Real Estate Strategy Semi-Annual Report (Open Session)

Prepared for California State Teachers' Retirement System

As of Q3 2023

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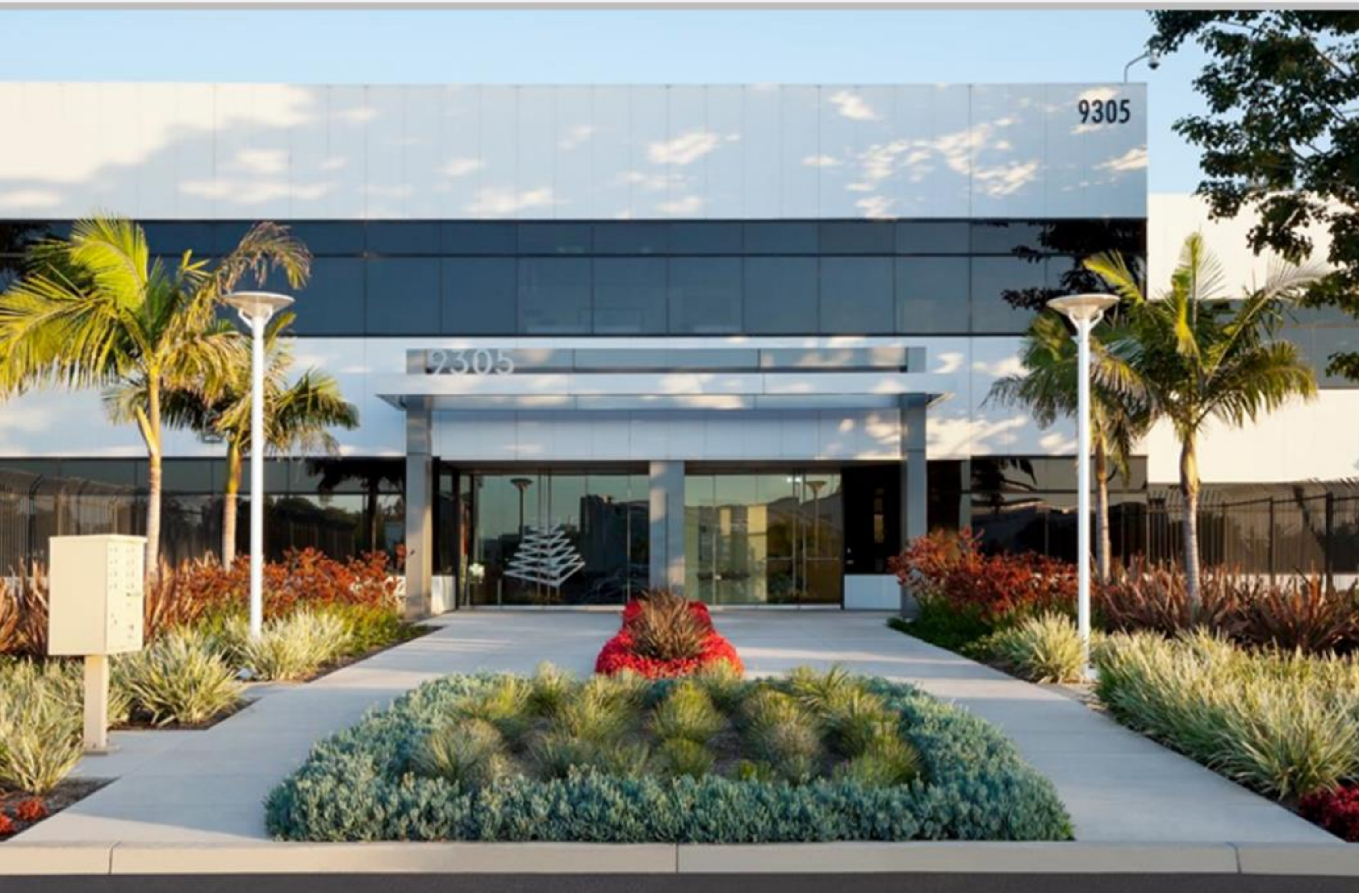
MARCH 6, 2024



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CalSTRS Q3 2023 Open Session Report

Goals and Objectives

The objective of this semi-annual report is to provide the Committee with an evaluation of the real estate portfolio's alignment with CalSTRS' established goals and policies and the investment opportunities presented by property and capital markets.

To accomplish the above objective, we reviewed the CalSTRS portfolio, policies and limitations, previous recommendations and activities, as well as current and forecasted economic, capital market, and property market conditions.

Current and long-term portfolio goals and objectives that the semi-annual report evaluates include:

- A real estate allocation target of 15% +/-3%;
- Target net return that exceeds the NCREIF NFI-ODCE Index;
- Provide stable income, a hedge against inflation, and improved diversification to the overall CalSTRS Investment Portfolio;
- Allocation based on property stage – stable and value creation (lease-up/reposition and construction) – to maintain an appropriate risk profile; and
- An appropriate level of leverage, with a loan-to-value (LTV) limit of 50% for the controlled portfolio and 65% for the non-controlled portfolio.

Performance

As of Q3 2023

- The real estate portfolio has outperformed its target return benchmark and inflation over the last decade. The portfolio has generated a 10-year net TWR of 8.6%, outperforming the ODCE benchmark return of 7.2% by ~140 basis points. The portfolio has also outperformed the ODCE benchmark by approximately 230 basis points over the last five years by achieving a 5-year net TWR of 7.0% vs the ODCE benchmark return of 4.7%.
- The portfolio has generated net TWRs of -9.7% and 7.8% over the 1- and 3-year time horizons. The portfolio outperformed the ODCE benchmark return of -12.9% and 6.2%, during the same period, by ~320 basis points and ~160 basis points, respectively. Excluding legacy investments, the portfolio has outperformed the benchmark every year over the ten-year period.

Portfolio Performance[1]

Net Time Weighted Returns

	Including Legacy				*Excluding Legacy*			
	1 Yr	**3 Yr**	**5 Yr**	**10 Yr**	**1 Yr**	**3 Yr**	**5 Yr**	**10 Yr**
Core	-11.4%	7.0%	6.3%	8.5%	-11.4%	7.0%	6.3%	8.5%
Value Add	-12.1%	6.7%	6.5%	10.9%	-12.1%	6.7%	6.5%	11.1%
Opportunistic	-3.3%	11.0%	9.4%	8.2%	-3.3%	12.1%	11.3%	12.2%
Total	**-9.7%**	**7.8%**	**7.0%**	**8.6%**	**-9.8%**	**7.9%**	**7.2%**	**9.6%**
Target Return (ODCE)	**-12.9%**	**6.2%**	**4.7%**	**7.2%**	**-12.9%**	**6.2%**	**4.7%**	**7.2%**

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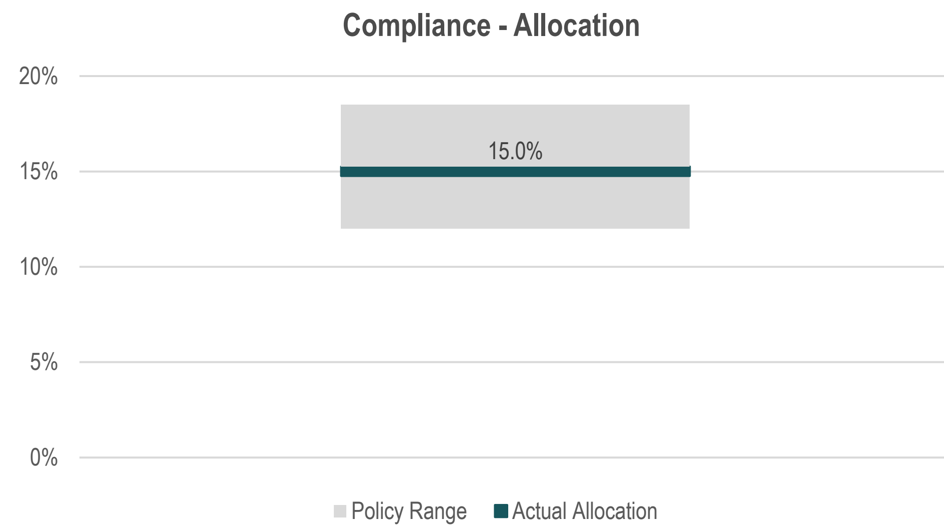
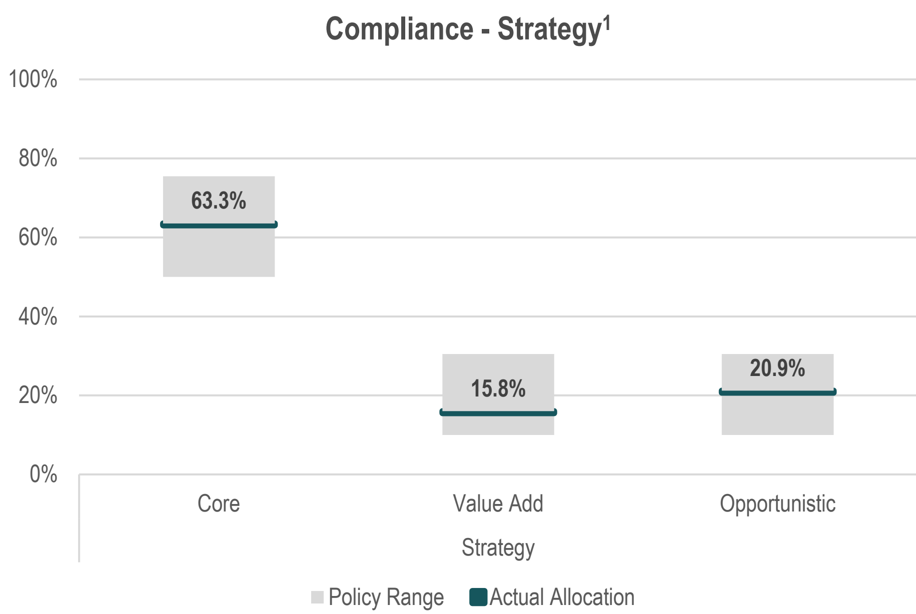
[1]The Core portfolio has a net target return benchmarked to the ODCE, while the Value Add and Opportunistic portfolios have net target returns of 50 basis points and 300 basis points over the ODCE, respectively.
Source: State Street - PrivateEdge, NCREIF, FRED

