# THE CHINESE UNIVERSITY OF HONG KONG

## Department of Statistics

will present a seminar entitled

## Optimal Early Withdrawal and Valuation of Fund Protection Options

by

**Professor Tiong Wee LIM**
**National University of Singapore**

on

**Tuesday, 27 November 2007**
**2:00pm – 3:00pm**

in

**Lady Shaw Building C5**
**The Chinese University of Hong Kong**

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## Abstract:

When embedded in equity-linked annuities, the dynamic fund protection option automatically increases the number of primary fund units so that their total value does not fall below the guaranteed level. As the payoff is determined by the running maximum of a price ratio, the "standard" fund protection option can be excessively expensive. We modify the design of the embedded option by relaxing the guarantee to take effect only when the upgraded fund value has fallen a certain level (the "spread") below the reference fund level. Our numerical results show that the introduction of a spread in the option payoff is effective in making fund protection options more economically attractive. We also study the effect of proportional fees and random maturity on the value and optimal withdrawal of these fund protection options with spread.

## All are Welcome