

# ECON GR6808: Macro-Finance

MATTHIEU GOMEZ

Fall 2018

**Overview** This course introduces students to the theoretical and empirical literature on macro-finance. The course covers general equilibrium models of risk and return and models with heterogeneous agents. A particular emphasis is given to continuous time methods to solve these models, as well as micro empirical techniques to test them.

**Grading** Your course grade will be based on a few problem sets (40% of the grade), participation (20% of the grade), and a term paper (40% of the grade). The term paper should be an original research proposal related to the course's topics.

**Statement on Academic Integrity** Columbia's intellectual community relies on academic integrity and responsibility as the cornerstone of its work. Graduate students are expected to exhibit the highest level of personal and academic honesty as they engage in scholarly discourse and research. In practical terms, you must be responsible for the full and accurate attribution of the ideas of others in all of your research papers and projects; you must be honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet source. Graduate students are responsible for knowing and correctly utilizing referencing and bibliographical guidelines. When in doubt, consult your professor. Citation and plagiarism-prevention resources can be found at the GSAS page on Academic Integrity and Responsible Conduct of Research.

Failure to observe these rules of conduct will have serious academic consequences, up to and including dismissal from the university. If a faculty member suspects a breach of academic honesty, appropriate investigative and disciplinary action will be taken following Dean's Discipline procedures.

**Statement on Disabilities Accommodations** If you have been certified by Disability Services (DS) to receive accommodations, please either bring your accommodation letter from DS to your professor's office hours to confirm your accommodation needs, or ask your liaison in GSAS to consult with your professor. If you believe that you may have a disability that requires accommodation, please contact Disability Services at 212-854-2388 or [disability@columbia.edu](mailto:disability@columbia.edu).

Important: To request and receive an accommodation you must be certified by DS.

# Optimization in Continuous-Time

## Week 1: Continuous-Time Tools

\*Samuel Karlin and Howard E Taylor. *A second course in stochastic processes*. Elsevier, 1981 Chapter 15

## Week 2: Consumption with Borrowing Constraints

\* Yves Achdou et al. *Income and wealth distribution in macroeconomics: A continuous-time approach*. Tech. rep. Working Paper. 2017

Chong Wang, Neng Wang, and Jinqiang Yang. “Optimal consumption and savings with stochastic income and recursive utility”. In: *Journal of Economic Theory* 165 (2016), pp. 292–331

## Week 3: Investment with Borrowing Constraints

Pierre-Olivier Gourinchas. “Notes for Econ202A Investment”

Patrick Bolton, Hui Chen, and Neng Wang. “A unified theory of Tobin’s  $q$ , corporate investment, financing, and risk management”. In: *The Journal of Finance* 66.5 (2011), pp. 1545–1578

Thomas Chaney, David Sraer, and David Thesmar. “The collateral channel: How real estate shocks affect corporate investment”. In: *The American Economic Review* 102.6 (2012), pp. 2381–2409

Gabriel Chodorow-Reich. “The employment effects of credit market disruptions: Firm-level evidence from the 2008–9 financial crisis”. In: *The Quarterly Journal of Economics* 129.1 (2014), pp. 1–59

# Asset Pricing

## Week 4: Discount Rates

\*John H Cochrane. “Discount Rates”. In: *The Journal of Finance* 66.4 (2011), pp. 1047–1108

John Y Campbell and Robert J Shiller. “The dividend-price ratio and expectations of future dividends and discount factors”. In: *Review of financial studies* 1.3 (1988), pp. 195–228

## Week 5: Stochastic Discount Factor

Robert C Merton. “Optimum consumption and portfolio rules in a continuous-time model”. In: *Journal of economic theory* 3.4 (1971), pp. 373–413

## Week 6: Long-Run Risk

\*Ravi Bansal and Amir Yaron. “Risks for the Long Run: A Potential Resolution of Asset Pricing Puzzles”. In: *Journal of Finance* 59.4 (2004), pp. 1481–1509

