

# Monetary Policy, Liquidity, and Risk Premia

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## Overview

We study how monetary policy affects the financial system and through this the “real” economy. We look at how the short interest rate and other central bank tools impact the supply of liquidity by the financial system and the risk premium on assets. We discuss the banking system in detail: what drives the business of banking, how is this affected by the short interest rate, and how do banks manage interest rate risk. We discuss the different types of lending, including mortgage, commercial and, personal, and look at how and why this lending is divided between the bond market, banks, and non-bank intermediaries. We study historical evidence on inflation, monetary policy, and business cycles and analyze how well this evidence is explained by alternative models.

The course covers both theory and empirics. It makes use of approaches and methods from empirical corporate finance and asset pricing. The emphasis is on empirical analysis. We examine the use of cross-sectional analysis of micro data for conducting well-identified tests of macroeconomic theories. I also emphasize institutional details of the financial system. A central goal of the class is to highlight and stimulate discussion of open questions and promising directions for future research in this area.

## Reading List

This is a broad reading list of papers on topics related to the course. I include this mainly as a general reference, though of course I will discuss results from these papers in the class. I will add to it during class.

### 1. Financial Intermediation Theory

- Holmström, Bengt, and Jean Tirole. "[Private and public supply of liquidity.](#)" Journal of political Economy 106.1 (1998): 1-40.
- Diamond, Douglas W., and Philip H. Dybvig. "[Bank runs, deposit insurance, and liquidity.](#)" Journal of political economy 91.3 (1983): 401-419.
- Diamond, Douglas W. "[Financial intermediation and delegated monitoring.](#)" The review of economic studies 51.3 (1984): 393-414.

- Gorton, Gary, and George Pennacchi. "[Financial intermediaries and liquidity creation.](#)" The Journal of Finance 45.1 (1990): 49-71.
- Calomiris, Charles W., and Charles M. Kahn. "[The role of demandable debt in structuring optimal banking arrangements.](#)" The American Economic Review (1991): 497-513.
- Diamond, Douglas W., and Raghuram G. Rajan. "[A theory of bank capital.](#)" The Journal of Finance 55.6 (2000): 2431-2465.
- Allen F, Gale D. "[Financial contagion.](#)" Journal of Political Economy. 2000 Feb;108(1):1-33.
- Allen F, Gale D. "[Optimal financial crises.](#)" The journal of Finance. 1998 Aug. 53(4):1245-84.
- Rajan RG. Insiders and outsiders: "[The choice between informed and arm's-length debt.](#)" The Journal of Finance. 1992 Sep;47(4):1367-400.
- Drechsler, Itamar, Alexi Savov, Philipp Schnabl, and Olivier Wang. [Banking on Uninsured Deposits deposits: Maturity transformation without interest rate risk.](#) The Journal of Finance, 76, (2021): 1091-1143.

## 2. Coexistence of Deposits and Lending/Maturity Transformation

- Kashyap, Anil K., Raghuram Rajan, and Jeremy C. Stein. "[Banks as liquidity providers: An explanation for the coexistence of lending and deposit-taking.](#)" The Journal of Finance 57.1 (2002): 33-73
- Drechsler, Itamar, Alexi Savov, and Philipp Schnabl. [Banking on deposits: Maturity transformation without interest rate risk.](#) The Journal of Finance, 76, (2021): 1091-1143.
- Gatev, Evan, and Philip E. Strahan. "[Banks' advantage in hedging liquidity risk: Theory and evidence from the commercial paper market.](#)" The Journal of Finance 61.2 (2006): 867-892.
- Li, Lei, Philip E. Strahan, and Song Zhang. "[Banks as lenders of first resort: Evidence from the COVID-19 crisis.](#)" The Review of Corporate Finance Studies 9, no. 3 (2020): 472-500.

