

# *Oil & Gas Modeling: – Quiz Questions*

## **Module 5 – LBO Model**

- 1. Why are mining companies and oil & gas companies typically poor targets for traditional leveraged buyouts (LBOs)?**
  - a. Because they don't have stable or predictable cash flows due to their exposure to commodity prices.
  - b. Because they have a huge need for ongoing investments in the form of Capital Expenditures.
  - c. Because natural resource production always declines over time since there's only a finite amount of resources on Earth – and if production falls over 3-5 years, it is almost impossible to realize an acceptable IRR.
  - d. Because they usually have high debt loads, which limits the amount of additional leverage that can be used – thereby limiting returns.
  - e. Because they have few hard assets, so they cannot produce much collateral for use when raising debt.
  
- 2. Given the limitations above, how might a private equity firm get around these problems and still invest in the sector anyway?**
  - a. By investing in oil & gas joint ventures (JVs) rather than buying out entire companies.
  - b. By acquiring minority stakes rather than entire companies.
  - c. By utilizing more advanced hedging techniques – such as 3-way collars rather than normal swaps, puts, or collars – to make the investment less dependent on commodity prices.
  - d. By investing outside of pure-play E&P companies (e.g. oilfield services or diversified companies) to reduce some of the risks above.
  - e. By using mostly junior capital (i.e. mezzanine or subordinated notes) with PIK interest payments if the cash flow available for debt repayment is declining.

- 3. Normally, you use sensitivity tables to assess the impact of factors such as revenue growth and margins on a normal company in a traditional leveraged buyout (LBO) scenario. Why might sensitivity tables be LESS useful if you're analyzing the LBO of an E&P company?**
- a. Because above all else, the viability of any E&P LBO depends on how commodity prices change – so at best, a sensitivity table with commodity prices and IRR only tells you the level at which the deal no longer works.
  - b. Because you have to assume such a wide range for exit multiples in an O&G LBO sensitivity table, due to cyclicalities, that the output becomes meaningless.
  - c. Because the most important variable to sensitize is commodity prices, but due to extensive hedging activities at E&P companies, it is impossible to use commodity prices as a single variable in sensitivity tables.
  - d. None of the above – for O&G LBOs the sensitivity analysis is even MORE useful than it would be for normal companies in traditional leveraged buyout scenarios.
- 4. Normally, when lenders analyze the credit profile of a company that is to be acquired in an LBO, they focus on metrics such as Leverage Ratios (e.g. Total Debt / EBITDA) and Coverage Ratios (e.g. EBITDA / Total Interest Expense). With an E&P company, you should use EBITDAX rather than EBITDA for these metrics since you want to normalize between companies that use different accounting standards.**
- a. True.
  - b. False.

5. Suppose that an E&P company had a massive hedging program in place to lock in commodity prices over the next few years. As a result, some of the risk from fluctuating commodity prices has been reduced. Why might a PE firm still be reluctant to acquire the company in a leveraged buyout?
- a. Because despite the commodity price hedging, the E&P company might still be highly levered and would therefore have limited additional debt capacity.
  - b. Because hedging will NOT necessarily guarantee the commodity prices 3 to 5 years into the future – companies tend to plan their hedging year-by-year.
  - c. Because the cost of acquiring the derivative contracts required for hedging will appear directly on the company's Income Statement, reducing its earnings.
  - d. Because even with commodity price hedging, the company would still have to make massive CapEx investments to continue growing its production into the future.
  - e. Because a massive hedging program could work AGAINST the E&P company if they hedge against a price decrease and commodity prices rise instead.