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The outbreak of Covid 19, declared by the World Health Organization as global pandemic, has a considerable impact on financial management in adopting economic and financial decisions. On the background of actual conditions we face, the element that makes the difference at the business entity level is how each succeeds in managing its own resources in order to meet the current market requirements. The problems caused by this pandemic subject entities to numerous risks. This article was based on our desire to find out how the entity management manages these risks whenever it has to adopt managerial decisions.

*Key words*: Economic and financial decisions; Financial management; Financial objectives; Economic and financial risks; Profitability; Solvency; Liquidity.

JEL Classification Codes: D81, G31, G32.

## 1. INTRODUCTION

At the level of business entities, the financial activity is the most important duty of their managers. In fact, it is the financial manager's responsibility to make financial decisions. They are nothing else but conscious acts through which modalities are established for the finalization of financial matters or future events are scheduled. The connection between the financial activity of entities and investors in the business is made by the financial manager. The effect of financial decisions must be as expected by shareholders or financial creditors. Their satisfaction is reflected by the profitability, but is given especially by the risk. We could say that risk is an essential component that intervenes in the completion of the economic and financial activity and is based on several factors which, due to their impact on the results of the entity, make risk analysis particularly significant to the financial management.

In addition to the profitability diagnosis, risk diagnosis is also an important component of the financial diagnosis which implies, on the one hand, defining the risk notion, and on the other hand, identifying risk measurement indicators. From the specialized economy theory, it results that the notion of risk could be attributed several meanings, such as the variability of profitability compared to its expected or forecast value; the likelihood of the occurrence of a certain event, the likelihood of recording a loss, the sacrifice of a current and certain earning in favour of a future and uncertain earning. Consequently, the purpose of the diagnosis is to measure the variability of the results obtained by the business entity when its business is changed (economic

risk) and when its equity structure is changed (financial risk), to measure the liquidity of the company and its solvency.

It is important to mention that, at the level of the business entity, we can identify two categories of activities: the operating activity, and the financial activity. Both categories of activities form the current activity of the company. Under the legal regulations in force (Order of the Minister of Finance no. 1802/2014), the current activity of the company includes all the activities carried out by it, as part of its business, as well as the ancillary activities in which it takes part and that are a continuation of the aforementioned activities, related to them or resulting from them.

The risk factor at the level of the current activity is represented by the variability of the turnover, which, in its turn, determines the variability of the results of the operating activity and implicitly, of the current activity of the entity.

Due to the current global uncertainty caused by the effects of the Covid 19 pandemic, knowing the methods of quantifying risk seem to be more challenging than ever. Financial risk tolerance is one of the most important factors that affect financial decisions.

#### 2. MATERIALS AND METHODS

In the specialized materials concerning the research methodology (Ţilică & Ciobanu, 2019) it is shown that the Financial Manager makes decisions for his shareholders. They invest in order to obtain a financial gain, thus increasing the value of their invested capital. It is important to highlight that the Financial Manager's decisions will lead to an increase in the company value. We should also take into account the fact that investments generate higher profit if the investor accepts higher risk that is translated into a higher loss possibility. The fact that there is a risk is not equivalent to not making investments, instead, it is recommended to take into account that any investment has a risk. This can help explain the profitability-risk correlation very well.

This article falls into the fundamental research category, but also into that of researching the practice existing in this field. It is also based on qualitative and quantitative research methods (researching case studies, researching the practice in the field, methods of examining and measuring phenomena) and we will mention the following data sources, among others: observing phenomena, documents and texts, the researchers' (authors'), impressions and reactions.

### 3. RISK TYPOLOGY

In the activity of an entity, risk as a notion refers to the possibility to assess, in terms of quantity and quality, the likelihood of certain variations of the expected results, as compared to the values or levels estimated initially, that might occur following certain actions or inactions of the enterprise, and generate various negative consequences.

