Real Estate & REIT Financial Modeling – Certification Quiz Questions

Module 9 – 3-Hour REIT M&A and Merger Model Case Study (Digital Realty / DuPont Fabros)

1. **You are working on a merger model for Digital Realty's $5.8 billion acquisition of DuPont Fabros Technology in the data center REIT space. You are explaining the key points of your model to a co-worker – how would you summarize the differences between REIT M&A deals and M&A deals involving "normal companies" (e.g., consumer/retail, technology, healthcare, industrials, etc.)?**

    a. Most REIT M&A deals are 100% Stock, or at least majority Stock.

    b. The Purchase Price Allocation process is different, at least under U.S. GAAP, because you eliminate the Seller's Accumulated Depreciation and create new Intangible Assets to represent tenant and lease values.

    c. Deals are often done because of synergies, and cost savings can be significant – but Buyers also incur restructuring costs when implementing these cost savings.

    d. The treatment of the Seller's Debt (and other financing sources) can make or break a deal because if it is not assumable, the Buyer typically has to refinance it with a higher-cost bridge loan.

    e. The Contribution Analysis and Value Creation Analysis are useful and highly relevant in REIT M&A deals, but they are not useful in "normal company" M&A deals.

    f. All of the above.

    g. Statements 1, 2, and 4 are correct.

    h. Statements 2, 4, and 5 are correct.

    i. Statements 1, 2, 4, and 5 are correct.

j. Statements 1, 2, and 3 are correct.

2. **You're reviewing the Sources & Uses schedule for this same deal, as shown below:**

Sources & Uses of Funds:

Post-Transaction Minimum Cash Balance:	$ M	$ 126.0
Post-Transaction Combined Cash Balance:	$ M	126.0
Cash Available for Transaction Fees:	$ M	-
Cash Used for Transaction Fees:	$ M	-
Debt Issued for Transaction Fees:	$ M	171.8

Sources:		Interest/Coupon Rate:	Differential:
Senior Notes Issued:	$ 171.8	3.70%	
Refinance Target's Debt:	1,523.5	3.34%	(0.46%)
Refinance Target's Preferred Stock:	201.3	5.25%	(1.37%)
Common Stock Issued:	5,831.2		
Cash for Transaction Fees:	-		
Total Sources:	**$ 7,727.7**		

Uses:		Interest/Coupon Rate:
Equity Purchase Price of Target:	$ 5,831.2	
Refinance Target's Debt:	1,523.5	3.80%
Refinance Target's Preferred Stock:	201.3	6.62%
Transaction Fees:	120.0	
Financing Fees:	51.7	
Total Uses:	**$ 7,727.7**	
CHECK:	**OK!**	

Which part of these assumptions should make you SKEPTICAL of this deal's chances for success?

a. It appears that the Buyer does not have enough Cash on-hand to pay for the transaction fees, which is never a good sign.

b. The Seller's Debt and Preferred Stock are both refinanced in the deal, even though it would be cheaper and easier to assume them instead.

c. Common Stock is used to fund nearly 100% of the acquisition costs, but it seems like the Buyer's Cost of Debt could easily be lower than its Cost of Equity.

d. The Seller's Debt and Preferred Stock are refinanced at *lower rates* rather than the typical *higher figures* for bridge loans.

e. All of the above.