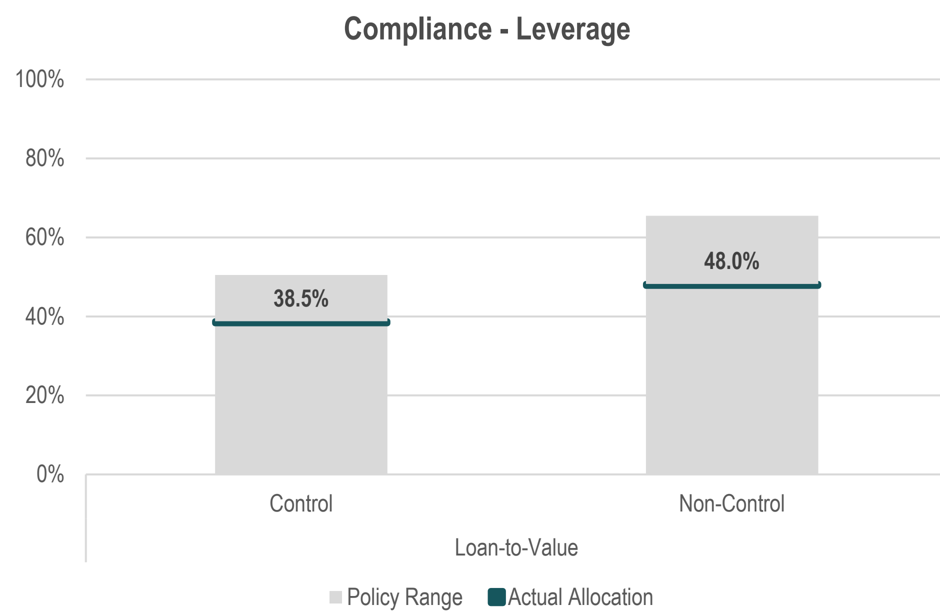
Funding Status and Compliance

As of Q3 2023

- The portfolio had a net asset value (NAV) of ~$49.1B as of Q3 2023, which is in line with the target allocation of 15%.
- The portfolio is compliant with the targeted allocation by investment strategy and is within the permitted leverage limits for the control and non-control[2] portfolios of 50% and 65%, respectively.







[1]Percentages do not account for the portion of Legacy assets. Public REITs included with Core.
[2]Control portfolios are those which CalSTRS maintains control over acquisitions, dispositions, and/or financing or has high liquidity in normal market conditions.
Source: State Street

Current Portfolio Summary

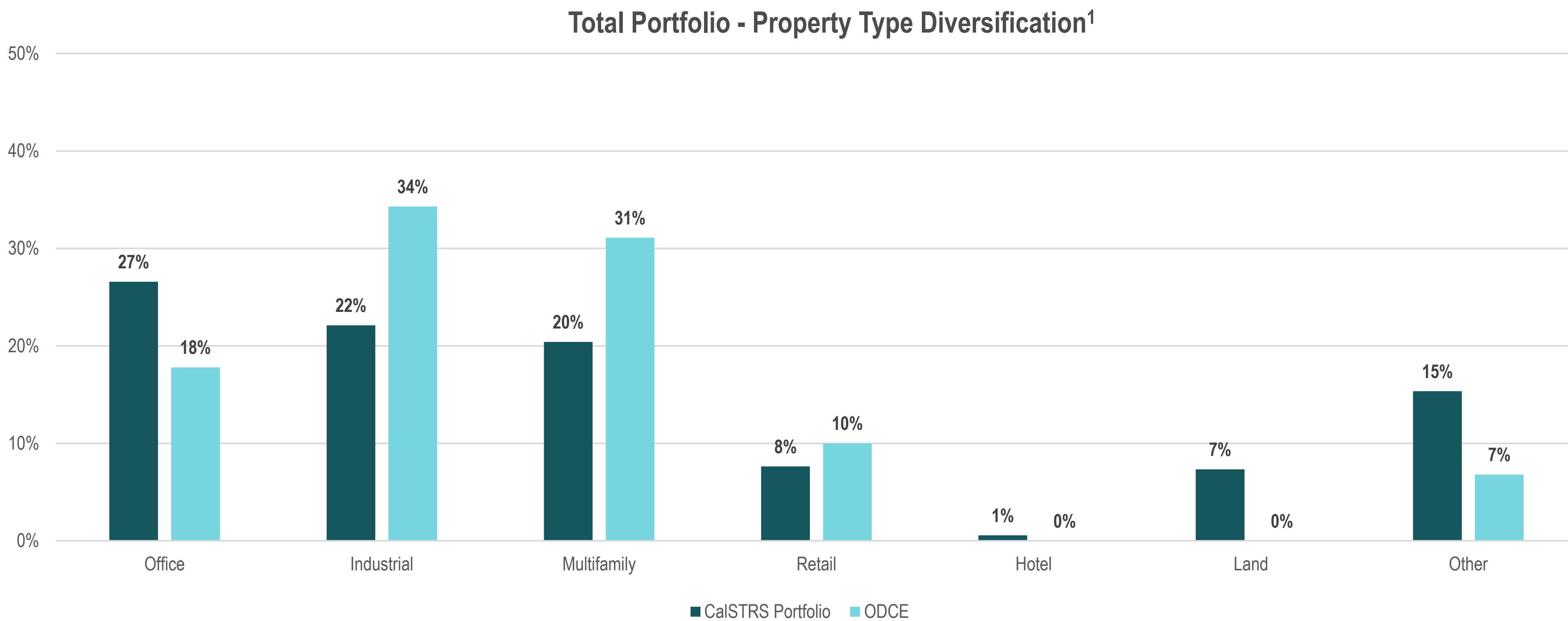
- The portfolio had a net asset value (NAV) of ~$49.1B as of Q3 2023, which is in line with the target allocation of 15%.
- Approximately 84% of the portfolio is invested in the United States.
- The portfolio continues to be underweight industrial and multifamily by 12% and 11%, respectively. The allocation to office properties (including life science properties) increased by 178 basis points over the past six months and remains 9% overweight relative to the benchmark. Excluding life science office properties, the weight to office is in line with the benchmark.
- Real estate debt was $33.2B as of Q3 2023, an increase of nearly $200M since Q1 2023. The LTV of the portfolio increased by 120 basis points from approximately 40% in Q1 2023 to approximately 41% in Q3 2023.
- The LTV of the controlled[1] portfolio increased approximately by 1% from 38% to 39% in Q3 2023, while the non-control LTV increased by 2% from 46% to 48%. Per the investment policy statement, the LTV is within the compliance limit of 50% and 65%, respectively.
- The allocation by risk profile is 63% core, 16% value-add, and 21% opportunistic, excluding Legacy investments (which comprise less than 1% of the NAV).

[1] Controlled investments are those which CalSTRS maintains discretion over acquisitions, dispositions, and financing, or has high liquidity in normal market conditions.

Portfolio Diversification

Property Type vs. ODCE

- The real estate portfolio remains overweight to office investments relative to the benchmark when including life science properties. Excluding life science properties, the office allocation is in line with the benchmark.
- The portfolio continues to be underweight industrial and multifamily by 12% and 11%, respectively.
- The portfolio has a 6% allocation to real estate debt investments, resulting in an overweight to the "Other" category.



Note: ODCE and CalSTRS' weights based on gross real estate value.

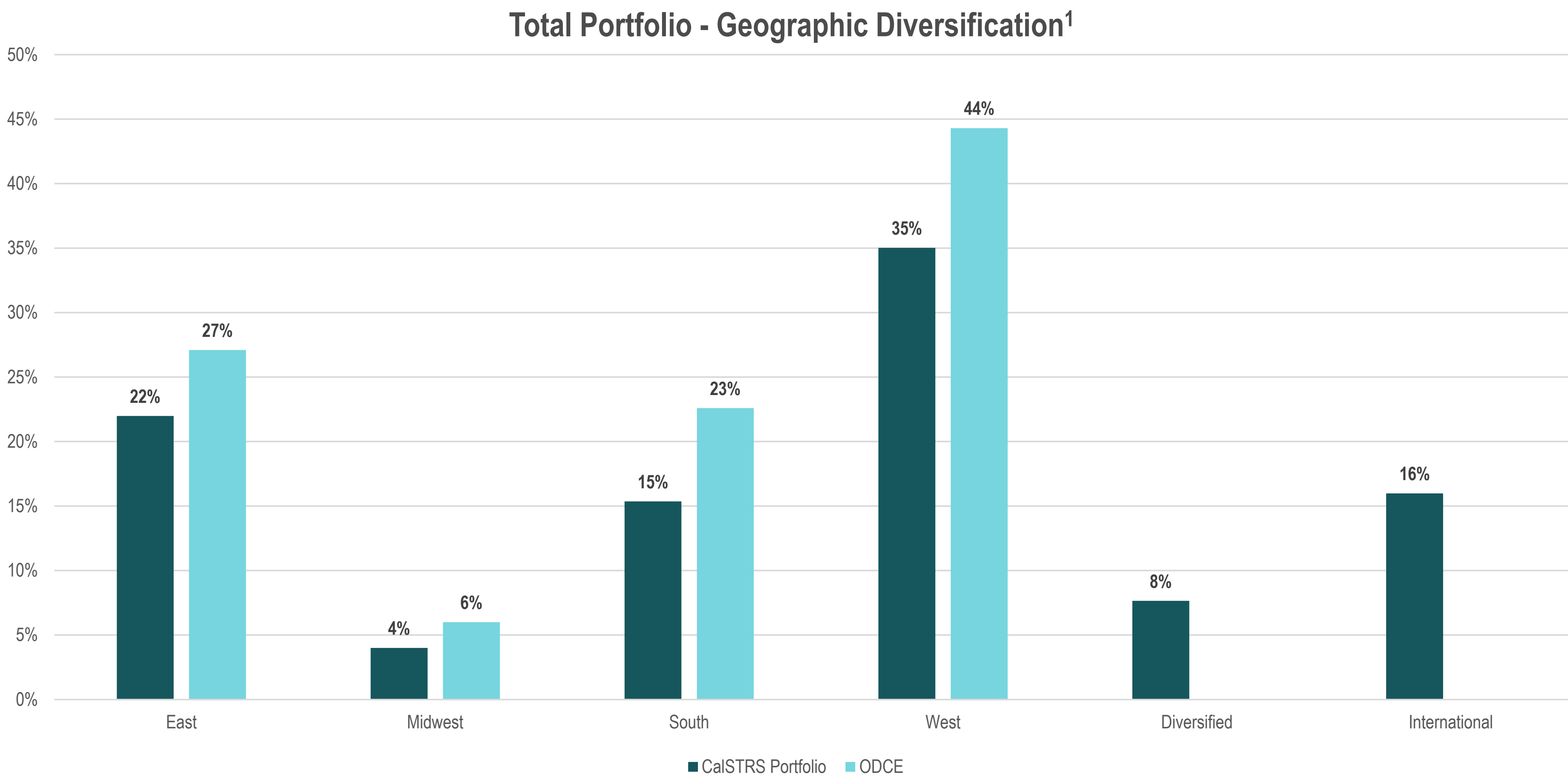
[1]"Other" property type category is made up of the following property types in descending order by percentage: Other, Mixed Use, Debt, Diversified, Manufactured, Senior Living, Healthcare, Hospitality, Various, Self-Storage, Infrastructure, Entertainment, Securities, REITs, and parking.

