

FINA 9110 SECTION 74-178
Asset Pricing: Theory and Evidence
Terry College of Business
University of Georgia
Spring Semester 2009

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Course Web Site: <http://terry.blackboard.com>

Office Hours: Wednesday 1:00 – 2:00 PM, Thursday 10:00- 11:00 AM, and by appointment.

Classroom: Caldwell 203

Class time: 3:30 – 4:45 PM on Monday and Wednesday.

Course Description: This course is a PhD-level course in asset pricing. The course focuses on empirical work in asset pricing but includes a theoretical review of intertemporal asset pricing models. Additionally, brief coverage of market microstructure and behavioral finance is included. The course picks up from the first finance PhD seminar, so it is assumed that students have a solid background in utility theory, the classic capital asset pricing model (CAPM), efficient markets, and other core concepts.

Textbooks:

- (1) The Econometrics of Financial Markets, by John Campbell, Andrew Lo, and Craig MacKinlay, Princeton University Press, 1997. **(CLM)**
- (2) Asset Pricing (Revised), by John Cochrane, Princeton University Press, 2005. **(JC)**

Other useful reference texts:

- (1) Foundations for Financial Economics, by Chi-fu Huang and Robert H. Litzenberger, Prentice Hall, 1988. **(HL)**
- (2) Theory of Financial Decision Making, by Jonathan Ingersoll, Rowman and Littlefield Publishers, 1987. **(ING)**
- (3) A quality MBA-Level Investments book may also be beneficial. Many times it is useful to read an MBA-level chapter in a particular area to provide an overview and intuition. “Investments” by Bodie, Kane, and Marcus is an example of a good MBA level text.

Prerequisites: FINA 9200 (Initial Finance PhD Seminar), ECON 8010 (Microeconomic Theory), ECON 8070 (Statistics for Econometrics). Calculus and linear algebra will be used in the development of the various models.

Course Topics: A tentative list of specific topics appears as the last part of this syllabus. While we may deviate from this list, it provides the basic structure for the course. I will provide a revised list if such deviations are substantial. The list includes a partial list of research papers that we will discuss. I anticipate making some additions, and possibly some deletions, to this list as the semester progresses.

Homework: The primary homework will be reading (and understanding) the various papers and chapters assigned. Accordingly, you should be familiar with the assigned papers prior to class. I will assign problems periodically to help you check your progress. Homework counts 25% of the class grade.

Course Project: There will be a formal course project, due near the end of the semester. I anticipate providing two alternatives. The first alternative will be to review multiple papers in an area that supplements our class coverage and then prepare a written review of the papers and make a presentation to the class. The second alternative will be a formal research paper proposal in the area of empirical asset pricing. This proposal should include the “front end” of a research paper and, possibly, some preliminary empirical results. Details to follow. The course project will count 25% of the class grade.

Class Attendance: We are all adults and know that you should attend every class. We also know that there may be legitimate major conflicts that arise. Please let me know in advance if you have a major conflict and will not be able to attend class or meet other course requirements.

Final Exam. The Final Exam is planned for Wednesday, May 6 at 3:30 – 6:30 PM in accordance with the university schedule. The Final Exam will count 40% of the course grade. Cheating on an exam will result in a grade of zero.

Laptop Computer Policy:

Laptops generally will not be needed for class. If you bring a laptop, then the laptop should only be used for activity directly related to class. Laptops should not be used to check e-mail, surf the web, or other non-class activities. If I perceive there is a “laptop problem”, then I reserve the right to implement a “laptops closed” policy.

Changes to syllabus: It is likely that I may need to make revisions to this syllabus as the course progresses. If the revisions are substantial, I will publish a revised syllabus to keep the class fully informed.

Grade Determination:

Homework	25 %
Class participation	10 %
Course Project	25 %
Final Exam	40 %

The grade breakdown will be based on the following: A/A-: 90-100; B+,B,B-: 75-89; C+,C,C-: 65-75; D: 55-65; and F: <55. Plus or minuses may be awarded for the extreme tails within the stated distributions, based on the student's numeric grade relative to the class.

