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MEMORANDUM

TO: Members of the Investment Committee, CalPERS
FROM: Meketa Investment Group
DATE: March 17, 2025
RE: Semi-Annual Real Estate Performance Review as of December 31, 2024

In our role as the Board Real Estate Consultant, Meketa Investment Group ("Meketa") conducted a 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 December 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 71.6%. 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-year time period, and underperformed the benchmark for the three-, five-, and ten-year time periods. 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 (35.4% versus the benchmark of 26.9%). When property values are rising, this accelerates returns. When values decline, this detracts from performance. Measured by the 2.3x 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 September 30, 2024, and Real Assets Quarterly Performance Report, Partnership Financial Statements as of September 30, 2024.
[2] Per Wilshire's CalPERS Real Assets Performance Analysis Review for the period ended December 31, 2024 reported with a 1-quarter lag, so effectively as of September 30, 2024.

Net Returns December 31, 2024	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
Real Estate Returns	-6.3	-2.0	1.9	4.9
Real Estate Policy Benchmark[1]	-7.9	-1.0	2.0	5.1
Over (under) Performance	1.6	-1.0	-0.1	-0.2

Prior to 2022, institutional real estate benefitted from more than a decade of low interest rates and economic growth tailwinds. However, since early 2022, lower economic growth and higher interest rates have caused a re-pricing of the entire real estate sector, and we now have seen eight quarters of depreciation in CalPERS' private real estate benchmark. Industry participants believe that prices have reached an inflection point. Indeed, the benchmark has reported a positive return for the fourth quarter of 2024, inclusive of a small positive appreciation return. Nonetheless, Meketa continues to expect some near-term volatility in valuations, particularly if rates rise further in response to pervasive inflation.

Performance Attribution

While the portfolio generated reasonable absolute returns over the last decade, rising interest rates and COVID market dislocations created a very challenging return environment since 2022. The one-year return, albeit negative, exceeded the benchmark by 160 basis points. The three-, five-, and ten-year returns trailed the benchmark by 100, 10, and 20 basis points, respectively, largely as a result of somewhat less robust appreciation across property types, a higher retail allocation than the benchmark, and the office portfolio. It should be noted that while returns for CalPERS' office portfolio trail the benchmark for all time periods presented, CalPERS' office allocation is below that of the benchmark, which is beneficial to overall returns. Overall, 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 6.3% net return, consisting of 3.8% current income and negative appreciation of 10.1%. While the total net return exceeded the benchmark by 160 basis points, led by outperformance of the core portfolio, the data center sector was the only sector to post a positive one-year total return. Within the portfolio, data center, industrial, multifamily, 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 6.6% of the core portfolio, generated a one-year return of 1.6%. 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 9.9% of the core portfolio, and which generated a negative 19.7% one-year return, in addition to negative returns for the 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 sectors generated negative returns during the one-year period. CalPERS' industrial portfolio, representing 34.0% of the core portfolio, posted returns for the one-year time period of negative 3.4%. CalPERS' multifamily portfolio, representing 26.6% of the core portfolio, posted returns for the one-year time period of negative 7.3%. 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 stronger, 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 9.9% of the core portfolio, posted a total return of negative 6.6% for the one-year time period. Since inception, these investments have produced a 5.6% 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 0.4% 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 87.4% of the Real Estate Portfolio, produced longer-term returns of 2.5% for the five-year period, and exceeded the Real Estate Policy benchmark returns by 50 basis points. Strong ten-year returns of 6.6% handily exceeded the 5.1% 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 December 31, 2024[1]	**NAV ($B)**	**1 Year (%)**	**3 Year (%)**	**5 Year (%)**	**10 Year (%)**
Core	44.2	-6.3	-1.4	2.5	6.6
Value Add	4.0	-10.4	-7.3	-1.5	1.9
Opportunistic	1.1	-14.3	-7.0	-4.3	-0.7
Real Estate Policy Benchmark	--	-7.9	-1.0	2.0	5.1

[1] Private Investment data are one quarter lagged, so effectively as of September 30, 2024.

