ASPECTS OF THE FINANCIAL RISK IN THE ROMANIAN ECONOMY VERSUS THE FRENCH ECONOMY - COMPARATIVE PERSPECTIVE AND ANALYSIS -

Marinela BARBULESCU[1], Alina HAGIU[2]

[1]Faculty of Economics, University of Pitesti, Romania, marinela.tanascovici@yahoo.com
[2] Faculty of Economics, University of Piteşti, Romania, alina.hagiu@upit.ro

Abstract: *Financial risk is characterizing the variability of outcome indicators within the subject of the company's financial structure. A firm's capital structure is: equity and borrowed capital. In the first part of the paper we presented the types of risks that surround us in contemporary economic life, followed by the detailing and analyzing financial risk at the Romanian enterprise level, and in the last part we applied practically the fundamental financial analysis of risk on the French model. The aim of this paper was to present and analyze the most important situations in which the risk is presented in the economy and to offer suggestions and methods by which it's unwanted effects can be avoided, minimized or controlled, so as to improve human performance.*

Key words*:* financial risk, analysis, perspectives, financial balance.

JEL Classification Codes: G32, G38.

1. INTRODUCTION

There are several types of risks in the financial markets. The main two risks are the credit risk and the market risk. The latter can be decomposed into interest rate risk, currency risk and market risk in the strict meaning of this expression.

- The interest rate risk: a risk that affects the assessment of the interest rate products held by the investor.
- The currency risk: is the risk that affects the value of the assets held by the investor in relation to the variation of a certain currency.
- The market risk in the strict meaning of this expression: is the risk of the variation of certain specific assets independently of the risks that affect the quasi-totality of the securities (such as the risks defined below).

The credit risk can also be decomposed in collection risk, default risk, and exposure risk.

- The default risk: the risk of the debtor to be unable to meet the due date, either for the interest payment, or for the repayment of the principal.
- The collection risk: a factor that reflects the uncertainty concerning the value to be recovered by the investor in the event of default.
- The exposure risk: this risk represents the uncertainty concerning the value of the possible loss in case of default, as a result of the optional clauses that can be included in the characteristics of the loan.

In addition to the 2 types of risk, we can also mention the operational risk, the business risk, the liquidity risk, and the asset/liability risk.

- The operational risk: the risk to incur loss as a result of an error made by an employee.

- The business risk: the risk to incur profitability loss for reasons related to the activity of the company (increase in competitors' aggressiveness, disturbance of the balance between demand and supply…).

- The assets/liabilities risk: the risk of having a mismatch between the assets and the liabilities of the company (at the level of the convexity or of the duration for example).

- The liquidity risk: the risk of delaying the exchange rate and to incur loss when you are compelled to buy or to sell very quickly values for which a small volume is exchanged.

Many authors, as Franck Moraux or Reynolds in their work, had reached the conclusion that the credit risk is the most important and relevand part of the financial risk.

As mentioned in the title, this paper will be exclusively dedicated to the financial risk, with highlighting one of the most important part of it, namely credit risk. This is a highly topical subject insofar as the countless disturbances agitating the markets lately represent one of the illustrations of this risk.

2. ANALYSIS OF FINANCIAL RISK IN ROMANIA

One of the most frequent methods of establishing or developing a company is to contribute share capital. Using this method, owners anticipate a provisional profitability level corresponding to a certain level of activity. If this level is variable, the financial profitability will undergo certain changes which will express financial risk.

In other words, any activity that accompanies capital spending is automatically subject to certain risks that accompany profitability.

Companies that have contracted loans to credit institutions or other types of institutions (outside the company) own financial expenses corresponding to the respective loans, which expenses are manifested through the payment of interests and which exercise a direct influence on the financial profitability of equity capitals.

