



## UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

College of Business  
DEPARTMENT OF FINANCE

### FINANCE 594 – ADVANCED CORPORATE FINANCE SYLLABUS – SPRING 2011

**Professors:** Murillo Campello & Dirk Hackbarth  
**Class Time:** Fridays: 1:00-3:50pm  
**Class Location:** 3003 BIF  
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**Office Hours:** By appointment

#### **BRIEF DESCRIPTION**

This is a thorough doctoral level class on corporate finance, covering modern theoretical and empirical work. The course is designed as the second in a sequence of two corporate finance courses. At this stage, rather than explaining the underpinnings of corporate research (e.g., basic model/applications dealing with asymmetric information, agency problems, capital market frictions), we will go deeper in understanding “how to operationalize” research on concrete topics that are central to corporate finance, such as capital structure, mergers and acquisitions, the limits of the firm, investment, and much more. The class will also look at the interface between corporate finance and other research areas, such as asset pricing and banking. Among other things, the course is a blend of new approaches to modeling in corporate research (e.g., dynamic/structural models of financial policy with quantitative predictions) and new approaches to testing design (e.g., matching estimators and discontinuity designs). The goal is to give students a glimpse at the “state-of-the-art” of research in corporate finance and prepare them to do research in corporate finance using new methods and tools.

#### **TEXT AND MATERIALS**

There is no required textbook. Readings will be based on articles. Reading assignments will follow the sequence below. Papers anteceded by an asterisk (\*) are strongly recommended and covered during lectures. The readings are nearly all available for free on the web (e.g., from JSTOR, SSRN, the journal’s website, or the author’s own website). Students can locate them using, e.g., Google Scholar.

#### **GRADING**

- Regular class participation: 20%  
All students are expected to have read prior to class in detail all the papers scheduled for discussion that day. Students need to come to the classroom with their minds on the material being discussed. Just “showing up” for class does not count for class participation.
- Referee reports and home work assignments: 30%  
We will give guidelines regarding these assignments. On the referee reports, for example, we

are looking for the students to mature on the art of writing reports. The first report will be on a paper that the professors have actually reviewed, so the students can later compare their assessment with that which decided the fate of the paper at a top journal. The second will be graded more “competitively” (as if the professors were editors at the journal and were ranking the referees). The best report will be copied and shared with all students (remaining anonymous). Referee reports are individual work, but other assignments may be done in pairs (fostering a sense of collaboration/co-authorship).

- Formal paper presentation and discussion (“mini AFAs”): 20%  
One class will be dedicated to emulating an AFA-like setting where students will present and discuss papers as if they were in a professional conference. Papers will be chosen among the “hottest/newest” WPs in circulation. Some students will present (defend) the papers as if they were their own work, while others will discuss (and criticize) the papers. Presentations and discussions will be tightly timed (we will cut you off if you go overtime) and they will have to look professional. This exercise is designed for the students demonstrate their full presentation/debating skills. This is simply a practice for the type of “ideas competition” you will see in the real world of academia.
- Research proposal(s) (paper + presentation): 30%  
More on this below.

All students in the classroom are expected to read the papers selected for each topic (in advance) and to participate in class discussion. Note: Auditors are expected to do all of the assignments of regular students, except the final project proposal and presentation.

### **INTENDED AUDIENCE**

This course is largely intended to help prepare students for research in the area of corporate finance. However, all PhD students with an interest in Finance, Economics, and Accounting are welcome to take it. Hopefully, this course will be stimulating enough that you will become interested in writing a thesis in corporate finance (but you don’t have to!). It should certainly prepare you to be a researcher in the area. This is sort of a “prep school-type” course, where students will get preparation for their work as academics.

### **WEBPAGE**

The course Webpage will contain this syllabus and some of the materials presented in class. The Web address is: <https://compass.illinois.edu/> (Compass).

### **RESEARCH PROPOSAL**

For many PhD students, the most difficult part of the program is the search for a dissertation topic. To gain some experience selecting research topics, one course requirement is to prepare a proposal for a project concerning issues we discuss in class. We hope that a set of research ideas will come to you as the course progresses. This set will presumably consist of multiple ideas in different stages. While some may be little more than preliminary (but hopefully thought-provoking) idea stubs, at least one should be in a more fully-formed stage by the end of the semester. For the latter, you should target writing down a document containing:

- 1) One or two pages motivating the idea/research question. You want to identify a question, explain why it is important that we know more about it (i.e., its implications for research in

corporate finance, policy making, etc.), and make the case that the existing literature has overlooked the issue.

