UNIVERSITY OF TEXAS AT AUSTIN
McCombs School of Business
Department of Finance

Finance 397, Topic 4, Unique #03715 — Dr. Ehud I. Ronn
Foundations of Energy Finance
Financial Risk Management — Fall 2012

Class Hours: MW, 9:30 – 11 a.m., UTC 1.132

Contact Info: CBA 6.270, `eronn@mail.utexas.edu`, 471-5853

Office Hours:

1. MW, 5 – 6 p.m. I hold office hours as an open meeting for all interested to pose questions regarding the presented materials, and past and concurrent problem sets.
2. When there are several students wishing to pose questions — such as prior to submission deadlines for problem sets, Midterm or Final Exams — we will revert to the more spacious Finance Dept. Conference Room.
3. This session will not take place on those Weds. when I have out-of-town commitments.
4. For personal issues, including post-MBA employment opportunities, please e-mail for an appointment.

Teaching Assistants: Bomi Lee,
`Bomi.Lee@phd.mccombs.utexas.edu`
CBA 5.334G, MW 3:30 – 4:30 p.m. and by appointment

Zack Liu,
`Zack.Liu@phd.mccombs.utexas.edu`
GSB 5.324D, Tue. 3 – 5 p.m. and by appointment

The TAs' roles include:

1. Response to students' clarifying questions regarding problem sets
2. Updating students who have missed classes

Course Prerequisites: BA 385T, FIN 394.1, FIN 397.1

In this regard, for those students lacking prerequisites:

1. I am not a stickler for prerequisites.
2. Conversely, if the student has not completed the prerequisite courses and consequently has questions regarding prerequisite material, they should expect answers to come exclusively from the class TA.
3. Students lacking prerequisites will be given no special treatment relative to students who have satisfied the prerequisites for my course.

Newspapers: Student rates available for *Wall Street Journal.* Rates also available to *Barron's, Business Week, Financial Times* and *The Economist* upon request.

Textbook: **Derivative Markets,** Robert L. McDonald, Addison-Wesley, 2003.

The textbook serves as supplementary material; the course does not "follow" the book. Rather, the predominant material in this course is presented in the Lecture Packet.

Grading: The Final Grade in the course will be determined by the relation:

$$\begin{matrix}\text{Final}\\ \text{Grade}\end{matrix} = 0.5 \times \begin{matrix}\text{Final}\\ \text{Exam}\end{matrix} + 0.3 \times \begin{matrix}\text{Midterm}\\ \text{Exam}\end{matrix} + 0.2 \times \begin{matrix}\text{Problem}\\ \text{Sets}\end{matrix}$$

Class participation, especially helpful at the margins, will also be taken into consideration in the determination of the final grade:

1. Students' display of their name cards throughout the semester is requested.
2. When posing questions in class, students assist not only their own comprehension, but perform a social role of assisting those of their peers who may have hesitated in posing these questions.

3. Consequently, class participation will be recognized, and can only *increase* (and never reduce) students' grades.

4. Student tardiness in arriving to class will offset the beneficial impact of class participation.

Based on past pattern, the distribution of grades will likely be 40% "A / A−", 50% "B+ / B", 10% "B−, C+, C".

<u>Problem Sets:</u>

1. Approximately 15 problem sets will be disseminated and assigned throughout the semester.

2. These questions are designed to:

   (a) Provide students with problem-solving experience

   (b) Constitute mini-case studies

   (c) Enhance understanding of markets, financial instruments, and financial risk management

3. As befits a professional school, students' responses to these problem sets should be neatly typed, clear and complete. Handwritten solutions will not be evaluated.

4. Students may submit the responses to problem sets in groups of up to four students.

5. Problem sets will be graded and returned to the students. If a graded problem set is not retrieved by the student (or on his/her behalf) when returned, the student may retrieve the problem set from the Teaching Assistant during the latter's office hours.

6. Problem set grades will be confidentially reported in Blackboard (`courses.utexas.edu)`. This will permit students to confirm they have received credit for submitted problem sets.

7. Solutions to problem sets will be disseminated to the students as well as reviewed in class.

Case Studies:

FIN 397.4 is designed to provide students with a fundamental understanding of energy financial markets, in particular, futures and options contracts. As such, the scope for case studies is limited to the following case studies:

1. MW Petroleum Case (risk sharing; valuation of average-style options)
2. Hedging the Price Exposure of an International Air Carrier

Copies of Handouts:

1. Most classes will begin with a handout covering administrative issues, occasional issues of topical interest, and problem set questions and solutions to previous problem sets.
2. Subsequent to each class session, handouts will be uploaded on Blackboard (`courses.utexas.edu,` "Course Documents") for student retrieval.
3. I request these documents not be shared, electronically or in paper form, with anyone outside the class.

Lecture Packet:

1. The Finance 397, Topic 4 Lecture Packet, constitutes a set of notes which includes the totality of material to be covered in the course, and students are encouraged to purchase the packet.
2. The FIN 397.4 Lecture Packet is not designed to be a *book,* but rather a detailed set of lecture notes requiring in-class attendance and active participation to be fully useful.
3. With a cover in *solar yellow,* the Packet will be available at University Duplicating Service, GSB 3.136.