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 12/31/24 Exposure[1]
Risk Classification	**(%)**	**(%)[1]**
Core	75-100	87.4
Non-Core	0-25	12.6
Geographic Region	**(%)**	**(%)[2]**
United States	75-100	93.3
International Developed	0-25	4.1
International Emerging	0-15	2.6
International Frontier	0-5	0.0
Manager Exposure[3]	**(%)**	**(%)**
Largest Partner Relationship	20 max	13.6
Investments with No External Manager	20 max	0.0
Leverage[4]		
Loan to Value	50% max	35.4%
Debt Service Coverage Ratio	1.5x min	2.3x

Implementation

The Real Estate Portfolio had a market value of $50.1 billion at the end of the current reporting period, representing 71.6% of the Real Assets program and 9.6% 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 Total Fund size grows and invest within the strategic ranges based on market conditions and alternative investments

[1] Real Assets Quarterly Performance Report as of September 30, 2024 and Real Assets September 30, 2024 Characteristics Report (PDF), based on asset-level risk.
[2] Real Assets Quarterly Performance Report as of September 30, 2024 and Real Assets September 30, 2024 Characteristics Report (PDF), based on asset-level geography.
[3] CalPERS Real Assets Portfolio Allocation Report (Excel), Period Ending September 30, 2024: 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 ($84.6 billion).
[4] CalPERS Real Assets Portfolio Leverage Report (pdf), Quarter Ending September 30, 2024.

available to the Total Fund. The Fund also uses closed end commingled funds to generate higher returns and to access differentiated strategies and management teams.

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."

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.

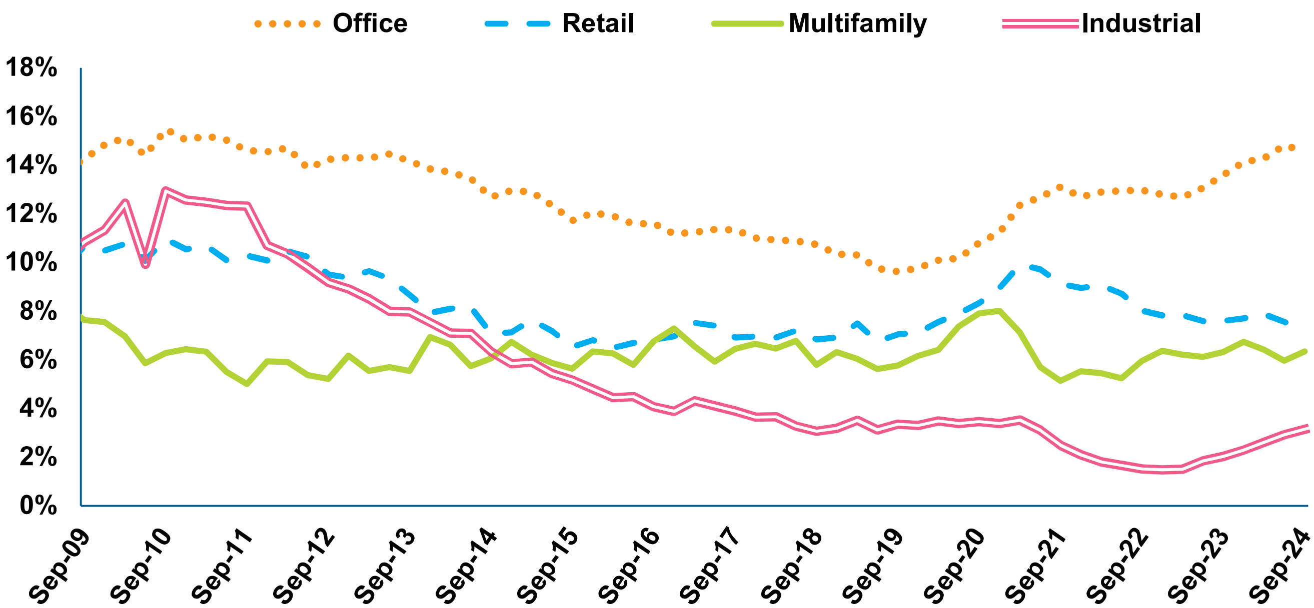
Please do not hesitate to contact us if you have questions or require additional information.

