

**Advanced Macro IV
Fall 2007
New York University**

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This is the first course in the 2nd year PhD sequence on Dynamic Monetary Economies. The objective is to introduce students to a range of topics in monetary and business cycle theory, in both closed and open economies. We will emphasize theory, data, as well as computational tools. The focus will be on methods for solving and aggregating economies with non-convexities (fixed costs, lumpiness, irreversibilities etc.). Special attention will be devoted to studying monetary economies.

Course Requirements

Homeworks

Class Presentation (10 minute presentation and critical discussion of a recent paper)

Referee Report (a 2-5 page summary and critical evaluation of a recent working paper of your own choice: to be approved by the instructor)

Term Paper (a proposal for an original research paper in which you outline the question and its relevance and describe the methods you plan to use to tackle the question, as well as any preliminary results)

References

Cooley, *Frontiers of Business Cycle Research*, Princeton University Press, 1995

Lundquist and Sargent, *Recursive Macroeconomic Theory*, MIT Press, 2004

Judd, *Numerical Methods in Economics*, MIT Press, 1998

Miranda and Fackler, *Applied Computational Economics and Finance*, MIT Press, 2002

Woodford, *Interest and Prices*, Princeton University Press, 2003

0. Numerical Methods (1-2 lectures)
 - a. Linear and non-linear equations
 - b. Optimization
 - c. Integration and differentiation
 - d. Functional approximation: projection and perturbation-based methods

1. Economies with Fixed Price Adjustment Costs: Partial Equilibrium Results (1-2 lectures)
 - a. Sheshinski and Weiss 1977, "Inflation and Costs of Price Adjustment", *Review of Economic Studies*
 - b. Sheshinski and Weiss 1983, "Optimum Pricing Policy under Stochastic Inflation", *Review of Economic Studies*

- c. Ahlin and Shintani 2006, "Menu Costs and Markov Inflation: A Theoretical Revision with New Evidence", Journal of Monetary Economics
- d. Danziger, 1999, "A Dynamic Economy with Costly Price Adjustment," American Economic Review
- e. Christiano, Eichenbaum and Evans, 1999, "Monetary Policy Shocks: What Have We Learned and to What End?" Handbook of Macroeconomics
- f. Nakamura-Steinsson, 2007, "Five Facts About Prices: A Reevaluation of Menu Cost Models", mimeo, Harvard U.
- g. Bils-Klenow, 2005, "Some Evidence on the Importance of Sticky Prices,"
- h. Klenow-Kryvtsov, 2007, "State-Dependent or Time-Dependent Pricing: Does It Matter for Recent U.S. Inflation?"
- i. Kashyap 1995, "Sticky Prices: New Evidence from Retail Catalogues," QJE

2. Foundations of monetary models (1 lecture)

- a. Lundquist-Sargent, chapter 24
- b. Feenstra, 1986, "Functional Equivalence between Liquidity Costs and the Utility of Money,"
- c. Lucas and Stokey, 1987, "Money and Interest in a Cash-in-Advance Economy," Econometrica
- d. Woodford, 1994, "Monetary Policy and Price Level Determinacy in a Cash-in-Advance Economy,"

3. Time-Dependent Sticky Price Economies (1 lecture)

- a. Woodford 2003, chapter 3
- b. Yun, 1996, "Nominal Price Rigidity, Money Supply Endogeneity and Business Cycles"

4. Economies with Fixed Price Adjustment Costs: General Equilibrium Results (2 lectures)

- a. Blanchard and Kiyotaki, 1987, "Monopolistic Competition and the Effects of Aggregate Demand," AER
- b. Caplin and Spulber, 1987, "Menu Costs and the Neutrality of Money," QJE
- c. Caplin and Leahy, 1991, "State-Dependent Pricing and the Dynamics of Money and Output, QJE
- d. Caplin and Leahy, 1997, "
- e. Caballero and Engel, 1993, "Heterogeneity and Output Fluctuations in a Dynamic Menu Cost Economy," Review of Economic Studies

- f. Danziger, 1999, “A Dynamic Economy with Costly Price Adjustment,” American Economic Review
- 5. Solving and Aggregating Economies with Fixed Price Adjustment Costs Numerically (2 lectures)
 - a. Golosov and Lucas, 2006, “Menu Costs and Phillips Curves,”
 - b. Midrigan, 2006, Menu Costs, Multi-Product Firms and Aggregate Fluctuations,” mimeo
 - c. Krusell and Smith, 1997, “Income and Wealth Heterogeneity, Portfolio Choice and Equilibrium Asset Returns,” Macroeconomic Dynamics
 - d. Den Haan, 1997, “Solving Dynamic Models with Aggregate Shocks and Heterogeneous Agents,” Macroeconomic Dynamics
 - e. Kubler and Schmedders, 2002, “Recursive Equilibria in Economies with Incomplete Markets,” Macroeconomic Dynamics
 - f. Judd, Kubler, Schmedders, 2000, “Computational Methods for Dynamic Equilibria with Heterogeneous Agents,” mimeo, Stanford U.
 - g. Dotsey, King and Wolman, 1997, “State-Dependent Pricing And The General Equilibrium Dynamics Of Money And Output,” QJE
 - h. Caballero and Engel, 2007, “Price Stickiness in Ss models: New Interpretations of old results,” mimeo
- 6. Strategic Complementarities in Sticky Price Models (2 lectures)
 - a. Chari, Kehoe, McGrattan, 2000, “Can the Contract Multiplier Solve the Persistence Problem?”
 - b. Christiano, Eichenbaum and Evans, 2005, “Nominal Rigidities and the Dynamic Effects of a Shocks to US Monetary Policy,” Journal of Political Economy
 - c. Ball and Romer, 1990, “Real Rigidities and the Non-Neutrality of Money,” Review of Economic Studies
 - d. Dotsey and King, 2005, “Pricing, Production, and Persistence,” mimeo
 - e. Dotsey and King, 2005, “Implications of state-dependent pricing for dynamic macroeconomic models,” Journal of Monetary Economics
 - f. Klenow-Willis, 2006, “Real Rigidities and Nominal Price Changes,” KC Fed working paper
 - g. Burstein-Hellwig, 2006, “Prices and Market Shares in a Menu-Cost Model”
- 7. Countercyclical Markups and other explanations for price rigidity (1 lecture)
 - a. Bilts, M. 1989, “Pricing in a Customer Market,” QJE
 - b. Edmond, C. and L. Veldkamp, 2007 “Income Dispersion and Countercyclical markups”

