

Cognitive Limitations and Behavioral Biases In The Asset Pricing Context

MAER Thesis Abstract

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I incorporate behavioral and bounded rationality elements into a single asset-pricing framework by setting up a two-period consumption-based portfolio selection problem in which a representative agent has biased priors, does not observe the current state and thus has incomplete information about future state probabilities. He forms posterior beliefs using signals that he selects according to the rational inattention discrete choice framework of Matějka and McKay (2015), where the precision of the beliefs depend intuitively on the priors and the cost of information λ . In the case of log-utility, the optimal portfolio is a convex combination of the N portfolios the investor would have selected in each of the N states if they were fully observable, where the weights reflect the subjective posterior likelihood of time-zero states. The posterior beliefs are induced by parsimonious reweighing of priors, where the weights depend on λ , discount factor β and the relative entropies of the future state distributions induced by different time-zero states.

Using a two-state example, I demonstrate how the cost of information and biases can be jointly analyzed in this framework and discuss implied deviations from fully rational behavior. The major advantage of the proposed model is its flexibility. When the cost of information λ is zero and the agent has correct priors, the model reduces to the standard neoclassical framework. When λ is non-zero and the agent has correct priors, it is a model of bounded rationality with endogenous signals and form of information, where the cost of information reflects the mental capacity of the agent. When λ is zero and the agent has biased priors, the model reduces to the behavioral framework with standard preferences. The proposed framework could lay the foundations for multi-periods heterogeneous-agents models in which the effects of biases and costly information can be jointly analyzed and its consumption-based formulation might render it useful well beyond the asset pricing context.

Keywords: Neoclassical Asset Pricing, Behavioral Asset Pricing, Rational Inattention, Cost of Information, Mental Capacity