

FIN 5557 Derivative Securities

MW 5:30–6:45PM

Room 3 LAW

Winter 2009

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Description

FIN 5557 is an introduction to the valuation and usage of derivative securities (futures, forwards and options). Prerequisites are graduate standing, along with FIN 5501, FIN 5532, DSOM 5508, and ACTG 5517 or their equivalents. During the semester, we will discuss the valuation, market structure, trading strategies, and risk-hedging characteristics of derivative instruments, focused primarily on examples derived from financial securities such as bonds, equities, market indices, and foreign currencies. This course is designed to be somewhat quantitative in nature; however, a student comfortable with basic algebra, beginning business statistics, and the arithmetic of discounted cash flow analysis should be suitably prepared for the course content.

Materials

The required text for this course is *An Introduction to Derivatives & Risk Management*, 7TH ed., by Robert Brooks and Don Chance (Thomson/South-Western Publishing). A financial calculator is also required; the Hewlett-Packard model HP-10B or Texas Instruments BA-II PLUS are recommended choices. If you buy a used calculator or borrow a friend's, make sure to get a manual and a new battery.

Assistance

The preferred means for quickly contacting me is via email; I usually respond to emails within 24 hours, at most. My official office hours are by appointment only; however, I am always available to set up an appointment to meet with you at a mutually convenient time, if necessary. I also encourage you to collaborate with your classmates via informal study groups; you can help each other work through the rough spots when you encounter them. I have found through the years that if you can successfully explain something to another person, the ability to do so cements and improves your own knowledge and comfort level with the material.

Grading

There will be three non-comprehensive midterm exams of approximately 25 questions per test, each equally-weighted as 35 points towards your total course grade. The exams will have a true-false, multiple-choice, and short-answer section, and each of the exams will be given in LAW 3 during the normal class time. The exam dates will each be on a Wednesday: February 18TH, March 18TH, and April 29TH. For each of the exams, you may bring with you **one** 8.5 by 11 inch "crib sheet," you are free to write anything you choose on the crib sheet for your benefit, both sides of the paper.

There will also be three takehome assignments distributed prior to each of the three exams. While I have graded these assignments in the past, this term I have decided not to do so. Nonetheless, I am confident you will find that the takehomes—which are of my own design—prove to be an excellent study aid for the exams; I will provide detailed solutions for you prior to each test. You are strongly encouraged to take these assignments seriously and treat them as if they were an integral part of your course grade. Indirectly, they are: If you cannot make any traction with the takehomes, you will not do well on the tests.

Your overall course grade will be determined at the end of the semester on the 90/80/70/60 point scale, based on 100 total points; plus/minus grading is used. A curve of my choosing will be determined at the end of the semester, if necessary, so that the overall class average is at least an 85%. There is no extra-credit, and no surprise quizzes or unannounced homework will be given. Note that the exams cumulate to a total point score of 105 points possible, so there is a built-in 5 point curve before the class even gets started!

Attendance

Attendance is not mandatory but is strongly encouraged. I put a great deal of effort into organizing useful and informative lectures, it is a safe bet on your part that the exam questions will be taken largely from material I have covered in class. My recommended strategy to you for success is to attend the lectures, then read the corresponding material in the text, and then do the practice sets and homework problems that I ask of you. If you reach a comfort level at that stage of the process, then I can assure you that you will be comfortable with the exam material. I do not like to “surprise” students on exams, and I do not use “gotcha”-type exam questions.

Administrative Matters

If you have any special needs as addressed by the *Americans with Disabilities Act*, please notify me as soon as possible. There will be no make-ups for missed exams except under the most unusual of circumstances; written permission will be required in such cases, as will advance notification of your absence. Please note the college’s policy regarding course withdrawals, should you choose that avenue at some point. The last day to drop the course this term is May 1st. Our last day of class—and your last test—is on April 29TH. Thus, my policy regarding drops is as follows: Any student that does **not** formally withdraw from the class, dated by April 28TH at the latest, **will** receive a grade in the course based on your performance, without exceptions. For any student that **does** withdraw from the course on or before April 28TH, it is my policy to give a “withdraw-pass” regardless of your actual grade in the class at that time, even if you are failing.

Tentative Lecture Schedule

The specific lecture content is subject to change as the semester progresses, but the schedule below should be fairly accurate. Time-permitting, we may briefly cover an introduction to swaps instruments at the end of the semester, as noted with an asterisk below.

WEEK ONE:	Course introduction; Overview of derivative markets
WEEK TWO:	Call and put options: Vocabulary (No class on Jan 19, University holiday)
WEEK THREE:	Call and put options: Pricing bounds and comparative statics
WEEK FOUR:	Call and put options: Arbitrage and basic trading strategies
WEEK FIVE:	Option Trading Strategies
WEEK SIX:	Regulation and structure of options markets (No lecture Feb 18, scheduled exam) <i>Chance textbook readings for Weeks 1–6: Chapters 1–3, 6–7</i> Midterm Exam #1 (Feb 18)
WEEK SEVEN:	Binomial option pricing model (BOPM)
WEEK EIGHT:	BOPM: Extensions and special cases; Introduction to the Black-Scholes model
WEEK NINE:	Black-Scholes-Merton option pricing model; Option greeks
WEEK TEN:	Option hedging strategies (No lecture Mar 18, scheduled exam) <i>Chance textbook readings for Weeks 7–10: Chapters 4–5</i> Midterm Exam #2 (Mar 18)
WEEK ELEVEN:	Spring Break (Mar 23 and Mar 25)
WEEK TWELVE:	Forward and futures contracts: Vocabulary and the Hedging Principle
WEEK THIRTEEN:	Perfect hedges; Cost-of-carry arbitrage
WEEK FOURTEEN:	Quality options; Optimal hedge ratios
WEEK FIFTEEN:	Regulation and structure of futures markets; Introduction to swaps*
WEEK SIXTEEN:	Plain vanilla swap strategies* (No lecture Apr 29, scheduled exam) <i>Chance textbook readings for Weeks 11–16: Chapters 8–11, 12*</i> Midterm Exam #3 (Apr 29)