

UNIVERSITY OF ILLINOIS AT CHICAGO
Liautaud Graduate School of Business
Department of Finance

Finance 512

Portfolio Analysis

Fall 2012

Professor Hsiu-lang Chen

2425 UH; Phone: 355-1024; Email: hsiulang@uic.edu

Class Website: UICBlackboard

Office Hours: 2:00pm~5:00pm on Wednesdays or by appointments.

Course Objectives:

This course develops the concept of investing from the perspective of a portfolio manager rather than an individual investor. Both portfolio theory and investment practice will be the focuses of this course. The course involves detailed quantitative analysis that is essential for a successful career in this area. We will focus on investment strategies for large portfolios, particularly in risk management issues. Students will have abundant opportunities to learn investment methodology by hands-on practice with financial data. Additionally, current developments in financial markets will be reviewed and introduced to help explain the dynamics of the markets. Overall, the course is designed to expose students to what it is really like to run money professionally.

Prerequisites: Fin 510 is required. The course is intensively quantitative. Students' familiarity with basic calculus, statistics, and microeconomics is assumed. Students are expected to be reasonably comfortable with Excel, particularly in use of linear regressions, variance/covariance algebra in matrix multiplications, and solver.

Reference books:

- A. *Investments*, Zvi Bodie, Alex Kane, and Alan J. Marcus, Irwin/McGraw-Hill, 9th edition.
- B. *Modern Portfolio Theory and Investment Analysis*, Edwin J. Elton, Martin J. Gruber, Stephen J. Brown, and William N. Goetzmann, John Wiley & Sons, Inc., 8th edition.
- C. *Investment Analysis and Portfolio Management*, Frank Reilly and Keith Brown, Thomson/South-Western, 10th edition.

Other Materials:

- A. The *Wall Street Journal* provides many real applications of modern portfolio theory and the most current financial information. Students can have substantial benefits by reading it on a daily basis.
- B. All the course materials including the syllabus, lecture notes, the homework assignments, and papers to be discussed can be found at the class blackboard.

- C. Financial data can be accessed via Wharton WRDS service and Professor French's web site.
<https://wrds-web.wharton.upenn.edu/wrds/>
<http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/index.html>
- D. Quantitative review for investments and the instruction of Excel Solver are posted at the class blackboard for your reference.

Evaluation:

Computer Projects & Presentations 36%
Two Exams 64% (32% each)

Course letter grades will be determined by:

86% +	A
76% to 85%	B
66% to 75%	C
56% to 65%	D
55% or below	F

Grading might be curved at the end, depending on the overall class performance.
*However, students absent more than 3 classes are excluded from such a curving.
Students surfing over the web during the lecture are considered as absent students.*

Computer Projects & Presentations:

It should be done in groups and handed in as a group. Everyone in the group will receive the same grade on the project. Each group will present its complete project to the class at the end the semester. Basically, you need to prepare a clear note that can be distributed to the class and can be used in your presentation. Aim for a 30-minute presentation and anticipate questions about your project from your classmates. The detailed project handout will be distributed after the 1st exam.

Exams:

Tests will be open books/notes and will consist of problems and essay questions.
No make-up exams are given except in case of emergency with documentation as a proof.
There is no final exam.

Academic Integrity and Class Conduct:

Consistent with CBA policy, cheating will be considered a very serious offense. Please familiarize yourself with the complete statement of the Honor Code at <http://www.uic.edu/cba/Faculty/academicaffairs/honorcode.html> or posted on Blackboard. Should you have any questions about what constitutes appropriate behavior, please do not hesitate to talk with me.

Course Outline and Reading Assignments:

The following outline represents the order of topics to be covered. Some topics will receive more attention in lecture than others will, but all will potentially be covered on the tests. To enhance your understanding in class, you should read the relevant chapters or articles before coming to the class.

Part I.

1. *Consistency of mean-variance analysis and expected utility maximization* [Chapter 10-11, EGBG], [Chapter 6 & Appendix A&B , BKM]
2. *Are assets returns normally distributed?* [Chapter 5, BKM]
3. *Does time diversification work?* [Handouts; Chapter 7.5, BKM]
4. *Portfolio Theory*—The Optimal Risky Portfolio, The Correlation Structure of Security Returns, CAPM, and APT, [Chapter 6-8, EGBG], [Chapter 7-10, BKM]
 - *Fama, Eugene F., and K. R. French, 1996, Multifactor explanations of asset pricing anomalies, *Journal of Finance* 51, 55–84.
 - *Chan, Louis K.C., Jason Karceski, and Josef Lakonishok, 1999, On portfolio optimization: Forecasting covariances and choosing the risk model, *Review of Financial Studies* 12, 937-974.
5. *Black-Litterman Model by Goldman, Sachs & Co.* [Handouts; Chapter 27.3, BKM]
6. *Applications of Factor Models in Risk Management*—Risk Neutral and Index Mimicking [Handouts; Chapter 10 & 17, BKM]

Part II.

7. *Introduction to Mutual Fund Industry*
Reid, Brian K. and John D. Rea, Mutual fund distribution channels and distribution costs, *Perspective*, Vol. 9, No. 3, July 2003.
8. *Mutual Fund Performance Evaluation and Style Classification*
[Handouts; Chapter 24, BKM]; Fama, Eugene F. and Kenneth R. French, 2010, Luck versus Skill in the Cross-Section of Mutual Fund Returns, *Journal of Finance* 65, 1915~1947.
9. *Returns-based approach*: Sharpe, William F., 1992, Asset allocation: Management style and performance measurement, *Journal of Portfolio Management* (Winter), 7–19.
10. *Holdings-based approach*: Chan, Louis K. C., Stephen G. Dimmock, and Josef Lakonishok, 2009, Benchmarking Money Manager Performance: Issues and Evidence, *Review of Financial Studies* 22, 4553-4599. Chan, Louis K. C., Hsiu-lang Chen, and Josef Lakonishok, 2002, On mutual fund investment styles, *Review of Financial Studies* 15, 1407-1437.
11. *Tax Issues in Fund Performance Evaluation*
12. *Current Issues in Mutual Fund/Hedge Fund Industry* [Chapter 26 & 27, BKM; *Wall Street Journal*, Handouts]

Part III.

13. *Equity Valuation Models (The Asset Selection Decision)* [Chapter 15, RB] [Chapter 18-19, BKM & EGBG; *Wall Street Journal*, Handouts] (if time is allowed)
14. *The Computer Project Presentation*