FIN 286 - VALUATION

SPRING 2016

M/W 10:00AM – 12:00PM, GSB 3.130 (SECTION 03390)
M/W 12:00PM – 02:00PM, GSB 3.130 (SECTION 03395)

Professor	Cesare Fracassi
Office	GSB 5.165
Professor Office Hours	Monday, 3:30-5:30
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Course Web Page	via Canvas
Final Exam	Thursday March 3rd
Teaching Assistant (Review Sessions)	Avishai Schiff
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TA Review Sessions	TBD
TA Office Hours	By appointment only.

Course Objectives

This course covers business valuation, equity 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.

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: Core MBA classes on accounting, statistics, and finance are a prerequisite. Working knowledge of EXCEL is also important. Students who hope to never see a financial statement again should not take this course.

Students should expect the workload for this course to be demanding. Students who took this course in the past have indicated that the workload is heavy compared to other courses.

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 https://cb.hbsp.harvard.edu/cbmp/access/42146773 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. There you can also download the supplemental excel spreadsheets.

   Optional Textbooks

The material taught in class is a collection of concepts and examples drawn from several textbooks, research papers, and newspapers. Thus I do not require any textbook. For those students who want to have a reference book, the textbook that is the closest in spirit to what I teach in class is

   - <u>Valuation: The Art & Science of Corporate Investment Decisions</u>, by Sheridan Titman and John Martin, Prentice Hall, 2010 2nd Edition, ISBN 0136117015.

Another good textbook, that covers only some of the material I teach, is

   - <u>Corporate Finance</u>, Jonathan Berk and Peter DeMarzo, 3rd Edition, 2013, Prentice Hall, ISNB 0132992477

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, we will discuss current financial news during the first 10 minutes of each class.

Course Requirements and Grading

Your grade in the course will be determined as follows:

	Assignment	Points
In-Class Contribution		5
HW#1 (FCF)	Individual	-
HW #2 (Discount Rate)	Individual	-
HW #3 (DCF Valuation)	Individual	20
HW #4 (APV and Multiples)	Individual	15
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. I will randomly assign students to groups for each group assignment, so that you can learn from your classmates. The average turn-around time for returning the graded HWs and cases back to students is one week. The students have a week after the assignments are returned to ask questions about the grading and ask for a re-grade.

The final examination will be administered during the final exam period. The final exam is cumulative and covers all material mentioned in the course. You are allowed one letter-sized sheet of paper, where you can write, front and back, any formula or information you might need. A calculator is also allowed. No other material is allowed. The best way to prepare for these exams is by going through examples from the lecture notes and the textbook after each lecture and by working through problem sets and the sample final exam.

Please note the scheduling of the exam. You are responsible for ensuring that you are available and on campus to take the exam. I will not FAX exams to remote locations. I will not permit anyone to take the exams at another time unless you are gravely ill, face a significant emergency or have an exam conflict. If your travel plans conflict with the date of an exam, you should change your travel plans now, or drop the course. Please advise potential employers that you cannot schedule interviews that conflict with your exam schedule.

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.

Discussion Board

My TA and I often receive emails from students regarding material taught in class, as well as broader finance topics. I invite students to post these questions on the discussion board available on Blackboard. My TAs and I will also join the forum as active participants and moderators. This discussion forum is the primary mode of communication for addressing finance topics outside the classroom. Consequently, my TAs and I will only answer emails regarding questions or concerns about grades, attendance and other individual matters.

Classroom Policies

I encourage the class to self-regulate and determine its own standards regarding classroom policies, and possible consequences for violating them. By the end of the first week, the students across all my sections of Valuation FIN 286 will have to agree on a set of common classroom policies pertaining to the following:

- *Attending class:* The education experience for everyone suffers if participation or attendance for the class becomes a problem. If you must miss a class, an examination, a work assignment, or a project, in order to observe religious holidays, you will be given an opportunity to complete the missed work within a reasonable timeframe after the absence.
- *Using laptops, smartphones, and other wireless devices:* There are often cases where learning is enhanced by the use of laptops and other devices in class. However, when students are surfing the web, responding to e-mails, 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.
- *Arriving 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.
- *Displaying Name cards:* This permits fellow students and faculty to learn names, enhancing opportunities for community building and evaluation of in-class contributions.
- *Turning in your assignments late:* Individual extension of assignment deadlines could negatively alter the level-playing field within the classroom.

I will circulate a survey right after the first day of classes, and I will post the results of the survey by the end of the first week.

All sessions will be videotaped, and made readily available online. However, it does not excuse you from attending class. Your presence and participation is essential to the classroom experience. I retain the option to stop posting videotaped classes online if the attendance drops.

The videos can be accessed at the following links:

10-12 Class:
http://msl.mccombs.utexas.edu/UTMediasite/Catalog/Full/183a0d7b5e9e42728ef195d8d470cc9021

12-2   Class:
http://msl.mccombs.utexas.edu/UTMediasite/Catalog/Full/a72c0fdc8bbf45339c1491459d9f61
1921

Academic Dishonesty

I have no tolerance for acts of academic dishonesty. As a result, this topic will not be self-regulated by students. Such acts damage the reputation of the school 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. Maximum penalty includes failing the class up to being expelled from the MBA program.

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 pre-assigned pairs. 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 2016- Fracassi

date	class	Topic & Assignments	material
Wed Jan 20	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 Jan 22	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 Jan 25	3	Valuing a Company using DCF. No friction Model without Taxes and Bankruptcy Costs. *(HW #1 DUE at the beginning of the class)*	Berk & DeMarzo, C's 14, 15 & 16
Wed Jan 27	4	WACC with Taxes and Bankruptcy costs. Forecasting FFCF. *(HW #2 DUE at the beginning of the class)*	Berk & DeMarzo, C's 14, 15 & 16
Mon Feb 1 **ROOM CHANGE: GSB 3.120**	5	Valuing a Company using the WACC model. In-class example Model set-up. *(Assign HW #3 – Individual Assignment)*	Titman & Martin, C's 2, 3, 6 & 9
Wed Feb 3 **ROOM CHANGE: GSB 3.120**	6	Valuing a Company with the DCF method - in-class example. Sensitivity analysis (scenario analysis, break-even, and simulation)	Titman & Martin, C's 2, 3, 6 & 9
Mon Feb 8	7	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 C9
Wed Feb 10	8	Valuation Case 1: AirThread Connections *(Valuation Case 1 DUE at the beginning of the class)*	
Mon Feb 15	9	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, C8
Wed Feb 17	10	Valuation Case 2: The Boston Beer Company, Inc *(Valuation Case 2 DUE at the beginning of the class)* *(Assign HW #4 – Individual Assignment)*	

Date	class	Topic	material
Mon Feb 22	11	Additional Topics for Discussion – Other Valuation Models: Cost Approach, Flow to Equity, EVA. Equity Control Premiums & Liquidity Discounts.	Titman & Martin, C's 7 & 10
Wed Feb 24	12	Valuing LBOs and M&A transactions, earnings accretion and dilution in M&A transactions. Valuing Financial Institutions *(HW #4 DUE at the beginning of the class)*	
Mon Feb 29	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	Berk & DeMarzo, C20
Wed Mar 2	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
Thur Mar 3	F	FINAL EXAM	