QUANTITATIVE CORPORATE FINANCE - SYLLABUS
Spring 2017 – Prof. Ian Ayres

My office number is Room 254. My telephone numbers are 432-7101 (w); 624-5654 (h). My assistant is Darcy Smith (Room 220, 432-6769, darcy.smith@yale.edu).

I will be holding “open” office hours this year from 1:30-3:10 PM on Wednesdays. Open office hours are intended to be a comfortable and confidential space to talk with a faculty member about anything you’d like – questions or ideas about the law, but also questions or concerns about personal issues including mental health challenges (yours or someone you are close with) at YLS. Please feel free to schedule a separate appointment if this time is inconvenient. If you would like to meet with me outside of office hours, please email (darcy.smith@yale.edu) 3 times that work for you (or you should also feel free to just drop by my office in the afternoon).

You should keep a name card displayed in front you in class with your preferred first name emblazoned in large bold letters to accommodate my failing eyesight.

At times, I will use an Excel spreadsheet to create a randomized (with replacement) order of people on which to call. If for some reason you cannot attend class, you should arrange with a classmate to answer on your behalf if your name is called. Answering or arranging for someone to answer on your behalf is a class requirement. My central interest is in assuring that I have an interlocutor and avoid the deflating moment of no one answering my question.

The last class will be Thursday, April 20, 2017.

You will be given a 3-hour, open book, final examination.

Computer Usage Rules: During class please only use your computers for taking notes. Please do not send or receive emails or texts. Please do not surf the web or play games. Please tell me if you see other students violating these rules. You are advised that confederates may be sitting in on the class who will report to me violations of these rules.

Please display a conspicuous name card indicating your preferred name.


This class is intended for students with no background in finance. Indeed, my ideal student has not ever had economics or finance and has not had math since high school. Please email me after the first class meeting a disclosure (subject line: QF Disclosure) indicating your prior experience or exposure (in school, on the job, etc.) with any of the course topics listed below. You should also indicate in the email your preferred pronouns (mine are he/him/his) and whether you are willing to abide by the computer usage rules. You will only be allowed to sit for the
course if you receive from me a “Welcome to the course” email. I reserve the right to exclude students from the class who have too much prior experience with finance or to require such students to take the course on a pass/fail basis.

The primary goal of the class is to make neophytes and/or mathphobes comfortable with modeling real world quantitative problems. The class will be light on reading and there will be almost no reading of cases or statutes. Instead we will focus on learning quantitative skills of finance. You will have to complete a number of problem sets using Excel and a major part of your final examination will require you to build spreadsheet analysis.

We will spend the bulk of the semester working through chapters 2-7 of Gilson and Black. See parallel references to Brealey and Meyers in parentheses. Major topics of each section are listed.

1. Chapter 2: Valuation Under Certainty [BM Chps. 2-6]
   a. Present Value and the Opportunity Cost of Capital
   b. How to Calculate Present Values
   c. Present Value of Bonds and Stocks
   d. Why Present Value Leads to Better Investment Decisions
2. Chapter 3: Valuation Under Uncertainty [BM Chp. 7]
   a. Risk and Return
   b. Standard Deviations
   c. Diversification
   d. Systematic v. Unsystematic Risk
3. Chapter 4: The Capital Asset Pricing Model [BM Chps. 8-9]
   a. The Market Price of Risk
   b. Measuring Betas
   c. Testing CAPM
   d. Arbitrage Pricing Theory (APT)
4. Chapter 5: The Efficient Capital Markets Hypothesis [BM Ch. 13]
   a. Weak Semistrong and Strong Forms of the ECMH
   b. Informational vs. Fundamental Efficiency
   c. Testing ECMH – Anomalies
5. Chapter 6: Event Studies
   a. Basic Methodology
   b. Single vs. Multiple Firms
   c. Single vs Multiple days
   d. Interpretation
6. Chapter 7: Options [BM Ch. 20]
   a. Position Diagrams
   b. Put Call Parity
   c. Black Scholes Option Pricing Formula
   d. Applications

If time remains, we may explore other derivative plays (hedging, swaps, future and forward contracts) or we may investigate matters of corporate structure (dividend policy, leverage, the Modigliani/Miller theorem).
For your first assignment please read Chapter 2 of Gilson and Black.