is.

"By revealing the correlations between cost, price and volume of sales, the analysis of the break-even point allows clarification of some aspects related to: the relative importance of different cost categories; how they vary according to the volume of production, and how these variations can be controlled; anticipating the influence of changes in the structure of production, prices and costs on the profitability of the enterprise; determining the production capacity necessary to reach the maximum
profitability; the opportunity to accept or not contracts of a certain size, etc. "[4].

The use of the break-even point as a risk assessment tool requires knowing the calculation methodology and the importance of information provided by it. Businesses are interested in the volume of activity or turnover threshold, the overrun of which leads to profit. "The break-even point (Dead Point or Equilibrium Point) represents that sales value from which the enterprise begins to earn profit. The break-even point can be calculated in three ways: quantitative, value or as number of days, each of the three values being useful in making decisions."

The first step in finding the equilibrium point is the delimitation of costs in variables and fixed, using the direct-costing process, which is not always easy to achieve because the cost criteria by their nature are sometimes purely conventional. Thus, the assumption that fixed costs are constant is true only for short periods of time, an increase in these costs being determined by the increase in the sales volumes and the expansion of production capacities. The equilibrium point configuration can be made by using the algebraic method and the graphical method.

In order to apply the algebraic method to find out the equilibrium point, it is assumed that the turnover (CA) obtained by capitalizing a certain volume of production (Qp) must cover all the expenses (CT) and profit registration (P). The size of the profit is strictly dependent on the volume of the sold production and its market price, which is influenced by the cost structure and market factors, aspects revealed by the following equation:

\[
\begin{align*}
CA &= CT + P \\
CA &= CV + CF + P \\
Q \times p &= Q \times cv + CF + P
\end{align*}
\]

where: CV - total variable costs  
Q - volume of production sold  
p - unit sales price  
CV - variable unitary cost  
CF - total fixed costs

Because the equilibrium point implies a profit equal to 0, it is possible to determine the equilibrium production (Q_e), starting from which the enterprise obtains profit, and the previous equation becomes:

\[
\begin{align*}
Q*p &= Q*cv + CF \\
(Q*p) - (Q*cv) &= CF \\
Q_e(p-cv) &= CF \\
Q_{PR} &= \frac{CF}{p-cv}
\end{align*}
\]
The variable cost margin method (MCV), a variant of the algebraic method, is a key concept of the cost-volume-profit method, and is the amount left by lowering the variable costs from the total revenue, amount that can be used to cover fixed costs, and to generate profit. The term used in English for this notion("contribution margin") justifies the alternative name under which it appears, time to time, in the literature, that of the "contribution margin". The variable cost margin method is based on the assumption that the equilibrium point represents the value level of turnover for the accomplishment of which the fixed costs of the period are equal to the variable cost margin.

Starting from the relation \( CA = CV + CF \), and knowing that \( MCV = CA - CV \), it results that at the dead point \( MCV = CF \). Thus, the enterprise will record profit when the variable cost margin is higher than fixed costs \( (MVC> CF) \).

The unitary margin on variable cost \( (MCV_u) \) expresses profit growth by selling each additional unit of product and is determined as the difference between the unit sale price and the variable cost per unit of product:

\[
MCV = CA - CV = Q \ast (p - cv) = Q \ast MCV_u
\]

The coverage factor shows the percentage of each unit of measure of sales that is available to cover fixed costs and is determined by reporting the variable cost margin to the turnover multiplied by 100. This indicator is very useful in the cost-volume-profit analysis because the FA expresses the share in which the percentage increase in the volume of sales will affect the increase of the variable costs margin, and therefore of the profit (as long as the volume of the fixed expenses is maintained) [5].

\[
FA = MCV_r(\%) = \frac{MCV}{CA} \ast 100
\]

The coverage factor is used to predict the change in profit \( (\Delta P) \) when is known the sales value increase \( (\Delta CA) \), being a very useful indicator in the preparation of the enterprises budgets, thus:

\[
\Delta P = FA - \Delta CA
\]

Unlike the value expression of the MCV, its percentage expression (or FA) will ease the comparative analysis performed at the level of the same enterprise (between different products) as well as the assessment of different firm's activity.
The turnover of equilibrium (CA\text{PR}) or the break-even point in units of value that an enterprise has to achieve in order to obtain a profit equal to zero, at the equilibrium point, can be determined by the relationship according to which the value break-even point corresponds to the value of the turnover for which the fixed expenses are equal to the absolute margin on the variable cost:

\[
\text{CA}_{\text{PR}} = \frac{\text{CF}}{\text{FA}} = \frac{\text{CF}}{\text{MCV}_r}
\]

