

Financial Modeling Fundamentals – Module 08

Discounted Cash Flow (DCF) Analysis – Quiz Questions

1. How much would you be willing to pay for a company that generates exactly \$100 in Free Cash Flow into eternity?
 - a. An infinite amount, since the total FCF generated will eventually reach infinity.
 - b. It depends on what your targeted yield, or discount rate, is.
 - c. You can't answer this question because you need to know much the FCF is increasing by each year (since there will always be growth).
 - d. You can't answer this question because you need to know the rate of inflation as well.

2. Which of the following statements correctly calculates Terminal Value (TV) in an Unlevered DCF, and also correctly describes how growth, the discount rate, and the Final Year FCF will affect the Terminal Value?
 - a. $TV = \frac{Final\ Yr.\ FCF * (1+FCF\ Growth\ Rate)}{(Discount\ Rate - FCF\ Growth\ Rate)}$; higher growth INCREASES TV; a higher discount rate REDUCES TV; higher final year FCF INCREASES TV.
 - b. $TV = \frac{Final\ Yr.\ FCF * (1+Discount\ Rate)}{(Discount\ Rate - FCF\ Growth\ Rate)}$; higher growth INCREASES TV; a higher discount rate REDUCES TV; Implied Enterprise Value = TV + PV of FCFs.
 - c. $TV = \frac{Final\ Yr.\ FCF}{(Discount\ Rate - FCF\ Growth\ Rate)}$; higher growth DECREASES TV; a higher discount rate INCREASES TV; higher final year FCF INCREASES TV.
 - d. $TV = \frac{Final\ Yr.\ FCF * (1+FCF\ Growth\ Rate)}{FCF\ Growth\ Rate}$; higher growth INCREASES TV; higher discount rate REDUCES TV; Implied Enterprise Value = TV + PV of FCFs.

3. Which of the following are signs that your assumptions might be incorrect or unrealistic in a DCF analysis?

- a. The Present Value of the Terminal Value comprises 75% or more of the company's implied Enterprise Value.
- b. The Present Value of the Terminal Value comprises only 30% of the company's implied Enterprise Value.
- c. The projection period is 10-15 years rather than 5 years.
- d. The projection period is 3-4 years rather than 5-10 years.
- e. In the Terminal Period, you assume that CapEx = D&A because in the long-term the company's Net PP&E balance should not be changing.
- f. In the Terminal Period, CapEx exceeds D&A because of inflation as well as the company's need for continual re-investment to maintain its final year FCF.
- g. You have included the expense associated with unfunded pensions in your FCF projections, so you have also subtracted the Unfunded Pension Liability when backing into Implied Equity Value from Implied Enterprise Value.
- h. You have built a sensitivity table that shows the company's implied Enterprise Value relative to its average revenue growth and average EBITDA margins.
- i. You have built a sensitivity table that shows the company's implied Enterprise Value relative to overall GDP growth and the interest rates set by the central bank.
- j. You have picked a Terminal EBITDA multiple such that the implied long-term FCF growth rate is 2%, compared to the expected GDP growth rate of 3%.

4. What is the BEST way to think about Unlevered FCF in a DCF analysis?

- a. You can think of it as Cash Flow from Operations less CapEx, since most companies define it that way in their filings.
- b. You can think of it as EBITDA less D&A, less taxes at the effective tax rate, plus D&A, plus or minus the change in Working Capital, minus CapEx.
- c. You can think of it as a modified version of the Cash Flow Statement that excludes Cash Flow from Financing and Cash Flow from Investing except for CapEx, but keeps much of what's in Cash Flow from Operations, except for the net interest expense and certain non-cash charges.
- d. You can think of it as EBITDA, less taxes at the effective tax rate, plus or minus the change in Working Capital, minus CapEx.
- e. You can think of it as $\text{Net Income} + \text{Net Interest Expense} * (1 - \text{Tax Rate})$, plus D&A, plus or minus the change in Working Capital, minus CapEx.