Source: State Street, CalSTRS

Portfolio Diversification

Geographic Allocation vs. ODCE

- Approximately 84% of the portfolio is invested in the United States. The benchmark has no international allocation.
- All geographic allocations, except International and Diversified, are within the +/-10% of the benchmark regional weights.

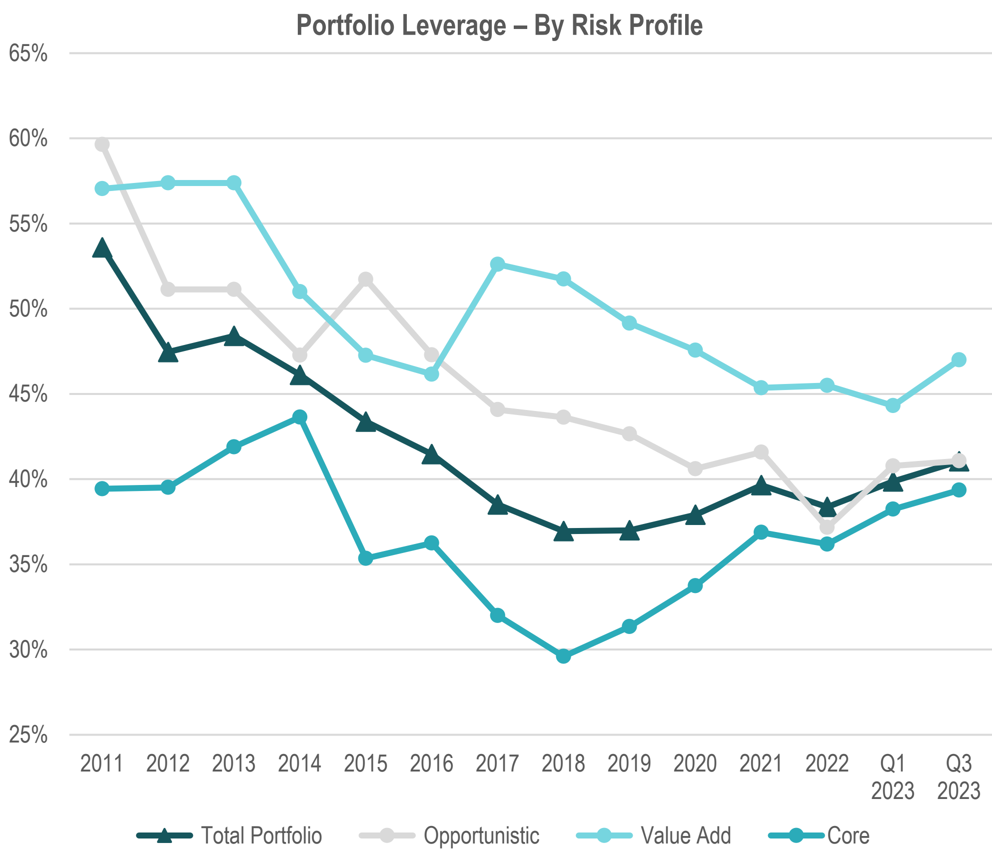


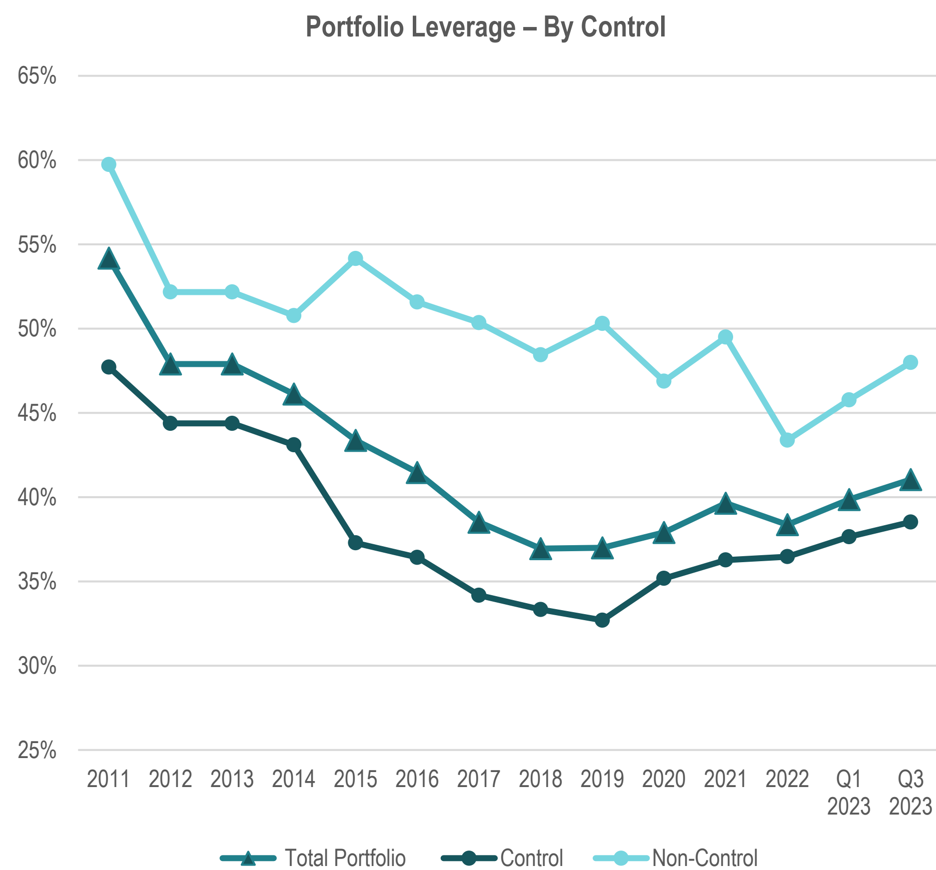
Note: ODCE and CalSTRS' weights based on gross real estate value.
[1] "Diversified" geographic category represents mostly U.S. diversified portfolio investments.
Source: State Street, CalSTRS

Total Portfolio Leverage

By Risk Profile and Control

- CalSTRS' real estate debt was $33.2B as of Q3 2023, an increase of nearly $200M since Q1 2023. The LTV of the portfolio increased by 120 basis points from ~40% in Q1 2023 to ~41% in Q3 2023.
- The LTV of the controlled[1] portfolio increased by ~1% from 38% to ~39% in Q3 2023, while the non-controlled LTV increased by 2% over the last six months from 46% to 48%.





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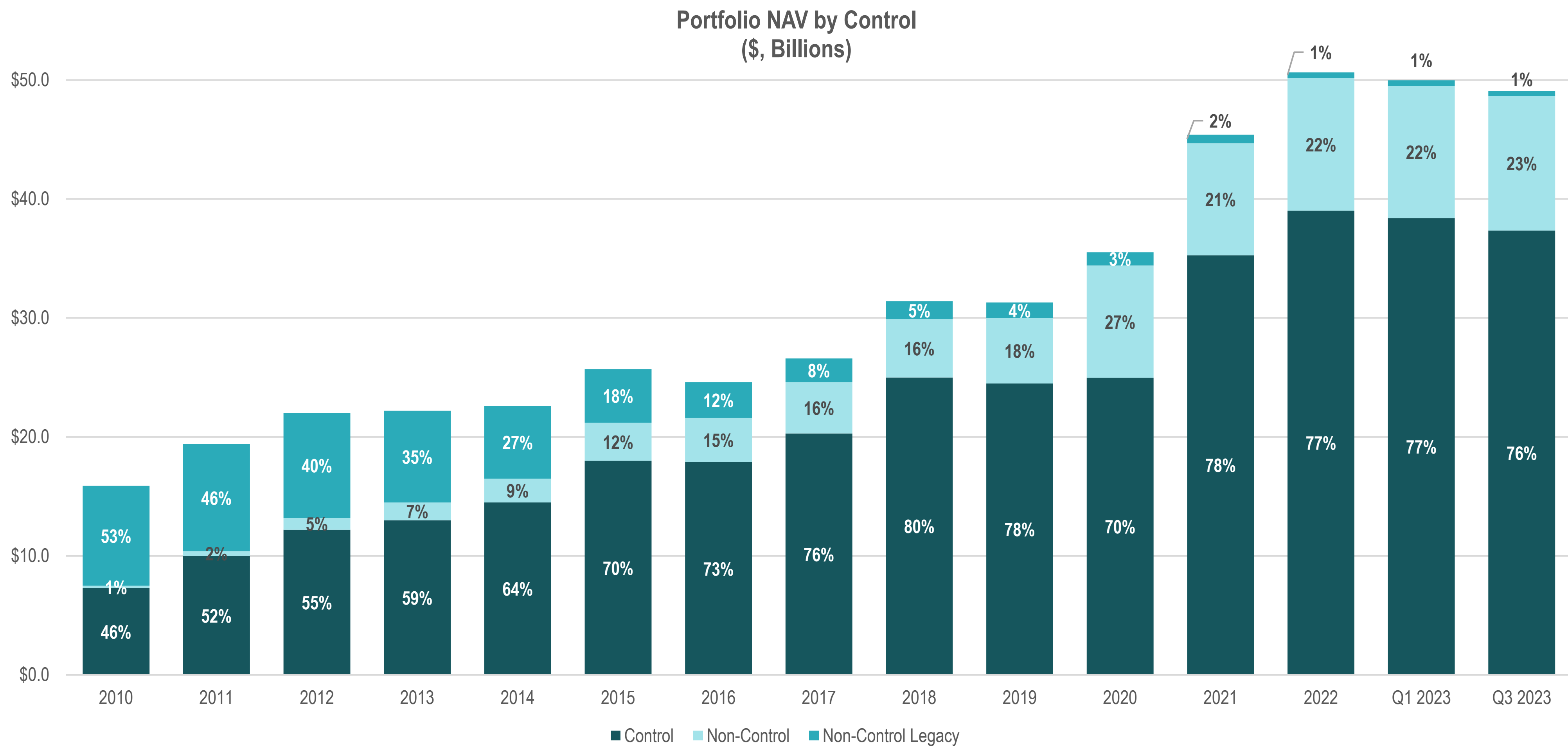
[1] Controlled investments are those which CalSTRS maintains discretion over acquisitions, dispositions, and financing, or has high liquidity in normal market conditions.
Source: State Street

Real Estate Portfolio Growth

Portfolio NAV by Control

- CalSTRS' real estate portfolio NAV has decreased by $900M in the past six months to $49.0B (as of Q3 2023). The controlled portfolio is 76% of the NAV as of Q3 2023.
- Legacy investments represent less than $0.5B of the NAV, or just under 1% of the portfolio.



