CORPORATE FINANCE
SYLLABUS AND OUTLINE
SPRING 2013
General Information

- Office: Room 9-96
- Phone: 998-0340
- E-mail: admodar@stern.nyu.edu
- Office Hours
  - Monday  9.45-10.20, 12-1.00
  - Wednesday  9.45-10.20, 12-1.00
  - The “fair game” principle applies.

- Teaching Assistants
  - The teaching assistants for the class are as follows:
  - Kelly Brooks catherine.brooks@stern.nyu.edu
  - Michael Ruhno mjr537@stern.nyu.edu
  - Cristina Olivares <cristina.olivares@stern.nyu.edu>
Class structure

Monday
- Class
- Follow up

Tuesday
- Corporate Finance story of the week

Wednesday
- Class
- Follow up

Thursday
- Project update email

Friday
- In practice webcast

Saturday
- Weekly Newsletter

Sunday
- Week ahead preview
For each class, please try to..

- Be here and on time: Each class will start on time. I will try to get here a few minutes ahead.
- Announcements: I know that this is one of the few chances you get to talk to almost the entire class. If you want to make an announcement, please let me know ahead of time and try to keep it to under 2 minutes.
- Bring your lecture note packet with you: These are available in three parts. They can be bought at the book store or downloaded from my website by going to: http://www.stern.nyu.edu/~adamodar/New_Home_Page/eqlect.html
- If you do miss a class, please catch up: All classes will be web cast. The webcasts will be online (usually) within a couple of hours of the class. The webcasts are available in three formats:
  - as a stream (with a high-speed internet connection)
  - as a downloadable video file (for a computer, an iPad or a smart phone)
  - as a downloadable audio file.
Information Hubs

- **The Website:** The central location for everything related to this class is on the home page for the class on my website:

- **The Social Media site (My Blackboard alternative):** Much of what is on the home page for the class will also be available at the following:
  - [http://lore.com/Corporate-Finance-Spring-2013.1](http://lore.com/Corporate-Finance-Spring-2013.1)

- If you are registered in the class, you should have received an email invitation to join the class. Please do, since you can check your grades here and participate in discussions.

- **The Apple iTunes U version:** The class will be carried on Apple iTunes U. If you have an Apple device (an iPad or even an iPhone), you can watch the webcasts and get the class material here. To get the class, download the iTunes U app to your device and then click on the link below:
More ways that I can harass you!!

- The Google calendar: The Google calendar for the class is available at
  - https://www.google.com/calendar/embed?src=d7ptk4kdmjubgij3o5qqvhl860%40group.calendar.google.com&ctz=America/New_York

- Blog: I post on finance and valuation on my blog. If you have time on your hands:
  - http://aswathdamodaran.blogspot.com/

- Twitter: I have a twitter feed (@AswathDamodaran). I don’t tweet much and you will learn nothing about my personal life, but I hope to keep you posted on corporate finance and valuation.
What is corporate finance?

- Every decision that a business makes has financial implications, and any decision which affects the finances of a business is a corporate finance decision.
- Defined broadly, everything that a business does fits under the rubric of corporate finance.
Course Objectives

- To give you the capacity to understand the theory and apply, in real world situations, the techniques that have been developed in corporate finance.
  - Motto for class: If it cannot be applied, who cares?.

- To give you the big picture of corporate finance so that you can understand how things fit together.
  - Motto for class: You can forget the details, but don’t miss the storyline.

- To show you that corporate finance is fun.
  - Motto for class: Are we having fun yet?
The Traditional Accounting Balance Sheet

## The Balance Sheet

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Lived Real Assets</td>
<td>Current Liabilities</td>
</tr>
<tr>
<td>Fixed Assets</td>
<td>Short-term liabilities of the firm</td>
</tr>
<tr>
<td>Short-lived Assets</td>
<td>Debt</td>
</tr>
<tr>
<td>Current Assets</td>
<td>Debt obligations of firm</td>
</tr>
<tr>
<td>Investments in securities &amp; assets of other firms</td>
<td>Other Liabilities</td>
</tr>
<tr>
<td>Financial Investments</td>
<td>Other long-term obligations</td>
</tr>
<tr>
<td>Assets which are not physical, like patents &amp; trademarks</td>
<td>Equity</td>
</tr>
<tr>
<td>Intangible Assets</td>
<td>Equity investment in firm</td>
</tr>
</tbody>
</table>
## The Financial View of the Firm

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Investments</td>
<td>Debt</td>
</tr>
<tr>
<td>Generate cashflows today</td>
<td>Fixed Claim on cash flows</td>
</tr>
<tr>
<td>Includes long lived (fixed) and short-lived (working capital) assets</td>
<td>Little or No role in management</td>
</tr>
<tr>
<td>Expected Value that will be created by future investments</td>
<td>Equity</td>
</tr>
<tr>
<td></td>
<td>Residual Claim on cash flows</td>
</tr>
<tr>
<td></td>
<td>Significant Role in management</td>
</tr>
<tr>
<td></td>
<td>Perpetual Lives</td>
</tr>
<tr>
<td>Assets in Place</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fixed Maturity</td>
</tr>
<tr>
<td></td>
<td>Tax Deductible</td>
</tr>
<tr>
<td>Growth Assets</td>
<td></td>
</tr>
</tbody>
</table>

