

PORTFOLIO ANALYSIS AND MANAGEMENT

Professor: Keith C. Brown  
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**Objective:** Successful portfolio management requires the development of a broad array of quantitative and qualitative skills, involving an analysis of both the investment instruments available in the capital markets and the objectives and constraints of the intended investor. The purpose of this course is to acquaint the student with conventional and state-of-the-art tools currently employed in the asset management industry. Through a series of lectures, projects, and case analyses we will examine the process of creating, maintaining, and evaluating the performance of profitable investment portfolios. This course, which will follow the general approach used in the Chartered Financial Analyst (CFA) candidate training program, is appropriate for anyone contemplating a career as an investment professional, portfolio manager or security analyst. A prerequisite for this course is the successful completion of FIN 367.

**Texts:** Required - *Investment Analysis and Portfolio Management, 9e* by F. Reilly and K. Brown  
(South-Western Cengage Learning, 2009)

Cases & Readings Packet (Available at University Copy Center, 3<sup>rd</sup> Floor GSB)

Recommended – *A Random Walk Down Wall Street, 10e* by B. Malkiel  
(Norton, 2011)

*Pioneering Portfolio Management, 2e* by D. Swensen (Free Press, 2009)

Also Recommended - *Wall Street Journal* or *Barron's*  
*Institutional Investor*  
*Bloomberg Markets*  
*Economist*  
*Financial Analyst Journal*  
*Journal of Portfolio Management*  
*Journal of Investment Management*

**Grades:** Your performance in this course will be evaluated in the following manner:

Midterm Examination I	23%
Midterm Examination II	23%
Final Examination	23%
Group Projects	23%
Class Participation	<u>8%</u>
	100%

A more complete discussion of the method used for assessing your performance can be found below in the Grading Policies section of the syllabus.

Course  
Structure:

The course is divided into the following parts and sections:

*Part 1:*

- I - Portfolio Formation and the Asset Allocation Process
- II - Risk, Return, and Portfolio Construction

*Part 2:*

- III - Equity Portfolio Management
- IV - Fixed-Income Portfolio Management

*Part 3:*

- V - Professional Asset Management
- VI - Portfolio Performance Measurement
- VII - Derivatives in Portfolio Management

*(i) Location of Daily Class Sessions:*

- As a rule, the class will meet every Monday and Wednesday of the semester in the regularly assigned classroom (CBA 4.330). Each class session will run between 75-80 minutes in length.
- On a few occasions during the semester, we may hold our class meeting in the Financial Trading and Technology Center (FTTC) classroom to facilitate our use of the myriad financial databases now available to us. These FTTC sessions will be announced in advance and take place during the normal class time.

*(ii) Class Session Topic Coverage:*

- The Course Outline gives a specific session-by-session breakdown of the topics we will cover in class. Throughout the semester, I will announce in class the details of the precise assignment for subsequent sessions; this information will also be posted in the appropriate location on the course home page. If you have any questions about what is to be covered in any class, please consult the website or ask me directly before the class session.
- The course home page (which is listed on the first page of this syllabus) will serve as an important mechanism for communicating course-related information. However, anything crucial to your class performance that is posted online also will be available through either more traditional outlets (e.g., e-mail, class handouts) or upon request. In addition to electronic versions of many of the materials distributed in class, the website will contain a file that summarizes the material covered in previous classes as well as one that specifies the required readings and problems for the next session. These files will be updated—assuming there are no network problems—no later than 2:00 pm on the day before a class session.
- PowerPoint files containing the class lecture notes will also be posted no later than 2:00 pm on the day before a class session. As a rule, these notes will not be distributed in class; if you would like to have them available during the lecture, you should download them (in hard copy form) and bring them with you to class.

*(iii) Examination Schedule and Coverage:*

There will be an examination given at the end of each of the three parts of the course:

- The first midterm examination will consist of two parts: (i) an in-class portion of the exam will be given during the regularly scheduled class period on **Monday, February 21**; and (ii) a take-home portion of the exam will be distributed on **Friday, February 18** and be due before the in-class portion of the exam commences. Collectively, the test will include all of the material covered from the beginning of class through the previous class session.
- The second midterm examination will consist of two parts: (i) an in-class portion of the exam will be given during the regularly scheduled class period on **Monday, April 4**; and (ii) a take-home portion of the exam will be distributed on **Friday, April 1** and be due before the in-class portion of the exam commences. Collectively, the test will include all of the material covered after the first examination through the previous class session.
- The final examination will be given during **Finals Week**. It will not contain a separate take-home portion. The length and topic coverage of the final exam will be determined at a later date.

