FACTOR STOCHASTIC VOLATILITY WITH TIME-VARYING LOADINGS

HEDIBERT FREITAS LOPES
5807 S. Woodlawn Ave, Chicago IL 60637.
hlopes@ChicagoGSB.edu
http://gsbwww.uchicago.edu/fac/hedibert.lopes/research/

ABSTRACT

In this article we use factor models to describe a certain class of covariance structure for financial time series models. More specifically, we concentrate on situations where the factor variances are modelled by a multivariate stochastic volatility structure. We build on previous work by allowing the factor loadings, in the factor model structure, to have a time-varying structure and to capture changes in asset weights over time motivated by applications with multiple time series of daily exchange rates. We explore and discuss potential extensions to the models exposed here in the prediction area. This discussion leads to open issues on real time implementation and natural model comparisons.

Key words

Bayesian inference, latent factor models, time-varying loadings, non-Gaussian dynamic models, stochastic volatility components.