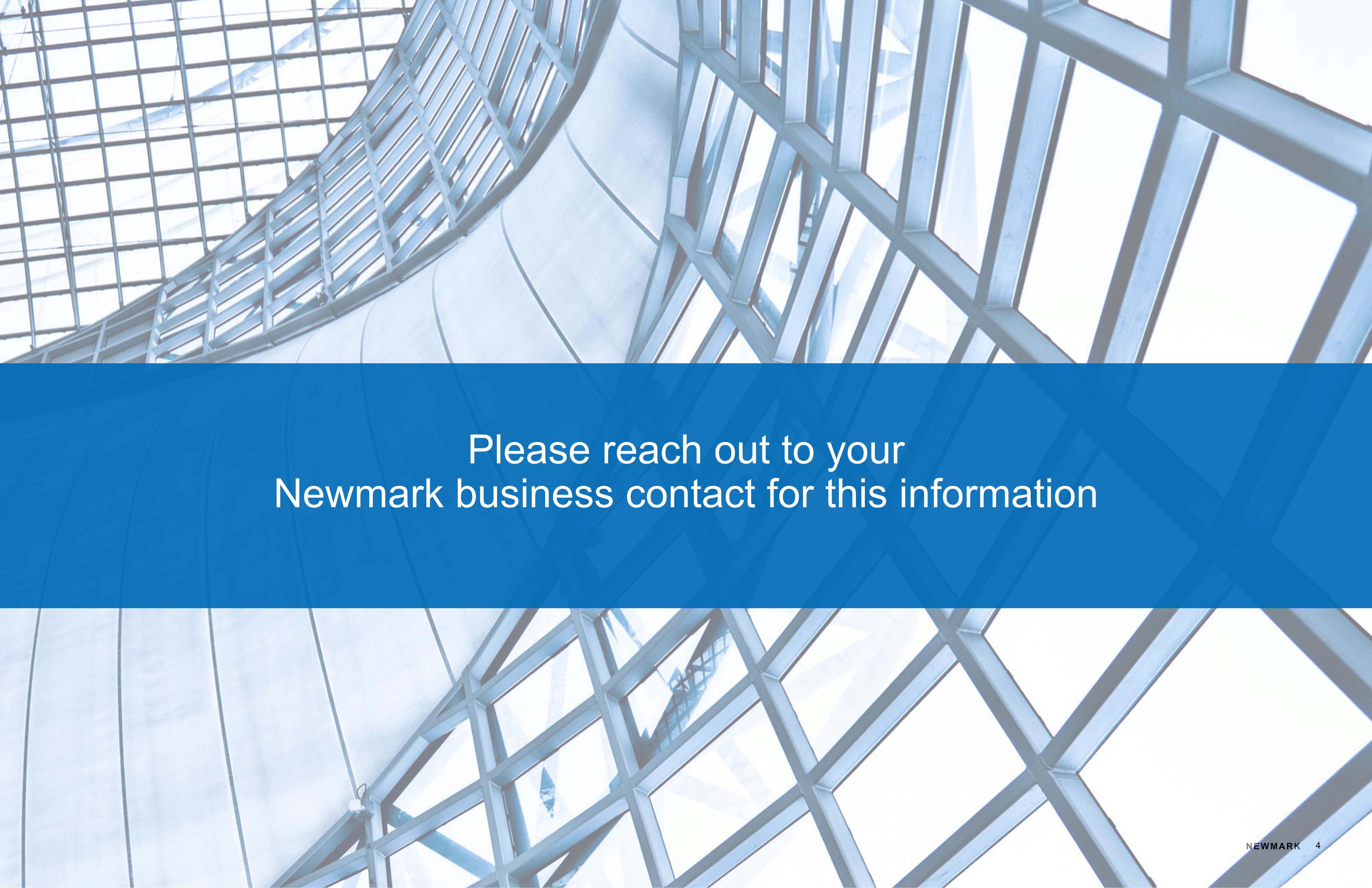
4Q23

State of the U.S. Capital Markets

Market Observations

- **Economy**. The U.S. economy continues to prove surprisingly resilient to rising rates. Real gross domestic product grew at a 3.3% annual rate in the fourth quarter of 2023, a strong showing. There are some signs of labor market softening, but overall conditions remain extremely tight, with 1.4 jobs available for every unemployed person. Wage growth has moderated but remains at the highest levels since the late 1990s. Inflation has moved towards the Fed's target, but in recent months there have been signs of re-acceleration. This, combined with the continued strength of the economy, provides the Federal Reserve with proceed cautiously with rate cuts in 2024. Markets, which overzealously drove 10-year Treasuries to 5.0% in the Fall, recently repeated the error in the other direction, pricing six rate cuts in 2024. Markets are now moving back to a middle, and in our view, more realistic path.
- **Debt Markets.** CRE debt origination activity remained constrained in 4Q23. Overall, origination volume was down 44% year-over-year in 2023. It's not just dollar volumes – there are 29% fewer active lenders in 4Q23 compared with the peak. Originations are down sharply across property types and lending sectors, though office, debt funds and CMBS/CRE CLO are negative outliers. The bigger issue is that the small and regional bank lending engine that has driven the CRE market is rapidly slowing with no clear replacement. All this is occurring while the market is set to absorb $2.0 trillion in debt maturities in the 2024 to 2026 period. This debt that will mature with significantly higher debt costs than when the loans were originated. Additionally, many loans are underwater or nearly so, especially recent loan vintages of most property sectors and broad swaths of office debt. We estimate that $670 billion in debt maturing between 2024 and 2026 is potentially troubled.
- **Equity Markets.** Investment sales declined 53% year-over-year in 2023 and 33% compared with the 2017-to-2019 average. Sales declined year-over-year across property sectors in the fourth quarter of 2023 and year-to-date. Sales declined quarter-over-quarter, except for office. Investment allocations continue to evolve. Multifamily has returned to its pre-pandemic share, while retail and industrial allocations rose in 2023. The office share continued to contract to just 13% of sales. Investment declined across capital groups in 2023 but institutional investors most dramatically – likely due to higher sensitivity to the cost of capital.
- **Supply of Capital.** Dry powder at closed-end funds currently sits at $259 billion, down 8% since December 2022. The capital remains concentrated in opportunistic and value-add vehicles, while debt strategies have pulled back. We estimate that 78% of this capital is targeting residential and industrial assets. Much of this dry powder was raised from prior vintages. Indeed, fundraising weakened from $199B in 2022 to $148B in 2023. Contributions to ODCE funds rebounded from post-GFC lows in 4Q23, though many funds continue to face redemption queues.
- **Pricing and Returns.** Transaction markets now show clear increases in transaction cap rates, belatedly following the public markets. Recent declines in corporate bond yields have improved spreads. Nonetheless, both in the private and public markets, cap rates appear distinctly unattractive relative to the cost of debt capital, possibly excepting office REITs. This is not surprising in the private markets where transaction volumes are muted and reflect selection bias and appraisal-based valuations lag market conditions. Extremely narrow cap rate spreads in the REIT markets are harder to justify and seem to require a rapid decline in debt costs, historically abnormal NOI growth or a combination of the two. Notwithstanding the structural deficiencies in NCRIEF valuations during periods of rapid change like today, NCREIF NPI total returns were broadly negative in the fourth quarter of 2023. Hotel and retail continued to outperform on the margin. Returns were negative in 81% of metro markets up from 60% in the third quarter of 2023.



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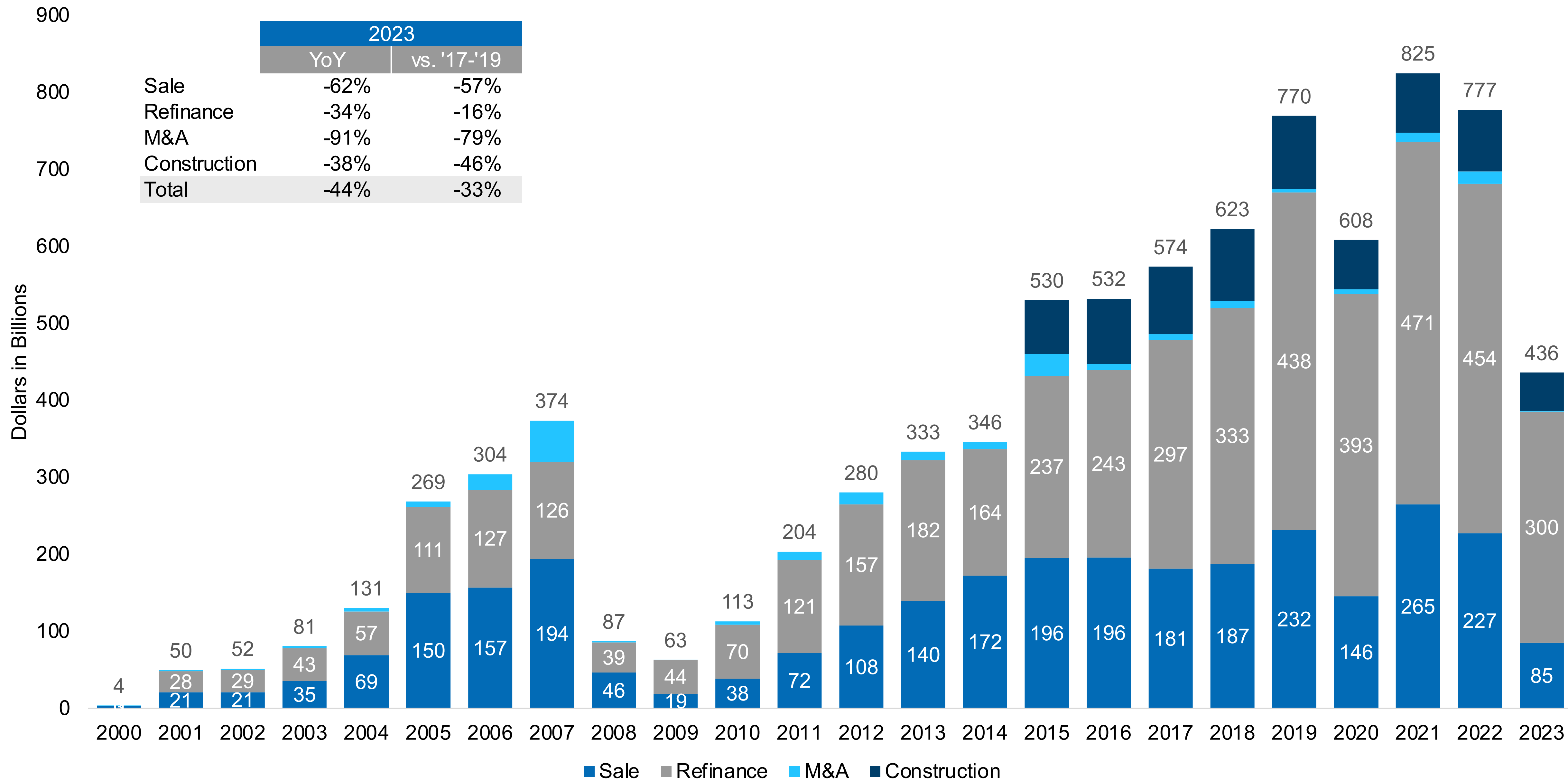
Debt Capital Markets

Debt Origination Down 44% Year-over-Year in 2023

Not surprisingly, acquisition financing has declined the most both on a year-over-year basis and as compared with the pre-pandemic period. This remains an important reference point due to the highly inflated levels of transaction activity in 2021 and the first half of 2022. Refinancing volumes declined sharply as well but to a lesser extent. This was not opportunistic and is most likely a result of elevated loan maturities in 2023.

Commercial Real Estate Debt Origination Volume

	2023	
	YoY	vs. '17-'19
Sale	-62%	-57%
Refinance	-34%	-16%
M&A	-91%	-79%
Construction	-38%	-46%
Total	-44%	-33%

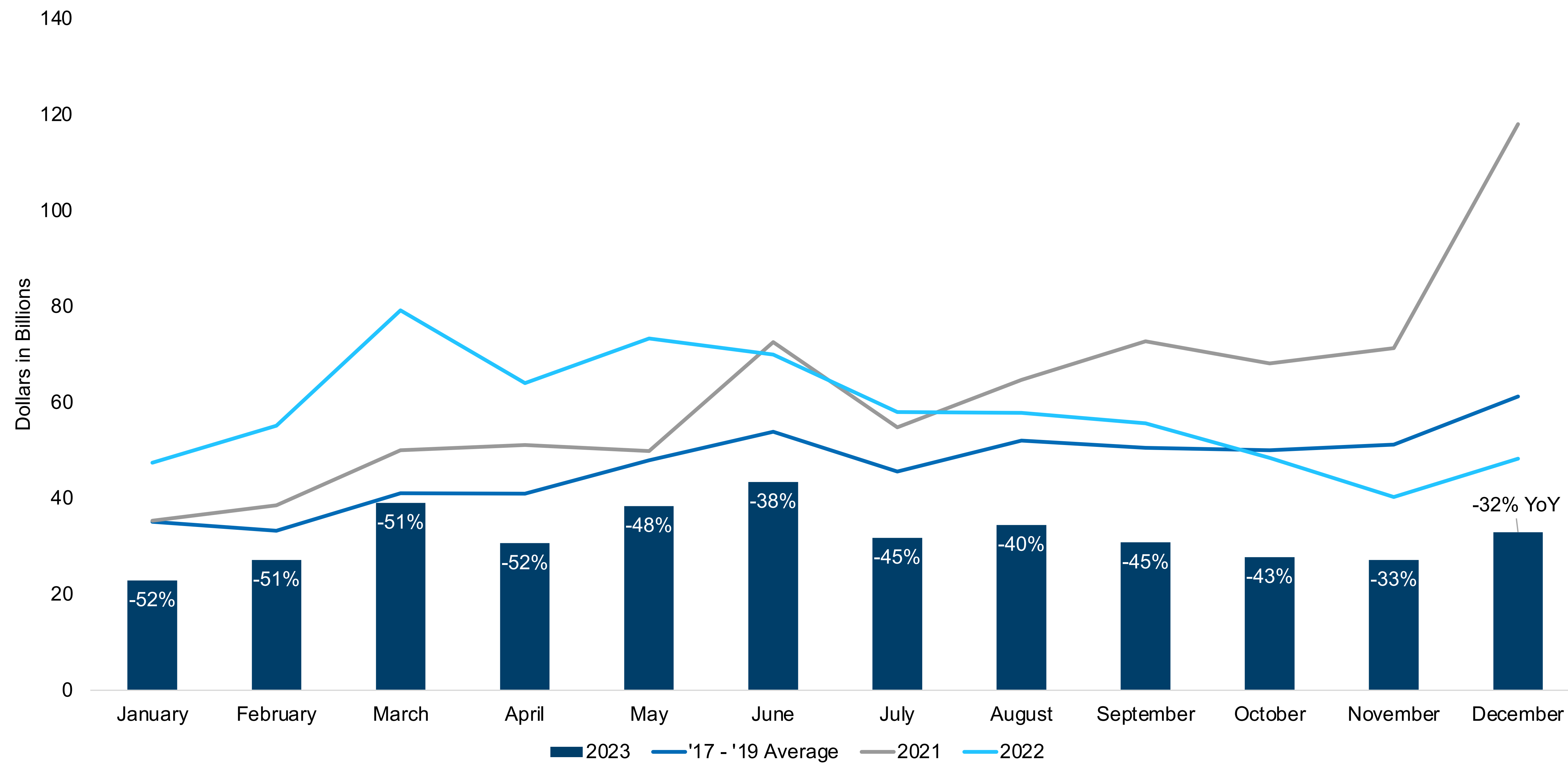


Source: RCA, Newmark Research as of 2/2/2024
Note: Data is based on preliminary loan sums, which are subject to future revision – potentially significant.

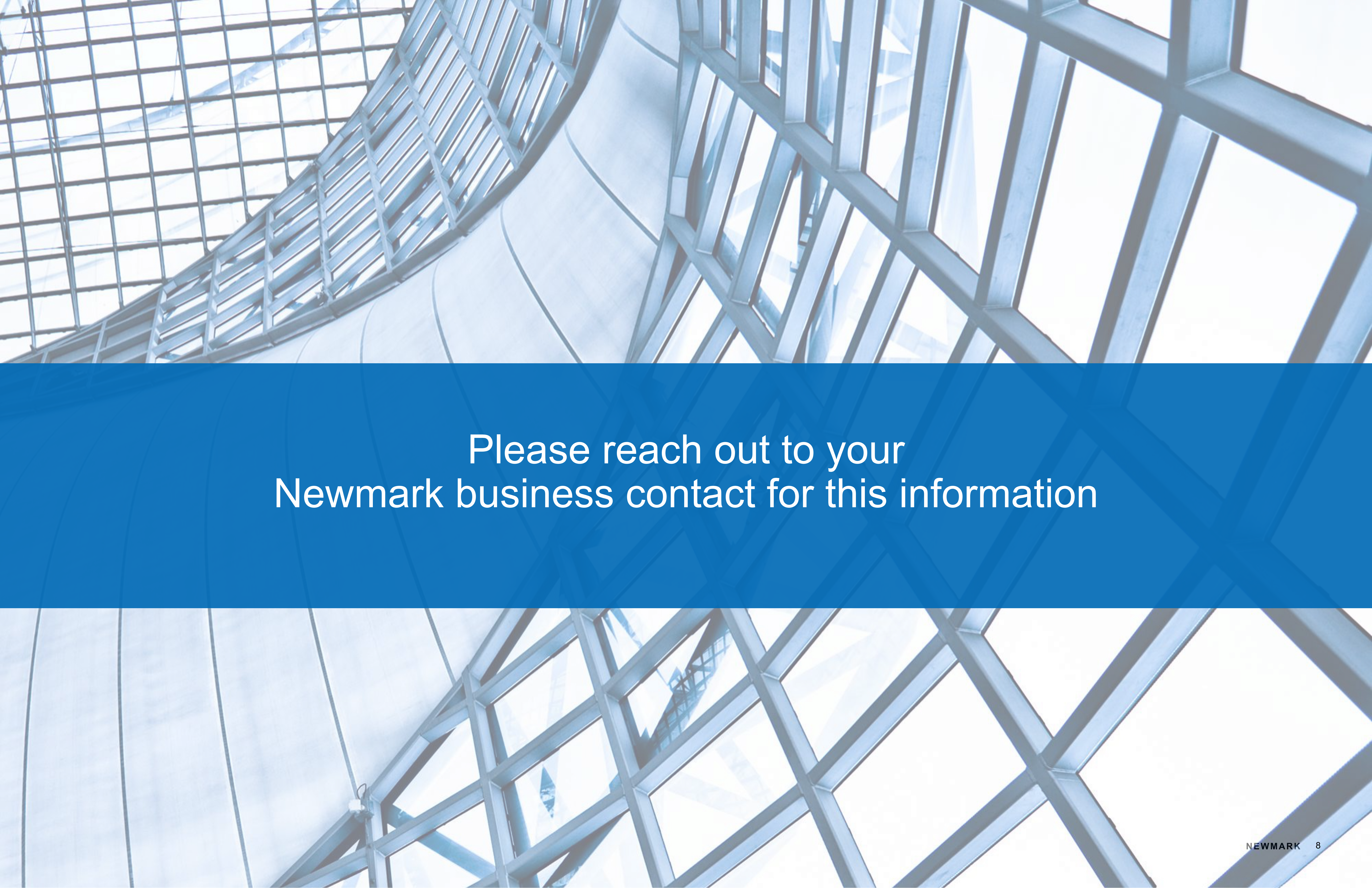
Monthly Origination Activity Has Deteriorated since June amid Surging Rates

Although figures in the fourth quarter of 2023 remain immature, activity appears to have remained anemic as long-term interest rates rose significantly. December volume is understated but is unlikely to see a large enough upward revision to change the story. Given the large quantities of maturing loans, the weak origination volume suggests that a significant share of maturing loans have been granted short-term extensions or used existing options to that effect.

Monthly Commercial Real Estate Debt Origination Volume



Source: RCA, Newmark Research as of 2/2/2023
Note: Data is based on preliminary loan sums, which are subject to future revision – potentially significant.



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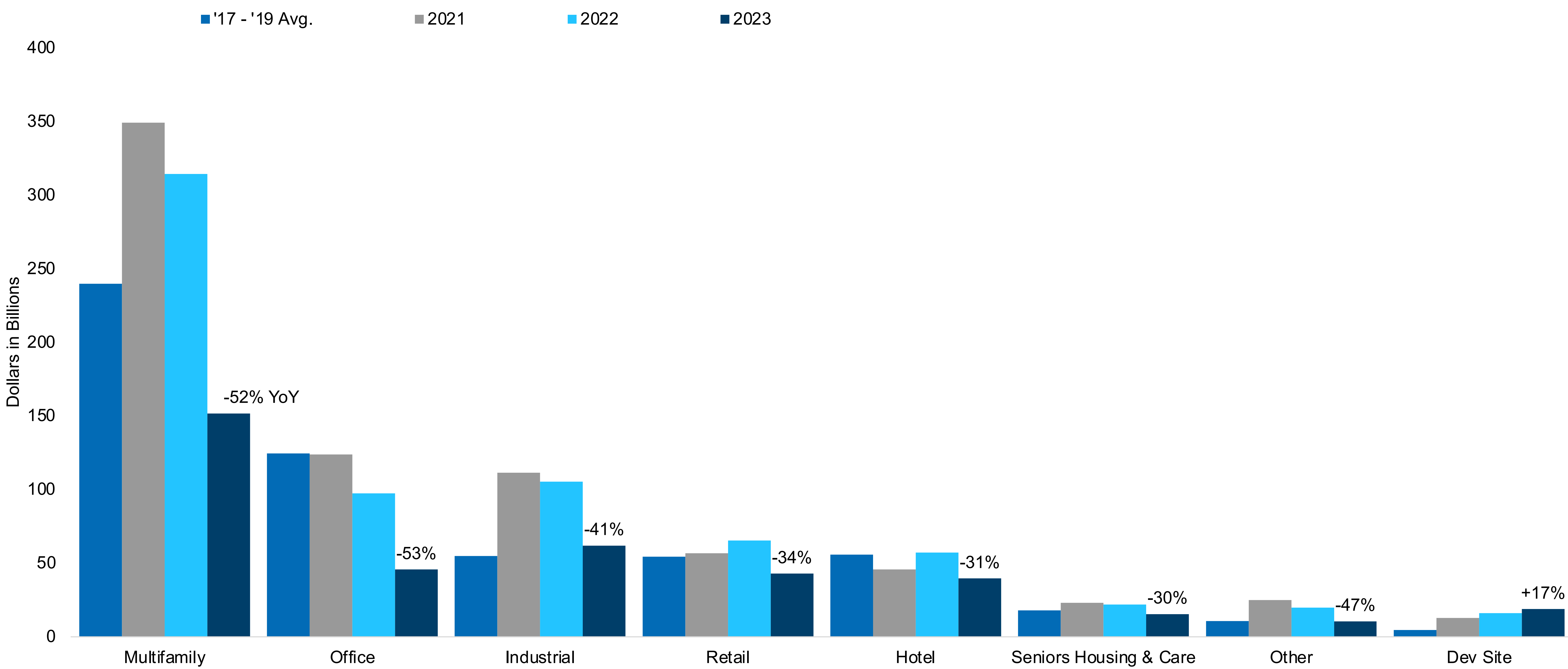
Originations Down across Property Types, Most Dramatically for Office, Multifamily

The 52% year-over-year multifamily decline is not just an artifact of inflated activity last year; lending is still down 37% compared with pre-pandemic. Office compares poorly to either period. In contrast, industrial originations are up 12% vs. pre-pandemic, though still significantly down from their recent peak.

