FIN 286 - VALUATION

SPRING 2012

M/W 08:00AM – 10:00AM, GSB 3.130 (SECTION 03250)
M/W 10:00AM – 12:00PM, GSB 3.130 (SECTION 03255)
M/W 02:00PM – 04:00PM, GSB 3.130 (SECTION 03260)
M/W 04:00PM – 06:00PM, GSB 3.130 (SECTION 03245)

Professor	Cesare Fracassi
Office	GSB 5.165
Professor Office Hours	Tuesday and Thursday, 4:00-5:30
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Course Web Page	via Blackboard
Teaching Assistant (TA Sessions)	Haiwei (Harvey) Jing
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Review Sessions	F 2:00PM-3:30PM GSB 5.153
TA Office Hours	Available upon request.
Teaching Assistant (Grading)	Zesong (Zack) Liu
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Course Objectives

This course covers business valuation, equity valuation, fixed income valuation, and option valuation. The goal of the course is to provide students with practical tools and methods to value a broad range of assets. While the course is designed first and foremost to be very practical, the tools and methods covered in this course are presented in the framework of generally accepted financial theory.

The course starts with a broad overview and discussion of valuation techniques. There are a number of different ways to try and determine the value of an asset, and it is almost always good practice to use more than one valuation method. Following the overview of valuation techniques, we start with methods for calculating the discount rate used in cash flow valuation methods. Our discount rate discussion involves determining the firm's cost of capital – both debt and equity capital – and the effect of leverage (debt) on the firm's cost of equity and the firm's overall cost of capital. Following our discount rate discussion we cover valuation effects of a firm's capital structure.

After our discount rate and capital structure classes we start coverage of cash flow valuation techniques used to value businesses and equity. We start with the discounted cash flow method (DCF), which is the most widely used cash flow valuation method. DCF valuation models are well-suited for sensitivity analysis, and we will cover methods for modeling the effects of varying material inputs of the DCF model. Cash flow valuation methods include many uncertain inputs, and sensitivity analysis help reveal the effects of varying the major inputs of the valuation. I will go through a detailed DCF example in class, and students will perform a valuation and sensitivity analysis on a company of their choosing as one of the major assignments of the course. Following the DCF work we will cover two additional cash flow valuation methods, the Adjusted Present Value method (APV) and the Capital

Cash Flow method (CCF), and work a Harvard Business School (HBS) case covering the DCF, APV, and CCF methods. After our coverage of cash flow valuation methods, we will cover the use of relative valuation multiples (e.g., EV/EBITDA, P/E) and work through an HBS case on the use of valuation multiples in determining firm and equity value. We conclude the section on business and equity valuation with a discussion of control premiums and liquidity discounts, and a look at valuation in both LBO and M&A contexts.

We next cover the valuation of fixed income instruments (bonds). Fixed income instruments are valued using a method generally known as "pricing with the curve", which involves using the information in the current Treasury yield curve to price riskless and risky debt. Specifically, we will bootstrap a yield curve with current Treasury prices and use our bootstrapped curve to price riskless debt. We will use the bootstrapped riskless curve and a risk spread over the curve to price risky debt. Pricing with the curve is a nice illustration of both cash flow valuation and relative valuation.

The course concludes with the valuation of options. Option valuation tools are some of the most powerful valuation tools developed in financial economics. We will cover the valuation of financial options with both the binomial option pricing model and the Black-Scholes option pricing model. We follow our discussion of financial option valuation techniques with a brief introduction to the notion of real options, which enriches and expands the traditional valuation techniques previously covered in the course.

Prerequisites: Graduate standing and Business Administration 285T or 385T

Materials

Required HBS Case material (available online)

- AirThread Connections. – HBS Case # 4263
- The Boston Beer Company, Inc. – HBS Case #196138

In order to purchase the cases, the students need to access the Harvard Business Publishing website at http://cb.hbsp.harvard.edu/cb/access/11634985 and click the Purchase Course button. Purchasing the 2-case course-pack gives you a 50% discount relative to buying the cases individually. Since these are group assignments, you can buy one case per group

Optional Textbooks

- Valuation: The Art & Science of Corporate Investment Decisions, by Sheridan Titman and John Martin, Addison-Wesley, 2008 2nd Edition, ISBN 0136117015.
- Fixed Income Securities, Bruce Tuckman, 2nd Edition, 2002, John Wiley & Sons.
- Corporate Finance, Jonathan Berk and Peter DeMarzo, 1st Edition, 2006, Addison Wesley

You can also purchase the four Tuckman chapters we will cover in this class on a per-chapter basis for $4.50/chapter at the following website: http://www.garpdigitallibrary.org/display/author.asp?aid=75 (This is the website for the GARP Digital Library, in the event this particular link does not work.)

