

PROPERTY PERFORMANCE MONITOR

Second Quarter 2019



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Marketing Material

QUARTERLY HIGHLIGHTS

- Core real estate, as measured by the NCREIF Property Index (NPI), registered unlevered total returns of 6.5% in the trailing four quarters as of 2Q 2019.
- Performance remained uneven as Industrial outperformed by a wide margin, returning 13.9%. Office and Apartment properties returned a distant 6.8% and 5.8%, respectively. The Retail sector continued to struggle, returning only 1.8%.
- Bifurcation persisted within sectors: In the Retail sector, Neighborhood center returns were in the mid-single digits while those of Malls were flat. Within the Apartment and Office sectors, outsized supply in a few key markets have limited returns in High-Rise Apartments and CBD Office while those of Garden Apartments and Suburban Office outperformed.
- West coast markets generally led the index while New York, Chicago and Washington, DC generally underperformed.

PRIVATE REAL ESTATE PROPERTY RETURNS

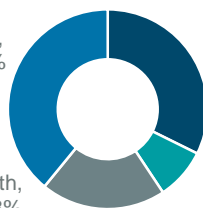
- Real estate returns ticked down 30 bps (trailing four-quarters) in 2Q 2019.
- Private real estate underperformed both bonds and equities in 2Q 2019 as lower interest rates supported public market pricing.
- Income accounted for 70% of total return in the second quarter (trailing four quarters), compared to 50% over the past 20 years.
- Overall vacancy remained near the lowest level in 18 years (5.9%). NOI growth was strong, at 4.5% (year-over-year, four-quarter moving average).
- The Industrial sector's total return was more than double that of any other sector.
- Tech-based markets such as Austin, the Bay Area, and Seattle were notable outperformers. The bottom of the list was mixed but generally included Chicago and markets in the Northeast.

NPI MARKET CAPITALIZATION

Index market value: \$653.1 billion

Property count: 8,289

West,
39.1%



East,
32.3%

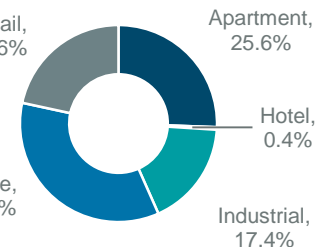
Midwest,
8.4%

South,
20.3%

Retail,
21.6%

Office,
35.0%

Industrial,
17.4%



RECENT PERFORMANCE TRENDS

	Quarter	12 months trailing	
	2Q 2019	2Q 2019	4Q 2018
Private Real Estate (NPI)	1.5%	6.5%	6.7%
Broad Equities (large cap)	4.3%	10.4%	-4.4%
Bonds	3.1%	7.9%	0.0%
Listed Real Estate	1.8%	13.0%	-4.0%
10-Year Treasury ¹	2.0%	2.0%	2.7%
12-Month LIBOR ¹	2.2%	2.2%	3.0%
CPI (SA)	0.5%	1.7%	1.9%

Sources: NCREIF, Standard and Poor's, Barclay's, NAREIT, and Federal Reserve. As of June 30, 2019. Data shown is the latest available. Past performance is no guarantee of future results. For definitions of indices, see the last page of this report.

¹ These figures represent annual yields.

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NCREIF PROPERTY INDEX (NPI) PERFORMANCE BY SECTOR AND REGION

- Overall returns were steady. Industrial led the index over the past year, followed by Office and Apartment. Retail trailed far behind, posting a negative total return in the second-quarter (-0.1%).
- Returns for all three Industrial subsectors remained in double digits, bolstered by both strong income yields and capital appreciation. In 2Q 2019, Industrial NOI growth continued historic momentum, posting 8.9% growth (year-over-year, four-quarter moving average).
- Within Retail, Regional and Super Regional malls, which typically have substantial tenant exposure to e-commerce (apparel) returned 0.0% over the past year. Neighborhood and Community centers returned 4.2%. Across the sector, negative appreciation chipped away at returns.
- Late cycle mark-to-market opportunities supported Office returns. Suburban Office returned 7.4% year-over-year while CBD Office returned 6.3%. Suburban Office has outperformed CBD Office for thirteen straight quarters.
- Garden Apartments continued to be the standout subtype outside of Industrial, returning 8.3%. High-Rise Apartments were weak on a relative basis.
- Regional dynamics were unchanged, with the West leading the pack by a significant margin, followed by the South. The East remained stable while returns in the Midwest decelerated.

