European University Institute
Department of Economics
Spring 2019 (Block IV)
Part I: April 3rd, 10th, 12th, 17th and 24th, 9 – 11.
Part II: May 3rd, 8th, 13th, 15th and 22nd, 9 – 11[1].

Macro-finance and policy design (Part I) [2]

Macro-finance after the crises: lessons for the EMU (Part II)

Ramon Marimon

This course is, in fact, **two-half-credit courses**, which can be taken separately or as a full-credit course. First year researchers, taking the full-credit option, are allowed to complete the course requirements at the beginning of the Fall term.

Part I covers four broad topics on macro and finance. The first two are relatively standard topics of a first-year macro sequence and, therefore, complement the current compulsory macro sequence in the department. The last two are relatively more advanced but also part of the current core of dynamic macro-finance economic models.

Part II covers developments in macro-finance – most of them motivated by the financial crisis, the 'great recession' and the euro crisis – to discuss the design of policies and institutions in contemporary economies -- in particular, in the European Economic and Monetary Union (EMU) after Brexit. Therefore, it combines theory with applied research, as well as institutional and policy knowledge – in sum: it should be a source for possible questions and topics of research.

Both parts will be separately **graded** with a short – possibly, take-home – exam at the end of the corresponding part. The lectures of Part I will be complemented with exercise classes given by **My Hedlin**. For students only taking one of these parts the grade will be based on the exam (80%) and in active class participation (20%, including exercises for Part I). Students taking both parts, as a **full-credit course**, are strongly encouraged to take the following option: a **paper** to be delivered by October 4th 2019, which can be co-authored (only in exceptional cases, to be discussed, with more than two authors and, if it is related to the 'June paper', its specific contribution should be made clear since would be the basis of its evaluation). With this option, the paper will count for 70% of the grade, with 10% each Part exam and 10% active class participation and, in any case, the final grade cannot be lower that the one it would had been counting both half-courses separately

[1] May 13th, 3 – 5 pm.
[2] The materials of the course can be found in the EUI Economics Moodle. The Notes are self-contained but they are only supporting notes and are not substitute for class attendance and active participation.

Syllabus

Part I

1. Introduction: Asset Prices, Ricardian Equivalence, Conventional Monetary Policy and Inside-Outside money.

We first revise some basic elements of the inter-temporal individual agent's problem and of asset pricing accounting. Then, we move to Lucas' Asset Pricing model and the Ricardian equivalence proposition. Finally, we discuss conventional monetary policy, inside-outside money, credit and currency.

Ljungqvist & Sargent, 2012 (8.7, 10.1 – 10.3, 13.1 – 13.10)

Lucas, Robert E., Jr. 1978."Asset Prices in an Exchange Economy," *Econometrica*, 46(6), 1429-1445.

2. Fiscal and Monetary Optimal Policies: Ramsey & Some Unpleasant Lessons.

We first focus on the design of Optimal Macroeconomic Policies with commitment. We show how to solve Ramsey problems using the 'primal approach' to fiscal and monetary policies. Then we study optimal fiscal policies, debt contingent policies and non-contingent debt policies. Finally, we discuss two contrasting results: price frictions may not affect optimal policies, while 'the unpleasant monetarist arithmetic' can be pervasive in the design of dynamic government policies.

Chari, V.V. and Patrick J. Kehoe. 1999. "Optimal Fiscal and Monetary Policy," in John B. Taylor and Michael Woodford eds. *Handbook of Macroeconomics* Volume 1, Part C, 1671-1745 (also NBER WP 6891).

Correia, Isabel, Juan Pablo Nicolini and Pedro Teles. 2008. "Optimal Fiscal and Monetary Policy: Equivalence Results," *Journal of Political Economy,* 116(1), 141-170.

Ljungqvist & Sargent, 2012 (16.1 – 16.8, 20.1 -20.2 & 27.1 – 27.3)

Lucas, Robert E. and Nancy L. Stokey, 1983. "Optimal Fiscal and Monetary Policy in an Economy without Capital," *Journal of Monetary Economics,* 12(1), 55-93.

Sargent, Thomas J., 2012. "Nobel Lecture: United States Then, Europe Now," *Journal of Political Economy*, 120(1), 1 - 40.

3. Rationality and Subjective Beliefs: Asset Prices and Policy Design.

We reassess and relax the Rational Expectations Hypothesis and introduce models where agents form their expectations adaptively or are Bayesian learners. This introduction to learning in macro and finance helps us to better explain the behaviour of asset prices and discuss policy design with self-confirming rational beliefs and with model uncertainty.

Adam, Klaus, Albert Marcet, and Juan Pablo Nicolini. 2016. "Stock Market Volatility and learning," *Journal of Finance,* 71(1), 33-82.

Evans, George W. and Seppo Honkapohja. 2001. *Learning and Expectations in Macroeconomics*. Princeton University Press. Ch 1 & 2.

Hansen, Lars Peter. 2014. "Nobel Lecture: Uncertainty Outside and Inside Economic Models," *Journal of Political Economy,* 122 (5): 945-987.

Sargent, Thomas J. 1999. *The Conquest of American Inflation*. Princeton University Press. Ch. 3 - 7.

4. **Limited enforcement and limited credibility: financial institutional design**

We relax two classical assumptions: full enforcement and full commitment. Examples of the former are models of the 'dynasties' or of defaultable debt, and of the latter the design of policies when the Ramsey policy is time-inconsistent and commitment is weak. We first look at the general issue of solving dynamic models with *forward-looking constraints* using 'recursive contracts'. We also look at these endogenous constraints as *wedges* and we discuss how to price them. We then discuss credible policies, starting by showing how the Ramsey problems can be casted in recursive form and how 'recursive contracts' can help to discuss credibility issues and briefly discuss Markov perfect equilibria. We conclude discussing how commitment and competition can interact in a non-trivial way and help to explain the evolution of financial institutions.