CF/KR/SPM/jls

Attachment

Real Estate Fundamentals

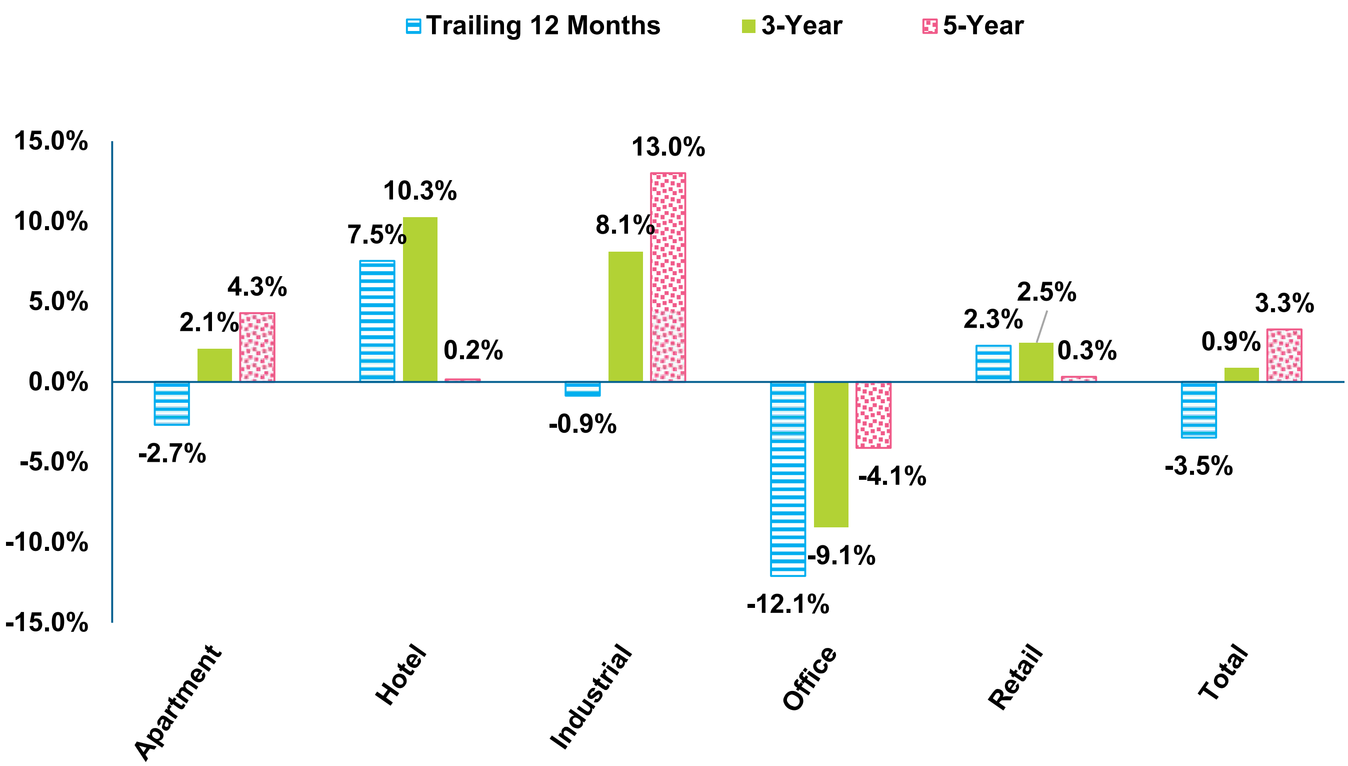
Vacancy by Property Type[1]



In the third quarter of 2024, the aggregate vacancy rate across all property types increased to 6.27%, the highest since June 2021, primarily driven by the continued increase in vacancy rates within the office sector since the onset of COVID. Office vacancies slightly declined by 24 basis points during the third quarter of 2024 but have seen a meaningful overall increase year-over-year ("YoY") of nearly 100 basis points since September 2023. Office vacancies remain at their highest point since early 2012. Industrial vacancies also continued to trend upwards during Q3 2024 by 22 basis points as the sector normalizes from peak levels in 2022 and 2023, while also experiencing the impact of oversupply issues in major MSAs. Since September 2023, industrial vacancies have increased over 110 basis points, a YoY increase exceeding that of office. Although the multifamily sector has similarly been affected by oversupply issues, vacancies have remained relatively stagnant year-over-year, although experiencing a 38 basis points uptick in Q3 2024 to a 6.3% vacancy rate. Retail experienced declining vacancies during the third quarter, as strong fundamentals continue to provide tailwinds to the sector, reaching an overall vacancy rate of 7.22% in Q3 2024, down 34 basis points from Q2 2024. As of Q3 2024, retail is the sole property type to have experienced an overall decline in vacancies since Q3 2023.

