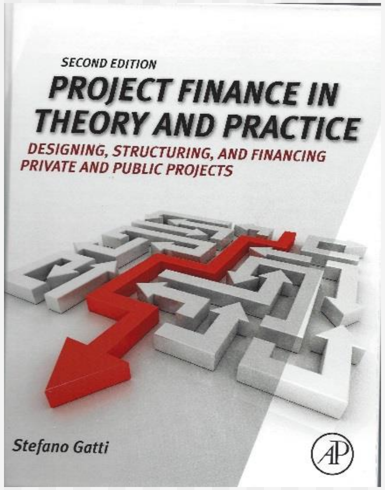
International Finance Course
LUISS Guido Carli, Academic Year 2018-2019

How to Analyse, Structure and Finance direct investments abroad, related to real assets (infrastructure, industrial plants, etc) with a project finance approach:

A greenfield project and operating assets (M&A) evaluation process

by
Federico Merola ("**FM**")
(22th October 2018)

1. Materials (2)



Project Finance in Theory and Practice

(by Stefano Gatti)

- ✓ **Chapter 1**: Introduction to the Theory and Practice of Project Finance (Page 1 - 14);
- ✓ **Chapter 2**: The Market for Project Financing: applications and sectors;
- ✓ **Chapter 3**: Project Characteristics, risk analysis and risk management (Page 43 – 49; 52 - 75);
- ✓ **Chapter 4**: The Role of Advisors in a Project Finance Deal (just to be red by students interested in the subject);

Risk Analysis – Recall from previous lessons

2. Risk Analysis – main area of analysis

A. GENERAL INFORMATION.

- Executive Summary;
- Objectives;
- Organisation;
- Output/services.

B. ISTITUTIONAL PICTURE - Country

- Regulation impacting the project
- Tax rules;
- Licenses, permits and concessions;
- Public Authorities involvement & Indipendent Authorities;
- Guarantees

C. SPONSORS.

- History and track record;
- Economic-Financial soundness
- Role in the Project and commitment (how is a certain Project?)
  - Potential conflict of interests.

D. MARKET.

- Market analysis;
- Information on players and structure of the sector
- Market trends;
- Potential position of the project in the market.

E. COST OF THE PROJECT.

- Detailed cost assumption;
- Capex and Working Capital;
- Operating and Financial Costs;
- Other cost including cost over-runs.

F. ENVIROMENTAL IMPACT.

- Analysis of the potential environmental impact;
- National and International Regulation impacting the Project
- SPV’s policies on environment;
- Risk analysis of any environmental impact

2. Risk Analysis – main area of analysis

G. TECHNOLOGY.

- Technology to be used
- Maturity and track record (Pilot projects)
- Technology providers;
- O&M

H. FINANCIAL STRUCTURE.

- Equity and quasi equity;
- Debt;
- Terms and conditions of the Senior Debt;
- Other potential financial sources;
- ECAs and Multilateral

I. ECONOMIC-FINANCIAL ASSUMPTIONS

- Economic Assumptions;
  Tariffs and revenues;
- Operational costs;
- Financial Profile of the deal;
- Debt Repayment capability;
- Main economic-financial indicators

J. CONTRACTS.

- Various Contracts and social commitments;
- Concession Contracts;
- Offtaker/Purchase contracts;
- O&M & etc.

K. GUARANTEES & Security Package.

- Guarantee provided;
- Other risk mitigations factors;
- Insurance coverege

2. Risk Analysis – major macro-risks

- ✓ **<u>Project Risk</u>**: all the possible events which may impact on the expected performance of a project;
- ✓ **<u>Country Risk</u>**: all the risks specifically associated with the investment (in infrastructure) in a foreign country.

