

SIMON FRASER UNIVERSITY
Faculty of Business Administration

FINAL EXAM

BUS 417-D1, Security Analysis
Prof. Geoffrey Poitras

05-3

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) Philip Fisher makes the following observation in Developing an Investment Philosophy (1980, p.44):

“The basic ingredient in outstanding common stock management is the ability neither to accept blindly whatever may be the dominant opinion in the financial community at the moment nor to reject the prevailing view just to be contrary for the sake of being contrary. Rather, it is to have more knowledge and to apply better judgment, in thorough evaluation of specific situations and the moral courage to act ‘in opposition to the crowd’ when your judgment tells you you are right.”

Comment on the implications of this statement for the valuation of common stocks. In your answer be sure to provide an assessment of the validity of the statement as well as a discussion of how security valuation would have to be conducted if the statement were correct.

b) 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 three most outstanding common stock purchases from all of the different sectors that were examined during the in-class presentations. For each of these three companies, what elements of Fisher's factors could not be applied?

2.a) "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 **three** discounted cash flow valuation models conventionally used to analyse common

stocks. What are some important limitations of using accounting data to implement discounted cash flow valuation? What is the appropriate variable to use for the cash flow that is to be discounted? Explain the rationale for your selection.

b)i) 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?

3. In chapter 12 of The General Theory J.M. Keynes described the process of valuing common stocks as: "a game of Snap, of Old Maid, of Musical Chairs – a pastime in which he is victor who says *Snap* neither too soon nor too late, who passes the Old Maid to his neighbor before the game is over, who secures a chair for himself when the music stops." 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 security valuation would have to be conducted if the statement were correct.

4.a) 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.

b) Assuming arithmetically declining death rates, derive the formula for the modified duration of a life annuity. Given an interest rate of 6%, what is the modified duration of a life annuity for a 12 year old person that cannot live beyond 100 years.

BONUS QUESTIONS: (5 points each)

B1. You are in the market for a house. Your effective all-in market borrowing rate for a house mortgage from a bank is 5.5%. One of the houses you are considering purchasing has an assumable \$300,000, 4 year mortgage at 8%, with a 14 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. Describe how a company such as Adobe can use current accounting standards for employee stock option compensation to manipulate the earnings reported in the income statement. What problems are confronting regulators in mandating accurate accounting standards for employee equity based compensation expenses?