Session 20: Post Class tests

1. When computing the optimal debt ratio for a firm in the standard cost of capital approach, we keep operating income fixed while varying the cost of capital, thus ignoring the effect of increased default risk on operations. One way of incorporating this “indirect” bankruptcy cost into your analysis is to assume that operating income will decrease as a company’s bond rating drops. If you allow for this effect, which of the following would you expect to generally see happen to the optimal debt ratio?
   a. The optimal debt ratio will go down
   b. The optimal debt ratio will remain unchanged
   c. The optimal debt ratio will go up
   d. Any of the above

2. You are assessing the optimal debt ratio for an oil company, using the cost of capital approach. A key driver of this optimal debt ratio is the operating income that you attribute to this firm. In coming up with an optimal, which of the following measures of operating income will yield the “best” estimate of optimal debt ratio?
   a. Operating income in the most recent fiscal year
   b. Operating income in the most recent 12 months
   c. Highest operating income earned over an oil price cycle
   d. Lowest operating income earnings over an oil price cycle
   e. Average operating income earned over an oil price cycle

3. Young, growth companies generally do not borrow much money. Does it follow that they are also likely to be under levered?
   a. Yes
   b. No
   Explain.

4. Banks, investment banks and insurance companies treat debt as raw material, rather than a source of capital. To assess how much new equity these financial service companies have to raise in markets, we have to look at regulatory capital requirements and growth potential. Which of the following financial service firms will have the greatest need for new equity in the future?
   a. A mature, under capitalized bank
   b. A mature, over capitalized bank
   c. A high growth, under capitalized bank
   d. A high growth, over capitalized bank

5. The equity risk premium (ERP) is the price for risk in the equity bond market, while default spreads are the price for risk in the bond market. Holding all else constant, under which of the following scenarios would you expect companies to use the most debt (relative to equity)?
   a. When the ERP and default spreads are both high
   b. When the ERP and default spreads are both low
   c. When the ERP is high and default spreads are low
   d. When the ERP is low and default spreads are high
Session 20: Post class test solutions

1. **a. The optimal debt ratio will generally decrease.** If the operating income also drops as the rating drops, you are increasing the “cost” of borrowing, while holding the benefits constant. While it is possible that your optimal is at a high enough rating that you are not affected, the optimal debt ratio will generally decrease.

2. **e. Average operating income over an oil price cycle.** Your objective is not to borrow money based on your last year’s income your best year’s income or your worst year’s income but to borrow money based upon what you can make in an average year. You will have too much debt in the bad years and too little in the good years, but you should be able to use the latter to buffer the former.

3. **b. No.** Young, high growth companies also have low operating income, relative to their market values. Consequently, they cannot afford to borrow much money and their optimal debt ratios also tend to be low or even zero.

4. **c. A high growth, under capitalized bank.** Under capitalized banks that are in high growth will need to add more to their regulatory capital bases. Some of that addition can come from retained earnings, but if the growth is high enough and the under capitalization large enough, they will have to raise fresh equity capital.

5. **c. When the ERP is high and default spreads are low.** The high price of risk in the equity market, relative to the corporate bond market, will make it more attractive to companies to raise debt (and retire equity).