

Earnings Quality and Fundamental Analysis, B8008, Fall 2022**Course Syllabus**
This Draft: August 23, 2022**I. CONTACT DETAILS**

Prof. Doron Nissim

Email: dn75@columbia.edu

Bio, CV, and research: <http://www.columbia.edu/~dn75/>

Office hours (1112 Kravis): By appointment – please send me an email to request an in-person or a Zoom meeting. In your email, please provide info re your availability.

Teaching assistant: Chen, Yue YChen24@gsb.columbia.edu

II. COURSE DESCRIPTION

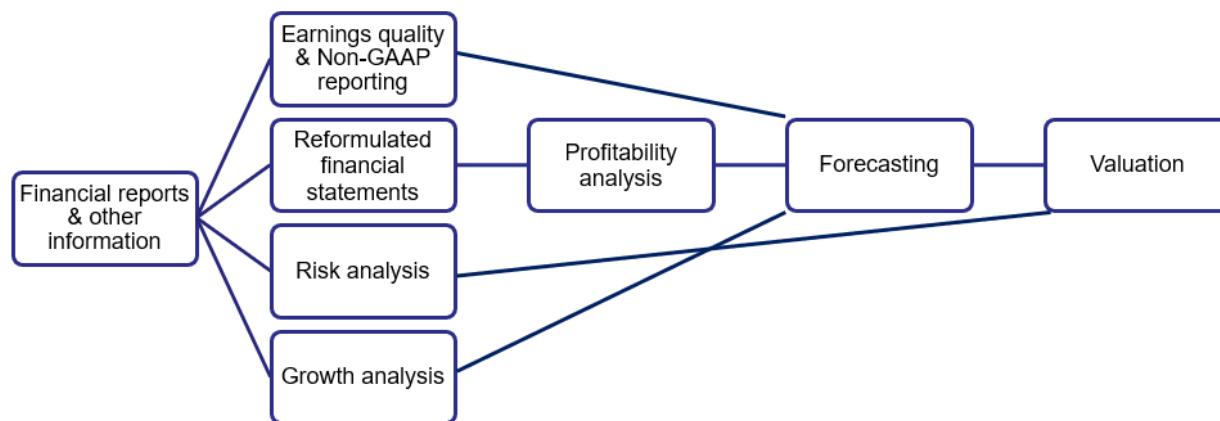
Financial reporting provides a window into the operational and financial workings of a company. However, translating this information into actionable insights is anything but straightforward. It requires an understanding of Generally Accepted Accounting Principles (GAAP), the quality of financial information, and the adjustments and analyses required to accurately measure and evaluate profitability, risks, growth prospects, and value.

The course starts with a short review of financial reporting and then focuses on various modules of fundamental analysis, including earnings quality, performance evaluation, risk assessment, forecasting, and valuation. The remaining class meetings (approximately 14 out of 24) are devoted to a deeper dive into the reporting and analysis of key transactions (e.g., business combinations, leasing) and financial statement line items (e.g., revenue, income taxes).

To allow for dynamic progress, the class schedule is flexible:

<u>Topic</u>	<u>Approximate # of class meetings</u>
1. Review of financial reporting	2
2. Financial statement analysis	4
3. Forecasting and valuation	4
4. Revenue and related items	2
5. Operating capacity	3
6. Estimated items	3.5
7. Financial instruments	2
8. Active investments	2.5
9. Equity and related items	1
Total	<u>24</u>

The following figure presents the framework:



While the course covers the theoretical underpinning of the various analyses, it focuses on implementation and practical uses. Many real-world examples will be analyzed, including using Excel tools that will be provided to the students.

The primary objective of the course is to acquire a deep understanding of accounting information and how to intelligently use it in making investment, credit, and similar resource allocation decisions. Such knowledge is required of executives, investors, consultants, bankers, analysts, and other users of financial information.

In a review conducted in 2011, the committee for evaluating elective courses concluded that *“this is an excellent, carefully constructed course which provides students with valuable insights and lasting concepts.”* In the same year, Professor Nissim won the “Dean’s Award for Teaching Excellence” for developing and teaching this course. Since then, the course has been contentiously updated, with a major revision in 2022.

