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GUVERNUL ROMÂNIEI



Instrumente Structurale
2007 - 2013

STUDY ON FINANCIAL AND SOCIAL DISCOUNT RATES

- EXECUTIVE SUMMARY -

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The document was prepared by experts who supported the implementation of the contract „Development of the capacity for the Cost-Benefit Analysis”, project co-financed by ERDF through TAOP

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This document has an informative character.

Project implemented by:

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1	Scope of the study	<p>Investment projects financed by the Commission of the European Communities cover a large area of sectors, use different financial mixes (different percents for public and private funds) and, in general, are characterized by different risks. For these reasons, capital budgeting has to use complex techniques in order to become a valid instrument for avoiding the waste of financial resources. Some choices regarding the hierarchy of the different indicators or their meaning can be considered subjective, so the justification for their level has to be done cautiously. Therefore, the study tries to explain the necessity of taking into account a rigorous level for financial and social discount rates.</p> <p>This study proposes a justification for the levels to be used for these two indicators for the particular case of Romania. The performance economic indicators for Romania are still one of the poorest in European Union, so a deep concern for the use of financial resources is explainable.</p> <p>Thus, it is necessary to verify the applicability of the financial discount rate of 5% (recommended in the Community's methodological to be used in financial analysis of CBA) and of the social discount rate of 5.5% (recommended in the Community's methodological framework to be used in economic analysis of CBA) to the socio-economic conditions of Romania and for different sectors/sub sectors. Thus, this study analyzes the adequacy of financial and social rates and proposes specific approaches in line with the local environment.</p> <p><i>To simplify, the study seeks to provide answers to the following questions:</i></p> <ul style="list-style-type: none"><i>To what extent the financial discount rate of 5% in real terms and the social discount rate of 5.5% recommended by the European Commission are applicable to the socio-economic conditions from Romania</i><i>What is the impact of using these discount rates over the projects financed through Structural Instruments</i><i>Which is the most adequate level applicable to Romania in terms of financial and social discount rates to be used in the cost-benefit analysis</i>
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		<ul style="list-style-type: none"> • <i>What is the impact of using different discount rates (different than those recommended by the European Commission) over the projects financed through Structural Instruments</i>
2	Study Structure	<p>The study is structured into seven chapters and annexes.</p> <p>The first chapter presents the scope of the study; the second one introduces the methodology used during the preparation of the study; the third chapter introduces some theoretical issues on the discount rate, while the fourth one presents a short analysis over macroeconomic ratios at Romania level and country risk assessment.</p> <p>Detailed information about existing discount rates applicable for different types of beneficiary are included in chapter 5; the same chapter explains the impact of a certain discount rate in CBA for different types of investments.</p> <p>Chapter sixth presents approaches in order to determine a suitable discount rate for public and private sectors, together with proposed level of these rates and justification of the recommendations.</p> <p>Within Chapter 7 there are the conclusions of the study.</p>
3	Key parameters	<p>The discount rate used for evaluating the performance of an investment is influenced by a set of risk factors, among which an important and undiversified risk is coming from the socio-economic environment. The risk premiums depend on the specific condition of investment, so there has to be taken into consideration the risks that are coming from economic and social framework.</p> <p>For a better understanding of the Romanian context and specific risk factors, which influences the financial and social discount rate, the study presents the Romanian socio-economic framework, considering the country risk assessment, social framework, economic framework and analysis of the main economic sectors. The study emphasizes on the economic framework of Romania (taking into account the current monetary and credit policy, capital market development, and fiscal policy) and the analysis of the main economic sectors and related key parameters (inflation, GDP structure, profitability, deficit, etc)</p>

4	Analysis period and application	<p>The analysis is based on the conditions in Romanian economic and social context in 2011. Due to changes in the economic background at European level due to the economic crisis of 2008 – 2009 and the economic uncertainty, regarding growth over the next period, it was necessary to verify whether current measurement instruments of future investments are in tone with current changes. In this regard the study looks at the efficiency and the effectiveness of the currently used financial and social discount rates in CBA, for projects financed through Structural Instruments, and makes recommendations for improvement of the analysis.</p> <p>The recommendations are applicable to the next allocation period, expected to 3-5 years.</p>
5	Defining the issue	<p>Cost Benefit Analysis uses the concept of discounting in order to make present and future cash flows obtained from an investment comparable. The discounting approach needs a defined discount rate.</p> <p>Discount rate can be considered a correction factor for considering the principle of taking time into account in the appraisal of investment projects. As a result, because the project benefits and costs occur at different time intervals it is necessary to calculate the financial flows in the moment that the investment projects are analysed, by using the discount rate. In cost-benefit analysis, two types of discount rates are used: financial and social.</p> <p>This study tries to explain the necessity of taking into account a rigorous level for financial and social discount rates that should be applied in Romanian socio-economic context. Moreover, it stresses that the financial and economic analysis have to be done before the investment decision. Of course, it can be argued that nobody knows what the future will bring into life. However, a less perfect plan is better than total hazard.</p> <p>This study responds to the queries regarding the estimation of the financial and social discount rates used in capital budgeting for public investment projects. This study proposes a justification for the levels to be used for these two indicators for the particular case of Romania. As is presented in Chapter 4, the</p>