The *Wall Street Journal*, *Financial Times*, the *New York Times* business section, the *Economist*, *or Business Week* are all recommended. We will cover the conceptual material to help you think through financial decisions. However, details of a particular issue a recruiter might ask your thoughts on may come from the press.

Course Requirements and Grading

Your grade in the course will be determined as follows:

	Assignment	Points
In-Class Contribution		5
HW#1 (FCF)	Individual	5
HW #2 (Discount Rate)	Individual	5
HW #3 (DCF Valuation)	Individual	15
HW #4 (APV and Multiples)	Individual	5
HW #5 (Fixed Income)	Individual	5
Valuation Case 1 (AirThread)	Group	10
Valuation Case 2 (Boston Beer)	Group	10
Final Exam	Individual	40
		100

Make-up and extra-credit assignments are generally not possible. Your grade will be determined solely by the components listed above. The homeworks are individual assignments. The cases are group assignments. Please work in groups of 2-3 people.

A forced curve will be used for grading purposes. The target grade distribution follows the Texas MBA course recommended distribution, with approximately:

A	(4.00)	25%
A-	(3.67)	20%
B+	(3.33)	15%
B	(3.00)	35%
B-	(2.67) or below	5%

C‘s, D’s and F’s will be awarded where deserved. Natural breaks in the distribution will be used to determine the final grade distribution. No student is allowed to take the course on a pass/fail basis.

Attendance Requirement

You are required to attend every class. If for any reason you cannot attend a class, you need to email the professor in advance with the reason of your absence. If you miss class without advance notice, it will count as two absences. If you miss four or more classes I reserve the right to fail you so that you may take the class at a later date when it is more convenient for you. By UT Austin policy, you must notify the professor of your pending absence at least one day prior to the date of observance of a religious holiday. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence. Absence due to religious holidays does not count towards the 6 absence limit.

Discussion Board

A discussion board is available on Blackboard to encourage students to exchange and engage in conversations outside the classroom. My TAs and I will monitor and moderate the forum.

McCombs Classroom Professionalism Policy

The highest professional standards are expected of all members of the McCombs community. The collective class reputation and the value of the Texas MBA experience hinges on this. Faculty are expected to be professional and prepared to deliver value for each and every class session. Students are expected to be professional in all respects. The Texas MBA classroom experience is enhanced when:

- **Students arrive on time.** On time arrival ensures that classes are able to start and finish at the scheduled time. On time arrival shows respect for both fellow students and faculty and it enhances learning by reducing avoidable distractions.
- **Students display their name cards.** This permits fellow students and faculty to learn names, enhancing opportunities for community building and evaluation of in-class contributions.
- **Students minimize unscheduled personal breaks.** The learning environment improves when disruptions are limited.
- **Students are fully prepared for each class.** Much of the learning in the Texas MBA program takes place during classroom discussions. When students are not prepared they cannot contribute to the overall learning process. This affects not only the individual, but their peers who count on them, as well.
- **Students attend the class section to which they are registered.** Learning is enhanced when class sizes are optimized. Limits are set to ensure a quality experience. When section hopping takes place some classes become too large and it becomes difficult to contribute. When they are too small, the breadth of experience and opinion suffers.
- **Students respect the views and opinions of their colleagues.** Disagreement and debate are encouraged. Intolerance for the views of others is unacceptable.
- **Laptops are closed and put away.** When students are surfing the web, responding to e-mail, instant messaging each other, and otherwise not devoting their full attention to the topic at hand they are doing themselves and their peers a major disservice. Those around them face additional distraction. Fellow students cannot benefit from the insights of the students who are not engaged. Faculty office hours are spent going over class material with students who chose not to pay attention, rather than truly adding value by helping students who want a better understanding of the material or want to explore the issues in more depth. Students with real needs may not be able to obtain adequate help if faculty time is spent repeating what was said in class. There are often cases where learning is enhanced by the use of laptops in class. Faculty will let you know when it is appropriate to use them. In such cases, professional behavior is exhibited when misuse does not take place.
- **Phones and wireless devices are turned off.** We've all heard the annoying ringing in the middle of a meeting. Not only is it not professional, it cuts off the flow of discussion when the search for the offender begins. When a true need to communicate with someone outside of class exists (e.g., for some medical need) please inform the professor prior to class.

Academic Dishonesty

I have no tolerance for acts of academic dishonesty. Such acts damage the reputation of the school and the degree and demean the honest efforts of the majority of students. The minimum penalty for an act of academic dishonesty will be a zero for that assignment or exam.

The responsibilities for both students and faculty with regard to the Honor System are described on http://mba.mccombs.utexas.edu/students/academics/honor/index.asp. As the instructor for this course, I agree to observe all the faculty responsibilities described therein. If the application of the Honor System to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification.

