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MEMORANDUM

TO: Members of the Investment Committee, CalPERS
FROM: Meketa Investment Group
DATE: June 10, 2024
RE: Annual Program Review, inclusive of Quarterly Real Estate Performance Review as of March 31, 2024

In our role as the Board Real Estate Consultant, Meketa Investment Group ("Meketa") conducted an annual program review, inclusive of the quarterly performance review, of the Real Estate Portfolio ("the Portfolio") based on data provided in Wilshire's California Public Employees' Retirement System ("CalPERS") Real Assets Performance Analysis Review for the period ended March 31, 2024, and selected CalPERS reports.[1] This memorandum provides the Portfolio performance data and information on key policy parameters, along with summary market commentary.

Performance[2]

Portfolio-Level Returns

CalPERS ("the System") assigns the goals of diversification from public securities, current income and inflation protection to its Real Assets portfolios, of which real estate comprises 75.8%. The Portfolio's diversification is serving the System as different property sectors experience varying demand and supply dynamics. Similarly, CalPERS' focus on the highest quality locations and materials that attract credit worthy tenants provides defensive characteristics. Across real estate markets, no property type or geographic region necessarily outperforms over the long-term, so diversification is critical.

CalPERS' Real Estate Portfolio returns exceeded the benchmark for the one- and five-year time periods, was in-line with the benchmark for the 10-year period, and underperformed the benchmark for the three-year period. While we anticipate near-term performance to continue to be challenging, the income return is generating reliable, positive cash flow to the System, fulfilling the role of the asset class in the broader CalPERS portfolio.

Measured by a percentage of Loan to Value ("LTV"), CalPERS has historically used more leverage than the benchmark (34.4% versus the benchmark of 25.7%). When property values are rising, this accelerates returns. When values decline, this detracts from performance. Measured by the 2.4x multiple of Net Operating Income to debt service, ("coverage ratio", or "DSCR"), and the strength of the tenancies, this is nevertheless deemed to be a prudent level of debt. Both LTV and DSCR are well within policy guidelines of <50% and >1.5x, respectively.

[1] Real Assets Program Allocation, Characteristics, and Leverage Reports (pdf) and Datasheets (Excel), Period Ending December 31, 2023, and Real Assets Quarterly Performance Report, Partnership Financial Statements as of December 31, 2023.
[2] Per Wilshire's CalPERS Real Assets Performance Analysis Review for the period ended March 31, 2024 reported with a 1-quarter lag, so effectively as of December 31, 2023.

Net Returns March 31, 2024	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Real Estate Returns	-11.6	3.5	3.8	6.3
Real Estate Policy Benchmark[1]	-12.6	4.0	3.3	6.3
Over (under) Performance	1.0	-0.5	0.5	0.0

Institutional real estate has benefitted from more than a decade of low interest rates and economic growth tailwinds. Slower economic growth and higher interest rates have caused a repricing of the entire real estate sector. Meketa anticipates relative performance will be challenging to assess until the dust settles on the property and capital markets. We continue to expect significant near-term volatility in valuations; shorter-term performance should be viewed skeptically.

Performance Attribution

The portfolio continues to generate reasonable absolute returns over longer time periods with low leverage and a low risk profile, but near-term performance is challenging. Ten-year net returns of 6.3% were in-line with the benchmark and five-year returns exceeded the benchmark by 50 basis points. The three-year return trailed the benchmark by approximately 50 basis points, largely as a result of somewhat less robust appreciation and a higher retail allocation than the benchmark. But the portfolio continues to generate consistent income with which CalPERS can pay its beneficiaries and the income return exceeded that of the benchmark for all time periods presented.

The big outlier in absolute performance is the one-year return. For the one-year period, the portfolio posted a negative 11.6% net return, consisting of 3.4% current income and negative appreciation of 15.0%. While the total net return exceeded the benchmark by approximately 100 basis points, all risks and sectors posted negative returns. Within the portfolio, data center, industrial, and retail properties outperformed the benchmark for the one-year time period.

The market continues to produce a remarkable dispersion of returns across property types and locations, with clear winners and losers from a space demand perspective. Even among core holdings where we would expect to see less volatility in performance, there was a wide range of returns. Data center buildings, which represent 5.9% of the core portfolio, generated a one-year return of negative 3.7%. Data center buildings are benefiting from increased cloud computing, technological device usage and artificial intelligence. At the other end of the spectrum were office buildings, which represent 10.6% of the core portfolio, and which generated a negative 31.1% one-year return, in addition to negative returns for the current quarter, three-, and five-year time periods. While CalPERS' underweight to office relative to the benchmark is a positive, the sector is very challenged and further deterioration is expected.

[1] CalPERS Real Estate Policy Benchmark, with historical composition as follows: As of July 1, 2018 is the MSCI/PREA US ACOE Quarterly Property Fund Index (Unfrozen), Net of Fees. From July 1, 2011 through June 30, 2018, the Policy Benchmark was the NCREIF Fund Index Open-End Diversified Core Equity, Net of Fees. The. Policy Benchmark results are shown on a blended basis during the relevant trailing periods.

