Financial Modeling Fundamentals – Module 07 Public Comps and Precedent Transactions – Quiz Questions

1. **What's the TRUE PURPOSE of valuing a company with a DCF, comparable public companies, and precedent transactions?**

    a. If the company is your client, you might use this valuation to advise the Board of Directors on how much the company might be worth in a sale.

    b. If you work at a hedge fund or asset management firm, you might value a company to determine whether or not you could make money by investing in it.

    c. A valuation tells you what the company SHOULD be worth today.

    d. A valuation tells you what the company IS worth today.

    e. A valuation using those methodologies shows you how much a company could earn if it sells off all its assets.

2. **What is the FIRST task you should complete when valuing a company?**

    a. Pull up the company's three financial statements to input its historical Income Statement, Balance Sheet, and Cash Flow Statement.

    b. Start by calculating the company's historical and future Free Cash Flow so you can run a "quick valuation" of the company first.

    c. Figure out the appropriate set of comparable public companies.

    d. Figure out the company's "story" by reading about it, doing research, and seeing why the company might not be priced correctly by the market.

3. **Why might your view of a pharmaceutical or biotech company be different from the market view of that company?**

    a. You believe the company's product pricing will increase by more than the market expects.

    b. You believe that drugs in the company's pipeline will launch sooner or later than the market expects.

    c. You believe that key patents will expire sooner or later than the market expects.

    d. You believe the company will spend a significantly different amount on sales & marketing than the market expects.

    e. All of the above.

4. **Suppose you are screening for comparable public companies for use in a valuation. How might you find potential companies to use?**

    a. Look up the company you are valuing on Google Finance, and see what it lists for "Related Companies."

    b. Look up "Competitors" or "Competition" in the company's filings or annual reports and see which firms are listed.

    c. Look up Fairness Opinions for recent M&A deals in the sector, and see which public companies banks have used to value similar companies.

    d. Look in equity research and see which companies research analysts use for their comparables.

    e. Use the screening feature on Capital IQ or Fact set and select the set of firms based on industry and financial criteria.

    f. All of the above.

5. **Which of the following screens for comparable public companies is likely NOT appropriate?**

   a. North American specialty pharmaceutical companies with between $500 million and $2 billion USD in LTM revenue; 5companies in the set.

   b. Worldwide spirits companies with over $1 billion USD in LTM revenue; 4companies in the set.

   c. Singaporean airlines with over $500 million SGD in revenue; 2 companies in the set.

   d. South Korean commercial banks with over 100 trillion KRW in assets; 6companies in the set.

6. **Consider the financial information for Vertex Pharmaceuticals [VRTX], as shown below:**

				VRTX Vertex Pharmaceuticals Inc.
	Calendarization			
	Old Partial	New Partial	FY	LTM
Revenue:	$ 625	$ 718	$ 1,567	
Cost of Sales:	89	107	219	
Gross Profit:	536	611	1,348	
Operating Expenses:	432	456	1,101	
Operating Income (EBIT):	104	155	247	
Interest and Other Income / (Expense):	(12)	(30)	(73)	
Pre-Tax Income:	92	125	174	
Taxes:	18	25	35	
Other Items:	5	-	51	
Reported Net Income:	79	100	190	
Amortization from the CFS:	6	5	15	
Acquired In-Process R&D from the CFS:	-	2	-	
Depreciation from the CFS:	43	33	78	
Non-Recurring Charges:	15	26	56	
Effective Tax Rate:				20.0%
EBITDA:	$ 168	$ 221	$ 396	

Based on this information, please calculate the LTM EBITDA for this company. All numbers shown above are in millions.

a. $449 million.

b. $343 million.

c. $433 million.

d. $366 million.

7. **Suppose the valuation date is August 5th, 2051, and you want to calculate a comparable company's Last Twelve Months' (LTM) revenue and EBITDA. The company's fiscal year ends on March 31st. How would you do this?**

a. Take the April 1st, 2050 – March 31st, 2051 fiscal year figures, add the April 1st – June 30th, 2051 figures, and subtract the April 1st – June 30th, 2050 figures.

b. It's best to look up the LTM figures in equity research, since most analysts project companies on a quarterly basis.

c. Since roughly 1/4 of the current fiscal year has passed, you can take the April 1st, 2050 – March 31st, 2051 fiscal year figures and multiply by ¾, and then take the current fiscal year projections and multiply by ¼ and add these numbers together.

d. Since we're in the middle of the calendar year, it's best to go back to the December 31st, 2050 calendar year figures for the company, take 50% of those, and then add 50% of the December 31st, 2051 projected calendar year figures.