Commercial Real Estate Debt Origination Volume

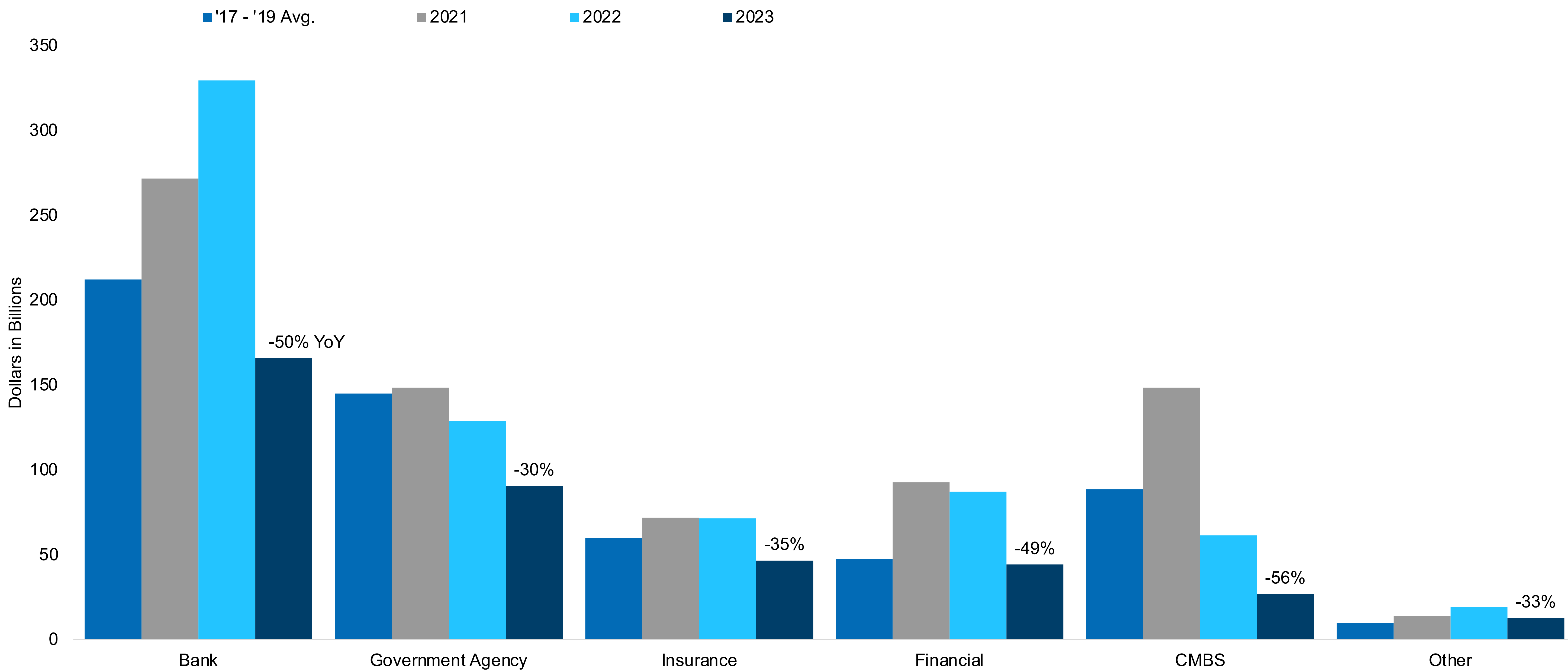


Source: RCA, Newmark Research as of 2/2/2024
Note: Data is based on preliminary loan sums, which are subject to future revision – potentially significant.

Originations Volumes Fell Sharply across Lenders in 2023

Banks, debt funds ("financial") and CMBS/CRE CLO lenders experienced similarly severe slowdowns in 2023 compared to 2022. Compared with pre-pandemic activity, the CMBS/CRE CLO sector stands out 70% compared with the 2017-to-2019 average. In dollar terms, the pullback in bank financing has been most significant. Insurance and agency lending were also down in 2023 but to a lesser extent. Insurance lending picked up mid-year as CRE lending yields became more competitive with corporate bonds.

Commercial Real Estate Debt Origination Volume

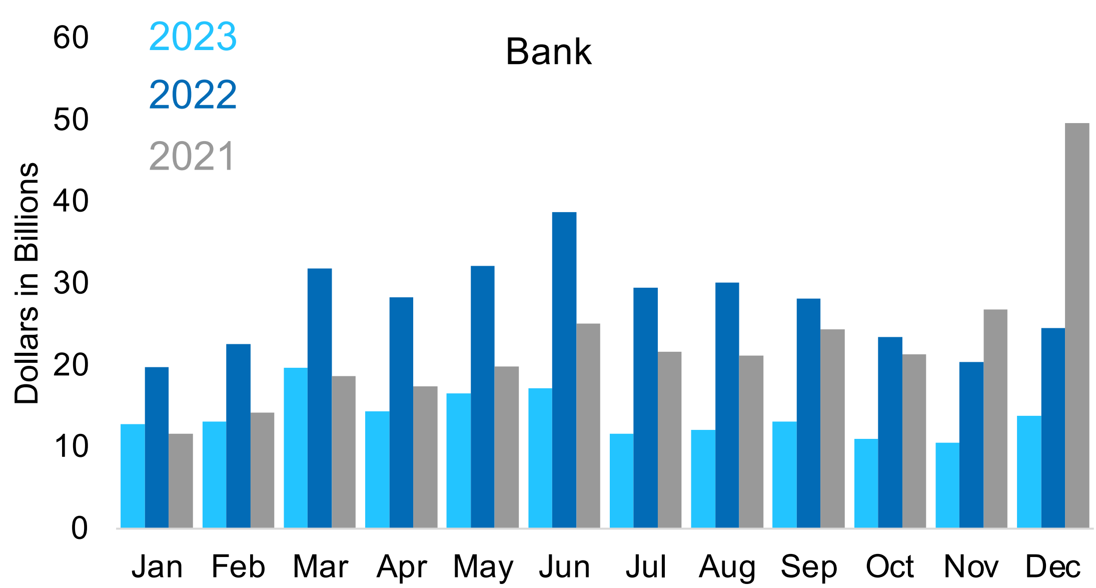


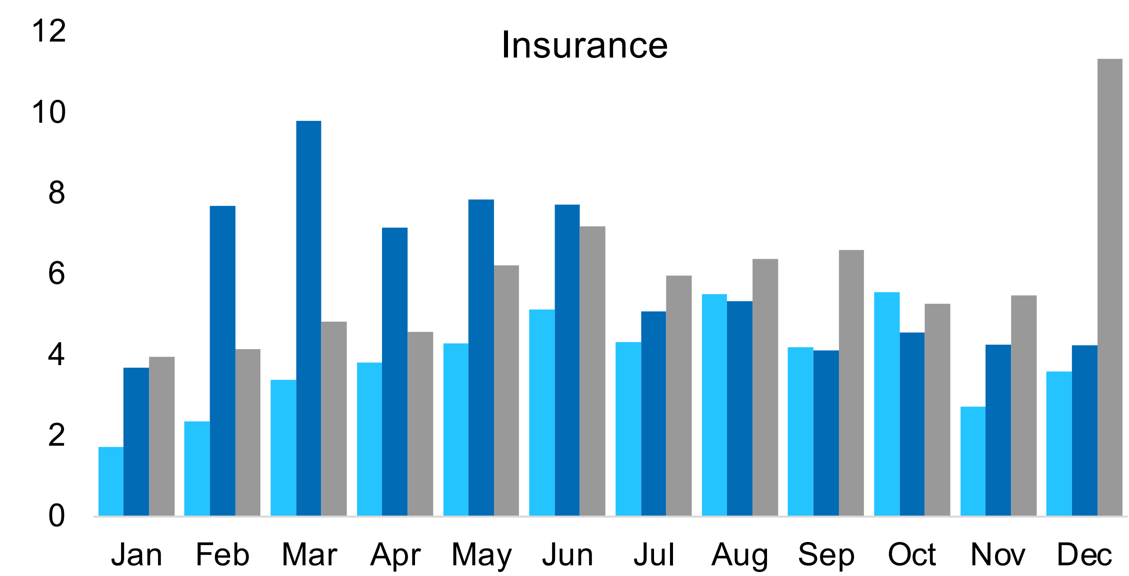
Source: RCA, Newmark Research as of 2/2/2024
Note: Data is based on preliminary loan sums, which are subject to future revision – potentially significant.

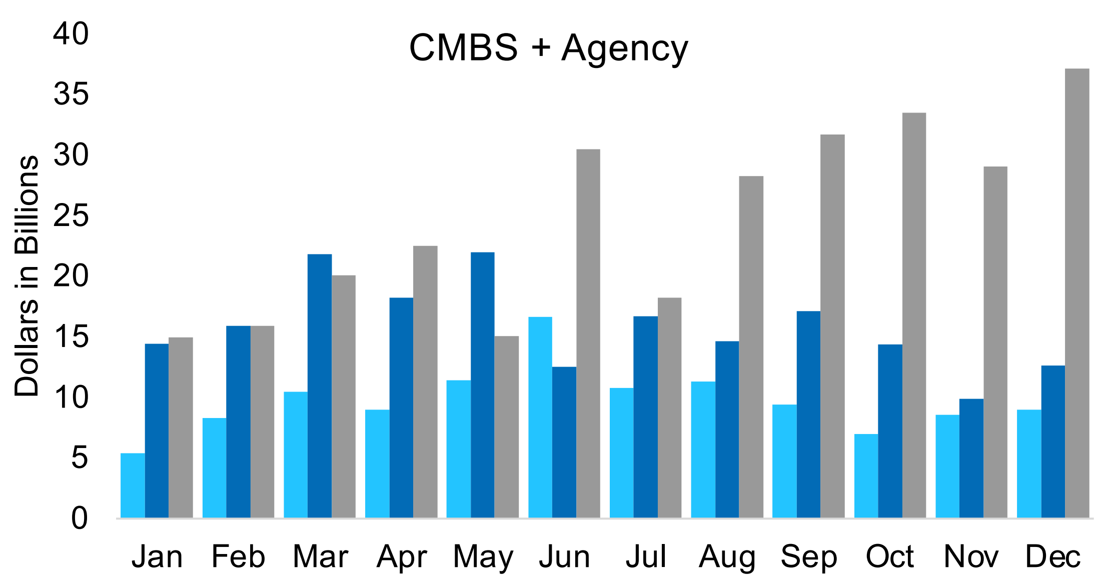
Loan Originations Have Declined across Lender Groups

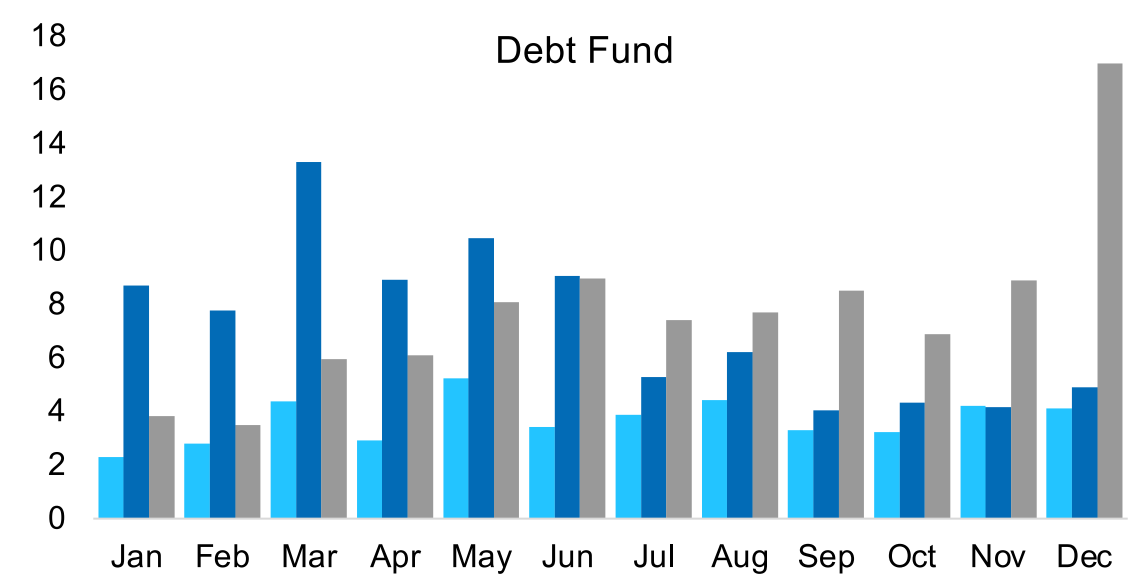
Bank lending remained anemic through the end of 2023, despite a slight pop in December. Insurance lending accelerated into August before seeming to run out of steam (or allocation) in the final months of 2023. Securitized lending was weak throughout the year, especially since June, but showed signs of increasing in November/December, which has carried into 2024. Debt fund originations were range bound in the fourth quarter of 2023, having picked up modestly from early fall.

Commercial Real Estate Debt Origination Volume







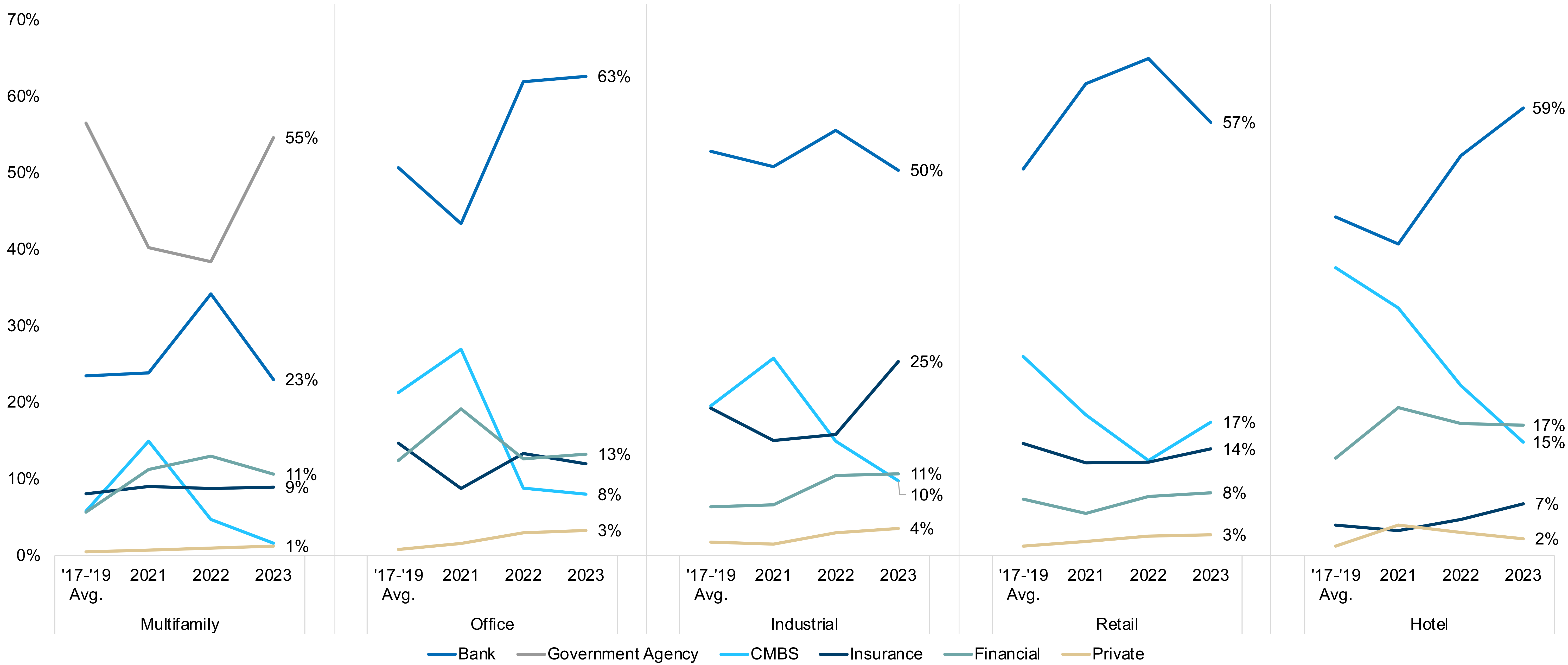


Source: RCA, Newmark Research as of 2/22/2024
Note: Data is based on preliminary loan sums, which are subject to future revision – potentially significant.

Despite Turmoil, Bank Share Remains at or above Pre-Pandemic Levels

CMBS/CRE CLO lending share has collapsed across property types. Surprisingly, debt fund lending shares have been stable for most property types, reversing the apparent trend at midyear. Insurance lending share has risen sharply in the industrial sector and is stable elsewhere.

Composition of Commercial Mortgage Debt Originations



Source: RCA, Newmark Research as of 2/2/2024
Note: Data is based on preliminary loan sums, which are subject to future revision – potentially significant.

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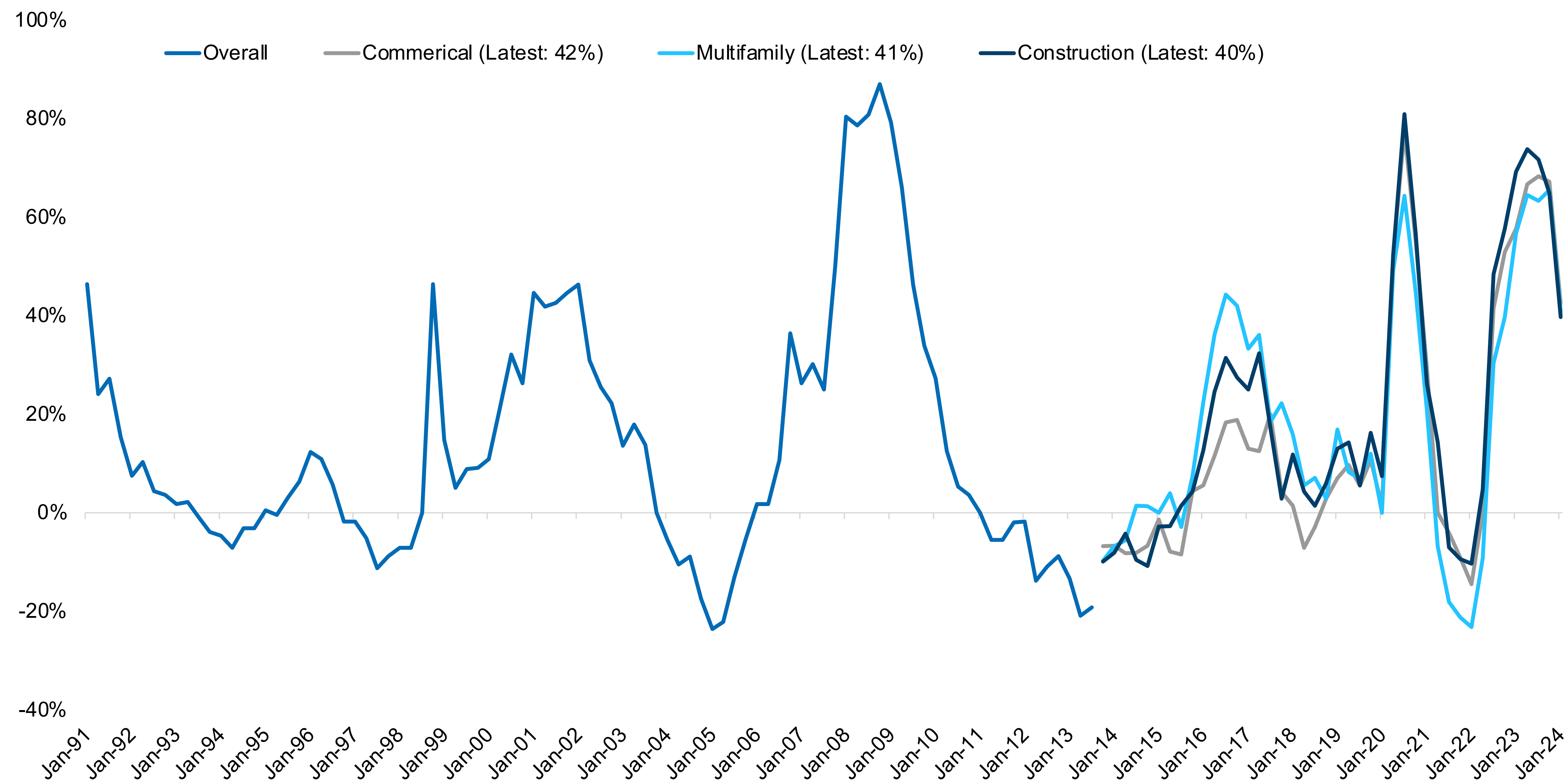
Banks Are Still Tightening Standards, But Pace of Tightening Has Slowed

Most banks expect to continue tightening lending standards in the 1Q24; however, the net share tightening came sharply down from a peak of ~65%. This is a salutary development, but it's still the first step on what is still likely to be a long road to a healthy CRE finance environment. Banks took at best muted steps to resolve issues in their CRE books in 2023, pushing them to 2024. Financial conditions have improved but not enough to resolve most problem loans. As a result, banks will have limited capacity to extend new credit.

Net Percentage of Banks Tightening Lending Standards

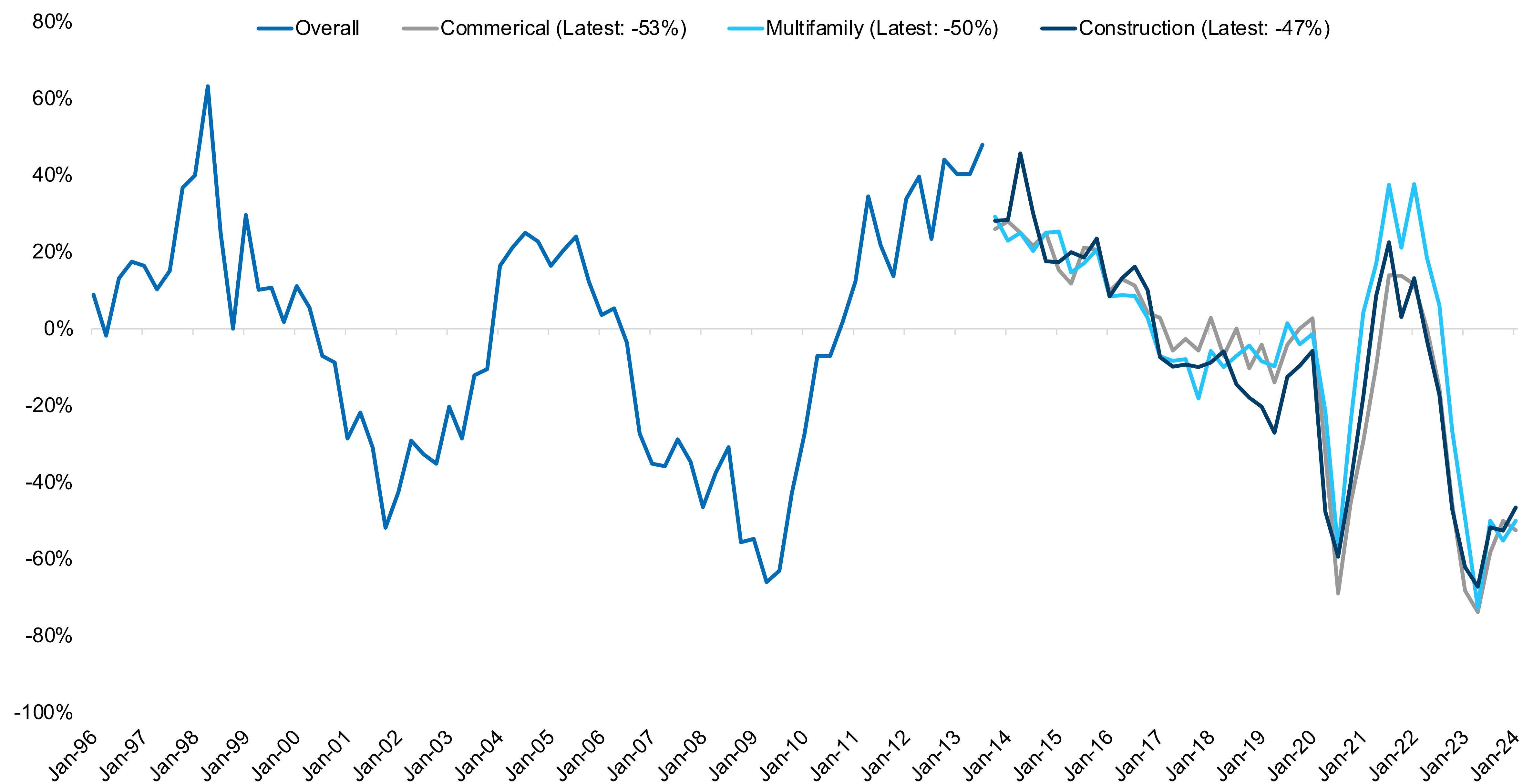


Source: Federal Reserve, Newmark Research as of 2/6/2024

Demand for *New* Bank CRE Credit Remains Weak

Both borrowers and lenders are heavily preoccupied with legacy loan maturities and the sustainability thereof. That said, conditions have improved on the margin since the regional banking mini-crisis in early 2023.

