SIMON FRASER UNIVERSITY
Faculty of Business Administration

FINAL EXAM

BUS 417-E200 Security Analysis 09-3
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EXAM INSTRUCTIONS: Please record all answers in the examination book provided. Calculators with enhanced capabilities such as the ability to input executable programs or 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 **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):

> For those primarily seeking major appreciation of their capital, de-emphasize the importance of dividends. The most attractive opportunities are most likely to occur in the profitable, but low or no dividend payout groups. Unusual opportunities are much less likely to be found in situations where high percentage of profits is paid to stockholders.

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 potential bias in the security selection process that adhering to this observation could produce.

2.a) An important drawback of "traditional yield spread analysis" is the "failure to take into account future interest rate volatility that would affect the expected cash flow" of a fixed income security. What is option adjusted spread analysis? How does this technique correct for the "failure" of traditional yield spread analysis in the valuation of bonds with embedded option features? Once the option adjusted spread has been determined, how can the cost of option be calculated? What are some important pitfalls of option adjusted spread analysis?

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. Warren Buffett has observed:

> "Academics ... like to define investment 'risk' differently, averring that it is the relative volatility of a stock or portfolio of stocks – that is, their volatility as compared to a large universe of stocks. Employing data bases and statistical skills, these academics compute with precision the 'beta' of a stock – its relative volatility in the past – and then build arcane investment and capital-allocation theories around this calculation. In their hunger for a single statistic to measure risk, however, they forget a fundamental principle: It is better to be approximately right than precisely wrong."

Comment on the implications of this statement for the analysis and 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 1% 2 year par bond 2% 3 year par bond 2.5% 4 year par bond 3%
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 6.5%. One of the houses you are considering purchasing has an assumable $500,000, 4 year second mortgage at 9.75%, with a 22 year amortization. The asking price on the house is $800,000. 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? Provide a discussion of the potential equity market reaction to the transition of unit trusts to corporate status in 2011.