FINA 4310: Survey of Investments

Course Syllabus

Spring 2012

Instructor

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Office Hours: *Wednesdays and Fridays, 4:00 to 5:00, and by appointment*

Contact Notes: *The best way to contact me is via e–mail.*

Meeting Times and Locations

53711 – Monday, Wednesday, Friday, from 1:25 to 2:15, Caldwell 107

73712 – Monday, Wednesday, Friday, from 2:30 to 3:20, Caldwell 107

Course Description

The securities markets, investor objectives, introduction to portfolio theory and the analytical tools of portfolio management, and an examination of investment alternatives.

Pre–Requisites and Co–Requisites

The course assumes that it is the student's first in–depth course in asset pricing. The students are required to have completed the basic course in finance (FINA 3000 – pre–requisite) and have completed or be currently taking the basic course in probability and statistics (MSIT 3000 or STAT 3000 – co–requisite). The course assumes that the students are familiar with the concepts of time value of money and discounting, can work with probability distributions and their moments, including covariances, and can understand the output of regression analysis and basic hypothesis testing.

Course Objectives

After completing the course, the student is expected to:

- Understand the concept of market efficiency and its practical applications
- Understand the contemporary notion of risk that underlies the CAPM and its extensions
- Know the definitions and understand the potential causes of the most well–known asset pricing anomalies
- Be able to apply the asset pricing models to evaluation and improvement of portfolio management
- Be familiar with the main issues of bonds pricing and interest rates behavior
- Be familiar with the definitions, trading, and pricing of several derivatives, most importantly options and futures

Tentative Course Outline

BKM means the course primary textbook "Essentials of Investments" by Bodie, Kane, Marcus. The current edition is the 8th edition; the 7th edition also works. ChX means that you have to read the whole Chapter X, x.x marks the subsection. The pace of the course is somewhat flexible and could speed up or slow down depending on student interest and comprehension.

January 9 Equity Securities and Bonds.

Reading: BKM 2.2, 2.3, 3.2, 3.3

January 11 Trading on the Margin and Selling Short.

Reading: BKM 3.5–3.7

January 13 Options and Futures.

Reading: BKM 2.5

January 16 NO CLASS – MLK Day

January 17. StockTrak trading starts

January 18 Valuation by Comparables.

Reading: BKM 13.1, 13.2, 13.4

January 20 Statistics Bootcamp, Part 1.

Descriptive Statistics, Confidence Intervals, Hypothesis Testing

Laptop required. Please install Analysis ToolPak / StatPlus before class.

Reading: BKM 5.1–5.4; Appendix to BKM A1, A2 (see course website)

January 23 Statistics Bootcamp, Part 2.

Event Studies. Market Model.

Laptop required.

Reading: BKM 2.4, 6.5, 7.2

January 25 Statistics Bootcamp, Part 3.

Forecasting. Idiosyncratic Risk and Diversification.

Laptop required.

Reading: BKM 6.5

January 27 Efficient Market Hypothesis

Reading: BKM 8.1, 8.2, EMH and Trading Costs, pp. 3–17 (see course website)

Project #1 assigned.

Project requires the use of Analysis ToolPak / StatPlus!

January 30 Efficient Market Hypothesis

Reading: BKM 8.1, 8.2, EMH and Trading Costs, pp. 3–17 (see course website)

February 1 Capital Allocation Line and Capital Market Line.

Please install and become familiar with Solver before class.

Reading: BKM 5.5, 5.6

February 3 Project #1 due.

Two Risky Assets and the Bullet.

Reading: BKM 6.1–6.3; Appendix to BKM A3 (see course website)

February 6

Two–Fund Separation. CAPM and Security Market Line.

Reading: BKM 7.1

February 8

Market Beta as a Measure of Systematic Risk. Zero–Beta CAPM.

Reading: BKM 7.1

February 10 Predictability of Risk, Part 1.

Reading: BKM 12.6, Contemporary Concept of Risk, pp. 3–19 (see the website)

Project #2 assigned. Project requires the use of Solver!

February 13 Predictability of Risk, Part 2.

Reading: Contemporary Concept of Risk pp. 3–19 (see the website)

February 15 Predictability of Risk, Part 3.

Reading: Contemporary Concept of Risk pp. 3–19 (see the website)

February 17 Project #2 due.

Conditional CAPM.

