The Art of Forecasting: Crystal Ball, or Magic 8-Ball?
*Perspectives from experienced analysts and PMs*

**Spring 2018 B-Term**

**(** Tentative spring 2018 syllabus: All information below is subject to change***)

Day/Time: Tuesday 9:00-12:15 p.m.

Location: URI 326

Professor:
Ellen Carr
Phone: (310) 497-9069
Email: ec2895@columbia.edu
Office Hours: Easily accessible via email/phone between classes.

**Course Overview:**

The core curriculum at CBS gives students the building blocks for quantitative modeling, DCF analysis, and securities valuation based on the outputs of these models. But what happens in the real world of investing? This class will build on the Core’s forecasting toolkit with a more qualitative approach, and prepare you to create realistic, stress-tested, multi-dimensional cash flow forecasts for use by investors across the capital structure, along with the assumptions that go into them.

Goals: (see Areas of Focus on Canvas for more detail)

- Develop a line-by-line, cross-capital-structure approach to forecasting cash flow
- Develop and stress-test reasonable assumptions for the most relevant drivers of forecasting outputs
- Forecast cash flow in a base, upside, and downside case
- Forecast cash flow for companies in cyclical industries and those undergoing secular and structural changes with meaningful potential impact on cash flow (e.g., yellow pages, brick and mortar retail)
- Translate forecasts into total return projections for equities and bonds.

**REQUIRED PREREQUISITES AND CONNECTION TO THE CORE**

The learning in this course will utilize, build on and extend concepts covered in the following core courses:

<table>
<thead>
<tr>
<th>Core Course</th>
<th>Connection with Core</th>
</tr>
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<tbody>
<tr>
<td>Corporate Finance</td>
<td>1. Free cash flow</td>
</tr>
<tr>
<td></td>
<td>2. Valuing bonds and stocks</td>
</tr>
<tr>
<td></td>
<td>3. Advanced capital structure</td>
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Students will be expected to have mastered these concepts and be able to apply them in the course.
While not prerequisites, Capital Markets and Security Analysis are highly relevant to the subject matter of this course.

**Illustrative Class Agenda**

*Please note the timing of some topics may need to change in order to accommodate guest speaker schedules.*

- Class 1 – Course Overview / Syllabus / Introduction to Forecasts and Assumptions
- Class 2 – Review of Core Concepts / Base Case Forecasts
  - Ball Corporation (today)
- Class 3 – Downside Case Forecasts
  - Gray Television (2007)
- Class 4 – Upside Case Forecasts
  - Amazon (today)
- Class 5 – Cyclical and Secular Industry Forecasting
  - Chesapeake Energy (2014)
- Class 6 – M&A Forecasts / Course Wrap-Up
  - Blockbuster Video (2006)

**SPECIFIC ASSIGNMENTS/COURSE MATERIALS**

Case Assignments and Reading Assignments are posted on Canvas. **Please note that you have two pre-class assignments which must be submitted via Canvas by 5pm the Friday before the class begins.**

**Pre-Reading:**

Daniel Kahneman, *Thinking Fast and Slow* (excerpts)

Maboussin, *Expectations Investing* (excerpts)

**In-Class Reading:**

Weekly forecasting exercises/case studies will include assigned reading for each company: excerpts from financial statements, sell-side reports, industry reports. Additional reading will be assigned as needed.

**Method of Evaluation:**

Grades will be calculated as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-class assignments (cash flow model review, writeup on BTU)</td>
<td>5%</td>
<td>Individual</td>
</tr>
<tr>
<td>Class Participation</td>
<td>25%</td>
<td>Individual</td>
</tr>
<tr>
<td>5 Cases/Forecasting Exercises</td>
<td>50%</td>
<td>Team</td>
</tr>
<tr>
<td>Final Project</td>
<td>20%</td>
<td>Individual</td>
</tr>
</tbody>
</table>

Grades will reflect knowledge and application of the course material and communication skills. This course is intended to be interactive and class participation will be crucial to the success of this class.

**Pre-class assignments (5%)—Individual**

- Review simple cash flow forecast model; complete base case exercise.
Writing assignment: Peabody Energy (BTU)
  
  o Review the JPM and Citi sell-side reports from early 2015 and BTU’s 2014 10k, 1Q15 10-Q, year-end/1Q earnings presentations, and year-end/1Q earnings call transcripts.
  
  o In no more than two pages, summarize the analyst forecasts included in each report, compare them to management’s commentary, and answer the following questions:
    ▪ What were the major assumptions behind each analyst’s forecast?
    ▪ What was missing from the forecasts?
    ▪ How much guidance did management provide that could be used in forecasting? How did the analysts use this guidance in their forecasts?
    ▪ If you were a PM reading the analyst reports, what questions would you have about the forecasts?

Class Participation (20%)—Individual

This is a highly interactive class and your participation is critical to your success and the success of the course. There will be substantial cold calling on both reading and case assignments. You will be asked to note your attendance and any contribution(s) you make in a weekly survey. In each survey, you will answer two questions – first, did you attend the class and second, did you contribute to the class by answering questions or making comments. If you are excused from class with reason, you may get attendance credit by watching the class video and summarizing it in one page, single spaced. In addition to verbal commentary in class, participation grades can be enhanced by submission of relevant written material (e.g. news articles, excerpts/quotes from books) with commentary to Canvas. If you submit something, be prepared to discuss it at the next class. A good quality contribution—verbal or written—provides insight on some issue under study.

Finally, high quality, relevant questions for our guest speakers that demonstrate understanding of the material and seek to take that understanding to the next level can enhance your class participation grade.

Weekly Cases/Forecasting Exercises (50%)—Team

Each week, you will work in teams to create a forecast for a given company. I have provided an industry report and one or more sell-side reports (including forecasts) for each company; you will need to pull financial statements for each company and create your own model, bottom up, going as far back, and forward, as you believe is relevant to your forecast. These forecasts will differ in complexity and detail based on the concept we are discussing in class that week. More detail is available on Canvas.

Final Project (20%)—Individual

For the final project, prepare an upside/base/downside case forecast for Fiat, and make a cross-capital-structure recommendation (stock, bonds, both, neither) based on your forecast. More detail is available on Canvas.

CLASSROOM NORMS AND EXPECTATIONS

At Columbia Business School, we believe that diversity strengthens any community or business model and brings it greater success. Columbia Business School is committed to providing all students with the equal opportunity to thrive in the classroom by providing a learning, living, and working environment
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- Ensure that you read this syllabus, particularly with regard to the contribution grade and how that is determined.
- To ensure that I get to know you quickly, sit in the same spot each class and use your nameplate.
- For team casework, form teams of four to five. Take advantage of your classmate’s different backgrounds, experiences and interests. Ensure that modelling responsibilities are shared within the team.
- In-class, please demonstrate consideration for your classmates (and your instructors and guest speakers) by closing laptops during lectures and guest appearances, posting nameplates and by being on time at the beginning of the class and at the break.
- Slide presentations will be posted on Canvas for review prior to class/viewing during class.
- Use Canvas to submit all assignments including articles that you would like to contribute.
- Contact me or my teaching assistant in the event you have any questions.