

Option 1 – Multiples

- Tell me about yourself / walk me through your resume
- Why Banking? (Slightly different than the why EVR question in Template B)
- Ask them about something on their resume that is team oriented and try to get a sense of how they work in a team
- What are different ways to value a company?
 - DCF
 - LBO
 - Comps
 - Precedent Transactions
- Which would lead highest valuation?
 - Precedents (includes premium)
 - Ok if they say that maybe DCF if the right inputs
- What are some multiples we could use for comps?
 - EV / EBITDA
 - P / E
- Why would you not use an EV/Income Multiple?
 - Income is earnings only to equity holders and enterprise value is the value of all stakeholders
- In banking we mostly use EBITDA multiples, why do you think that is?
 - The value the full company as opposed to the equity
 - Can you buy a company, you can will probably recapitalize so don't care about the current cap stack
 - Is capitalization agnostic
- Why do you think some Companies might trade at different multiples?
 - Industry
 - Growth
 - Country risk
 - Size
 - Litigation / regulatory risk...
 - To name a few
- I see, let's say we control for the above so same industry, same growth profile, same country... why could two companies trade differently?
 - At this point I imagine a good amount of kids will not know so we must help them get there
 - We are looking for capital intensity as the answer
 - HINTS:
 - When thinking of the value of a Company, what do investors really care about?
 - Hint: Think of a DCF
 - They care about cash flow

- Right and we think of EBITDA as a proxy for cash flow. What would have to happen for EBITDA to equal free cash flow?
 - $D\&A = CapEx$ (no growth)
 - No cash taxes
 - No changes in NWC
 - So what does that tell you about multiples
 - 2 companies could trade differently given different working capital needs or capital intensity capital intensity
 - Which one do you think is most likely to be meaningful?
 - $CapEx$
- If they do this in less than 20min you can ask either behavioral questions or from the random questions below
- Give them 5 min to ask questions

Option 2 – Enterprise Value

- Tell me about yourself / walk me through your resume
- Why Evercore? (Different than why banking)
- Ask about either one on their interests or ask them something **NOT** in their resume
- What is enterprise value conceptually?
 - The value of the full firm
 - I think a helpful way to think of TEV is the present value of the future cash flows
- Would you mind walking me from Equity value to enterprise value?
 - $EV = \text{Market Cap of Common} + \text{Market Cap of Preferred} + \text{Face Value of Debt} + \text{Minority Interest} - \text{Cash and Equivalents}$
- Why do we subtract cash?
 - We don't want to "double count" since it is already reflected in the market cap
 - When you buy the Company you get that cash so the net price you are paying should not include the cash
- Let's say you have a company that raises \$100mm of debt, what would happen to its TEV and why?
 - It does not change
 - Debt goes up by \$100mm and cash goes up \$100mm
 - If they say goes up or down ask them if that makes sense. I.e., why would raising debt change the value of the full Company
- What if the Company does a stock split, what happens to TEV? Why?
 - It does not change
 - Number of shares double
 - Price of share should half
 - No change in market cap of any other component
- What if the Company pays a \$100mm dividend, what happens to TEV? Why?
 - They will most likely struggle here. Want to help them understand that since equity is the residual claim, if the value of the business exceeds the value of debt + pref, any value (like cash) goes to the equity holders
 - Hint: Who do we think that cash belongs to ?
 - Hint: Since it makes sense that the value of the Company should not change (operations are the same / no change to NPV of future cash flows...) and you know cash goes down, what else could be changing to make the total change 0? (by process of elimination you should be able to get the candidate to equity value)
 - Want to tell the candidate to ignore market movement like ("oh shares might go up if people think the Company is going to start paying dividends now")
 - It does not change
 - Cash goes down by \$100mm and equity value goes down by \$100mm
- What if the Company decides to invest \$100mm in a new project?

- Again, will most likely struggle here. Want to lead them to think of TEV as the present value of future cashflows.
 - If IRR of project > cost of capital then TEV will go up
 - If IRR of project = cost of capital then TEV will not change
 - If IRR of project < cost of capital then TEV will go down
 - All of this would happen in the equity value (assuming the Company is not distressed)
- What would happen to TEV if LIBOR drops by 50bps?
 - It would go up. Yield on your debt should go down making your cost of debt lower, making your WACC lower and hence increasing TEV
- If you have time: using what we just discussed above, in banking, we generally like TEV (like TEV / EBITDA) multiples as opposed to equity multiples (like PE) because they are capital structure agnostic. To see this, what would happen to a TEV/EBITDA multiple and P/E multiple if we raise \$100mm of new debt?
 - EV / EBITDA: EV doesn't change (as discussed above) and neither does EBITDA (no change)
 - P/E: Price (equity value) does not change as discussed above. Earnings decreases by tax effected interest expense so the multiple goes up
- If they do this in less than 20min you can ask either behavioral questions or from the accounting questions below
- Give them 5 min to ask questions