3. **The Balance Sheet adjustments for this M&A deal are shown below:**

Balance Sheet:	Units:	Projected: 2Q 17	Projected: 3Q 17	Transaction Adjustments: Seller	Debit	Credit	3Q 17
ASSETS:							
Real Estate Assets:							
(+) Operating Real Estate Assets:	$ M	$10,992.9	$11,135.2	$ 3,174.4	$ 167.1	$ -	$14,476.7
(+) Construction in Progress and Development Land:	$ M	1,070.4	1,120.4	621.7	124.3	-	1,866.5
Gross Real Estate Assets:	$ M	**12,063.3**	**12,255.6**	**3,796.2**			**16,343.2**
(-) Accumulated Depreciation:	$ M	(2,973.0)	(3,161.9)	(747.3)	747.3	-	(3,161.9)
Net Real Estate Assets:	$ M	**9,090.2**	**9,093.7**	**3,048.9**			**13,181.3**
Cash & Cash-Equivalents:	$ M	92.3	103.7	22.3	-	-	126.0
Accounts Receivable:	$ M	170.6	218.0	14.1	-	-	232.1
Deferred Rent:	$ M	420.8	420.3	122.5	-	(122.5)	420.3
Goodwill:	$ M	757.4	757.4	-	2,582.5	-	3,340.0
Equity Investments:	$ M	113.6	113.8	-	-	-	113.8
Other Intangibles & Net Above-Market Leases:	$ M	1,446.0	1,448.0	5.0	161.2	(184.3)	1,430.0
Acquired In-Place Lease Value:	$ M				1,589.9	-	1,589.9
Other Assets:	$ M	243.7	258.7	74.6	-	-	333.3
TOTAL ASSETS:	$ M	**$12,334.6**	**$12,413.8**	**$ 3,287.3**			**$20,766.7**
LIABILITIES & EQUITY:							
Debt & Other Borrowings:	$ M	$ 6,417.7	$ 6,500.4	$ 1,523.5	$ (1,569.2)	$ 1,695.2	$ 8,149.9
Accounts Payable & Other Accruals:	$ M	784.1	860.6	41.0	-	-	901.6
Other Liabilities:	$ M	144.1	171.1	161.6	-	-	332.7
Total Liabilities:	$ M	**$ 7,345.9**	**$ 7,532.1**	**$ 1,726.0**			**$ 9,384.2**
Common Shareholders' Equity:	$ M	**$ 3,935.8**	**$ 3,828.1**	**$ 765.6**	**$ (885.6)**	**$ 5,831.2**	**$ 9,539.3**
(+) Preferred Stock:	$ M	1,013.0	1,013.0	201.3	(207.3)	201.3	1,208.2
(+) Noncontrolling Interests in Op. Partnership:	$ M	32.4	32.4	594.5	-	-	626.9
(+) Noncontrolling Interests in Consolidated JVs:	$ M	7.5	8.2	-	-	-	8.2
Total Equity:	$ M	**$ 4,988.7**	**$ 4,881.7**	**$ 1,561.3**			**$11,382.5**
TOTAL LIABILITIES & EQUITY:	$ M	**$12,334.6**	**$12,413.8**	**$ 3,287.3**			**$20,766.7**
Balance Check:		**OK!**	**OK!**	**OK!**			**OK!**

Which of these adjustments seems incorrect (or, if these adjustments seem fine, which other adjustments are missing)?

a. The Seller’s Deferred Rent should not be written down because it represents a simple timing difference between book rental income and cash rent received.

b. Another Intangible Asset, “Below-Market Lease Intangibles” should be created on the L&E side.

c. The Debt and Preferred Stock numbers seem wrong because they are both refinanced and replaced with new balances that are different from the old ones.

d. There is no mark-to-market adjustment on the Seller’s Debt.

e. The Seller's Equity Investments should be marked to market and then separated into their Asset and Liability components.

f. The Acquired In-Place Lease Value line item is very high, and it's unclear how a company with Forward Rental Income of ~$360 million could produce such a value.

g. All of the above.

h. None of the above.

4. The Combined Company's Income Statement down to Operating Income, with transaction adjustments and modifications in light blue, is shown below (4Q 17 is immediately after deal close):

