

# ECON GR6226: Applied Macroeconomics & Finance

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Fall 2023

Class meetings: Wednesdays 4:10-6:00pm, location TBD

Office hours: Wednesdays 6:00-7:00pm, IAB 1133

**Overview.** This is a graduate-level class on macroeconomics and finance. Most of the course is devoted to the study of macro-finance (Part I-IV). The guiding question is: how does finance affect the macroeconomy? More precisely, we will study the various channels through which financing frictions affect aggregate supply. In the last part of the course (Part V), we will study various topics in macroeconomics and finance.

The course is primarily focused on empirical research, but we will also relate to core theoretical models in the field. A particular emphasis is given to causal identification in macroeconomics and finance and to methods that bridge the gap between micro-estimates and the macro-outcomes of interest.

**Grading.** Presentation of a paper (20%), final project (60% of the grade) and in-class participation (20% of the grade).

**Pre-requisites.** Completion of the first year Ph.D. sequence or permission of instructor.

**Disabilities Accommodations.** If you require special accommodations for disability-related reasons, please obtain an evaluation from the Office of Disability Services (212-854-2388 or [disability@columbia.edu](mailto:disability@columbia.edu)) and also speak to me about the issue as soon as possible.

## Course outline

Papers with an asterisk (\*) are required readings.

### Part I: Introduction to macro-finance

#### Why should finance matter for the macroeconomy? .

##### Finance and growth

- Rajan, R., and Zingales, L. 1998 “Financial Dependence and Growth.” *American Economic Review* 88(3), pp. 559-586.

- (\*) Jayaratne, J., and Strahan, P. E. 1996. “The Finance-Growth Nexus: Evidence from Bank Branch Deregulation”. *Quarterly Journal of Economics*, 111(3), pp. 639-670.

#### Finance and business cycles

- (\*) Gilchrist, S., and Zakrajsek, E.. 2012. “Credit Spreads and Business Cycle Fluctuations.” *American Economic Review*, 102 (4): 1692-1720.
- Schularick, M., and Taylor, A. 2012. “Credit Booms Gone Bust: Monetary Policy, Leverage Cycles, and Financial Crises, 1870-2008”. *American Economic Review* 102 (2): 1029-1061

#### Applied micro methods: Fixed effects and diff-in-diff

- (\*) Angrist, J. D. and Pischke, J. 2009. *Mostly Harmless Econometrics: An Empiricist’s Companion*. Princeton University Press. Chapters 2, 3, 5.

## **Part II: Corporate finance and aggregate investment**

### **Financing frictions and corporate investment: Micro-evidence**

#### Investment cash-flow sensitivity

- (\*) Rauh, J. 2006. “Investment and Financing Constraints: Evidence from the Funding of Corporate Pension Plans.” *Journal of Finance* 61, 33-71.

#### Credit constraints

- (\*) Chaney, T, Sraer, D., and Thesmar, D. 2012. “The Collateral Channel: How Real Estate Shocks Affect Corporate Investment.” *American Economic Review*, 102 (6): 2381-2409.
- Kashyap, A., Lamont, O., and Stein, J. 1994. “Credit Conditions and the Cyclical Behavior of Inventories.” *Quarterly Journal of Economics* 109 (3): 565-92.
- Almeida, H., Campello, M., Laranjeira, B., and Weisbenner, S. 2012. “Corporate Debt Maturity and the Real Effects of the 2007 Credit Crisis.” *Critical Finance Review*, 1(1), 3-58.
- Banerjee, A. V., and Duflo, E. 2014. “Do firms want to borrow more? Testing credit constraints using a directed lending program. *Review of Economic Studies*, 81(2), 572-607.

#### Applied micro methods: IV, RDD

- (\*) Angrist, J. D. and Pischke, J. 2009. *Mostly Harmless Econometrics: An Empiricist’s Companion*. Princeton University Press. Chapters 4 and 6.

### **Micro-to-macro methods**

#### Micro-to-macro method #1: Structural estimation & match reduced-form moment in structural model

- Hennessy, C., and Whited, T. 2007. “How Costly is External Financing? Evidence from a Structural Estimation.” *Journal of Finance*. 62 (2007), 1705-1745.

