Corporate Finance Exam
April 25, 2003
Professor Bullard

This is a 180-minute exam. The number of minutes for each question represents its proportionate weight for grading (e.g., a 9 minute question will determine 5% of your exam grade).

This will be a time-pressured exam. Answer the questions you know best first. Answer in any order you wish. Answer all of the questions, even if you have to guess (at least guess "yes" or "no" for the yes/no questions).

When the question says "yes or no," write the word "yes" or "no" at the beginning of your answer.

One way to manage your time best might be to answer all of the short answer questions you understand well first, thereby giving you a better idea of how much time you will have for the longer ones. (In other words, invest in the questions with a lower standard deviation time-wise relative to their expected return point-wise, taking into account your particular risk/return preferences.)

This is an open-book, open-paper, open-any-source exam.

I am not interested in particular cases or case names, and you will get no credit for referring to them. Of course, you may refer to a particular case as a short-hand way of illustrating a point, but be sure you've got it right, or you will lose points. It's generally safer to illustrate the point by illustrating the point.

Write on only one side of a blue book page.

This is an outline of the questions for your convenience:

| Topic | Questions | Points |
|---|---|---|
| Valuation | 1 – 5 | 15 |
| Closely Held Corporations/Common Stock | 6 – 8 | 42 |
| Preferred Stock | 9 – 11 | 35 |
| Debt | 12 – 14 | 16 |
| Mergers | 15 – 16 | 20 |
| Sale of Control | 17 – 20 | 28 |
| Tender Offers | 21 – 22 | 24 |
| | | Total: 180 |

Good luck!

## VALUATION

### Question 1

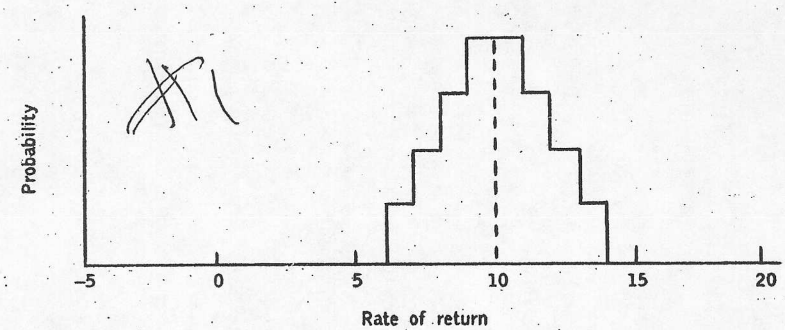
Shareholder A buys shares of Company A, which has a price/earnings ratio of 50/1. Shareholder B buys shares of Company B, which has a price/earnings ratio of 10/1. Which shareholder expects a greater increase in the company's earnings in the future? Explain why. **(2 minutes)**

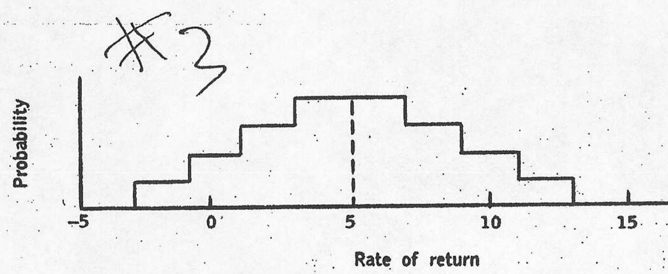
### Question 2

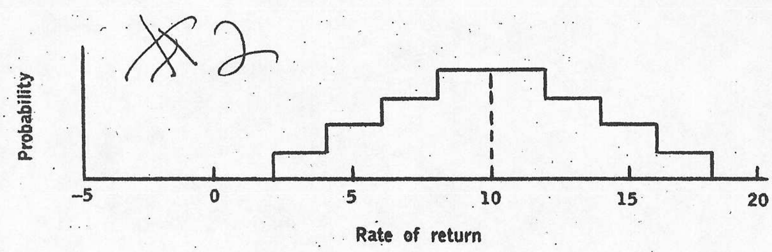
The court is considering two discount rates for purposes of valuing a company's shares: 5% or 20%. Your client wants the highest valuation possible. For which discount rate do you argue and why (provide an illustration assuming that the company's earnings are $1/share)? **(2 minutes)**

