14.462 Advanced Macroeconomics
Spring 2014

Lectures: Tuesdays and Thursdays 1:00 - 2:30 (E51-361)

Recitations: Fridays 1:00-2:30 (E51-372)

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Website: https://stellar.mit.edu/S/course/14/sp14/14.462/

Contents:
The course shows how contract and general equilibrium theory can help our understanding of the functioning of financial markets, the occurrence of crises, and to evaluate the rationale for financial regulation. In particular, it emphasizes that identifying the *nature* of financial frictions is crucial to determining potential market failures and thinking about ex ante optimal design – we will see many instances in which markets achieve on their own constrained-optimal outcomes.

Requirements:
The grade will be based on class participation, a final exam and a combination of problem sets and referee reports.

Links to the development course:
The class has been designed to emphasize the links that exist between macro modeling and micro empirical work (data, institutions). Each Tuesday and Thursday, a development class is taught right after the macro class, in the same room and on the same topic. Students are encouraged to attend both lectures.

	Lecture		**14.462 Topic**	**14.772 Topic**
1-Apr	1	Tuesday	**Introduction**	**Introduction: micro-founded macro models**
3-Apr	2	Thursday	**Complete markets, full risk-sharing**	**Risk and Insurance in Village India**
4-Apr	*Rec 1*	*Friday*		
8-Apr	3	Tuesday	**Macro and labor supply**	**Micro and labor supply**
10-Apr	4	Thursday	**Limited information: welfare theorems**	**Limited information: first-order approach, lotteries, and distinguishing regimes in data.**
11-Apr	*Rec 2*	*Friday*		
15-Apr	5	Tuesday	**Industrial organization of financial services providers**	**Karlan-Zinman, Einav-Levin**
17-Apr	6	Thursday	**Limited commitment: theory**	**Limited commitment: empirics**
18-Apr	*Rec 3*	*Friday*		
22-Apr	Patriot's Day	Tuesday		
24-Apr	7	Thursday	**Macro and Financial Frictions**	**Development and Financial Frictions**
25-Apr	*Rec 4*	*Friday*		
29-Apr	8	Tuesday	**Bank runs**	**Financial Stability in Emerging Markets with Financial Frictions**
1-May	9	Thursday	**Retrading and externalities**	**Platforms**
5-May	*Rec 5*	*Friday*		
6-May	10	Tuesday	**Incomplete markets, banks, and default**	**Incomplete markets and consumption**
8-May	11	Thursday	**Bubbles: theory**	**Bubbles: empirics**
9-May	*Rec 6*	*Friday*		
13-May	12	Tuesday	**Foundations of money**	**Cash management**
15-May		Thursday		

(1) April 1 – Introduction

Past

- Townsend, R.M., 1990. *Financial Structure and Economic Organization*, Blackwell Publishers 2003.

Present: in the US

- Adrian, Tobias, and Hyun Shin. "The changing nature of financial intermediation and the financial crisis of 2007-09." FRB of New York Staff Report 439 (2010).
- Hansen, L.P., 2012. Challenges in Identifying and Measuring Systemic Risk. *mimeo University of Chicago*

Future

- Berger, S.C. & Gleisner, F., 2009. Emergence of Financial Intermediaries in Electronic Markets: The Case of Online P2p Lending. *BuR Business Research Journal*, 2(1)
- Shapley, L. & Shubik, M., 1977. Trade Using One Commodity as a Means of Payment. *Journal of Political Economy*, 85(5), pp.937–968
- Ostroy, J.M. & Starr, R.M., 1974. Money and the Decentralization of Exchange. *Econometrica*, 42(6), pp.1093–1113.
- Dubey, P., 1982. Price-Quantity Strategic Market Games. *Econometrica*, 50(1), pp.111–126.
- Townsend, R.M., 1983. Theories of intermediated structures. *Carnegie-Rochester Conference Series on Public Policy*, 18, pp.221–272.

