

SYLLABUS

Advanced Corporate Finance
B8307– Fall 2017
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Overview

Advanced Corporate Finance develops the “art and science” of optimal strategic decision-making by applying corporate financial theory to cases of financial policy, financial instruments and valuation. In particular, the following topics are studied: cost of capital and capital budgeting, discounted cash flow valuation and financial multiples, payout policy, equity and debt financing, option pricing theory and applications, corporate control (mergers and acquisitions), and recapitalizations.

The classes are structured to maximize the synergy between theory and practice, providing students with portable, durable, and marketable tools for their careers.

This class is suitable for students looking to make executive strategic financial decisions, including investment bankers, consultants, CFOs and corporate treasurers, portfolio and investment managers, and students seeking careers in private equity.

Advanced Corporate Finance should be considered a capstone course. This is an advanced course in which students are expected to perform professional level work. The class is open to both 1st and 2nd year students who have completed B8306 Capital Markets and Investments, as the material covered in B8306 is necessary throughout the course. In particular, students should be familiar with notions of options pricing including valuation using the Black-Scholes formula.

Advanced Corporate Finance builds directly upon the basic valuation tools developed in Corporate Finance and extends in the following directions: (1) The course introduces more advanced concepts into valuation (such as corporate securities beyond simple debt and equity) to equip students with the tools necessary to analyze more complex (and therefore, more realistic) capital structures and corporate transactions. (2) The course incorporates richer institutional detail into quantitative analysis, bringing students closer to real-world. (3) The course explores new topics and recent developments in corporate finance theory and practice as a means of exposing students to the ever-changing nature of the capital markets, both its terms and its practices. The more advanced tools and deeper understanding of the valuation process in this course serve the same goal stated in Corporate Finance: To improve corporate financial decision-making by executives and to provide value-creating tools of analysis for investors.

References

1. *Teaching Notes*. In the course packet.
2. *Cases, Outside Readings, Supplementary Information*. On Canvas.
3. Jonathan Berk and Peter DeMarzo, *Corporate Finance*, Pearson, 2014, 4th edition (BD). Recommended. Copies are on reserve in the library.
4. Tim Koller, Marc Goedhart and David Wessels, *Valuation: Measuring and Managing the Value of Companies*, 2015, 6th edition (Valuation). Recommended. Copies are on reserve in the library.

A point about the Valuation text: Nine chapters (6-14) of the Valuation text are an important recommended reading for the valuation section of the course, chapter 34 covers high-growth companies, chapter 32 covers real options, chapter 21 covers mergers and acquisitions, and chapters 30 and 33 address international valuation. Someone in each group should buy a copy of the book so that these chapters can be read by the group members. If you plan to go into banking or consulting, do corporate valuations, or be a user/consumer of valuation services, this book may be an important part of your library.

5. *Class Handouts*. From time to time, I will distribute outside readings or case analysis.
6. *Spreadsheets on Canvas*. There are spreadsheets posted on Canvas for many of the cases.

Office Hours

My scheduled office hours will be on Mondays from 1:30 p.m.-3:00 p.m. I am also available to meet with students by appointment.

Grading

The breakdown of the performance measurement to be used in the class follows:

5 cases written up by group	75 points (15%) each
Class participation	<u>125 points (25%)</u>
	500 points (100%)

Re-grade requests must be made in writing.

Group Assignments

Groups, *not to exceed four members*, will be formed by the students during the first week of class. Case write-ups are to be handed in by each group (one hard-copy paper per group) at the beginning of class.

At the end of the semester, you will be asked to give each of your group members (including yourself) a grade on his or her performance within your group (See the peer review form, page 5). This assessment will enter into each student's class participation grade.

Case Solutions

1. You should take the perspective of an external consultant to the decision maker(s) in the case (such as the CEO, CFO, or Board of Directors). The format should be: a short executive summary saying what course of action should be followed and a succinct description of why; a short list of the *key assumptions* made in your analysis; the bulk of your paper should be the logic of the argument(s) leading to your conclusion. Your argument(s) should contain your entire critique and solution. You do not want to research the outcome or the performance of the company since the case. I am seeking your opinion, not the duplication of the decisions made by others.

Case solutions are limited to three pages of text (typed, with reasonable point sizes, spacing, and margins). Supporting tables, spreadsheets and graphs are limited to five additional pages. Tables and graphs should be clearly labeled, with the assumptions made and formulas used obvious to the reader. Care in preparing your tables is important.

Class Participation

Class participation grades will be determined, in order of importance, on the basis of 1) participation in the class discussion of the cases; 2) the intra-group peer evaluations.

This course relies heavily on class participation and requires substantial preparation for each session. You are expected to participate in the class. A necessary (but not sufficient) requirement for participation is presence. If you are not in class, you cannot have participated. You do not need to tell me that you are going to miss a class, but your performance assessment will reflect if you are not there. Please bring your nameplate to class.

This class starts promptly. Class sessions should be considered to be important business meetings with clients (our clients are CEOs, CFOs, boards of directors, etc.) or with the CEO of your firm, whether the class in question is a session when a case is due or when a lecture is scheduled. You would not be late to such meetings (particularly with any frequency) and expect to keep your clients or your job.

