

Advanced Portfolio Analysis

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Fall 2010

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This is a course in the theory and application of portfolio management techniques.

Course Materials

1. Elton, Edwin, Martin Gruber, Stephen J. Brown , and William Goetzmann, Modern Portfolio Theory and Investment Analysis, 8th Edition (John Wiley, 2010) and accompanying software.
2. Notes package available at the bookstore.

All chapters are from Elton, Gruber, Brown, and Goetzmann.

Grading

Grades will be based on case discussions, the midterm and final. While the grading distribution will vary slightly according to the quality of the class in general I follow the Finance Department Guidelines of

A 20-25%
B 55-70%
C and below 10-20%

Grades will be based 50% on the final, 30% on the midterm, and 20% cases and case discussions.

Note

To understand asset allocation and to be able to reapply it requires knowledge and expertise in modern portfolio theory, modern investment theory, and the nature of the assets that can be held. Modern Portfolio Theory and Modern Investment Theory are very analytical and if you intend to use these concepts you need to understand the analytics. Thus, this course is very quantitative. I realize that you can only handle so much of the material in a session so the last hour will be light, discussing the nature of assets that can be held or a discussion of cases or problem sets. You are expected to be in class throughout. If we are discussing material you know, you can contribute by helping others understand it.

Assignments

Late assignments will not be accepted. However, I will be open to rescheduling assignments if the class desires providing this is done several weeks before it is due.

I) Overview (Chapter 27)

II) Mean Variance Analysis: The Fundamentals – (3)

- 1) Basic Portfolio Analysis – Chapter 4 and 5
- 2) Solving for the Efficient Frontier – Chapter 6
- 3) Objective Functions – Chapter 11
- 4) International Diversification – an application- Chapter 12
- 5) Bond Portfolio Management – Chapter 22

Case: BP Amoco

III) Estimating Inputs – (2)

A) Covariance Structure

- 1) Single-index Model – Chapter 7
- 2) Multi-index Model – Chapter 8

B) Variances

- 1) Variance Estimation

C) Mean Returns

- 1) Models of Equilibrium – Chapter 10 and Chapters 13-16
- 2) Other Estimation

Case: Aggregate Asset Allocation

IV) Other Uses of Index Models – (2)

- 1) Simple Rules – Chapter 9
- 2) Performance Evaluation – Chapter 24
- 3) Portfolio Theory with Multi-index Models
- 4) Taking Factor Bets

Case: Fund Evaluation

V) Investment Vehicles – (3)

- 1) Open End Mutual Funds
- 2) Exchange Traded Funds
- 3) Commodity Funds
- 4) Index Funds
- 5) Close End Mutual Funds
- 6) Hedge Funds

VI) Other Issues – (6)

- 1) Liability Effects on Asset Allocation
- 2) Multi-period Strategies
- 3) Taxes and Asset Allocation
- 4) Portfolio Theory with Discrete Data
- 5) Special Issues of Pension Funds
- 6) Managing Endowments
- 7) Risk Control

Case: Harmonized Savings Plan at B.P. America