Dynamic Noisy Rational Expectations Equilibrium with Information Production and Beliefs-Based Speculation

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Abstract

A continuous time economy with information production and belief-based speculation is studied. All agents, informed, uninformed and speculators, have constant absolute risk aversion. Equilibrium is in closed form, except for a coefficient satisfying a Riccati equation. Costly information production generates asynchronous private and public information flows. Private information dissemination reduces price volatility. Intertemporal hedging amplifies this decrease. Asynchrony between information flows increases volatility over time. A decomposition of ex-ante and interim utilities, highlighting the sources of welfare, is obtained. Conditions for Pareto efficiency of equilibrium are derived. Speculation is shown to be socially beneficial.