Real Estate & REIT Financial Modeling – Certification Quiz Questions

## Module 8 – 2-Hour REIT Debt vs. Equity Case Study (SPH REIT)

1. You are working on a Debt vs. Equity analysis for SPH REIT, a Singaporean retail REIT that owns two major properties (Paragon and Clementi Mall). The company wants to acquire another property, the Seletar Mall, and needs to raise S$ 500 million in capital to do so.

   Initially, management wanted to do the deal with 100% Debt, arguing that their Gearing Ratio (Debt / Total Assets) of 25% was well below the sector median of 35%, and that their Cost of Debt was 40% lower than their Cost of Equity.

   SPH REIT wants to maintain a Distribution Yield above 5%, ensure that the deal is neutral or accretive to Distributions per Unit (DPU), ensure that its Gearing stays at or below 35%, and maintain an Interest Coverage Ratio of at least 5.0x.

   To help the management team make a decision, you have built a property-by-property and 3-statement model for the REIT. The historical rental reversion (i.e., the change in rent upon lease expiration) and occupancy cost data for both properties, as well as market-wide data for Singapore, are shown below:
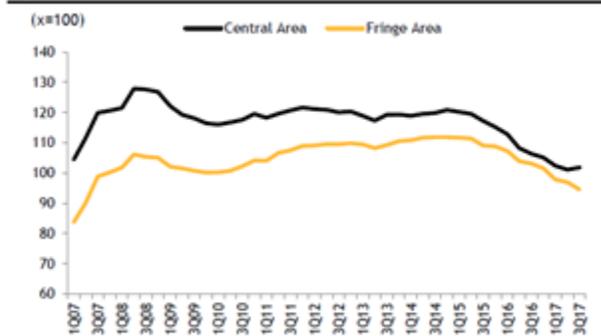

Fig 55: Paragon's rental reversions and occupancy costs
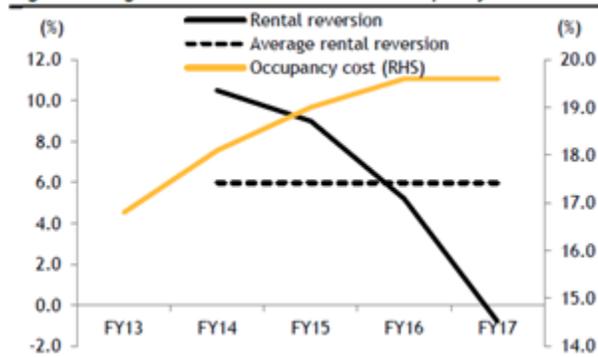
Fig 56: Clementi Mall's rental reversions and occupancy costs
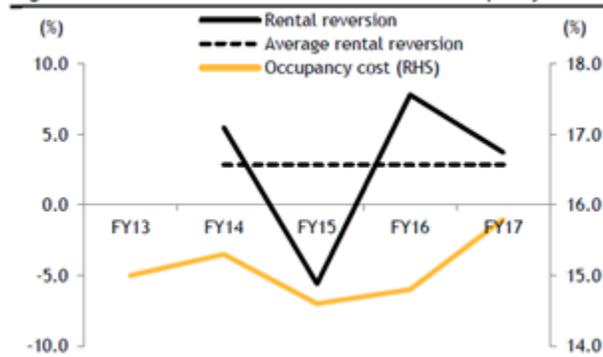
Fig 57: URA's rental index
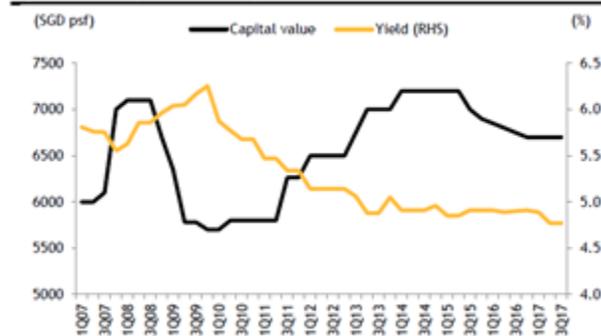
Fig 60: Retail capital value and yield