Industrial and multifamily returns have moderated from recent highs; both portfolios generated negative returns during the one-year period. CalPERS' industrial portfolio, representing 33.7% of the core portfolio, posted returns for the one-year time period of negative 6.0%. CalPERS' multifamily portfolio, representing 26.6% of the core portfolio, posted returns for the one-year time period of negative 15.5%. Both sectors are experiencing slowing rental rate growth, and industrial properties with longer leases at below market rents are getting penalized for the lost potential revenue (the "loss to lease").

Longer term performance for these property types is expected to be strong as both benefit from resilient demand drivers and moderating new supply. Industrial buildings continue to benefit from greater e-commerce volume and onshoring of manufacturing, while multifamily properties benefit from the shortage and lack of affordability of single family homes.

Mall retail property investments, to which CalPERS has had a material overweight compared to the benchmark, and which account for 10.0% of the core portfolio, posted a total return of negative 6.4% for the one-year time period. Since inception, these investments have produced a 6.1% total net return.

The other portion of CalPERS' retail holdings, grocery anchored shopping centers, which amount to 10.4% of the core portfolio, generated a return of negative 3.0% for the one-year time period. Shorter average lease terms, relative to big box retailers, and little new development have given owners of grocery anchored shopping centers the ability to more proactively push rents, especially given historically low vacancy within the sector.

As of this reporting period, the core risk portfolio, comprised of completed, leased and cash flowing assets, and representing 87.8% of the Real Estate Portfolio, produced longer-term returns of 4.2% for the five-year return, and exceeded the Real Estate Policy benchmark returns by 90 basis points. Strong ten-year returns of 8.1% handily exceeded the 6.3% benchmark return. Virtually all core properties are held directly in lower cost separate accounts (as opposed to investing in open-end-commingled pools).

Net Returns As of March 31, 2024[1]	NAV ($B)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Core	45.2	-11.8	4.3	4.2	8.1
Value Add	3.9	-13.9	-2.5	0.3	3.5
Opportunistic	1.3	-12.9	-1.4	0.4	1.2
Real Estate Policy Benchmark	--	-12.6	4.0	3.3	6.3

[1] Private Investment data are one quarter lagged, so effectively as of December 31, 2023.

Key Policy Parameters

The Real Estate Portfolio is compliant with all key parameters related to diversification and other limits applicable at the Portfolio level, as demonstrated in the following table.

Key Portfolio Parameter	Policy Range/Limit	NAV 3/31/24 Exposure[1]
Risk Classification	(%)	(%)[1]
Core	75-100	87.8
Value Add	0-25	8.5
Opportunistic-All Strategies	0-25	3.7
Geographic Region	(%)	(%)[2]
United States	75-100	93.3
International Developed	0-25	4.0
International Developing	0-15	2.7
International Frontier	0-5	0.0
Manager Exposure[3]	(%)	(%)
Largest Partner Relationship	20 max	15.4
Investments with No External Manager	20 max	0.0
Leverage[4]		
Loan to Value	50% max	34.4%
Debt Service Coverage Ratio	1.5x min	2.4x

Implementation

The Real Estate Portfolio had a market value of $50.3 billion at the end of the current reporting period, representing 75.8% of the Real Assets program and 10.2% of the total portfolio. Including Forestland and Infrastructure, the Real Assets program currently comprises 13.4% of the total portfolio against a long-term target allocation of 15.0%, within the policy range of 8% to 18%. CalPERS has a very small exposure to overseas properties, and almost no exposure to the hospitality industry in its private real estate holdings.

The CalPERS business model for real estate emphasizes control, transparency, alignment and governance. CalPERS' market advantages are its size, scale and ability to hold assets for longer periods. The implementation of this business model is primarily through direct investing with separately managed accounts, in which CalPERS has effectively complete control. Cancellable separate accounts are created with expert, aligned fiduciary managers/partners. These relationships are overseen by Staff with the benefit of independent consultants' prudent person opinions and monitored on behalf of the Trustees by the Board Consultant. This provides a replicable, scalable model that can grow as the

[1] Real Assets Quarterly Performance Report as of December 31, 2023 and Real Assets 2023.12.31 Characteristics Report (PDF), based on asset-level risk.
[2] Real Assets Quarterly Performance Report as of December 31, 2023 and Real Assets 2023.12.31 Characteristics Report (PDF), based on asset-level geography.
[3] CalPERS Real Assets Portfolio Allocation Report (Excel), Period Ending December 31, 2023: calculated based on manager- and account-level NAV. Percent calculated using relevant NAV plus total unfunded commitments for relationships/investments and same for the Real Assets Program ($79.0 billion).
[4] CalPERS Real Assets Portfolio Leverage Report (pdf), Quarter Ending December 31, 2023.