## 3. Monetary Policy and the Deposits Channel

- Kashyap, Anil K., and Jeremy C. Stein. "[What do a million observations on banks say about the transmission of monetary policy?.](#)" American Economic Review 90.3 (2000): 407-428.
- Drechsler, Itamar, Alexi Savov, and Philipp Schnabl. "[The deposits channel of monetary policy.](#)" The Quarterly Journal of Economics 132.4 (2017): 1819-1876.
- Kashyap, Anil K., and Jeremy C. Stein. "[Monetary policy and bank lending.](#)" Monetary policy. The University of Chicago Press, 1994. 221-261.
- Bernanke B, Gertler M. "[Agency Costs, Net Worth, and Business Fluctuations.](#)" The American Economic Review. 1989 Mar;79(1):14-31.

- Stein, Jeremy C. "[Monetary policy as financial stability regulation](#)." The Quarterly Journal of Economics 127.1 (2012): 57-95.

#### 4. Empirical Evidence on Channels of Monetary Policy

- Ramey, Valerie. "Macroeconomic Shocks and Their Propagation" in the *Handbook of Macroeconomics*, (2016).
- Nakamura, Emi and Jon Steinsson. "Identification in Macroeconomics." Journal of Economic Perspectives. 32.3 (2018): 59-86.
- Drechsler, Itamar, Alexi Savov, and Philipp Schnabl. "[How Monetary Policy Shaped The Housing Boom](#)." Journal of Financial Economics, 144(3), (2022): 992-1021.
- Wang, Yifei, Toni M. Whited, Yufeng Wu, and Kairong Xiao. Bank market power and monetary policy transmission: Evidence from a structural estimation. The Journal of Finance, 77.4 (2022): 2093-2141.
- Drechsler, Itamar, Alexi Savov, and Philipp Schnabl. "[Liquidity, risk premia, and the financial transmission of monetary policy](#)." Annual Review of Financial Economics 10 (2018): 309-328.
- Bernanke BS, Gertler M. "[Inside the black box: the credit channel of monetary policy transmission](#)." Journal of Economic perspectives. 9(4), (1995):27-48.
- Supera, Dominik. "Running Out of Time (Deposits): Falling Interest Rates and the Decline of Business Lending, Investment, and Firm Creation, Working paper (2022).
- Van den Heuvel, Skander J. "The bank capital channel of monetary policy." The Wharton School, University of Pennsylvania, mimeo (2002): 2013-14.

#### 5. Financial Crises

- Acharya, Viral V., Philipp Schnabl, and Gustavo Suarez. "[Securitization without risk transfer](#)." Journal of Financial economics 107.3 (2013): 515-536.
- Haddad, Valentin, Alan Moreira, and Tyler Muir. [When selling becomes viral: Disruptions in debt markets in the covid-19 crisis and the fed's response](#). No. w27168. National Bureau of Economic Research, 2020.
- Mian, A. and Sufi, A., 2018. "[Credit supply and housing speculation](#)" (No. w24823). National Bureau of Economic Research.
- Gorton, Gary, and Andrew Metrick. "[Securitized banking and the run on repo](#)." Journal of Financial economics 104.3 (2012): 425-451.
- Brunnermeier, Markus K. "[Deciphering the liquidity and credit crunch 2007-2008](#)." Journal of Economic perspectives 23.1 (2009): 77-100.
- Gilchrist S, Schoenle R, Sim J, Zakrajšek E. "[Inflation dynamics during the financial crisis](#)." American Economic Review. 2017 Mar;107(3):785-823.
- Bordalo, P., Gennaioli, N. and Shleifer, A. "[Diagnostic expectations and credit cycles](#)." The Journal of Finance, 73.1 (2018): 199-227.

- Khwaja, Asim Ijaz, and Atif Mian. "[Tracing the impact of bank liquidity shocks: Evidence from an emerging market.](#)" *American Economic Review* 98.4 (2008): 1413-42.
- Schnabl, Philipp. "[The international transmission of bank liquidity shocks: Evidence from an emerging market.](#)" *The Journal of Finance* 67.3 (2012): 897-932.
- Peek, Joe, and Eric S. Rosengren. "[Collateral damage: Effects of the Japanese bank crisis on real activity in the United States.](#)" *American Economic Review* 90.1 (2000): 30-45.

