

國立中央大學

統計研究所

學術演講

主 講 人：Prof. Steven Kou (National University of Singapore)

講 題：Jumps in Equity Index Returns Before and During the Recent Financial Crisis:
A Bayesian Analysis

時 間：104 年 12 月 29 日 (星期二) 上午 11:00 ~ 12:00

地 點：中央大學鴻經館 M605 室

茶 會：上午 10:30 ~ 11:00 地 點：鴻經館 510 室

ABSTRACT

We attempt to answer two questions in this paper: (i) How did jumps in equity returns change after the 2008-2009 financial crisis; in particular, were there significant changes in jump rates or in jump sizes, or both? (ii) Can the performance of affine jump-diffusion models be improved if jump sizes are larger, i.e. jumps with tails heavier than those of the normal distribution? To answer the second question, we find that a simple affine jump-diffusion model with both stochastic volatility and double exponential jumps fits both the S&P 500 and the Nasdaq 100 daily returns from 1980 to 2013 well; the model outperforms existing ones (e.g. models with variance-gamma jumps or jumps in volatility) during the crisis, and is at least comparable before the crisis. Based on the model and the data sets, for the first question we observe that during the crisis, negative-jump rate has increased significantly while there is little change in the average negative-jump size.

This is a joint work with Cindy Yu and Haowen Zhong.

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