Midterm Exam:

1. The Midterm Exam will be held in class on Sep. 26th or Oct. 4th.

2. The questions for the Midterm will be patterned after the questions contained in the problem sets (those requiring no more than a reasonable amount of data manipulation). Thus, students will be able to familiarize themselves with the format and types of questions to be encountered in the Midterm.

3. Prior to the Midterm, a list of review topics, containing concepts introduction in the first half of the semester will be disseminated in the class.

4. Material presented by in-class visitors from industry and/or academia may be included in the Midterm.

5. A copy of the 2009 Midterm Exam and its Solution may be found towards the end of this class' Lecture Packet.

Midterm Teaching Evaluation:

Subsequent to the Midterm, I will conduct an anonymous midterm teaching evaluation.

Final Exam:

1. The Final Exam will be held in accordance with the Final Exam Schedule. The Fall 2012 Course Schedule appears to indicate the official Final Exam date is Sat. Dec. 15, 9:00 – 12 noon.

2. Students wishing to leave Austin early will have the option of taking the Exam on the early alternate date, Fri. Dec. 7th, 1:30 – 4:30 p.m.

3. A list of review topics and sample questions will be distributed prior to the end of the semester. The review topics will briefly summarize the concepts introduced throughout the course.

4. As was the case for the Midterm Exam, the questions on the Final Exam will resemble those of the Problem Sets, and will include material on visitors' in-class presentations.

5. A copy of the 2009 Final Exam and its Solution key may be found towards the end of this class' Lecture Packet.

EDS Financial Technology and Trading Center (FTTC):

1. I have reserved the EDS FTTC facility for twelve sessions — Sep. 5, 12, 19, 26, Oct. 3, 10, 17, 24, 31, Nov. 7, 14, 28.
2. The FTTC will be used to demonstrate the use of the Bloomberg machinefor practical data acquisition and analysis.
3. The Bloomberg system is important in terms of grounding to real-world data. In the relevant problem sets where Bloomberg is called upon, I will provide the requisite key strokes required to perform the analysis. In those problem sets, students will be asked to develop some proficiency in Bloomberg usage.
4. Prior to our use of the facility on each of the reserved dates, I will re-confirm our use of the FTTC in the preceding class meeting.
5. The FTTC has an occupancy limit of 50.

Class Presentations:

Here is the current lineup for Industry/External Academic Presentations:

Company/University	Visitor(s)	Date
Chevron	J. Brent Faulk and Sean P. Coerver	10/8
BP	Dominic Sung	10/29
Bank of America Merrill Lynch	Rob Jones	TBA
Rice University	Vince Kaminski	TBA

Eighth Annual National Energy Finance Challenge, Oct. 4 – 5, 2012:

1. The student association supporting CEFER's activities is the *Energy Finance Group.*
2. MBA students from the nation's top business schools will compete in Austin in McCombs eighth annual National Energy Finance Challenge Fri. Oct. 5, 2012.

Class Auditors:

Per the Registrar Office's `http://www.utexas.edu/student/registrar/catalogs/gi01-02/ch3/ch3a.html`,

> "A University student who wishes to audit a course should obtain a Class Auditor Permit from the Office of the Registrar and secure the consent of the course instructor and his or her dean. A nonstudent must obtain the Class Auditor Permit and the consent of the instructor. An audit fee of $20 a course is assessed nonstudents under the age of sixty-five."

Class Protocols:

1. Class begins promptly at 9:30 a.m., and tardiness is not tolerated
2. Display of name cards is appreciated
3. Laptop use for class purposes is permissible, but other use will be curtailed
4. A conduct of professionalism is expected:
   (a) Disable phones and wireless devices. Please advise me of any critical need to communicate or anticipated early departure
   (b) Uphold University Honor Code: Work on Midterm and Final Exams is *individual;* problem-set work may be communicated within the group but not outside the group
5. In order to assist qualified students, students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, (512) 471-6259, `http://www.utexas.edu/diversity/ddce/ssd/`.

Course Outline:

The objectives of this course are to introduce students to the manner by which energy corporations manage their business risk exposures, and the derivative securities which can be utilized for this purpose:

1. Overview of energy markets
2. Principles of risk management: Objectives and tools
3. Measurement of corporate risk, including Value-at-Risk
4. Proper role of derivatives in firms' risk management
5. Understanding the valuation and role of futures contracts and swap agreements
6. Understanding the principles of option and derivative-claim valuation, hedging and uses
7. Understanding the numerical procedures involved in derivative valuation
8. Understanding the structuring, reverse engineering and valuation of OTC derivatives
9. Understanding the uniqueness of commodity derivatives (relative to financials)

<u>Summary:</u>

1. The predominant material in this course is presented in the Lecture Packet.
2. Problem sets, some of significant scope, will be disseminated and assigned throughout the semester.
3. While math is used primarily to bolster intuition, students should be cognizant this Finance course is, in parts, highly quantitative. In particular, I will review those statistics concepts I deem necessary for proper class coverage.