

Session 16: Post class test solutions

1. **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.
2. **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.
3. **b. 12%.** Since banks are mature, you can use the simple version of the price to book ratio:

$$\begin{aligned} \text{PBV} = 0.80 &= (\text{ROE} - g) / (\text{Cost of equity} - g) \\ &= (.10 - .02) / (\text{Cost of equity} - .02) \end{aligned}$$

$$\text{Cost of equity} = 12\%$$

If you use $(1+g)$ in your equation, you will get a cost of equity slightly lower than 12%.