Evaluation of Financial Information

Syllabus
(Subject to minor changes)

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Course Focus

We will learn how to use financial information to value firms, projects, and securities in a wide variety of industries, including real estate. The course will be based entirely on the Harvard Business School case studies and will focus on learning techniques of financial analysis, selecting an appropriate valuation model, analyzing the quality of financial data, finding an appropriate discount rate, and forecasting financial variables and cash flows. Corporate Finance course is strongly suggested as a prerequisite. Consult with faculty if this can be waived.

Course Materials

Textbooks:
1. Principles of Corporate Finance by R.A. Brearly, S. Myers, and F. Allen, 10th edition*

*These textbooks will be used for background readings only, and earlier editions are also fine.

Cases will be available on study.net

Course Format

Case analysis will involve building Excel models and conducting sensitivity analysis to assumptions in support of the final recommendation. Due to the labor-intensive nature of case preparation, I strongly encourage students to work in groups to get ready for class. Attendance and participation are essential parts of the learning process for this course. I expect students to attend all scheduled sessions and to come prepared to contribute to the discussion. Reading assignments should be read in advance of class, and everyone is expected to participate in discussions. If you have a compelling reason for missing a
class, you should inform me in advance (email is best). **Missing classes will affect your grade; missing any without reasonable cause is likely to do so significantly** (see participation grading scheme below). If you absolutely need to miss a class, please let me know ahead of time, and I will, most likely, ask you to submit written answers to case questions prior to the missed class and evaluate your participation based on this writeup.

**Class Participation**

Class participation is a very important part of the learning process in this course. A major large part of your final grade will be based on an assessment of the quality of your contributions to class discussions.

**Homework Assignment**

There will be one homework assignment that needs to be turned in in written form.

**Final Project**

The final project involves solving a case and preparing a detailed report showing all relevant analysis.

**Office Hours**

Office hours are held by appointment.

**Evaluation**

Final grades will be computed as:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual class participation</td>
<td>50%</td>
</tr>
<tr>
<td>Homework assignment</td>
<td>10%</td>
</tr>
<tr>
<td>Final Project</td>
<td>40%</td>
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COURSE SCHEDULE

The course is comprised of seven modules:

**Module 1: Buy or rent and own or lease (and the analysis of real estate markets)**
Recommended reading:
1. R.A. Brealey, S. Myers and F. Allen, *Principles of Corporate Finance*, Chapter 4, Section 4.9

**Module 2: Production strategy (efficiency vs. risk)**
Recommended reading:

**Module 3: Macro forecasting**
Recommended reading:
1. R.A. Brealey, S. Myers and F. Allen, *Principles of Corporate Finance*, Chapter 22, Section 22.4

**Module 4: Corporate takeovers**
Recommended reading:
1. R.A. Brealey, S. Myers and F. Allen, *Principles of Corporate Finance*, Chapter 21

**Module 5: Decision trees, real options**
Recommended reading:

**Module 6: Subscriber models**
No recommended reading

**Module 7: Asset bubbles**
Recommended reading:
1. R.A. Brealey, S. Myers and F. Allen, *Principles of Corporate Finance*, Chapter 2, Section 2.4 and Chapter 7, Sections 7.6 -- 7.7
LIST OF SESSIONS:

The course will consist of the following cases, lectures, and in-class assignments

Session 1:
• CASE: Stedman Place: Buy or Rent?
  Topics covered: buy or rent decision, real estate markets, forecasting

Session 2:
• CASE: Health Development Corporation
  Topics covered: own or lease decision, the use of multiples

Session 3:
• CASE: Toy World, Inc.
  Topics covered: forecasting, production methods, balance sheet risks

Session 4:
• CASE: Ocean Carriers
  Topics covered: cash flow forecasting, macro forecasting

Session 5:
• INTERACTIVE LECTURE and AN IN-CLASS EXERCISE (please bring your laptops):
  Forecasting macro variables using international equity markets data

Session 6:
• CASE: Kerr-McGee
  Topics covered: hostile takeovers, real options

Session 7:
• CASE: Merck & Company: Evaluating a Drug Licensing Opportunity
  Topics covered: decision trees, probability trees, sunk costs, real options

Session 8:
• CASE: Valuing Project Achieve
  Topics covered: subscriber models, DCF valuation, forecasting
Session 9:
  • CASE: Netflix.com, Inc.
    Topics covered: subscriber models, forecasting

Homework assignment due

Session 10:
  • INTERACTIVE LECTURE and AN IN-CLASS EXERCISE (please bring your laptops):
    Asset Bubbles in Equity and Real Estate Markets

CASE QUESTIONS:

Module 1

Session 1
Case: Stedman Place
Case Questions:
  1. What is the cost of renting?
  2. What is the cost of buying?
  3. Identify the key assumptions and key unknowns that influence the buy-versus-rent decision.