- (\*) Catherine, S., Chaney, T., Huang, Z., Sraer, D., and Thesmar, D. 2022. “Quantifying Reduced-Form Evidence on Collateral Constraints.” *Journal of Finance*, forthcoming

### Presentations by Students

- (†) Ottonello, P. and Winberry, T. 2020. “Financial Heterogeneity and the Investment Channel of Monetary Policy.” *Econometrica*, 88: 2473-2502.
- (†) Cloyne, J., Ferreira, C., Froemel, M., and Surico, P. 2023. “Monetary Policy, Corporate Finance and Investment.” *Journal of the European Economic Association*, forthcoming
- (†) Drechsel, T. 2023. “Earnings-Based Borrowing Constraints and Macroeconomic Fluctuations.” *American Economic Journal: Macroeconomics*, 15 (2): 1-34.
- (†) Caggese, A., and Mesters, G. 2023. “Identifying Firm-Level Financial Frictions using Theory-Informed Restrictions.”
- (†) Curtis, E. M., Garrett, D. G., Ohn, E. C., Roberts, K. A., and Serrato, J. C. S. 2021. “Capital investment and labor demand.”

## Part III: The role of financial intermediaries

### Estimating the bank lending channel using micro-level data

- (\*) Khwaja, A. I. and A. Mian. 2008. “Tracing the impact of bank liquidity shocks: Evidence from an emerging market.” *American Economic Review* 98 (4), 1413-42.
- Cingano, F., F. Manaresi, and E. Sette. 2016. “Does credit crunch investment down? New evidence on the real effects of the bank-lending channel.” *The Review of Financial Studies* 29 (10): 2737-2773.
- Pinardon-Touati, N. 2022. “The crowding out effect of local government debt: Micro-and macro-estimates”
- Chodorow-Reich, G., and Falato, A. 2022. “The Loan Covenant Channel: How Bank Health Transmits to the Real Economy.” *Journal of Finance* 77 (1): 85-128.

### Applied micro methods: shift-share IV

- Goldsmith-Pinkham, P., I. Sorkin, and H. Swift. 2020. “Bartik instruments: What, when, why, and how.” *American Economic Review* 110 (8): 2586-2624.
- Borusyak, K., P. Hull, and X. Jaravel. 2021. “Quasi-experimental shift-share research designs.” *The Review of Economic Studies*.

### Micro-to-macro methods .

#### Micro-to-macro method #2: Estimate spillovers

- Huber, K. 2018. “Disentangling the Effects of a Banking Crisis: Evidence from German Firms and Counties.” *American Economic Review*, 108 (3): 868-98.

#### Micro-to-macro method #3: Use model to derive missing intercept

- (\*) Chodorow-Reich, G. 2014. “The employment effects of credit market disruptions: Firm-level evidence from the 2008-9 financial crisis.” *Quarterly Journal of Economics* 129

(1): 1-59.

- Herreño, J. 2021. “The Aggregate Effects of Bank Lending Cuts”

#### Micro-to-macro method #4: Granular IV

- (\*) Gabaix, X., and Koijen, R. S. 2020. “Granular Instrumental Variables”
- Kundu, S., Park, S., and Vats, N. 2021. “The Deposits Channel of Aggregate Fluctuations”

#### Presentations by Students

- (†) Mian, A., Sarto, A., and Sufi, A. 2021. “Estimating Credit Multipliers.”
- (†) Altavilla, C., Boucinha, M. and Bouscasse, P. 2022 “Supply or Demand: What Drives Fluctuations in the Bank Loan Market?”
- (†) Kalemli-Ozcan, S., Kamil, H., and Villegas-Sanchez, C. (2016). What hinders investment in the aftermath of financial crises: Insolvent firms or illiquid banks?. *Review of Economics and Statistics*, 98(4), 756-769.

### Part IV: Finance and capital misallocation

#### Definition, measurement, and role of financial frictions

- (\*) Hsieh, C.-T. and Klenow, P. J. 2009. “Misallocation and Manufacturing TFP in China and India.” *Quarterly Journal of Economics*, 124(4), 1403-1448.
- Moll, B. 2014. “Productivity Losses from Financial Frictions: Can Self-Financing Undo Capital Misallocation?” *American Economic Review*, 104(10), 3186-3221.
- Buera, F. J., Kaboski, J. P., and Shin, Y. 2015. “Entrepreneurship and Financial Frictions: A Macroeconomic Perspective.” *Annual Review of Economics*, 7(1), 409-436.

