# FINANCIAL INDICATORS FOR THE ROMANIAN COMPANIES BETWEEN ELIGIBILITY AND BANKABILITY OF EU FINANCED PROJECTS

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***Abstract:*** *The main goal of this research is to compare the eligibility indicators for accessing EU projects with the bankability indicators at the level of Romanian companies. This study was realized in a period when the term of bankability seems to be in the focus of the beneficiaries and management authorities for European funding, of the banking system and of the mass-media as well. This happens for the first time since the launch in 2007-2008 of the main structural EU funding programs focusing on the development of competitive SMEs, which brought significant changes in the EU funding environment. The same with the public institutions, many SMEs have applied for grants in order to finance their investments using different funding programs, especially under the European Regional Development Fund. This process to obtain European funding was a long one in term of evaluation and contracting periods. Under this context, the initial success of SMEs that have successfully applied and even managed to gain access to European funding was overshadowed by another sharper problem: lack of financial resources for co-financing to support investments or expenditures in the initial stages funding the project. This was also a big problem since the start of word financial and economic crisis. Under this context the banking sector was supposed to be heavily involved in ensuring external financing. The main difficulties in co-financing European funding projects by the banks came from the fact that the companies were requested to obtain satisfactory scores in order to qualify for the banking loans. Several indicators were used by the banking sector to analyze the creditworthiness of the applicant companies. From these indicators we selected five of them to be tested by using Student distribution modelling within the ModelRISK – VoseSoftware application over a group of 50 companies located in the North-Western region of Romania. After the model was created in this paper we tried to validate it. During the validation process of the model were observed differences between the relevancy of the proposed indicators in the analysis of the selected companies creditworthiness and also in the investment analysis itself.*

***Keywords:*** *Bankability, Dispersion Modelling, Financing investment projects, Financial Indicators, Creditworthiness*

***JEL classification:*** *H43, G30, G32, C61, G17, G21*

## 1. INTRODUCTION

In the last years the biggest financial impact of the development of the Romanian companies came from European funding and also from the fight to avoid the effects of the economic and financial crisis. After their launch, in Romania, The European funds brought a several effects over the economy, especially at the level of enterprises and their competitiveness development (Droj, 2010). In this period a massive wave of SMEs have applied for investments grants within the different funding programs, especially in

the Regional Operational Programme and under the Sectorial Operational Programme – Increasing Economic Competitiveness(Droj, 2012). But this phenomenon had mixed effects: an initial success of the SMEs that have successfully applied and even managed to gain access to European funding was overshadowed by another more acute problem: lack of financial resources for co-financing to support investments or expenditures in the initial stages funding the project(Droj, 2012).

The problems were more acute at the initial stages of the projects, when European funding grant recipient must invest their own financial resources to support the projects. These resources will be reimbursed later by the Management Authorities of the Programmes, if the projects are carried out respecting the national legislation, the rules of the programme and the expenses are considered eligible under the conditions of the financing contract.

Bankability of the projects became an issue, in this stage when confronted with the absence of sufficient internal resources to co-finance European projects, beneficiaries have returned again to seek the support of the banking sector (Droj, 2010). The banking system, as well reacted, to this new opportunity and created special departments to deal with the requests from their clients. Also new special packages of products exclusively dedicated for co-financing and/or pre-financing were created and proposed by the main Romanian banks: Banca Transilvania, BRD, BCR, Unicredit, Banca Carpatica, etc. This increase of applicants for special banking products which were required for sustaining project grants was initially received with a huge enthusiasm by the banking sector. But soon this transformed into a dilemma: the applicants which already obtained financial funding from the EU Programmes Management Authorities had huge problems in being able to obtain satisfactory scores in the credit analysis, according to the banking standards.