Total Fund size grows and invest within the strategic ranges based on market conditions and alternative investments available to the Total Fund. As the System grows and markets evolve, this method of investing helps control risk and reduce costs.

CalPERS continues to be an industry leader in creating and embracing Responsible Contractor Policies and ESG best practices at its properties. Additionally, during the last five years, the Staff has made progress harmonizing several of the private asset classes under the Real Assets Unit. This has improved continuity of research, decision-making, risk mitigation and reporting, as well as providing increased knowledge across INVO. This is consistent with a System wide, Total Fund approach rather than a collection of independent asset “silos.”

Real Estate Portfolio Structure

The Portfolio invests via a number of different managers and investment vehicles, currently relying primarily on separate accounts and commingled funds.

Partners	Investment Vehicles	Investments	Countries
18	39	1,151	10+

Investment Vehicle Type	Count	% of NAV	% of NAV + Unfunded
Commingled Funds	6	4.6	6.1
Direct Investments	1	0.0	0.0
Separate Accounts	32	95.4	93.9
Total	**39**	**100.0%**	**100.0%**

Real Assets Program Staffing Update

The Real Assets Program is led by its Managing Investment Director (“MID”), along with three Investment Directors, who together oversee approximately 38 other Staff positions, as of April 1, 2024.

As the level of activity in infrastructure has increased over the last several years, and infrastructure investment has begun to scale in a meaningful way, Real Assets’ staff have begun to specialize in either real estate or infrastructure activities. Additionally, whereas there used to be a separation of new investment underwriting from ongoing portfolio management, most team members currently work across all phases of the investment program, including sourcing and diligencing new investments, as well as managing existing investments and manager relationships.

The Program is recruiting an Investment Manager (“IM”), Associate Investment Manager (“AIM”), Investment Officer (“IO”) II, and a Staff Services Analyst (“SSA”) all specifically for real estate. Staffing movements among professionals supporting the Real Estate Portfolio over the prior fiscal year are as follows: one SSA retirement, one IO II moved laterally from Strategy Portfolio Analytics Research and Risk (“SPARR”) to the Investment Management Team (“IMT”), and one new hire for an IO III position in SPARR.

Overall, we have observed the Real Assets team as stable, engaged, and collaboratively working together in a rigorous investment sourcing, diligencing, decision-making, and post-commitment and post-acquisition management process. Their rigor and focus has been important to increasing the infrastructure portfolio's scale and diversification in a thoughtful, strategic, and prudent manner.

Real Estate Market Commentary

The year 2023 ended with the trajectory of the US economy remaining uncertain and investors adjusting their return expectations assuming a higher for longer interest rate environment that would allow for a reduction in interest rates. More recent decades-high inflation and the corresponding monetary policy actions of the Federal Reserve have had a widespread and negative impact on commercial real estate. As commercial real estate assets re-price amid greatly reduced transaction volume and restrictive capital markets, some asset owners with maturing debt are struggling to refinance or sell their asset(s). Determining "fair value" has also been challenging due to a lack of overall comparable sales and/or data from sales executed under stress and/or abnormal circumstances. There have also been instances of wide dispersion of appraisal inputs. We anticipate some continued volatility in the coming quarters.

While headline inflation moderated during 2023, the pace at which inflation moderated was slower than expected. Year-over-year inflation as of March 2024, rose 30 basis points to 3.5% and remains stubbornly above expectations. Core inflation (excluding food and energy) remained flat on a year-over-year basis. Overall, inflation continues to be primarily driven by high shelter costs, comprised of rent of a primary residence and owners' equivalent of rent. The multiple interest rate increases by the Federal Reserve during 2022 and 2023 aimed at reducing inflation have caused rent growth to slow dramatically across property types and locations, and for debt costs to more than double. For the first time in more than a decade, market conditions are resulting in "negative" or non-accretive leverage, meaning the cost of new debt financing exceeds the going-in-yield of the real estate acquisition. While "hard assets" such as real estate offer protection from inflation over the mid to longer term because of their ability to raise rents, the timing and amount of correlation vary depending on the individual rent roll (weighted average lease terms), market supply and demand for competing space (also affected by changing usage needs), legislation, and other factors. While the likelihood of distress is increasing, it is not anticipated to be widespread.

Investors with upcoming loan maturities, expiring interest rate caps, and other situations requiring a refinancing of current debt could have difficulty obtaining financing and be forced to sell their commercial real estate asset(s) or to give the asset(s) back to the lender. Those holding office, hotel and retail property types will have more difficulty getting new financing than those holding industrial and/or multifamily assets. While this situation could create buying opportunities for well capitalized, low leverage investors, the current economic uncertainty coupled with thin transaction volumes (and therefore comparable sales) makes finding reasonable price and return expectations challenging.

Commercial real estate loan exposure at large banks is generally less than at smaller, and/or regional banks. While some smaller banks may be experiencing stress, primarily due to high interest rates, commercial office building high vacancy coupled with declining values of these buildings, the situation is currently not anticipated to be a risk to the entire US banking system. However, there is more concern with non-bank mortgage lenders as they can have less liquidity options and cannot access the Federal Reserve's discount window through which the Federal Reserve is able to lend money directly to eligible banks.

