Advanced Financial Modeling – Certification Quiz Questions

Modules 6, 7, and 8 – More Advanced M&A Concepts and Merger Models

1. Consider the screenshot below, which shows the Purchase Price Allocation Schedule for an M&A deal that uses a mix of Cash, Debt, and Stock for the financing and which is currently structured as a Stock Purchase:

Purchase Price Allocation:

Goodwill Calculation:	
Equity Purchase Price:	**$ 2,529.6**
(-) Seller Book Value:	(1,113.0)
(+) Write-Off of Existing Goodwill:	295.4
Total Allocable Purchase Premium:	**1,712.0**
(-) Write-Up of PP&E:	(41.7)
(-) Write-Up of Intangibles:	(1,027.2)
(+) Write-Down of Deferred Tax Assets:	-
(-) Write-Down of Deferred Tax Liabilities:	(114.1)
(+) New Deferred Tax Liability:	235.2
Total Goodwill Created:	**$ 764.2**
Goodwill Amortization Period - Book:	N/A
Goodwill Amortization Period - Tax:	15
Annual Amortization - Book:	-
Annual Amortization - Tax:	-

Fixed Asset Write-Up:	
PP&E Write-Up %:	10.0%
PP&E Write-Up Amount:	$ 41.7
Depreciation Period (Years) - Book:	8
Depreciation Period (Years) - Tax:	6
Annual Depreciation - Book:	5.2
Annual Depreciation - Tax:	-
Intangible Asset Write-Up:	
Purchase Price to Allocate:	$ 1,712.0
% Allocated to Indefinite-Lived Intangibles:	40.0%
Indefinite-Lived Intangibles:	684.8
% Allocated to Definite-Lived Intangibles:	20.0%
Intangibles Write-Up Amount:	342.4
Amortization Period (Years) - Book:	5
Amortization Period (Years) - Tax:	15
Annual Amortization - Book:	68.5
Annual Amortization - Tax:	-
New Deferred Tax Liability:	$ 235.2

Both the Acquirer and Target in this deal are large, publicly-traded corporations.

If this deal were structured as an Asset Purchase instead, which of the following statements correctly describe(s) how this schedule would CHANGE?

Use ONLY this schedule and do not assume anything about the companies' financial statements or off-statement line items.

a. There would be a write-down of the Target's Deferred Tax Assets because in an Asset Purchase, the Acquirer cannot use the Target's Net Operating Losses.

b. The new Goodwill Created would amortize for both book and tax purposes, so the two "Annual Amortization" lines in that section would be positive numbers.

c. The PP&E Write-Up and Definite-Lived Intangibles would depreciate/amortize for both book and tax purposes, so the "Annual Depreciation – Tax" and "Annual Amortization – Tax" lines in those two sections would be positive numbers.

d. A new Deferred Tax Liability would not be created.

e. All of the above.

f. Only statements A, C, and D.

g. Only statements A and B.

h. Only statements C and D.

2. You are analyzing a public company's potential spin-off of its manufacturing division into an entity separate from its services division (SunPower = services; Maxeon = manufacturing). In this spin-off, the company's current shareholders will receive 1 share in the new entity for every 8 shares they hold in the current company.

   The company wants to complete this spin-off because it believes that its services division will trade at a revenue multiple of 4-5x rather than the current ~1x revenue multiple for the entire company (the manufacturing division would continue to trade at ~1x revenue).

   You have built a spin-off model that shows each company's separate, projected financial statements, including a Sum-of-the-Parts (SOTP) valuation that values the services and manufacturing divisions as separate entities.

   This model then adds the separate Implied Enterprise Values to estimate what the current, combined company SHOULD be worth.

   In this SOTP valuation, you use the current, combined company's Equity Value to Enterprise Value "bridge" to calculate the Combined Equity Value, and you divide it by the current company's share count + the new shares issued to form the separate company.

You then compare this Implied Share Price to the combined company's current share price to estimate shareholders' potential upside. The full analysis is shown below:

Business Segment	Applicable Figure	25th Percentile Multiple	75th Percentile Multiple	Implied Enterprise Value Range	
SunPower Corporation - Standalone					
TEV / Revenue - FY21:	$ 1,397.8	4.9 x	5.0 x	$ 6,802.4	$ 6,976.4
TEV / Revenue - FY22:	1,639.0	4.3 x	4.3 x	6,979.9	7,008.2
15-Year Unlevered DCF Analysis:				3,215.7	4,054.8
(Terminal FCF Growth Rate of 0.50% to 1.50% and WACC of 9.10% to 8.10%)					
Blended Average Range:				**5,053.4**	**5,523.5**
Maxeon Solar Technologies, Ltd. - Standalone					
TEV / Revenue - FY21:	1,061.0	0.5 x	1.1 x	571.3	1,152.2
TEV / Revenue - FY22:	1,308.9	0.5 x	0.9 x	622.5	1,201.5
15-Year Unlevered DCF Analysis:				735.3	1,115.7
(Terminal FCF Growth Rate of 0.50% to 1.50% and WACC of 10.40% to 9.40%)					
Blended Average Range:				**666.1**	**1,146.3**
(-) Adjustment for Corporate Overhead:				-	-
Combined Enterprise Value:				**5,719.5**	**6,669.8**
(+) Cash & Cash-Equivalents:				464.8	464.8
(+) Financial Investments:				-	-
(+) Equity Investments:				226.6	226.6
(+) Other Non-Core Assets, Net:				-	-
(+) Net Operating Losses:				56.3	56.3
(-) Total Debt & Finance Leases:				(940.7)	(940.7)
(-) Preferred Stock:				-	-
(-) Operating Leases:				-	-
(-) Noncontrolling Interests:				(11.3)	(11.3)
(-) Unfunded Pensions:				-	-
Combined Equity Value:				**5,515.3**	**6,465.6**
Combined Share Count of Parent and Sub:				199.936	199.936
Range of Implied Share Prices:				**$ 27.59**	**$ 32.34**
Premiums to Current Share Price:				223.8%	279.6%