Since you are enrolled in the 9:00 or 10:45 section, this is the section you should attend and you should form groups from within your own section. The reason for this is simple: Finance B8307 has an enrollment restriction because of the difficulty of running a class participation-oriented class effectively with more students. Your group responsibility requires you to be in class to provide analysis and discussion with your group.

If you must miss a class in a rare instance, you may attend another section.

Honor Code

Students are expected to fully abide by the Honor Code, which states “As a lifelong member of the Columbia Business School community, I adhere to the principles of truth, integrity and respect. I will not lie, cheat, steal or tolerate those who do.”

The structure of this class, especially the amount of group work and measurement of performance based on team product, makes the application of the Honor Code (for both students and teachers) a little trickier than in a midterm/final class. For example, I cannot determine, other than through information that is given to me on peer evaluations and what I observe in class, to what extent one group member shirked at his or her group's expense.

Case solutions for a grade are designation type A (group/group).
The final case is designation type C (individual/individual).

The following examples are concrete violations of the Honor Code:

1. Using, as a resource to complete any course requirements, any written or verbal account of a solution to (or analysis of) any of the cases taught in the class. This includes using any prior solution to the case (be it someone's class notes or cases/solutions from a prior quarter, teaching notes from professors, etc).
2. Any communication to students in other sections of the class for whom a case is due at a later time concerning any details of the class discussion of the case.
3. Unauthorized communication concerning the final case once it has been handed out.

GROUP MEMBER BEING EVALUATED:

YOUR NAME:

SECTION:

Directions: Rate this member relative to his/her participation in and contribution to your group by circling the appropriate number. (1 unsatisfactory, 3 satisfactory, 5 exceptional)

					COMMUNICATION
1	2	3	4	5	Listens to and considers others' points of view
1	2	3	4	5	Is open to feedback
1	2	3	4	5	Communicates ideas well with others
1	2	3	4	5	Makes clear his/her personal expectations of group
1	2	3	4	5	Informs group when he/she will not make group timeline
					INNOVATION/IDEA GENERATION
1	2	3	4	5	Offers ideas on how to achieve group goals
1	2	3	4	5	Applies past knowledge to current projects
1	2	3	4	5	Offers alternative approaches to current ways of thinking
1	2	3	4	5	Challenges the status quo when necessary
1	2	3	4	5	Encourages innovative thinking among group members
					INITIATIVE
1	2	3	4	5	Works to enable group to move ahead efficiently
1	2	3	4	5	Goes beyond the requirements of the task
1	2	3	4	5	Looks for opportunities to improve
					TEAM ORIENTATION
1	2	3	4	5	Works well with group
1	2	3	4	5	Acknowledges and pays attention to group and individual activities
1	2	3	4	5	Treats all members as colleagues
1	2	3	4	5	Completes individual task requirements to achieve group goals
1	2	3	4	5	Gives other members credit for their ideas
1	2	3	4	5	Considers the group goal as the number one priority
1	2	3	4	5	Attends all group meetings or provides advance notice when absent
1	2	3	4	5	Informs group of his/her task so that it can be completed when absent

What strengths did this person bring to the group?

How could this individual be more effective in the group?

Would you like to work with this person again?

Evaluate the above person overall in 0.5 increments on a scale of 1 to 5:

Course Outline

The following topics and cases will be covered on the associated dates. For each class with a case write-up due, each group's written case is to be turned in at the beginning of class. Everyone is expected to be prepared for a class discussion of each case whether a case solution is due or not.

A list of questions to prepare for each case (class) and the required and recommended readings (including the case) follow the outline.

The structure of the detailed assignment pages (beginning on page 9) is as follows: on a day where a case is due, the "Questions to discuss prior to class" are a collection of issues (both key issues and, sometimes, side issues) related to the case which you can use to guide your group discussions and which will usually be brought up at some point in the class discussion. (The case write-up should **not** simply be a list of answers to the questions, see "Case Solutions" above.) You should be prepared to discuss aspects of the case and to defend your proposal concerning the decision(s) the company should make. The readings refer to the case (or lecture) being covered on the same page: to get the most out of the case or lecture, you should look over the readings you intend to read beforehand.

The readings include the cases and teaching notes (the only *required* reading) and other materials which may prove helpful in doing the cases. The philosophy behind the range of available readings is that different people want to get different things out of Advanced Corporate Finance --- people have different backgrounds (so some readings are review and not necessary); people have different interests (so some readings will be preferred to others); and people have different career interests (so some readings will be necessary for some students and not for others).

The following is the schedule of topics and cases and their dates.

