

ECON8862.01: Monetary Economics II
Capital Market Imperfections, Financial Structure and Financial
Development: Business Cycle and Growth Effects

Fall 2018

(Maloney Hall 330, T TH 12)

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Syllabus and Reading List

(August, 2018)

Content: In this course I will analyze the interplay between capital market imperfections, investment, business cycle fluctuations and growth. I am providing you with a quite extensive reading list, so that you can explore some issues in more depth. Not all the sub-topics will be covered in detail during the lectures, but you will be encouraged to investigate some of the issues on your own, with my guidance and help. We will discuss both theoretical and empirical contributions, the latter containing both macro and micro evidence. The course will also include a section on dynamic panel data estimation, with an empirical exercise (see end of reading list).

Lecture notes: A set of lecture notes on the main topics can be found on Canvas and at my google personal website:

<https://sites.google.com/a/bc.edu/fabio-schiantarelli/teaching---graduate>

Assignments and Grading: Students will be required to produce three referee reports on distinct topics, using very recent papers. Moreover, they will have to give a classroom presentation. Finally, they will be expected to complete a replication exercise using panel data techniques. Grading will be based on all these elements.

**A) CAPITAL MARKET IMPERFECTIONS, FINANCIAL STRUCTURE,
INVESTMENT AND BUSINESS CYCLE FLUCTUATIONS**

**1) Corporate Finance Primer: from the State Preference Model to Asymmetric
Information and Incomplete Contracts**

a) The Modigliani-Miller Theorem and the Irrelevance of Financial Structure

Modigliani, F and M. Miller (1958), “The Cost of Capital, Corporation Finance, and the Theory of Investment”, American Economic Review, June, pp. 261-297.

* Ch. 7 in Sargent, T.J., **Macroeconomic Theory**, second edition.

b) Firms' Financial Structure under Asymmetric Information and Incomplete Contracts

* Walsh, C. E., **Monetary Theory and Policy**, (1998), MIT Press, Ch. 7.

Jensen, M. and W. Meckling (1976), "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure", Journal of Financial Economics, pp. 305-360.

* Myers, S.C. and N.S. Majluf (1984), "Corporate Financing and Investment Decisions When Firms Have Information that Investors Do Not Have", Journal of Financial Economics, 13, June, pp. 184-221.

* Stiglitz, J and A. Weiss (1981), "Credit Rationing in Markets with Imperfect Information", American Economic Review, June, pp. 393-410.

Bester, H. (1985), "Screening Versus Rationing in Credit Markets with Imperfect Information", American Economic Review, 75(4), pp. 850-55.

Arnold, L. G. and J. R. Riley (2009), "On the Possibility of Credit Rationing in the Stiglitz-Weiss Model", American Economic Review, 99:5, December, pp. 2012-2021.

Townsend, R. (1979), "Optimal Contracts and Competitive Markets with Costly State Verification", Journal of Economic Theory, October pp. 265-293.

Gale, D. and M. Hellwig (1985), "Incentive Compatible Debt Contracts I: The One Period Problem", The Review of Economic Studies, 52, October, pp. 674-664.

* Williamson, S.D. (1987), "Costly Monitoring, Loan Contracts, and Equilibrium Credit Rationing", Quarterly Journal of Economics, Vol. 102, pp. 135-145.

Williamson, S.D. (1986), "Costly Monitoring, Financial Intermediation, and Equilibrium Credit Rationing", Journal of Monetary Economics, 18, pp. 159-179.

Hart, O. (1995), "Firms, Contracts and Financial Structure", Oxford University Press, Oxford, Chs. 5 and 6.

De Meza, D. and D. Webb (1987), "Too Much Investment: A Problem of Asymmetric Information", Quarterly Journal of Economics, 102, pp. 281-292.

An Introduction to Intermediation and Banking

Diamond, D. and P. Dybvig (1983), “Bank Runs, Deposit Insurance, and Liquidity”, Journal of Political Economy, June, pp. 401-419.

Diamond, D., (2007), “Banks and Liquidity Creation: A Simple Exposition of the Diamond-Dybvig Model”, Economic Quarterly, Federal Reserve Bank of Richmond, N.2, Spring, pp.189-2000.

