MAGNOLIA
REALTY ADVISORS

Mr. Market Forgot to Check His Math on the Recent REIT Drawdown

I noticed a strange occurrence during the recent weeks in the office and industrial REIT sector so I decided to quantify it. Lo and behold my observations were substantiated by a bit of analysis. The observation I had made was that the plunge in REIT prices seemed to have no relationship to how much leverage each REIT was using. The thing it, when the market decreases in such a short amount of time, the most important factor that should influence the drawdown of each REIT is the amount of leverage it employs. This is because there was very little material information released for any of these REITs as earnings had already been announced for the second quarter of 2015 prior to the drawdown. Therefore leverage should have been the major factor in each REIT's drawdown.

Leverage Estimate

In order to compare the drawdown of each REIT to its leverage, the leverage needs to be established. To make things easy, I used the debt ratio reported in NAREIT's REITWatch publication from July 2015 which reports data as of July 30, 2015. Below is a screen shot of the report which reports each's REIT's debt ratio based upon the close of its stock price on July 30, 2015.

National Association of Real Estate Investment Trusts®

Industrial/Office

Name	Ticker	Share Price ($) 30-Jun-2015	52 Week High	52 Week Low	FFO per Share Estimates ($) 2015	FFO per Share Estimates ($) 2016	Price/FFO Estimates 2015	Price/FFO Estimates 2016	FFO Growth (%) 2015 - 2016	FFO Payout (%) 2015: Q1	Debt/ EBITDA 2015: Q1	Total Return (%) Jun-15	Total Return (%) QTD	Total Return (%) YTD	Total Return (%) 1-Yr	Total Return (%) 3-Yr	Total Return (%) 5-Yr	Dividend Yield (%)	Equity Market Cap ($M)	Implied Market Cap ($M)	Debt Ratio (%)	Average Share Volume	Average Dollar Volume	Relative Liquidity	Long-Term Issuer Rating
Office																									
Alexandria Real Estate Equity	ARE	87.46	102.42	73.40	5.24	5.48	16.70	15.97	4.58	83.72	12.39	-4.86	-10.02	0.17	16.55	10.25	10.12	3.52	6,247.0	6,247.0	35.8	339	30,867	0.494	BBB-
BioMed Realty Trust	BMR	19.34	24.97	19.28	1.56	1.52	12.40	12.73	-2.57	71.43	2.99	-3.89	-13.52	-7.96	-5.65	6.67	8.97	5.38	3,939.8	4,044.3	36.8	1,552	30,992	0.787	BBB
Boston Property	BXP	121.04	144.74	113.66	5.41	5.90	22.37	20.50	9.09	51.59	5.27	-6.42	-13.38	-5.01	8.12	8.12	14.93	2.15	18,568.4	20,741.1	29.7	847	106,620	0.574	A-
Brandywine Rlty	BDN	13.28	17.00	13.28	1.43	1.47	9.29	9.03	2.82	50.00	8.08	-5.68	-16.11	-15.31	-11.46	7.01	9.52	4.52	2,376.3	2,396.7	45.9	2,599	35,932	1.512	BBB-
City Office REIT	CIO	12.40	13.61	12.28	1.08	1.30	11.46	9.54	20.18	-	10.00	-0.59	-0.75	0.53	6.69	-	-	7.58	159.3	195.5	48.6	28	352	0.221	
Columbia Property Trust Inc	CXP	24.55	27.67	23.80	1.90	1.87	12.95	13.11	-1.21	61.22	3.68	-5.58	-8.10	-0.91	-1.13	-	-	4.89	3,064.6	3,064.6	40.1	768	19,554	0.638	BBB-
Corporate Office Properties	OFC	23.54	30.75	23.54	2.00	2.19	11.75	10.74	9.41	80.88	8.12	-7.26	-18.97	-15.28	-11.83	4.39	-4.59	4.67	2,225.4	2,315.7	41.4	1,176	29,399	1.321	BBB-
Cousins Property	CUZ	10.38	13.21	9.50	0.84	0.89	12.41	11.63	6.64	31.25	2.61	7.56	-1.27	-7.71	-14.26	12.85	11.94	3.08	2,247.4	2,247.4	27.0	2,638	27,725	1.234	
Douglas Emmett	DEI	26.94	30.92	25.61	1.61	1.68	16.71	16.01	4.37	51.28	8.59	-7.61	-8.94	-3.73	-1.66	8.42	16.87	3.12	3,929.5	4,673.1	40.6	919	26,036	0.663	
Easterly Government Properties	DEA	15.92	16.50	15.43	1.00	1.08	15.89	14.72	7.96	-	-	2.51	-0.11	3.44	-	-	-	0.69	384.8	384.8	-	85	1,339	0.348	
Empire State Realty Trust	ESRT	17.06	18.96	14.89	0.88	0.95	19.32	17.93	7.77	38.64	5.26	-5.19	-8.87	-2.02	5.46	-	-	1.99	1,901.7	4,609.4	24.7	1,033	18,272	0.961	
Equity Commonwealth	EQC	25.67	27.89	24.21	1.82	1.16	14.08	22.13	-36.36	0.00	-	-0.31	-3.31	0.00	-2.47	14.14	6.44	3.90	3,308.1	3,308.1	39.2	695	18,056	0.546	BB+
Franklin Street Properties	FSP	11.31	13.46	11.19	1.06	1.08	10.67	10.44	2.20	70.37	6.58	-2.58	-10.43	-5.05	-4.45	8.64	5.39	6.72	1,133.1	1,133.1	40.1	355	4,112	0.363	
Government Properties Income Trust	GOV	18.55	24.81	18.50	2.31	2.30	8.04	8.05	-0.22	76.79	6.56	-4.97	-17.24	-16.24	-21.31	0.49	0.47	9.27	1,303.7	1,303.7	41.5	854	16,387	1.257	BBB-
Highwoods Prop	HIW	39.95	48.14	38.62	3.03	3.19	13.20	12.52	5.49	57.43	5.45	-4.77	-11.87	-8.05	-0.97	10.69	12.83	4.26	3,757.4	3,874.7	32.5	647	26,707	0.711	BBB
Hudson Pacific Properties	HPP	28.37	33.95	24.45	1.38	1.77	20.53	16.05	27.93	52.08	8.54	-6.56	-14.16	-4.86	13.90	20.19	13.32	1.76	2,511.8	2,579.4	22.4	538	15,858	0.631	BBB-
Kilroy Realty	KRC	67.15	78.86	58.68	3.34	3.49	20.12	19.24	4.55	44.87	6.74	-2.29	-11.39	-1.83	10.06	14.33	21.25	2.08	5,912.7	6,033.8	26.6	634	43,833	0.741	BBB-
Mack Cali Realty	CLI	18.43	21.78	16.90	1.72	1.77	10.71	10.44	2.62	44.12	9.36	9.05	-3.66	-1.79	-11.55	-9.68	-4.07	3.26	1,640.0	1,844.3	52.2	1,257	23,030	1.404	BB+
NEW YORK REIT INC	NYRT	9.95	11.36	8.90	0.52	0.54	19.23	18.43	4.35	-	-	7.78	-3.94	-3.88	-5.96	-	-	4.62	1,626.2	1,668.7	31.5	1,705	16,422	1.010	
Paramount Group	PGRE	17.16	19.75	17.15	0.80	0.79	21.41	21.66	-1.17	0.00	-	-5.92	-10.60	-6.51	-	-	-	1.33	3,636.2	4,520.6	36.3	1,776	31,788	0.874	
Parkway Properties	PKY	17.44	21.70	16.27	1.38	1.51	12.66	11.58	9.35	60.48	3.65	2.59	1.64	-3.04	-11.92	19.62	7.09	4.30	1,937.9	2,028.6	48.4	906	15,579	0.804	BBB-
Piedmont Office Realty Trust Cl A	PDM	17.59	20.01	16.89	1.59	1.70	11.06	10.36	6.69	52.50	6.96	2.33	-4.34	-4.43	-2.88	5.33	3.98	4.78	2,713.9	2,713.9	44.8	1,402	24,521	0.904	BBB
SL Green Realty	SLG	109.89	134.00	101.23	6.30	6.72	17.45	16.36	6.69	34.97	9.42	-6.89	-13.94	-6.74	2.45	13.05	16.48	2.18	10,943.1	11,379.7	38.6	746	85,809	0.784	BB+
AVERAGE		32.76	38.98	30.33	2.10	2.19	14.80	14.31	4.40	50.68	6.86	-2.15	-8.84	-5.05	-2.11	9.09	8.88	3.92	3,716.0	4,056.9	37.5	1,022	28,226	0.817	

