New York University
Stern School of Business

B40.3186 – Project Finance and Infrastructure Investment

Summer 2010 **Prof. Tommaso Albanese**

Rationale

This course will provide students with an understanding of the fast changing dynamics around project and infrastructure finance. For many years, project finance has been the core technique for financing infrastructure and other large-scale projects worldwide. Carefully engineered financings have allowed an efficient allocation of the project risks between sponsors and investors, typically under the umbrella of government or multilateral finance programs. More recently, private capital has taken the lead. The syndicated project finance business has given space to direct equity investments and hybrid secured financings. Specialized funds have flourished using the private equity model to buy the infrastructure asset and leverage it up to increase the return on capital. This course will also provide students with an exposure to the current debate on how the credit crunch has tempered the pace of such investments and how the recent infrastructure spending plans initiated by governments around the world need a significant private capital participation in order to have a meaningful chance of being implemented.

Course Objectives

The first part of the course will provide the necessary theoretical and conceptual tools for financial analysis and decision-making in relation to project and infrastructure finance. The course is designed to introduce students to project feasibility, evaluation, financial analysis and structuring, use of various sources of funds and markets, and contractual documentation. The second part will focus on the global need for infrastructure investments (accelerated by the recent stimulus policies) and the increased role played by private capital in the form of private equity, insurance companies, pension funds and sovereign wealth funds. Students will appreciate how international investors now consider infrastructure as an asset class per se. The course will make large use of real case studies, including greenfield and brownfield projects in energy, renewable power, transportation, and water. Area of focus will be the US, the UK and emerging markets. Student will learn the cogent analyses of why some deals have succeeded while others have failed. At least one session will be devoted to derivatives, swaps and financial modelling as these techniques apply to project finance analysis. The course will be very useful to students interested in a financial career in the sector, or in a bank/ government institution involved in project and infrastructure financing, or for portfolio managers that will inevitably consider an exposure to this asset class.

Course Method

The course aims at providing students with the technical and strategic skills required to analyze and evaluate infrastructure projects. The case studies provide an opportunity to apply the project finance principles and valuation methods to real-life projects. The course will be taught in the form of lectures together with case studies intended for class discussion.

As in any case-based course, the method of analysis and the questions posed are far more important than the final answers. Consequently, the lessons and insights drawn from these cases are largely a function of the effort and care students invest into being fully acquainted with the readings and cases for each session. Classes will include discussion of readings, case analysis and group presentations.

Instructor

Tommaso Albanese is an Adjunct Professor in Finance at Stern. He is a former Managing Director of Morgan Stanley & Co, Co-Head of Global Capital Markets in Europe and Global Head of Corporate Derivatives. He also teaches at the Cass Business School in London.

Text and Cases

The textbook for the course is: John D. Finnerty, *Project Financing: Asset Based Financial Engineering*, (Wiley Finance, 2007) ("JF"). The additional readings and assigned cases will be provided on Blackboard during the course. Class notes will be distributed in advance of each session.

Case Assignments

All case assignments will be turned in by groups of three to four students each. In addition to preparing for each class, groups will be responsible for the following:
-One case presentation in class.
-Two case write-ups out of the remaining cases.

Class presentation. There are five cases assigned for the course to be allocated between groups. Each presentation will last no longer than 20 minutes. It should focus on the substantive issues rather than being a question-by-question response. No time should be spent on presenting background information. Focus should be on presenting insights. Attention should be paid to the clarity and quality of the message.

Write-up. The coversheet should include the name of the case and the group members. The first page should be titled "Executive Summary" and should contain the main insights that have emerged from analyzing the case. The next one or two pages (no more) should contain a numbered list with the answer to each question in the case (all supporting work in appendices). The write-up will be graded for content and format. Write-ups should be turned in electronic format at talbanes@stern.nyu.edu and in hardcopy format prior to the session for which they are assigned.

Grading

Grades will be computed as follows:

Case Assignments (as per above)	40%
Final Exam	40%
Class participation	20%

Final Exam. The final exam will be an individual effort. It will last about sixty minutes and will consist of a list of questions (six to eight) to test the depth of your understanding of the material. The questions will only refer to the topics covered in class. It is a closed book exam.

Class Participation. It will be evaluated on the basis of participation to the class discussion. Quality is more important than quantity. Quality comments are those who move the conversation forward, or offer a different, unique and relevant perspective, or build on other comments, or raise apparent tradeoffs in the analysis. The evaluation is adversely affected by lack of attendance or the creation of negative classroom externalities.

First Day of Class

Please bring the course outline, a name tag and a calculator. Please be on time.

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Course Outline

SESSION 1 – Why Project and Infrastructure Finance?
What is project finance?
Project finance versus corporate finance
The rationale for project finance/ infrastructure investment
The Cogeneration Project case discussion (part 1)
Project viability and security arrangements
Structuring the project
The market for project finance

SESSION 2 – Financing the Project and Risk Analysis
The Cogeneration Project case discussion (part 2)
Financial plan and modelling
Project valuation and return analysis
Sources of funds
Issues for host government
Project risk analysis
The Petrolera Zuata case discussion (presentation group 1)

SESSION 3 – Managing the Project Risk, PPP/P3 and Renewable Energy
Risk management instruments
Public-Private Partnership (PPP or P3)
Renewable energy
Biomass, wind, solar and geothermal projects
Renewable energy financing
The Wind Farm case discussion (presentation group 2)

SESSION 4 – Infrastructure Investment, Leverage and Regulation
Infrastructure as a new asset class
A true long-term investment opportunity?
Recent innovations in infrastructure investment
The Macquarie Fund example
How is an infrastructure fund structured?
Leverage and regulation
The UK Water Sector case discussion (presentation group 3)

SESSION 5 – Focus on the Transportation Sector
Infrastructure investments in the US
Private focus on transportation sector
Is the P3 accepted in the US?
Different examples of P3 in the US road sector
Federal budget and state regulation
Chicago Skyway case discussion (presentation group 4)

SESSION 6 – Infrastructures through the Crisis
Infrastructure investments through the crisis
New financial dynamics affecting the sector
Public policy response to the crisis
Expectations on future infrastructure investments
British Airport Authority case discussion (presentation group 5)
Final Exam (60 minutes)