5. Consider a DCF analysis for Steel Dynamics, a leading steel manufacturing company, as shown below:

Steel Dynamics, Inc. - FCF Projections:	Historical			Projected				
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue:	\$ 7,997.5	\$ 7,290.2	\$ 7,372.9	\$ 7,741.6	\$ 8,051.2	\$ 8,373.3	\$ 8,624.5	\$ 8,883.2
Revenue Growth Rate:	26.9%	(8.8%)	1.1%	5.0%	4.0%	4.0%	3.0%	3.0%
Operating Income:	584.8	391.2	386.5	425.8	483.1	544.3	603.7	666.2
Operating Margin:	7.3%	5.4%	5.2%	5.5%	6.0%	6.5%	7.0%	7.5%
Less: Taxes, Excluding Effect of Interest:	(198.8)	(133.0)	(131.4)	(144.8)	(164.2)	(185.0)	(205.3)	(226.5)
Net Operating Profit After Tax (NOPAT):	386.0	258.2	255.1	281.0	318.8	359.2	398.5	439.7
Adjustments for Non-Cash Charges:								
Depreciation & Amortization:	222.6	225.2	230.9	193.5	201.3	209.3	215.6	222.1
% Revenue:	2.8%	3.1%	3.1%	2.5%	2.5%	2.5%	2.5%	2.5%
Impairment Charges:	-	8.3	0.3	-	-	-	-	-
Equity-Based Compensation:	17.3	12.5	15.5	15.4	16.0	16.7	17.2	17.7
% Revenue:	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Deferred Income Taxes:	34.4	54.5	30.7	29.0	24.6	18.5	10.3	5.7
% Book Taxes on Income Statement:	21.7%	88.3%	30.9%	20.0%	15.0%	10.0%	5.0%	2.5%
(Gain) / Loss on PP&E Disposal:	(3.9)	0.5	1.1	-	-	-	-	-
Total Non-Cash Adjustments:	270.4	301.0	278.6	237.9	242.0	244.5	243.1	245.4
Changes in Working Capital:								
Decrease / (Increase) in Accounts Receivable:	(100.6)	86.0	(78.2)					
Decrease / (Increase) in Inventory:	(85.5)	13.8	(108.0)					
Decrease / (Increase) in Other Assets:	5.7	(1.3)	13.7					
Increase / (Decrease) in Accounts Payable:	56.6	(32.6)	40.1					
Increase / (Decrease) in Income Tax Payable:	26.2	21.6	(12.5)					
Increase / (Decrease) in Accrued Expenses:	47.9	(85.1)	15.0					
Net Change in Working Capital:	(49.7)	2.4	(129.9)	(18.4)	(15.5)	(16.1)	(12.6)	(12.9)
% Change in Revenue:	(2.9%)	(0.3%)	(157.1%)	(5.0%)	(5.0%)	(5.0%)	(5.0%)	(5.0%)
% Revenue:	(0.6%)	0.0%	(1.8%)	(0.2%)	(0.2%)	(0.2%)	(0.1%)	(0.1%)
Less: Capital Expenditures:	(167.0)	(223.5)	(186.8)	(232.2)	(241.5)	(251.2)	(258.7)	(266.5)
% Revenue:	2.1%	3.1%	2.5%	3.0%	3.0%	3.0%	3.0%	3.0%
Unlevered Free Cash Flow:	\$ 439.6	\$ 338.1	\$ 216.9	\$ 268.3	\$ 303.8	\$ 336.4	\$ 370.2	\$ 405.7
Growth Rate:	N/A	(23.1%)	(35.8%)	23.7%	13.2%	10.8%	10.0%	9.6%

BESIDES the fact that the projection period is too short and the final year Unlevered FCF growth rate is too high, what is the biggest mistake or potential problem with this analysis?

- a. The Change in Working Capital should be linked to revenue, not the change in revenue, since it jumps around too much as a % of the change in revenue.
 - b. The operating margins expand by too much, since they start out at 5.2% in the last historical year but increase to 7.5% by the end of the projected period.
 - c. Revenue should be projected on a “# units sold and average price per unit” basis, and expenses should be linked to raw material costs and the employee count rather than a simple percentage.
 - d. Equity-Based Compensation should NOT be included as a non-cash expense, or, if it is, the company’s share count should be adjusted to reflect its impact.
 - e. CapEx is too high since it exceeds D&A as a % of revenue in all the projected years.
- 6. Suppose that you look at the comparable public companies and, based on those figures, you estimate a baseline Terminal EBITDA multiple of 10x in a DCF for the company you’re valuing.**

What’s the best way to check whether or not this Terminal EBITDA multiple is reasonable?