Session 2
Case: Health Development Corporation
Case Questions:
  1. Did the purchase of the Lexington Club real estate increase the pre-tax value of HDC?
  2. Why does the Lexington Club real estate purchase reduce the office prices? Does it make sense?
  3. How would you structure the deal?

Module 2

Session 3
Case: Toy World, Inc.
Case Questions:
  1. Should Mr. McClintock adopt the level production plan? Among the relevant factors, consider the following:
    a. The likely savings
b. The amount and timing of additional required funds. (To get an estimate, use pro forma income statement and balance sheet, not cash budget.)
c. Risks to the various parties involved.

Module 3

Session 4
Case: Ocean Carriers
Case Questions:
Ocean Carriers uses a 9% discount rate.
1. Do you expect daily spot hire rates to increase or decrease next year?
2. What factors drive average daily hire rates?
3. How would you characterize the long-term prospects of the capsize dry bulk industry?
4. Should Ms. Linn purchase the $39 million capsize? Make two different assumptions. First, assume that Ocean Carriers is a US firm subject to 35% taxation. Second, assume that Ocean Carriers is located in Hong Kong, where owners of Hong Kong ships are not required to pay any tax on profits made overseas and are also exempted from paying any tax on profit made on cargo uplifted from Hong Kong.
5. What do you think of the company’s policy of not operating ships over 15 years old?

Session 5
Lecture and Exercise in extracting macro information from equity markets
Please bring your laptops.

Module 4

Session 6
Case: Kerr-McGee
Case Questions:
1. What is the NPV of exploring for oil?
2. What is the value of KMG?
3. What is the optimal corporate structure of KMG?
Module 5

Session 7
Case: Merck & Company: Evaluating a Drug Licensing Opportunity
Case Questions:
Assume that all cash flows are already discounted (or the discount rate is 0%)
1. How has Merck been able to achieve substantial returns to capital given the large costs and lengthy time to develop drugs?
2. Build a decision tree that shows the cash flows and probabilities throughout the FDA approval process.
3. Should Merck bid to license Davanrik? How much should they pay?
4. What is the expected value of the licensing arrangement to LAB? Assume a 5% royalty fee on any cash flows that Merck receives from Davanrik after a successful launch and that the present value of benefits are net of royalties.
5. How would your analysis change if the costs of launching Davanrik for weight loss are $255 million instead of $100 million as given in the case?

Module 6

Session 8
Case: Valuing Project Achieve
Case Questions:
1. What is Project Achieve’s competitive advantage? What uncertainties does it confront?
2. How have angel investors valued the company? Has the issuance of the angel round reduced the percentage ownership of Boyd as a common shareholder? Has the issuance of the angel round reduced the value of Boyd’s common stock?
3. Nine public companies have been identified as comparable to Project Achieve. Which of these companies do you consider to be most comparable? How can Boyd use her research on comparable companies in her valuation of Project Achieve?
4. What discount rate should Boyd use in her valuation of Project Achieve?
5. Boyd anticipates that Project Achieve will have different types of users (customers). What are these customer types? What is the most likely type of customer?
6. What value does each customer type have to Project Achieve?
7. What value does each targeted customer have to Project Achieve?
8. What is the value of all Project Achieve’s targeted customers?
9. What is the value of Project Achieve?
10. Boyd’s potential investors have widely varying estimates of the value of Project Achieve. How will Boyd’s valuation of Project Achieve contribute to her negotiations with potential investors? Why might their valuations differ from Boyd’s?
11. Boyd’s potential investors include angel investors, venture capitalists, a
strategic investor, and Jostens, a school supply company. What are the advantages and possible disadvantages to Project Achieve of each type of investor? Which type of investor would you consider most suitable for Project Achieve?

Session 9
Case: NetFlix.com, Inc.

Case Questions:
NetFlix uses a 20% discount rate.
1. What is NetFlix’s long-run objective? How does NetFlix plan to achieve this long-run goal?
2. Describe the NetFlix short-run business model. How would you assess NetFlix’s performance to date? How successful has NetFlix been in implementing its short-run business model?
3. Construct an annual subscriber model for NetFlix.com that can be used to forecast the expected cash flows for a new subscriber over the next five years. What is the value of a subscriber?
4. Revise your subscriber model for a retained customer.
5. Determine the expected cash flow for a new subscriber. This requires that you include the cash flows for subscribers that do not become paying subscribers and the subscribers that drop after six months.
6. Determine the present value of a new subscriber. Assume that subscriber cash flows occur only during the first five years.
7. What is the value of NetFlix.com?

Module 7

Session 10
Lecture and Exercise on asset bubbles and behavioral finance
Please bring your laptops.