- 2) Once you motivate your research question, you need to think about the economics of your inquiry. This would probably take a page or two. For example, what are the tradeoffs involved? What kinds of corporate actions/consequences do they entail? Should we expect to verify them using real-world data? How to design an identification strategy for empirical testing? Should we check the idea via simulations? What are the exact methods we should use and why?
- 3) Anticipating the results: Based on priors, what results should be expected? (What if we find something else?) Discussing this should take a few paragraphs.
- 4) Add a literature review. In this profession, it is important that you recognize (and give credit to) those who did prior research in the area you want to do your first paper. Do a fair (not aggressive, but still critical) review of the literature in no more than three pages. The emphasis should be on establishing your case that the “void” in the literature is worth pursuing. Try to organize the papers in a compare/contrast format. Like all you do in the paper, use this to motivate the importance of your research question.
- 5) Take a page or two to discuss “implementation issues” such as data availability, sample construction, programming (computer capacity) needs, replicability, etc.
- 6) Have some preliminary results for us to discuss. These can be empirical results, simulations/calibrations, or anything that gives us “hope” that this is more than a bunch of nice-sounding ideas that will never see the light of day.
- 7) The last part of the requirement regarding this assignment is a presentation of your research idea. We are not expecting a paper that is going straight to a top journal. On the other hand, we expect the student to present something that shows that he/she was thoughtful, hardworking, and capable of coming up with a potentially fruitful research idea. We expect that the presentation will help all of these elements transpire. Accordingly, it is important that you prepare well for this last task of the course. We (the professors) will be judging you as a potential job candidate at a good research school.

Students may propose to work on a joint project with other students in the class, subject to instructors’ prior approval. It is also advisable (and expected) that students are communicating with us about their plans for the final project through the semester. Finally, conforming to requirements now being adopted by some outlets, all programs and data should be made available so results can be reproduced. (Put and turn in copies of the relevant files in a USB drive or CD.)

## **LIST OF TOPICS AND READING MATERIALS**

### **1. Investment Under Uncertainty I (Foundations of Real Options)**

Dixit, A., 1993, "The Art of Smooth Pasting," in J. Lesourne and H. Sonnenschein, eds: Fundamentals of Pure and Applied Economics, Vol. 55, Routledge, London.

Dixit, A., 1992, "Investment and Hysteresis," *Journal of Economic Perspectives* 6, 107-132.

Dixit, A., 1991, "A Simplified Exposition of the Theory of Optimal Control of Brownian Motion," *Journal of Economic Dynamics and Control* 15, 657-673.

(\*) Dixit, A. and R. Pindyck, 1994, Investment Under Uncertainty, Princeton, NJ: Princeton University Press, Chapters 1-6.

Dumas, B., 1991, "Super Contact and Related Optimality Conditions," *Journal of Economic Dynamics and Control* 15, 675-685.

(\*) McDonald, R., and D. Siegel, 1986, "The Value of Waiting to Invest," *Quarterly Journal of Economics* 101, 707-728.

Pindyck, R., 1991, "Irreversibility, Uncertainty, and Investment," *Journal of Economic Literature* 29, 1110-1152.

### **2. Investment Under Uncertainty II (Applications of Real Options)**

Abel, A. and J. Eberly, 1994, "A Unified Model of Investment under Uncertainty," *American Economic Review* 84, 1369-1384.

Abel, A. and J. Eberly, 1996, "Optimal Investment with Costly Reversibility," *Review of Economic Studies* 63, 581-593.

Abel, A. and J. Eberly, 1997, "An Exact Solution for the Investment and Value of a Firm Facing Uncertainty, Adjustment Costs, and Irreversibility," *Journal of Economic Dynamics and Control* 21, 831-852.

(\*) Boyle, G., and G. Guthrie, 2003, "Investment, Uncertainty, and Liquidity," *Journal of Finance* 58, 2143-2166.

Dixit, A., 1989, "Entry and Exit Decisions under Uncertainty," *Journal of Political Economy* 97, 620-638.

Dixit, A. and R. Pindyck, 1994, Investment Under Uncertainty, Princeton, NJ: Princeton University Press, Chapter 11.

