Project Finance

INTRODUCTION

It refers to a financing technique designed for large infrastructure and energy projects.

Its goal is to allow the construction of projects that require significant up front costs and have long term economic lives, such as prisons, hospitals, schools, roads, energy plants, etc …

As already mentioned during the course, the first documented project finance transaction was structured in England at the end of the 13th century (1299) when the king Edward 1rst and his bankers, the family Frescobaldi (Florence-Toscani) signed an agreement to finance silver mining interests in Devonshire.
To make it short, the Frescobaldi was one of the richest and most powerful family in Europe. As Edward 1rst did not have any money to finance the development of silver mines, the king agreed to let the Frescobaldi finance the construction of the mining infrastructure. In exchange, the family would receive all the income derived from the operation of the project during 1 year.
The Frescobaldi did not have recourse to the Crown if the profits turn out to be lower than the investments realized. At the end of the one year period, the ownership of infrastructure had to be transfered to the Kingdom of England, which could operate it then for its own benefits.

Following this first « experiment », project finance technique was almost never used in the following centuries. As long as the economy was mainly agricultural, the need for project finance was limited. Things changed with the First Industrial Revolution : the Suez Canal and the Eiffel Tower were financed using project finance structures.

CHAPTER 1 – UNDERSTANDING THE BASICS

1- Definition

A- The purpose of Project Finance

It is to finance the construction and operation of large scale public or private infrastructure projects.

Project Finance is used worldwide to finance all types of infrastructure assets :

- Highways
- Railways
- Ports and Airports
- Fiber networks
- Telecom towers
- Wind and solar farms
- Wastewater treatment plants
- Hospitals, schools and stadiums …….. etc

➔ These assets all have in common the following characteristics :

- A high construction cost
- A long construction period
- A project lifetime spanning over several decades

B- Financing the construction of infrastructure with non-recourse debt

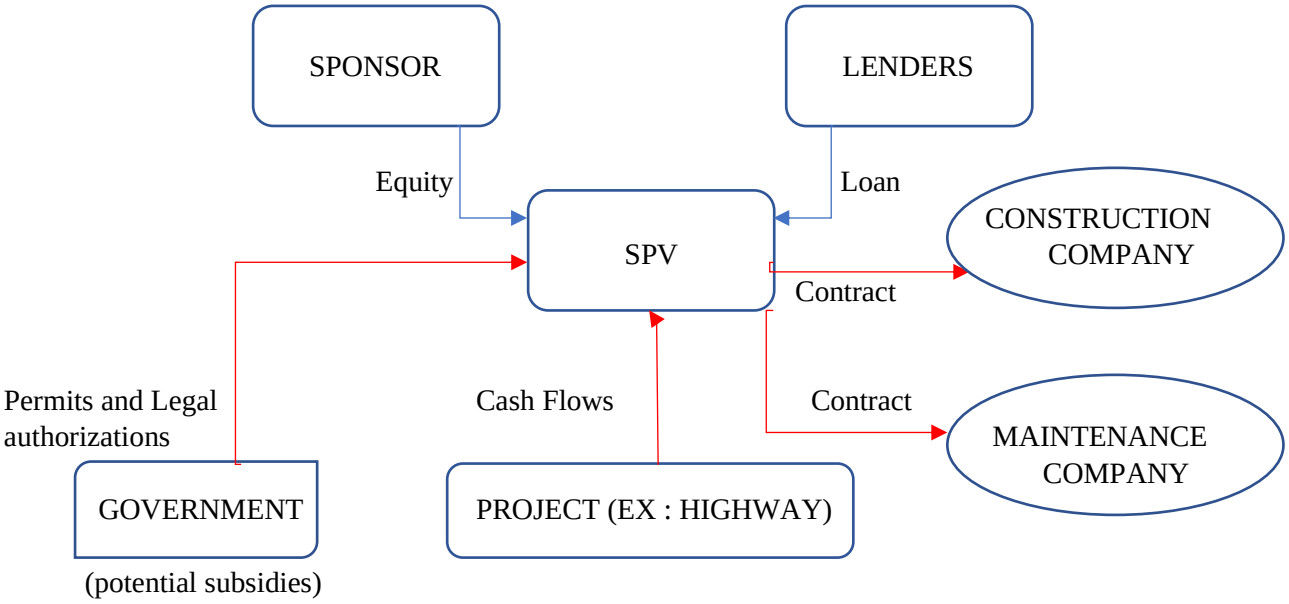
Project Finance is not only defined by the type of assets it finances, but also by a set of rules common to all Project Finance structures

Detailed definition :

➔ The financing of an infrastructure project via non recourse debt granted to an SPV, established by one or several corporate and/or financial shareholders, for the unique purpose of constructing and operating this infrastructure.

Debt and equity used to finance the project are paid back from the cash flows generated by the project only.

Simplified Diagram of a Project Finance Structure



In the example above, the SPV (or Project Company) is established by a shareholder (Sponsor), for the sole purpose of building a Highway commissioned by the government.
The SPV is financed by a mix of debt and equity, and uses the funds to finance the construction of the highway. Once the asset is fully built, the project start generating cash flows. These cash flows (sum of the toll payments and potential subsidies) are used to pay for the operation and maintenance of the highway, and to repay the debt.
If the SPV has enough cash after these payments, dividends are distributed to shareholders.

