Empirical Finance

Spring 2013 – Syllabus

Instructor:	Sungbin Sohn
Class Time:	Mondays & Thursdays 3:30-5:20pm in C102
Office Hours:	Wednesdays 10-11:30am
Email:	sungbin.sohn@phbs.pku.edu.cn
Grading:	Homework/Participation: 30%, Midterm 30%, Final exam 40%

Course Description:

This course is designed to help students learn how to apply basic finance theories to real data. The topics this course focuses on include several important and controversial issues in finance. Because good empirical work is always guided by theory, we will begin by reviewing some basic portfolio theory and asset pricing theory. Then we move on to discuss the empirical application of those theories. Topics will include optimal investment decision; predictability of equity index returns; transitory variation in asset values; testing and evaluating classic models of finance in the cross-section (e.g., CAPM, Fama-French model, etc.).

The following books are useful (but you are not required to buy them):

Zvi Bodie, Alex Kane and Alan J. Marcus (2010), Investment, McGraw-Hill.

John H. Cochrane (2001), Asset Pricing, Princeton University Press.

John Y. Campbell, Andrew Lo and Craig MacKinley (1997), *The Econometrics of Financial Market*, Princeton University Press.

John H. Cochrane, "Time Series for Macroeconomics and Finance," lecture notes.

Requirements:

There will be several problem sets, some of which will ask you do implement empirical work using a computer. You can use any software package that you know, but my instruction will be mostly based on Matlab and MS Excel. You are encouraged to work in groups but you must turn in an individual solution. Plagiarism is strictly punished. Late submission is unacceptable and will not be graded. Throughout the class, knowledge of master-level microeconomics and econometrics is assumed. Attendance is required (I will randomly call the roll).

Email policies:

I strongly encourage you to ask questions during lectures and office hours. If you have special needs to reach me outside the lectures or office hours, however, you may email me. I will try to respond to your email in two business days. If you don't get my response within two business days, please send me a reminder email. When you email me, please prefix the subject header [EF] in order to make your email too conspicuous to miss it.

Course Outline and References

Please note that the schedule of topics are likely to be updated as the course evolves. Lecture notes for each topic will be provided.

1. Introduction

2. Portfolio Theory and Practice: Risk aversion and capital allocation, Optimal risky portfolio, Single-factor model

Bodie, Kane and Markus, Chapter 6-8.

3. Essential background for time series econometrics

Cochrane (lecture note) Chapter 1-7, 10-11.

4. Theory review: Consumption-based models, SDF, preferences, equity premium puzzle, risk-free rate puzzle

Cochrane, Chapter 1-7, 10. Cochrane, John H. (2007), Financial Markets and the Real Economy.

5. Return predictability, log-linear approximation

Campbell, Lo and MacKinley, Chapter 2, 7. Cochrane, Chapter 20.1.

Campbell, John Y. (2003), "Consumption Based Asset Pricing," in George Constantinides, Milton Harris and Rene Stulz eds., *Handbook of the Economics of Finance*, North-Holland, Amsterdam.

6. Volatility tests, long horizon regressions, VAR models (optional)

Campbell, John Y. (1991), "A Variance Decomposition for Stock Returns," *Economic Journal* 101.

7. Cointegration, permanent-transitory decomposition (optional)

Cochrane (lecture note) Chapter 15-18.

Cochrane, John H. (1994), "Permanent and Transitory Components of GDP and Stock Prices," *Quarterly Journal of Economics* 109.

8. Cross-section of stock returns: CAPM, CCAPM, conditional vs. unconditional models

Cochrane, Chapter 8, 9.

Campbell, John Y. (1993), "Intertemporal Asset Pricing Without Consumption Data," *American Economic Review* 83.

Campblee, John Y. (1996), "Understanding Risk and Return," *Journal of Political Economy* 104.