Grenadier, S., 1996, "The Strategic Exercise of Options: Development Cascades and Overbuilding in Real Estate Markets," *Journal of Finance* 51, 1653-1679.

Grenadier, S., 1999, "Information Revelation Through Option Exercise," *Review of Financial Studies* 12, 95-129.

Grenadier, S., and A. Malenko, 2010, "A Bayesian Approach to Real Options: The Case of Distinguishing between Temporary and Permanent Shocks," *Journal of Finance* 65, 1949-1986.

Grenadier, S., and N. Wang, 2005, "Investment Timing, Agency, and Information," *Journal of Financial Economics* 75, 493-533.

Kisser, M., 2010, "Do All-Equity Firms Destroy Value by Holding Cash?" Working Paper, NHH.

Lambrecht, B., and W. Perraudin, 2003, "Real Options and Preemption under Incomplete Information," *Journal of Economic Dynamics and Control* 27, 619-643.

Leahy, J., 1993, "Investment in Competitive Equilibrium: The Optimality of Myopic Behavior," *Quarterly Journal of Economics* 108, 1005-1033.

Pindyck, R., 1988, "Irreversible Investment, Capacity Choice, and the Value of the Firm," *American Economic Review* 78, 969-985.

### **3. Credit Risk and Optimal Capital Structure**

Black, F., and J. Cox, 1976, "Valuing Corporate Securities: Some Effects of Bond Indenture Provisions," *Journal of Finance* 31, 351-367.

Duffie, D., and D. Lando, 2001, "Term Structures of Credit Spreads with Incomplete Accounting Information," *Econometrica* 69, 633-664.

Fan, H., and S. Sundaresan, 2000, "Debt Valuation, Renegotiation, and Optimal Dividend Policy," *Review of Financial Studies* 13, 1057-1099.

Gorbenko, A., and I. Strebulaev, 2010, "Temporary vs. Permanent Shocks: Explaining Corporate Financial Policies," *Review of Financial Studies* 23, 2591-2647.

(\*) Hackbarth, D., J. Miao, and E. Morellec, 2006, "Capital Structure, Credit Risk, and Macroeconomic Conditions," *Journal of Financial Economics* 82, 519-550.

Hackbarth, D., C. Hennessy, and H. Leland, 2007, "Can the Tradeoff Theory Explain Debt Structure?" *Review of Financial Studies* 20, 1213-1252.

Hackbarth, D., 2008, "Managerial Traits and Capital Structure Decisions," *Journal of Financial and Quantitative Analysis* 43, 843-882.

Hege, U., and P. Mella-Barral, 2005, "Repeated Dilution of Diffusely Held Debt," *Journal of Business* 78, 737-786.

Korteweg, A., 2010, "The Net Benefits to Leverage," *Journal of Finance*, forthcoming.

Lambrecht, B., and S. Myers, "Debt and Managerial Rents in a Real-Options Model of the Firm," *Journal of Financial Economics* 89, 209-231.

(\*) Leland, H., 1994, "Corporate Debt Value, Bond Covenants, and Optimal Capital Structure," *Journal of Finance* 49, 1213-1252.

Leland H., 1998, "Agency Costs, Risk Management, and Capital Structure," *Journal of Finance* 53, 1213-1243.

Mella-Barral, P., and W. Perraudin, 1997, "Strategic Debt Service," *Journal of Finance* 52, 531-556.

Miao, J., 2005, "Optimal Capital Structure and Industry Dynamics in Stationary Equilibrium," *Journal of Finance* 60, 2621-2659.

Morellec, E., 2001, "Asset Liquidity, Capital Structure and Secured Debt," *Journal of Financial Economics* 61, 173-206.

Morellec, E., 2004, "Can Managerial Discretion Explain Observed Leverage Ratios?" *Review of Financial Studies* 17, 257-290.

Pennacchi, G., 2008, Theory of Asset Pricing, Boston, MA: Addison-Wesley. (Chapter 18.)

#### **4. Capital Structure Dynamics**

Bhamra, H., L. Kuehn, and I. Strebulaev, 2008, "The Aggregate Dynamics of Capital Structure and Macroeconomic Risk," Working Paper, Stanford University.

(\*) Fischer, E., R. Heinkel, and J. Zechner, 1989, "Dynamic Capital Structure Choice: Theory and Tests," *Journal of Finance* 44, 19-40.