As specific guidance regarding collaboration for this course, you should consider the completion of the three individual problem sets to be an individual effort. It is OK to ask for help from others on the individual assignments if you get completely stuck or lost, however, you should develop your own answer and certainly not cut and paste the work of others. The two case assignments will be completed in pairs or groups of three. Group *preparation* for examinations is acceptable and encouraged.

Students with Disabilities

Upon request, the University of Texas at Austin provides appropriate academic accommodations for qualified students with disabilities. Services for Students with Disabilities (SSD) is housed in the Office of the Dean of Students, located on the fourth floor of the Student Services Building. Information on how to register, downloadable forms, including guidelines for documentation, accommodation request letters, and releases of information are available online at http://deanofstudents.utexas.edu/ssd/index.php. Please do not hesitate to contact SSD at (512) 471-6259, VP: (512) 232-2937 or via e-mail if you have any questions.

FIN 286 Valuation Class Schedule Spring 2012 - Fracassi

date	class	Topic & Assignments	material
Wed 18-Jan	1	Introduction and Discussion of Valuation Techniques. Review of main accounting concepts. Definition of Free Cash Flow. Discounted Cash Flow Model. Annuities and Perpetuities. *(Assign HW #1 – Individual Assignment)*	Titman & Martin, C2
Fri 20-Jan	2	Calculating the Discount Rate: The CAPM. Calculating and unlevering/re-levering beta. Fama-French 3 factor model *(Assign HW #2 – Individual Assignment)*	Titman & Martin, C4
Mon 23-Jan	3	Valuing a Company using DCF. No friction Model without Taxes and Bankruptcy Costs. WACC with Taxes and Bankruptcy costs. *(HW #1 DUE at the beginning of the class)*	Berk & DeMarzo, C's 14, 15 & 16
Wed 25-Jan **ROOM CHANGE: GSB 3.120**	4	Valuing a Company using the WACC model. In-class example Model set-up. *(HW #2 DUE at the beginning of the class)* *(Assign HW #3 – Individual Assignment)*	Titman & Martin, C's 2, 3 & 7
Mon 30-Jan **ROOM CHANGE: GSB 3.120**	5	Valuing a Company with the DCF method - in-class example. Sensitivity analysis (scenario analysis, break-even, and simulation)	Titman & Martin, C's 2, 3 & 7
Wed 1-Feb	6	Valuing a Company with the APV method and the Capital Cash Flow Method; Equivalence with WACC *(HW #3 DUE at the beginning of the class)* *(Assign Valuation Case 1 – AirThread (HBS* Case #4263) *– Group Assignment)*	Titman & Martin C7,
Mon 6-Feb	7	Valuation Case 1: AirThread Connections *(Valuation Case 1 DUE at the beginning of the class)*	
Wed 8-Feb	8	Valuing a company with comparables and multiples; selecting comparable companies; application to the in-class example DCF valuation *(Assign Valuation Case 2 – Boston Beer (HBS* Case #9-196-138) *– Group Assignment)*	Titman & Martin, C6
Mon 13-Feb	9	Valuation Case 2: The Boston Beer Company, Inc *(Valuation Case 2 DUE at the beginning of the class)* *(Assign HW #4 – Individual Assignment)*	
Wed 15-Feb	10	Additional Topics for Discussion – Other Valuation Models: Cost Approach, Flow to Equity, EVA. Equity Control Premiums & Liquidity Discounts, valuing LBOs and M&A transactions, earnings accretion and dilution in M&A transactions	Titman & Martin, C's 8 & 9

Date	*class*	*Topic*	*material*
Mon 20-Feb	11	Valuation of Fixed Income Instruments - curve construction, discount factors, spot rates, and forward rates, pricing riskless debt with a Treasury Curve *(HW #4 DUE at the beginning of the class)*	Tuckman C's 1-4
Wed 22-Feb	12	Valuation of Fixed Income Instruments - in-class example including bootstrapping a Treasury curve, solving for static and zero-volatility spreads on risky debt, pricing and analyzing risky debt with spread measures *(assign HW #5 – Individual Assignment)*	Tuckman C's 1-4
Mon 27-Feb	13	Financial Options - Descriptions and Payoff diagrams; applications and analogies to enterprise valuation and the valuation of debt and equity claims; start Black-Scholes and Binomial pricing models *(HW #5 DUE at the beginning of the class)*	Berk & DeMarzo, C20
Wed 29-Feb	14	Valuation of Financial Options - Black-Scholes and Binomial pricing models; Introduction (brief) to Real Options; Course Wrap-up	Berk & DeMarzo, C's 21 & 22
Fri 2-Mar	F	FINAL EXAM	