The Wharton School – University of Pennsylvania
FNCE 7070751 - Corporate Valuation
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Spring 2024 - Preliminary Course Syllabus

(*Please note that this syllabus is subject to change over the duration of the course*)

Course Description

Key benefits:
After taking this course, participants will have a deep understanding not only of 'what' steps to follow in assessing the value of a company, but also 'why' those are the steps to follow. Our focus will be on developing discounted cash flow (DCF) models and estimating the appropriate discount rate to obtain the present value of the expected future free cash flows. We will emphasize the importance of the process employed to perform the valuation. Specifically, participants will know how to (1) perform historical analysis to identify a company's potential for value creation, (2) produce a forecast of the expected future cash flows to be discounted, (3) incorporate the continuing value of the firm, and (4) estimate the appropriate discount rate for calculating present value. In addition, by understanding the conceptual basis for these elements, participants will be prepared to explain and persuade others why their valuation is reasonable and how it can be used in decision-making.

Course Overview
In this course, we will cover three general "themes": (1) Why is value, and thus also valuation, so important and relevant in the world of business, (2) How to perform a high quality and robust valuation, and (3) How to explain the valuation to ensure it is actually used in decision-making. This third point is highly challenged by a widespread practice of using "pricing" rather than "valuation" to support and drive decision making. We will contrast "pricing" with "valuing" a business. In many situations which claim to use value and valuation for decision-making, it has been noted that very often factors other than value-impact are incorporated into the decision process, either deliberately or inadvertently. In many cases, this is due to a lack of full understanding of why the valuation is being performed and the critical importance of value creation as the over-riding objective in the "modern" world.

Throughout the course we will emphasize the importance of understanding both the "what" as well as the "why" of valuation techniques. To improve the effectiveness and impact of the valuation process, we will ensure that participants are able to both do a quality valuation as well as have the deeper understanding of the process necessary to be able to explain why they have done what they have done to persuade decision-makers to have confidence and to rely on the output of the valuation for driving decisions. Conceptually, the course will focus on the two core elements of any valuation: (1) how do we forecast the expected future free cash flows, and (2) how do we estimate the opportunity cost of capital to be used to discount these forecasted cash

flows to estimate the value.

Structure of the learning blocks:
In the first class we begin with an overview of the topics to be addressed in the course. This will put everything into a 'global' perspective to ensure participants see the context within which each element belongs and how they fit together. We then move on to the first theme of the course, "what is value and why is it so important?". We define value in order to have a common language upon which to base the remaining content in the course. We also expand on why it is critical not only to be capable of assessing the value of a business, but also to be able to explain to others why they should have confidence in your valuation and use it for decision-making

We then delve into a review of earlier finance courses and an introduction the opportunity cost of capital. We will carefully distinguish the opportunity cost of capital from the cost of funding, both conceptually and in practice. We then develop the building blocks of the opportunity cost of capital, including the risk-free rate and the risk premium. We will quickly provide the evidence to support the empirical estimates of these two concepts, as well as the theoretical explanation for what each represents and why they form the opportunity cost of capital. We will quickly connect back to the core principles of finance, including the Capital Asset Pricing Model (CAPM) and Modigliani-Miller (MM). These first few classes will be interactive, but also highly theoretical.

Once we have established the framework and the core concepts, we will begin to focus on the 'mechanics' of valuation. This will include working through the Ferrari IPO case. We will address the necessary accounting concepts which serve as the lens through which we view and assess firm performance. For the first step of the Ferrari IPO case study participants will have performed (in groups) the historical analysis of the company. In class we will discuss the key accounting concepts which enable us to assess the well-being and competitive position of the company to be valued. We discuss the role of financial statement analysis and the ROIC tree in assessing a company's past performance and building a conceptual foundation upon which we can base our forecasts. We will make use of the Ferrari IPO case study to apply these techniques. Participants will perform a historical analysis on the company and develop a view on the past performance of the business which they will then defend in the plenary session. With the remaining time we will begin to define the Free Cash Flows and discuss the complexity and challenge of forecasting these for our company to be valued.

We continue to develop the second important theme in valuation – the process of estimating the expected future free cash flows. The second step of the Ferrari IPO case study is due, in which participants will have built upon their historical analysis of the company in order to develop forecasts of the company's cash flows. Our objective is to do "assumption-free" forecasting, by which we mean that every number in the spreadsheet has an explanation behind it, and the explanation is never "that's my assumption." The critical question that every valuation expert needs to be prepared to answer is "Why?" for each number used in the valuation, as well as for every methodological step used in the valuation.