In the specialised literature, this risk is manifested by the sensitiveness of the net result to the variations of the operating profit or loss, and is expressed in the financial analysis through the financial leverage coefficient (FLC) calculated in two ways through elasticity:

$FLC = E_{Rnet/\mathrm{Re}\,xp} = \dfrac{\Delta Rnet / Rnet}{\Delta \mathrm{Re}\,xp / \mathrm{Re}\,xp}$	$FLC = \dfrac{\Delta rRnet}{\Delta r\,\mathrm{Re}\,xp} = \dfrac{IRnet - 100}{I\,\mathrm{Re}\,xp - 100}$ **or** $FLC = \dfrac{\Delta Rnet}{\Delta \mathrm{Re}\,xp} * \dfrac{\mathrm{Re}\,xp}{Rnet}$

In other words, from the two models used for the determination of the financial leverage coefficient (FLC), we can conclude that the value of the FLC shows the percentage change of the net profit or loss as a response to the change by one percent of the operating profit or loss and expresses the level of the financial risk in a direct manner.

At the level of accounting, financial analysis and management of Romanian companies, this coefficient is important due to the fact that the net profit or loss is the one that conditions profit (benefit) and dividends per share, as well as the company self-financing.

Another way of determining the FLC is to use the factorial model, which is determined based on the profit or loss flow through the profit and loss account (which is referred to as the PLA in the specialised literature), the net profit or loss being equal to the gross profit or loss after deducting the profit tax (as the share i), as follows:

$R_{net} = R_{brut}(1 - i) = [R_{exp} - Ch_{fin} + (V_{fin} - R_{extr})] \times (1 - i)$

Given that the calculation of the FLC takes into account only the current profit or loss and the financial expenses (the only ones that are correlated to the operation) which leads to the following formula of the net profit or loss:

$R_{net} = (R_{exp} - Ch_{fin}) (1 - i)$,

And the financial leverage becomes the following, from the mathematical point of view:

$$FLC = \frac{d}{d\,\mathrm{Re}\,xp}\left[(\mathrm{Re}\,xp - Chfin)*(1-i)\right]*\frac{\mathrm{Re}\,xp}{(\mathrm{Re}\,xp - Chfin)*(1-i)} = \frac{\mathrm{Re}\,xp}{\mathrm{Re}\,xp - Chfin}$$

Analysing the equations presented above, we can notice that the FLC value grows with the increase in the financial expenses and reflects the level of the higher or lower financial risk undertaken by the company when it resorts to indebtedness.

Financial risk can be inexistent, minimal or maximal. In the local specialised literature, this is mathematically expressed as follows:

Inexistent financial risk	**Minimal financial risk**	**Maximal financial risk**
Financial risk is inexistent when $R_{exp} = 0$ $FLC = \frac{0}{\mathrm{Re}\,xp - Chfin} = 0$	Financial risk can be deemed minor when $Ch_{fin} = 0$ $FLC = \frac{\mathrm{Re}\,xp}{\mathrm{Re}\,xp - 0} = 1$	Financial risk is maximal when, for the funding from loans, interests can be equal to the operating profit or loss ($Ch_{fin} = R_{exp}$) $FLC = \frac{\mathrm{Re}\,xp}{0} = \infty$

Source: Petrescu S., *Financial and accounting analysis and diagnosis - Guide theoretical - applicative*, CECCAR Publishing House, Bucharest, 2010

The limitation of financial risk through the presence of financial expenses can be made by increasing the break-even point, which implies including the financial expenses into the critical values. (Petrescu, 2010)

$$q_{critic} = \frac{Cf + Chfin}{p - v}$$

and respectively,

$$CA_{critic} = \frac{Cf + Chfin}{1 - v/p}$$

where,
Cf = overhead expenses
p – v = unitary margin of variable costs
q_{critic} = critical volume of sales
CA_{critic} = critical turnover

3. ANALYSIS OF THE FINANCIAL RISK BASED ON THE FRENCH MODEL

The specialised literature proposes a number of indicators for the measurement of risk in the financial analysis. However, this notion must be defined.

While in the internal analysis or in the credit analysis, the risk notion is a relatively clear one, the contemporary spectrum of the performance analysis (especially by shareholders) gives the notion of risk a special definition.(Cécile Kharoubi et Philippe Thomas, 2013)

In finance, in general, risk is the risk level affecting the future profitability. Thus for a shareholder, risk is the uncertainty that affects his expected rate of return per share. Given that this is included in TSR (*Total shareholders return.)*, the risk must be measured by the forecast β, generally assessed by the historic β of the share adjusted according to the anticipated evolution.

