15.418 Corporate Finance

(Monday, Wednesday 10:00-11:30 or 1:00-2:30, E62-276; and Friday 2:30-4:00, E52-164)

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Prerequisites: Finance Theory I (15.401/411) and Accounting (15.515/501).

Corporate Finance is an introduction to basic principles and decision-making tools for corporate financial management. It covers investment decisions, financing decisions and the management of cash flows. Specific topics include capital budgeting, valuation and the cost of capital, working capital management, security issues, dividend policy, optimal capital structure, and real options. Monday-Wednesday classes mostly use case studies to introduce and apply finance to these topics. Friday classes put teams of students to work on more extensive applied projects.

Friday classes teach how to work with financial spreadsheets, databases and statistical methods used in applied corporate finance. These sessions also cover valuation practice, including estimation of the cost of capital, at a deeper and more detailed level. Student teams will prepare two reports, one valuing investment in an oil field and one analyzing for a potential acquisition. There will be extensive instruction and practice in communication, including oral and PowerPoint presentations.

15.418 a 15-unit undergraduate subject. It is approved as an Institute Laboratory subject and as a CI-M subject for Course 15 students.

Monday-Wednesday classes meet with section A or B of 15.402, Corporate Finance. Prof. Thesmar will teach most of the Monday-Wednesday sessions, Prof. Myers most of the Friday “lab” sessions.
Class Procedures and Case Memoranda (Monday-Wednesday Classes)

For each case, Prof. Thesmar will assign case questions and you will have to submit a two-page memorandum with your proposed answers to these questions. You are allowed and encouraged, but not required, to meet in groups outside of class to discuss and analyze the cases. If you choose to do so, the group cannot be larger than four students. We will accept one memorandum from the group and count it for all students in the group. Each group member must make a substantial contribution to each part of the assignment. It is not acceptable, e.g., to divide the assignments amongst the team members.

The rules for writing memoranda are as follows:

- Each memorandum should be typed and not exceed two pages.
- The two-page limit is for text only; you may attach as many numerical calculations as you wish.
- Write these as if you were writing a recommendation to a CEO (or other major decision maker).
- The memoranda are due at the beginning of the class (see grading criteria below).

Because of the nature of this course (and the grading criteria, see below), it is extremely important that you attend every class, arrive on time and be prepared to participate.

Starting from the second class on, I am asking you to sit in the same spot for the duration of the semester. You should bring your name tag to each class, to facilitate the discussion and receive appropriate credit for your remarks.

A mutually supportive learning environment depends on active attention and engagement. For this reason, the use of laptops, iPads, PDAs, phones and any other electronics with on/off switches is not allowed during classroom sessions. While some students like to use them for note-taking or other pursuits, the value of legitimate use of laptops and mobile devices is far outweighed by the distraction that they create for their classmates and the overall deleterious effect on the learning environment.

Projects

The Friday “lab” sessions are designed to prepare and assist student teams (four or five students per team) working on two realistic and challenging projects. The first is the Yellow Moon case, which requires an expert valuation of investment in an offshore oil field. Each student team will have to master and modify the project spreadsheet, choose a long-term forecast for oil prices,
estimate the cost of capital and value the project. The “deliverable” is a valuation report, probably 10 pages plus tables and figures.

The second project is an “M&A” analysis and valuation of a potential merger or acquisition. Each team chooses a pair of companies that could be worth more together than apart. The second project has three deliverables: a written report, probably 25 pages plus tables and figures; a PowerPoint presentation, and an oral presentation in class.

The second project can also be a security analysis of several companies in a given industry, or an independent research paper, for example an event study.

Grading

The final grade will be a weighted average of performance in the following categories:

- **10%** Class participation in Monday-Wednesday classes
- **5%** Case write-ups for Monday-Wednesday classes
- **50%** Team projects – 20% content and 30% communication
- **35%** Final exam

Project Grading

The 50% weight given to the team projects includes a 30% weight for communication. Each project will be graded twice, once for content and once for communication:

1. The quality and completeness of each team’s financial analysis will account for 20% of each student’s grade: 4% for Yellow Moon and 16% for the second team project.
2. Clarity and effectiveness of communication in the written reports and the PowerPoint and oral presentations will account for 30% of your grade, 6% for Yellow Moon and 24% for the second team project. The grade for Yellow Moon will be based on the written report. The communication grade for the second project will be divided between the written report (16%) and the PowerPoint and oral presentation (8%).

