

SIMON FRASER UNIVERSITY
Faculty of Business Administration

FINAL EXAM

BUS 417-D1 Security Analysis
Prof. Geoffrey Poitras

07-1

EXAM INSTRUCTIONS: Please record all answers in the examination book provided. Calculators with enhanced capabilities such as the ability to attach external drives, whether such drives are attached or not, are prohibited. The exam is closed book, no books or other supplementary materials are permitted to be used during the examination.

EXAM DURATION: TWO HOURS

DO ALL PARTS OF ALL QUESTIONS (Each question is worth 25 total points – 10 points for part a and 15 points for part b for two part questions)

1.a) The Fisher (1975) approach to company analysis emphasizes the importance of "four dimensions" to assess in determining the value of a company's common stock: people factors, business factors, 'the investment characteristics of some businesses' and 'the price of the investment'. Using these factors identify the **TWO MOST** outstanding common stock purchase from all of the different sectors that were examined during the in-class presentations. Where there any elements of Fisher's factors that could not be directly applied to this company?

b) Philip Fisher makes the following observation in Developing an Investment Philosophy (1980):

There are a relatively small number of truly outstanding companies. Their shares frequently can't be bought at attractive prices. Therefore, when favorable prices exist, full advantage should be taken of the situation. Funds should be concentrated in the most desirable opportunities. For those involved in venture capital and quite small companies, say with annual sales of under \$25,000,000, more diversification may be necessary. For larger companies, proper diversification requires investing in a variety of industries with different economic characteristics. For individuals (in possible contrast to institutions and certain types of funds), any holding of over twenty different stocks is a sign of financial incompetence. Ten or twelve is usually a better number. ... As an individual's holdings climb toward as many as twenty stocks, it nearly always is desirable to switch from the least attractive of these stocks to more of the attractive..

Comment on the implications of this statement for the management of a portfolio common stocks. In your answer be sure to provide an assessment of the validity of the statement as well as a discussion of the minimum possible time period a stock would have to be held after purchase if the statement were correct.

2.a) What is a "classical immunization" strategy? What conditions are required to ensure that a

classical immunization strategy will protect the surplus of a fixed income portfolio from changes in interest rates?

b) "The search for the 'correct' way to value common stocks, or even one that works, has occupied a huge amount of effort over a long period of time....the implementation of a system to selectively value or select common stocks is a difficult task. This is a task that a valuation model purports to accomplish."

Describe the **discounted dividend** cash flow valuation models conventionally used to analyse common stocks. How do these models differ from valuation models that discount cash flows other than dividends? What are some important limitations of using accounting data to implement discounted cash flow valuation? Explain the rationale for your selection.

3. In *Memoirs of the Dean of Wall Street* (1996), Benjamin Graham observed that:

"I have little confidence even in the ability of analysts, let alone untrained investors, to select common stocks that will give better than average results. Consequently, I feel that the standard portfolio should be to duplicate, more or less, the DJIA."

Comment on the implications of this statement for the valuation of securities. In your answer be sure to provide an assessment of the validity of the statement as well as a discussion of how investment strategy would have to be formulated if the statement were correct.

4.a) You are given the following information about a (fictional) Government of Canada yield curve: 1 year treasury bill 5% 2 year par bond 6% 3 year par bond 6.5% 4 year par bond 7% Calculate all possible implied forward interest rates. (Hint: You will need to calculate the implied zero coupon interest rates to do this.)

b) Contrast the solutions to the life annuity valuation problem developed by de Witt and de Moivre. Be sure to explain: the connection of the pricing formulas to pricing using discounted expected value; and, to identify the limitations for each of the solutions. Demonstrate that the de Moivre formula is equivalent to the de Witt formula with uniformly distributed death rates.

BONUS QUESTIONS: (5 points each)

B1. You are in the market for a house. Your effective all-in market borrowing rate for a second mortgage from a bank is 8.5%. One of the houses you are considering purchasing has an assumable \$300,000, 4 year second mortgage at 9.75%, with a 22 year amortization. The asking price on the house is \$600,000. What reduction in the sales price of the house is warranted if, as part of the purchase, you assume the vendor's mortgage?

B2. Outline the new rules announced by the federal government on Oct. 31, 2006, and implemented in the March 2007 Federal budget, regarding the use of a unit trust structure by publicly traded Canadian companies. What exemptions to the new rules were provided? Was the market reaction, a sharp downward revision in the value of affected trusts, consistent with the cash flow implications of the new rules? What has happened to the prices of unit trusts since the Oct. 31 announcement.