The Safety Interval (IS) is one of the first indicators that shows the risk and represents the distance to the actual sales situation of the enterprise towards the level of sales beyond which it begins to incur losses. The safety margin expresses, therefore, the risk of the enterprise of incurring losses by lowering the sales volume compared to the current situation. The safety margin indicates the distance of the enterprise to the point where it will start to record losses; therefore, when the enterprise is at a greater distance away, it shelters the profit. IS can be calculated as:

- value, based on sales revenue as follows: \( IS \text{ value} = \text{CA- PR value} (\text{CA}_e) \)
- quantitatively, based on the quantity, as follows: \( IS \text{ quantitative} = \text{CA - PR quantitative} (Q_e) \)

The safety coefficient (CS) eliminates the limitation of the safety margin that makes it difficult to compare firms or products by expressing it quantitatively or in value. Thus, the safety coefficient is the distance, expressed as a percentage, of the actual (current) sales situation to the break-even point. Like the safety interval, the safety coefficient expresses the risk of an enterprise to record losses. Percent expression shows how much sales can be reduced in percentage to avoid losing. The CS value should be interpreted in the context of the sector to which the enterprise belongs; in some areas of activity it is acceptable that in certain periods the enterprises are closer to the break-even point, while in others it is normal for the CS values to be higher. The safety coefficient is determined as follows:

\[
\text{CS} = \frac{IS \text{ value}}{\text{CA}} \times 100 \text{ or } CS = \frac{IS \text{ quantitative}}{Q} \times 100
\]

Parallel with identifying the volume of sales or the turnover that corresponds to the equilibrium point, the time horizon (OT) in which the enterprise will reach at the break-even time can be determined. The process
of determining the time horizon is easy when annual sales are made uniform over the time.

\[ OT = \frac{\text{CAPR}}{\text{CA realised}} \times 360 \]

"In the case of a multi-product enterprise, the equilibrium point cannot be expressed quantitatively just for each individual product, and if it is desired to determine a global equilibrium point, it can be expressed only in monetary units. In this situation, the methodology of analysis requires the prepaid calculation of the weighted average price (\( \bar{P} \)) of the products (according to their unit prices and the value share of each product in the total turnover) and the percentage incidence of the unit margin on the average sale price (\( \bar{m}/(\bar{p})V \)). Therefore, the turnover corresponding to the critical threshold for the multi-product enterprise is determined by the model in [1].

\[ \text{CAPR} = \frac{\text{CF}}{\text{m}} \times \frac{1}{\bar{p}} \]

Regarding the graphical method of configuring the equilibrium point, it is a method that presents graphically "the elements that by difference give the benefit: on the abscissa is the volume of the production sold (Q), and on the abscissa, turnover (CA), total costs (CT), fixed (CF) and variable (CV). The method is applicable in the case of homogeneous production or by product, after the distribution of expenses and proceeds from the hypothesis of linearity of variable costs and turnover. "[3]

Depending on the content of the economic and financial indicators used and depending on the graphical representation used, there are two variants of the graphical representation method of the critical point: the linear model and the nonlinear model.

Thus, in the case of the linear analysis model, variable costs (CV) vary directly proportional with the volume of production sold (Q), being a linear function of the production volume. It can be considered that this linear model of the break-even point is purely theoretical, unable to show the complex situations encountered by the enterprise because, firstly, the fixed costs do not present the same constant at different levels of activity and the variable costs do not fully respect the proportionality rule. In conclusion, the critical threshold is not a static notion; there is no "absolute
critical point", but a threshold of profitability (break-even point), with a certain horizon of determination.

The non-linear model of the break-even point highlights the meaning and magnitude of the changes that occur in the cost of production, correlated with variations that occur in the total volume of production. Adopting the more realistic idea that between the evolution of variable expenses and turnover is not a linear function, more break-even points are obtained.

The enterprise "gains profit if it sells a quantity of product that is between the two equilibrium points. The slope of the total cost curve is the marginal cost and the slope of the total income curve measures the marginal income, therefore the equality of the two points marks the maximum deviation between the two curves and the maximum profit of the analyzed enterprise." [1]

Operating leverage (operational)

"Called, often, economic risk, the business risk is evidenced, precisely, by the elasticity of operating profit under the influence of the turnover (CA), meaning that a significant change in the value of the sold production and received leads to a significant change in the gross benefit." [6]

A careful analysis of the cost-volume-profit correlation shows that, near the equilibrium point, the operating result varies more than proportional reported to the volume of activity. "In business terminology, a high degree of operating leverage, caeteris paribus, means that a relatively small change in sales volume (in the turnover) will have as result a significant change in the level of the operating profit." [7]