Summary

a) The SPV is established by a shareholder (or sponsor) that has an economic interest in the development of the project.
   Sometimes, several sponsors are backing the same project. Sponsors can also be investment companies specialized in infrastructure (financial sponsor). Financial and industrial sponsors may team-up, depending on the project.
b) The SPV is established for the sole purpose of the project. It can generally not perform the construction and operation of the project on its on, so these activities are outsourced to other companies, including sometimes the sponsors themselves, or specialized subsidiaries of the sponsors.
c) Project Finance is a specific financial technique. Each transaction is analyzed and structured separately. Lenders finance the only the SPV. They have no legal or financial recourse to the shareholders of the project company.
   Project debt is said to be non-recourse.
d) If the lenders have no recourse to the sponsors, this implies that the loans has to be repaid only with the cashflow generated by the project.
   Debt sizing is strictly based on the potential revenues of the SPV. A very detailed analysis of the project is carried out by the lenders to make sure that the infrastructure can be built and will generate enough cash flows
e) As a result from the absence of recourse, contractors have strict contractual obligations towards the SPV.
   These obligations generally include financial guarantees, so that the SPV can have a financial recourse to them (in case it is proven that any issue is directly attributable to a contractor not meeting its obligations).
f) Project Finance can be divided in 3 phases :
   (1) First phase called the development phase, during which the sponsor works to obtain all the permits and necessary legal authorizations (administrative and regulatory) to build the project.
   (2) A second phase, called the construction phase, during which the non-recourse financing is structured
   (3) A third phase, called the operational phase, during which the SPV can start selling the goods and/or services produced by the project. Cash flows generated by the project are used :
      + to pay for the the operation and maintenance costs
      + to repay the debt
      + to distribute dividends

2- Why chose a Project Finance » Structure ?

A- Two different options to finance infrastructure assets

Infrastructure projects are not all financed via Project Finance structures. There are 2 possibilities of financing for a sponsor :

(1) It can raise debt at corporate level to develop the project directly on its balance sheet (corporate financing)
(2) It can fund the project via a SPV which rôle is to finance the construction of the infrastructure.

In option (1), banks lend directly to the sponsor. The repayment of the loan is linked to the ability of the project to generate cashflows. Lenders are in the same position as the other creditors of the sponsor. Their loan is repaid as long as the sponsor is solvent.

Repayment of the loan is due even if the project is a failure. To the opposite, if the project is a success but the sponsor goes bankrupt because of other activities, the lenders who financed the project are not in any preferred position.

In option (2), (Project Financing), the repayment of the debt is only based on the cash-flow generated bu the project. Lenders have no recourse to the sponsors other assets ; they face a project's risk. If the project is a failure, their loan will not be repaid even if the sponsor is very profitable.

B- Advantages of the Project Finance option

(a) Isolating risks

For a sponsor, the use of a Project Finance structure with an SPV makes it possible to transfer all legal and financial risks to another entity

The SPV is established under the form of an Llc (Limited Liability Company) so that the shareholder liability is limited to its capital contribution.

➔ If the project fails, the sponsor is not required to repay the debt raised by the SPV.

To the opposite, if the sponsor decides to finance the project via corporate financing, it must service the debt linked to the project irrespective of what is happening. In this case, lenders have full recourse on the sponsor.

(b) Optimizing leverage

Using a Project Finance structure allows to increase the total amount of debt raised in connection with the infrastructure. Lenders size the loan based on cash-flows generation.

If the cash-flow is steady and predictable, lenders can be agressive in terms of leverage, particularly if the company benefits from **a Long Term Purchase Agreement** with a company or government controlled entity with a very good credit rating. (in this case, it is common to see a project financed with 80% debt).

In the case of corporate financing, banks will analyze the project cash-flow generation, but also the all revenue structure of the sponsor. If some activities are less predictable, it will have a negative impact on the ability of the sponsor to raise debt. For such sponsor, the project finance structure is more adequate.

(c) Extending debt maturity

If a project offers sufficient predictable and steady cash-flows, lenders can offer financing solutions with long maturities, sometimes over 20 years.

Please note that the average maturity of Project Finance solutions are greater than most of the instruments marketed by banks or institutional lenders for general financing purposes.

(d) Ideal solution for consortiums

Financing a project via a Project Finance Structure is common when several sponsors want to participate together in a project. When establishing an SPV to secure debt at the project company

level, it means that the cost of debt will be linked to the creditworthiness of the project. The cost will be the same for all shareholders, regardless of their differences => it will align their interests.

(e) Ideal solution for financial sponsors

Financial sponsors are not very different from LBO firms. Their organization is very similar. Their objective is to raise funds from Limited Partners, through dedicated investment vehicle, and invest the cash in operating companies.

The main difference is that investment companies specialized in infrastructure target only investments in project companies holding infrastructure assets. Infrastructure investment companies also generally have a longer investment period and can hold an asset for a period of 10 to 15 years (versus 5 to 7 years for LBO firms).

Finally, given that infrastructure investment companies invest in projects with steady and predictable cash-flow, they target a lower IRR than LBO firms.

Unlike industrial sponsors, financial sponsors do not have the option to raise funding at coporate level. The size of the investment company is always limited. The equity used to invest in projects come from funds that are separate legal entities.

