# Project financing and open innovation

## Prof. Guillermo Arenas Diaz; Prof. Andrea Signori

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

Innovation encompasses multiple fields within the social sciences, including management and economics. The Project Financing module consists of an introduction to the mechanism of project financing. After reviewing the main market frictions faced by firms when raising capital for new projects, the module outlines the difference between corporate and project financed-investments and the ways in which project finance can address the above frictions. Then, the module focuses on the identification and allocation strategies of the main risks associated with project finance. Finally, it addresses the setup of the financial model, the capital structure decision, and the main valuation techniques used in project finance. The Open Innovation module consists of an extensive analysis of the main barriers firms face when innovating, in its different phases moving from invention towards commercialization of a new product or process or organizational set up. Also, the module assesses the concept of “Open Innovation” as a competing innovation model (with respect to existing and more traditional models) which would partly allow overcoming the financial barriers a firm faces when innovating/or when willing to innovate.

Upon successful completion of this course, students will acquire:

1. The knowledge and understanding of the logic underlying project financing, as well as the ability to outline and understand the open innovation model and the main innovation barriers, including the financial ones.

2. The ability to apply such knowledge to real and unfamiliar issues associated with the financing of new projects and the strategies firms may pursue in terms of open innovation.

3. The elements necessary to autonomously and critically develop their own judgment about the opportunities and challenges of project financing and open innovation, depending on the characteristics of the players involved.

4. The lexicon associated with the topics of the course and the ability to communicate with both specialist and non-specialist interlocutors clearly and unambiguously by means of dedicated activities throughout the course.

5. The learning skills that will allow them to further delve into the interaction between finance and innovation in an autonomous way.

***COURSE CONTENT***

The contents of the Project Financing module are the following:

– Capital market frictions: agency costs, information asymmetry.

– Introduction to project financing: main features and players, corporate vs. project finance, advisors and financial intermediaries.

– Risk in project financing: risk identification, analysis, and allocation.

– Financial structure and valuation: financial model, capital structure choice, project valuation and cover ratios.

– Case studies.

The contents of the Open Innovation module are the following:

– Main barriers to innovation, both financial and non-financial.

– Conceptualization of the open innovation model and implications for firm boundaries, networks, and digitalization.

– Opportunities and challenges of open innovation.

***READING LIST[[1]](#footnote-1)***

*Project Financing module*:

S. Gatti, *Project Financing in Theory and Practice*, 3rd edition, Elsevier, 2018, chapters 1, 3, 5, 6.

*Open Innovation module*:

– H. Chesbrough-W. Vanhaverbeke-J. West (eds). *Open innovation: Researching a new paradigm*. Oxford University Press on Demand, 2006.

– H. Hottenrott-B. Peters (2012), *Innovative capability and financing constraints for innovation: more money, more innovation?*, Review of Economics and Statistics, 94(4), 1126-1142.

– G. Pellegrino-M. Savona (2017), *No money, no honey? Financial versus knowledge and demand constraints on innovation*, Research Policy, 46(2), 510-521.

For both modules, additional teaching material will be made available on Blackboard.

***TEACHING METHOD***

The course uses a combination of frontal lectures, case study discussions, and project works to be presented in groups.

***ASSESSMENT METHOD AND CRITERIA***

The assessment method is different for attending and non-attending students.

*Attending students*: the Project Financing module is evaluated in an interim test during the mid-term break. Students who pass the interim test on the Project Financing module are then evaluated on the Open Innovation module in a completion test at the end of the course. Students who fail the interim test on the Project Financing module have to retake the full exam.

The Project Financing interim test is written and composed of multiple choice questions and numerical exercises. The Open Innovation completion test is written and composed of open-ended questions. The final grade is the arithmetic average of the grades of the two modules.

*Non-attending students*: the exam is written and composed of two parts, one for each module. Both parts consist of open-ended questions, multiple choices and numerical exercises. Non-attending students are not allowed to take the interim exam.

IMPORTANT: please note that the status of attending and non-attending student applies only to the first two exam dates following the end of the course (i.e., the winter session up to the end of December). In all other sessions, the exam is written and composed of two parts (one for each module), and is the same for all students. Both parts consist of open-ended questions, multiple choice questions, and numerical exercises.

***NOTES AND PREREQUISITES***

The Project Financing module requires the knowledge and understanding of basic Corporate Finance concepts, such as capital budgeting, NPV and cash flows. Also, having attended a course of Economics of Innovation would facilitate the understanding of the Open Innovation module.

In case the current Covid-19 health emergency does not allow frontal teaching, remote teaching will be carried out following procedures that will be promptly notified to students.

1. I testi indicati nella bibliografia sono acquistabili presso le librerie di Ateneo; è possibile acquistarli anche presso altri rivenditori. [↑](#footnote-ref-1)