The operating leverage effect can be defined by the way in which a variation in sales volume affects the benefits before the interest and taxes are paid (EBIT-earnings interest and taxes). In determining the effect of the change in the sales volume on profitability, the degree of operating leverage is calculated (GLO) (DOL-equilibrium degree of business operation) as the ratio between the relative deviation of operating profits and the relative deviation of turnover, and measures the relative variation in operating result as a result of the relative variation of the enterprise’s activity.

\[
\text{GLO} = \frac{\frac{\Delta \text{EBIT}}{\text{EBIT}}}{\frac{\Delta Q}{Q}}
\]

where: \(Q\) – production in units

\(\Delta Q\) – production deviation in unit
Starting from the idea that DOL (GLO) characterizes sensitivity to sales variations, the calculation relation of CLE (operating leverage coefficient) is:

\[
CLE = \frac{\Delta R_{\text{exp}}}{\Delta Q (\Delta CA)} = \frac{R_{\text{exp}} - \Delta R_{\text{exp}}}{Q (\Delta CA)}
\]

where: \( R_{\text{exp}} \) – operating result
\( \Delta R_{\text{exp}} \) - variation of the operating result
\( Q (\Delta CA) \) - the volume of production/the volume of turnover
\( \Delta Q (\Delta CA) \) - the variation of the production volume/turnover

The operating leverage coefficient (CLE) measures algebraically the importance of sales changing on profits, and can be calculated in two variants [8]:

a) Depending on the physical volume of sales

\[
CLE = \frac{\Delta R_{\text{exp}}}{\Delta R} = \frac{qv_0 \times (pv-cv)}{qv_0 \times (pv-cv) - CF} = \frac{qv_0 \times mcv}{qv_0 \times mcv - CF} = \frac{MCV_0}{R_{\text{exp}0}}
\]

b) Depending on the turnover

\[
CLE = \frac{\Delta R_{\text{exp}}}{\Delta CA} = \frac{CA \times (1-\overline{Rcv})}{CA \times (1-\overline{Rcv}) - CF} = \frac{CA - CA_{PR}}{CA - CA_{PR}}
\]

The relationship between the change in operating result and the production variation determines the degree of elasticity of the result according to the size of the volume of activity, determining how much increases or decreases the result of the operating activity to a 1% variation of the production volume or of the turnover. Economic risk is present when a 1% increase in production or turnover volume corresponds to an increase of less than 1%, or even a reduction, in the result of the operating activity.

Depending on the values of the elasticity coefficient, an enterprise may face one of the following situations:

- **unstable**, in the case of CLE > 11, with a high economic risk;
- **relatively stable**, in the case of CLE approximately equal to 6;
- **stable**, in the case of CLE < 6, with a low economic risk.
Under these three situations, it is noted that the increase in the operating leverage coefficient, basically, shows the increase in operating risk. [9].

The practical importance of knowing the value of operating leverage effect is very important for business leadership, especially when business strategies are established. The degree of sensitivity to events such as increased competition, increased salaries, technological progress, prints to the enterprise the risk feature and the determination of the elasticity coefficient is a valuable tool in the process of risk taming.

**Comparative assessment of economic risk (operating) risk at SC Quatrooil and SC Servoil**

"The activity of an enterprise implies, obviously, the existence and manifestation of economic risk (operational or operating) as a result of the fact that the elements of the result of the exploitation activity (cost, quantity, price) cannot be, certainly, correlated or anticipated with those of the exploitation cycle (supply, production, sales). "[10]

Starting from the financial statements of the two companies for the years 2015, 2016 and 2017, the economic risk analysis will be carried out in Table 1.

**Table 1 Operating risk assessment**

<table>
<thead>
<tr>
<th>Name</th>
<th>No.</th>
<th>Indicators</th>
<th>Financial exercise</th>
<th>Absolute deviation (±Δ)</th>
<th>Relative deviation (Δ%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2015</td>
<td>2016</td>
<td>2017</td>
</tr>
<tr>
<td>SC QUATROOIL SRL</td>
<td>1</td>
<td>Operating income (CA)</td>
<td>23,711,707,5</td>
<td>20,176,418</td>
<td>19,600,762,5</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Operating expenses</td>
<td>22,568,293</td>
<td>19,429,236</td>
<td>19,023,157,5</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Operating result (1-2)</td>
<td>1,143,414,5</td>
<td>1,494,364</td>
<td>747,182</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Variable expenses</td>
<td>14,274,568</td>
<td>12,629,003</td>
<td>13,316,210</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Fixed expenses</td>
<td>8,812,874</td>
<td>6,906,962</td>
<td>5,816,694,5</td>
</tr>
<tr>
<td>SC SERVOIL</td>
<td>6</td>
<td>Variable cost margin (MCV) (1-4)</td>
<td>9,436,139,5</td>
<td>7,547,415</td>
<td>6,284,552,5</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Variable Cost Margin Rate - Coverage Factor (%) (6/1)*100</td>
<td>39,79%</td>
<td>37,40%</td>
<td>32,06%</td>
</tr>
</tbody>
</table>
### Table 1: Financial Data Overview

