

Financial Markets and Investments

Course Objectives and Outline

This course is concerned with the choice and evaluation of investment strategies and portfolio management. The goal of the course is to provide you with a deeper understanding and appreciation of the complex questions and tradeoffs facing any investor, along with the necessary theoretical background for critically evaluating investments and understanding the modern literature on investments. That is, the course is designed to provide you with a conceptual framework for analyzing investment decisions; not a recipe for how to make a quick buck on Wall Street.

The topics covered, time permitting, include:

- I. Portfolio Theory and Asset Allocation
- II. Portfolio Theory and Asset Allocation: Some Practical Considerations
- III. Risk and Return in Equilibrium: The Capital Asset Pricing Model (CAPM)
- IV. The CAPM: Empirical Evidence
- V. Multi-Factor Models and the Arbitrage Pricing Theory (APT)
- VI. Performance Evaluation
- VII. Market Efficiency and Return Predictability
- VIII. Options

Course Requirements

The treatment of uncertainty is essential to investment management. Consequently, the course will entail the use of a number of different statistical tools, ranging from the notion of probability distributions through linear regression analysis. The prerequisites for the course are Economics 205D (105D) or Economics 372 (172), and a statistics course, such as Statistics 103, 104, 113 or 114.

Course Evaluation

Your course grade will be based on two projects, an optional midterm quiz, and a final exam. The two projects may be done in groups of up to four persons. The due dates for the projects are still TBA. Late projects are not accepted under any circumstances. The midterm quiz will be held in class on Wednesday, October 16. The final exam is scheduled for Wednesday, December 11, 9:00-11:00am (two hours). You must take the exams at the scheduled times. Topics not covered in class prior to the exams will not be on the exams. Since the midterm is optional, the final exam will be comprehensive.

Your course grade will be determined by weighting each of the two projects by 10%, and the maximum score obtained by weighting the midterm and the final by 30% and 50%, respectively, or by weighting the final by 80%. Thus, if you do well on the midterm, the final will “only” account for 50% of your overall grade. In some cases, I may also add a few bonus points to the total score based on your participation and contribution to the classroom atmosphere.

Contact Info

My office is Room 228E in the Social Science Building (Econ). My email is: boller@duke.edu. My office hours are Tuesdays from 1:30-3:00 pm. If you are unable to see me during my regular office hours, or immediately after class, please email to set up an appointment.

Teaching Assistant

Leonardo Salim Saker Chaves (lsalimsaker@gmail.com) is the teaching assistant for the class. Leonardo will be holding weekly office hours on Tuesdays from 5:00-6:00pm in Room 107 in the Social Science Building (Econ). He will also be available by appointment on Mondays from 6:00-7:00pm in Room 111 in the Social Science Building (Econ). Leonardo should be your first point of contact in terms of questions about the lectures, projects, and end-of-chapter problems.

Texts and Readings

The required text for the course is:

Investments, Zvi Bodie, Alex Kane and Alan J. Marcus, 11th Edition, New York, NY: McGraw-Hill/Irwin, 2018.

The Bodie, Kane and Marcus (BKM) book provides a very comprehensive treatment of modern investment theory (the 10th Edition of the book from 2014 is very similar, and a lot cheaper). We will not be able to cover the entire book in a single semester course. The book also comes with several online tools and Excel spreadsheets that will be useful for solving some of the homework problems.

The Bodie, Kane and Marcus textbook has a number of concept checks throughout, with solutions at the end of each chapter. It is a good idea to carefully study these. There are also some problems at the end of each chapter. I will be posting suggestive solutions to these on the class website. Even though these problems are entirely optional, from past experience, there is usually a strong correlation between the time and effort spent on solving these problems and the final exam performance.

I also encourage you to keep abreast of daily events in financial markets by reading the Wall Street Journal or other financial news sources. If you come across something that is relevant for what we have been discussing in class, please bring it up. I will try to do the same.

The recent book:

Efficiently Inefficient: How Smart Money Invests & Market Prices Are Determined, Lasse H. Pedersen, Princeton, NJ: Princeton University Press, 2015,

provides an excellent practically oriented discussion of many of the concepts that we are going to cover in the class, and how these ideas form the basis for the strategies employed by some of the most successful hedge funds.

Class Website

I will be posting all of my lecture notes and problems on the class website:

www.econ.duke.edu/~boller/Econ.471-571.F19

I will also be posting some additional readings and background material. Some of these additional readings are fairly technical. I do not expect you to fully understand every detail of these.

Class Outline and Reading List

Some of my lectures will follow the BKM book fairly closely. However, for some of the topics, I will provide more in-depth discussions and a different point of view.

Lecture Series 0: Review Material

A) Institutional Background

BKM, Chapters 1-4.

B) Statistical Review

BKM, "Quantitative Review," Appendix A.

Mark Kritzman, "What Practitioners Need to Know about Uncertainty," Financial Analysts Journal, 1991, Vol.47, No.2, pp.17-21.

Mark Kritzman, "What Practitioners Need to Know about Regressions," Financial Analysts Journal, 1991, Vol.47, No.3, pp.12-15.

Lecture Series I: Portfolio Theory and Asset Allocation

BKM, Chapters 5, 6 and 7.

Lecture Series II: Portfolio Theory and Asset Allocation: Some Practical Considerations

BKM, Chapter 8

Lecture Series III: Risk and Return in Equilibrium: The Capital Asset Pricing Model (CAPM)

BKM, Chapter 9 and Section 27.3.

Lecture Series IV: CAPM: Empirical Evidence

BKM, Chapter 13.

Lecture Series V: Multi-Factor Models and the Arbitrage Pricing Theory (APT)

BKM, Chapter 10.

Lecture Series VI: Performance Evaluation

BKM, Chapter 24.

Lecture Series VII: Market Efficiency and Return Predictability

BKM, Chapters 11 and 12.

Lecture Series VIII: Options

BKM, Chapters 20 and 21.