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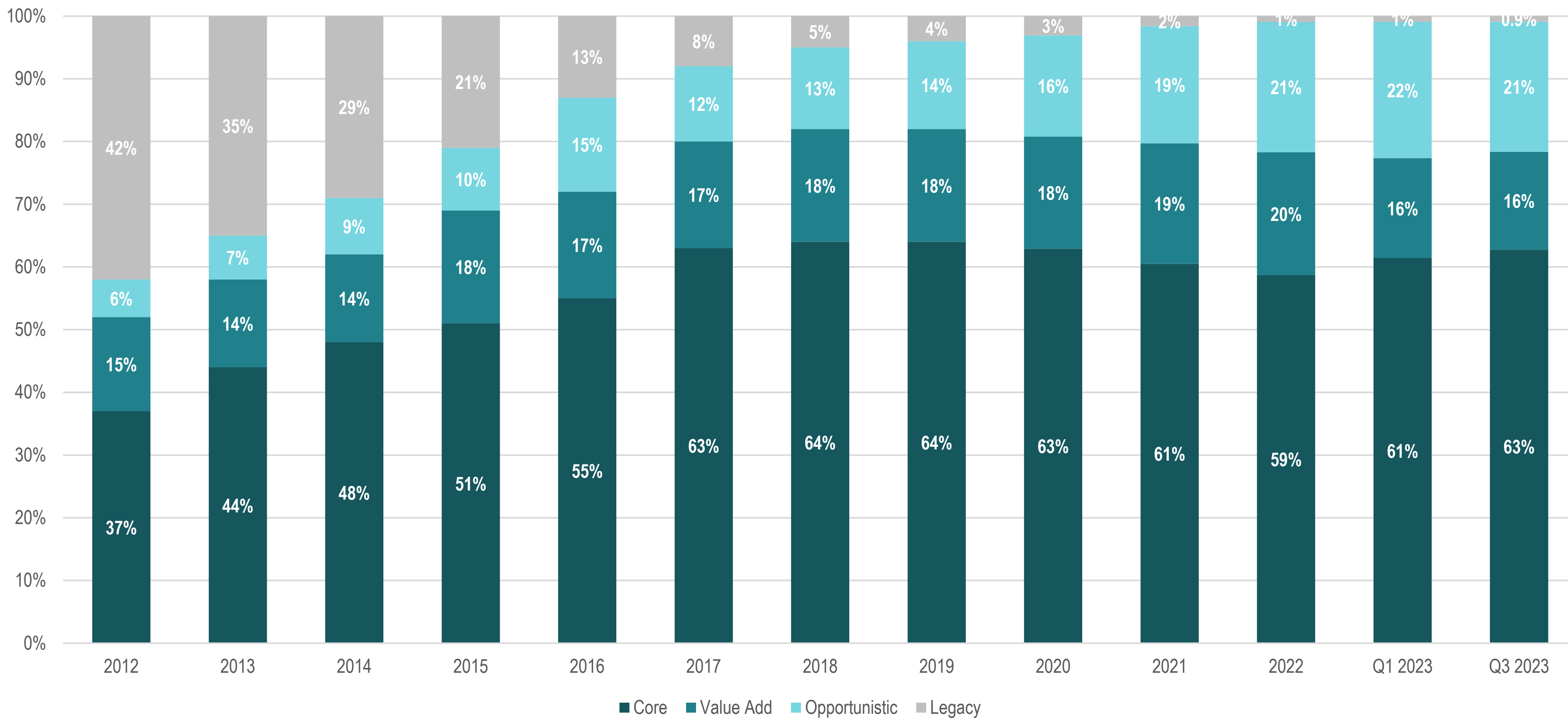
Weights based on percentage of CalSTRS' net asset value
Source: State Street

Portfolio Allocation

By Risk Profile

- Allocations to opportunistic investments have decreased by 1% over the last six months while core allocations have increased by 2%; value add investments have held steady.
- Legacy investment allocations have held steady around 1%.



Weights based on percentage of CalSTRS' net asset value. REITs included in Core
Source: CalSTRS, State Street

APPENDIX: KEY MARKET TRENDS

U.S. Economic Summary

As of Q4 2023

- The **US economy was resilient in 2023**, coming nowhere close to the recession that many predicted. Risks have moderated, and the consensus probability of a recession fell to 39% in Q4 as the economy weathered the Federal Reserve's aggressive interest rate hiking regime.
- Economic news in the fourth quarter of 2023 reflected strong growth, which has complicated the Fed's inflation fight:
  - **GDP growth surprised on the upside at 3.3% in Q4 and 2.5% in 2023,** exceeding 2022 growth. Growth was driven by increases in consumer spending on both goods and services (particularly housing services), private inventory investment (driven by manufacturing and retail trade), exports, government spending, and residential fixed investment. Decline in nonresidential fixed investment (equipment) and increases in imports partially offset growth.
  - **The US economy added 2.7M jobs in 2023**, exceeding growth in the years immediately preceding the pandemic. Employment growth is expected to slow in 2024 although January employment data were strong. Unemployment stood at a low 3.7% in December, reflective of a tight labor market.
  - **Headline CPI inflation cooled to 3.4% by YE 2023,** falling from 6.5% at the end of 2022. After remaining stubbornly high through 1H 2023, **core inflation moderated to 3.9%,** still outpacing headline CPI. TIPs-implied 5-year inflation rates have consistently hovered around 2.2% through 2H 2023.
  - After a rate hike in July, the **Federal Reserve held the funds rate steady** at 5.25-5.5% through its first meeting of 2024. The Fed has hinted at potential rate cuts beginning in mid-2024, contingent upon until inflation moving sustainably towards 2%.
  - The **10-Year UST yield ended 2023 at 3.88%**, moderating significantly in Q4 after briefly breaking 5% in mid-October. Yields rose above 4.1% in late January and are projected to remain in the 4-4.5% range for the next several years with periods of volatility likely.
  - **The stock market rallied in Q4** due to rising rate cut expectations, and the S&P 500 and Nasdaq Composite ended 2023 up 24.2% and 43.4%, respectively.
- The **economy will likely stay resilient** in the first half of 2024 and could continue to **outperform expectations** if consumers continue spending and the job market remains strong. A **steeper downturn** is also still possible with a government shutdown, further credit problems, higher oil prices, or an escalation of geopolitical conflict possible triggers.

Note: Inflation figures are seasonally adjusted.

U.S. Real Estate Summary

As of Q4 2023

- **Real estate fundamentals cooled** over the course of 2023 with further moderation likely in 2024 before a return to equilibrium in 2025 (except office which will likely remain troubled in the medium term).
  - **Multifamily** – Economic headwinds weighed on the sector in 2023. New supply (570K units) outpaced net absorption (370K units), sending vacancies to a 20-year high of 8.9%. Rent growth slowed and registered just 0.4% with modest contractions possible in the near term. An early recovery looks likely in 2024.
  - **Office** – Office net absorption totaled -50M in 2023, adding to nearly 60M SF of new supply delivered. Vacancy rates swelled to fresh highs, closing out the year at 15.3%. Rent growth stayed positive but modest at 0.7% with contractions expected to begin in 2024 and persist for several years.
  - **Retail** – Neighborhood center retail fundamentals were favorable in 2023, but demand is projected to cool. Net absorption slowed to 14M SF for the year, half of last year's total but still well ahead of new supply which totaled 5M SF. Vacancies fell to a cyclical low of 5.8%, and rent growth was strong at 4.2% YoY.
  - **Industrial** – Industrial performance ended the year strong, but absorption moderated sharply to 170M SF in 2023, approximately a third of the 530M SF of new supply delivered over the year. Vacancy increased to 5.7% in response, and rent growth cooled but remained robust at 6.4%.
  - **Niche** – Niche property types comprise a growing share of the expanded NCREIF Property Index (NPI+) at 12.1% of market value in Q4. Self-storage and life science are the largest niche property types and have recorded the highest returns over the mid- to long-term.
- **Private real estate returns were negative in Q4** for a fifth consecutive quarter as NFI-ODCE and NPI posted quarterly returns of -4.8% and -3.0%, respectively. Full year 2023 total returns were -12.0% for ODCE and -7.9% for NPI, the lowest returns since the GFC. Further negative appreciation is likely as appraisal values move closer to transaction values.
- **Real estate transaction volumes decreased 25% QoQ to $70B in Q4** with declines in most property types. Annual transaction volume totaled $350B in 2023, less than half of 2022's $740B and the lowest annual total since 2012.
- **Real estate debt will likely remain scarce and expensive** as banks maintain tight lending standards. Institutional dry powder fell 15% in 2023, reflective of the cautious mood among investors. CRE distress and loan delinquencies rose considerably over the year, adding downside risk to the market outlook.

Source: CoStar; MSCI; NCREIF

Property Markets Snapshot and Outlook

As of Q4 2023

Multifamily

- Vacancy increased over the last year and is expected to decline through 2026 but remain above the long-term average.
- Rent growth was close to zero over past year but is forecast to rebound through 2026.