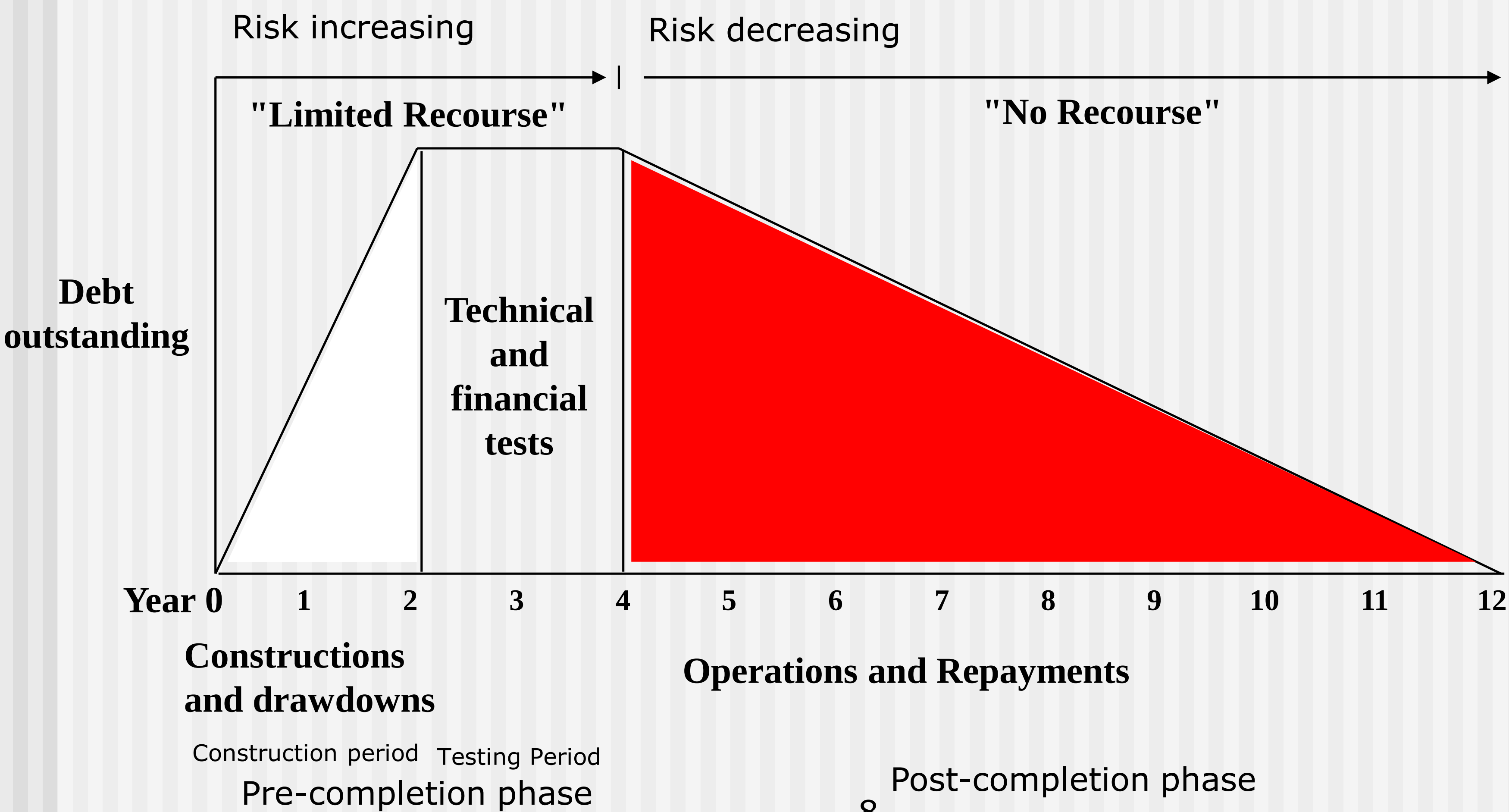
2. Risk Analysis – Project risks

Divided in

- ✓ Pre-completion risks
- ✓ Post-completion risks

Ps: Country/political risks may occur during the pre and post completion phase

2. Risk Analysis – Risk profile of a project



2. Risk Analysis – Major Pre completion risks

- ✓ Project management (planning)
- ✓ Construction (timing, costs and quality/performance defined)

2. Risk Analysis – Major Post completion risks

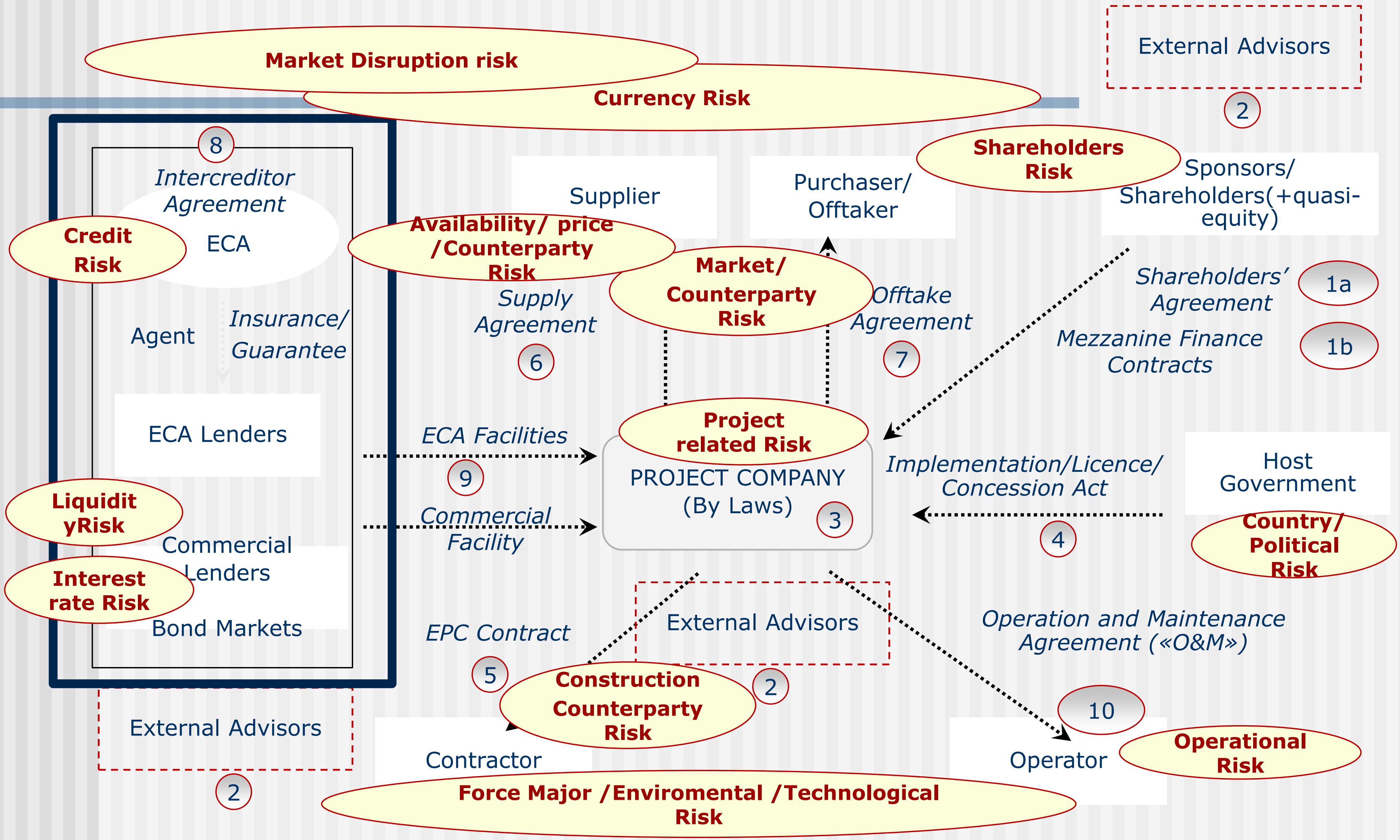
- ✓ Supply risks (quality, quantity and prices);
- ✓ Operating risk (project management)
- ✓ Performance Risk
- ✓ Commercial risks (demand and prices);

