

**SIMON FRASER UNIVERSITY**  
*Faculty of Business Administration*

**FINAL EXAM**

BUS 417 Security Analysis  
Prof. Geoffrey Poitras

11-3

**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. Use of devices with communications abilities, such as cell phones, is 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)**

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) The Graham and Dodd ‘value investing’ approach to security analysis emphasizes the importance of calculating an *intrinsic value* and comparing this value to the observed market price. A security is eligible for purchase if the difference between intrinsic value and market price exceeds the *margin of safety*. Finally, value investing requires an acceptable level of *diversification*. Using this approach, identify the best value investing portfolio of **THREE** common stocks selected from all of the different sectors that were examined during the in-class presentations. (Hint: Be sure to explain the value investing rationale for each stock selected.)

2.a) Contrast the solutions to the life annuity valuation problem developed by de Witt, Halley and de Moivre. Be sure to identify relevant assumptions used to obtain the solutions and to explain the connection of each life annuity pricing formula to pricing using discounted expected value.

b) "Whether the bond market moves up or down, high-convexity portfolios will always outperform low-convexity portfolios of equal duration and yield." Explain the argument supporting this statement and the connection to the classical immunization strategy. What factors would tend to undermine the validity of the statement? What are the implications of this result for the asset/liability managers seeking to control interest rate risk for the fixed income portfolio of a life insurance company? Is it true that "the cost of a higher convexity is a lower yield"?

3.a) 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 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. Sometimes the costs of the capital gains tax may justify taking several years to complete a move towards concentration. 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 potential bias in the security selection process that adhering to this observation could produce.

b) 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) Describe the evolution of security analysis from 1900 to the present. In your answer be sure to identify seminal contributions to the different approaches to the subject and to provide an overview of the essential elements of these possible approaches.

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?

**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 with a seven year term from a bank is 8.55%. The vendor of one of the houses you are considering purchasing is willing to undertake a \$500,000 second mortgage, with a 7 year term at 5.25%, and a 25 year amortization period. The asking price on the house is \$800,000. What adjustment to the sales price of the house is warranted if, as part of the purchase, you take up the vendor’s second mortgage offer?

B2. 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 required the elimination of favourable corporate tax treatment no later than Jan.1, 2011 Provide a discussion of the actual equity market reaction to the transition of unit trusts to corporate status in 2011. (Hint: Be sure to discuss the implications for entities that were exempt from the rules).