These grading standards assume that each student contributes a full share to his or her team’s analysis and deliverables. Slackers, if any, will be identified by the TAs and instructor. Slackers’ grades will be adjusted appropriately.
Course Policies

The course policies are designed to ensure fairness. By remaining enrolled in the course, you agree to abide by the policies detailed below:

- **The final exam cannot be rescheduled or made up.** Treat the exam date as you would an important meeting in the business world. In the unlikely event that you are faced with unforeseeable and unavoidable circumstances that will cause you to miss the exam, you must talk to me immediately. Travel is not an acceptable reason for exam rescheduling.

- **Re-grades.** The TAs and instructor will work hard to ensure that the same partial credit is allocated to the same partially correct answer on each exam. Occasionally, we will make mistakes in our grading, and we are eager to correct mistakes subject to the following limits. If you believe that there was a mistake in the grading of your exam, within one week following the return of the exam, submit the original exam and a separate written explanation of the points of contention to me. If the re-grade request is made after one week or without an accompanying written explanation, no re-grade will be given. All re-grade decisions are final. We reserve the right to correct all mistakes made grading an exam submitted for a re-grade.

- **Special Arrangements.** If you have a documented disability and anticipate the need for accommodations in this course, please make arrangements as soon as possible. Please contact the MIT Coordinator of Disabilities Services to request assistance in arranging appropriate accommodations with me.

- **Illness and emergency.** Documented evidence that you were seriously ill or had a serious emergency at the scheduled time of the final exam are the only valid excuses for missing an exam. In order to be excused from the exam, you must contact me prior to the exam and be ready to provide documentation after the exam.

Course materials

- **Course packet (required):**
  - Contains the case studies, and some supplementary readings for the course.
  - You can purchase the course packet at http://www.study.net/mit.

- **Course website:**
  - Stellar: http://stellar.mit.edu/.
  - Make sure you have access to Stellar (contact the course assistant if you are unable to access Stellar).
  - Check Stellar at least once a week. All course announcements will be posted on Stellar.

- **Textbooks (optional):**

• Additional material:
  - Handouts (slides) will be provided at the beginning of each class. Some of these slides contain gaps which we will fill out together in class.
  
  We will post solutions of examples at the end of each class and a sample final exam in the second half of the semester.

Additional reading material, including assignments and background material for the team projects, will be posted on Stellar. Make sure you join the class in Stellar!

Administrative Assistants

Jonathan Cowin, E62-631, 617-324-7023, jcowin@mit.edu (Thesmar)
Patsy Thompson, E62-611, 617-715-4817, pthomps@mit.edu (Myers)

Teaching Assistant for Monday-Wednesday sessions

Section A: Eduardo Moore, edumoore@mit.edu
Section B: Wilson Huang, Wkhuang@mit.edu

Teaching Assistants for Friday “lab” sessions

Matias Lyon Schurch malyon@mit.edu
Irene Hernandez Gracia irenehdz@mit.edu
Felipe Corcuera Habsburg Lothringen corcuera@mit.edu
COURSE OUTLINE

The course outline is subject to changes. Please follow the announcements in class and on Stellar.