As of March 31, 2024, the NCREIF ODCE index has recorded seven consecutive quarters of negative appreciation and six consecutive quarters of a negative total return. Trailing one-year net appreciation returns of negative 14.6% and trailing one-year net total returns of negative 12.0% are vastly different than the record-setting returns notched during calendar 2021 and the first half of 2022. During the second half of 2022 and throughout 2023, rent growth slowed dramatically across property types and locations. While overall fundamentals, such as occupancy, remain healthy, softening demand is causing some property level fundamentals to be under pressure.

While investors continue to evaluate the overall attractiveness and investment return potential of various property types and markets as they form their target allocations, asset selection has increasingly become paramount. Investors have become hyper-focused on using various criteria to narrow down the specific asset(s) they want to target. The increasing amount of data available and technological tools able to compile and analyze various data points and performance metrics is only anticipated to grow.

Core investors have been actively rebalancing their portfolios in light of portfolio growth, liquidity needs, increasing interest rates, and declining commercial real estate values. The redemption queues at many large open-end funds remain elevated and have exceeded levels seen during the Great Financial Crisis ("GFC"). While some funds satisfy redemption requests on a first-come first-serve basis, some will distribute redemption proceeds on a pro-rata basis. Given the dearth of transaction volumes and new commitments to core funds, it is unclear how long it will take to satisfy these redemption requests.

There remains significant dry powder equity capital (nearly $404 billion) raised and sitting on the sidelines ready to invest. However, capital raising slowed significantly in 2023, down 40-50% as compared to a year earlier. Excluding mega funds, the decline in fundraising is even greater. In addition, the length of time spent in the market fundraising has increased which indicates a difficult fundraising environment. Low transaction volumes have kept capital tied up in existing investments, so there have been fewer distributions of invested capital back to investors. Additionally continued price opacity and costly debt financing have severely constrained new capital deployment. Investors have been navigating both numerator and denominator effects on real estate allocations over the last few years and are likely to remain discerning around new capital commitments in today's uncertain markets.

Increasing interest rates, lack of construction financing, rising input costs (labor and materials) and a slowing economy are causing a reduction in construction starts and, therefore, new supply. This

represents an opportunity for investors like CalPERS with high quality, well-located assets to maintain long-term resilient income streams, and also- for those with quality development projects far enough along in the development pipeline with certainty around execution pricing and timing.

Conclusion

CalPERS' continued discipline, long-term investment horizon in this illiquid asset class, and focus on the role of the asset class should continue to serve the needs of the System. Adhering to the Strategic Plan, particularly in times of market uncertainty and disruption, will ensure the real estate program continues to scale in an appropriate manner and contribute to achieving CalPERS' investment objectives.

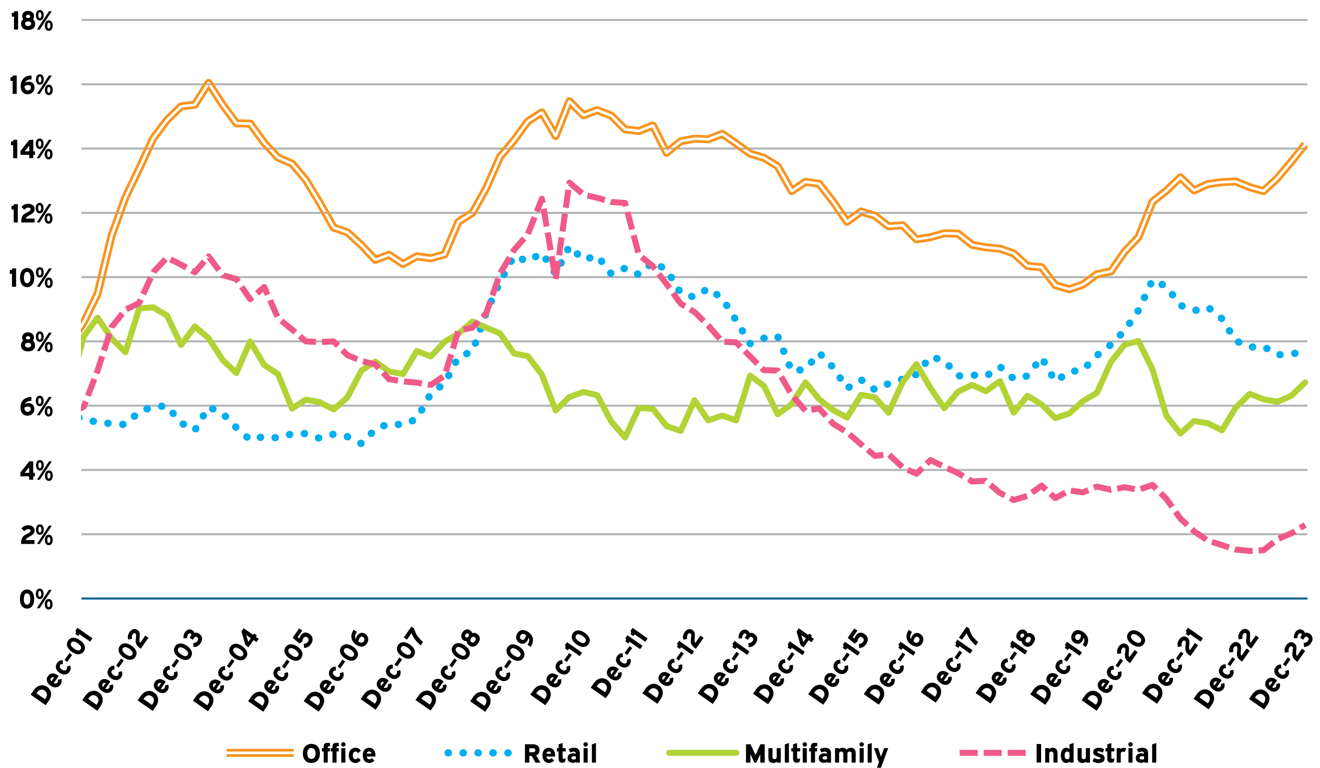
Please do not hesitate to contact us if you have questions or require additional information.