		Projected:								
Income Statement:	*Units:*	**4Q 17**	**1Q 18**	**2Q 18**	**3Q 18**	**4Q 18**	**1Q 19**	**2Q 19**	**3Q 19**	**4Q 19**
Revenue:										
(+) Rental Income - Existing Properties:	*$ M*	$ 487.4	$ 501.9	$ 460.8	$ 481.5	$ 485.6	$ 507.6	$ 461.1	$ 480.7	$ 484.4
(+) Rental Income - Developments:	*$ M*	39.8	54.6	73.0	91.4	110.6	131.9	153.1	175.2	198.1
(-) Amortization of Acquired Above-Market Leases:	*$ M*	(10.1)	(10.1)	(10.1)	(10.1)	(10.1)	(10.1)	(10.1)	(10.1)	(10.1)
(+) Amortization of Acquired Below-Market Leases:	*$ M*	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
(+) Tenant Reimbursements - Existing Properties:	*$ M*	132.4	134.1	130.4	138.5	132.4	135.4	130.6	138.4	132.5
(+) Tenant Reimbursements - Developments:	*$ M*	12.5	17.0	22.6	28.2	33.8	39.9	46.3	53.0	59.6
(+) Property Management Fees:	*$ M*	1.7	2.2	1.3	1.8	1.9	2.6	1.5	2.1	2.1
(+) Interconnection Fees:	*$ M*	62.0	64.4	61.2	68.2	66.6	69.2	64.2	71.6	70.0
(+) Other Income:	*$ M*	6.6	3.0	3.8	1.4	6.8	3.1	3.9	1.5	7.0
Total Revenue:	*$ M*	**736.1**	**770.9**	**746.8**	**804.8**	**831.4**	**883.4**	**854.6**	**916.2**	**947.4**
Operating Expenses:										
(-) Property Expenses - Existing Properties:	*$ M*	(251.6)	(251.0)	(235.9)	(248.6)	(250.6)	(253.8)	(236.0)	(248.1)	(250.0)
(-) Property Expenses - Developments:	*$ M*	(20.4)	(27.8)	(37.3)	(46.8)	(56.6)	(67.3)	(78.2)	(89.5)	(101.3)
(+) Annual Cost Synergies:	*$ M*	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
(-) Restructuring and Merger Integration Costs:	*$ M*	-	-	-	-	(6.8)	(6.8)	(6.8)	(6.8)	-
(-) Amortization of Acquired In-Place Lease Value:	*$ M*	(28.4)	(28.4)	(28.4)	(28.4)	(28.4)	(28.4)	(28.4)	(28.4)	(28.4)
(-) Depreciation of Real Estate Asset Write-Ups:	*$ M*	(1.1)	(1.1)	(1.1)	(1.1)	(1.1)	(1.1)	(1.1)	(1.1)	(1.1)
(-) General & Administrative:	*$ M*	(48.3)	(44.8)	(45.0)	(58.0)	(54.2)	(51.2)	(51.2)	(65.7)	(61.6)
(-) Depreciation & Amortization:	*$ M*	(211.9)	(232.2)	(233.7)	(245.7)	(238.0)	(265.1)	(266.0)	(278.4)	(270.1)
(-) Other Items:	*$ M*	(5.4)	(2.5)	(3.1)	(1.2)	(5.6)	(2.6)	(3.2)	(1.2)	(5.7)
Total Operating Expenses:	*$ M*	**(562.5)**	**(583.2)**	**(579.9)**	**(625.2)**	**(636.8)**	**(671.6)**	**(666.4)**	**(714.7)**	**(713.7)**
Operating Income:	*$ M*	**173.6**	**187.7**	**166.9**	**179.5**	**194.6**	**211.8**	**188.2**	**201.5**	**233.8**

What seems unusual or incorrect about these projections?

a. The Cost Synergies should not start fully phased in immediately after deal close.

b. The Amortization of Above- and Below-Market Leases are in the wrong places – all Amortization should be under Operating Expenses.

c. The Restructuring and Merger Integration Costs should be incurred primarily in Year 1 following deal close, or at least earlier than they are in this model.

d. The absolute value of the Restructuring and Merger Integration Costs should not exceed the absolute value of the Cost Synergies.

e. All of the above.

f. Only statements 3 and 4 are correct.

g. Only statements 1 and 3 are correct.