<table>
<thead>
<tr>
<th>Column</th>
<th>SC SERVOIL SRL</th>
<th>Source: personal elaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Operating income (CA)</td>
<td>23.877.457</td>
</tr>
<tr>
<td>2</td>
<td>Operating expenses</td>
<td>22.558.501</td>
</tr>
<tr>
<td>3</td>
<td>Operating result (1-2)</td>
<td>1.318.956</td>
</tr>
<tr>
<td>4</td>
<td>Variable expenses</td>
<td>12.262.812,5</td>
</tr>
<tr>
<td>5</td>
<td>Fixed expenses</td>
<td>10.527.355</td>
</tr>
<tr>
<td>6</td>
<td>Variable cost margin (MCV) (1-4)</td>
<td>13.349.621,5</td>
</tr>
<tr>
<td>7</td>
<td>Variable Cost Margin Rate - Coverage Factor (%) (6/1)*100</td>
<td>55,90</td>
</tr>
<tr>
<td>8</td>
<td>Operating break-even point (CA;&lt;sup&gt;pr&lt;/sup&gt;) (5/7)</td>
<td>18.833.337</td>
</tr>
<tr>
<td>9</td>
<td>Safety interval (IS) (1-8)</td>
<td>5.044.070</td>
</tr>
<tr>
<td>10</td>
<td>Safety coefficient (CS) (9/1)*100</td>
<td>21,12%</td>
</tr>
<tr>
<td>11</td>
<td>Temporal horizon (OT) (days) (8/1)*360</td>
<td>283</td>
</tr>
<tr>
<td>12</td>
<td>Operating leverage coefficient (CLE) (1/9)</td>
<td>4,73</td>
</tr>
</tbody>
</table>

### Table 2: Economic Risk Assessments

Based on the data in Table no. 1, corroborated with the previous graphs, are made the following assessments, centralized in Table no. 2, regarding the two companies analyzed from the economic risk point of view.
Table 2 Interpretation of the operating risk indicators

<table>
<thead>
<tr>
<th>SC QUATROOIL SRL</th>
<th>SC SERVOIL SRL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable cost margin</strong> registered a decreasing trend during the analyzed period, from values of 9,436,139.5 RON in 2015, to 6,284,552.5 RON in 2017, a decrease of 1,262,626.5 RON, 16.73% in relative value, determined by the decrease of the turnover in the period 2017-2016 with 2.85% corroborated with the increase of the variable expenses by 5.44%. However, the MCV indicator is above the fixed cost level in both, 2015, 2016 as well as in 2017, which results in obtaining profit for the enterprise.</td>
<td></td>
</tr>
<tr>
<td><strong>Coverage factor (FA)</strong> has, as well, a reduction in the study period, decreasing from 39.79% in 2015 to 37.4% in the following year, reaching 32.06%, which means that in 2017 from a unit of measure for selling, only 32.06% is available to cover fixed costs, compared with 37.4% in 2016 and 39.79% in 2015.</td>
<td></td>
</tr>
<tr>
<td><strong>Value break-even point (CA\textsubscript{PR})</strong> – the level of turnover in which the enterprise registers the null profit decreases in the analyzed period, from 22,148,464 RON in 2015 to 18,467,812.5 in 2016 and in 2017 it decreases by 1.75% compared to the previous year, keeping the downward trend of both, fixed costs (-15.78%) and the margins on variable costs (-16.73%).</td>
<td></td>
</tr>
<tr>
<td><strong>Safety interval (IS\textsubscript{value})</strong> is a first indicator of operating risk, which increases in the first part of the analyzed timeframe, but its decrease by 14.69% in 2017 compared to 2016 indicates that the enterprise's distance from the turnover - from which starts to record losses - has decreased, because the decrease in turnover registered in the analyzed period (2.85%) exceeded the decrease of the turnover threshold (1.75%).</td>
<td></td>
</tr>
<tr>
<td><strong>Safety coefficient (CS)</strong> record levels below 10% in the three years under the review, is indicating, according to expert studies, an unstable situation in 2015, which is improving slightly in 2016, to worsen in 2017 by lowering this indicator from 8.406% to 7.436%. This indicates that, in order to avoid losses, sales can be reduced by 6.58% in 2015, by 8.468% in 2016 and by 7.436% in 2017, being an indicator of the company's flexibility.</td>
<td></td>
</tr>
<tr>
<td><strong>Temporal horizon (OT)</strong> indicates that in 2015, the turnover corresponding to the equilibrium point is reached in 336 days, the following year the interval is reduced to 328 days, and in 2017 it will increase to 333 days as a consequence of the turnover decrease at a faster pace than the value break-even point has declined.</td>
<td></td>
</tr>
<tr>
<td><strong>Operating leverage coefficient (CLE)</strong> registered in 2015 expresses a risky situation, 2016 reveals a relatively stable situation, which is getting worse in 2017 when the CLE reached 13.44%, the dynamics (meaning increasing) of this indicator is showing the sensitivity increase of the operating result to the turnover variation, and the increase in economic risk.</td>
<td></td>
</tr>
<tr>
<td><strong>Variable cost margin (MCV)</strong> registered a sharp decline in 2016 compared to 2015, because of the turnover decreasing and rising variable expenses, and also a decrease in 2017 compared to 2016, by 8.84% as a result of a more pronounced decrease in turnover compared to the decrease in variable expenses. However, being higher than fixed expenses, it allows the enterprise to earn profit in 2015, 2016 and 2017.</td>
<td></td>
</tr>
<tr>
<td><strong>Coverage factor (FA)</strong> declines sharply from 2015 to 2016, from 55.9% to 35.65%, then remains relatively constant over the past two years, being around 35%, which means that from a unit of measure sold, 35% is available to cover fixed costs. This constancy of the FA indicator is due to the reduction of both, turnover (7.79%) and of the variable costs</td>
<td></td>
</tr>
</tbody>
</table>
(7.2%), as well as the fixed costs (7.2%).

