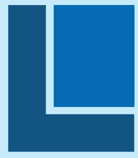

The Linneman Letter

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The following is an excerpt from the Winter 2019-2020 edition of The Linneman Letter.

10-Year vs. 3-Year Returns

In several issues over the past year, we have discussed the outcomes and determinants of 10-year returns for commercial real estate. The bottom line is that for all major property food groups, both NAREIT and NCREIF data indicate solid unlevered returns over a 10-year hold. Not only are typical annual 10-year returns 7-10%, but periods of negative returns are virtually nonexistent. This is true even if you invested at a cyclical peak or exited at a cyclical low. The upshot of this research is that unless excessive leverage causes you to lose your property, you can expect solid returns, which can be modestly enhanced with low leverage, if you have a long investment horizon. It also makes clear that debt coverage (the ability to service your debt) rather than LTV (the amount of debt) is the relevant leverage metric.

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Our new analysis examines 3-year hold returns (also based on historical NAREIT and NCREIF indices) and compares them to the 10-year analysis. The following charts plot the histograms of compounded annualized unlevered returns for both 3 and 10-year hold periods. We found that despite generating higher average returns in most property sectors, 3-year hold periods have far greater volatility and downside relative to 10-year hold periods.

Figure 1 shows the standard deviations, minimums, maximums, and percent of sample periods with negative returns for both 3 and 10-year unlevered returns for various property categories. Beginning with the NAREIT indices (1971-2018), most sectors generate modestly higher average unlevered returns over 3-year investment horizons. However, the standard deviations of 3-year CAGRs were 2-3 times higher than those of 10-year holds. And not surprisingly, 3-year hold periods have much greater probability of negative returns than 10-year hold periods. For example, office REITs outperform on a 3-year hold basis with an average CAGR of 11.2% (versus 9.3% for 10-year holds) and registered a peak return of 39.6% (highest of all categories). In addition, office REITS have a below-average 3-year hold standard deviation, relative to other sectors. Similarly, Apartment REITs on a 3-year hold have an above-average CAGR of 12.4%, a relatively low standard deviation of 9.7% (vs. other sectors), and a well below-average incidence (9%) of negative return periods. Industrial REITs average10.8% CAGRs over three years but only 7.3% over 10 years, but both periods have the same percentage share of negative return periods (both 13%).

A sample of articles available in the complete version of *The Linneman Letter*. To subscribe to *The Linneman Letter*, contact Doug Linneman at dlinneman@linnemanassociates.com.

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	10-Year Hold Period CAGRs (%)					3-Year Hold Period CAGRs (%)				
	Avg	SD	Min	Max	% Pds. of Neg. Return	Avg	SD	Min	Max	% Pds. of Neg. Return
NAREIT INDICES										
All REITS	10.9	4.0	4.7	23.4	0%	10.6	12.1	-22.4	34.2	18%
Equity	12.7	4.2	5.1	23.4	0%	12.5	10.6	-12.4	29.2	13%
Office	9.3	4.5	2.7	18.0	0%	11.2	12.0	-13.5	39.6	13%
Industrial	7.3	7.2	-0.7	17.5	13%	10.8	16.0	-28.4	27.9	13%
Retail	11.4	4.8	3.7	19.0	0%	11.7	14.8	-17.9	35.6	26%
Apartment	11.8	2.3	7.9	15.6	0%	12.4	9.7	-9.8	30.1	9%
Healthcare	13.6	3.4	8.2	19.9	0%	12.2	10.8	-10.4	34.7	13%
Lodging	4.8	3.4	-1.6	13.0	13%	6.6	16.3	-26.2	36.4	26%
Self-Storage	16.2	1.7	12.8	19.1	0%	16.3	11.5	-5.1	32.3	17%
Diversified	8.7	2.9	3.1	13.5	0%	9.0	11.4	-13.3	26.8	22%
NCREIF INDICES										
All	8.2	2.6	4.1	13.1	0%	9.1	5.7	-4.5	18.5	13%
Office	7.1	3.6	0.6	13.3	0%	8.3	7.4	-7.7	23.0	15%
Industrial	8.7	2.6	4.9	13.1	0%	9.8	5.9	-5.4	17.4	15%
Retail	9.3	2.5	5.2	13.6	0%	9.7	5.2	-1.7	19.8	3%
Apartment	9.3	2.3	6.2	14.9	0%	10.1	5.3	-4.9	21.4	8%

Source: NAREIT, NCREIF, Linneman Associates
CAGR = Compounded Annual Growth Rate; SD = Standard Deviation

figure 1

Interestingly, some NAREIT categories yield lower returns over the shorter investment horizon. For example, the "All REITs" index generated an average 10-year CAGR average of 10.9% with no periods of negative return and a 3-year CAGR average of 10.6% with negative returns 18% of the time. Similarly, Equity REITs have a 10-year CAGR average of 12.7% with no periods of negative return and a 12.5% 3-year CAGR average with negative return periods 13% of the time. The most significant instance of 10-year returns outperforming 3-year returns is seen with Healthcare REITs, which have respective average CAGRs of 13.6% (no periods of negative returns) and 12.2% (negative returns 13% of the time).

