Real Estate Research

February 2023

U.S. Property Performance Monitor

Fourth Quarter 2022

IN A NUTSHELL

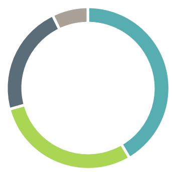
— The impact of higher interest rates has begun to seep into the NPI in the form of higher yields as investors attempt to determine fair pricing in the face of declining transaction activity.
— The fourth quarter of 2022 saw core real estate print its first negative quarterly total return (-3.5%) since COVID. This was driven by a negative capital return of -4.5% that was somewhat cushioned by a 1.0% income return. Trailing four-quarter returns remained postive (5.5%).
— Total returns for industrial property (trailing four quarters) were the highest of any sector, followed by apartment returns. The retail and office sectors lagged behind, albeit with substantial variation by market and subtype.
— Sun Belt and Mountain West markets generally outperformed while New York, Chicago, Washington, DC, and San Francisco struggled.

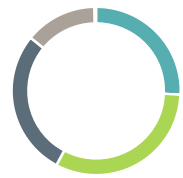
Private Real Estate Property Returns

— On a trailing four-quarter basis, core real estate total returns continued to post positive performance, printing 5.5% to end a rollercoaster year. This was a decline from the third quarter return of 16.1% and below the NPI's long term average of 9.0%.
— None of the four major property types have been immune to the impact of hgher rates. Returns decelerated across the board and were negative in the case of office on a trailing-four quarter basis.
— The industrial sector's total return (14.5%) remained strong, yet continued to moderate from its peak of 51.9% in the first quarter of 2022. Apartment total return (7.1%) outpaced the overall NPI but decelerated from the recent high (24.4%) reached in the second quarter of 2022. Retail total return (2.7%) continued its positive streak albeit at a slower pace. Office posted its first negative total return (-3.4%) since 2010 amid high vacancies.
— While the fourth quarter saw a reversal in the bond and stock market, private real estate still closed the year meaningfully outperforming stocks (-18.1%) and bonds (-13.0%).
— Property fundamentals were strong in the fourth quarter. Vacancies remained at a historic low. Net Operating Income (NOI) increased 7.5% (trailing four quarters), a slight moderation from the previous quarter (7.9%) but healthy relative to historical norms, led by industrial (12.0%) and apartment (10.4%).
— Geographic trends were largely unchanged. Regional markets generally benefitting from lower costs and in-migration (e.g., Sun Belt and Mountain West) performed well. Gateway markets with comparatively higher costs (e.g., New York, Chicago, Washington, DC, and San Francisco) generally underperformed.

NPI Market Capitalization

Index market value U.S. $ 933.0 billion – Property count 10,770





Recent Performance Trends

	Quarter	12 months trailing	
	4Q 2022	**4Q 2022**	**3Q 2022**
Private Real Estate (NPI)	-3.5%	5.5%	16.1%
Broad Equities (large cap)	7.6%	-18.1%	-15.5%
Bonds	1.9%	-13.0%	-14.6%
Listed Real Estate	4.1%	-24.9%	-16.3%
10-Year Treasury[1]	3.9%	3.9%	3.8%
12-Month LIBOR[2]	5.5%	5.5%	4.8%
CPI (SA)	0.5%	6.4%	8.2%

Sources: NCREIF (NPI), S&P 500 (Broad Equities), Barclay's U.S. Aggregate Bond Index (Bonds), NAREIT (Listed Real Estate), BLS (CPI) and Federal Reserve (10 yr Treasury, LIBOR). As of December 31, 2022

[1] These figures represent annual yields.
[2] These figures represent annual yields.

NCREIF Property Index (NPI) Performance by Sector and Region

- Despite cooling demand, 2022 was another banner year for the industrial sector[3]. Total returns slid from 34.6% (trailing four quarters) in the third quarter to 14.5% in the fourth quarter, yet they remained above their long-term average (10.8%). NOI growth (12% year-over-year) remained strong after posting a record high in the third quarter (13.6%) as vacancies (1.5%) continued to make record lows. The remenants of the post-covid e-commerce boom coupled with a shift in favor of just-in-case inventory, as a response to global supply chain disruptions, can be credited for driving high industrial demand throughout the year.
- Even in the face of negative absorption, apartments clocked in as the second-best performing sector, producing a total return of 7.1% for the year.[4] Vacancies ticked up 40 bps to 6.4%, right below their long-term average of 6.5%. NOI growth declined by seven percentage points to 10.4% but remained strong relative to historical standards. A housing shortage, of both single-family and rental apartment units, has continued to benefit apartments. An ongoing migration of ageing Millennials to the suburbs, a trend that first surfaced in 2015 and accelerated with the pandemic, helped Garden (11.0%) to outperform High-Rise (5.0%) assets.
- Total returns for retail were 2.7% in the fourth quarter of 2022 (trailing four quarters). Neighborhood (5.1%) and community (7.7%) centers outperformed as vacancies hovered near 17-year lows. Malls (about half the index) were flat.
- Office performance deteriorated, delivering total returns of -3.4% (trailing four quarters). CBDs fared worse than suburbs, although both suffered. The sector as a whole printed a -7.4% capital return for the year, as remote work weighed on leasing activity.
- Regional dynamics were generally unchanged. The South led the pack (8.5%), followed closely by the West (7.0%). Returns in the East and Midwest lagged the index over the past year.