Of course, the default risk and the bankruptcy risk are the components of this overall risk, which mainly depends on the volatility of the company results and on the stock price in the market. Conceptually, the credit risk could be approached in a similar manner. The financial creditor hopes to obtain a return on the loan granted by it to a company (measured by means of a TRI- *The total return on the enterprise*); the credit risk could thus be approached, through the forecast TRI dispersion, leading to a default or bankruptcy probability. The risk studied in the traditional final analysis and in the case of the assessment of the credit risk, corresponds to the risk of the company to face cash which could determine it to cease payments.

The traditional financial analysis underwent profound evaluations through the standardization of a financial cash flow table: *the Free Cash Flow Statement,* which allowed for refining and supplementing the traditional measures. The financial literature teaches us that the (bankruptcy) risk analysis is performed through two approaches. (Cécile Kharoubi et Philippe Thomas, 2013)

- **The analysis of the risk from the perspective of the financial balance**

The default or bankruptcy risk can be viewed as a consequence of a financial crisis that can be related to a financial unbalance: the company lacked financial resources. In order to detect the risk, we should verify whether a financial balance is obtained.

According to this logic, the higher the significant financial balance of a company is, the lower its risk is.

Normative approach to the financial balance

This European approach postulates that the cash difficulties are generated by a situation where BFR (the working capital requirement - Le besoin en fonds de roulement) is no longer financed. Consequently, a well-balanced company always has resources cover its BFR. Thus, it must have permanent resources "in stock". The latter include the Equity Capital (EC), the Specific Provisions (SP) and Long-Term Debts are (DFLT) are mobilized to finance investments in Net Assets. Consequently, a company must have an excess of resources for permanent uses and to establish working capital.

Permanent resources (EC + SP + DFLT) – Permanent jobs = Working Capital (WC)

The working capital represents the resources available to finance BFR. The more significant the WC, the lower the risk. It constitutes, according to the established expression, a "mattress" of resources available to finance operation. The monetary measurement is not, however, very practical for the assessment of the balance extent; a Working Capital ratio is preferred to its detriment:

WC ratio = Permanent resources / Permanent jobs

Consequently:

If the WC ratio >1: financial balance:

If the WC ratio < 1: financial unbalance

We can thus obtain a more extensive formulation of the notion of financial balance, the WC being used to finance BFR.

WC – BFR = TR (**Treasury**)
If WC > BFR => TR > 0
If WC < BFR => TR < 0

Demonstrating conservative and prudent logic, this lecture of the financial balance performs an allocation of the resources to commitments (Long-term resources finance long-term commitments), and therefore, implicitly, a rationalisation of the financial resources. This approach leads to special financial situations where companies have to justify how they use their resources (for dedicated assets) in order to collect them. In such case, the company faces a drastic rationalization of the capital, which allows creditors to require them to observe their balance rules. Consequently, this approach is acceptable and adapted, in the case of PME or of companies in distress.

The positive approach of the financial balance

From a more international perspective, balance is analysed from the point of view of the bankruptcy risk. A company in distress can go bankrupt and a judge decides this. This can occur when the company has ceased payments, which situation is accurately defined by bankruptcy laws. Generally, it provides as a criterion the fact that the company is no longer able to cope with its payable liabilities using its available assets. There is either a financial distress, or a fatal financial unbalance. In order to measure the financial balance, perceived in this case through an (immediate) cash approach), an attempt is made to determine the probability of a financial crisis and of bankruptcy proceedings by applying the legal criterion. Liquidity measurement assesses the ability of a company to cope with its short-term commitments. The universal calculation divides the assets that will become liquid (Stocks, Receivables, Realizable and Available) to the short-term debts (Operating payables (suppliers and related accounts) and short-term financial debts (cash loans and short terms for the payment of long-term financial debts)) that will consume cash. The logic is cash in versus cash out (cash collections versus cash payments). A few ratios are used depending on the potential liquid assets retained. (C*é*cile Kharoubi et Philippe Thomas, 2013)

The current ratio divides the whole current asset to the short-term liabilities.