Office

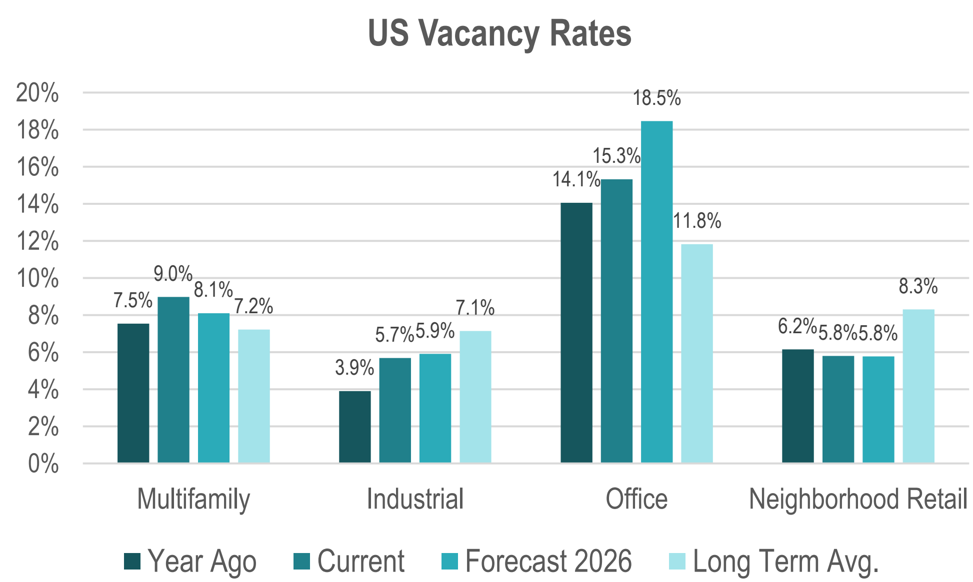
- Office vacancy climbed 120 basis points over the past year, reaching a record high. Further deterioration is predicted through 2026.
- Rent growth was slightly positive the past year but will turn negative the next three.

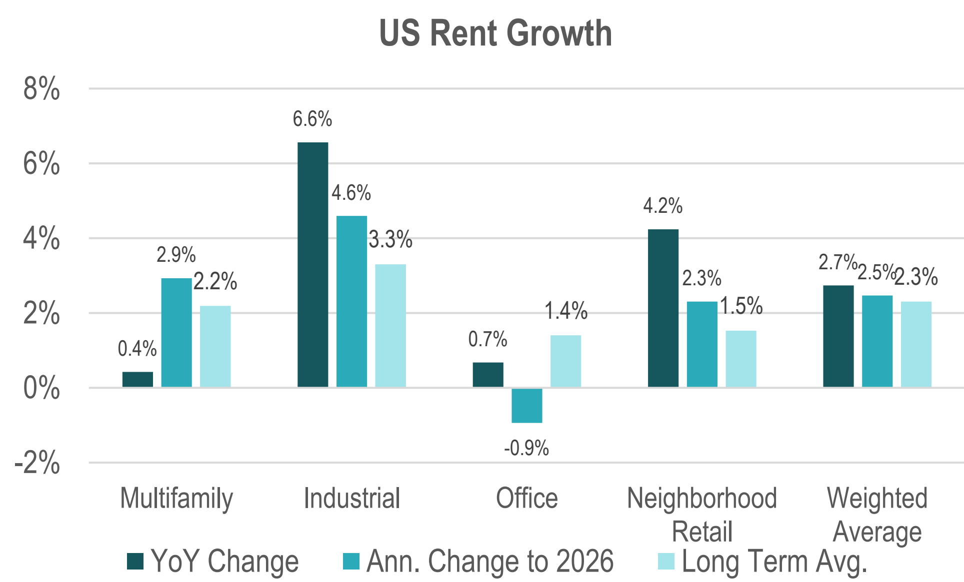
Retail

- Neighborhood retail vacancy was little changed over the past year. The current and forecast vacancy rate is below the long-term average.
- Rents rose by over 4% in 2023 but growth is expected to moderate through 2026.

Industrial

- Industrial vacancy rose over the past year but is well below the long-term average. Little change is expected over next three years.
- Rent growth led all property types over the past year and will do so through 2026.

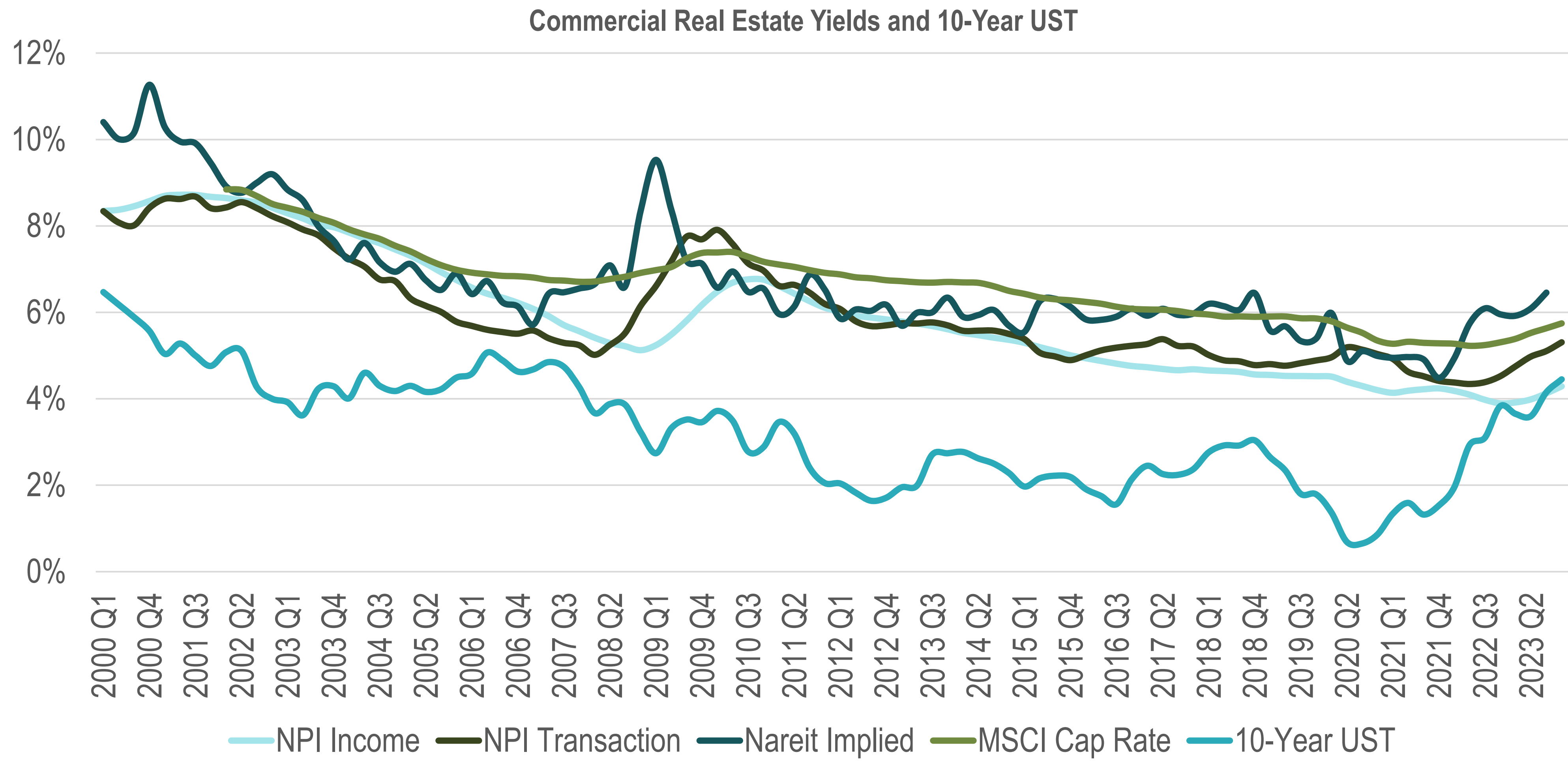




Source: CoStar, RFA

Real Estate Income Yields Rose Alongside the 10-Year UST in 2023

Transaction-based Yields Increased at a Faster Rate than Appraisal-based Yields



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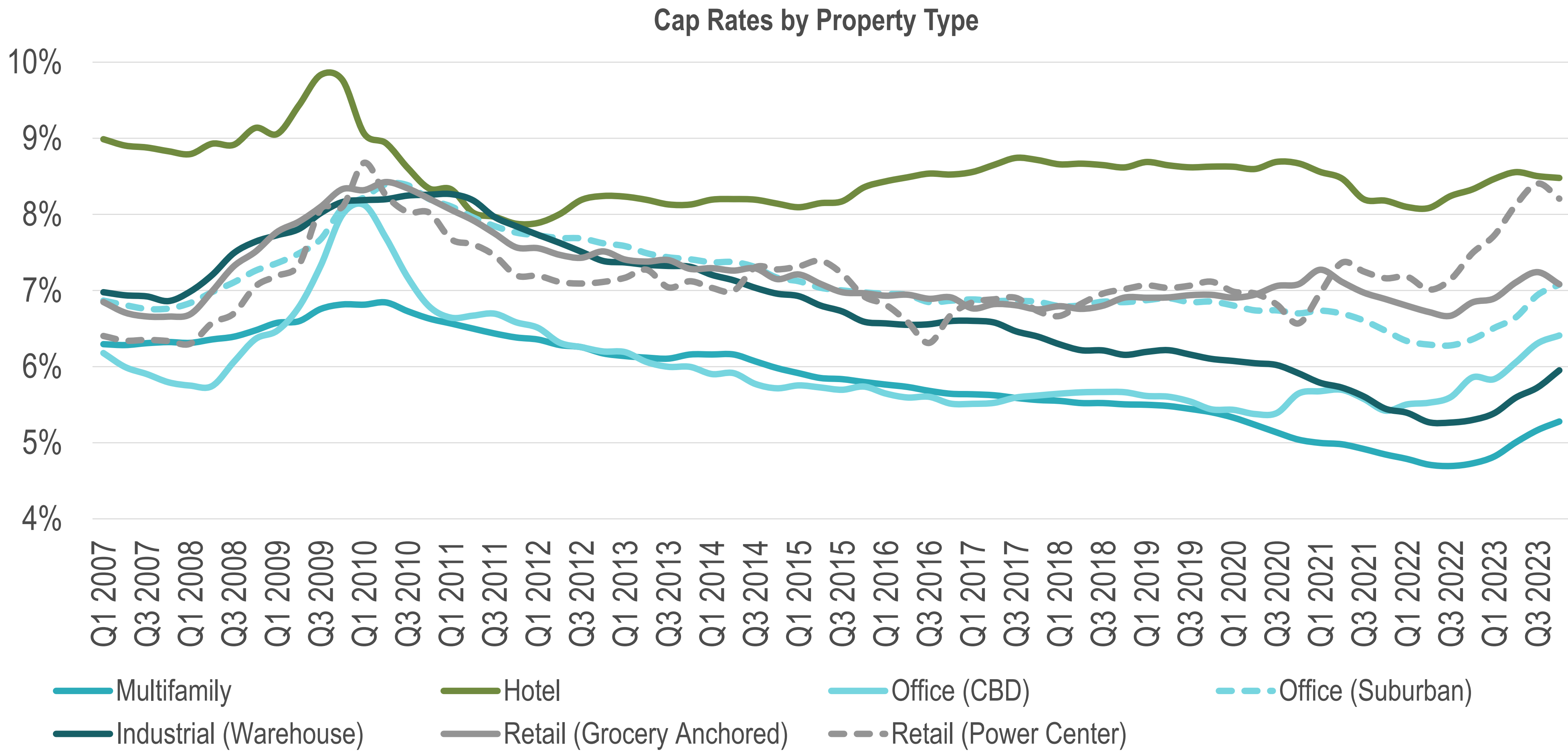
Note: Nareit implied cap rate data are only available through 2023 Q3.
Source: NCREIF; Nareit; MSCI; Federal Reserve Bank of St. Louis

