

# Macroeconomic and Political Risk Management in Infrastructure Projects

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## Abstract

*Probably more exposed than any other kind of investment to macroeconomic and political risks, infrastructure projects are trying to find new ways to answer old challenges related to such risks. The paper looks at the different types of risks and tries to promote an answer which brings together the interests of the project sponsors and the project beneficiaries.*

**Key words:** *macroeconomic risks, risk management, infrastructure finance*

**JEL Classification:** *F23, G15, G31*

## Introduction

Macroeconomic risks are those risks which affect the investment project through the economic environment in which it is implemented. There is a large degree of discretion, with regard to what these risks really refer to, and the spectrum could be more extensive or restricted, depending on each author's typology. For instance, Yescombe<sup>1</sup>, a practitioner of project finance, believes this category includes only the effects of inflation, changes in exchange and interest rates. Ghoshal<sup>2</sup>, on the other hand, added to the macroeconomic risks the ones related to civil wars and social movements (which other authors classify in fact as political risks), the basic idea underpinning his classification being that such risks are beyond the company's ability to control. Other authors, like Sullivan<sup>3</sup>, add elements of local infrastructure, labour availability or local savings to the categories of macroeconomic risks, but include the same also into the much broader category of country risks (on the other hand, Sullivan excludes the social risks from macroeconomic risks, a category included by Ghoshal in his turn). According to the Economist Intelligence Unit's (EIU)<sup>4</sup> classification, macroeconomic risks are environmental risks, however

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<sup>1</sup> Yescombe, E.R., *Public Private Partnerships – Principles of Policy and Finance*, Elsevier Ltd, Oxford, 2007.

<sup>2</sup> Ghoshal, S., Global Strategy: an organizing framework, *Strategic Management Journal*, Vol. 8, 1987.

<sup>3</sup> Horobet, Al., *Managementul riscului in investițiile internaționale*, All-Beck, Bucuresti, 2005.

<sup>4</sup> ibidem

with an important distinction, namely that risk elements related to funding - such as interest rates, foreign exchange risks - are elements that are included by EIU in a separate risk category, process risks, considering that ultimately, these risks are a direct result of the company actions and hence not completely decoupled from the internal decision-making process.

### Three Types of Macroeconomic Risks

The typology of macroeconomic risks does not therefore reflect a significant caesura between researchers. Yescombe's limited approach can be attributed to the project financing character of the investment projects he refers to, while all others are more general and refer to the risks affecting any direct investment. So, two perspectives are presented: the narrow, specialised in project finance, and the general, inclined more to corporate finance. For the purposes of our work, which examines risk management for the specific case of an investment project in infrastructure, which is funded solely because of its ability to generate cash, it is probably better to adhere to Yescombe's rather narrower, but more focused, perspective.

The probability of the risk events to happen can have a significant effect on the ability of the project to operate at normal parameters so as to generate the necessary cash flows to pay the investors and lenders. Most of the infrastructure investment needs are in developing countries, countries which, in terms of macroeconomic performance are not always predictable and stable. Monetary policies in these countries are not sufficiently mature and fail to maintain a long-term stability of all these indicators at the same time or in the long run. In addition, in most cases, project funding is being available only in hard currency, however the revenue stream from the project is denominated in local currencies which are always subjected to both inflation, depreciation and convertibility risks (or, in a word, transfer risk).

**1. Inflation.** It is difficult to believe but historically there is no such thing as an investment project which has not been affected by inflation at some point in time during its existence. Whether the inflation risk bites during construction, or in the operation phase, the easiest way to limit its effects is contracting at fixed prices. For this reason, the company implementing the project will have to negotiate a fixed-amount Engineering Procurement and Construction (EPC) contract, or buy as many project items at fixed prices. But if this might be possible with respect to imported equipment or facilities, items which are procured by the EPC contractor (and therefore transferred as risk elements to him), items which are sourced from the project's host country, - such as labour, translated into personnel costs - are subject to inflation risk.

One of the ways that companies use in practice to cover such a risk is a project credit facility to cover additional costs, if any, which generate inflation, a credit facility that is used only in special cases but always allocated by banks usually as stand-by facility. An alternative to this is a special allocation of the EPC contract for items where the right of the contractor to apply an indexing factor (due to inflation) is recognized. A third solution is forcing the EPC contractor to obtain a fixed price even for such cost items, but often that means some very high costs for the EPC contract because, in such a case, the contractor assumes the full risk of inflation.

In the operating phase, the applicable principle is that any payment obligation should have a corresponding item in proceeds or revenues. Thus, the risks of increased costs due to inflation should be covered, mostly by the prices charged by the project from its customers. In other words, increased operating costs due to inflation, should be offset or transferred to the end-user and eventually covered by the latter. The project company must be able to transfer additional payment obligations as negotiated through operating agreements or contracts for the supply of raw materials to the long-term sales contracts concluded with its customers. This is the only way the inflation risk can be completely neutralized.

