FACULTY OF MANAGEMENT
University of Toronto

FM 3030
Financial Theory of the Firm
Fall 1994

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Course Objective:

This is an introductory Ph.D. level course in finance. As prerequisites, it requires a sound understanding of microeconomic theory and an understanding and appreciation of finance problems. This background will come from the MA economic theory sequence and the second year MBA level finance courses. It is presumed that students are already familiar with the material in Copeland, T.E. and J. Fred Weston, (3rd ed.), Financial Theory and Corporate Policy, Addison-Wesley (1988). This course has traditionally relied very heavily on articles, primarily because no textbook has appeared, which covers the topics in an integrative manner consistent with a first Ph.D. course in finance. The closest to an appropriate textbook is: Huang, Chi-fu and Robert Litzenberger, Foundations for Financial Economics, North Holland, 1989 and its purchase is recommended. However, it is not as readable or as comprehensive as either of the following "classic" texts:

Fama, Eugene and Merton Miller, The Theory of Finance, Holt, Rinehart and Winston, New York, 1972.

Jack Hirshleifer, Investment, Interest and Capital, Prentice-Hall, New Jersey, 1970.

The interested reader may also find the following texts useful:

Clement Krouse, Capital Markets and Prices: Valuing Uncertain Income Streams, North-Holland, 1986.

Jonathan Ingersoll, Theory of Financial Decision Making, Rawman and Littlefield, 1987.

Course Evaluation:

The class will meet every Tuesday afternoon 3:00-6:00 p.m. in Room 207, FM building starting September 20th and concluding December 12th with a final examination worth 50% of the grade. Additionally, a one hour workshop will be held intermittently to discuss problem sets and have students present some of the papers on the reading list. This work will comprise the final 50% of the grade.

COURSE OUTLINE

Topic I: Capital Theory under Uncertainty

Chapters 1-7 in Hirshleifer.

Chapters 1-4 in Fama and Miller.

P. Samuelson, "An Exact Consumption Loan Model of Interest with or without the Social Contrivance of Money", Journal of Political Economy, (December 1958).

Topic II: Utility Theory

Chapter 1 in Huang and Litzenberger.

M. Rubinstein, "An Aggregation Theorem for Securities Markets", Journal of Financial Economics, **1** (1974).

R. Pollak, "Habit Formation and Dynamic Demand Functions", Journal of Political Economy, **78** (July-August 1970).

R. Pollak, "Interdependent Preferences", American Economic Review, **66** (June 1976).

M. Machina, "Dynamic Consistency and Non-Expected Utility Models of Choice under Uncertainty", Journal of Economic Literature, XXVII (December 1989).

Topic III: Risk Aversion

J. Pratt, "Risk Aversion in the Small and in the Large" Econometrica **32**, 1964.

G. Hawawini, "The Geometry of Risk Aversion: A Pedagogic Note", Journal of Economics and Business, **38**, 1986.

Topic III: Increasing Risk

M. Rothschild and J.E. Stiglitz, "Increasing Risk I: A Definition", Journal of Economic Theory, **2**, 1970.

Y. Kroll and H. Levy, "Stochastic Dominance: A Review and Some New Evidence", Research in Finance, **2**, 1980.

Huang and Litzenberger, Chapter 2.

Topic IV: Time-State Preference

K.J. Arrow, "The Role of Securities in the Optimal Allocation of Risk Bearing", Review of Economic Studies, **31**, 1964.

J. Hirshleifer and J. Riley, "The Analytics of Uncertainty and Information: An Expository Survey", Journal of Economic Literature (December 1979).

a) Application Papers

S. Myers, "A Time State Preference Model of Security Valuation", Journal of Financial and Quantitative Analysis, **3**, 1-33, 1968.

H. Varian, "Divergence of Opinion in Complete Markets", Journal of Finance, **30**, 1985.

S. Turnbull, "Measurement of the Real Rate of Interest and Relation Problems in a World of Uncertainty", Journal of Money Credit and Banking, (May 1981), 177-191.

E. Dyl, "A State Preference Model of Capital Gains Taxation", Journal of Financial and Quantitative Analysis, (September 1979), 529-535.

W. Brainard and F. Dolbear, "Social Risk and Financial Markets", American Economic Review, 360-370, 1971.

A. Kraus and R. Litzenberger, "A State Preference Model of Optimal Financial Leverage", Journal of Finance, **28**, 911-927, 1973.

Topic V: Mean Variance Analysis

H.M. Markowitz, Portfolio Selection: Efficient Diversification of Investments, (Wiley, New York), 1959.

J. Tobin, "Liquidity Preference as Behaviour Towards Risk", Review of Economic Studies, **25**, 65-86, 1958.

P.A. Samuelson, "The Fundamental Approximation Theorem of Portfolio Analysis in Terms of Means, Variances and Higher Moments", Review of Economic Studies, **37**, (1970), 537-542.