2. Risk Analysis – Major Risks during both phases

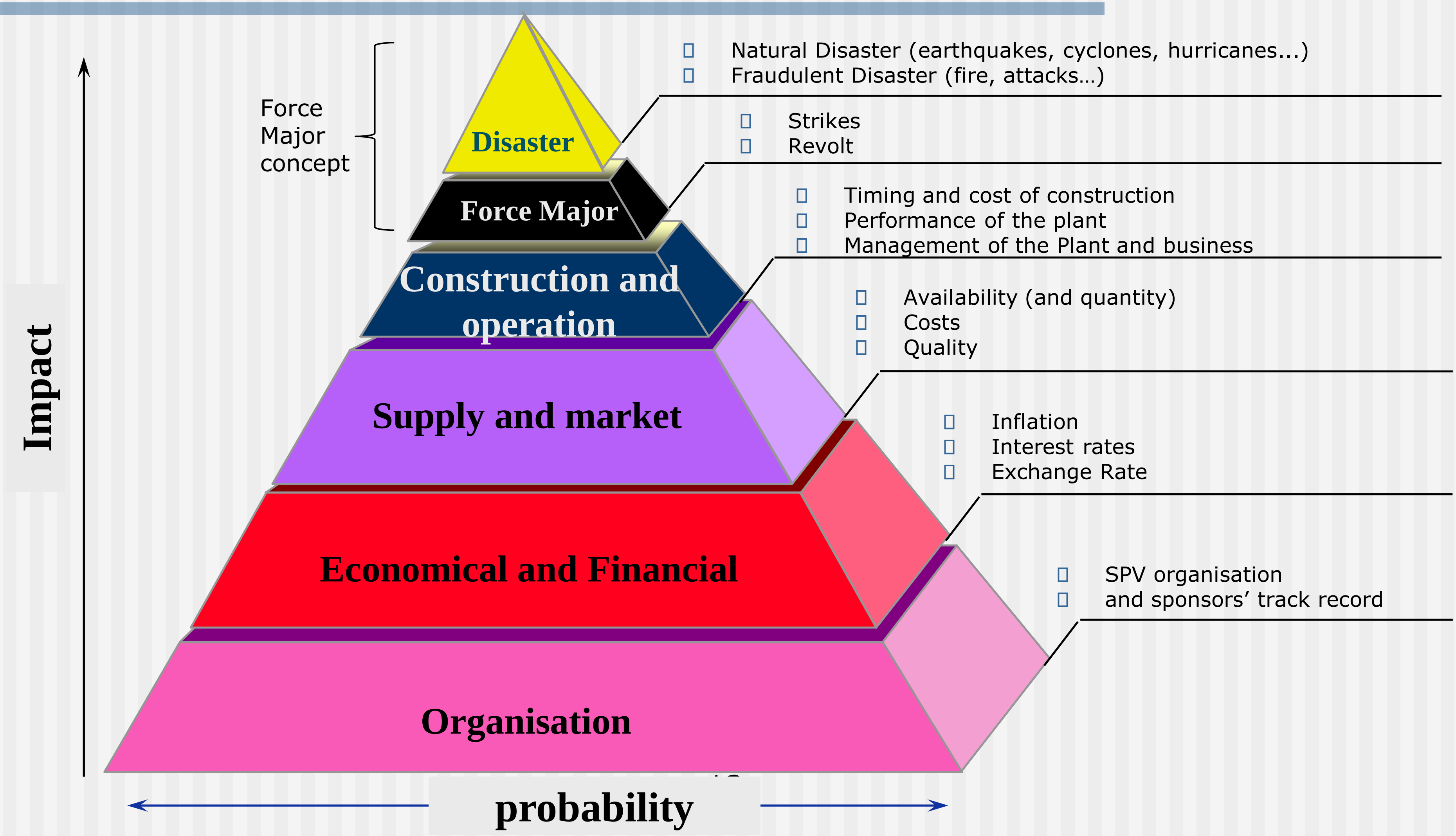
- ✓ *Sponsors and deal structure* (commitment, potential conflict of interests; alignment of interests; soundness of various players and the complex risk sharing)
- ✓ *Technological* (risks of performance for not tested technologies and rapid obsolescence during operation);
- ✓ *Financial* (exchange rate, interest rates, inflation rate);
- ✓ *Environmental*;
- ✓ *Regulatory Risk;*
- ✓ *Force Major and Market disruption;*
- ✓ *Political Risk/Country risk;*
- ✓ *Legal Risk*
- ✓ *Credit/Counterparty risk*
- ✓ Other