Net Percent of Banks Reporting Stronger CRE Loan Demand



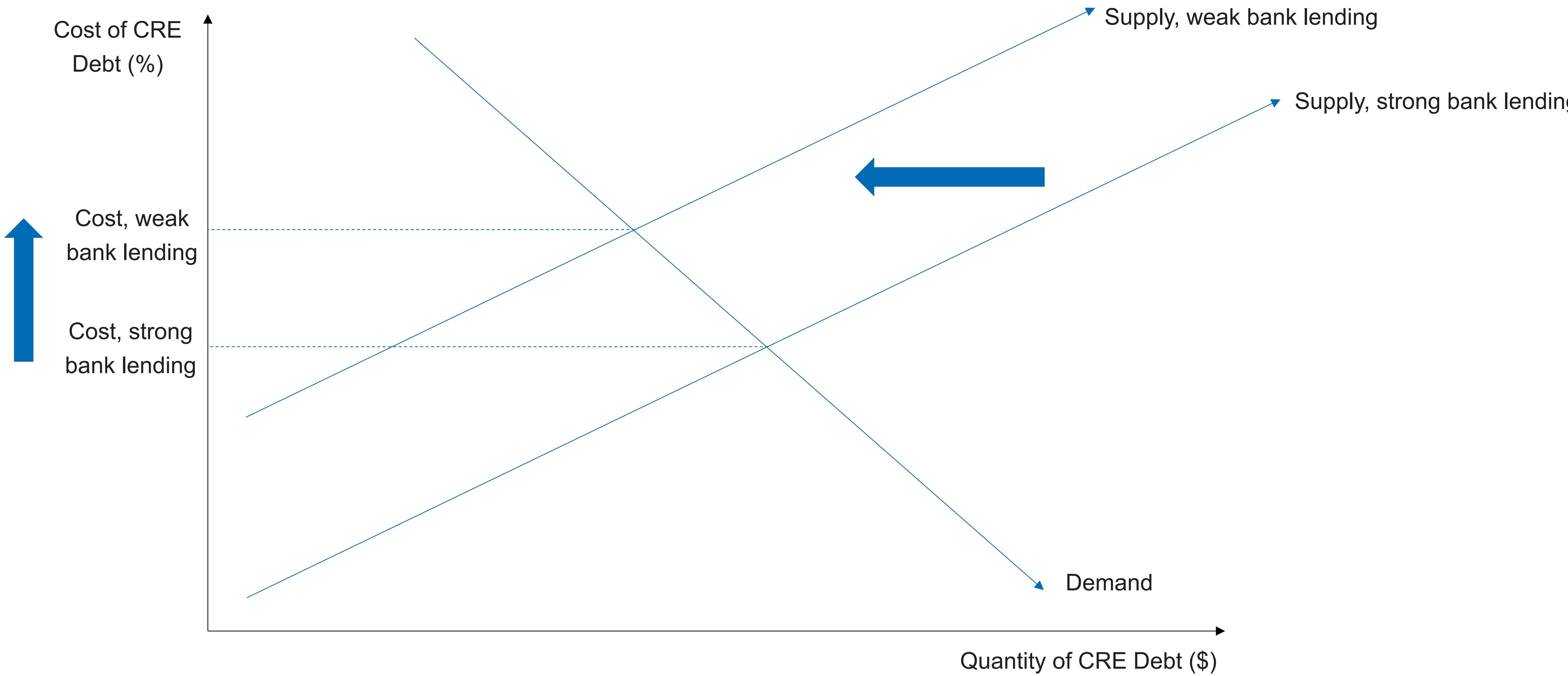
Source: Federal Reserve, Newmark as of 2/6/2024

Banks are likely to spend the next several years reducing their CRE exposures. This would be a significant negative supply shock to the CRE finance ecosystem.

If Banks Continue to Pull Back, Debt Costs Increase

Econ 101 shows us why this is the case. Higher yields are needed to induce banks to sustain lending and attract other sources of capital to lend to the sector. This is not always a smooth process, resulting in lags during which interest rates could easily overshoot their eventual equilibrium. It's important to keep in mind that this supply shock is *in addition to* the supply shock resulting from the increases in Treasury yields. As such, not only does bank retrenchment signal higher rates, but also higher *relative* rates.

Supply and Demand of CRE Credit

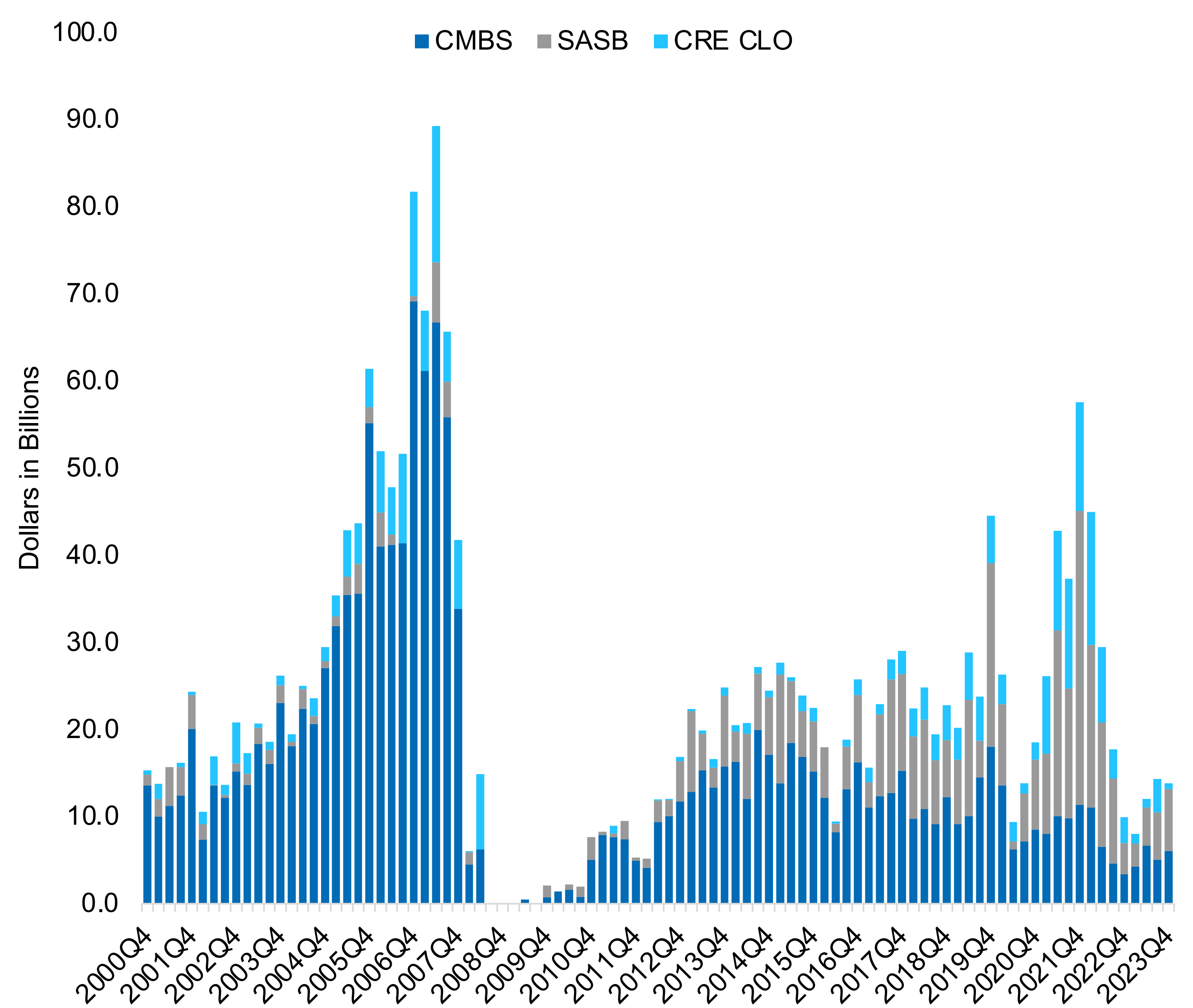


Source: Newmark Research

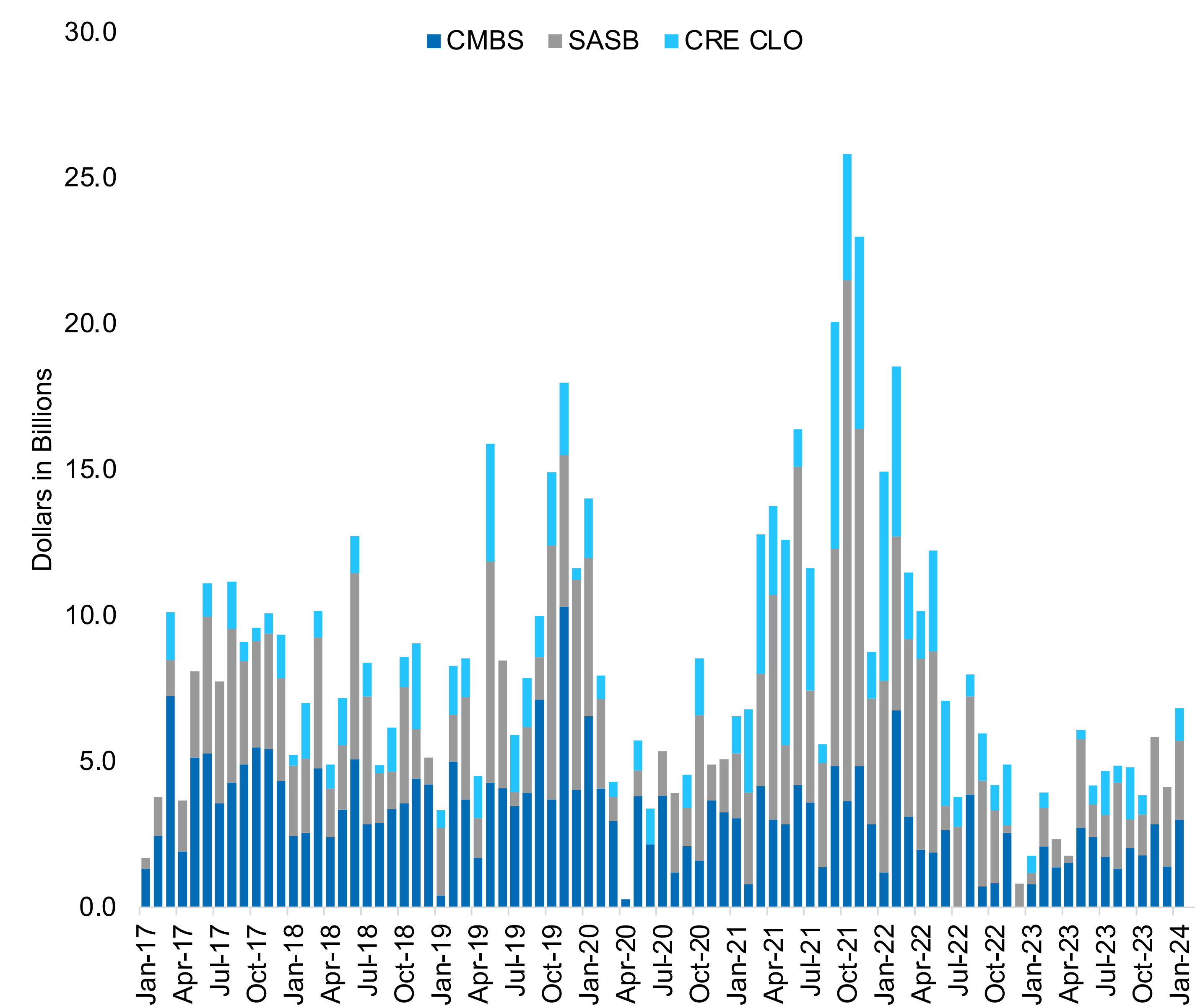
Securitized Markets Have Slowed Markedly; Unlikely to Backfill Bank Credit

Securitized markets could potentially be much larger than they are today. Indeed, they were pre-GFC. However, thus far, securitized markets have been the most impacted by the increases in interest rates. Spreads have moved correspondingly, but elevated rate volatility has made it riskier to originate for securitization. This impacts both debt funds and banks, which are increasingly loath to extend repo financing to debt funds. Finally, while the process has been improved, workouts remain far more complicated for securitized loans.

Quarterly CMBS Issuance



Monthly CMBS Issuance

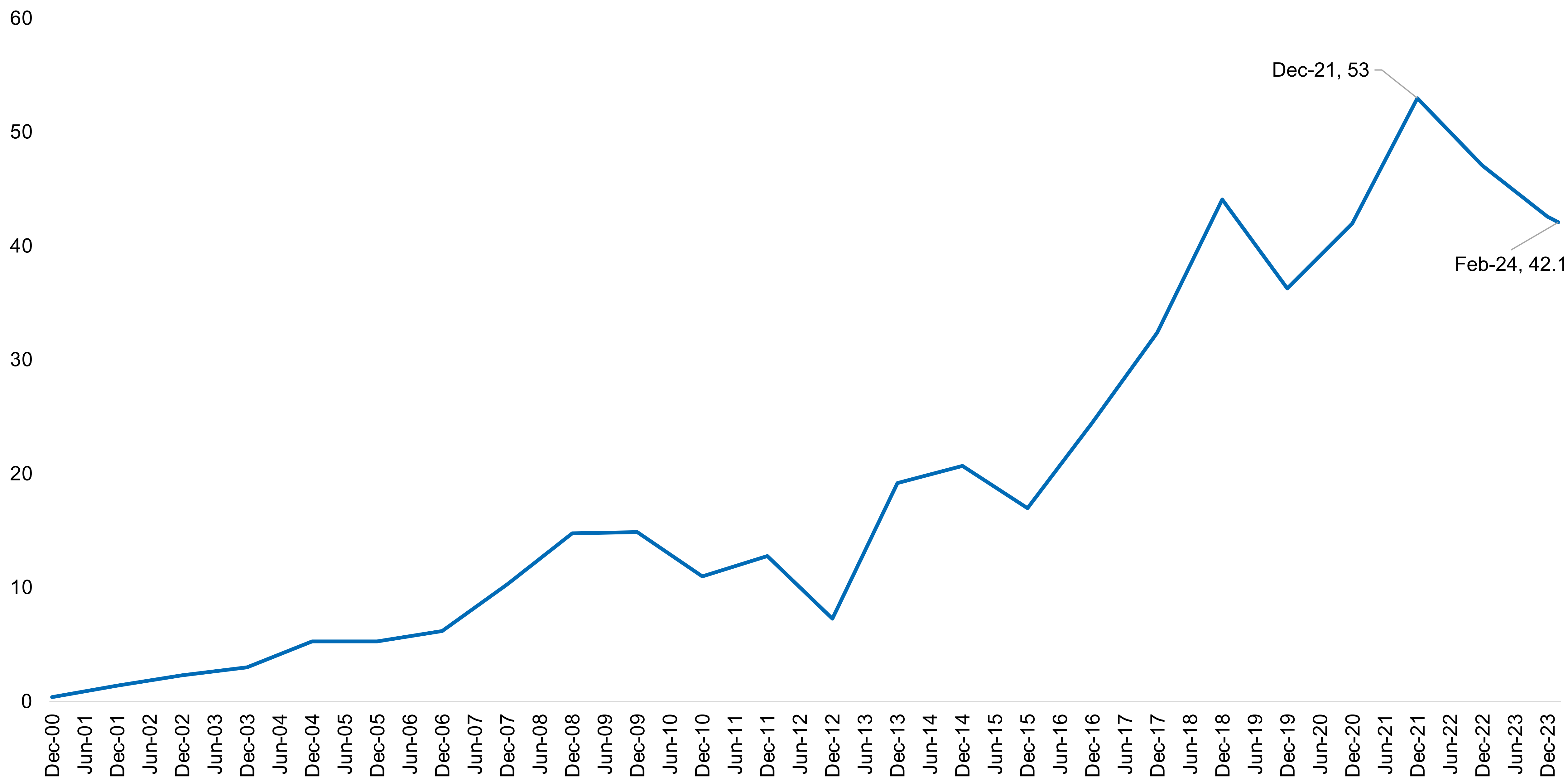


Source: Green Street, Newmark Research as of 2/2/2024

Debt Funds Have Dry Powder, but Not Enough to Fill the Hole (for Now)

The rehypothecation channel is impaired by bank hesitancy and securitization market illiquidity. Additionally, debt funds expanded dramatically in the liquidity bubble and focused on transitional and high leverage finance – loan profiles likely to be under the greatest stress. Legacy portfolio issues are likely to further constrain activity, though, on average, it seems likely that debt funds are better prepared to take back assets than other creditors. Longer term, a smaller bank role offers opportunities for private capital.

Debt Fund Dry Powder



Source: Newmark Research, Preqin as of 2/2/2024

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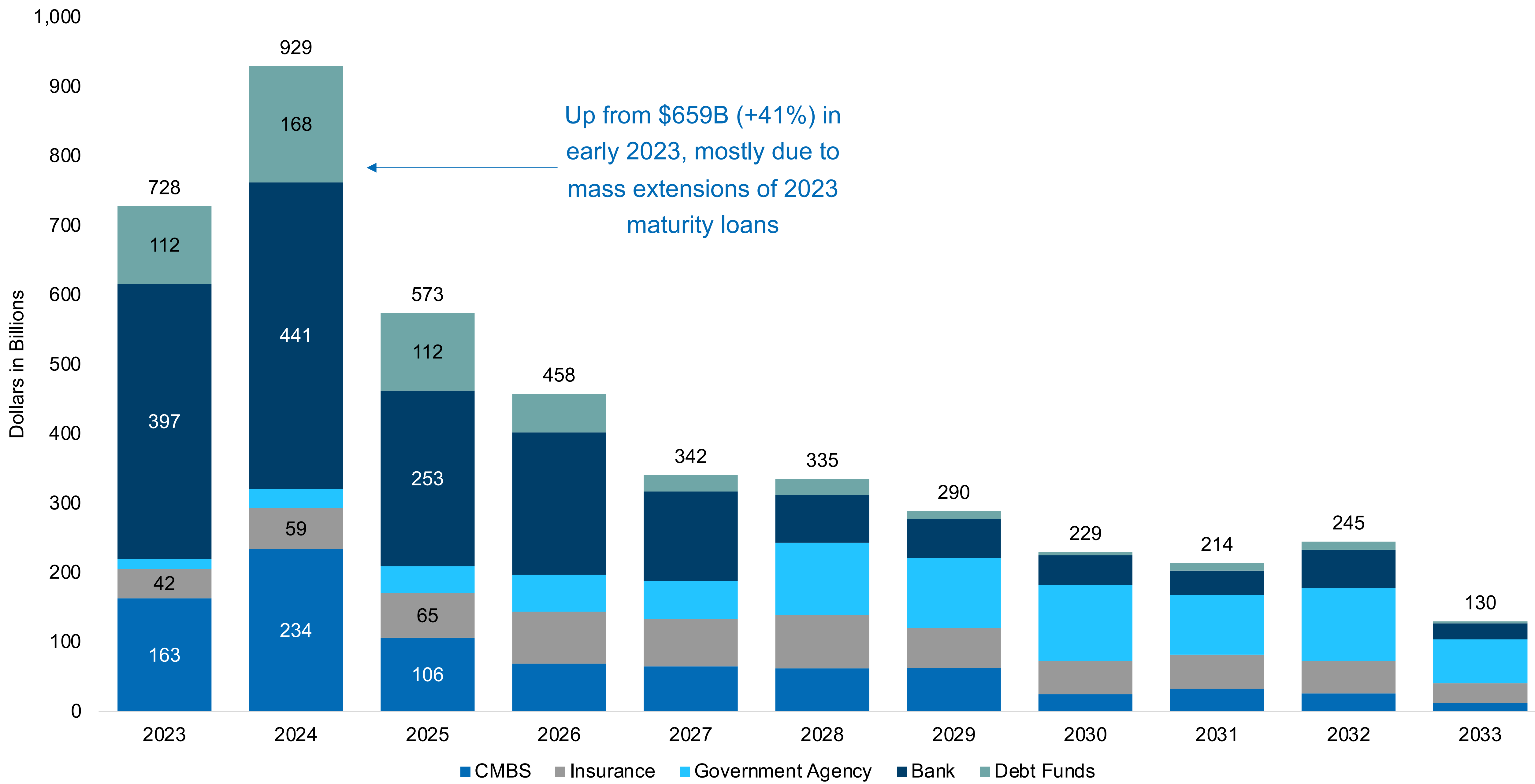
Market Face Record Maturities in 2024

Bank, CMBS/CRE CLO and debt fund maturities are particularly heavily front-loaded over the next 12 months.

