

NUS RMI Conference on Quantitative Economics and Finance: In Honour of Professor Lars Peter Hansen

Date : 3 August 2023, Thursday

Time : 14:00 – 17:00

Venue : Seminar Room Level 1, 21 Heng Mui Keng Terrace, I3 Building, National University of Singapore, 119613

| Program Agenda | |
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| 14:00 - 14:40 | A Learning Model of Financial Instability Prof. Noah Williams (University of Miami) |
| 14:40 - 15:20 | The Optimal Structure of Securities under Coordination A/P Yang Ming (University College London) |
| 15:20 – 15:40 | <i>Tea break</i> |
| 15:40 - 16:20 | Anomalies and Their Short-Sale Costs Prof. Neil Pearson (University of Illinois at Urbana-Champaign) |
| 16:20-17:00 | Sea Level Rise and Portfolio Choice Asst Prof. Emirhan Ilhan (NUS) |

Program Details

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| Title | A Learning Model of Financial Instability |
| Speaker | Prof. Noah Williams |
| Abstract | In Minsky’s financial instability hypothesis, periods of stability lead to changes in beliefs and behavior that lead to periods of instability. I develop an adaptive learning model that captures aspects of Minsky’s theory and generates recurrent asset market booms and busts. In a period of relative stability, investors increase their estimates of expected returns and reduce their estimates of return volatility. They then buy more stocks, which drives up the price, and makes the belief change self-reinforcing. But when agents’ portfolios are concentrated in stocks, the economy becomes fragile, so small changes in portfolios can lead to large changes in prices. Stock market booms may sow the seeds of their own destruction. A rapid increase in prices drives up perceptions of risk as well as returns, leading agents to pull back from risky assets, causing a market crash. I show how such booms and busts can help explain observed asset pricing phenomena. I also establish new results on instability and cycles in adaptive learning models. As long as agents put sufficient weight on new information, learning from asset returns results in a fundamental instability that drives endogenous booms and busts. |

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| Title | The Optimal Structure of Securities under Coordination |
| Speaker | A/P Yang Ming |
| Abstract | We study multi-agent security design in the presence of coordination frictions. A principal intends to develop a project whose value increases with an unknown state and the level of agents' participation. To motivate the participation of ex-ante homogeneous agents, the principal offers them multiple monotone securities backed by the project value. More participation results in a higher project value and thus higher security payment to participating agents, making participation decisions strategic complements. Miscoordination arises because agents cannot precisely infer others’ decisions from noisy signals about the state. We identify two objects in security design— "payoff sensitivity" and "perception of participation"— that determine the impact of miscoordination. To mitigate the adverse impact of miscoordination, the two objects should be matched assortatively over agents. This mechanism implies a multi-tranche security structure in which senior-tranche holders are more robust to potential miscoordination and participate more aggressively, helping alleviate the junior-tranche holders' fear of miscoordination. We find that the principal's ability to differentiate agents in security format is crucial to whether differentiation is desirable. |

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| Title | Anomalies and Their Short-Sale Costs |
| Speaker | Prof. Neil D. Pearson |
| Abstract | <p>Short-sale costs eliminate the abnormal returns on asset pricing anomaly portfolios. While many anomalies persist out-of-sample, they cannot be profitably exploited due to stock borrow fees.</p> <p>Using a comprehensive sample of 162 anomalies, the average long-short portfolio return is a significant 0.15% per month before short-sale costs, and the returns are due to the short leg.</p> <p>However, the average is -0.02% once returns are adjusted for borrow fees. The anomalies are not profitable even before accounting for fees if the high-fee observations, 12% of stock dates, are excluded from the analysis. Thus, short sale costs explain why many anomalies persist.</p> |

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| Title | Sea Level Rise and Portfolio Choice |
| Speaker | Asst Prof. Emirhan Ilhan |
| Abstract | <p>Many households face uninsurable background risks due to future sea level rise (SLR). Using detailed local variation in SLR exposure and disaggregated geographic information on households in the United States, I show that SLR exposed households participate less in the stock market compared to their unexposed counterparts within the same neighborhood. This effect is driven by long-run SLR risks as opposed to short-run flood risks and is elevated at times when attention to climate change is high. I provide causal evidence of the effect of SLR risks on household portfolio choices by exploiting plausibly exogenous variation stemming from the adoption of state-led climate change adaptation plans that reduced households' SLR risks. Additional tests isolate the effect of SLR exposure as a background risk from alternative explanations, including changes in house prices, past flooding experiences, endogenous location choices, political beliefs, or differences in risk preferences.</p> |