The following is a recent email from an alumnus that audited the class: *“I really want to Thank You for letting me audit your course. I don’t understand why this is not a mandatory course in the Value Investing program. All of us learn lessons that you are teaching the hard way – by losing money, because no one taught us all this. Every single mistake I made, you covered in the class. It is very important for people in the Value Investing Program to know all this. The capital they lose in their initial years (when they are young and learning all this), if not lost, will make its way into the business school endowment eventually, after compounding. ... Thank you for your dedication. You are also the only professor who covered as much material as possible and was really dedicated with the content of the course.”*

The following is a recent email from a student: *“I just wanted to thank you again for the great semester ... I loved my internship and I’ve already accepted my offer to return to Your class was the best preparation I had for investment banking. All of the normalizing adjustments and deep dives into line items really helped me succeed because several times during the internship I was called on to make considerable accounting adjustments to make companies more comparable for comparison and had I not taken Earnings Quality I would not have been as prepared to handle the assignments. I was better at my job because of your course so I really*

wanted to express my gratitude for all the time you took creating your presentations and answering questions.”

III. COURSE ADMINISTRATION

Class Material

The course material consists of

- Detailed presentations (listed in Section V)
- A comprehensive monograph titled *Earnings Quality*, which serves as a recommended text and is available at <https://ssrn.com/abstract=3794378>.
- Two excel workbooks (*Ratio Analysis* and *Project Analysis and Valuation*)
- Practice exercises, cases, and problem sets.

All items will be made available electronically before class. These items cover all the course content. For those interested in additional readings, a recommended book is *Valuation: Measuring and Managing the Value of Companies*, Wiley Finance, 7th Edition. Additional optional readings will be posted to Canvas or made available via a link (see Section V below).

The course material is quite voluminous. To manage the work load, it is recommended that you focus primarily on carefully reviewing the presentations. To the extent that points made in the presentations are unclear, solving the practice cases, reviewing the calculations and explanations in the excel workbooks, and reading the related discussion in the *Earnings Quality* monograph are the next recommended steps.

There will be five assigned problem sets:

<u>Problem Set</u>	<u>Due date</u>	<u>Consists of the Following Cases</u>
1. Financial statement analysis	September 28	Practice Exercise - Profitability Analysis; Risk Analysis of Cummins
2. Forecasting and valuation	October 12	Forecasting Financial Statements – Insights from Costco’s MD&A; DCF Analysis of Alphabet
3. Revenue and operating capacity	November 9	Revenue and Related Items – Cummins; Inventory – Cummins; PP&E and Intangibles – Cummins
4. Estimated items	November 28	Income taxes - Cummins; Pension - Cummins
5. Financial instruments and investments	December 7	Debt – Kellogg; Equity Method Investments & consolidation - Coca Cola;

There will be many opportunities for practice. In addition to the many examples in the presentations and *Earnings Quality* monograph, the following practice cases (and solutions) will be made available on Canvas:

<u>Topic</u>	<u>Practice Cases</u>
1. Financial statement analysis	Earnings Quality Analysis of Alphabet; Risk Analysis of Alphabet
2. Forecasting and valuation	Forecasting Financial Statements – 3M; Relative Valuation of Coca Cola
3. Revenue and operating capacity	Revenue and Related Items - Coca Cola; Revenue and Related Items - Campbell Soup Company; Inventory - Campbell Soup Company; PP&E and Intangibles - Coca Cola; PP&E & Intangibles - Campbell Soup Company
4. Estimated items	Income taxes - Campbell Soup Company; Income taxes - Kimberly-Clark; Income taxes - Kellogg; Income taxes - Microsoft; Pension – General Mills; Pension – Kimberly-Clark; Pension - Kellogg
5. Financial instruments and investments	Equity Method Investments – Cummins; Business Combinations - Campbell Soup Company; Business Combinations - Kellogg
Review	Financial Analysis & Valuation of Tesla; B8008 Spring 2021 Final

Class Meetings

<u>Section</u>	<u>Days</u>	<u>Time</u>	<u>Room</u>
B8008-01	M, W	10:20-11:50	Geffen 420
B8008-02	M, W	2:00-3:30	Geffen 420

First class: September 7; last class: December 7. Make-up class for Labor Day: September 9 (Friday). No class on October 5 – make-up class TBD (Zoom participation and recording will be available).

