CORPORATE FINANCE
SYLLABUS AND OUTLINE
SPRING 2016

Aswath Damodaran
General Information

- Office: Room 9-69
- Phone: 998-0340
- E-mail: adamodar@stern.nyu.edu

Office Hours
- Monday 9.45-10.20, 1.30-3.00
- Wednesday 9.45-10.20, 1.30-3.00
- The “fair game” principle applies.

Teaching Assistants
1. Tyler Albright, tyler.albright@stern.nyu.edu
2. Charlotte Baranne, cb3271@stern.nyu.edu
3. Ramandeep Singh, rs5058@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

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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 web site by going to: [http://www.stern.nyu.edu/~adamodar/New_Home_Page/cflect.html](http://www.stern.nyu.edu/~adamodar/New_Home_Page/cflect.html)
- **If you do miss a class, please catch up**: All classes will be web cast. The web casts will be online (usually) within a few hours of the class. The webcasts will be available in four formats:
  - as a stream (with a high-speed internet connection)
  - as a YouTube video (if you have a lower-speed connection or small screen device)
  - as a downloadable video file (for a computer, a tablet 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:
  

  I will try to also keep the material on NYU Classes, but I don’t like closed systems. Enough said!

- **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 for the class.


  If you have an Android (what possessed you to commit such a mortal sin?), you can watch iTunes U, if you have the Tunesviewer app on your Android. You can get it by going to [http://sourceforge.net/projects/tunesviewer/](http://sourceforge.net/projects/tunesviewer/)

- **YouTube Channel:** There is a final option, if your broadband connection is not that great and you are watching on a Tablet/smartphone. There is a YouTube playlist for this class, where all class sessions will be loaded.

  [https://www.youtube.com/playlist?list=PLUkh9m2BorqIs7VGVRN0qpfba4Zdevusi](https://www.youtube.com/playlist?list=PLUkh9m2BorqIs7VGVRN0qpfba4Zdevusi)

  When you get a chance, check it out.
More ways that I can harass you!!

- **The Google calendar**: The Google calendar for the class is available at http://bit.ly/1k0xT2t
- **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.
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>Short-lived Assets</td>
<td>Short-term liabilities of the firm</td>
</tr>
<tr>
<td>Investments in securities &amp; assets of other firms</td>
<td>Debt</td>
</tr>
<tr>
<td>Assets which are not physical, like patents &amp; trademarks</td>
<td>Other Liabilities</td>
</tr>
<tr>
<td></td>
<td>Other long-term obligations</td>
</tr>
<tr>
<td></td>
<td>Equity</td>
</tr>
<tr>
<td></td>
<td>Equity investment in firm</td>
</tr>
</tbody>
</table>
The Financial View of the Firm

### Assets

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Investments</td>
<td>Assets in Place</td>
</tr>
<tr>
<td>Generate cashflows today</td>
<td></td>
</tr>
<tr>
<td>Includes long lived (fixed) and short-lived (working capital) assets</td>
<td></td>
</tr>
<tr>
<td>Expected Value that will be created by future investments</td>
<td>Growth Assets</td>
</tr>
</tbody>
</table>

### Liabilities

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Claim on cash flows</td>
<td>Debt</td>
</tr>
<tr>
<td>Little or No role in management</td>
<td></td>
</tr>
<tr>
<td><em>Fixed Maturity</em></td>
<td></td>
</tr>
<tr>
<td><em>Tax Deductible</em></td>
<td></td>
</tr>
<tr>
<td>Residual Claim on cash flows</td>
<td>Equity</td>
</tr>
<tr>
<td>Significant Role in management</td>
<td></td>
</tr>
<tr>
<td><em>Perpetual Lives</em></td>
<td></td>
</tr>
</tbody>
</table>

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First Principles & The Big Picture

Maximize the value of the business (firm)

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

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

- The optimal mix of debt and equity maximizes firm value.
- The right kind of debt matches the tenor of your assets.

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

- 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.
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...

<table>
<thead>
<tr>
<th>Growth stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1: Start-up</td>
<td>Have an idea for a business that meets an unmet need in the market.</td>
</tr>
<tr>
<td>Stage 2: Young Growth</td>
<td>Create a business model that converts ideas into potential revenues &amp; earnings</td>
</tr>
<tr>
<td>Stage 3: High Growth</td>
<td>Build the business, converting potential into revenues.</td>
</tr>
<tr>
<td>Stage 4: Mature Growth</td>
<td>Grow your business, shifting from losses to profits</td>
</tr>
<tr>
<td>Stage 5: Mature Stable</td>
<td>Defend your business from new competitors &amp; find new markets</td>
</tr>
<tr>
<td>Stage 6: Decline</td>
<td>Scale down your business as market shrinks</td>
</tr>
</tbody>
</table>

$ Revenues/ Earnings

The Lightbulb (Idea) Moment

The Product Test

The Bar Mitzvah

The Scaling up Test

The Midlife Crisis

The End Game

Revenues

Earnings

Time
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.
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

II. Supplementary Text:
   http://www.stern.nyu.edu/~adamodar/New_Home_Page/ACF3E/appliedCF3E.htm
   Applied Corporate Finance: A User’s Manual (Fourth Edition) by Aswath Damodaran

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
   There are also problems in the supplementary book, and solutions.
   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
   www.stern.nyu.edu/~adamodar/New_Home_Page/spreadsh.htm
Class Structure & Chapter references

Maximize the value of the business (firm): **Chapter 2 & 12**

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

- **The hurdle rate** should reflect the riskiness of the investment and the mix of debt and equity used to fund it. **Chapters 3,4**
- **The return** should reflect the magnitude and the timing of the cashflows as well as all side effects. **Chapters 5,6**

#### Sessions
- Sessions 5-12
- Sessions 13-15

### 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 optimal mix** of debt and equity maximizes firm value. **Chapters 7,8**
- **The right kind** of debt matches the tenor of your assets. **Chapter 9**

#### Sessions
- Sessions 16-19
- Session 20

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

- **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**

#### Sessions
- Session 21
- Sessions 22-23

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And it will be applied...

Disney
Sector: Entertainment
Incorporated in: US
Operations: Multinational
Size: Large market cap

Bookscape
Sector: Book Retail
Incorporated in: US
Operations: New York
Other: Privately owned

Vale
Sector: Mining/Metals
Incorporated in: Brazil
Operations: Multinational
Size: Large market cap
Other: Government stake

Deutsche Bank
Sector: Bank/Investment Bank
Incorporated in: Germany
Operations: Multinational
Size: Large market cap
Other: Regulated

Tata Motors
Sector: Automotive
Incorporated in: India
Operations: Multinational
Size: Mid market cap
Other: Family Group

Baidu
Sector: Online Search
Incorporated in: Cayman Isl
Operations: China
Size: Mid market cap
Other: Shell company (VIE)
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 (March 30 before class) 10%
  - Group Project: Due Session 26 (May 9 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 7)
    - Quiz 2: Session 17 - Covers sessions 10-16 (April 6)
    - Quiz 3: Session 23 - Covers session 17-22 (April 27)
  - **Final Exam:** This will also be an open-book and open-notes cumulative exam worth 30%. It is scheduled for TBA from 10-12.
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 fallback.
  - Cell phones ... (Please, need I say more..)
  - All participation is welcome.