Some of the risks incurring during both, the pre and post-completion phase, are hedged by the use of insurance contracts or derivatives contracts

Main parties involved in a PF deal & related risks



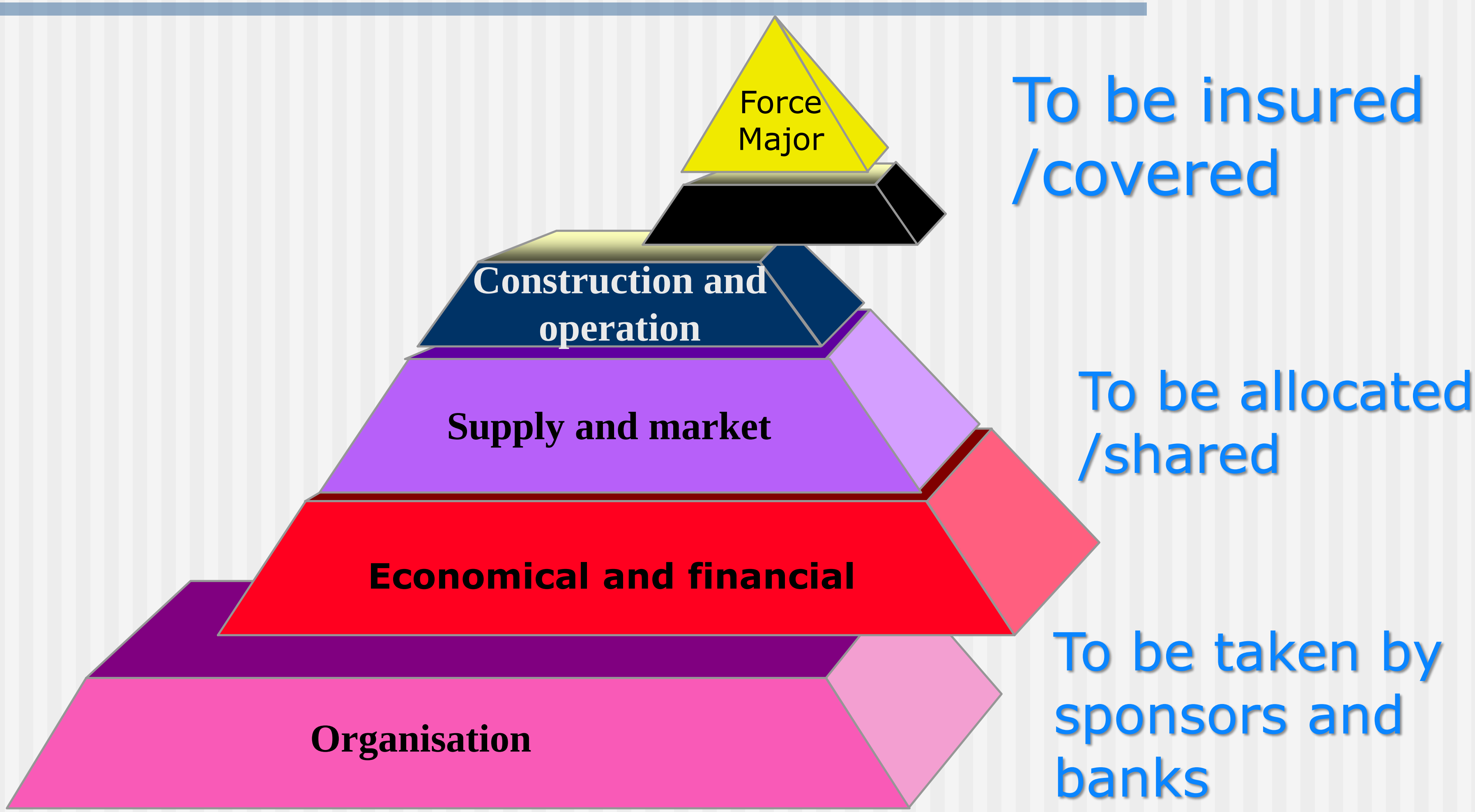
2. Risk Analysis – the Pyramid of risks



2. Risk management

key principles:

- Risks have to be allocated on those parties which are more capable to manage them;
- It may be preferable to sustain a pre-determined cost rather than take uncertainty



3. Risk Analysis – Post Completion Risk

3. Risk Analysis – Major Post completion risks

- ✓ Commercial risks (demand and prices);
- ✓ Supply risks (quality, quantity and prices);
- ✓ Operating risk (project management- O&M)
- ✓ Performance Risk (technology)

3. Risk Analysis – Major Risks during both phases

- *Sponsors and deal structure* (commitment, potential conflict of interests; alignment of interests; soundness of various players and the complex risk sharing)
- *Technological* (risks of performance for not tested technologies and rapid obsolescence during operation);
- *Financial* (exchange rate, interest rates, inflation rate);
- *Environmental*;
- *Regulatory Risk;*
- *Force Major and Market disruption;*
- *Political Risk/Country risk;*
- *Legal Risk*
- *Credit/Counterparty risk*
- Other

Some of the risks incurring during both, the pre and post-completion phase, are hedged by the use of insurance contracts or derivatives contracts

3. Commercial/market/demand Risk

- The **market risk** is the risk that **revenues generated by the SPV are less than expected**
- Such **negative difference** may be the result of a **optimistic projections** in terms of **quantity** of output sold and/or sales **prices**;
- To the extent possible **Sponsors try to allocate this risk to other parties** such as:
  - Off takers (pre-defined buyers) with a "***Take-and-Pay***" contract (ensuring payments only after the actual delivery of goods and services)
  - Off takers (buyers) with a "***Take-or-Pay***" Contract (ensuring payments just for the availability of goods and services, even <u>if such goods and services are not actually taken</u>).

3. Commercial/market/demand Risk

- In case of **large infrastructure with a retail market** (such as motorways, transport services, etc) it may happen that a **Public Body will guarantee the payment** of a **residual tariff** on the luck of traffic necessary to achieve certain financial ratios;

- It may also be possible that a **public body pays "shadow tariffs"** (a price for any service delivered) on services provided for social infrastructure like prisons and schools;

- Finally, it may also happen that a **public body pays a "fixed" tariff-rent for the availability** and management of a certain asset;

- **Other** typical market risks (always resulting in less quantities and /or lower prices) are **change in the competitive environment** and or the **default of an off-taker**;

3. Commercial/market/demand Risk

Some key terms:

- ✓ Offtake agreement: Take or Pay or Take and Pay;
- ✓ Throughput Agreement (take or pay off-take contract);
- ✓ Toll / Tariff Agreement.

3. Supply / Feedstock risk

- **Availability** of necessary production inputs/raw materials (quality and quantity required) and **Price** risk;
- **To the extent possible** Sponsors will try to mitigate this risk by means of **long term supply contracts**;
- The **price** of such inputs will be **agreed upon** by parties on the basis of **market standards with specific adjustment methods**;
- Special **reserve accounts** and **"*ceiling price*"** may mitigate price risks related to supply;
- In Oil&Gas or other related sectors, it has also to be considered the "*Depletion Risks*" e "*Reservoir Risks*‟ (**upstream risk**)

3. Operating risk – Performance risk

- **The operating risk** is related to the actual performance of the plant/asset during the post completion phase (lower efficiency, cost overruns, etc);
- **The operator,** is the counterparty (if any) who takes care of the facility after construction (maintenance) in order to preserve its technical performance;
- **Under the O&M contract** it handles maintenance for an agreed number of years guaranteeing the SPV that the plant is run efficiently in keeping with the preestablished output parameters;

3. Risk Analysis – Pre and post completion risks

The difference in risk profile and perception during the pre and post completion phases implies that:

- ✓ the "**Security Package**" is usually **different for the two phases** of the project (i.e. limited recourse and non recourse);
- ✓ The **impact of the project financing on the banks' capital requirements** may be different and so the "**pricing**" of the debt.

4. Risk Analysis – Major Risks common to both phases, pre and post completion

4. Risk Analysis – Major Risks common to both phases

- ✓ Sponsors and deal structure (commitment, potential conflict of interests; alignment of interests; soundness of various players and the complex risk sharing)
- ✓ Technological (risks of performance for not tested technologies and rapid obsolescence during operation);
- ✓ Financial (exchange rate, interest rates, inflation rate);
- ✓ Environmental;
- ✓ Regulatory Risk
- ✓ Force Major.
- ✓ Political Risk/Country risk
- ✓ Legal Risk
- ✓ Credit/Counterparty risk
- ✓ Other

Some of the risks incurring during both, the pre and post-completion phase, are hedged by the use of insurance contracts or derivatives contracts

4. Sponsors’ risk

- Financial soundness of the sponsors;
- Track record and experience;
- Commitment on the project;
- Absence of conflict of interests (and/or satisfactory mitigation);
- Sound Shareholders agreements