We will then delve into the continuing value calculation, also referred to as the 'terminal value' or the 'perpetuity value' which captures the value of all cash flows to be generated after our

explicit forecast period. The continuing value is an area of valuation most prone to error in application, so we will devote considerable time to ensuring participants understand the principles and are able to apply the principles to do a robust continuing (terminal) value estimation.

With the historical analysis, forecasting process, and continuing value behind us, we move to the critical theories and principles which underpin how we estimate the discount rate with which we will convert our forecasted future cash flows into a present value. This will include revisiting the principles behind the CAPM and the Modigliani-Miller theorem. We also need to discuss the handling of leverage, including its potential impact on both the expected future free cash flows and the discount rate. This will take us into the mechanics of estimating the WACC and contrasting the WACC method with the APV.

We will briefly consider alternative contexts for the valuation, such as LBO, Mergers & Acquisitions, Emerging Markets, and Financial Distress. We will also consider other factors, such as how to build flexible valuation models for incorporating robust sensitivity and scenario analysis.

Finally, we will devote the remainder of the final session to reflection, review, and wrapping up the course to give everyone the opportunity to test and confirm their understanding of the principles and mechanics of corporate valuation.

Reading Materials:

- Case materials and lecture notes on course webpage (Canvas)
  - Ferrari IPO, UV7259

- Textbooks:

  "The Blue Line Imperative," by Kaiser and Young, 2013 (readings will be assigned from this book)
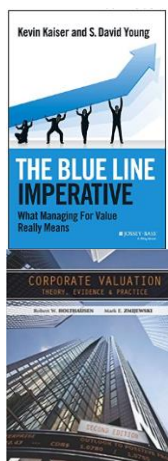
  "Valuation, 7th edition", by Koller, Goedhart and Wessels (anyone serious about valuation needs to own a copy of this book)

  "Corporate Valuation, 2nd edition" by Holthausen and Zmijewski, 2019 (readings will be assigned from this book)

  "Corporate Finance, 5th edition", by Berk and DeMarzo

Format:

The structure of the course includes lectures, teamwork, case discussions, and team presentations.

The major objective of the case method in finance is to **use the logic of financial theory to arrive at sensible conclusions** when faced with real world problems. While **there is not one absolutely right answer to a case, there are approaches which are consistent with the principles of finance and others which are not**. One of the objectives of this course is to help you to distinguish between sensible and senseless arguments. Considering the professor's analyses as the correct solution defeats the purpose of this course and contributes to the silly notion that in the "real world" there is a single correct recipe to be followed in the case of a valuation.

This course involves a high degree of teamwork. Valuation is a team activity and the functioning of the team is a key determinant to the quality of the valuation. As we will learn, diverse backgrounds within the group is beneficial and you are encouraged to team up with people with whom you are unfamiliar. All students are expected to take steps throughout the course to ensure a high level of team engagement and effective teamwork by all members of the team. These steps may include scheduling times for team feedback and team assessment discussions and designing team processes for ensuring openness and honesty in feedback and peer-coaching.

Grading

All participants must join a group of, ideally, 4 people (groups may not be less than 3 and not more than 5 participants). Case work must be submitted in teams – work by individuals will not be accepted. Each group must submit an Excel spreadsheet and report (PDF format of a 'vertical' document) for each case study which includes your calculations and a description of what work was performed and with explanations for the key steps and methods employed in the valuation.

Grades will be based upon team performance as demonstrated in the case exercise (40%), group valuation project (30%) and individual performance in classroom participation (20%), an individual reflection paper (10%). The reflection paper is an opportunity to reflect upon and consolidate the lessons and concepts from the class. I recommend your reflection paper address three elements: (1) Summarize the concepts taught by Professor Kaiser in this class, (2) Summarize the insights you gained in this class, and (3) Describe and provide examples of what will you do differently as a result of these new insights.