**2. Interest rates.** This risk occurs because investment in infrastructure projects is financed through long term borrowings. Over the debt repayment period, interest rates may have different fluctuations. There are few cases where the creditors agree to lend money at a fixed cost over a period exceeding six months or a year. Financing costs are usually expressed by summing the two indicators: the reference rate - EURIBOR or LIBOR, for example - and the interest margin (reflecting the project risk premium over a virtually risk free asset such as local government bonds). The latter is generally constant, reflecting the risk of the project (of course, if the lender perceives a company's situation worsening the margin may increase). The former is variable, depending on external factors – eg the general level of interest rates determined by the central bank's monetary policy.

The reference rate does not reflect the risk of the project but a general macroeconomic risk which the investor cannot control but has decided to accept once the investment decision was made. In most cases, the reference rate has negative effects on the financial capacity of the project, given that funding is long term, and over a period of fifteen or twenty years, the economy goes through at least one cycle of increase and decrease of the reference rate. This is actually why financing parties request - whenever possible – to use swaps. Through this derivative product, projects swap floating interest payments with fixed pay. It is a very common mechanism developed by financial markets and involving converting a stream of payments with a variable amount in one fixed sum payment stream. The way it works is as follows: First, the acceptable level of fixed payments is set; then the financial market is looking for an investor, usually a commercial bank, which agrees to pay the difference between variable interest rate and fixed rate interest, if the variable rate is higher than the fixed rate. The project company undertakes that it will pay the difference if the situation is reversed. The arrangement is valid only in respect of the interest costs of the transaction and no part of principal is traded this way.

Given that many investment projects take place in developing countries, with underdeveloped financial markets to offer the right structures to mitigate these risks it is sometimes impossible to find a solution to mitigate such risks. The absence of these derivatives means sometimes that many projects will not be funded at all.

**3. Exchange rate risk.** Although this risk can occur also during the construction phase of investment projects, the most obvious manifestation of it is in operation phase, by counterposing the cost of financing - in hard currencies such as euros or dollars – to the revenues of the project - in national currency. When the exchange rate between the first and second currency is fixed, the risk is nonexistent. Problems arise however when the exchange rates fluctuate. If during the period of construction it is attempted, whenever possible, to align the currency of the contract to the payment terms of the EPC contract, in the operating phase, to ensure the revenues are denominated in the loan currency is not usually possible. In these situations, a solution is represented by payment mechanisms used in national currency but which correspond to fixed amounts in foreign currency. Indexation to the euro or dollar of income is also a widely used solution, but it only partially solves the problem of exchange rate risk. Assuming convertibility although theoretically the amount of local currency should be easily exchanged into foreign currency, thereby achieving the required amount of payment financing, in practice a volatile exchange rate induces a state of uncertainty upon receipt amount in national currency. Since it is difficult to assume that in a developing economy a forward sale contract (through which the cost of a currency in terms of another currency is fixed) is easy to conclude, between the time the project cashes revenues and the time it has to pay back the funding an adverse fluctuation in exchange rates is very likely. The example has to be nuanced, however: in the categories of projects where the main customer is the state, it is possible for the project company to lock in a certain exchange rate so that it can achieve the necessary income to support the payment of the financing. The state may require to change the national currency at a particular exchange rate, or to compensate the investor for the additional costs he is subject to if he attempts to do the same thing. Another option is to collect hard currency revenues off-shore,

in which case the income doesn't pass through the country where the project takes place and can be paid directly in foreign currency. This type of financing has been widely used especially in Russia, particularly in relation to commodity-producing companies that sell products abroad. The funding went to the Russian company, but revenues in foreign currency which the latter collected from the final foreign customers, were paid directly to the project financing banks, opened at banks outside Russia. There, the bank would retain, as was the case, the cost of credit or its principal payments, letting the rest of the company's revenues to flow to the project, in Russia.

## **Political Risk Management**

It is hard to imagine an infrastructure project which is not exposed to political risk in one or another of its phases. Governments play an important role in infrastructure projects, but at the same time, represent a continuing source of risk by interfering with the projects and affecting their ability to alter the variables in which they operate and from which they derive their income. In fact, probably there are no infrastructure investment projects whatsoever that has not needed political support, or that has been implemented without political will. The extent to which hosts of the projects are developing countries, countries where democratic principles have sometimes only a limited practical application, political interference in the economic sectors is a significant risk factor for an investment project. The solution is the attraction of "political will". In most cases, the very nature of the project is allowing for coordination of the public sector perspective and of the long-term objectives of investors. A highway, a power plant or an electrical energy distribution network are favourite "themes" of politicians, because they provide an opportunity to show people that what comes first are the interests and welfare of the community. Such objectives, in addition to improving living standards, can solve serious social problems like unemployment. It is therefore easy to understand why investment in infrastructure projects is generally valued by politicians.