Grading: As noted, your mastery of the course material will be evaluated with three distinct graded  
Policies: components: Examinations, Group Projects, and Class Participation

*(i) Examinations:*

- The three examinations given during the semester will carry equal weight toward your final grade. The tests will involve a combination of questions designed to assess your problem-solving, analytical and interpretative (i.e., essay) skills.
- The in-class portion of each test will be closed-book, closed-note. All necessary materials (i.e., test booklet, equation sheet, extra paper) will be provided to you. You will need to bring to each exam the following items: writing instruments, financial calculator, and picture ID card. You will not be allowed to use laptop computers or any other electronic devices during the examinations.
- It is expected that you will be present at the time and date for each of the examinations. **No makeup examinations will be given without the prior consent of the instructor.** Such consent will only be given for demonstrable conflicts and with the proper documentation.

*(ii) Group Projects:*

- The Group Projects component of your grade will consist of *three separate projects* that will be spread throughout the semester and linked to each part of the course. These projects will allow you to explore several different aspects of the investment process, including the asset allocation decision, the valuation and selection of individual securities in the context of the portfolio formation process, and a performance evaluation of a security portfolio. The specific descriptions associated with these assignments will be distributed formally beginning in mid-January.
- Completion of the assigned projects will require you to work in **groups of four people**. You will be assigned to the same four-person group for the entire semester, but you will be allowed to select your own group. While you will be able to work fully with other members within your assigned group, you will not be permitted to collaborate in any form with members of other groups. At the end of the semester, you will have the opportunity to provide a peer evaluation of the other members of the group to help determine the quality of each person's relative contribution.
- Your final class project grade will be an equally weighted average of the scores earned on each of the three separate projects. On each project, the same grade will be assigned to every member of your group, *assuming each person contributes equal effort and output to the assignment*. Further, no late projects will be accepted for any reason.

*(iii) Class Participation:*

- Your class participation score will be based on two elements: (1) *the consistency of your attendance in your assigned section*, and (2) *the quality of your contributions to the daily in-class discussions*. Class participation grades (as a percent of the overall course) will range from 8 (i.e., excellent attendance, frequent and substantive in-class contributions) to 0 (i.e., poor attendance, no in-class contributions, disruptive behavior).
- **It is expected that you will attend and contribute to the section in which you are enrolled on a daily basis.** More than two missed class sessions without some form of prior approval will begin to have an adverse effect on your class participation grade. An excessive number of unexcused absences will be interpreted as a sign of neglect and lack of preparation, which could lead to being dropped from the course. Instances of tardiness or leaving class early without explicit prior permission will be counted as the equivalent of an absence.
- **You may not attend a section of the course in which you are not enrolled** without the prior written (i.e., by e-mail) consent of the instructor. Unauthorized attendance in a different section will be treated as an absence for the purpose of assigning class participation grades.
- As reflected by the Course Outline, consideration of solutions to the case studies and assigned end-of-chapter questions and problems is an important focus, so it is vital that you consider them *before* each class meeting. You will be responsible for being prepared to discuss answers to all of the questions pertaining to a particular topic, even if some of them are not eventually covered in class. You also will be held responsible for everything covered or assigned in class which, at times, will depart significantly from the material contained in the textbook and articles.

Grading  
Policies:  
(cont.)

*(iv) Overall End-of-Semester Assessment:*

- At the end of the semester, the raw number of points that you earned on each graded component (i.e., exams, projects, class participation) will be averaged by the weighting percentages listed earlier. The weighted total scores for all students in all sections of the course will then be curved together to determine the final distribution.

- *At a minimum*, the following percentile ranges will be applied to the distribution of *relative weighted scores* (i.e., not the raw numerical scores on each graded component) when assigning final grades: **A: 92.0-100; A-: 90.0-91.9; B+: 87.0-89.9; B: 82.0-86.9; B-: 80.0-81.9; C+: 77.0-79.9; C: 72.0-76.9; C-: 70.0-71.9; D+: 67.0-69.9; D: 62.0-66.9; D-: 60.0-61.9; F: Below 60.0**. In borderline situations, both class participation and improvement on your test scores throughout the semester will be determining factors.