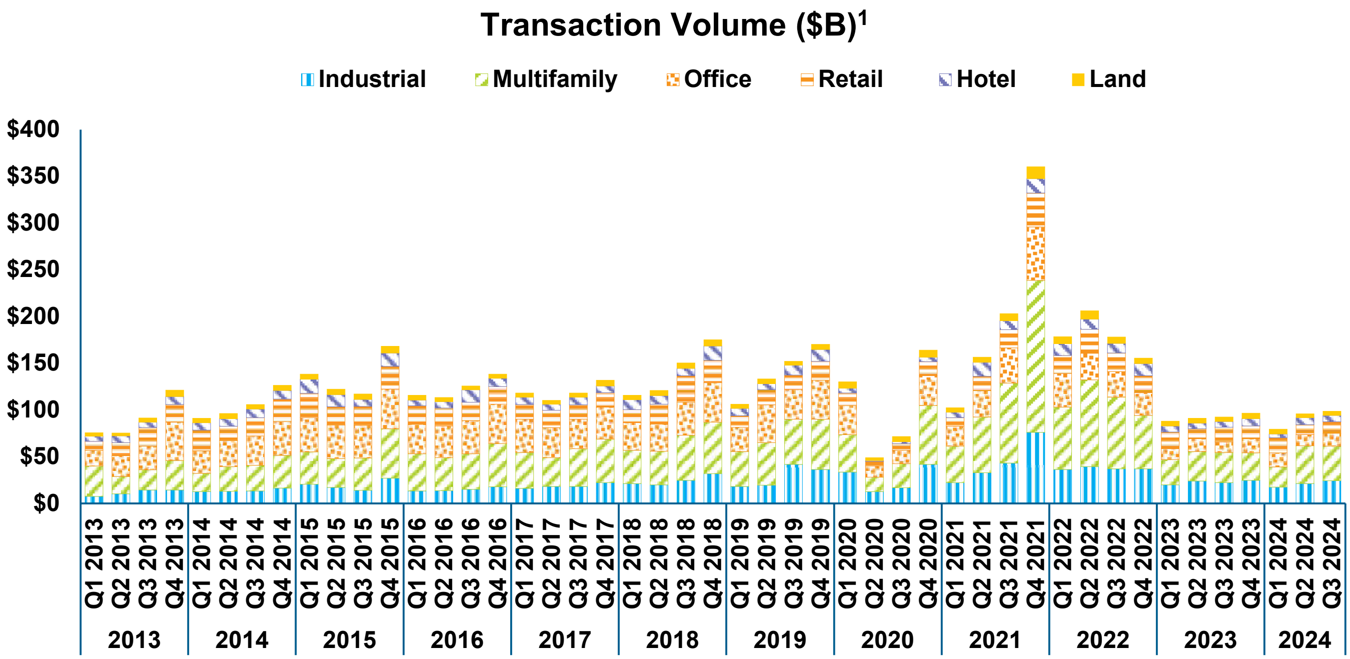
[1] Source: NCREIF.

NPI Returns by Property Type[1]



