

Dirk Becherer:

Portfolio optimization under model uncertainty with incomplete preferences

Abstract:

Solutions to optimal control problems are notoriously sensitive to assumptions about the underlying model. Key parameters in models for portfolio optimization, like means for asset returns, are known to be highly uncertain. We study a portfolio optimization problem in continuous time for a growth optimizing investor. The investor is faced with asset returns which depend on an unobservable factor process involving unknown parameters, leading to an uncertain family of filtering problems.

Under incomplete preferences of Bewley type, we show why the optimal investment strategy for such an inert investor is of impulse control form and how it can be constructed.

(This is joined work with Hauke Laing, HUB)