

COORDINATES OF A RISK MANAGEMENT PROJECT

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Abstract

High risk – high benefit: a well-known correlation both in the economic field and in the day-to-day life. Another correlation, on which this article is based: large project – numerous participants – increased risks and other malfunctions.

The risk management concept is challenged by those projects and is forced to find the most adequate “customized” ways for each project at its turn.

In this respect, the assessment of management has followed the trend of the last three decades, marked by moving of management profit analysis by risk intermediation, respectively the transition from managing profit to risk-return relationship management. Such trend assumes the obligation of participants to identify objectives and expected benefits of the project on the basis of the strategies laid-down, the elements of risk management policies, in conjunction with the indication of the most negative scenarios which they may provide.

This activity must take into consideration the process of obtaining and combining human, financial, physical and information resources in order to accomplish the primary goal of the proposed and wanted project by a certain segment of population.

Project participants are directed to evaluate their own activities in terms of revenues and risks from the business access, opportunity, operating mode, as well as the limitations and boundaries on certain sides of activity. The paper focuses on the analysis and evaluation of incomes and risks, on simulations to streamline the activities and the determination of the optimal model of project choice.

Also, the paper treats the risks that can be taken over by the sponsors, especially those related to implied guaranties, even implied guaranties.

Keywords: project risk, output supplier and purchaser, swap currency, swap on interest rate, operation risk.

Introduction

The investment projects support the economic development of a country by creating and developing production capacities, achieving the infrastructure and socio-cultural objectives.

The present paper intends to identify the project participants with all their duties, and especially the risks which are relevant for the project, the stultification of their consequences, as well as risk management by the parties entitled to manage them.

Minimizing those risks must be operated starting from the negotiation stage of the project participants and reflection of those agreed with the contract arrangements.