- a. Widen your set of comparables and check whether or not other companies are also trading at 10x EBITDA multiples.
- b. Sensitize around the 10x multiple heavily, and create sensitivity tables that go down to 5x and up to 15x to make sure the range of outcomes is reasonable.
- c. Calculate the implied long-term FCF growth rate, based on the final year FCF, the discount rate, and the 10x multiple, and compare it to expected GDP growth, the rate of inflation, and the company’s final year FCF growth rate.
- d. You should look up equity research for the company and see what assumptions analysts are using in their DCF analyses.

- 7. When you're moving from the Implied Enterprise Value to the Implied Equity Value in a DCF based on Unlevered Free Cash Flow, how can you determine which items to add and subtract in the calculation?**
- a. All the items that typically go into the Enterprise Value calculation should be included, but you flip the signs since you're working backwards and moving from Enterprise Value to Equity Value.
 - b. If you've already included the income or expenses associated with the item in the FCF projections, include it; otherwise, don't include it.
 - c. Certain items, like Debt and Cash, should always be included, but beyond those you should include an item only if the associated expenses are part of the company's operating expenses.
 - d. If you're already included the income or expense associated with the item in the FCF projections, don't include it; otherwise, do include it.

8. Consider the 10-year Unlevered FCF projections for Jazz Pharmaceuticals, as shown below:

Unlevered Free Cash Flow Projections:	Units	Projected									
		FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Revenue:	\$ M	\$ 1,176.9	\$ 1,553.3	\$ 1,998.0	\$ 2,554.3	\$ 3,174.8	\$ 3,853.2	\$ 4,552.3	\$ 5,371.6	\$ 1,662.1	\$ 1,827.6
Annual / Annualized Revenue Growth Rate:	%	34.9%	32.0%	28.6%	27.8%	24.3%	21.4%	18.1%	18.0%	(69.1%)	10.0%
Operating Income (EBIT):	\$ M	348.7	697.0	911.7	1,169.9	1,453.2	1,768.0	2,064.2	2,432.8	677.4	749.1
Annual / Annualized Operating Margin:	%	29.6%	44.9%	45.6%	45.8%	45.8%	45.9%	45.3%	45.3%	40.8%	41.0%
Less: Taxes, Excluding Effect of Interest:	\$ M	(62.8)	(125.5)	(164.1)	(210.6)	(261.6)	(318.2)	(371.6)	(437.9)	(121.9)	(134.8)
Net Operating Profit After Tax (NOPAT):	\$ M	285.9	571.5	747.6	959.3	1,191.6	1,449.8	1,692.6	1,994.9	555.5	614.3
Adjustments for Non-Cash Charges:											
Amortization of Intangible Assets:	\$ M	129.5	126.2	121.8	121.7	118.2	100.7	100.7	100.7	100.7	100.7
Depreciation:	\$ M	4.7	7.8	12.0	17.9	25.4	34.7	45.5	59.1	19.9	23.8
Acquired In-Process Research & Development:	\$ M	127.0	-	-	-	-	-	-	-	-	-
Change in Fair Value of Contingent Consideration:	\$ M	-	-	-	-	-	-	-	-	-	-
Deferred Income Taxes:	\$ M	-	-	-	-	-	-	-	-	-	-
Goodwill Impairment:	\$ M	-	-	-	-	-	-	-	-	-	-
Other Items and Adjustments:	\$ M	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Total Adjustments for Non-Cash Charges:	\$ M	265.3	138.0	137.9	143.7	147.7	139.4	150.3	163.9	124.7	128.5
Changes in Operating Assets & Liabilities:											
Accounts Receivable:	\$ M	(43.5)	(55.4)	(66.0)	(83.2)	(93.8)	(103.6)	(108.0)	(127.5)	554.8	(26.8)
Inventories:	\$ M	(6.9)	(11.4)	(13.4)	(16.8)	(18.7)	(20.5)	(21.1)	(24.8)	112.1	(5.0)
Prepaid Expenses & Other Current Assets:	\$ M	(68.6)	1.5	(37.6)	(49.0)	(55.7)	(59.8)	(67.3)	(74.6)	320.3	(15.6)
Other Non-Current Assets:	\$ M	-	-	-	-	-	-	-	-	-	-
Accounts Payable:	\$ M	7.0	9.0	10.6	13.2	14.8	16.1	16.6	19.5	(88.2)	3.9
Accrued Liabilities:	\$ M	79.6	(2.1)	52.3	68.2	77.4	83.2	93.6	103.8	(445.7)	21.7
Income Taxes Payable:	\$ M	-	-	-	-	-	-	-	-	-	-
Deferred Revenue:	\$ M	2.6	3.0	3.6	4.4	5.0	5.4	5.6	6.6	(29.7)	1.3
Other Current & Non-Current Liabilities:	\$ M	-	-	-	-	-	-	-	-	-	-
Total Changes in Operating Assets & Liabilities:	\$ M	(29.8)	(55.4)	(50.6)	(63.1)	(71.0)	(79.1)	(80.6)	(97.0)	423.6	(20.4)
Less: Capital Expenditures:	\$ M	(14.1)	(20.2)	(28.0)	(38.3)	(50.8)	(65.5)	(81.9)	(102.1)	(33.2)	(38.4)
Annual Unlevered Free Cash Flow:	\$ M	507.2	634.0	806.9	1,001.6	1,217.5	1,444.6	1,680.4	1,959.7	1,070.5	684.0