Goldstein, R., N. Ju, and H. Leland, 2001, "An EBIT-Based Model of Dynamic Capital Structure," *Journal of Business* 64, 483-512.

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

#### **5. Interactions between Financing and Investment**

Bolton, P., H. Chen, and N. Wang, 2010, "A Unified Theory of Tobin's Q, Corporate Investment, Financing, and Risk Management," *Journal of Finance*, forthcoming.

Campello, M., and D. Hackbarth, 2009, "Corporate Financing and Investment: The Firm-Level Credit Multiplier," Working Paper, University of Illinois.

Chen, H., and G. Manso, 2010, "Macroeconomic Risk and Debt Overhang," Working Paper, MIT.

Gamba, A., and A. Triantis, 2008, "The Value of Financial Flexibility," *Journal of Finance* 63, 2263-2296.

Hackbarth, D., 2009, "Determinants of Corporate Borrowing: A Behavioral Perspective," *Journal of Corporate Finance* 15, 389-411.

(\*) Hackbarth, D., and D. Mauer, 2009, "Optimal Capital Structure, Debt Structure, and Investment," Working Paper, University of Texas at Dallas.

Hennessy, C., 2004, "Tobin's Q, Debt Overhang, and Investment," *Journal of Finance* 59, 1717-1742.

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, 1705-1743.

Manso, G., 2008, "Investment Reversibility and Agency Cost of Debt," *Econometrica* 76, 437-442.

Morellec, E., and N. Schürhoff, 2010, "Dynamic Investment and Financing under Personal Taxation," *Review of Financial Studies* 23, 101-146.

(\*) Morellec, E., and N. Schürhoff, 2011, "Corporate Investment and Financing under Asymmetric Information," *Journal of Financial Economics* 99, 262-288.

Mauer, D., and A. Triantis, 1994, "Interactions of Corporate Financing and Investment Decisions: A Dynamic Framework," *Journal of Finance* 49, 1253-1277.

Mello, A. and J. Parsons, 1992, "Measuring the Agency Cost of Debt," *Journal of Finance* 47, 1887-1904.

Titman, S., and S. Tsyplakov, 2007, "A Dynamic Model of Optimal Capital Structure," *Review of Finance* 11, 359-400.

Tserlukevich, Y., 2008, "Can Real Options Explain Financing Behavior?" *Journal of Financial Economics* 89, 232-252.

## **6. Firm Boundaries and Mergers and Acquisitions**

Almeida, H., M. Campello, and D. Hackbarth, 2009, "Liquidity Mergers," Working Paper, University of Illinois.

Alvarez, L., and R. Stenbacka, 2006, "Takeover Timing, Implementation Uncertainty, and Embedded Divestment Options," *Review of Finance* 10, 417-441.

Bernile, G., E. Lyandres, and A. Zhdanov, 2008, "A Theory of Strategic Mergers," *Review of Finance*, Forthcoming.

Habib, M., and P. Mella-Barral, 2006, "Which Way to Grow? Merging, Allying, or Buying Assets," Working Paper, University of Zürich.

(\*) Hackbarth, D., and J. Miao, 2009, "The Timing and Returns of Mergers and Acquisitions in Oligopolistic Industries," Working Paper, Boston University.

(\*) Hackbarth, D., R. Mathews, and D. Robinson, 2010 "Innovation, Capital Structure, and the Boundaries of the Firm," Working Paper, Duke University.

Lambrecht, B., 2004, "The Timing and Terms of Mergers Motivated by Economies of Scale," *Journal of Financial Economics* 72, 41-62.

Margrabe, W., 1978, "The Value of the Option to Exchange One Asset for Another," *Journal of Finance* 33, 177-186.

Margsiri, W., A. Mello, and M. Ruckes, 2008, "A Dynamic Analysis of Growth via Acquisitions," *Review of Finance* 12, 635-671.

(\*) Morellec, E., and A. Zhdanov, 2005, "The Dynamics of Mergers and Acquisitions," *Journal of Financial Economics* 77, 649-672.

Morellec, E., and A. Zhdanov, 2008, "Financing and Takeover," *Journal of Financial Economics* 87, 556-581.

## **7. Corporate Finance and Asset Pricing**

Aguerrevere, F., 2009, "Real Options, Product Market Competition, and Asset Returns," *Journal of Finance* 64, 957-983.

Bena, J., and L. Garlappi, 2010, "Technological Progress, Industry Rivalry, and the Cross Section of Stock Returns," Working Paper, University of British Columbia.

