

## Corporate Valuation, Fall 2017

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.

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 (6<sup>th</sup> 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: Sichuan Green	9/25/2017	5%
2	Individual Assignment: TRS Decomposition	10/2/2017	5%
3	Exam I	10/16/2017	30%
4	Group Presentation: Financial Analysis	10/30/2017	10%
5	Individual Assignment: Integrated Model Building	11/20/2017	10%
6	Exam II	12/4/2017	30%
7	Group Presentation: Long-Short Recommendation	12/11/2017	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 based on the first letter of your last name:

Names A-M Alex Teixeira, [alde@wharton.upenn.edu](mailto:alde@wharton.upenn.edu)

Names N-Z Matt Wachter [wachm@wharton.upenn.edu](mailto:wachm@wharton.upenn.edu)

**Office Hours:** The TAs will be holding office hours on Tuesdays at 5pm in the finance suite, SHDH 2300/2400. I will be holding office hours on Wednesdays 12-1:30pm 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

Corporate Valuation				Version 1
Class Schedule				9/7/2017
Section	Date	Note	Reading	
Section 1: Core Valuation Techniques	9/11/2017	1	C-Suite Thinking: Strategic Growth Levers Chapter 1, Granularity	
		2	C-Suite Thinking: Tactical Growth Levers Chapter 3	
	9/18/2017	3	Key Value Drivers Chapter 2	
		4	Valuation using ROIC & Economic Profit Valuation, Appendix A	
	9/25/2017	5	The Alchemy of Stock Market Performance Chapter 4	
		6	Valuation using Enterprise DCF Chapter 8, 135-150	
Section 2: Advanced Financial Analysis	10/2/2017	7	Financial Analysis: Revenue Growth Chapter 10, 209-215	
		8	Financial Analysis: Profitability & Capital Chapter 10, remainder	
	10/9 (D)	9	Reorganizing: Invested Capital Chapter 9, 165-182	
		10	Reorganizing: NOPAT & Operating Taxes Chapter 9, 165-188	
	10/16/2017	n/a	Exam I No reading	
		11	Key Performance Indicators Chapter 10, 206-209	
	10/23/2017	12	Advanced Analysis: Pensions Chapter 20, 414-421	
		13	Advanced Analysis: Taxes Chapter 18	
Section 3: Building a Robust DCF Model & Triangulating Value with Multiples	10/30/2017	14	Enterprise DCF Models Chapter 8, review	
		15	Choosing the Right DCF Model Chapter 8, 150 - 164	
	11/6/2017	16	Model Building & Revenue Models Chapter 11, 221-228	
		17	Proforma Forecasting Chapter 11, 229-246	
	11/13/2017	18	Calculating Free Cash Flow Chapter 9, 188-194	
		19	Continuing Value Chapter 12	
	11/20/2017	20	The Cost of Capital: Theory & Traps No reading	
		21	The Cost of Capital: In Practice Chapter 13	
	11/27/2017	22	Valuation using Multiples Chapter 16, 331-336	
		23	Choosing the Right Multiple Chapter 16, 336-351	
Exam and Presentation	12/4/2017	n/a	Exam II No reading	
	12/11/2017	n/a	Final Presentations Chapter 15	