Syllabus of "Financial Economics 2.0: bubbles, instability and speculation"

San Miniato, September 14-18, 2015

After a brief refresh of the theory of choices under uncertainty, securities markets, and the notion of arbitrage, the course introduces to the tools and methods of inter-temporal equilibrium models with heterogeneous agents. On the economic side, the focus is on the role of heterogeneous beliefs and preferences on asset pricing. Both standard general equilibrium models and evolutionary models are presented. On the mathematical side, classical results on local and global analysis of stochastic processes are reviewed. Inside this framework, the course proceeds to analyze three interrelated aspects: the occurrence of rational bubbles, the effect and persistence of speculation, and optimal portfolio choice in an evolutionary framework.

Schedule of the course

Monday

- Introduction to financial economics: choices under uncertainty, security markets, arbitrage
- Sequential betting and the Kelly rule

Tuesday

- Local and global stability of stochastic fixed points
- Asset pricing with heterogeneous boundedly rational agents: evolutionary finance

Wednesday

- Speculation in an inter-temporal equilibrium model

Thursday

- Rational bubbles (special guest)

Friday

- Evolutionary portfolio management (special guest)

Prerequisites

A certain degree of confidence with mathematical formalism and economic reasoning are important to fully benefit from the course. Students will work on exercises which require basic programming and statistical skills.

Lecturer: Bottazzi Giulio and Pietro Dindo, from Scuola Superiore Sant'Anna with the help of a few special guests (TBD)

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