“Fundamental Analysis for Investors, Managers and Entrepreneurs”
Course Description and Objectives

Most of the decisions of analysts, consultants, entrepreneurs, investors and managers require us to look ahead and assess an uncertain future. In this class, you will learn a differentiated approach to decision making that will help you consider the fundamentals of enterprises and how to link these fundamentals to underlying measures, which in turn will help you make better investment or management decisions. Students who have taken this course often comment on how it has transformed their thinking and understanding of companies. It also serves as a useful “capstone” to the MBA core as we draw on what was taught in most core courses.

In developing this line of reasoning and performing the analysis, we consider how to think about a new business as well as a publicly traded company. Having considered the basic building blocks, we next examine how the business resources and activities are translated into financial statements (whether for an early stage or public company) and consider what we learn from published financial statements. We also consider how this is supplemented by the extensive information increasingly available from outside sources, including various websites, Bloomberg and CapIQ. We also consider how certain accounting measures and practices impact the measures of the key elements of the business.

**IMPORTANT:** While you will be able to use the approach to analyze a public company for your assignments and final project, you can (and students in the past have) also use private companies ranging from startups to family businesses, or use internal data of public companies or their subsidiaries if you have access to this information.

The course draws on three decades of my own experience advising corporations, analyzing companies as a ranked sell side analyst, creating a new framework and technology-based data and valuation system for analysis and investment decisions, and as part of the senior management and finance teams at Morgan Stanley, plus as an academic researcher, auditor, board member of public and private companies, consultant to corporations, participant in accounting and financial regulation, and early stage “angel” investor. My objective is to pass on as much of this knowledge to you as is possible in a one-semester course.

All business and investment decisions require you to consider the uncertain future, I take **a different approach** on many topics/concepts that are covered in various ways in other financial statement analysis, earnings quality, security analysis and valuation classes. Many students take this course as well as other seemingly similar courses, and I have **never** received any feedback that the coverage in this course is redundant, irrespective of the other courses taken by students.
We will focus on understanding how entities create or destroy value for various stakeholders and what it would take to change this, how to consider uncertainty more explicitly in plans, and whether this fundamental value is reflected in the price or not (for entities that it applies to).

This year, I am introducing changes to further enhance the learning experience and ensure you can apply what you learn. As I continuously update the course, we will keep some flexibility to ensure we optimize the value of the takeaways.

**Graded Learning**

The only way you will internalize the information in the course is by actually preparing a forecast (plan) of a business. In the past I have allowed students to work in groups for the assignments and then do a final project (usually on a different company) on their own. Because this adds to the work load which is relatively high, many students have allowed other group members to do the assignments and then they struggle in the final project and do not really learn from the class. As a result I am changing the approach this semester.

Each student will be use one company for the assignments and final project which will be more closely integrated. As a result, if you work consistently through the semester the final project will be relatively straight forward and little extra burden.

In the **assignments**, utilizing the framework provided in the class, you will analyze some of the key aspects (e.g., revenue, labor, etc.) of the business that you choose. The assignments also are critical input for the final project (based on the same company/business). **Each student** will be required to hand in her/his own assignment and final project. However, you are free to discuss the assignments with other students as long as you demonstrate that it is your own work and understanding.

For the **final project**, you will make sure all the elements of your semester’s work are linked appropriately in your model, and add the extra topics not covered in the assignments (e.g., taxes). You will also perform a valuation analysis. There will also be bonus points for an additional scenario (as will be explained in class).

Ideally the business you choose to analyze will be one that you are interested in understanding deeply, e.g. the company (or a company in the industry) you work for/cover (or a customer, client or competitor), your family business, or perhaps a startup that you are developing.

I will select a few companies from which to choose for anyone who does not have a company they particularly want to do.

**I require each student to meet with me at least once in the semester to ensure you are on track. I will personally spend time with each student to help provide**
insight into how the issues we consider (and others we might not), apply to the company.

The grades will be based on your engagement in the class, some spot quizzes to check you are keeping up and help you appreciate what you are learning, the assignments, and the final project but no exams.

What you will get out of this

Every student who puts in effort should walk away with an approach and concepts that you can use in almost any business or position in which you find yourself. It is usually a fun and stimulating journey for students who are committed to doing the work.

Is financial expertise critical?

