Syllabus for Dynamic Asset Pricing

Fall 2015
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Prerequisites: The first-year doctoral sequence in economics.

Course Focus: This course is meant to serve as an introduction to asset pricing. I will introduce the theoretical constructs and then explore the restrictions that the theory imposes on the data. We will consider both frequentist and Bayesian empirical specifications.

Overarching theme: The absence of arbitrage.

Outline structure:


Requirements:

1. Every paper that is listed on this syllabus is required reading—before the scheduled class.

2. I want to run the class largely as a seminar. This means active class participation is critical.

3. I have divided the course into 5 blocks. Each student has to replicate the empirical analysis of one of the papers in each of 2 blocks. Students will present both replications to the class during the scheduled final exam time. You should get started on this immediately! This must be done at the individual-student level.

Course Schedule

Block I The Absence of Arbitrage and the Data: Introduction and tools

- Week 1. Pricing Rule Representation Theorem / Fundamental Theorem of Asset Pricing
  - Arbitrage, State Prices, and Portfolio Theory, by Phil Dybvig and Steve Ross (2003).
• Week 2. Some probability theory and the behavior of stock returns

• Week 3. SDF Moments
  – Chapter 5 in Cochrane’s book.

• Week 4. Additional Restrictions on the data: Equity premium puzzle

• Week 5. Predictability of aggregate market returns
Block II. Factors in the cross-section of stock returns

- Week 6.
  - Chapter 9 of Cochrane’s book. Factor Structure of the stochastic discount factor
- Week 7. Factors and utility optimization
- Week 8.

Block III. Solving the Present Value Relation

- Week 9
- Week 10

Block IV. Term Structure Models

- Week 11
• Week 12

Block V. Options

• Week 13

• Week 14

• Week 15
• Week 16
  – What is the expected return on the market? by Ian Martin, 2015 Working Paper, LSE.