FNCE 934 Advanced Topics in Dynamic Asset Pricing

DESCRIPTION

This course has three main objectives:

The first objective is to introduce students to the fundamental works and the frontier of research in dynamic asset pricing. We will cover recent models that have been proposed to shed light on intriguing and important empirical patterns in the cross section and in the time series. Topics include non-separable utilities, market incompleteness, learning, uncertainty, differences of opinions, ex-ante and ex-post asymmetric information, ambiguity and Knightian uncertainty.

The second objective is to teach students how to think of asset pricing research under a bigger or richer framework. We shall focus on the interactions between asset pricing and other fields such as macroeconomics, corporate finance, financial institutions, and international finance. The goal of investigating the joint dynamics is not only to better understand how asset prices are determined, but also (maybe more importantly) how would asset pricing dynamics affect other important economic variables such as investment, corporate payout and financing, unemployment, risk sharing, and international capital flows. The students will learn production-based asset pricing models, particularly the asset pricing models with investment-specific technology shocks, uncertainty shocks, risk shocks, financial frictions, searching frictions, and information frictions. Of course, the advanced solution methods will the focus too.

The third objective is to introduce advanced empirical methods to analyze the data and the quantitative dynamic models. It includes how to estimate structural dynamic models, how to evaluate structural models beyond goodness-of-fit tests, how to confront the models' predictions with empirical data by simulations and resampling techniques, and how to efficiently test models and explore new patterns using asset pricing and macro data.

GRADES

Research Project 40%

There will be one research project done. The project can be empirical exploration, theoretical development, or replication and extension of some paper related to the theme of the course.

Assignments 30%

There will be three assignments. Students can work in groups.

Paper Presentations 30%

Towards the end of the course I will to assign three papers for presentation at the conclusion. Everyone is expected to prepare a 30-minute summary discussion of **one** assigned paper. **Alternatively, students can also choose to present her/his own research project.**

There is no final exam.

TOPICS & PLANS (Tentative)

NOTE: Readings are to be added.

Week 1: Dynamic Programming in Continuous-Time Framework

Week 2: Asset Pricing Puzzles and Attempts: External Habit Formation and Recursive Preferences in Continuous-Time Framework

Week 3: Equilibrium Asset Pricing Models with Production: An Introduction

Week 4: General Equilibrium Models with and without Heterogeneous Firms

Week 5: Equilibrium Models with IST Shocks

Week 6: Equilibrium Models with Moral Hazard or Limited Enforcement

Week 7: Equilibrium Models with Uncertainty Shocks

Week 8: Equilibrium Models with Search Frictions

Week 9: Credit Spreads in Equilibrium Models

Week 10: Incomplete Information: Parameter Uncertainty

Week 11: Incomplete Information: State Uncertainty

Week 12: International Asset Pricing

Week 13: Robustness and Uncertainty

Week 14: Students' Presentations