Grades will be based upon individual and team performance assessed as follows:

1. PARTICIPATION: Individual (15% of final grade)
2. MIDTERM TEST: Individual (20% of final grade)
3. CASE EXERCISE: Group; Four assignments on the Ferrari IPO Valuation will be submitted which will count toward 30% of final grade, group grade allocated across group members based upon group member self-allocation (see below)
4. TOPICAL GROUP VALUATION PROJECT: Group; A valuation will be performed by each team on a self-selected company. This report will be submitted in PDF format for the written document of maximum 10 pages plus an Excel file with the valuation. Groups may also be asked to present their project to the class. This project will count toward 30% of final grade, group grade allocated across group members based upon group member self-allocation (see below). Please submit your proposed 3 target companies for valuation by May via this Google Form: https://forms.gle/ykzcpfzZUXRdS4NL9).

5. INDIVIDUAL REFLECTION PAPER (5% of final grade) Learning is an effortful process and I have added this assignment in place of a final exam. The purpose of this exercise is to ensure that each individual devotes some time to reflecting back on this course and trying to recall and deepen your understanding of the many topics and concepts covered. It is intended as a 'learning' element, rather than as a 'grading' element. You are expected to submit your individual reflections on what you learned during this course and the insights you gained. It is expected to be between 2-5 pages and address the following elements: (1) Summarize and demonstrate understanding of the concepts taught in this course, (2) Summarize the insights you gained, and (3) Describe how these insights will impact you/your behavior going forward. Please do not be evaluative (e.g., please avoid statements such as "I really loved the session when we talked about..." or "I found the discussion around xxx to be very confusing...") Simply emphasize your learning by structuring your reflections as, "What I learned was ...." Grading will be based on the depth and quality of your reflections as reflected in the depth and quality of the learning and insights you share in this report.

Important Note Concerning Group Grading Process:

To provide effective governance and to encourage effective teamwork, grades for groupwork will be allocated according to contribution allocations as assessed by the other members of your group for ALL group members of ALL groups. All group members are required to provide a response to the survey question below after all group work for the course has been completed. The results will apply to group grade allocation across group members for ALL of the groupwork throughout the course,

Survey question to be answered by all students enrolled in the course:

Please provide an allocation out of 100% for the contribution made by the individual members of your group to all group work submitted in this course, including any measure of your own contribution, such that the sum totals 100%.

Each group member's contribution will be assessed as the average of the percentages reported by the other members of the group. For example, if you are in a 5-member group and the other four members of your group gave you contribution allocations of 19%, 20%, 18% and 19%, then your average is 19%.

See the chart below as a sample template:

Group member name:	Howard Marks	Marie Curie	Mary O'Connor	Michael Jordan	Tom Brady	Percent allocation (out of 20%)
Howard Marks	20%	22%	22%	19%	21%	21.0%
Marie Curie	21%	18%	22%	19%	21%	20.8%
Mary O'Connor	22%	24%	20%	19%	21%	21.5%
Michael Jordan	18%	16%	18%	24%	19%	17.8%
Tom Brady	19%	20%	18%	19%	18%	19.0%
TOTAL	100%	100%	100%	100%	100%	100%

Your own grade will be the average of the contribution allocated by you as reported by your teammates. For example, if your 4 teammates gave you contribution allocations of 21%, 22%, 19% and 21%, such as for Marie Curie above, then your average allocation would be 20.8%. In this case, your team grade will be increased by 0.8% of the team average grade. As another example, had your teammates given you

contribution allocations of 19%, 20%, 18%, and 19%, such as for Tom Brady above, then your average allocation would be 19%.

Your resulting relative contribution allocation as rated by your teammates will then be used to either add to or deduct from the team's overall grade on the group assignments according to the distance your relative contribution allocation is away from 20% (for groups of 5) or 25% (for groups of 4). Each 1% above/below the mean will result in an addition/deduction of 1% of the group grade. Therefore, for example if your group grade is 18/20 on the group exercises and your relative contribution is rated 21.5% in a team of 5, such as for Mary O'Connor above, so that you are 1.5% above the mean of 20% for relative contribution, then your grade on the group work will be $101.5\% \times 18 = 18.27/20$.

Code of Ethics:

Submitted assignments for grading should be your own or your team's own work only. Failure to observe this rule may result in an automatic failing grade for the course.

