

7<sup>th</sup> International Conference on Applied Statistics

## Statistical methods applied to the financial analysis of a publicly funded investment project

Banica (Ghintu) Ramona Mihaela<sup>a</sup> \*<sup>a</sup> Bucharest University of Economic Studies, Piața Romană nr. 6, Bucharest 010374, Romania

---

### Abstract

The article presents the elaboration method of financial analysis for an investment project financed through irredeemable public funds. Taking into account the economic and financial context of the company and before the analysis of risk related to the implementation of the project, the financial analysis aims at offering evaluators the necessary information for deciding upon the opportunities for funding the investment, according to the principles and rules from the solicitor's guide. The data are presented starting from the synthesis of the economic and financial situation evolution of the company and of its performance indicators for the most recent three years. The cash flows that determine the net discounted value and the internal profitability rate, important indicators in the evaluation process, were established based on the forecasts obtained. Also, the risks, determined with the help of statistical methods, were identified in the sensitivity analysis by defining the critical variables that might influence these indicators.

© 2014 Elsevier B.V. This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

Selection and peer-review under responsibility of the Department of Statistics and Econometrics, Bucharest University of Economic Studies.

**Keywords:** risk management, sustainability, cash flow, financial indicators

---

### 1. Introduction

With the aim to develop the socio-economic and business environment, the national and European authorities offer investors irredeemable public funds for implementing investment projects in various major domains of activity.

The investment decisions constitute the basis of any development strategy. Economic growth and welfare depend on productive capital, infrastructure, human capital, know-how, total productivity factor and institution quality. All

---

\* Corresponding author. Tel.: +4-072-230-4206.

E-mail address: [ramona\\_banica@yahoo.com](mailto:ramona_banica@yahoo.com).

these development elements imply – to a certain degree – difficult decision making related to spending economic resources in the present with the hope of future benefits in a distant and uncertain future (European Commission, 2008).

To this purpose, a financial analysis chapter is required in order to show if the investment proposed by the funding beneficiary is justified from the point of view of the project's results, as well as if its development, implementation and operation are done in accordance with the primary objective of the Cohesion Policy regarding sustainable development, which includes, among other requirements, competitiveness.

Within this analysis:

- All information will be correlated;
- Each income and expense category will be detailed and explained;
- The net discounted cash-flow method will be used for elaborating the financial forecast;
- The analysis of the financial sustainability of the investment will comprise (Solicitor's guide):
  - The financial profitability of the investment, determined using the Net Discounted Value (VAN) and the Internal Financial Profitability Rate (RIRF), computed based on the total value of the investment (Solicitor's guide). The total value of the investment includes the total eligible and ineligible costs (VAT as well) for the forecasted scenario of the project's incrementing variant. The financial expenses, taxes and levies, credit instalments are not included here.
  - The financial feasibility/durability of the project, by verifying the net cumulated (not discounted) cash-flow (Solicitor's guide) taken into account for the forecasted variant of the project: "Company with project financed through irredeemable public funding".
  - The profitability of the investment based on profitability rates (Solicitor's guide).

The discount rate used for the discounting of the net cash flow in computing the net discounted value is 7%.

## 2. Hypotheses

Company Alfa, whose project is proposed for financing, has an entirely private social capital of 5,000,000 lei. Having an experience of 20 years, Company Alfa's main domain of activity is reconditioning and maintenance of roads and airports. Also, the company does civil and industrial constructions, iron and steel repairs and offers transportation services. The entire activity of the company is based on highlighting the importance of the client in business, which implies that the policy and the actions of the business must be targeted towards satisfying the requests and wishes of the client. The company's management adopted the system of management through rigorously established organisational and individual objectives: quality of work, timely execution of tasks, cost efficiency.

The development programme of Company Alfa regarding rehabilitation of roads aims at assimilation of new technology and equipments for carrying the repairmen tasks and interventions on the roadway, in places with easy or difficult access, in working conditions that are compatible with the ones existing in the European Union. Increasing competitiveness of the tasks performed at the technological and professional standards of the European community and improving work productivity are permanently in the attention of the company.

The project "Research, Development and Innovation Centre for increasing performance" proposed for funding by Company Alfa aims at creating a regional centre for development of innovative technology and materials in the construction domain, which will be endowed with performant equipment, but also valorisation of the technical-scientific potential and of the material base the company already has.

## 3. Data and methodology

With the view to carrying out the financial analysis of Company Alfa, I have gathered the following documents: the financial reports of the most recent three years and their respective balance, the balance of assets for the last completed financial year, the situation of credits at 31st of December and to date.

The data acquired for elaborating the project proposal refer both to the forecasting process of budgets and cash-flows and at incremental information related to the investment.

Download English Version:

<https://daneshyari.com/en/article/981782>

Download Persian Version:

<https://daneshyari.com/article/981782>

[Daneshyari.com](https://daneshyari.com)