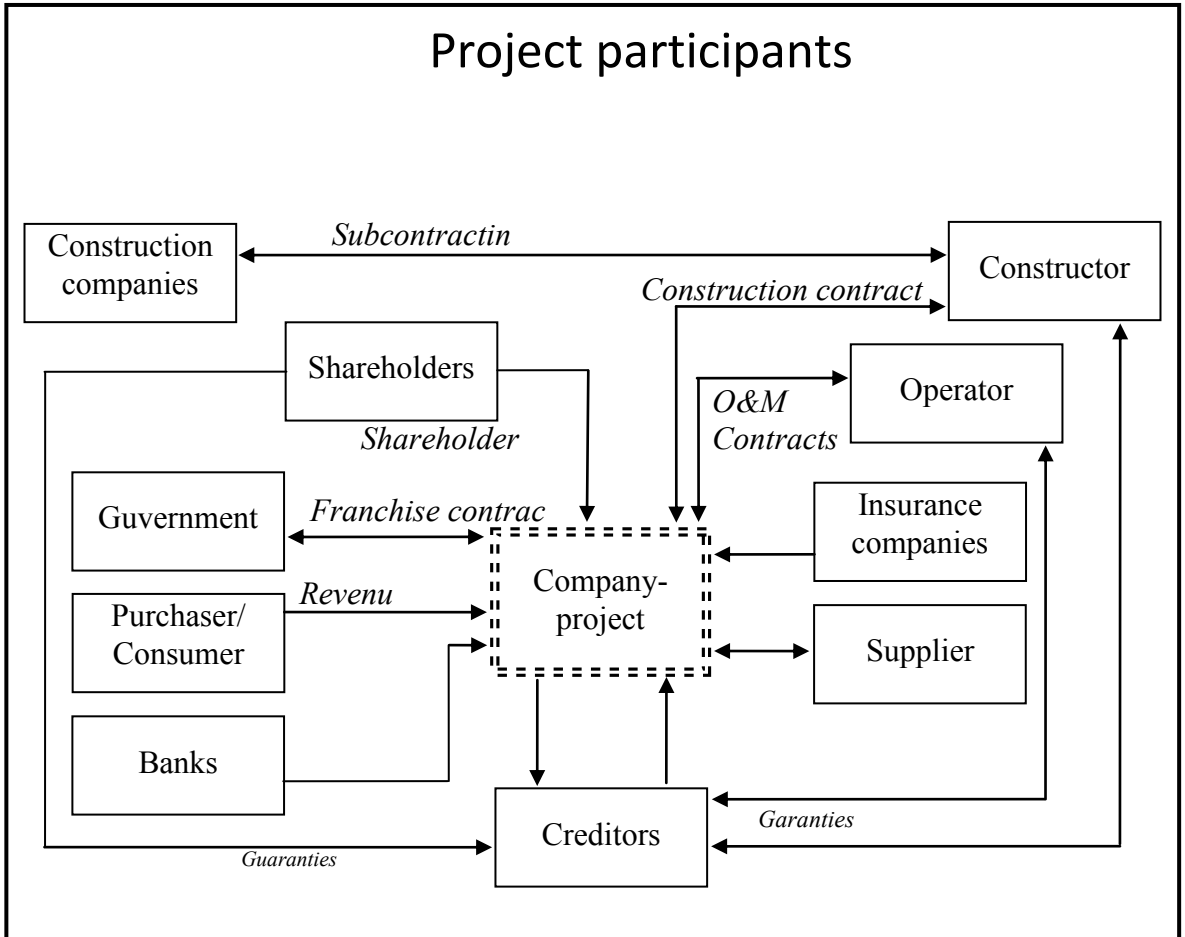
Discussion

Large project means infrastructure objectives or other high scale constructions to create or develop production capacities or socio-cultural objectives and implying also numerous participants. Summing up, they are those included in figure 1.

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Figure 1. Project participants



In the first place, in order to reduce the risk of the project promoters (most of the cases, shareholders, named in this case sponsors), those are separately constituted, under the shape of a company-project getting out of the company finance sphere and joining the project finance field (Project Finance).

Another step is the identification of the risks which are relevant for the project, their reduction (for instance by selecting checked suppliers, with a good reputation) and managing risks towards other parties which are entitled to manage them (simplified, the construction risk is transmitted to the constructor, the management risk to the manager and so on). At this level, still, each part involved is covered and /or ensured against the risks which come with the territory (1).

Risk management differs from a transaction to another.

1. However, in most cases, the parties participating at risk management are: the production purchaser, the supplier, the constructor, the government, the operator, and, of course, the sponsors.

◆The *output* purchaser is motivated to assume certain risks when the project is important for his own business.

The relationship with the output supplier and purchaser is approached mainly through the indirect guaranties, as long term contracts, which can assure the availability of the needed materials, on one hand, and the project revenues on the other hand. The most known and applicable contract arrangements of the kind are: *take-if-offered*, *take-or-pay*, *hell-or-high-water*¹, *put-or-pay*, and *pass-through*.

The *take-if-offered* contract urges the purchaser of the project output to accept the delivery and to pay for the offered products and services. The contract doesn't demand the purchaser to pay in the case when the project doesn't succeed in delivering or supplying the promised services. Thus, the contract protects the creditors only if the project is operational. In general, the creditors demand further arrangements to cover for force majeure, which make the project inoperable for a certain time.

The *take-or-pay* contract urges the purchaser to pay for the goods and services even if he doesn't accept the delivery. It can be set that the parties from the contract should cover all the fixed expenses of the project (the fixed operational and maintenance expenses, the debt services, the net benefit of the shareholders) or only a part from the project capacity. In the latter case, the project sponsors have to sell the remaining part from the market transparently or to look for long term buying arrangements with third parties.

The *hell-or-high-water* contract is similar to the *take-or-pay* contract, with the bounding to pay to the purchaser further, no matter if a product is delivered or not or the services are offered or not.

The *put-or-pay* contract provides that the supplier should deliver a certain quantity of materials to achieve the project or to pay a certain amount which can allow the provision to be made by third parties in case he doesn't succeed in fulfilling his duty. The *pass-through* arrangements come to complete the purchasing ones or supplying with the purpose of protecting the investors from unwanted amendments of the goods price. For instance, a link between the power selling price and the fuel buying price for central heating can be set. Thus, if the price of the fuel increases, it increases therefore also the selling price of the power from the buying contract. Yet, if the efficiency of the fuel use decreases, namely if a unit of produced power needs a higher consumption of fuel than it has been anticipated (then the consumption on production unit increases), then the *pass-through* arrangements don't apply and, therefore, the net operational revenue won't diminish.

◆The supplier can take some risks from his desire to sell his own products.

◆The constructor most times takes risks appropriate to the construction time. On the construction market there is a strong competition, and a large project may be a profitable source of income and, in the same time, an opportunity to increase the reputation of the construction company.

In order to guaranty the constructor's responsibilities stand-by credit letters are used, bid bounds guaranties, performance bonds guaranties, advance payment bonds guaranties and so on.

◆The government is interested in promoting certain projects according to the economic, political and social context.

The involvement of the government doesn't pay a real part in certain assumptions (although, in some cases the strategic importance of a project for the national economy of a state justifies this approach), but guaranties against the political risk action (transfer, expropriation, etc.) the government co-interest in a particular project is a cautious and wise attitude, due to the fact that not few were the case in which certain projects profitability was affected by the hostile the government decisions, with social, political, environment motivations etc., more or less well-founded.

¹ The phrase (come) hell-or-high-water means in English "any difficulties which may arise".

The government support offered to a project can be expressed in implicit guaranties, but also through formal support guaranties. The latter contains insurances on behalf of the government to minimize the political risk.

◆The operator is, also, motivated to take over some risks in exchange for a convenient operation and maintenance contract.

