

ECON 712: TOPICS IN MACROECONOMIC THEORY

FALL 2021

UNIVERSITY OF PENNSYLVANIA

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Lectures: Tuesday and Thursday 1:45-3:15PM PCPE 203

Office Hours: by appointment.

Course description This class will cover topics at the intersection between macroeconomics and international finance. Applications will include: endogenously incomplete markets and the optimality (or not) of government interventions, positive and normative model of government debt determination, exchange rates and theory of optimal currency areas, monetary policy and risk premia. On the methodological side, we will study how to use tools from dynamic game theory and mechanism design to analyze optimal policy when the government lacks commitment and optimal markets arrangements with lack of commitment and private information.

An important reference for the class is RMT4: Ljungqvist, Lars, and Thomas J. Sargent. Recursive macroeconomic theory. MIT press, 2018.

Expectations I will regularly assign you problem sets and there would be a take home exam at the end of the class. Some of you will be asked to present the solutions of the problem set to the class. I expect you to actively participate in class.

Topics I will tentatively cover (a subset of) the following topics, in particular papers with a “*”:

1. Optimal taxation with and without commitment

Positive and normative model of government debt determination:

- Ch. 16, RMT4. Optimal Taxation with Commitment
- Ch. 20, RMT4. Two Ramsey Problems Revisited
- *Chari, and Patrick J. Kehoe. “Optimal fiscal and monetary policy” in Handbook of Macroeconomics, 1999, vol. 1C, ed. John B. Taylor and Michael Woodford, 1671-1745. Amsterdam: North-Holland.

- *Chari, Varadarajan V., Juan Pablo Nicolini, and Pedro Teles. "Optimal capital taxation revisited." *Journal of Monetary Economics* (2019).
- *Lucas, Robert E., and Nancy L. Stokey. "Optimal fiscal and monetary policy in an economy without capital." *Journal of monetary Economics* 12.1 (1983): 55-93.
- *Aiyagari, S. Rao, Albert Marcet, Thomas J. Sargent, and Juha Seppälä. "Optimal taxation without state-contingent debt." *Journal of Political Economy* 110, no. 6 (2002): 1220-1254.
- Angeletos, George-Marios. "Fiscal policy with noncontingent debt and the optimal maturity structure." *The Quarterly Journal of Economics* 117.3 (2002): 1105-1131.
- Buera, Francisco, and Juan Pablo Nicolini. "Optimal maturity of government debt without state contingent bonds." *Journal of Monetary Economics* 51.3 (2004): 531-554.
- Werning, Ivan. "Optimal fiscal policy with redistribution." *The Quarterly Journal of Economics* 122.3 (2007): 925-967.
- Bhandari, Anmol, David Evans, Mikhail Golosov, and Thomas J. Sargent. Taxes, debts, and redistributions with aggregate shocks. No. w19470. National Bureau of Economic Research, 2013.

Policy without commitment:

- Ch. 24. Credible Government Policies, I
- Ch. 25. Credible Government Policies, II
- *Chari, Varadarajan V., Patrick J. Kehoe, and Edward C. Prescott. Time consistency and policy. No. 115. Federal Reserve Bank of Minneapolis, 1988.
- *Chari, Varadarajan V., and Patrick J. Kehoe. "Sustainable plans." *Journal of political economy* 98.4 (1990): 783-802.
- *Phelan, Christopher, and Ennio Stacchetti. "Sequential equilibria in a Ramsey tax model." *Econometrica* 69.6 (2001): 1491-1518.
- Farhi, Emmanuel, Christopher Sleet, Ivan Werning, and Sevin Yeltekin. "Non-linear capital taxation without commitment." *Review of Economic Studies* 79, no. 4 (2012): 1469-1493.

Unique implementation:

- *Atkeson, Andrew, Varadarajan V. Chari, and Patrick J. Kehoe. "Sophisticated Monetary Policies." *Quarterly Journal of Economics* 125.1 (2010).
- Bassetto, Marco. "Equilibrium and government commitment." *Journal of Economic Theory* 124.1 (2005): 79-105.