In the economic theory and practice (Muntean & Balanuță, 2010) two risk theories are highlighted: the classical and the neoclassical one. In relation to the classical theory, in the profit structure, a percentage of the invested capital is highlighted, as well as the risk payment (as compensation for the potential risk related to the economic and financial activity).

Such a risk approach has generated economists' harsh criticism. The supporters of the neoclassical theory believe that an entity that carries out its business in uncertainty conditions should take into account two elements: the size of the expected profit, and the size of its potential deviations. From the neoclassical risk theory, it can be inferred that the guaranteed profit has a higher value than the profit expected in the same size.

In order to understand the risk content at entity level, it is necessary to know two essential notions that are directly related to the notion of "risk", more specifically: "situation of risk" and "level of risk". Generally, the term "situation" is defined as a combination of various

circumstances and conditions that create a certain management environment of the entity or of another type of activity. Starting from the fact that the situation is characterized by the presence of and unfolding of certain conditions, in which we ascertain the influence of a determined phenomenon and we highlight the causes of its occurrence, then the notion of "situation" is broader than any separate phenomenon. There is a multitude of situations encountered by management subjects, but the situations of risk hold a special place. For the completion of the management activity, there are uncertainty elements conditioning the emergence of situations that do not have an identical outcome.

The situation of risk is related to statistical processes and is corresponding to uncertainty, the need to choose an alternative, the possibility to assess the likelihood of completing a version or another version in terms of quantity and quality. In fact, the situation of risk is a diversification of uncertainty, when the realisation of certain events is possible and can be determined. In such a case, objectively speaking, we can determine the probability of events occurred as a result of the joint activity of production partners, actions of the competitors, the influence of the environment on the development of the economy, the implementation of the technical and scientific results into the national economy, etc. In relation to the notion of "risk level", we can say that the certainty quality and quantity measure is reflected in this notion.

In an entity, the correlation between **profitability** - **risk** is of utmost importance when the goal is to assess the essence of risk essence. The investor takes the risk in conditions of uncertainty, due to the fact that, in addition to the risk of bearing losses, there is also a possibility to obtain additional income. Although it is clear that the profit gain is not guaranteed, the reward for the time lost, the effort made, and the skills employed can be substantiated both in the form of profit, as well as in the form of loss. Thus, in order to obtain the profit, the investor willingly accepts the risk as part of the economic life, but at the same time, he can partially delegate the risk to other business entities at any time, but he cannot omit it completely. In other words, in order to obtain profit, the investor must consciously take the risks corresponding to the decision made.

Another important aspect is the connection between the notions of "risk" and "uncertainty", which determines the difference between the scheduled result and the real one that is obtained, being the source of development of the activity of an entity. Risk analysis usually begins by outlining the term of uncertainty, of future insecurity. An economic action is deemed insecure when several results can be obtained, without knowing the probability of their occurrence. On the contrary, risk is characterized by the possibility of describing a probability law for the expected results. In fact, the two notions, namely "risk" and "uncertainty", are met combined in various proportions. Uncertainty becomes a potential source of risk, especially when it is inferred from an incomplete statement, or when incomparable sources of information are used.

In the specialized literature, a distinction is made between the concept of "uncertainty" and the concept of "risk". Certain author (Stancu, 2007) believe that risk cannot be opposed to uncertainty. Therefore, if a situation is uncertain, then we are in conditions of uncertainty, and we can no longer talk about a process of allocating probabilities.

In practice, there are many perceptions in relation to this difference, due to the fact that most financial decisions are made in the absence of statistical data and mathematical calculations available. Nevertheless, this distinction has a certain conceptual value. Uncertainty associated with a large impact is a larger unknown value than the risk associated to the same event. Nevertheless, in practice, the usefulness is relatively reduced, it is not a substantial one, since it depends on the degree of information in relation to the future events and on the credibility concerning the respective events. Consequently, the difference between risk and uncertainty consists of how information is transmitted and determines the existence, (in the case of risk), or

the absence (in the case of uncertainty) of the possible characteristics of the uncontrolled changes.

