***Financing methods in project management and its relevance in the succeed of a project***

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## **Abstract**

How to finance a project and how to get advantage of the market in order to succeed is one of the most important topics in project management. The project manager and projects financiers must be aware of the finance and management issues such as BOO/ BOT, BOOT, etc. In managing project there must be an structure consistent with project financing practice, when deciding where to look for finance, how much is needed and how the money should be obtained, the project manager is dealing with project finance and the challenge here is to lead the project to a happy ending within budget and specifications. Looking the resources and defining what to do with those, is only the beginning of a large and delicate process of knowing how to present your case and how to get the money achieving a deal that is beneficial to both the company and the financier. In this article we will analyze the different methods of financing projects in public and private sectors and how lenders and borrowers get advantage of the situation in order to achieve mutual earnings.

**BOT (Build/Own/Transfer) BOO (Built-Own-Operate) BTO (build-transfer-operate) BOOT (build-own operate-transfer)*

## *1. INTRODUCTION*

As the project manager became a specialist in project finance (or an expert in the finance area), realize the importance of manage different kinds of financing methods. Now is worldwide known that the nature of the projects can vary depending on the source of financing them or in the area that they will be implemented.

This information is aimed to those who either work in the project management environment or just want to be aware of the different methodologies of financing in project management.

A good project manager must Identify the financing requirements and analyze the potential financing choices, discover how and when to restructure your debt position and there are several techniques to financing a project that can help a project manager in this process such as build-own-operate (BOO) build-own-transfer (BOT), build-transfer-operate (BTO) and build-own-operate- transfer (BOOT).

It is often said that *money is the lifeblood of every business*. So, companies will require funds for daily operations, budget preparation, expansion and investment, as well as to fortify their capital bases and increase profits for themselves or for the shareholders that work with them.

The "Build-Operate-Transfer" (BOT) or "Build-Operate-Own" (BOO) methods have been tested for use by new private infrastructure projects which had traditionally been under development by the public sector. In this article we are going to explain briefly these different methodologies and his impact in project management.

## *2. VARIOUS FINANCING METHODS*

When a project is considered for debt financing from external sources, firms will decide methods of incorporation and the structure of debt contracts based on the decision whether the project will be financed separately or not. For example, firms may elect to finance infrastructure as a separate investment, which is not supported by the firm's balance sheet. The necessity for separate project financing could partly arise due to corporate balance sheet constraints. Under such circumstances, if a project is financed as a separate legal entity then project finance principles may be followed instead of conventional corporate finance[1].

For technical matters the project manager must have understanding of this global information:

***BOOT, BOT/BOO**: forms of concession in which a public authority contracts with a private company to Build, Own and Operate a specified piece of infrastructure (BOO), and possibly later Transfer it (BOOT) back into public ownership. The contracting firm expects to recover its outlays from charges to customers or to the public authority (off*

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[1] A widely followed articulation of PF is that it is "a financing of a particular economic unit in which a lender is satisfied to look initially to the cash flows and earnings of that economic unit as the sources of funds from which a loan will be repaid and to the assets of the economic unit as collateral" (Nevitt and Fabozzi, 1998). The economic unit in this definition typically refers to a capital investment project incorporated as a single venture company (Project Company) with a set of legally and economically independent assets with a single industrial use. Nevitt and Fabozzi (1998) suggest that the key to a successful PF is structuring the financing of a project with as little recourse as possible to the sponsor, while at the same time providing sufficient credit support through guarantees or undertakings from a sponsor or third party, so that lenders will be satisfied with the credit risk. Under such circumstances the particular PF becomes limited-recourse finance, rather than non-recourse. Source of Information: **ROLE OF INSTITUTIONAL ARRANGEMENTS IN FINANCING PROJECT COMPANIES IN ASIA/ Dr. K. A. K. Devapriya and Dr. H. Wilhelm Alfen/** October 2, 2003

*taker) buying its services. In a BOT the operator Builds, Operates and eventually Transfers the assets back to the public authorities, without legally owning the assets[2].*

This particular form of structured financing, BOT can involves sovereign countries, private international investors, huge costs and long duration.  Applying this methodology, brings with it a lot of legal, commercial, political, social and economical aspects that added risk issues to the project. Due to this, BOT projects are generally structured on a project basis requiring all parties to share the risks of the project.

On a BOO project, a project sponsor undertakes the development, funding, design, construction, ownership and operation of the project for a defined period of time. The arrangement involves a long-term supply contract with the client, who is charged accordingly for the services delivered. With a BOT scheme, the sponsor undertakes the same functions. However the project is transferred to the client at the end of the supply contract term. [3]

Key marks of the BOO method:

- The lenders to the project look primarily at the earnings of the project as the source from which loan repayments will be made. Their credit assessment is based on the project, not on the credit worthiness of the borrowing entity.