Which of the following represent potential problems or assumptions to reconsider in this model?

Make sure you take into account the company's industry (pharmaceuticals) when answering this question.

- a. The revenue growth doesn't make any sense since it drops precipitously in Year 9, but then recovers in Year 10... following years of steady growth before that. This rarely, if ever, happens for normal companies.
 - b. The Final Year FCF and the associated growth rate don't make much sense because there is an increase in revenue and NOPAT, but a decrease in FCF– so perhaps we need to create a “final, stabilized year” FCF instead.
 - c. The Amortization of Intangible Assets is very high, but we don't show Purchases of Intangible Assets anywhere; we should either reflect those purchases or include a final, stabilized year FCF with no Amortization of Intangibles.
 - d. The margins do not make sense because they stay in about the same range even when the company's revenue drops – but no company could reduce a high fixed-cost base that quickly.
9. You are building a DCF analysis. Suppose that the valuation date is September 30th, 2051, and the company's most recent fiscal year ended on December 31st, 2050.

If you're applying the mid-year discount convention and you're reflecting stub periods, what should the discount factor for FY 2052 be?

- a. 1.250.
- b. 0.750.
- c. 0.625.
- d. 1.125.

10. Which of the following statements represents DIFFERENCES in how you might calculate the Terminal Value (TV) in a DCF analysis for a pharmaceutical company compared to a consumer retail company?

- a. The appropriate long-term FCF growth rate is easier to determine for a consumer retail company because its sales, margin, and FCF growth are more predictable, so it's easier to check your work.
- b. You always have to use a much longer projection period for a pharmaceutical company due to patent expiration.
- c. You should use EV / EBITDAR for the Terminal Multiple for the consumer retail company, but EV / EBITDA is more appropriate for the pharmaceutical company.
- d. You don't have to check the long-term FCF growth rate implied by the Terminal Value against long-term GDP growth for the pharmaceutical company, since such a company will not grow at a steady rate over time.

11. Consider a company that has Free Cash Flow of \$1,200 in the final year of its 10-year projection period. Its Discount Rate is 11.0%, and its Long-Term FCF Growth Rate is 2.0%.

Please calculate BOTH the Terminal Value and the Present Value of the Terminal Value based on the Long-Term Growth (Gordon Growth) Method.

