HKMetrics-Seminar@Heidelberg

Research seminar in Econometrics and Statistics

Factors that Fit the Time Series and Cross-Section of Stock Returns

Markus Pelger
Stanford University

July 08, 13:30 – 14:30

Alfred-Weber-Institute, Bergheimer Str. 58, Room 00.010

Abstract:

We propose a new method for estimating latent asset pricing factors that fit the time- series and cross-section of expected returns. Our estimator generalizes Principal Component Analysis (PCA) by including a penalty on the pricing error in expected returns. We show that our estimator strongly dominates PCA and finds weak factors with high Sharpe-ratios that PCA cannot detect. Studying a large number of characteristic sorted portfolios we find that five latent factors with economic meaning explain well the cross-section and time-series of returns. We show that out-of-sample the maximum Sharpe-ratio of our five factors is more than twice as large as with PCA with significantly smaller pricing errors. Our factors are based on only a subset of the stock characteristics implying that a significant amount of characteristic information is redundant.

(Joint work with Martin Lettau, University of California.)

Local organizer: Prof. Dr. Christian Conrad
Contact: christian.conrad@awi.uni-heidelberg.de