The acid ratio does not take into account the stocks in the current assets due to the uncertainty and to the time required to turn them into cash.

Last, but not least, the cash ratio divides only the realizable and the possible to the payable liabilities. There will be a financial balance if these ratios are higher than 1 and the highest ones are possible. Nevertheless, the financial community retains, more often than not, the first two rations in order to assess the short-term financial balance. (Franck Moraux – Olivier Renault, 2002)

Two consistent approaches

These two concepts, sometimes used at the same time in the continental Europe (Liquidity is studied by commercial bankers.), are just two sides of the same topic, related to the financial structure balance. WC reports the Permanent Resources for Permanent Commitments – either all the liabilities in the adjusted balance sheet, except Debts to suppliers and cash Loans – to the whole asset, except Stocks, receivables, realizable and available. The items that are not integrated are precisely those taken into account in the current ratio. Therefore, the current ratio is the inverse ratio compared to the Working Capital ratio.

Table 1 – Two notions of the financial balance

Financial balance	European	International
Basis Horizon Balance Logic	Regulation Short-term Structural Financing	Positive Short-term Instantaneous Cash
Diagnosis indicator	Working Capital Ratio	Current ratio
Threshold value	1	1

Source: *Analyse du risque de crédit,* Cécile KHAROUBI et Philippe THOMAS, RB Édition, Paris, 57p, 2013

These two tools have a different approach of the same vision of a financial balance: prudence and a certain financial conservative approach allow for avoiding bankruptcy risk (through a form of financial reserve). The measurement of the extent of the compliance with this balance contributes to the anticipation of this risk.

- **Risk analysis by means of solvency**

The financial and banking analysis of the credit risk is at the origin of the assessment of a company's capacity to cope with its commitment by the due date: solvency. For this analysis, the doctrine considers studying several elements.

Analysis of the indebtedness: financial structure

This is the assessment of the debt share in the company financing, taking into account that the larger it is, the higher the default risk will be.

A multitude of descriptive ratios describe the financial structure rate descriptive:

Financial independence = Equity/Liability

Financial autonomy = Equity + PS[1] / Liability

Financial indebtedness = Financial Debts / Liability

However, as a whole, the financial structure that summarises the financing selection and its consequences in terms of risk, is assessed by means of the following rate:

Gearing = Financial Debts / Equity[2]

The stronger the gearing, the higher the financial risk.

Debt service analysis

This analysis examines the consequences of indebtedness on the company and on its capacity to ensure the debt service. (Reynolds, D, 2008)

The repayment constraint is assessed by means of the capacity of the company to pay its financial debts by means of an interest coverage rate: *the interest coverage.*

This is the ratio between the Financial Expenses and the EBITDA margin. (EBITDA is the acronym of earning before interest, taxes, depreciation and amortization – which will also deduct the depreciation and provision expenses (these expenses are included in the respective operating expenses).

In the continental Europe, it is calculated as a % (interest share in the EBITDA, i.e. a taxation rate. As a matter of fact, it is expressed as being the (x) number of times "EBITDA" represents financial expenses.

[1] *Specific (regulated) provisions*

[2] *Two measurements are possible, depending on whether Specific Provisions are added or not to the Equity.*

The repayment constraint is analysed comparing financial debts (which must be replayed) to the cash flow generated by the company (which is used as a priority to make these payments). The considered cash flow can be, traditionally, the accounting cash flow: Financial debts/Self-financing capacity, or the Economic Free Cash Flow: Financial Debt/FCFF. In all cases, these ratios show how many times[3] debts represent the cash flow.