		<p>performance economic indicators for Romania are still one of the poorest in European Union, so a deep concern for the use of financial resources is explainable.</p> <p>Despite the simplicity of the “discount” concept, choosing a discount rate is a controversial and a difficult issue of the cost-benefit analysis. It can be mentioned that there are different points of view regarding the discount rates, and different recommendations for the relationships for calculation to be used in practice, for financial, but also for social discount rate.</p>
6	Current situation and approach	<p>For the programming period 2007-2013, the EC recommended in the Working Document no. 4, a financial discount rate of 5% in real terms as a reference parameter for the opportunity cost of the long-term capital and a social discount rate of 5.5% for Member States benefiting from the Cohesion Policy - among them being also Romania. The same levels of financial discount rate and the social discount rate are indicated in the Romanian „National Guide for the Cost Benefit Analysis of the investment projects”, conducted with the assistance of JASPERS.</p> <p>However, several Management Authorities through the experience of practice and conducted studies related to the concept of discounting have chosen to modify the above mentioned levels for the discount rates (financial in particular).</p> <p>For investment developed under EAFRD (European Agricultural Funds for Rural Development) it is recommended to use 8% for the financial discount rate (source www.apdrp.ro) for all types of investments.</p> <p>For investment developed under “SOP IEC” the level of financial discount rate is set to 9% (source www.minind.ro).</p> <p>CBA developed for investments under ROP (Regional Operational Programme) recommended the following rates (source www.inforegio.ro):</p> <ul style="list-style-type: none"> - For public beneficiaries - 5% for financial discount rate and 5.5% for social discount rate (investments in roads infrastructures, social, tourism, business environment) - For private beneficiaries – 9% for financial discount rate and 5.5 % for

		<p>social discount rate (investments in business development, tourism)</p> <p>The only Cross Border Cooperation Programme which takes into account the recommendations of Working Document no. 4 is the Hungary-Romania Cross-Border Co-operation Programme 2007-2013. The only beneficiaries for this programme are from public sectors (Local Public Authorities, Researching Institutes, Public Hospitals, and Universities etc.). For all type of the investments financed under CBC the financial analyses is required using the financial discount rate of 5%.</p> <p>Romanian socio-economic context has some particularities, described in Chapter 4 of the study, which have to determine a careful analysis in order to propose recommended levels for the financial and social discount rates.</p> <p>Beginning with this and the theoretical background for estimating the discount rates, the study analyses a series of methods for obtaining values for the financial and social discount rates and chooses the best method to be used.</p> <p>One of the first standout points that emerged from the analysis was the fact that, financially, the public and private sectors have to be approached separately because of different conditions that affect the two sectors (for example a public authority can contract loans much cheaper than private companies, but private companies can contribute with their own cash flows directly to the investment).</p> <p>The method of calculating the social discount rate had been chosen on other criteria, some of which being that public projects have generally more socio-economic benefits than private investments and theoretical approaches themselves support the method used.</p>
7	Results of the current situation	<p>In 2007-2013 the EU Funds will contribute to the infrastructure plans of 27 countries, including ten new members (mostly former transition economies) and the latter <u>candidates</u> to accession (Romania and Bulgaria). ISPA funds assisted Croatia and other accession candidates.</p> <p>According to a report, by October 2009, 21 projects were submitted to the European Commission for approval, of which 13 projects for the Environment sector, a project of the productive sector (energy) and 7 projects in the transport sector. All</p>

		<p>13 environmental projects and two transport projects were approved. Regarding the CBA, there were not reported significant problems in the environment sector, while for projects in other sectors is too early to conclude whether there is a real need to take measures additional to specific ones for each project.</p> <p>With regard to projects whose budgets fall below thresholds established by HG 28/2008, in spite of the flexibility offered by the legal framework and methodology for the European and national level, in practice, potential beneficiaries were asked by applicants guides to provide complete cost-benefit analysis for nearly all investment projects, such as investments in research and development, information technology and communications, energy, transport, environment (except for bio-diversity), health, education, business infrastructure, cultural heritage and tourism.</p> <p>The current studies will assess the most important indicators used in Cost Benefit Analysis, and whether there is need for them to be updated for practice under the current socio- economic conditions, for the improvement of the above stated results.</p>
8	Proposed approach	<p>The financial discount rate</p> <p>In academic literature and in practice we can find, however, differing views regarding the discount rate that should be used in the financial analysis of investment projects.</p> <p>Out of the 3 approaches taken into consideration by EC the weight average of capital costs (WACC method) has been used in estimating the financial discount rate because it uses real market indicators.</p> <p>The Weighted Average Cost of Capital (WACC) approach for calculating the cost of capital is widely used and accepted. It is the method adopted by all Public Sectors historically and remains the preferred methodology of most regulators. The WACC method, described detailed in the study, calculates an estimate of the expected rate of return on total company assets. It can reflect the minimum return sought by investors/shareholders while in other cases investors/shareholders may set hurdle rates higher than the WACC.</p>

The WACC approach applied so far by EC is perfectly applied on both sectors when supposing that the marginal public investment should have the same return as the private one. But is not the case in Romania as the private sector bears more risks and a higher cost of capital, therefore we are proposing different discounting rates for public and private sectors.

