Simon Fraser University
Faculty of Business Administration

BUS 902
SECURITY ANALYSIS

INSTRUCTOR: Prof. GEOFFREY POITRAS
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Course Outline: This course provides an introduction to theoretical and practical issues involved in the market valuation of securities. The course covers three general areas: valuation of fixed income securities; valuation of equity securities and implications of combining securities in portfolios.

Required Readings: A readings package, sold at cost, will be distributed in the first few weeks of class.

Recommended Texts:

F. Fabozzi, Bond Markets, Analysis and Strategies (4th ed.), Prentice-Hall, 2000.
G. Poitras, The Early History of Financial Economics, 1478-1776, Elgar, 2000.
S. Penman, Financial Statement Analysis and Security Valuation, New York: McGraw-Hill, 2001.

In Addition to the Recommended Texts, Some other Supplementary Texts:

Z. Bodie, A. Kane and A. Marcus, Investments Irwin, 1993 (2nd ed.)
E. Elton and M. Gruber, Modern Portfolio Theory and Investment Analysis New York: Wiley, 1995.
Foster, Financial Statement Analysis, Prentice Hall, 1986 (2nd ed.)
B. Graham, D. Dodd and S. Cottle, Security Analysis New York: McGraw-Hill, 1962.
J. Hull, Options, Futures and Other Derivative Securities, Prentice-Hall, 1995.
S. Mason, R. Merton, A. Perold and P. Tufano, Cases in Financial Engineering, Prentice-Hall, 1995.
K. Palepu, P. Healy and V. Bernard, Business Analysis and Valuation, Cincinnati: Southwestern, 2000.

Other Useful Readings:

P. Bernstein, Capital Ideas, The Improbable Origins of Modern Wall Street, New York: Free Press, 1992.
O. Grabbe, International Financial Markets, New York: Elsevier, 1991.
B. Malkiel, A Random Walk Down Wall Street, New York: Norton, 1995.
J. Nofsinger, The Psychology of Investing, Upper Saddle River, NJ: Prentice-Hall, 2002.

Evaluation:

Class Participation	10%
Group Presentation	20%
Term Project	20%
Assignments	25%
Final Exam	25%

DETAILED COURSE OUTLINE

NOTE: Material included in the Readings Package is listed with a (*).

BACKGROUND READING

This material is recommended for students with only a rudimentary knowledge of financial markets.

Elton and Gruber, Chap. 2-3

Mason, Merton, Perold and Tufano, "The US Government Debt Market and the Structure of Interest Rates", p.87-116.

PART I. History of Security Analysis

Week 1: Introduction: Discussion of Security Analysis

–Class Organization: Creation of Groups, Discussion of Evaluation, Review of Syllabus

--Course Overview: Basics of Financial Markets, Money Markets, Bond Markets, Equity Markets.

--Important Topics in the Early History: Commercial Arithmetic, Interest Calculations and Early Types of Securities

--Assigned Readings: Poitras, Ch. 2, 4, 5.

Week 2: Life Annity Valuation

--De Witt's Theoretical Solution: Pricing Contingent Claims

-- Halley's Life Table Valuation: Using a life table to value a life annuity

-- De Moivre's Approximation: Simplifying the Pricing Formula

-- Bernoulli's Problem: Contingent claims versus annuities certain

--Assigned Readings: *Poitras Ch. 6

Week 3: Development of Security Analysis in the 20th Century

--Graham and Dodd's <u>Security Analysis</u> (1934)

--Assigned Readings: Graham and Dodd (1934), Pt. I; Bernstein; Malkiel

PART II. Fixed Income Valuation

Week 4. Review of Modern Fixed Income Concepts and Introduction to Immunization Theory

--Basic Fixed Income Calculations, How to Price Bonds and Mortgages, Introduction to Duration and Convexity

--Completion of Review of Fixed Income Concepts; How to calculate spot interest rates; Classical immunization theory

--Assigned Readings: *Fixed Income Problem Set and Solutions Handout; *Fabozzi, Chap. 2.; *Handout on Types of Interest Rates, etc.; *Fabozzi, Chap. 4; Sample TSP program for calculating spot interest rates.

--Background Readings:

*Carron, "Understanding CMOs, REMICs and Other Mortgage Derivatives", Institutional Investor (1992)

*Crabbe and Nikoulis, "The Putable Bond Market: Structure, Historical Experience and Strategies", Journal of Fixed Income (1995).

Week 5. Convexity and Time Value; Immunization with Non-Parallel Yield Curve Shifts

--Use of Univariate Taylor Series to demonstrate role of convexity; Decomposition of multivariate Taylor series expansion for the bond price function into components for Duration, Convexity and Time Value.

