



MASTER of QUANTITATIVE FINANCE AND RISK MANAGEMENT – 2010/ 2011

The Microstructure of Financial Markets Syllabus

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Course Aim and Objectives

This course has three objectives:

I/. to teach students how the most advanced financial markets work, also in light of the striking recent developments brought about by high frequency trading and dark markets, and their evolutions.

II/. to show how a trader can place orders in a standard automated limit order platform similar to those used for trading equities around the World.

III/. to present the core models of market microstructure. These can be used both to evaluate the effects on market quality of the regulatory actions aimed at modifying market design, and to estimate transaction costs.

Course Outline

- *The different structures of financial markets*: market models, orders' types and market participants
- *The electronic limit order book*: time and price priority rules, algorithms for price formation in opening and closing auctions
- *Fast trading and dark markets*: algorithmic trading programs, dark pools and internalization pools
- *The role of financial economic theory in assessing market quality*: liquidity and other indicators of market quality
- *Information based models*: sequential trading models and analysis of current issues in financial markets regulation
- *Dynamic models of Limit Order Books*: execution costs, price opportunity costs, exposure costs and the choice of the optimal order submission strategy
- *Trading costs*: the bid-ask spread and the components of trading costs. Empirical models for estimating transaction costs.

Course Material: lecture notes and additional readings.

Assessment: this course is assessed by a final examination or by an essay.