

Generalized Disappointment Aversion and the Variance Term Structure

Contrary to leading asset pricing theories, recent empirical evidence indicates that financial markets compensate short-term equity volatility risk. An equilibrium model with generalized disappointment aversion risk preferences and rare events reconciles the term structure of variance swap prices and returns, consistent with the data. In addition, a calibration explains the variance and skew risk premiums in equity returns and the implied volatility skew of index options while capturing salient moments of fundamentals, equity returns, and the risk-free rate. The key intuition for the results stems from endogenous variation in the probability of disappointing events in consumption growth.

Parameter Learning in Production Economies

We examine how parameter learning amplifies the impact of macroeconomic shocks on equity prices and quantities in a standard production economy where a representative agent has Epstein-Zin preferences. An investor observes technology shocks that follow a regime-switching process, but does not know the underlying model parameters governing the short-term and long-run perspectives of economic growth. We show that rational parameter learning endogenously generates long-run productivity and consumption risks that help explain a wide array of dynamic pricing phenomena. The asset pricing implications of subjective long-run risks crucially depend on the introduction of a procyclical dividend process consistent with the data.

Option Prices and Learning about Productivity Dynamics

We demonstrate that incorporating time-varying productivity volatility and priced parameter uncertainty in a production economy can explain index option prices, equity returns, the risk-free rate, and macroeconomic quantities. A Bayesian investor learns about the true parameters governing mean, persistence, and volatility of productivity growth. Rational parameter learning amplifies the conditional risk premium and volatility especially at the onset of recessions. We estimate the model based on post-war U.S. data and find that it can capture the implied volatility surface and the variance premium. Intuitively, the agent pays a large premium for index options because they hedge future belief revisions.