Berk, J., R. Green, and V. Naik, 1999, "Optimal Investment, Growth Options, and Security Returns," *Journal of Finance* 54, 1553-1607.

Berk, J., R. Green, and V. Naik, 2004, "The Valuation and Return Dynamics of New Ventures," *Review of Financial Studies* 17, 1-35.

Bhamra, H., L. Kuehn, and I. Strebulaev, 2010, "The Levered Equity Risk Premium and Credit Spreads: A Unified Framework," *Review of Financial Studies* 23, 645-703.

Bustamente, C., 2010, "Strategic Investment, Industry Concentration, and the Cross Section of Returns," Working Paper, London School of Economics.

Carlson, M., A. Fisher, and R. Giammarino, 2005, "Corporate Investment and Asset Price Dynamics: Implications for the Cross-Section of Returns," *Journal of Finance* 59, 2577-2603.

(\*) Carlson, M., A. Fisher, and R. Giammarino, 2006, "Corporate Investment and Asset Price Dynamics: Implications for SEO Event Studies and Long-Run Performance," *Journal of Finance* 61, 1009-1034.

Carlson, M., A. Fisher, and R. Giammarino, 2010, "SEO Risk Dynamics," *Review of Financial Studies* 23, 4026-4077.

Chen, H., 2010, "Macroeconomic Conditions and the Puzzles of Credit Spreads and Capital Structure," *Journal of Finance* 65, 2171-2212.

Chen, L., P. Collin-Dufresne, and R. Goldstein, 2009, "On the Relation Between the Credit Spread Puzzle and the Equity Premium Puzzle," *Review of Financial Studies* 22, 3367-3409.

Cooper, Ilan, 2006, "Asset Pricing Implications of Non-Convex Adjustment Costs and Irreversibility of Investment," *Journal of Finance* 61, 139-170.

Garlappi, L., T. Shu, and H. Yan, 2008, "Default Risk, Shareholder Advantage, and Stock Returns," *Review of Financial Studies* 21, 2743-2778.

Garlappi, L., and H. Yan, 2010, "Financial Distress and the Cross-Section of Equity Returns," *Journal of Finance*, forthcoming.

(\*) Gomes, J., and L. Schmid, 2008, "Levered Returns," *Journal of Finance*, forthcoming.

Gomes, J., and L. Schmid, 2010, "Equilibrium Credit Spreads and the Macroeconomy," Working Paper, Duke University.

(\*) Hackbarth, D., and E. Morellec, 2008, "Stock Returns in Mergers and Acquisitions," *Journal of Finance* 63, 1213-1252.

(\*) Hackbarth, D., and T. Johnson, 2010, "Operational Flexibility and Stock Returns," Working Paper, University of Illinois.

Hackbarth, D., Haselmann, R., and D. Schoenherr, 2011, "Default Risk and Stock Returns," Working Paper, University of Illinois.

Li, E., 2007, "Corporate Governance, the Cross Section of Returns, and Financing Choices," Working Paper, University of Michigan.

Ozdogli, A., 2010, "Financial Leverage, Corporate Investment, and Stock Returns," Working Paper, University of Chicago.

Sagi, J., and M. Seasholes, 2007, "Firm Specific Attributes and the Cross-Section of Momentum," *Journal of Financial Economics* 84, 389-434.

## **8. Empirical Methods in Corporate Finance I**

(\*) Bertrand, M., E. Duflo, and S. Mullainathan, 2004, "How Much Should We Trust Differences-in-Differences Estimates?" *Quarterly Journal of Economics* 119, 249-275.

(\*) Bertrand, M., and S. Mullainathan, 2003, "Enjoying the Quiet Life? Corporate Governance and Managerial Preferences," *Journal of Political Economy* 111, 1043-1075.

Besley, T., and A. Case, 2000, "Unnatural Experiments? Estimating the Incidence of Endogenous Policies," *Economic Journal* 110, 672-694.

(\*) Butler, A., and J. Cornaggia, 2011, "Does Access to External Finance Improve Productivity? Evidence from a Natural Experiment," *Journal of Financial Economics* 99, 184-203.

Campello, M., and J. Graham, 2007, "Do Stock Prices Influence Corporate Decisions? Evidence from the Technology Bubble," NBER Working Paper #13640.