Reading: Contemporary Concept of Risk, pp. 19–30 (see the website)

February 20 Conditional CAPM.

Reading: Contemporary Concept of Risk, pp. 19–30 (see the website)

February 22 Intertemporal CAPM.

Reading: BKM 7.4, Contemporary Concept of Risk, pp. 30–43 (see the website)

Project #3 assigned.

No Office Hours

February 24 NO CLASS

February 27 Intertemporal CAPM.

Reading: BKM 7.4, Contemporary Concept of Risk, pp. 30–43 (see the website)

February 29 Arbitrage Pricing Theory. Fama–French Model.

Reading: BKM 7.4, 7.5, Contemporary Concept of Risk, pp. 43–46 (see the website)

Midterm Material Stops Here

March 2 **Project #3 due.**

Introduction to Anomalies.

Reading: BKM 8.3, Anomalies, pp. 3–19 (see the website)

March 5 Value Effect: Risk–Based Explanations

Reading: Anomalies, pp. 19–30 (see the website)

March 7 Value Effect: Mispricing Explanations

Reading: Anomalies, pp. 30–39 (see the website)

March 7, 5:00 pm to 6:30 pm – MIDTERM – MLC 214

March 9 Momentum and Related Anomalies

Reading: Anomalies, pp. 39–46 (see course website)

March 19 Momentum: Risk–Based Explanations

Reading: Anomalies, pp. 46–52 (see course website)

March 21 Momentum: Mispricing Explanations

Anomalies, pp. 52–61 (see course website)

March 23 Institutional Investors. Costs of Investing.

Project #4 assigned.

Reading: BKM Ch4

March 26 Performance Measures.

Reading: BKM 18.1

March 28 Performance Measures.

Reading: BKM 18.1

March 30 **Project #4 due.**

Performance Evaluation.

Reading: BKM 18.1

April 2 Bonds Basics. Bond Pricing.

Reading: BKM 2.1, 2.2, 10.1–10.2

April 4 Bond Yields. Default Risk.

Reading: BKM 10.3–10.4

April 6 Interest Rate Risk. Duration.

Final part of Stocktrak project assigned.

Reading: BKM 10.5, 11.1

April 6. StockTrak trading ends

April 9 Immunization. Convexity.

Reading: BKM 11.2–11.3

April 11 Spot and Forward Rates.

Reading: BKM 10.6

April 13 Final part of Stocktrak project due.

Term Structure of Interest Rates.

Reading: BKM 10.6

April 16 The Use of Futures

Project #5 assigned.

Reading: BKM Ch17

April 18 NO CLASS, No Office Hours – Terry College Honors Day

April 20 NO CLASS, No Office Hours

April 23 Pricing by Arbitrage. Spot–Futures Parity.

Reading: BKM Ch17

Extra Office Hours, 4:00 pm to 5:00 pm

April 25 Options. Option Strategies. Option–like Securities.

Reading: BKM Ch15

April 27 Project #5 due.

Binomial Pricing.

Reading: BKM Ch16

April 30 Put–Call Parity. Black–Scholes Formula.

Reading: BKM Ch16

Final exam for 1:25 pm session:

Wednesday, May 2, 12:00–3:00 pm, Caldwell 107

Final exam for 2:30 pm session

Friday, May 4, 3:30–6:00 pm, Caldwell 107

University Honor Code and Academic Honesty Policy

As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at www.uga.edu/honesty. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

Special note on group assignments: It is expected that all students in the group work together and contribute equally to each group assignment. Each group should produce *only one* joint written output, irrespective of the number of students in the group. Communication between the groups about the assignment is a violation of the Honesty Policy. Communication to anyone outside of the group about the assignment is a violation of the Honesty Policy.

Changes to the Syllabus

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

Required Course Material

Textbook: "Essentials of Investments" by Bodie, Kane, Marcus

Stocktrak: www.stocktrak.com. Register your group at

http://www.stocktrak.com/public/members/registrationstudents.aspx?p=UGA-FINA4310-Spring2012

Grading

The course grade will be based on:

- Five projects to be completed in groups of maximum four people – 5% of the course grade each, 20% of the course grade total, the worst of the five grades is excluded
- The midterm – 20% of the course grade

- The non–cumulative final – 30% of the course grade
- The Stocktrak project – 25% of the course grade, see the Stocktrak memo on the course website for more detail
- Class attendance – 5% of the course grade

The grade is on the curve (i.e., it is possible to get 60% for the exams and still get an A, if others do even worse).

