

Corporate Valuation, Fall 2016

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, 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 five sections.

- During the first few weeks of class, we discuss the drivers of corporate value, specifically return on investment and organic revenue growth. We examine how the world's most valuable companies have created value, and how they have protected their competitive position (Buffett coined this the economic moat). We next introduce the most common methods of corporate valuation: enterprise DCF, 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 the third section, we cover advanced valuation issues; issues only the experts understand. We start the section with off-balance sheet financing, specifically operating leases. We next cover retirement obligations, which can cause major distortions in EBITDA, and for some companies be the largest nonequity liability. We conclude with a spirited discussion of deferred taxes (the low point of the class).
- In section four, we build an integrated valuation model using enterprise DCF. The section starts with 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 with issues related to discounting and the cost of capital. We will discuss alternative methods of discounting, such as the weighted average cost of capital (WACC), adjusted present value (APV), capital cash flow, and equity valuation methodologies. The section will cover each component of the cost of capital (the cost of equity and the cost of debt) in detail.

The course will conclude with final presentations. Students will be expected to complete a comprehensive analysis and valuation of an upcoming IPO.

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%), two group projects (25% total), and a final exam (60% 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	Individual Assignment: Nucor Steel	9/28	5%
	Midterm	10/17	30%
2	Group Project: Financial Analysis	10/24	10%
3	Individual Assignment: ROIC	11/14	5%
4	Group Project: Enterprise Valuation	12/7	10%
	Comprehensive Final	TBD	40%

Teaching Assistants & Office Hours

The teaching assistants for the course will be Ajay Jagannath ajayi@wharton.upenn.edu, Alexander Fortmueller afort@wharton.upenn.edu, and Aastha Jain aasthaj@wharton.upenn.edu. We will be adding additional TAs based on enrollment, and will post updates – including office hours - to canvas.

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 material, please come to me. I will be holding drop in office hours from 12-1:30pm on Mondays and by appointment.

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>

Corporate Valuation

Course Schedule

Section	Date	Notes	Reading	
Section 1: Core Valuation Techniques	8/31/2015	1	Driving Valuation: C-Suite Thinking	Chapter 1
	9/7/2016	2	Key Value Drivers	Chapter 2
	9/12/2016	3	Valuation using ROIC & Economic Profit	Chapter 8, 150-153
	9/14/2016	4	Enterprise DCF Valuation	Chapter 8, 135-150
	9/19/2016	5	Valuation using Multiples	Chapter 16, 331-336
	9/21/2016	6	Choosing the Right Multiple	Chapter 16, 336-351
Section 2: Financial Analysis	9/26/2016	7	Financial Analysis: Revenue Growth	Chapter 10, 209-215
	9/28/2016	8	Financial Analysis: Profitability & Capital	Chapter 10, 201-206
	10/3/2016	9	Financial Analysis: Leverage & Capital Structure	Chapter 10, 215-220
	10/5/2016	10	Reorganizing: Invested Capital	Chapter 9, 165-182
	10/10/2016	11	Reorganizing: NOPAT & Operating Taxes	Chapter 9, 165-199
	10/12/2016	12	Key Performance Indicators	Chapter 10, 206-209
	10/17/2016	n/a	Midterm	No reading
Section 3: Advanced Valuation Issues	10/19/2016	13	Advanced Valuation: Leases	Chapter 20, 405-414
	10/24/2016	n/a	No Class	No reading
	10/26/2016	14	Advanced Valuation: Capitalized R&D	Chapter 21
	10/31/2016	15	Advanced Valuation: Pensions	Chapter 20, 414-421
	11/2/2016	16	Advanced Valuation: Taxes	Chapter 18
Section 4: Building the Model	11/7/2016	17	Enterprise DCF versus Equity DCF	Chapter 8, 153-164
	11/9/2016	18	Proforma Forecasting	Chapter 11
	11/14/2016	19	Calculating Free Cash Flow	No reading
	11/16/2016	20	Continuing Value	Chapter 12
Section 5: The Cost of Capital and Advanced Capital Structure	11/21/2016	21	The Cost of Capital	Chapter 13, 269-272
	11/28/2016	22	The Cost of Debt & Marginal Tax Rate	Chapter 13, 290-299
	11/30/2016	23	The Cost of Equity: Best Practices	Chapter 13, 272-289
	12/5/2016	24	Time Permitting: Special Topics	Time Permitting
	12/7/2016	n/a	Final Presentation	No reading

Note: On 9/21/2016 and 10/26/2016, I will be teaching from Wharton SF. Therefore, we will be conducting the class virtually