Grade

The course grade will be based on **problem sets** (40%; 5 problem sets, 10% each, four highest grades count), and a **Final** exam (60%). Problem sets should be submitted to Canvas before the beginning of class on the respective due dates. Grading of the problem sets is based on effort. The Final will be open books. Finals from previous years are available on Canvas.

The exam will be administrated online. It will be made available on Canvas (in the “Files directory”) on December 12 at 10am. You will have 3 hours and 15 minutes from the time you download it to upload the solution onto Canvas (the extra 15 minutes are for downloading/uploading the exam and for technical difficulties). The exam will be closed for downloading/uploading at 1:15pm on December **15th**. *You can take the exam any time during this 75-hour window*. The exam is open book. Please see the Files directory for prior year exams.

IV. CONNECTION WITH THE CORE AND OTHER ELECTIVES

This course builds on knowledge from the core courses Financial Accounting (B6001) and Corporate Finance (B6300), which introduce students to basic concepts of financial reporting and analysis. In particular, B8008 requires a basic understanding of the following:

- Financial statements, including the balance sheet, income statement, and cash flow statement

- How accrual accounting differs from cash accounting, including revenue recognition, expense recognition (matching principle), and the basic principles of asset and liability recognition and measurement.
- Time value of money and present value calculations

In B8008, students acquire a deep understanding of accounting information and how to intelligently use it in making investment, credit, and similar resource allocation decisions.

V. DETAILED COURSE OUTLINE

1. Review of Financial Accounting (Approximately 2 class meetings)

Presentations:

RFA.1 Foundations of Financial Accounting (To be reviewed by the students, preferably prior to the first class; will not be discussed in class)

RFA.2 Review of Financial Reporting

Recommended Readings:

Nissim, D. 2022. *Earnings Quality*. Available at <https://ssrn.com/abstract=3794378>. Appendix A (Review of the Financial Statements).

2. Financial Statement Analysis (Approximately 4 class meetings)

Presentations:

FSA.1 Earnings Quality and Non-GAAP Reporting

FSA.2 Reformulated Financial Statements and Profitability Analysis

FSA.3 Fundamental Risk Analysis

Recommended Readings:

Nissim, D. 2022. *Earnings Quality*. Available at <https://ssrn.com/abstract=3794378>. Chapter 1; Sections 2.1-2.5 and 2.8-2.10.

Excel workbook: *Ratio Analysis*. Available on Canvas.

Optional readings:

Nissim, D. 2022. Profitability analysis. Columbia Business School. Available at <https://ssrn.com/abstract=4064824>.

Nissim, D. 2022. Reformulated financial statements. Columbia Business School. Available at <https://ssrn.com/abstract=4064722>.

Nissim, D. 2017. Synthetic credit ratings and the inefficiency of agency ratings. Columbia Business School Research Paper No. 17-81. Available at <https://ssrn.com/abstract=3012723>.

3. Forecasting and Valuation (Approximately 4 class meetings)

Presentations:

F&V.1 Forecasting Financial Statements

F&V.2 Valuation and F/S-based Investment Strategies

Recommended Readings:

Nissim, D. 2022. *Earnings Quality*. Available at <https://ssrn.com/abstract=3794378>. Sections 2.11, 2.12, 3.1.4, and Chapter 6.

Excel workbook: *Project Analysis and Valuation Models*. Available on Canvas.

Optional readings:

Chan, L., J. Karceski and J. Lakonishok. 2003. The Level and Persistence of Growth Rates. *Journal of Finance* 58(2): 644-684. Available on Canvas.

Liu, J., Nissim, D. and Thomas, J., 2007. Is cash flow king in valuations? *Financial Analysts Journal*, 63(2), pp.56-68.

Nissim, D. 2019. EBITDA, EBITA, or EBIT? Columbia Business School Research Paper No. 17-71. Available at <https://ssrn.com/abstract=2999675>.

Nissim, D. 2019. Terminal value. Columbia Business School Research Paper No. 18-12. Available at <https://ssrn.com/abstract=3095564>.