Aswath Damodaran
First Principles

Corporate Finance: The Big Picture

- The hurdle rate should reflect the riskiness of the investment and the mix of debt and equity used to fund it.
- The return should reflect the magnitude and the timing of the cashflows as well as all side effects.
- The optimal mix of debt and equity maximizes firm value.
- The right kind of debt matches the tenor of your assets.
- How much cash you can return depends upon current & potential investment opportunities.
- How you choose to return cash to the owners will depend whether they prefer dividends or buybacks.

The Investment Decision
Invest in assets that earn a return greater than the minimum acceptable hurdle rate.

The Financing Decision
Find the right kind of debt for your firm and the right mix of debt and equity to fund your operations.

The Dividend Decision
If you cannot find investments that make your minimum acceptable rate, return the cash to owners of your business.

Maximize the value of the business (firm)
Theme 1: Corporate finance is “common sense”

- There is nothing earth shattering about any of the first principles that govern corporate finance. After all, arguing that taking investments that make 9% with funds that cost 10% to raise seems to be stating the obvious (the investment decision), as is noting that it is better to find a funding mix which costs 10% instead of 11% (the financing decision) or positing that if most of your investment opportunities generate returns less than your cost of funding, it is best to return the cash to the owners of the business and shrink the business.

- Shrewd business people, notwithstanding their lack of exposure to corporate finance theory, have always recognized these fundamentals and put them into practice.
Theme 2: Corporate finance is focused...

- It is the focus on maximizing the value of the business that gives corporate finance its focus. As a result of this singular objective, we can
  - Choose the “right” investment decision rule to use, given a menu of such rules.
  - Determine the “right” mix of debt and equity for a specific business
  - Examine the “right” amount of cash that should be returned to the owners of a business and the “right” amount to hold back as a cash balance.

- This certitude does come at a cost. To the extent that you accept the objective of maximizing firm value, everything in corporate finance makes complete sense. If you do not, nothing will.
Theme 3: The focus in corporate finance changes across the life cycle...

**Con Ed’s Financial Balance Sheet**

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments already made</td>
<td>Debt</td>
</tr>
<tr>
<td>$15 billion</td>
<td>$7 billion</td>
</tr>
<tr>
<td>Investments yet to be made</td>
<td>Equity</td>
</tr>
<tr>
<td>$3 billion</td>
<td>$11 billion</td>
</tr>
</tbody>
</table>

**Linkedin’s Financial Balance Sheet**

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments already made</td>
<td>Debt</td>
</tr>
<tr>
<td>$0.25 billion</td>
<td>$0.00 billion</td>
</tr>
<tr>
<td>Investments yet to be made</td>
<td>Equity</td>
</tr>
<tr>
<td>$13.35 billion</td>
<td>$13.6 billion</td>
</tr>
</tbody>
</table>
Theme 4: Corporate finance is universal...

- Every business, small or large, public or private, US or emerging market, has to make investment, financing and dividend decisions.
- The objective in corporate finance for all of these businesses remains the same: maximizing value.
- While the constraints and challenges that firms face can vary dramatically across firms, the first principles do not change.
  - A publicly traded firm, with its greater access to capital markets and more diversified investor base, may have much lower costs of debt and equity than a private business, but they both should look for the financing mix that minimizes their costs of capital.
  - A firm in an emerging markets may face greater uncertainty, when assessing new investments, than a firm in a developed market, but both firms should invest only if they believe they can generate higher returns on their investments than they face as their respective (and very different) hurdle rates.
Theme 5: If you violate first principles, you will pay a price (no matter who you are..)

- There are some investors/analysts/managers who convince themselves that the first principles don’t apply to them because of their superior education, standing or past successes, and then proceed to put into place strategies or schemes that violate first principles.
- Sooner or later, these strategies will blow up and create huge costs.
- Almost every corporate disaster or bubble has its origins in a violation of first principles.
Outline for Class

The **hurdle rate** should reflect the **riskiness** of the investment and the **mix of debt and equity** used to fund it. **Sessions 4-11**

The **return** should reflect the **magnitude** and the **timing** of the cashflows as well as all side effects. **Sessions 12-16**

The **optimal mix of debt and equity** maximizes firm value. **Sessions 17-19**

The **right kind of debt** matches the **tenor of your assets**. **Sessions 20-21**

**How much cash you can return depends upon current & potential investment opportunities. Session 22/23**

**How you choose to return cash to the owners will depend whether they prefer dividends or buybacks. Session 24**

The **Investment Decision**
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The **Financing Decision**
Find the right kind of debt for your firm and the right mix of debt and equity to fund your operations.