8. **Consider the information below on Vertex Pharmaceuticals' Balance Sheet and its projected Revenue, EBITDA, and Net Income:**

	VRTX Vertex Pharmaceuticals Inc.		
	Balance Sheet Data		
Less: Cash & Cash-Equivalents:			$ (561)
Less: Equity Investments:			(21)
Less: Other Non-Core Assets, Net:			-
Less: Net Operating Losses:			(434)
Plus: Total Debt:			671
Plus: Preferred Stock:			-
Plus: Noncontrolling Interests:			27
Plus: Unfunded Pension Obligations:			-
Plus: Capital Leases:			101
Plus: Restructuring & Other Liabilities:			28
	Equity Research Projections		
	Year 1	Year 2	Year 3
Revenue:	$ 2,015	$ 2,343	$ 2,671
EBITDA:	656	878	1,002
Reported Net Income:	256	324	399

The company's Current Equity Value is $15,689 million USD (i.e., $15.689 billion).

Based on this information, please calculate the company's projected Year 1 EBITDA and P / E multiples.

a. It's not possible to calculate these multiples because we need forward estimates for Equity Value and Enterprise Value. Projected Revenue, EBITDA, and Net Income numbers must be matched with projected Equity Value or Enterprise Value.

b. Year 1 EBITDA Multiple = 23.6x; Year 1 P / E Multiple = 61.3x.

c. Year 1 EBITDA Multiple = 23.6x; Year 1 P / E Multiple = 60.5x.

d. Year 1 EBITDA Multiple = 24.3x; Year 1 P / E Multiple = 61.3x.

e. Year 1 EBITDA Multiple = 24.1x; Year 1 P / E Multiple = 60.5x.

9. **What's the BEST way to get forward projections for metrics such as revenue and EBITDA for the comparable public companies in a valuation?**

    a. It is best to create an Operating Model for each company in the set and come up with your own figures, based on your knowledge of the companies' operations.

    b. Find equity research reports from online brokerage accounts, or get consensus estimates from sites like Google or Yahoo Finance.

    c. Follow what's in the answer choice above, but use ONLY equity research reports issued by the bank that you're working at so that your numbers will be internally consistent.

    d. Look up the average growth rates and margins for all companies in the industry, and use them to forecast the figures for all the companies in this set.

10. **Why do you need to "calendarize" financial figures in a Public Company Comparables analysis?**

    a. It's not necessary – this is an optional step, and it's only required if you want to make the results slightly more accurate.

    b. You only need to calendarize if the fiscal years are "misaligned," e.g. if one company's FY ends on September 30 but another company's ends on December 31. You do it so that the financial metrics cover the same time periods for all the companies.

    c. You can't just rely on annual numbers in a set of Public Comps, but you must instead add quarterly data in order to be as accurate as possible.

    d. The question premise is false because you have to calendarize for Precedent Transactions, but not for Public Company Comparables.

11. **Which of the following screening criteria would NOT be appropriate for Precedent Transactions?**

    a. Specialty Pharma industry; North America companies; LTM revenue between $100 million and $1 billion USD; acquired between January 1st, 2010 and December 31st, 2014.

    b. Consumer Retail industry; European companies; LTM revenue between EUR 1 billion and EUR 5 billion; acquired between January 1st, 2021 and December 31st, 2025.

    c. Low-cost airline carriers; East and Southeast Asian companies; LTM EBITDA between $500 million and $2 billion USD; acquired between January 1st, 2012 and December 31st, 2017.

    d. Precious metals & mining industry; Australian companies; LTM EBITDA between $1 billion and $5 billion AUD.

12. **Which of the following steps do you complete when calculating the <u>PURCHASE Enterprise Value</u> for each M&A deal in a set of Precedent Transactions?**

    a. Always use the *offer price* to calculate the Purchase Equity Value first.

    b. For the Balance Sheet data required for Enterprise Value, use the seller's latest Balance Sheet available as of the transaction close date.

    c. Convert the value of stock into dollars or other currencies based on the buyer's share price as of the announcement date.

    d. For the Balance Sheet data required for Enterprise Value, use the seller's latest Balance Sheet available as of the transaction announcement date.

    e. Account for earn-outs either by assuming a probability of payout or by taking an "all or nothing" approach for the deals with earn-outs.

    f. If the seller's financial status or key metrics changed between the transaction announcement and the closing date, update the analysis to account for them.

13. **Suppose that you've come up with sets of public comps and precedent transactions for a company you're valuing. What would be an unusual result after you've calculated the key metrics and multiples for both sets?**

   a. The multiples vary considerably for the precedent transactions, with historical EBITDA multiples ranging from 5x to 15x; the range is narrower for the public comps.

   b. The set of metrics and multiples is more limited for the precedent transactions, and we rely mostly on LTM or last fiscal year figures instead of forward numbers.

   c. The public comps have higher multiples than the precedent transactions across all types of multiples and all the years.

   d. The screening criteria you use for the precedent transactions is much broader than it is for the public comps.