ECON 526b - Adv. Macroeconomics: Incomplete Financial Markets and Business Cycles

Spring 2024 - 2nd half

Logistics

Instructor: Martin Souchier (martin.souchier@yale.edu), 87 Trumbull Street, Room B231. The first half of the course is taught by Michael Peters.

Lecture: TTh 1pm-2:30pm in HLH28 A06 - 28 Hillhouse Avenue A06.

Content

This is a course in quantitative macroeconomics. We will study the determinants of idiosyncratic and aggregate income risks, the ways in which workers insure against them, and the implications for business cycles. The course will be a mix of topics and methods, with a focus on *heterogeneous agent models* and *contracting models*.

Requirements

This is an advanced graduate class so the assignments are designed to help you get started with your research. For this part of the course, there will be two sets of assignments:

a) **2 problem sets**: in the first one (due April 4) you will use the Sequence-Space Jacobian (Auclert, Bardóczy, Rognlie and Straub, 2021), which is one of the best methods available to solve heterogeneous-agent models with aggregate shocks; in the second one (due May 7) you will solve a dynamic contracting model applied to the labor market similar to the one used in my job market paper.

b) **Group projects**: see Michael's syllabus for details.

Timeline

- Feb 27: **introduction**

  - some facts on labor income risk

- Feb 29, March 05: **old precautionary savings models**

  - Aiyagari (1994), Krusell and Smith (1998) $\Rightarrow$ heterogeneity is irrelevant for business cycles
  - method: KS algorithm, state-space vs sequence-space methods, introduction to sequence-space Jacobians (Auclert, Bardóczy, Rognlie and Straub 2021)

- March 26, April 02 and April 04: **modern precautionary savings models**

  - Kaplan and Violante (2014), Kaplan, Moll and Violante (2014), Auclert (2018), Auclert, Rognlie, Souchier and Straub (2021)
  - getting precautionary-savings models to match the high MPCs from the data
  - implications: fiscal policy, monetary policy, exchange rates
  - **1st problem set due on April 4:** monetary policy in HANK

- April 11: **pass-through of productivity shocks to wages**

  - measuring the pass-through in the data (Guiso, Pistaferri, and Schivardi 2005)
  - what do standard models of the labor market say about the pass-through?

- April 16, April 18 and April 23: **contracting models of the labor markets**

  - Thomas and Worrall (1988): two-sided limited commitment
  - Burdett and Cole (2002), Shi (2009): search frictions and EE mobility
  - Menzio and Shi (2010), Balke and Lamadon (2022), Souchier (2023): the pass-through of productivity shocks to wages
  - method: solving dynamic contracting models
  - **2nd problem set due on May 7:** optimal wage contracts in PE

- April 30: **precautionary savings meets optimal wage contracts**

– Souchier (2024): insurance inside and outside the firm

- May 02: student presentations of group projects

Readings

Old precautionary savings models

- Bewley, T. (1980), "The Optimum Quantity of Money". Models of Monetary Economics.

- Hansen, G. and Imrohoroğlu, A. (1992), "The Role of Unemployment Insurance in an Economy with Liquidity Constraints and Moral Hazard". Journal of Political Economy.

- Huggett, M. (1993), "The risk-free rate in heterogeneous-agent incomplete-insurance economies". Journal of Economic Dynamics and Control.

- Aiyagari, S.R. (1994), "Uninsured Idiosyncratic Risk and Aggregate Saving". The Quarterly Journal of Economics.

- Krusell, P. and Smith, A.A. (1998), "Income and Wealth Heterogeneity in the Macroeconomy". Journal of Political Economy.

Method: solving heterogeneous-agent models

- Carroll, C. (2006), "The method of endogenous gridpoints for solving dynamic stochastic optimization problems". Economics Letters.

- Reiter, M. (2009), "Solving heterogeneous-agent models by projection and perturbation". Journal of Economic Dynamics and Control.

- Winberry, T. (2018), "A method for solving and estimating heterogeneous agent macro models". Quantitative Economics.

- Boppart, T., Krusell, P., and Mitman, K. (2018) "Exploiting MIT Shocks in Heterogeneous-Agent Economies: The Impulse Response as a Numerical Derivative,". Journal of Economic Dynamics and Control.