Commercial Mortgage Maturities



Source: MBA, Newmark Research as of 2/12/2024

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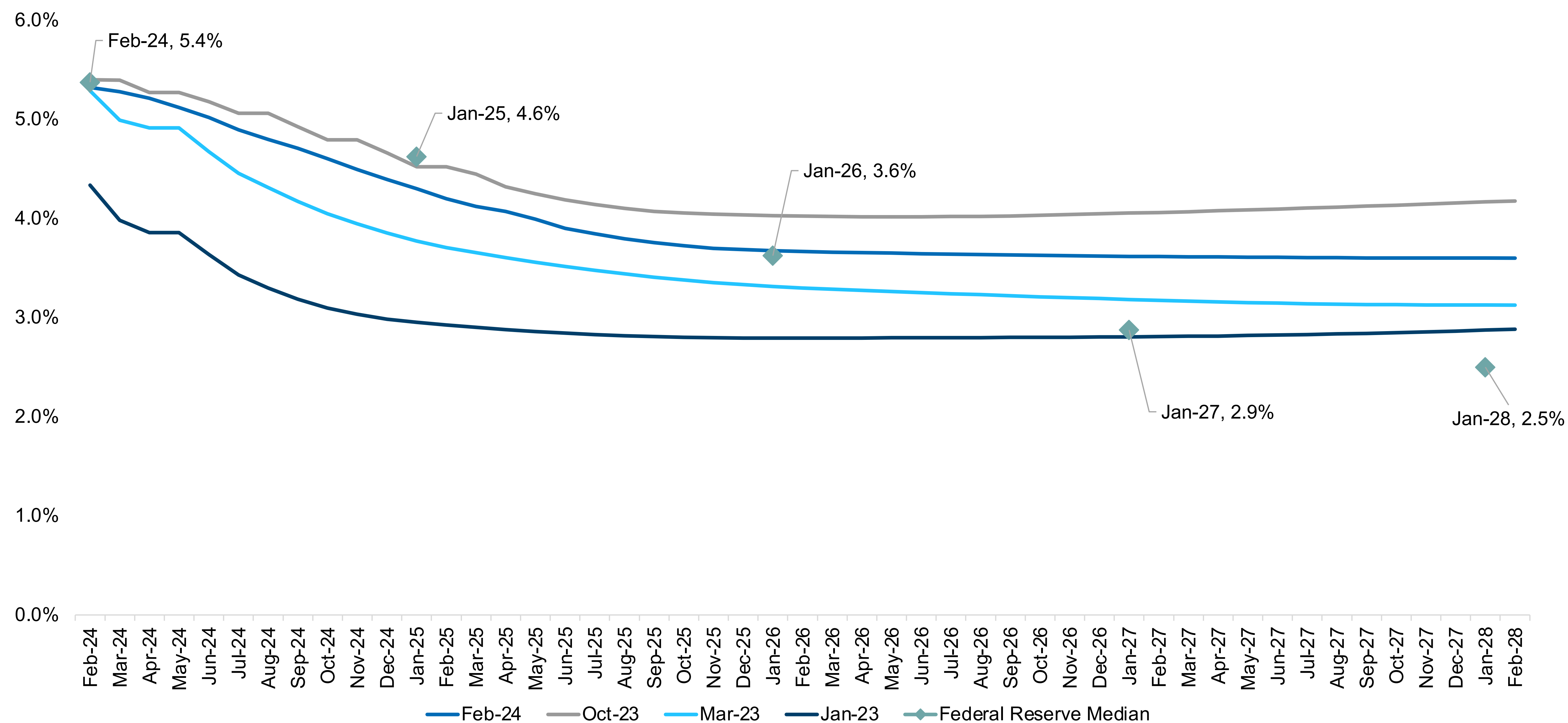
New *New* Normal—Higher Cost of Capital

Forward rate projections have varied widely over the last 12 months, but at no time have they anticipated a rapid return to post-GFC short rates. Without this prospect, long-term rates too are likely to remain locked in higher ranges. In addition, quantitative tightening and large government deficits will continue to place upward pressure on the term premium.

U.S. Rates Forward Curve: 1-Month SOFR



Source: Chatham Financial, Newmark Research as of 2/20/2024

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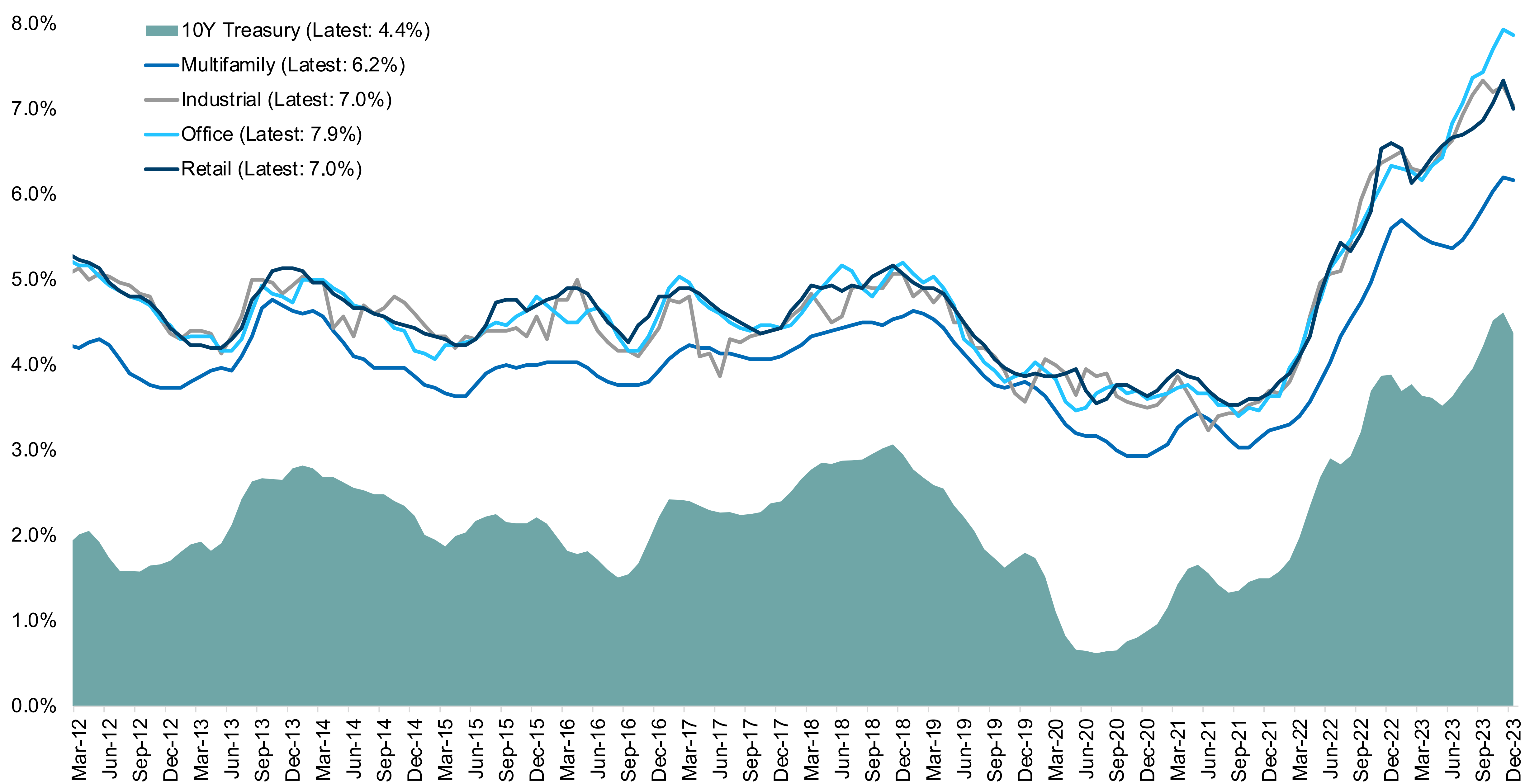
Fixed-Rate Debt Costs Rising in Private Transaction Market

The Fed's hiking cycle and the concomitant increase in yields across the Treasury curve has been the primary driver of higher CRE debt costs. Spreads have widened, particularly for office loans, but this has been a smaller factor. Recently, Treasury yields have been higher variable with the 10-year Treasury breaking out in the fall to as high as 5.0% before returning to the 3.7-to-4.2% range in which it currently stands. Rated reflect this treasury surge in Q4. In Q1, we expect debt costs to remain high but could moderate on the margin.

Average Interest Rate on Fixed Rate CRE Originations

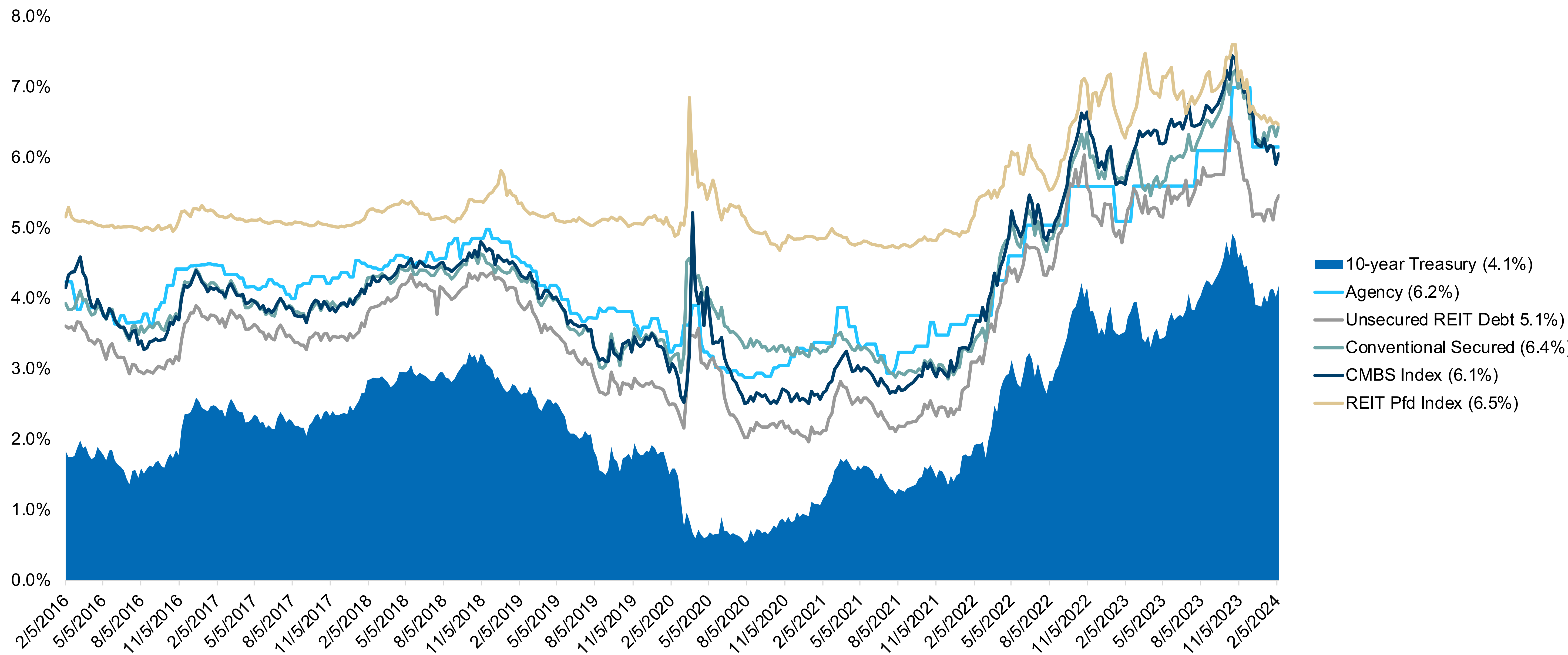


Source: Real Capital Analytics, Newmark Research as of 2/2/2024

Public Market CRE Benchmarks Rising along with Treasuries

Public market benchmarks were faster to rise there private transaction-based measures. Both through direct lending and by purchasing publicly-traded instruments, fixed income investors are now able to pick up additional yield by investing in CRE relative to corporate credit. This should attract some capital inflows from lenders with optionality, namely LifeCos. Public market measures have come back in sharply along with Treasuries and corporate bonds recently. The decline in REIT debt has been particularly dramatic

Public CRE Cost of Debt Benchmarks vs. Treasuries

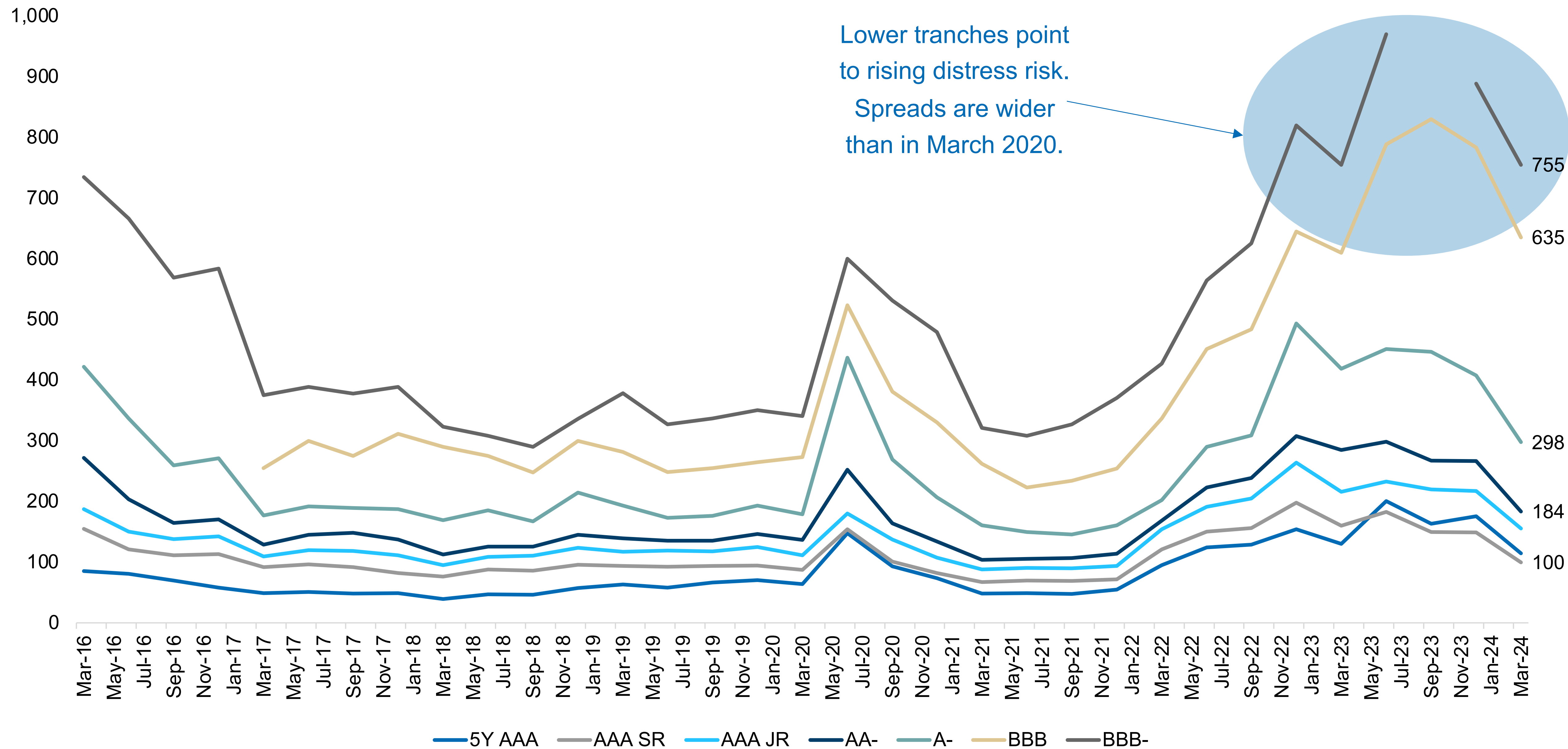


Sources: Newmark Research, Green Street as of 2/20/2024

Spreads Have Fallen Sharply, But Remain at Distressed Levels for Lower Tranches

CMBS new issue spreads have fallen alongside corporate debt over the last two months. The most secure tranche spreads are now generally within 30 bps of pre-pandemic spreads while the lower tranches continue to point to distress potential. These distressed lower tranches represent a problem for issuers, who are required to keep “skin in the game.” This alone may influence banks’ willingness to securitize.

Average CMBS Conduit New Issuance Spreads to SOFR



Source: Trepp, Newmark Research as of 2/2/2024

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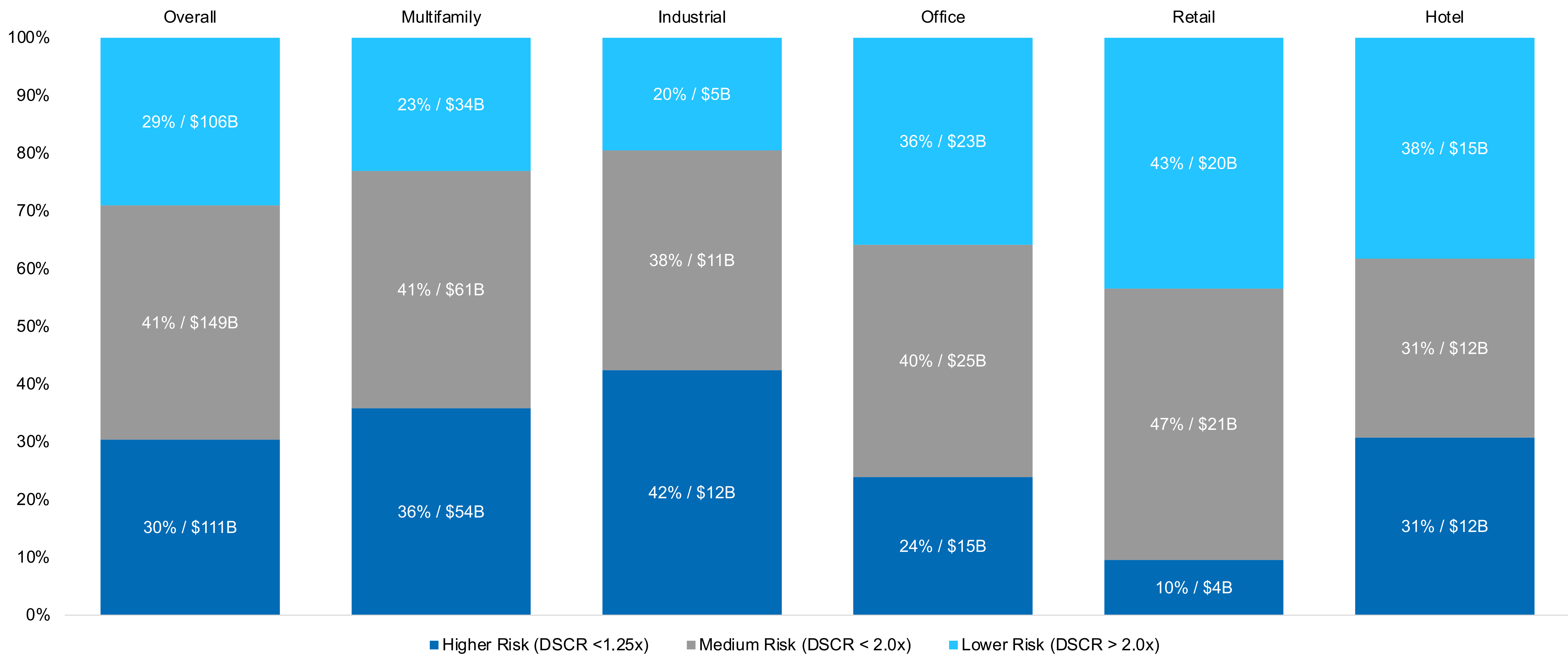
Some Loans Will Be Able to Absorb Higher Interest Costs – But Many Will Not

Even property types with strong operating fundamentals could face challenges covering new, higher interest costs. Floating rate loans on transitional product – a significant portion originated by debt funds and securitized in CRE CLO – are particularly fraught. This is largely responsible for the high portion of at-risk loans in the multifamily and industrial sectors. The securitized markets are not an isolated problem: banks engaged in a great deal of this newly risky lending. New bank regs give them a “pass” on underwater loans but not DSCRs.

DSCR Profile of Securitized CRE Debt Maturing between 2023 and 2025



Source: Trepp, Newmark Research as of 2/7/2024

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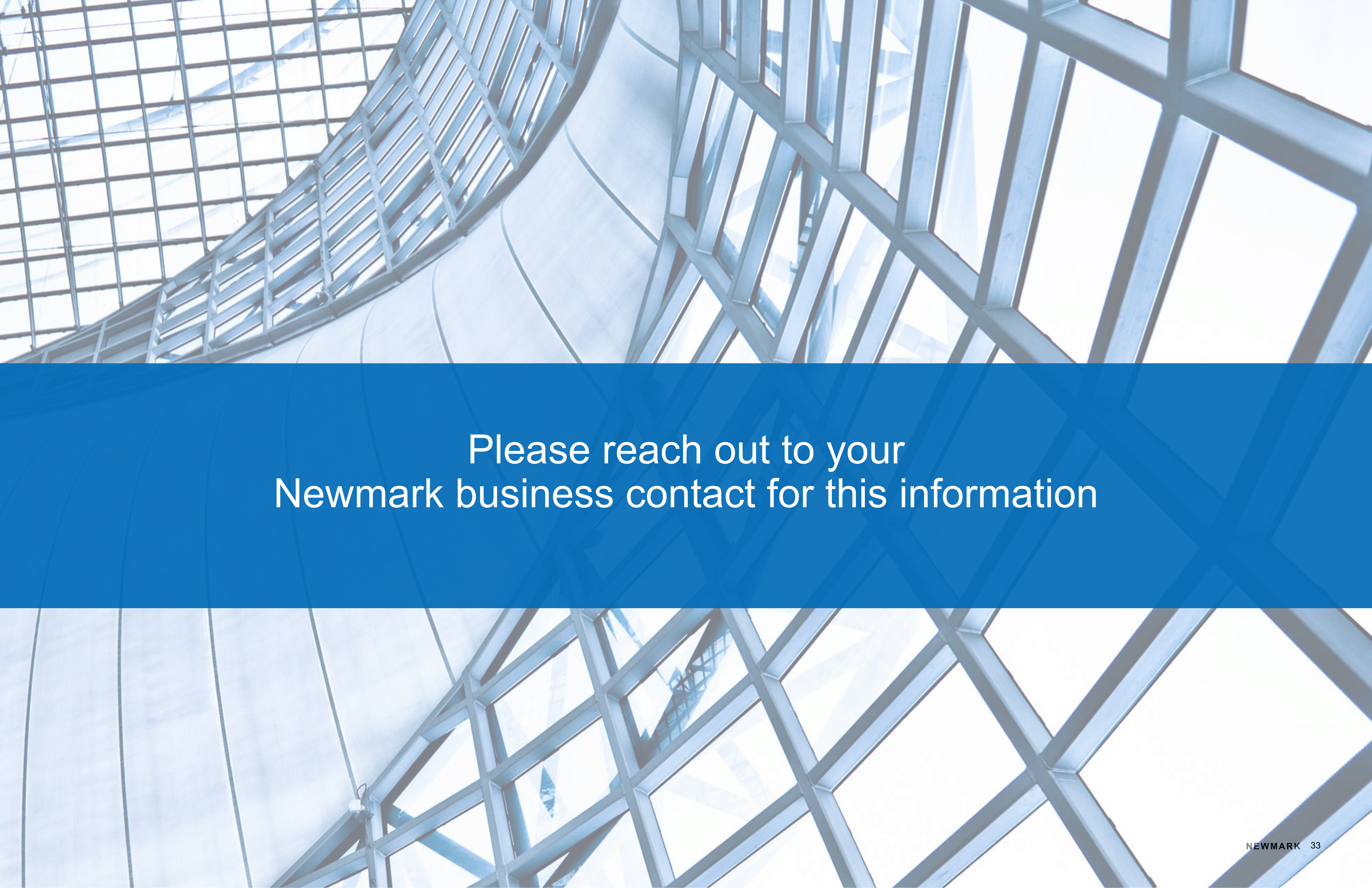

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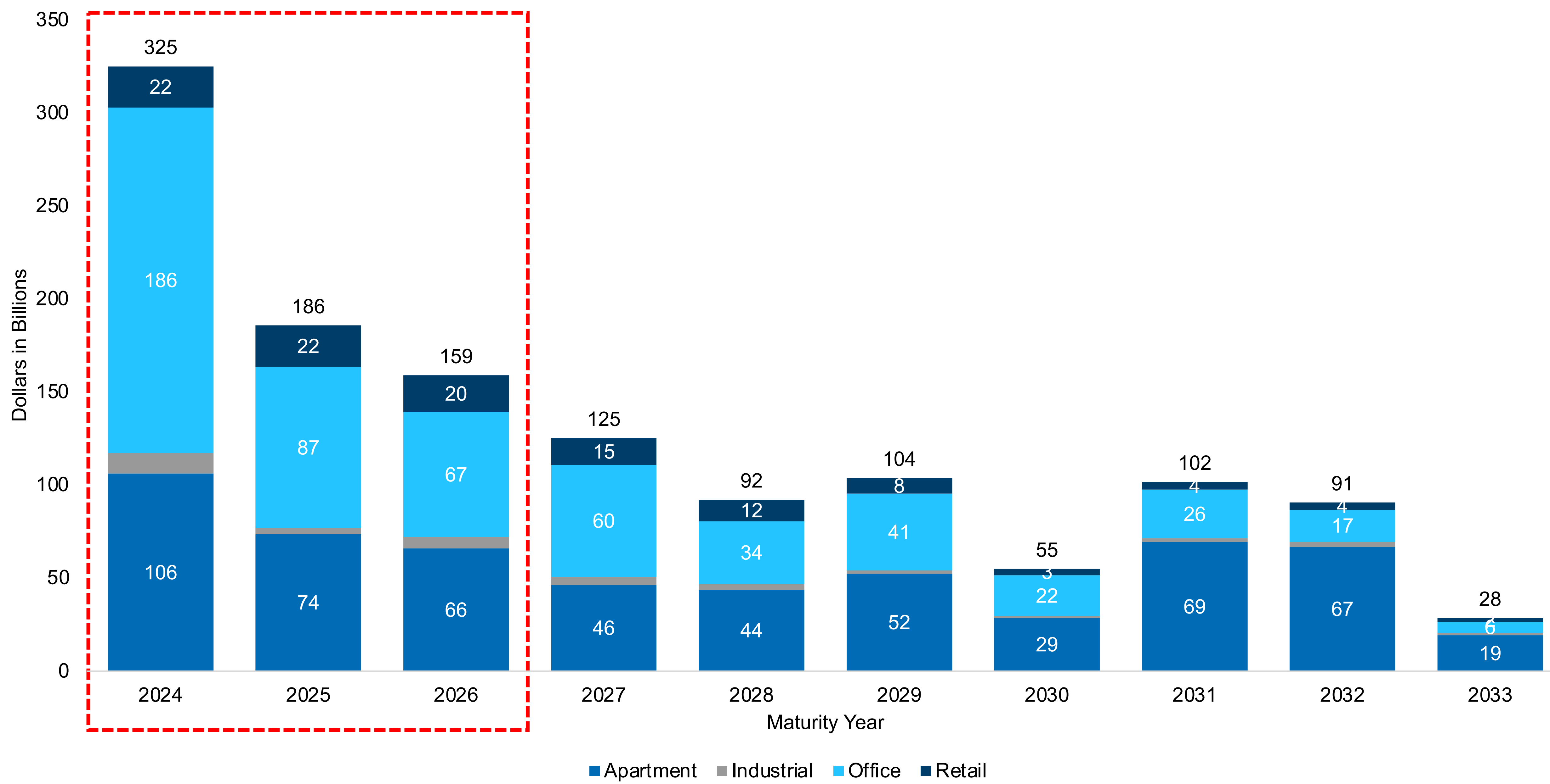
$1.3T of Outstanding CRE Debt is Potentially Troubled, $670B Maturing in ’24-’26

Combining our analysis of mark-to-market LTVs with the structure of debt maturities, we estimate the volume of debt that currently is potentially troubled.* Office and multifamily loans constitute most potentially troubled loans, particularly in the 2024-to-2026 period. The high office volume results from most loans being underwater. The distribution of LTV ratios for multifamily are more favorable overall, but the greater size of the multifamily market and the concentration of lending during the recent liquidity bubble drive high nominal exposure.