For each assignment or exam, you will get two grades: the raw grade (written on the text of the assignment or the exam by the grader) and the curved letter grade (reported to you by me via eLC). The curved letter grade will be preliminary and will not impact the letter grade for the whole course. At the end of the semester a separate, though similar, curve will be created based on the weighted average of the raw grades in order to produce the letter grade for the course.

I expect that 40% of the class will get A or A– and about 15% will get B– and below.

Group Assignments

- The group assignments (the Stocktrak and the five projects) are to be completed in groups of up to four people
- You can complete all projects or some of them individually
- If you need to form a group of five people or more, you need to get my permission first
- The group can consist of people attending different sessions
- Any communication about the project to anyone who is not a member of the group is a violation of the Honesty Policy
- All members of the group are expected to contribute equally to each part of the group assignment
- Your group for Stocktrak and for the five projects can be (but does not have to be) different
- You are free to change your group for all projects except for Stocktrak
- If you wish to change the Stocktrak group, let me know first
- If you split from your group in the middle of working on a project, it is your responsibility to clear all issues on the work done together with your old group. I will assume that you were a member of your new group during the whole period you worked on a project

- Most important rule: **When in doubt, ask!**

Late Homework Policy

All group projects are due on Friday (see the course outline above for exact dates). Homework turned in on Monday loses 20% of the maximum possible score. Homework turned in on Tuesday loses another 10% of the maximum possible score. Homework turned in on Wednesday and later gets no points.

Software

Microsoft Excel will be used extensively throughout the course (student version of Excel is fine). I expect everyone to be proficient with it or learn from the other members of their group. We will use two Excel Add–ins: Solver and Analysis ToolPak (called StatPlus on Macs). Here is how to get them:

PC Users:

- Click the Office button in the top left corner.
- Go to Excel Options at the bottom, Excel options window will open
- Select Add–ins on the left
- Go to the very bottom and click Go for Manage Excel add–ins
- Check the boxes for Analysis ToolPak and Solver Add–in the window that opens
- Click Yes when it asks if you want to install one and the other
- It will take a while
- When you are done, you will see them on Data tab at the very right

Mac Users:

- Excel for Mac does not include the add–ins in the standard package. You need to download them and install
- For Solver, go to http://www.solver.com/mac/ and follow the installation and usage instructions on the Web page
- For Analysis ToolPak (called StatPlus on Macs), go to
  http://www.analystsoft.com/en/products/statplusmacle/
  and follow the installation and usage instructions on the Web page
- Excel help also provides instructions on how to start Analysis ToolPak (renamed StatPlus for Macs) once you have installed it.

Attendance Policy

Attendance will be controlled by non–graded quizzes and questionnaires performed during 12 random classes. If you have to miss a class due to a medical condition, a job interview, etc., please notify me *before* class. The first two registered absences (without prior notification) are not punished. Each one starting with the third one will cost you 0.5% of the course grade.

Withdrawal Policy

You can withdraw with a W grade no later than January 31, providing that you attend classes. After that date, your grade will depend on the projects you have completed or should have completed. No projects completed means WF. If your project score falls in the lowest 10% in class, it is also WF.

"Formula Sheets" for the Exams

You are allowed to bring a finance/scientific calculator and a "Formula Sheet" into the midterm and the final. The "formula sheet" can be at most a double-sided letter-sized sheet ("letter-sized" is the paper you put into a printer). The contents of the "formula sheet" is completely up to you. It may be handwritten, printed or copied, it can be formulas, slides, questions from the sample exams, etc.

Policy for make–up of examinations

There will be **no make–up tests for any reason**. The weight from the missed midterm will be transferred to the final exam if the absence is due to a serious illness, a family emergency, or some university–sponsored events. If you expect to miss the midterm for an approved reason, you must provide me with a formal written note or e–mail regarding the situation **before** the exam – plus a note from a physician or other relevant person within one week following the missed exam.

Exam Schedule

Midterm:

Wednesday, March 7, 5:00 – 6:30 pm, MLC 214

Final:

53711 (11 am session) – Wednesday, May 2, 12:00 – 3:00 pm, Caldwell 107

73712 (12:30 pm session) – Friday, May 4, 3:30 – 6:30 pm, Caldwell 107