



Course: Money and Banking
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Term: Spring
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Description

The main topic of this course is the analysis of the role money plays in the economy. In particular, the aim is to bridge the gap between the Macroeconomics literature concentrating on money, with the Finance literature studying banking together with a realistic view on how central banks conduct monetary policy.

Outline and readings

Useful books where to find most of the material covered in the course are the following. For the Macroeconomics part you can look at:

- Galí, J. (2008): *Monetary Policy, Inflation and the Business Cycle*, Princeton University Press
- Walsh, C. E. (2010): *Monetary Theory and Policy* Cambridge, MA: MIT Press, 3rd edition

For the Finance part, a useful book is:

- Allen, F. and D. Gale (2007): *Understanding Financial Crises*, Oxford University Press

Finally, an excellent overview of how monetary policy is implemented in practice is:

- Bindseil, U. (2004): *Monetary Policy Implementation: Theory, Past and Present*, Oxford University Press

PART A. MONEY

1. Introduction: empirical facts about money

Gali, ch. 1

Walsh, ch. 1

Camacho, M., G. Pérez Quirós and H. Rodríguez Mendizábal (2013): “Mixing the Ingredients: Business cycles, Technology Shocks, Productivity Slowdown and the Great Moderation”, unpublished manuscript

Cooley, T. F. and G. D. Hansen (1995): “Money and the Business Cycle,” in T. F. Cooley (ed.) *Frontiers of Business Cycle Research*, Princeton University Press.

Christiano, L. J., M. Eichenbaum, and C. L. Evans (1999): “Monetary Policy Shocks: What Have We Learned and to What End?,” in J. B. Taylor & M. Woodford (ed.), *Handbook of Macroeconomics*, edition 1, volume 1, chapter 2: 65-148, Elsevier.

Gali, J. (1999): “Technology, Employment, and the Business Cycle: Do Technology Shocks Explain Aggregate Fluctuations?” *American Economic Review*, 89(1): 249-271.

Lucas, R. E. Jr. (1980): “Two Illustrations of the Quantity Theory of Money” *American Economic Review* 70 (5): 1005-1014.

2. Money in Macroeconomics

2.1. Money in general equilibrium without frictions

Sargent, T. J. (1987): *Dynamic Macroeconomic Theory*. Ch. 4.

2.2. Classical models of money

Walsh, ch. 3 and 5

Gali, ch. 2

Abel, A.B. (1985) : “Dynamic Behavior of Capital Accumulation in a Cash-in-Advance Model”, *Journal of Monetary Economics* 16: 55-71

Feenstra, R. C. (1986): “Functional Equivalence Between Liquidity Costs and the Utility of Money”, *Journal of Monetary Economics* 17: 271-291

Fuerst, T. (1992): “Liquidity, Loanable Funds, and Real Activity” *Journal of Monetary Economics* 29: 3-24.

Lucas, R. E. Jr. (1972): “Expectations and the neutrality of money”, *Journal of Economic Theory* 4: 103-24

Lucas, R. E. Jr. (1973): “Some International Evidence on Output-Inflation Trade-offs”, *American Economic Review* 63: 326-334

Lucas, R. E. Jr. (1980): “Equilibrium in a Pure Currency Economy” in J. Kareken and N. Wallace (eds.) *Models of Monetary Economies*, Federal Reserve Bank of Minneapolis

Lucas, R. E. Jr., and N. L. Stokey (1987): “Money and Interest in a Cash-in-Advance Economy”, *Econometrica* 55 (3): 491-513

Sargent, T. J. (1987): *Dynamic Macroeconomic Theory*. Ch. 6.

Stockman A.C. (1981): "Anticipated Inflation and the Capital Stock in a Cash-in-Advance Economy", *Journal of Monetary Economics* 8: 387-93

Svensson, L. E. O. (1985): "Money and Asset Prices in a Cash-in-Advance Economy" *Journal of Political Economy* 93 (5): 919-944

2.3. Basic new Keynesian models

Walsh, ch. 6

Gali, ch. 3

Blanchard, O. J. and N. Kiyotaki (1987): "Monopolistic Competition and the Effects of Aggregate Demand" *American Economic Review* 77 (4): 647-666.