Potentially Troubled Loans by Maturity Year*



Source: Green Street, NCREIF, RCA, Trepp, MBA, Newmark Research as of 2/15/2024
*Loans with an estimated senior debt LTV of 80% or greater are potentially troubled. The loans are marked-to-market using an average of cumulative changes in the Dow Jones REIT sector price indices, REIT sector enterprise value indices and Green Street sector CPPI.

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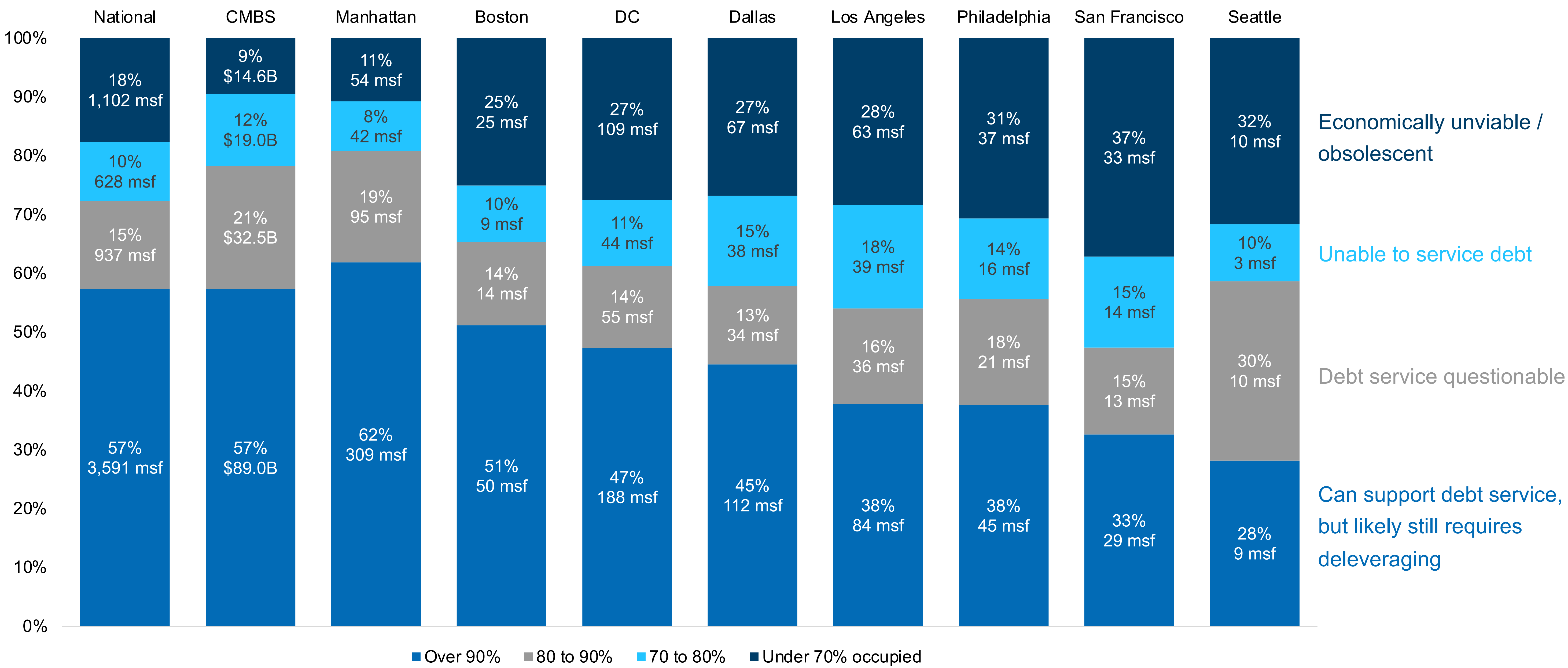
Structural Health and Impairment in the Office Sector

Significant portions of the office market are structurally impaired purely from an occupancy perspective. Debt issues will accelerate their demise. On the other hand, a great deal of offices have healthy occupancy profiles. While they may still be over-levered, there is a clear fundamental path to solvency.

Distribution of Office Vacancy

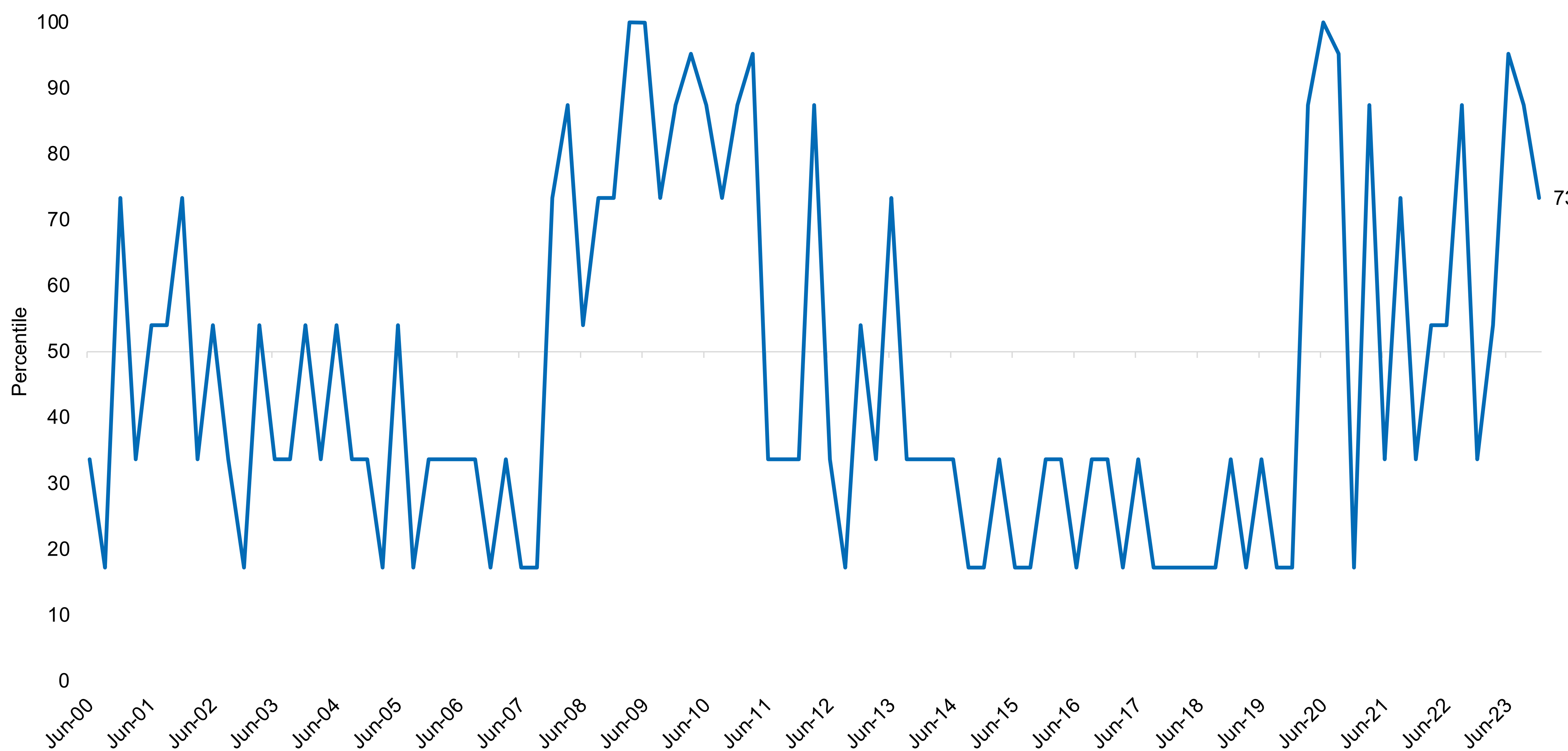


Source: Costar, Newmark Research as of 2/12/2024

Interest in Loan Sales Near Record Highs

While it is difficult to estimate the volume of loan dispositions given their opacity, interest in the topic has clearly increased, matching the levels seen in mid-2020 and during the GFC.

CRE Loan Sales Story Frequency*



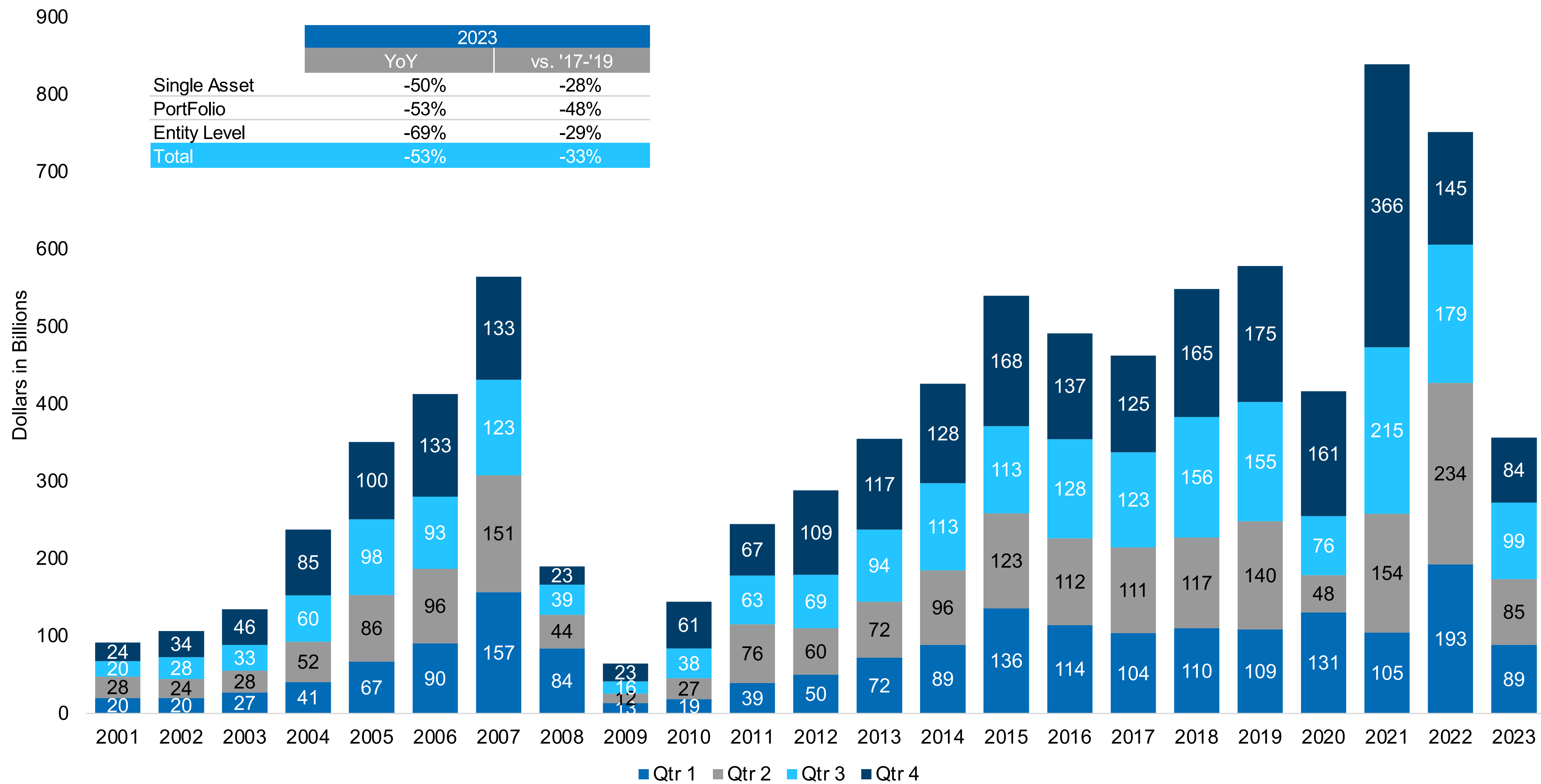
Source: Green Street, Newmark Research as of 2/7/2024
*Based on Commercial Mortgage Alert and Real Estate Alert stories that mention loan sales. Percentile calculated using on normal sampling distribution.

Equity Capital Markets

Sales Activity Slowed to Its Lowest Level Since 2011 in 4Q23

Sales declined 53% year-over-year in 2023 and negative 33% compared with the 2017-to-2019 average. Rising debt costs in 3Q23 translated into a weakening deal pipeline in 4Q23. Falling debt costs towards quarter-end doubtless helped deals close, but this will mostly not be felt until 1Q24. Rates remain at levels that suggest significant impacts to asset values and debt sustainability. **Lenders have been offering short-term extensions, which has slowed price discovery at the expense of a frozen transaction market.**

Investment Sales Volume



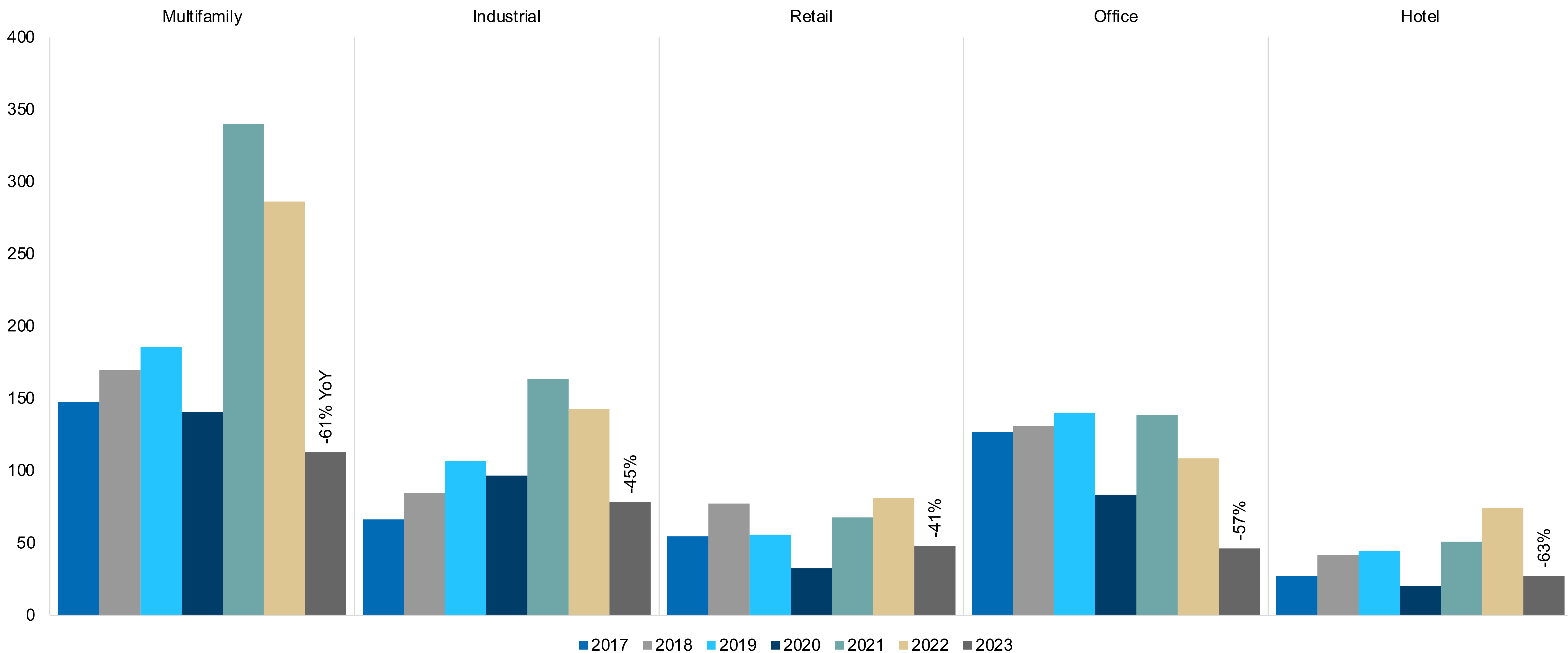
	2023	
	YoY	vs. '17-'19
Single Asset	-50%	-28%
PortFolio	-53%	-48%
Entity Level	-69%	-29%
Total	-53%	-33%

Source: RCA, Newmark Research as of 2/2/2024

Transaction Activity Fell across Major Property Sectors in 2023

Hotels, multifamily and office properties declined most sharply in 2023. The industrial and retail sectors were hardly spared but outperformed on the margin. Compared to the 2017-to-2019 period, industrial sales are down just 9% while multifamily, retail and hotel sales are down around 30%. Not surprisingly, office stands out, down 65%.

Investment Sales Volume

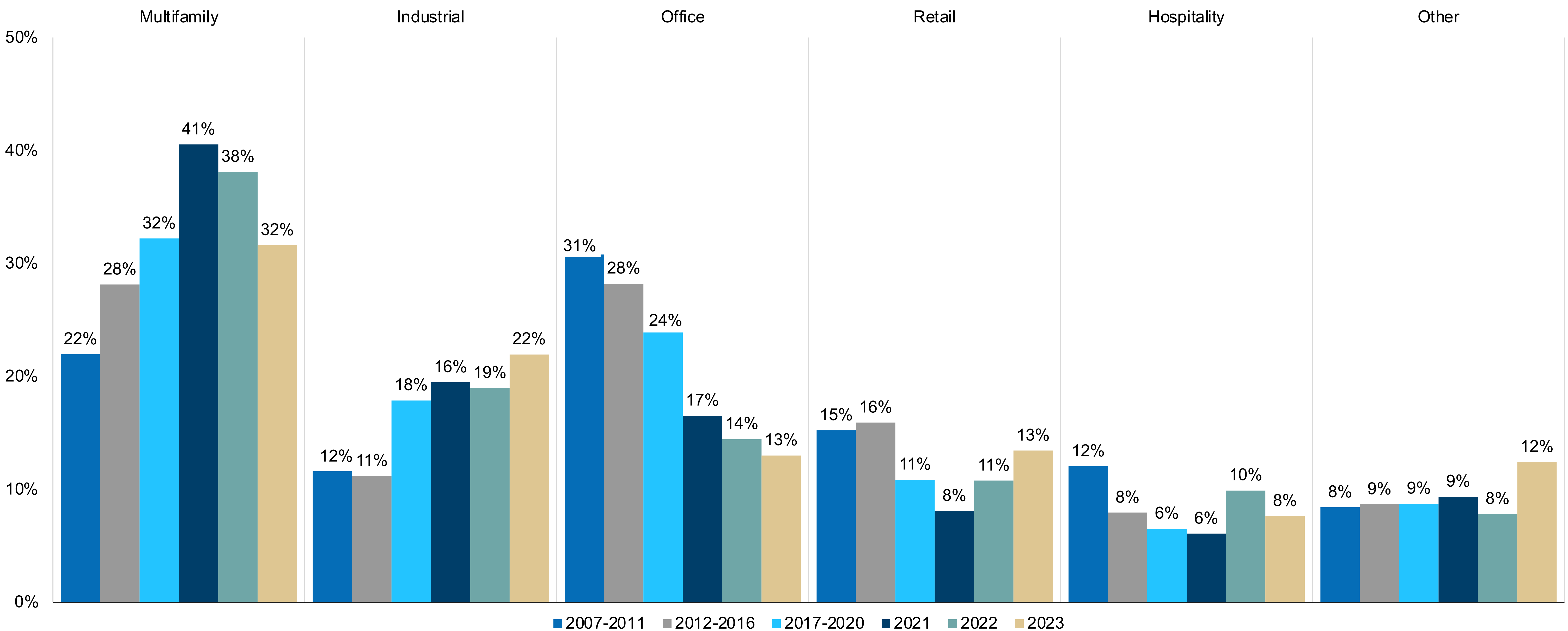


Source: RCA, Newmark Research as of 2/2/2024

Investor Allocations in Flux in 2023

Multifamily allocation dropped sharply year-to-date following two years of highly elevated share. Office allocation continued to fall. The star performers are industrial, retail and "other" – all of which are above their share in the 2017-to-2020 period. Industrial assets were inflated during the pandemic liquidity bubble, but they have been better supported by NOI growth compared with other bubble sectors. This helps account for diminished sales but growing share. Retail is now reclaiming a higher share after years of disfavor.