Assume there is no stub period, i.e. it is exactly 10 years from the current date to the end of the final year in the projection period.

- a. Terminal Value = \$14,328.5; PV of Terminal Value = \$5,046.3.
- b. Terminal Value = \$13,600.0; PV of Terminal Value = \$5,046.3.
- c. Terminal Value = \$14,328.5; PV of Terminal Value = \$5,316.6.
- d. Cannot determine these figures because it depends on whether it's an Unlevered or Levered DCF.
- e. Cannot determine these figures because it depends on whether or not the mid-year convention is used.

12. Consider the partial WACC analysis shown below for Bolton Incorporated, a leading provider of medical supplies for burn injury and skin disease victims:

WACC Analysis - Bolton Incorporated

(\$ in Millions Except Per Share and Per Unit Data)

Discount Rate Calculations - Assumptions

Risk-Free Rate:	4.00%
Equity Risk Premium:	7.50%
Pre-Tax Cost of Debt:	5.50%
Cost of Preferred Stock:	7.50%

Comparable Companies - Unlevered Beta Calculation

Name	Levered			Preferred		Equity			Unlevered Beta
	Beta	Debt	% Debt	Stock	% Preferred	Value	% Equity	Tax Rate	
Smallwood, Inc.	0.90	\$ 545.6	16.9%	\$ 121.0	3.7%	\$ 2,561.1	79.3%	25.0%	0.75
Lychester Incorporated	0.70	978.1	22.1%	56.1	1.3%	3,401.1	76.7%	30.0%	0.57
Farwynd Corporation	0.80	761.1	16.2%	221.1	4.7%	3,708.1	79.1%	35.0%	0.67
Frey Weddings Corp.	1.20	878.1	22.7%	-	-	2,987.6	77.3%	27.0%	0.99
Massey Inc.	0.78	179.1	14.3%	78.1	6.2%	998.1	79.5%	19.0%	0.64
Martell Incorporated	1.10	435.1	17.7%	351.1	14.3%	1,671.1	68.0%	29.0%	0.79
Royce Corporation	0.95	693.1	19.8%	601.1	17.1%	2,211.1	63.1%	34.0%	0.64

Median:	0.90	\$ 693.1	17.7%	\$ 121.0	4.7%	\$ 2,561.1	77.3%	29.0%	0.67
----------------	-------------	-----------------	--------------	-----------------	-------------	-------------------	--------------	--------------	-------------

Bolton Incorporated 1.08

Bolton Incorporated - Levered Beta & WACC Calculation

	Unlevered			Preferred		Equity			Levered Beta
	Beta	Debt	% Debt	Stock	% Preferred	Value	% Equity	Tax Rate	
Current Capital Structure:	0.67	\$ 1,198.6	25.5%	\$ -	-	\$ 3,510.1	74.5%	18.0%	0.86
"Optimal" Capital Structure:									

Calculate WACC for Bolton Incorporated based on its optimal capital structure.

- 8.93%.
- 10.17%.
- 9.10%.
- 9.40%.

13. The point of Enterprise Value is to assess the company's value regardless of its capital structure. In other words, \$100 of Debt, Equity, or Preferred Stock all contribute the same exact amount to Enterprise Value: \$100.

However, the theory behind Weighted Average Cost of Capital (WACC) seems to disprove, or at least argue against, the notion that a company's value is independent of its capital structure.

How do the concepts of Cost of Equity and WACC imply that a company's value does, in fact, depend on its capital structure?

- a. Because of taxes (interest on debt will provide tax benefits), default risk (debt and preferred increase the risk to all investors), and agency costs (different investors may want the company to pursue different agendas).
- b. Because the company's capital structure (current or targeted) affects its Cost of Equity, and so its capital structure will impact more than just each individual term in the WACC formula.
- c. Because there is wide disagreement about how to calculate Cost of Equity, in large part because people disagree on how the capital structure should affect it.
- d. Because the risk-free rate and equity risk premium will fluctuate based on a company's capital structure: investors will expect a heavily levered company to also generate higher returns.

