Macroeconomía Avanzada: Corto Plazo

ECON 4212
Alan Finkelstein Shapiro
a.finkelstein@uniandes.edu.co
2014-20

1. Horario atención a estudiantes, correos electrónicos y nombres de los profesores complementarios

Clase magistral

Profesor: Alan Finkelstein Shapiro, a.finkelstein@uniandes.edu.co
Horario: Lunes y Miércoles, 11:30 a.m. – 12:50 p.m.
Salón: SD 806
Atención a estudiantes: Lunes y Miércoles, 7:30 a.m. – 8:30 a.m., *con cita previa*, W824

Página web del curso

SicuaPlus

Asistentes graduados

Aldo Genaro Pareja Cardona
Dirección electrónica: ag.pareja68@uniandes.edu.co
Atención a estudiantes: Anunciado en Sicua Plus al comienzo del semestre.

Juan Sebastián Betancur Mora
Dirección electrónica: js.betancur125@uniandes.edu.co
Atención a estudiantes: Anunciado en Sicua Plus al comienzo del semestre.

TBD
Dirección electrónica: TBD
Atención a estudiantes: Anunciado en Sicua Plus al comienzo del semestre.

2. Introducción y descripción general del curso

La macroeconomía moderna requiere de métodos cuantitativos para poder profundizar en los temas más relevantes. Es por esto que, de manera paralela, el curso dará una primera introducción al uso de métodos computacionales para resolver modelos macro modernos. Esto nos permitirá establecer un balance entre la teoría y la técnica, y ofrecerá una base sólida para aquellos estudiantes que quieran hacer investigación de punta en el área de ciclos de negocios en el futuro.

3. Objetivos de la materia

El curso tiene como objetivo principal familiarizar a los estudiantes con la teoría macroeconómica moderna de corto plazo, con un énfasis en los desarrollos más destacados en los últimos 30 años. La mayor parte del curso se centrará en modelos de ciclos de negocios, poniendo énfasis en modelos con fricciones en los mercados laborales, modelos con rigideces nominales, y modelos de políticas óptimas, entre otros temas.

4. Contenido

El curso empieza por cubrir varios hechos estilizados de los ciclos de negocios, para luego introducir el modelo prototipo de ciclos: el modelo de ciclos de negocios reales (real business cycle model). Utilizando modelos de equilibrio general dinámicos estocásticos, exploramos las diferentes modificaciones que se han introducido a lo largo de los años para mejorar las deficiencias del modelo base. Al mismo tiempo, introducimos los métodos computacionales necesarios para resolver modelos de ciclos de manera numérica. El curso cubre el modelo RBC básico, modelos DSGE con empleo indivisible, modelos con rigideces nominales, y modelos con fricciones laborales de búsqueda y emparejamiento (search and matching). Finalmente, el curso introduce modelos de políticas óptimas en el contexto de ciclos de negocios y modelos con fricciones financieras.

5. Metodología

El curso está basado principalmente en la lectura de papers y en una serie de ejercicios computacionales, con el objetivo de que los estudiantes se familiaricen con la literatura y con los métodos de análisis cuantitativo que prevalecen en la macroeconomía moderna.

6. Competencias

Al final del curso, los estudiantes serán capaces de leer y entender a profundidad la literatura de ciclos, y entender los métodos de solución, la intuición económica detrás de los resultados, las fortalezas, y las debilidades de los modelos macro cuantitativos actuales. También serán capaces de resolver y simular modelos de ciclos de negocios utilizando métodos computacionales, lo que les permitirá poder hacer investigación macroeconómica de punta.

7. Criterios de evaluación (Porcentajes de cada evaluación)

La nota definitiva del curso dependerá de un examen a mitad de semestre, de cuatro ejercicios computacionales, y de un quiz que cubrirá el material después del examen. Otros ejercicios complementarios serán asignados durante el curso, pero no se corregirán ni tendrán valor en la nota final.

Los alumnos de doctorado están sujetos a los mismos criterios de evaluación, pero tanto el examen como los proyectos computacionales incluirán preguntas adicionales y extensiones del material.