CF/KR/SPM/jls

Attachment

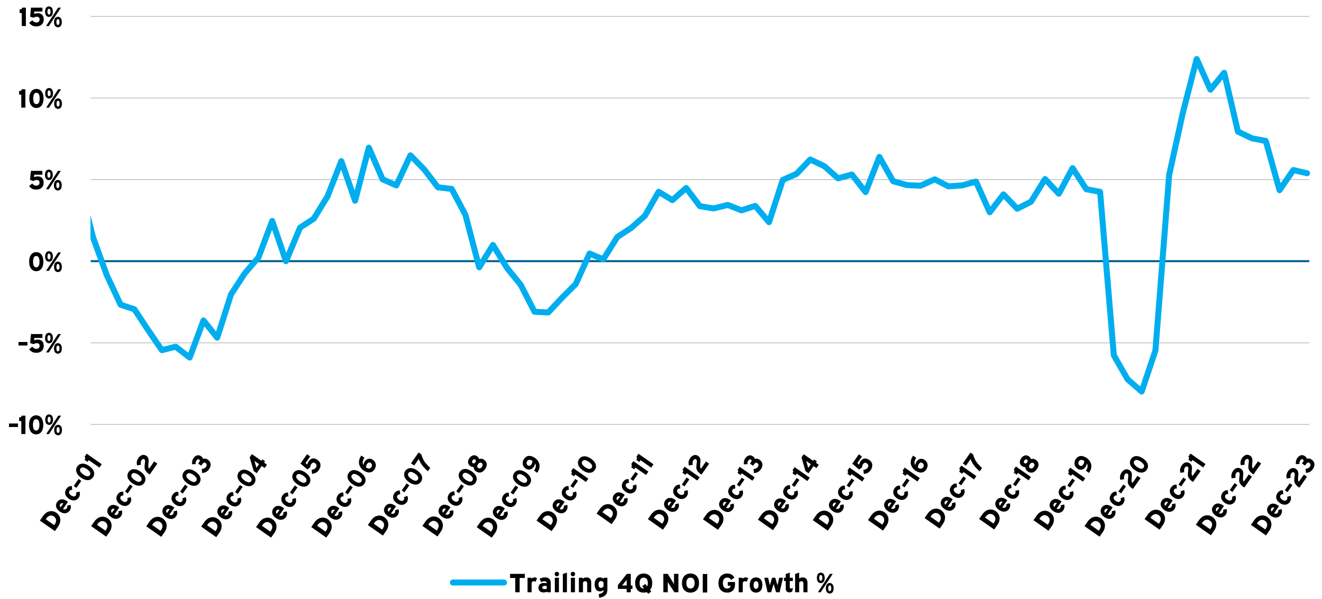
Real Estate Market Views – Q4 2023

Vacancy by Property Type[1]