Class Date	Topic and Case
September 6 (W)	Introduction to the Course
September 11 (M)	Cost of Capital and Capital Budgeting
September 13 (W)	No Class
September 18 (M)	Cost of Capital and Capital Budgeting Case: Marriott Corporation: The Cost of Capital (<i>Abridged</i>)
September 20 (W)	Discounted Cash Flow Valuation
September 25 (M)	Discounted Cash Flow Valuation Case writeup to be handed in by group: <i>E.I. du Pont de Nemours and Co.: Titanium Dioxide</i>
September 27 (W)	Payout Policy: Dividends
October 2 (M)	Payout Policy: Stock Repurchases
October 4 (W)	Payout Policy: Dividends and Stock Repurchases Case writeup to be handed in by group: <i>Cash is King: Microsoft's 2004 Cash Disbursement</i>
October 9 (M)	Equity Financing and Initial Public Offerings
October 11 (W)	Equity Financing and Initial Public Offerings Case: <i>Don't Be Evil: Google's 2004 Dutch Auction Initial Public Offering</i>
October 16 (M)	Option Pricing Theory and Applications
First Final Exam Period	No Classes
October 25 (W)	Option Pricing Theory and Applications
October 30 (M)	Option Pricing Theory and Applications Case writeup to be handed in by group: <i>Chrysler's Warrants (1983)</i>

November 1 (W)	Option Pricing Theory and Applications; Corporate Control
Election Days	No Classes
November 8 (W)	Corporate Control Case: <i>Paramount Communications Inc.- 1993</i>
November 13 (M)	Corporate Control
November 15 (W)	Corporate Control Case writeup to be handed in by group: <i>Paramount Communications Inc.- 1994</i>
November 20 (M)	Corporate Control <i>Valuing the AOL Time Warner Merger</i>
Thanksgiving Break	No Classes
November 27 (M)	Recapitalizations
November 29 (W)	Recapitalizations Case: <i>Bankruptcy and Restructuring at Marvel Entertainment Group</i>
November 30 (Th)	Marvel and Disney Visitor (class will be videotaped): 12:30-2:00 p.m. in Uris 333 Jeff Kaplan (COO Appaloosa, formerly of MacAndrews & Forbes and Bank of America Merrill Lynch)
December 4 (M)	Course Summary Case: <i>Four Princesses, Meet the Fantastic Four: Disney's 2009 Acquisition of Marvel</i>
December 6 (W)	No Class
December 11 (M)	Course Summary Case writeup to be handed in by group: <i>Please Add me to your Network: Microsoft's 2016 Acquisition of LinkedIn</i> Peer evaluations to be handed in individually

Introduction to the Course

The lecture will, for the most part, follow the lecture notes contained in the course packet. The lecture is intended to introduce the framework of riskless arbitrage within which we evaluate corporate financial decisions.

Readings

1. Hodrick, Laurie Simon. *Teaching Note: Note on Riskless Arbitrage and Corporate Finance*, 2017. In the course packet.

Lecture on Cost of Capital and Capital Budgeting

The lecture will, for the most part, follow the lecture notes contained in the course packet. The lecture is intended to be a big picture discussion of the cost of capital in general (and the WACC in particular), with minutiae related to the estimation of the WACC relegated to the discussion of the Marriott Cost of Capital case.

Readings

1. Hodrick, Laurie Simon. *Teaching Note: Note on the Cost of Capital*, 2017. In the course packet.
2. Hodrick, Laurie Simon. *Teaching Note: Note on the Cost of Capital, Appendix*, 2017. In the course packet.
3. Chapters 10-12 of BD, on the cost of capital.
4. Chapter 11 of Valuation, on the cost of capital.
5. Brotherton, W. Todd, Kenneth M. Eades, Robert S. Harris, and Robert C. Higgins. "Best Practices" in Estimating the Cost of Capital: An Update. *Journal of Applied Finance*, 2013, pages 15-33. On Canvas.
6. Supplementary information to compute the cost of capital. On Canvas.

Marriott Corporation: The Cost of Capital (Abridged)

Questions to be discussed prior to class

1. Are the four components of Marriott's financial strategy consistent with its growth objective?
2. How does Marriott use its estimate of the cost of capital? Does this make sense?
3. Using the CAPM, estimate the weighted average cost of capital for:
 - Marriott Corporation
 - The lodging division
 - The restaurant division
4. Towards answering #3
 - What risk-free rate and risk premium did you use to calculate the cost of equity? Why did you choose these numbers?
 - How did you estimate the required rate of return on the debt of the company and on the divisions? Should the debt cost differ across divisions? Why?
 - How did you measure the beta of each division? Of the firm?
 - Should you take corporate and/or personal taxes into account? How?
5. What is the cost of capital for Marriott's contract services division? How can you estimate its equity costs without publicly traded comparable companies?
6. If Marriott used a single corporate hurdle rate for evaluating investment opportunities in each of its lines of business, what would happen to the company over time?

Readings

1. *Marriott Corporation: The Cost of Capital (Abridged)*. On Canvas.
2. Supplementary information about Marriott. On Canvas.

Lecture on Discounted Cash Flow Valuation

The lecture will, for the most part, follow the lecture notes contained in the course packet. The lecture is intended to examine various discounted cash flow methods used for valuation, including ANPV and WACC. EVA and the Dividend Discount Model will be presented. Financial Multiples are also discussed.

Readings

1. Hodrick, Laurie Simon. *Teaching Note: Note on Discounted Cash Flow Valuation*, 2017. In the course packet.
2. Hodrick, Laurie Simon. *Teaching Note: Note on Financial Multiples*, 2017. In the course packet.
3. Chapters 8, 9, 18, and 19 of BD, on valuation.
4. Chapters 6-14 of Valuation, on valuation.
5. Luehrman, Timothy A. *Note on Adjusted Present Value*. Harvard Business School teaching note. On Canvas.
6. Supplementary information about valuation. On Canvas.