Distribución de las notas

Primer ejercicio computacional	(20%)

Segundo ejercicio computacional	(20%)
Examen	(30%)
Tercer ejercicio computacional	(20%)
Quiz	(10%)

8. Sistema de aproximación de notas definitiva

No habrá aproximación de la nota definitiva.

Reclamos

Política de Reclamos: (Artículo 62 del Reglamento de Estudiantes) Todo estudiante que desee formular un reclamo sobre las calificaciones de cualquier evaluación o sobre la nota definitiva del curso, deberá dirigirlo por escrito y debidamente sustentado al profesor responsable de la materia, dentro de los ocho (8) días hábiles siguientes a aquel en que se dan a conocer las calificaciones en cuestión. El profesor dispone de diez (10) días hábiles para resolver el reclamo formulado; vencido el término informará al estudiante la decisión correspondiente.

Fechas importantes

Julio 28:	Primera clase
Octubre 8:	Examen
Noviembre 12:	Quiz (última clase)

Fechas tentativas para la entrega de proyectos computacionales

Agosto 25:	Proyecto 1
Septiembre 17:	Proyecto 2
Octubre 20:	Proyecto 3

9. Bibliografía

El curso no tiene un texto guía. Algunos textos útiles que pueden consultar son:

David Romer. *Advanced Macroeconomics*. Third Edition, McGraw Hill, 2006. [DR]

Thomas F. Cooley (Ed.). *Frontiers of Business Cycle Research*, Princeton University Press, 1995. [TC]

Carl E Walsh. *Monetary Theory and Policy*, Second Edition, MIT Press, 2003. [CW]

Woodford Michael. *Interests and Prices: Foundations of a Theory of Monetary Policy*, First Edition, Princeton University Press, 2003. [MW]

Jordi Gali. *Monetary Policy, Inflation and the Business Cycle: An Introduction to the New Keynesian Framework*. Princeton University Press, 2008. [JG]

Christopher A. Pissarides. *Equilibrium Unemployment Theory*, Second Edition, MIT Press, 2000. [CP]

Robert Shimer. *Labor Markets and Business Cycles*, Princeton Univeristy Press, 2010. [RS]

Sargent, Thomas J. y Lars Ljungqvist. *Recursive Macroeconomic Theory*. Segunda edición. MIT Press, 2004. [SL]

Nancy L. Stokey and Robert E. Lucas Jr., with Edward C. Prescott. *Recursive Methods in Economic Dynamics*, Harvard University Press, 1989. [SLP]

Temas[1]

Nota: La mayor parte de los artículos utilizados en el curso se puede conseguir en formato electrónico. Algunos requieren acceso a la red de la Universidad para poder ser bajados. Dadas las restricciones de tiempo, no será posible cubrir todos y cada uno de los artículos listados. Decidiremos qué temas cubrir con más profundidad conforme avance el curso. Las lecturas precedidas de un ***** son obligatorias.

El Debate sobre la Macroeconomía Moderna y la Agenda Futura

*Prescott, Edward C. 2006. "Nobel Lecture: The Transformation of Macroeconomic Policy and Research." *Journal of Political Economy,* Vol. 114, pp. 203-235.

*Mankiw, N. Gregory. 2006. "The Macroeconomist as Scientist and Engineer." *Journal of Economic Perspectives,* Vol. 20, pp. 29-46.

*Akerlof, George A. 2007. "The Missing Motivation in Macroeconomics." *American Economic Review,* Vol. 97, pp. 5-36.

*Caballero, Ricardo. 2010. "Macroeconomics after the Crisis: Time to Deal with the Pretense-of-Knowledge Syndrome." *Journal of Economic Perspectives,* Vol. 24, Fall 2010, p. 85-102.

Ohanian, Lee E. 2010. "The Economic Crisis from a Neoclassical Perspective." *Journal of Economic Perspectives,* Vol. 24, Fall 2010, p. 45-66.

*Blanchard, Olivier J. 2008. "The State of Macro." NBER Working Paper No. 14259.

Kydland, Finn E. 2006. "Nobel Lecture: Quantitative Aggregate Economics." *American Economic Review,* Vol. 96, pp. 1373-1383.