## 2. BANKABILITY ANALYSIS

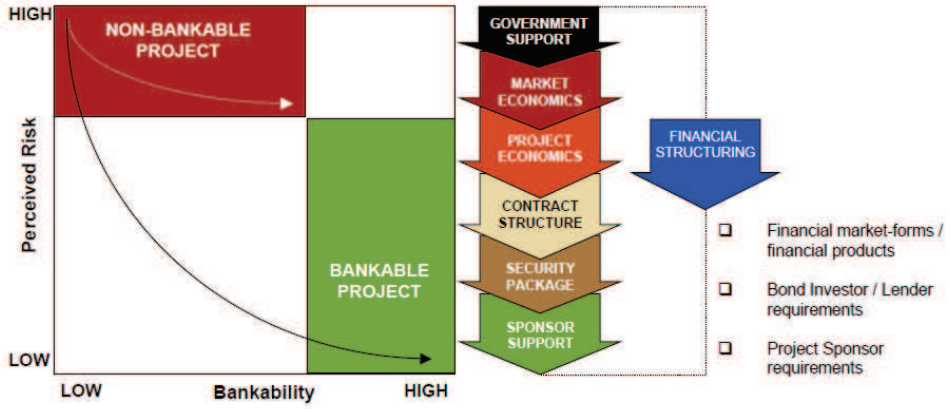
One of the main topics these days: bankability of the European projects is linked also with the topic of creditworthiness. Creditworthiness or “bankability” analysis are performed quite often in the last years especially concerning investment projects(Droj, 2012). Bankability, comes from the term bankable and was defined in the Business Dictionary(2014) to be a “Project or proposal that has sufficient collateral, future cash-flow, and high probability of success, to be acceptable to institutional lenders for financing” or more simple defined a project “Acceptable to or at a bank”(Eze, 2010). The European Investment Bank(2014) based on Vinter(2006) considers that a “project is considered bankable if lenders are willing to finance it”.

As reflected in recent studies (Hampl et all, 2011) the realization of infrastructure investments are conditioned by making these investments bankable. Even if bankability is perceived differently by the different stakeholders: banks, project management companies, beneficiaries, European/national management authorities.

The banks seem to concentrate and emphasize more on stable cash flows and on their impact over the project’s long-term debt service(Hampl et all, 2011). The same study specifies that in which concerns the equity investors they tend to focus on their expectations, on the possible investment returns, on possible tax incentives and over their portfolio strategies. It stressed the importance of ensuring „the project’s soundness, diligence in legal, technical and economic matters” (Hampl et all, 2011) for all factors

involved. This is presented in the below picture:

Figure 1. The General Project Finance feasibility Matrix




Source: UNECE (2013) - Capacity Building to Develop Bankable Energy Efficiency Projects

Also Delmon(2010) considers that bankability requirements and lender appetite will depend on the nature of the lender, their existing loan portfolio, their strategy for portfolio development and their desire to enter into new markets.

In terms of indicators of creditworthiness, the financial analysis performed by the banks, they are different indicators from one bank to another depending on their profile, sales policy and their exposure. In order to create an image as complete and effective as possible over the economic and financial situation of the credit applicants and to diagnose the state of their creditworthiness, as we noted above, banks defined and apply a set of internal evaluation indicators. The indicators must be chosen so as to support banking decision making officials on lending and later on allowing individual monitoring of the performance for each loan. In general, banks have a rating system based on the granting relative scores, with a minimum level of accessibility and intermediate levels as targets to be reached (Nevit and Fabozzi, 2000).

The main financial indicators of analysis presented by the specialized literature Trenca (2006) are:

- Liquidity Indicators
- Management indicators: turnover of current assets, inventory turnover, receivables turnover, rotation of suppliers, etc..
- Profitability Indicators: gross profit margin, net profit margin, etc..
- Solvency indicators: leverage, debt coverage (operating profit / interest paid)
- Cash-flow/treasury Indicators: cash flow = total revenue of the period / total number of payments

Following interviews with various officials involved in analysing loan documentation shaped the idea that five of the indicators mentioned above have high scores in the banking evaluation scales and are widely used. They are defined by various authors (Brealey et all, 2004), (Droj, 2012) and Pierre(2004) as:

- **General solvency ratio** – which reflects the entity's ability to cover the total debt of total assets held in property: i.e. the ability of enterprises to cope with all his maturity, both the short and medium and long term. For the enterprise to be able to repay debts and short term, the report recommended a value greater than 1.5. In the opposite (R sg <1.5), the risk of insolvency.

