Oil & Gas Modeling:
– Quiz Questions

Module 4 – Merger Model

1. **Which 2 of the 3 main acquisition financing methods – Stock, Debt, and Cash – are the MOST common in Oil & Gas ('O&G') M&A deals, and why?**

    a. Stock and Debt – O&G companies are often cash-strapped due to high CapEx requirements and fluctuating commodity prices, so they rarely have enough cash on-hand to fund entire acquisitions.

    b. Stock and Cash – Sellers in the oil & gas industry prefer cash and stock consideration because debt is much riskier due to fluctuating commodity prices.

    c. Debt and Cash – O&G acquirers can rarely issue new stock because shareholders don't like to accept dilution, given that commodities investments are already extremely risky.

    d. None of the above – In O&G M&A deals, stock, cash, and debt **ALL** are equally likely to be used.

2. **You are running an accretion / dilution model for two E&P-focused oil & gas companies, and you want to look at energy-specific metrics. Which of the following metrics would be MOST meaningful to calculate in your analysis, and why?**

    a. Proved Reserves per Share Accretion / Dilution – Because buyers care the most about a company's Proved Reserves, and often tend to discount or ignore the more speculative reserve types.

    b. 3P Reserves per Share Accretion / Dilution – Because smaller E&P companies, especially, can often unlock significant value from their Probable and Possible Reserves.

    c. Daily Production per Share Accretion / Dilution – Because O&G investors are most focused on how a company's production growth changes immediately following an acquisition.

    d. NAV per Share Accretion / Dilution – Because it's relevant no matter the % of cash/stock/debt used.

    e. None of the above – The problem with all of these "unconventional metrics" is that the numerator is not impacted by the amount of cash or debt used, and as a result they are only meaningful for 100% stock deals.

3. **As discussed in the course, it is extremely rare to incorporate revenue synergies into an oil & gas merger model. Suppose, however, that you DO want to estimate revenue synergies in this type of merger model anyway. Which of the following would be the MOST valid approach to estimating revenue synergies?**

    a. Assume increased production from existing wells in the first year or two due to improved technology.

    b. Assume longer-term (after the end of the first two years) production increases due to improved technology.

    c. Assume higher commodity prices due to improved yields or quality, which result in greater demand for commodities.

    d. Assume improved hedging – larger O&G companies have more to spend on the derivative contracts required for proper hedging strategies.

4. **Which of the following might be possible expense synergies in an O&G merger model?**

    a. A reduction in headcount (i.e. a "reduction-in-force") due to redundancies or improved technology.

    b. A reduction in the combined hedging expense, as a result of realized prices as a percentage of commodity market prices increasing.

    c. A reduction in Capital Expenditures.

    d. Operating lease consolidations.

    e. A reduction in per-unit production costs.

    f. A reduction in Finding & Development (F&D) costs due to economies of scale.

    g. None of the above – Just as revenue synergies are less applicable for oil & gas companies, expense synergies also tend to be less relevant.

5. **Suppose that a Full Cost E&P company ("Acquirer") acquires a smaller, Successful Efforts E&P company ("Target"). Why might it be deceptive to look at EPS accretion / dilution for this type of scenario?**

    a. Because the Acquirer will convert the Target to the Full Cost accounting method, so the combined Net Income would increase by a higher-than-expected amount – Income Statement expense are always higher for a Full Cost company, all else being equal.

    b. Because the Acquirer and Target would both start using the Successful Efforts method under this scenario, which would artificially depress combined Net Income – since Successful Efforts companies record the Dry Hole expense on their Income Statements.

    c. Because the Acquirer will convert the Target to the Full Cost accounting method, so the combined Net Income would increase by a higher-than-expected amount since the Target's Dry Hole Expense on the Income Statement would now be capitalized rather than expensed.

    d. None of the above – an acquisition between two O&G companies with different accounting standards would NOT make EPS accretion / dilution appear deceptive in any way.