Chari, V.V. and Patrick J. Kehoe. 2006. "Modern Macroeconomics in Practice: How Theory is Shaping Policy." *Journal of Economic Perspectives,* Vol. 20, pp. 3-28.

Rebelo, Sergio T. 2005. "Real Business Cycle Models: Past, Present, and Future." NBER Working Paper No. 11401.

Hall, Robert E. 2010. "Why Does the Economy Fall to Pieces After a Financial Crisis?" *Journal of Economic Perspectives,* Vol. 24, Fall 2010, p. 3-20.

Woodford, Michael. 2010. "Financial Intermediation and Macroeconomic Analysis," *Journal of Economic Perspectives,* Vol. 24, Fall 2010, p. 21-44.

Teoría Dinámica Estocástica de Equilibrio General (DSGE)

[1] La estructura de este curso se basa en parte en el curso de Macroeconomía Avanzada de Sanjay K. Chugh.

*Christiano, Lawrence, Martin Eichenbaum, anc Robert Vigfusson. 2004. “What Happens After A Technology Shock?” *mimeo.*

King, Robert G. and Sergio T. Rebelo. 1999. “Resuscitating Real Business Cycle,” In *Handbook of Macroeconomics,* Vol. 1B, edited by John B. Taylor and Michael Woodford.

McGrattan, Ellen R. 2006. “Real Business Cycles,” Federal Reserve Bank of Minneapolis Staff Report No. 370.

Programación Dinámica y Métodos Computacionales Básicos

*Schmitt-Grohé, Stephanie and Martin Uribe. 2004. “Solving Dynamic General Equilibrium Models Using a Second-Order Approximation to the Policy Function,” *Journal of Economic Dynamics and Control,* Vol. 28, pp. 755-775.

Aruoba, S. Boragan, Jesus Fernandez-Villaverde, and Juan F. Rubio-Ramirez. 2006. “Comparing Solution Methods for Dynamic Equilibrium Economies,” *Journal of Economic Dynamics and Control,* Vol. 30, pp. 2477-2508.

Prescott, Edward C. and Rajnish Mehra. 1980. “Recursive Competitive Equilibrium: The Case of Homogeneous Households,” *Econometrica,* Vol. 48, p. 1365-1379.

Ljungqvist and Sargent, Chapter 1.4, Chapter 2.2, Chapter 3, 4 (obligatorio para alumnos de doctorado)

Capítulos 1 y 2 de Stockey, N. y Robert E. Lucas Jr. Recursive Methods in Economic Dynamics. Harvard University Press, 1989 (obligatorio para alumnos de doctorado)

Uhlig, Harald. 1999. “A Toolkit for Analyzing Nonlinear Dynamic Stochastic Models Easily,” In *Computational Methods for the Study of Dynamic Economies,* edited by Ramon Marimon and Andrew Scott. Oxford Press.

Modelos Macroeconómicos Cuantitativos I: Empleo y Dinero

*****Rogerson, Richard. 1988. “Indivisible Labor, Lotteries and Equilibrium,” *Journal of Monetary Economics,* Vol. 21, pp. 3-16.

Hansen, Gary D. 1985. “Indivisible Labor and the Business Cycle,” *Journal of Monetary Economics,* Vol. 16, pp. 309-327.

*****Cho, Jang-Ok and Thomas F. Cooley. 1994. “Employment and Hours Over the Business Cycle,” *Journal of Economic Dynamics and Control,* Vol. 18, pp. 411-432.

*Chetty, Raj, Adam Guren, Day Manoli, and Andrea Weber. 2012. “Does Indivisible Labor Explain the Difference between Micro and Macro Elasticities? A Meta-Analysis of Extensive Margin Elasticities,” forthcoming *NBER Macroeconomics Annual 2012*.

*****Cooley, Thomas F. and Gary D. Hansen. 1989. “The Inflation Tax in a Real Business Cycle Model,” *American Economic Review,* Vol. 79, pp. 733-748.

*****Cooley, Thomas F. and Gary D. Hansen. 1991. “The Welfare Costs of Moderate Inflation,” *Journal of Money, Credit, and Banking,* Vol. 23, pp. 483-503.

Cooley, Thomas F. and Gary D. Hansen. 1995. “Money and the Business Cycle,” In *Frontiers of Business Cycle Research,* edited by Thomas F. Cooley. Princeton University Press.