For these financial sponsors, the only option available to finance an infrastructure project is to use a Project Finance Structure, with an SPV raising non-recourse debt.

(f) Only structure for small and medium size sponsors.

Very often, a sponsor is too small to access enough Long Term liquidity for a large project. In this situation, Project Finance is the only solution for moving forward.

Example : Case of an Independant Power Producer (IPP), specialized in renewable energies (see wind and solar farms). Its goal is to build a power plant connected to the grid and capable of producing energy. It can only do it by signing long term contracts with publicly regulated entities that will, distribute electricity.

For lenders, financing a wind or solar farm, with the certainty of collecting revenues from a government owned institution, is easier than directly financing an IPP , which can be in some cases very small.

C- Constraints of the Project Finance structure

Despite all the above benefits, Project Finance Structure comes with drawbacks as compared to corporate financing.

+ Lenders being at risk on the project itself, carry out a deep analysis of the project. They require a lot of information, and ask for technical, tax, legal and financial due diligence. These reports are prepared and drafted by consultant and firms specialized. This add costs, time and complexity to the transaction.

+ The contractual arrangement is very complex. The number of parties involved in a project finance transaction can be significant, which slows down the negociation process. A Project Finance transaction can easily take several months to structure (very different from corporate loans requiring a few weeks).

+ The Project monitoring cost is generally very high. Lenders have important technical, financial and legal monitoring requirements, and have to dedicate teams to actively follow the transaction until it fully amortizes.

+ Because of the additional risks borne by lenders (high leverage, long maturity, no recourse to the sponsors), financing costs can be higher than those of a corporate financing, especially if the sponsor is investment grade.

Given these disadvantages, the use of Project Finance is generally limited to very large projects.

D- How to chose between corporate and project financing

Since projects can be financed through an SPV or by using corporate debt, sponsors have 2 options to chose from.

(see additional document provided with a table to compare the 2 options)

CHAPTER 2 – THE MAIN PARTIES TO PROJECT FINANCING

1- Different types of projects

Projects are always different from one another.

Example : A highway leaves the project company exposed to traffic risk → uncertain cash-flow cannot be financed like a wind farm project which benefits from a Long Term Power Purchase Agreement (PPA) from an investment grade utility company. The degree of certainty concerning projected revenues determines the structure, the amount of leverage, the costs and the maturity of the debt secured by the project company.

In finance, projects are often classified based on the origin of their cash-flows.

⇨ 3 main categories are commonly identified :

- (1) Projects with long term purchase contracts in which the SPV sells its output or services for a long period to an identified buyer
- (2) Projects with traffic or merchant risks, in which the SPV sells its output or services directly in the market
- (3) Projects in which the SPV receives fixed rental payments from a public entity to build and manage infrastructure used to offer a public service. These projects often referred to as Public Private Partnership (PPP).

A- Projects with Long Term Purchase Agreement

Some projects benefit from Long Term purchase contracts for the output or services they produce.

These contracts, often called **off-take contracts** are usually signed for a long period of time (20 years) giving sponsors and banks a high visibility on the future cash-flow.

These projects constitute a large part of the infrastructures financed through non-recourse debt.

+ How does it work ?

Very common in the energy sector, Long Term PPA are offered by governments to induce producers to build large wind or solar farms (renewable energy producers)

The contracts come with a fixed price, generally indexed to inflation, garanteeing to the SPV (Project Company) that 100% of the energy output will be purchased at a given price for a very long period. Such PPA offer renewable energy producer a high level of visibility on the future revenues of the SPV, which is supposed to encourage the construction of renewable energy projects.

➔ The risk analysis is then very simplified. It focus only on the creditworthiness of the counterparty buying the output (often the government or local utility company).

In the energy sector, these PPA often take the form of « Contract for the difference »(CFD). The firm sells the energy on the spot market but benefit at the same time from a top-up payment made by the national utility company or the government if the market prices are lower than the price guaranteed when the project was awarded.
Inversely, if market prices are higher than the guaranteed price, the SPV has to pay the difference to the national utility company or the government.
PPAs can also be signed with private firms.

Beware :

- Long Term purchase agreement reduces but does not eliminate risks. => PPAs replace the market risks by a counterparty risk.
- All other risks remain unchanged. Notably, sponsors and lenders in both cases face :
  (1) A construction risk
  (2) A ressource risk (no wind, no revenue for a wind farm)

+ Financing a project benefiting from LT Purchase Agreement

If the creditworthiness of the offtaker is acceptable, having a LTPPA allows the project company to secure long term financing.

Assuming the other risks are correctly mitigated, the SPV could, for instance, raise an 18 year fully amortizing loan if the project benefits from a 20 year offtake contract.
The 2 years difference is known as a tail, and acts as a buffer in case other risks limit the capacity of the project to generate cashflow during the initial debt repayment period.
Having a tail allowed lenders to restructure the debt and extend its maturity while still benefiting from a bankable PPA.
In some cases, lenders are willing to accept a negative tail : the debt maturity is longer than the purchase contract. It is possible when it is known that the infrastructure has a life expectancy greater than the offtake contract. In this case, lenders assume that the project will still be able to produce and sell an ouput, even after the end of the original purchase agreement.
The negative tail does not exceed a few years. The risks are mitigated by the fact that the debt is already significantly amortized, ensuring that the credit exposure of the lenders is is limited compared to the projetc's cash-flows

➔ Of course, it is only possible if the SPV does not have to automatically hand over the infratructure to the government or a government owned entity, at the end of the original contract.