--Use of Taylor Series Expansions; Reitano's Model and Extreme Bounds on the Duration of Surplus

--Assigned Readings:

*Chance and Jordan, "Duration, Convexity and Time as Components of Bond Returns", Journal of Fixed Income (1996)

*Christensen and Sorensen, "Duration, Convexity and Time Value' Journal of Portfolio Management (1994).

*Reitano (1992); *Fabozzi, Chap. 4

*Falkenstein and Hanweck, "Minimizing Basis Risk from Non-Parallel Shifts in the Yield Curve", Journal of Fixed Income (1996).

Week 6. Introduction to Option Bonds and OAS; Pitfalls in Option Adjusted Spread Analysis

--Different Types of Option Bonds; Overview of Mortgage-Backed Securities; Derivation of Duration and Convexity for Callable/Option Bond.

--Static Spread; Use of binomial process to determine the OAS for a callable bond; Pitfalls in the use of OAS.

--Assigned Readings: *Fabozzi, Chap. 13, 14.

*Babbel and Zenios, "Pitfalls in the Analysis of Option-Adjusted Spreads", Financial Analysts Journal (1992).

*Kopprasch, "Option-Adjusted Spread Analysis: Going Down the Wrong Path?", Financial Analysts Journal (1994).

*Kupiec and Kah, "On the Origin and Interpretation of OAS", Journal of Fixed Income (1999).

PART III: Equity Valuation

Week 7: Valuation Models for Stock Prices

-- Overview of Approaches to Security Analysis; Cash Flow Models of Equity Valuation.

--Assigned Readings:

*Damodaran, Damodaran on Valuation, Chp. 1,3,6,7

Dynkin, Hyman and Wu, “Value of Skill in Security Selection versus Asset Allocation in Credit Markets”, Journal of Portfolio Management, Fall 2000.

*Stickney, "The Academic's Approach to Securities Research: Is it Relevant to the Analyst?", Journal of Investing, Summer 1997.

*Penman and Sougiannis, "A Comparison of Dividend, Cash Flow and Earnings Approaches to Equity Valuation", Contemporary Accounting Research, Fall 1998.

*Herzberg, Guo and Brown, "Enhancing Earnings Predictability Using Individual Analyst Forecasts", Journal of Investing, Summer 1999.

*Christofi, Christofi, Lori and Moliver, "Evaluating Common Stock's Using Value Line's Projected Cash Flows and Implied Growth Rate", Journal of Investing (1999).

Jensen, "Agency Costs of Free Cash Flow, Corporate Finance and Takeovers", American Economic Review May 1986.

S. Penman, Financial Statement Analysis and Security Valuation, New York: McGraw-Hill, 2001.

Week 8: Fundamental Analysis; Hedge Funds

--Techniques of Fundamental Analysis

--Graham and Dodd on Value Investing

--Hedge Funds

--Assigned Readings:

*Graham and Dodd, Security Analysis (1934), Chp. XXVII

Abarbanell and Bushee, "Fundamental Analysis, Future Earnings and Stock Prices", Journal of Accounting Research, Spring 1997.

White, Sondhi and Fried, The Analysis and Use of Financial Statements Chp. 2, 4, 15.

*Ackermann, McEnally, Ravenscraft, "The Performance of Hedge Funds: Risk, Return and Incentives", Journal of Finance (1999).

*Liang, "Hedge Funds: The Living and the Dead", JFQA (2000).

WEEKS 9-11: GROUP PRESENTATIONS

PART IV. Portfolio Management

Week 12: Review of Mean-Variance Optimization Model; International Diversification

--Assigned Readings:

Elton and Gruber, Modern Portfolio Theory, Chp. 4,5,6.

Bodie, Kane and Marcus, Investments, Chp. 23-4.

Grabbe, International Financial Markets, Chp. 11.

*Eun and Resnick, "International Diversification of Investment Portfolios: US and Japanese Perspectives" Management Science, Jan. 1994.

PART V: Technical Analysis

Week 13: Technical Trading Systems; The Dow Theory; Herding

--The Dow Theory

--Herding Behaviour by Institutions

--Assigned Readings

*Brown, Goetzmann, Kumar, "The Dow Theory: William Peter Hamilton's Track Record Reconsidered", Journal of Finance (1998).

*Russell, The Dow Theory Today, Chp. 1

*Nofsinger and Sias, "Herding and Feedback Trading by Institutional and Individual Investors", Journal of Finance (1999).

Brock, Lakonishok and LeBaron, "Simple technical trading rules and stochastic properties of stock returns", Journal of Finance (1992).