



## **Financial Statement Analysis and Valuation B7009-001 – Summer 2024**

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### **Course description and objectives**

The purpose of this course is to learn about fundamental drivers of value and risk by analyzing financial statements of businesses in different industries. Every public company provides a lot of financial and operational information in its filings. How can this information be used to evaluate its prospects and its risks?

The course is organized around two themes (1) how to identify relevant information in the financial information reported by firms, and (2) how to draw inferences using sound analytical methodology. To this end, we will review techniques for valuation and risk analysis used by banks and asset management firms. The valuation models you will study in this course are all fundamental models – models that use financial information and review the fundamental operating characteristics of the company. We will learn to build simple financial models, perform risk analysis and fine tune value drivers. This involves doing financial analysis, understanding the firm's strategy and doing prospective analysis. Much of the data comes from the financial statements – but it requires a careful study of arcane footnotes to unearth the information provided by the companies. This is an advanced course that goes into the details of footnote analysis, accounting rules, and financial presentations.

By the end of the course, you should be able to perform a thorough, credible investment or credit analysis that meets a high standard. Students should have the ability to estimate fundamental values, and pull apart the information in the financial statements to get relevant information. This course should be of interest to those contemplating careers in investment banking, security analysis, private equity, hedge funds, and corporate finance.

### **Course requisites**

To enroll in this course, you must meet two requirements. **(1) Attendance to the first two sessions of the course is mandatory. (2) You should have taken *Financial Accounting* and *Corporate Finance* before.**

This course builds on what you learned in *Financial Accounting* and *Corporate Finance*. These courses are pre-requisites for taking this course. It is assumed that you have already taken these courses. If you have not taken these courses you should first talk with me before you register. This course will build significantly on your knowledge from those courses. If your basics are solid and you are interested in learning to read financial statements; if you wish to learn to apply financial analysis; this course is for

you. We will use excel to build some of the models – but this is not a course in excel. But, it is highly recommended that you have a good working knowledge of how to build formulas in excel **before** you come to this class.

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

Core Course	Concepts
Financial Accounting	<ul style="list-style-type: none"><li>• The role of the accounting equation in the formulation of different financial statements</li><li>• Accrual concepts and Revenue Recognition</li><li>• Basic Financial Analysis</li></ul>
Corporate Finance	<ul style="list-style-type: none"><li>• Cost of Capital</li><li>• Basic risk analysis</li><li>• Time value of money</li><li>• Excel</li></ul>
Strategy	<ul style="list-style-type: none"><li>• Sources of economic value</li></ul>

Students are expected to have mastered these concepts and be able to apply them in different settings.

### Course materials

I will be teaching this course entirely from my own notes that draw heavily from my personal experiences in financial markets. There is no required text book. Since there is no required book, if you miss my class, you will not be able to make up by reading a book. It is highly advised that you do not miss any of the classes. If it is unavoidable, you should watch the video of the class to make up what you miss. All the teaching will be from my notes. Your assignment questions, cases and projects will all be based on what I teach in class. If you find it helpful to get a book, I recommend that you get Professor Penman's book on Financial Statement Analysis and Valuation, but it is not required.

Course notes for each session will be available in advance (on Canvas). A tentative course schedule is provided at the end of this syllabus. I will assume that when you show up for class, you have already skimmed through the assigned material and worked on the assignment for the day, if any.

Sharing of course material (both receiving and giving) with someone who is not enrolled in the course or someone who is not in your section is not allowed. It would be considered a violation of the honor code (and potentially of copyrights).

### Pedagogy

A significant portion of the work will be done in the form of in-class exercises or cases, and homework. Some exercises/cases will require advance preparation while some will require work in groups in class.

The purpose of this course is to teach you to make judgments about value and risks associated with investments (in firms and industries) through an analysis of their financial statements. You will therefore be required to work on two big projects during the course. One of the projects is an individual project while the other is a group project. In addition, there will be several small homework assignments throughout the course.

For the individual project, you will be asked to select a firm for study. This should be a firm that you are curious about. You will be asked to choose a firm from a selection of companies given by me. In some cases, I will allow you to choose your own company. The individual project will be done in three phases. For this purpose, you will prepare and submit three reports on the firm you choose. With each report it is expected that you will apply what you learn in this course to arrive at your conclusions. You will prepare your first report sometime before Session 7, your second report sometime before Session 10, and your final report after Session 12.

For the group project, you will be assigned to a team. For this purpose, the entire class will be divided into teams of four or five. Each team will study one industry. At any time, the entire class will study at least three (or four) industries during the course. Sometimes, more than one team may be assigned to the same industry. Each group will do an assignment on its assigned industry. The assignment is due sometime after Session 4. (See schedule on last page).

All submission become due at 11:59 p.m. on the day specified.

We may have guest speakers coming to speak to the class during the course. Since it is difficult to get a time commitment from some of the speakers in advance, I will announce their visits as and when the information becomes available. I will require all of you to be present in class and on time whenever we have a guest speaker presentation.

