**Session 11a: Post class test solutions**

1. **b. 13.8%:** First, since the owner is undiversified, you compute the total beta
    - Correlation with the market = Square root of $R^2$ = 0.50
    - Total unlevered beta = 0.90/Correlation with the market = .90/.50 = 1.80
    - Levered beta = 1.80 (since the firm has no debt)
    - Cost of equity = 3% + 1.80 (6%) = 13.8%
2. **e. All of the above.** Accounting earnings are estimated far too infrequently (thus leading to fewer observations in a regression), are smoothed out, can be negative (making percentage changes impossible to compute) and measure only market risk.
3. **b. A publicly traded sporting equipment company**. The investors in this company are likely to be diversified, allowing them to look at only market risk (and use market beta) in estimating cost of equity. In addition, they are far more likely to find synergies (and perhaps pay for them).
4. **d. Deferred tax liabilities.** These are not legal commitments in the conventional sense but accounting liabilities (reflecting expectations that the firm will have to pay more in taxes in the future).
5. **d. 5.00%**. The pre-tax cost of debt is a long term cost of borrowing money today.
    - Pre-tax cost of debt = 3.5% + 1.5% = 5%