Turning to NCREIF indices (1978-2018), which track returns of institutional-grade investment properties, the average 3-year CAGR is modestly higher than the comparable 10-year CAGR for all categories. Notably, the NCREIF 10-year indices had no instances of negative return periods, but the 3-year hold periods saw negative returns ranging from 3% (retail) to 15% (office and industrial). The office sector saw the lowest average 3-year (8.3%) and 10-year (7.1%) returns, while apartments (10.1% for 3-year holds) and retail and apartments

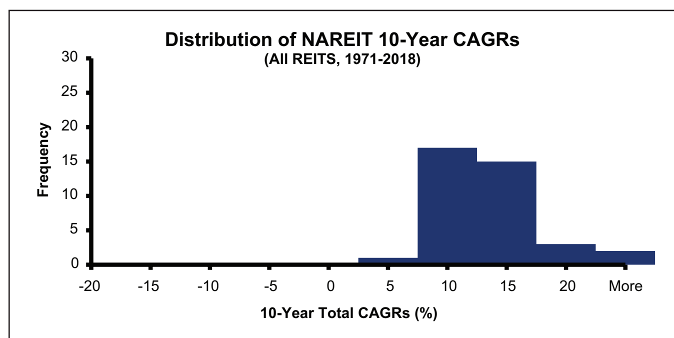

figure 2

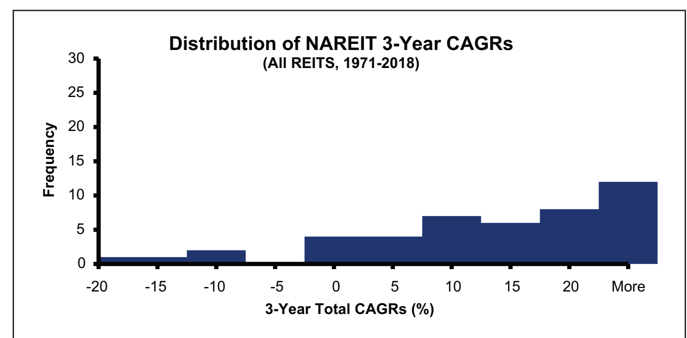

figure 3

(each 9.3% for 10-year holds) turned in the highest category returns based on NCREIF data. As with NAREIT returns, the 10-year NCREIF standard deviations are significantly lower than the 3-year standard deviations. And leverage would only accentuate this pattern.

Comparing the two data sets, the NCREIF standard deviations are notably lower than the NAREIT standard deviations. This is driven by appraisal bias, which creates a tighter range of NCREIF CAGRs than those of NAREIT. That is, the worst 3-year NCREIF average CAGR was -7.7% (office), while the worst NAREIT 3-year return was -28.4% (industrial). At the other end of the range, the best 3-year NAREIT return of 39.9% (office) compares to the best 3-year NCREIF return of 23% (also office). The same is true for the 10-year analysis, with NAREIT returns ranging from a low of -1.6% (Lodging) and a high of 23.4% (All and Equity REITS) versus a NCREIF low of 0.6% (office) and high of 6.2% (apartments). Interestingly, for the 3-year hold, the percent of periods with negative returns is comparable between NAREIT and NCREIF, except for retail, which had a significantly higher share of negative returns (26%) than the NCREIF retail index (3%).

…shorter investment horizons bring significantly more risk in the form of volatility and negative returns.

The key lesson is that shorter investment horizons bring significantly more risk in the form of volatility and negative returns. However, the additional risk of a 3-year hold only delivers marginally better returns than a 10-year hold. Thus, the better bet is to buy and hold long.

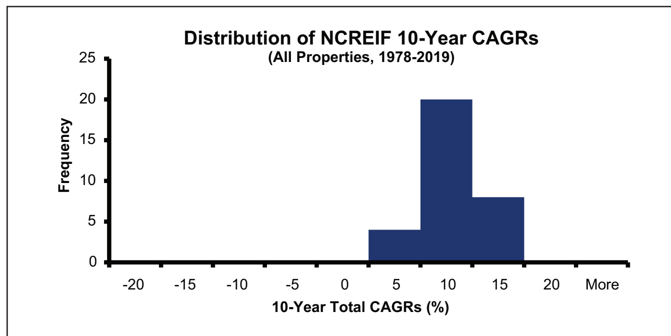

figure 4

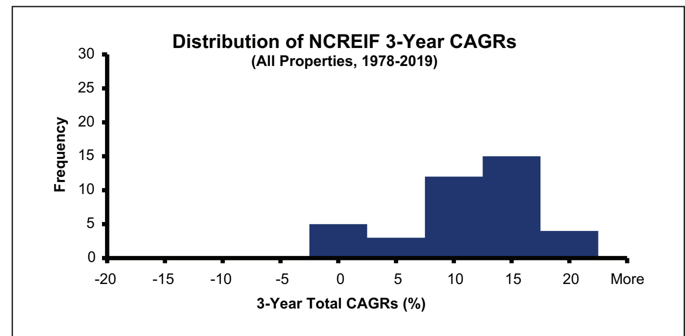

figure 5

About Dr. Peter Linneman

Dr. Linneman, who holds both Masters and Doctorate degrees in economics from the University of Chicago, is the Principal of Linneman Associates. For nearly four decades, he has provided strategic and financial advice to leading corporations. Through Linneman Associates, he provides strategic and M&A analysis, market studies, and feasibility analysis to a number of leading U.S. and international companies. In addition, he serves as an advisor to and a board member of several public and private firms.

Dr. Linneman is the author of the leading real estate finance textbook, *Real Estate Finance and Investments: Risks and Opportunities*, now in its fifth edition. His teaching and research focuses on real estate and investment strategies, mergers and acquisitions, and international markets. He has published over 100 articles during his career. He is widely recognized as one of the leading strategic thinkers in the real estate industry.

He also served as the Albert Sussman Professor of Real Estate, Finance, and Business and Public Policy at the Wharton School of Business at the University of Pennsylvania until his retirement in 2011. A member of Wharton's faculty since 1979, he served as the founding chairman of Wharton's Real Estate Department and the Director of Wharton's Zell-Lurie Real Estate Center for 13 years. He is the founding co-editor of *The Wharton Real Estate Review*.

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