Gali, J. (1999): "Technology, Employment, and the Business Cycle: Do Technology Shocks Explain Aggregate Fluctuations?" *American Economic Review*, 89(1): 249-271.

2.4. Monetary policy

Walsh, ch. 7 and 8

Gali, ch. 4 and 5

Barro, R. J. and D. B. Gordon (1983): "A Positive Theory of Monetary Policy in a Natural Rate Model" *Journal of Political Economy* 91(4): 589-610.

Clarida, R., J. Galí and M. Gertler (1999): "The Science of Monetary Policy: A New Keynesian Perspective" *Journal of Economic Perspectives* 37: 1661-1707

Kydland, F. E. and E. C. Prescott (1977): "Rules Rather Than Discretion: The Inconsistency of Optimal Plans," *Journal of Political Economy*, 85: 473–91.

Menz, J. O. and L. Vogel (2009): "A Detailed Derivation of the Sticky Price and Sticky Information New Keynesian DSGE Model", DEP Discussion Papers Macroeconomics and Finance Series 2/2009, Hamburg University.

Rogoff, K. (1985): "The Optimal Commitment to an Intermediate Monetary Target", *Quarterly Journal of Economics* 100(4): 1169–1189.

Taylor, J. B. (1993): "Discretion versus Policy Rules in Practice" *Carnegie-Rochester Series on Public Policy* 39: 195-214.

2.5. Financial markets

Walsh, ch. 10

Bernanke, B., and M. Gertler, and S. Gilchrist (1989): "Agency Costs, Net Worth, and Business Fluctuations" " *American Economic Review* 79(1): 14-31.

Bernanke, B., M. Gertler, and S. Gilchrist (1999): "The Financial Accelerator in a Quantitative Business Cycle Framework", in: J. B. Taylor & M. Woodford (ed.), *Handbook of Macroeconomics*, edition 1, volume 1, chapter 21, pages 1341-1393 Elsevier.

Bernanke, B., M. Gertler, and S. Gilchrist (1996): "The Financial Accelerator and the Flight to Quality" *The Review of Economics and Statistics* 78(1): 1-15.

Carlstrom, C. T., and T. S. Fuerst. (1997): "Agency Costs, Net Worth, and Business Fluctuations: A Computable General Equilibrium Analysis" *American Economic Review* 87(5): 893-910.

Kiyotaki, N., and J. Moore (1997): "Credit Cycles" *Journal of Political Economy* 105(2): 211-248

PART B. BANKING

1. Liquidity

Brunnermeier, M. K., T. M. Eisenbach, and Y. Sannikov (2012): "Macroeconomics with Financial Frictions: A Survey" NBER Working Paper 18102

Goodhart, C. (2008): "Liquidity Risk Management" in *Financial Stability Review*, Banque de France (February)

Kiyotaki, N., and J. Moore (2002): "Evil Is the Root of All Money" *American Economic Review* 92(2): 62-66

Nikolaou, K. (2009): "Liquidity (Risk) Concepts, Definitions and Interactions" ECB Working Paper 1008.

Strahan, P. (2008): "Liquidity Production in the 21st Century" NBER Working Paper 13798.

Williamson S. D. (2008): "Liquidity Constraints" in *The New Palgrave Dictionary of Economics*, Second Edition, edited by S. N. Durlauf and L. E. Blume

2. Funding liquidity

Allen and Gale, ch. 3

BIS (2008): "Basel Committee on Banking Supervision .Liquidity Risk: Management and Supervisory Challenges"

Bruche, M. and J. Suarez (2010): "Deposit Insurance and Money Market Freezes" *Journal of Monetary Economics* 57: 45-61.

