

Economics 642, International Monetary Economics
Spring 2007
Luca Guerrieri

Office: 458 Mergenthaler Hall
Luca_Guerrieri@yahoo.com

Outline and Basic Readings

The course aims to provide a limited survey of open economy macroeconomics. I hope to build up your confidence in setting up, solving, and estimating open economy models. The emphasis is going to be on you getting your hands dirty with programming. No programming background is assumed.

The course requirements are seven homework assignments and two in-class paper presentations of one of the starred articles in the reading list below. The presentations should not run longer than 20 minutes. You are supposed to summarize the main insights provided by the paper and highlight its shortcomings, much like a discussant at a conference would do. You should feel free to work together on homework assignments. However, the presentations need to be delivered individually.

There is no required textbook, but I expect you to have access to a recent version of Matlab (release 6.5, or more recent). You can purchase a student version of Matlab at heavily discounted prices, either from a local bookstore, or directly from the Matlab website.

In the first class, we will review some methods for solving linear dynamic recursive models. For most of the homework assignments, however, you are encouraged to rely on the solution methods built in the Dynare set of tools or in the AIM routines. I will provide instructions on how to install and make use of these tools. You can download these programs from the website for the class: <http://mysite.verizon.net/vze4wb22/>

1- Closed-economy RBC models

Handout on Solving systems of stochastic linear difference equations.

King R., C. Plosser and S Rebelo. "Production, Growth and Business Cycles," *Journal of Monetary Economics*, 21 1988, pp 195-232.

Further reading

Blanchard O. and C. Kahn. "The Solution of Linear Difference Models under Rational Expectations," *Econometrica*, 48, 1980, pp 1305—1312.

Uhlig, Harald. "A Toolkit for Analyzing Nonlinear Dynamic Stochastic Models Easily," Federal Reserve Bank of Minneapolis, Institute for Empirical Macroeconomics, Discussion Paper 101, 1995.

Judd, Kenneth. *Numerical Methods in Economics*. MIT Press, 1998. Section 6.1.

King, Robert., Charles Plosser and Sergio Rebelo. “Production, Growth and Business Cycles: Technical Appendix,” *Computational Economics*, 20, 2002, pp 87--116.

King, Robert and Mark Watson. “System Reduction and Solution Algorithms for Singular Linear Difference Systems under Rational Expectations,” *Computational Economics*, 20, 2002, pp 57—86.

Kydland, F. E. and Edward Prescott. “Time to Build and Aggregate Fluctuations.” *Econometrica*, 50, 1982, pp 1345-70.

2- International RBC models

Backus, D., P. Kehoe and F. Kydland. “International Real Business Cycles,” *Journal of Political Economy* 100, 1992, pp 745-775.

Baxter, Marianne and Mario Crucini, “Explaining Saving—Investment Correlations,” *The American Economic Review*, 83, 1993, pp 416—436.

Further Reading

Feldstein, Martin and Charles Horioka. “ Domestic Saving and International Capital Flows,” *The Economic Journal*, 90, 1980, pp 314—329.

Glick, Reuven and Kenneth Rogoff. “Global Versus Country-Specific Productivity Shocks and the Current Account,” *Journal of Monetary Economics*, 35, 1995, pp 159—192.

Mendoza, Enrique. “Real Business Cycles in a Small Open Economy,” *American Economic Review*, 81, 1990, pp 797-818.

Nason, James and John Rogers. “Investment and the Current Account in the Short Run and the Long Run,” *Journal of Money, Credit and Banking*, 34, 2002, pp 967—86.

3- Introducing non-traded goods

Backus, David K. and Gregor W. Smith, “Consumption and Real Exchange Rates in Dynamic Economies with Non-Traded Goods,” *Journal of International Economics*, 35, 1993, pp 297—316.

Stockman, Alan and Linda Tesar, "Tastes and Technology in a Two-Country Model of the Business Cycle: Explaining International Comovements," *The American Economic Review*, 85, 1995, pp 168--185.