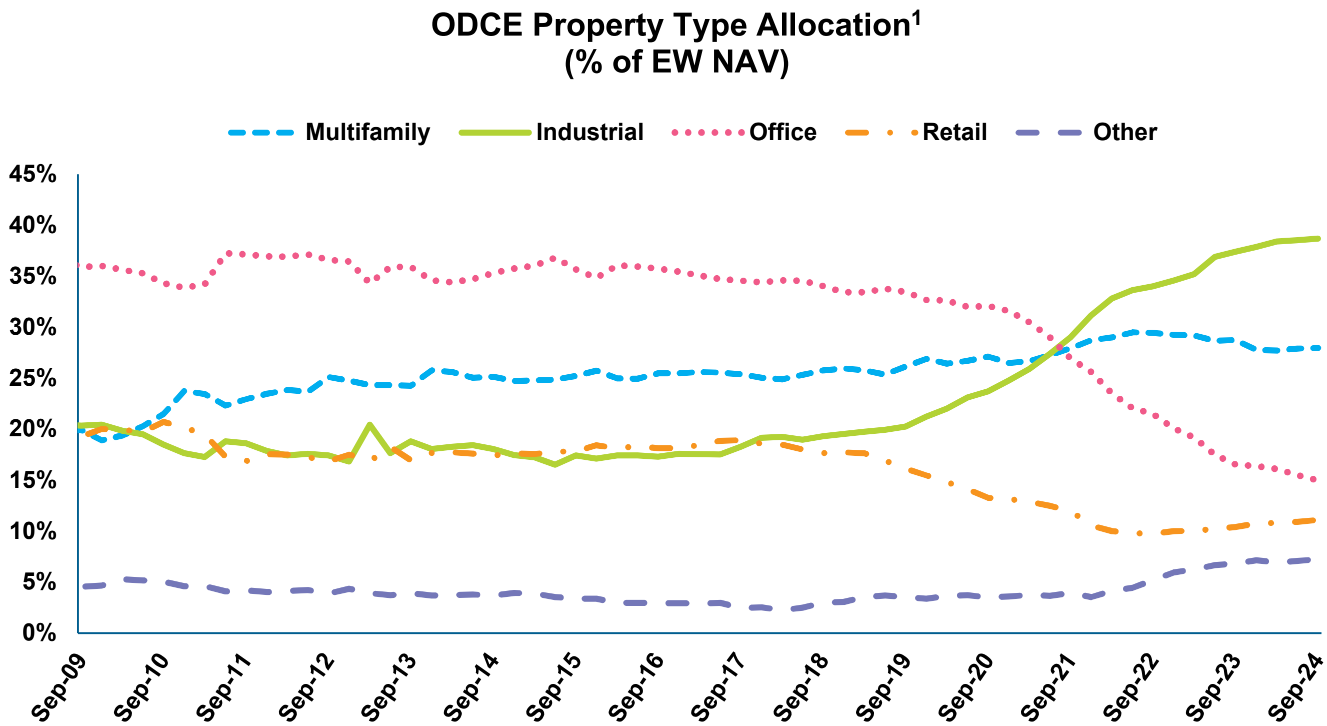
As of Q3 2024, the NCREIF Property Index ("NPI") generated a -3.5% trailing 12-month return, largely attributed to the outsized underperformance in the office sector, which posted a -12.1% return over the same time period. Office is the only sector with negative property-level returns across all three presented time periods. Notably, the hotel and retail sectors maintained positive returns across the trailing 12-month, 3-year, and 5-year horizons, as both property types have exhibited significant rebounds post-COVID as consumers return to travel and storefronts. Over the longer-term, the industrial sector is a pronounced outperformer, having generated a 13.0% return over the last five years, as of Q3 2024, with multifamily trailing in second place at just 4.3%.

[1] Source: NCREIF.



Private real estate transaction volume for properties valued over $2.5 million was $98.3 billion in the third quarter of 2024, representing a slight increase of nearly $3 billion from the second quarter and the highest quarterly transaction volume since the fourth quarter of 2022. The overall uptick in transaction volume, albeit nominal, was primarily driven by rises in industrial, retail, and office activity, increasing by $2.9 billion, $1.8 billion, and $1.7 billion, respectively, during the third quarter. Alternatively, multifamily transaction volumes slowed in Q3 2024 by $3.3 billion, after a meaningful increase in the second quarter by $19.0 billion. Accordingly, despite a slight decline in the third quarter, the multifamily sector retains the highest transaction volume at $37.1 billion, exceeding industrial transaction volume, the second highest total, by $13.0 billion. Such a significant margin illustrates the continued confidence in the long-term fundamentals of the multifamily sector despite short-term oversupply issues. Hotel transaction volume also declined marginally by $700 million during the third quarter.

