

# Heterogeneity in Risk Preferences leads to Stochastic Volatility

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This paper studies the price processes of a claim on terminal endowment and of a claim on firm book value when the underlying variables follow a bivariate geometric Brownian motion. If the state-price process is multiplicatively separable into time and endowment functions, our main result shows that firm (endowment) price volatility is stochastic (state-dependent) if, and only if, the endowment function is not a power function. In a pure exchange economy populated by two agents with CRRA preferences we confirm the separability and show furthermore that firm (endowment) price volatility is stochastic (state-dependent) if, and only if, both agents are heterogeneous in risk-preferences.