Investor Allocation over Time

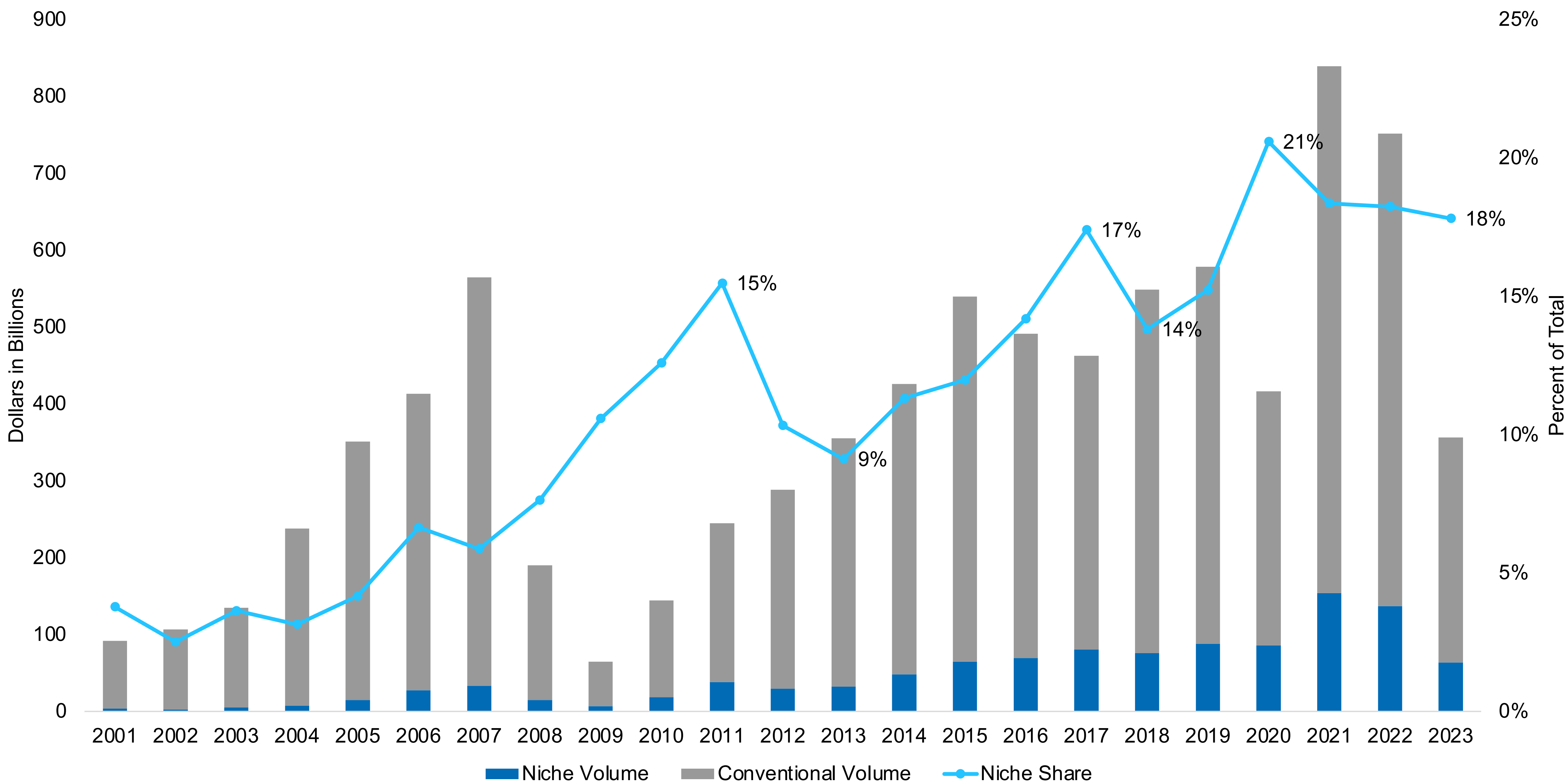


Source: Real Capital Analytics, Newmark Research as of 2/2/2024
Note: "other" includes development sites, senior housing and nursing care, self storage, parking and manufactured housing.

Niche Sector Volumes Contracted 54% Year-over-Year in 2023

Niche investment categories, such as life science, student housing, cold storage etc., saw investor interest increase significantly in 2020 to 2022, driving sales volume to $153 billion in 2021, or 18% of total transaction volume. 2022 was also a strong year for niche investment, both in dollar and share terms. Niche asset sales weakened sharply in 2023 – down 54% year-over-year. The niche asset share fell slightly from 18.2% to 17.8% in 2023 but remains above any year prior to 2020.

Investment Sales Volume

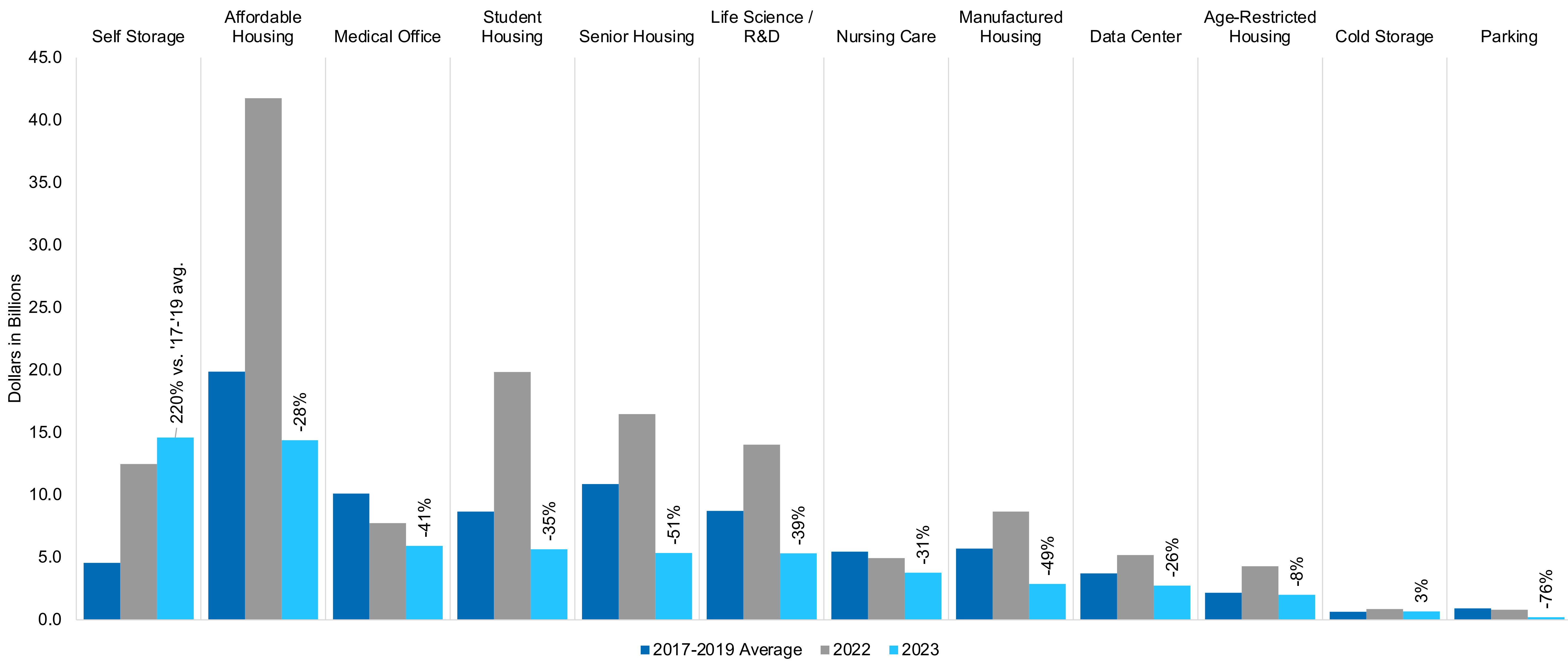


Source: RCA, Newmark Research as of 2/2/2024

Niche Asset Sales Broadly below Pre-Pandemic Levels through 3Q23

Sales contracted year-over-year across most niche asset sectors in 2023. More significantly, sales also contracted compared to the pre-pandemic baseline. Self-storage was the exception, achieving record volume in 2023. Niche housing sectors and life science pulled back sharply following historic trading volumes in 2022. The same is true of life science. Cold storage, data centers and nursing care have been somewhat more resilient both year-over-year and compared to pre-pandemic, though volumes are small in absolute terms.

Investment Sales Volume

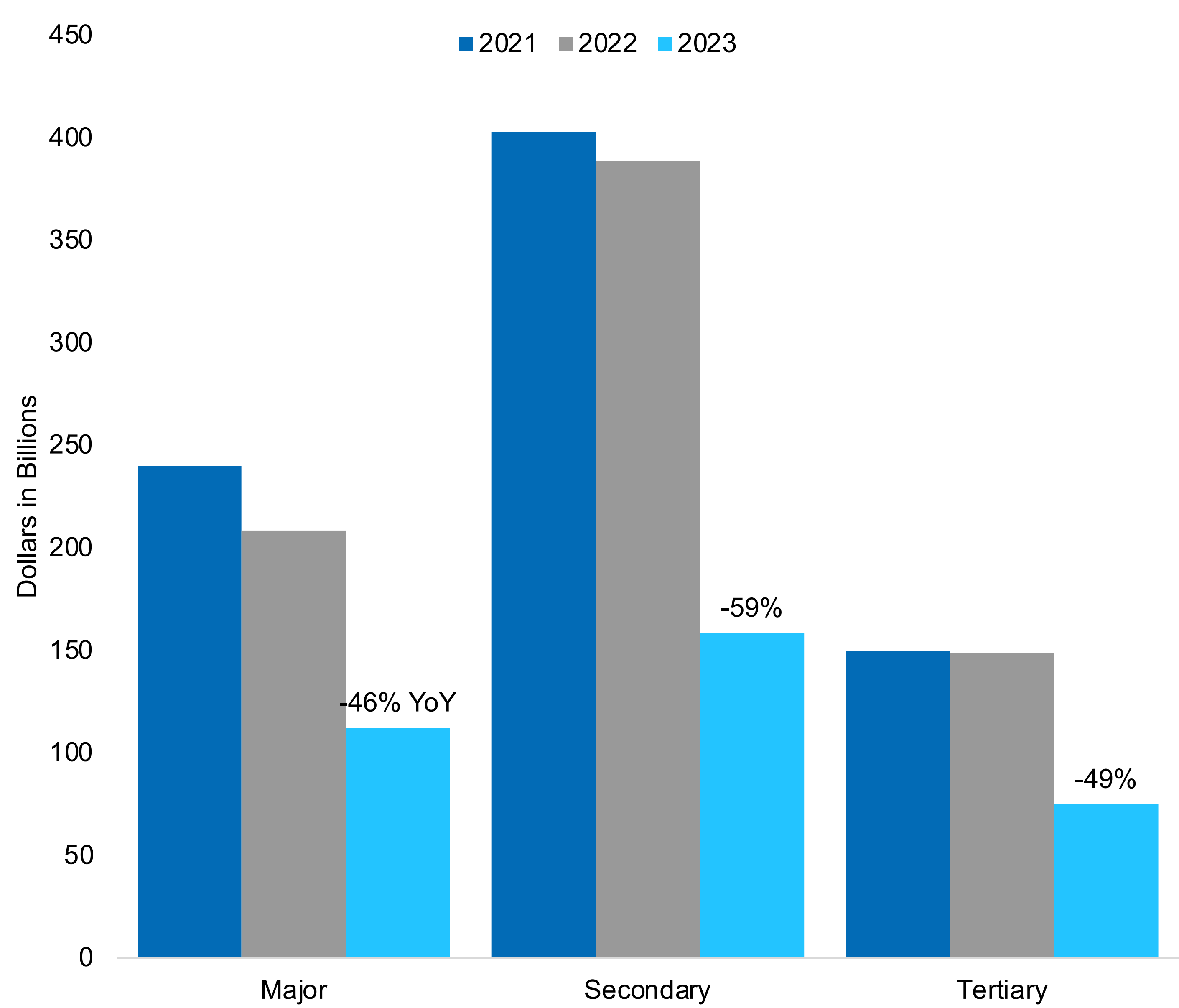


Source: RCA, Newmark Research as of 2/2/2024

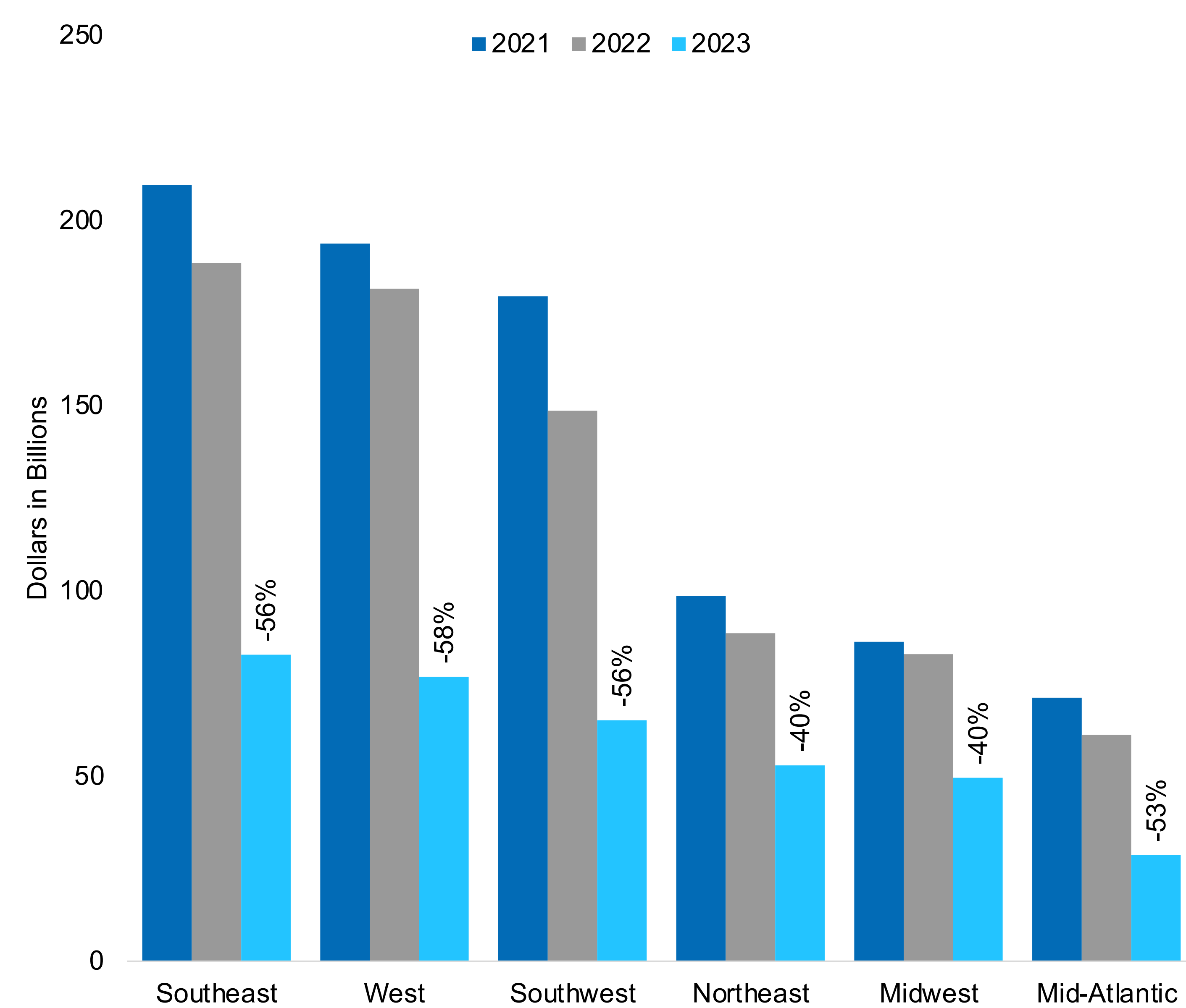
Sales Volume Continues to Fall Sharply across Market Tiers and Regions

Against this negative backdrop, major and tertiary markets have been moderately less impacted. The West and Southeast regions were the most liquid overall, while the Midwest and Northeast contracted least year-over-year.

Investment Sales Volume by Market Tier



Investment Sales Volume by Region

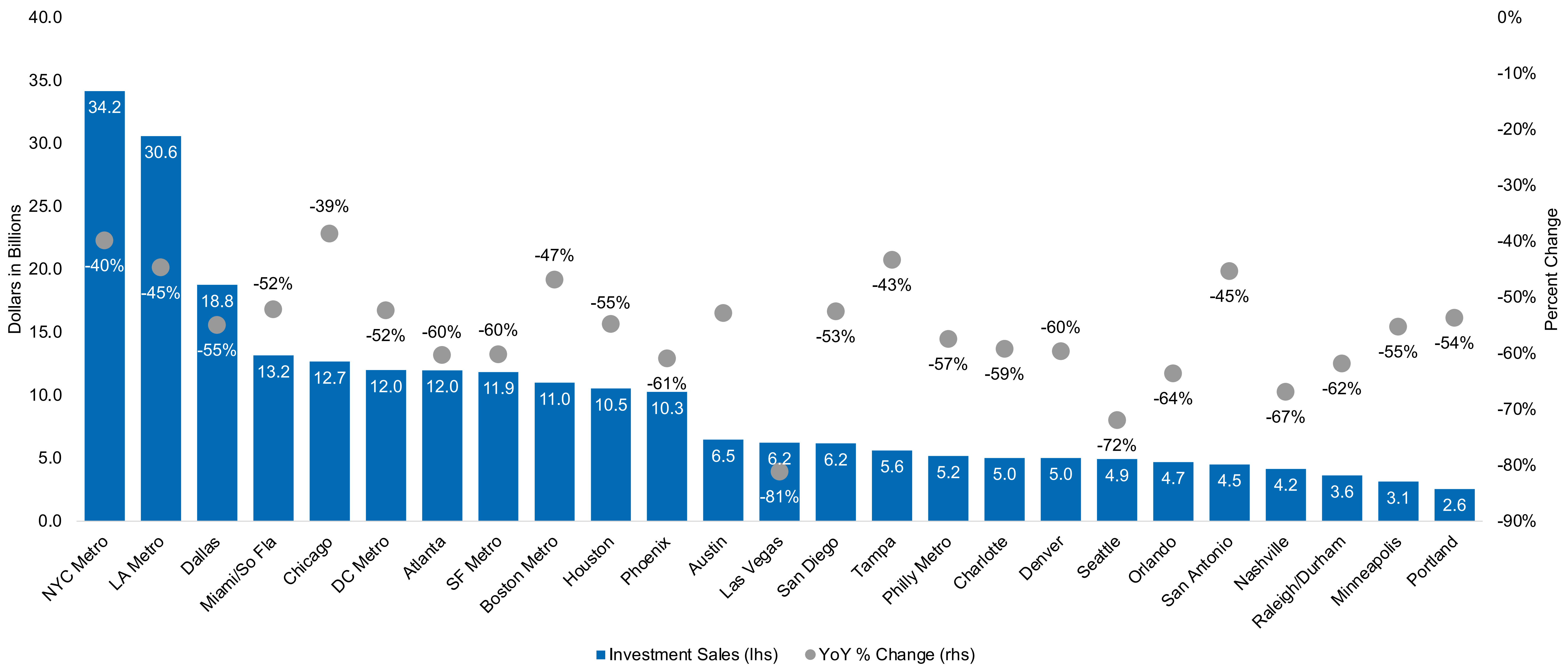


Source: RCA, Newmark Research as of 2/2/2024

Top United States Markets by Investment Sales Volume

NYC Metro and LA Metro were the top markets by investment volume in the US in 2023. While volumes were down year-over-year in all the top 25 markets, Chicago, LA Metro, NYC Metro, Tampa and San Antonio experienced lesser but still severe reductions in activity. In contrast, Las Vegas, Seattle and Nashville volumes fell even more sharply than in other markets.

Top 25 Metro Markets by 3Q23 Year-to-Date Sales Volume

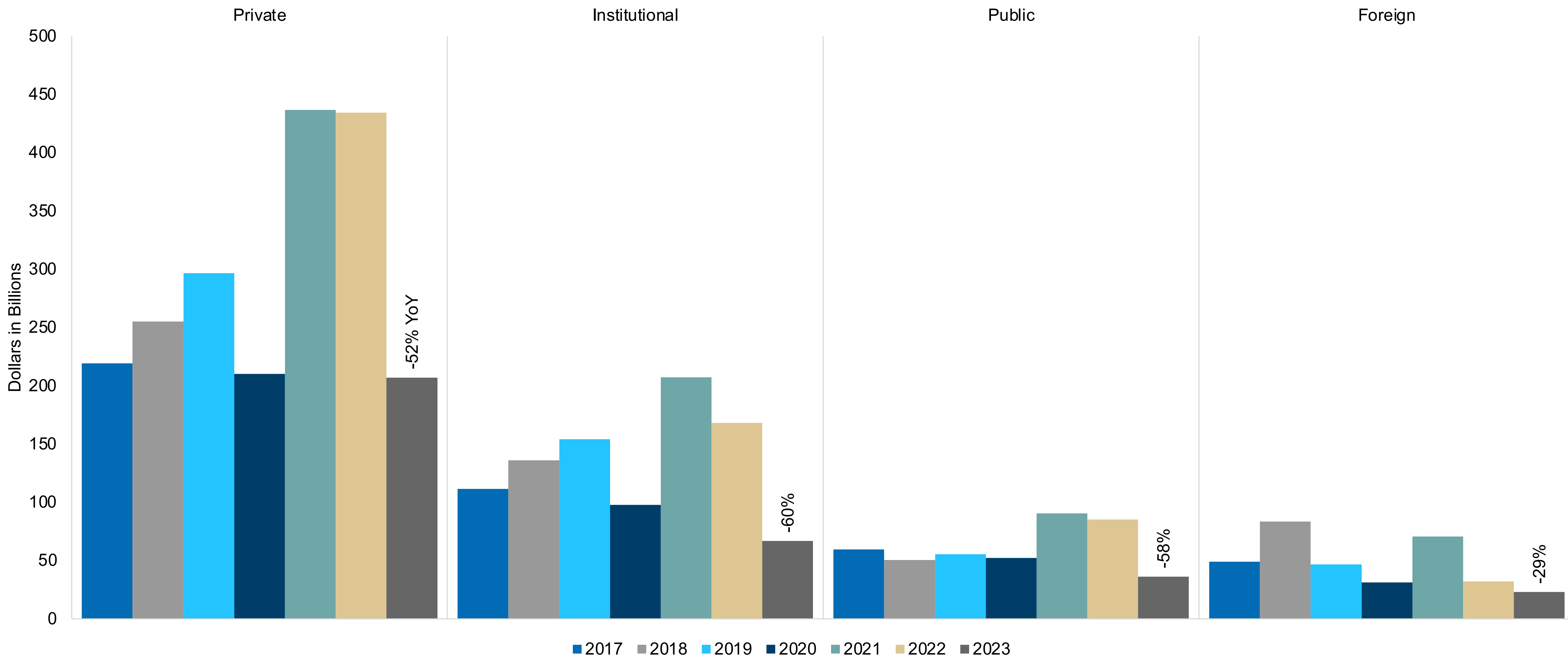


Source: RCA, Newmark Research as of 2/2/2024
Note: excludes tertiary markets from ranking.

Acquisitions Down Sharply across Investor Groups

Private capital remains the most active segment, accounting for 58% of acquisitions. Institutions deployed 32% less capital in 2023 than they did in 2020. REIT investment was similarly inactive. Foreign investment declined less than other sectors year-over-year but is down more than any other sector compared to pre-pandemic.