- The security taken by the lenders is largely confined to the project assets. As such, project financing is often referred to as "limited recourse" financing because lenders are given only a limited recourse against the borrower.

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[2] http://www.worldwatercouncil.org/ Glossary
[3] http://www.hyflux.com/hyflux_b_model.html

The borrowing company maintains full responsibility for the design, preparation, and implementation of the project, though the Lender is deeply involved in each of the stages of the project.

BOO/BOT projects are very useful in bidding situations. By implementing these methodologies, the company or the government can share the risk of the project.

BOO(T) structure projects is a form of project finance, debt financiers will undertake a review of all core project documents to assess the allocation of risks and how that allocation impacts upon their credit approval. [4]

All these methodologies are used with new projects and work as a concession Agreement. For example, BOOT works the following way: The government finances and builds the plant using its own budget. After the plant is built, it hires a private company to run it for an agreed period of time under certain price conditions. Once the period is over, the plant will be owned by the private company. This system offers advantages of low risks to the private company and the possibility of an efficient management. BOOT methodology stimulates the private operator to maintain the plant in good conditions because this private sector in some moment will own it.

All the process of financing management with this methodologies, affect directly the project life cycle, the project risk management, and it's developed in the project cost management, where stages such as feasibility studies and project preparation are done. For the lender the process of analyze the viability of the project is called project cycle

[4] http://www.mcmullan.net/eclj/BOT.html

where variables such as process of project identification, preparation, appraisal, implementation, supervision, and post-evaluation are evaluated.[5]

The essence of BOT/BOO projects is to increase social benefit through the cooperation of the government and the private sector. Therefore, based on the foundation of mutual trust, the government and the private sector both should bear a reasonable part of the risk as the role of a partner. Furthermore, they both need to specify clearly all the related rights and obligations on the concession agreement for observation accordingly. For instance, in the acquisition of land, specification of standards for environmental protection, certificate issuance and settlement of disputes, the government must exercise its full authority in order to maintain the administrative efficiency and eliminate any suspicion and anxiety of the private enterprise. On the other hand, the private enterprise should not unreasonably ask for favors from the government, but plan cautiously to undertake operational and price risks.[6]

## *3. FINANCING METHODS ROLE IN A PROJECT*

When managing the financial aspect of a project, the project manager is managing a process which brings together planning, budgeting, accounting, financial reporting, internal control, auditing, and the physical performance of the project with the aim of managing the project resources properly in order to achieve the project's objectives. Project financing management (PFM) is one of the most important processes for a

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[5] Reference : PMBOOK, The World Bank Group (***www.worldbank.org)***

[6] Financial and Banking Practice in the BOT/BOO Projects/ Yung-san Lee/ http://www.icbc.com.tw/chinese/news/news06/news88110601/news8811060105.htm

project success. In this process the project manager has to deal with the financial information and resources which will help him/her at the moment of making a decision and get results on time and within budget. The finance management plays a role not only for the borrower but for the lender.

Projects should be financially, economically, socially, and environmentally sound. In order to fulfill this requirement, the PFM is responsible for the preparation of the identification of the most suitable structure of the project to ensure good arrangements, so the lender can determine is the conditions are good enough for the project to succeed. For example, if some company requires a loan from the World Bank it'll work in this way:

> *<< The Financial Management team (FMT) finalizes the assessment of the Financial Management (FM) arrangements through using the FM Questionnaire and the FM Report. During negotiations, the Bank and Borrower endeavor to agree on the measures required to assure project success. The Borrower reviews final documents and both sides come to agreement on the terms and conditions of the loan. In addition and once project is approved, the FMT ensures that the Credit or Loan Agreement is well understood by project staff and that each project staff fully understands her/his duties and responsibilities as well as his/her relationship with others. Following approval, the loan or credit agreement is submitted to whatever final process is required by the borrowing government (agreements may have to be ratified by a country's legislature). At the end of the disbursement period (can take several years), a completion report identifying accomplishments, problems, and lessons learned is submitted to the Bank Board of Executive Directors for approval. The FMT proceeds to review the Project*

> *FMT System through a follow up to FM Assessment. It also determines the FM rating in the Project Status Report and continues ensuring compliance and providing technical assistance to the client. Following completion of the project, the Bank's Operations Evaluation Department (OED), conducts an audit of the project, where the project's outcome is measured against its original objectives. The audit entails a review of the project completion report and preparation of a separate report. Both reports are then submitted to the executive directors and the borrower. These reports are not available to the public; however, OED periodically prepares impact evaluations on sets of projects based on these reports. >>* ***(Source of information: www.worldbank.org)***

Project finance (PF) is a nowadays, an important subject in the enterprise financial environment. It has been used with effectiveness and notable success as an alternative for financing an ample range of projects.