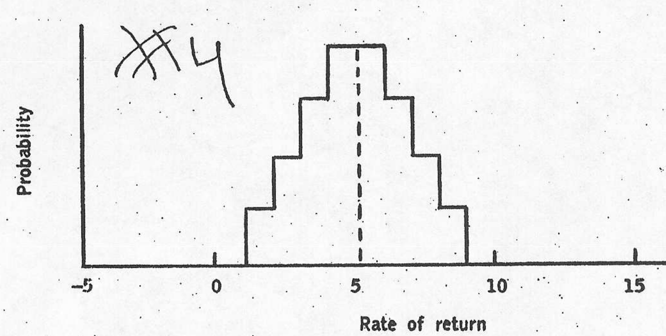
### Question 3

The following graphs show the distribution of returns for four different portfolios. Please rank them in order of preference and explain your ranking. **(4 minutes)**



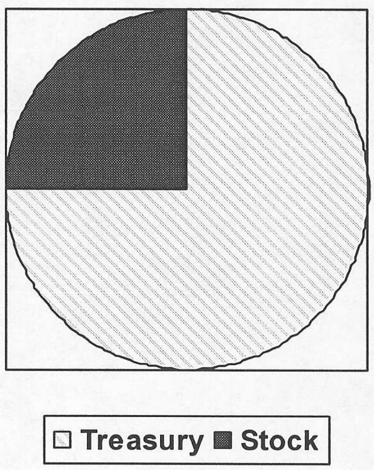
Question 4

What role does beta play in the capital asset pricing model? **(3 minutes)**

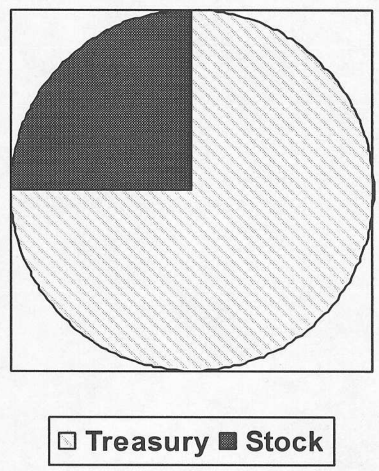
Question 5

Consider two portfolios. Each has 75% government bonds that have a fixed, risk-free return of 8%. The other 25% is stocks. The stocks in Portfolio A have a return of 20% and a risk of 20%. The stocks in Portfolio B have a return of 16% and a risk of 16%. Which portfolio has superior risk-return characteristics and why (show how you arrived at your answer)? **(4 minutes)**

Portfolio A
Risk = 20%
Return = 20%




Portfolio B
Risk = 16%
Return = 16%



## CLOSELY HELD CORPORATIONS/COMMON STOCK

Question 6

Closely held Company A is financed with contributions from three persons: $50,000 from Joe, $5,000 from Sam, and $5,000 from Jill. Company A is on shaky financial ground and needs an infusion of cash. This will require that Company A incorporate. Joe wants each of the three owners to contribute the same amount of capital ($5,000 each), with the excess of his contribution being issued to him in the form of unsecured debt (a $45,000 note).

A) If Company A becomes bankrupt, will Joe's debt be treated as debt that is entitled to a pro rata share of liquidation proceeds along with other unsecured creditholders? Why or why not? **(6 minutes)**

B) Assume that Company A had $500,000 in annual sales. Will Joe's argument be stronger if Company A is in a high turnover business (yes or no)? Please explain. **(2 minutes)**

Question 7

Prospero, Miranda and Caliban organize a company. Each receives 100 shares with equal value and equal rights in return for a $10,000 contribution from each. A vote of two directors is required for all decisions, including the issuance of additional stock. Prospero and Miranda want to recapitalize the company in order to expand its operations. Caliban is opposed. Prospero and Miranda vote to issue an additional 300 shares for $100 each and offer Caliban one-third of the shares at that price. Caliban rejects the offer, and Prospero and Miranda each buy 300 shares at $100/share. Immediately prior to the time of the recapitalization, each share is worth $200.