However, the role that the state has in relation to the investment projects (even if that role is not necessarily a direct one), represents a source of risk. Risks that the political factor brings in investment projects are likely to be related to the investment or of a legal nature. In the first category, we deal with items such as currency convertibility and transfer, expropriation or social risks etc. In the second category, there is the risk of legislative changes.

With regard to the national currency convertibility risks, two types of situations stand out:

- Lack of full convertibility;
- Failure of the currency transfer.

The first of the two is the most difficult. The project received revenues denominated in the national currency, but cannot convert the currency to pay for financing (which is in a different currency). Situations of this kind can occur if the sovereign payment obligations are so great that the state needs as much foreign currency as possible, and suspends the convertibility of national currency in order to be the only one who has access to it (often also confiscation measures are accompanied by setting a fixed exchange rate at which the state - and only the state - can buy foreign currency, and those who own the currency are forced to sell). Unfortunately, against such practices, there are no alternative measures, apart from that of prior contracting private insurance or a guarantee issued by an Export Credit Agency (ECA). The former is an insurance on the loan, contracted from a private insurer to cover the risk of non-convertibility. The latter, although somewhat less expensive and operating on the same principle (although in the case of ECA, the insurer is usually a state institution and not a private one) can be issued only on the basis of export contracts providing for capital goods from the ECA country to the project country and usually cannot be extended to goods originated from another

country than the one of the ECA. However, cumbersome, bureaucratic and burdensome procedures that investors have encountered on receipt of these policies, has made ECAs slightly less popular lately. In recent years, as a result of bankruptcies recorded in the banking and insurance world and the global financial crisis, the ECAs has become more popular.

The inability to transfer currency outside the country in which it is obtained it is due to adverse actions of the host government, determined in many situations, by the lack of foreign currency, which is necessary, in its turn, to finance the import of vital raw materials the State cannot purchase but from abroad. Thus, the state forces keeping the currency in the country to serve its purposes, depriving the private sector to benefit of hard currency earnings as they see fit, or as required by the several financing agreement they have to abide to. In this case, the insurance policy is again the best counter-measure. Of course, anticipation of such a probability, would have led to a number of changes to the transaction, such as the offshore collection of debts, but that is only appropriate for situations such as processing raw materials and goods which the project exports to customers who pay in foreign currency. Such a way of structuring payments and revenues steams cannot, unfortunately, apply to infrastructure projects.

Another important risk is that of expropriation. Yescombe adds to expropriation the confiscation, seizure of private assets in the public domain without proper justification and compensation for legal owners – but also other adverse events regarding permits, authorizations, approvals and requirements by the state which are imposed arbitrarily to private investors and which prevents them from enjoying the full benefit of their investment.

Expropriation risk is one which, in most cases, the project company shall assume or, where possible, shall insure. What is important here is that the elements for which the state may expropriate the assets of the project are not related to the project. Expropriation is an arbitrary action, most often unjustified, but usually it occurs in conjunction with other elements of political and macroeconomic risk. For example, if a currency crisis began with a suspension of convertibility, the next step may be the expropriation of the company's bank accounts. Or, following a civil war - a major factor of political risk, usually insurable - the immediate consequence is blocking convertibility and expropriation of assets of the project company. Sometimes national law undergoes changes - these changes are themselves an important factor of political risk - and, following this, investment projects are placed in a situation where they cannot continue anymore. This is the case of a rice processing factory in Venezuela, owned by the multinational agro-food products company Cargill, which produces among other pre-cooked rice. Under Venezuelan law, the price of rice (a basic food) was regulated<sup>5</sup>. Under the pretext that by processing, Cargill attempted to escape from the obligation to sell rice at fixed prices, the government decided to expropriate the company's assets in early 2009. Proper justification in this case, however, was that Venezuela had faced a food crisis in recent years and was trying to control as many new production facilities in order to end the rice crisis.

As noted above, in case of expropriation, the reasons can be extremely diverse and are usually related to social or political situations of host countries. It is hard to predict which will be the actions of governments, when faced with serious social problems, so a very effective way to interest the stakeholders in the project is to try to align national interests and investors', by having the state as partner in the project. This concept is generically called Public Private Partnership.

Public Private Partnerships (PPP) is the provision by the private sector of infrastructure services that traditionally were provided by the public sector companies.

The literature knows many points of view on partnerships, based on the theoretical definition of the concept and extending to variants in which, in one form or another, it is found in practice.