DETAILED PROPERTY TYPE NPI PERFORMANCE

	No. of props.	Market value (Mil)	Trailing four quarters		
			Total return	Income	Apprec.
Apartment					
Garden	638	\$46,236	8.3%	4.9%	3.2%
High Rise	980	\$103,925	4.6%	4.0%	0.6%
Low Rise	215	\$16,948	6.2%	4.3%	1.8%
Industrial					
R&D	29	\$880	11.7%	6.2%	5.3%
Flex	230	\$4,411	12.3%	5.4%	6.6%
Warehouse	3,226	\$105,053	13.9%	4.7%	8.9%
Office					
CBD	465	\$136,011	6.3%	4.1%	2.2%
Suburban	1,033	\$92,727	7.4%	5.0%	2.4%
Retail					
Community	253	\$15,915	3.3%	5.4%	-2.0%
Neighborhood	520	\$19,721	5.0%	5.0%	0.0%
Power	196	\$15,584	2.2%	5.4%	-3.1%
Regional	64	\$19,504	-1.1%	4.6%	-5.6%
Super Regional	63	\$52,548	0.5%	4.3%	-3.6%

Source: NCREIF Property Index as of June 30, 2019. Past performance is no guarantee of future results.

RETURNS BY PROPERTY TYPE AND REGION

Property Type	Annual returns							Standard deviation		
	1 Year			3 years	5 years	10 years	20 years	Since inception ²	20 years	Since inception ²
	Total	Income	Apprec.							
Apartment	5.8%	4.3%	1.5%	6.2%	8.0%	9.4%	8.7%	10.3%	8.4%	7.6%
Industrial	13.9%	4.8%	8.8%	13.4%	13.7%	11.4%	10.0%	9.9%	8.3%	7.5%
Office	6.8%	4.5%	2.2%	6.3%	8.2%	8.4%	8.2%	8.4%	9.0%	9.5%
Retail	1.8%	4.7%	-2.8%	4.4%	7.7%	9.2%	9.9%	9.5%	7.7%	6.5%
Total Index	6.5%	4.5%	1.9%	6.9%	8.8%	9.2%	8.9%	9.1%	8.1%	7.5%
Region	Total	Income	Apprec.							
East	5.0%	4.4%	0.7%	5.2%	7.0%	8.2%	8.7%	9.9%	8.7%	9.0%
Midwest	3.1%	4.7%	-1.5%	4.8%	7.3%	8.0%	7.3%	7.9%	6.5%	5.8%
South	6.6%	4.9%	1.6%	6.9%	8.9%	9.4%	8.5%	8.3%	7.3%	6.7%
West	8.5%	4.4%	3.9%	8.8%	10.8%	10.5%	9.9%	9.8%	8.9%	8.3%
Total Index	6.5%	4.5%	1.9%	6.9%	8.8%	9.2%	8.9%	9.1%	8.1%	7.5%

Source: NCREIF Property Index. As of June 30, 2019. Past performance is not indicative of future returns.

² Index returns start in 1978, equivalent to a 41.5 year calculation.

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MARKET ANALYSIS – BENCHMARK INSIGHTS AND PORTFOLIO IMPLICATIONS

The NCREIF Property Index is a value-weighted index of property returns and as such, a large portion of the index is located in just 20 markets. Local economic growth will affect properties located in the same market similarly, so we can estimate the effect of property geographical location on the overall index. Large metros, by value, will likely have the largest impact on the index, although small metro with particularly strong or weak performance may boost or weigh on returns from time to time. The following tables lists out which markets had the strongest positive and negative effect on returns during the past four quarters.

