SEMINAR

"Equilibrium in Incomplete Markets under Translation Invariant Preferences"

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Thursday, 9th April 2009 – h. 14.00
Room 16 – Via Sarfatti 25 - 20136 Milano

Abstract:

We consider a partial equilibrium framework within to price financial securities in dynamically incomplete markets in discrete time when the agents have translation invariant preference functionals. We show the existence of equilibrium is equivalent to the existence of a representative agent which is satisfied if the agents are sensitive to large losses. It turns out that the analysis of equilibrium in dynamic models can be reduced to a recursive sequence of static equilibrium models and when the flow of information is generated by independent random walks the equilibrium dynamics can be described by a coupled system of backward stochastic difference equations. For the special case where the preferences can be described by entropic utility functions we prove that the equilibrium dynamics in discrete time converge to an equilibrium dynamics of a continuous time model when the time between two successive trading periods tends to zero. It is joint work with Patrick Cheridito, Ulrich Horst and Traian Pirvu.