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<sup>5</sup> Venezuela seizes US rice producer, <http://news.bbc.co.uk/2/hi/7925174.stm>

For example, Yescombe defines partnerships based on several features which it is believed are defining for them. In his view, the partnership is a long term commitment between a public representative - a local or national one, for example - and one of the private sector (usually a project company, established specifically to provide good or services respectively) for the design, construction, financing and operation of a public good by a private sector representative, under a public sector representative's promise to pay over the life commitment for the right to use the good or its availability. The payments are made under the condition the asset is offered or the service is provided within certain qualitative and quantitative parameters, based on which the amount of the payment is calculated. Over the period of the commitment – the commitment is always for a fixed term - , the facility may remain in the property of the public sector, may be temporarily transferred to private property, with the option to stay private or not after the completion of the contract between the two parties . A similar definition is used by Grimsey.

Another useful definition is that given by the National Council for Public-Private Partnerships in the U.S., which considers that partnerships are “contractual arrangements between an agency belonging to the public sector and a private commercial entity, which has to do with the sharing of resources and specific risks, in order to provide public services or public infrastructure development.” Similarly, the UK public authority responsible for the implementation of partnerships, consider the relationship between the two sectors, public and private, are entered into in order to use private sector expertise and management capabilities, and to transfer the funding obligations to it. As far as the concrete ways in which the relationship between the two sectors are regulated, they include both franchises and concessions, the private sector assuming all responsibilities related to construction, operation and maintenance of industrial facilities, assuming at the same time, the obligation to finance the assets and the risks related to the financing of the operation.

Another point of view belongs to the Australian public authority for partnerships, which considers that the partnership is a long term relationship between public and private sector, a relationship in which the private sector supplies infrastructure assets and services - services that are among the objectives of economic and commercial policy of the public sector - in exchange for recurring payments that the public authority is obliged to do, according to certain standards of quality and quantity that the latter requires. The Australian definition insists that compared with traditional methods of financing and realization of these investments, namely through the state budget or through the local budget, in partnerships, the public service component is more relevant and enhanced and more important and better reflected in the terms of contract. If by using budgetary resources, the public sector pays to raise an infrastructure facility and the role of the contractor is considered completed once the product's technical reception was held, in partnerships, the private sector's role continues after the completion of the works and consists of operating, maintaining and possibly implementing additional investments as necessary to further good use over a period of time. Thus, the result is that the public sector receives no good, but rather a set of goods and services, for which there is only one party responsible: the private sector. This creates long-term responsibility for private sector representatives, responsibilities which, in turn, improve management, reduce costs both during the construction phase and through the operation phase, and increase the profitability of investments.

The reasons for these structures, which began to be popular in the early 90s in the UK (through a set of policies known as the Public Finance Initiative - PFI), have become widespread over the past 20 years, were due to both benefits that PPPs have made over the years in the management of sectors such as health, transport, infrastructure, and to the fact that by transferring these services to the private sector led, in general, to lower public spending, which allowed the diversion of funds to priority sectors. In essence, these financial and economic constructions provide a means for risk sharing between private and public sector, except that, by keeping a public component in the project, the state sector (regulatory authorities, central government or local) is also interested in its functioning of the project. By engaging with the private sector in

sharing risks and profits of the project, the state succeeds in reducing the uncertainty related to its future actions, which helps reduce the cost of financing for the project. Being directly interested in the management of a PPP, the public sector tends to work towards maintaining the capacity of the project to pay its funding costs and capital. In most of the times, especially when it comes to developing countries, the state support is based institutional framework which must provide sufficient certainty that the project will be carried out without further interference from the public sector. For the most part, the regulation pertains to the fiscal, monetary or of specific legislation. In an environment where the private sector is confident that the project's activity will take place in the best conditions, there is an additional motivation for a smoothly run project.

## Conclusions

It seems that the best way in which an infrastructure project can manage macroeconomic risks is by trying to align the interests of project sponsors to the ones of the beneficiaries of the project, in most cases the beneficiary being the state. By operating in PPP structures, the investors and financiers would be comforted that the state will not be easily tempted to take measure or to act against the interest of a project that it has a stake in.

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## Managementul riscurilor macroeconomice și politice în proiectele de investiții în infrastructură

### Rezumat

*Proiectele de investiții în infrastructură sunt, probabil mai mult ca oricare alte proiecte de investiții, expuse riscurilor macroeconomice și politice, astfel că inițiatorii lor încearcă mereu să găsească noi modalități prin care să diminueze efectele determinate de materializarea acestor riscuri. Articolul analizează diferitele tipuri de riscuri din aceste categorii, încercând să găsească un răspuns care să țină cont de interesele comune ale inițiatorilor proiectului și de cele ale beneficiarilor acestuia.*