

# Macro Financial Modeling Intro

**Dr. Richard W. Evans**

July 28, 2017

# Schedule to the end

Day	Time	Description
Today	8-10am	Nonlinear Opt
	10am-noon	MFM Intro
	noon-1:30pm	RA jobs
Mon	8-10am	Nonlinear Opt
	10am-noon	MFM model
Tue	8am-noon	HPC/Parallel
Wed	8-10am	Nonlinear Opt
	10am-noon	MFM model
Thur	8am-noon	HPC/Parallel
Fri	10-11am	Survey fill out
	11am-noon	concluding remarks

# Macro Financial Modeling

## Definition:

“**Macro-finance** studies the relationship between asset prices and economic fluctuations.” (John Cochrane, “Macro-Finance”, *Review of Finance*, 21:3, pp. 945-985, May, 2017) [[RoF blog post summary](#)]

## MFM characteristics

Characteristics	Research questions
Macroeconomic, dynamic, GE	Connect bus. cycle and financial sector
Endog asset prices (risky v. riskless)	Equity premium, risk aversion
Aggr. shocks/risk, incomplete markets	Firm regulation/capital requirements
Firm/household heterogeneity	House prices and recessions
Financial capital requirements	Yield curve and recessions
	Default, bailouts, bankruptcy

# Cochrane piece

- John Cochrane, “Macro-Finance”, *Review of Finance*, 21:3, pp. 945-985, May, 2017)
  - [RoF blog post summary](#)
- Key mechanisms:
  - Habits, persistence: Epstein-Zin prefs, minimum consumption
  - Long-run risk, rare disasters
  - Idiosyncratic risk
  - Heterogeneous preferences
  - Intermediary asset pricing/borrowing constraints
  - Investor irrationality and belief heterogeneity

# Brunnermeier reading list and BFI

- Brunnermeier Macro-finance reading list
- BFI Macro Financial Modeling Initiative
  - starting repository of macro-finance models

## 4 papers

- ① Richard W. Evans, Laurence J. Kotlikoff, and Kerk L. Phillips, “[Game Over: Simulating Unsustainable Fiscal Policy](#),” Fiscal Policy After the Financial Crisis, eds. Alberto Alesina and Francesco Giavazzi, National Bureau of Economic Research, University of Chicago Press (2013).
- ② Richard W. Evans and Scott Condie, “**Bailouts and Regulation**” (2011).
- ③ Markus K. Brunnermeier and Yulih Sannikov, “**A Macroeconomic Model with a Financial Sector**,” *American Economic Review*, 104:2, pp. 379-421 (2014).
- ④ Viktor Tsyrennikov, **Discrete time version of Brunnermeier-Sannikov (2014)**
  - See also Rappaport and Walsh, “[A Discrete-time Macroeconomic Model with a Financial Sector](#),” (2012).