Econ 422:  
Finance, Capital and Investments  
Winter 2013

This course is an introduction to financial economics and asset pricing. We will cover the analytical tools and finance theory that Wall Street uses to value securities and corporations use to make investment decisions. Key topics are valuation of assets with net present value and no-arbitrage, informational efficiency of asset markets and risk management.

Financial economics is a quantitative subject and we will use mathematical techniques that will include statistics and calculus. Course prerequisites are: 2.0 in econ 300; either econ 311, stat 311, math 390, stat 390, or qmeth 201. You will also need to know how to use Excel.

Instructor

Professor Mu-Jeung Yang

- Office: Savery 327
- Office hours: Thursdays, 10:30am-11:30am or by appointment
- Email: mjyang@uw.edu. Please start your subject line with [Econ 422]: doing so will ensure I read your emails first.

Class Meeting times

Tuesdays and Thursdays, 8:30am-10:30am, Savery 264

Class website

The website for this class will be:  
http://faculty.washington.edu/mjyang/teaching/Econ422_W13/

Class Grading

- Problem Sets: 10%
- Midterm: 40%
- Final: 50%
If you cannot make an exam date, the following policy applies: major exceptions are only allowed in case of medical emergencies that concern either you or your family. In this case, please provide a certification by a doctor. **If you already know that you cannot make the final exam date, you will not be able to take this class.**

If you miss a midterm, I will reweight the final and it will count 90% instead of 50%. If you miss the final, you will need to take a make-up exam next quarter. This exam will be significantly harder than the exam at the end of this term, reflecting the fact that you have more time for preparation and that the make-up final should only be taken in exceptional cases. In case you cannot make the final and do not take the make-up final, I will assign an incomplete for this class.

**Problem Set Guidelines**

- **If you cannot attend the date at which problem sets are due**, email me an electronic version of your solution, completely formatted and with your name on the problem set. If the printed version of the problem set does not contain your name, you will not get credit for the submission. Problem sets need to be here by the end of the lecture. Late problem sets cannot be accepted, since they all go together with a grader!

- You can work in groups but you need to submit individually.

- Solutions will be available in hard copy, to be picked up in class or at my office. **There will not be electronic versions of the solution available, sorry.**

**Textbooks**

- We will use Bodie, Kane and Marcus (BKM) “Investments”, 9th edition. Previous editions can be used, but you need to figure out the corresponding pages on your own. I will follow the book for around 65-80% of the material, but you should make sure that you understand the lectures, especially if you aim for a very good grade in the class.

- Supplemental Reading for NPV and Lecture 9 will come from Brealey, Myers and Allen (BMA) “Principles of Corporate Finance”, 10th ed.

- For a review of intermediate micro-economics, I recommend to check out the following chapter’s of Varian’s Intermediate Microeconomics: “Intertemporal Choice”, “Asset Markets”, “Uncertainty” and “Risky Assets”.

- BKM will be sufficient for our discussion of derivatives markets. However, if you are interested in reading more about the topics we discuss there, I recommend Hull’s “Fundamentals of Futures and Options Markets”. Selected material in our discussion of derivatives will be taken from Hull.
Additional Readings / Material (Optional)

I recommend finance/business related publications such as the WSJ (http://subscribe.wsj.com/semester), the FT or the Economist. In addition, there are some additional readings listed that help to make you familiar with institutional details of today's financial markets and some of the major players. I also encourage you to check out the following blogs:

- Fama-French blog at Dimensional Fund advisors:
  http://wwwdimensional.com/famafrench. Fama and French are two of the foremost empirical finance researchers of the last 30 years, so they have a lot of interesting perspectives on what is going on in markets.

- John Cochrane’s blog at Chicago Booth: http://johnhcochrane.blogspot.com. Cochrane is probably the best example of the modern intersection of asset pricing and macroeconomics. His comments on what you read in the newspaper are finance insights mixed with a good dose of the big picture.

- Robert Shiller at Yale has a blog at:
  http://www.shillerfeeds.com. He is an important counterweight to Fama-French and Cochrane, who are all Chicago economists. Shiller is a Behavioral Economist who has been emphasizing the human side of financial markets and the importance of the democratization of finance.