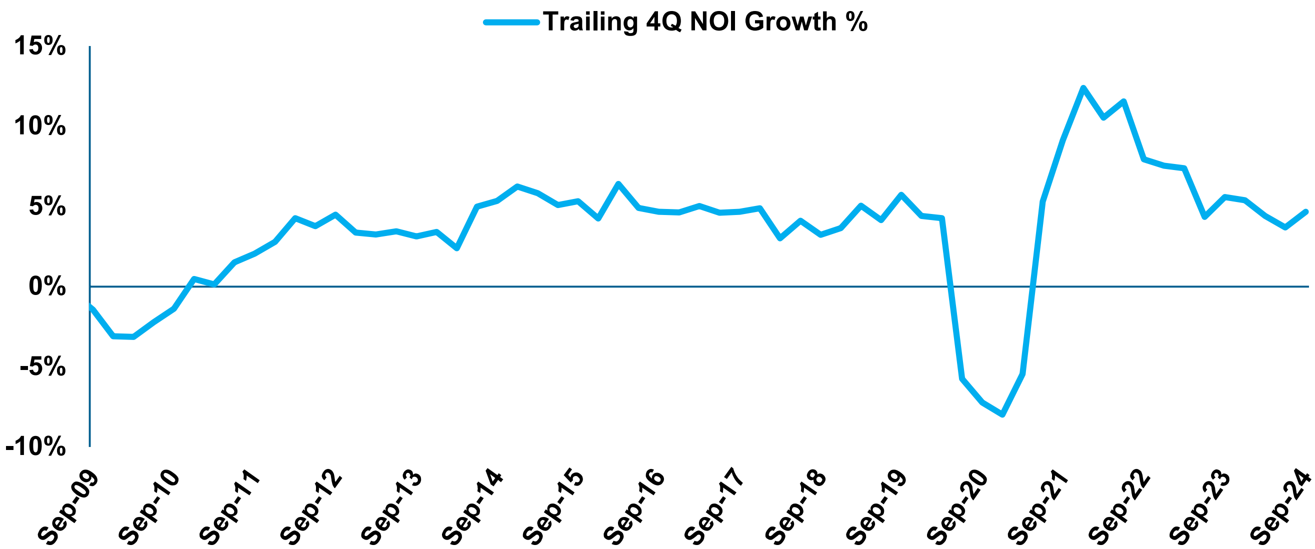
[1] Source: PREA.



The NFI-ODCE Equal Weight Index currently comprises 28% multifamily, 39% industrial, 15% office, 11% retail, and 7% in other property types, based on its net asset value ("NAV") as of Q3 2024. The heavy weight towards industrial results from a trend of consistent growth within the sector over the past five years, combined with a steady decline in office exposure which was heightened after the onset of COVID in March 2020. During the third quarter, the office sector was the only property type to experience a decrease in its ODCE allocation, declining by 54 basis points from the second quarter. Further, in the past year (Q3 2023-Q3 2024), the office sector has experienced the largest decline, decreasing its exposure by nearly 160 basis points. The multifamily sector has also declined in its ODCE exposure by a lesser amount of 79 basis points year-over-year. Alternatively, industrial and retail have experienced growth over the past year, increasing by approximately 130 basis points and 70 basis points, respectively. The "other" category has also seen a meaningful uptick over the past few years, increasing its allocation by over 40 basis points year-over-year. As of Q3 2024, the "other" category includes 3.0% self-storage, 1.3% healthcare, 0.6% land, 0.2% hotel, 0.2% senior living, and 2.0% in other smaller sectors.

[1] Source: NCREIF.