A) Has Caliban been harmed economically (yes or no)? Why or why not (illustrate your answer in dollar amounts)? **(4 minutes)**

B) Can Caliban successfully challenge the recapitalization (yes or no)? Why or why not? **(3 minutes)**

C) At the time of the formation of the company, how would you advise Caliban to avoid this situation? **(3 minutes)**

D) Before the recapitalization, Prospero and Miranda want to pay dividends, and Caliban wants to reinvest the company's profits in the business. Assume for this question that the payment of dividends requires a unanimous vote of the directors, and that any of the owners can demand the dissolution of the company at any time for any reason. Prospero and Miranda sue to force the payment of dividends, and Caliban countersues to force dissolution of the company. You are the judge. What is your decision on each claim and why? (If you think you are missing important facts here, identify them and explain why they are important.) **(7 minutes)**

E) Before the recapitalization, Prospero, Miranda and Caliban all were employed by the company. They provided different services, but all received the same salary. The company has never paid dividends. The organizational documents include a provision that states that the company will buy any owner's shares at their market value as determined by an independent arbitrator who must be approved by the selling owner. Caliban is fired for legitimate reasons. He has no employment law grounds on which he could successfully challenge his termination. Can Caliban successfully challenge his termination (yes or no)? Why or why not? **(5 minutes)**

Question 8

Recall the Booth excerpt beginning on page 266 of the casebook. According to Booth, why would diversified and undiversified shareholders disagree about how courts should interpret the management duty to the corporation and its shareholders? In what respects would they agree? Disagree? Please provide concrete examples (these can be examples from actual cases, but be sure to describe the facts, don't just name the case, and how the facts illustrate why the two types of shareholders would agree/disagree). **(12 minutes)**

**PREFERRED STOCK**

Question 9

The Capulet family, a sophisticated group of investment bankers, owns $100 million par value nonparticipating, noncumulative 10% preferred stock of the Montague Company, of which the Montague family owns 100% of the common stock. There is no other outstanding debt. The Montague Company has not paid (or declared) any dividends for the last 10 years. The Company's total net earnings for each year during that period, as provided in the table below, were spent on company operations or retained in a surplus account.

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|---|---|
| Account Surplus | 1 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| Used for Operations | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| Total Net Earnings | 2 | 0 | 1 | 2 | 1 | 0 | 3 | 1 | 0 | 0 |

Amounts are in $ millions.

In 2001, the Company has $18 million in net earnings and proposes to pay dividends of $7 million to the Capulets and $11 million to the Montagues. The Capulets sue for the entire $18 million. Please describe three possible outcomes of the litigation (i.e., the exact amount the Capulets would receive) and the reasoning behind each outcome. Your answer should include both a specific dollar total and an explanation for each outcome. **(10 minutes)**

Question 10

Assume the same facts regarding the Capulets and Montagues described in Question 9, except that in 2001 the Company has no earnings and is liquidated. The Company has a total liquidation value of $150 million. The applicable provision of the indenture states that, in liquidation, the preferred stock shall have priority in the amount of "all accrued unpaid dividends."

For (A), (B) and (C), include both a specific dollar total and an explanation. You may incorporate your answer to Question 9 immediately above.

A) What is the amount that the Montagues (the common stockholders) would argue is payable in liquidation to the preferred stockholders and why? **(5 minutes)**

B) What is the amount that the Capulets (the preferred stockholders) would argue is payable in liquidation to the preferred stockholders and why? **(5 minutes)**

C) What is the amount that you believe should be payable as a matter of good policy and why? **(4 minutes)**

Question 11

Company X has liquidated and distributed all of its assets except for a manufacturing process on which it has a patent pending. The patent has a 30% chance of being granted, in which case it will be worth $200 million. If the patent is not granted, it will be worth nothing. The holders of Class A Preferred Shares are owed $55 million in accrued dividends and have prior rights to the Class B Preferred Shares, on which the holders are owed $50 million in accrued dividends. The Board of Directors of Company X, a majority of whom were elected by the holders of the Class A Preferred, is offered $50 million for the patent. Assume that the offer represents the fair market value of the patent.