**E.I. du Pont de Nemours and Co.: Titanium Dioxide
CASE WRITE-UP TO BE HANDED IN BY GROUP**

Questions to discuss prior to class

1. What are Du Pont's competitive advantages in the TiO₂ market as of 1972? How permanent or defensible are they? What must Du Pont do to retain its competitive advantages in the future?
2. Given the forecasts provided in the case, what are the relevant cash flows associated with the following three strategies for managing DuPont's TiO₂ business?

Strategy I: Status Quo. Hold production capacity at 325,000 tons per year.

Strategy II: Maintain Strategy. Build capacity to 482,000 tons by 1985.

Strategy III: Growth Strategy. Build capacity to 685,000 tons per year by 1985.

Notice that the status quo is not directly discussed in the case, but just gives a benchmark of comparison between the two strategies being considered (maintain vs. growth).

3. How much risk and uncertainty surround these future cash flows? What are particular sources of risk facing Du Pont?
4. How might competitors respond to Du Pont's choice of either strategy in the TiO₂ market?
5. What other factors should Du Pont consider in making this decision?
6. Which strategy, maintain or growth, looks more attractive for Du Pont? What are the key factors leading to your conclusion?

FYI, in 1972, bond yields and recent inflation data were approximately as follows:

Long-term Treasuries = 6.2%

Aaa Corporate bonds = 7.2%

Baa Corporate bonds = 7.8%

Inflation rate (CPI) = 3.2%

Assignment hints

1. The continuation or terminal value is especially important for strategies with large CAPEX during the forecast period.
2. Case page 4: Ongoing capital expenditure for maintenance and replacement were expected to approximate depreciation allowances over time.
3. Case page 4: Should TiO₂ production terminate at any point in the future, it was believed that Du Pont's investment in working capital and the book value of other assets could be completely recovered.

Readings

1. *E.I. du Pont de Nemours and Co.: Titanium Dioxide*. On Canvas.
2. Chapter 22 of BD.
3. Supplementary information about Du Pont. On Canvas.

Lecture on Payout Policy: Dividends

This lecture will, for the most part, follow the lecture notes contained in the course packet. The lecture will introduce the facts about dividends, and it will discuss the common explanations for the patterns in dividend payout policy.

Readings

1. Hodrick, Laurie Simon. *Teaching Note: Note on Payout Policy: Dividends*, 2017. In the course packet.
2. Chapter 17 of BD, on dividends.
3. Miller, Merton, The Modigliani-Miller Propositions After Thirty Years. On Canvas.
4. Supplementary information about dividends. On Canvas.

Lecture on Payout Policy: Stock Repurchases

This lecture will, for the most part, follow the lecture notes contained in the course packet. The lecture will introduce the facts about stock repurchases, and it will discuss the common explanations for the patterns in stock repurchase payout policy.

Readings

1. Hodrick, Laurie Simon. *Teaching Note: Note on Payout Policy: Stock Repurchases*, 2017. In the course packet.
2. Bagwell, Laurie Simon and John Shoven. Cash Distributions to Shareholders. *Journal of Economic Perspectives*, 1989. On Canvas.
3. Supplementary information about repurchases. On Canvas.

Cash is King: Microsoft's 2004 Cash Disbursement
CASE WRITE-UP TO BE HANDED IN BY GROUP

Questions to be discussed prior to class

2. How much cash does Microsoft really need? What are the key considerations? How important are strategic factors?
3. What is the value of Microsoft's cash hoard? Is there option value to holding this cash?
4. What are the potential effects of a major cash disbursement on Microsoft? On its shareholders? On its employees? On its senior management? On its competitors? How does your valuation of Microsoft influence your opinion?
5. What is the rationale for the amount and the structure of the proposed payout plan? Why now? Is it optimal? If not, what should they do instead?
6. You do not want to research the outcome or the performance of the company since 2004. I am seeking your opinion, not the duplication of the decisions made by others.

Assignment hints

1. These exhibits are exactly as reported in Microsoft annual reports. Segment results in Exhibit 4 are not restated for SFAS 123, *Accounting for Stock-Based Compensation*, whereas the income statement data in exhibit 5 *has* been restated for SFAS 123 in 2003 and 2004. Additionally, Microsoft periodically restates segment results to reflect acquisitions and/or discontinued operations.
2. Students will have to adjust 2003 and 2004 operating expenses for the change in accounting treatment, which resulted in higher operating expense items (like sales and marketing expense).
3. Students should assume that Exhibit 5 most accurately represents Microsoft's financial results, and should use this as the basis for any projections. Exhibit 4 should be used only to understand the company's revenue mix and the relative profitability of each operating segment.

Readings

1. *Cash is King: Microsoft's 2004 Cash Disbursement*. On Canvas.
2. Supplementary information about Microsoft. On Canvas.