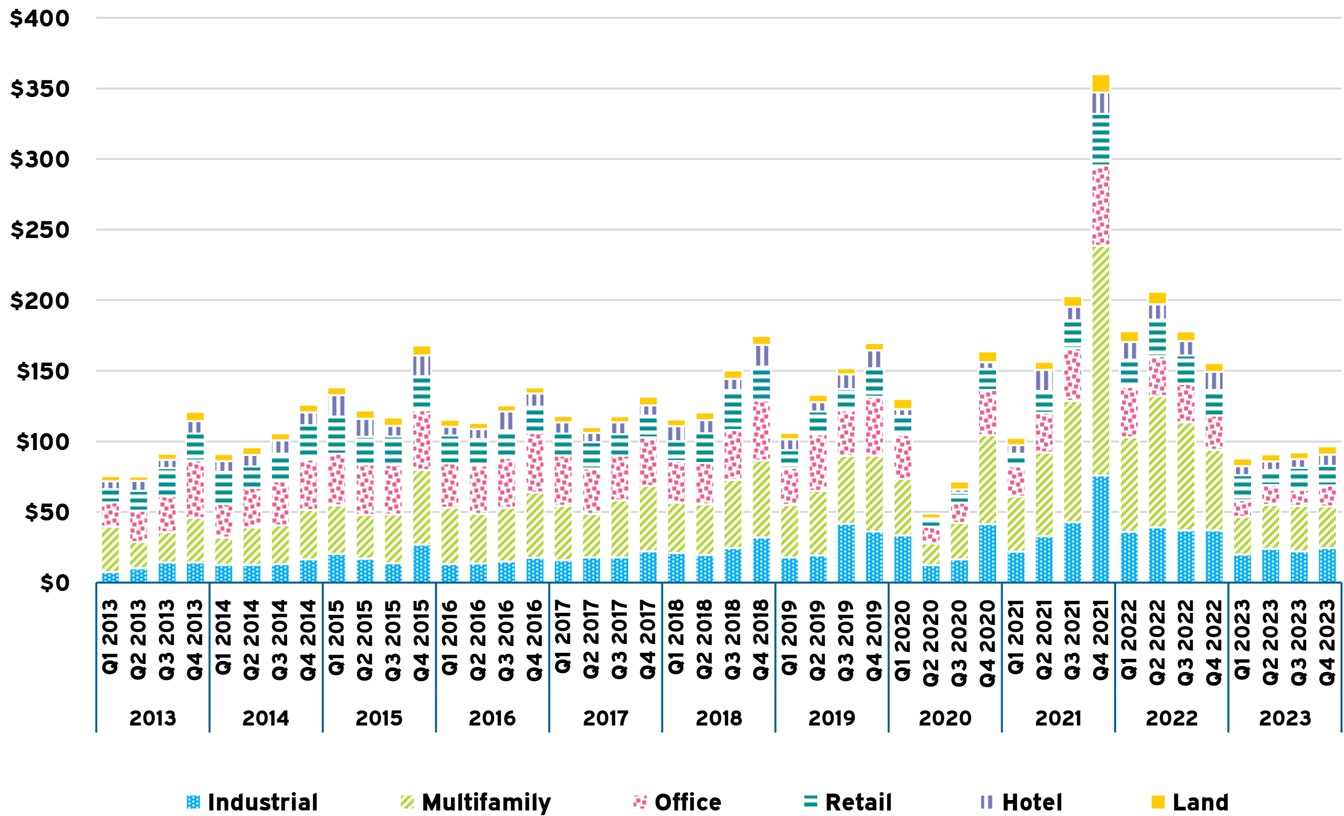
In the fourth quarter of 2023, vacancy rates increased for all property types, with the office sector experiencing the largest increase of 54 basis points ("bps") during the quarter. Generally, office vacancies have continued to trend upwards at a steady rate since the onset of COVID, increasing by 134 bps year-over-year, the largest increase of any sector over the past year by a margin of over 50 bps. The only property type to experience a decline in vacancies during the past year was retail, reporting a 12 bps decline in vacancy rates from December 2022 to December 2023, which may be largely due to the strong fundamentals of the sector post-COVID, underpinned by a significant shortage of supply. In contrast, elevated deliveries in the multifamily sector continue to place an upward pressure on vacancies, which have increased by 42 bps during the quarter, and 36 bps over the past year. Industrial properties also face increasing vacancies, expanding by 26 bps during the quarter, as the sector progressively normalizes downwards from peak performance levels.

[1] Source: NCREIF.