Bryant, J. (1980): "A Model of Reserves, Bank Runs, and Deposit Insurance," *Journal of Banking and Finance* 4: 335-344

Drehmann, M, and K. Nikolaou (2010): "Funding Liquidity Risk: Definition and Measurement" BIS Working Paper 316.

Diamond, D. and Dybvig, P. (1983): "Bank Runs, Deposit Insurance, and Liquidity" *Journal of Political Economy* 91: 401-19.

Disyatat, P. (2011): "The Bank Lending Channel Revisited" *Journal of Money, Credit and Banking*, Blackwell Publishing, vol. 43(4): 711-734.

3. Market liquidity

Allen, F. and D. Gale (2000): "Financial Contagion" *Journal of Political Economy* 108: 1-31.

Brunnermeier M. and L. H. Pedersen (2009): "Market Liquidity and Funding Liquidity" *The Review of Financial Studies* 22(6): 2201-2238.

Brunnermeier, M. K. and Y. Sannikov (2012): "A Macroeconomic Model with a Financial Sector," Working Paper Research 236, National Bank of Belgium.

PART C. MONEY AND BANKING

1. Monetary policy implementation

Bindseil.

European Central Bank (2011): *The Implementation of Monetary Policy in the Euro Area: General Documentation on Eurosystem Monetary Policy Instruments and Procedures*, ECB.

Hamilton, J. D. (1996): "The Daily Market for Federal Funds" *Journal of Political Economy* 104 (1): 26-56

Meulendyke, A. M. (1989): *U.S. Monetary Policy and Financial Markets*, Federal Reserve Bank of New York.

Pérez Quirós, G. and H. Rodríguez Mendizábal (2006): "The Daily Market for Funds in Europe: What Has Changed with the EMU?" *Journal of Money, Credit and Banking* 38 (1): 91-118.

Poole, W. (1968): "Commercial Bank Reserve Management in a Stochastic Model: Implications for Monetary Policy" *Journal of Finance* 23: 769-791.

2. The Liquidity and Credit Crunch of 2007-2008

Brunnermeier, M. (2009): "Deciphering the Liquidity and Credit Crunch of 2007-2008", *Journal of Economic Perspectives* 23(1): 77-100

Cecchetti, S. G. (2009): "Crisis and Responses: The Federal Reserve in the Early Stages of the Financial Crisis", *Journal of Economic Perspectives* 23(1): 51-75

Financial Crisis Inquiry Commission (2011): *The Financial Crisis Inquiry Report*.

Gorton, G. B. and A. Metrick (2009): "Securitized Banking and the Run on Repo", NBER working paper 15223

Kotlikoff, L. (2010): *Jimmy Stewart is Dead – Ending the World's Ongoing Financial Plague with Limited Purpose Banking*. John Wiley and Sons.

Mizen, P. (2008): "The Credit Crunch of 2007-2008: A Discussion of the Background, Market Reactions, and Policy Responses, Federal Reserve of St. Louis *Review*, September: 531-567.

3. Modern theories of depository institutions

Bianchi, J., and S. Biggio (2014): "Banks, Liquidity Management and Monetary Policy" NBER working paper 20490.

Disyatat, P. (2011): "The Bank Lending Channel Revisited" *Journal of Money, Credit and Banking* 43 (4), pp. 711-734.

Jakab, Z. and M. Kumhof (2015): "Banks Are not Intermediaries of Loanable Funds - and Why this Matters" Bank of England Working Paper 529.

McLeay, M., A. Radia and R. Thomas (2014): "Money Creation in the Modern Economy" Bank of England Quarterly Bulletin 54, First quarter.

Rodríguez Mendizábal, H. (2017): "Narrow Banking with Modern Depository Institutions: Is There a Reason to Panic?" Barcelona GSE working paper 955.

Sheard, P. (2013): "Repeat after me: Banks Cannot and Do not "Lend out" Reserves" Credit Market Services, Standard and Poor's, available at <http://issuu.com/positivemoney/docs/sp-banks-cannot-anddo-not-lend-out>.

Grading

There will be a final exam at the end of the course.