What distinguishes the financing project management from the customary direct financing is that instead of use all the assets of the company to generate cash flow, financing project management uses the financial engineering to get advantage of the resources that are available and managed them in order to achieve successful arrangements and get an advantage financing the project.

"PF differs from traditional non-project loans as the former emphasizes the cash flow analysis and is referred to as "Cash Flow Finance." The main concept is that the financing agency chooses a specific plan or business entity to provide financing; and the payment of principal and interest will solely come from the profit and cash flow generated by that plan or business entity. With regard to the collateral, it is limited to the asset purchased under that specified project. The key issue is that banks do not allow having recourse to the project sponsor, shareholders of business entity, or the affiliated company when the borrowers fail to honor their debts (principal and interest). Because of the features of: "without recourse" and "limited recourse" in project finance, banks strongly emphasize the mechanism of financial risk-taking and project risk sharing."[7]

### *4. BENEFITS AND CONTRAS OF MANAGE PROJECT FINANCE AND THIS DIFFERENT METHODS*

BOT/BOO are attractive from the perspective of government officials, because this contracts are efficient mechanisms for rapidly organizing private capital and management in order to have and provide a set of priority services, without affect the overall utility system's organization and employees.  This kind of methodology offers a “predetermined cash flow” which means that even there’s an implementation risk, there’s an absence of market risk.   Even though, there are risks those concessions agreements address, such as the timing and level of the investment program, how and when tariffs will be adjusted, and valuation of assets in case of early contract termination. That’s why this king of negotiations and bidding process in a public environment can take several years to be accomplished. The financial risk can be particularly dangerous in the BOT contracts, where the borrower only can use the revenues generated by the new asset, to finance his initial investment. Because of this the projected cash flow must be as accurate as possible.[8]

The BOOT contracts have the tendency to work well when the purpose of the project is to offer a service, but if the aim is to improve a service or make more efficient a system,

[7] Financial and Banking Practice in the BOT/BOO Projects/ Yung-san Lee/ http://www.icbc.com.tw/chinese/news/news06/news88110601/news8811060105.htm
[8] http://www.worldbank.org/fandd/english/0397/articles/0100397.htm

this modality is not recommended. These methodologies increment the complexity of the financial study.

BOT, BOO and BOOT are a very attractive financing models, when a project faces “No recourses” or “limited recourses” to finance it. The financing feasibility of BOT/BOO projects is the crucial factor to the success or failure of any project.

“BOO is maybe the trickiest of these because here there's at least, up front, no government involvement whatsoever. The private sector builds the project, owns it, and operates it. Now there are lots of things, of course, that meet those criteria. Every time somebody builds themselves a house, they are building it, owning and operating it. What distinguishes things that are called BOO projects is typically that there is some continuing level of government involvement and so we distinguish BOO projects from private investment in general by the fact typically that there's an essential service of some kind being provided, in a situation where we can't simply rely on the existence of a large number of competitive suppliers of that service. So, in some way or another, the government remains involved. Another area of involvement in transport infrastructure projects is typically the need for the government to use powers of coercion to let the project go ahead in the first place. Say, for example, we're going to build a private railway line - it's typically the case that the viability of that depends on the capacity of the government to resume land, compulsorily, in order that the private or government builder of the railway line can proceed”.[9]

The financial institutions that provide financing should be aware that arranging a BOT project consumes significant time and higher costs. “All in all, any BOT/BOO projects

[9] Professor John Quiggin, Professor of Economics, James Cook University/ www.uq.edu.au/economics/**johnquiggin**/Conference/BOOT.html

require close cooperation among the government agency, financial providers, and the private sponsor to make them successful"[10].

## *5. CONCLUSION*

Within institutional economics perspective of PF, this paper presents the description of an investigation into financing project management methodologies, through BOT and BOOT. Financial engineering and structured financing solutions are a priority to the successful and realization of development projects; these financing methodologies are very useful in developing markets and its implementation has been increase in Latin America.

The public infrastructure projects by adopting the BOT frame, mobilize private capital to participate in infrastructure projects, stimulate more investment, and improve the operational efficiency. However, the other side of these good deals is having a large sum of money involved, an extensively long payback period, and high project risks that must be shared. Because of this, the responsibilities and obligations in these contractual arrangements should be specified clearly between the government and the private sector. "The private investor not only needs to study and analyze the project feasibility, but also should obtain the financing support before the bidding. With regard to the financial viability, the estimated self-liquidation ratio should not be too low. If the project sponsor cannot acquire reasonable profits, then the project cannot last long".[11]

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