Detailed Property Type NPI Performance

	No. of props.	Market value U.S.$ (Mil)	Trailing four quarters: Total return	Income	Apprec.
Apartment					
Garden	877	86,129	11.0%	3.9%	6.9%
High Rise	1,163	147,883	5.0%	3.6%	1.4%
Low Rise	289	28,068	6.7%	3.8%	2.9%
Industrial					
R&D	36	2,265	5.8%	4.0%	1.7%
Flex	203	6,061	15.2%	4.0%	10.8%
Warehouse	4,799	282,377	14.5%	3.1%	11.1%
Office					
CBD	485	130,470	-5.7%	4.1%	-9.5%
Suburban	1,281	109,726	-0.4%	4.6%	-4.8%
Retail					
Community	200	13,883	7.7%	5.3%	2.3%
Neighborhood	586	24,408	5.1%	5.0%	0.1%
Power	177	13,798	6.5%	5.9%	0.5%
Regional	45	12,339	-2.1%	4.6%	-6.5%
Super Regional	72	46,611	0.5%	4.8%	-4.1%

[3] JLL. As of December 31 2022.
[4] CBRE-EA; NCREIF. As of December 31 2022.

Returns by Property Type and Region

	Annual returns								Standard deviation	
	Total	Income	Apprec.	3 years	5 years	10 years	20 years	Since inception[5]	20 years	Since inception[6]
Property type										
Apartment	7.1%	3.7%	3.3%	9.3%	7.9%	8.6%	8.4%	10.2%	9.0%	7.6%
Industrial	14.5%	3.2%	11.1%	22.4%	18.9%	16.0%	11.8%	10.7%	11.5%	9.1%
Office	-3.4%	4.3%	-7.4%	1.4%	3.5%	6.3%	7.0%	7.9%	9.1%	9.2%
Retail	2.7%	5.0%	-2.2%	-0.3%	0.6%	5.7%	8.1%	8.7%	8.9%	6.9%
Total Index	**5.5%**	**3.9%**	**1.6%**	**8.1%**	**7.5%**	**8.8%**	**8.6%**	**9.0%**	**8.6%**	**7.4%**
Region										
East	2.2%	3.9%	-1.6%	5.5%	5.3%	6.8%	7.8%	9.5%	8.9%	8.8%
Midwest	2.1%	4.4%	-2.2%	4.2%	4.0%	6.6%	6.7%	7.6%	6.9%	5.9%
South	8.5%	4.2%	4.2%	9.6%	8.4%	9.6%	8.8%	8.4%	8.0%	6.8%
West	7.0%	3.6%	3.2%	9.9%	9.4%	10.6%	9.8%	9.8%	9.4%	8.3%
Total Index	**5.5%**	**3.9%**	**1.6%**	**8.1%**	**7.5%**	**8.8%**	**8.6%**	**9.0%**	**8.6%**	**7.4%**

Source: NCREIF Property Index as of December 31, 2022. Past performance is not indicative of future returns.

[5] Index returns start in 1978, equivalent to a 45 year calculation.
[6] Index returns start in 1978, equivalent to a 45 year calculation.

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 metros with particularly strong or weak performance may boost or weigh on returns from time to time. The tables on the following page list out which markets had the strongest positive and negative effect on returns during the past four quarters.

Apartments

The pandemic reinforced demographic trends underpinning apartment markets. Over the past year, markets in the Sun Belt (e.g., Phoenix, Austin, Fort Lauderdale, Miami, Atlanta), benefitting from in-migration, were the largest positive contributors. Gateway locations with comparatively higher costs (e.g., New York, Chicago, San Francisco, and Los Angeles) lagged behind.

Industrial

Overall performance remained impressive, with most markets delivering double-digit total returns over the trailing four quarters. Major port markets, including Riverside (26.4%), Los Angeles (22.9%), Orange County (19.6%), and Miami (19.4%) significantly outperformed all markets. Although port markets located in the Pacific Northwest (e.g., Seattle and Portland) generally underperformed. The large inland distribution hubs were mixed with Atlanta (15.1%) posting strong returns, while Dallas (9.0%) and Chicago (7.4%) lagged, though their returns were still elevated. Markets located along the I-95 Corridor in the Northeast all produced double digit returns with Baltimore (15.9%) leading followed by Washington DC (14.1%), Boston (12.1), Philadelphia (11.6%), and New York (11.0%).

