

FIN 971: Corporate Finance
Instructor: Dean Corbae
Email: dcorbae@gmail.com,
Web: <http://sites.google.com/site/deancorbae/>

Syllabus

This course is about corporate finance puzzles. There are two parts to a puzzle: theory and data. For instance, Myers entitles his 1984 AFA presidential address “The Capital Structure Puzzle”. Under a (strong) set of assumptions, Modigliani-Miller theory says that a firm’s value does not depend on its mix between debt and equity. Data says otherwise, thus there is a puzzle. The literature then relaxed the theoretical assumptions to try to match the data. The objective of this course is to find and attempt to answer puzzles (i.e. propose theory) for both nonfinancial and financial firms.

You will be evaluated on weekly problem sets and computer assignments which can be undertaken in groups, as well as an individual final project. The final project will either find a new puzzle and try to provide theory to answer it or just try to solve an old puzzle. Since we are focusing on puzzles you need to do both theory and data work. You should state a well-defined question, explain how your work differs from the most relevant paper or two related to your question, and finally provide some preliminary results.

We will study some papers in depth rather than a cursory review of the literature. There are three works which provide background for class lectures:

(RW) Roberts, M. and T. Whited (2012) “Endogeneity in Empirical Corporate Finance”, working paper available at:

(http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1748604)

(SW) Strebulaev, I. and T. Whited (2012) “Dynamic Models and Structural Estimation in Corporate Finance”, working paper available at:

(http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2091854)

(T) Tirole, J. (2006) Theory of Corporate Finance, Princeton: Princeton University Press.

I. Benchmark Theory: the MM Invariance Propositions

*(T) 2.

*Miller, M. and F. Modigliani (1961) "Dividend Policy, Growth, and the Valuation of Shares", *Journal of Business*, Vol. 34, pp. 411-433.

*Modigliani, F. and M. Miller (1958) "The Cost of Capital, Corporation Finance, and the Theory of Investment," *American Economic Review*, 48: 261-297.

Stiglitz, J. (1969) "A Re-Examination of the Modigliani-Miller Theorem", *American Economic Review*, 59, p. 784-793.

II. Data Moments

*(T) 2.

*Kalemli-Ozcan, S. B. Sorensen, and S. Yesiltas (2012) "Leverage across firms, banks, and countries", *Journal of International Economics*, 88, p. 284-298.

*Kashyap, A., and J.C. Stein (2000), "What do a million observations on banks say about the transmission of monetary policy?", *American Economic Review*, 90, 407-428.

Korteweg, A. (2010) "The Net Benefits to Leverage", *Journal of Finance*, 65, p.2137-2170.

Lemmon, M., M. Roberts, and J. Zender (2008) "Back to the Beginning: Persistence and the Cross-Section of Corporate Capital Structure", *Journal of Finance*, 63, p.1575 - 1608.

*Rajan, R. and L. Zingales (1995) "What do we know about capital structure? Some evidence from international data," *Journal of Finance*, 50, 1421-1460.

*Stein, J. (2003) "Agency, Information and Corporate Investment," in Handbook of the Economics of Finance, edited by George Constantinides, Milton Harris and Rene Stulz. Amsterdam: North-Holland.

Strebulaev, I and B. Yang (2012) "The Mystery of Zero-Leverage Firms", mimeo.

Stulz, R. (1990), "Managerial discretion and optimal financing policies", *Journal of Financial Economics*, 26, p.3-27.

III. Deviations from Benchmark Theory

(T) Chapters 3-6.

*Harris, M. and A. Raviv (1991) "The theory of capital structure", *Journal of Finance*, 46, 297-355.

Holmstrom, B., and J. Tirole (1997), "Financial intermediation, loanable funds, and the real sector", *Quarterly Journal of Economics*, 112, 663-691.

Myers, J. (2003) "Financing of Corporations," in Handbook of the Economics of Finance, edited by George Constantinides, Milton Harris and Rene Stulz. Amsterdam: North-Holland.

a. Taxes and Financial Distress (Tradeoff Theory)

Leland, H. (1994) “Corporate debt value, bond covenants, and optimal capital structure”, *Journal of Finance*, 49, p.1213-1252
 Miller, M. (1977) “Debt and taxes”, *Journal of Finance*, 32, 261-275.
 Myers, S. (1977) “The determinants of corporate borrowing”, *Journal of Financial Economics*, 5, 147-175.

b. Moral Hazard (Agency Theory)