◆The sponsors (the shareholders) assume some risks at their turn and can be demanded to contribute with some in-house further capital in case any adverse event takes place. The sponsors also have to offer some guaranties or they have to obtain them from third parties (2).

These take over the risks they don't succeed in allotting or consider they cannot manage effectively. Along the limited guaranties (as amount, time or coverage), there is also an interesting tool through the consequence it has, without having a strong background: the implicit guaranties. These are so-called guaranties, due to the fact that they don't have a legal influence over the guaranty. Still, they offer certainty to the creditors who get from the sponsors insurances that all the efforts will be made for the project to succeed. The implicit guaranties take the form of declarations, intents, best-efforts commitments. The most common implicit guaranty is the comfort letter which consists of a sponsor intent declaration to supervise the management and the development of the project. In case the financial terms deteriorate, the guarantor sponsors will take all the needed measures to prevent the project from becoming unable to fulfill its duties.

2. Risk management organization and its objectives

Risk management in an organization or institution is, first and foremost, the responsibility of the executive board. The main objectives of a good system of risk management concerns:

- establish a common accepted definition of “risk” and the types of risks;
- evaluation of financial sources necessary for the institution, of existing and potential internal and external risks;
 - establish of clear responsibilities in the field of risk management and reporting system;
 - ensuring a transparent, comprehensive system of information management, a system of monitoring and reporting of actual exposures, losses and gains;
 - development of a system for measuring financial performance to take into consideration the expected loss (the cost of activity), unexpected loss (risk measurement), capital allocation for each risk, where is possible, and income adjusted for each risk (return of capital adjusted with the risks);
- define and use principles of diversification of risk and financial management of the portfolio;
- establish the price of the products, services and investments taking into account the above items;
 - identify inclination/tolerance in assuming risks and establish limits of exposure;
 - installing in all of the areas by organizations of plans for recovery in the event of natural disasters and/or of plans for the continuity of activity, as well as updating and testing on a regular basis to these plans;
 - permanent analysis of achievements and failures of the risk management system and adjustments in accordance of instruments of control;
 - providing a professional level and specialized of the employees in order to neutralize and control various categories of risks.

One of the most important risks, which must be managed by the participating organizations at an investment, is market risk. Losses arising from this risk can be significantly and can generate the bankruptcy of the organizations if the changes on markets are dramatic. After 1990's the global exposure to this risk has increased noticeably, therefore poor management of this risk has become a

leading cause of organizations' losses. Market risk represents the probability that a variation of the conditions of its markets adversely affect profit organizations. If we refer to changes in the conditions of financial markets, they can affect organizations through three interrelated transmission channels, which are separately managed: the variation of tendency of evolution and of the level of interest rates; the exchange rate variation and hence the value of the national currency of foreign assets and liabilities (building materials, investment goods); financial assets rate variation which may affect market value of the portfolio of securities (commercial) and value of financial securities issued by organizations (stocks, bonds). The volatility in price of assets (commercial or financial) is determined by the factors that determine supply and demand. If these factors change significantly, asset courses will display important variations adapted to restore market balance. This volatility has following dimensions: frequency, amplitude and speed. Since volatility in price of assets reflects efficient functioning of markets, it should not be worrisome for management of organizations. However, volatility in price of assets may significantly expose both participants of the market transactions and non-participants at risks. The change is the main source of volatility and vulnerability of markets. The process of changing commercial and financial structures change relative capacity of various institutions and markets to efficiently process the information on which depends the regular functioning of markets. The market risk concerns the possibility to affect market value in a positive or negative way and/or the profit of an organization as a result of unexpected price fluctuations. Exposure to this risk may be different from one organization to another. Assets volatility (commercial or financial) implies market risk if this volatility was not anticipated.

The volatility transmission from one national market to another involves several models that report the transmission mechanisms. The overall conclusion indicates there is a strong degree of connection of different markets and stock volatility transmission. Don Jones is the index most open to international influences, while FTSE is at least open at such influences. Market risk management can be achieved: ensuring commercial and financial assets; using derivatives (hedging instruments). Derivatives may reduce risks, but can't eliminate the need for proper capitalization of the organizations. There is no complete protection, some risks inevitably remain undiversified.

Once all the risks which affect a project are allotted to the project participants, these will reduce them further by *hedging* and insurance operations.

This final stage is, also, demanded by creditors for all these risks which remained the responsibility of the project-company. In theory, the creditors don't take risks, such as currency risk, interest risk, market and force majeure risk (including political risks) (3).

The currency risk reduces by using certain derivative tools, such as swap, futures, forward and options. Below there is an example of currency swap.

The exchange of the loan in local currency (LC) into a USD one reduces the currency risk due to the fact that the USD revenues can be paid within the swap contract, and the local currency which is received can be used to pay the debt (see fig. 2).