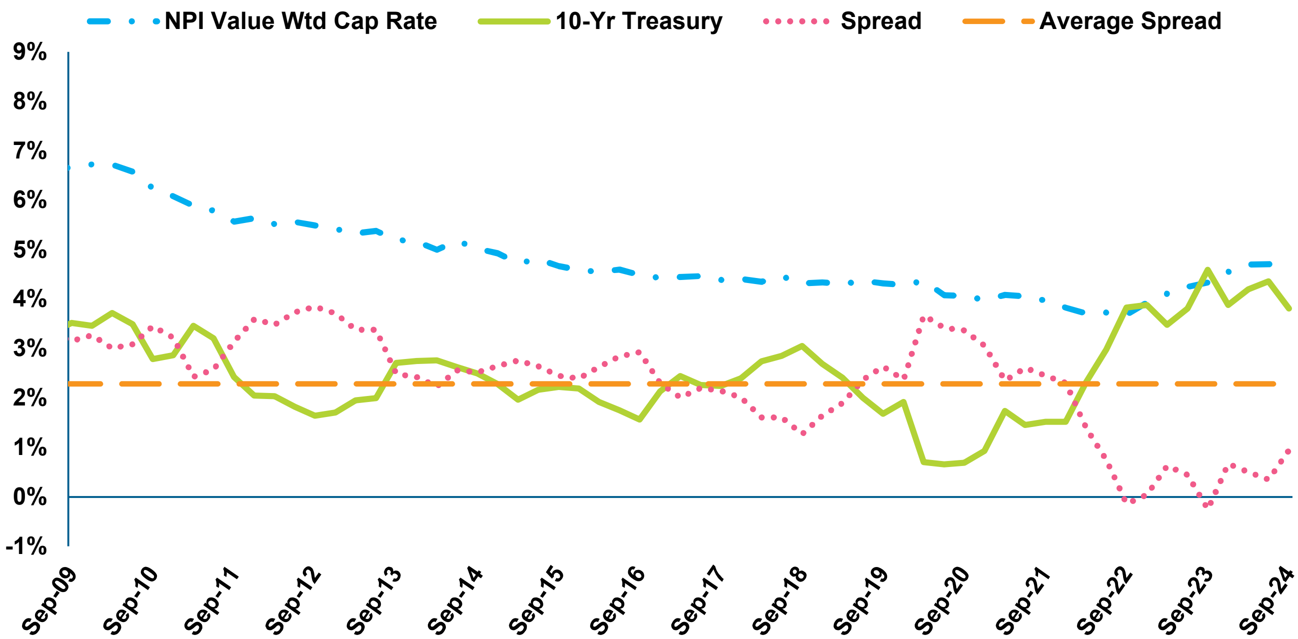
NOI Growth[1]



The index's trailing twelve-month NOI growth rate accelerated in Q3 2024 to 4.7%, as compared to 3.6% in Q2 2024, representing an increase of more than 100 basis points over the quarter and the first quarterly increase since a year ago in Q3 2023. Office constitutes the sole sector to experience deceleration over the quarter (-344 basis points), resulting in a trailing 12-month NOI growth rate of -4.3% as of September 30, 2024, the sector's lowest rate since 2011. The three other main property types all experienced acceleration in the third quarter, including significant increases in industrial and retail, which had trailing 4Q NOI growth rates accelerate by 459 basis points and 244 basis points, respectively, during the quarter. Multifamily's trailing 12-month NOI growth rate also accelerated by 70 basis points in the third quarter. Industrial still comfortably maintains the highest trailing 4Q NOI growth rate across all property types by a significant margin of over 800 basis points as of Q3 2024, as rent growth remains well above the long-term average for the sector, despite the impact of recent interest rate-driven corrections.

[1] Source: NCREIF.

Real Estate Capital Markets
Cap Rates vs. 10-Year Treasury[1]



The NPI Value Weighted Cap Rate increased marginally by five basis points from 4.71% to 4.76% over the third quarter, representing the eighth consecutive increase since September 2022. The 10-year Treasury yield notably decreased by 55 basis points in Q3 2024 to approximately 3.8%, resulting in a positive spread of 95 basis points between cap rates and treasury yields, although remaining tight and well-below the historical average spread of 230 basis points over the last 24 years (September 2000 – September 2024).

