Topics in Open Economy Macroeconomics

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Tuesdays and Thursdays 9:00 AM – 12:00 PM

Overview

The purpose of this class is to introduce you into some basics of the Open Economy Macroeconomics (also called International Finance). In order to do so, we are going to review some of the main contributions to the field. Then, we are also going to focus on more novel contributions. The aim of the class is not only to master the literature in International Finance/Open Macro, but also to dominate the tools used in this type of research. Ideally, these two should should pave the ground for your future research interests. The focus of the class will be mainly theoretical, although empirical issues will be touched along the way to illustrate the theoretical models, and to encourage research topics if you are so inclined.

In general, the overall description of the class could be characterized as an open economy version of business cycles theory. We are going to start with models with perfect foresight, flexible prices, and complete markets. Then, we will progressively levy these assumptions and study the effects of uncertainty, price stickiness, and financial markets' imperfections, among other things.

The class will cover seven fundamental topics. The first one deals with Current Account Dynamics. Essentially, it covers optimal borrowing and intertemporal trade for rational agents. We will dig into the understanding of complete markets. We are going to use standard tools and introduce the basics of continuous-time finance for some applications. We will also focus on the sustainability of the current account and its adjustment processes.

The second block will study the effects of credibility in implementing stabilization policy measures, emphasizing its effects in many developing countries. We will highlight the allocation effects (intertemporal distortions) that lack of credibility generates.

The third block of readings focuses on Balance of Payments (BOP) crises. We will extend this literature by analyzing the role of asymmetric information in the decision process, and go over the existence of multiple equilibria and self-fulfilling effects.

The fourth section deals with the New Open Macroeconomics literature, the standard workhorse in current closed and open macro models. It introduces price sluggishness, and puts together what has been labelled as Dynamic New Keynesian Models, which integrate RBC models with nominal and real frictions. These models are usually solved by computational techniques due to their high non-linearity.

In the fifth part of the class, we will introduce Financial Market Imperfections to study the macroeconomic dynamics of capital market's imperfections. To put it simple, we will study the real effects of credit market frictions. More complete models will be analyzed. We will also focus on the computational methods to solve them.

In the sixth section of the course we will study of exchange rate regimes, including balance sheet effects, target zones, optimal currency areas, exchange rate arrangements classification and other related topics.

The last section of the class will be devoted to sovereign debt defaults and capital controls.

The organization of the lectures is a combination of book chapters and articles. You are expected to read the material in advance for each class. You are also expected to know and understand in detail all the conceptual and mathematical underpinnings contained in the readings. Sometimes

problem sets will guide you in these, but many others you will rely on yourself.

Reading List

Note: The articles and chapters marked with an asterisk (*) refers to material that will be very likely covered in class. I will be announcing regularly the readings that will follow.

A. Books:

Here is a list of books that you might find helpful. Some are directly related to our readings – we are going to use some of them extensively. Some others are not directly related, but are a good source, especially to introduce you to connected topics and alternative tools.

Obstfeld, M. and Rogoff. K. (1996), "Foundations of International Macroeconomics", MIT Press (OR).

Blanchard, O. and Fischer, S. (1989), "Lectures on Macroeconomics", MIT Press (BF).

Grossman, G. and Rogoff, K. (1995) Eds., Handbook of International Economics, Volume III, North Holland (GR).

Dixit, A. and Pindyck, (1994), "Investment Under Uncertainty" Princeton University Press (DP).

Vegh, C. (2005), "Open Economy Macroeconomics in Developing Countries", mimeo, available at: http://www.econ.ucla.edu/cvegh/book/book.htm, forthcoming by MIT Press. (CV)

Romer, D (2001), "Advanced Macroeconomics", 2nd Edition, McGraw Hill (DR).

Drazen, A. (2000), "Political Economy in Macroeconomics", Princeton University Press. (AD)

Lundqvuist, L. and Sargent, T. (2004), "Recursive Macroeconomic Theory", 2nd Edition, MIT Press (LS).