The **Dividend Decision**
If you cannot find investments that make your minimum acceptable rate, return the cash to owners of your business.

Maximize the value of the business (firm)

**Sessions 1-3**

Session 25
Required Material

- I. Text: Lecture Notes; They are sold in the book store in two parts. The lecture notes are also available in pdf format on the web:
  - [http://www.stern.nyu.edu/~adamodar/New_Home_Page/cflect.htm](http://www.stern.nyu.edu/~adamodar/New_Home_Page/cflect.htm)
- II. Supplementary Text:
- III. Practice Problems/Exams:
  - Every quiz and final exam that I have ever given is online, with solutions. [http://www.stern.nyu.edu/~adamodar/New_Home_Page/cfprob0.html](http://www.stern.nyu.edu/~adamodar/New_Home_Page/cfprob0.html)
  - There are also problems in the supplementary book, and solutions. [http://www.stern.nyu.edu/~adamodar/New_Home_Page/cfprset.htm](http://www.stern.nyu.edu/~adamodar/New_Home_Page/cfprset.htm)
- IV. Spreadsheets and data are accessible on my home page:
  - [www.stern.nyu.edu/~adamodar/New_Home_Page/data.html](http://www.stern.nyu.edu/~adamodar/New_Home_Page/data.html)
  - [www.stern.nyu.edu/~adamodar/New_Home_Page/spreadsh.htm](http://www.stern.nyu.edu/~adamodar/New_Home_Page/spreadsh.htm)
Chapter references...

The hurdle rate should reflect the riskiness of the investment and the mix of debt and equity used to fund it. Chapter 3, 4

The return should reflect the magnitude and the timing of the cashflows as well as all side effects. Chapter 5, 6

The optimal mix of debt and equity maximizes firm value. Chapter 7, 8

The right kind of debt matches the tenor of your assets. Chapter 9

How much cash you can return depends upon current & potential investment opportunities. Chapter 10

How you choose to return cash to the owners will depend whether they prefer dividends or buybacks. Chapter 11

The Investment Decision
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Maximize the value of the business (firm)
Grading Distribution
Grading Basis

- **Group Work:** Each group will be required to work on one case (you will get it in class in the fourth week) and one comprehensive project (See attached description).
  - Case: Due session 15 (April 3 before class) 10%
  - Group Project: Due Session 26 (May 13 at 5 pm) 30%

- **Individual Work:**
  - Quizzes: There will be three open-book and open-notes quizzes worth 10% each.
    - Quiz 1: Session 10 - Covers sessions 1-9 (March 11)
    - Quiz 2: Session 17 - Covers sessions 10-16 (April 10)
    - Quiz 3: Session 23 - Covers session 17-22 (May 1)
  - Final Exam: This will also be an open-book and open-notes cumulative exam worth 30% on May 17 from 9 -11.
Exam Ground Rules

1. Quizzes will be on the designated days in the first 30 minutes of the class.
2. Exams will be open book, open notes. You can bring in as much supporting material as you can carry.
3. Exams are NOT group work. You cannot consult with, talk to, communicate with or pass telepathic (or text) messages to anyone else in or out of the classroom. There are no cultural exceptions.
4. When time is called on the quiz, please stop writing.
5. Each quiz is worth 10%.
6. If you have to miss a quiz for good reason, you will have to let me know (by email) at least 15 minutes before the quiz that you will be missing the quiz.
7. If you miss a quiz for good reason, the 10% weight on that quiz will be reallocated across your remaining exams (quizzes and final). You cannot weight prior quizzes more.
8. If you take all three quizzes, the score on your worst quiz will be pushed up to the average score across all of your other exams (the other two quizzes and the final exam) (Note: It will not be thrown out). If you miss a quiz, you will not have this option, even if you miss the quiz for good reason.
9. I grade all of your quizzes and I give partial credit. So, please show all work. If you have a beef with the grading (and I do make mistakes), please come to me
10. You can bring calculators to the quiz but you cannot use your laptop (yet).

Good reasons for missing quiz: Physical or mental sickness (you, spouse or child), Stalled subway train, Important interview (and you cannot change time), Tickets to Yankee Opening day.
Not good reasons for missing quiz: Did not have time to prepare, Feeling overwhelmed, Not quite ready, Tickets to Red Sox or Mets opening day.
Rules of Engagement for class and group work

- Rules of group work
  - Pick your own groups. (If you have trouble getting picked, I will help)
  - All group work will be self policed, except in extreme circumstances.
  - There will be one grade per group, no matter how the work load is distributed among the group members

- Rules for class
  - I do not enforce attendance, but I would really like you to be here. Of course, if you have to miss a class, you can always use the webcast as a fall-back.
  - Cell phones ... (Please, need I say more..)
  - All participation is welcome.