The Hong Kong Polytechnic University
Department of Applied Mathematics

Seminar
on

Market excess volatility, underreaction, overreaction and Bayesian inference

by

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Abstract

This paper develops a formal model of weights assignment in a pseudo Bayesian approach induced by investors' behavioural biases. In this model, weights induced by investors' conservatism and representative heuristics are assigned to observations in the earning shocks of stock prices. This quantitative behavioural model enables us to deduce the followings. (1) Market volatility will result from investor' biased heuristics. The more conservative/ representative are the heuristics, the more volatile is the market. (2) Investors' behavioural biases give rise to short-term underreaction and long-term overreaction in the market. The more conservative/ representative are the heuristics, the larger is the return auto-correlation, and the larger is the momentum/contrarian trading profit. (3) Investors' behavioural biases induce a magnitude effect in the under-and-overreaction phenomena, i.e. the more severe is the earning shock, the larger is the market autocorrelation and the larger is the momentum/ contrarian trading profit. (4) The magnitude effect described in (3) is convex in nature.

Date	**:**	**25 January 2007 (Thursday)**
Time	**:**	**3:00 – 4:00 p.m.**
Venue	**:**	**Departmental Conference Room HJ610** **The Hong Kong Polytechnic University**

*** * *   ALL ARE WELCOME   * * ***