Canvas files

1. Microsoft.xlsx

Lecture on Equity Financing and Initial Public Offerings

This lecture will, for the most part, follow the lecture notes contained in the course packet. This lecture will survey equity financing and detail initial public offerings for stock.

Readings

1. Hodrick, Laurie Simon. *Teaching Note: Note on Equity Financing and Initial Public Offerings*, 2017. In the course packet.
2. Chapter 23 of BD, on equity financing.
3. Chapter 34 of Valuation, on valuation of high-growth companies.
4. Smith, Clifford, *Raising Capital: Theory and Evidence*. On Canvas.
5. Hodrick, Laurie Simon, *Google's IPO: A Dutch Auction Works, If You Let It*. On Canvas.
6. Hodrick, Laurie Simon, *Dutch Auctions*. On Canvas.
7. *Supplementary information about equity financing*. On Canvas.

Don't Be Evil: Google's 2004 Dutch Auction Initial Public Offering

Questions to discuss prior to class

1. What is Google's competitive advantage? Is it permanent? Defensible? What must/can Google do to retain it?
2. Why is Google going public in 2004? What are the risks to Google in this transaction?
3. What are reasonable valuations for Google? High and low likely values? How did you estimate these values? What are the key value drivers? Please draw on as many valuation approaches as you reasonably can.
4. How does your answer to question 3 compare with the IPO offering price of \$85? Think carefully about your answer here: the offering price need not equal your answer to question 3. If your answer to question 3 differs from the IPO price, however, please explain why.
5. What, if anything, do the changes in the market values of the competition indicate when Google releases information during this period?
6. As a potential investor in Google's IPO in 2004, at what price(s), if any, would you have recommended that ReidCourt bid? Justify your decision.

Assignment hints

1. The implied IPO market capitalization is \$23.05 billion, based on an offering price of \$85 with 271.2 million shares (33,603,386 Class A shares and 237,616,257 Class B shares).
2. For a DCF analysis, the case provides lots of information on which to base financial forecasts. You then may want to consider expansion options.

Readings

1. *Don't Be Evil: Google's 2004 Dutch Auction Initial Public Offering*. On Canvas.
2. Supplementary information about Google. On Canvas.

Canvas files

1. Google.xlsx

Lectures on Option Pricing Theory and Applications

These lectures will, for the most part, follow the lecture notes contained in the course packet. The lectures are intended to review option pricing theory and applications.

Readings

1. Hodrick, Laurie Simon. *Teaching Note: Note on Option Pricing Theory and Applications*, 2017. In the course packet.
2. Hodrick, Laurie Simon. *Teaching Note: Note on Valuing Real Options*, 2017. In the course packet.
3. Copeland and Tufano. A Real-World Way to Manage Real Options. On Canvas.
4. Chapters 20-22 of BD, on option pricing and real options.
5. Chapter 32 of Valuation, on real options.

Canvas files

1. BSCall.xlsx
2. BinomialOptionPricing.xlsx

Chrysler's Warrants (1983)
CASE WRITE-UP TO BE HANDED IN BY GROUP

Questions to discuss prior to class

1. Value the Chrysler warrants held by the government on five dates (even if they didn't actually exist yet): September 14, 1979 (see case exhibit 5); January 7, 1980 (see case exhibit 6); April 8, 1980 (see case exhibit 7); May 12, 1980 (see case exhibit 8) and September 1, 1983 (see case exhibit 4). Why did the warrants' value change over this time?
2. To test the estimate of the standard deviation given in exhibit 4, use the data in case exhibit 10 on Chrysler's publicly traded warrants to solve for the standard deviation implied by the warrant's price.

Hint: The implied standard deviation for the September 1, 1983 numbers seems big.

3. Value the government's loan guarantee as of May 12, 1980. Remember that it amounts to a put option, which allows the banks to put their risky Chrysler loans to the government.

Hint: The variance of returns on Chrysler debt is suggested by case exhibit 11. How else could this put be priced?

4. What is the prospective internal rate of return to the government on the loan guarantee as of May 12, 1980, taking into account the expected fees and the current value of the warrants? How does this IRR compare with Chrysler-type risks in the market?
5. What price should Chrysler bid for its warrants in September 1983?

Assignment hints

1. Typos: Exhibits 4-8, third column should read $R_j = S_j / S_{j-1}$, and log is supposed to read \ln .
2. Some of the calculations in the Darden version (on Canvas) of the exhibits are erroneous and are corrected in the Canvas spreadsheet.
3. The loan guarantee was signed on May 12, 1980. The warrants expired on December 31, 1990.

Readings

1. *Chrysler's Warrants (1983)*. On Canvas.
2. Supplementary information about Chrysler. On Canvas.

Canvas files

1. ChryslerCorrectedData.xlsx

Lectures on Corporate Control

These lectures will, for the most part, follow the lecture notes contained in the course packet. These lectures will introduce the market for corporate control. Both theoretical arguments and empirical evidence will be presented.

