FIN 895 – Empirical Methods in Finance

College of Business University of Cincinnati

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Class Hours: Wednesday and Friday 11:00am-12:30pm
Class Room: 401 Carl H. Lindner Hall except for October 12, 2007 (TBA)
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COURSE DESCRIPTION:

This course introduces doctoral students in finance and related fields to current empirical asset pricing research. We will cover selected topics that are essential for understanding the 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 also overview the tension between empirical findings and economic theories, and discuss recent theoretical developments that 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 researchers use SAS, STATA, SPLUS, TSP, MATLAB, or GAUSS but you are welcome to use any other statistical packages. 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 http://wrds.wharton.upenn.edu/. You might need to download data from WRDS for your assignments and course paper.

By the end of the course, you are expected 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

**GRADING:**

**Class Preparation and Participation (20%)**
Intensive reading is the only way to getting you being familiar with the frontier research. You should read as much as possible with a focus on issues that interest you. At a minimum, you should work through the required reading before each class. I will deduct 5% from your final grade each time when I find that you fail to do so.

**Class Presentation (20%)**
Depending on the actual size of the class, you will have one or two opportunities to present a paper from the reading list. For each presentation, you should prepare 10-15 slides and should finish it in about 20 minutes. You also need to address the comments raised by the other class participants, including the instructor.

**Assignments (30%)**
There will be three assignments. For each assignment, you will be asked to replicate main results of a paper from the reading list. You can discuss the assignments with the other students in the class; however, you must write the computer codes by yourself.

**Course Paper (30%)**
You have two options. First, I will give you a topic and main data, and you decide how to carry out the empirical analysis using methodologies discussed in the class. Second, I strongly encourage you to come up with an idea of your own. It does not have to be completely novel; for example, you can extend a published work using an improved methodology or a different dataset. However, you can not simply replicate an existing study. You are welcome to discuss your ideas with me if you are not sure about them.

The paper should be about 15 to 20 pages long. It typically has five parts: introduction, literature review, data and empirical specifications, empirical results, and conclusion. The paper is due on the day of the last class, and there will be no extension.

Collaboration always leads to higher research productivity and thus should be encouraged. However, because the ultimate objective of this course is that you should master the basic skills for conducting empirical research, I expect that you write the course paper independently.

**TENTATIVE COURSE OUTLINE AND READING:**
(Notes: PDF files of most papers can be found in the department directory L:\Guo\FIN 901\References. You can also search and download journal articles through EconLit. You can download all of my papers from my personal webpage. * denotes required reading and # denotes recent surveys.)
Week 1 Overview, Efficient Market Hypothesis, and Random Walk Hypothesis

- **Literature Overview**


- **Random Walk Hypothesis**

  * CLM Chapters 1 and 2


Week 2 Market Microstructure Effects

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


Weeks 3-4 Time-Series Stock Market Return Predictability

* CLM, Chapter 7

  - **Empirical Evidence**


  - Present-Value Relations and Return Variance Decomposition


  - Finite-Sample Issues


  - The Predictability Debate


**Week 5 CAPM**

* CLM Chapter 5


**Week 6 APT and Conditional CAPM**

* **APT**

* CLM Chapter 6


* **Conditional CAPM**


- * Stochastic Discount-Factor Models (if time permits)

* Cochrane, Chapters 4, 10, 11, 13


**Week 7 Intertemporal CAPM**

* CLM Chapter 8

- * Theoretical Framework*


- * Empirical Evidence*


**Week 8 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


**Week 9 Conditional Volatility and Stock Market Risk-Return Relation across Time**

• *Realized Volatility, ARCH, and Implied Volatility*

* CML, Chapter 12.2


• *Empirical Studies*


**Week 10 More on Cross-Sectional Stock Return Predictability**


- **Momentum**


- **Accruals**


- **Investments**

Cooper, M., H. Gulen, and M. Schill, Asset growth and the cross-section of stock returns, unpublished working paper.

- **Net Share Issuance**


- **Liquidity**


- **Idiosyncratic Volatility**