4. Technological and financial risks

Technological risk:

- Is the technology mature, sound and trustable ?
- Normally such risks are not taken by lenders and therefore have to be covered by technology providers, EPC Contractors and Sponsors

Financial Risks:

- Exchange rate risk (to be covered by means of derivatives);
- Interest Rate risks: (to be covered by means of derivatives);
- Inflation risk (To be addressed within the financial model)

4. Environmental Risks

- Environmental issues may present themselves as temporary or permanent changes to the atmosphere, water and land due to the human activities or to the projects' activity itself, which can result in reversible or irreversible impacts (low, medium or high risk);

- Main Environmental Risks are the following:
  - ✓ Air emissions and air quality
  - ✓ Energy use and conservation
  - ✓ Wastewater and water quality as well as Water use and conservation
  - ✓ Hazardous materials use
  - ✓ Wastes
  - ✓ Land contamination
  - ✓ Land acquisition and resettlement
  - ✓ Biodiversity and natural resources
  - ✓ Community health, safety, and security
  - ✓ Indigenous peoples
  - ✓ Cultural heritage

4. Environmental Risks

The coverage of environmental risks are very articulated and complex, resulting in a number of activities such as:

- Preliminary and on going Due Diligence analysis;
- Specific Technologies;
- Insurance policies;
- Etc.

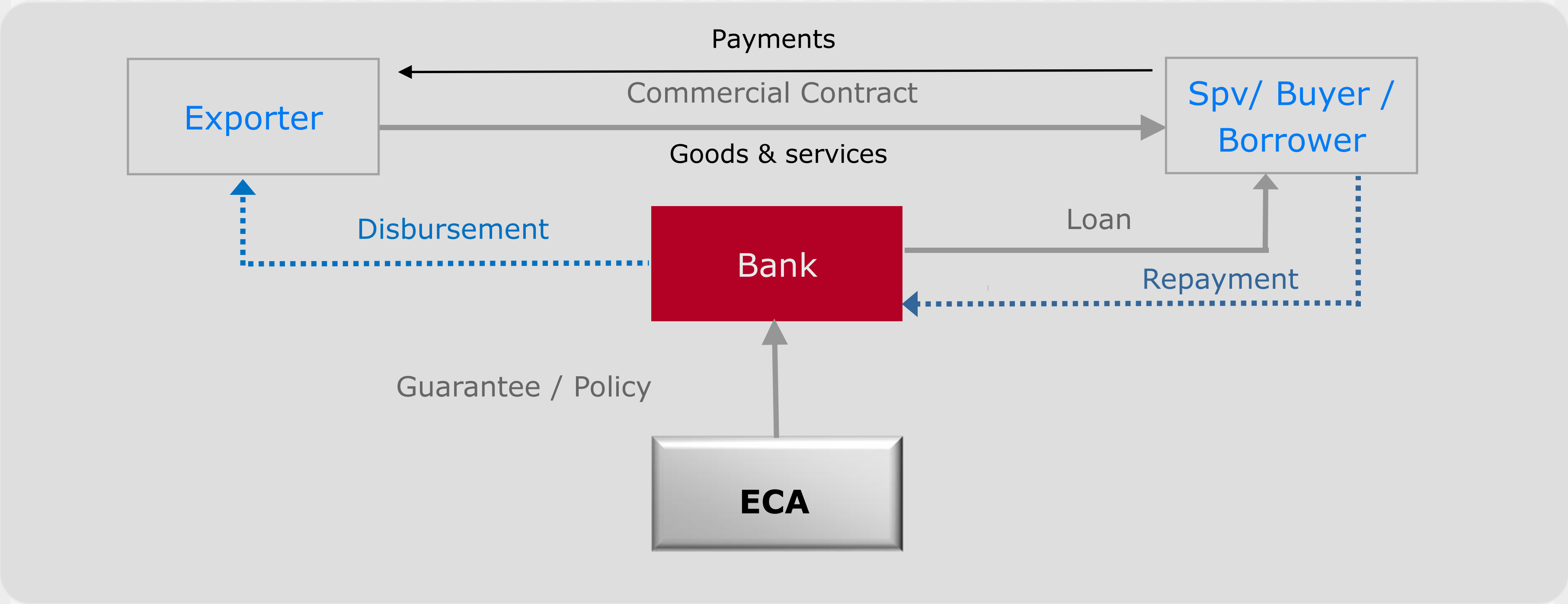
4. Political risks in Export – Project finance

- ✓ Political risk for buyers' credit lines for projects in non OECD countries is covered by ECAs;
- ✓ Such coverage is usually among 90-100% and may differs during the pre and post completion phase;
- ✓ ECAs coverage has a cost (premium) to be paid by the Project Company for the benefit of banks;

4. Political risks coverage

Risks	Events of default
Expropriation	Any discriminatory action by the host government which deprives or prevents the Guarantee Holder from exercising its ownership rights in, or effective control of the guaranteed investment
Transfer and convertibility	Any action by the host government which prevents, directly or indirectly, the Guarantee Holder from legally converting or transferring outside of the host the dividends, profits or other monetary benefits/returns derived from the investment
Political violence	Any political disorder or turmoil or conflict which can cause: i) destruction or disappearance of, or physical damage to, tangible assets in the host country functional to the investment project; ii) total inability of the project enterprise to conduct operations essential to its overall financial viability as a going concern for the duration of the applicable waiting period; iii) business interruption.
Breach of Contract	Contracting party’s actual failure or refusal to perform (or a clear indication of its intentions to not perform) its obligations under the contract.

