Session 18: Post class test solutions

1. **c. $17.87.** To get the value, you first need to estimate the expected EBITDA in year 5:
   - Expected revenues in year 5 = 1000 *1.06^5 = $1,338 million
   - Expected EBITDA in year 5 = 1,338 *.08 = $107.05 million

   Applying the EV/EBITDA multiple (6) for a healthy telecom firm
   - Expected EV = 107.05 * 6 = $642.3 million

   Discounting back at 12% for five years, we get:
   - EV today = $642.3 million/ 1.12^5 = $364.5 million
   - Equity value today = $364.5+ 50 – 200 = $214.5 million
   - Equity value per share = $214.5/12 = $17.87/share
2. **b. $946.8 million**. Start by estimating the expected EV at the end of year 3 and discounting back to today at the cost of capital for 15%:
   - Expected EV = 3* 600 = $1800 million

   Discount back at the cost of capital
   - EV value today = $1800/1.15^3$ = $1183.5 million

   Adjust for survival
   - Value of equity today = 1183.5*.8 = $946.8 million
3. **c. 25%**. To estimate the growth rate, recognize that the firm is correctly priced right now:

   Current EV/EBITDA multiple = 480/100 = 4.80
   Set equal to the expected value in the regression
   4.80 =5+80*(0.06)-20*(0.10)-12(Tax rate)
   Solve for the tax rate, tax rate = 25%

4. **d. None of the above.** There are two ways to measure whether a multiple works. One is how well you can explain differences in this multiple across companies, using fundamentals (a regression, for instance). The other is to see if the multiple used makes sense, given what managers focus on in the sector. Whether a multiple yields a value close to the intrinsic value or market price should not be the determining factor.
5. **b. False**. There is no reason why a relative valuation should always yield a higher value than the intrinsic value. In fact, when markets become overly pessimistic about a growth sector, it is entirely possible that intrinsic valuations consistently yields higher numbers than relative valuations.