Random Additional Question

- You are a toy store. At T=0 you buy \$10 of toys from your supplier with cash, at T=1 you sell the toys for \$12 on credit, walk me through the 3 statements
 - T = 0. Nothing on income statement. **SCF**: changes in working capital goes down by \$10 (inventory: assets are a use of cash) so cash is down by that amount. **BS**: Cash is down by \$10 and inventory is up by \$10 so it balances
 - T = 1. **IS**: Rev is up \$15 and COGS is up \$10 so income before taxes is up \$5. If we assume a 20% tax rate, NI is up \$4. **SCF**: NI is up \$4 and inventory is down \$10mm and Accounts receivable is up \$15 so changes in NWC is down \$5 (both inventory and AR are assets) so cash is down \$1. **BS**: cash is down \$1, inventory is down \$10mm, and AR is up \$15mm so assets are up \$4mm. Stockholder equity is also up \$4mm so the BS balances
- Let's say you take out \$100 of debt with 10% **PIK** interest what happens to your 3 statements after one year
 - **IS**: Interest expense is up \$10 (for the year of \$2.5 for the quarter) so pre-tax NI is down \$10 and with a 20% tax rate NI is down \$8. **SCF**: NI is down \$8 you have add back the non-cash (PIK) interest expense so cash is up \$2. **BS**: Cash is up \$2, the PIK tranche of debt is up \$10 (liabilities up \$10) and Stockholders equity is up \$8. It balances!
- Acc / Dill: Company A buys Company B
 - Company A:
 - P/E: 10
 - Stock price: \$5
 - Number of Shares 20
 - EBITDA: \$40
 - EV / EBITDA: 7x
 - Company B:
 - P/E: 6
 - NI: 8
 - Net debt: \$30
 - Things we will not give them but they should ask for: Synergies (\$1), premium on Company B (25%), interest rate on new debt (10%)
 - Financed with 50% cash (all debt) and 50% equity
 - How much are you paying Company B?
 - PE of 6 times NI of 8 = then mkt cap is **\$40**
 - With a 25% premium to the equity you get purchase equity of **\$50**
 - Plus Net Debt of \$30 you get purchase price of **\$80**
 - 50% of equity means \$40 of new equity and \$40 of new debt
 - At 10% interest, that is **\$4** of new interest expense
 - In order to get \$40 by selling equity Company A has to issue **8** shares (assuming they can issue them at \$5)
 - Math for Company A:

- Stock price of \$5/P/E of 10 you get **EPS of 0.5** times 20 shares you get Net income for A of **\$10**

○ FORMULA:

○
$$\frac{\text{Net Income of A} + \text{Net Income of B} + \text{Synergies} - \text{Interest on new debt} - \text{Forgone Interest in Cash}}{\text{Shares of A} + \text{New Shares Issued}}$$

○
$$\frac{10 + 8 + 1 - 4 - 0}{20 + 8} = \frac{15}{28}$$
 which is more than .5 so accretive

Option 3 - Modigliani–Miller Theorem Question

- Tell me about yourself / walk me through your resume
- Why Evercore? (Different than why banking)
- Walk me thorough a DCF
 - High-level answer from them. Should not be controversial
 - Will probably mention you discount the cashflows by the WACC
- On a high level though, what is WACC?
 - It is the opportunity cost of investing in the Company (the full enterprise). I.e., the return you could expect to get investing in a similarly risky Company
- Would you mind walking through the WACC?
 - $K_d \cdot D(1-t) + K_e \cdot E + K_p \cdot p$
 - Where K = cost, d = debt, e = equity, and p = preferred
- How do you calculated Ke and Kd?
 - $K_d = \text{weighted average yield on debt}$
 - $K_e = \text{Capm} = R_f + (R_m - R_f)B$
 - R = return
 - f = risk free rate
 - m = market
 - B = Beta
- How do you think is higher the cost of debt or the cost of equity?
 - Equity higher as it is riskier and hence investor demand additional return for that risk
 - Debt gets the tax shield
- For simplicity let's assume there are no taxes in this scenario. Let's say a company with TEV of \$100mm currently has \$20mm of debt (single tranche) with a 5% coupon. What would the WACC of this company be?
 - They will need to ask for
 - Trading price of the debt (for the yield): par
 - Beta: 1.5
 - Risk free rate: 2%
 - Return of the market: 10%
 - $\text{WACC} = 20\% \cdot 5\% + 80\% \cdot [2\% + (10\% - 2\%) \cdot 1.5] = 1\% + 11.2\% = 12.2\%$
- There's a popular WACC theorem called the Modigliani–Miller Theorem. The theorem states that in the absence of taxes, bankruptcy costs, agency costs, and asymmetric information, and in an efficient market, the value of a firm is unaffected by how that firm is financed. Why does this make sense?
 - Given that he have discussed that WACC is the riskiness of the full enterprise, why should capitalization change that. Why should more debt affect how many widgets to sell, at what price, or how much it costs to produce them?
 - Disclaimer, if you near bankruptcy the change in capitalization can affect riskiness of cashflows to the firm