I will concede that the debt ratio reported in REITWatch does not reflect the most precise calculation of leverage for each REIT prior to the significant drawdown for several reasons. The first is the obvious that stock prices changed between June 30, 2015 and August 18, 2015, the day prior to the drawdown. The second is that in order to calculate the economic leverage employed by each REIT, one would need to account for the REIT's share of unconsolidated JV debt and their JV partners' share of consolidated debt. Below is a calculation of this by Boston Properties that lays out the calculation. Nevertheless, REITWatch reports a debt ratio of 29.7% and Boston Properties reports a debt ratio of 30.16% as of the same date as the REITWatch report which is not materially different.

Capitalization:		30-Jun-15
Common Stock Price @ Quarter End	$	121.04
Equity Value @ Quarter End	$	20,959,086
Total Consolidated Debt	$	9,867,459
Total Consolidated Market Capitalization	$	30,826,545
Total Consolidated Debt/Total Consolidated Market Capitalization (9)		32.01%
BXP's Share of Unconsolidated Joint Venture Debt	$	352,882
Less:		
Partners' Share of Consolidated Debt	$	1,168,046
Total Adjusted Debt	$	9,052,295
Total Adjusted Market Capitalization (10)	$	30,011,381
Total Adjusted Debt/Total Adjusted Market Capitalization (9) (10)		30.16%