Other  
Policies:

The following additional policies will also be in place this semester:

*(i) Academic Dishonesty:*

- Academic dishonesty (as defined by the Policy Statement on Scholastic Dishonesty for the McCombs School of Business) will not be tolerated and will be dealt with in the most severe manner possible. I assume that all students in this course will act as if bound by this policy and you can expect the same from me. In particular, I will expect that on every individual assignment or examination the work you submit will be entirely your own and that you will provide a level and quality of input to the group projects commensurate with that of your colleagues. Failure to do so may result in failure on the project or failure in the course.

*The McCombs School of Business has no tolerance for acts of scholastic dishonesty. The responsibilities of both students and faculty with regard to scholastic dishonesty are described in detail in the Policy Statement on Scholastic Dishonesty for the McCombs School of Business:*

*By teaching this course, I have agreed to observe all of the faculty responsibilities described in that document. By enrolling in this class, you have agreed to observe all of the student responsibilities described in that document. If the application of that Policy Statement to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification. Policy on Scholastic Dishonesty: Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. You should refer to the Student Judicial Services website at <http://deanofstudents.utexas.edu/sjs/> or the General Information Catalog to access the official University policies and procedures on scholastic dishonesty as well as further elaboration on what constitutes scholastic dishonesty.*

*(ii) Prohibition Against Using Electronic Devices in the Classroom:*

- Consistent with the policy of the Department of Finance, the use of computers and other electronic devices in class is generally prohibited. On occasion, however, the use of laptop computers may be permitted in class solely for the purposes of note-taking and discussion of the homework problems *and* when authorized in advance by the instructor.

- *Please note that accessing the internet, recreational programs, or e-mail and messaging accounts without prior consent of the instructor is strictly forbidden.*

*(iii) Students With Disabilities:*

- The Provost's Office offers the following statement to help inform students of available resources and to fulfill due diligence for Americans With Disabilities Act (ADA):

*The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641 TTY.*

## COURSE OUTLINE

The following outline lists the topic coverage and reading requirements for the semester. The "Assignment" listings refer to the end-of-chapter problems that can be found in the ninth edition of Reilly and Brown's (RB) *Investment Analysis and Portfolio Management* textbook. For the RB assignments, the question and problem numbering system refers to the relevant chapter and question or problem (e.g., Q1.2 refers to the second *question* in Chapter 1, P2.3 refers to the third *problem* in Chapter 2). All of the supplemental readings and case studies are contained in the course reading packet, except where indicated by an asterisk (\*); the case studies and readings marked by an asterisk can be downloaded from the course website.

### I. Portfolio Formation and the Asset Allocation Process

*Class #1: Wednesday, January 19*

Topic: Overview of the Portfolio Formation Process and Recent Financial Market Trends

Reading: RB Chapter 1, Appendix 1A

P. Bernstein, "How Far Away is the Past; How Near is the Future?," *CFA Institute Conference Proceedings Quarterly*, December 2008 - \*

M. Kritzman, "Post-Crisis Investment Management," *Financial Analysts Journal*, January-February 2011 - \*

Assignment: Q1.11, P1.5, P1A.2, P1A.3

*Class #2: Monday, January 24*

Topic: The Asset Allocation Decision: Background and Investment Policy Statements

Reading: RB Chapter 2 (pp. 31-48), Appendix 2A

R. Ibbotson and P. Kaplan, "Does Asset Allocation Policy Explain 40, 90, or 100 Percent of Performance," *Financial Analysts Journal*, January-February 2000 - \*

Assignment: Q2.1, Q2.6, Q2.9, P2.5

*Class #3: Wednesday, January 26*

Topic: Asset Allocation Strategy Formation

Reading: RB Chapter 2 (pp. 48-54)

Chapter 16 (pp. 568-572)

Assignment: P16.6, Strategic Asset Allocation Case Study - \*

*Class #4: Monday, January 31*

Topic: Equity Style and Passive Investment Management

Reading: RB Chapter 16 (pp. 539-548, 559-568)

L. Chan and J. Lakonishok, "Value and Growth Investing: Review and Update," *Financial Analysts Journal*, January-February 2004 - \*

K. Brown, "Relative Valuation Techniques and Value vs. Growth Investing," Lecture Notes, January 2011 - \*

Assignment: Q16.1, Q16.2, Q16.8, P16.5, P16.8

*Class #5: Wednesday, February 2*

Topic: The Endowment Investment Model

Reading: K. Brown, L. Garlappi, and C. Tiu, "Asset Allocation and Portfolio Performance: Evidence from University Endowment Funds," *Journal of Financial Markets*, May 2010 - \*

K. Brown and C. Tiu, "Do Endowment Funds Select the Optimal Mix of Active and Passive Risks?," *Journal of Investment Management*, First Quarter 2010 - \*