Acquisitions Volume by Capital Group

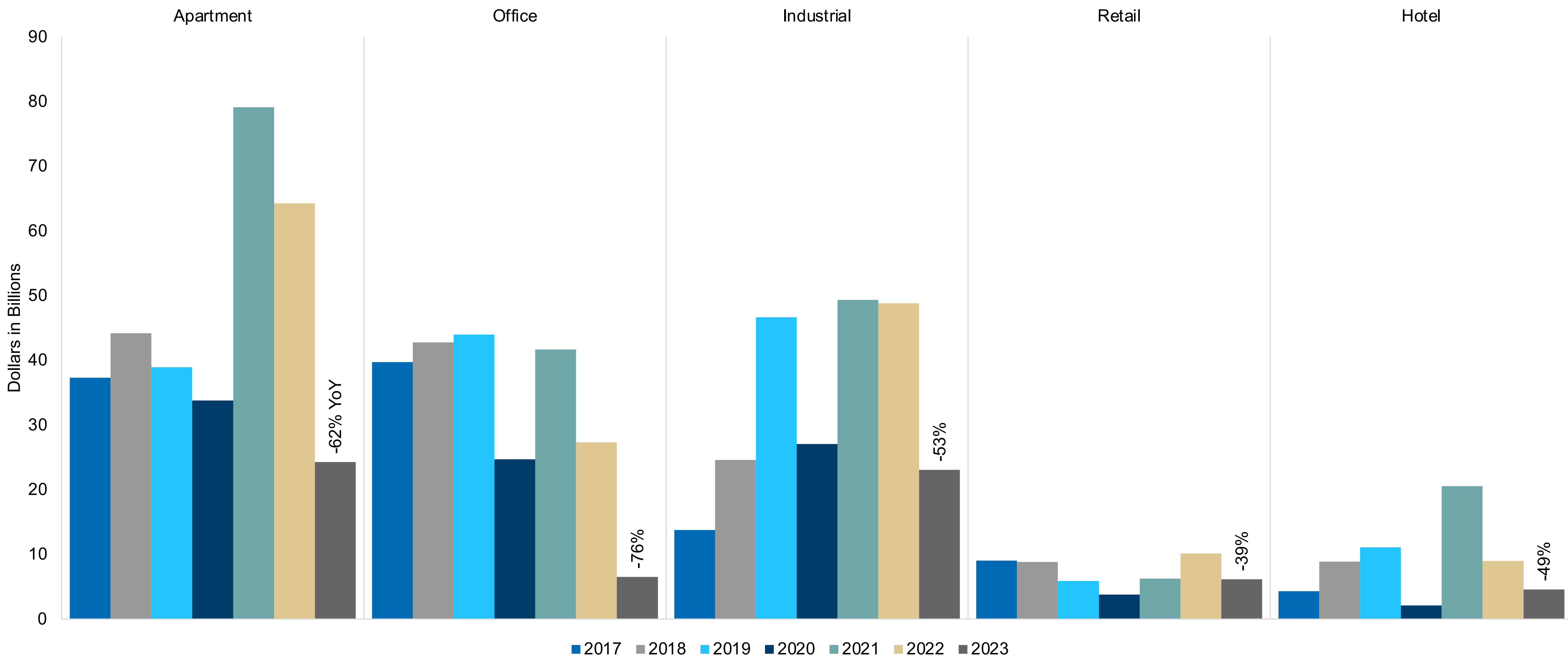


Source: RCA, Newmark Research as of 2/2/2024

Institutions Have Pulled Back on Investment across Property Sectors

Institutional acquisitions of office properties have collapsed, down 76% year-over-year and 85% compared with pre-pandemic. Apartment investment is down sharply both year-over-year and versus pre-pandemic (-40%). Industrial acquisitions were down sharply as well but the comparison with pre-pandemic is less severe. The same is true of retail.

Institutional Acquisitions Volume



Source: RCA, Newmark Research as of 2/2/2024

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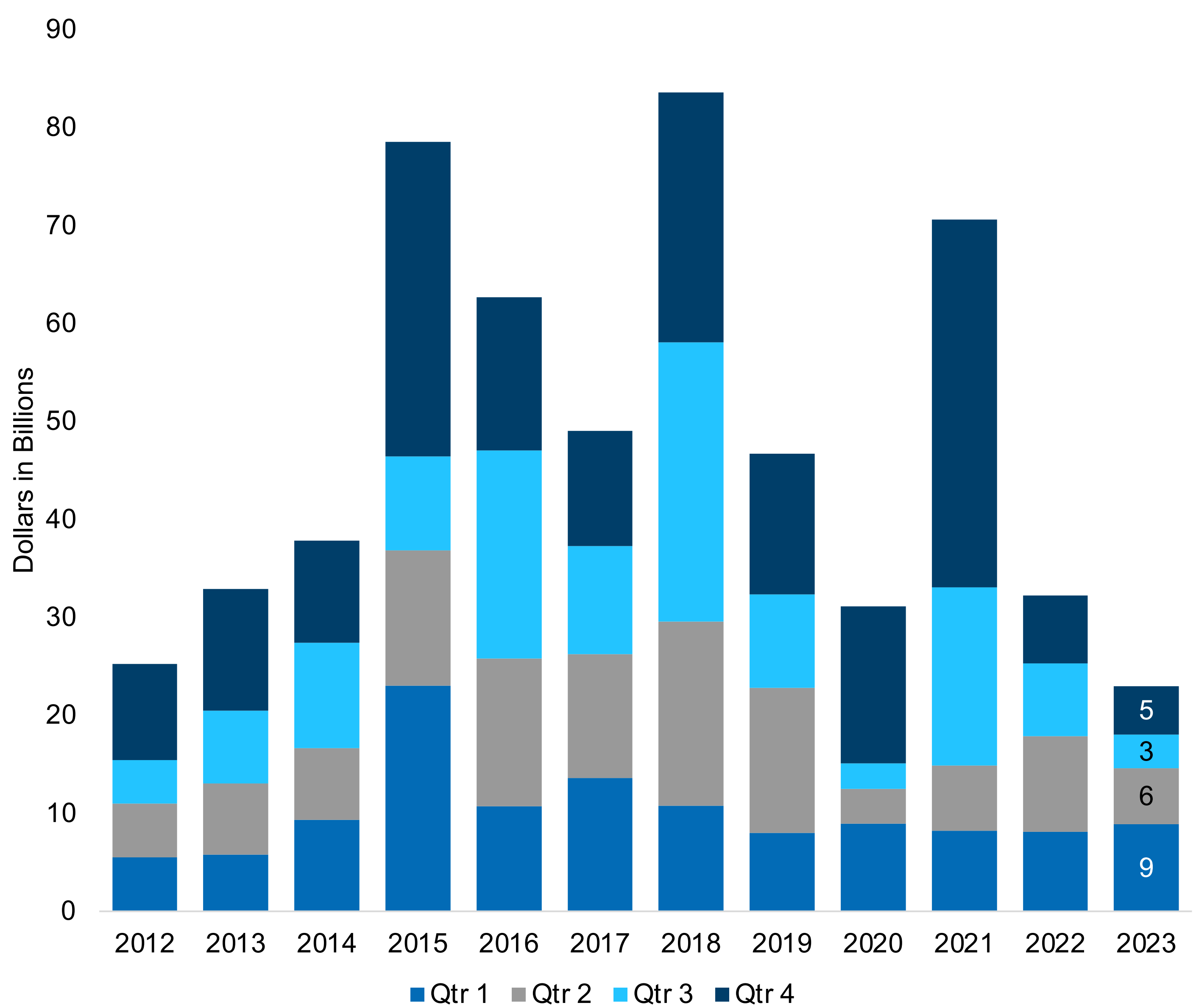
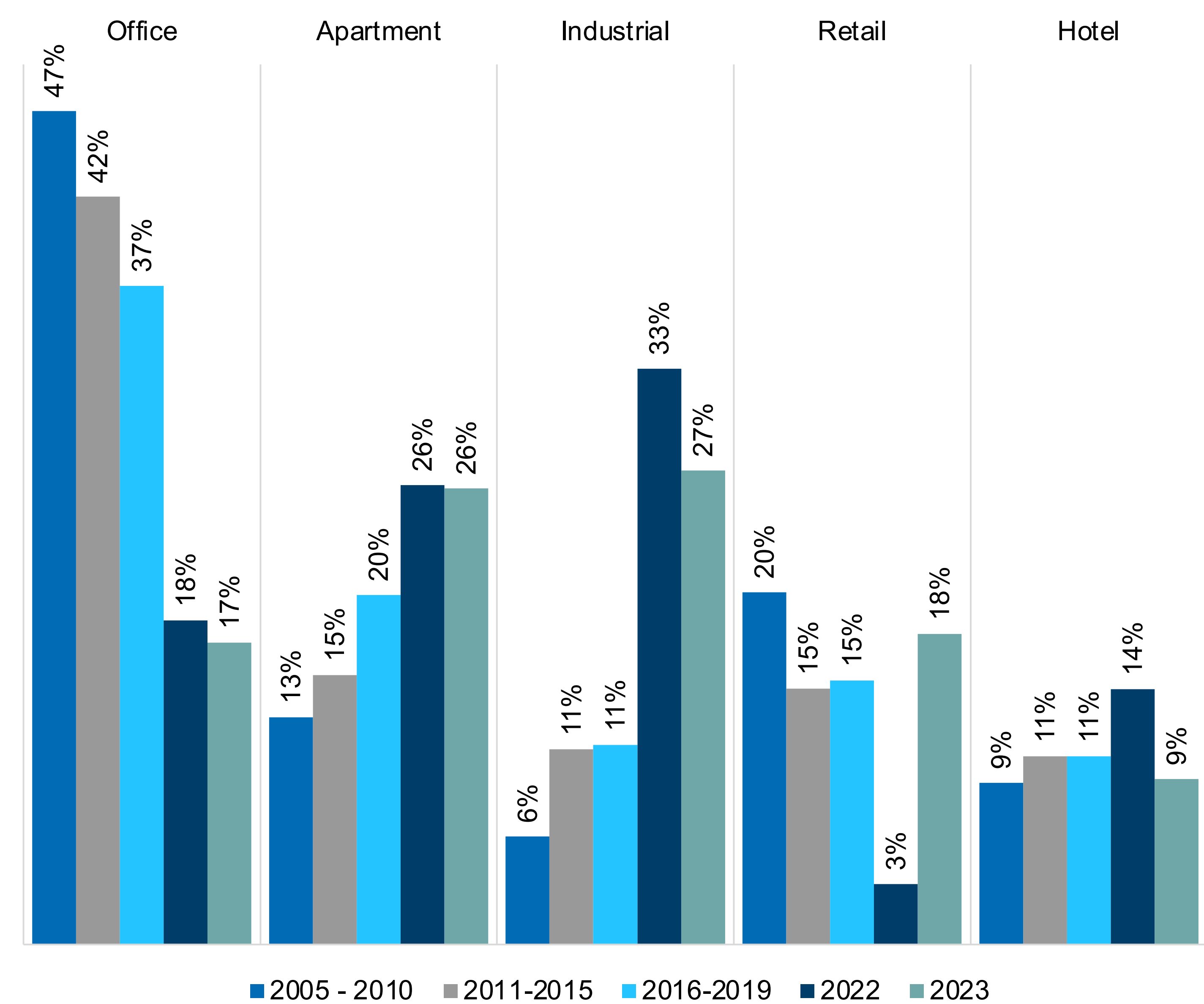
Foreign Investment Declined 29% Year-over-Year in 2023

Foreign investment picked up slightly in 4Q23, but it was still the slowest fourth quarter since 2010. For the full year, volume was the lowest since 2011. Nonetheless, the foreign share of acquisitions rose from 4.3% in 2022 to 6.4% in 2023. The office share of investment has continued to decline. The apartment share remained steady and well above pre-pandemic levels. The industrial share pulled back but also remains historically elevated. Finally, the retail share exploded upwards due to Singaporean investment.

Cross-Border Acquisitions Volume



Allocation of Cross-Border Acquisitions

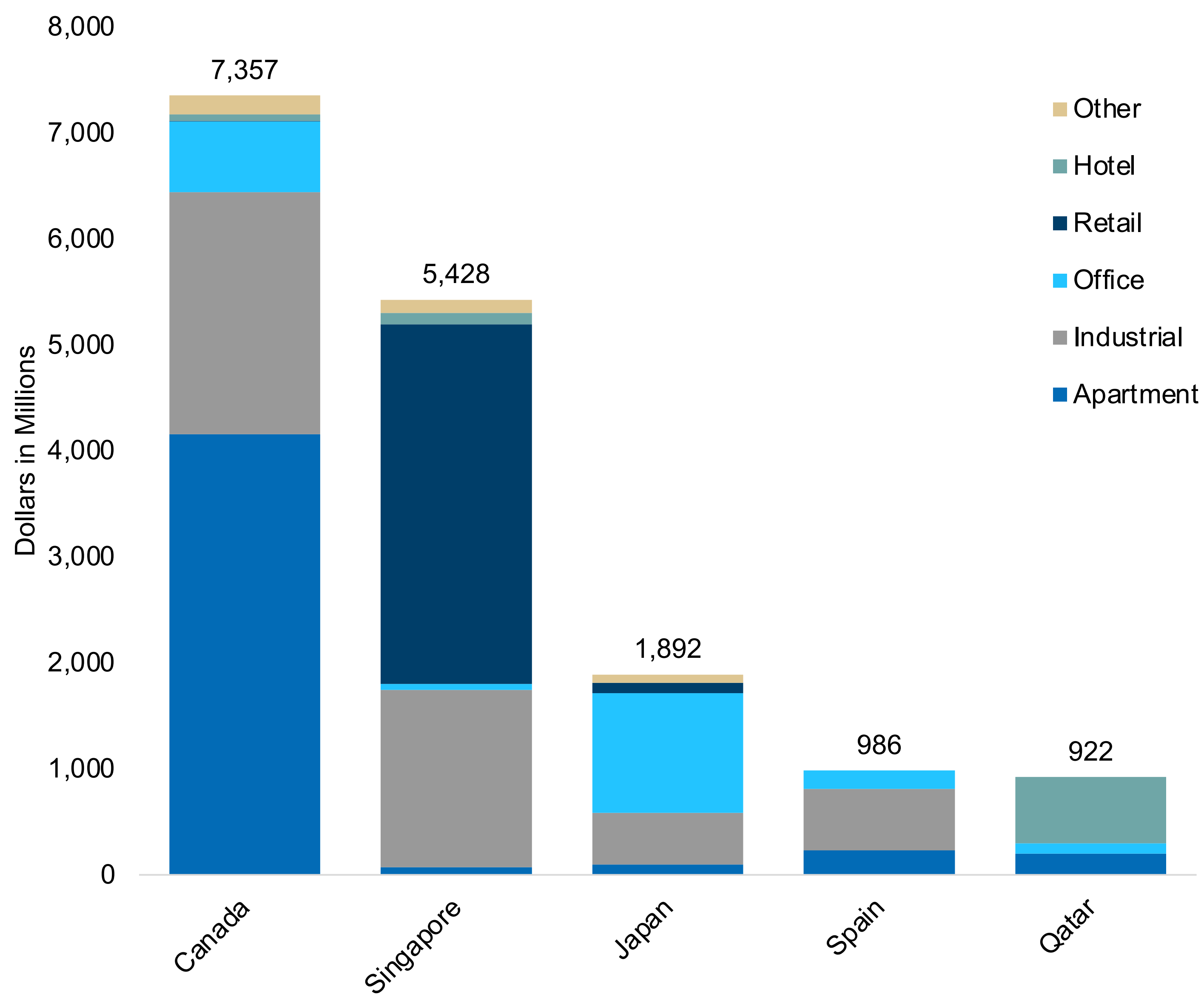


Source: Newmark Research, Real Capital Analytics as of 2/2/2024

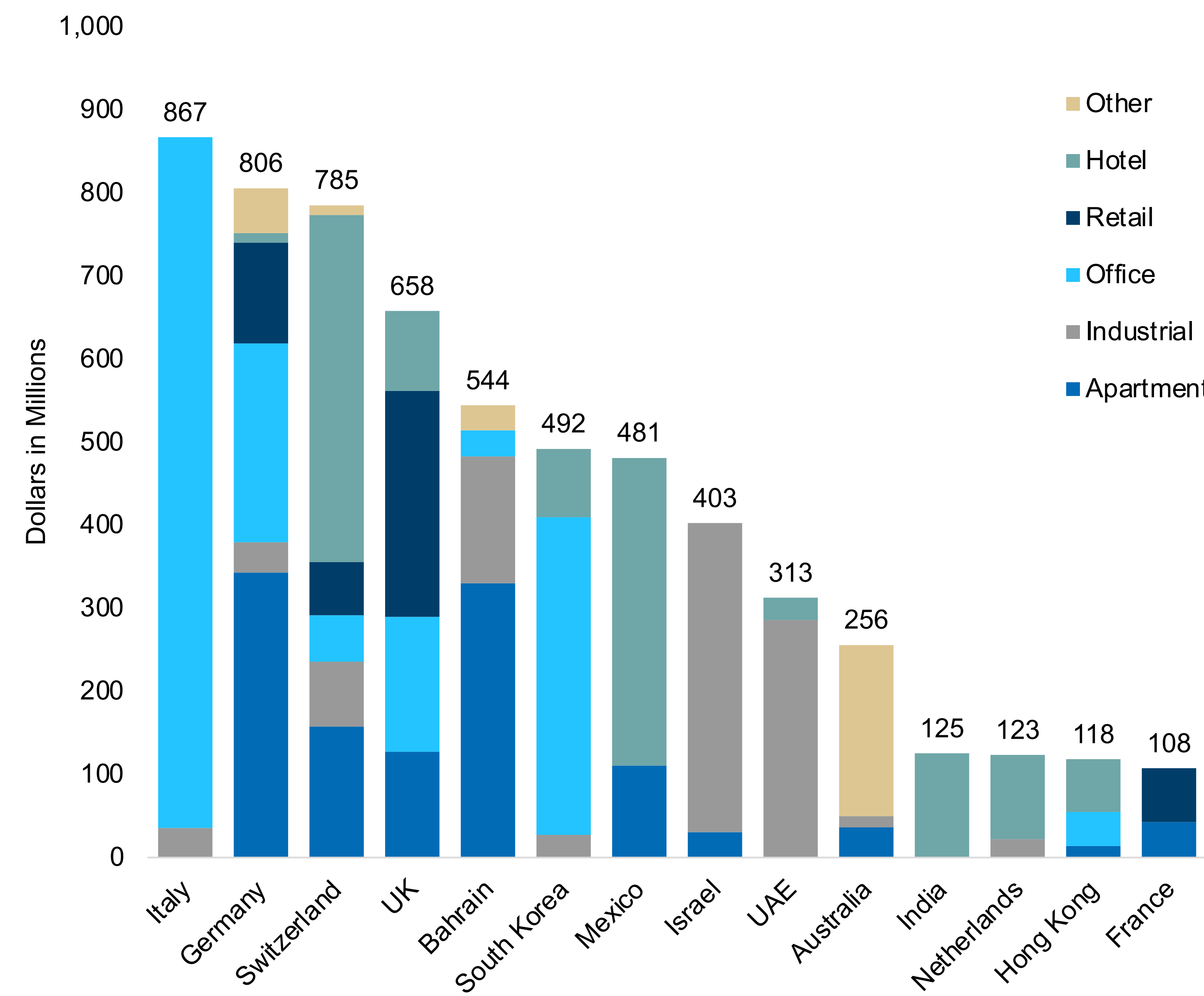
Sources of Inbound Capital

Canada, per usual, led inbound investment in 2023 with a pronounced focus on industrial and multifamily investment. Singapore followed, accounting for essentially all of the spike in retail acquisitions. After Singapore came Japan, Spain, Qatar and Italy. Japan, Italy and South Korea stood apart in having relatively high office investment.

Top Five Sources of Inbound Capital: 2023 YTD



Remaining Sources of Inbound Capital: 2023 YTD



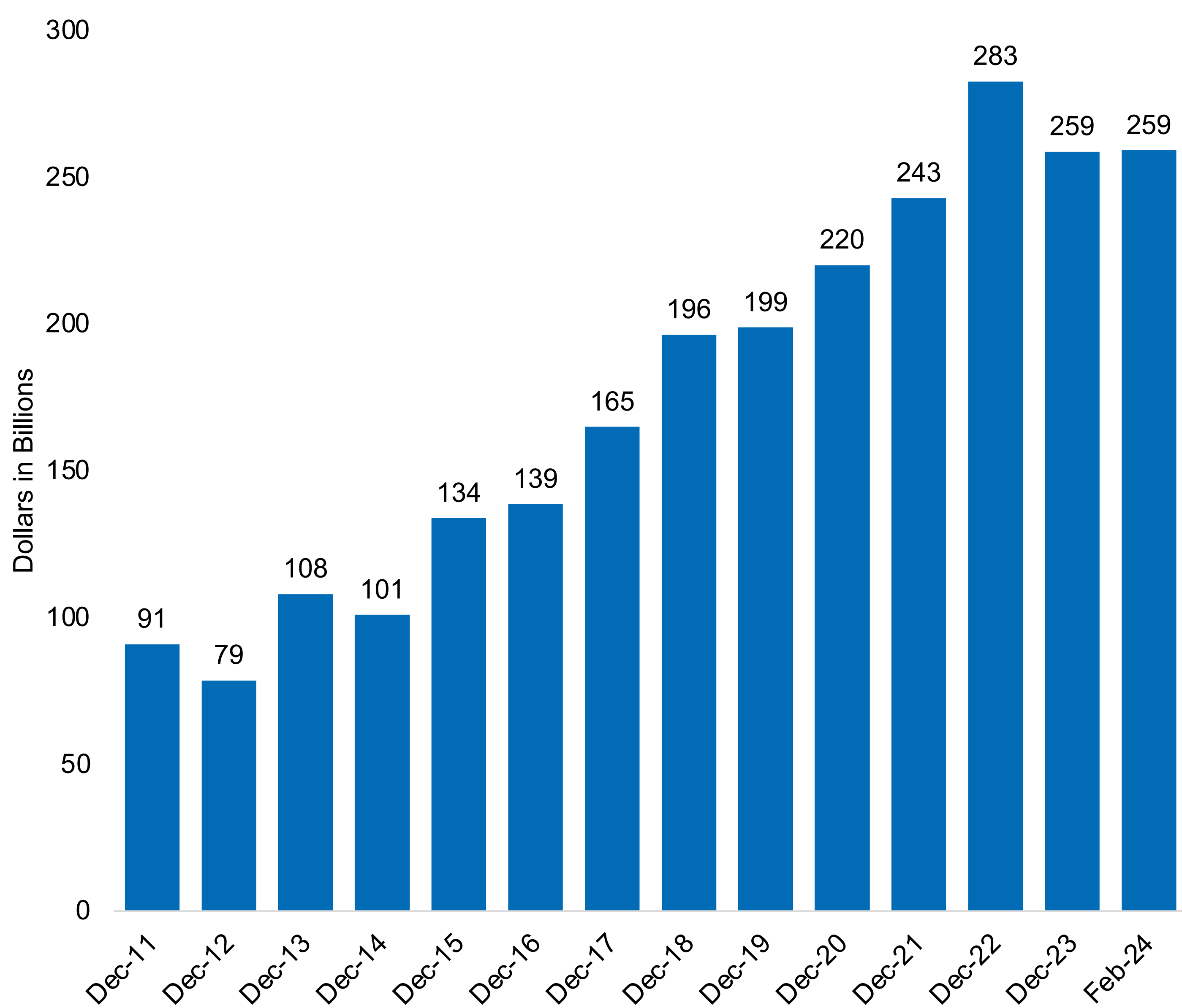
Source: RCA, Newmark Research as of 2/2/2024