B- Project with traffic or merchant risks

+ Definition : These projects do not benefit from LT offtake contract (example : Eiffel Tower and visitors)

- Project with traffic risks = toll roads, airport, etc ..
- Project with merchant risks = energy projects without PPA.

+ A higher level of risks than projects benefiting from offtake agreement.

Because of the risks, these projects are more difficult to finance. They are therefore less leveraged, the margin on the loan is higher and the maturity of the debt shorter.

These projects are also riskier from an equity perspective. Sponsors investing in this type of assets usually require a higher IRR than investors taking an equity position in a project benefiting from a LTPPA.

Projects with merchant risks require the input of experts to determine how market prices may evolve in the future. This is a difficult exercise and many lenders are cautious about financing such a project.

Lenders analyzing projects with traffic risk have to understand the value of the service provided by the infrastructure. (example : toll road).

+ Subsidies

Governmenst that grants the right to build project exposed to traffic or merchant risks, can offer subsidies to minimize the risks for the private sector.

Example : Gustave Eiffel benefited from 1,5 million francs grant from the French government.

Grants reduce the total costs of the infrastructure and make it easier for the project to reach its breakeven point.

Paying subsidies is a way to attract more sponsors to participate in the construction, while leaving a large part of the risks to the private sector. Subsidies can be paid during the construction period (see Eiffel Tower) or during the operational phase (when the infrastructure is properly built and performs adequately).

C- Public Private Partnership (PPP)

There is not one, but many definitions of PPPs.

To some, it refers to all legal agreements between the private and the public sector ; to others, it is defined by the nature of the revenues generated by the project company. As a result, they tend to differentiate between a concession (where revenues are coming directly from the end users), and PPP (where rentals are paid by a public entity).

a) Concessions :

In the case of Edward 1rst, the Frescobaldi and the silver mines, the government did not spent any money.
The legal agreement behind the construction of the Eiffel tower is not so different. : G. Eiffel and the banks financed an asset that belongs to the city of Paris. In exchange, they received all revenues generated by the project for 20 years.

This type of cooperation between governments (or public entities) and the private sector, is usually referred to as a concession. According to a concession contract, the private sector is given by a public authority the right to develop, finance, build, operate and maintain a piece of infrastructure. In return, the entity in charge of the project is entitled to retain all (or a large part) of the revenue generated by the infrastructure for a given period of time.

Concessions contracts are relevant for regulated public infrastructure. They can be used to finance the renovation, improvement or extension of existing assets.
Concession agreements expose the concessionnaire to the performance risk of the infrastructure it has to build, or renovate and operate. There are sometimes subsidies involved but they are limited.

b) PPP (from the UK in 1992 to the rest of the world)

Origin : a program named Private Finance Initiative (PPI) in the UK in 1992, which became the framework for the PPP development in the rest of the world.

PPPs may seem similar to concessions, but the model offers much greater scope for possible partnerships with the private sector.

- ⇨ **Concessions = real performance risks, as clients are free to use it or not**
- ⇨ **PPPs = in this case, the direct user of the infrastructure and the clients are not the same persons. Users are individuals people, while clients paying for the asset are government and local public authority.**

Example

A delegation is given to a private consortium for the construction and the operation of a hospital.

As in any project financing, the construction is done by an SPV, which has subcontracted the obligation to companies specialized in this field.

Once the hospital is built, the SPV takes charge of all non-medical activities of the hospital (such as security, maintainance, catering, etc …). In exchange for these services, the government or local authority, pays rents to the project company. The rents are used by the SPV to (1) pay for the operation of non medical services, and (2) repay the debt contracted to finance the construction. Any money left is distributed to the sponsors in dividends.
Please note that all medical elements are outside the scope of the agreement.

PPPs mostly cover social infrastructure projects, that are used by a government or public entity to provide a basic public service.

Revenues received in a PPP are collected from the government or a local public authority, that uses the infrastructure to provide non-commercial services to its citizen.

➔ This is a main difference with concessions.

Rent payments made by a govenrment or public authority to a PPP are called « availability payments ».

An availability payment is a payment for performance, irrespective of demand => as long as the infrastructure is fully available and can be used without restriction by the public, the rent is due to the SPV.

To make sure that the infrastructure is well conceived, correctly operated and professionally maintained, availability payments are indexed to certain performance criteria (which means that payments can decrease).

➔ Behing the PPP : there is the concept that the duty of the public sector is to provide services, but not to build, operate and maintain assets that help public authority offer these services.

d) Financing PPP

PPP are considered by lenders as the safest type of project finance. Construction is often easy, and cash flows is not exposed to market risk.
Cashflow depends on :

(1) The creditworthiness of the public counterparty
(2) The ability of the project company to provide a high level of service to the infrastructure so that availability payments are made in full.

For lenders, the risk is much lower than for traditional concessions.

⇨ So PPP are financed with less equity than other types of projects. For instance, gearing in Europe for public counterparty rated A and above, is around 90 to 10, which means there is only 10% equity in SPV financing.

e) The various legal forms of PPP

PPP legal forms vary depending on the country where the infrstructure is being built.

