# Finance Empirical PhD Course

**Semester Two 2021**

**Instructor: Professor Tom Smith**

Tom's research interests are in the areas of Asset Pricing Theory and Tests; Design of Markets - Market Microstructure; Environmental Finance and Derivatives. His articles have appeared in leading journals including the Journal of Financial Economics, Journal of Finance, Review of Financial Studies, Journal of Financial and Quantitative Analysis, Journal of Business, Journal of Law and Economics, Journal of Accounting Research. Tom is particularly proud of all of his PhD students and the fact that they have more than 50 tier 1 publications in the Journal of Finance, Journal of Financial Economics, Review of Financial Studies, Journal of Financial and Quantitative Analysis and Journal of Business. Tom's students credit the PhD course work in Finance Theory and Finance Empirical as providing a great base for their research careers.

## Overview

The purpose of this course is to introduce you to the empirical methods of modern Finance. We do not have time to cover all the topics or papers in the field. However, the subset of topics and papers which we do cover are chosen because they highlight some of the key concepts involved in current empirical work in Finance. Assignments are an important part of this course. In these assignments you will be asked to test some of the models that we study. The idea being to reproduce (or otherwise) the results reported in the studies which we examine. It is felt that that this sort of learning by doing is an integral part of internalizing new ideas and concepts. There will be two assignments in the course. These assignments can be done either individually or in groups but group work is encouraged as this helps to develop a cohort which is very valuable to you as your research career goes forward. Each group will get a chance to present solutions to the problems in class. This gives the other students in the class a chance to see how a particular group approached the problems, and also provide members of the presenting group with an opportunity to develop their presentation skills. In addition to the assignments, there will be a closed notes, closed book final exam.

## Assessment

- In Class Closed Book Exam 60%
- Assignments 40%
- Total 100%

**Textbooks**

There are no required texts for this course. The following books are useful references:

- Campbell, Lo and MacKinlay, 1997, *The Econometrics of Financial Markets*, Princeton University Press
- Cochrane, 2005, *Asset Pricing Revised Edition*, Princeton University Press

**Venue**

Online with a 12-2pm Zoom session the Saturday of each module.

**Timetable**

Module 1: Weekend of 24/25th July
Module 2: Weekend of 28/29th August
Module 3: Weekend of 25/26th September

Final Exam: Thurs 11 Nov 2-5pm

**Module 1**

- Review of Econometrics
  - Hansen
  - Jagannathan and Skoulakis
  - Lavine
  - Johannes and Polson
  - Class Notes

- Intertemperal Asset Pricing Models
  - Brown and Gibbons
  - Hansen and Singleton
  - Brav, Constantinides and Geczy

- CAPM
  - Gibbons, Ross and Shanken
  - Gibbons
  - Gibbons and Ferson

**Module 2**

- Data Issues
  - Scholes and Williams
  - Blume and Stambaugh
  - Working

- Serial Dependence
  - Fama and French
  - Lo and MacKinlay
  - Richardson and Smith
  - Class Notes

- Distribution of Returns
  - Richardson and Smith
  - Class Notes
- Excess Volatility
  - Shiller
  - Grossman and Shiller
  - Kleidon

- Inequality Constraints
  - Boudoukh Richardson and Smith
  - Class Notes

- Interest Rates
  - Constant Real Rate
    - Fama
    - Nelson and Schwert

  - Term Structure of Interest Rates
    - Fama (1984)
    - Gibbons and Ramaswamy

**Module 3**

- Endogeneity
  - Heider and Ljungqvist
  - Gippel Smith and Zhu

- Corporate Finance
  - Debt and Taxes
    - Graham
  - Ownership and Performance
    - Welch
  - Takeovers
    - Barraclough, Robinson, Smith and Whaley

- Data Snooping and Spurious Regression
  - Harvey
  - Foster, Smith and Whaley

    - Ferson
    - Powell, Shi, Smith and Whaley
    - Class Notes

- Market Microstructure
    - Bollen, Smith and Whaley
    - Sidhu, Smith and Whaley
    - Class Notes

- Review