Further Reading

* Corsetti, Giancarlo, Luca Dedola and Sylvain Leduc, "International Risk Sharing and the Transmission of Productivity Shocks," *International Finance Discussion Papers* 826, 2005.

Engel, Charles. "Accounting for U.S. Real Exchange Rate Changes," *Journal of Political Economy*, 107, 1999, pp 507—538.

4- Incomplete market models

Baxter, M. and M. Crucini., "Business Cycles and the Asset Structure of Foreign Trade", *International Economic Review*, 36, 1995, pp 821—854.

Schmitt-Grohe, S. and M. Uribe, "Closing Small Open Economy Models," *Journal of International Economics* 61, 2003, pp 163-185.

Further reading

* Bodenstein, M., "Closing Open Economy Models," *International Finance Discussion Papers* 867, 2006.

Kollman, Robert. "Incomplete Asset Markets and the Cross-Country Consumption Correlation Puzzle," *Journal of Economic Dynamics and Control*, 20 1996, pp 945—961.

Ghironi, F., "Macroeconomic Interdependence Under Incomplete Markets," *Journal of International Economics*, 70, 2006, pp 428-450.

* Ghironi, Fabio, Jaewoo Lee and Alessandro Rebucci, "The Valuation Channel of External Adjustment," *Mimeo*, Boston College, 2006.

<http://www2.bc.edu/~ghironi/GhiroLeeRebuValuation122106.pdf>

5 – Nominal rigidities in open economy models

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

Erceg Christopher, Luca Guerrieri and Christopher Gust. "SIGMA an Open Economy Model for Policy Analysis" *International Journal of Central Banking*, 2, 2006, pp 1—50.

Further reading

Lane, Phillip. “The New Open Economy Macroeconomics: A Survey,” *Journal of International Economics*, 54, 2001, pp 235—266.

Gali, Jordi and Tommaso Monacelli. “Monetary Policy and Exchange Rate Volatility in a Small Open Economy,” *72*, 2005, pp 707—734.

Benigno, Gianluca. “Real Exchange Rate Persistence and Monetary Policy Rules,” *Journal of Monetary Economics*, 51, 2004, pp 473—502.

* Huang, Kevin and Zheng Liu. “Business Cycles with Staggered Prices and International Trade in Intermediate Inputs,” *Journal of Monetary Economics*, 2007 (forthcoming).

6 – Pricing to Markets

Betts, Caroline and Michael Devereux. “The Exchange Rate in a Model of Pricing-to-Market,” *European Economic Review*, 40, 1996, pp 1007—1021.

Chari, V.V., P.J. Kehoe and E. McGrattan. “Can Sticky Price Models Generate Volatile and Persistent Real Exchange Rates?” *Review of Economic Studies*, 69, 2002, pp 533 – 563

Further reading

Bergin, Paul and Robert Feenstra. “Pricing-to-Market, Staggered Contracts and Real Exchange Rate Persistence,” *Journal of International Economics*, 54, 2001, 333-359.

Corsetti, Giancarlo and Luca Dedola “A Macroeconomic Model of International Price Discrimination,” *Journal of International Economics*, 67, 2005, pp 129—155.

* Gust, Christopher and Nathan Sheets. “The adjustment of Global External Imbalances: Does Partial Exchange Rate Pass-Through to Trade Prices Matter?” *International Finance Discussion Paper 850*, 2006.

Rogoff, K. “The Purchasing Power Parity Puzzle,” *Journal of Economic Literature*, 34, 1996, pp 647—668.

7 – DGE models and trade deficits

Engel, Charles and John Rogers. “The U.S. Current Account Deficit and the Expected Share of World Output,” *Journal of Monetary Economics*, 53, 2006, pp 1063-1093.

Obstfeld, Maurice and Kenneth Rogoff. “The Unsustainable US Current Account Position Revisited,” *CEPR Discussion Paper No. 5416*, 2005.

