

Economics 328: Investment Finance
Fall 2016
Tuesdays and Thursdays 8:50-10:10am in PAC 107

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Office Hours: Tuesdays, Wednesdays, and Thursdays 2-3:30¹
Teaching Assistant: Tae Kim (tkim04); optional TA sessions to be scheduled for weeks when problem sets are assigned (day/time TBA)

General Course Information

Purpose: This course investigates theoretical and empirical aspects of investment finance. The primary topics covered in the course are the following: portfolio and arbitrage pricing theory, capital asset pricing model (CAPM), term structure of interest rates, bond management, and pricing of derivative securities. Students will explore the potential and limitations of financial theory in dealing with real-world problems.

Assignments and Credit:

Class participation	5%
Problem Sets (5)	10%
Group reports (5)	10%
Group presentation & final report	5%
<i>Literature review</i>	
- topic selection	1%
- final paper	19%
Exam 1	25%
Exam 2	25%

Readings: The required text is Bodie, Kane, and Marcus, *Investments*, 10th Edition, ISBN 978-0-07-786167-1.² Chapters 1-3 and 17 are available through the course moodle. A hard copy of the textbook (9th edition) is available at the reserve desk in Olin. Chapter numbers in the course schedule refer to this text.

I expect you to read the *Wall Street Journal*, *New York Times* or *Financial Times* daily. *Advance notice: exam questions, especially qualitative questions, will be heavily skewed towards current issues, which are often topics covered in the WSJ and explored in group reports.* Additional short items will be handed out in class and/or made available on the course moodle.

Grading Policy: I will use the “Dear Abby” scale for grading: 0, 1, 2 (the “hurdle” level), 3, 4 (minor problems), or 5. To find your letter grade equivalent, divide by the number of questions to get your

¹ Exceptions: no office hours on Wednesday October 12 (Yom Kippur), and Wednesday & Thursday October 19-20 (Financial Management Association conference).

² If students purchase international editions of our textbook, please note that the international editions of finance textbooks often have different examples and different questions (and this is not a problem).

average score on the 0-5 scale. Then convert according to: 4.5=A, 4.0=A-, 3.7=B+, 3.3=B, 3.0=B-, 2.7=C+, 2.3=C, 2.0=C-, 1.7=D+, 1.3=D, 1.0=D-.

Problem sets will receive a check minus, check, or check plus. The 0-5 scale equivalents are: check plus, 4.5, check 3.4, and check minus 2.3. Late problem sets will receive a grade of 1.0 irrespective of the quality of the work shown.

Class Participation: Class attendance is expected. You are expected to complete all assigned readings before class. I will use our class-time to focus on the most important or complex topics.

If you know that you will have to be late and/or leave early, please let me know in advance. Excessive absences, late arrivals or early departures will lead to a lower class participation grade.

Please adhere to the following policies as your participation grade depends also on these:

- Be on time for class.
- Avoid getting up during class sessions unless absolutely necessary. This is not only very disruptive to all people in the classroom but shows a lack of respect for all present.
- No use of computers, tablets, or cell phones during class sessions without instructor consent.
- Please switch your phones to “airplane mode” and turn off the ringer volume.

Students who meet the above expectations will receive a *B* for class participation. To earn a higher grade a student will need to ask insightful questions as well as answer questions posed by me or others. I will give a *C* or lower for class participation to students who never participate in class or who are often not able to answer questions.

Problem Sets: Problem sets are assigned regularly (every other week). They have several purposes: to review and extend concepts from lecture or the textbook; to introduce related topics not covered in lecture; and to provide feedback on your comprehension of the material to date. *Note: problem sets will occasionally cover material before it is covered in class.*

There will be no TA sessions to help with assignments. Your TA is not allowed to answer any questions prior to your submitting problem sets or group reports.

Problem sets will be due at 1:15 pm on Wednesdays, and should be submitted via the Econ 328 slot in the departmental locked box. Late assignments will only get a check-minus irrespective of quality as solutions will be available online as soon as the deadline for submission passes.

Grading will be on a check-plus, check, check-minus scale. Quick guide to problem set grades:

- Check-plus: all questions answered correctly or all questions answered using right strategies (but with possible computational errors).
- Check-minus: some questions skipped or many questions answered incorrectly.
- Check: almost everything in between.

Up to three people may cooperate on each problem set; when students submit joint problem sets all students will get the same grade. Please do *not* list any students' name on the problem sets; instead, please put students' WesIDs. Assignments will be returned in class.

Optional case studies: In the weeks when there is a problem set due on Wednesday, the TA will hold an optional session on Sunday or Monday (day/time TBD) to cover a related case study. To repeat: the TA is not allowed to help you with any aspect of your homework but these case studies greatly complement the assignments even as there is often minimal direct overlap. Case studies will be posted to the moodle ahead of time; skeletal solutions will be posted to moodle after the sessions; full solutions will be available only at the sessions. These case studies are all questions that could constitute problem sets but will not be assigned for credit.