Legal Forms :

- BOT Agreement = Build, Operate, Transfer Agreement. In that case, the ownership of the infrastructure remains with the public sector.
- BOOT Agreement = Build, Own, Operate, Transfer Agreement. Same than BOT except that the ownership remains with the SPV during the PPP. Result : with BOOT, the SPV can offer a pledge on the infrastructure itself to lenders.
- BOO Agreement = Build, Own , Operate. Structured that way in some cases only, there is no transfer back to the public sector. BOO are a way for the public sector to avoid taking back old assets or infrastructure, that may become obsolete in the future.

2- The Sponsors

Sponsors are the shareholders of the SPV. They provide equity to the project, and are therefore the first to take a financial hit if the project fails.

A- Industrial sponsors

They are those that have a real business activity beyond investing in infrastructure projects.

Example : Energy producers in the energy sector. They invest in equity to finance wind or solar farms, but also perform industrial activities around the life of their project. They :

- Identify and secure land to build and develop the project
- Perform studies to make sure that the environment (wind, sun) is adequate
- Design the project with specifications
- Secure a Power Purchase Agreement which is bankable
- Oversee the construction
- Operate and maintain the infrastructure after it is built

The sponsors' goal is to create value through various channels ; the investment is one of them.

In the example above, the energy company makes profit through the dividends paid, but also via the various operations of the project. A large part of the value creation comes from the development and the maintainance of the project.

Important :

The development of the concessions system has changed the business model for many sponsors.
(See case study of VINCI in class)
Summary : VINCI was originally a construction company, and is now an integrated business which includes construction and concessions management (mostly airport and highways). In 2019, net income from concessions represented almost 70% of the group's total ($2255 billions out of $3260 billions) => concessions business profit is more than twice the one of construction activities.

The reason behind the success of the integration :

a) Investing in infrastructure is very profitable
b) Being active in concession business is a way to secure contracts for the construction division
c) Most of the time, consortiums are not comfortable selecting a supplyer not fully committed to the project. When the subcontractor is also investing in the project (which is the case when it belongs to the same company as the sponsor), his interests are aligned with the shareholders ones.

B- Financial sponsors

They are investment companies that invest equity in infrastructure assets. Their only target is to generate profit from their investment. If their logic and organization are similar to the Private Equity firms specialized in LBO, there is one main difference :

Instead of investing in shares of companies acquired via an LBO, they buy shares of companies holding infrastructure assets. Given the resilience and the lower volatility of the cashflow in the sector, sponsors target a lower IRR.

Limited Partners such as pension funds, insurance companies, etc … are attracted by low volatility and stable yield over long periods of time. Recently, LPs became direct competitors to PE firms as they do not want to pay management fees : such costs lower yields and are not justified when assets benefit from long term purchase agreement.

Financial and industrial sponsors often invest alongside each other (Example : Heathrow Airport, with 7 shareholders : 1 industrial, 2 pension funds, 3 sovereign funds and 1 infrastructure fund).

C- Greenfield and Brownfield investment

While investment in infrastructure is a long term play, investors sometimes sell their stake if they have a specific need, or if they believe that it makes sense.

- The development phase of a project is generally funded by industrial sponsors only (they understand and know the risks very well – permits, licenses, etc …)
- The construction phase is also realized by industrial players, but sometimes, they sell a portion of their equity to financial sponsors (particularly in the case of mature assets when construction risk is very low – Europe, North America). When they sell part of the equity they own, the industrial sponsors lock in some of the value created during the development phase. Assets under construction are reffered to as Greenfield assets.
- When the infrastructure is operational (referred to as Brownfield assets) financial investors become natural potential buyers : the project is perceived as derisked.

Example : Renewable energy sector, where infrastructures are backed by LTPPA with creditworthy counterparts. Many assets are sold (partly or entirely by industrial sponsors to financial players) once they have a good operating track record.

Finally, some projects are named Yellowfield because they are somewhere between Greenfield and Browfield assets (partly operating, partly under construction).

D- The stock exchange listing – YIELDCO example

Large infrastructure assets are sometimes publicly listed (example : Frankfurt Airport). … Infrastructure funds may also be listed : in this case, the vehicle is listed (see Macquarie Infrastructure & real assets fund)

The example of the YIELDCOs

A YIELDCO is a type of listed company active in the field of renewable energy.

It is an investment vehicle established by a Renewable Energy Developer (RED) to hold its operating assets. In a regular YieldCo structure, a RED transfers its portfolio of assets to the YieldCo while keeping its development business and its portfolio of assets under development. The YieldCo is listed, but the developer keeps a significant minority stake.