- Now let's assume the Company above raises an additional \$20mm of junior debt at 7%. What would the new WACC be?
 - They might be tempted to say: $WACC = 40\% \times 6\% + 60\% \times [2\% + (10\% - 2\%) \times 1.5] = 2.4\% + 8.4\% = 10.8\%$
- How do you reconcile this with the theorem I just explained to you?
 - You should ask them what else could have changed in the WACC formula with that new debt. The answer is that Beta should be higher now
 - You want them to realize that raising for debt only shifts the risk it does not create it
- To illustrate this example let's take the Company (with \$100mm of TEV) in the two scenarios we discussed \$20 of debt and \$40 of debt. Let's say the Company loses a contract that adversely affects TEV by \$10mm what happens to the Company in both scenarios?
 - \$20mm of debt scenario: $10/80 = 12.5\%$ - Equity drops by 12.5%
 - \$40mm of debt scenario: $10/60 = 16.7\%$ - Equity drops by 16.7%
 - This map should illustrate how more leverage makes equity riskier and hence more expensive
- If you have time you could discuss why absence of taxes, bankruptcy costs, agency costs, and asymmetric information, and in an efficient market are necessary for the theorem to work

Alternative Option 3 – Burning Factory

- Tell me about yourself / walk me through your resume
- Why Evercore? (Different than why banking)
- Let's talk about a scenario in which you own a Company that has two factories. Let's say one of the factories burns down. Can you walk me through the impact in the income statement
 - Revenue cuts in half
- What assumption are you making there?
 - Factories were running at full capacity
 - Both factories are independently self-sufficient (i.e, is not like one does step one and the other does step two of the process)
- What about the Costs?
 - They might be tempted to say they will also be cut in half
 - Important for them to remember about fixed costs. Remind them that the CEO will still have to get paid the same amount
- So what about net income?
 - Would decrease by less than half
- Introduce them to the concept of operating leverage
- So if you expect to grow would you rather have more of fixed cost structure or a variable cost structure?
 - Fixed. Margins will improve
- Back to the burning factory, for the sake of this question, let's say net income is cut in half, what do you think will happen to the stock price?
 - Will be tempted to say half
 - Have to explain that depends on capitalization
 - Walk through an example

Option 4 – Jaslow (Pardon the formatting it is late at night)

- Tell me about yourself / walk me through your resume
- Why Banking? (Slightly different than the why EVR question in Template B)
- 1. Can you walk me through how you would get to EBITDA if I only gave you beginning and ending balance sheet?
 - a. They should ask the following questions in order to work their way back to EBITDA.
 - i. What is the difference between retained earnings?
 - 1. Answer: The difference is \$75
 - ii. Did the company issue any dividends throughout the year?
 - 1. Answer: They issued \$25 worth of dividends
 - iii. They should then say that Net Income therefore was \$100.
 - iv. Then they should ask you what the tax rate is.
 - 1. Answer: Say 50% for the simplicity of the math.
 - v. They then should say pre-tax income (EBT) is \$200.
 - vi. They then should ask for debt statistics in order to calculate the interest rate on the debt. Specifically they should ask for whether interest is calculated on beginning, ending, or average debt balance.
 - 1. Answer: Say that interest is calculated at 15% of the beginning balance of debt which was \$200
 - a. Interest should therefore be \$30
 - vii. They then should ask what the difference was between PP&E was on the balance sheet. **They must also ask if there was any capital expenditures during the period.**
 - 1. Answer: Say that PP&E decreased by \$75 but that there was \$50 in capex for the year.
 - a. Depreciation should therefore be \$125
 - viii. They should then ask if there was a difference between intangible assets. **They must also ask if there were any purchases of intangible assets.**
 - 1. Answer: Say there was a decrease of \$30 and that there were \$15 of purchases.
 - a. Amortization should therefore be \$45
 - ix. They should then say that **EBITDA is \$400**
 - 2. Ask what the formula for perpetuity growth and exit multiple are in a DCF.
 - a. Then ask how would they both be different under the mid-year convention.
 - i. Perpetuity growth would have to be discounted using the mid-year because the cash flows that are received in perpetuity should be viewed as mid-year cash flows

ii. Exit multiple method would not change in the way it is discounted because it is reflecting a sale of the company at that multiple, and that cash flow is received all at once

3. How would increasing the WACC increase the value of the company in a DCF?
 - a. If the company had negative cash flows
4. Can you give me ways an all cash merger would be dilutive?
 - a. Company the buyer is acquiring as negative earnings
 - b. The interest forgone on cash yielded a higher return than the increase in earnings received in the transaction
5. Give me 3 ways to increase accretion in a merger model.
 - a. Decrease purchase price
 - b. Reduce the amount of equity used
 - c. Increase synergies
6. Which are more valuable, revenue or cost synergies?
 - a. Cost synergies because they directly flow through to EBITDA as opposed to revenue which are reduced by COGS
7. How can you increase revenue without increasing the amount of sales the company has?
 - a. Increase price
8. What changes would you make to EBITDA to make it a better proxy for cash flow?
 - a. Take out taxes
 - b. Take out capex
 - c. Adjust for net working capital
 - d. Take out interest