



DEPARTMENT OF APPLIED MATHEMATICS

應 用 數 學 系

**The Hong Kong Polytechnic University
Department of Applied Mathematics**

Colloquium

Can Swing Pricing Prevent Mutual Fund Runs and Fire Sales?

by

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Columbia University

Abstract

We develop a model of the feedback between mutual fund outflows and price impact in which asset illiquidity can lead to fund failure through the first-mover advantage in the pricing of mutual fund shares. Some investors anticipate the impact on the fund's net asset value of other investors' redemptions and exit first at favorable prices. Our model shows that (i) this first-mover advantage introduces a nonlinear dependence between an initial price shock and the resulting endogenous asset price change, amplifying the fire sale impact of the initial shock; (ii) because of this amplification, there is a critical shock threshold beyond which a run brings down the fund; (iii) swing pricing transfers liquidation costs from the fund to redeeming investors, and it reduces these costs by removing the nonlinearity stemming from the first-mover advantage. Joint work with Paul Glasserman and Marko Weber.

Date : 18 December, 2017 (Monday)

Time : 11:00a.m. – 12:00noon

Venue : TU801, The Hong Kong Polytechnic University

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