國 立 中 央 大 學

統 計 研 究 所

學 術 演 講

主 講 人：賴暐婷 博士（國立中央大學統計研究所）

講　　題：**Modified VAR-deGARCH Model for Asynchronous Multivariate Financial Time Series via Variational Bayesian Inference**

時　　間：112年12月19日（星期二）上午11：00 ～ 12：00

茶　　會：上午 10：30 ～ 11：00　　　地　點：鴻經館510室

ABSTRACT

This study proposes a modified VAR-deGARCH model, denoted by M-VAR-deGARCH, for modeling asynchronous multivariate financial time series with GARCH effects and simultaneously accommodating the latest market information. A variational Bayesian (VB) procedure is developed to infer the M-VAR-deGARCH model for structure selection and parameter estimation. We conduct extensive simulations and empirical studies to evaluate the fitting and forecasting performances of the M-VAR-deGARCH model. The simulation results reveal that the proposed VB procedure produces satisfactory selection performances. In addition, our empirical studies find that the latest market information in Asia can provide helpful information to predict market trends in Europe and South Africa, especially when momentous events occur.

This work is cooperated with Professor Ray-Bing Chen（國立成功大學）and Shih-Feng Huang（國立中央大學）

Keywords：Asynchronous time series, GARCH, variational Bayesian inference, vector autoregressive model.

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