## 6. Credit cycles

- Schularick, Moritz, and Alan M. Taylor. "[Credit booms gone bust: Monetary policy, leverage cycles, and financial crises, 1870-2008.](#)" *American Economic Review* 102, no. 2 (2012): 1029-61.
- Gilchrist, Simon, and Egon Zakrajšek. "[Credit spreads and business cycle fluctuations.](#)" *American Economic Review* 102, no. 4 (2012): 1692-1720.
- Bernanke BS, Gertler M, Gilchrist S. "[The financial accelerator in a quantitative business cycle framework. Handbook of macroeconomics.](#)" 1999 Jan 1;1:1341-93.
- Kiyotaki N, Moore J. "[Credit cycles.](#)" *Journal of political economy.* 1997 Apr;105(2):211-48.

## 7. The Zero Lower Bound

- Woodford, Michael. "[Methods of policy accommodation at the interest-rate lower bound.](#)" (2012).
- Brunnermeier, Markus K., and Yann Koby. "[The reversal interest rate.](#)" *American Economic Review*, 113.8 (2023): 2084-2120.
- Eggertsson, Gauti B., Ragnar E. Juelsrud, Lawrence H. Summers, and Ella Getz Wold. "[Negative nominal interest rates and the bank lending channel!](#)". No. w25416. Working paper, 2019.
- Krishnamurthy, Arvind, and Annette Vissing-Jorgensen. "[The ins and outs of LSAPs.](#)" *Kansas City Federal Reserve Symposium on Global Dimensions of Unconventional Monetary Policy.* 2013.

## 8. Quantitative Easing

- Krishnamurthy, Arvind, and Annette Vissing-Jorgensen. "[The ins and outs of LSAPs.](#)" *Kansas City Federal Reserve Symposium on Global Dimensions of Unconventional Monetary Policy.* 2013.
- Wang, Olivier. "[Banks, low interest rates, and monetary policy transmission.](#)" Working paper, 2022.

- Nagel, Stefan. "[The liquidity premium of near-money assets.](#)" *The Quarterly Journal of Economics* 131.4 (2016): 1927-1971.
- Krishnamurthy, Arvind, and Annette Vissing-Jorgensen. "[The aggregate demand for treasury debt.](#)" *Journal of Political Economy* 120.2 (2012): 233-267.
- Eggertsson, Gauti B., Ragnar E. Juelsrud, Lawrence H. Summers, and Ella Getz Wold. "[Negative nominal interest rates and the bank lending channel](#)". No. w25416. Working paper, 2019.

## 9. Monetary Policy and Risk Premia

- Drechsler, Itamar, Alexi Savov, and Philipp Schnabl. "[A model of monetary policy and risk premia.](#)" *The Journal of Finance* 73.1 (2018): 317-373.
- Hanson, Samuel G., and Jeremy C. Stein. "[Monetary policy and long-term real rates.](#)" *Journal of Financial Economics* 115.3 (2015): 429-448.
- Nakamura, Emi, and Jón Steinsson. "[High-frequency identification of monetary non-neutrality: the information effect.](#)" *The Quarterly Journal of Economics* 133, no. 3 (2018): 1283-1330.
- Gertler, Mark, and Peter Karadi. "[Monetary policy surprises, credit costs, and economic activity.](#)" *American Economic Journal: Macroeconomics* 7.1 (2015): 44-76.
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- Cieslak, Anna, and Annette Vissing-Jorgensen. [The economics of the Fed put.](#) No. w26894. National Bureau of Economic Research, 2020.
- Cieslak, Anna, Adair Morse, and Annette Vissing-Jorgensen. "[Stock returns over the FOMC cycle.](#)" (2018).

