COURSE DESCRIPTION:
This course introduces doctoral students in finance and related fields to the frontier empirical asset pricing research. We will cover selected topics that are essential for understanding the pricing and dynamics of financial markets. These topics include time-series stock return predictability, cross-sectional stock return predictability, the dynamics of stock market volatility, and the stock market risk-return relation across time. We will discuss each topic in three respects: (1) commonly used empirical methodologies; (2) main empirical findings; and (3) the relation between empirics and theories. Good empirical work always requires a thorough understanding of asset pricing theories. In this course, we will overview the tension between empirical findings and economic theories, and discuss recent theoretical developments that attempt to provide a better explanation of data.

To register for this course, you should have completed graduate-level courses in finance theory and econometrics. You should also be able to use a statistical package or you are willing to learn it quickly. Many empiricists use SAS, STATA, SPLUS, R, TSP, MATLAB, or GAUSS but you are welcome to use any statistical packages that you are most comfortable with. The College of Business has the subscription to many financial databases through WRDS. If you have not done so, please register an account with WRDS at https://wrds-web.wharton.upenn.edu/wrds/

By the end of the course, I expect you to be familiar with relevant economic issues and have skills required for doing empirical research. The ultimate objective is that you should be able to conduct the original research in empirical asset pricing.

COURSE MATERIALS:
Required Textbook

Useful References

Strongly recommended

**GRADING:** TBA

**TENTATIVE COURSE OUTLINE AND READING:**
(* denotes required reading and # denotes surveys)

**9/4 and 9/18**
(No class on 9/11 NFA meetings)
*Overview, Efficient Market Hypothesis, and Random Walk Hypothesis*

- **Literature Overview**

- **Random Walk Hypothesis**
  * CLM Chapters 1 and 2

**9/25**
*Market Microstructure Effects*

* CLM Chapter 3 (Sections 3.1, 3.2, and 3.4)


* Dimson, E., 1979, Risk Measurement When Shares are Subject to Infrequent Trading, Journal of Financial Economics, 7, 197-226

10/2, 10/9, and 10/16
(10/9 is a reading day)

Time-Series Stock Market Return Predictability

* CLM, Chapter 7
  - Empirical Evidence


  - Present-Value Relations and Return Variance Decomposition


  - Finite-Sample Issues


- The Predictability Debate


- Recent Development


Kelly, B. and H. Jiang, Tail Risk and Asset Prices, Review of Financial Studies, forthcoming


10/23

CAPM

* CLM Chapter 5


10/30

APT and Conditional CAPM
**APT**

* CLM Chapter 6


**Conditional CAPM**


**Stochastic Discount-Factor Models**

* Cochrane, Chapters 4, 10, 11, 13


**Intertemporal CAPM**

11/6
* CLM Chapter 8

  • *Theoretical Framework*


  • *Empirical Evidence*


11/13 and 11/20

**Consumption-based Asset Pricing Models**

* CLM Chapter 7

# Campbell, J., 2003, Consumption-Based Asset Pricing, Handbook of the Economics of Finance, Edited by George Constantinides, Milton Harris, and Rene Stulz, North-Holland

  • *Excess Volatility Puzzle*


  • *Equity Premium Puzzle*


  • *Recent Theoretical Developments*

* CLM Chapter 8


Bansal, R., D. Kiku, I. Shaliastovich, and A. Yaron, Volatility, the Macroeconomy and Asset Prices, forthcoming Journal of Finance


11/27 Thanksgiving Holiday

12/4

Conditional Volatility and Stock Market Risk-Return Relation across Time

- Realized Volatility, ARCH, and Implied Volatility

* CML, Chapter 12.2


  •  **Empirical Studies**


**12/11**

**Cross-Sectional Stock Return Predictability and Other Topics**


  •  **Value and Growth, Size**


- **Momentum**


- **Accruals**


- **Investments**


- **Net Share Issuance**


- **Liquidity**


- **Idiosyncratic Volatility**


- **Skewness**


- **Hedge Fund Returns**