Session 35: Post Class tests

1. When you use relative valuation, you are trying to price assets based upon what similar assets are being priced at. In comparing across these assets, which of the following do you have to do?
   a. Find similar or comparable assets, with trading prices
   b. Standardize the prices to a common variable available for all assets
   c. Control the standardized prices for differences across the assets
   d. All of the above
   e. None of the above

2. The distribution for any multiple will tend to be asymmetric. Given that a multiple cannot be less than zero but is unconstrained on the upside, which of the following would you expect to see in the summary statistics?
   a. The average should be higher than the median
   b. The average should be lower than the median
   c. The average will be roughly equal to the median
   d. The average can be higher or lower than the median

3. The PE ratio usually cannot be computed when a company has negative earnings. Assume that you have a sample of 100 firms and that 30 of these firms have negative earnings. Let’s say that you compute a market cap weighted PE ratio for the 70 firms with PE ratios and an aggregate PE ratio by dividing the total market capitalization of all firms in the sector by the total net income of all firms in the sector. Which one will yield the lower value?
   a. The weighted average PE ratio across the money making firms
   b. The aggregate PE ratio across all firms
   c. Either can happen

4. The conventional wisdom is that if a company increases its growth rate, the PE ratio should go up. When is this not true?
   a. When the company has a growth rate < riskfree rate
   b. When the company is risky
   c. Whey the company is safe
   d. When the company earns a ROE > Cost of equity
   e. When the company earns a ROE < Cost of equity

5. You have evaluating Zena Inc., a firm that is trading at a PE ratio of 15, with an expected growth rate of 20%, on a PEG ratio basis. The PEG ratio for the S&P 500 is 1.10. Based on the PEG ratios, which of the following statements would you subscribe to?
   a. Zena is cheap, relative to the market
   b. Zena is expensive, relative to the market
   c. Zena is cheap, relative to the market, but only if it is safer than the market
   d. Zena is cheap, relative to the market, but only if it is riskier than the market
   e. Zena is expensive, relative to the market, but only if it is safer than the market
   f. Zena is expensive, relative to the market, but only if it is riskier than the market
6. 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
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1. **d. All of the above.** You have to find traded, similar companies, standardize prices to a common variable and adjust for differences across companies.

2. **a. The average should be higher than the median.** The positive outliers will tend to pull the average up, above the median.

3. **a. The weighted average PE ratio across all firms.** The firms that you were unable to compute PE ratios for had negative earnings and positive market capitalizations. If you added their market capitalization to the market capitalization of the companies that you were able to compute the PE ratio for and added the net income (or loss) to the net income of the firms that you were able to compute the PE ratio for, you will end up with a lower aggregate PE ratios since the numerator will become higher and the denominator will become smaller.

4. **e. When the company earns a ROE < Cost of equity.** A company that increases growth by investing in projects that earn less than the cost of equity will destroy value and see its PE ratio go down. In terms of mechanics, the gain in growth will be offset by the loss in cash flows to equity (or dividends) in the near term.

5. **d. Zena is cheap, relative to the market, but only if it is safer than the market.** Zena’s PEG ratio is lower than that of the overall market, but that may be justified if the stock is riskier than the market. It has to be safer, for the low PEG ratio to indicate that the stock is cheap.

6. **b. 12%.** Since banks are mature, you can use the simple version of the price to book ratio:

\[
PBV = 0.80 = \frac{(ROE - g)}{(Cost of equity - g)} \\
= \frac{(0.10 - 0.02)}{(0.12 - 0.02)} \\
\text{Cost of equity} = 12\% \\
\text{If you use (1+g) in your equation, you will get a cost of equity slightly lower than 12%.}
\]