Corporate Valuation, Fall 2018

Professor David Wessels

Department of Finance, the Wharton School

This course will focus on the financial analysis and valuation of companies.   The course will link corporate strategy with valuation; a critical skill for those entering consulting, investment banking, private equity, and business development. When necessary, the course will take a deep dive into the accounting notes, identifying nuggets of information critical for robust valuation. The course will be segmented into four sections.

- During the **first section** of class, we discuss the drivers of corporate value, specifically return on capital and organic revenue growth. We examine how the world's most valuable companies have created value, and how they protect their competitive position. We use this framework to underpin and introduce the most common methods of corporate valuation: enterprise DCF, discounted economic profit models, and multiples.

- The **second section** will cover financial analysis using the 10-K. We start with the traditional DuPont Formula and then move to modern metrics such as return on invested capital (ROIC) and economic profit (EP). Our primary goal will be to build a clean understanding of operating performance across business units and for the entire company. We examine similar issues related to revenue growth, such as how to separate accounting effects from true organic growth. We conclude the section by deriving non-financial key performance indicators (such as retail basket size and aircraft turnaround time) and discuss their linkage to financial ratios.

- In **section three**, we build an integrated valuation model using enterprise DCF. The section starts by discussing alternative methods of cash flow estimation and discounting, such as free cash flow at the weighted average cost of capital (WACC), adjusted present value (APV), capital cash flow, and direct-to-equity valuation methodologies. Next we cover the fundamentals of forecasting, how to determine the appropriate forecast period, and issues related to continuing value. I plan to demonstrate a fool proof method for constructing free cash flow, one that hopefully will save you many unnecessary late-night hours! We conclude the section with continuing valuation and estimation of the cost of capital.

- In **section four**, we cover advanced valuation issues, such as off-balance sheet debt and deferred taxes. These advanced issues will enable us to discuss performance, cash flow, and cost of capital in an integrated way. How many advanced issues we cover depends on remaining time, because we must close the course with multiples. Multiples are an excellent valuation tool to triangulate a company's value. Multiples may appear straightforward, but as you will see, their simplicity is deceptive, and the skills developed throughout the course will be critical!

By the end of this course, you should feel comfortable creating a sophisticated valuation of a complex company, integrating both strategic and financial assessments into your work!

Reading Material

The course will rely on a textbook and a few supplemental readings (which can be found on canvas). The textbook can be purchased in the campus bookstore or on Amazon.com:

- Valuation: Measuring and Managing the Value of Companies (6th edition) by Koller, Goedhart, and Wessels, 2015, John Wiley & Sons, Inc, NY.

Lecture notes will be distributed in class and will also be available on canvas.

In-Class Requirements

Please bring three items to EVERY class: your name tent, the previous lecture's notes, and a basic calculator. As the semester progresses, please remain diligent. I tend to be relentless with those who come to class empty-handed!

Assignments &Grading

There will be two individual assignments (15% total), three group projects (25% total), and two exams (30% each). For individual assignments, I expect you to work alone and hand in your own work. You can discuss class tools, but not the assignment. For group work, please self-select groups of between 3-5 people, no exceptions. If you have six people, create two groups of three.

Class participation will not formally be scored, but students at the grading cutoffs will be evaluated for their ability to generate an active and positive class environment. The assignment/exam due dates and grading breakdown will be as follows:

	Assignment/Exam	Due Date	Grade
1	Group Presentation: 3M	9/20/2018	5%
2	Individual Assignment: Nucor Steel	9/27/2018	5%
3	Exam I	10/11/2018	30%
4	Group Presentation: Financial Analysis	10/23/2018	10%
5	Individual Assignment: Integrated Model Building	11/8/2018	10%
6	Exam II	11/29/2018	30%
7	Group Presentation: Enterprise Valuation	12/6/2018	10%

Teaching Assistants & Office Hours

We have two teaching assistants for the class. If you have questions concerning assignments or practice exams, please e-mail your primary TA first. If they are out of town, only then reach out to the other TA. If you have a question about class examples OR assignments, please use the TAs as your primary resource. As a general policy, I do not answer questions about the assignments! If you have questions about the course notes or content beyond the class, please come see me during office hours.

Your primary TA is: Nikhil Goyal nikgoyal@wharton.upenn.edu

Office Hours: The TAs will be holding office hours on Wednesday from 8pm-9pm in 2401 Walnut. I will be holding office hours on Tuesdays 2:00-3:30pm in SHDH 2422 and by appointment.

Regrade policy. All regrade requests must be submitted in TYPE and emailed to your primary TA within ten calendar days following the return of your graded work.

Academic Integrity.

I expect you to follow Penn's code of academic integrity when completing problem sets, group work, and exams. Allegations of impropriety should be brought directly to me, which in turn will be referred to the University Honor Council. For more, see:

https://provost.upenn.edu/policies/pennbook/2013/02/13/code-of-academic-integrity

I look forward to meeting each and every one of you this semester! Best, Prof. Wessels.

Corporate Valuation

Course Schedule

Section	Date	Note		Reading
Section 1: Value Creation	8/28/2018	1	C-Suite Thinking: Strategic Growth Levers	Chapter 1, Granularity
	8/30/2018	2	C-Suite Thinking: Tactical Growth Levers	Chapter 3
	9/4/2018	3	Key Value Drivers	Chapter 2
	9/6/2018	4	Valuation using ROIC & Economic Profit	Valuation, Appendix A
	9/11/2018	5	The Alchemy of Stock Market Performance	Chapter 4
	9/13/2018	6	Valuation using Enterprise DCF	Chapter 8, 135-150
Section 2: Financial Analysis	9/18/2018	7	Financial Analysis: Revenue Growth	Chapter 10, 209-215
	9/20/2018	8	Financial Analysis: Profitability & Capital	Chapter 10, 201-206
	9/25/2018	9	Financial Analysis: Leverage & Capital Structure	Chapter 10, 215-220
	9/27/2018	10	Reorganizing: Invested Capital	Chapter 9, 165-182
	10/2/2018	11	Reorganizing: NOPAT & Operating Taxes	Chapter 9, 165-188
	10/4/2018	n/a	No Class: Fall Break!	No Reading
	10/9/2018	12	Key Performance Indicators (v)	Chapter 10, 206-209
	10/11/2018	n/a	EXAM I	No Reading
Section 3: Building a Robust DCF Model	10/16/2018	13	Enterprise DCF Models	Chapter 8, review
	10/18/2018	14	Choosing the Right DCF Model	Chapter 8, 150 - 164
	10/23/2018	15	Model Building & Revenue Models	Chapter 11, 221-228
	10/25/2018	16	Proforma Forecasting	Chapter 11, 229-246
	10/30/2018	17	Calculating Free Cash Flow	Chapter 9, 188-194
	11/1/2018	18	Continuing Value	Chapter 12
	11/6/2018	19	The Cost of Capital: Theory & Traps	No reading
	11/8/2018	20	The Cost of Capital: In Practice	Chapter 13
Section 4: Advanced Valuation Issues	11/13/2018	21	Advanced Valuation: Leases	Chapter 20, 405-414
	11/15/2018	22	Advanced Valuation: Pensions	Chapter 20, 414-421
	11/20/2018	23	Advanced Valuation: Taxes (time permitting)	Chapter 18
	11/22/2018	n/a	Thanksgiving	No Reading
	11/27/2018	25	Using Multiples to Triangulate Value	Chapter 16, 331-336
	11/29/2018	n/a	EXAM II	No Reading
	12/4/2018	26	Choosing the Right Multiple (time permitting)	Chapter 16, 336-351
	12/6/2018	n/a	Final Presentations	No Reading