(2) April 3 - Complete markets, full risk-sharing

- Chiappori, Pierre-Andre, Krislert Samphantharak, Sam Schulhofer-Wohl and Robert M. Townsend (2013) "Heterogeneity and Risk-Sharing in Village Economies, forthcoming in Quantitative Economics; Federal Reserve Bank of Minneapolis Research Department Staff Report #483, June 2013
- Samphantharak, Krislert and Robert M. Townsend (2013) "Risk and Return in Village Economies," NBER Working Paper No. 19738.
- Schulhofer-Wohl, S., 2011. "Heterogeneity and Tests of Risk Sharing" *Journal of Political Economy*, 119(5), pp.925–958.

(3) April 8 - Macro and labor supply

- Chetty, Raj, Adam Guren, Day Manoli, and Andrea Weber "Are Micro and Macro Labor Supply Elasticities Consistent? A Review of Evidence on the Intensive and Extensive Margins", *American Economic Review Papers and Proceedings* 101: 471-75, 2011.
- Rogerson, Richard "Indivisible labor, lotteries and equilibrium", *Journal of Monetary Economics*, Volume 21, Issue 1, January 1988, Pages 3-16.
- Hansen, Gary D. "Indivisible labor and the business cycle", *Journal of Monetary*

Economics, Volume 16, Issue 3, November 1985, Pages 309-327.

- Chang, Yongsung, and Sun-Bin Kim. 2006. "From Individual to Aggregate Labor Supply: A Quantitative Analysis Based on a Heterogeneous Agent Macroeconomy." *International Economic Review*, 47:1–27.
- Prescott, Edward C. 2002. "Prosperity and Depression," *American Economic Review* 92:1–15.
- Ljunqvist, Lars and Thomas Sargent, "Career Length: Effects of Curvature of Earnings Profiles, Earnings Shocks, Taxes, and Social Security", Working Paper, August 2011.

Related papers

- Mike Keane and Richard Rogerson (2012). Reconciling Micro and Macro Labor Supply Elasticities: A Structural Perspective (sections 1, 2, 4.1, the rest is XR)
- Rogerson and Wallenius, "Nonconvexities, Retirement and the Elasticity of Labor Supply ", *American Economic Review* 103(4) (2013), 1445-1462.
- Yongsung Chang & Sun-Bin Kim, 2007. "Heterogeneity and Aggregation: Implications for Labor-Market Fluctuations," *American Economic Review*, vol. 97(5), pages 1939-1956, December.
- Rogerson, Richard and Johanna Wallenius. 2009. Micro and macro elasticities in a life cycle model with taxes. *Journal of Economic Theory* 144 (6):2277–2292.
- Ljungqvist, Lars and Thomas J. Sargent. 1998. The European Unemployment Dilemma. *Journal of Political Economy* 106:514–550

(4) April 10 - Limited information: welfare theorems

- Prescott, E.C. & Townsend, R.M., 1984. General Competitive Analysis in an Economy with Private Information. *International Economic Review*, 25(1), pp.1–20.
- Prescott, E.C. & Townsend, R.M., 1984. Pareto Optima and Competitive Equilibria with Adverse Selection and Moral Hazard. *Econometrica*, 52(1), pp.21–45.

(5) April 15 – Industrial Organization of Financial Service Providers

- Robert M. Townsend and Victor V. Zhorin, 2013. Spatial Competition among Financial Service Providers and Optimal Contract Design. Working Paper.
- Hotelling, H. (1929). Stability in competition. The Economic Journal 39(153), 41–57.
- D'Aspremont, C., J. J. Gabszewicz, and J.-F. Thisse (1979). "On Hotelling "stability in competition". Econometrica 47(5), 1145–1150.
- Dasgupta, Partha and Eric Maskin (1986) "The Existence of Equilibrium in Discontinuous Economic Games, I: Theory," *Review of Economic Studies*, 53(1), 1-26.
- Karaivanov, A. (2002). Computing moral hazard programs with lotteries using matlab. Research note.

- Phelan, C. and R. M. Townsend (1991). Computing multi-period, information-constrained optima. The Review of Economic Studies 58, 853–881. 6.
- Prescott, E. S. (1999). A primer on moral-hazard models. FRB Richmond Economic Quarterly 85(1), 47–77.

