The Chinese University of Hong Kong
Department of Statistics

Seminar

Modelling and Forecasting High-frequency Volatility with Vine Copulas

By

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Abstract

The heterogeneous autoregressive (HAR) model is extended by modeling the joint distribution of the four partial-volatility terms therein involved. Namely, today's, yesterday's, last week's and last month's volatility components. The joint distribution relies on a (C-) Vine copula construction, allowing to conveniently extract volatility forecasts based on the conditional expectation of today's volatility given its past terms. The proposed empirical application of the novel CV-HAR model involves more than seven years of high-frequency transaction prices for ten stocks and evaluates the in-sample, out-of-sample and one-step-ahead forecast performance of the CV-HAR model for daily realized-kernel measures of volatility. The proposed new forecasting model is shown to outperform the HAR benchmark under different models for marginal distributions, copula construction methods, and forecasting settings.

Date:	November 12, 2019 (Tuesday)
Time:	2:30 p.m. - 3:30 p.m.
Venue:	Lady Shaw Building, Room LT6
	The Chinese University of Hong Kong

ALL INTERESTED ARE WELCOME !!