Insolvency and lack of liquidity at a time not necessarily determines the insolvency of the analysed business. Solvency is generated by an efficient activity and ability to pay and lack of liquidity may be temporary if the company is based on a general solvency.

$$Rsv = \frac{\text{Total Assets}}{\text{Total Liabilities}}$$

- **The Rate of Financial Autonomy** – indicates which is the level in which company assets is financed through own resources. Being a result of financial policy pursued by each company, the financial autonomy ratio may vary from one company to another. However, analysts consider that the minimum allowable value is 33% and the banks use as a threshold rate of 30% of net assets (equity) to the total assets, although their sources should help to finance a proportion of the least 50%. If equity is at least 66% of total resources, the company has a high financial autonomy, presenting almost certain guarantees to benefit by medium and long term bank loans.

$$R_{FA} = \frac{\text{Equity}}{\text{Total Assets}} \times 100$$

- **Rate of financial debt repayment through internal capacity of self-financing(CAF)** - This rate expresses the number of years in which the company is able to repay its long-term debts incurred, based on internal self-financing capacity. The banking regulations are imposing a maximum of three years for debt repayment based on self-financing capacity of the loan requesting company.

$$R_{CAF} = \frac{Long\ and\ MediumTerm\ Debts}{CAF}$$

- **Rotational speed of total assets** – it total reflects the efficiency usage of assets. Being a synthetic and qualitative indicator it reflects changes in the operational and financial activities of the enterprise. VRAT characterizes the supply, production and cost reduction policies at the level of the company, shortening the production cycle and the period of sale and receipt of production.

$$VRAT = \frac{Turnover}{Total\bar{}Assets}$$

**- Return on Equity –** measures the company's ability to make profit from the usage of it own capital. The financial return is used to remunerate shareholders either through dividends or by increasing company's reserves, which actually represents an increase of the intrinsic value of shares. This rate should register values above the average bank interest rate in order that a business/a company should be considered profitable.

$$\text{ROE}=\frac{Net\ income(After\ tax)}{Shareholder\ \ Equity}\times 100$$

Another criterion considered by the banking sector in awarding investment loans, especially to companies demanding financial support tools in order to carry out projects financed by European funds is the analysis of cash flows in future periods.

## 3. USAGE OF THE FINANCIAL INDICATORS FOR THE ANALYSIS OF THE BANKABILITY OF INVESTMENT PROJECTS

As I mentioned in the previous chapter, the banking sector when performing financial creditworthiness analysis is using several financial indicators from which emerged five financial indicators which seem to be widely used by banks in Romania(Firtescu, 2008). In order to test the relevancy of these indicators were selected a set of 50 companies from the north-western region of Romania which benefited from the Operational Programme - Increase of Economic Competitiveness - Axis 1 in order to increase their competitiveness, production capacity and to diversify their operations. The financial statements of these companies were analysed to determine correlations between the indicators proposed.

The first step was the determination of financial indicators presented in the previous chapter for each company studied. In the second stage we measured the distribution of each indicator separately using the normal distribution (Gauss) because it can approximate most distributions. By definition, the variable X is a normal distribution of parameters m (mean) and s (dispersion) if its probability density is(Brooks, 2008):

$$f(x)=\frac{1}{\sigma\sqrt{2\pi}}e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

and the distribution function is:

$$F(x)=P(X<x)=\int_{-\infty}^{x}f(u)du$$

To determine the dispersion for reimbursement capacity and for the financial rate of return, since the range of values corresponding to these indicators generated many insignificant (0 or values which tend towards 0), we used Student dispersion(van Hauwermeiren et all, 2012). Student dispersion is used for low volume samples, less than 30, or when a normal distribution approximation is unsatisfactory.

By definition, the probability density of Student distribution is:

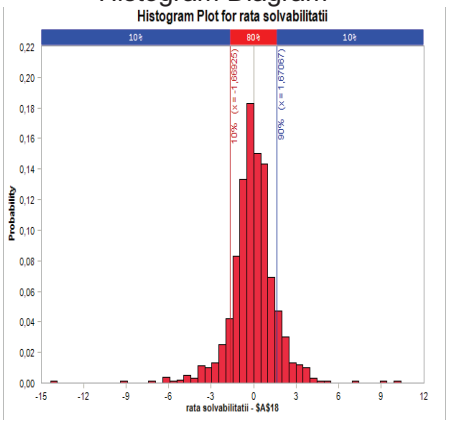
$$f(t)=\frac{\Gamma\left(\frac{\upsilon+1}{2}\right)}{\sqrt{\pi\nu}\Gamma\left(\frac{\upsilon}{2}\right)}\left(1+\frac{t^2}{\upsilon}\right)^{-\frac{\upsilon+1}{2}},t\in\Re,\upsilon\geq 1$$

