



The Chinese University of Hong Kong  
Department of Statistics

## Seminar

# Outperforming the Market Portfolio with a Given Probability

By

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### Abstract

Our goal is to resolve a problem proposed by Karatzas and Fernholz (2008): Characterizing the minimum amount of initial capital that would guarantee the investor to beat the market portfolio with a certain probability as a function of the market configuration and time to maturity. We show that this value function is the largest subsolution of a nonlinear PDE. As in Karatzas and Fernholz (2008), we do not assume the existence of an equivalent local martingale measure but merely the existence of a local martingale deflator. It is joint work with Erhan Bayraktar and Yujui Huang.

Date: October 26, 2010

Time: 2:00 p.m. - 3:00 p.m.

Place: William M W Mong Engineering Building, Room 407  
The Chinese University of Hong Kong