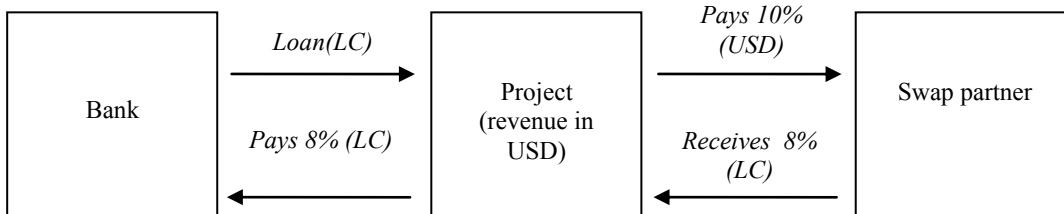


Fig. 2: Currency swap

Total cost: Pays 8% in LC within the loan contract

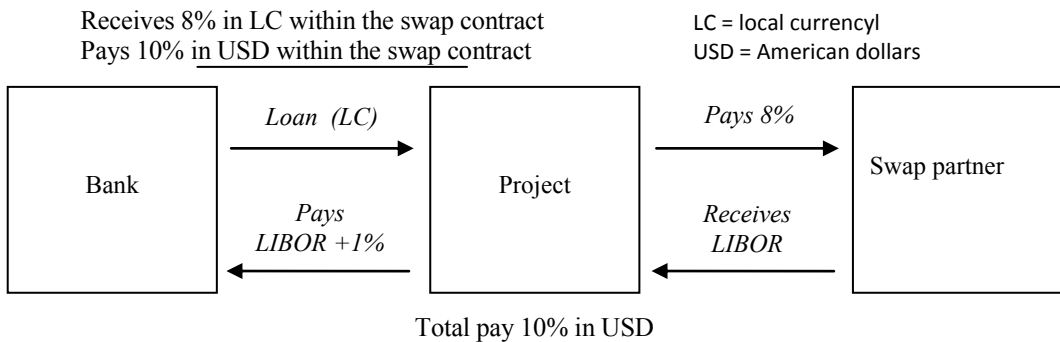


Figure 3: Swap on interest rate

The interest rate risk reduces by derivative swap futures, options and FRA’s (forward rate agreement) tools. Figure 3 shows how a fixed interest rate can be converted into a variable rate, through a swap contract. The project loans found from a bank at LIBOR + 1% variable interest rate. Within the swap contract it pays 8% and receives LIBOR. In reality, the interest rate it pays is invariable, equal to 9% (8%+ 1%).

Total cost:

Pays LIBOR+1% within the loan contract
Receives LIBOR within the swap contract
Pays 8% within the swap contract
Total pay 9%

The market risks (possibility of adverse price fluctuations) are most often covered by commodity swaps (4). In a commodity swap the producer is demanded to make some payments towards the consumer in case the spot price gets over the swap contract, and the consumer pays the producer if the spot price gets under the agreed level. The commodity swaps can be achieved anytime two terms are accomplished: essential prices and spot market cleared.

The force majeure and political risks are generally insured, either by commercial insurance (for force majeure events and or some political risks), or by political insurance programs (for certain specific political risks).

Conclusions

With large projects, maybe more than other times, the risk management is asked to find that solution adjustable to any case and which can make the risks bearable by the parties. To harden the things more, the emergence of such a risk can be rarely isolated from the rest of the project, leading to a chain reaction. That’s why, risk approaching for such projects must be achieved in an integrative way, considering all the details. There is no universal rule regarding the risk management for large projects, still in the middle there is the principle of risk distribution to the parties more liable of managing them.

For an effective management of project risks, management of the organization must follow closely the main objectives of an effective and efficient management system.

Effective enforcement of these objectives is likely to lead achieving the goal of risk management, that of “maximizing shareholders”, and the implementation of customer, employees and organizations requirements.

The most important objectives to be mentioned are: establishing clear responsibilities in risk management; transparency and comprehensive reporting system; existence of a financial performance measurement system, expected and unexpected losses and capital allocation for each risk; assessing the cost of capital, the minimum rate of return and limits exposure to organic growth; using principles of risk diversification; existing plans for disaster recovery or business continuity

plans; independent and efficient control of risk management; highly professional and specialized knowledge employees etc.

The paper has analysed the losses generated to organizations by the market risk especially emphasizing the asset price volatility (goods, financial investments) driven mainly by factors affecting supply and demand in the market. It was found that the price volatility can significantly expose both participants in market transactions and non-participants at risks.

The conclusion of risk management analysis is referring to the most important factor that led organization to focus on market risk was that, after years 70's, the global exposure has increased noticeably, so the poor management of this risk has become a leading cause of loss organizations.

Under these circumstances, and especially when it comes to projects at large the phrase which best applies for the effective risk management is: "just cannot do without it!".

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