Jacklin, C. J. (1987), “Demand Deposits, Trading Restrictions, and Risk Sharing”, in **Contractual Arrangements for Intertemporal Trade**, E. D. Prescott and N. Wallace, Eds. , Minneapolis, University of Minnesota Press, 1987, pp. 26-47.

Diamond, D. (1984),”Financial Intermediation and Delegated Monitoring”, Review of Economic Studies, July, pp. 401-419.

Diamond, D., (1996), “Financial Intermediation and Delegated Monitoring”, Economic Quarterly, Federal Reserve Bank of Richmond, Vol. 82/3, Summer, pp. 51-66.

Boyd, J.H. and E.C.Prescott (1986), “Financial Intermediary-Coalitions”, Journal of Economic Theory, April, pp.211-232.

Diamond, D.W. (1991), “Monitoring and Reputation: The Choice between Bank Loans and directly Placed Debt”, Journal of Political Economy, Vol. 99, No. 4, pp.689-719.

Rajan, R. (1992), “Insiders and Outsiders: The Choice between Relationship and Arms’-Length Debt”, Journal of Finance, 47, pp. 1367-1400.

Petersen, M, and R. Rajan (1994), “The Benefits of Lending Relationships: Evidence from Small Business Data”, Journal of Finance, 49, pp. 3-37.

Berger, A., L. Klapper, G. Udell and F. Gregory (2000), “The Ability of Banks to Lend to Informationally Opaque Small Business”, Journal of Banking and Finance, Vol 25(12), pp 2127-67.

2) Capital Market Imperfections, Investment and Business Cycle Fluctuations: Models and Aggregate Implications

a) Financial Frictions and the Financial Accelerator: Theory and Macro (or Semi-Macro) Evidence

* Walsh, C. E., **Monetary Theory and Policy**, (1998), MIT Press, Ch. 7.

Matsuyama, K. (2007), “Aggregate Implications of Credit Market Imperfections”, NBER Macro Annual, 2007.

http://www.nber.org/books_in_progress/macro22/index.html

* Gertler, Mark, (2007) comment on K. Matsuyama, “Aggregate Implications of Credit Market Imperfections” (see above for link).

Brunnermeier, M.K., T.M. Eisenbach, and Y. Sannikov (2012), “Macroeconomics with Financial Frictions: a Survey”, Princeton University, mimeo.

http://scholar.princeton.edu/markus/files/survey_macrofinance.pdf

Bernanke, B. and M. Gertler (1989), “Agency Costs, Net Worth, and Business Cycle Fluctuations”, American Economic Review, 79, March, pp. 14-31.

Bernanke, B. and M. Gertler (1990), “Financial fragility and Economic Performance”, Quarterly Journal of Economics, February.

* Gertler, M. and R.G. Hubbard (1989), “Financial Factors in Business Cycle Fluctuations”, in **Financial Market Volatility: Causes, Consequences, and Policy Recommendations**, Federal Reserve Bank of Kansas City.

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

* Bernanke, B. M. Gertler and S. Gilchrist (1999), “Credit Market Frictions and Cyclical Fluctuations”, **Handbook of Macroeconomics**, J. Taylor and M. Woodford (eds), available also as NBER Working Paper 6455 at nber.org.

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

Iacoviello, M. (2005), “House prices, borrowing constraints and monetary policy in the business cycle”, American Economic Review, 95, 3 (June), pp. 739-764.

Carlstrom, C.T., Fuerst, T.S. and M. Paustian (2013/2012), “Privately optimal contracts and suboptimal outcomes in a model of agency costs”, Working Paper, Federal Reserve Bank of Cleveland 1239/1204, Federal Reserve Bank of Cleveland. Published as **"Optimal Contracts, Aggregate Risk, and the Financial Accelerator,"** American Economic Journal: Macroeconomics, American Economic Association, vol. 8(1), pages 119-47, January 2016.

Dmitriev, M. and J. Hoddenbagh (2013), “The financial accelerator and the optimal lending contract”, Boston College, mimeo.