Source: URA, CBRE

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Your projections for the company's first property, Paragon, are shown below:

Paragon:	Units:		Projected:							
		2H18	1H19	2H19	1H20	2H20	1H21	2H21	1H22	2H22
Gross Revenue:	S$ M	S$ 86.7	S$ 87.0	S$ 87.0	S$ 87.5	S$ 87.6	S$ 87.9	S$ 88.0	S$ 88.0	S$ 88.1
Net Property Income:	S$ M	69.2	69.5	69.5	70.0	70.1	70.3	70.4	70.4	70.5
NPI Margin:	%	79.8%	79.9%	79.9%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
Base	%	79.8%	79.9%	79.9%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
Downside	%	78.5%	78.0%	78.0%	78.5%	78.5%	79.0%	79.0%	79.5%	79.5%
Extreme Downside	%	77.5%	77.5%	78.0%	78.0%	78.5%	78.5%	79.0%	79.0%	79.0%
% New/Renewal Leases:	%	8.8%	15.2%	7.4%	16.1%	17.5%	12.0%	17.0%	4.0%	2.0%
Rental Reversion for New/Renewal Leases:	%	5.0%	4.5%	4.5%	4.0%	4.0%	3.0%	3.0%	2.5%	2.5%
Base	%	5.0%	4.5%	4.5%	4.0%	4.0%	3.0%	3.0%	2.5%	2.5%
Downside	%	(5.0%)	(5.0%)	(5.0%)	(3.0%)	(2.0%)	4.0%	3.5%	3.0%	2.5%
Extreme Downside	%	(7.5%)	(7.5%)	(5.0%)	(5.0%)	(3.0%)	5.0%	4.0%	3.0%	2.5%
Asset Valuation:	S$ M	2,605.9		2,541.1		2,497.8		2,447.6		
Applicable Forward Net Operating Income (NOI):	S$ M	116.0		116.9		117.4		117.5		
Capitalisation Rate:	%	4.45%		4.60%		4.70%		4.80%		
Base	%	4.45%		4.60%		4.70%		4.80%		
Downside	%	5.25%		5.10%		4.95%		4.80%		
Extreme Downside	%	5.75%		5.40%		5.15%		4.80%		
Change in Fair Value of Investment Property:	S$ M	(89.1)		(64.9)		(43.2)		(50.2)		

What's the most VALID criticism of these projections, based on the data and description above?

a. The NPI Margin does not vary sufficiently in different cases.

b. **In the Extreme Downside and Downside Cases, the Rental Reversions may be too negative, while the Cap Rates may not rise to high enough levels.**

c. It seems extremely odd that the property's Fair Value is declining each year in the Base Case.

    d. In the Extreme Downside and Downside Cases, the Rental Reversions should be more negative.

    e. All of the above are equally valid criticisms.

2. **A co-worker is reviewing your model and points out that the cases are not that much different regarding Net Property Income (AKA Net Operating Income) and Net Income.**

    For example, in the Base Case, the company reaches NPI of S$ 199 million and Net Income of S$ 146 million by Year 4, in the Downside Case, the company reaches NPI of S$ 192 million and Net Income of S$ 140 million, and in the Extreme Downside Case, the company reaches NPI of S$ 189 million and Net Income of S$ 137 million.

    Is this a problem for your analysis?

    a. Yes – the financial results should be at least 10% different in each case, even for a mature REIT.

    b. Yes – the problem is that we did not assume a prolonged recession in the Downside and Extreme Downside Cases.

    c. **Not necessarily – if there's a high percentage of long-term leases, lease expirations are well-staggered, and margins don't change much, this result is plausible.**

    d. Not necessarily – other metrics, such as Distributions and Distributions per Unit, matter more, and those could differ significantly even if NPI and Net Income do not.

    e. Not necessarily – this almost always happens with office and retail REITs due to the long-term nature of the leases.