Assignment: Endowment Investment Committee Case Study

## **II. Risk, Return, and Portfolio Construction**

*Class #6: Monday, February 7*

Topic: Risk and Diversification: Fundamentals, Downside Risk and Efficient Optimization Principles

Reading: RB Chapter 7

K. Brown, "A Brief Review of the Portfolio Formation Process," Lecture Notes, January 2011 - \*

Assignment: Q7.3, Q7.6, Q7.12, P7.5, P7.6, P7.7

*Class #7: Wednesday, February 9*

Topic: Risk and Diversification: Optimization Examples and Components of Portfolio Risk

Reading: K. Brown, "The Components of Portfolio Risk," Lecture Notes, January 2011 - \*

H. Markowitz, "Modern Portfolio Theory, Financial Engineering, and Their Roles in Financial Crises," *CFA Institute Conference Proceedings Quarterly*, December 2009 - \*

Assignment: Q7.11, Efficient Portfolio Formation Case Study - \*

*Class #8: Monday, February 14*

Topic: Advanced Portfolio Risk Analytics: Value at Risk and Implied Expected Return Forecasts

Reading: A. Damodaran, "Value at Risk (VaR)," Chapter 7 from *Strategic Risk Taking* (Wharton Publishing), August 2007 - \*

G. He and R. Litterman, "The Intuition Behind Black-Litterman Model Portfolios," Goldman Sachs Working Paper, December 1999 - \*

Assignment: Asset Class Risk Analysis Case Study - \*

*Class #9: Wednesday, February 16*

Topic: Risk and Expected Return: Capital Asset Pricing Model & Multi-Factor Models

Reading: RB Chapter 8 (pp. 205-222, 228-231)

Chapter 9 (pp. 237-241, 246-257)

K. Brown, "Some Useful Facts About Beta," Lecture Notes, January 2011 - \*

Assignment: Q8.2, P8.5, P8.7, P8.8, Q9.5, P9.2, P9.6, P9.7

*Class #10: Monday, February 21*

Topic: Midterm Examination #1

### **III. Equity Portfolio Management**

*Class #11: Wednesday, February 23*

Topic: Market Efficiency and Behavioral Finance

Reading: RB Chapter 6

G. Bhandari and R. Deaves, "The Demographics of Overconfidence," *Journal of Behavioral Finance*, First Quarter 2006 - \*

Assignment: None

*Class #12: Monday, February 28*

Topic: Equity Valuation Analysis: Fundamental Concepts

Reading: RB Chapter 11 (pp. 317-336)

K. Brown, "The Foundations of Stock Valuation," Lecture Notes, January 2011 - \*

Assignment: Q11.1, Q11.8, P11.4, P11.6, P11.15

*Class #13: Wednesday, March 2*

Topic: Equity Valuation Analysis: Company Analysis and DCF Techniques

Reading: RB Chapter 14 (pp. 453-470)

K. Brown, "Some Thoughts on Cash Flow," Lecture Notes, January 2011 - \*

Assignment: Q14.8, P14.8, P14.14, P14.15

*Class #14: Monday, March 7*

Topic: Comparable Firm Techniques & Equity Portfolio Formation

Reading: RB Chapter 11 (pp. 336-341)

Chapter 14 (pp. 470-491)

J. Liu, D. Nissim, and J. Thomas, "Is Cash Flow King in Valuations?," *Financial Analysts Journal*, March-April 2007 - \*

K. Brown, "The Conceptual Relationship Between DCF and Relative Valuation Techniques," Lecture Notes, January 2011 - \*

Assignment: Q14.10, Q14.11, Q14.21, P14.16, P14.18a

*Class #15: Wednesday, March 9*

Topic: Active Equity Portfolio Strategies

Reading: RB Chapter 16 (pp. 548-559)

Assignment: Q16.9, Harbor Capital Appreciation Fund Case Study

### **IV. Fixed-Income Portfolio Management**

*Class #16: Monday, March 21*

Topic: Bond Fundamentals: Yield Curve Analysis, Instruments and Valuation

Reading: RB Chapter 17 (pp. 579-587)

Chapter 18 (pp. 609-618, 625-635)

K. Brown, "The Fundamentals of Bond Valuation," Lecture Notes, January 2011 - \*

Assignment: Q17.8, P17.4, Q18.1, Q18.5, Q18.6, P18.2

*Class #17: Wednesday, March 23*

Topic: Bond Risk Measurement

Reading: RB Chapter 18 (pp. 640-663), Appendix 18

M. Kritzman, "What Practitioners Need to Know about Duration and Convexity," *Financial Analysts Journal*, November-December 1992 - \*