4. Political and commercial risks in Export – Project finance



- Buyer's Credit is a typical form of **medium/long term financing** used in commercial transactions with foreign countries
- Buyer's Credit protects the **bank against the credit risk** in respect of a loan made available to a foreign borrower, for the settlement of export contracts with national companies

4. Do ECAs cover commercial risk ?

- ✓ Commercial risks include:
  - ❖ *De jure* or *de facto* insolvency of the Borrower / Guarantor and, if applicable, of the Guarantor
  - ❖ the default of the Borrower /Guarantor, (i.e. Borrower or the Guarantor's failure to comply with the obligation to pay the Insured Party)
- ✓ Very often ECAs also cover commercial risks (only post completion), but only towards selected countries and with percentages reduced in respect of those applicable to political risk (and costs proportionally higher than those applicable to political risk).

4. Political and commercial risks in Export – Project finance

Covered Risks

Commercial Risks

- - *De jure* or *de facto* insolvency of the Borrower / Guarantor and, if applicable, of the Guarantor
- - the default of the Borrower /Guarantor, (i.e. Borrower or the Guarantor's failure to comply with the obligation to pay the Insured Party)

Political Risks:

- decisions of a foreign country, affecting the performance of the Loan Agreement
- general moratorium allowed by a foreign Government
- currency transfer restrictions
- legal provisions which produce a discharging effect on the payments to be made by the borrowers or guarantors
- force majeure events occurring outside Italy, (ie war, civil war, revolutions, riots, civil unrest, acts of terrorism, sabotage, cyclones, floods, earthquakes, volcanic eruptions, tsunami or nuclear accidents)

which leads to

Non payment of outstanding Credit

4. The advantage of having the ECAs

- ✓ Substantial reduction of the lenders' risk (with limited impact on their capital and increased bankability effect);
- ✓ Reduction of borrowers' financial costs (less interests to be paid even if there is a premium);
- ✓ The project is brought at a sovereign level.

4. The disadvantage of having the ECAs

- ✓ Time for evaluation and approval;
- ✓ Different criteria adopted by various ECAs in multi-sourced export-project finance deals;
- ✓ More complexity within the project’s structure;
- ✓ Premium paid may be high (especially for commercial risks’ cover);
- ✓ Litigation between ECAs and Banks in case of payment requests.

5. Security Package

The all system of **contracts**, **agreements**, **guarantees** and **specific contractual clauses** set up in order to cover, mitigate and share risks (in particular lenders' risks) is addressed as *Security Package*

5. Security Package

In general terms, the **Security Package** is the complex of:

- Agreements and contracts,
- commitments and covenants,
- guarantees

Specifically shaped for covering, mitigating, transferring/sharing and insuring risks among various parties of a PF.

NB: Be careful not to confuse the <u>Security Package</u> in the above mentioned "large" meaning with the <u>Security Documents</u>

5. Security Package

In a Project Financing transaction there are **three categories of documents being part of the security package:**

- **Project Documents**
- **Finance Documents**
- **Security documents**

5. Security Package – the project document

Project documents include

- **Construction Contract (EPC);**
- **Operation and Maintenance Agreement (O&M)**
- **Offtake Agreements (PPA; Tolling; EnPC etc.)**
- **Supply Feedstock Agreement**
- **Concession Agreement (in a PPP structure)**
- **Ecc.**

5. Security Package

Financial documents include

- **Financial Agreement**
- **Ancillary Documents**

A large part of the Financial documents are part of the security package (projects accounts; DSCR Reserve account, covenants; securities)

5. Security Package

Security documents include

- **Pledge** on the Project Company’s **Shares**;
- **Security** on the Project Company’s **receivables**;
- **Security** on the Project Company’s **Banks Accounts**/**Escrow Accounts**
- **Mortgage** on the Project’s **Properties**
- **Security** on other Project Company’s **Assets**
- **Direct Agreement.**

5. Security Package – The project risks

- ✓ ***Collateral on the SPV assets*** (are this kind of guarantees really enforceable ?)
- ✓ ***Specific Guarantees released by Sponsors*** (are the Sponsors available to structure a PF without recourse ? Maybe just post construction ?);
- ✓ ***"Guarantee" on cash flows*** *of the project or of another project (usually within the financial agreement as covenants, together with other* ancillary and additional guarantees);
- ✓ ***Contractual "Guarantee"*** (legal agreements set up in order to transfer and mitigate risks rather than provide actual guarantees).