- c. Menzio, G., 2007 “A Search Theory of Rigid Prices” mimeo, U. of Pennsylvania
- d. Nakamura and Steinsson, 2007 “Price Setting in Forward-Looking Customer Markets”
- e. Rotemberg and Woodford, 1999, “The Cyclical Behavior of Prices and Costs,” *Hanbook of Macroeconomics*, Vol. 1
- f. Benabou, 1992, “Inflation and Efficiency in Search Markets,” *Review of Economic Studies*

8. Segmented markets (2 lectures)

- a. Alvarez, F., A. Atkeson, P. Kehoe, 2002, “Money, Interest Rates and Exchange Rates with Endogenously Segmented Markets,” *JPE*
- b. Alvarez, F., A. Atkeson, P. Kehoe, 2006, “Time-varying risk, interest rates, and exchange rates in general equilibrium,” *FRB Minneapolis Staff Report*
- c. Alvarez, F., A. Atkeson, C. Edmond, 2003, “On the Sluggish Response of Prices to Money in an Inventory Theoretic Model of Money Demand,” *NBER WP 10016*
- d. Khan A., and J. Thomas, 2007, “Inflation and Interest Rates with Endogenous Market Segmentation”
- e. Vissing-Jorgensen, A., 2002, “Towards and Explanation of Household Portfolio Choice Heterogeneity: Nonfinancial Income and Participation Cost Structure

9. Investment

- a. Caballero, 1999, “Aggregate Investment,” *Handbook of Macroeconomics*
- b. Thomas, 2002, “Is Lumpy Investment Relevant for the Business Cycle?” *Journal of Political Economy*
- c. Khan and Thomas, 2006, “Idiosyncratic Shocks and the Role of Non-Convexities in Plant and Aggregate Investment Dynamics,”
- d. Caballero and Engel, 1999, "Explaining Investment Dynamics in U.S. Manufacturing: A Generalized (S,s) Approach", *Econometrica*
- e. Kashyap and Gourio, 2007, “Investment Spikes: New Facts and a General Equilibrium Exploration,”
- f. Bachman, Caballero, Engel, 2007, “Lumpy Investment in Dynamic General Equilibrium,” mimeo

10. Inventories

- a. Aguirregabiria, 1999. "The Dynamics of Markups and Inventories in Retailing Firms," *Review of Economic Studies*
- b. Khan and Thomas, 2006, "Inventories and the Business Cycle: An Equilibrium Analysis of (S,s) Policies,"
- c. Caplin, 1985, "The Variability of Aggregate Demand with (S,s) inventory Policies," *Econometrica*
- d. Fisher and Hornstein, 2000, "(S,s) inventory policies in general equilibrium," *Review of Economic Studies*
- e. Hall and Rust, 1999, "An (S,s) model of commodity price speculation," mimeo
- f. Hall and Rust, "The (S,s) Rule is an Optimal Trading Strategy in a Class of Commodity Price Speculation Problems"

11. Consumer Durables

- a. Caballero, R, 1993, "Durable Goods: An Explanation for Their Slow Adjustment," *Journal of Political Economy*
- b. Eberly 1994 "Adjustment of Consumers' Durables Stocks: Evidence from Automobile Purchases" *Journal of Political Economy*,
- c. Mankiw, 1982, "Hall's Consumption Hypothesis and Durable Goods," *Journal of Monetary Economics*
- d. Stokey, 2007, "Adjustment Costs and Consumption Behavior," mimeo
- e. Caplin and Leahy, 2004, "Equilibrium in a durable goods market with lumpy adjustment, JET.

12. Labor Markets

- a. Gourio and Noyal, "The Marginal Worker and the Aggregate Elasticity of Labor Supply," mimeo
- b. Chang and Kim, "Heterogeneity and Aggregation in the Labor Market: Implications for Aggregate Preference Shifts," mimeo
- c. Caballero, Engel and Haltiwanger, 1997, "Aggregate Employment Dynamics: Building from Microeconomic Evidence", *AER*
- d. Rogerson and Wallenius, 2007, "Micro and Macro Elasticities in a Life-Cycle Model with Taxes,"
- e. Cooper, Haltiwanger, Willis, 2007, "Search Frictions: Matching Aggregate and Establishment-Level Observations," mimeo