Renewal of the approaches by means of the Free Cash Flows

Nowadays, for a better assessment of the default risk, these ratios were improved by using the Free Cash Flows. One ratio rapidly established itself:

FCFD/FCFF (%)
Free Cash-flow to Debt, FCFD/ Free Cash-flow to Firm, FCFF

This ratio divides the net cash "spent" during a certain period by the service debt to the net cash generated by the asset portfolio. If this ratio is higher than 100% and the company does not have cash in advance, there is default. Consequently, the closer the ratio is to 100%, the higher the financial risk will be. Conceptually, the default risk should be analysed as being the probability that this ratio is higher than 100% in the future.

4. CONCLUSIONS

In Romania, when a financial analysis is made, the overall profitability is taken in to account – by studying the operation performance recorded in the profit and loss account – as well as the impact of the funding resources used in relation to the means used through the study of the return of capital based on the balance sheet.

In order to study the financial (or capital) risk, we should take into account the way the business of the company is financed, more specifically whether it is financed exclusively from equity capital (which is a very rare situation in Romania) or has borrowed sources.

Currently, in Romania (which is viewed as an emerging market in this respect), the main focus is put on the future-oriented analysis, which can determine through statistical assessment the chain effects of the sensitivity of the profit or loss at the variation of the volume of activity recorded in the previous financial year compared to the basic period, and for the determination of this aspect, one of the reference points is the analysis of the financial, operating, and implicitly, overall risks.

As the comparison of the two models shows, the Romanian model is very alike to the French model, so this paper represents only the starting point in the research process of the degree of risk that affects the future profitability of the financial business systems. The research will continue with the analysis of other countries models in order to determine the best practices in the area and to be able to formulate recommendations for improving the Romanian model.

As seen from the data presented above, a rich and relatively effective set of tools is available for the risk study of the fundamental financial analysis of the French model.

[3] *Years implicitly.*

Table 2. Financial risk analysis tools

Tool	Measurement	Unit
Working Capital	Permanent resources / Permanent commitments	Number
Current ratio	Current asset/ Payable liability	Number
Gearing	Financial debts/Equity	Number
Interest coverage	Interests / EBITDA	%
DSCR	EBITDA / Debt service	Number
Debt coverage	Financial debt/Cash flow	Number
Debt cash service	FCFD/FCFF	%

Source: *Analyse du risque de crédit,* Cécile KHAROUBI et Philippe THOMAS, RB Édition, Paris, 59p, 2013

These indicators allow for the examination of various components or the risk perception. However, these tools create real assessment and interpretation difficulties. Although many times, intuitively, we assess indicator values that could be associated to a strong risk, we do not know exactly what threshold we should start from in order to deem that the risk becomes strong.

Although these tools are undeniable advantages with a major role in the financial diagnosis, they are also accompanied by great "calibration" difficulties. They are generators of a feeling, of an impression related to the risk rather than a true credit risk quantifying measurement. We empirically and intuitively perceive that "there is a risk or there is no risk", but we do not assess its extent!

Paradoxically, these quantitative approaches lead to a subjective and qualitative interpretation.

REFERENCES

1. Anghelache, G. *Capital market in the European context*, Economic Publishing House, Bucharest, 2009;
2. Anghelache C. *General statistics and economics*, Artifex Publishing House, Bucharest, 2011;
3. Berkowitz, J. *Testing density forecasts with applications to risk management*. Journal of Business & Economic Statistics, Vol. 19, 2001;
4. Dowd, K., *Measuring market risk,* John Wiley and Sons, Ltd., 2002;
5. Franck Moraux – Olivier Renault, *30 ans de modèles structurels de risque de défaut,* Collection Recherche en Gestion, Economica, 2002;
6. Kharoubi C., Thomas Philippe, *Analyse du risque de crédit,* RB Edition, Paris, 2013;
7. Michel Dietsch – Joël Petey, *Mesure et gestion du risque de crédit dans les institutions financières*, Revue Banque, 2ème édition, 2008;
8. Petrescu S., *Financial and accounting analysis and diagnosis - Guide theoretical - applicative*, CECCAR Publishing House, Bucharest, 2010;
9. Reynolds, D., *Risk in capital markets and trading,* Extract from Chartis Research Report, 2008;
10. Roland Portait – Fabrice Poncet, *Finance de Marché,* Dalloz , 2ème édition, 2009.