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

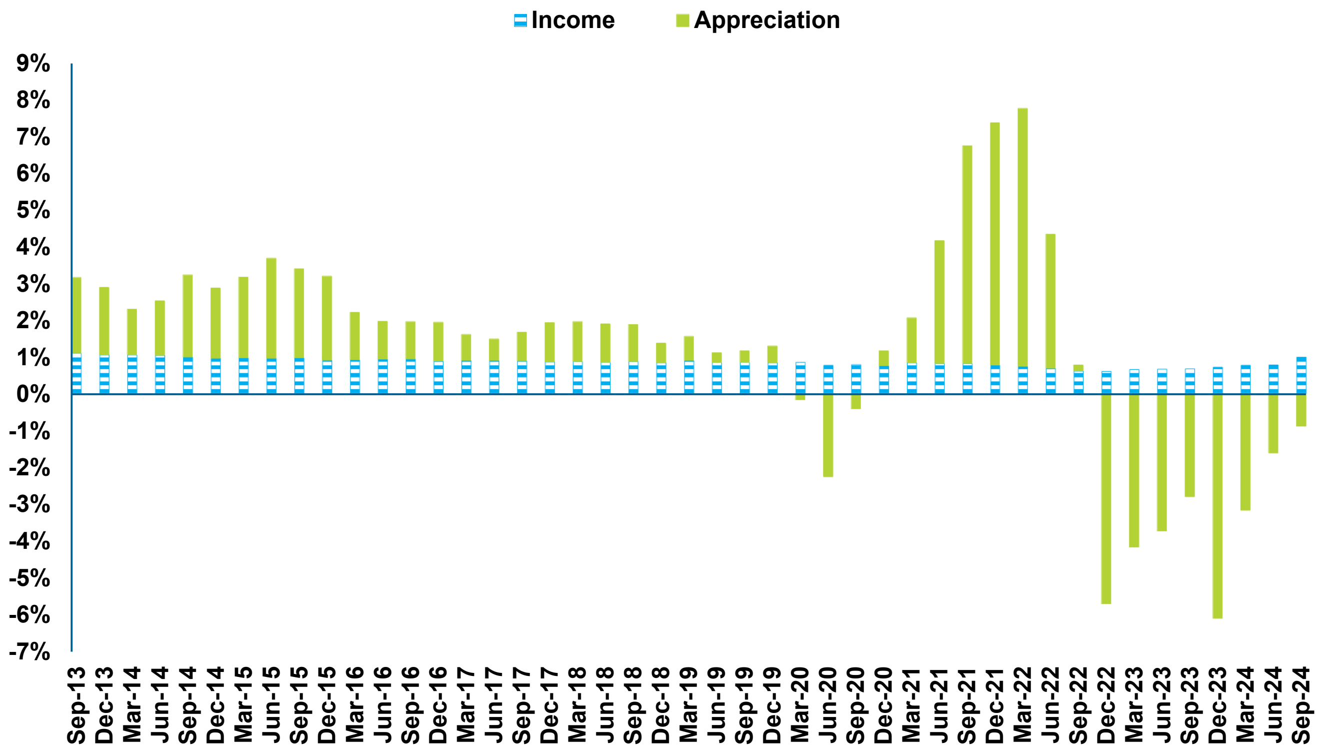
Trailing Period Returns[1]

As of September 30, 2024	Quarter	1 Year	3 Years	5 Years	10 Years
NFI-ODCE (Equal Weight, net)	-0.1	-8.4	-1.1	2.3	5.5
NFI-ODCE (Value Weight, net)	0.0	-8.0	-1.0	2.0	5.2
NCREIF Property Index	0.8	-3.5	0.9	3.3	5.9
NAREIT Equity REIT Index	16.8	34.8	3.5	5.1	8.0

The NFI-ODCE Equal Weight Index generated negative quarterly returns in Q3 2024, as well as over the 1-year and 3-year time horizons. The NFI-ODCE Value Weight Index return was positive in Q3 2024 for the first time since Q3 2022, while the NFI-ODCE EW Q3 2024 remained slightly negative, although continuing to trend upwards. Across both indices, the 5-year and 10-year horizons remained positive. Notably, the NAREIT Equity REIT Index meaningfully outperformed private real estate indices during the third quarter, as well as all illustrated time horizons, likely driven by the public markets' positive reaction to the Federal Reserve's interest rate cut in September.

[1] Source: NCREIF.

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



In Q3 2024, the NFI-ODCE Equal Weight Index reflected a net return of -0.1%, representing its eighth consecutive negative return, but another meaningful increase of 75 basis points from the prior quarter and the index's strongest performance since Q3 2022. This result was driven by a -0.9% appreciation return for the quarter, which was slightly offset by a 1.0% income return. Upward adjustments to the discount rate, used in valuations to reflect higher interest rates and the cost of debt financing, continue to negatively impact the appreciation component of returns, although to a lesser degree at present. Over the last eight quarters, the NFI-ODCE Equal Weight Index has reported a cumulative negative appreciation return of -13.4%. The recent sequence of negative appreciation is slightly offset by the outsized performance of the index in the prior eight quarters from December 2020 through September 2022, reporting a 14.8% appreciation return over the eight-quarter period and therefore constituting positive performance overall for groups who may have invested in September 2020.

[1] Source: NCREIF.

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