Session 17: Post Class tests

1. If you are dividing the market capitalization by book value to arrive at a price to book value ratio for a company, which of the following will you use as your measure of book value?
    a. Book value of assets
    b. Book value of liabilities
    c. Book value of common equity
    d. Book value of invested capital (debt + equity – cash)
    e. None of the above
2. A stock that trades at less than book value is cheap, because you can liquidate the company and get the book value of equity.
    a. True
    b. False
3. You are reading an analyst reports that claims that banks collectively are cheap, because they are trading at 0.80 times book value of equity. You believe that the truth is that banks are perceived as riskier than they used to be. If the current return on equity for banks is 10% and the expected growth rate in perpetuity is 2%, what is the cost of equity that investors are attaching to banks? (Assume that banks collectively are in stable growth)
    a. 8%
    b. 12%
    c. 12.5%
    d. 15%
    e. None of the above
4. Assume that you are doing a valuation, where you are comparing the price to book ratio of GenSys Bank to other banks. GenSys has a price to book ratio of 2.00 and a return on equity of 16%. The average price to book ratio across all banks is 1.20 but you have run a regression of price to book against return on equity across banks and arrived at the following:

    $$PBV = 0.72 + 80\ (ROE)$$

    Based on this regression, which of the following conclusions would you draw?
    a. Gensys is under valued (cheap)
    b. Gensys is over valued (expensive)
    c. Gensys is fairly valued
5. You are looking at a group of mature insurance companies, with the intent of finding an undervalued company. Which of the following combinations would you be looking for?
    a. Low price to book, low risk, low return on equity
    b. Low price to book, high risk, high return on equity
    c. Low price to book, low risk, high return on equity
    d. Low price to book, low risk, low return on equity

Session 17: Post class test solutions

1. **c. Book value of equity**. If the numerator is market capitalization which is the market value of equity, the denominator should be the book value of equity.
2. **False**. The book value of equity does not measure what you can get in liquidation. If the business for a firm has deteriorated, it can trade at less than book value and not be cheap.
3. **b. 12%.** Since banks are mature, you can use the simple version of the price to book ratio:

   PBV = 0.80 = (ROE –g)/ (Cost of equity –g)

   = (.10-.02)/ (Cost of equity - .02)

   Cost of equity = 12%

   If you use (1+g) in your equation, you will get a cost of equity slightly lower than 12%.
4. **c. Fairly valued.** Plugging the ROE for GenSys into the regression

   PBV = 0.72 + 80 (.16) = 2.00

   The stock is trading at 2 times book value. Hence, it is fairly priced.
5. **c. Low price to book, low risk, high return on equity.** Low price to book is an indication of cheapness, low risk of a low cost of equity and a high return on equity of high returns on investments.