The Board of Directors reviews this analysis and concludes that there is 3-4x potential upside for current shareholders in this spin-off.

Which of the following is the BIGGEST potential problem with that argument?

a. There is no adjustment for corporate overhead, so the Combined Enterprise Value figures are likely too high.

b. You should not base the Equity Value to Enterprise Value "bridge" on the combined company's current bridge because there may be adjustments to the Cash balance due to the transaction fees.

c. There is a big difference between the implied values based on revenue multiples and the implied values from the DCF analysis for the services division ("SunPower"), so this 3-4x potential upside may not be plausible.

d. You should not use the combined share count at the bottom because the Parent and Sub are still part of the same entity; also, the Enterprise Value bridge is for the current company, not the spun-off entities.

3. You are analyzing an M&A deal in which the Acquirer goes from a minority stake (~49%) in one company to a majority stake (~70%) in the same company.

   The purchase of this additional stake will be financed with a mix of Cash, Debt, and Stock, and after the deal has closed, the companies' financials will be consolidated 100%. A Noncontrolling Interest for the 30% that the Acquirer does NOT own in the Target will be recorded on the Combined Balance Sheet.

   You create a sensitivity table to analyze the EPS accretion/dilution from the deal in Year 1 on a GAAP/IFRS basis, and it produces the following results:

Sensitivity - Year 1 EPS Accretion/Dilution vs. Premium Paid and % Additional Stake Acquired:

		Premium Paid:										
		–	3.0%	6.0%	**9.0%**	12.0%	15.0%	18.0%	21.0%	24.0%	27.0%	30.0%
% Additional Stake Acquired:	49.3%	(0.7%)	(1.4%)	(2.1%)	**(2.8%)**	(3.5%)	(4.2%)	(4.9%)	(5.5%)	(6.2%)	(6.8%)	(7.5%)
	45.7%	(0.5%)	(1.2%)	(1.9%)	**(2.5%)**	(3.2%)	(3.8%)	(4.5%)	(5.1%)	(5.7%)	(6.3%)	(6.9%)
	42.1%	(0.3%)	(1.0%)	(1.6%)	**(2.2%)**	(2.8%)	(3.4%)	(4.0%)	(4.6%)	(5.2%)	(5.8%)	(6.4%)
	38.5%	(0.1%)	(0.7%)	(1.3%)	**(1.9%)**	(2.5%)	(3.0%)	(3.6%)	(4.2%)	(4.7%)	(5.3%)	(5.8%)
	34.9%	0.1%	(0.5%)	(1.0%)	**(1.6%)**	(2.1%)	(2.6%)	(3.1%)	(3.7%)	(4.2%)	(4.7%)	(5.2%)
	31.3%	(0.1%)	(0.4%)	(0.7%)	**(1.2%)**	(1.7%)	(2.2%)	(2.7%)	(3.1%)	(3.6%)	(4.1%)	(4.6%)
	27.7%	(1.0%)	(1.2%)	(1.4%)	**(1.6%)**	(1.8%)	(2.0%)	(2.2%)	(2.6%)	(3.0%)	(3.5%)	(3.9%)
	24.1%	(1.9%)	(2.1%)	(2.3%)	**(2.4%)**	(2.6%)	(2.8%)	(2.9%)	(3.1%)	(3.3%)	(3.4%)	(3.6%)
	20.5%	**(2.8%)**	**(3.0%)**	**(3.1%)**	**(3.2%)**	**(3.4%)**	**(3.5%)**	**(3.7%)**	**(3.8%)**	**(4.0%)**	**(4.1%)**	**(4.2%)**

The EPS calculations here are based on Combined Net Income to Parent / Combined Share Count, i.e., they add Net Income from Equity Investments and subtract Net Income Attributable to Noncontrolling Interests in the numerator.

How is it possible for this deal to become *less dilutive* as a higher percentage is acquired but then turn *more dilutive* as the percentage acquired increases above a certain level?

a. Because the Net Income Attributable to Noncontrolling Interests becomes *less negative* at higher percentages acquired, but the Interest Expense on New Debt becomes *more negative*, and the combined share count also increases.

b. Because the positive Net Income from Equity Investments goes to 0 above a certain percentage acquired, and it gets replaced by Net Income Attributable to Noncontrolling Interests, which is always negative.

c. Because in all likelihood, the Acquirer issues Stock to fund the acquisition at lower percentages acquired, but then switches to Cash and then Debt at higher percentages.

d. Because at higher percentages acquired, the Net Income Attributable to Noncontrolling Interests contributes less to making the Net Income to Parent positive, while the Interest Expense on New Debt becomes more negative.