Group portfolio project: Please work in groups of 4-5 people.³ Your team will manage a \$1 million portfolio which can include long and/or short positions on stocks, bonds, and options subject to the following caveats:

- 1) This semester we will all maintain portfolios in investopedia's simulator within the 'game' that is set up for this class. If you don't record a transaction in the portfolio, the transaction does not exist.
- 2) All registered students will be invited to join the game on September 9th. You will have no access to the system before that date.
- 3) Each group will designate an individual to set up a group account on Investopedia using your chosen group name. Either this person will be the sole active trader for your group or he/she should select a shareable password/username combination so that all members of a group can be traders.
- 4) The portfolio must always contain at least five (5) assets.
- 5) Any firm in which you invest must have equity that sells for a minimum of \$10 per share at time of initial purchase.⁴
- 6) All assets must be traded on U.S. exchanges.
- 7) If Investopedia will not allow you to take on a position, then you are not allowed to do so.
- 8) You can consult any resource (loosely defined) to make investment decisions.
- 9) You can trade as often as you wish but trading cannot begin until September 9th, after you have committed to a group identity. In your reports you have to provide concise information only on the most recent composition and value of your portfolio and compare that to your last report (when applicable).

Each team will work together all semester to complete five group reports, a final report and a presentation; all students on a team will receive the same grade. The assets held in your portfolio, and the allocation of funds to each asset, may change at any time in the semester. However, whatever you do must be consistent with the identity you have chosen for your group although your understanding of your group's identity may change over the time. You should expect that your investments may not always perform in a manner that is fully consistent with the theories we study; this real-world deviation is important and non-trivial.

All assignments must be submitted to the appropriate folder in the course moodle in doc or docx format so that they can be edited in tracking mode. [Google docs and pdfs will not be acceptable.] All

³ While I prefer that you self-select into teams, I will assist individuals if necessary.

⁴ Thus, if you invest in ABC Inc. and their price dips to below \$10, you can invest more in it. However, if DEF Inc. is already selling for less than \$10, then that stock is off limits unless the price rises to \$10.01 or higher. More generally: all portfolio characteristics are as defined in the Investopedia 'game'. Most rules reflect investopedia's standard default settings. I've made two changes: minimum asset price is \$10 (vs. \$1) to avoid thinly traded assets, and I slashed their fees to be consistent with etrade.

assignments should be titled using this convention “Group Name Assignment” (e.g., “Hornstein 1” for the Hornstein group’s first report). The documents will be edited and graded and then returned via email with “AH” added to the title.

The group presentations are scheduled for the registrar-assigned final exam slot for our course, Saturday, December 17th, 9am-12pm. The final group report will be collected at this time. More information on this assignment will be available towards the end of the semester.

Computer work: The group project will involve extensive use of Research Insight, through which you can retrieve Compustat data (i.e., annual accounting level data for publicly listed U.S. firms), and ValueLine which aggregates some of the same information. You can use alternative data-sources for your work so long as you do not need formal technical support.

Manolis Kaparakis, head of the QAC, will hold two sessions on Wednesday, September 14, and Thursday, September 15, both in Albritton 204 from 3-4:30pm. A google docs sign-up sheet will be circulated ahead of time. Please do not consider this session to be optional. You will need these skills for the semester-long group project, and it will be difficult for you to master the material without these skills. If you cannot attend either session, you will have to ask classmates and/or QAC tutors for help.

Research Paper: Your paper will be an in-depth exploration of any topic in investment finance. The project will have two components: a brief proposal, and a literature review. The literature review should be about 10 pages long (not including references, appendices or exhibits), double-spaced, 12 point font, with one-inch margins. Excessive length is generally detrimental to the quality of your work. Papers cannot be longer than 13 pages; at the low end: 8 pages is probably the minimum.

Proposal: A 1-2 paragraph email should be sent to me no later than 1pm on Fri., October 28th. Do not attach it in a document; it must be in the body of your email. The proposal should describe the topic of your paper, and can also include a tentative bibliography of works that you have already consulted or plan to consult in the course of your research. (Note: bibliographic references are not expected at this rather early date but may be useful for getting more substantive feedback and guidance.) In the event that multiple students propose similar topics, I’ll help them find ways to differentiate their topics.

Literature review: The paper is due no later than 1:15pm on Wednesday, November 16th. This review of the academic literature will provide a meta-analysis of academic research on your chosen topic.

Evaluation: Grading is based primarily on the quality of your analysis. However, I expect your papers to be well-written and free of any grammatical, logical, or spelling errors. You are encouraged to take advantage of the writing workshop on campus.

Late submissions: Late submissions are penalized at the rate of one letter grade per day late.

Turnitin: In addition to submitting your papers directly to me, the final paper must also be submitted by you to the class folder on turnitin.com by midnight on the appropriate due date. I have already set up a folder for these papers. (Obviously, if you have non-computer-readable attachments, you will not need to upload those into the system.)

Directions on how to use turnitin can be found on www.turnitin.com. Once you have set up your account, “enroll” in this course – the class ID number is 13340293 and the password is “econ328”.