Dmitriev, M. and J. Hoddenbath (2014), "Collateral Constraints and State Contingent Contracts", mimeo, FSU.

Dmitriev, M. and Giacomo Candian (2014), "Risk Aversion and the Financial Accelerator", mimeo

Carlstrom, C.T., Fuerst, T.S., Ortiz, A. and M. Paustian (2013), "Estimating contract indexation in a financial accelerator model", Working Paper, Federal Reserve Bank of Cleveland 1216, Federal Reserve Bank of Cleveland. Carlstrom, published as "**Estimating contract indexation in a Financial Accelerator Model**," *Journal of Economic Dynamics and Control*, Elsevier, vol. 46(C), pages 130-149, 2014..

Guerrieri L. and M. Iacoviello "Collateral Constraints and Macroeconomic Asymmetries"

<http://www.federalreserve.gov/pubs/ifdp/2013/1082/ifdp1082r.pdf>

Cooley, T.F. and V. Quadrini (2006), "Monetary Policy and the Financial Decision of Firms", *Economic Theory*, vol. 27(1), pp. 243-270.

Cooley T, R. Marimon, V. Quadrini, (2003), "Aggregate Consequences of Limited Contract Enforceability", NBER Working Papers 10132.

J. Bailey Jones (2003), "The Dynamic Effects of Firm-Level Borrowing Constraints", *Journal of Money, Credit and Banking*, vol. 35(5), pp. 743-762.

House, C.L. (2006), "Adverse Selection and the Financial Accelerator", *Journal of Monetary Economics*, 53, pp. 1117-1134.

De Graeve, F. (2008), "The External Finance Premium and the Macroeconomy: US Post WWII Evidence", *Journal of Economic Dynamics and Control*, 32, pp. 3415-3440.

*Gertler, M. and S. Gilchrist (1994), "Monetary Policy, Business Cycles, and the Behavior of Small Manufacturing Firms", *Quarterly Journal of Economics*, 109, pp. 309-340.

*Oliner, S.D., and G.D. Rudebusch (1996), "Is there a broad credit channel for monetary policy?", *Economic Review*, Federal Reserve Bank of San Francisco, pages 3-13.

b) The Credit or Bank Lending Channel for Monetary Policy : Early and Some Recent Evidence

* Bernanke, B.S., and A. Blinder, (1988), "Credit, Money and Aggregate Demand", *American Economic Review*, May, pp. 435-439.

Romer, C.D., and D.H Romer (1990), “New Evidence on the monetary Transmission Mechanism”, Brookings Papers on Economic Activity, 1, pp. 148-198.

Ramey, V. (1993), “How Important is the Credit Channel in the Transmission of Monetary Policy?”, Carnegie-Rochester Conference series on Public Policy, 39, December, pp. 1-45.

Bernanke, B.S. and A.S. Blinder (1992), “The Federal Funds rate and the Channels of Monetary Transmission”, American Economic Review, September, pp. 901-921.

Bernanke, B., M. Gertler, and S. Gilchrist (1996), “The Financial Accelerator and the Flight to Quality”. Review of Economics and Statistics, LXXVIII(1), February, pp. 1015.

Walsh, C.E., and J.A. Wilcox (1995), “Bank Credit and Economic Activity” in J. Peek and E. Rosengren (eds.) **Is Bank Lending Important for the Transmission of Monetary Policy?**, Federal Reserve Bank of Boston Conference Series, No. 39, June, pp. 83-112.

Iacoviello, M. and R. Minetti (2008), “The Credit Channel of Monetary Policy: Evidence from the Housing Market”, Journal of Macroeconomics, 30, pp. 69-96.

Kashyap, A.N., J.C. Stein, and D.W. Wilcox (1993), “Monetary Policy and Credit Conditions: Evidence from the Composition of External Finance”, American Economic Review, 83, no. 1, March, pp.78-98.

* Oliner, S.D., and G.D. Rudebush (1996), “Monetary Policy and Credit Conditions: Evidence from the Composition of External Finance: Comment”, American Economic Review, 86, no.1, March, pp. 300-309.

