IMPORTANT:

Please refer to the <u>USC Center for Excellence in Teaching</u> for current best practices in syllabus and course design. This document is intended to be a customizable template that primarily includes the technical elements required for the Curriculum Office to forward your proposal to the UCOC.



ECON 555, Topics in Asset Pricing Theory

Lectures:

: KAP 156 Monday & Wednesday, 12 – 1:20pm

Instructor: Marianne Andries Office: KAP 364 Office Hours: Wednesdays 10.30-11.30am Contact Info: andries@usc.edu

Teaching Assistant: TBD

Course Description

The current value of any given asset is determined, quite naturally, by how much payoff you expect this asset to yield, and by how much appetite you have for the risks this payoff entails.

This simple intuitive statement is formalized as $p_t = E_t(\Pi_{t,t+1}X_{t+1})$, the central pricing formula in market finance, where p_t is the price, at any time t, of an asset with next-period final payoff X_{t+1} ; $\Pi_{t,t+1}$ is the discount for risk between t and t + 1; and E_t is the expectation operator given the information \mathcal{I}_t at time t.

Writing this formula down allows me to highlight the key elements at the core of this Advanced Asset Pricing Theory course:

- I) How is the discount for risk $\Pi_{t,t+1}$ determined? How is risk measured? Why are some risks more acceptable than others? How do agents evaluate different payoff distributions?
- II) What is the information set \mathcal{I}_t that agents have access to at time t? What mechanisms would limit their access to information?
- III) How do agents form their expectation operator E_t ? Are they subject to biases? Do they learn over time?

The classical asset pricing model assumes I) the discount for risk is determined by a standard expected utility model, with e.g. power utility; II) agents observe all available information at any time t (efficient market hypothesis); and III) agents use all the available information rationally to form their expectations.

In this class, we will see why the evidence invites us to relax these assumptions, one by one, and how such extensions to the classical model have been formalized.

I will make heavy use of illustrative empirical evidence, so all students (independent of their appetite for theory) will learn about the major market anomalies and their implications for risk/investment.

Many different topics will be covered (see the course schedule below), so not all will be studied in depth; but I can provide the interested students with additional material should they want to study a particular question more extensively.

Prerequisites or co-enrollement:

ECON 514: Empirical Finance, ECON 515: Time Series, ECON 577: Foundations of Financial Economics; Undergraduate students with a math/econ background are also welcome to contact me if they want to take the class.

Grading policy:

The final grade is a weighted average of the following:

- Weekly or bi-weekly assignments and class participation: 10%
- Midterm: 20%
- Referee report: 30%
- Final exam: 40%

<u>Weekly or bi-weekly assignments</u>: students will be required to write a brief summary/report on journaled articles. All students must turn such assignment at the beginning of the class, unless otherwise instructed. One or more student will be asked to present her/his work in a 5-minute presentation.

<u>Referee report</u>: students will be required to write an in-depth report, in the style of a journal "referee report", on one research paper they choose from a list I will provide. The referee report will be due at the end of the course.

Course Schedule: A Weekly Breakdown

Note: This schedule is tentative and may be subject to change! Not all reading references will be studied in detail each week; the list is indicative.

