

## **Joint Seminar**

### **Risk Management Institute, Saw Centre for Financial Studies and Department of Finance**

#### **Details of Seminar**

Date: 26 November 2008, Wednesday

Time: 3:30pm to 5:00pm

Venue: Staff Lounge Meeting Room, NUS Business School, Level 2

#### **Speaker**

Assistant Professor Johan Walden

Haas School of Business, UC Berkeley

#### **Title**

Asset Pricing in Large Information Networks

#### **Abstract**

We study asset pricing in economies with large information networks. We derive closed form expressions for price, volatility, profitability and several other key variables, as a function of the topological structure of the network. We focus on networks that are sparse and have power law degree distributions, in line with empirical studies of large scale human networks. Our analysis allows us to rank information networks along several dimensions and to derive several novel results. For example, price volatility is a non-monotone function of network connectedness, as is average expected profits. Moreover, the profit distribution among investors is intimately linked to the properties of the information network. We also examine which networks are stable, in the sense that no agent has an incentive to change the network structure. We show that if agents are ex ante identical, then strong conditions are needed to allow for non-degenerate network structures, including power-law distributed networks. If, on the other hand, agents face different costs of forming links, which we interpret broadly as differences in social skills, then power-law distributed networks arise quite naturally.

#### **About the Speaker**

Johan Walden is an Assistant Professor at the Haas School of Business, UC Berkeley. He received his Ph.D. in financial economics from Yale School of Management. Professor Walden's research is focused on theoretical asset pricing and on financial and insurance markets when risks are heavy-tailed. Previously, Professor Walden worked as a management consultant at McKinsey & Company, and as a Postdoctoral research associate at Yale Department of Mathematics. He also has a Ph.D. and Docentship in applied mathematics from Uppsala University, Sweden.