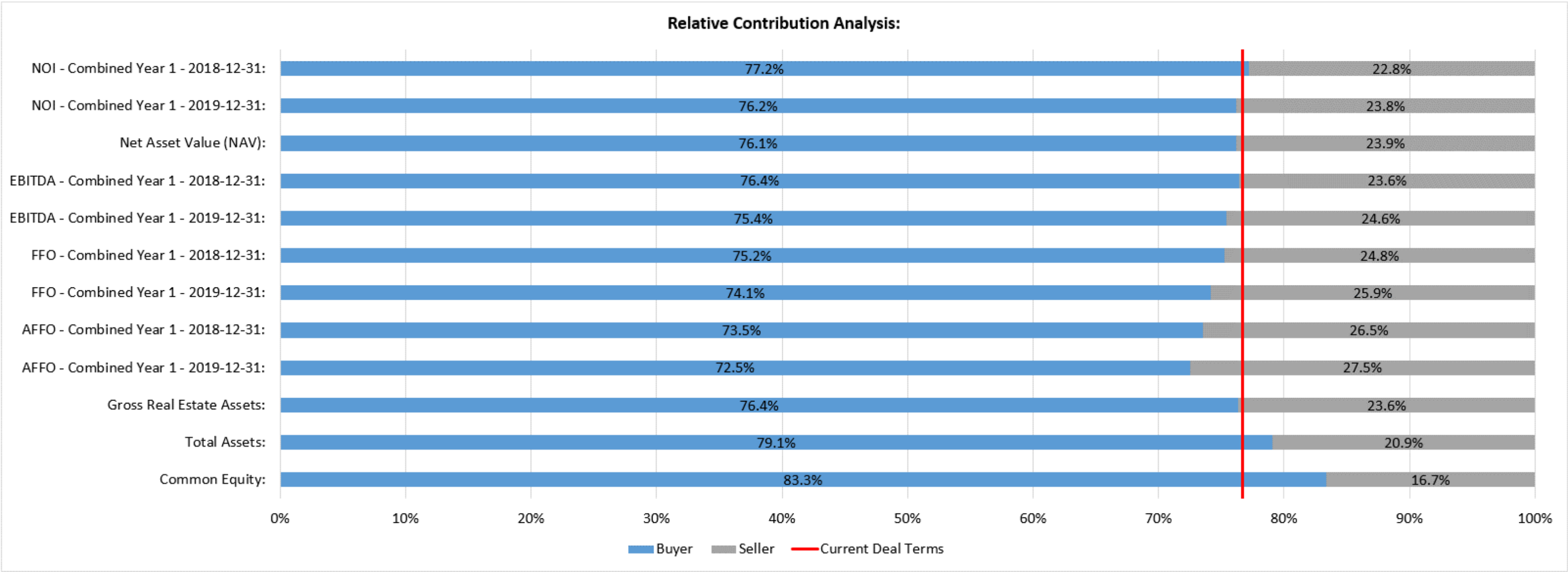
h. Only statements 1, 2, and 3 are correct.

5. You have also set up a Relative Contribution Analysis for this deal that measures the percentage of metrics such as NOI, EBITDA, FFO, and AFFO that each company contributes and then determines the Implied Exchange Ratio and Offer Price based on that:

Relative Contribution Analysis:	Contribution ($):			Contribution (%):		Combined Pro-Forma Value:		Implied Seller Value:		Implied Figures in 100% Stock Deal:		
Equity Value:	**Buyer:**	**Seller:**	**Pro-Forma:**	**Buyer:**	**Seller:**	**Enterprise Value:**	**Equity Value:**	**Enterprise Value:**	**Equity Value:**	**Exchange Ratio:**	**Purchase Price:**	**Variance to Offer Price:**
Undisturbed Equity Value:	$ 19,157.6	$ 5,033.5	$ 24,191.1	79.2%	20.8%	$ 32,837.9	$ 24,191.1	$ 6,597.7	$ 5,033.5	0.4706 x	$ 55.54	(13.7%)
Pro-Forma Ownership @ 15.8% Premium:	19,157.6	5,831.2	24,988.8	76.7%	23.3%	33,635.5	24,988.8	7,395.3	5,831.2	0.5452 x	64.34	0.0%
Net Operating Income (NOI):												
Combined Year 1 - 2018-12-31:	1,546.9	457.8	2,004.8	77.2%	22.8%	34,005.9	25,359.2	7,765.7	6,201.6	0.5798 x	68.43	6.4%
Combined Year 1 - 2019-12-31:	1,737.8	543.5	2,281.3	76.2%	23.8%	34,446.8	25,800.1	8,206.6	6,642.5	0.6210 x	73.29	13.9%
Net Asset Value (NAV):												
Most Recent Quarter Prior to Deal Announcement:	15,778.8	4,942.5	20,721.2	76.1%	23.9%	33,805.2	25,158.4	7,565.0	6,000.9	0.5610 x	66.21	2.9%
EBITDA:												
Combined Year 1 - 2018-12-31:	1,383.4	426.6	1,810.0	76.4%	23.6%	34,332.2	25,685.5	8,092.0	6,527.9	0.6103 x	72.03	12.0%
Combined Year 1 - 2019-12-31:	1,553.4	506.5	2,059.9	75.4%	24.6%	34,797.0	26,150.2	8,556.8	6,992.6	0.6538 x	77.16	20.0%
Funds from Operations (FFO):												
Combined Year 1 - 2018-12-31:	1,046.1	344.8	1,390.9	75.2%	24.8%	34,119.6	25,472.8	7,879.4	6,315.2	0.5904 x	69.68	8.3%
Combined Year 1 - 2019-12-31:	1,179.3	411.5	1,590.8	74.1%	25.9%	34,489.2	25,842.5	8,249.0	6,684.9	0.6250 x	73.76	14.7%
Adjusted Funds from Operations (AFFO):												
Combined Year 1 - 2018-12-31:	934.7	336.6	1,271.3	73.5%	26.5%	34,702.3	26,055.5	8,462.1	6,897.9	0.6449 x	76.11	18.3%
Combined Year 1 - 2019-12-31:	1,054.5	400.2	1,454.7	72.5%	27.5%	35,075.0	26,428.3	8,834.8	7,270.7	0.6798 x	80.23	24.7%
Balance Sheet Items as of Transaction Close Date (Ignores Acquisition Effects):												
Gross Real Estate Assets:	12,255.6	3,796.2	16,051.8	76.4%	23.6%	33,738.4	25,091.7	7,498.2	5,934.1	0.5548 x	65.48	1.8%
Total Assets:	12,413.8	3,287.3	15,701.1	79.1%	20.9%	32,877.5	24,230.8	6,637.3	5,073.2	0.4743 x	55.98	(13.0%)
Common Equity:	3,828.1	765.6	4,593.7	83.3%	16.7%	31,635.6	22,988.8	5,395.4	3,831.2	0.3582 x	42.27	(34.3%)

In this analysis, you've calculated the Combined Pro-Forma Enterprise Values by dividing the Buyer's Enterprise Value by the Buyer's % Contribution (for Enterprise Value-based metrics), and you've done something similar for the Combined Pro-Forma Equity Values for Equity Value-based metrics.

The graphical results of this exercise are below:



You believe that this graph shows that the Buyer should pay slightly more for the Seller because it is an objective analysis based on near-term percentage contributions, not far-in-the-future forecasts.

Your co-worker objects and claims that while the analysis appears to be objective, it does have some flaws. Is he/she correct?

a. Yes – basing the Combined Pro-Forma Enterprise Value or Equity Value on the Buyer's vs. Seller's standalone figures and contribution percentages changes the results since these companies almost certainly trade at different multiples.

b. No – this is the closest to an objective analysis there is. However, it would be better to use historical figures rather than projected ones for NOI, EBITDA, FFO, and AFFO.

c. Yes – by ignoring synergies and other acquisition effects and not attributing them to one company, we change the results of the analysis.

d. Yes – this analysis is less meaningful for *non* 100% Stock deals because Cash or Debt financing means less ownership for the Seller regardless of the contribution percentages.

e. Only statements 1 and 3 are correct.

f. Only statements 1 and 4 are correct.

g. Only statements 3 and 4 are correct.

h. Only statements 1, 3, and 4 are correct.

6. **You have also built a Value Creation Analysis for this deal, which combines the financials of the Buyer and Seller and then applies the trading multiples of a larger company in the same market (Equinix, in this case).**

   Then, you back into the Implied Share Price of the Combined Company and determine whether it's higher or lower than the Buyer's standalone Share Price.

   As a combined entity, Digital Realty and DuPont Fabros have higher EBITDA, FFO, and AFFO Growth than Equinix. Additionally, they have higher numerical FFO and AFFO figures (their combined EBITDA still trails that of Equinix).