Nissim, D. 2021. Steady-state growth. Columbia Business School. Available at <https://ssrn.com/abstract=3898767>.

Nissim, D. 2021. Valuing minority interests. Columbia Business School. Available at <https://ssrn.com/abstract=3472592>.

Nissim, D. 2022. Equity risk premium. Columbia Business School. Available at <http://www.columbia.edu/~dn75/>.

Nissim, D. 2022. Special items: Implications for forecasting. Columbia Business School. Available at https://ssrn.com/abstract_id=4076136.

Nissim, D. 2022. Steady-state profitability. Columbia Business School. Available at <http://www.columbia.edu/~dn75/>.

4. Revenue and Related Items (Approximately 2 class meetings)

Presentations:

LIEQ.1 Revenue

LIEQ.2 Accounts Receivable and Bad Debt

Recommended Readings:

Nissim, D. 2022. *Earnings Quality*. Available at <https://ssrn.com/abstract=3794378>. Sections 3.1, 3.2, 5.1, and 5.2.

5. Operating Capacity (Approximately 3 class meetings)

Presentations:

LIEQ.3 Inventory and COGS

LIEQ.4 PP&E and Related Expenses

LIEQ.5 Intangible Assets and Related Expenses

Recommended Readings:

Nissim, D. 2022. *Earnings Quality*. Available at <https://ssrn.com/abstract=3794378>. Sections 3.3, 3.4, and 5.3-5.5.

Optional readings:

Nissim, D. 2019. EBITDA, EBITA, or EBIT? Columbia Business School Research Paper No. 17-71. Available at <https://ssrn.com/abstract=2999675>.

Nissim, D. 2019. The valuation implications of overproduction. Columbia Business School Research Paper No. 17-102. Available at SSRN: <https://ssrn.com/abstract=3054282>.

6. Estimated Items (Approximately 3.5 class meetings)

Presentations:

LIEQ.6 Restructuring, Loss Contingencies and Other Operating Expenses

LIEQ.7 Assets and Liabilities Held for Sale and Discontinued Operations

LIEQ.8 Income Taxes

LIEQ.9 Leases

LIEQ.10 Pension and Other Postretirement Benefits (OPB)

Recommended Readings:

Nissim, D. 2022. *Earnings Quality*. Available at <https://ssrn.com/abstract=3794378>. Sections 2.6, 2.7, and 5.6-5.10.

Optional readings:

Lev, B. and Nissim, D. 2004. Taxable Income, Future Earnings, and Equity Values, *The Accounting Review* 79(4), 1039-1074.

Nissim, D. 2022. Normal tax rate. Columbia Business School. Available at <http://www.columbia.edu/~dn75/>.

Nissim, D. 2022. Right-of-use assets. Columbia Business School. Available at <http://www.columbia.edu/~dn75/>.

7. Financial Instruments (Approximately 2 class meetings)

Presentations:

LIEQ.11 Debt Payable

LIEQ.12 Loans Receivable and Related Accounts

LIEQ.13 Investments in Debt Securities

LIEQ.14 Derivatives

LIEQ.15 Passive Investments in Equity Securities

Recommended Readings:

Nissim, D. 2022. *Earnings Quality*. Available at <https://ssrn.com/abstract=3794378>. Sections 5.11-5.15.

8. Active Investments (Approximately 2.5 class meetings)

Presentations:

LIEQ.16 Equity Method Investments

LIEQ.17 Business Combinations

LIEQ.18 Consolidation

Recommended Readings:

Nissim, D. 2022. *Earnings Quality*. Available at <https://ssrn.com/abstract=3794378>. Sections 5.16-5.18.

Optional readings:

Nissim, D. 2019. EBITDA, EBITA, or EBIT? Columbia Business School Research Paper No. 17-71. Available at <https://ssrn.com/abstract=2999675>.

9. Equity and Related Items (Approximately 1 class meeting)

Presentations:

LIEQ.19 Equity

LIEQ.20 Share-based Payments (SBP, encompassing Stock-based Compensation or SBC)

LIEQ.21 Earnings Per Share (EPS)

Recommended Readings:

Nissim, D. 2022. *Earnings Quality*. Available at <https://ssrn.com/abstract=3794378>. Sections 5.19-5.21.