BEM 107
Spring Quarter 2011

Bradford Cornell
Prof. of Financial Economics

Applied Corporate Finance and Investment Banking

This course builds off the concepts studied in the introductory corporate finance course and applies them to the fundamental investment banking activities of financing and valuing companies and of analyzing corporate transactions. Stress is on bridging the gap between theory and practice, a gap that can be alarmingly high. Following the late Fischer Black, the course is designed around a serious of questions. I have found that I remember questions better than answers and I feel your experience will be similar, at least in the long run. Readings for each week will be the primary source of the questions, so be sure to do the reading *before* class.

I have also found that to understand an issue a student must to explain it. Consequently, the entire grade for this course is based on participation. Instead of lecturing, I will call on specific students to answer a series of questions. It will be a bit like a scientific version of a Harvard law school class. Don't panic if you don't know answer to some of the questions because I suspect that will be common. However, if it becomes a habit, your grade will suffer. For those of you who do go into business related fields, there is a side benefit of this approach. Because corporate events are fast moving, business ideas are usually evaluated in Q&A sessions similar to those in this course.

Prerequisites: BEM 103.

Time: Tues 6-8:50 pm in Baxter 25.

Office hours: By appointment in Baxter 211, bcornell@hss.caltech.edu

TA: Tyler Hannasch,

Text: **Required**: *Financial Statement Analysis and Security Valuation: Fourth Edition*, Stephen Penman.

Other Valuation Books

Cornell: *Corporate Valuation.*
Damodaran: *Damodaran on Valuation*.
Koller, Goedhart and Wessels: *Valuation*.
Pratt: *Valuing a Business*.

Materials: Added reading materials for course are available electronically in the course readings database.

Reading Assignments and Course Schedule

Note: Reading is due the week under which it is listed. E.g. you should have read chapters 4 and 5 before class on the 5th.

Week 1 (3/29): Introduction to the course. What is a firm? What is it supposed to do from a financial point of view? Review of financial reporting and what can go wrong.

What is a firm? What is the relation of the firm to its various stakeholders? Why are managers and shareholders unique stakeholders?

What is the theoretical objective of the firm? How is that objective to be carried out? What does it mean, operationally, to maximize value? How do firms create value in the first place? What redress do shareholders have if a firm fails to maximize shareholder value?

What is on the balance sheet? What items are good indicators of market value? What are not? Are any key items left off? How can we estimate total value of assets on a market value basis? Which items on a market value balance sheet do we refer to as the "value of the firm"? Be ready for questions in class using Google finance data for an actual company.

Readings due:

Penman: Chapters 2 and 3.

Week 2 (4/5): The DCF and Residual Income Approach to Valuation.

If the balance sheet doesn't do the job, how do we estimate the market value of the firm? What are the practical problems with estimating future cash flow or residual value? How do you handle the fact that firms have indefinite lives? Why is the cost of capital the appropriate discount rate?

Readings due:

Penman Chapters 4, 5.

Class presentation

Luck versus skill (Project 1)

WEEK OF APRIL 11 PROFESSOR CORNELL IS OUT OF TOWN

Week 4 (4/19): Session at CRA. Data Sources for Financial Analysis. Estimating the Cost of Capital: The current state of the applied affairs (1).

Class will start with a CRA presentation on the data sources available for financial analysis.

What is the cost of capital? What affects the cost of capital?

For bonds, what is the difference between expected and promised returns? Which is associated with the cost of debt? How do I calculate or estimate both?

For equity, why use a model rather than past average of excess returns? How do the models work? Is there an analogue to the yield on a bond that does not require a model? What are practical issues that arise when operationalizing the competing approaches? What are the statistical issues? What are the data problems?

Readings for the next TWO weeks:

Penman Chapter 18.
Cornell Chapter 4, 7.

Class presentations

POWs (Project 2)
Term structure of interest rates (Project 4)

Week 5 (4/26): Estimating the Cost of Capital: The current state of the applied affairs (2). Valuation by multiples. Estimate the WACC for Edison International before you come to class.

Finish questions from the previous class.

What is the cost of capital for Edison International? What do you see as the main uncertainties associated with your estimate?

What are security analysts? Who do they work for? What type of information do they provide?

What assumptions must be made to do valuation by direct comparison? What are common multiples? To what observable variables are they applied? How are multiples related to earnings growth and the cost of capital? What is the discounted future value approach based on multiples? Why is it used?

Readings due:

Penman Chapter 18.
Cornell Chapter 4, 7.

Class presentations

Edison International (EIX) WACC (Project 3)
Discounted cash flow valuation of Apple equity (Project 5)

Week 6 (5/3): Some tricky details. Where does value creation come from? How do you handle employee options? The valuation impact of liquidity. The valuation impact of control.

We now know that value is created by residual earnings, but what produces residual earnings? What determines their duration? What companies have a long track record for producing residual earnings? What companies do not? Why? Does this present a problem for scientists working in industry? How do we forecast residual earnings in practice.

What do we mean by "liquidity"? Why does liquidity have value? How great is the value of liquidity? How can a firm increase liquidity? How do you adjust valuations for differences in liquidity?

Readings due:

Penman pages 266-272, 464-466.
Cornell Chapter 8.

Class presentations

Residual earnings valuation of Apple equity (Project 6)
Valuation by multiples for Amgen (Project 7)

Week 7 (5/10): Event studies and their application in finance. Start corporate control transactions (see next week readings)

What is event study? What is meant by the event window? What are "abnormal" returns? How are they estimated? Can important information fail to be associated with a significant announcement? What is leakage? Prior anticipation? Presentation of event study on Yahoo-Microsoft proposed transaction.

Does control have value? When and how much? Why is a premium often paid for control? What are synergies? Where do they come from? How are they measured?

Readings due:

MacKinlay: Event Studies in Economics and Finance, pp. 13-27.
CRA event study

Class presentations

Estimating residual returns for Google (Project 8)

Week 8 (5/17): Session with Marty Willhite of Munger, Tolles on legal aspects of business transactions and evaluating contractual terms.

This will also be an interactive session led by Mr. Willhite. One key theme – identifying and responding to optionality in contracts and transactions.

Readings due:

Judicial decision:

Week 9 (5/24): Session with Steve Walker of IdeaLab on venture capital and the evaluation of start-up businesses.

This will also be an interactive session led by Mr. Walker. It will focus on the identification, evaluation and nurturing of an actual start-up business at IdeaLab.

Readings due:

Gompers and Lerner (from course materials).

Class presentations

Microsoft-Yahoo event study (Project 9)

Week 10 (5/31): Corporate Control Transactions

The menu of transactions – what is the difference between mergers, acquisitions, LBOs and spin-offs? How do you measure whether a transaction is a success? How do ex-ante measures of success differ from ex-post measures? What are possible reasons for transactions other than maximizing shareholder wealth? How can you tell if a transaction occurred for one of those reasons?

Readings due:

Weston: Chapters 6, 11, 13.

Class presentations

Microsoft-Yahoo wealth evaluation analysis (Project 10)