Readings

1. Hodrick, Laurie Simon. *Teaching Note: Note on Corporate Control*, 2017. In the course packet.
2. Chapter 28 of BD, on mergers and acquisitions.
3. Chapter 21 of Valuation, on mergers and acquisitions.
4. Hodrick, Laurie Simon. What I Teach my Students about the Diversification Discount: A Brief Summary. On Canvas.
5. Brotherson, W. Todd, Kenneth M. Eades, Robert S. Harris, and Robert C. Higgins. Company Valuation in Mergers and Acquisitions: How is Discounted Cash Flow Applied by Leading Practitioners? *Journal of Applied Finance*, 2014, pages 1-9. On Canvas.
6. Cullinan, Le Roux, and Weddigen. When to Walk Away from a Deal. On Canvas.
7. Supplementary information about corporate control. On Canvas.

Paramount Communications, Inc. - 1993

Questions to discuss prior to class

1. Why do you think Paramount is a takeover target?
2. Which of the two firms - Viacom or QVC - would make a better fit for Paramount? Which would Paramount management, i.e., Martin Davis, prefer, if it had to choose?
3. What effect would Viacom have on the costs at Paramount if it bought the company? What effect would Viacom have on Paramount's growth rate? What would happen to costs and sales growth if QVC bought Paramount instead?
4. What is Paramount worth as is? To Viacom? To QVC? In class, I will expect you to argue for the particular cost savings and / or synergies that Viacom and QVC will be able to achieve.

Hint: Calibrate your valuation to the current stock price.

5. How should Redstone proceed?
 - What price should he offer?
 - Should the offer be a cash offer, a stock offer, or some combination?
 - What should he do about the lock-out option and the termination fees?
 - Should he bother trying to buy Paramount at all?

Assume:

- Paramount's marginal tax rate is 37%.
- Expected inflation is 4%.

Corrections: In Exhibit 8, July 31 is really July 30. Also, while the Paramount and S&P prices are correct, for July 30, 1993 and August 30, 1993 the Viacom and QVC prices are wrong. Use instead the Viacom and QVC prices for 8/2 and 8/31 given in Exhibit 4 of Paramount 1994.

Readings

1. *Paramount Communications, Inc. - 1993*. On Canvas.
2. Supplementary information about Paramount. On Canvas.

Canvas files

1. Pmt93.xlsx

Paramount Communications Inc. – 1994
CASE WRITE-UP TO BE HANDED IN BY GROUP

Questions to discuss prior to class

1. What do you think of Redstone's tactics in making the initial offer to Paramount? The Price? The Deal structure? The lock-up option? The termination fee? What did the market think of the initial offer?
2. Why did Viacom change its bid after October 21?
3. What do you think of the actions of Paramount's board before the November 24, 1993 Delaware Chancery Court decision? What do you think of the auction procedure devised by Paramount's board after the Delaware Court decisions?
4. Explain what has happened with the stock prices of the three players, Paramount, Viacom and QVC, from September of 1993 to February of 1994. Specifically, explain the movements of QVC and Viacom stock as the likelihood of their winning changes.

Hint: November 24 and January 7 are particularly interesting.

5. What is the impact of the Contingent Valuation Rights (CVRs)? What are their key features?
6. What did the changes in QVC's final bid accomplish?
7. Which of the two final bids is more attractive at the current (1994) stock prices of QVC and Viacom? Which should Paramount shareholders accept in February of 1994? Why?

Hint: Start by replicating Lazard Frères' analysis of the bids (Exhibit 5), then consider what you disagree with. TAKE AS GIVEN the valuations for Viacom's subordinated debentures and QVC's Preferred Stock.

Typo: In Exhibit 6, Paramount put on 1/31/94 for 18-Mar should have price of \$1.85, not \$18.50.

Readings

1. *Paramount Communications, Inc. - 1994*. On Canvas.
2. Supplementary information about Paramount. On Canvas.

Canvas files

1. Pmt94.xlsx

Valuing the AOL Time Warner Merger

Questions to be discussed prior to class

1. What was Time Warner worth as a stand-alone company in the early January 2000? What was AOL worth as a stand-alone company? What was the value of the merged company? How did you estimate these values? What are the key value drivers? Please draw on as many valuation approaches as you reasonably can.

Hint: Start with the LB and SSB analysts as discussed in Appendix C, then consider with what you disagree.

Hint: Page 1 of the HBS Case states that “claims were made that the combined entity would generate over \$1b in cash during 2001.” Exhibit D1 provides one such claim, the 2001 synergy assessment published by Merrill Lynch analyst Henry Blodget. I expect you to include an argument for/against particular revenue enhancement/cost savings synergies that AOL and Time Warner would be able to achieve if merged.

2. What would be the merged firm’s competitive advantage? Is it permanent? Defensible? What must/can it to retain it?
3. What are the key risks associated with the merger in 2000?
4. This merger was structured as an all-stock, fixed exchange ratio deal (TW:AOL = 1.5:1) without a collar: Each Time Warner shareholder would receive 1.5 shares in AOL Time Warner per share at the completion of the deal. This is described on page 5 of the attached HBS case. Given AOL’s value of \$73 per share on 1/7/2000, this implies that a Time Warner shareholder would receive a consideration currently valued at \$109.50 ($=\73×1.5) per Time Warner share, though this consideration value changes as AOL’s share price changes prior to deal completion, to maintain the fixed exchange ratio of 1.5:1.