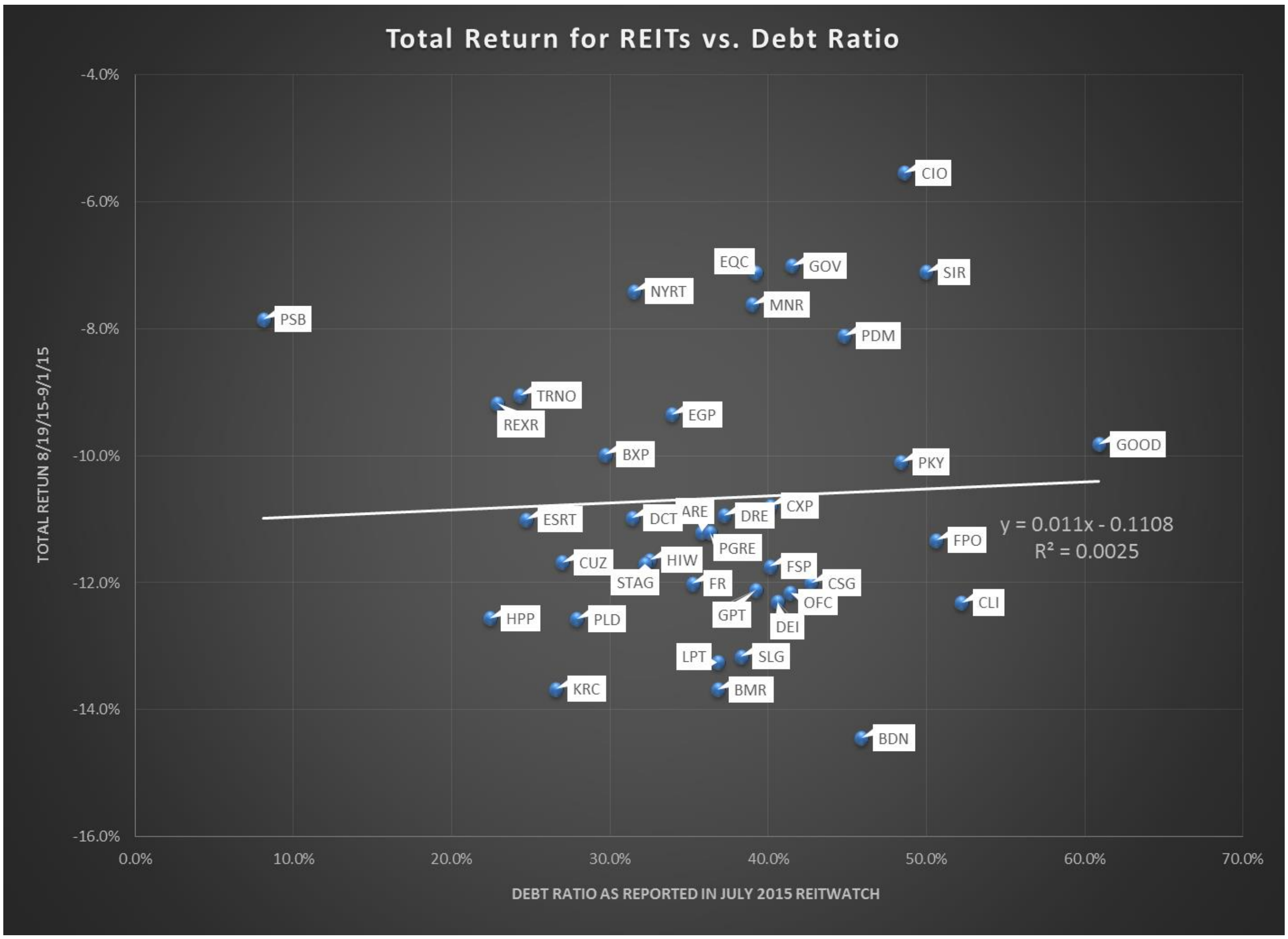
As for the difference in leverage attributed to the change in each REITs' stock price between June 30, 2015 and August 18, 2015, this would also be a minor change in leverage so the debt ratio reported in REITWatch is a good estimate of leverage of each REIT's leverage as of August 18.

Total Returns

The period in which the most concentrated drawdown happened was August 19, 2015 to September 1, 2015 so the total return of each REIT over this period will be used and compared to the leverage of each REIT.

Results

The chart below shows the return of each REIT over the period compared to the leverage of each REIT. The best fit line shows that REITs that employed more leverage actually performed better in the drawdown than did REITs that employed less leverage. The R-squared value of 0.0025 indicates that there is almost no relationship between the drawdown in each REIT and the leverage it employs.



Implication

There should be a relationship between the drawdown of a REIT and the leverage it employs with less leveraged REITs having less of a drawdown than more levered REITs. This analysis implies that a 90% leveraged REIT and a REIT that employs no leverage would have likely had a similar drawdown which does not stand to reason and therefore presents a mispricing in the REIT market. There are several ways to exploit this and the most straight forward is to go long the less levered REITs that had a significant drawdown such as HPP, KRC, PLD, CUZ and ESRT and short the more levered REITs that had a much less significant drawdown such as CIO, SIR, PKY, PDM, and GOV. Eventually Mr. Market will get this figured out but it is quite obvious that Mr. Market forgot to check his math.