The impact of the Covid-19 pandemic on financial decisions as well as certain perceptions of risk at the management level constitute a complex approach, given the diversity of the areas under which risk is exercised at the level of an entity. The fundamental risk takes different forms such as economic risk, financial risk, or bankruptcy risk.

Economic risk reflects the sensitivity of the economic result to the variation of the level of the core business carried out by the entity. Depending on the factors that contribute to the generation of certain types of risk, the economic risk can be classified as follows: technical and technological risk; human resources provision and usage risk; risk related to the provision and use of fixed assets, including the active part; commercial risks related to the supply, provision and use of the material resources; fiscal risk.

The financial risk reflects the sensitivity of the result to the change in the conditions of financing the activity of the entity. This type of risk takes various forms, such: the credit risk, the liquidity risk, the investment risk, the interest risk, the currency risk.

The bankruptcy risk, or the insolvency risk, respectively, reflects the capacity of the entity to be able to make payments by their due date. with payments. The occurrence and manifestation of the insolvency risk is closely connected to the manifestation of the other aforementioned risks.

### 4. COMPANY RISK MEASURING INDICATORS

In the risk diagnosis analysis, the starting point is represented by the financial statements. These statements, also referred to as synthesis accounting reports, due to their information content and the functions they accomplish, constitute a particularly important tool in the process of substantiating economic decisions, and especially in the risk diagnosis at entity level. In order to carry out the analysis of the company risk, the main financial statements used are the accounting balance and the profit and loss account.

The accounting balance is a main source of information for the manager in relation to how the activity he leads us carried out, o synthetic image in terms of money, of the management and the overall result (profit or loss), and also a good way of knowing the risk level that ensures the maximisation of the entity value.

Due to its content, the profit and loss account provides information in relation to the financial activity of the entity, and also in relation to how it succeeds in managing its business by the size of the income, expenses and results it obtains. This annual financial statement drawn up in terms of flow allows for the performance analysis for the assessment of the profitability of an entity. The profit and loss account is of double interest:

- Following its analysis, an overall result is determined and overall assessments can be made in terms of economic and financial performance of the period.
- Allows for the full recapitulation of the incomes and expenses that contributed to their realization and identifies its influencing factors, whether favourable or unfavourable.

In addition to this analysis tools, the intermediary balances if administration are also used in order to establish a diagnosis concerning the company risk. They provide a useful image on the economic behaviour of the entity. They represent money accumulation markings that show the measure of the profitability of a company at its various levels of activity.

The operationalisation of the analysis of the profit and loss account can be achieved in two ways:

- 1. By preparing the financial intermediary balance sheet
- 2. By reporting each category of expenses in the net turnover.

For a better understanding of the concept of intermediary balance of administration, we are specifying that, similarly to the profit and loss account presented in he financial statements which is composed on levels of activity, intermediary balances of administration are formed in the same manner, by structuring the items of the profit and loss account in several steps, the result being, in fact, a number of indicators as well.

The specialised literature shows that the starting point in determining the money accumulation margins, or the intermediary balances of administration respectively, is the compliance with the following general rule: at each level of activity of the entity, the corresponding incomes are added and the related expenses are deducted. Thus, intermediary balances of administration are determined in cascade, the starting point being the most comprehensive intermediary balance, more specifically, the added value, the last being to determine the most synthetic intermediary balance, i.e. the net profit or loss of the financial year. Despite the fact that the preparation of the situation of the intermediary balances of administration is optional, for the entity managers, shareholders and creditors, the information provided by it is particularly important.

**Risk measurement indicators** are essential, given the general objective in financial management, namely to maximize profitability at s certain level of risk, or to minimize risk at a certain level of expected profitability.