Where the distribution parameter n is called the degrees of freedom and can take the values 1, 2, ..., n. Where n is the degree of freedom greater than 30 Student distribution is equivalent to the normal distribution. In stage three the scattered diagrams were determined for each financial indicator evaluated. The scattered diagram was obtained by plotting the values of the indicators which are related to the same element in the sample (VoseSoftware, 2014). From the analysis of the cloud of points obtained we can easily analyze common distributions, marginal distributions, as well as information about

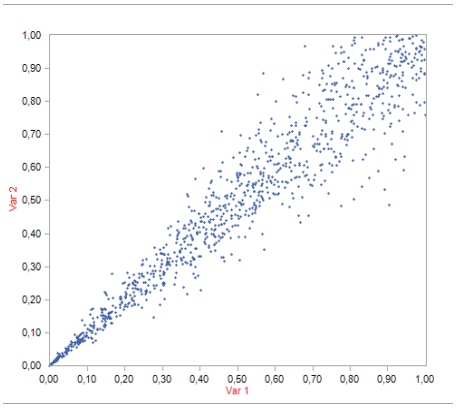
how the association of variables influences the analysis.

Figure 2. Rate of solvency analysis

Histogram Diagram



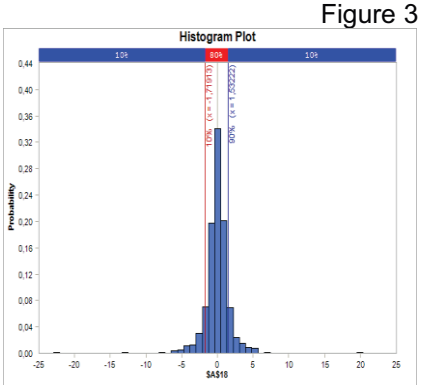

Scattering Diagram

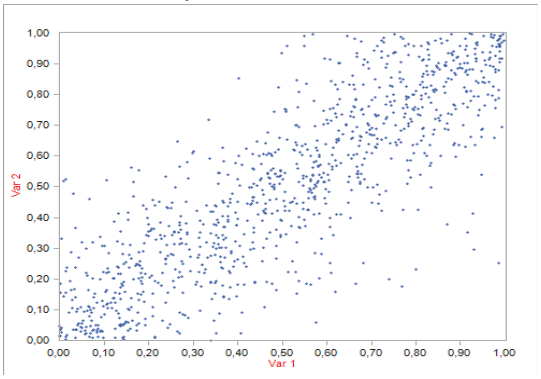



Source: Analysis conducted by author with application ModelRISK - VoseSoftware

As shown in the figure above most companies fall into conditions surrounding the solvency of 80% of companies in the range of 1 to 1.5. The analysis of the scattering diagram shows a close positive correlation of this indicator.

Figure 3 Financial autonomy ratios

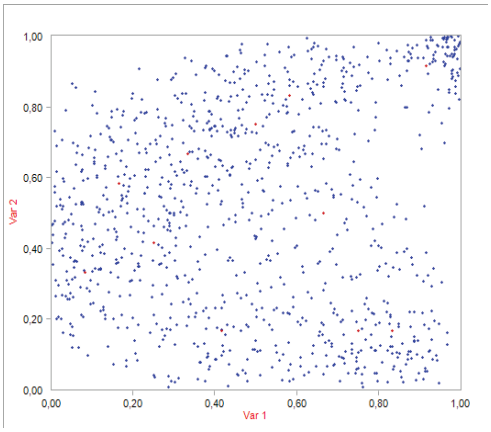



Source: Analysis conducted by author with application ModelRISK - VoseSoftware

As shown in the figure above most companies fall into conditions surrounding the solvency 80% of companies in the range 0.3 to 0.5. Unlike the solvency ratio of the scattering diagram analysis shows a weak positive correlation of this indicator.