Emi Nakamura, Dmitriy Sergeyev, and Jón Steinsson. “Growth-Rate and Uncertainty Shocks in Consumption: Cross-Country Evidence”. In: *American Economic Journal: Macroeconomics* 9.1 (2017), pp. 1–39. DOI: 10.1257/mac.20150250. URL: <http://www.aeaweb.org/articles?id=10.1257/mac.20150250>

## Week 7: Disaster Risk

\*Ian WR Martin. “Consumption-based asset pricing with higher cumulants”. In: *The Review of Economic Studies* 80.2 (2013), pp. 745–773

Jessica A Wachter. “Can Time-Varying Risk of Rare Disasters Explain Aggregate Stock Market Volatility?” In: *The Journal of Finance* 68.3 (2013), pp. 987–1035

Emi Nakamura et al. “Crises and recoveries in an empirical model of consumption disasters”. In: *American Economic Journal: Macroeconomics* 5.3 (2013), pp. 35–74

## Week 8: RBC with Asset Prices

Urban J Jermann. “Asset pricing in production economies”. In: *Journal of Monetary Economics* 41.2 (1998), pp. 257–275

\* Francois Gourio. “Disaster risk and business cycles”. In: *The American Economic Review* 102.6 (2012), pp. 2734–2766

Dimitris Papanikolaou. “Investment Shocks and Asset Prices”. In: *Journal of Political Economy* 119.4 (2011), pp. 639–685

Robert E Hall. “High discounts and high unemployment”. In: *The American Economic Review* 107.2 (2017), pp. 305–330

Jaroslav Borovicka and Katarina Borovicka. “Discount Rates and Employment Fluctuations”. 2016

## Week 9: NK Models with Asset Prices

\*Ricardo J Caballero and Alp Simsek. *A risk-centric model of demand recessions and macroprudential policy*. Tech. rep. National Bureau of Economic Research, 2017

# Heterogeneous Agent Models

## Week 10: Income and Wealth Distribution

\*Xavier Gabaix. “Power Laws in Economics and Finance”. In: *Annual Review of Economics* 1.1 (2009), pp. 255–294

Matthieu Gomez. “What Drives the Recent Rise in Inequality?” Working Paper. 2016

### **Week 11: OLG Models**

\* Charles I. Jones. “Simple Models of Top Income and Wealth Inequality”. 2016

Nicolae Gârleanu, Leonid Kogan, and Stavros Panageas. “Displacement Risk and Asset Returns”. In: *Journal of Financial Economics* 105.3 (2012), pp. 491–510

Nicolae Garleanu and Stavros Panageas. “Heterogeneity and Asset Prices: A Different Approach”. In: (2018). Working Paper

### **Week 12: Heterogeneous Exposure to Aggregate Shocks**

Nicolae Gârleanu and Stavros Panageas. “Young, Old, Conservative, and Bold: The Implications of Heterogeneity and Finite Lives for Asset Pricing”. In: *Journal of Political Economy* 123.3 (2015), pp. 670–685

Matthieu Gomez. “Asset Prices and Wealth Inequality”. Working Paper. 2016

### **Week 13: Idiosyncratic Risk**

George M Constantinides and Darrell Duffie. “Asset Pricing with Heterogeneous Consumers”. In: *Journal of Political economy* (1996), pp. 219–240

Lawrence DW Schmidt. “Climbing and Falling off the Ladder: Asset Pricing Implications of Labor Market Event Risk”. In: (2016). Working Paper

Leonid Kogan, Dimitris Papanikolaou, and Noah Stoffman. “Winners and Losers: Creative Destruction and the Stock Market”. In: (2013). Working Paper

\* Fatih Guvenen, Serdar Ozkan, and Jae Song. “The nature of countercyclical income risk”. In: *Journal of Political Economy* 122.3 (2014), pp. 621–660