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Disequilibrium asset price dynamics with heterogeneous agents. Preliminary report.

We study an economy of agents trading a single stock paying a stochastic dividend. The agents form individual demands for stock in each time period by maximizing an infinite horizon time-separable utility function with constant relative risk aversion. Agents are allowed to differ in their preferences regarding risk and patience; we want to study the evolution of market clearing prices over time when the preferences and holding of other agents are not public knowledge.

The usual study of this problem focuses on identifying equilibria at which all agents correctly forecast price distributions and behave jointly optimally. We are interested in how prices evolve when the economy is not yet at equilibrium and agents must learn the correct pricing function when observing only market clearing prices. Numerical simulation results show that the economy converges to equilibrium over time with a simple learning algorithm, robustly for a wide range of parameters. (Received February 04, 2008)