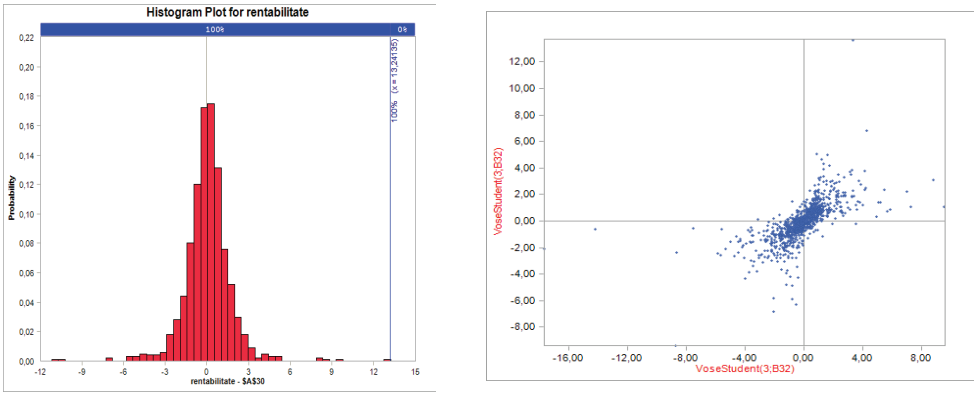
Figure 4. Rate of financial debt repayment through internal capacity of self-financing




Source: Analysis conducted by author with application ModelRISK - VoseSoftware

Rate of financial debt repayment through internal capacity of self-financing(CAF) unlike previous indicators do not show that correlation is present. Analysis of value indicators, of the calculated student distribution it shows an optimum value lower than 2. We can mention that this indicator is 0 for most of the companies which were analyzed, since they most of them do not have registered long term debts.

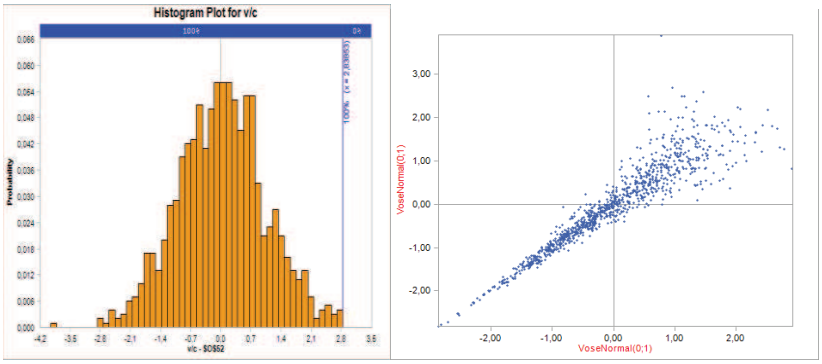
Figure 5. Return on equity




Source: Analysis conducted by author with application ModelRISK - VoseSoftware

For the analysis of the Return on Equity we used both types of analysis (histogram and the dispersion diagram). The analysis of the histogram reflects a threshold value of maximum 13% and minim 0%. In the same time the dispersion diagram represents a close relations and concentrations within the results.

Figure 6. The relation between the value of the investment and the turnover




Source: Analysis conducted by author with application ModelRISK - VoseSoftware

The relation between the value of investment and the turnover was also similar to the rest of the indicators analyzed.

As shown in the figure presented above the investment value and turnover should be in correlation, marginal values are indicating projects with value higher than the annual turnover of the company (in four projects 4, it was obtained even 10 times bigger turnover than the company value).

These kind of projects are not considered feasible for any banks in order to receive investment loans. In which concerns the evaluation of the projects at the level of the Management Authorities this criterion is not taken into account in evaluating financing projects, except the AM POR for 4.3 ROP Axis.

## Conclusions

As mentioned by the ICE(2014) A project's bankability can be determined only after establishing its feasibility in terms of social, economic, financial, technical, environmental, and administrative factors. As observed from the above realized analysis, using ModelRISK – VoseSoftware, the chosen indicators performed with totally different results in the 50 selected case studies. An average recommended threshold can be determined for most of them except the Rate of financial debt repayment through internal capacity of self-financing, which seem to provide a large scale of results, impossible to quantify and to aggregate with all others indicators in a bankability analysis. A solution for a proper bankability analysis of the indicators can be using relative score or ponderation score charts.

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