Cooley, Thomas, Ramon Marimon and Vincenzo Quadrini, 2018. "Commitment and Competition," EUI.

Diaz–Giménez, Javier, Giorgia Giovannetti, Ramon Marimon and Pedro Teles, 2008. "Nominal Debt as a Burden to Monetary Policy," *Review of Economic Dynamics*, 11, 3, 493—514. 2008.

Ljungqvist & Sargent, 2012 (20.3, 21.4 & 24.1 – 24.7)

Marcet, Albert and Ramon Marimon, 2019. "Recursive Contracts," EUI.

Book Reference

Ljungqvist, Lars and Thomas J. Sargent, 2018. *Recursive Macroeconomic Theory,* Fourth Edition (or, with different Chapter numbering, 2012 Third Edition or 2004 Second Edition), MIT Press.

Part II[3]

1. Introduction: The EMU, a Union of three Unions during and after the Crises.

Bénassy-Quéré, A., M.K. Brunnermeier, H. Enderlein, E. Farhi, M. Fratzscher, C. Fuest, P-O. Gourinchas, P. Martin, J. Pisani-Ferry, H. Rey, N. Véron, B. Weder di Mauro and J. Zettelmeyer (2018), "Reconciling Risk Sharing with Market Discipline: A Constructive Approach to Euro Area Reform", CEPR Policy Insight No. 91.

Juncker, J-C, D Tusk, J Dijsselbloem, M. Draghi and M. Schulz (2015), *The Five Presidents' Report: Completing Europe's Economic and Monetary Union*, European Commission.

Marimon, Ramon and Thomas Cooley (eds.), 2018. *The EMU after the Euro Crisis: Lessons and Possibilities,* VoxEU.org Book.

Tooze, A. (2018), *Crashed: How a Decade of Financial Crises Changed the World,* Viking, New York.

2. Adding the Financial link to the Fiscal and Monetary link: new RBC models.

Fostel, Ana and John Geanakoplos, 2013. "Reviewing the Leverage Cycle," Cowles Foundation Disc. Paper No. 1918.

Gertler, Mark and Simon Gilchrist, 2018. "What Happened: Financial Factors in the Great Recession," *Journal of Economic Perspectives,* 32(3), 3-30.

Gertler, Mark, Nobuhiro Kiyotaki and Andrea Prestipino, 2017. "A Macroeconomic Model with Financial Panics," Princeton University.

Holmstrom, Bengt, 2015. "Understanding the Role of Debt in the Financial System," BIS Working Papers No 479.

Huo, Zhen and José-Victor Rios-Rull. 2016. "Financial Frictions, Asset Prices, and the Great Recession," University of Pennsylvania.

Kehoe, Patrick, Virgiliu Midrigan and Elena Pastorino, 2018. "Evolution of Modern Business Cycle Models: Accounting for the Great Recession," *Journal of Economic Perspectives,* 32(3), 141-166.

Kiyotaki, Nobu and John Moore. 1997. "Credit Cycles," *Journal of Political Economy,* 105(2), 1477-1507.

Quadrini, Vincenzo, 2011. "Financial Frictions in Macroeconomic Fluctuations," *Economic Quarterly,* 97(3), 209-254.

[3] Provisional version.

3. **Unconventional Monetary Policies and Macroprudential Policies**

Dell'Ariccia, Giovanne, Pau Rabanal and Damiano Sandri, 2018. "Unconventional Monetary Policies in the Euro Area, Japan, and the United States," *Journal of Economic Perspectives,* 32(4), 147-172.

Gaballo, Gaetano, and Ramon Marimon. 2017. "Breaking the Spell with Credit-Easing: Self-Confirming Credit Crises in Competitive Search Economies," ADEMU WP2016/001

Gertler, Mark and Peter Karadi, 2011. "A Model of Unconventional Monetary Policy," *Journal of Monetary Policy,* 58(1), 17-34.

Mendoza, Enrique, 2016. "Macroprudential Policy: Promises and Challenges," NBER WP 22868.

4. **Fiscal rules (SGP), Sovereign Debt, Risk-sharing and Safe Assets.**

Ábrahám, A., E. Carceles-Poveda, Y. Liu and R. Marimon, 2019. "On the Optimal Design of a Financial Stability Fund", ADEMU WP2018/105.

Aguiar, Manuel and Manuel Amador, 2014. "Sovereign Debt," in *Handbook of International Economics*, Vol. 4, pp. 647 - 687. North Holland.

Aguiar, Manuel and Harold Cole, 2016. "Quantitative Models of Sovereign Debt Crises**,"** in *Handbook of Macroeconomics*, Vol. 4.

Ayres, João, Gaston Navarro, Juan Pablo Nicolini and Pedro Teles, 2016. "Sovereign Default: The Role of Expectations," ADEMU-WP 025.

Gourinchas, Pierre Olivier, Philippe Martin, and Todd Messer, 2018. "The Economics of Sovereign Debt, Bailouts and the Eurozone Crisis".

5. **Conclusion: adding the Social and International links to the post-Brexit EU.**

Ábrahám, A., J. Broguiera de Sousa, R. Marimon, and L. Mayr, 2019. "On the Design of a European Unemployment Insurance system (EUIS)", ADEMU WP2018/106.

Brogueira de Sousa, João, Julián Díaz-Saavedra and Ramon Marimon, 2019. "Introducing an Austrian Backpack in Spain", ADEMU WP2018/139.

Marimon, Ramon, 2019. "Feasible and Much Needed Reforms for the EMU: The *European Stability Fund et al.",* RSCAS PP 2019/17.