Modelos Macroeconómicos Cuantitativos II: Rigideces de Precios

*Rotemberg, Julio J., and Michael Woodford. 1999. “The Cyclical Behavior of Prices and Costs,” *NBER Working Paper 6909*.

*Jaimovich, Nir. 2007. “Firm Dynamics and Markup Variations: Implications for Sunspot Equilibria and Endogenous
Economic Fluctuations,” *Journal of Economic Theory*, Vol. 137, pp. 300-325.

Rotemberg, Julio J. and Michael Woodford. 1995. “Dynamic General Equilibrium Models with Imperfectly Competitive Product Markets,” In *Frontiers of Business Cycle Research,* edited by Thomas F. Cooley. Princeton University Press.

Kimball, Miles S. 1995. “The Quantitative Analytics of the Basic Neomonetarist Model,” *Journal of Money, Credit, and Banking,* Vol. 27, pp. 1241-1277.

*Calvo, Guillermo A. 1983. “Staggered Prices in a Utility-Maximizing Framework,” *Journal of Monetary Economics,* Vol. 12, pp. 383-398.

*Yun, Tack. 1996. “Nominal Price Rigidity, Money Supply Endogeneity, and Business Cycles,” *Journal of Monetary Economics,* Vol. 37, pp. 345-370.

Chari, V.V., Patrick J. Kehoe, and Ellen R. McGrattan. 2000. “Sticky Price Models of the Business Cycle: Can the Contract Multiplier Solve the Persistence Problem?” *Econometrica,* Vol. 68, pp. 1151-1179.

*Gali, Jordi and Mark Gertler. 2007. “Macroeconomic Modeling for Monetary Policy Evaluation,” *Journal of Economic Perspectives,* Vol. 21, pp. 25-45.

*Gagnon, Étienne. 2009. “Price Setting During Low and High Inflation: Evidence from Mexico,” *Quarterly Journal of Economics*, Vol. 124, No. 3, pp. 1221-1263.

Mankiw, N. G. and R. Reis (2002), “Sticky Information versus Sticky Prices: A Proposal to Replace the New Keynesian Phillips Curve,” *Quarterly Journal of Economics*, November, pp. 1295-1328.

Blanchard, Olivier J. and Nobuhiro Kiyotaki. 1987. “Monopolistic Competition and the Effects of Aggregate Demand,” *American Economic Review,* Vol. 77, pp. 647-666.

Mankiw, N. Gregory. 1985. “Small Menu Costs and Large Business Cycles: A Macroeconomic Model of Monopoly,” *Quarterly Journal of Economics,* Vol. 100, pp. 529-538.

Taylor, John B. 1980. “Aggregate Dynamics and Staggered Contracts,” *Journal of Political Economy,* Vol. 88, pp. 1-23.

Rotemberg, Julio J. 1982. “Sticky Prices in the United States,” *Journal of Political Economy,* Vol. 90, pp. 1187-1211.

Taylor, John B. 1999. “Staggered Price and Wage Setting in Macroeconomics,” In *Handbook of Macroeconomics,* Vol. 1B, edited by John B. Taylor and Michael Woodford.

Basu, Susanto and John G. Fernald. 1997. "Returns to Scale in U.S. Production: Estimates and Implications," *Journal of Political Economy,* Vol. 105, pp. 249-283.

Bils, Mark and Peter J. Klenow. 2004. "Some Evidence on the Importance of Sticky Prices." *Journal of Political Economy,* Vol. 112, pp. 947-985.

Steinsson y Nakamura (2008) "Five Facts About Prices: A Reevaluation of Menu Cost Models," *Quarterly Journal of Economics*, Vol. 123 (4): 1415-1464.