   The sensitivities are shown below, with 12.2x as the standalone P / FFO multiple of the Seller, 16.1x close to the standalone P / FFO multiple of the Buyer, and 25.2x close to Equinix's P / FFO multiple:

Sensitivity Analyses - Per-Share Value Created in Transaction:

Annualized Cost Synergies:	Combined Entity - FY 19 P / FFO Multiple: 12.2 x	13.5 x	14.8 x	16.1 x	17.4 x	18.7 x	20.0 x	21.3 x	22.6 x	23.9 x	25.2 x
$ 24.0	$ (33.19)	$ (24.16)	$ (15.12)	$ (6.08)	$ 2.96	$ 12.00	$ 21.04	$ 30.08	$ 39.12	$ 48.15	$ 57.19
21.0	(33.36)	(24.34)	(15.32)	(6.30)	2.72	11.74	20.76	29.78	38.80	47.83	56.85
18.0	**(33.53)**	**(24.53)**	**(15.52)**	**(6.52)**	**2.48**	**11.48**	**20.49**	**29.49**	**38.49**	**47.50**	**56.50**
15.0	(33.70)	(24.71)	(15.73)	(6.74)	2.24	11.23	20.21	29.20	38.18	47.17	56.15
12.0	(33.87)	(24.90)	(15.93)	(6.96)	2.00	10.97	19.94	28.90	37.87	46.84	55.81
9.0	(34.03)	(25.08)	(16.13)	(7.19)	1.76	10.71	19.66	28.61	37.56	46.51	55.46
6.0	(34.20)	(25.27)	(16.34)	(7.41)	1.52	10.46	19.39	28.32	37.25	46.18	55.11
3.0	(34.37)	(25.46)	(16.54)	(7.63)	1.29	10.20	19.11	28.03	36.94	45.85	54.77
-	(34.54)	(25.64)	(16.75)	(7.85)	1.05	9.94	18.84	27.73	36.63	45.52	54.42

Exchange Ratio:	Combined Entity - FY 19 P / FFO Multiple: 12.2 x	13.5 x	14.8 x	16.1 x	17.4 x	18.7 x	20.0 x	21.3 x	22.6 x	23.9 x	25.2 x
0.605 x	$ (35.67)	$ (26.89)	$ (18.12)	$ (9.34)	$ (0.57)	$ 8.21	$ 16.98	$ 25.76	$ 34.53	$ 43.31	$ 52.08
0.590 x	(35.14)	(26.31)	(17.48)	(8.65)	0.18	9.01	17.84	26.67	35.50	44.34	53.17
0.575 x	(34.61)	(25.73)	(16.84)	(7.95)	0.94	9.83	18.71	27.60	36.49	45.38	54.26
0.560 x	(34.08)	(25.13)	(16.19)	(7.24)	1.70	10.65	19.59	28.54	37.48	46.43	55.37
0.545 x	**(33.53)**	**(24.53)**	**(15.52)**	**(6.52)**	**2.48**	**11.48**	**20.49**	**29.49**	**38.49**	**47.50**	**56.50**
0.530 x	(32.98)	(23.92)	(14.86)	(5.79)	3.27	12.33	21.39	30.45	39.52	48.58	57.64
0.515 x	(32.42)	(23.30)	(14.18)	(5.06)	4.07	13.19	22.31	31.43	40.55	49.67	58.79
0.500 x	(31.85)	(22.67)	(13.49)	(4.31)	4.87	14.05	23.24	32.42	41.60	50.78	59.96
0.485 x	(31.28)	(22.04)	(12.79)	(3.55)	5.69	14.93	24.18	33.42	42.66	51.91	61.15

Which of the following conclusions might you draw, based on the description above and these tables?

a. If the Combined Company does not trade at higher multiples than the Buyer or Seller as standalone entities, then this deal will almost certainly destroy value.

b. This deal would be far more likely to create value if the Buyer could negotiate a moderately lower purchase price for the Seller.

c. Given the Combined Company's financial profile, it seems absurd that it could trade at multiples close to those of Equinix.

d. This deal is highly dependent on the realization of significant annual cost synergies.

e. All of the above.

f. None of the above.