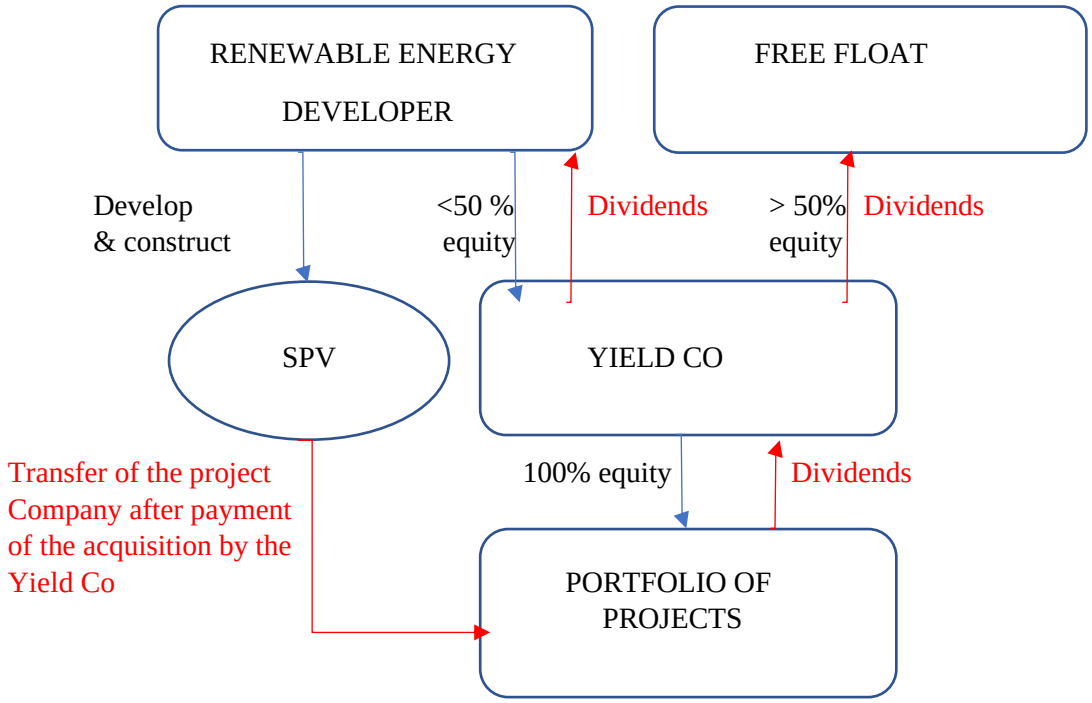
The establishment of a YieldCo allows the RED to partly monetize their existing portfolio of operating projects. It allows the RED to finance the construction of new projectswithous having to raise additional equity that would delute their existing shareholders.

By selling operating projects backed by LTPPA, they offer an investment opportunity to investors with a low risk profile, who favor yield over growth (hence the name YieldCo)

An important element of the YieldCo structure is that the YieldCo and the developer have an agreement regarding the future projects that will be built by the developer (which owns a stake in the YieldCo). Once a project has reached completion, the YieldCo is invited to buy it. The YieldCo has no obligation to acquire every project, it has only a right of first offer (ROFO) over the assets built by the developer.

The fact that this access comes in a form of ROFO, and not obligation to buy, reduces potential risks. YieldCo owners know they will not overpay for these projects, they will only pay the market price if they decide to buy it. The cash that is not used to buy new projects is distributed to shareholders.

SIMPLIFIED YIELDCO STRUCTURE



The logic behind a YieldCo is that equity investors backing RED and those looking to finance the operations of RED assets are not taking the same risk, and not targeting the same IRR. Valuations of integrated operators specialized both in the development and ownership of renewable assets can therefore be driven down by the high risk level of the development business.
Separating the 2 activities (development and ownership) should lead to an optimal valuation of both legs of the business.

YieldCo were very popular between 2007 and 2017.

A YieldCo is also partly an accounting arbitrage. Listing the majority of a YieldCo enables the developer to de-consolidate the debt raised at the SPV level for each transaction.

- When a developer has a full control over an SPV, the SPV is consolidated into the developer's financial documents.
- When he transfers the full ownership of its operating project to the YieldCo, the last one becomes the controlling shareholders of the SPV. It consolidates the SPV and its debt.
- However, if the developer retains only a significant influence over the YieldCo, it does not have to consolidate the YieldCo. It only recognizes its prorata share of the YieldCo net profit following the equity method of accounting.

⇨ A developer can largely reduce its level of debt by selling its operating assets to a YieldCo, and yet keeping a share of the profit generated at the SPV level.

Several questions raised by the concept

1. Potential conflict of interest as the YieldCo is buying from one of its shareholder. The structure is supposed to be protected using a Special Valuation Committee mandated by the Board of Directors
2. Dependance on the « anchor » shareholder : Being in the same time affiliate and captive client of the RED, YieldCo are not anymore renewable investment vehicle. They are part of a larger group.
3. Conflict between yield and growth. YieldCo is also a growth platform, it does not only provides yields. To acquire assets, the YieldCo must raise capital on a regular basis, because cash received from the projects and not distributed to shareholders is not enough. If the price of assets increases, then the yield given by the firm to shareholders is decreasing at each capital increase, with stock price being pushed down.

3- The Lenders

A- The banks

They do the majority of the lending in Project Finance. They benefit from a competitive advantage when they have both corporate and retail clients.

Basel III regulation have created difficulties for the banks involved in Project Finance (see : capital requirements linked to the credit rating, Risk Weighted Assets, capital consumption, …)

To accomodate increased capital consumption when maturities extend, banks usually include margin step-ups in their loans. The margin increases regularly by a few basis points.