Sargent, T. (1987), "Dynamic Macroeconomic Theory", Harvard University Press (TS).

Agenor P. and Montiel, P. (1996), "Development Macroeconomics", Princeton University Press (AM).

Edwards, S. (1989), "Real Exchange Rates, Devaluation, and Adjustment", MIT Press (SE).

B. Topics

1. Intertemporal Trade, Current Account Dynamics, and Optimal Borrowing

OR, Chapter 1.

OR, Chapter 2.*****

OR, Chapter 3.

GR, Chapter 34. (Also, NBER working paper 4893)*

OR, Chapter 5.*

Obstfeld, M. (1982), "Aggregate Spending and the Terms of Trade: is there a Laursen-Metzler Effect?", *Quarterly Journal of Economics*, May, Vol. 97, No. 2, 251-270.

Dixit, A. (1993), "The Art of Smooth Pasting", Harwood Academic Publishers.*

DP, Chapters 1, 2, 3, 4, 5, 6.

Kraay, A. and Ventura, J. (2000), "Current Accounts in Debtor and Creditor Countries", *Quarterly Journal of Economics*, November, 1137-1166.*

Blanchard, O., Giavazzi, F., and Sa, F. (2005), "The U.S. Current Account and the Dollar", NBER WP 11137, February.

Gourinchas, P. and Rey, H. (2005), "International Financial Adjustment", NBER WP 11155, February.

Clarida, R., Goretti, M., and Taylor, M. (2005), "Are there Thresholds of current Account Adjustments in the G7?", mimeo, May.*

Ghironi, F. Iscan, T., and Rebucci, A. (2005), "Net Foreign Asset Position and the Consumption Dynamics in the International Economy", IMF WP/05/82, April.

Milesi-Ferretti, G.M. and Lane, P. (2005), "A Global Perspective on External Positions", mimeo, May.*

Tille, C. (2004), "Financial Integration and the Wealth Effect of Exchange Rate Fluctuations", mimeo, August.*

Obstfeld, M. and Rogoff. K. (2005), "The Unsustainable U.S. Current Account Position Revisited", NBER WO 10869, June.*

Backus, D. and Lambert, F. (2005), "Current Account Fact and Fiction", mimeo, July.*

2. Credibility

Calvo, G. (1978), "On the Time Consistency of Optimal Policy in a Monetary Economy", *Econometrica*, 46, 1411-1428.

Calvo, G. (1981), "Devaluation: Levels versus Rates", *Journal of International Economics*, 11, pp 165-172.*

Calvo, G. (1987), "On the Costs of Temporary Policy", *Journal of Development Economics*, 27, 245-261.*

Calvo, G. and Vegh, C. (1993), "Exchange-Rate Based Stabilization under Imperfect Credibility", in *Open Economy Macroeconomics*, IEA Conference Volume, No. 105, by Frisch, H. and Worgotter, A. (eds.), MacMillan.*

Calvo, G. and Vegh, C. (1999), "Inflation Stabilization and BOP Crises in Developing Countries", *Handbook of Macroeconomics*, J. Taylor and M. Woodford (editors), North Holland.*

Mendoza, E. and Uribe, M. (2001), "Devaluation Risk and the Business-Cycle Implications of Exchange-Rate Management", Carnegie-Rochester Conference Series on Public Policy, vol. 53, 239-96.*

Vegh, C. (1992), "Stopping High Inflation: An Analytical Overview", *IMF Staff Papers*, 39, September, 626-695.*

Connolly, M. (1986), "The Speculative Attack on the Peso and the Real Exchange Rate: Argentina 1979-81", *Journal of International Money and Finance*, **5**, S117-130.