Academic Honesty: All academic work must meet the standard contains in the university's "A Culture of Honesty." All students are responsible to inform themselves about these standards. Students will comply with the following guideline: "I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others."

TENTATIVE CLASS SCHEDULE

Note: Following is a list of related papers. We will not necessarily cover all these papers, but the list provides a starting point. Papers denoted by (B) indicate 'background' papers that will only be briefly discussed in class. Most papers are available electronically through common UGA web services. If a paper is not readily electronically available, then I will post it to the course Blackboard website.

PART I. Introduction

1. Siegel, J., and R. Thaler, 1997, "Anomalies: The Equity Premium Puzzle," JEP 11.
2. Campbell, 2000, "Asset Pricing at the Millenium", JF 55.
3. (B) Mehra and Prescott, 1985, "The Equity Premium: A Puzzle," JME 15.

PART II: Theoretical Review**A. The Capital Asset Pricing Model – (Review)**

1. **CLM**, Ch 5; **HL**, Ch 4.
2. Berk, J., 1995, "A Critique of Size-related Anomalies", RFS 8.

B. Intertemporal Capital Asset Pricing I –Stochastic Discount Factor

1. **CLM**, Ch. 8, **JC**, Ch. 1-6.
2. Lucas, R., "Asset Prices in an Exchange Economy," EMA 1978.
3. Hansen, L., and R. Jagannathan, 1991, "Restrictions on Intertemporal Marginal rates of Substitution Implied by Asset Returns," JPE 99.
4. Hansen and Jagannathan, 1997, "Assessing specification errors in stochastic discount factor models," JF 52.
5. Ahn, Conrad, and Dittmar, 2003, "Risk Adjustment and Trading Strategies,": RFS 16.
6. (B) Kan and Zhou, 1999, "A Critique of the Stochastic Discount Factor Methodology," JF 54.

7. (B) Cochrane, 2001, “A Rehabilitation of Stochastic Discount Factor Methodology,” Working Paper.
- C. Intertemporal Capital Asset Pricing Models II – Classical approach.
1. **ING**, Ch. 10-13, **JC**, Ch 9.
 2. Merton, 1973, “An Intertemporal Capital Asset Pricing Models, EMA.
 3. (B) Breeden, 1979, “An Intertemporal Capital Asset Pricing Model with Stochastic Consumption and Investment Opportunities,” JFE.
 4. (B) Cox, Ingersoll, and Ross, 1985, “An Intertemporal General Equilibrium Model of Asset Prices,” EMA.
- D. Introduction to Asymmetric Information in Asset Pricing and Market Microstructure
1. Kyle, A., 1985, “Continuous Auctions and Insider Trading,” EMA 50.
 2. (B) Grossman, S. and J. Stiglitz, 1980, “On the Impossibility of Informationally Efficient Markets,” AER 70.
 3. (B) Madhavan, 2000, “Market Microstructure: A Survey,” Working Paper.

PART III: Empirical Evidence

- A. The Random Nature of Stock Prices
1. **CLM**, Chapter 2, Chapter 12, Section 2.
 2. Fama, 1991, “Efficient Capital Markets II,” JF 46.
 3. Conrad and Kaul, 1988, “Time Variation in Expected Returns,” JB.
 4. Fama and French, 2002, “The Equity Premium”, JF 57.
 5. Schwert, 1990, “Why Does Stock Market Volatility Change over Time?,” JF 44.
 6. Scraggs, 1998, “Resolving the Puzzling Intertemporal Relation between the Market Risk Premium and Conditional Market Variance: A Two-Factor Approach”, JF 53.
 7. Guo and Whitelaw, 2006, “Uncovering the Risk-Return Relation in the Stock Market”, JF 61.
 8. (B) Bollerslev, Chou, and Kroner, 1992, “ARCH Modeling in Finance: A Review of the Theory and Empirical Evidence,” JEM 52.
 9. (B) French, Schwert, and Stambaugh, 1987, “Expected Stock Returns and Volatility, JFE 19.
- B. Background on Estimating and Evaluating Asset Pricing Models
1. **JC**, Chapters 10-16.
- C. Testing the CAPM
1. **HL**, Chapter 10.
 2. Fama and MacBeth, 1973, ‘Risk, Returns, and Equilibrium: Empirical Tests,’ JPE 91.
 3. Fama and French, 1992, “The Cross-section of Expected Stock Returns,” JF 47.
 4. Harvey, 1989, “Time-Varying Conditional Covariances in Tests of Asset Pricing Models,” JFE 89.

