



INSTITUT FÜR HÖHERE STUDIEN
INSTITUTE FOR ADVANCED STUDIES
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 - HS II
Institute for Advanced Studies
Stumpergasse 56, 1060 Wien

JOINT VIENNA MACROECONOMICS SEMINAR

Robert KUNST,

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“Optimizing time-series forecasts for inflation and interest rates using simulation and model averaging”

Motivated by concepts of economic theory, such as the Fisher hypothesis and the theory of the term structure, we consider a small set of simple bivariate closed-loop time-series models for the prediction of price inflation and of long- and short-term interest rates. The set of time-series structures includes vector autoregressions (VAR) in levels and in differences, a cointegrated VAR, and a non-linear VAR with threshold cointegration based on data from Germany, Japan, UK, and the U.S.

Following a traditional comparative evaluation of predictive accuracy, we subject all four basic structures to a mutual validation using parametric bootstrapping. Ultimately, we utilize the recently developed technique of Mallows model averaging to explore the potential of improving upon the predictions through combinations of the basic models.

While the simulation experiments generally confirm the traded wisdom that VARs in differences optimize one-step prediction and that error correction helps at larger horizons, our experience with model averaging points at problems in the adequate penalty for the complexity of candidate models.

with Adusei Jumah, University of Vienna.