These indicators can be synthesized as follows:

## Profit variability measurement indicators

The variability of profit is determined both by factors pertaining to the general conditions of the economy, expressed, for example, by the evolution of the gross domestic product, or by the inflation rate, as well as by factors that induce specific influences to each entity.

> Solvency and liquidity indicators highlight the capacity of the entity to meet its commitments in the long term, or respectively to pay its debts as they reach their maturity date.

Starting from these indicators and from the typology concerning the measured risk as variability of the profit, the following categories of risk are taken into account:

**The economic risk** refers to the sensitivity of the earnings before interest and taxes, known in the international literature as EBIT, in relation to the turnover. It can be calculated by means of the indicator **operating leverage -CLE**. This indicates the elasticity of the operating profit or loss compared to the company turnover and is calculated as follows:

$$CLE = \frac{\Delta\% EBIT}{\Delta\% CA} = \frac{\frac{EBIT_{1} - EBIT_{0}}{EBIT_{0}}}{\frac{CA_{1} - CA_{0}}{CA_{0}}}$$
 (1)

where: CLE = operating leverage, EBIT = earnings before interest and taxes, CA = turnover, the index 0 refers to the previous financial year, index 1 refers to the current financial year.

A high level of the operating leverage, while all the other factors remain unchanged, shows that a reduced percentage change of the turnover will cause a substantial change of the operating profit or loss. The logic of the existence of the operating leverage is given by the fixed costs of the company, namely those that do not change in relation to the volume of production of the

company. The higher these costs are, the higher the operating leverage will be, and the earnings before interest and taxes will be more sensitive to the variations of the sales volume. The size of the operating leverage is determined by three factors that are directly controllable by the entity management:

# • The fixed costs of the entity

As the fixed costs grow, the break-even point grows as well, and the operating leverage is increased, as a consequence, the company business becomes more riskier.

The reduction of the fixed costs of the company as much as possible is a priority for the management and can be achieved by a more efficient use of the company assets or by restructuring the business. The reduction of the fixed costs is translated into the decrease in the break-even point, which helps the company make profit at a lower level of the quantity of products sold and/or services provided..

#### • The variable costs

Insofar as the company management is able to reduce variable costs, there will be an increase in the sales contribution to the coverage of fixed costs and to the company profit. Consequently, the size of the break-even point will be reduced, and the company profit will grow. In relation to the ratio between the effect of fixed costs and that of variable costs on the operating leverage, the author highlights that, in general, the reduction of the fixed costs has a stronger influence on the profit elasticity in relation to the turnover, not to mention that the reduction of the variable costs is more difficult to achieve than the reduction of the fixed ones.

• *The turnover obtained*, which also depends, in its turn, the prices charged by the entity for its products and/or services.

Prices (or better said, their modifications) are mainly determined by the actual market conditions and have a direct influence on the market balance and the quantity of products and services that can be sold by companies. This is the reason why the effects of the price variation must be analysed only in correlation to the shifts they generate in the quantities of products and services sold by the company.

If the company management decides to increase prices, a reduction in the volume of goods sold might occur that could lead to a reduction of the turnover. Symmetrically, if a reduction of the sales prices is decided, a company might end up in the situation where an increase in the quantity of products sold compensates the price reduction and generated a higher turnover compared to the initial situation.

The price changes made by companies influence not only their internal profitability, but can also have significant influences on the competitive environment. This is true especially in the case of large companies, which often have economic and technological advantages over competitors. By reducing its prices, such an entity can achieve sales volumes able to offset lower unitary collections and to generate, for significant periods of time, important profits. Consequently, such an entity will gain a competitive advantage that will be difficult to overcome by its rivals in the market. Of course, if the entity does not have an advantage over its competitors, then it's initiative to reduce prices will result in similar measures from its competitors and in reductions of profits for all the entities in the market, due to the fact that the relative market shares well remain unchanged in fact.