5. Jagannathan, R. and Wang, Z., 1996, "The Conditional CAPM and the Cross-Section of Expected Returns," JF 51.
 6. (B) Gibbons, 1982, "Multivariate Test of Financial Models: A New Approach.
- D. Multi-factor Asset Pricing Models
1. **CLM**, Ch. 6.
 1. Chen, Roll, and Ross, 1986, "Economic Forces and the Stock Market: Testing the APT and Alternative Asset Pricing Theories," JB 59.
 2. Fama and French, 1993, "Common risk factor in the returns on stocks and bonds," JF 59.
 3. (B) Ferson and Harvey, 1992, "The Variation of Economic Risk Premiums," JPE 99.
- E. Stock Liquidity.
1. Amihud, 2002, "Illiquidity and Stock Returns: cross-section and time-series effects," Journal of Financial Markets.
 2. Pastor and Stambaugh, 2003, "Liquidity Risk and Expected Stock Returns, JPE.
- F. Value versus Growth and Momentum
1. Fama and French, 1998, "Value versus Growth: The International Evidence", JF.
 2. Griffin, Ji, and Martin, 2003, "Momentum Investing and Business Cycle Risk: Evidence from Pole to Pole," JF 58.
 3. Gomes, Kogan, and Zhang, 2003, "Equilibrium Cross Section of Returns", JPE.
 4. Zhang, 2005, "The Value Premium", JF.
 5. Johnson, 2002, "Rational Momentum Effects:", JF.
 6. Liu and Zhang, "Momentum Profits, Factor Pricing, and Macroeconomic Risk", RFS.
 7. Stivers, and Sun, 2009, "Cross-sectional Return Dispersion and Time-Variation in Value and Momentum Premia," UGA Working Paper.
- G. Joint Stock and Bond Asset Pricing Research.
1. Fama and French, 1989, "Business Conditions and Expected Returns on Stocks and Bonds," JFE 25.
 2. Campbell, J. and J. Ammer, 1993, "What Moves the Stock and Bond Markets? A Variance Decomposition for Long-term Asset Returns." JF 48, 3-37.
 3. Campbell, Sundarem, and Viciera, 2008, "Inflation Best or Deflation Hedges? The Changing Risks of Nominal Bonds", Working Paper, Harvard University.
 4. Connolly, Stivers, and Sun, 2005, "Stock Market Uncertainty and the Stock-Bond Return Relation," JFQA , March 2005.

Part IV. Behavioral Finance (very briefly)

1. Daniel, Hirshleifer, and Subrahmanyam, 1998, "Investor Psychology and Security Market Under- and Overreactions," JF 53.
2. Daniel and Titman, 1997, "Evidence on the Characteristics of Cross Sectional Variation in Stock Returns", JF.
3. (B) Fama, E., 1998, Market efficiency, long-term returns, and behavioral finance, JFE 49.
4. (B) Barberis and Thaler, 2002, "A Survey of Behavioral Finance," Working Paper.

JOURNAL ABBREVIATIONS

1. EMA Econometrica
2. JB Journal of Business
3. JEP Journal of Economic Perspectives
4. JET Journal of Economic Theory
5. JF Journal of Finance
6. JFE Journal of Financial Economics
7. JFQA Journal of Financial and Quantitative Analysis
8. JME, Journal of Monetary Economics
9. JPE Journal of Political Economy
10. JPM Journal of Portfolio Management
11. REST Review of Economics and Statistics
12. RES Review of Economic Studies
13. JEM Journal of Econometrics
14. JFM, Journal of Financial Markets.