**Minisymposium 14 - Stochastische Marktmodelle**

### Optimal Portfolio Choice under Model Uncertainty

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We consider the problem of utility maximization under model uncertainty in the presence of both cost and risk constraints. Downside risk is measured by *utility-based shortfall risk*.

We first review the properties of utility-based shortfall risk. The acceptance sets of these risk measures are defined in terms of a convex loss function and a fixed threshold level.

Second, we discuss utility maximization under both cost and risk constraints, if there is no model uncertainty. By means of its dual problem, the optimization problem can explicitly be solved.

Finally, we characterize the solution of the robust utility maximization problem under robust constraints. In this case, model uncertainty involves three aspects: the measurement of the utility, the cost and the downside risk. We assume that investors take a worst case approach.