# Securities markets (derivative and structured instruments)

## Prof. Paola Fandella

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

The course aims to assess the financial profile of derivatives instruments by analysing: the main models for computation of their market value and the knowledge needed for their use in hedging, speculation and arbitrage. The course also studies the possible relationships between the markets for derivatives and the markets for the underlying securities.

*Prerequisites*

Students should have basic knowledge of how movable markets work and the features of original financial instruments. In brief: profiles of regulations, financial intermediaries, shares, bonds, state bonds, and techniques and circuit of negotiations.

At the end of the course, students will be able to:

* know, understand and evaluate the different types of derivative and structured instruments that are already present and negotiable in various regulated and unregulated financial markets. analyse the most recent avant-garde topics on the correct functioning of these instruments, as well as perceive and evaluate their new, more innovative forms, analysing their unique features even in national and international market research contexts;
* critically apply their acquired knowledge and promote a personal evaluative approach that will help students devise and argue solutions to evaluation problems typical of the different derivative and/or structured instruments, and be able to create tools with specific financial characteristics;
* collect and interpret data and information in order to formulate independent judgments when evaluating the possible different tools, as well as integrate and manage the complex information that can contribute to the evaluation of a single derivative/structured instrument, also considering ethical and social evaluative criteria to support the use of particular financial instruments;
* communicate the information acquired, their ideas on financial management optimisation developed in the field, and their possible solutions within different financial contexts, both to specialist interlocutors and to non-specialist subjects;
* possess the learning skills needed for further independent study, aimed at critically evaluating and analysing the evolution of financial structuring processes.

***COURSE CONTENT***

1. *The options market*

– Operating with options. The variables that affect the option price. Price determination models: from binomial model to the Black & Scholes formula.

2. *The futures market*

– Models for the valuation of futures instruments.

– Dealing in futures. The possibility of speculation and/or risk reduction through futures.

3. *The market for interest-rate swaps*

– The main types of interest-rate swaps.

– The construction of simple and structured interest-rate swaps.

4. *Structured securities*

– The process of “building” a structured security.

– The various structures.

*5. Exotic instruments.*

– Exotic securities: the main types (e.g. *weather derivatives*).

*6. Alternative investments:*

– Real estate funds.

– Sustainable investments

***READING LIST***

During the course, specific material will be provided and made available on *Blackboard* in conjunction with each part of the programme, and practical simulations will be carried out directly by experts in managing derivative instrument operations.

In any event, students should refer to the following texts for additional:

For the first part (1, 2 and 3 in the course content list):

A. Fusconi, *Economia e struttura dei mercati degli strumenti finanziari,* Giappichelli, Turin, 1999 (Part IV, Chapter VIII and Part V, Chapter IX, Section 5.1).

Or alternately:

J.C. Hull, *Fondamenti dei mercati di futures e opzioni,* Pearson Prentice Hall, Italian edition compiled by Emilio Barone, latest edition.

For the second part (4, 5 and 6 in the course content list):

P. Fandella, *Principi di valutazione delle metodologie di strutturazione e ristrutturazione degli strumenti finanziari di debito nell’ambito dei servizi bancari,* Educatt, Milan, 2018.

P. Fandella*,, Contributi all’analisi della valutazione dei profili finanziari e dei rischi di investimento in differenti contesti economici*, Educatt, Milan, 2018.

***TEACHING METHOD***

Lectures. 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.

***ASSESSMENT METHOD AND CRITERIA***

Students will be assessed through a written exam.

Since the course is divided into two modules, there will be a midterm exam.

*Structure of the midterm exam*

The midterm exam can be taken only by attending students, after signing up on Blackboard by the deadline given in class and available on the lecturer’s personal webpage.

The interim test includes open / close ended questions and exercises with specific criteria that will be communicated at the beginning of the course, due to the possibility to take the exam in person or remotely.

The midterm exam is worth 50% of the final grade and it can be completed in the next three exam sessions.

*Final exam*

For students who take the final exam to round out the interim test, there will be two options:

1. Questions and exercises, similar to the interim test.
2. In-depth study of two topics: students may choose to study in depth two topics among those presented in the second part of the course. Students will submit an essay of maximum 18000 characters to be handed in on the exam date.

For students who take the final exam as a whole, it will include open and close ended questions and exercises with a similar structure as in the interim test. Further details will be published on *Blackboard.*

***NOTES AND PREREQUISITES***

The issues and presentations made by external experts will be covered on the exam.

Dissertation: students can request to compile a dissertation with the lecturer after passing this course. Topics are chosen by the students and discussed with the lecturer.

Further information can be found on the lecturer's webpage at http://docenti.unicatt.it/web/searchByName.do?language=ENG, or on the Faculty notice board.