I would like you to value a floating (fixed exchange) collar with the following characteristics and determine for which firm(s) would this collar be potentially beneficial in 2000, how valuable, and why?

The floating (fixed exchange) collar: If AOL’s stock price is between \$48.00 per share and \$98.00 per share when the deal closes, AOL shareholders will receive 1 share in AOL Time Warner and Time Warner shareholders will receive 1.5 shares of AOL Time Warner, as prescribed under the original terms of the merger agreement. However, if at closing AOL shares are below \$48 per share, then the exchange ratio is reset such that Time Warner shareholders receive \$48 per AOL share in a fixed value deal worth \$72.00 ($=\48×1.5) per Time Warner share. Similarly, if at closing AOL is above \$98 per share, then the exchange ratio is reset such that Time Warner shareholders receive \$98 per AOL share in a fixed value deal worth \$147.00 ($=\98×1.5) per Time Warner share.

5. What does the change in the market capitalizations of the companies between 1/7/2000 and 1/31/2000 indicate about the market's assessment of the expected synergy and whether either firm is overpaying?
6. Though the deal is touted as a "strategic merger of equals," which firm is acquiring which? Has the target chosen a good time to sell itself?
7. As of 2000, AOL pays no dividend. Time Warner pays a dividend of 56 cents per share per year.
8. What important things change between January 2000 and January 2001? What advice would you give the AOL and Time Warner boards of directors, respectively, before the deal closes in early 2001?
9. Given the information available in the case, do you predict that this merger, which the New York Times in 2010 called "a colossal mistake," Bloomberg called in 2013 "the most disastrous in corporate history," and the Economist called in 2014 "the deal of the century, just not in a good way," failed because of bad luck, bad strategy, or bad execution?

The importance of this question has recently been magnified, as the challenges for the pending merger of Time Warner and AT&T "echo those of 2000 AOL deal" (WSJ 10/24/16) so much that Steve Case says "it feels like déjà vu...many of the lessons I learned could prove valuable to AT&T and Time Warner today" (WSJ 10/25/16).

Assignment hints

1. There is a timeline (Exhibit I) that summarizes all key relevant events during the period 2000-2009. Note the typo in the HBS case in the third paragraph on page 1: it should read that the deal closed on January 11, 2001.
2. Some calculations in the Exhibits of the hard copy Harvard Case contain errors and inconsistencies, so you will want to use the spreadsheet posted on Canvas. Relevant cells in Exhibits 2, 3, 7, and Appendix C3 are highlighted to call your attention to them. Green cells should be taken as corrected. Yellow cells may or may not be correct and you should use your judgment.
3. Some of SSB's inputs are suspect. (Relevant cells in Appendix C1 are highlighted in yellow).
4. There are always ambiguities in provided data. Please make your assumptions/choices clear and undertake sensitivity analysis as appropriate. You can assume that all historical financials are accurate.
5. You want to use as much of what you have learned in this course as possible, including intuitions developed analyzing other cases.

6. You do not want to research the outcome of this deal nor the performance of the company. I am seeking your opinion. As we have seen elsewhere, what actually happened need not have been the right course of action.

Readings

1. *Valuing the AOL Time Warner Merger...* and additional materials. On Canvas.

Canvas files

1. AOLTWE Exhibits.xlsx

Lecture on Recapitalizations

This lecture will, for the most part, follow the lecture notes contained in the course packet. This lecture examines recapitalizations including leveraged buyouts.

Readings

1. Hodrick, Laurie Simon. *Teaching Note: Note on Leveraged Recapitalizations and Bankruptcy*, 2017. In the course packet.
2. Chapter 16 of BD, on the limits of debt financing.
3. Pages 833, 984-986 of BD, on leveraged buyouts.
4. Inselbag and Kaufold. *How to Value Recapitalizations and Leveraged Buyouts*. On Canvas.
5. Supplementary information about recapitalizations. On Canvas.

Canvas files

1. RecapSpreadsheets.xlsx

Bankruptcy and Restructuring at Marvel Entertainment Group

Questions to be discussed prior to class

1. Why did Marvel file for Chapter 11? Were the problems caused by bad luck, bad strategy, or bad execution?
2. Evaluate the Proposed restructuring plan. Will it solve the problems that caused Marvel to file chapter 11? As Carl Icahn, the largest unsecured debt-holder, would you vote for the proposed restructuring plan? Why or why not?
3. How much is Marvel's equity worth per share under the proposed restructuring plan assuming it acquires Toy Biz as planned? What is your assessment of the pro forma financial projections and liquidation assumptions? What alternative valuation methods might justify Perelman's valuation of the equity?
4. Will it be difficult for Marvel or other companies in the MacAndrews and Forbes holding company to issue debt in the future?
5. Why did the price of Marvel's zero-coupon bonds drop on Tuesday, November 12, 1996? Why did the portfolio managers at Fidelity and Putnam sell their bonds on Friday, November 8, 1996?

Assignment hints

1. When reviewing Exhibit 1: Ownership of Marvel Entertainment Group, please be aware that the three entities above the MEG ownership structure are not included in the MEG capital structure and hence does not appear on their balance sheet.
2. A company with publicly-traded debt does not necessarily imply that stock of the holding company is publicly traded, merely that the debt itself is traded publicly.