The financial risk depends on how the business is financed: if it is financed exclusively from own capitals, it does not entail any financial risk. This risk occurs only if it is financed from borrowed sources which imply financial expenses for the payment of debts through interests and they influence the financial profitability of the company. Thus, the difference between the

financial risk and the economic risk is that the former takes into account the degree of indebtedness of each entity. The financial risk emerges when a company uses funds fixed cost bearing funds such as bank loans and bond capital, in its capital structure. The use of fixed cost bearing financial resources implies using the financial lever. The financial lever expresses the impact of the use of loans on the financial profitability of the company.

For the assessment of the financial risk, **the financial leverage ratio -CLF** is defined, which is basically the elasticity of the net result in relation to the operating profit (or loss):

$$CLF = \frac{\Delta\% PN}{\Delta\% EBIT} \qquad (2)$$

where CLF is the financial leverage ratio.

This indicator shows the percentage increase (or decrease) of the net profit of the company when its EBIT variates by 1%.

Based on the operating leverage ratio (CLE) and on the financial leverage ratio (CLF), the **total leverage ratio -CLT**, is obtained, which shows the percentage variation of the net profit of the company corresponding to a 1% change in the turnover:

$$CLT = \frac{\Delta\%PN}{\Delta\%CA} = \frac{\Delta\%EBIT}{\Delta\%CA} \times \frac{\Delta\%PN}{\Delta\%EBIT}$$
 (3)

or, equivalently:

$$CLT = CLE \times CLF$$
 (4)

where CLT shows the total leverage ratio.

The conclusions drawn for the operating leverage are also valid in the case of the financial leverage ratio: the closer the company operates to the break-even point, the higher its financial risk; on the other hand, the financial risk decreases as the turnover grows and/or fixed costs of the company (operating and financial) are reduced.

Carrying out an optimal financial management implies that the entity seeks to increase its degree of indebtedness as long as its economic return is higher than the borrowed capital rate. The compliance with this rule leads to the increase in the shareholders' wealth, a phenomenon k known as **Financial leverage effect of indebtedness**, which is calculated as follows:

$$Elf = (Re - Rd) \frac{D}{Cpr} \quad (5)$$

In order to calculate this indicator, we first need to determine the Financial rate of return:

$$Rf = [Re + (Re - Rd) \frac{D}{Cpr}] (6)$$

Where: Rf = Financial rate of return, Re = economic rate of return, Rd = interest rate, financial debts, Cpr = equity

# **Example:**

In order to determine and interpret the financial leverage effect, we started from taking over the following information from the financial statements of the company SIGMA S.A.: equity 25,000 RON, a bank loan in the amount of 14,000 RON contracted for a period of 4 years 4, with a 12% interest, a net operating profit of 9,500 RON, a profit tax of 16%.

For this purpose, we have followed the steps below:

1. Determining the economic rate of return (Re):

$$Re = \frac{Profit net \ din \ exploatare}{Total \ activ} =$$

$$Re = \frac{9500}{39000} \ x100 = 24,3\%$$

2. Determining the interest rate (Rd):

$$Rd = d(1-Ci) = 12\% (1-16\%) = 10,1\%$$

where Ci = profit tax share.

3. Determining the financial rate of return (Rf):

$$Rf = \frac{Profit \ net}{Cpr} \times 100 =$$

$$= \frac{Profit \ net \ din \ exploatare - RdxD}{Cpr} =$$

$$= \frac{9500 - 10,1\%X14000}{25000} \times 100 = 32,3\%$$
cial leverage effect (Fif):

4. Determining the financial leverage effect (Elf):

$$Elf = (Re - Rd) \frac{D}{Cpr} = (24,3\% - 10,1\%) x \frac{14000}{25000} = 7,9\%$$

## **Interpretation:**

Re = 24.3% and Rd = 10.1%. it can be noticed that Re > Rd, and based on this, we can say that we can talk about a **positive leverage** at the level of the company Sigma SA.