(6) April 17 - Limited commitment: theory

- Alvarez, F. & Jermann, U.J., 2000. Efficiency, Equilibrium, and Asset Pricing with Risk of Default. *Econometrica*, 68(4), pp.775–797.
- Thomas, J. & Worrall, T., 1988. Self-Enforcing Wage Contracts. *The Review of Economic Studies*, 55(4), pp.541–553.
- Kehoe, T.J. & Levine, D.K., 1993. Debt-Constrained Asset Markets. *The Review of Economic Studies*, 60(4), pp.865–888.
- Kocherlakota, N.R., 1996. Implications of Efficient Risk Sharing without Commitment. *The Review of Economic Studies*, 63(4), pp.595 –609.
- Ligon, E., Thomas, J.P. & Worrall, T., 2002. Informal Insurance Arrangements with Limited Commitment: Theory and Evidence from Village Economies. *The Review of Economic Studies*, 69(1), pp.209–244.
- Hellwig, C. & Lorenzoni, G., 2009. Bubbles and Self-Enforcing Debt. *Econometrica*, 77(4), pp.1137–1164.

(7) April 24 – Macro and Financial Frictions

- Bernanke, B.S., Gertler, M. & Gilchrist, S., 1999. Chapter 21 - The Financial Accelerator in a Quantitative Business Cycle Framework. In J. B. Taylor & M. Woodford, eds. *Handbook of Macroeconomics*. Elsevier, pp. 1341–1393.
- Krishnamurthy, A., 2003. Collateral Constraints and the Amplification Mechanism. *Journal of Economic Theory*, 111(2), pp.277–292.
- Carlstrom, C.T., Fuerst, T.S. & Paustian, M., 2013. Privately Optimal Contracts and Suboptimal Outcomes in a Model of Agency Costs. *Manuscript*.
- Di Tella, S., 2013. Uncertainty Shocks and Balance Sheet Recessions. Manuscript, Stanford GSB
- Christiano, L.J., Motto, R. & Rostagno, M., 2014. Risk Shocks. *American Economic Review*, 104(1), pp.27–65.

(8) April 29 – Banks Runs

- Diamond, D.W. & Dybvig, P.H., 1983. Bank Runs, Deposit Insurance, and Liquidity. *The Journal of Political Economy*, 91(3), pp.401–419.
- Peck, J. & Shell, K., 2003. Equilibrium Bank Runs. *Journal of Political Economy*, 111(1), pp.103–123.
- Wallace, N., 1990. A Banking Model in Which Partial Suspension Is Best. *Federal Reserve Bank of Minneapolis Quarterly Review*, 14(4), pp.11–23.
- Green, E.J. & Lin, P., 2003. Implementing Efficient Allocations in a Model of Financial Intermediation. *Journal of Economic Theory*, 109(1), pp.1–23.
- Cavalcanti, R. & Monteiro P.K., 2011. "Enriching information to prevent bank runs," Working paper.

- Andolfatto, David, Ed Nosal, and Neil Wallace (2007) "The role of independence in the Green–Lin Diamond–Dybvig model," *Journal of Economic Theory* 137(1): 709-715.