3. **After building your model and testing different scenarios, you recommend 60% Equity and 40% Debt for the acquisition because with that mix, the company complies with its targeted financial metrics in all operational scenarios.**

    However, your co-worker has reviewed your work and recommended an 80% Equity and 20% Debt mix, arguing that even at that level, the company still meets all its targets

(Distribution Yield > 5%, neutral or accretive to DPU, Gearing <= 35%, and Interest Coverage Ratio >= 5.0x).

A screenshot of these metrics in the Extreme Downside Case, with the 80% Equity and 20% Debt mix, is shown below:

Key Metrics and Ratios:	Units:	Historical:		Projected:			
		FY16	FY17	FY18	FY19	FY20	FY21
NAV per Unit:	S$ as Stated	S$ 0.95	S$ 0.67	S$ 0.69	S$ 0.75	S$ 0.82	
Earnings per Unit (EPU):	Cents as Stated		6.16	(25.72)	7.23	11.35	12.73
Distribution per Unit (DPU):	Cents as Stated		5.52	5.08	5.37	5.28	5.33
Distribution Yield:	%			5.1%	5.4%	5.3%	5.3%
(+) NPI from Existing Properties Only:	S$ M				162.0	161.9	164.0
(-) Income Support:	S$ M				-	-	-
(+) Finance Income:	S$ M				0.7	0.8	0.7
(-) Finance Costs @ Constant Debt and Interest:	S$ M				(24.2)	(24.2)	(24.2)
(-/+) Straight-Line Rental Adjustments:	S$ M				(1.0)	(1.0)	(1.0)
(+) Other Items:	S$ M				0.1	0.1	0.1
Income Avail. for Distribution - Pre-Transaction:	S$ M				137.6	137.5	139.5
Estimated Unit Count - Pre-Transaction:	# Millions:			2,575.808	2,592.103	2,608.399	2,624.694
Estimated DPU - Pre-Transaction:	Cents as Stated				5.30	5.26	5.31
DPU - Accretion / (Dilution) $:	Cents as Stated				0.07	0.01	0.02
DPU - Accretion / (Dilution) %:	%				1.3%	0.3%	0.5%
LTM EBITDA:	S$ M	143.0	149.8	147.2	167.4	165.8	168.3
LTM EBITDA Growth:	%		4.8%	(1.7%)	13.7%	(0.9%)	1.5%
LTM EBITDA Margin:	%	68.2%	35.5%	34.6%	36.3%	33.5%	34.1%
Debt / LTM EBITDA:	x	5.92 x	5.66 x	6.45 x	5.68 x	5.75 x	5.67 x
Net Debt / LTM EBITDA:	x	5.44 x	5.24 x	6.07 x	5.28 x	5.37 x	5.35 x
LTM EBITDA / Interest:	x	5.95 x	6.26 x	6.11 x	6.30 x	6.22 x	6.31 x
LTM EBITDA / Net Interest:	x	6.19 x	6.46 x	6.30 x	6.47 x	6.41 x	6.48 x
Debt / Equity:	%	35.4%	35.0%	47.8%	46.2%	42.2%	38.2%
Gearing (Debt / Total Assets):	%	25.5%	25.3%	31.5%	30.6%	28.8%	26.8%

What's the PROBLEM with your co-worker's argument?

a. There is no problem – he's correct that the company still complies with these financial targets even in the Extreme Downside Case when it uses 80% Equity.

b. We don't know what the Base and Downside Cases look like, so we can't support this mix just based on the output in one case.

c. It doesn't appear that the Interest Rate on Debt changes as the company uses more or less Debt because the Finance Costs are shown "@ Constant Debt and Interest."

d. **There is very little "cushion" on metrics like the DPU Accretion / (Dilution) – if something goes wrong, this number could easily turn dilutive.**

e. The Gearing Ratio only reaches ~32% vs. a peer median of 35% – indicating that the company could use even *more* Debt.