Example : A loan can pay 200 basis points (bps) for the first 5 years, 225 bps for the following 3 years, 250 bps for the next 3 years, and so on …

⇨ It incites the borrower to refinance the debt by reimbursing the loan rapidly
⇨ It reduces the effective maturity of the loan
⇨ Shorter loans means lower RWA for the banks

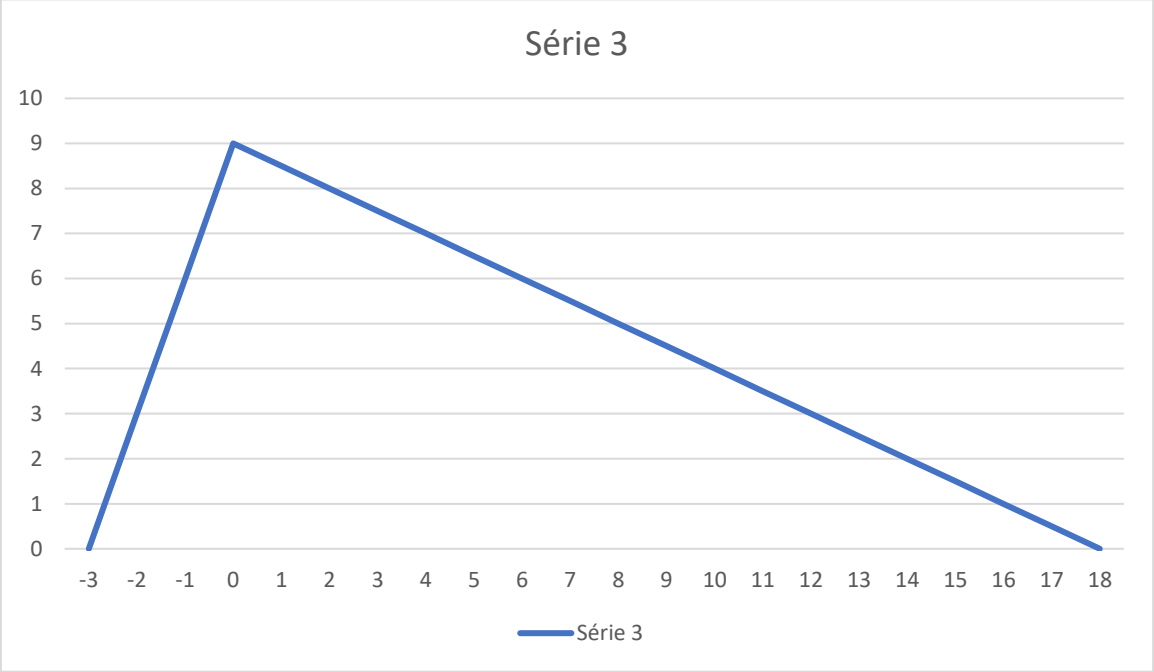
If the loan is not refinanced, the bank benefits from an increase in margin, which partly compensates the increase in RWAs.

The types of loans being offered :

Bansk can offer different types of loans to project companies :

1) Fully amortizing loans
2) Hard mini-perms
3) Soft mini-perms

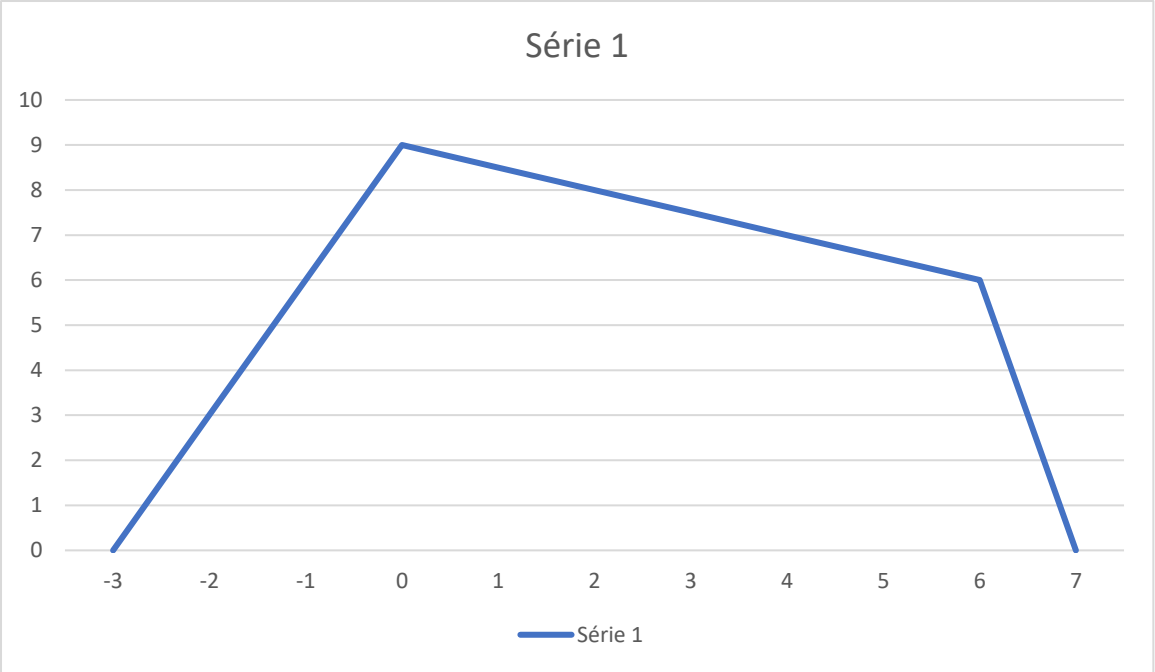
1- Fully amortizing loans are traditional project finance loans that amortizes down to zero over the life of a project. The maturity of these loans is based on the revenue scheme of the project company. If the SPV sells its output via a 20 years PPA with a creditworthy counterparty, the loan can cover the construction period + 18 years (or more).