Klenow, Peter J., Benjamin A. Malin 2010. "Microeconomic Evidence on Price-Setting," *NBER Working Paper 15826.*

Dhyne, Emmanuel, Luis J. Álvarez, Hervé Le Bihan, Giovanni Veronese, Daniel Dias, Johannes Hoffman, Nicole Jonker, Patrick Lünnemann, Fabio Rumler and Jouko Vilmunen. 2005. "Price Setting in the Euro Area. Some Stylized Facts from Individual Consumer Price Data", *ECB Working Paper Series No.524. 25.*

Klenow, Peter J., and Oleksiy Kryvtsov. 2008. "State-Dependennt or Time-Dependent Pricing: Does it Matter for Recent U.S. Inflation?" *Quarterly Journal of Economics,* Vol. 123, Issue 3, pp. 863-904.

Modelos Macroeconómicos Cuantitativos IV: Modelos de Mediana Escala

*Christiano, Lawrence J., Martin Eichenbaum, and Charles L. Evans. 2005. "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy," *Journal of Political Economy,* Vol. 113, pp. 1-45.

Chari, V.V., Patrick J. Kehoe, and Ellen R. McGrattan. 2007. "Business Cycle Accounting," *Econometrica,* Vol. 75, pp. 781-836.

Smets, Frank and Rafael Wouters. 2003. "An Estimated Stochastic Dynamic General Equilibrium Model of the Euro Area," *Journal of the European Economic Association,* Vol. 1, pp. 1123-1175.

*Smets, Frank and Rafael Wouters. 2007. "Shocks and Frictions in U.S. Business Cycles," *American Economic Review,* Vol. 97, pp. 586-606.

Modelos Macroeconómicos Cuantitativos III: Desempleo

*Davis, Steven J., R. Jason Faberman, and John Haltiwanger. 2006. "The Flow Approach to Labor Markets: New Data Sources and Micro-Macro Links," *Journal of Economic Perspectives,* Vol. 20, No. 3, pp. 3-26.

*****Rogerson, Richard, Robert Shimer, and Randall Wright. 2005. "Search-Theoretic Models of the Labor Market: A Survey," *Journal of Economic Literature,* Vol. 43, pp. 959-988.

*Albrecht, James. 2011. "The 2010 Nobel Memorial Prize in Search Theory," *Scandinavian Journal of Economics* Vol. 113, Issue 2, pp. 237–259.

*****Shimer, Robert. 2005. "The Cyclical Behavior of Equilibrium Unemployment and Vacancies," *American Economic Review,* Vol. 95, pp. 25-49.

* Shimer, Robert. 2012. "Reassessing the Ins and Outs of Unemployment," *Review of Economic Dynamics,* Vol. 15, Issue 2, pp. 127-148.

*Fujita, Shigeru, and Garey Ramey. 2007. "Reassessing the Shimer Facts," *Working Papers 07-2*, Federal Reserve Bank of Philadelphia.

*****Hall, Robert E. 2005. “Equilibrium Wage Stickiness,” *American Economic Review,* Vol. 95, pp. 50-65.

*****Andolfatto, David. 1996. “Business Cycles and Labor Market Search,” *American Economic Review,* Vol. 86, pp. 112-132.

*****denHaan, Wouter J., Garey Ramey, and Joel Watson. 2000. “Job Destruction and Propagation of Shocks,” *American Economic Review,* Vol. 90, pp. 482-498.

Merz, Monika. 1995. “Search in the Labor Market and the Real Business Cycle,” *Journal of Monetary Economics,* Vol. 36, pp. 269-300.

Gertler, Mark and Antonella Trigari. 2009. “Unemployment Fluctuations with Staggered Nash Bargaining,” *Journal of Political Economy,* Vol. 117, p. 38-86.

*Hagedorn, Marcus and Iourii Manovskii. 2008. “The Cyclical Behavior of Equilibrium Unemployment and Vacancies Revisited,” *American Economics Review,* Vol. 98, p. 1692-1706.

Pissarides, Christopher A. 2000. *Equilibrium Unemployment Theory.* MIT Press.

*Chugh, Sanjay K. and Christian Merkl. 2012. “Efficiency and Labor Market Dynamics in a Model of Labor Selection.”

Krusell, Per, Toshihiko Mukoyama, and Aysegul Sahin. 2010. “Labour-Market Matching with Precautionary Savings and Aggregate Fluctuations,” *Review of Economic Studies,* Vol. 77, p. 1477-1507.