Office

Most of the markets recorded negative returns as a result of systematic factors. Though return-to-work policies are bringing workers back to their offices, job cuts have started in the tech and financial sectors as companies evaluate economic uncertainty.
With its large exposure to life sciences, San Diego (9.3%) was the clear winner in office performance over the trailing four quarters. Tech-heavy Austin and Sun-Belt markets benefiting from corporate relocations and demographic tailwinds (Dallas, Miami and Charlotte) were the only other markets to end the year in positive territory. Conversely, values slipped in all of the major gateway markets, including Chicago, Los Angeles, Washington D.C., New York, San Francisco, and Boston.

Retail

Relative market performance largely reflected subsector exposures: those with significant mall constituents (e.g., San Francisco, Washington, DC, New York) underperformed, while those with more neighborhood and community centers, benefitting from demographic tailwinds (e.g., Las Vegas, Atlanta, and Dallas), fared better. Additionally, tech and life science markets such as Seattle (12.7%) and San Diego (7.8%) posted strong returns over the trailing four quarters.

Apartment		
Metro	Metro returns[7]	Impact on sector returns
Austin	12.6%	23
Miami	17.0%	21
Fort Lauderdale	16.8%	20
San Diego	12.5%	14
Dallas	9.0%	12
Atlanta	9.0%	10
Phoenix	10.6%	9
Charlotte	11.3%	8
Houston	7.7%	2
Denver	7.3%	1
Santa Ana	7.5%	1
Boston	6.5%	-4
Oakland	1.3%	-10
Seattle	4.3%	-13
San Jose	0.9%	-14
Washington, DC	4.7%	-17
New York	4.1%	-26
Chicago	2.2%	-26
San Francisco	-2.4%	-30
Los Angeles	1.3%	-39

Industrial		
Metro	Metro returns[8]	Impact on sector returns
Riverside	26.4%	173
Los Angeles	22.9%	83
Orange County	19.6%	20
Miami	19.4%	16
Baltimore	15.9%	3
San Diego	15.9%	2
Atlanta	15.1%	2
Phoenix	14.6%	0
Washington, DC	14.1%	-1
Las Vegas	13.7%	-1
Boston	12.1%	-3
Philadelphia	11.6%	-4
Portland	9.8%	-7
Oakland	10.1%	-16
Denver	3.6%	-17
Houston	5.3%	-18
New York	11.0%	-30
Seattle	9.2%	-30
Dallas	9.0%	-35
Chicago	7.4%	-48

Office		
Metro	Metro returns[9]	Impact on sector returns
San Diego	9.3%	26
Boston	-1.4%	24
Austin	1.8%	12
Dallas	0.7%	9
San Jose	-0.7%	9
Miami	1.8%	5
Charlotte	2.2%	4
Oakland	-0.9%	4
Seattle	-3.1%	2
Phoenix	-1.3%	1
San Francisco	-3.3%	1
Denver	-3.6%	-1
Atlanta	-4.8%	-3
Houston	-5.0%	-5
Orange County	-7.5%	-6
Portland	-11.5%	-9
Chicago	-6.5%	-15
Los Angeles	-5.5%	-17
Washington, DC	-6.0%	-32
New York	-5.7%	-41

Retail		
Metro	Metro returns[10]	Impact on sector returns
Seattle	12.7%	26
San Diego	7.8%	22
Las Vegas	5.5%	18
Dallas	6.6%	17
Atlanta	7.8%	12
Baltimore	6.3%	7
Riverside	5.3%	5
Los Angeles	3.5%	5
Orlando	4.1%	3
San Jose	3.5%	2
Houston	2.8%	0
Boston	2.0%	-2
Orange County	1.7%	-3
Oakland	1.5%	-4
Miami	-1.4%	-11
San Francisco	-3.2%	-13
Phoenix	-1.8%	-16
New York	-1.5%	-18
Chicago	-3.2%	-37
Washington, DC	-3.7%	-51

Source: NCREIF Property Index as of December 31, 2022.

[7] Four-quarter cumulative returns ending fourth quarter 2022.
[8] Four-quarter cumulative returns ending fourth quarter 2022.
[9] Four-quarter cumulative returns ending fourth quarter 2022.
[10] Four-quarter cumulative returns ending fourth quarter 2022.

Appendix – Historical Performance

	12 months trailing				
	12/31/2022	12/31/2021	12/31/2020	12/31/2019	12/31/2018
Private Real Estate (NPI)	5.5%	17.7%	1.6%	6.4%	7.2%
Broad Equities (large cap)	-18.1%	28.7%	18.4%	31.5%	17.9%
Bonds	-13.0%	-1.5%	7.5%	8.7%	-1.2%
Listed Real Estate	-24.9%	41.3%	-5.1%	28.7%	4.7%
10-Year Treasury[11]	3.9%	1.5%	0.9%	1.9%	3.1%
12-Month LIBOR[12]	5.5%	0.6%	0.3%	2.0%	2.9%
CPI (SA)	6.4%	7.1%	1.3%	2.3%	2.4%

Sources: NCREIF, Standard and Poor's, Barclay's, NAREIT, and Federal Reserve as of December 31, 2022.

[11] These figures represent annual yields.
[12] These figures represent annual yields.

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