## DEPARTMENT OF FINANCE MCCOMBS SCHOOL OF BUSINESS UNIVERSITY OF TEXAS AT AUSTIN

#### Finance 397.1 - Investment Theory and Practice

#### Spring 2011

Tuesday & Thursday 3:30 - 4:45, UTC 1.132, unique #03260

Professor: Shimon Kogan GSB 5.159, <u>Shimon.Kogan@austin.utexas.edu</u> Class website: Blackboard Office Hours: Tuesday, 5:00 – 6:00

TA: Tracy Thigpen TA office hours and location: posted on BlackBoard

#### Course Description

Finance 397.1 is an introductory survey investments course. The course covers the primary financial securities - stocks (equity), bonds (fixed income and/or debt), and options (derivatives) – and methods for combining these underlying assets into a portfolio (portfolio theory). Throughout the course, a great deal of emphasize is put on the use of data to both understand patterns of returns and to apply the tools we discuss. The first half of the course covers general overview material, portfolio theory, market efficiency, and return predictability. The second half of the course starts with a discussion of the money management industry and performance evaluation and continues with fixed income analysis and derivatives (futures and options). Students will get an opportunity to apply the concepts learned in class through an ongoing group portfolio project.

We will first cover the overall layout of the U.S. financial markets and the financial instruments available in the markets and their past performance. After this overview we will go directly into the study of portfolio theory, asset allocation, and risk in capital markets. After discussing portfolio construction, we will look at market efficiency, behavioral finance, and return predictability.

Following global trip week and spring break, we will take up the study of the money management industry -- mutual funds, exchange traded funds, and hedge funds -- structure and performance. Following that, we will cover topics in fixed income, including the linkage between bond prices and the term structure and bond portfolio risk analysis.

After the fixed income section of the course we take up derivative securities (options, futures, and swaps). The options material will include an analysis of the uses of options to construct various payoff schemes generally unavailable with stocks and bonds, and will cover the construction and use of option pricing models such as the Black-Merton-Scholes Option Pricing Model and the Binomial Option Pricing Model. Following our study of options we will cover futures contracts, and look at the use of derivative instruments in hedging risk.

## Course Requirements and Grading

Grades will be based on the student's performance on the two problem sets, the ongoing portfolio project, the two non-cumulative exams, and class participation. The weights on each component of the overall course grade are as follows:

Portfolio Theory Problem Set	Tuesday, Feb 24	10%		
Fixed Income/Derivatives Problem S	ixed Income/Derivatives Problem Set			
	Tuesday, May 3	10%		
Portfolio Project	ongoing	20%		
Exam I	Thursday, March 3	25%		
Exam II	Thursday, May 5	25%		
Class Participation	ongoing	10%		

Make-up and extra-credit assignments are generally not possible. Your grade will be determined solely by the components listed above. If you fail to turn in the assignments or problem sets when they are due you will not be able to make up the assignment or the points.

Problems from the text will be assigned and occasionally discussed in class, but will not be graded. The problems assigned will be useful as study guides for the exam. I will post solutions to the end-of-chapter problems on the blackboard site.

#### Class Attendance, Participation, and the use of laptop computers in class

I expect you to come to class having read the chapter and readings for the day. If you miss more than four classes without some form of prior approval from me, I reserve the right to drop your grade by one letter grade (e.g., an A drops to a B, an A- to a B-, etc.). If you miss more than six classes, I reserve the right to fail you so that you may take the class again when it is more convenient for you.

You cannot use your laptops in class; it just doesn't seem to work.

#### **Course Materials**

The recommended text for the course, available at the Co-op, is:

Investments, Bodie, Kane, and Marcus, Ninth Edition, © 2010, McGraw-Hill.

## **Guest Speakers**

Jan Schneider and I have arranged for three guest speakers to come and provide their perspective as leading practitioners on various investment related topics. Due to the logistics

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involved in arranging these talks, we will combine sections on the days scheduled for the talks. To minimize conflict with other classes, these talks are scheduled for the late afternoon. Please take a note of these dates to ensure your attendance. We will have question(s) on the final exam related to materials that will be covered exclusively in these talks.

## Portfolio Project

In the portfolio project, you and your team will act both as fund managers and as investors. As fund managers, your goal is to maximize payoffs by maximizing the money under management. As investors, your goal is to generate the highest returns by deciding on the fund(s) you invest in.