The course presumes that you have a solid understanding of the subject matter covered in B6000 and other core courses. I have had many students who have no additional financial accounting or finance backgrounds, and by investing in their learning, they end up with H or even H+ grades. So, while financial analysis expertise may be helpful it is not necessary at all.

High quality investment and management decisions are grounded in a lot of detail about the sustainability and evolution (growth) of the business model. Without careful analysis, we cannot hope to understand our options as managers (including our competition) or for investors ferret out price moving information that the market has overlooked. Following that objective, this is a detail-heavy class that gets deep into financial and non-financial data to assess the business. So you should be only take this class if (i) you feel that you can devote enough time to the class assignments; and (ii) you do not expect simple formulaic answers to complex issues.

Required Text and Readings

- Weekly handouts/posts on Canvas substitute for a course packet
- There is no required text as there is nothing published that follows this approach.
- There will also be additional references provided for those students who want to get more background and a deeper understanding of some of the technical accounting aspects of any topic, but this is not required.
Grading

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<tbody>
<tr>
<td>Class quizzes and participation</td>
<td>20%</td>
</tr>
<tr>
<td>Assignments</td>
<td>55%</td>
</tr>
<tr>
<td>Final Project</td>
<td>25%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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There will be 6 written assignments (3 of which are quite detailed), which will relate to the materials discussed and their application to an actual company (see p 8). These assignments will be done INDIVIDUALLY using the Type B assignment scheme (see page 5 below) and cover 55% of the grade. 20% of your grade will be based on in class quizzes and your preparation and understanding of the company analysis for your discussions with me. There will be approximatel10 quizzes depending on how the pace of the course goes, you will be able to drop the lowest two quizzes (including any you miss) for grading purposes. 25% of the grade will be based on the final project which builds on the assignments. The final project will also follow Type B in the assignment scheme on page 5 below.

I do not intend to grade on a curve for this course. I believe in merit-based grades so would be delighted to give everyone an H, but I also give low or failing grades to anyone who does not put in the effort and does not demonstrate an understanding of what we cover.

**TA**

There will be two TAs: Nan Li, his email is NLi18@gsb.columbia.edu and Yuan Zou, her email is yzou19@gsb.columbia.edu. You can communicate with Nan and Yuan via email to discuss the assignments and final project. **You should also copy me on all correspondence.**

**Office Hours:** By appointment, I will set up several days through the semester where you can book appointments via a doodle calendar. It will be administered by Kathleen Brucasa kb2554@gsb.columbia.edu.

**Relation to the Core:**

This course incorporates elements of every core class.
Code of Conduct: aka our Contract

The value of the course will depend on how much effort you are willing to put in, and on attendance and participation in the lectures and assignments.

You are expected to treat the class as you would your job, i.e., as a business professional, demonstrating mutual respect for each other, and performing as if it is an important business assignment. This means you need to be prepared, be on time, and be attentive during the class.

Tablets/Computers: I am open to letting you use these for access to the class materials in-class quizzes or to take notes. BUT if this is abused for personal activities and distracts other students I will change the policy.

Cellphones: All classes in this course have a ‘no cellphone’ policy. In respect to your fellow classmates and myself, please have your phone’s volume and vibration turned off during class and keep your phone in your bag/pocket. We will have one break (10 to 15 minutes) when you can catch up on calls, emails, etc.

If you need to be reachable immediately during class (e.g. your wife is going into labor any minute), please let me know ahead of time.

My commitment to you:

I will give you as much personal attention as feasible to maximize the benefit from your work. As people come in with different expertise, we can (partially) tailor the output to your strengths and expertise. I appreciate constructive feedback during the course to help optimize your learning, but I have to consider the class as a whole, so individual needs are best dealt with by me, or one of the TAs one-on-one.