	Topics/Daily Activities	Readings/Preparation
Week 1	Introduction Asset Pricing Theory foundations	Asset Pricing – John Cochrane ECON 557: Financial Economics
Week 2	Part I: Preferences 1. Habit	Campbell, John Y., and John H. Cochrane. "By force of habit: A consumption-based explanation of aggregate stock market behavior." <i>Journal of political Economy</i> 107.2 (1999): 205-251
Week 3 and 4	Part I: Preferences 2. Long-run risk, Epstein-Zin preferences	Bansal, Ravi, and Amir Yaron. "Risks for the long run: A potential resolution of asset pricing puzzles." <i>The journal of Finance</i> 59.4 (2004): 1481-1509.
Week 5 and 6	Part I: Preferences 3. Loss aversion / Disappointment aversion	 Kőszegi, Botond, and Matthew Rabin. "A model of reference- dependent preferences." <i>The Quarterly Journal of</i> <i>Economics</i> 121.4 (2006): 1133-1165. Routledge, Bryan R., and Stanley E. Zin. "Generalized disappointment aversion and asset prices." <i>The Journal of</i> <i>Finance</i> 65.4 (2010): 1303-1332. Barberis, Nicholas C. "Thirty years of prospect theory in economics: A review and assessment." <i>Journal of Economic</i> <i>Perspectives</i> 27.1 (2013): 173-96.
Week 7	Part I: Preferences 4. Time inconsistency	Luttmer, Erzo GJ, and Thomas Mariotti. "Subjective discounting in an exchange economy." <i>Journal of Political Economy</i> 111.5 (2003): 959-989. Andries, Marianne, Thomas M. Eisenbach, and Martin C. Schmalz. "Horizon-dependent risk aversion and the timing and pricing of uncertainty." <i>FRB of New York Staff Report</i> 703 (2019).
Week 8	Part II: Information 1. Inattention, Information avoidance —- an empirical survey	Sicherman, Nachum, et al. "Financial attention." <i>The Review of Financial Studies</i> 29.4 (2016): 863-897. Golman, Russell, David Hagmann, and George Loewenstein. "Information avoidance." <i>Journal of Economic Literature</i> 55.1 (2017): 96-135.
Week 9 and 10	Part II: Information2. Theories of inattention:a. Information costsb. Rational inattentionc. Sparsity	 Veldkamp, Laura L. Information choice in macroeconomics and finance. Princeton University Press, 2011. Gabaix, Xavier. "Behavioral inattention." Handbook of Behavioral Economics: Applications and Foundations 1. Vol. 2. North-Holland, 2019. 261-343.

		Abel, Andrew B., Janice C. Eberly, and Stavros Panageas. "Optimal inattention to the stock market with information costs and transactions costs." <i>Econometrica</i> 81.4 (2013): 1455-1481.
MIDTERM		
Week 11 and 12	Part II: Information3. Preferences for risk, preferences for information	Epstein, Larry G., Emmanuel Farhi, and Tomasz Strzalecki. "How much would you pay to resolve long-run risk?." <i>American</i> <i>Economic Review</i> 104.9 (2014): 2680-97. Andries, Marianne, and Valentin Haddad. "Information
		aversion." Journal of Political Economy 128.5 (2020): 1901-1939.
Week 13	Part III: Rational Expectations ? 1. Optimal Expectations	Brunnermeier, Markus K., and Jonathan A. Parker. "Optimal expectations." <i>American Economic Review</i> 95.4 (2005): 1092-1118.
		Oster, Emily, Ira Shoulson, and E. Dorsey. "Optimal expectations and limited medical testing: evidence from Huntington disease." <i>American Economic Review</i> 103.2 (2013): 804-30.
Week 14	Part III: Rational Expectations ? 2. Experience effect	 Malmendier, Ulrike, Demian Pouzo, and Victoria Vanasco. "Investor experiences and financial market dynamics." <i>Journal of Financial Economics</i> 136.3 (2020): 597-622. Nagel, Stefan, and Zhengyang Xu. <i>Asset pricing with fading memory</i>. No. w26255. National Bureau of Economic Research, 2019. Kozlowski, Julian, Laura Veldkamp, and Venky Venkateswaran. <i>Scarring body and mind: the long-term beliefscarring effects of Covid-19</i>. No. w27439. National Bureau of Economic Research, 2020.
Week 15	Part III: Rational Expectations ? 3. Extrapolation, Diagnostic expectations	 Barberis, Nicholas, et al. "Extrapolation and bubbles." <i>Journal of Financial Economics</i> 129.2 (2018): 203-227. Barberis, Nicholas, et al. "X-CAPM: An extrapolative capital asset pricing model." <i>Journal of financial economics</i> 115.1 (2015): 1-24. Bordalo, Pedro, et al. "Diagnostic expectations and stock returns." <i>The Journal of Finance</i> 74.6 (2019): 2839-2874.
FINAL	Refer to the final exam schedule in the USC Schedule of Classes at classes.usc.edu.	

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, "Behavior Violating University Standards" policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call studenthealth.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press "0" after hours – 24/7 on call

studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED) - (213) 740-5086 | Title IX – (213) 821-8298 <u>equity.usc.edu</u>, <u>titleix.usc.edu</u>

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298 usc-advocate.symplicity.com/care report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity |Title IX for appropriate investigation, supportive measures, and response.

The Office of Disability Services and Programs - (213) 740-0776

<u>dsp.usc.edu</u>

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Campus Support and Intervention - (213) 821-4710

campussupport.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101 diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call <u>dps.usc.edu</u>

Non-emergency assistance or information.