5. Security Package - Financial Agreement

- In a PF Deal to protect cash flows deriving from the project is more important than any other guarantee instrument;

- For such reason, it is necessary for the borrower:

  - ❖ To accept that cash flows have to be concentrated in specific Escrow Account set up under Escrow Account Agreement;
  - ❖ to bear a **complex** and **detailed** set of obligations toward lenders that are **ancillary** to both, the obligation to **repay** and to the **financing in general**.

- These obligations may be either related to **loan repayment** – if the SPV fails to do certain actions and it will not be able to repay the loan at the scheduled maturity date – or in general to **monitor** the credit investment and verify that it is **managed properly**.

5. Security Package - Covenants

- Some specific closes within the financial agreements are dedicated to cover and mitigate risks for the lenders (Covenants);
- the Covenants are commitments, obligations and limitations that the Borrower has to respect during the life of the Loan;
- Under the facility agreement, covenants are usually divided in:

  - Positive covenants,
  - Negative covenants,
  - Financial Covenants

5. Security Package - Positive Covenants (obligations to do something)

- The following obligations, *inter alia*, belong to the Positive Covenants:
  - Obligations to **building and operating the plant** and the project according to sound industrial and business criteria;
  - Obligations to **use funds made available by lenders solely for purpose set out in the credit agreement**;
  - Obligations to **use cash flows in accordance with limitations stated** within the project documents
  - Obligations to **keep insurance policies** required for project in existence and effectiveness;
  - Obligations to **get administrative authorizations/permits needed to build/operate the plant/project**;

5. Security Package - Positive Covenants (obligations to do something)

- Obligations to comply with **reserved discretions;**
- Obligations to comply with applicable **laws and regulations**;
- Obligations to comply with **environmental** laws;
- Obligations to duly keep the Project Company's **accounting** documents;
- Obligations to open and maintain the **project bank accounts** as specified in the facility agreement;
- Obligations to create and keep valid **security interests** as security for the financing and to provide security on the additional future assets of the Project Company
- Etc.

5. Security Package - Negative Covenants

- The following topics belong, *inter alia*, to the Negative Covenants:
  - Obligations **not** to **modify or jeopardize** the right of the Project Company under the project agreements, **without lenders' approval**;
  - Obligations **not** to **dispose** of the Project Company's **assets**;
  - Obligations **not** to create any other **financial indebtedness;**
  - Obligations **not** to **create** any **security** in favor of third parties (***negative pledge clause***);
  - Obligations **not** to **undertake** any other **business or transaction** other than those related to building and operating the plant/project (ring fence obligation);
  - Obligations **not** to **buy assets** which do not pertain to the project or **enter into contracts not included** in the list of contracts approved by lenders;

5. Security Package - Negative Covenants

- Obligations **not** to **abandon** the **construction** or the **operation** of the plant/project ;
- Obligations **not** to **undertake** any merger, demerger or corporate restructuring and in general not to execute **any extraordinary corporate operation**;
- Obligations **not** to **decrease** the equity capital and/or **issue** shares not pledged in favor of the lenders
- <u>**Restrictions to dividend distribution**</u>
- Obligations **not** to **grant credit** or **guarantees** to third parties

5. Security Package - financial Covenants

- **Financial covenants** are also included in the facility agreement in order to:

  - ***Set conditions for drawdowns***: **deterioration** of certain ratios **triggers the prohibition** of further drawdown;
  - ***Modify the interest rate***: rate is **increased** if the **creditworthiness** of the borrower **deteriorates**;
  - ***Allow sponsors to make distributions of dividends under some circumstances***: it will occur **during the operation phase only**;
  - ***Establish event of default***: a material **drop** of certain financial ratios causes an event of default

5. Security Package - financial Covenants

- **Obligation** to respect the Debt / Equity Ratio
- Obligation to respect some industrial/financial ratios

- Financial Ratios have the purpose of:

(i) **Monitoring the technical/industrial progress of the project**;

(ii) **Monitoring the borrower and its economic results**.

- The most common financial ratios include:
  - **Project Life Cover Ratio (LCR)**- this compares the **net present value** of the **future revenues** of the project against the **debt outstanding**;
  - **Loan Life Cover Ratio (LLCR)** - this compares the net **present value of the future revenues during the agreed term of the loan** with the **debt outstanding** on the day in question;

5. Security Package - financial Covenants

- **Drawdown Cover Ratio** – this compares the projected **maximum debt outstanding** with the **forecast net present value** of the **project cashflows** during the term of the loan;

- **Debt Service Cover Ratio (DSCR) -** this is usually a historical test which compares the amount by which the **net *cashflow*** for a given period, usually 12 months, has gone **over the debt service requirement** (principal plus interest).

5. Security Package - financial Covenants

- "In theory", violation of a covenant in a credit agreement **causes** an **event of default**.
- However, the credit agreement may provide for some mitigations in favor of the borrower such as:

  (i) To grant the borrower with a **grace period,** where the Project Company may cure the breach in question;

  (ii) As per the representations and warranties, the **materiality of the breach** is crucial in order **to claim** the event of default.

  (iii) A **material adverse effect** occurs when the borrower **is prevented** in its ability **to fulfill the contract obligations**.