Course Outline and Reading suggestions:

Class 1: Course Introduction & The Colors of Value
Reading: Kaiser & Young, *The Blue Line Imperative*, Chapters 1&3 and Holthausen and Zmijewski, *Corporate Valuation*, Chapter 1 (H&Z Ch. 1)

Class 2: The Colors of Value and the Conceptual Foundations of the Opportunity Cost of Capital
Reading: K&Y Ch. 3

Class 3: Accounting Concepts and Historical Analysis
Reading: K&Y Ch. 4, H&Z Ch. 2
Case: no assignment due this session

Class 4: Accounting Concepts and Historical Analysis
Reading: K&Y Ch. 4, H&Z Ch. 2 , Advanced Valuation Simplified (AVS)
Case: no assignment due this session

Class 5: Defining Free Cash Flow, Forecasting Free Cash Flow
Reading: K&Y Ch. 11, H&Z Ch. 3, Ferrari
Case: Ferrari IPO, UV7259, Assignment #1

Class 6: Forecasting with Integrity and Mechanics and Economics of Continuing Value
Reading: K&Y Ch. 11, H&Z Ch. 3, HK&R The Hidden Traps in Decision Making
Background reading: Koller, Goedhart & Wessels, Valuation, Chapters 11Case: no assignment due this session

Class 7: Midterm Test and Revisiting Discount Rates
Reading: K&Y Ch. 7, H&Z Chs. 5
Case: no assignment due this session (but the midterm test is this session!)

Class 8: Discount rates: Risk and Perspective: CAPM, MM – APV and WACC
Reading: H&Z Chs. 5
Case: Ferrari IPO, UV7259, Assignment #1

Class 9: Discount rates: Estimating the Inputs
Reading: H&Z Chs. 8 & 10
Case: no assignment due this session

Class 10: Discount rates: MM – Risk-free rate and The Opportunity Cost of Debt
Reading: K&Y Ch. 3, Kaiser, AVS, H&Z Ch. 9
Case: no assignment due this session

Class 11: Ferrari Complete: Bringing it all together, IPOs and Perspectives on Value
Reading: Kaiser, AVS
Case: Ferrari IPO, UV7259, Assignment #3

Class 12: Group Valuation Projects due / Reflection and Wrap-up
Case: Group valuation project
Reading: review of the course

Course Outline

Class #	Date	Time	Topic	Assignment	Pre-reading	Case study
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1	Friday, January 26, 2024	9:30am - 12:30 pm	Course Introduction & The Colors of Value	no assignment due	K&Y Chs. 1&3, H&Z Ch. 1	
2	Friday, January 26, 2024	5:30 pm - 7:30 pm	Intro to The OCC/WACC & Historical Analysis	no assignment due	K&Y Ch. 3	
3	Saturday, January 27, 2024	1:00 pm - 4:00 pm	Accounting Concepts & Historical Analysis	no assignment due	K&Y Ch. 4, H&Z Ch. 2	
4	Friday, February 23, 2024	9:30am - 12:30 pm	Accounting Concepts & Historical Analysis	no assignment due	K&Y Ch. 4, H&Z Ch. 2	
5	Friday, February 23, 2024	5:30 pm - 7:30 pm	Defining Free Cash Flow and Forecasting	Ferrari #1 due	K&Y Ch. 11, H&Z Ch. 3, Ferrari	Ferrari IPO, UV7259
6	Saturday, February 24, 2024	1:00 pm - 4:00 pm	Forecasting & Continuing Value	no assignment due	HK&R *The Hidden Traps in Decision Making*	
7	Friday, March 8, 2024	9:30am - 12:30 pm	Continuing Value and Midterm Exam	Midterm Exam	K&Y Ch. 7, H&Z Ch. 6	
8	Friday, March 8, 2024	5:30 pm - 7:30 pm	Discount Rates: CAPM and MM (WACC/APV)	Ferrari #2 due	H&Z Ch. 5	Ferrari IPO, UV7259
9	Saturday, March 9, 2024	1:00 pm - 4:00 pm	Discount Rates: Estimating the inputs	no assignment due	H&Z Chs. 8 & 10	
10	Thursday, April 4, 2024	9:30am - 12:30 pm	Discount Rates: Cost of Debt	no assignment due	H&Z Ch. 9	
11	Friday, April 5, 2024	1:00 pm - 4:00 pm	Bringing the pieces together	Ferrari #3 (final paper) due	Ferrari	Ferrari IPO, UV7259
12	Saturday, April 6, 2024	9:00 am - 12:00 pm	Complications (EM, LBOs, etc) and Wrap Up	Valuation Project Due		Valuation Project