

**UNIVERSITY OF ILLINOIS AT CHICAGO  
COLLEGE OF BUSINESS ADMINISTRATION**

**FINANCE 455 – ASSET MANAGEMENT  
Fall 2012**

**Time and Class Room:** Tuesday      3:30-6:00 PM, in BH B10      (call # 34833/34834)

Instructor:      Professor Oleg Bondarenko  
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**Course description:**

This is an applied course in investments. Its objective is to progress from the basic theory of investments you learned in FIN 310/510 to practical issues of implementation. The emphasis is on modern quantitative techniques for asset management. Students will use real data and learn to create their own spreadsheet optimization programs in MS Excel. In particular, student will learn how to calculate mean-variance efficient portfolios, estimate covariance matrices, estimate multifactor models, assess evidence regarding the predictability of returns, and evaluate portfolio performance.

**Reading:**

1.      Bodie, Z., A. Kane, and A. Markus, *Investments*, Irwin, 8<sup>th</sup> or 9<sup>th</sup> Ed. [BKM]
2.      Teaching notes [TN]
3.      Research articles [RA] posted on Blackboard
4.      \**Modern Investment Management: An Equilibrium Approach*, by B. Litterman and the Quantitative Resources Group of Goldman Sachs Asset Management, Wiley, 2003 [L]
5.      \**Wall Street Journal*

(\*) -- indicates optional reading

**Prerequisites:** FIN 310/510 is required. This course is technical and challenging. You must be comfortable with linear regressions, matrix algebra, and basic calculus. Spreadsheet proficiency is essential.

**Course website:** The course website is accessible from the UIC Blackboard site <http://blackboard.uic.edu/>. All course materials will be posted there, including syllabus, schedule, homework assignments, data sets, case instructions, research articles, teaching notes, announcements, etc.

Occasionally, I might use the website for logistical matters, such as to announce schedule changes, make clarifications, answer common questions, correct typos, etc. Please check this website periodically.

## Coursework

1. There will be 4 homework assignments, 3 cases, an investment project, and a take-home exam. Assignments, cases, and the investment project will be done in groups of 2-4 people. The exam is individual and open-book.

2. You need to form your own groups. I want an email from each group by the second class stating who is in the group. I will assign each group a name (Group A, Group B, etc.). You will submit your assignments electronically in Blackboard, as Excel and Word files, before the start of class on the day it is due.

You should name your files as Assignment1\_GroupA.xls, Case2\_GroupC.doc, etc. Do NOT use spaces and special symbols in file names. Specific instructions for submitting to files will be posted on the course website. In addition, please turn in a hard copy of your assignment in class.

3. **Cases:** Each group will submit a written report on the case. The report should be typed using 12pt font, double-spaced and generally within predefined limits. The report will be graded on the basis of the quality of its analysis, as well as its professional presentation.

A case report is similar to consulting recommendations. As such, you need to take a position and support it with analytical arguments. Typically, the case contains wealth of data to analyze. Try to identify what is important and what is not. This is part of a challenge. You will be provided with the list of questions to help guide your analysis, but you do not have to follow those questions. You are welcome to search web for related information, but try to be brief.

4. **Homework assignments** will be done in groups. They will involve implementation in Excel of various models discussed in class.

5. Assignments and cases will be graded as P+, P, P-, or F, which correspond to 10, 8, 6, and 0 points, respectively. Note that late submissions will get F.

6. **Investment project:** Each group will propose and implement an original investment idea. You will need to pick a relevant issue, collect the necessary data, perform statistical analysis, and document your findings. I will provide some suggestions for the investment project. Each group will present its results to the class at the end of the semester. It might be helpful to distribute notes to the class.

7. The exam is individual and open-book. It will involve Excel implementation and will be similar to homework assignments.

8. Class participation contributes to your grade. To get participation points, one should actively participate in class and case discussions. Regular attendance is a course requirement. Note that visits during my office hours do NOT count toward class participation points.

**Grades:** Your final grade will be determined by

<b>Components</b>	<b>Possible points</b>
Homework assignments	4x10
Case analyses	3x10
Exam	30
Investment project	30
Class participation	10
<b>Total</b>	<b>140</b>

### **How to Reach Me**

1. I will hold office hours on Tuesday between 2:00 and 3:00 p.m. If this time does not work for you, please email me to make an appointment at mutually convenient time.
2. You can ask questions by email, by phone, or in person, with email being the most efficient alternative.
3. I also welcome your comments on every aspect of the course. Your feedback is important!

**Academic Integrity:** *This course and its associated coursework are being administered under the policies of UIC College of Business Administration Honor Code. All students are expected to respect and uphold this code.*

Academic misconduct is grounds for failing the course and may be grounds for additional sanctions. Academic misconduct includes, but is not limited to, giving and receiving information during an exam and submitting plagiarized work for an academic requirement. Academic dishonesty in any form will not be tolerated.

In particular, with respect to homework assignments and cases, you are only allowed to place your name on group work if you have had substantial input in that work. With respect to the exam, you are not allowed to discuss exam content with anyone.

**Schedule Changes:** Changes in the sequencing of material, assignments, or grading policy may be made as the course progresses. Such changes will be announced in class and students are responsible for learning about these changes.

### **Additional comments**

**About me:** I am an Associate Professor at University of Illinois at Chicago. My research interests cover several areas in Quantitative Finance, including Derivatives, High-frequency data, Hedge funds, and Market microstructure. If you are interested, you can find some of my publications and working papers at [www.uic.edu/~olegb/research](http://www.uic.edu/~olegb/research).

**About you:** I like to read your resumes, so please email one to me.

## **Tentative Course Schedule**

**Note:** All reading assignments and research articles will be posted on the course website.

08/28 – Introduction. Review of Portfolio Theory. Practical difficulties with portfolio optimization

09/04 -- The Black-Litterman model

09/11 – Domestic and international diversification. Portfolio optimization with simulations

09/18 -- Covariance matrix estimation

Case: Harvard Management Company (2001)

09/25 -- GARCH and other models

Homework 1 is due

10/02 – Multifactor Models, APT

10/09 – Equity risk factor models

Homework 2 is due

10/16 – Tactical Asset Allocation

Case: Dimensional Fund Advisors (2002)

10/23 – Active equity portfolio management

Homework 3 is due

10/30 – Portfolio performance evaluation

11/06 – Hedge funds and market-neutral strategies

Homework 4 is due

11/13 – Current issues in Hedge Funds

Case: Risk Arbitrage: Abbot Labs and Alza

11/20 – Exam (3:30-6:00)

11/27 – No class. Group appointments to review investment projects

12/04 – Investment project presentations. Course wrap up