I also recommend to check out broadcasts of Jim Cramer’s “Mad Money” on CNBC (http://www.cnbc.com/id/33482520). This has pure entertainment value but will introduce you to some practical investing issues (also: Cramer actually has a lot of clout of Wall Street through his show...). If you find yourself still hungry for finding out more about financial markets, here are three recommendations to further explore other complementary insights about finance and capital markets:

- The economics department offers Econ 423 this Winter! This is a topics class which will go more deeply into institutional details, legal frameworks and macroeconmic conditions pertaining to financial markets. Your professors will be practitioners, so Econ 423 will give you a “Street Smart” view instead of the “Ivory Tower” approach of Econ 422. Highly recommended!

- Robert Shiller has a fantastic online class, accessible over Yale Open Course: http://oyc.yale.edu/economics/econ-252-11. This is a nice institutional overview about all types of financial institutions that enable risk management with a big emphasis on the human side of investing. Note especially his phenomenal guest speaker list from all corners of capital markets: institutional investors, private equity, regulators etc.

- For those more interested in Quant finance topics such as derivatives and securitization, Yale has another great open course: John Geanakopolos’ class on finance theory http://oyc.yale.edu/economics/econ-251
LECTURE OUTLINE

Note regarding readings: **required** readings are from the textbook BKM discussed above. The **optional** readings are entirely up to you. They are intended to introduce you to some of the personalities in finance in the last 20 years, but are not related to class material in any direct way. What is more, especially the book by Patterson sometimes has factual mistakes regarding finance theory and empirics! The point is that these readings provide you with context, but the reference material for your understanding of finance should be the lectures and the textbook.

I will post a “web version” of the lecture slides that constitute the class material. Note that these web accessible slides will be an **incomplete** version of the actual lecture slides. These slides will be made available after the lectures so you don’t need to completely copy all figures and tables. Substantial portions of the material will be left free however and you will need to take notes during class to get the whole lecture. Class attendance and participation are strongly encouraged.

Basics

I. Introduction: Why study Finance

II. Present Value
   *(BMA, Chapters 1-5)*

III. Risk and Arbitrage

Part I: Fixed Income

   **Optional:** Lowenstein, Roger (2001). *When Genuis Failed: The Rise and Fall of Long-Term Capital Management, Chapters 1-6*

IV. Bond Returns and Pricing with No-Arbitrage
   *(BKM Chapter 14)*

V. Duration, Convexity and Immunization
   *(BKM Chapter 16)*

VI. Expectations and the Informational Content of Yield Curves
   *(BKM Chapter 15)*
Part II: Equities and Portfolio Theory

Optional: Malkiel, Burton (2010): A Random Walk Down Wall Street, Chapters 6-11

VII. Fundamental Company Analysis I:
Simple Stock Valuation Approaches and Comparables
(BKM, Chapter 18)

VIII. Fundamental Company Analysis II:
Financial Statements
(BKM, Chapter 19)

IX. Fundamental Company Analysis III:
Valuation Effects of Capital Structure and Corporate Financial Policy
(BMA, Chapters 16-19)

In-Class MIDTERM

X. Risk Premia I:
Statistical Tools and the Principle of Diversification
(BKM, Chapter 7)

XI. Risk Premia II:
Mean-Variance Analysis and CAPM
(BKM, Chapter 9)

XII. Risk Premia III:
APT and Empirics of Common Risk Factors
(BKM, Chapter 10, 13)

XIII. Expectations and the Informational Content of Security Prices
(BKM, Chapter 11, 12)

Part III: Derivatives

Optional Reading: Patterson, Scott (2011). The Quants: How a New Breed of Math Whizzes Conquered Wall Street and Nearly Destroyed It

XIV. Derivatives I: Forwards and Futures
(BKM, Chapter 22)

XV. Derivatives II: Options Basics
(BKM, Chapter 20)

XVI. Derivatives III: Contingent Claims Pricing in the Binomial Model
(BKM, Chapter 21.1-21.3) - IF TIME PERMITS

The Bottomline (last lecture)