Exams: I have posted to the course moodle the exams from the last offering of this course. Please note that these should be viewed as guides to the types and quantities of questions I might consider fair to ask on exams. However, please note that I do not feel any obligation to structure exams similarly year after year as course time is allocated slightly differently in each offering of a course. While you can use either a calculator or Excel to complete the problem sets, you will need a calculator for the exams.⁵

Exams will be given at the scheduled times only. Please do not enroll for this course if you cannot attend the scheduled exams. Optional review sessions will be held prior to exams.

Honor Code: In accordance with the Honor Code, submitting another person's work as your own constitutes plagiarism and will not be tolerated. *To put this in colloquial terms, unless you personally came up with the solutions and words that you are attaching your name to, it is not your work.* If you have any questions about the application of the honor code, please contact me.

Students with Disabilities: Wesleyan University is committed to ensuring that all qualified students with disabilities are afforded an equal opportunity to participate in and benefit from its programs and services. To receive accommodations, a student must have a documented disability as defined by Section 504 of the Rehabilitation Act of 1973 and the ADA Amendments Act of 2008, and provide documentation of the disability. Since accommodations may require early planning and generally are not provided retroactively, please contact Disability Resources as soon as possible. If you believe that you need accommodations for a disability, please contact Dean Patey in Disability Resources, located in North College, Room 021, or call 860-685-5581 for an appointment to discuss your needs and the process for requesting accommodations. Information can be found at <http://www.wesleyan.edu/studentaffairs/disabilities/>.

Approximate Course Schedule

In the readings column: numbers with no letters mean chapters in our textbook; all other readings are available on moodle. The midterm exams will be given during class; assignments will be posted to moodle. All deliverables are due by 1:15 pm on the date indicated.

L#	Date	Topic	Readings	Deliverable
1	Tues. Sep. 6	Investment environment	1	
2	Thurs. Sep. 8	Financial instruments; Securities trading	2, 3.1-3.4	List of group members (email, 9/9)
3	Tues. Sep. 13	Securities trading; Market microstructure	3, O'Hara	Group 1 (9/14)
4	Wed. Sep. 14 or Thurs. Sep. 15, 3-4:30pm Thurs. Sep. 15	Intro to ValueLine and Research Insight; Albritton 204 Market microstructure; Macroeconomy and industry	O'Hara, 17	
5	Tues. Sep. 20	<i>Optional case study with TA</i> Macroeconomy and industry	17	PS 1 (9/21)
6	Thurs. Sep. 22	Interest rates and risk premiums	5	

⁵ If you do not already have a calculator, it is not necessary for you to buy a financial calculator.

7	Tues. Sep. 27	Interest rates and risk premiums; Risk and risk aversion	5, 6	Group 2 (9/28)
8	Thurs. Sep. 29	Risk and risk aversion	6	
		<i>Optional case study with TA</i>		
9	Tues. Oct. 4	Risk and risk aversion; Optimal risky portfolios	6, 7	PS 2 (10/5)
10	Thurs. Oct. 6	Optimal risky portfolios	7*, Jaconetti et al.	
11	Tues. Oct. 11	Index models	8	Group 3 (10/12)
12	Thurs. Oct. 13	Index models; Capital asset pricing model (CAPM)	8, 9	
13	Tues. Oct. 18	Capital asset pricing model	9	
		<i>Tues. Oct. 18, 12-1pm: Drop-in review session with professor in PAC 107</i>		
	Thurs. Oct. 20	Exam 1 (through L13)		
14	Thurs. Oct. 27	Arbitrage pricing theory and multifactor models	10	Lit review topic email (10/28)
		<i>Optional case study with TA</i>		
15	Tues. Nov. 1	APT; Efficient market hypothesis	10, 11**	PS 3 (11/2)
16	Thurs. Nov. 3	EMH; Behavioral finance	11, 12	
17	Tues. Nov. 8	Empirical evidence; Bond pricing	13, 14	Group 4 (11/9)
18	Thurs. Nov. 10	Bond pricing	14	
19	Tues. Nov. 15	Interest rates; Bond portfolios	15, 16.1-16.2	Lit review (11/16)
20	Thurs. Nov. 17	Equity valuation models	18***	
		<i>Optional case study with TA</i>		
21	Tues. Nov. 22	Financial statement analysis	19	PS 4 (11/23)
22	Tues. Nov. 29	Options	20****, Paulos	Group 5 (11/30)
23	Thurs. Dec. 1	Options	21	
		<i>Optional case study with TA</i>		
24	Tues. Dec. 6	Options; wrap-up	21, Most, Markowitz	PS 5 (12/6)
		<i>Drop-in review session to be scheduled for Tues or Wed. (TBD)</i>		
	Thurs. Dec. 8	Exam 2 (all material since first exam)		
	Sat. Dec. 17	Group presentations during registrar-assigned exam slot (9am-12pm)		

* Please carefully review App. B to make sure your mathematical toolkit is up-to-date

** Skim section 11.5.

*** Skip section 18.3.

**** Skim section 20.6 and skip section 20.7.