14. Suppose that you are building a DCF analysis for a company, and the comparable public companies have a median Debt to Total Capital percentage of 15%.

You want to base Levered Beta, Cost of Equity, and WACC on this “optimal” capital structure and use 15% to determine the amount of debt this company *should* have, but the company does not have any debt currently.

How might you reasonably determine the Pre-Tax Cost of Debt for this company?

- a. Look at debt issuances from the comparable companies and take the median interest rate of those debt issuances.
- b. Do the same thing as in the answer choice above, but use the yield to maturity (YTM) of those companies’ debt issuances rather than the nominal interest rate.
- c. Start with the risk-free rate and then add an appropriate default spread based on the company’s credit rating.
- d. All of the above.

15. What is the MAIN problem in estimating Cost of Equity using the capital asset pricing model?

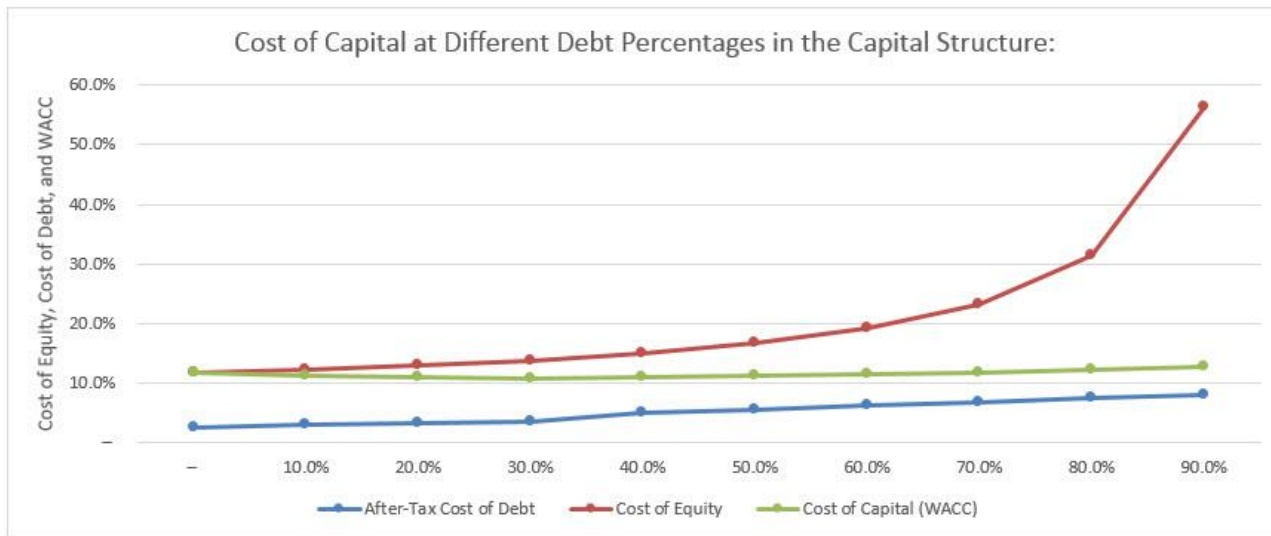
- a. The Risk-Free Rate is difficult to determine for multinational companies, or companies that operate in one country but are listed in another country.
- b. No one can agree on the proper Equity Risk Premium; academic sources cite numbers ranging from 3% to 11%.
- c. Levered Beta is difficult to determine because no one agrees on whether to use the company’s current capital structure, its targeted structure, or its optimal structure.
- d. All of the above.

16. Consider the information shown below for Cost of Equity and WACC at various Debt / Total Capital ratios for a company you are valuing:

Discount Rate Calculations - Assumptions

Risk-Free Rate:	3.50%
Equity Risk Premium:	7.50%
Unlevered Beta:	1.10
Tax Rate:	40.0%