Nilsen, J.H. (2002), “Trade Credit and the Bank Lending Channel”, Journal of Money, Credit and Banking, 34(1), February, pp. 226-253.

Morgan, D.P. (1998), “The Credit Effects of Monetary Policy: Evidence Using Loan Commitments”, Journal of Money, Credit and Banking, February, pp.102-118.

Peek, J. and E. Rosengren (1997), “The International Transmission of Financial shocks: the Case of Japan”, American Economic Review, September, 495-505.

Peek, J. and E. Rosengren (2000), “Collateral Damage: the Effects of the Japanese Banking Crisis on Real Activity in the US”, American Economic Review, vol. 90(1), pp. 30-45.

Braun, M. and B. Larrain (2005), “Finance and the Business Cycle: International, Inter-industry Evidence”, The Journal of Finance, 60(3), pp. 1097-1128.

Kashyap, A.K., O.A. Lamont, and J. C. Stein (1994), “Credit Conditions and the Cyclical Behavior of Inventories”, Quarterly Journal of Economics, 109, N.3, August, pp. 565-592.

* Kashyap, A.N., J.C. Stein (2000), “What do a Million Observations on Banks say about the Transmission of Monetary Policy?”, American Economic Review, 83 (1), pp. 78-98.

Ehrmann, E., L. Gambacorta, J. Martinez-Pages, P. Sevestre and A. Worms (2003), “Financial systems and the Role of Banks in Monetary Policy Transmission in the Euro Area”, in **Monetary Policy Transmission in the Euro Area**, Angeloni, I., A. Kashyap and B. Mojon, editors, Cambridge University Press.

Khwaja, A. I. and A. Mian (2008), “Tracing the Impact of Bank Liquidity Shocks: Evidence from an Emerging Market”, American Economic Review, American Economic Association, American Economic Association, vol. 98(4), 1413-42, September.

Jimenez, G., Ongena, S., Peydró, J.L. and J. Saurina (2012a), “Credit Supply and Monetary Policy: Identifying the Bank Balance-Sheet Channel with Loan Applications”, American Economic Review, American Economic Association, vol. 102(5), pages 2301-26, August.

Jimenez, G., S.Ongena, J L Peydro, and J. Saurina (2014). “Hazardous times for monetary policy: What do twenty-three million bank loans say about the effects of monetary policy on credit risk-taking?”, Econometrica 82, 463–505.

c) Other Papers on the Transmission Mechanism of Monetary Policy

Dell’Ariccia, G., L. Laeven, and G. Suarez, (2013). Bank Leverage and Monetary Policy’s Risk-Taking Channel; Evidence from the United States. IMF Working Papers 3/143 International Monetary Fund.

Drechsler, I., A. Savov and P. Schnabl (2015), “ The Deposit Channel of Monetary Policy”, mimeo. <http://pages.stern.nyu.edu/~sternfin/pschnabl/>

Ippolito, F., A. K. Ozdagli, and A. Perez (2015)”, “ The Transmission of Monetary Policy Through Bank Lending: The Floating Rate Channel”, mimeo

Bolton, P. and X. Freixas, (20006), “Corporate Finance and the Monetary Transmission Mechanism”, The Review of Financial Studies, 19(3), 829-870.

d) Financial Shocks, Financial Intermediation and the Macroeconomy

i) *Models without Financial Intermediaries*

* Jermann, U. and V. Quadrini (2012), “Macroeconomic Effects of Financial Shocks”, American Economic Review, 102(1), February; also NBER Working Paper 15338.

Khan, A. and J. K. Thomas (2013), “Credit Shocks and Aggregate Fluctuations in an Economy with Production Heterogeneity”, Journal of Political Economy, University of Chicago Press, University of Chicago Press, vol. 121(6), pages 1055 – 1107.

Gilchrist, S., E. Zakrajsek (2011), “Credit Spreads and Business Cycle Fluctuations”, American Economic Review, forthcoming.

Liu, Z. P. Wang, and T. Zha (2011), “Credit Frictions in a Production Economy with Heterogeneous Agents”, mimeo.

