

Macroeconomic Risk Management

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Professional work in Finance often requires the assessment of macroeconomic risks. Thus, it is desirable to acquire tools for better understanding these risks, to what extent they can (or cannot) be addressed through public policies, and what hedging strategies are available.

Fortunately it is possible to carry most of this analysis with standard Finance tools. In this course we will integrate knowledge acquired in different areas (e.g. Corporate Finance, Financial Intermediation, Risk Management, and Behavioral Finance) to study the impact of macroeconomic risks. And macroeconomists also use Finance tools to guide their work, for example, in macroprudential regulation.

We will start with an analysis of the Great Recession, the Euro crisis, and the Covid-19 pandemic that will show us how the financial system can amplify shocks. Then we will use Finance tools to study macroeconomic risk and their optimal and feasible management. We will consider how fiscal and monetary policy smooth business cycles and how the social security system can redistribute intergenerational shocks, highlighting differences in how these risks can be managed in developed and developing countries. Finally, we will then study two particular types of global risk: of a global nuclear war, and global warming.

Students are expected to learn the basic sources of macroeconomic risk, its basic modelling, and the limitations of policy and financial innovations to hedge them. At the end of the course the student is expected to be proficient in the application of the concepts of macroeconomic risk from the models covered in the course. The student should show competence in analyzing a macroeconomic risk management problem, where the above-mentioned concepts and methods are central, that is competence in solving such models and explaining in economic terms the results and implications and how they derive from the assumptions of the models.

The particularly good performance, corresponding to the top mark, is characterized by a complete fulfillment of these learning objectives.

At the beginning of every lecture, except for the first one, students will be given a short quiz based on the starred readings (and videos) in the bibliography. Students need to pass at least 50% of quizzes to be able to take the final exam.

Lecture 1: Review of basics. Real business cycles, CAPM, moral hazard, credit rationing and liquidity shocks. Value-at-risk.

Kurlat, P., (2020), “A Course in Modern Macroeconomics”, chapter 13.

Berk, J. and P. DeMarzo, (2017), “Corporate Finance”, Pearson, chapters 11 and 12.

Tirole, J., (2006), “The Theory of Corporate Finance”, MIT Press, chapters 3.2, 3.4, 5.2 and 5.3.

Hull, R., (2015), “Options, Futures, and other Derivatives”, Pearson, chapter 22

Shiller R., (1993), “Macro Markets”, Oxford University Press, chapter 5.

Lecture 2: Anatomy of recent crises. Great Recession, the Euro crisis, and the Covid-19 pandemic.

Barth, J., R. Brumbaugh, and J. Wilcox, (2000) “Policy Watch: The Repeal of Glass-Steagal and the Advent of Broad Banking”, *The Journal of Economic Perspectives*, Vol 14(2), 191-204.

*Gertler, M., and S. Gilchrist, (2018), “What Happened: Financial Factors in the Great Recession”, *Journal of Economic Perspectives*, 32(3), 3-30.

Hall, R., (2010), “Why Does the Economy Fall to Pieces after a Financial Crisis?”, *Journal of Economic Perspectives*, 24(4), 3-20.

*Brunnermeier, M. and R. Reis, (2019), “A Crash Course on the Euro Crisis”, NBER working paper No. 26229.

Baker, S., N. Bloom, S. Davis, and S. Terry, (2020), “Covid-Induced Economic Uncertainty”, NBER working paper 26983.

Gonzalez-Eiras, M. and D. Niepelt, (2020), “On the optimal ‘lockdown’ during an epidemic”, *Covid Economics* 7, 68-87.

Gonzalez-Eiras, M. and D. Niepelt, (2020), “Lockdown Durations: Fundamentals, Behavior, and Politics”, working paper.

Andersen, A., Hansen, E., Johannesen, N. and A. Sheridan, (2020), “Consumer responses to the COVID-19 crisis: Evidence from bank account transaction data”, *Covid Economics* 7, 88-114.

Lecture 3: Shock amplification through the financial system.

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

Fanelli S., and M. Gonzalez-Eiras, (2020), “Resolution of Financial Crises”, working paper.

*Lorenzoni, G., (2008), “Inefficient credit booms”, *Review of Economic Studies*, 75, 809-833.

Hart O. and L. Zingales, (2015), “Liquidity and Inefficient Investment”, *Journal of the European Economic Association*, 13(5), 737–769.

Lecture 4: The leverage cycle. Behavioral considerations, non-linear effects and secular stagnation.

*Geanakoplos J., (2009), “The leverage cycle”, in Acemoglu D., K. Rogoff and M. Woodford, eds., *NBER Macroeconomics Annual*.

* <https://www.youtube.com/watch?v=jGMgLLo4RSA> (lecture by Geanakoplos on “The leverage cycle”, 2009)

Thaler R. and C. Sunstein, (2009), “Nudge”, Yale University Press, chapter 3.

*Shiller R., (2000), “Irrational Exuberance”, chapter 5.

Banerjee A., (1992), “A Simple Model of Herd Behavior”, *Quarterly Journal of Economics*, vol 107(3), 779-817.

Lamont O., and J. Stein, (2006), “Investor Sentiment and Corporate Investment: Micro and Macro”, *American Economic Review*, 96(2), 147-151.

*Summers, L., (2015), “Demand Side Secular Stagnation”, *American Economic Review*, 105(5), 60-65.

