Session 20: Post Class tests

1. Vaughn Enterprises is an all-equity funded firm with 100 million shares outstanding, trading at $10/share. The company is planning on borrowing $400 million and buying back shares. The marginal tax rate for the firm is 40% and the cost of bankruptcy as a percent of unlevered firm value is 30%. If the new market capitalization for the firm will be $700 million, after the buyback, what is the probability of bankruptcy after the buyback? (Use the standard APV assumption about the tax benefits of debt)
    a. 0%
    b. 10%
    c. 18.18%
    d. 20%
    e. 28.57%
    f. None of the above
2. Lizzie Inc. is an apparel manufacturer with 200 million shares outstanding, trading at $15/share and $1.2 billion in debt outstanding (in market value terms). If the marginal tax rate for the firm is 40%, the cost of bankruptcy is 20% of current firm value and the probability of bankruptcy at the current debt level is 25%, what is the unlevered value of the firm?
    a. $2,670 million
    b. $3,930 million
    c. $4,200 million
    d. $4,470 million
    e. None of the above
3. Sizzle Media is a media company that has a market capitalization of $900 million and debt outstanding of $100 million. The average debt ratio for media companies is 37%. Which of the following provides a likely explanation for why Sizzle Media should have a lower debt ratio than the average media company?
    a. Sizzle Media has a higher effective tax rate than the typical media company
    b. There are fewer insider investors in Sizzle Media than in the typical media company
    c. Sizzle Media has more stable income than the typical media company
    d. Sizzle Media is a larger company than the typical media company
    e. Sizzle Media is more dependent on movie making and has fewer physical assets than the typical media company
    f. None of the above
    g. All of the above
4. You have run a regression of debt to capital ratios against independent variables, across all companies in the market, and arrived at the following:
    Debt to Capital Ratio = 0.40 + 0.25(Effective Tax Rate) – 0.15 (Insider holdings as % of shares outstanding) – 0.20 (Standard deviation in operating earnings)
    Felter Inc. has an effective tax rate of 30%, insider holdings are 10% of outstanding shares and you have estimated a standard deviation of 50% in the firm's operating earnings. What is the optimal debt ratio for Felter Inc., based

upon the market regression? (Enter the percentage values as decimals; thus, 20% is entered as 0.20)

   a. 36%
   b. 39%
   c. 40%
   d. 56%
   e. None of the above

5. Assume that you have found Galloway Inc. is under levered, with an actual debt ratio of 10% and an optimal debt ratio of 40%. Galloway is a mid-cap company that pays substantial dividends. It generated a ROC of 15% in the most recent year, higher than its cost of capital of 9%. The stock has also generated a Jensen's alpha of 8% and has relatively high insider holdings (as a percent of the outstanding stock). Which of the following would you recommend that the company do?
   a. Borrow money immediately and buy back stock
   b. Borrow money immediately and pay dividends
   c. Borrow money gradually over time and pay higher dividends
   d. Borrow money gradually over time and take projects
   e. Borrow money gradually and buy back stock