IMPACT OF TOP 20 MARKETS ON SECTOR PERFORMANCE

Apartment			Industrial			Office			Retail		
Metro	Metro returns ³	Impact on sector returns	Metro	Metro returns ³	Impact on sector returns	Metro	Metro returns ³	Impact on sector returns	Metro	Metro returns ³	Impact on sector returns
Denver	7.7%	9	Seattle	18.8%	36	San Francisco	11.2%	42	San Diego	6.5%	21
Austin	8.6%	8	New York	16.8%	19	Boston	8.8%	22	Washington, DC	4.5%	20
Boston	7.4%	8	Riverside	15.0%	14	Seattle	10.3%	18	Miami	4.6%	10
Atlanta	7.3%	6	Los Angeles	15.0%	13	San Jose	10.7%	16	Orange County	5.3%	8
San Diego	7.7%	5	San Francisco	21.8%	12	Austin	12.1%	11	Orlando	4.6%	7
San Jose	7.4%	4	Portland	17.3%	6	Los Angeles	8.0%	9	San Jose	4.7%	7
Orange County	7.6%	3	Oakland	15.1%	5	Oakland	9.9%	7	Dallas	3.1%	7
Houston	6.6%	3	Miami	15.1%	4	Atlanta	9.6%	5	Las Vegas	3.0%	6
Washington, DC	6.0%	2	Orange County	14.4%	2	Denver	8.1%	3	Riverside	4.7%	6
Oakland	6.0%	0	Fort Lauderdale	14.3%	1	Portland	6.9%	0	San Francisco	3.5%	4
Seattle	5.8%	0	San Diego	14.0%	0	Dallas	6.6%	0	Seattle	2.8%	2
Fort Lauderdale	5.8%	0	Denver	13.2%	-1	San Diego	6.1%	-1	Oakland	2.2%	1
Los Angeles	5.7%	0	Washington, DC	12.9%	-2	Phoenix	4.7%	-2	Boston	0.8%	-3
Miami	4.1%	-3	San Jose	12.8%	-2	Miami	5.0%	-2	Houston	1.1%	-4
San Francisco	4.2%	-4	Atlanta	12.8%	-3	Minneapolis	3.3%	-2	Phoenix	0.5%	-5
Portland	3.1%	-5	Harrisburg	7.7%	-8	Orange County	4.2%	-5	Los Angeles	0.8%	-6
Philadelphia	3.0%	-5	Baltimore	9.8%	-9	Houston	4.6%	-7	Atlanta	-0.8%	-7
Dallas	3.8%	-12	Houston	9.8%	-11	Chicago	4.7%	-10	Denver	-1.8%	-11
Chicago	2.2%	-25	Dallas	11.3%	-20	Washington, DC	3.4%	-39	New York	-3.8%	-32
New York	2.8%	-34	Chicago	9.6%	-35	New York	3.8%	-58	Chicago	-4.2%	-46

Source: NCREIF Property Index as of June 30, 2019. Past performance is no guarantee of future results. Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, opinions and hypothetical models or analysis which may prove to be incorrect.

Apartments – Orlando, Phoenix and Riverside, smaller, regional markets that fell outside of the top 20, boasted some of the highest total returns. Generally, regional growth markets outperformed while several mature gateway markets struggled; New York, Chicago and San Francisco all detracted from sector returns. Denver, Austin and Boston made the largest positive contributions. Texas was largely a positive contributor, with the exception of Dallas, which has an outsized supply pipeline.

Industrial – Performance was strong, with nearly every market outperforming the overall NPI. Supply-constrained coastal cities such as Los Angeles, New York and Seattle dominated. Smaller, regional and local distribution metros such as Allentown and Philadelphia were standouts. The major inland distribution hubs of Atlanta, Chicago and Dallas, all of which have above-average construction activity, underperformed.

Office – Tech-based markets including Austin, the Bay Area, Boston and Seattle, delivered a large positive contribution to sector returns. Underperformance in the two largest office markets (New York and Washington, DC) resulted in a 97 basis point deduction from the sector's total return (trailing four quarters). Mid-West markets (Chicago and Minneapolis) continued to underperform.

Retail – West Coast markets generally produced the highest returns. Mall properties were generally the largest detractors of performance; New York, Chicago and Denver faced the greatest negative effects. Regional growth metros were mixed with Nashville producing the highest total return (trailing four quarters), Austin and Orlando producing strong returns, and Atlanta delivering a negative return over the past year.

³ Four-quarter cumulative returns ending second quarter 2019.

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PERFORMANCE OVER THE PAST 5 YEARS (12-MONTH PERIODS)

	6/30/2018-6/30/2019	6/30/2017-6/30/2018	6/30/2016-6/30/2017	6/30/2015-6/30/2016	6/30/2014-6/30/2015
Private Real Estate (NPI)	6.5%	7.2%	7.0%	10.6%	13.0%
Broad Equities (large cap)	10.4%	14.4%	17.9%	4.0%	7.4%
Bonds	7.9%	-0.4%	-0.3%	6.0%	1.9%
Listed Real Estate	13.0%	4.9%	0.2%	23.6%	4.1%
10-Year Treasury ¹	2.0%	2.9%	2.3%	1.5%	2.4%
12-Month LIBOR ¹	2.2%	2.8%	1.7%	1.2%	0.8%
CPI (SA)	1.7%	2.8%	1.7%	1.0%	0.2%

¹ These figures represent annual yields.

Sources: NCREIF Property Index (NPI), S&P 500 Total Return (Broad Equities), Bloomberg/Barclay's U.S. Aggregate Total Return Index (Bonds), FTSE/NAREIT All Equity REITs Total Returns Index (Listed Real Estate), Federal Reserve (10-Year Treasury, 12-Month LIBOR, Consumer Price Index (CPI)). As of June 30, 2019. Data shown is the latest available.
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- Adverse changes in law and regulation including environmental laws and regulations, zoning laws and other governmental rules and fiscal policies;
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