S.C. Tsiang, "The Rationale of the Mean-Standard Deviation Analysis: Skewness Preference and the Demand for Money", American Economic Review, **62**, (June 1972), 354-71.

O. Loistl, "The Erroneous Approximation of Expected Utility by Means of a Taylor Series Expansion: Analysis and Computational Results", American Economic Review, 66-5, (December 1976), 904-910.

H. Levy and H. Markowitz, "Approximating Expected Utility by a Function of Mean and Variance", American Economic Review, 69-3, (June 1979), 308-313.

J. Meyer, "Two Moment Decision Models and Expected Utility Maximisation", American Economic Review, 77-3, (June 1987), 421-430.

H. Levy, "The Demand for Assets Under Conditions of Risk", Journal of Finance (March 1973).

Huang and Litzenberger, Chapter 3.

Topic VI: Capital Asset Pricing

W.F. Sharpe, "Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk", Journal of Finance, **19**, 425-442, 1964.

J. Lintner, "The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets", Review of Economics and Statistics, **47**, 13-57, 1965.

R. Roll, "A Critique of the Asset Pricing Theory's Tests", Journal of Financial Economics, **4**, 129-176, 1977.

R. Roll and S. Ross, "On the Cross-Sectional Relation Between Expected Returns and Betas", Journal of Finance, (March 1994), 101-122.

L. Booth, "On the Relationship Between Time State Preference and Capital Asset Pricing Models", Financial Review, 19-2, 251-265, 1984.

b) Application Papers

E. Losq, and J.P.D. Chateau, "Generalization of the CAPM Based on the Property of the Covariance Operator", Journal of Financial and Quantitative Analysis, **17**, 783-797, 1982.

H. Levy, "Equilibrium in an Imperfect Market: A Constraint on the Number of Securities in the Portfolio", American Economic Review, (September 1978), 643-658.

E. Kim, "A Mean-Variance Theory of Optimal Capital Structure and Corporate Debt Capacity", Journal of Finance, (March 1978), 45-64.

W. Sharpe, Portfolio Theory and Capital Markets, McGraw-Hill, 244-273 (Appendixes), 1970.

Topic VII: Extensions to the CAPM

M. Brennan, "Capital Market Equilibriums with Divergent Borrowing and Lending Rates", Journal of Financial and Quantitative Analysis (December 1971).

F. Black, "Capital Market Equilibrium with Restricted Borrowing", Journal of Business (July 1972).

F. Milne and C. Smith, "Capital Asset Prices with Proportional Transactions Costs", Journal of Financial and Quantitative Analysis, **XV**, 1980.

A. Kraus and R. Litzenberger, "Skewness Preference and the Valuation of Risk Assets", Journal of Finance, **XXXI** (September 1976).

S. Ross, "Return Risk and Arbitrage" in I. Friend and J. Bicksler (ed.), Risk and Return in Finance, Balinger, Cambridge, 1976.

Topic VII: Multiperiod Models

Huang and Litzenberger, Chapters 7 & 8.

E. Fama, "Multiperiod Consumption - Investment Decisions", American Economic Review, (March 1970).

P. Samuelson, "Lifetime Portfolio Selections by Dynamic Stochastic Programmes", Review of Economics & Statistics (August 1969).

R. Stapleton and M. Subrahmanyan, "A Multiperiod Equilibrium Asset-Pricing Model", Econometrica, 46 (September 1978).

M. Rubinstein, "Securities Market Efficiency in an Arrow-Debreu Economy", American Economic Review (December 1975).

Topic VIII: Separation

Huang and Litzenberger, Chapter 4.

J. Mossin, The Economic Efficiency of Financial Markets, D.C., Heath, 1977.

S. Ross, "Mutual Fund Separation in Financial Theory: The Separating Distributions", Journal of Economic Theory, **17**, 1978.

Topic IX: Allocational Efficiency

S. Ross, "Options and Efficiency", Quarterly Journal of Economics, (February 1976).

N.C. Nielsen, "The Investment Decision of the Firm under Uncertainty and the Allocative Efficiency of Capital Markets", Journal of Finance, **31**, 1976.

Huang and Litzenberger, Chapter 5.

Topic X: Information Efficiency

S. Figlewski, "Market Efficiency in a Market with Heterogeneous Information", Journal of Political Economy, **86**, 1978.

J. Stiglitz and S. Grossman, "On the Impossibility of Informationally Efficient Markets", American Economic Review, **70**, 1980.

J.M. Keynes, "The State of Long-Term Expectations", in The General Theory of Employment, Interest and Money, MacMillan, Chapter 12, 1936.

c) Application Papers

D. Scharfstein and J. Stein, "Herd Behaviour and Investment", American Economic Review (June 1990).

J. De Long et al, "Noise Trader Risk in Financial Markets", Journal of Political Economy, **98**, 1990.

F. Black, "Noise Trading", Journal of Finance, (May 1989).