Calvo, G. and Drazen, A. (1998), "Uncertain Duration of Reform–Dynamic Implications", *Macroeconomic Dynamics*, **2**, 443-455.*

Rebelo, S. and Vegh, C. (1995), "Real Effects of Exchange Rate-Based Stabilization: An Analysis of Competing Theories", National Bureau of Economic Research working paper 5197, July, mimeo.

CV, Chapters 1, 2, 3, 5, 9.

3. BOP Crises

GR, Chapter 36.

Flood, R. and Garber, P. (1984), "Collapsing Exchange Rate Regimes: Some Linear Examples", *Journal of International Economics*, 17, 1-13.*

Calvo, G. (1998), "Varieties of Capital Markets Crises", in Calvo, G. and King, M. (Eds.), *The Debt Burden and its Consequences for Monetary Policy*, MacMillan.

Hellwig, C., Mukherji, A., and Tsyvinski, A. (2005), "Self-Fulfilling Currency Crises: the Role of Interest Rates", NBER WP 11191, March.

Burnside, C., Eichenbaum, M. and Rebelo, S. (2004), "Government Finance in the Wake of Currency Crises", mimeo, October.

Velasco, A. (1987), "Financial and Balance of Payments Crises", *Journal of Development Economics*, October, 27, 263-83.

Kaminsky, G. and Reinhart, C. (1999), "The Twin Crises: the Causes of Banking and Balance of Payments Problems", *American Economic Review*, **89**, 473-500.*

CV, Chapter 14.

Krugman, P. (1979), "A Model of Balance of Payments Crises", *Journal of Money, Credit and Banking*, August, 11, 3, 311-25.

Caplin A. and Leahy, J. (1994), "Business as Usual, Market Crashes, and Wisdom After the Fact", *American Economic Review*, 84, June, 548-565.*

Obstfeld, M. (1994), "The Logic of Currency Crises", National Bureau of Economic Research, WP 4640, February.

OR, Chapter 9.

Obstfeld, M. (1996), "Models of Currency Crises with Self-Fulfilling Features", *European Economic Review*, April, 40 , 1, 1037-47.*****

Morris, S. and Shin, H. (1998), "Unique Equilibrium in a Model of Self-Fulfilling Currency Attacks", *American Economic Review*, 88, June, 587-597.*****

4. New Open Macroeconomics (Dynamic New Keynesian Models)

OR, Chapter 4 – especially pages 226-235.*****

OR, Chapter 10.*****

Gertler, M. (2002), "The Real Business Cycle Model", class notes, mimeo.

Gertler, M. (2002), "A Basic Sticky Price Model without Capital", class notes, mimeo.

Gertler, M. (2002), "A Dynamic New Keynesian Model of the Business Cycle with Capital", class notes, mimeo.

Calvo, G. (1983), "Staggered Contracts in a Utility-Maximizing Framework", *Journal of Monetary Economics*, September, 12, pp. 383-398.

Obstfeld, M. and Rogoff, K. (1995), "Exchange Rate Dynamics Redux", *Journal of Political Economy*, 103, June, 624-660.

Obstfeld, M. and Rogoff, K. (2000), "New Directions for Stochastic Open Economy Models", *Journal of International Economics*, 50, 117-153.

Lane, P. (2001), "The New Open Economy Macroeconomics: a Survey", *Journal of International Economics*, 54, August, 235-266.

Gali. J. and Monacelli, T. (2002), "Monetary Policy and Exchange Rate Volatility in a Small Open Economy", National Bureau of Economic Research, working paper 8905, May, mimeo.*****

5. Capital Markets Imperfections

OR, Chapter 6.*****

Diamond, D. and Dybvig (1983), "Bank Runs, Deposit Insurance, and Liquidity", *Journal of Political Economy*, 91, 3, June, 401-419.

Bernanke, B and Gertler, M. (1989), "Agency Costs, Net Worth, and Business Fluctuations", *American Economic Review*, 73, June, 405-423.

