RMI 9060: ADVANCED RISK VALUATION

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Time and location: ADHOLD 12, We 4:30-7:00pm

Office Hours: We 1-2:30pm or by appointment

Prerequisites: ECON 8100, ECON 8110, RMI 9000.

Catalog description: This course focuses on the effect of financial frictions (informational or institutional) on asset prices, macroeconomic outcomes and financial crises. Borrowing constraints can modify some pillars of traditional asset pricing theory, including the absence of arbitrage and risk-based pricing relations. We explore in detail various theories of asset price bubbles, driven by financial frictions.

Course Description: We start by revisiting the frictionless (classical) benchmark theories of asset pricing and investment (arbitrage theory and existence of stochastic discount factors, consumption based asset pricing, neoclassical investment theory) and discuss their inadequacy in light of the existing empirical tests/diagnostics.

Then we focus on asset pricing and risk valuation under financial frictions, especially stemming from incomplete markets, imperfect enforcement and limited commitment of financial contracts, or limited collateral. We discuss theories of asset price bubbles (rational bubbles, speculative bubbles, agency bubbles), and show that they are a robust and intrinsic feature of economies with limited enforcement/collateral.

Finally we touch upon various other ingredients used to improve the performance of asset pricing models such as disaster risk and product variety.

Objectives: The first goal is to introduce and investigate a subset of the economic issues that fall at the intersection of macroeconomics, finance and risk valuation. In the aftermath of the recent subprime crisis and the recession, these issues are the subject of much novel research. The second goal is to present some of the workhorse models in this field, that ultimately could be used to address your own research questions.

Method of Instruction: Lecture slides and notes, problem sets, and problem set solutions.
Grading: There will be three problem sets (30%), graded only as “mostly correct” (100%) or “mostly incorrect” (50%, if I see evidence of hard effort), or “no submission” (0%). You have to make a 70 minutes (in-class) presentation of a paper (with additional time allowed for discussion), and write one referee report (70%). You must select one of the topics in the “Student Presentations” section of the syllabus, and present one of the two papers in that section, and write a referee report for the other. Substitution with a different topic that interest you, and broadly related to the topics covered in class, are possible, upon approval.

Textbook: There is no required textbook for this class. A useful supplementary textbook for the first few lectures, and in particular for a good overview of the empirical challenges facing asset pricing models is (henceforth Cochrane (2000)):


For an introduction to modern macroeconomics, a useful supplementary reference is


The reading list follows. The papers that will be discussed in more detail are marked with a star.

**Topics**

**Week 1 (1/15): Arbitrage theory. Stochastic Discount Factors. Consumption-Based Asset Pricing (CCAPM).**

- *Cochrane (2000): Chapters 1,2,3,4

**Week 2 (1/22): CCAPM - Empirical Challenges. Incomplete Markets and Heterogeneous Agents.**

- *Cochrane (2000): Chapters 21


**Week 3 (1/29): Production-Based Asset Pricing. Q-Theory of Investment.**


**Week 4 (2/4): Limited Enforcement (Commitment).**


Week 6 (2/18): Bubbles and Dynamic Inefficiency. Limited Collateral.

- Hirano, T. and Yanagawa, N. (2010). Asset bubbles, endogenous growth, and financial frictions. CIRJE F-Series CIRJE-F-752, CIRJE, Faculty of Economics, University of Tokyo

Week 7 (2/25): Bubbles and Endogenous Growth.


• Slawski, A. (2008). The dynamics of speculative bubbles under learning. mimeo, University of Minnesota


Week 10 (3/18): SPRING BREAK - NO CLASS.


Topics for Presentations/Reports

Week 12 (4/1), Week 13 (4/8), Week 14 (4/15), Week 15 (4/22)

Limits to Arbitrage and Heterogeneous Information.

Innovation and Asset Prices.

Q-Theory with Limited Enforcement.

Bubbles, Liquidity and Growth.

Disaster Risk.