Diamond, D. (1989) “Reputation acquisition in debt markets”, *Journal of Political Economy*, 97, 828-862.
 Jensen, M. and W. Meckling (1976) “Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure”, *Journal of Financial Economics*, 3, 305-360.

c. Asymmetric Information (Pecking Order Theory)

Myers, S. (1984) “The Capital Structure Puzzle,” *Journal of Finance*, 39, 575-592
 Myers, S. and N. Majluf (1984) “Corporate Financing and Investment Decisions when Firms Have Information That Investors Do Not Have,” *Journal of Financial Economics*, 13, 187-222.
 Ross, S. (1977) “The Determination of Financial Structure: The Incentive Signalling Approach”, *Bell Journal of Economics*, 8, 23-40.

d. Imperfect Competition

Brander, J. and T. Lewis (1986) “Oligopoly and financial structure: The limited liability effect”, *American Economic Review*, 76, 956-970.

e. Control Issues

Harris, M. and A. Raviv (1988) “Corporate control contests and capital structure”, *Journal of Financial Economics*, 20, 55-86.
 Israel, R. (1991) “Capital structure and the market for corporate control: The defensive role of debt financing”, *Journal of Finance*, 46, pp. 1391-1409

IV. Security Design and Intermediation

(T) Chapter 12

Diamond, D. (1984) “Financial Intermediation and Delegated Monitoring. *Review of Economic Studies*, 51, 393-414.
 Diamond, D., and P. Dybvig (1983) “Bank runs, deposit insurance, and liquidity”, *Journal of Political Economy*, 91, 401-19.
 Gorton, G., and G. Pennacchi (1990) “Financial intermediaries and liquidity creation”, *Journal of Finance*, 45, 49-71.
 Keeley, M. (1990) “Deposit insurance, risk and market power in banking”, *American Economic Review*, 80, p.1183-1200.
 Townsend, R. (1979) “Optimal Contracts and Competitive Markets with Costly State Verification”, *Journal of Economic Theory*, 21, 265-293.

V. Dynamic Models

(RW), (SW)

a. Benchmark

Fazzari, S.M., R.G. Hubbard and B.C. Petersen (1988) "Financing Constraints and Corporate Investment," *Brookings Papers on Economic Activity*, 141-195.

Hayashi, F. (1982) "Tobin's Marginal q and Average q: A Neoclassical Interpretation", *Econometrica*, 50, pp. 213-224.

Kaplan, S. and L. Zingales (1997) "Do Investment-Cash Flow Sensitivities Provide Useful Measures of Financing Constraints?" *Quarterly Journal of Economics*, 112, 169-215.

b. Frictions

Albuquerque, R., and H. Hopenhayn, 2004, "Optimal dynamic lending contracts with imperfect enforceability", *Review of Economic Studies*, 71, 285-315.

Atkeson, A., A. Eisfeldt, and P. O. Weill (2012) "Measuring the Financial Soundness of US Firms 1926-2012", mimeo.

Clementi, G. and H. Hopenhayn (2006) "A theory of financing constraints and firm dynamics", *Quarterly Journal of Economics*, 121, 229-265.

DeMarzo, P., M. Fishman, Z. He, and N. Wang (2012) "Dynamic agency and the q theory of investment", *Journal of Finance*, 67, p.2295-2340.

DeMarzo, P. and Y. Sannikov (2006), "Optimal Security Design and Dynamic Capital Structure in a Continuous-Time Agency Model," *Journal of Finance*, 61, 2681-2724.

Hennessy, C. and T. Whited (2005) "Debt Dynamics," *Journal of Finance*, 60, 1129-1165.

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

Strebulaev, I. (2007) "Do Tests of Capital Structure Theory Mean What They Say?" *Journal of Finance*, 62, p.1747-1787.

c. Industry Dynamics

Cooley, T. and V. Quadrini (2001) "Financial Markets and Firm Dynamics," *American Economic Review*, 91, 1286-1310.

Corbae, D. and P. D'Erasmus (2012) "A Quantitative Model of Banking Industry Dynamics", mimeo.

Gomes, J. (2001) "Financing Investment," *American Economic Review*, 91, p 1263-1285.

VI. Welfare and Macro Implications of Financial Frictions

(T) Chapters 13, 14, 15

Bernanke, B., M. Gertler, and S. Gilchrist (1999) "The financial accelerator in a quantitative business cycle framework", Handbook of Macroeconomics.

Gertler, M. and N. Kiyotaki (2010) "Financial Intermediation and Credit Policy in Business Cycle Analysis", Handbook of Monetary Economics, B. Friedman & M. Woodford (ed.), Volume 3, Elsevier.