Fisher, I. (1933), "The Debt-Deflation Theory of Great Depressions", *Econometrica*, 1, 337-357.*****

Bernanke, B. (1983), "Non Monetary Effects of the Great Depression", *American Economic Review*, 73, No. 2, June, 257-276.

Kiyotaki, N. and Moore, J. (1997), "Credit Cycles", *Journal of Political Economy*, 105, April, 211-248.*

Greenwald B. and Stiglitz J. (1993), "Financial Markey Imperfections and Business Cycles", *Quarterly Journal of Economics*, February, 77-114.

Holmstrom, B. and Tirole, J. (1998), "Private and Public Supply of Liquidity", *Journal of Political Economy*, 106, 1, February, 1-40.

Stiglitz, J. and Weiss, A. (1981), "Credit Rationing in Markets with Imperfect Information", *American Economic Review*, 71, 3, June, 393-410.

Bernanke, B. and Gertler, M. (1995), "Inside the Black Box: the Credit Channel of Monetary Transmission", *Journal of Economic Perspectives*, 9, No. 4, Fall, 27-48.

Caballero, R. and Krishnamurthy, A. (2000), "Emerging Market Crises: An Asset Markets Perspective", MIT, mimeo.

Krugman, P. (1999), "Balance Sheets, the Transfer Problem, and Financial Crises", mimeo, MIT.

McKinnon, R. and Pil, H. (1998), "International Overborrowing: A Decomposition of Credit and Currency Risks, *World Development*, 26, July 1998.*

Aghion P., Bacchetta P., and Banerjee, A. (2001), "Currency Crises and Monetary Policy in an Economy with Credit Constraints", *European Economic Review*, 45, (7), 1121-1150.

Arellano, C. and Mendoza, E. (2002), "Credit Frictions and 'Sudden Stops' in Small Open Economies: an Equilibrium Business Cycle Framework for Emerging Market Crises", NBER WP 8880.

Christiano, L., Gust, C., and Roldos, J. (2002), "Monetary Policy in a Financial Crisis", NBER WP 9005.

Mendoza, E. (2001), "Credit, Prices, and Crashes: Business Cycles with a Sudden Stop", in *Preventing Currency Crises in Emerging Markets*, S. Edwards and J. Frankel (editors), University of Chicago Press. Also NBER WP 8338.

Mendoza, E. (2004), "Sudden Stops in an Equilibrium Business Cycle Model with Credit Constraints: A Fisherian Deflation of Tobin's Q", mimeo, University of Maryland.*

Paasche, B. (2001), "Credit Constraints and International Financial Crises", *Journal of Monetary Economics*, 48, 623-650.

Edwards, S. (2004), "Thirty Years of Current Account Reversals and Sudden Stops", mimeo, NBER WP 10276.

Bernanke, B., Gertler, M., and Gilchrist, S. (1999), "The Financial Accelerator in a Quantitative Business Cycle Framework", *Handbook of Macroeconomics*, J. Taylor and M. Woodford (editors), North Holland.*

6. Exchange Rate Regimes

OR, Chapter 8.

Magud, N. (2003a), "Currency Mismatch, Openness, and Exchange Rate Regime Choice", mimeo, University of Oregon.*

Magud, N. (2003b). "Exchange Rate Regime Choice and Country Characteristics: an Empirical Investigation", mimeo, University of Oregon, Department of Economics, 2003.*

Bleackly, H. and Cowan, K. (2002), "Corporate Dollar Debt and Depreciations: Much Ado About Nothing", mimeo, MIT.

Céspedes, L., Chang, R. and Velasco, A. (2004). "Balance Sheets and Exchange Rate Policy", *American Economic Review*, **94**, (4), September.

Gertler, M., Gilchrist, S., and Natalucci, F. (2001), "External Constraints on Monetary Policy and the Financial Accelerator", mimeo, New York University.

Berganza, J., Chang, R., and Garcia Herrero, A. (2003), "Balance Sheet Effects and the Country Risk Premium: an Empirical Investigation", mimeo.