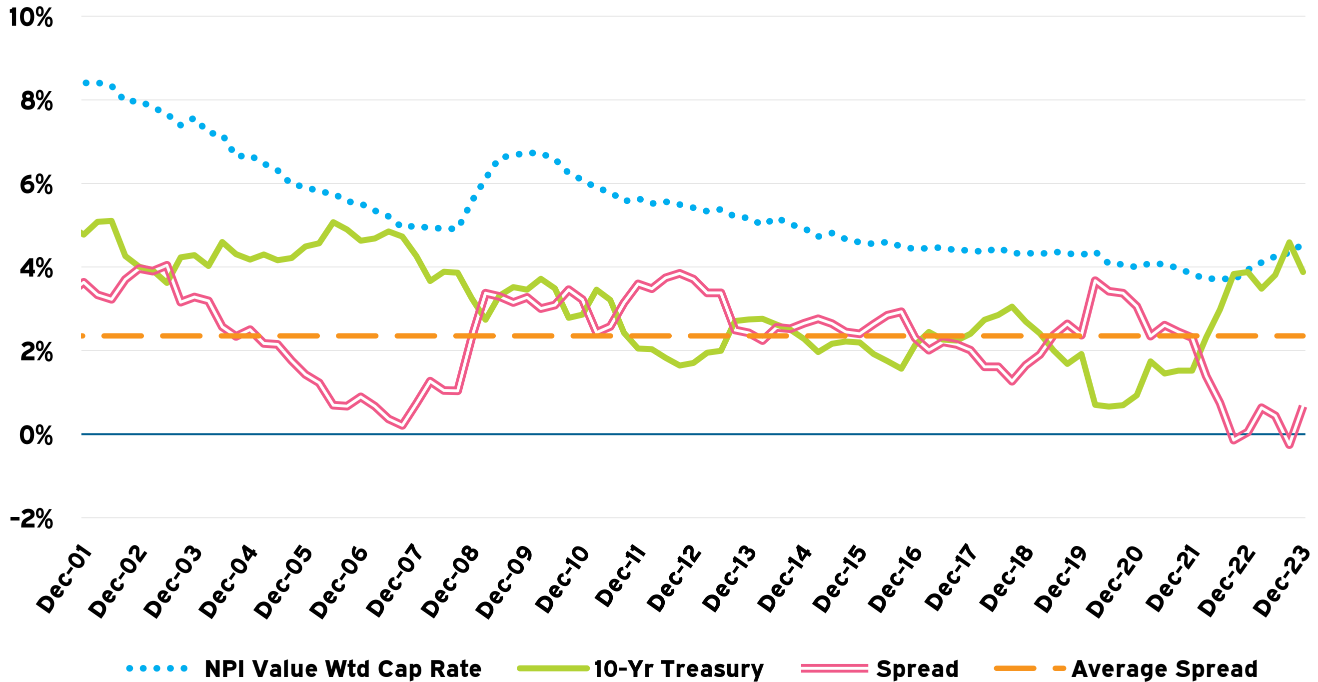
The index's trailing twelve-month NOI growth rate decelerated in Q4 2023 to 5.4%, as compared to 5.6% in Q3 2023. Both office and retail NOI growth decelerated for the trailing twelve months ending in Q4 2023, constituting the primary drivers for the overall quarterly decrease. Office experienced the highest deceleration (-307 bps), resulting in a trailing 12-month NOI growth rate of 1.5% as of December 31, 2023. Retail decelerated by a smaller amount (-135 bps), reporting 2.8% NOI growth year-over-year as of Q4 2023. Multifamily NOI growth accelerated in Q4 2023 by nearly 100 bps to 4.4% year-over-year. Similarly, industrial also experienced an increase in NOI growth over the quarter, with meaningful acceleration of 249 bps to 12.3% NOI growth year-over-year. Industrial comfortably maintains the highest trailing 4Q NOI growth rate across all property types by a significant margin of over 700 bps as of December 31, 2023.

[1] Source: NCREIF.



Private real estate transaction volume for properties valued over $2.5 million was $96.5 billion in Q4 2023, slightly up from the $92.1 billion total last quarter, but remaining generally low overall relative to prior quarters as a result of continued high interest rates and cap rate expansion. The $96.5 billion is the largest quarterly transaction volume of 2023, with each quarter successively reporting a larger number, which may signal future pickup in transaction activity in the coming quarters as broader economic outlook stabilizes. The office sector experienced the largest increase in transaction volume from the prior quarter of $3.8 billion. All other sectors experienced minimal positive changes, with the exception of multifamily and retail, which decreased in transaction volume by $2.8 billion and $1.9 billion, respectively, during the fourth quarter.

[1] Source: PREA.



The NPI Value Weighted Cap Rate increased to 4.55% (+21 bps) in Q4 2023. The 10-year Treasury yield decreased by 71 bps in Q4 2023 to approximately 3.9%, resulting in a positive spread of 67 bps between cap rates and treasury yields, although remaining tight and well-below the historical average spread of 235 bps.

[1] Source: NCREIF and US Department of the Treasury.

Trailing Period Returns[1]

As of December 31, 2023	Quarter	1 Year	3 Years	5 Years	10 Years
NFI-ODCE (Equal Weight, net)	-5.4	-13.3	4.4	3.8	6.6
NFI-ODCE (Value Weight, net)	-5.0	-12.7	4.0	3.3	6.3
NCREIF Property Index	-3.0	-7.9	4.6	4.3	6.8
NAREIT Equity REIT Index	18.0	11.4	5.7	7.6	7.9

Private real estate indices generated negative returns in Q4 2023, as well as over the one-year time horizon. The 3-year, 5-year, and 10-year horizons remained positive. The NFI ODCE Equal Weight Index posted a negative return in Q4 2023 of -5.4%, representing a significant decrease of -325 bps from Q3 2023. Notably, as of December 31, 2023, the NAREIT Equity REIT Index has outperformed private core real estate by a significant margin across all time horizons displayed in the above table. REITs, and the broader public market, responded positively from mid-October through the end of the year as Treasury yields declined in the fourth quarter, resulting in outsized returns in Q4 2023 and a positive snowball effect across the additional time horizons.