Gordon, R., (2015), “Secular Stagnation: A Supply Side View”, *American Economic Review*, 105(5), 54-59.

Lecture 5: Financial institutions and macroprudential regulation. Lender of last resort and modern central bank interventions.

Gorton G., y A. Metrick, (2011), “Securitized Banking and the Run on Repo”, *Journal of Financial Economics*, 104(3), 425-451.

Shleifer A., and R. Vishny, (2011), “Fire Sales in Finance and Macroeconomics”, *Journal of Economic Perspectives*, vol 25(1), 29-48.

*Hanson, Stein and Kashyap, (2011), “A Macroprudential Approach to Financial Regulation”, *Journal of Economic Perspectives*, vol 25(1), 3-28.

*Adrian, T. and M. Brunnermeier, (2016), “CoVaR”, *American Economic Review*, 106(7), 1705-1741.

Freixas X. and J. Rochet, 2008, “Microeconomics of Banking”, MIT Press chapter 7.7

Gonzalez-Eiras, M., 2004, “Banks’ Liquidity Demand in the Presence of a Lender of Last Resort”, working paper.

* <https://youtu.be/0iNQNZAUDiw> (webinar by Jeremy Stein, “An Evaluation of the Fed-Treasury Credit Programs”, 2020)

Lecture 6: Markets for macroeconomic risks. Long term investors.

*Shiller R., (1993), “Macro Markets”, Oxford University Press, chapters 3-5.

Shiller R. “The New Financial Order”, chapters 1-5.

Campbell J. and L. Viceira, (2002) “Strategic Asset Allocation”, Oxford University Press, chapters 2-3.

Lecture 7: Pricing macroeconomic risks. Market participation. Uncertainty risk.

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

Athanasoulis S. and E. van Wincoop, (2000), “Growth, Uncertainty and Risk Sharing”, *Journal of Monetary Economics*, vol 45, 477-505.

*Athanasoulis S and R. Shiller, (2001), “World Income Components: Measuring and Exploiting International Risk Sharing Opportunities”, *American Economic Review*, 91(4), 1031-1054.

Calvet, L., Gonzalez-Eiras, M., and P. Sodini, (2004), “Financial Innovation, Market Participation, and Asset Prices”, *Journal of Financial and Quantitative Finance*, 39(3), 431-459.

*Dew-Becker I, S. Giglio, and B. Kelly, (2019), “Hedging macroeconomic and financial uncertainty and volatility”, working paper.

Lecture 8: Monetary and fiscal policy. Deficit monetization.

*Eggertson G. and P. Krugman, (2012), “Debt, Deleveraging, and the Liquidity Trap: A Fisher-Minsky-Koo Approach”, *Quarterly Journal of Economics*, Volume 127, 1469-1513.

Werning, I., (2011), “Managing a Liquidity Trap: Monetary and Fiscal Policy”, NBER working paper 17344.

Guerrieri, V., G. Lorenzoni, L. Straub, and I. Werning, (2020), “Macroeconomic Implications of COVID-19: Can Negative Supply Shocks Cause Demand Shortages?”, NBER working paper 26918.

* <https://youtu.be/-PkK9IITHVM> (video of GLSW paper, 2020)

Reinhart C., and K. Rogoff, (2009), “This Time is Different”, chapter 12.

Lecture 9: Sovereign risk and challenges to risk management.

Obstfeld M., and K. Rogoff, (1998), “Foundations of International Macroeconomics”, MIT Press, chapter 6.1.

Gonzalez-Eiras, M., (2017), “Why Might the Old Want to Honor Sovereign Debt?”, working paper.

Reinhart C., and K. Rogoff, (2009), “This Time is Different”, chapters 1-2.

Calvo G., A. Izquierdo, and E. Talvi, (2006) “Phoenix Miracles”, American Economic Review, 96(2), 405-410.

Caballero R., and A. Krishnamurthy, (2004), “Smoothing Sudden Stops”, Journal of Economic Theory, 119(1), 104-127.

*Caballero R., K. Cowan and J. Kearns, (2005) “Fear of Sudden Stops: Lessons from Australia and Chile”, The Journal of Policy Reform, 8(4), 313-354.

*Talvi E., and C. Vegh, (2005), “Tax base variability and procyclical fiscal policy in developing countries” Journal of Development Economics, 56(1), 156-190.

* <https://youtu.be/0uh4oPjxxq8> (webinar by Kenneth Rogoff, “Global sovereign debt and the dollar post-COVID”, 2020)

Lecture 10: Social security and intergenerational risk management. Global risks.

Diamond P., (1997), “Macroeconomic Aspects of Social Security Reform”, Brookings Papers on Economic Activity, 2, 1-87.

Krueger D. and F. Kubler, (2006), “Pareto-improving social security reform when financial markets are incomplete?”, American Economic Review, 96(3), 737-755.

Gonzalez-Eiras M., and D. Niepelt, (2008), “The future of social security”, Journal of Monetary Economics, 55(2), 97-115.

*D’Amato, and V. Galasso, (2011), “Political Intergenerational Risk Sharing”, Journal of Public Economics, 95(1-2), 628-637.

Gonzalez-Eiras M., V. Luo, and D. Niepelt, (2019), “Annihilation Risk”, working paper.

*Engle III, R., Giglio S., Kelly B., Lee H., and J. Stroebel, (2020), “Hedging Climate Change News”, The Review of Financial Studies, 33(3), 1184-1216.