(9) May 1 – Retrading and externalities

- Kilenthong, T. and R. M. Townsend (2014): " A Market Based Solution to Price Externalities: A Generalized Framework", Working Paper
- Kilenthong, Weerachart T. and Robert M. Townsend (2010) "Information-Constrained Optima with Retrading: An Externality and Its Market-Based Solution" *Journal of Economic Theory*, 146 (3), 2011: 1042-1077.
- D. Acemoglu, A. Simsek, "Moral hazard and efficiency in general equilibrium with anonymous trading," Working Paper, 2008.
- Greenwald, B. and J. Stiglitz (1986). Externalities in Economies with Imperfect Information and Incomplete Markets. *Quarterly Journal of Economics* 101 (2), 229-264.
- Kilenthong, T. and R. M. Townsend (2013): "Market Based, Segregated Exchanges in Securities with Default Risk", Working Paper
- Jacklin, C., 1987. Demand Deposits, Trading Restrictions, and Risk Sharing in E. C. Prescott & N. Wallace, *Contractual Arrangements for Intertemporal Trade*. Univ Of Minnesota Press.
- Lorenzoni, G., 2008. Inefficient Credit Booms. *The Review of Economic Studies*, 75(3), pp.809 –833.
- Hart, O. and L. Zingales, 2013. Liquidity and Inefficient Investment, Manuscript
- Jeanne, O. & Korinek, A., 2010. Managing Credit Booms and Busts: A Pigouvian Taxation Approach. *NBER Working Paper* No. 16377.

(10) May 6 – Incomplete markets, banks, and default

- Allen, F. & Gale, D., 2004. Financial Intermediaries and Markets. *Econometrica*, 72(4), pp.1023–1061.
- Allen, F. & Gale, D., 2000. Financial Contagion. *Journal of Political Economy*, 108(1), pp.1–33.
- Pesendorfer, W., 1995. Financial Innovation in a General Equilibrium Model. *Journal of Economic Theory*, 65(1), pp.79–116.
- Makowski, L., 1980. Perfect Competition, the Profit Criterion, and the Organization of Economic Activity. *Journal of Economic Theory*, 22(2), pp.222–242.
- Dubey, P., Geanakoplos, J. & Shubik, M., 2005. Default and Punishment in General Equilibrium. *Econometrica*, 73(1), pp.1–37.
- Zame, W.R., 1993. Efficiency and the Role of Default When Security Markets are Incomplete. *The American Economic Review*, 83(5), pp.1142–1164.

(11) May 8 – Bubbles: theory

- Santos, M.S. & Woodford, M., 1997. Rational Asset Pricing Bubbles. *Econometrica*, 65(1), pp.19–57.
- Samuelson, P.A., 1958. An Exact Consumption-Loan Model of Interest with or

without the Social Contrivance of Money. *Journal of Political Economy*, 66(6), pp.467–482.
- Bewley, T., 1980. The Optimum Quantity of Money. In J. H. Kareken & N. Wallace, eds. *Models of Monetary Economies*. Minneapolis: Federal Reserve Bank of Minneapolis, pp. 169–210.
- Bewley, T., 1983. A Difficulty with the Optimum Quantity of Money. *Econometrica*, 51(5), pp.1485–1504.
- Tirole, J., 1985. Asset Bubbles and Overlapping Generations. *Econometrica*, 53(6), pp.1499–1528.

(12) May 13 – Foundations of money

- Townsend, Robert M., (1980) "Models of Money with Spatially Separated Agents", In: Models of Monetary Economies, ed. by J. H. Kareken and Neil Wallace, Minneapolis: Federal Reserve Bank of Minneapolis, pp. 265--304.
- Manuelli, Rodolfo and Thomas J. Sargent (2009) "Alternative Monetary Policies in a Turnpike Economy: Vintage Article," Mimeo
- R Townsend, N Wallace, "Circulating Private Debt: An Example with Coordination Problem," in Contractual Arrangements for Intertemporal Trade, 1987.
- Townsend, Robert M. (1989) "Currency and Credit in a Private Information Economy." *Journal of Political Economy* 97, no. 6: 1323-1345.
- Sargent, Wallace (1982), "The real-bills doctrine versus the quantity theory: A reconsideration", The Journal of Political Economy
- Grossman, S. & Weiss, L., 1983. A Transactions-Based Model of the Monetary Transmission Mechanism. *The American Economic Review*, 73(5), pp.871–880.
- Rotemberg, J.J., 1984. A Monetary Equilibrium Model with Transactions Costs. *Journal of Political Economy*, 92(1), pp.40–58.
- Woodford, M., 1990. Chapter 20 - The Optimum Quantity of Money. In B. M. Friedman & F. Hahn, eds. *Handbook of Monetary Economics*. Elsevier, pp. 1067–1152