Readings

1. *Bankruptcy and Restructuring at Marvel Entertainment Group*. On Canvas.
2. Supplementary information about Marvel. On Canvas.

Canvas files

1. Marvel.xlsx

Four Princesses, Meet the Fantastic Four: Disney's 2009 Acquisition of Marvel

Questions to discuss prior to class

1. What is Marvel worth as a standalone company as of August 30, 2009? What is Disney worth? What is the value of the merged company? How did you estimate those values? What are the key value drivers? Please draw on as many valuation approaches as you reasonably can.
2. Does the combination of Disney and Marvel make strategic sense? To what extent does being owned by Disney enhance Marvel's current strategy for maximizing the value of its character library? Disney expects the acquisition of Marvel to generate significant synergies. You have been provided with an assessment of deal synergies produced by Credit Suisse shortly after the deal was announced as a starting point. It is critical that you draw your own assessment of the potential synergies.
3. What are the risks associated with the deal? How do they affect Marvel shareholders?
4. What, if anything, do the changes in the market values of these firms indicate during the period leading up to August 30? What will happen to the prices of Disney and Marvel on Monday, August 31 if a deal is announced before the stock market opens?
5. What do you think of the deal protection measures that Disney sought?
6. Has Marvel chosen a good time to sell itself?

Assignment Hints

1. You are tasked with presenting an overall recommendation on the deal. You should state whether you believe that the consideration offered to Marvel shareholders is fair from a financial point of view *and* address the broader strategic value of the transaction.
2. BAML's confidential June 24, 2009 board book of discussion materials is attached. Note that these estimates are from June 2009, whereas the financial exhibits provide data as of August 28, 2009, and the Wall Street estimates were generated at various points over this time period. This may result in some inconsistencies. You will need to choose which data to use and may need to make assumptions to remedy omissions, as is common in a work setting. Choose thoughtfully and justify your choices.
3. The timeline included summarizes all key events leading up to and including the signing of the deal.
4. Since you are making a recommendation on August 30, 2009, you should evaluate the deal based only on what Marvel's board and its advisors would have known on that date.
5. For completeness, BAML's DCF estimates Marvel's share price based on fully diluted shares calculated using the treasury stock method. Do not devote substantial time to the

mechanics of this calculation for your own analysis. Note that for the exhibit to calculate, you must set Excel to allow iterative calculations.

6. The tax adjustment formula is based on the volume-weighted average trading price (VWAP) of Disney stock on the day prior to close. You can assume that VWAP equals Disney's closing price.
7. Marvel's policies for recognizing film revenues and expenses in its studio business are consistent with industry standards. Marvel recognizes revenue received from its producer's fee and gross receipts net of distribution partner Paramount's distribution fee and reimbursable expenses. All direct film production costs for Marvel Studios films are capitalized then amortized as the film earns revenue over a maximum life of 10 years. It does not recognize costs linked to distribution, such as film prints, promotions, or revenue participation payments to talent.

Readings

1. *Four Princesses, Meet the Fantastic Four: Disney's 2009 Acquisition of Marvel*. On Canvas.
2. Supplementary information about Marvel. On Canvas.

Canvas files

1. DisneyMarvel.xlsx
2. June242009BoardBook.pdf

Please Add me to your Network: Microsoft's 2016 Acquisition of LinkedIn
CASE WRITE-UP TO BE HANDED IN BY GROUP

Questions to discuss prior to class

1. What is LinkedIn worth as a standalone company as of June 13, 2016? What is Microsoft worth? What is the value of the merged company? How did you estimate those values? What are the key value drivers? Please draw on as many valuation approaches as you reasonably can.
2. Does the combination of Microsoft and LinkedIn make strategic sense? To what extent does being owned by Microsoft give LinkedIn an opportunity to cross-sell its products through Microsoft's platform and vice versa? The majority of the synergies in this transaction are revenue synergies. What is your perspective on how certain, and ascertainable, these synergies are for the merged company?
3. What are the risks associated with the deal? How do they affect Microsoft and LinkedIn shareholders? Why do you think Microsoft paid in all cash for this transaction?
4. What, if anything, do the changes in the market values of these firms indicate during the period leading up to June 13? What will do the after-announcement changes in stock prices indicate about what the market thinks about the deal with regards to (i) the probability of the deal closing and (ii) the allocation of synergies and whether Microsoft overpaid for LinkedIn?
5. What do you think of the deal protection measures Microsoft sought? Do you believe LinkedIn's Transactions Committee acted consistent with their fiduciary duties when evaluated the bids from Microsoft and Salesforce.com, Inc.?
6. Has LinkedIn chosen a good time to sell itself?
7. Were this acquisition to close, but prove not to create value, do you believe it would be due to bad luck, bad strategy, or bad execution?

Readings

1. *Please Add me to your Network: Microsoft's 2016 Acquisition of LinkedIn.* On Canvas.
2. Supplementary information about Microsoft and LinkedIn. On Canvas.

Canvas files

1. MSFTLNKD.xlsx