Simon Fraser University
Beedie School of Business

BUS 417
SECURITY ANALYSIS

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Course Outline: Recognizing the global reach of securities markets, 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. Practical course content involves coverage of Canadian, American, European and Hong Kong companies and the implications of exchange risk.

Required Text:
Geoffrey Poitras, *Security Analysis and Investment Strategy*, Oxford, UK: Blackwell, 2005.

Supplementary Texts:
Geoffrey Poitras, *Valuation of Equity Securities*, Singapore: World Scientific, 2011.
_____, *Equity Capital: From Ancient Partnerships to Modern Exchange Traded Funds,* Routledge, 2016.

Helpful Texts:
G. Poitras, (ed.), *Stock Market Globalization Handbook*, Elgar 2012.
F. Fabozzi, *Bond Markets, Analysis and Strategies* (6th ed.), Prentice-Hall, 2007.
G. Poitras, *The Early History of Financial Economics, 1478-1776*, Elgar, 2000.
S. Penman, *Financial Statement Analysis and Security Valuation*, (4th ed.) New York: McGraw-Hill, 2009.

Some other Supplementary Texts:
P. Bernstein, *Capital Ideas, The Improbable Origins of Modern Wall Street*, New York: Free Press, 1992.
Z. Bodie, A. Kane and A. Marcus (et al.), *Investments* Irwin, 2008 (6th Can. ed.)
E. Elton and M. Gruber, *Modern Portfolio Theory and Investment Analysis* New York: Wiley, 2009 (9th ed.).
B. Graham, D. Dodd and S. Cottle, *Security Analysis* (4th ed.) New York: McGraw-Hill, 1962.
J. Hull, *Options, Futures and Other Derivative Securities*, Prentice-Hall, 2009 (7th ed.).
B. Malkiel, *A Random Walk Down Wall Street*, New York: Norton, 2003 (1st ed. 1975).
S. Mason, R. Merton, A. Perold and P. Tufano, *Cases in Financial Engineering*, Prentice-Hall, 1995.
K. Palepu and P. Healy, *Business Analysis and Valuation*, (4th ed.) Cincinnati: Southwestern, 2007.

Evaluation:
Class Participation 10% (Game, Math Pretest)
Group Presentation 20% (Group and Individual Scores)
Term Project 20% (On approved topics, see 'Tips' on class webpage)
Assignments 25% (See class webpage)
Final Exam (In-class) 25% (Exam is cumulative)

DETAILED COURSE OUTLINE

NOTE: The textbooks are listed as SAIS and VES. There is overlap between these texts.

BACKGROUND READING

This material is recommended for students with only a rudimentary knowledge of US 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
- Basics of Global Financial Markets, Bond Markets, Equity Markets.
- Math Pretest Review
- What is Security Analysis?

Necessary Readings: SAIS, sec.1.1, 2.3 and/or VES ch.3

Week 2: ***Early History of Securities and Life Annuity Valuation***

- Early History of Equity and Fixed Income Securities
- 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

Necessary Readings: SAIS, sec. 2.1

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

- The Dow Theory and Technical Analysis
- Emergence of Financial Reporting in England and the US
- Graham and Dodd's *Security Analysis* (1934)
- The Emergence of Modern Finance

Necessary Readings: SAIS, sec. 1.2, 2.3 and 2.4; VES ch.3

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
- Differences between US and Canadian Mortgages
- Review of how to calculate spot interest rates
- Introduction to Duration and Convexity
- Basics of US Credit and Default Risk (time permitting)

Necessary Readings: SAIS, sec. 4.1, 4.2 and 4.3; VES sec. 4.3

Week 5. ***Duration, Convexity and Time Value***

– Classical immunization theory
– Use of Taylor Series Expansions
– Demonstrating the role of convexity
– Decomposition of multivariate Taylor series expansion for the bond price function

Necessary Readings: SAIS, sec. 5.1, 5.2 and 5.3

Week 6. ***Introduction to Option Bonds and OAS***

– Different Types of Option Bonds;
– Overview of US and Canadian Mortgage-Backed Securities;
– Derivation of Duration and Convexity for Callable/Option Bond (Optional)
– Use of Monte Carlo to determine the OAS for a callable bond
– Pitfalls in the use of OAS.

Necessary Readings: SAIS, sec. 4.4, 6.1 and 6.3

PART III: Equity Valuation and Investment Strategy

Week 7: ***Fundamental Analysis and Value Investing***

– Overview of Approaches to Security Analysis
– What is Value Investing?
– Observations from the Classics

Necessary Readings: SAIS, sec. 7.2, 7.3 and 7.4; VES ch.4

Week 8: ***Valuation Models for Stock Prices***

– Cash Flow Models of Equity Valuation.
– Financial Statement Analysis Across Countries
– Determining the Value Drivers
– Cases in Fundamental Analysis

Necessary Readings: SAIS, sec. 8.1, 8.2 and 8.3; VES ch.7 and ch.8

WEEKS 9-11:
GROUP PRESENTATIONS
Examine Case Downloads from the Class Webpage for
Canadian, US and Hong Kong Publicly Traded Companies

Week 12: ***Technical Trading Systems: The Dow Theory, Charting and Oscillators***

– What is Technical Analysis?
– The Dow Theory Again
– Edwards and Magee, *Technical Analysis of Stock Trends* (1948)
– Momentum and Oscillators

Necessary Readings: SAIS, sec. 9.1, 9.2 and 9.4 and/or VES ch.6

Week 13: ***Investment Strategies and Asset Allocation***

- The Philosophy of Investment
- The Markowitz Optimization Model
- Two Fund Separation and FX Risk
- Tactical and Strategic Asset Allocation

Necessary Readings: SAIS, sec. 2.4, 3.1, 3.2 and 10.2