Card, D., and A. Krueger, 1994, "Minimum Wages and Employment: A Case Study of the Fast Food Industry in New Jersey and Pennsylvania," *American Economic Review* 84, 772-793.

Heckman, J., Lalonde, R., Smith, J., 1999, Handbook of Labor Economics, Vol. 3, O. Ashenfelter, and D. Card, eds. Lesevier North-Holland, Amsterdam.

Imbens, G., 2003, "Nonparametric Estimation of Average Treatment Effects under Exogeneity: A Review," NBER Technical Working Paper #294.

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

(\*) LaPorta, R, F. Lopez-De-Silanes, A. Shleifer, R. Vishny, 1998, "Legal Determinants of External Finance." *Journal of Finance* 52, 1131-1150.

Rosenzweig, M., and K. Wolpin, 2000, "Natural `Natural Experiments' in Economics," *Journal of Economic Literature* 38, 827-874.

(\*) Tang, T., 2009, "Information Asymmetry and Firms' Credit Market Access: Evidence from Moody's Credit Rating Format Refinement," *Journal of Financial Economics* 93, 325-351.

(\*) Wooldridge, J. M., 2002, Econometric Analysis of Cross Section and Panel Data, MIT Press. Cambridge, Mass. (Chapters 6, 10, and 18.)

## **9. Empirical Methods in Corporate Finance II**

(\*) Abadie, A., D. Drukker, J. Herr, and G. Imbens, 2004, "Implementing matching estimators for average treatment effects in Stata," *Stata Journal* 4, 290-311.

Abadie, A., and G. Imbens, 2002, "Simple and Bias-Corrected Matching Estimators for Average Treatment Effects," Working Paper.

(\*) Almeida, H., M. Campello, B. Laranjeira, and S. Weisbenner, 2009, "Corporate Debt Maturity and the Real Effects of the 2007 Credit Crisis," NBER Working Paper #14990.

(\*) Angrist, J., 1990, "Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence from Social Security Administrative Records," *American Economic Review* 80, 313-336.

Angrist, J., A. Krueger, 2001, "Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments," *Journal of Economic Perspectives* 15, 69-85.

Angrist, J., and V. Lavy, 1999, "Using Maimonides' Rule To Estimate The Effect Of Class Size On Scholastic Achievement," *Quarterly Journal of Economics* 114, 533-575

Becker, S., and M. Caliendo, 2006, "Sensitivity Analysis for Average Treatment Effects," *Stata Journal* 7, 71-83.

(\*) Becker, S., and A. Ichino, 2002, "Estimation of Average Treatment Effects Based on Propensity Scores," *Stata Journal* 2, 358-377.

Chava, S., and A. Purnanandam, 2011, "The Effect of Banking Crisis on Bank-Dependent Borrowers," *Journal of Financial Economics* 99, 116-135.

(\*) Chava, S., and M. Roberts, 2008, "How does Financing Impact Investment? The Role of Debt Covenants," *Journal of Finance* 63, 2085-2121

Dehejia, R., and S. Wahba, 1999, "Causal Effects in Nonexperimental Studies: Reevaluating the Evaluation of Training Programs," *JASA* 94, 1053-1062.

Dehejia, R., and S. Wahba, 2002, "Propensity Score Matching Methods for Non-Experimental Causal Studies," *Review of Economics and Statistics* 84, 151-161.

Gangl, M., 2004, "RBOUNDS: Stata Module to Perform Rosenbaum Sensitivity Analysis for Average Treatment Effects on the Treated," Working paper.

Hahn, J. P., Todd, and W. van der Klaauw, 2001, "Identification and Estimation of Treatment Effects with a Regression-Discontinuity Design," *Econometrica* 69, 201-209.

(\*) Imbens, G., and T. Lemieux, 2008, "Regression Discontinuity Designs: A Guide to Practice," *Journal of Econometrics* 142, 615-635.

Leuven, E., and B. Sianesi, 2003. "PSMATCH2: Stata Module to Perform Full Mahalanobis and Propensity Score Matching, Common Support Graphing, and Covariate Imbalance Testing," Boston College Department of Economics (Revised 2009).

(\*) Lee, S., 2008, "Randomized Experiments from Non-Random Selection in U.S. House Elections," *Journal of Econometrics* 142, 675-697.

(\*) Malmendier, U., and G. Tate, 2008, "Superstar CEOs," *Quarterly Journal of Economics*, forthcoming.