Cap Rates Rose YoY Across Property Types and Major Markets

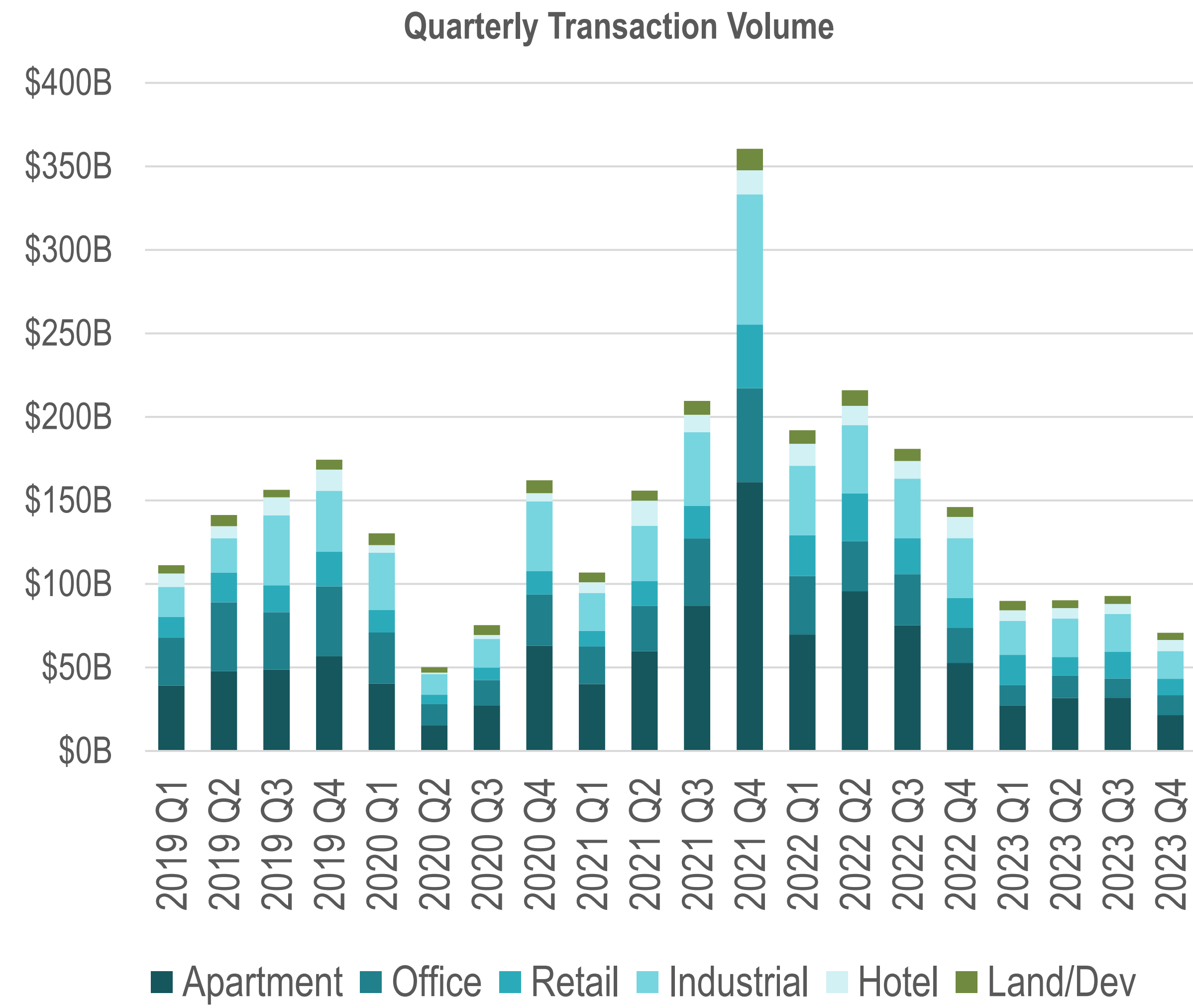
Power Center and Suburban Office Cap Rates Expanded the Most, Up ~70 bps YoY

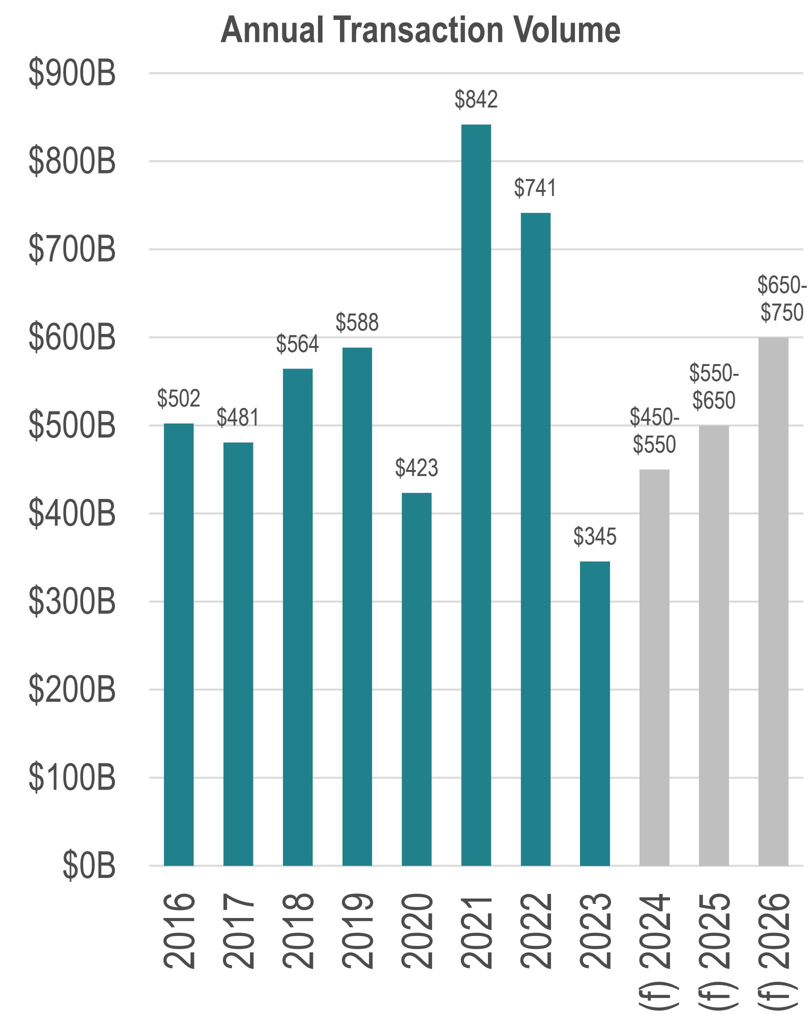


Source: MSCI

Transaction Volume Fell to a 10-Year Low of $345B in 2023

Investment Activity Is Expected to Remain Low in 2024-25 but Begin to Recover as Markets Adjust to Repricing