2. Monetary policy

Classic results:

- *Chari, Varadarajan V., Lawrence J. Christiano, and Patrick J. Kehoe. "Optimality of the Friedman rule in economies with distorting taxes." *Journal of Monetary Economics* 37.2 (1996): 203-223.
- *Correia, Isabel, Juan Pablo Nicolini, and Pedro Teles. "Optimal fiscal and monetary policy: Equivalence results." *Journal of political Economy* 116, no. 1 (2008): 141-170.
- Correia, Isabel, Emmanuel Farhi, Juan Pablo Nicolini, and Pedro Teles. "Unconventional fiscal policy at the zero bound." *American Economic Review* 103, no. 4 (2013): 1172-1211.
- Bhandari, Anmol, David Evans, Mikhail Golosov, and Thomas J. Sargent. "Inequality, Business Cycles, and Monetary-Fiscal Policy." (2020).
- *Bassetto, Marco, and Thomas J. Sargent. "Shotgun Wedding: Fiscal and Monetary Policy." *Annual Review of Economics* 12 (2020).

Monetary policy and risk premia:

- *Alvarez, Fernando, Andrew Atkeson, and Patrick J. Kehoe. "If exchange rates are random walks, then almost everything we say about monetary policy is wrong." *American Economic Review* 97, no. 2 (2007): 339-345.
- *Alvarez, Fernando, Andrew Atkeson, and Patrick J. Kehoe. "Money, interest rates, and exchange rates with endogenously segmented markets." *Journal of political Economy* 110, no. 1 (2002): 73-112.
- *Alvarez, Fernando, Andrew Atkeson, and Patrick J. Kehoe. "Time-varying risk, interest rates, and exchange rates in general equilibrium." *The Review of Economic Studies* 76, no. 3 (2009): 851-878.

Debt sustainability and convenience yields

- Krishnamurthy, Arvind, and Annette Vissing-Jorgensen. "The aggregate demand for treasury debt." *Journal of Political Economy* 120.2 (2012): 233-267.
- Jiang, Zhengyang, et al. The US public debt valuation puzzle. No. w26583. National Bureau of Economic Research, 2019.
- Jiang, Zhengyang, et al., "Bond Convenience Yields in the Eurozone Currency Union" (2021)
- Woodford, Michael. "Public debt as private liquidity." *The American Economic Review* 80.2 (1990): 382-388.
- *Collard, Fabrice, Harris Dellas, and George-Marios Angeletos. "Public Debt as Private Liquidity: Optimal Policy." (2020).
- Jiang, Zhengyang, Arvind Krishnamurthy, and Hanno Lustig. Dollar safety and the global financial cycle. No. w27682. National Bureau of Economic Research, 2020.
- He, Zhiguo, Arvind Krishnamurthy, and Konstantin Milbradt. "A model of safe asset determination." *American Economic Review* 109.4 (2019): 1230-62.
- J Caballero, Ricardo, and Emmanuel Farhi. "The safety trap." *The Review of Economic Studies* 85.1 (2018): 223-274.
- Bhandari, A., Evans, D., Golosov, M. and Sargent, T., 2021. Managing public portfolios.

Quantitative Easing

- *Wallace, Neil. "A Modigliani-Miller theorem for open-market operations." *The American Economic Review* 71, no. 3 (1981): 267-274.
- Eggertsson, Gauti, and Michael Woodford. "The zero bound on interest rates and optimal monetary policy," *Brookings Papers on Economic Activity.*" (2003).
- Vayanos, Dimitri, and Jean-Luc Vila. A preferred-habitat model of the term structure of interest rates. No. w15487. National Bureau of Economic Research, 2009.

3. Bailouts, regulation, and rules

- *Chari, V. V., and Patrick J. Kehoe. "Bailouts, time inconsistency, and optimal regulation: A macroeconomic view." *The American Economic Review* 106.9 (2016): 2458-2493.

- *Farhi, Emmanuel, and Jean Tirole. "Collective moral hazard, maturity mismatch, and systemic bailouts." *The American Economic Review* 102.1 (2012): 60-93.
- *Athey, Susan, Andrew Atkeson, and Patrick J. Kehoe. "The optimal degree of discretion in monetary policy." *Econometrica* 73.5 (2005): 1431-1475.
- *Dovis, Alessandro, and Rishabh Kirpalani. "Fiscal rules, bailouts, and reputation in federal governments." *American Economic Review* 110, no. 3 (2020): 860-88.
- *Dovis, Alessandro, and Rishabh Kirpalani. *Rules without commitment: Reputation and incentives*. No. w26451. National Bureau of Economic Research, 2019.
- Piguillem, Facundo, and Anderson Schneider. *Coordination, Efficiency and Policy Discretion*. No. 1306. Einaudi Institute for Economics and Finance (EIEF), 2016.
- Halac, Marina, and Pierre Yared. *Fiscal Rules and Discretion under Self-Enforcement*. No. w23919. National Bureau of Economic Research, 2017.
- Atkeson, Andrew, Varadarajan V. Chari, and Patrick J. Kehoe. *On the optimal choice of a monetary policy instrument*. No. w13398. National Bureau of Economic Research, 2007.