### 5. ANALYSIS OF THE BANKRUPTCY RISK

Under the current circumstances generated by the Covid-19 pandemic, we are aware of the fact that any entity, due to its object of activity and to the fact that there is no such experience in the Romanian market yet, could face various unpredictable risks when it comes to carry out its activity, in the process of obtaining products, executing works or providing services. When we want to assess such risks an entity could be subjected, we seek to find methods of measuring the economic and financial consequences of the management's decisions, substantiated into operating, financing and investment activities. The size of the risk of the economic and financial activity is of interest not only for the entity that resorts to loans, but also for the lending banks which seem that, in order to receive a loan, the entity must have a financial creditworthiness that could represent s guarantee of the healthy management at all levels, de la cel from the operating (tactical) to the strategic one.

As mentioned hereinabove, in the analysis of the company risk, in addition to the indicators related to the profit variability, other indicators could be used as well that show the capacity of the entity to be creditworthy and liquid. In this respect, the full assessment of the stability of the company and of the possibility to record losses anticipating the degradation of its financial situation down to the **bankruptcy risk**, can be achieved by means of indicators that express the quality of the economic and financial activity, more specifically **the patrimonial solvency** which expresses the degree to which own capitals cover long-term liabilities and loans

through patrimonial items and also through its **liquidity** which constitutes it's ability to pay its short-term liabilities by the due date from its available financial resources.

The current ratio, also referred to as the general ratio, measures the capacity of the entity to cover its current debts by means of its current assets.

$$Rlc = \frac{Ac}{Dc}$$

If Rlc < 1 we can speak about the lack of short-term payment capacity, the occurrence of the risk to accumulate outstanding debts which result in additional costs, the financial results can be diminished, its relationships with its clients become worse.

When Rlc is in the range (1,2) we have a favourable situation, of equilibrium of the indicator.

Also, if Rlc > 2 we can say that it has an unfavourable. The lower the liquidity of the current assets, the more unfavourable the situation, it shows an unfavourable management of the short-term debts, which results in a too high degree of chargeability.

The analysis of the capacity to bay medium- and long-term debts implies the analysis of the solvency of the company, in order to monitor the payment of total liabilities. The financial solvency indicators that can be analysed in the determination of the capacity to pay medium- and long-term debts are the patrimonial solvency ratio and the general solvency ratio.

The patrimonial solvency ratio (Rsp), also referred to as the financial autonomy ratio, is calculated as a ratio between the entity equity (Cpr) and the total capitals/ total liabilities (Pt), reflecting the degree of covering medium- and long-term liabilities from the equity of the entity:

$$Rsp = \frac{c_{pr}}{Pt} x 100 \quad (7)$$

it is recommendable that the level of this ratio should be of minimum 0.3, but the situation is considered normal if the patrimonial solvency exceeds 0.5, i.e. 50% of the total capitals should be represented by the own ones, the accepted financial safety rate being between [0.3-1]. The patrimonial solvency ratio shows the degree to which the entity finances its activity from own sources. (Bondoc, 2014)

## 6. CONCLUSIONS

The problems of the risk measurement at the level of an entity under the circumstances of the pandemic is particularly complex and represents a major preoccupation of the management of each entity, the objective that is continuously sought after being to maximize the company value, to increase the competitiveness of the company, and to minimize risk.

As mentioned hereinabove, once the risk is identified within the entity, this implies a more careful monitoring of such risk, not renouncing investments. Consequently, when the investment decision is made, both the probable gains as well as the risks involved must be taken into account.

Risk monitoring is a complex approach, given the diversity of the risk factors at entity level. Risk measurement indicators can be synthesized into indicators for the measurement of the profit variability and solvency and liquidity indicators...

Company risk analysis gravitates around the operating leverage - CLE, the financial leverage ratio - CLF and the total leverage ratio-CLT. All these indicators highlight the impact of risk in financial decision making. Another important concept is the bankruptcy risk which can be monitored by help of indicators for the analysis of liquidity and solvency.

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