## 11. Inflation and Monetary Policy Channels

- Drechsler, Itamar, Alexi Savov, and Philipp Schnabl. "Credit Crunches and the Great Stagflation." Working Paper (2023).
- Drechsler, Itamar, Alexi Savov, and Philipp Schnabl. "[The Financial Origins of the Rise and Fall of American Inflation.](#)" Working Paper (2021).
- Kaplan, Greg, Benjamin Moll, and Giovanni L. Violante. "[Monetary policy according to HANK.](#)" *American Economic Review* 108, no. 3 (2018): 697-743.
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## 12. Shadow Banking

- Hanson, Samuel G., et al. "[Banks as patient fixed-income investors.](#)" Journal of Financial Economics 117.3 (2015): 449-469.
- Moreira, Alan, and Alexi Savov. "[The macroeconomics of shadow banking.](#)" The Journal of Finance 72.6 (2017): 2381-2432.
- Gennaioli, Nicola, Andrei Shleifer, and Robert Vishny. "[Neglected risks, financial innovation, and financial fragility.](#)" Journal of Financial Economics 104.3 (2012): 452-468.
- Caballero, Ricardo J., Emmanuel Farhi, and Pierre-Olivier Gourinchas. "[The safe assets shortage conundrum.](#)" Journal of Economic Perspectives 31.3 (2017): 29-46.
- Gorton, Gary. "[The history and economics of safe assets.](#)" Annual Review of Economics 9 (2017): 547-586.

## 13. Intermediary Asset Pricing

- Du, Wenxin, Alexander Tepper, and Adrien Verdelhan. "[Deviations from covered interest rate parity.](#)" The Journal of Finance 73.3 (2018): 915-957.
- Haddad, Valentin, and Tyler Muir. "Do intermediaries matter for aggregate asset prices." *NBER Working Paper* (2018).
- Adrian, Tobias, Erkko Etula, and Tyler Muir. "[Financial intermediaries and the cross-section of asset returns.](#)" The Journal of Finance 69.6 (2014): 2557-2596.
- Lucca, David O., and Emanuel Moench. "[The pre-FOMC announcement drift.](#)" The Journal of Finance 70.1 (2015): 329-371.
- He, Zhiguo, Bryan Kelly, and Asaf Manela. "[Intermediary asset pricing: New evidence from many asset classes.](#)" Journal of Financial Economics 126.1 (2017): 1-35.
- Lettau M, Ludvigson S. "[Consumption, aggregate wealth, and expected stock returns.](#)" the Journal of Finance. 2001 Jun;56(3):815-49.
- Brunnermeier, Markus K., and Yuliy Sannikov. "[A macroeconomic model with a financial sector.](#)" American Economic Review 104.2 (2014): 379-421.
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- Di Tella, Sebastian. "[Uncertainty shocks and balance sheet recessions.](#)" Journal of Political Economy 125.6 (2017): 2038-2081.

## 14. International Liquidity Spillovers

- Gopinath, Gita, and Jeremy C. Stein. "[Banking, Trade, and the making of a Dominant Currency.](#)" Working paper, 2018.
- Keller, Lorena. "[Capital Controls and Risk Misallocation: Evidence From a Natural Experiment.](#)" Working paper, 2018.

**15. Cross-sectional Estimates to Aggregate Impact of Monetary Policy**

14. Guren, A.M., McKay, A., Nakamura, E. and Steinsson, J., 2019. "[What Do We Learn From Cross-Sectional Empirical Estimates in Macroeconomics?](#)" University of California, Berkeley, Mimeo.
15. Sarto, A., 2019, "[Recovering Elasticities from Micro Data](#)", MIT Working Paper
16. Beraja, Martin, Andreas Fuster, Erik Hurst, and Joseph Vavra. "[Regional heterogeneity and the refinancing channel of monetary policy.](#)" *The Quarterly Journal of Economics* 134, no. 1 (2019): 109-183.