

ECON 571: Financial Markets and Investments

Instructor: Professor Brian M. Weller
Office: Social Sciences 228H
Phone: (919) 660-1720
E-mail: brian.weller@duke.edu
Class hours: MW 3:05pm–4:20pm, **1/9–4/24**
Office hours: W 1:00pm–2:00pm and by appointment

Prerequisites: ECON 105D/205D/172/372 and STAT 103/104/113/114, or equivalent.

Course Description

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 trade-offs facing any investor, along with the necessary theoretical background for critically evaluating alternative investment strategies and 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:

1. Portfolio Theory and Asset Allocation
2. Portfolio Theory and Asset Allocation: Some Practical Considerations
3. Risk and Return in Equilibrium: The Capital Asset Pricing Model (CAPM)
4. The CAPM: Empirical Evidence
5. Multi-Factor Models and the Arbitrage Pricing Theory (APT)
6. Performance Evaluation
7. Market Efficiency and Return Predictability
8. Options

Course Requirements and Grading

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.

Your course grade will be based on two group projects, a midterm quiz, a paper, and a final exam. The group projects and the midterm quiz are optional, and the final exam and final paper are required. The midterm quiz will be held in class on March 4. The two-hour final exam is scheduled for TBD. You must take the exams at the scheduled times. Topics not covered in class prior to the exams will not be on the exams. **No late assignments will be accepted.**

Your course grade will be determined by the maximum total score obtained by weighting each of the group projects by 10%, the midterm quiz by 25%, the final paper by 10%, with the remainder allocated to the score for the final exam:

	Due Date	Maximum %	Minimum %
Midterm Quiz:	March 4	25%	0%
Project #1:	March 6	10%	0%
Project #2:	April 24	10%	0%
Final Paper:	April 24	10%	10%
Final Exam:	TBD	100%	45%

For example, if your score for the two group projects are 95 and 90, respectively, your score for the midterm is 80, and your score for the final is 75, your total score for the class would be $0.10 \times 95 + 0.10 \times 90 + 0.30 \times 80 + (1 - 0.10 - 0.10 - 0.30) \times 75 = 80$. Thus, if you do well on both of the group projects and 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 class participation and contribution to the classroom atmosphere. Since the midterm exam and projects are optional, the final exam will be comprehensive. This course cannot be taken pass/fail.

Students who are permitted special accommodations should inform me **immediately** by providing an “approved accommodation” letter in the first week of class.

Honor Code

Students are required to adhere to the standards of conduct of the Duke Community Standard. Each student will be required to sign the following pledge on her exam: “I pledge my honor that I have not violated the Duke Community Standard during this examination.”

Teaching Assistants

There are two teaching assistants for the class: Sherry Huang (zijing.huang@duke.edu) and Stephanie Wiehe (stephanie.wiehe@duke.edu). Sherry will be holding weekly office hours on TBD, in Social Sciences TBD. Stephanie will be holding weekly office hours on TBD, in Social Sciences TBD. Sherry and Stephanie are your first points of contact in regards to questions about the lectures, projects, and end-of-chapter problems.

Readings for the Course

Required Texts

- Bodie, Zvi, Alex Kane, and Alan J. Marcus. *Investments*. 11th Edition. McGraw-Hill, 2017.

The Bodie, Kane and Marcus (BKM) book provides a comprehensive treatment of modern investment theory. We will not be able to cover the entire book in a single semester class. The book also comes with several online tools and Excel spreadsheets that will be useful for solving 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 post suggested solutions on Sakai. 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 and the final exam performance.

Recommended Texts

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 do the same.

The recent book:

- Pedersen, Lasse Heje. *Efficiently Inefficient: How Smart Money Invests and Market Prices Are Determined*. Princeton University Press, 2015.

provides an excellent practically oriented discussion of many of the concepts that we will be covering in class, and how they form the basis for the strategies employed by some of the most successful hedge funds.

Class Notes and Handouts

- Lecture notes will be posted on Sakai several days in advance. **You should either take notes on the electronic copy or print them ahead of time to better follow the lecture as we discuss the various topics.** However, much of the material will be presented in discussion format in class.
- I will also be posting some additional readings and background material. Some of these additional readings are fairly technical, and I do not expect you to understand every detail.

Feedback, Questions, and Concerns

- You are welcome to stop by my office to discuss specific questions, any of the course topics, or other interesting areas of finance. In addition, if you have any concerns about the course, please let me know. The best time to catch me is during my office hours. However, if you cannot meet with me then, please call or e-mail me to set up an appointment.

Course Outline

Most 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.

Module 0: Review Material

1. Institutional Background

- BKM, Chapters 1-4.

2. Statistical Review

- BKM, "Quantitative Review," Appendix A.
- Kritzman, Mark, "What Practitioners Need to Know about Uncertainty," *Financial Analysts Journal*, 1991, 47(2), 17-21.
- Kritzman, Mark, "What Practitioners Need to Know about Regressions," *Financial Analysts Journal*, 1991, 47(3), 12-15.

Module 1: Portfolio Theory and Asset Allocation

- BKM, Chapters 5, 6 and 7.

Module 2: Portfolio Theory and Asset Allocation: Some Practical Considerations

- BKM, Chapters 8.

Module 3: Risk and Return in Equilibrium: The Capital Asset Pricing Model (CAPM)

- BKM, Chapter 9 and Section 27.3.

Module 4: CAPM: Empirical Evidence

- BKM, Chapter 13.

Module 5: Multi-Factor Models and the Arbitrage Pricing Theory (APT)

- BKM, Chapter 10.

Module 6: Performance Evaluation

- BKM, Chapter 24.

Module 7: Market Efficiency and Return Predictability

- BKM, Chapters 11 and 12.

Module 8: Options

- BKM, Chapters 20 and 21.