Merger Model Interview Questions: “The Progression”

What should you expect?
“I’m preparing for interviews right now. How should I study for the technical questions?”

“And what should I expect if I haven’t had much finance experience? Will I get detailed M&A and LBO-related questions?”
Merger Model Interview Questions

• **SHORT ANSWER:** Bankers will test you up to your “point of failure” – so M&A and LBO-related questions could easily come up

• **Trend #1:** Within those topics, interviewers have started asking *more difficult* questions on the *fundamentals*

• **Implication:** Far more important to understand accretion/dilution math very well than obscure transaction structures or tax details

• **Trend #2:** Interviewers like to ask you a *progression* of questions on the same topic to see how much you really know
Typical Progression for Merger Models

• **First:** Do you know the basic rules for accretion/dilution and how to predict it?

• **Next:** Can you walk through what happens with real numbers?

• **Next:** How do Equity Value and Enterprise Value and the valuation multiples change with different purchase methods?

• **Next:** What ranges would you expect for the Combined Multiples?

• **Next:** What happens if the Buyer is twice as big, and why?
“A company with a P / E multiple of 25x acquires another company for a purchase P / E multiple of 15x. Will the deal be accretive or dilutive?”

**ANSWER:** You can’t tell unless it’s a 100% Stock deal! If so:

- **Cost of Acquisition** = $1 / (Buyer P / E Multiple) = 1 / 25 = 4.0%  
- **Seller’s Yield** = $1 / (Seller’s P / E Multiple) = 1 / 15 = 6.7%

Since the Seller’s Yield exceeds the Cost of Acquisition, the deal will be accretive... **but only if it’s a 100% Stock deal!**
Question #2: Real Numbers

“Let’s say it is a 100% Stock deal. The Buyer has 10 shares outstanding at a share price of $25.00, and its Net Income is $10. It acquires the Seller for a Purchase Equity Value of $150. The Seller has a Net Income of $10 as well. Assume the same tax rates for both companies. How accretive is this deal?”

• **Step 1:** Buyer EPS = $10 / 10 = $1.00
• **Step 2:** Buyer must issue **6 new shares** to do the deal ($150 / $25), so the Combined Share Count is 10 + 6 = 16

• **Step 3:** Combined Net Income = $10 + $10 since no Cash or Debt were used and the tax rates are the same
• **Step 4:** Combined EPS = $20 / 16 = $1.25, so there’s **25% accretion**
Question #3: Equity Value and Enterprise Value

• “What are the Combined Equity Value and Enterprise Value in this same deal? Assume that Equity Value = Enterprise Value for both the Buyer and Seller.”

• **RULE**: Combined Equity Value = Buyer’s Equity Value + Value of Stock Issued in the Deal

• **So**: Combined Equity Value = $250 + $150 = $400

• **RULE**: Combined Enterprise Value = Buyer’s Enterprise Value + Purchase Enterprise Value of Seller

• **So**: Combined Enterprise Value = $250 + $150 = $400
**Question #3: Equity Value and Enterprise Value**

- “How do the EV / EBITDA and P / E multiples change if the purchase method changes?”

- **Answer:** We need more information since we don’t have either company’s EBITDA, but the Combined EV / EBITDA is **not** affected by the purchase method.

- **P / E Multiple:** Combined Equity Value / Combined Net Income = $400 / $20 = 20x

- **P / E Multiple:** It **IS** affected by the purchase method since the Combined Equity Value depends on the amount of Stock issued, and the Combined Net Income is affected by the Cash and Debt used.
Question #4: Ranges for the Multiples

• “Without doing any math, what ranges would you expect for the Combined EV / EBITDA and P / E multiples, and why?”

• **ANSWER:** They will be somewhere in between the Buyer’s multiples and the Seller’s purchase multiples

• **So:** Buyer P / E of 25x and Seller P / E of 15x means that the Combined P / E will be between 15x and 25x, which it is

• **BUT:** It will almost never be a simple average – depends on the relative sizes of the Buyer and Seller! And, for P / E, the purchase method also plays a role.
Question #5: Hypotheticals...

• “What happens if the Buyer is twice as big, i.e. it has an Equity Value of $500 and Net Income of $20?”

• **Change #1:** The deal becomes *less accretive* because the company that’s making it accretive – the Seller – now has a lower weighting

• **Math:** Buyer was previously ($250 / $400) of total, but now it’s ($500 / $650) of total → We’d expect accretion to fall by 10-15% in a 100% Stock deal, which it does

• **Change #2:** The Combined Multiples will all move closer to the Buyer’s multiples because it has a greater weighting now
Recap and Summary

• **Most Important:** Don’t memorize specific questions and answers – learn the *principles* and you can answer anything!

• **Principle #1:** If the Seller’s Yield is above the Weighted Cost of Acquisition, it’s accretive; dilutive if the opposite

• **Principle #2:** Combined Equity Value = Buyer’s Equity Value + Value of Stock Issued in the Deal

• **Principle #3:** Combined Enterprise Value = Buyer’s Enterprise Value + Purchase Enterprise Value of Seller
Recap and Summary

• **Principle #4:** The Combined P / E Multiple *is* affected by the Cash / Debt / Stock mix, but the Combined EV / EBITDA Multiple is not.

• **Principle #5:** The Combined Multiples will be in between the Buyer’s multiples and the Seller’s purchase multiples – exact numbers depend on sizes of the Buyer and Seller.