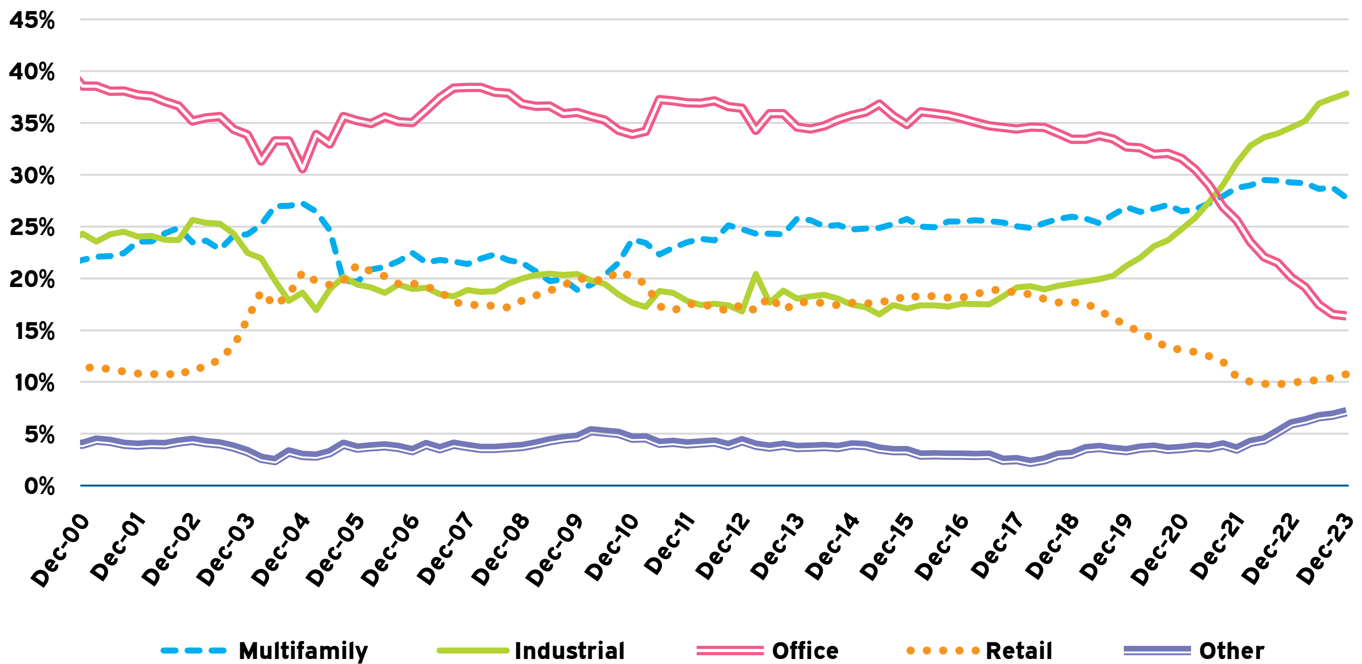
[1] Source: NCREIF.

ODCE Return Components[1]
(Equal Weight, Net)

Income | Appreciation

In Q4 2023, the NFI-ODCE Equal Weight Index reflected a net return of -5.4%, representing its fifth consecutive negative return and the lowest return across the past five-quarter stretch of negative index performance. This result was driven by a -6.1% appreciation return for the quarter, which was slightly offset by a 0.9% income return. Upward adjustments to the discount rate, used in valuations to reflect increasing interest rates and the cost of debt financing, continue to negatively impact the appreciation component of returns. Over the last four quarters, the NFI-ODCE Equal Weight Index has reported a cumulative negative appreciation return of -15.8%. The recent sequence of negative appreciation is slightly offset by the outsized performance of the index in prior quarters from June 2021 through June 2022, reporting a 23.0% appreciation return over the five-quarter period. Conversely, the last five quarters produced an aggregate negative appreciation return of -16.8%, therefore constituting positive performance overall for groups who may have invested in March 2021.

[1] Source: NCREIF.



The NFI-ODCE Equal Weight Index currently comprises 28% multifamily, 38% industrial, 16% office, 11% retail, and 7% in other property types, based on its net asset value ("NAV") as of Q4 2023. The heavy weight towards multifamily and industrial results from a trend of consistent growth within those sectors over the past five years, combined with a steady decline in office exposure which was heightened after the onset of COVID in March 2020. In the past year (Q4 2022-Q4 2023), the office sector has experienced the largest decline in its ODCE allocation, decreasing by nearly 370 bps. The multifamily sector has declined in its ODCE exposure by a lesser amount of nearly 150 bps year-over-year. Alternatively, industrial and "other" have experienced growth over the past year, increasing by 330 bps and 120 bps, respectively. As of Q4 2023, the "other" category includes 2.8% self-storage, 1.3% healthcare, 0.6% land, 0.2% hotel, and 2.2% in other smaller sectors. The retail sector has trended upwards over the past year, experiencing modest growth of 76 bps since December 2022.

[1] Source: NCREIF.