

## Session 21: Post class test solutions

1. **c. EV/EBITDA can be compared across companies that use different depreciation methods.** Companies that use accelerated depreciation will report lower net income than companies that use straight line depreciation and may look more expensive on a PE ratio basis. None of the other reasons hold up: EV/EBITDA is affected by cost of capital, which can be affected by financial leverage and while EBITDA may be a measure of intermediate cash flow, it is not free (since you still have to pay taxes and cover capital expenditures).
2. **d. The income from cash is not part of EBITDA.** To preserve consistency, you have to net out the cash (and any other assets whose income is not part of EBITDA from the numerator).
3. **e. They have high net capital expenditures.** High depreciation, high earnings and lower taxes, by themselves, should push up your EV/EBITDA multiple. Having high net capital expenditures, holding growth constant, will lead to lower EV to EBITDA.
4. **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 =  $\$642.3 \text{ million} / 1.12^5 = \$364.5$  million
- Equity value today =  $\$364.5 + 50 - 200 = \$214.5$  million
- Equity value per share =  $\$214.5 / 12 = \$17.87/\text{share}$

5. **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

$4.80 = 5 + 80 * (0.06) - 20 * (0.10) - 12(\text{Tax rate})$

Solve for the tax rate, tax rate = 25%