Liu, Z. P. Wang, and T. Zha (2011), “Land Price Dynamics and Macroeconomic Fluctuations”, NBER Working Paper 17045.

Christiano L., Motto, R., and Rostagno M. (2013), “Risk Shocks”, NBER Working Paper 18682.

ii) *Models with Financial Intermediaries*

Quadrini, V. (2011), “Financial Frictions in Macroeconomic Fluctuations”, Economic Quarterly, 97(3), 209-254.

Christiano L., Motto, R., and Rostagno M. (2010), “Financial Factors in Economic Fluctuations”, WP Series, 1192, European Central Bank.

Holmstrom, B and J. Tirole (1997), “Financial Intermediation, Loanable Funds, and the Real Sector”, Quarterly Journal of Economics 112(3), pp. 663-692.

Goodfriend, M. and B. T. McCallum, (2007), “Banking and Interest Rates in Monetary Policy Analysis: A Quantitative Exploration”, Journal of Monetary Economics, 54, pp. 1480-1507.

* Gertler, M. and P. Karadi (2011), “ A Model of Unconventional Monetary Policy”, NYU mimeo, Journal of Monetary Economics, 58(1), January, pp. 17-34.

* Gertler, M. and N. Kiyotaki (2010), “Financial Intermediation and Credit Policy in Business Cycle Analysis”, **Handbook of Monetary Economics**, B.M Friedmand and M. Woodfor (eds), vol 3, ch.11, 547-599. Elsevier.

Curdia, V., and M. Woodford (2010), “Conventional and Unconventional Monetary Policy”, FRB of St. Louis Review, July/August 2010, 92(4), pp. 229-64.

Woodford, M. and V. Curdia (2010), “The Central Bank Balance Sheet as an Instrument of Monetary Policy”, FRB of New York, Staff Report 463, July.

Gerali, A., S. Neri, L. Sessa and F. Signoretti (2010), “Credit and Banking in a DSGE Model of the Euro Area”, Journal of Money, Credit and Banking, 42(6), pp. 107-141

Adrian, T. and H. S. Shin (2010), “Financial Intermediaries and Monetary Economics”, **Handbook of Monetary Economics**, B.M Friedman and M. Woodford (eds), Elsevier.

Adrian, T. and H. S. Shin (2013), “Financial Intermediary Leverage and Value at Risk”, Federal Reserve Bank of New York Staff Reports, 338

Brunnermeier, M.K., and Y. Sannikov (2012), “A Macroeconomic Model with a Financial Sector”, Princeton University, mimeo.
http://scholar.princeton.edu/markus/files/macro_finance.pdf

Aoki, K and K. Nikolov (2011), “Bubbles, Banks and Financial Stability”, mimeo.
http://www.ecb.int/events/conferences/html/mar_net.en.html

Christensen, I., C. Meh and K. Moran (2011), “Leverage Regulation and Macroeconomic Dynamic”, mimeo.
<http://www.federalreserve.gov/events/conferences/2011/rsr/program.htm>

Rannenberg, A. (2011), “Asymmetric Information in Credit Markets, Bank Leverage Cycles and Macroeconomic Dynamics”, mimeo.
http://www.ecb.int/events/conferences/html/mar_net.en.html

iii) More on Wedges

Chari, V.V., P. J. Kehoe, and E.R. McGrattan, “Business Cycle Accounting”, Econometrica, Vol. 75(3), pp. 781-836, May.

Christiano, L. J. and J. M. Davis (2006), “Two Flaws in Business Cycle Accounting”, Northwestern University, mimeo.
<http://faculty.wcas.northwestern.edu/~lchrist/research/wedges/wedges1.pdf>

Chari, V.V., P.J. Kehoe, and E.R. McGrattan (2007), “Comparing Alternative Representations, Methodologies, and Decompositions in Business Cycle accounting”, Federal Reserve Bank of Minneapolis, Research Department Staff Report 384, March.

Hall, R. E. (2009), “The High Sensitivity of Economic Activity to Financial Frictions”, Stanford University, mimeo.

e) Open economy

Gertler, M., S. Gilchrist, F. Natalucci (2007), “External Constraints on Monetary Policy and the Financial Accelerator”, Journal of Money, Credit and Banking, 39 (2-3), pp. 295-330.