Aghion, P., Bacchetta, P., Ranciere, R., and Rogoff, K. (2005), "Productivity Growth and the Exchange Rate Regime: the Role of Financial Development", mimeo, July.*

Calvo. G. and Reinhart, C. (2002), "Fear of Floating", *Quarterly Journal of Economics*, 117, 2, 379-408.*

Calvo G. and Reinhart, C. (2003), "Fixing for Your Life", Brookings Trade Forum 2000, Collins, S. and Rodrik, D. (Eds.), Brookings Institution, Washington D.C.*

Krugman, P. (1991), "Target Zones and Exchange Rate Dynamics", *Quarterly Journal of Economics*, 106, 669-82.*

Svensson, L.E.O. (1992), "An Interpretation of Recent Research in on Exchange Rate Target Zones", *Journal of Economic Perspectives*, 6, No. 2, Autumn, 119-144.

Mundell, R. (1960), "The Monetary Dynamics of International Adjustments Under Fixed and Flexible Exchange Rates", *Quarterly Journal of Economics*, May.

Mundell, R. (1961), "A Theory of Optimal Currency Areas", *American Economic Review*, 51, 4, 657-665.

Alesina, A., Barro, R., and Tenreyro, S. (2002), "Optimal Currency Areas", NBER WP 9072, July.

Broda, C. (2004). "Terms of Trade and Exchange Rate Regimes in Developing Countries", *Journal of International Economics*, **63**, 31-58.

Calvo , G. (1999), "Fixed vs. Flexible Exchange Rates: Preliminaries of a Turn-of-Millennium Rematch", mimeo, University of Maryland.

Edwards, S. and Levy-Yeyati, E. (2002), "Flexible Exchange Rates as Shock Absorbers: an Empirical Investigation", mimeo.

Reinhart, C. and Rogoff, K. (2003), "The Modern History of Exchange Rate Arrangements: a Reinterpretation", NBER WP 8963, forthcoming in *Quarterly Journal of Economics*, 2004.*

Fischer, S. (2001), "Exchange Rate Regimes: Is the Bipolar View Correct?", mimeo.

Dornbusch, R. (1976), "Expectations and Exchange Rate Dynamics", *Journal of Political Economy*, December.

Flood, R. and Marion, N. (1982), "The Transmission of Disturbances under Alternative Exchange Rate Regimes with Optimal Indexing", *Quarterly Journal of Economics*, 97, 1, February, 43-66.

7. Sovereign Debt Defaults

Reinhart, C. and Rogoff, K., and Savastano, M. (2003), "Debt Intolerance", in W. Brainard and G. Perry (editors), Brookings Papers on Economic Activity, 1-74.*

Reinhart, C. and Rogoff, K. (2004), "Serial Dwfault and the 'Paradox' of Rich to Poor Capital Flows", NBER WP 10296, mimeo, February.*

Arellano, C. (2005), "Default Risk, the Real Exchange Rate, and Income Fluctuations in Emerging Economies", mimeo, March.

Yue, V. (2005), "Sovereign Default and Debt Renegotiation", mimeo, June.

Tomz, M. and Wright, M. (2005), "Sovereign Debt, Defaults, and Bailouts", mimeo, June.

8. Bonus: Discussion on Capital Controls

Magud, N. and Reinhart, C. (2004),"Capital Controls: An Evaluation", forthcoming in *Capital Controls and Capital Flows in Emerging Economies: Policies, Practices and Consequences*, S. Edwards (editor), NBER, The University of Chicago Press. Also, **NBER Working Paper 11973**.

Magud, N., Reinhart, C., and Rogoff, K. (2006), "Capital Controls: Myth and Reality–A Portfolio Balance Approach", mimeo, University of Oregon.

Wright, M., (2005), "Private Capital Flows, Capital Controls, and Default Risk", mimeo.