Additionally, for the private sector we are proposing the financing cost approach, respectively the borrower costs, which is further detailed in the section related to discounting rates for private sector.

The social rate of return

There are two main approaches for calculating the social discount rate, depending on the type of investment (public and private), respectively: social opportunity cost rate of capital and social time preference rate (STPR). The social opportunity cost rate of capital is usually identified with the real rate of return on marginal projects in the private sector. The social time preference rate is the rate of fall in the social value of consumption by the public, known as the consumption rate of interest. Cost-Benefit Analysis is more suitable for projects with long term horizon, respectively for public investments with significant economic benefits. Also, the appraisal of private projects are more focused on the financial aspects of the project than social one (financial ratios are more important for a successful investment project). In this respect the present study proposed the same approach as it was followed for developing the Guide to Cost-Benefit Analysis of investment projects (2008), EC, respectively a shortcut solution for both public and private investments using the STPR.

Ideally, project-specific parameters should be estimated for each individual project because the opportunity costs of the resources used or produced may differ from project to project, due to the specific characteristics of each project. However, in the context of public finances, in many cases the necessity for the controlling of the public financial resources can become a barrier for the applicability of the theoretical issues regarding the connection between discount rates and risks. Thus, accepting the use of different discount rates - different from project to project - can create agency problems, affecting the points of view of some analysts, which can adapt their discount rates in order to obtain public financial resources. As long discount rates are very subjective indicators (see

		<p>Chapter 3), these persons can justify in an incorrect manner higher or lower levels for discount rates, which can determine an inappropriate estimation of NPV. As result, even the variability of discount rates from project to project can be accepted from a theoretical point of view, their approval should be given cautiously. However, it can be considered the principle that, for very important projects and with a sounded justification, can be considered an allowance for a modification of the recommended level of social and financial discount rates taking into account the risks, according to the principle “higher the risk is, higher has to be the discount rate”.</p>
9	Proposed rates	<p>For private beneficiaries a financial discount rate of 9% and a social discount rate of 6%.</p> <p>For public beneficiaries a financial and social discount rate of 6%.</p> <p>The estimation of discount rates has to be understood as a permanent process of recalculations and re-estimations. For public funds, the social efficiency implies that public money to be not wasted for inappropriate projects. For private investors, too low levels of return offered by public-private partnerships (which are expressed by the rate of required return for the private investors’, but also as cost for the public funds), can determine lags in development and opportunity costs. As a result, once the economic conditions, the expectations of the investors and the public policies are changing, these discount rates have to be recalibrated.</p> <p>As the discount rates and in fact any other parameter used in the CBA shall be analysed in accordance with each developing strategy on investment sectors, we suggest that once the strategies will be made available for the coming period, these studies shall be reviewed.</p>
10	Motivation	<p>In conclusion, in accordance with the current situation in Romania and uncertainty for future forecasts also due to the worldwide downturn since 2008 which will affect the global economy on a longer period including the coming EC allocation 2014 – 2020 period, the lack of information at Romanian level, we</p>

believe a more conservative approach is more realistic in our case in respect with the EC recommendations relating discounting rates. Even if the requirement is that Romania shall align with the other EU member states' economy also from the discounting rates point of view, the trend being descendant (as described in the study sections), we think this can be done with small steps and in accordance with country risks and variations on certain inputs affecting these ratios.

Therefore, as it has been described since the beginning of the study starting with macroeconomic ratios and the way they are affecting these discounting rates, comparison with other EU members, defining discount rates up to the end of the study where we have proposed a different approach for public and private sectors, in the light of a better consumption of EC funds but in line with our characteristics and developments Romania may take into consideration also new financial discount rates for the coming period. Also, in our opinion, trying to modify these rates for the current period is not acceptable as long as this can modify the allocated budgets, a major part of the projects are under preparation and modifying the rules during the development process can bring important delays in the project preparations, unpredicted additional costs and later decrease of the EU funds absorption.

Regarding the economic discount rates relevant mainly in the public projects case, we think the current value shall be used for the next period as well, based on the fact that the fluctuations of the economic growth of Romania have registered values between (-7% - 9% as it was presented in the sections above. Having such fluctuations in the actual economic situation, the lack of data from the point of view of the crisis effects on the socio-economic aspects in Romania on long term, political changes and legislation it is quite difficult to fix a standard for Romania but to use the suggested one by the EC.



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