Céspedes, L.P., R. Chang and A. Velasco (2004), “Balance Sheets and Exchange rate Policy”, American Economic Review, 94(4), pp. 1183-93.

Elekdag, S., Justiniano, A. and Tchakarov, I (2005), “An Estimated Small Open Economy Model of the Financial Accelerator”, IMF Staff Papers, Palgrave MacMillan Journals, 53(2), 2.

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Mendoza, E. G. (2010). Sudden Stops, Financial Crises, and Leverage. American Economic Review 100 (5), 1941–66.

Perri, F., V. Quadrini (2014), “International Recessions”, http://www.fperri.net/PAPERS/irecessions_latest.pdf

3) Credit Frictions and Investment: Micro Evidence

a) Early Critical Reviews

* Schiantarelli, F. (1996) “Financial Constraints and Investment: Methodological Issues and International Evidence”, Oxford Review of Economics Policy, Vol. 12, No. 2, pp. 70-89, also in **Is Bank Lending Important for the Transmission of Monetary Policy?**, edited by J. Peek and E.S. Rosengren, Federal Reserve Bank of Boston, Conference Series No. 39, June 1995.

* Hubbard, R.G. (1998), “Capital Market Imperfections and Investment”, Journal of Economic Literature, March 1998

Galindo, A. and F. Schiantarelli (2003), “Determinants and Consequences of Financing Constraints Facing Firms in Latin America: An Overview”, in **Credit Constraints and Investment in Latin America**, A. Galindo, F. Schiantarelli, editors, Inter-American Development Bank, September, 2003.

b) Excess Sensitivity Approach: Micro evidence from q Models

* Fazzari, S., R.G. Hubbard, and B. Petersen (1988), “Financing Constraints and Corporate Investment”, Brookings Papers on Economic Activity, 1, pp. 141-195.

Hoshi, T., A.K. Kashyap, and D. Scharfstein (1990), “Corporate Structure and Investment: Evidence from Japanese panel Data”, Quarterly Journal of Economics, 106, pp.33-60.

* Gilchrist, S. and C.P. Himmelberg (1995), “Evidence on the Role of Cash Flow for Investment”, Journal of Monetary Economics, January, pp. 541-572.

Gilchrist S. and C.P. Himmelberg (1998), “Investment, Fundamentals and Finance”, NBER Macro Annual.

Hu, X. and F. Schiantarelli (1997), “Investment and Financing Constraints: A Switching Regression Approach Using US Firms’ Panel Data”, The Review of Economics and Statistics, 1998

c) Micro Evidence from Euler Equations

* Whited, T. (1992), “Debt, Liquidity constraints, and and Corporate Investment: Evidence from Panel Data”, Journal of Finance, 47, September, 1425-1460.

* Bond, S., and C. Megir (1994), “Dynamic Investment Models and the Firms’ Financial Policy”, The Review of Economic Studies, 61, pp.197-222.

d) Criticism on the Excess Sensitivity Approach and Structural Estimation of Dynamic Models with Constraints

* Kaplan, S.N. and L. Zingales (1997) “Do Investment-Cash Flow Sensitivities Provide Useful Measures of Financing Constraints?”, Quarterly Journal of Economics, 1997, pp.169-215.

* Fazzari, S.M., R.G. Hubbard, and B.C. Petersen (2000), “Investment-Cash Flow Sensitivities Are Useful: A Comment on Kaplan and Zingales”, Quarterly Journal of Economics, May, pp. 695-705.

*Kaplan, S.N. and L. Zingales (2000), “Investment Cash Flow Sensitivities Are Not Valid Measures of Financing Constraints”, Quarterly Journal of Economics, May, pp. 707-712.

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*Cummins, J.G., K.A. Hassett, and S.D. Oliner (2006), “Investment Behavior, Observable Expectations, and Internal Funds”, American Economic Review, 96, pp. 796-810.

Moyen, N. (2004), “Investment-Cash Flow Sensitivities: Constrained versus Unconstrained Firms”, Journal of Finance, 59(5), pp. 2061-2092.