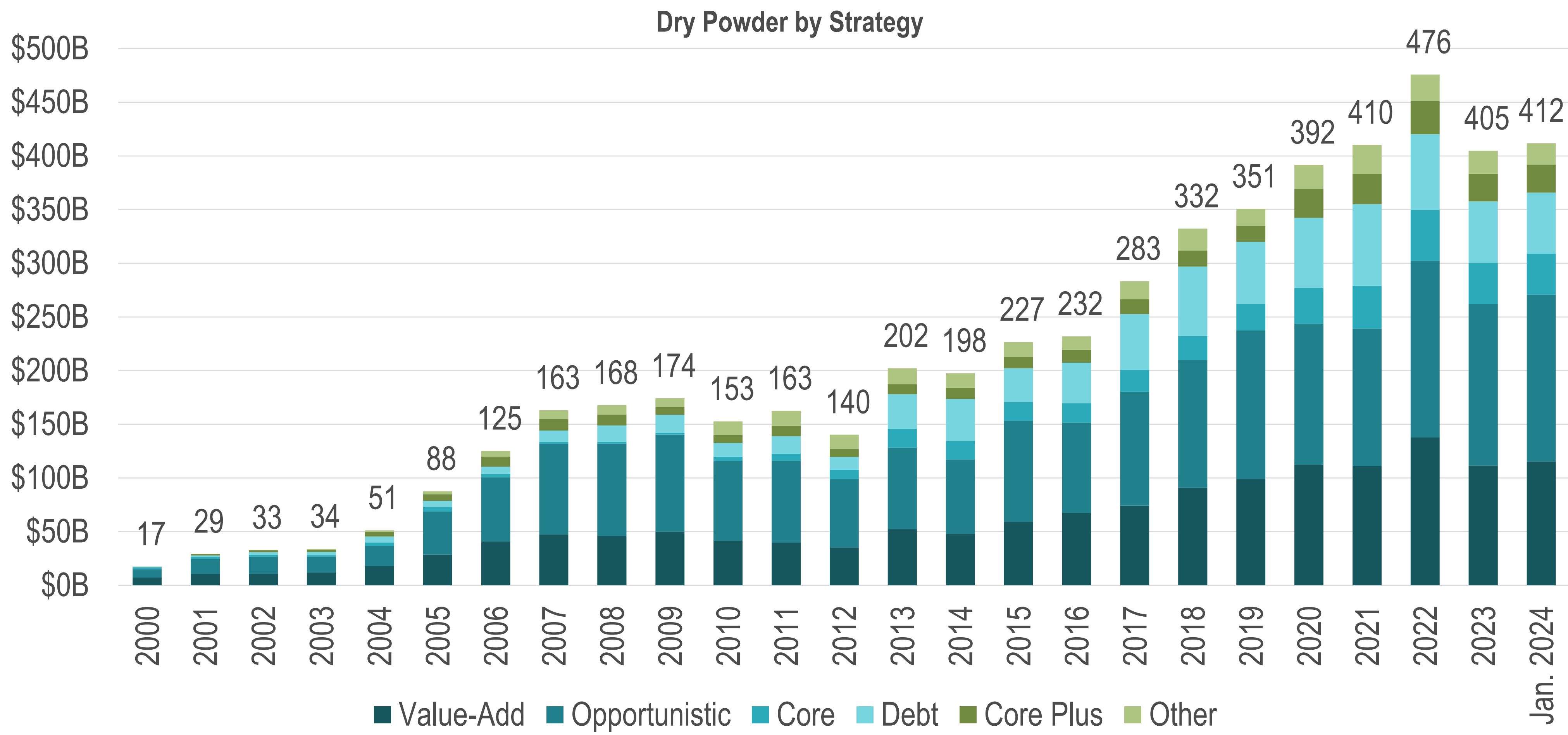




Source: MSCI

Institutional Dry Powder Fell From 2022 Highs to $405B in 2023

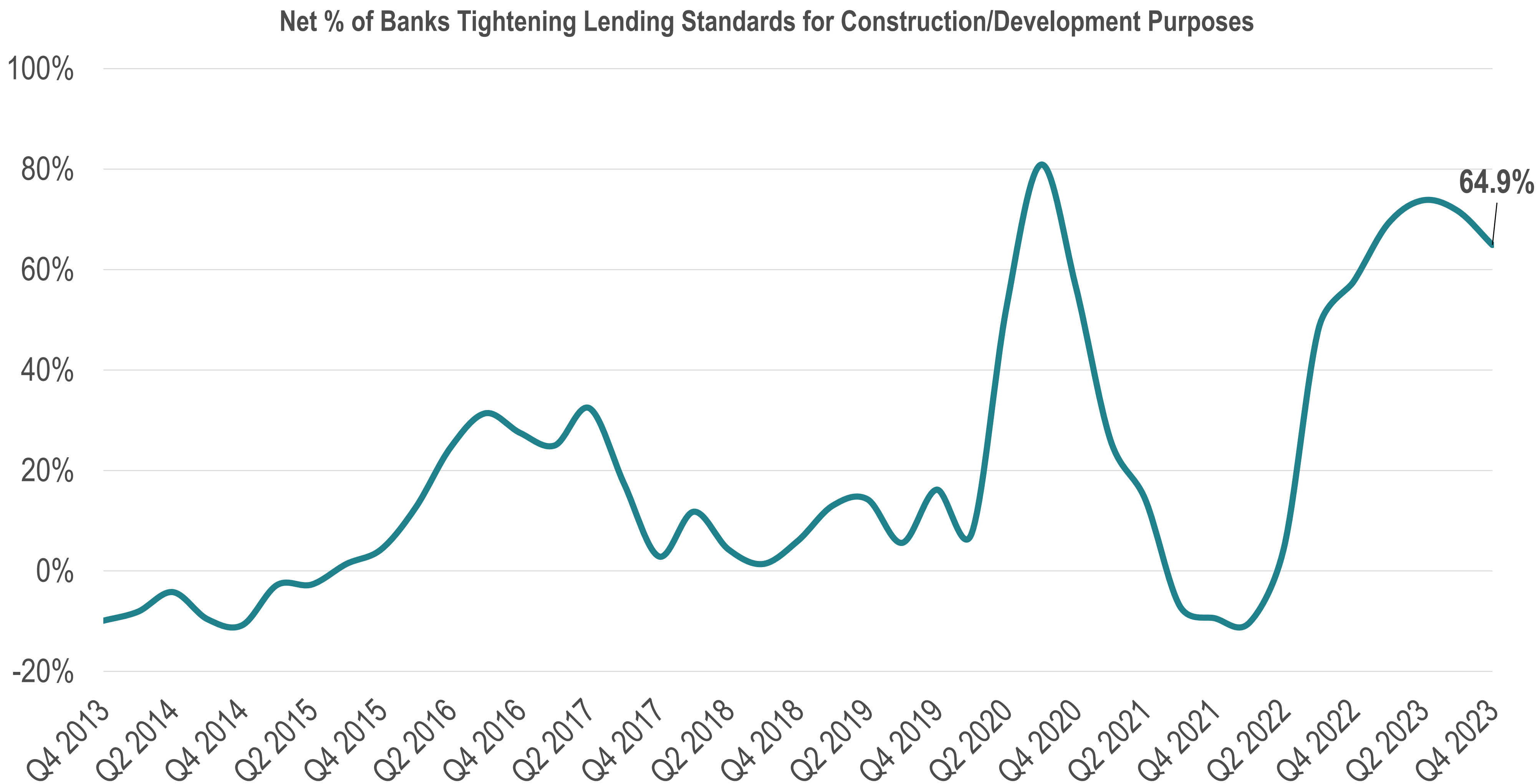
Two Thirds of Real Estate Dry Powder Is Earmarked for Value-Add and Opportunistic Investments



Source: Preqin

Almost Two Thirds of Banks Tightened Lending Standards Again in Q4

Capital Markets Were Constrained in 2023 as Borrowing Costs Increased



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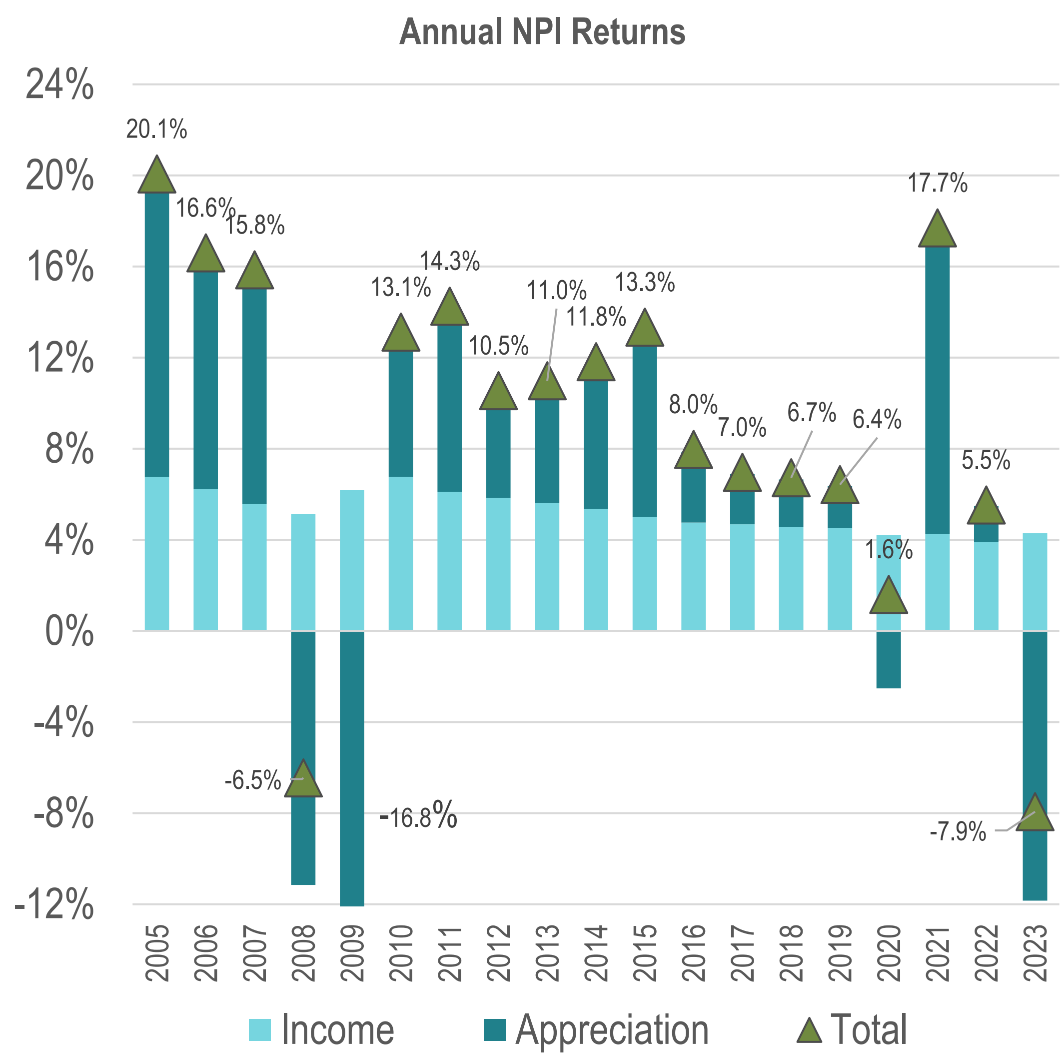
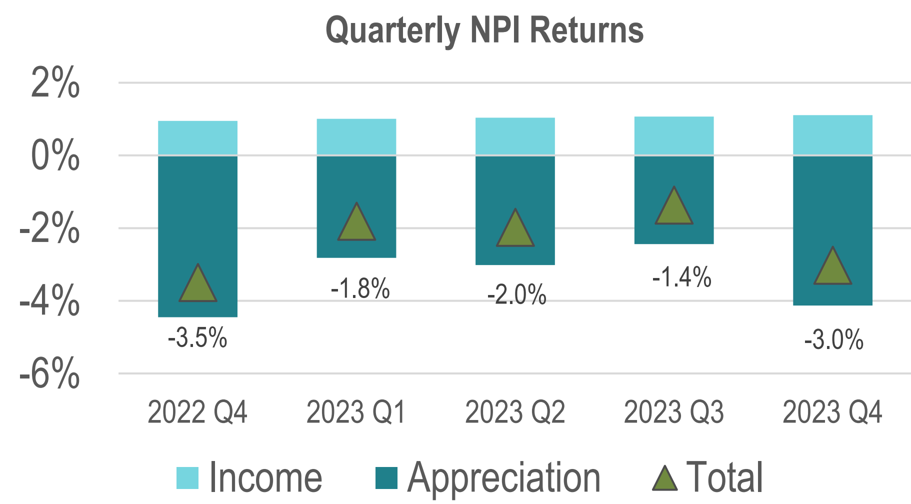
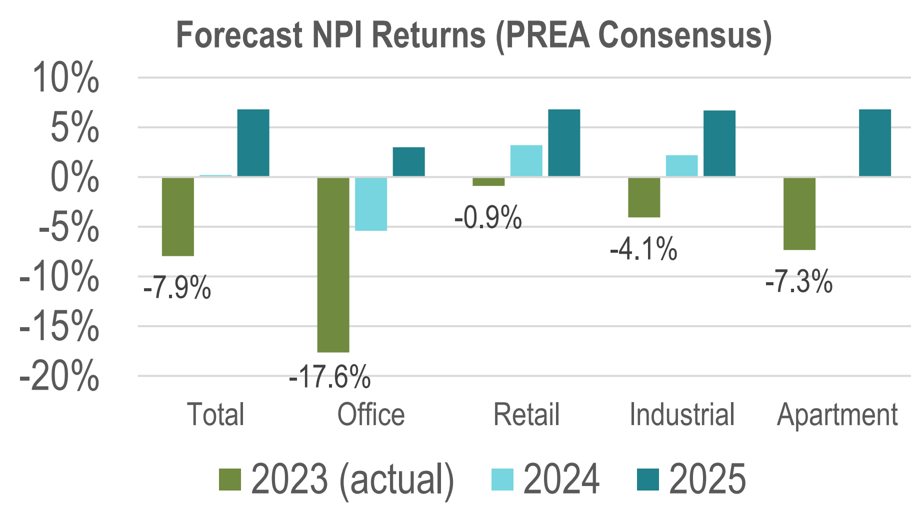
Source: Federal Reserve

