Syllabus

Course: Asset Pricing IV – Topics in Asset Pricing Models

Professor: Fernando Chague

2ND QUARTER OF 2018

In this course we present the latest asset pricing models based on the problem of representative agents. It starts with the canonical Consumption CAPM model and how it fails to capture the main empirical features of stocks returns--the so-called equity, risk-free, and volatility puzzles. Then, as the literature evolves to reconcile theory with data, the latest models are introduced. We discuss models based on external habit and Epstein-Zin preferences; consumption processes subject to rare disaster shocks and long-run risks; consumption of durable goods and housing; models that deal with incomplete markets with heterogenous agents; and, finally, models with incomplete information and learning.

PROGRAM

1. Introduction
2. Canonical consumption-based asset pricing model
3. External habit
4. Recursive preferences
5. Long-run risks
6. Rare disasters
7. Multiple goods
8. Heterogeneous agents
9. Learning

BIBLIOGRAPHY

Main textbooks:

(KB) Back, Kerry (2017). **Asset Pricing and Portfolio Choice Theory**, 2nd Edition, Oxford Press.

(CM) Munk, Claus (2013). **Financial Asset Pricing Theory**, Oxford Press.

(JC) Cochrane, John (2005). **Asset Pricing**, revised edition, Princeton.

GRADING

20% participation

40% in-class examination

40% take-home examination

CONTACT

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DETAILED PROGRAM

1. **Introduction**
   - JC, chapter 1
   - KB, chapters 1, 3, 7
   - Mehra, Rajnish (2012) “Consumption-Based Asset Pricing Models.” Annual Review of Financial Economics, 4 (1): 385–409.
   - Breeden, Douglas T., Robert H. Litzenberger, and Tingyan Jia (2015) “Consumption-Based Asset Pricing, Part 1: Classic Theory and Tests, Measurement Issues, and Limited Participation”. Annual Review of Financial Economics, 7, 35–83.
   - Breeden, Douglas T., Robert H. Litzenberger, and Tingyan Jia (2015) “Consumption-Based Asset Pricing, Part 2: Habit Formation, Conditional Risks, Long-Run Risks, and Rare Disasters”. Annual Review of Financial Economics, 7, 85–131.

2. **Canonical consumption-based asset pricing model**
   - CM, chapter 8
   - KB, chapter 10
   - JC, chapter 21
   - Lucas, R. (1978) “Asset Prices in an Exchange Economy”, *Econometrica*, 46, 1429-1446.
   - Breeden, D. (1979) “An Intertemporal Asset Pricing Model with Stochastic Consumption and Investment Opportunities”, *Journal of Financial Economics*, 7, 265-296.
   - Hansen, Lars P.; Singleton, Kenneth J. (1982) Generalized Instrumental Variables Estimation of Nonlinear Rational Expectation Model. *Econometrica*, vol. 50, n.º 5, p. 1269-1286.
   - Mehra, R. and Prescott, E. (1985) “The Equity Premium: A Puzzle," Journal of Monetary Economics, 15, 145-161.
   - Weil, P. (1989) “The Equity Premium Puzzle and the Risk Free Rate Puzzle”, Journal of Monetary Economics, 24, 401-421
   - Hansen, Lars Peter, and Ravi Jagannathan (1991) “Implications of Security Market Data for Models of Dynamic Economies.” Journal of Political Economy 99 (2): 225–62.

3. External habit

- CM, cap. 9
- KB, cap. 11
- Abel, A. (1990) “Asset Prices Under Habit Formation and Catching Up with the Jones”, American Economic Review, 80, 38-42.
- Campbell, J. and Cochrane, J. (1999) “By Force of Habit: A Consumption Based Explanation of Aggregate Stock Market Behavior”, *Journal of Political Economy*, 107, 205-251
- Campbell, J, and Cochrane, J. (2015) “The Fragile Benefits of Endowment Destruction”. Journal of Political Economy 123, 5, 1214–26.
- Ljungqvist, Lars, and Harald Uhlig (2015) “Comment on the Campbell-Cochrane Habit Model.” Journal of Political Economy 123, 5, 1201–13.

4. Recursive preferences

- CM, cap. 9
- KB, cap. 11
- Epstein, L. and Zin, S. (1989) “Substitution, Risk Aversion and the Temporal Behavior of Asset Returns: A Theoretical Framework”, *Econometrica*, 57, 937-969
- Epstein, L. and Zin, S. (1991) “Substitution, Risk Aversion and the Temporal Behavior of Asset Returns: An Empirical Analysis”, *Journal of Political Economy*, 99, 263-286

5. Long-run risks

- CM, cap. 9
- KB, cap. 11
- Ravi, and Amir Yaron (2004) “Risks for the Long Run: A Potential Resolution of Asset Pricing Puzzles.” The Journal of Finance 59 (4):1481–1509.

6. Rare disasters

- CM, cap. 9
- KB, cap. 11
- Rietz, Thomas A (1988) “The Equity Risk Premium a Solution.” Journal of Monetary Economics 22 (1):117–31.
- Barro, Robert J (2006) “Rare Disasters and Asset Markets in the Twentieth Century.” The Quarterly Journal of Economics 121 (3):823–66.
- Wachter, Jessica A (2013) “Can Time-Varying Risk of Rare Disasters Explain Aggregate Stock Market Volatility?” The Journal of Finance 68 (3):987–1035.

7. Multiple goods

- CM, cap. 9
- Yogo, Motohiro (2006) “A Consumption-Based Explanation of Expected Stock Returns.” The Journal of Finance 61 (2):539–80.
- Piazzesi, Monika, Martin Schneider, and Selale Tuzel (2007) “Housing, Consumption and Asset Pricing.” Journal of Financial Economics 83 (3):531–69.

8. Heterogeneous agents

- CM, cap. 9
- KB, cap. 11
- Constantinides, George M., and Darrell Duffie (1996) "Asset Pricing with Heterogeneous Consumers." Journal of Political Economy 104 (2):219–40.
- Gomes, Francisco, and Alexander Michaelides (2008) "Asset Pricing with Limited Risk Sharing and Heterogeneous Agents." The Review of Financial Studies 21 (1):415–48.

9. Learning

- KB, cap. 23
- Veronesi, P. (1999) "Stock Market Overreactions to Bad News in Good Times: A Rational Expectations Equilibrium Model." Review of Financial Studies 12 (5):975–1007.
- Brennan, Michael J., and Yihong Xia (2001) "Stock Price Volatility and Equity Premium." Journal of Monetary Economics 47 (2):249–83.