Further reading

Betts, Caroline and Michael Devereux. “The International Effects of Monetary and Fiscal Policy in a Two-Country Model,” Mimeo, University of British Columbia, 1999.

Erceg, Christopher, Luca Guerrieri and Christopher Gust. “Expansionary Fiscal Shocks and the U.S. Trade Deficit,” *International Finance*, 8, 2005, pp 1237—1278.

Cavallo, Michele and Cedric Tille. “Could Capital Gains Smooth a Current Account Rebalancing?” Federal Reserve Bank of New York Staff Report 237, 2006.

Lane, Philip and Gian Maria Milesi-Ferretti. “A Global Perspective on External Positions,” NBER Working Paper 11589, 2005.

* Ruhl, Kim. “The Elasticity Puzzle in International Economics,” Mimeo, University of Texas at Austin, 1995.

8 – Limited information estimation

Ahmed, Shaghil. “International Business Cycles,” *The American Economic Review*, 83, 1993, pp 335 –359.

Eichenbaum, Martin and Charles Evans. “Some Empirical Evidence on the Effects of Shocks to Monetary Policy on Exchange Rates,” *Quarterly Journal of Economics*, 110, 1995, 975—1009.

Further Reading

* Betts, Caroline and Patrick Kehoe. “U.S. Real Exchange Rate Fluctuations and Relative Price Fluctuations”, *Journal of Monetary Economics*, 53, 2006, pp 1297—1326.

Engel, Charles. “Accounting for Real Exchange Rate Changes,” *Journal of Political Economy*, 107, 1999, pp 507—538.

Faust, Jon and John Rogers, “Monetary Policy’s Role in Exchange Rate Behavior,” *Journal of Monetary Economics*, 50, 2000, pp 1403—1424.

Kim, Soyoung, Nouriel Roubini. “Exchange Rate Anomalies in the Industrial Countries: A Solution with a Structural VAR Approach,” *Journal of Monetary Economics*, 45, 2000, pp 1403—1424.

9 - Maximum likelihood estimation

Bergin, Paul. "Putting the 'New Open Economy Macroeconomics' to a Test," *Journal of International Economics*, 54, 2001, pp 333-359.

Hamilton, James. "Time Series Analysis." Chapter 13, "The Kalman Filter".

Further reading

Bergin, Paul. "How Well Can the New Open Economy Macroeconomics Explain the Exchange Rate and Current Account."

Cogley, Timothy. "Estimating and Testing Rational Expectations Models When the Trend Specification is Uncertain," *Journal of Economic Dynamics and Control*, 2001.

M. Ravn, H. Uhlig. "On Adjusting the HP-Filter for the Frequency of Observations." *Review of Economics and Statistics*, 84(2), May 2002, pp. 371-76.

Justiniano, A and Bruce Preston. "Small Open Economy DSGE Models: Specification Estimation, and Model Fit," mimeo, Columbia University, 2004.

* Ghironi, Fabio and Marc Melitz, "International Trade and Macroeconomic Dynamics with Heterogenous Firms," NBER Working Paper 10540, 2004.

10 – Bayesian estimation

Handout on Bayesian methods

Schorfheide, Frank and Thomas Lubik. "A Bayesian Look at New Open Economy Macroeconomics," *NBER Macroeconomics Annual*, 2005, pp 313—366.

Further Reading

Smets, Frank and Raf Wouters. "Comparing Shocks and Frictions in US and Euro Area Business Cycles: A Bayesian DSGE Approach," *Journal of Applied Econometrics*, 20, 2005, pp 161—183.

* Adolfson, M., S. Laseen, J. Linde and M. Villani. "Bayesian Estimation of an Open Economy DSGE Model with Incomplete Pass-Through," *Sveriges Riksbank WP* 179.

Sungbae, An and Frank Schorfheide. "Bayesian Analysis of DSGE Models," *Econometric Review*, 2006 (forthcoming).