Shapiro, Carl and Joseph Stiglitz. 1984. “Equilibrium Unemployment as a Worker Discipline Device,” *American Economic Review*, Vol. 74, No. 3, pp. 433-444.

Diamond Peter. 2011. “Unemployment, Vacancies, Wages,” *American Economic Review,* Vol. 101(4), pp. 1045-1072.

Mortensen, Dale T . 2011. “Markets with Search Friction and the DMP Model,” *American Economic Review,* Vol. 101(4), pp. 1073-1091.

Pissarides, Christopher A. 2011. “Equilibrium in the Labor Market with Search Frictions,” *American Economic Review,* Vol. 101(4), pp. 1092-1105.

*Krause, Michael U., and Thomas A. Lubik. 2006. “The Cyclical Upgrading of Labor and On-the-Job Search,” *Labour Economics,* Vol. 13, pp. 459-477.

Krause, Michael U., and Thomas A. Lubik. 2010. “On-the-Job Search and the Dynamics of the Labor Market,” *Federal Reserve Bank of Richmond Working Paper No. 10-12*.

*Tuzemen, Didem. 2012. “Labor Market Dynamics with Endogenous Labor Force Participation and On-the-Job Search,” *Federal Reserve Bank of Kansas City Research Working Paper RWP 12-07.*

Modelos de Informalidad en el Mercado Laboral

*Bosch, Mariano and Julen Esteban-Pretel. 2012. "Job Creation and Job Destruction in the Presence of Informal Markets," *Journal of Development Economics*, Vol. 98(2), pp. 270-286.

Bosch, Mariano and William F. Maloney. 2010. "Comparative Analysis of Labor Market Dynamics Using Markov Processes: An Application to Informality," *Labour Economics*, Vol. 17(4), pp. 621-631.

*Bosch, Mariano and William F. Maloney. 2008. "Cyclical Movements in Unemployment and Informality in Developing Countries," *IZA Discussion Papers 3514*, Institute for the Study of Labor (IZA).

*Finkelstein Shapiro, Alan. 2014. “Self-Employment and Business Cycle Persistence: Does the Composition of Employment Matter for Economic Recoveries?” *Journal of Economic Dynamics and Control*, forthcoming.

Ball , Laurence, Nicolás de Roux, and Marc Hofstetter. 2011. “Unemployment in Latin America and the Caribbean,” *NBER Working Paper 17274.*

Política Óptima I: Modelos Neo-Keynesianos

Clarida, Richard, Jordi Gali, and Mark Gertler. 1999. “The Science of Monetary Policy: A New Keynesian Perspective,” *Journal of Economic Literature,* Vol. 37, pp. 1661-1707.

*King, Robert G. and Alexander L. Wolman. 1999. “What Should the Monetary Authority Do When Prices Are Sticky?” In *Monetary Policy Rules,* edited by John B. Taylor. NBER Conference Volume on Research in Business.

*Erceg, Christopher J., Dale W. Henderson, and Andrew Levin. 2000. “Optimal Monetary Policy with Staggered Wage and Price Contracts,” *Journal of Monetary Economics,* Vol. 46, pp. 281-313.

Goodfriend, Marvin and Robert G. King. 2001. “The Case for Price Stability,” NBER Working Paper No. 8423.

Woodford, Michael. 2003. *Interest and Prices: Foundations of a Theory of Monetary Policy.* Princeton University Press.

Política Óptima II: Ramsey

Lucas, Robert E. and Nancy L. Stokey. 1983. “Optimal Fiscal and Monetary Policy in an Economy Without Capital,” *Journal of Monetary Economics,* Vol. 12, pp. 55-93.

Chamley, Christophe. 1986. “The Welfare Cost of Capital Income Taxation in a Growing Economy,” *Econometrica,* Vol. 54, pp. 607-622.

*Chari, V.V., Lawrence J. Christiano, and Patrick Kehoe. 1991. “Optimal Fiscal and Monetary Policy: Some Recent Results,” *Journal of Money, Credit, and Banking,* Vol. 23, pp. 519-539.

Chari, V.V. and Patrick J. Kehoe. 1999. “Optimal Fiscal and Monetary Policy,” In *Handbook of Macroeconomics,* Vol. 1C, edited by John B. Taylor and Michael Woodford.