## <u>Set-up</u>

Student teams of 3-5 members. As fund managers, you will invest the money received from other teams in stocks and bonds. Portfolio teams are encouraged to trade the portfolio over the course of the semester as economic and firm-specific factors change. You are also encouraged to form a strategy that guides to investment process. As investors, you start out with \$1,000,000 of factitious money that you need to allocate across funds managed by <u>other</u> teams.

## Deliverables for the Portfolio Project

- <u>Thursday, February 17</u> submit a report that serves as a short fund prospectus. In the report, you should provide information that potential investors in the fund would find useful. For example, you should discuss the proposed investment strategy, risk characteristics, qualifications of the fund managers, etc. The report should be no longer than five pages. In addition, you will receive in-class "air-time" to promote your fund in front of your class mates.
- 2) <u>Tuesday, February 22</u> submit your allocation decision across the funds offered by your classmates. This allocation will remain constant until April 7. Details on how to submit the allocation will be provided.
- 3) <u>Tuesday, April 5</u> submit a three to five page memo (five pages max) containing, but not necessarily limited to, the following items:
  - A table summarizing portfolio performance for the period since inception;
  - Evaluation of last period's performance in light of the fund's strategy;
  - Discussion of the fund's strategy going forward.
- 4) <u>Thursday, April 7</u> submit your allocation decision across the funds offered by your classmates. This allocation will remain constant until the end of the course. Details on how to submit the allocation will be provided.

Total points (20) earned on the portfolio project will be assigned as follows:

• 15 points: your performance as fund managers, measured by the average money the fund attracted over the semester.

• 5 points: your performance as fund investors, measured by the ratio between your average daily returns and your daily return standard deviation; your objective is to maximize this ratio.

Individual grades will be allocated in accordance to the average of team member grades.

## General and Miscellaneous Policies

- Professor Jan Schneider (teaching the other sections of the course) and I will coordinate very closely in terms of material covered, load, and grading policy. We further plan on cross-teaching some of the subject matters based on our research.
- Though attendance will not be taken, you are responsible for everything covered or assigned in class. The lectures may depart from the material assigned and it is important that you review the assigned readings prior to the class session.
- Academic dishonesty will not be tolerated. Your responsibilities with regard to scholastic dishonesty are described in detail in the Policy Statement on Scholastic Dishonesty for the McCombs School of Business. In particular, it is expected that the work on your examinations will be entirely your own and that you will provide a level and quality of work on your group projects commensurate with your colleagues. Failure in these regards may result in failure on the examination, projects, or course.
- The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259.

meeting	DAY	DATE	ТОРІС	CHAPTER
			FIRST HALF	
			THE CORE INVESTMENT PROCESS	
1	Thu	Jan-20	Class introduction; Calculating returns	-
2	Tue	Jan-25	Equity Premium	5.4, 5.5
3	Thu	Jan-27	Asset Allocation and Portfolio Optimization	27
4	Tue	Feb-1	Understanding the Sources of Risk	9
			ADDING VALUE SEPARATING ALPHA FROM BETA	
5	Thu	Feb-3	Market Efficiency	12.1

			5	12.1
6	Tue	Feb-8	The Fama-French Factors	13.1-13.3
7	Thu	Feb-10	Explaining Returns on the Fama-French Factors	13.1-13.3
8	Tue	Feb-15	Cross-Sectional Predictability	-
9	Thu	Feb-17	Portfolio Presentations (I)	
10	Tue	Feb-22	Time Series Predictability	-
11	Thu	Feb-24	Guest Speaker Talk	
12	Tue	Mar-1	Implementing Trading Strategies	27
13	Thu	Mar-3	Exam I	

## GLOBAL TRIP WEEK AND SPRING BREAK

# SECOND HALF

## THE MONEY MANAGEMENT INDUSTRY

14 Tue Mar-22 The Money Management Industry

15	Thu	Mar-24	Performance Evaluation of Mutual Funds	24
16	Tue	Mar-29	Hedge Funds	26
17	Thu	Mar-31	Guest Speaker Talk	
18	Tue	Apr-5	Portfolio Presentations (II)	
			FIXED INCOME	
19	Thu	Apr-7	Fixed Income (I)	14, 15
20	Tue	Apr-12	Fixed Income (II)	14, 15
			<b>DERIVATIVES</b>	
21	Thu	Apr-14	Futures and Forwards	22, 23
22	Tue	Apr-19	Commodity Returns	22, 23
23	Thu	Apr-21	Guest Speaker Talk	
24	Tue	Apr-26	Options (I)	20, 21
25	Thu	Apr-28	Options (II)	20, 21

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## WRAP-UP

26	Tue	May-3	Review
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27 Thu May-5 Exam II