- Auclert, A., Bardóczy, B., Rognlie, M. and Straub, L. (2021), "Using the Sequence-Space Jacobian to Solve and Estimate Heterogeneous-Agent Models". Econometrica.

MPCs

- Johnson, D. S., Parker, J. A., and Souleles, N. S. (2006), "Household Expenditure and the Income Tax Rebates of 2001". The American Economic Review.

- Blundell, R., Pistaferri, L., and Preston, I. (2008), "Consumption Inequality and Partial Insurance". American Economic Review.

- Jappelli, T. and Pistaferri, L. (2010), "The Consumption Response to Income Changes". Annual Review of Economics.

Modern precautionary savings models

- Kaplan, G., and Violante, G. L. (2014). "A Model of the Consumption Response to Fiscal Stimulus Payments". Econometrica

- Werning, I. (2015), "Incomplete Markets and Aggregate Demand," Working Paper, NBER.

- McKay, A., Nakamura, E. and Steinsson, J. (2016), "The Power of Forward Guidance Revisited". American Economic Review.

- Kaplan, G., Moll, B. and Violante, G.L. (2018), "Monetary Policy According to HANK". American Economic Review.

- Auclert, A. (2019). "Monetary Policy and the Redistribution Channel." American Economic Review.

- Bayer, C., Luetticke, R., Pham-Dao, L. and Tjaden, V. (2019), "Precautionary Savings, Illiquid Assets, and the Aggregate Consequences of Shocks to Household Income Risk". Econometrica.

- Auclert, A., Rognlie, M., and Straub, L. (2020), "Micro Jumps, Macro Humps: Monetary Policy and Business Cycles in an Estimated HANK Model".

- Auclert, A., Rognlie, M., Souchier, M. and Straub, L. (2021), "Exchange Rates and Monetary Policy with Heterogeneous Agents: Sizing up the Real Income Channel".

- Auclert, A., Rognlie, M., and Straub, L. (2023), "The Intertemporal Keynesian Cross".

- Wolf, C. (2023), "Interest Rate Cuts vs. Stimulus Payments: An Equivalence Result".

The pass-through of productivity shocks to wages

- Guiso, L., Pistaferri, L., and Schivardi, F. (2005), "Insurance within the Firm". Journal of Political Economy.

- Guiso, L., and Pistaferri, L. (2020), "The insurance role of the firm". Geneva Papers on Risk and Insurance.

- Chan, M., Salgado, S. and Xu, M. (2023), "Heterogeneous Passthrough from TFP to Wages".

Optimal wage contracts

- Baily, M. N. (1974), "Wages and Employment under Uncertain Demand". The Review of Economic Studies.

- Azariadis, C. (1975), "Implicit Contracts and Underemployment Equilibria". Journal of Political Economy.

- Thomas, J., and Worrall, T. (1988), "Self-Enforcing Wage Contracts". The Review of Economic Studies.

- Beaudry, P., and DiNardo, J. (1991), "The Effect of Implicit Contracts on the Movement of Wages Over the Business Cycle: Evidence from Micro Data". Journal of Political Economy.

- Postel-Vinay, F., & Robin, J.-M. (2002), "Equilibrium Wage Dispersion with Worker and Employer Heterogeneity". Econometrica.

- Burdett, K., and Coles, M. (2003), "Equilibrium Wage-Tenure Contracts". Econometrica.

- Shi, S. (2009), "Directed Search for Equilibrium Wage–Tenure Contracts". Econometrica.

- Rudanko, L. (2009), "Labor Market Dynamics under Long-Term Wage Contracting", Journal of Monetary Economics.

- Menzio, G., and Shi, S. (2010), "Block Recursive Equilibria for Stochastic Models of Search on the Job". Journal of Economic Theory.

- Menzio, G., and Shi, S. (2011), "Efficient Search on the Job and the Business Cycle". Journal of Political Economy.

- Schaal, E. (2017), "Uncertainty and Unemployment". Econometrica.

- Balke, N., and Lamadon, T. (2022), "Productivity Shocks, Long-Term Contracts, and Earnings Dynamics". American Economic Review.

- Souchier, M. (2023), "The Pass-through of Productivity Shocks to Wages and the Cyclical Competition for Workers".

- Moscarini, G. and Postel-Vinay, F. (2023) "The Job Ladder: Inflation vs. Reallocation".

- Souchier, M. (2024), "Insurance Inside and Outside the Firm".