## Grading

Your grade will be decided based on a combination of the following:

<b>Individual assignment</b>	<b>50</b>
<b>Group assignment</b>	<b>20</b>
<b>Class Participation</b>	<b>30</b>
<b>Total</b>	<b>100</b>

### *Individual Project*

There is a three-part individual project to be submitted during the course. On the first day of class, each of you will be asked to select a company. Sometime prior to your Session 7 you will submit your first report. For this report you will perform a detailed fundamental analysis of the company and present a report on your findings. Just prior to Session 10 you will submit your second report. For this report, you will model the firm's income statement in detail. Modeling the operating income requires analysis of revenues and operating costs. The primary focus of this report is to reinforce your understanding of the firm's revenue and cost model. Sometime around Session 12 you will submit your final report. In this report you will present a three statement financial model of the firm stating clearly all the assumptions. You will present a forecast estimate of the firm's earnings per share (EPS). You will present your estimate of the value of the firm value, and its forecast share price.

This is a Type C assignment.

### *Team Projects*

For the group project, each group will perform a common size financial statement analysis of companies in an assigned industry.

This is a Type A assignment.

### *Class Participation*

The class participation grade will depend on class attendance, on-time arrival and professional behavior during class including but not limited to, not leaving while the class is in session, no private conversations, no use of unauthorized electronics like computers, tablets and phones, preparedness, responses to questions asked during class (cold calls or voluntary), questions, comments, and sharing your professional experience and similar demonstrations of positive engagement. If you cannot attend a class or need to come in late or leave early, I will expect you to inform me in advance and take my permission as a common courtesy.

*There is no midterm or final exam for this course.*

### **Core Culture**

Students are expected to adhere to [CBS Core Culture](#) in this class by being Present, Prepared, Participating.

### **Inclusion, Accommodation, and Support for Students**

At Columbia Business School we believe diversity strengthens any community or business model and brings it greater success. The School is committed to providing all students with equal opportunity to thrive in the classroom by providing a learning, living, and working environment free from discrimination, harassment, and bias on the basis of gender, sexual orientation, race, ethnicity, socioeconomic status, or ability.

Students with documented disabilities may receive reasonable accommodations. Students are encouraged to contact [Columbia University's Office of Disability Services](#) for information and to register for services.

Columbia Business School adheres to all community, state, and federal regulations as relate to Title IX and student safety. Read more about CBS' policies to support [Inclusion, Accommodations and Support for Students](#).

### **Honor Code and Academic Integrity**

The [Columbia Business School Honor Code](#) calls on all members of the School community to adhere to and uphold the notions of truth, integrity, and respect both during their time in school, and throughout their careers as productive, moral, and caring participants in their companies and communities around the world. All students are subject to the Honor Code for all of their academic work. Failure to comply with the Honor Code may result in [Dean's Discipline](#). Here you can review [examples of Academic Misconduct](#) which may result in discipline.

Course materials (videos, assignments, problem sets, etc) are for your use in this course only. You may not upload them to external sites, share them with students outside of this course, or post them for public commentary without the instructor's permission.

### **Honor Code Individual and Group Work Guidelines**

Type	Designation	Discussion of Concept	Preparation of Submission	Grade
A	Group/Group	Permitted with designated group	By the group	Same grade for each member of the group
B	Group/Individual	Permitted	Individually (No sharing of any portion of the submission)	Individual
C	Individual/Individual	None of any kind	Individual	Individual

<i><b>Session</b></i>	<i><b>Topics, Assignments</b></i>
Session 1 (May 10)	Introduction to valuation with multiples. Why fundamental analysis? In class examples. In class exercises.
Session 2 (May 11)	How to read a 10K. Fundamental factors that affect business performance. Return Analysis with ROA, ROE. Finer points of DuPont Decomposition. In class examples. In class exercises.
Session 3 (May 17)	Standardizing company reports. Common size analysis. Comparative analysis with common sized statements. In class Case: <b>Biometrica</b>
Session 4 (May 18)	Finer details of fundamental analysis – RNOA, PEG, Time value of money, Adjustment to PE multiples. In Class exercises.
<b>30 May 2023</b>	<b>Group Assignment 1 Due: Analysis of Common Size financial statements</b>
Session 5 (May 31)	Multi-period analysis for valuation – DDM, DCF and Residual income Models. Recasting the cash flow statement for valuation and financial management.
Session 6 (Jun 1)	Common errors and how to fix them. DCF-RI models comparisons. Terminal Value Analysis. In class Exercises. Introduction to fundamental analysis and model building. Basics of income statement analysis.
<b>7 Jun 2023</b>	<b>Individual Assignment 1 Due: Basic fundamental Analysis</b>
Session 7 (Jun 15)	Analysis of revenues and costs. In class exercise. Introduction to fundamental analysis and model building.
Session 8 (Jun 29)	Basics of income statement analysis. Footnote analysis. In class exercise.
Session 9 (Jul 13)	Introduction to fundamental analysis and model building. Basics of balance sheet modeling and cash flow analysis. Footnote analysis. In class exercise.
<b>15 Jul 2023</b>	<b>Individual Assignment 2 Due: Income Model</b>
Session 10 (Jul 26)	Introduction to fundamental analysis and model building. Balance sheet modeling and cash flow analysis. DCF valuation. In class exercise/ cases.
Session 11 (Aug 9)	Modeling, DCF Valuation In class exercise. <b>Guest Speaker</b>
Session 12 (Aug 17)	Course Review, Make Up.
<b>19 Aug 2023</b>	<b>Individual assignment 3 Due – Three Statement model and valuation.</b>