Survival in Speculative Markets: The Role of Saving, Beliefs’ Accuracy, and Log-Optimality

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Extended abstract

The objective of this paper is to investigate the asset pricing implications of speculative trading, the exchange of financial assets due to different opinions about fundamentals rather than for hedging purposes. At this purpose, I study a dynamic economy with a complete asset market where Epstein-Zin agents have heterogeneous beliefs about the aggregate endowment process. I propose a decomposition of portfolio expected log-return in terms of an accuracy premium, a log-optimality premium, and a log-risk premium. The first is related to beliefs’ accuracy. The second is related to a portfolio proximity to the log-optimal portfolio. The third is the return of a log-optimal portfolio that uses market beliefs. I derive sufficient conditions for agents long-run survival, and dominance, and show how they depend, other than on saving, on accuracy, log-optimality, and log-risk premia. The conditions are applied to test the Market Selection Hypothesis that speculation allows the agent with correct beliefs to gain all the wealth in the long-run and price assets accordingly, see e.g. [1]. In the special case of log-economies, I show that only accuracy and log-risk premia matter. Provided discount factors are equal, returns from speculation are sufficient for an agent with accurate beliefs to dominate, confirming a result that supports the MSE, see e.g. [2]. With different risk preferences also log-optimality premia play a role. Beliefs accuracy alone does not imply dominance, leading to generic failures of MSE. Three types of failures are identified: multiple agents survive; an agent with
accurate beliefs vanishes with positive probability; an agent with accurate beliefs vanishes a.s. Under long-run heterogeneity, which typically occurs when agents are more risk averse than log, prices keep fluctuating between agents’ evaluations. Finally, I show that due to the role played by saving only the last type of failure is possible in CRRA economies, confirming results of [3] and [4].

Keywords
Asset Pricing; Heterogeneous Beliefs; Market Selection Hypothesis; Epstein-Zin Preferences.

References