Debt / Total Cap.:	Debt / Equity:	Relevered Beta:	Risk Spread:	Cost of Debt:		Cost of Equity:	Implied WACC:
				Pre-Tax:	After-Tax:		
—	—	1.10	1.0%	4.5%	2.7%	11.8%	11.8%
10.0%	11.1%	1.17	1.5%	5.0%	3.0%	12.3%	11.4%
20.0%	25.0%	1.27	2.0%	5.5%	3.3%	13.0%	11.1%
30.0%	42.9%	1.38	2.5%	6.0%	3.6%	13.9%	10.8%
40.0%	66.7%	1.54	5.0%	8.5%	5.1%	15.1%	11.1%
50.0%	100.0%	1.76	6.0%	9.5%	5.7%	16.7%	11.2%
60.0%	150.0%	2.09	7.0%	10.5%	6.3%	19.2%	11.5%
70.0%	233.3%	2.64	8.0%	11.5%	6.9%	23.3%	11.8%
80.0%	400.0%	3.74	9.0%	12.5%	7.5%	31.6%	12.3%
90.0%	900.0%	7.04	10.0%	13.5%	8.1%	56.3%	12.9%



Based on these assumptions, it seems like the company's "optimal" capital structure is 30% Debt / Total Capital since that ratio produces the lowest WACC (10.8%).

Which of the following changes would be MOST likely to REDUCE the optimal Debt / Total Capital ratio for the company?

Note that this question is NOT asking how WACC would change, but rather how the Debt / Total Capital ratio that minimizes WACC would change.

- a. If the company's Tax Rate declines to 20%, the optimal ratio will decline because the tax benefits of Debt will be reduced.
- b. If the Risk-Free Rate doubles, the optimal ratio will decline because Debt will become significantly more expensive.
- c. If Unlevered Beta decreases to 0.55, the optimal ratio will decline because Debt will become more expensive relative to Equity.
- d. If the Equity Risk Premium decreases to 4.0%, the optimal ratio will decline because it will be better to use less debt and more Equity.

17. Assume that a company you're valuing is currently using no debt and no preferred stock in its capital structure (i.e., it's 100% equity).

Which of the following will happen when the company goes from using no debt to using SOME amount of debt?

- a. The Cost of Equity will go up due to the added risk of bankruptcy, but the Cost of Debt will stay the same.
- b. Both the Cost of Equity and the Cost of Debt will increase.
- c. WACC will increase because both the Cost of Equity and the Cost of Debt increase.
- d. WACC will decrease initially, but will then increase past a certain level of debt because the additional risk from debt will outweigh its benefits.
- e. The company's implied Enterprise Value will increase initially, but will then decrease past a certain level of debt.
- f. The company's implied Enterprise Value will stay the same because Enterprise Value is a capital-structure-neutral metric.

18. Suppose that you are valuing a South African diamond producer that sells most of its products in China, records its sales in Chinese RMB, and has most of its employees in China.

The company is publicly traded on the South African stock market.

Which of the following should be components of your Cost of Equity calculation for this company?

- a. Use Chinese government bond yields for the Risk-Free Rate.
- b. Use South African government bond yields for the Risk-Free Rate.
- c. The Equity Risk Premium should be based on US stock market historical returns, plus a spread to account for the additional risk and potential returns in South Africa (as the company is listed on the South African stock market).
- d. The Equity Risk Premium should be based on US stock market historical returns, plus a spread to account for the additional risk and potential returns in China (as the company operates largely in China).
- e. Ideally, Levered Beta should be based on comparable diamond producers that operate in China.
- f. Ideally, Levered Beta should be based on comparable diamond producers that are headquartered in South Africa but operate largely in China.

19. Which of the following represent DIFFERENCES in a Levered DCF analysis compared to an Unlevered DCF analysis?

- a. You will calculate Terminal Value using an Equity Value-based multiple rather than an Enterprise Value-based one.
- b. You will use Levered Beta rather than Unlevered Beta in the Cost of Equity calculations.
- c. You will use Cost of Equity instead of WACC for the discount rate.
- d. You don't have to add back non-cash charges in the same way because Levered Free Cash Flow starts with Net Income rather than NOPAT.
- e. You will calculate the company's Implied Equity Value directly from the analysis, rather than calculating the implied Enterprise Value and then backing into the implied Equity Value.
- f. When calculating Free Cash Flow, you have to subtract the net interest expense and mandatory debt repayments.