Assignment: Q18.7, Q18.8, Q18.18, P18.3, P18.7

*Class #18: Monday, March 28*

Topic: Fixed-Income Portfolio Strategies: Passive and Dedicated

Reading: RB Chapter 19 (pp. 677-682, 697-708), Appendix 19

Assignment: Q19.1, Q19.8, P19.3, P19.7

*Class #19: Wednesday, March 30*

Topic: Fixed-Income Portfolio Strategies: Active and Core-Plus

Reading: RB Chapter 19 (pp. 682-697)

J. Prince, "Credit Default Swaps and Structured Credit: A Primer for Wealth Managers," *CFA Institute Conference Proceedings Quarterly*, December 2009 - \*

Assignment: P19.1, P19.5, Greydanus Boeckh Case Study

*Class #20: Monday, April 4*

Topic: Midterm Examination #2

**V. Professional Asset Management**

*Class #21: Wednesday, April 6*

Topic: Traditional Asset Management: Private Firms and Mutual Funds

Reading: RB Chapter 24 (pp. 891-906, 924-929)

G. Brinson, "The Future of Investment Management," *Financial Analysts Journal*, July-August 2005 - \*

Assignment: None

**VI. Portfolio Performance Measurement**

*Class #22: Monday, April 11*

Topic: Traditional Evaluation Measures: Peer Comparisons and Basic Risk-Adjusted Measures

Reading: RB Chapter 25 (pp. 937-955)

Assignment: Q25.3, Q25.6, P25.1, P25.2, P25.3

*Class #23: Wednesday, April 13*

Topic: Traditional Evaluation Measures: Advanced Risk-Adjusted Measures

Reading: RB Chapter 25 (pp. 957-962, 967-970)

V. Harlow and K. Brown, "The Right Answer to the Wrong Question: Identifying Superior Active Portfolio Management," *Journal of Investment Management*, Fourth Quarter 2006 - \*

Assignment: Q25.4, Q25.5, Q25.8, P25.4, P25.6

*Class #24: Monday, April 18*

Topic: Attribution Analysis

Reading: RB Chapter 25 (pp. 963-967)

Assignment: Q25.7, P25.7, P25.8

## **V. Professional Asset Management (cont.)**

*Class #25: Wednesday, April 20*

Topic: Alternative Asset Management: Private Equity

Reading: RB Chapter 24 (pp. 906-910, 918-924)

B. Singer, R. Staub, and K. Terhaar, "Determining the Appropriate Allocation to Alternative Investments," *CFA Institute Conference Proceedings Quarterly*, April 2002 - \*

L. Phalippou, "Private Equity: Performance, Risk, and Fund Selection," *CFA Institute Conference Proceedings Quarterly*, September 2010 - \*

Assignment: Yale University Investments Office Case Study

*Class #26: Monday, April 25*

Topic: Alternative Asset Management: Hedge Funds

Reading: RB Chapter 24 (pp. 910-918)

R. Ibbotson, P. Chen, and K. Zhu, "The ABCs of Hedge Funds: Alphas, Betas, and Costs," *Financial Analysts Journal*, January-February 2011 - \*

Assignment: Maverick Capital Case Study

## **VII. Derivatives in Portfolio Management**

*Class #27: Wednesday, April 27*

Topic: Altering Portfolio Risk and Return with Derivatives

Reading: RB Chapter 20 (pp. 727-748 [*Note: This should be review material*]; 751-756)

Chapter 22 (pp. 828-839)

Chapter 23 (pp. 848-855, 860-863)

Assignment: P20.1, P20.2, P20.3, P20.7a, P22.10, P22.11, Q23.7

*Class #28: Monday, May 2*

Topic: Embedded Derivatives & Equity Investment Alternatives

Reading: RB Chapter 23 (pp. 866-870, 872-875)

Assignment: Q23.9, P23.6, P23.9

*Class #29: Wednesday, May 4*

Topic: Equity Investment Alternatives (cont.) and Examination Review

Reading: RB Chapter 23 (pp. 858-861)

Assignment: P23.5

THIS OUTLINE SHOULD BE CONSIDERED REPRESENTATIVE OF THE MATERIAL WE WILL COVER DURING THE SEMESTER; IT IS SUBJECT TO CHANGE UPON PROPER NOTIFICATION.