<table>
<thead>
<tr>
<th>Type</th>
<th>Designation</th>
<th>Discussion of Concepts</th>
<th>Preparation of Submission</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Group/Group</td>
<td>Permitted with designated group*</td>
<td>By the group</td>
<td>Same grade for each member of group</td>
</tr>
<tr>
<td>B</td>
<td>Group/Individual</td>
<td>Permitted with designated group*</td>
<td>Individually</td>
<td>Individual</td>
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*The designated group is either a self-selected study group to be used for the duration of the course.
<table>
<thead>
<tr>
<th>Date</th>
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<th>Subject matter</th>
<th>Specific Topics</th>
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</table>
| Sept 8    | 1       | Overview - Approach to Fundamental Analysis of any Business | - A general framework for understanding and then forecasting a business and its potential value in an uncertain environment  
- The “Cycle of Life” of a business  
- Relating this to financial statements, other information and intrinsic value  
- A critical review of what we see in practice by companies (early stage and established) and analysts. |
| Sept 15   | 2 and 3 | Understanding Revenue | - Understanding the product or service  
- To whom, how and where is it being sold  
- Pricing  
- What are the market size and the competitive situation?  
- How is the revenue recognized?  
- Impact of volatile currencies.  
- How and when are customers paying? |
| Sept 29   | 4 and 5 | Understanding Productive Capacity, R&D and Intangibles. | - What property and equipment (including technology) do they need to sustain the revenue and/or grow (match to the revenue expectations)?  
- How much does this cost and how will it be financed?  
- Where and How are (/should) the physical and related financing needs (be) reflected in the financial statements?  
- Considering IP and patents, what R&D or other intangibles are needed, how are they “acquired” and paid for, and how are/should they be reported?  
- How do these all compare to competitors? |
## Course Outline PRELIMINARY

<table>
<thead>
<tr>
<th>B8010</th>
<th>Class #</th>
<th>Subject matter</th>
<th>Specific Topics</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Understanding Human Resources and Labor Costs</strong></td>
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| Oct 13 | 6 and 7 |                | • What type of talent do you need to sustain and/or grow the business, how many and where are they located?  
• What are/(should they) be paid?  
• How are/(should) they be compensated Cash vs Benefits (pensions and health/opeb) vs share-based compensation (shares vs employee stock options)?  
• Impact of volatile currencies  
• Where and How is the cost reflected in financial statements? |
| Oct 27 |         |                | **Understanding Material and other costs** |
| Nov 3  | 8       |                | • What are primary materials/components needed?  
• How are they sourced (supply chain) and what do they cost?  
• Impact of volatile currencies  
• What are key sales and marketing approaches and costs?  
• Where and how are these reflected in financial statements? |
| Nov 3  | 8-9     | **Funding, Capital Structure** | • Funding choices (equity vs debt) for different types of entity (early stage, high growth and steady state; small vs large)  
• How much and when is funding needed?  
• Impact of volatile currencies  
• How are these reflected in financial statements and performance measures? |
| Nov 10 | 9 and 10| **Funding: Financial Investments, Strategic and M&A and Intangibles from Acquisition Understanding Currency’s Impact in Consolidated Accounts** | • Considering liquidity and financial investments and how they are reflected in financial statements  
• Impacts of strategic investments, mergers and acquisitions, and minority stakes.  
• How do we interpret the related growth and acquisition related assets?  
• Transactions vs translation and impact on margins, cash flow, ratios and capital |
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| Dec 1 | 11      | The Impact and Understanding of Taxation | • Tax considerations: what is taxed, where is it taxed, when is it taxed and at what rate?  
• How is tax reflected in the financial statements and what can we learn from this? |
| Dec 8 | 12      | Catch up, valuation and putting it all together | • Bringing all the pieces together and relating them to forecasts and valuation analysis  
• Considering the trade-offs of various valuation approaches for managers and different investors. |
## Preliminary-- Fundamental Analysis for Investors, Managers and Entrepreneurs Assignment Scheduling

<table>
<thead>
<tr>
<th>Assignment number</th>
<th>Topic</th>
<th>Preliminary Due Date</th>
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<tbody>
<tr>
<td>1</td>
<td>Drawing-describing the &quot;Operating and Funding Cycles of a Business&quot; (small, but investing time in this step will pay off)</td>
<td>Sept 22</td>
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<tr>
<td>2</td>
<td>Revenue analysis (large)</td>
<td>October 6</td>
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<tr>
<td>3</td>
<td>Capacity analysis (large)</td>
<td>October 27</td>
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<tr>
<td>4</td>
<td>Labor analysis (large)</td>
<td>November 10</td>
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<tr>
<td>5</td>
<td>Materials and Other Costs (small)</td>
<td>November 17</td>
</tr>
<tr>
<td>6</td>
<td>Capital structure analysis (small)</td>
<td>December 1</td>
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<tr>
<td><strong>Final Project</strong></td>
<td>Completion of topics and integration of the 2 Year Forecast, Write-up and Valuation (Individual)</td>
<td>December 16</td>
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