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<th>Class #</th>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
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<td>1</td>
<td>Wednesday</td>
<td>9/6</td>
<td>Introduction &amp; cash flow Management</td>
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<tr>
<td>Lab</td>
<td>Friday</td>
<td>9/8</td>
<td>Lecture 1: Capital Investment Decisions</td>
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<td>Session</td>
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<td>2</td>
<td>Monday</td>
<td>9/11</td>
<td>Case Study: Wilson Lumber (Part I)</td>
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<td>3</td>
<td>Wednesday</td>
<td>9/13</td>
<td>Case Study: Wilson Lumber (Part II)</td>
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<td>Monday</td>
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<td>Lab</td>
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<td>Case Study: Massey Ferguson</td>
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<td>Session</td>
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<td>8</td>
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<td>10/2</td>
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<td>Lecture 1 wrap up</td>
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<td>10</td>
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<td>Lab Session</td>
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<td>Friday</td>
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<td>Yellow Moon reports</td>
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<td>Case Study: H partners and 6 Flags</td>
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<td>Friday</td>
<td>10/20</td>
<td>Lecture 2.</td>
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<td>Draft of Yellow Moon reports due before start of class</td>
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<td>Friday</td>
<td>10/27</td>
<td>Lecture 2A.</td>
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<td>Final Yellow Moon reports due before start of class</td>
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<td>13</td>
<td>Monday</td>
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<td>Lecture: Valuation of Free Cash Flows</td>
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<td>14</td>
<td>Wednesday</td>
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<td>Case Study: Diamond Chemicals</td>
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<td>M&amp;A project memo due before start of class</td>
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<td>Lecture: WACC and APV</td>
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<td>16</td>
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<td>No class</td>
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<td>17</td>
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<td>18</td>
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<td>No Class</td>
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<td>21</td>
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<td>Lecture: Valuing a Company</td>
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<td>Tuesday –</td>
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<td>Team feedback on draft reports</td>
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<td>11/29</td>
<td>Wednesday</td>
<td>11/29</td>
<td>Case Study: Cooper Industries</td>
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<tr>
<td>12/1</td>
<td>Friday</td>
<td>12/1</td>
<td>Draft PowerPoint presentation due by 5pm</td>
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<td>12/4 – 12/6</td>
<td>Monday – Wednesday</td>
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<td>Team feedback on draft PowerPoint presentations</td>
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<td>12/6</td>
<td>Wednesday</td>
<td>12/6</td>
<td>Corporate Governance</td>
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<td>12/6 – 12/8</td>
<td>Wednesday – Friday</td>
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<td>Dress rehearsals with WRAP staff for PowerPoint presentations</td>
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<td>12/8</td>
<td>Friday</td>
<td>12/8</td>
<td>Final M&amp;A report and PowerPoint presentation due at or before start of the class</td>
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<tr>
<td>12/11</td>
<td>Monday</td>
<td>12/11</td>
<td>Review Session</td>
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<td>Recitation</td>
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Course Outline (Detailed)

Part I: Cash Flow Management

9/6 – Introduction

Lecture: Cash Flow Management

• Reading:
  - Asquith, Weiss, ch. 1: “Introduction”
  - Higgins, ch. 1: “Interpreting Financial Statements”
  - Brealey, Myers, Allen, ch. 14: “An Overview of Corporate Financing”

9/8 – Lab Session: Introduction and overview of the lab sessions.

Lecture 1

9/11 – Case Study: Wilson Lumber Company (Part I)

• Reading:
  - Asquith, Weiss, ch. 2: “Determining a Firm’s Financial Health”
  - Brealey, Myers, Allen, ch. 28: “Financial Analysis”
  - Higgins, ch. 2: “Evaluating Financial Performance”

9/13 – Case Study: Wilson Lumber Company (Part II)

• Reading:
  - Asquith, Weiss, ch. 3: “Pro Forma Forecasts”
  - Higgins, ch. 3: “Financial Forecasting”
  - Higgins, ch. 4: “Managing Growth”

9/15 – Lab Session: Lecture 1 continued

9/18 – Case Study: Play Time Toy

• Reading:
  - Asquith, Weiss, ch. 4: “The Impact of Seasonality on a Firm’s Funding”

9/20 – Case Study: SureCut Shears
9/22 – Lab Session: WRAP presentation

Part II: Financing

9/25 – Lecture: Capital Structure (Part I)

- Reading:
  - Asquith, Weiss, ch. 6: “An Introduction to Capital Structure Theory”
  - Brealey, Myers, Allen, ch. 17: “Does Debt Policy Matter?”
  - Brealey, Myers, Allen, ch. 18: “How Much Should a Corporation Borrow?”
  - Higgins, ch. 5: “Financial Instruments and Markets”
  - Higgins, ch. 6: “The Financing Decision”

9/27 – Case Study: Massey-Ferguson

- Reading:
  - Asquith, Weiss, ch. 5: “Why Financing Matters”
  - Myers: “The Search for Optimal Capital Structure”

9/29 – Lab Session: No Class.