Nannicini, T., 2007, "A Simulation-Based Sensitivity Analysis for Matching Estimators," *Stata Journal* 7, 334-350.

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

Van der Klaauw, W., 2008, "Regression-Discontinuity Analysis: A Survey of Recent Developments in Economics," *LABOUR* 22, 219-245.

Villalonga, B., 2004, "Does Diversification Cause the Diversification Discount," *Financial Management* 33, 5-23.

Welch, I., 2010, "A Critique of Recent Quantitative and Deep-Structure Modeling in Capital Structure Research and Beyond," Working Paper, Brown University.

## **10. The Boundaries of the Firm and Internal Capital Markets**

(\*) Berger, Philip, and Eli Ofek, 1995, "Diversification's Effect on Firm Value," *Journal of Financial Economics* 37, 39-65.

(\*) Campa, J., and S. Kedia, 2001, "Explaining the Diversification Discount," *Journal of Finance* 57, 1731-1762.

(\*) Campello, M., 2002, "Internal Capital Markets in Financial Conglomerates: Evidence from Small Bank Responses to Monetary Policy," *Journal of Finance* 57, 2773-2805.

Chevalier, J., 2004, "What Do We Know About Cross-subsidization? Evidence from Merging Firms" *B.E. Journal of Economic Analysis and Policy* 4, article #3.

Comment, R., and G. Jarrell, 1995, "Corporate Focus and Stock Returns," *Journal of Financial Economics* 37, 67-87.

Dimitrov, V. and S. Tice, 2006, "Corporate Diversification and Credit Constraints: Real Effects Across the Business Cycle," *Review of Financial Studies* 19, 1465-1498.

Fee, E., C. Hadlock, and J. Pierce, 2009, "Investment, Financing Constraints, and Internal Capital Markets: Evidence from the Advertising Expenditures of Multinational Firms," *Review of Financial Studies* 22, 2361-2392.

Gertner, R., D. Scharfstein, and J. Stein, 1994, "Internal versus External Capital Markets," *Quarterly Journal of Economics* 109, 1211-1230.

Graham, J., M. Lemmon, and J. Wolf, 2002, "Does Corporate Diversification Destroy Value?" *Journal of Finance* 57, 695-720.

Klein B., R. Crawford, and A. Alchian, 1978, "Vertical Integration, Appropriable Rents, and the Competitive Contracting Process," *Journal of Law and Economics* 22, 297-326.

(\* Lamont, O., 1997, "Cash Flow and Investment: Evidence from Internal Capital Markets," *Journal of Finance* 52, 83-110.

(\* Lang, L., and R. Stulz, 1994, "Tobin's q, Corporate Diversification and Firm Performance," *Journal of Political Economy* 102, 1248-1280.

(\* Maksimovic V., and G. Phillips, 2002, "Do Conglomerate Firms Allocate Resources Inefficiently Across Industries? Theory and Evidence," *Journal of Finance* 57, 721-776.

Ozbas, O., and D. Scharfstein, 2009, "Evidence on the Dark Side of Internal Capital Markets," *Review of Financial Studies*, forthcoming.

Rajan, R., H. Servaes, and L. Zingales, 2000, "The Cost of Diversity: The Diversification Discount and Inefficient Investment," *Journal of Finance* 55, 35-80.

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## 12. Firm-Financier Relationships

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## LECTURE SCHEDULE

(Note: Tentative and subject to change)

Date	Subject
Jan. 21	Course Introduction / Investment Under Uncertainty
Jan. 28	Credit Risk and Optimal Capital Structure / Capital Structure Dynamics
Feb. 04	Empirical Methods in Corporate Finance I
Feb. 11	<b>No Class (External Seminar/Conference)</b>
Feb. 18	Empirical Methods in Corporate Finance II
Feb. 25	Interactions between Financing and Investment
Mar. 04	Firm Boundaries and Mergers and Acquisitions
Mar. 11	Empirical Methods in Corporate Finance II
Mar. 18	<b>No Class (Spring Break)</b>
Mar. 25	<b>No Class (Spring Break)</b>
Apr. 01	<b>Mini-AFAs</b>
Apr. 08	The Boundaries of the Firm and Internal Capital Markets
Apr. 15	Product Market Competition and Firm Policies / Firm-Financier Relations
Apr. 22	<b>Presentation of Project Proposal</b>
Apr. 29	Corporate Finance and Asset Pricing