

Financial equilibria in complete semimartingale markets

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Abstract

A financial equilibrium is a stable price system - i.e. it exactly balances demand and supply when all the agents act rationally. We prove existence of stochastic financial equilibria on filtered spaces more general than the ones generated by finite-dimensional Brownian motions. These equilibria span complete markets, or the markets in which incompleteness stems from withdrawal constraints. We deal with general time-dependent utility functions on which only regularity assumptions are imposed and random endowment density streams which admit jumps. As side-products of the proof of the main result, we establish a novel characterization of semimartingale functions, and a simple criterion of the Novikov type for L^p -boundedness of exponential local martingales with jumps.