10/2 – Lecture: Capital Structure (Part II)

10/4 – Case Study: Marriott

- Reading:
  - Asquith, Weiss, ch. 7: “Capital Structure Decisions”
  - Asquith, Weiss, ch.8: “Investment Decisions”
  - Brealey, Myers, Allen, ch. 24: “The Many Different Kinds of Debt”
  - Barclay, Smith, Watts: “The Determinants of Corporate Leverage and Dividend Policies”
10/6 – Lab session: Lecture 1 wrap up.

10/11 – Lecture: Capital Structure: Asymmetric Information and Agency Costs

- Reading:
  - Asquith, Weiss, ch. 12: “A Continuation of Capital Structure Theory”
  - Asquith, Mullins, “Signaling with Dividends, Stock Repurchases, and Equity Issues”

10/13 – Lab Session

10/16 – Case Study: Intel

- Reading:
  - Asquith, Weiss, ch. 11: “Dividend Policy”
  - Brealey, Myers, Allen, ch. 16: “Payout Policy”
  - Opler, Pinkowitz, Stulz, Williamson, “Corporate Cash Holdings”

10/18 – Case Study: MCI

- Reading:
  - Brealey, Myers, Allen, ch. 15: “How Corporations Issue Securities”

10/20 – Lab Session: Lecture 2

III: Valuation

10/27 – Lab Session: Lecture 2A

10/30 – Lecture: Valuation of Free Cash Flows
• Reading:
  - Higgins, ch. 7: “Discounted Cash Flow Techniques”

11/1 – Case Study: Diamond Chemicals (A)

11/3 – Lab Session

11/6 – Lecture: WACC and APV

• Reading:
  - Brealey, Myers, Allen, ch. 19: “Financing and Valuation”
  - Higgins, ch. 8: “Risk Analysis in Investment Decisions”

11/8, 11/13 – Case Study: Harris Seafoods

• Reading:
  - Asquith, Weiss, ch. 15: “Valuation”
  - Asquith, Weiss, ch. 16: “Valuation Nuances”
  - Brealey, Myers, Allen, ch. 10: “Project Analysis”

11/10 – Lab Session

  No Class

11/15 – Case Study: Dixon Corporation

11/17 – Lab Session

  WRAP workshop on oral presentations.

11/20 – Case Study: Arundel Partners (Real Options)
• Reading:
  - Brealey, Myers, Allen, ch. 22, “Real Options”
  - Luehrman, “Investment Opportunities as Real Options”

11/22 – No Class

11/24 – Lab Session: No Class

11/27 – Lecture: Valuing a Company

• Reading:
  - Higgins, ch. 9: “Business Valuation and Corporate Restructuring”
  - Brealey, Myers, Allen, ch. 31: “Mergers”

11/28 – 12/1 – Lab Session: Team feedback on draft reports.

11/29 – Case Study: Cooper Industries

• Reading:
  - Asquith, Weiss, ch. 18: “Mergers and Acquisitions: Strategic Issues”

12/1 – Lab Session: No formal class. Time may be used for team meetings.

12/4 – Case Study: Southland Corporation

• Reading:
  - Asquith, Weiss, ch. 17: “Leveraged Buyouts and Private Equity”
  - Brealey, Myers, Allen, ch. 32: “Corporate Restructuring”

12/4 – 12/6 – Lab Session: Team feedback on draft PowerPoint presentations.
12/6 – Corporate Governance

- Reading:
  - Brealey, Myers, Allen, ch. 32: “Governance and Corporate Control around the World”
  - Sraer, Thesmar, “Performance and Behavior of Family Firms”, *Journal of European Economic Association* 2007

12/6 – 12/8 – Lab Session: Dress rehearsals with WRAP staff for PowerPoint presentations.

12/8 – Lab Sessions: Class reserved for oral PowerPoint presentations.

12/11 – Review for Final

12/13 – Recitation

Final Exam – during final exam week check registrar exam schedule for details