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Gomes, J.F. (2001), “Financing Investment”, American Economic Review, December, pp. 1263-1285

* Cooper, R. and J. Ejarque (2003), “Financial Frictions and Investment: A Requiem in Q”, Review of Economic Dynamics, 6, pp. 710-728.

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Whited, T.M. and G.J. Wu (2006), “Financing Constraint Risk”, Review of Financial Studies, 19,; 531-559.

C. Hennessy, A. Levi and T.M. Whited (2007), “Testing the Q Theory with Financing Frictions”, Journal of Financial Economics, 83, pp. 691-717.

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

Cleary, S. (1999), “The Relationship Between Firm Investment and Financial Status”, Journal of Finance, 54, pp. 673-692.

Nikolov, B, L. Schmidt, R. Steri, (2018), "Dynamic Financial Constraints: Which Frictions Matter for Corporate Policies?" mimeo, July.

<https://ideas.repec.org/p/red/sed017/630.html>

e) Credit Frictions and Price Setting

Bils, Mark, 1989. "Pricing in a Customer Market," *The Quarterly Journal of Economics*, MIT Press, vol. 104(4), pages 699-718, November.

Gottfries, Nils, 1991. "Customer Markets, Credit Market Imperfections and Real Price Rigidity," *Economica*, London School of Economics and Political Science, vol. 58(231), pages 317-23, August.

Chevalier, Judith A & Scharfstein, David S, 1996. "Capital-Market Imperfections and Countercyclical Markups: Theory and Evidence," *American Economic Review*, American Economic Association, vol. 86(4), pages 703-25, September.

Anna Bottasso & Marzio Galeotti & Alessandro Sembenelli, 1997. "The Impact Of Financing Constraints On Markups: Theory And Evidence From Italian Firm Level Data," CERIS Working Paper 199706, Institute for Economic Research on Firms and Growth - Moncalieri (TO).

Bucht, Charlotte & Gottfries, Nils & Lundin, Magnus, 2002. "Why Don't Prices Fall in a Recession? Financial Constraints, Investment, and Customer Relations," Working Paper Series 2002:3, Uppsala University, Department of Economics.

Marvin J. Barth III & Valerie A. Ramey, 2002. "The Cost Channel of Monetary Transmission," NBER Chapters, in: *NBER Macroeconomics Annual 2001*, Volume 16, pages 199-256 National Bureau of Economic Research, Inc.

Ravenna, Federico & Walsh, Carl E., 2006. "Optimal monetary policy with the cost channel," *Journal of Monetary Economics*, Elsevier, vol. 53(2), pages 199-216, March.

Jae Sim & Raphael Schoenle & Egon Zakrajsek & Simon Gilchrist, 2014. "Inflation Dynamics During the Financial Crisis," 2014 Meeting Papers 206, Society for Economic Dynamics.

f) New Micro and Macro Evidence on the Credit and Lending Channel (widely interpreted) mostly (but not only) from the Financial and Sovereign Debt Crisis Period

i) *US*

Becker, B. and V. Ivashina (2014), “Cyclicality of credit supply: Firm level evidence”, Journal of Monetary Economics, Elsevier, vol. 62I, pages 76-93.

Kahle, K. and R. Stulz (2011), “Access to capital, investment, and the financial crisis: Impaired credit channel or diminished demand for capital?”, Working Paper 2011-3, Dice Center for Research in Financial Economics, Fisher College of Business, The Ohio State University, February.

Adrian, T., Colla, P. and H.S. Shin (2012), “Which Financial Frictions? Parsing the Evidence from the Financial Crisis of 2007-9”, NBER Working Papers 18335, National Bureau of Economic Research, Inc.

Gilchrist, S., V. Yankow, E. Zakrajsek (2009), “Credit Market Shocks and Economic Fluctuations: Evidence from Corporate Bonds and Stock Markets”, NBER W.P. 14863.

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* Ivashina, V. and D. Scharfstein (2010), “Bank lending during the financial crisis of 2008”, Journal of Financial Economics, Elsevier, vol. 97(3), pages 319-338, September.

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