A) How would you advise the Board to respond to the offer and why? **(4 minutes)**

B) Assume that the Board accepts the offer. How would you advise the Board to distribute the $50 million proceeds (include exact dollar amounts) and why? **(7 minutes)**

**DEBT**

Question 12

Insurance Company A owns $100 million of debentures issued by Manufacturing Company B. Would the value of A's debentures be affected if B were bought out in an LBO financed by junk bonds (yes or no)? Why or why not? **(3 minutes)**

Question 13

Company A issues zero coupon bonds with a face value of $500 million due in 2025. It receives $50 million for the bonds.

A) Why did it receive less than the face value of the bonds? **(3 minutes)**

B) Would Company A have received more or less if the bonds had been due in 2015? **(3 minutes)**

Question 14

"Junk bonds are not really riskier bonds, but rather are stock which includes a promise to pay."

This is quoted from the Booth excerpt beginning on page 467. Bonds are really stocks? Please explain what he means. **(7 minutes)**

**MERGERS**

Question 15

Company A owns 85% of publicly-held Company B. State law permits Company A to freeze-out the minority shareholders of Company B, who have appraisal rights if they don't like the price offered by Company A. Company A freezes out the minority shareholders for $16/share. At all times, the shares of Company B have traded at $15/share. There was no purpose for the transaction other than to enable Company A to receive 100% of Company B's profits. The minority shareholders sue on the ground that Company A, as the majority shareholder, and Company B's directors violated their fiduciary duty to the minority shareholders by freezing them out at an inadequate price.

A) On what ground(s) might a court rule in favor of Company A and the directors? **(4 minutes)**

B) On what ground(s) might a court rule in favor of the minority shareholders? **(4 minutes)**

C) Which would be the better result? **(4 minutes)**

Question 16

"[I]t is extremely unlikely that shareholders value their shares at more than the market price. . . . [T]he form of investment in stock does not merit protection. . . . It is thus meaningless to think of shareholders as the 'owners' of the firm." Fischel at 664 – 65.

This quotation states the essence of Fischel's argument against courts' evaluating the business purpose of a freeze-out merger. In light of this argument, why should courts consider the business purpose of a freeze-out, or at least some concept of the best interests of the corporation, when minority shareholders have an appraisal right? **(8 minutes)**

**SALE OF CONTROL**

Question 17

The Boosky Family Trust sells all of its 50% stake (50 shares) in Company A to Looters Inc. for $20/share. Company A produces raw steel which Looters Inc. uses to produce steel beams. Looters Inc. causes Company A to sell all of its product to Looters Inc. at a substantially lower profit margin than it could sell the raw steel on the open market (the Boosky family possessed facts showing that it was reasonably likely that Looters Inc. would implement this plan).

Company A's minority shareholders, who hold Company A's remaining 50 shares, successfully sued the Boosky Family Trust, and now the court must fashion a remedy (i.e., **this is a damages question, not a liability question).** The market value of Company A's shares was $10/share before the transaction and $7.50/share after the transaction. How much should the court award to the minority shareholders on a per share basis and why (provide a specific dollar amount in your answer and any assumed values on which it is based)? **(6 minutes)**

Question 18

Assume the facts in Question 17 above, as well as your answer to that question. If the minority shareholders sold their shares for $7.50/share, what would be the total they received including the payment received from the Booskys (provide a dollar/share amount)? What is the total the Booskys received after subtracting what they had to pay to the minority shareholders (provide a dollar/share amount)? Are these amounts consistent with your analysis in Question 17? Why or why not? **(6 minutes)**

Question 19

Company A is owned by 20 shareholders, each of whom owns 1 share, or 5%, of the company. The book value of each share was $5,000, but there is no market for the shares. Bill Milliken approached 15 shareholders with a proposal. For a fee, he offered to create Company B, which would exchange 1,000 of its shares in return for each of their shares of Company A. Company B would offer its shares publicly and the shareholders would thereby be able to sell their Company B shares at a market price. Twelve of the shareholders agree to the proposal. Milliken creates Company B, it issues 12,000 shares in return for 12 shares of Company A, it makes a public offering, and its shares subsequently trade at $5/share. All of this has the effect of severely limiting the marketability of the remaining 8 shareholders shares.

