

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

50th Anniversary Seminar Series

Dr. Kaiji MOTEGI

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Kobe University
Japan

will give a talk
entitled

**TESTING FOR WEAK FORM EFFICIENCY OF
STOCK MARKETS**

Abstract

We perform a variety of white noise tests on daily stock returns over rolling windows of subsamples. Tests of weak form efficiency of stock markets are performed predominantly under the null hypothesis of independence or a martingale difference property. These properties rule out higher forms of dependence that may exist in stock returns that are otherwise serially uncorrelated. It is therefore of interest to test whether returns are white noise, allowing for a wider range of conditionally heteroskedastic time series, but also for non-martingale difference white noise. Assisted by the dependent wild bootstrap of Shao (2010, 2011), we use sup-Lagrange Multiplier, Cramer-von Mises, and max-correlation statistics in order to test the white noise hypothesis. Evidently the dependent wild bootstrap has only been used in a full data sample, hence a key shortcoming has gone unnoticed: in rolling window sub-samples, the block structure unintentionally inscribes an artificial periodicity in computed p-values or confidence bands. We eliminate periodicity by randomizing the block size across bootstrap samples and windows. In the case of Chinese and Japanese markets, we cannot reject the white noise hypothesis, suggesting a high degree of efficiency. The same goes for U.K. and U.S. markets, provided trading occurs during non-crisis periods. When U.K. and U.S. markets face greater uncertainty, we tend to observe negative autocorrelations that are large enough to reject the white noise hypothesis.

on

Tuesday, June 13, 2017

(Refreshments will be served from 10:45 a.m. outside Room 301 Run Run Shaw Building)

11:00 a.m. – 12:00 noon

at

Room 301, Run Run Shaw Building

Visitors Please Note that the University has limited parking space. If you are driving please call the Department at 3917 2466 for parking arrangement.