The NPI Posted its Lowest Return Since GFC in 2023

Returns Were Negative Across Property Types but Are Generally Expected to Improve in 2024-25







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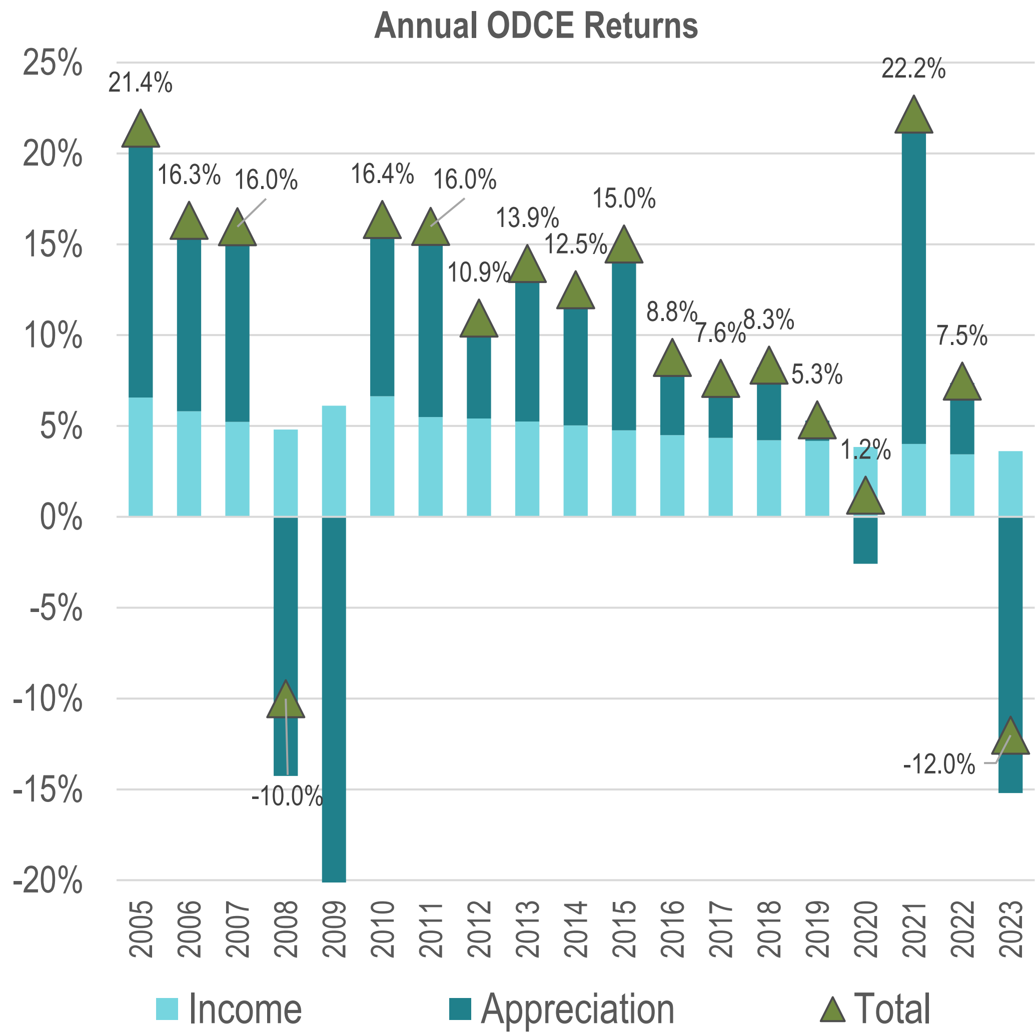
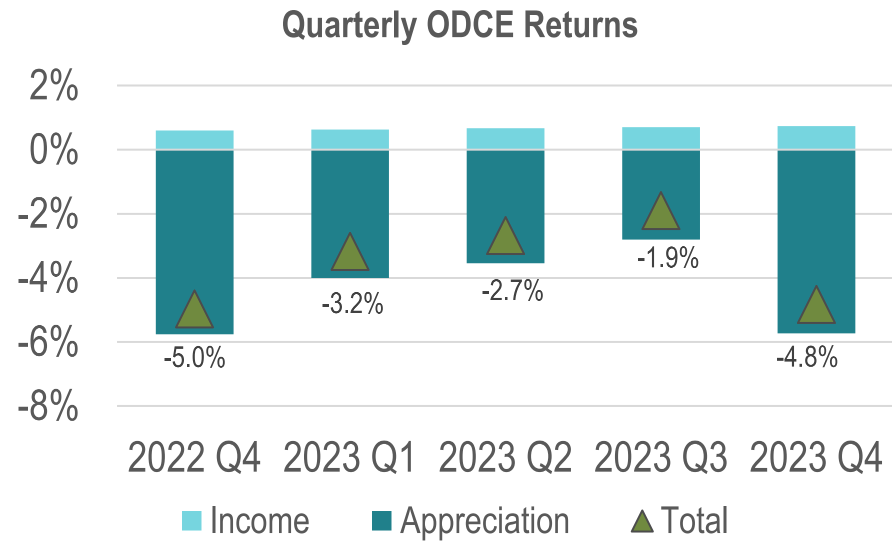
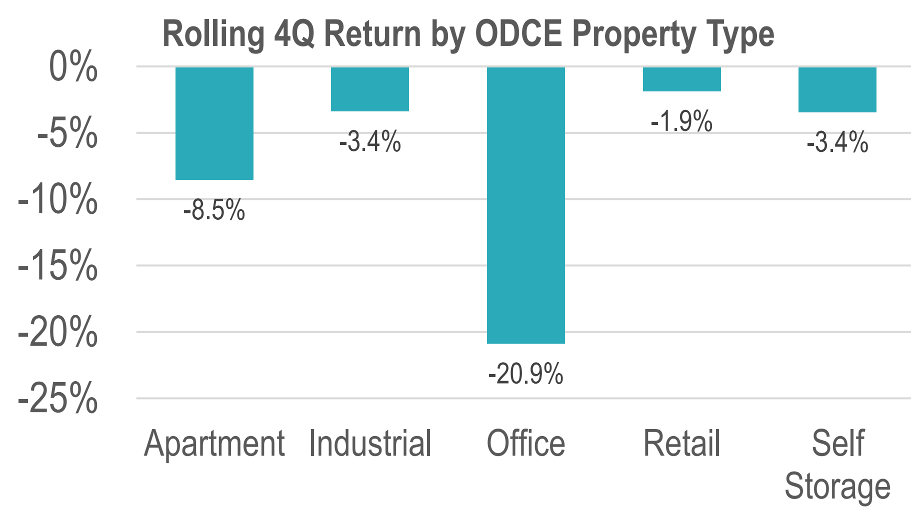
Note: Returns are gross unlevered.
Source: NCREIF; PREA

ODCE Returns Were Negative Through 2023 and Fell to Post-GFC Low

Trailing 4Q Returns Remained Negative Across All Property Types







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Note: Annual and quarterly returns are gross levered; property type returns are gross unlevered at ownership share.
Source: NCREIF

Disclaimers

Critical Assumptions

Our analysis depends on the correctness and completeness of data available as of the date of this memo. The future performance of the global, national, and local economy and real estate market, and other factors similarly outside our controlled may vary. Given the fluid and dynamic nature of the economy and real estate markets, as well as the uncertainty surrounding particularly the near-term future, it is critical to monitor the economy and markets continuously. Stable and moderate growth patterns are historically not sustainable over extended periods of time; the economy is cyclical; and real estate markets are typically highly sensitive to business cycles. Further, it is very difficult to predict when an economic and real estate upturn will end.

Our analysis cannot predict unusual economic shocks on the national and/or local economy, potential benefits from major "booms" that may occur, or the residual impact on the real estate market and the competitive environment of such a shock or boom. Also, it is important to note that it is difficult to predict changing consumer and market psychology.

As such, we recommend the close monitoring of the economy and the marketplace, and updating this analysis as appropriate.

General Limiting Conditions

Reasonable efforts have been made to ensure that the data contained in this study reflect accurate and timely information and are believed to be reliable and comprehensive. This study is based on estimates, assumptions, and other information developed by RCLCO Fund Advisors from its independent research effort and general knowledge of the industry. No responsibility is assumed for inaccuracies in reporting by any data source used in preparing or presenting this study. This memo is based on information that to our knowledge was current as of the date of this memo, and RCLCO Fund Advisors has not undertaken any update of its research effort since such date.

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