Company A offers each of the 8 remaining Company A shareholders 300 shares of Company B shares for each Company A share. The 8 shareholders reject the offer, choose not to seek appraisal, and sue Company B, as the majority shareholder, for the right to receive 1,000 Company B shares for each Company A share. What result and why? (If your view is that the 8 shareholders should be limited to an appraisal remedy, explain how their shares should be appraised.) **(10 minutes)**

Question 20

Hamlet owns 10% of Company A's shares. The ownership of Company A's remaining shares is widely dispersed, with no shareholder owning more than 0.1% of the shares. Hamlet sells his shares to Laertes pursuant to a contract that requires that each member of the 16-member board resign followed by the board replacing him with a representative of Laertes (i.e., Bob resigns and board replaces him; then Jill resigns and the Board replaces her; and so on until all of the board members are Laertes' representatives). Company A's by-laws provide for a staggered board, with 4 directors coming up for election each year. Amending this provision would require the vote of 90% of the shareholders. Without the contingency agreement, it would take Laertes 35 months to appoint a working majority of the board. Hamlet refuses to perform and Laertes sues to enforce the agreement. Hamlet's only defense is that the provision regarding the board is illegal. What result and why? **(6 minutes)**

**TENDER OFFERS**

Question 21

Target is trading at $40/share. Offeror offers $50/share for Target. Target's investment banker opines that Target's shares are worth between $80 and $90 per share. Target's board responds to the offer by adopting a Rights Plan under which each shareholder will have the right to purchase 1/100 share of 12% Preferred Stock in return for one share of common stock. After one year has passed, each $100 of Preferred Stock can be exchanged for $10,000 of common stock. The Rights Plan will be triggered if any person owns or acquires 2% or more of the Target's common stock. The directors have no authority to cancel or redeem the Rights Plan and, in the event of a change in control of Target, the Rights Plan cannot be amended until six months after the change in control has occurred. The Offeror challenges the Rights Plan. Who will prevail and why? **(6 minutes)**

Question 22

Target is trading at $40/share. Offeror offers $50/share for 50% of Target's shares. Target's investment banker opines that Target's shares are worth between $65 and $75 per share. Target's board responds to the offer by adopting a Rights Plan under which each shareholder will have the right to purchase 1/100 share of 12% Preferred Stock in return for one share of common stock. After one year has passed, each $100 of Preferred Stock can be exchanged for $200 of common stock. The Rights Plan will be triggered if any person owns or acquires 20% or more of the Target's common stock. The directors have the authority to cancel the Rights Plan.

Target's directors find a White Knight. The White Knight offers $55/share; the Offeror responds by bidding $60/share. The White Knight represents that it will offer to buy 100% of the shares for $70/share on the following conditions: (1) Target will provide it with confidential business information that has not been requested by or made available to anyone else; (2) the information confirms the assumptions on which White Knight is basing its bid (Target's directors know that this will be the case); (3) Target will pay White Knight a $5 million termination fee if the deal falls through; (4) Target's board will not communicate with any other party unless required to do so under a reasonable understanding of their fiduciary duties; and (5) Target's board will reject any other bids for less than $75/share (the "Lockup Agreement").

A) The Offeror challenges the Rights Plan and the Lockup Agreement. What result and why? **(12 minutes)**

B) Would it matter whether the Rights Plan had been adopted before there was any indication of interest by potential purchasers? Why or why not? **(2 minutes)**

C) How would it affect your analysis if Offeror: (1) is in the same or a similar line of business as the target, (2) has a history and pattern of breaking up companies and selling the pieces, or (3) has a history and pattern accepting greenmail in return for abandoning the takeover attempt? For each situation, please explain separately whether the factor does or does not matter and why. **(4 minutes)**