4. Dynamic contracts

- Ch. 21, RMT4. Insurance Versus Incentives
- Ch. 22, RMT4. Equilibrium without Commitment
- *Alvarez, Fernando, and Urban J. Jermann. "Efficiency, equilibrium, and asset pricing with risk of default." *Econometrica* 68.4 (2000): 775-797.
- *Aguiar, Mark, Manuel Amador, and Gita Gopinath. "Investment cycles and sovereign debt overhang." *The Review of economic studies* 76.1 (2009): 1-31.*
- *Dovis, Alessandro. "Efficient sovereign default." *The Review of Economic Studies* 86, no. 1 (2019): 282-312.
- Kehoe, Timothy J., and David K. Levine. "Debt-constrained asset markets." *The Review of Economic Studies* 60.4 (1993): 865-888.
- Atkeson, Andrew. "International lending with moral hazard and risk of repudiation." *Econometrica: Journal of the Econometric Society* (1991): 1069-1089.

- Kapicka, Marek. "Efficient allocations in dynamic private information economies with persistent shocks: A first-order approach." *Review of Economic Studies* 80.3 (2013): 1027-1054.
- Gu, C., Mattesini, F., Monnet, C. and Wright, R., 2013. Endogenous credit cycles. *Journal of Political Economy*, 121(5), pp.940-965.
- Hellwig, Christian, and Guido Lorenzoni. "Bubbles and Self-Enforcing Debt." *Econometrica* 77.4 (2009): 1137-1164.
- Thomas, Jonathan, and Tim Worrall. "Income fluctuation and asymmetric information: An example of a repeated principal-agent problem." *Journal of Economic Theory* 51.2 (1990): 367-390.
- Atkeson, Andrew, and Robert E. Lucas. "On efficient distribution with private information." *The Review of Economic Studies* 59.3 (1992): 427-453.
- Prescott, Edward C., and Robert M. Townsend. "Pareto optima and competitive equilibria with adverse selection and moral hazard." *Econometrica: Journal of the Econometric Society* (1984): 21-45.
- Kirpalani, Rishabh. "Efficiency and Policy in Models with Incomplete Markets and Borrowing Constraints." (2017).
- Atkeson, Andrew, and Harold Cole. A dynamic theory of optimal capital structure and executive compensation. No. w11083. National Bureau of Economic Research, 2005.
- Ai, Hengjie, and Anmol Bhandari. "Asset Pricing with Endogenously Uninsurable Tail Risks." Unpublished manuscript (2016).

5. Debt and default

- *Chari, Varadarajan V., and Patrick J. Kehoe. "Sustainable plans and debt." *Journal of Economic Theory* 61.2 (1993): 230-261.
- Dovis, Alessandro. "Efficient sovereign default." *The Review of Economic Studies* 86, no. 1 (2019): 282-312.
- *Passadore, Juan, and Juan Pablo Xandri. "Robust Conditional Predictions in Dynamic Games: An Application to Sovereign Debt."
- *Aguiar, Mark, et al. "Quantitative Models of Sovereign Debt Crises." *Handbook of Macroeconomics* 2 (2016): 1697-1755.

- *Cole, Harold L., and Timothy J. Kehoe. "Self-fulfilling debt crises." *The Review of Economic Studies* 67.1 (2000): 91-116.
- *Aguiar, M., Amador, M., Hopenhayn, H., and Werning, I. (2016). Take the short route: Equilibrium default and debt maturity (No. w22847). National Bureau of Economic Research.
- *Bocola, Luigi, and Alessandro Dovis. *Self-Fulfilling Debt Crises: A Quantitative Analysis*. No. w22694. National Bureau of Economic Research, 2016.
- Chari, V. V., Alessandro Dovis, and Patrick J. Kehoe. "On the optimality of financial repression." *Journal of Political Economy* 128, no. 2 (2020): 710-739.