The construction starts at (-3).
From (-3) to (0), this is the Drawdown Period.
The construction is finished on (0) and cash-flows generated are used to reimburse the loan from (0) to (18).

2- If it is not possible for banks to offer Long Term Debt, given the risk of the project, banks can offer mini-perms.
A hard mini-perm is a loan with a maturity of usually 7 to 10 years with a balloon repayment at the end. The debt profile is based over a fully amortizing LT loan, but after 7 to 10 years a full repayment of the outstanding amount is due.

⇨ The SPV must refinance the loan at or before maturity. If it fails to do so, the project company defaults.



The construction starts at (-3).
From (-3) to (0), this is the Drawdown Period.
The construction is finished on (0) and cash-flow generated are used to reimburse the loan from (0) to (7). This is the repayment period.
On year (7), a bullet payment is due to fully repay the oustanding loan.

⇨ The loan must be refinanced before that date (7)

3- Finally, banks can also offer soft mini-perms. A soft mini-perm is similar to a hard mini-perm because a balloon repayment is expected by the banks after the original period of 7 to 10 years. Unlike a hard mini-perm, though, the repayment is not mandatory after this period. The SPV can keep the loan but there are generally significant margin step-ups. The sponsor is also usually not allowed to receive dividends after the original period ; all the project's cash-flows are devoted to the repayment of the loan.
A soft mini-perm is meant to push sponsors to refinance the loan after the orginal period. But it is more flexible than a hard mini-perm.

<u>Junior loans can be offered :</u>

In addition to the loans described here-above, some banks can provide facilities that rank junior to these loans but senior to equity. These types of loans are called junior loans. They allow sponsors to increase leverage (and improve the IRR), while keeping the level of risks unchanged for senior lenders.

Including a junior loan to the overall financing structure is only possible for large projects, as :

- they must be large enough to compensate for the costs associated with the additional complexity ,

- and they give an incentive to potential junior lenders to analyze the opportunity.. Junior loans have usually a shorter maturity than senior loans, and always pay higher margin.

B- Infrastructure debt funds

Recent in the field of Project Finance, they are investment vehicles that provide Long term debt to infrastructure and energy projects.

The structure of these funds is similar to the funds managed by Private Equity firms : an investment company acts as manager and GP of the funds, while long term investors act as LPs.

Successfull for a while, these funds face now new competitors : their own clients ! Today, passive investors (LPs) are actively participating to the financing of infrastructure assets, and are becoming direct lenders.

C- Project Bonds

Project bonds are another source of liquidity for project finance. They are issued by a project company and acquired by investors who get repaid only with the cash flows generated by the project. These bonds have the following features :

- They must be investment grade rated if possible, in order to attract conservative investors.
- Their investor base is mostly constituted by insurance companies (buy and hold investors looking to secure a stream of interest over a long period of time).
- Due to the regulation applicable to various investors such as insurance companies or pension funds, project bonds can have a very long maturity.
- Project bonds are attractive in the case of big projects, as investors can deploy large amounts of money.
- Bonds pay a fixe coupon, instead of a reference rate plus a margin, and do not include step-ups.
- These bonds also include a make-whole provision in case of early repayment. This provision protect the investor : it forces the issuer to pay to the lender an amount equal to the present value of all coupons that the investor will forgo in the case of an early reimbursement.
- The total amount of the bond is drawn on the day of issuance. Therefore, bonds are not a good tool for projects where debt is drawn gradually during the construction period. Nevertheless, they can be a good tool used to refinance infrastructure assets already built.

4- The Public Authorities

Public Authorities are important actors in Project Finance. They set the rules applicable to concessions and PPPs, they are responsible for organizing tenders in order to select the private investors and the operators of future infrastructures.

A- The legal structure

The rôle of government is to vote on the laws applicable to project finance. Each has it own legal system, its own concession and PPPs framework, and has specified what has to be financed by public entities, and what can be funded by the private sector.

Considering the long term nature of the projects, the stability of the legal framework is essential in order to attract investors. This explains why governments tend to minimize legal changes, or do so after long interactions with infrastructure stakeholders.

Public entities have a role at each step of a project, particularly during the development and construction phases. They grant sponsors with the necessary legal authorizations to build the asset. But they also regulate the interaction between citizen and project companies: their goal is to find the right balance between the need for infrastructure and the well-being of citizen who live in the neighborhood.

B- Public tenders

Governments and local authorities organize public tenders to select which sponsors will be allowed to finance, build and operate the infrastructure. These tenders are designed to select the most qualified party for the project, using a set of criteria defined by the government or local authority.

The first part of a tender (called pre-qualification phase), consists in a period of time during which sponsors (it can be a consortium) present their credentials and their previous relevant experiences. Following a selection, the retained parties receive then the final tender conditions and can participate to the second phase.

The second part of the tender (called the bid phase), is the period during which sponsors prepare and present their final offers. A preferred bidder is then selected at the end of this phase, with the task to build and operate the future infrastructure.

This selection process enable public authorities to retain only experienced sponsors, and to optimize both the quality of the technical offer, and the price to be paid.

Based on various publications from C. Larreur