

Quiz 1: Corporate Finance

Answer all questions and show necessary work. Please be brief. This is an open books, open notes exam.

1. Please answer the following questions (picking only one of the offered choices for each one). (1/2 point for each question)
 - a. In a publicly traded firm, there is often a conflict of interest between managers and stockholders and compensation contracts are designed to reduce this conflict. Which of the following contracts is most likely to induce to managers behave in the best interests of stockholders?
 - i. A bonus tied to a company's bond rating
 - ii. Restricted stock in the company (restrictions are on trading)
 - iii. A fixed salary
 - iv. A bonus tied to a company's revenue growth
 - v. A bonus tied to a company's accounting profits
 - vi. A stock option grant
 - b. One of the arguments made for stronger corporate governance is that it will lead to better managed companies. Which of the following links between corporate governance and management quality do you think is closest to the truth?
 - i. Firms with better corporate governance are better managed than firms with weak corporate governance
 - ii. Firms with better corporate governance are more likely to change managers when they are badly managed
 - iii. Firms with better corporate governance are worse managed than firms with weak corporate governance
 - iv. Firms with better corporate governance are less likely to change managers when they are badly managed
 - v. There is no relationship between corporate governance and how a firm is managed
 - c. In an efficient market, maximizing the stock price will lead to
 - i. Maximization of firm value
 - ii. Maximization of stockholder wealth
 - iii. Maximization of social welfare
 - iv. Maximization of bond prices
 - v. None of the above
 - d. Most decisions made by corporations create costs to society. Which of the following is the most efficient way to reduce these social costs? (Efficiency implies that the costs created for the non-guilty are minimized.)
 - a. Sue companies that create costs for society
 - b. Convince customers to stop buying the firm's products and investors to sell it's stock
 - c. Make managers take ethics classes
 - d. Make it illegal to create social costs

2. You are reviewing a five-year monthly return regression of returns for Avatar Corp, a U.S.-based consumer product company, against the S&P 500.

$$\text{Return}_{\text{Avatar}} = 0.10\% + 1.20 \text{ Return}_{\text{S\&P 500}} \quad R^2 = 25\%$$

The U.S. treasury bond rate is 4.75%, the treasury bill rate today is 4.25% and the historical equity risk premium is 4.91%.

- a. After a recent statistics class, you are concerned about the low R-squared in this regression. You also find that Avatar is a NASDAQ stock and that the R-squared improves significantly (to 50%) if the returns are regressed against the NASDAQ. In estimating a beta for a stock for use with the CAPM, which of the following indices should you use? (1 point)

- i. The index which your stock is part of (NASDAQ).
- ii. The index for the sector to which your firm belongs (Consumer products).
- iii. The index that gives you the highest R-squared.
- iv. The broadest index in terms of risky assets represented
- v. An index reflecting your own stock holdings (you are a potential investor)

- b. Based upon this regression, estimate the long-term cost of equity in \$ terms for this company. (1 point)

- c. Assume that the stock will continue to earn the annualized Jensen's alpha, computed from the regression, for next year. If the stock price today is \$50 and there are no dividends paid, estimate the expected stock price a year from today. (The monthly riskfree rate during the regression period was 0.2%) (2 points)

3. You are assessing the effects of and acquisition of Riteway, a highly levered specialty retailer, by Norita Inc., a consumer product company, and have collected the following information on the two companies:

| Company | Market value of Equity | Debt | Beta |
|--------------|------------------------|------------|------|
| Norita Inc. | \$ 1200 million | \$ 300 mil | 1.04 |
| Riteway Inc. | \$ 150 million | \$ 750 mil | 4.80 |

You can assume a 40% tax rate for all firms.

a. Estimate the unlevered beta of the combined company after the merger. (2 points)

b. Norita is planning to issue shares to buy out Riteway's equity, but it also wants to issue additional shares to retire some of Riteway's debt. If Norita would like to have a levered beta of 1.381 after the transaction, how much of Riteway's debt will it have to retire? (2 points)