**Value break-even point (CA\textsubscript{PR})** records, first, an increase of 7.98% between 2015 and 2016, and in 2017 a decrease, from 20,337,185 to 19,090,588.5, with 6.13%, a trend implied by the reduction of fixed expenses by 7.2%, which means that in order to achieve profit, the company must achieve lower turnover than in the previous year.

**Safety interval (IS\textsubscript{value})** registered by the company during the three years analyzed is the first alarm signal by reducing with 88.35% in 2016 compared to 2015, and by 65.33% in 2017 compared to 2016, and indicates that the company failed to be far away from the turnover threshold, which is lower in 2017. Compared to the previous year, the safety interval recorded in 2017 is lower by 767,431 RON, which coincides with the increase of the exploitation risk.

**Safety coefficient (CS)** in the case of this enterprise, it is situated in 2015 over the level of 10%, indicating a favorable situation, which suddenly deteriorates in the following year, well below the level of 10% in the next two years, and there is a decrease to 0 in 2017, indicating a very unstable situation, a rigidity of the company that, in order not to get losses, can reduce sales by only 1.05%. Although the turnover of the two companies are close as values, the fact that SC SERVOIL SRL fails to reduce the costs (especially the fixed ones) with more than the decrease in turnover, implies an unfavorable situation for this company.

**Temporal horizon (OT)** registered in 2015 is 283 days, increases in 2016 to 350 days, and in 2017 it increases to 356 days, meaning that although the break-even point expressed in monetary units has decreased, the enterprise takes more time to reach it in 2017 than in the previous year.

**Operating leverage coefficient (CLE)** indicates a low economic risk in 2015, the enterprise being stable, but it’s rising in both, 2016 and 2017, far beyond the 11 level, suggesting an unstable business situation, and the trend to increase this indicator in the last two years prints an increased economic risk to SERVOIL SRL.

Source: personal elaboration

**Conclusions**

In conclusion, 2017 was a difficult year for the two reviewed companies, which have experienced declines in turnover, corroborated with less significant cost reductions, which has print an economic risk that needs to be very well managed by the management of the two companies. From the economic risk point of view, SC QUATROOIL SRL presents a lower risk than SC SERVOIL SRL, regarding the fact that the economic result is less sensitive to the variations of the turnover than in the case of the other analyzed company and, as well, by a more efficient management of fixed costs.

The activity of an enterprise is under the operating risk, but a significant impact on its health has the structure of funding sources, impact determined by the financial risk.
The risk diagnosis of an enterprise is very complex, resulting from the cumulative influence of all the risks affecting its activity (exploitation, investment, financing).

References