Calvo, Guillermo and Pablo E. Guidotti. 1993. “On the Flexibility of Monetary Policy: The Case of the Optimal Inflation Tax,” *Review of Economic Studies,* Vol. 60, pp. 667-687.

*Schmitt-Grohé, Stephanie and Martin Uribe. 2004. “Optimal Fiscal and Monetary Policy Under Imperfect Competition,” *Journal of Macroeconomics,* Vol. 26, pp. 183-209.

*Schmitt-Grohé, Stephanie and Martin Uribe. 2004. “Optimal Fiscal and Monetary Policy Under Sticky Prices,” *Journal of Economic Theory,* Vol. 114, pp. 198-230.

Siu, Henry E. 2004. “Optimal Fiscal and Monetary Policy with Sticky Prices,” *Journal of Monetary Economics,* Vol. 51, pp. 576-607.

*Chugh, Sanjay K. 2006. “Optimal Fiscal and Monetary Policy with Sticky Wages and Sticky Prices,” *Review of Economic Dynamics,* Vol. 9, pp. 683-714.

Chugh, Sanjay K. 2007. “Optimal Inflation Persistence: Ramsey Taxation with Capital and Habits,” *Journal of Monetary Economics,* Vol. 54, pp. 1809-1836.

*Arseneau, David M. and Sanjay K. Chugh. 2008. “Optimal Fiscal and Monetary Policy with Costly Wage Bargaining,” *Journal of Monetary Economics,* Vol. 55, p. 1401-1414.

* Arseneau, David M. and Sanjay K. Chugh. 2012. “Tax Smoothing in Frictional Labor Markets,” *Journal of Political Economy,* Vol. 120, pp. 926-985.

Política Monetaria y Desempleo

Galí, Jordi. 2011. “Monetary Policy and Unemployment,” In *Handbook of Monetary Economics,* Vol. 3B, edited by Benjamin M. Friedman and Michael Woodford.

Blanchard, Olivier and Jordi Galí. 2010. “Labor Markets and Monetary Policy: A New Keynesian Model with Unemployment,” *American Economic Journals: Macroeconomics,* Vol. 2, p. 1-30.

*Ravenna, Federico and Carl Walsh. 2011. “Welfare-Based Optimal Monetary Policy with Unemployment and Sticky Prices: A Linear-Quadratic Framework,” *American Economic Journals: Macroeconomics,* Vol. 3, p. 130-162.

Fricciones Financieras y Ciclos de Negocios

*Brzoza-Brzezina, Michał, Marcin Kolasa, and Krzysztof Makarski. 2013. “The Anatomy of Standard DSGE Models with Financial Frictions,” *Journal of Economic Dynamics and Control*, Vol. 37, Issue 1, pp. 32-51.

*Carlstrom, Charles T. and Timothy S. Fuerst. 1997. “Agency Costs, Net Worth, and Business Fluctuations: A Computable General Equilibrium Analysis,” *American Economics Review,* Vol. 87, p, 893-910.

*Bernanke, Ben, Mark Gertler, and Simon Gilchrist. 1999. “The Financial Accelerator in a Quantitative Business Cycle Framework,” in *Handbook of Macroeconomics*, Vol. 1, Part C, pp. 1341-1393.

Carlstrom, Charles T. and Timothy S. Fuerst. 1998. “Agency Costs and Business Cycles.” *Economic Theory,* Vol. 12, p. 583-597.

Chugh, Sanjay K. 2009. “Costly External Finance and Labor Market Dynamics,” University of Maryland.

*Eslava, Marcela, Arturo Galindo, Alejandro Izquierdo, y Marc Hofstetter. 2010. “Scarring Recessions and Credit Constraints: Evidence from Colombian Firm Dynamics,” Documento CEDE 2010-27. Universidad de los Andes.

Petrosky-Nadeau, Nicolas. 2013. “TFP During a Credit Crunch,” *Journal of Economic Theory* (forthcoming).

den Haan, Wouter, Garey Ramey, and Joel Watson. 2003. “Liquidity Flows and the Fragility of Business Enterprises,” *Journal of Monetary Economics*, Vol. 50, Issue 6, pp. 1215-1241.