#### Reduced-form evidence and aggregation

- (\*) Bau, N., and Matray, A. 2020. “Misallocation and capital market integration: Evidence from India.” *Econometrica*, 91: 67-106.
- Gopinath, G., Kalemli-Ozcan, S., Karabarbounis, L., and Villegas-Sanchez, C. 2017. “Capital Allocation and Productivity in South Europe.” *Quarterly Journal of Economics*, 132(4), 1915-1967.
- (\*) Sraer, D., and Thesmar, D. 2023. “How to Use Natural Experiments to Measure Misallocation.” *American Economic Review*, 113 (4): 906-38.

#### Presentations by Students

- (†) David, J. M., Schmid, L., and Zeke, D. 2022. “Risk-adjusted capital allocation and misallocation.” *Journal of Financial Economics*, 145(3), 684-705.
- (†) Whited, T. M., and Zhao, J. 2021. “The misallocation of finance.” *The Journal of Finance*, 76(5), 2359-2407.

- (†) Gopinath, G., Kalemli-Ozcan, S., Karabarbounis, L., and Villegas-Sanchez, C. 2017. “Capital Allocation and Productivity in South Europe.” *Quarterly Journal of Economics*, 132(4), 1915-1967.

## **Part V: Additional topics in applied macroeconomics and finance (depending on time and preferences)**

### **Fiscal multipliers**

- Clemens, J., and S. Miran. 2012. “Fiscal policy multipliers on subnational government spending.” *American Economic Journal: Economic Policy* 4 (2): 46-68.
- Pinardon-Touati, N. 2022. “The crowding out effect of local government debt: Micro-and macro-estimates”

### Micro-to-macro method #5: Use model to derive GE bound

- (\*) Nakamura, E., and Steinsson, J. 2014. “Fiscal Stimulus in a Monetary Union: Evidence from US Regions.” *American Economic Review*, 104 (3): 753-92.
- Chodorow-Reich, G. 2019. “Geographic cross-sectional fiscal spending multipliers: What have we learned?” *American Economic Journal: Economic Policy* 11 (2): 1-34.

### **Corporate taxation, investment, and the macroeconomy**

- Yagan, D. 2015. “Capital Tax Reform and the Real Economy: The Effects of the 2003 Dividend Tax Cut.” *American Economic Review*, 105 (12): 3531-63.
- Zwick, E., and Mahon, J. 2017. “Tax Policy and Heterogeneous Investment Behavior.” *American Economic Review*, 107 (1): 217-48.
- Giroud, X., and Rauh, J. 2019. “State Taxation and the Reallocation of Business Activity: Evidence from Establishment-Level Data.” *Journal of Political Economy* 127(3)
- Boissel, C., and Matray, A. 2022. “Dividend Taxes and the Allocation of Capital.” *American Economic Review*, forthcoming

### **Financing frictions and the effect of monetary policy on aggregate investment**

- (\*) Bernanke, B. S., M. Gertler, and S. Gilchrist. 1999. “The financial accelerator in a quantitative business cycle framework.” *Handbook of macroeconomics*, pp. 1341-1393.
- Kashyap, A., Lamont, O., and Stein, J. 1994. “Credit Conditions and the Cyclical Behavior of Inventories.” *Quarterly Journal of Economics* 109 (3): 565-92.
- Gomez, M., Landier, A., Sraer, D. and Thesmar, D. 2021. “Bank Exposure to Interest-Rate Risk and the Transmission of Monetary Policy.” *Journal of Monetary Economics* 117: 543-570.

## **Recommended textbooks**

### **Methods**

- Angrist, J. D. and Pischke, J. 2009. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.
- Ljungqvist, L., and Sargent, T. J. (2018). *Recursive macroeconomic theory*. MIT press.

### **Topics**

- Tirole, J. 2006. *The Theory of Corporate Finance*. Princeton University Press.
- Freixas, X. and Rochet, J.C. 2008. *Microeconomics of Banking*. MIT press.
- Gali, J. 2015. *Monetary Policy, Inflation, and the Business Cycle*. Princeton University Press.