

國立中央大學

統計研究所

學術演講

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講 題：Bayesian inference for the realized volatility model with intra-day financial time series

時 間：111年11月08日（星期二）上午11：00 ~ 12：00

地 點：中央大學鴻經館M429室

茶 會：上午 10：30 ~ 11：00 地 點：鴻經館 510 室

ABSTRACT

We introduce a new variant of realized GARCH-type model which is a hybrid model integrating realized GARCH models with daily range. Using a multiplicative error structure into the measurement equation is presented to facilitate a simple volatility model for the conditional distribution of the hybrid data related to the return and range on the financial market. A Bayesian framework is constructed to deal with parameter estimation and quantile forecasts of financial return under the proposed hybrid models. The models are used to quantile forecasts such as Value-at-Risk (VaR) and expected shortfall (ES), as well as to volatility forecasts. These forecasts are assessed applying a range of tests and performance measures through empirical studies, especially in some volatile periods, such as the COVID-19 pandemic period.

Keywords: Bayesian inference; realized volatility; hybrid Realized GARCH; backtesting

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