Supply of Capital

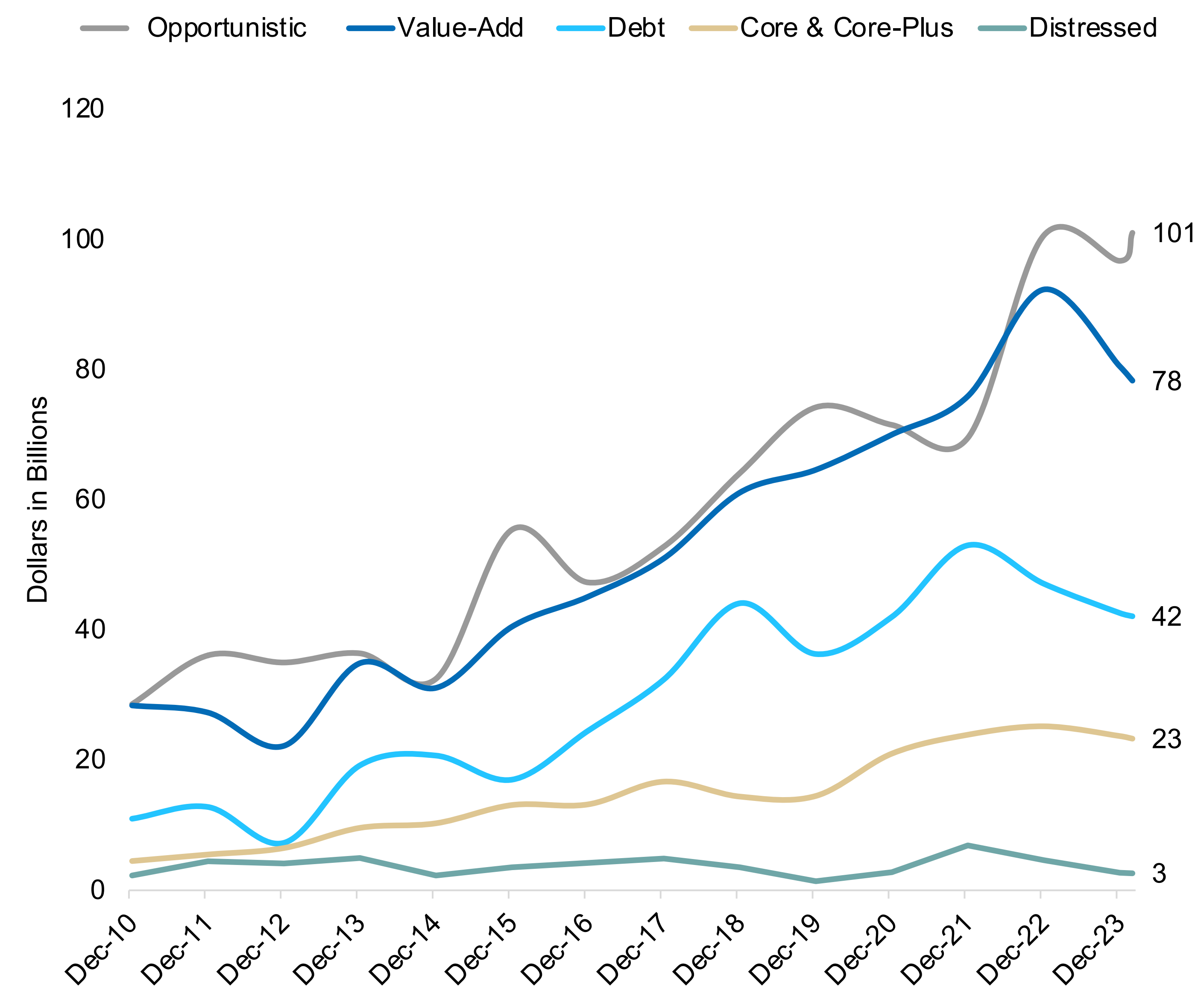
Private Equity Dry Powder Has Declined from 2022 Peak, But Still Elevated Overall

Dry powder at closed-end funds is 8% below its December 2022 peak, reflecting declines in dry powder at value-add and debt funds. Opportunistic fund vehicles are also off the peak but by a smaller margin. New fundraising declined sharply from $199B in 2022 to $148B in 2023. Capital deployment was also weak as funds have husbanded their powder in anticipation of new, attractive entry points. Less positively, some funds will find it necessary to use dry powder to bail-in investments made in early years.

Dry Powder – Closed-End Funds



Dry Powder by Strategy*



Source: Newmark Research, Preqin as of 2/2/2024
*Not shown: Fund of funds, co-investments, and secondaries strategies

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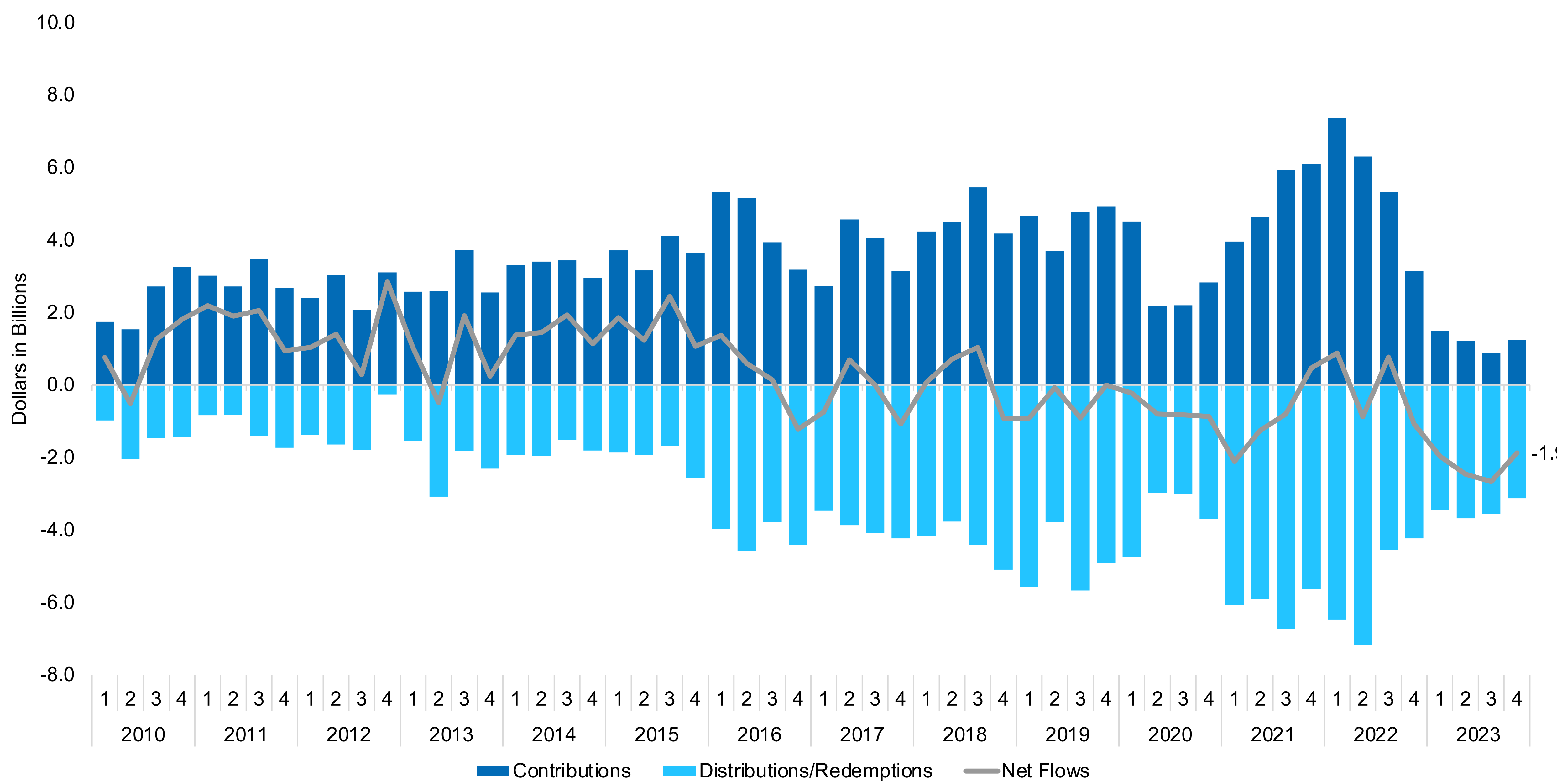
ODCE Fund Flows Remain under Pressure

ODCE funds continued to hemorrhage cash for the fifth consecutive quarter in 4Q23. Net cash flow improved on the margin due to a small uptick in contributions and weaker distributions/redemptions. Anecdotally, many funds continue to face redemptions queues while new fundraising is hampered by above-market portfolio valuations. ODCE funds are gradually taking marks, which should help ameliorate this issue over time. The risk for the funds is that they could be hampered in taking advantage of new opportunities as they arise.

ODCE Fund Flows

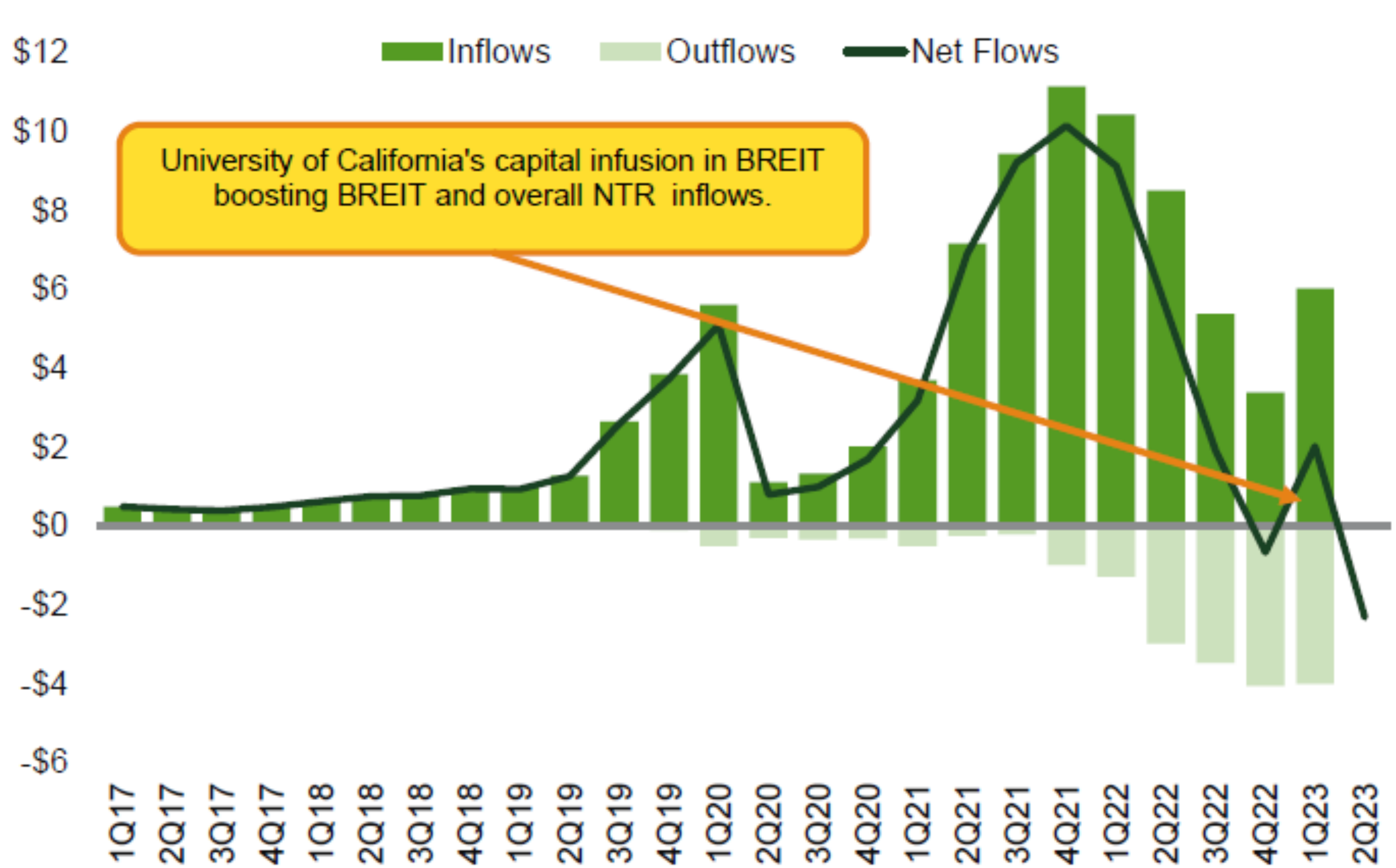


Source: Newmark Research, NCREIF as of 2/2/2024

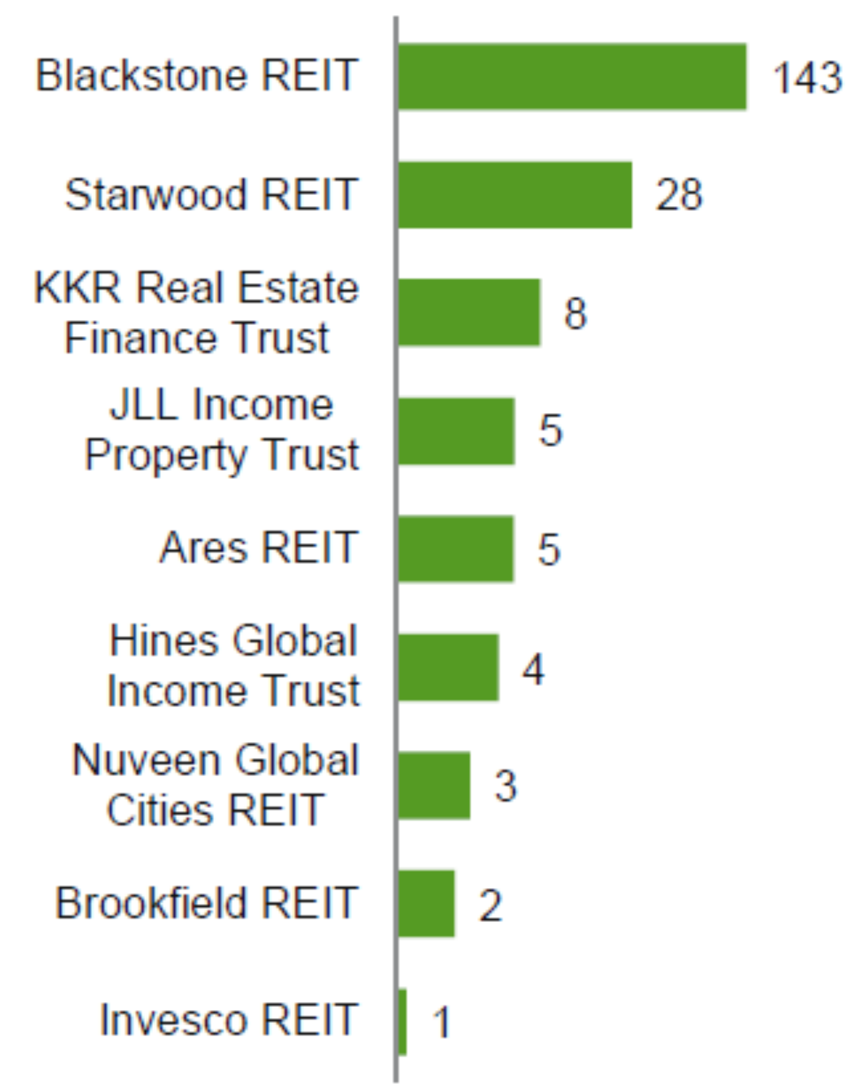
Net Capital Flows into Non-Traded REITs Slowing Sharply

New commitments have declined as redemptions have gained momentum, creating negative pressure on net flows. Cash flows will remain negative for as long as appraised values remain at a premium to market values. The current situation essentially offers redeeming shareholders an arbitrage.

Non-Traded REIT Net Flows ($B)



Non-Traded REIT Asset Value ($B)

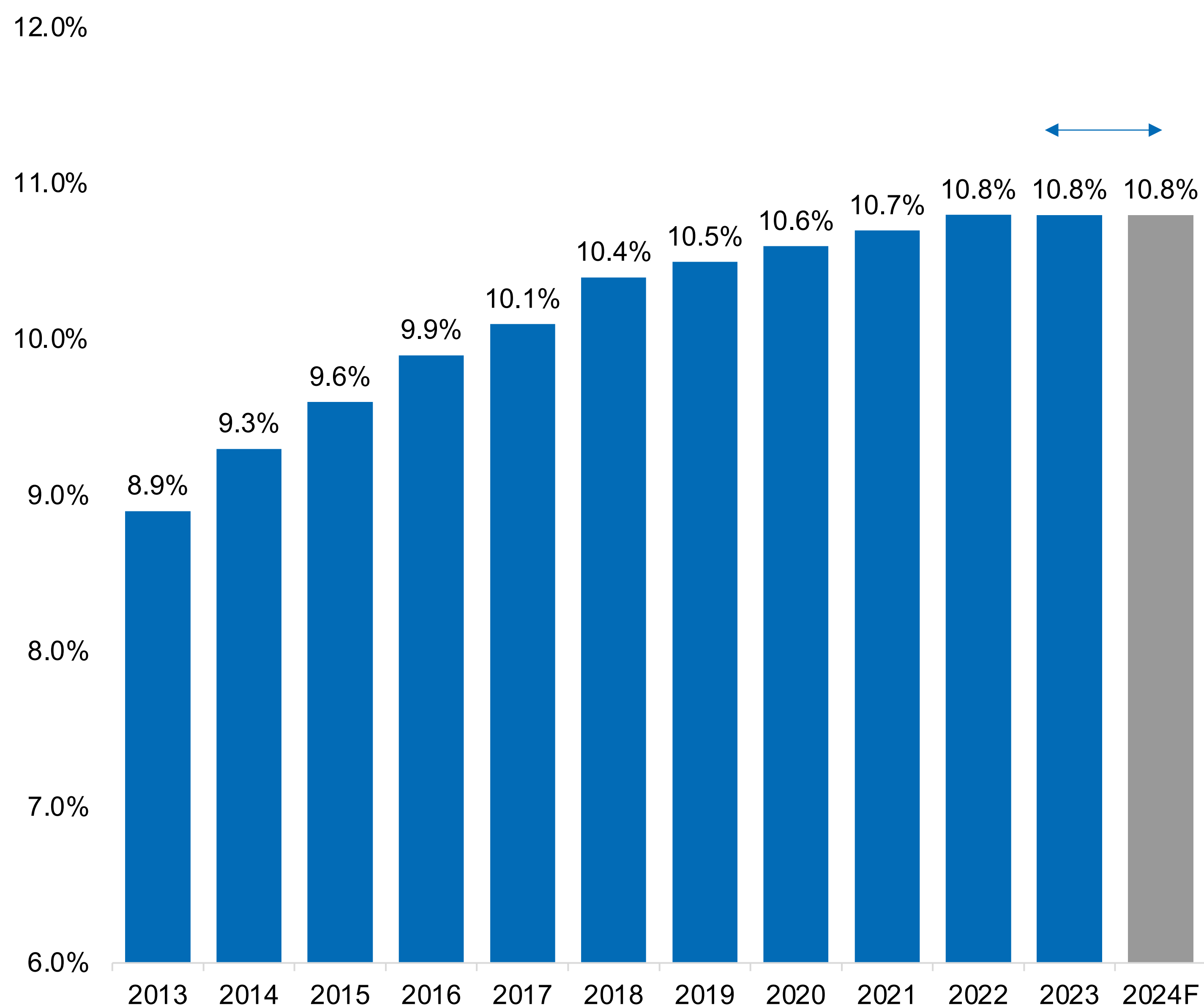


Sources: Newmark Research, Green Street FlowTracker Report as of 8/7/2023

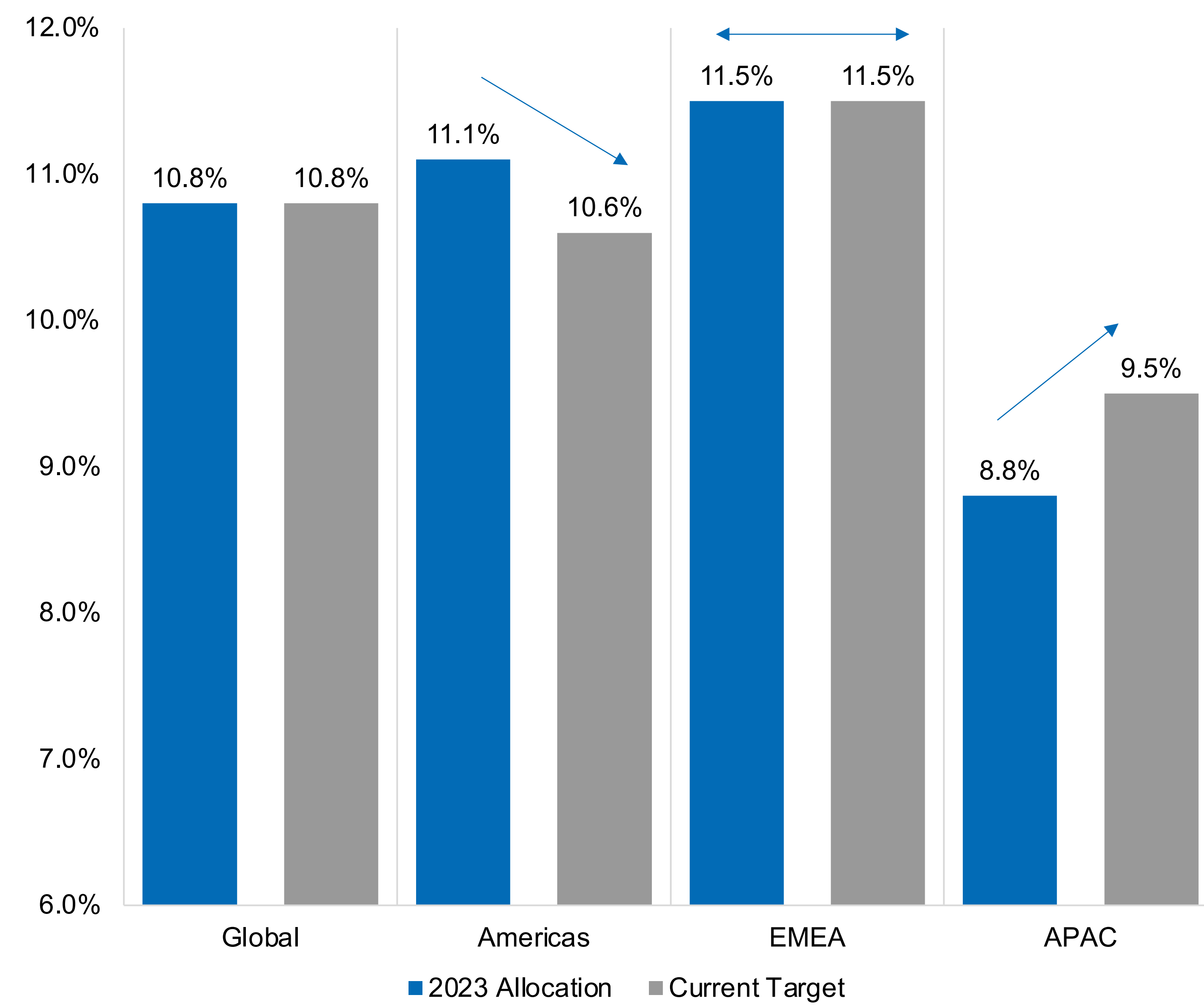
Institutional Allocations Approaching Stabilization after a Decade of Increase

When Hodes-Weill, a consultancy, surveyed 175 global institutions with $10.2 trillion in AUM, they found that: 1) globally institutions aim to hold their real estate allocations steady and that they have closed a heretofore persistent gap between actual and target allocations; 2) there is regional nuance with institutions in the Americas now above their targets and APAC institutions still below. Overall, this represents a deterioration in the outlook and curtails the prospect for a significant rotation of capital into the sector.

Target Allocation to Real Estate, All Institutions



2022 Actual vs. Target Allocation by Region of Institution



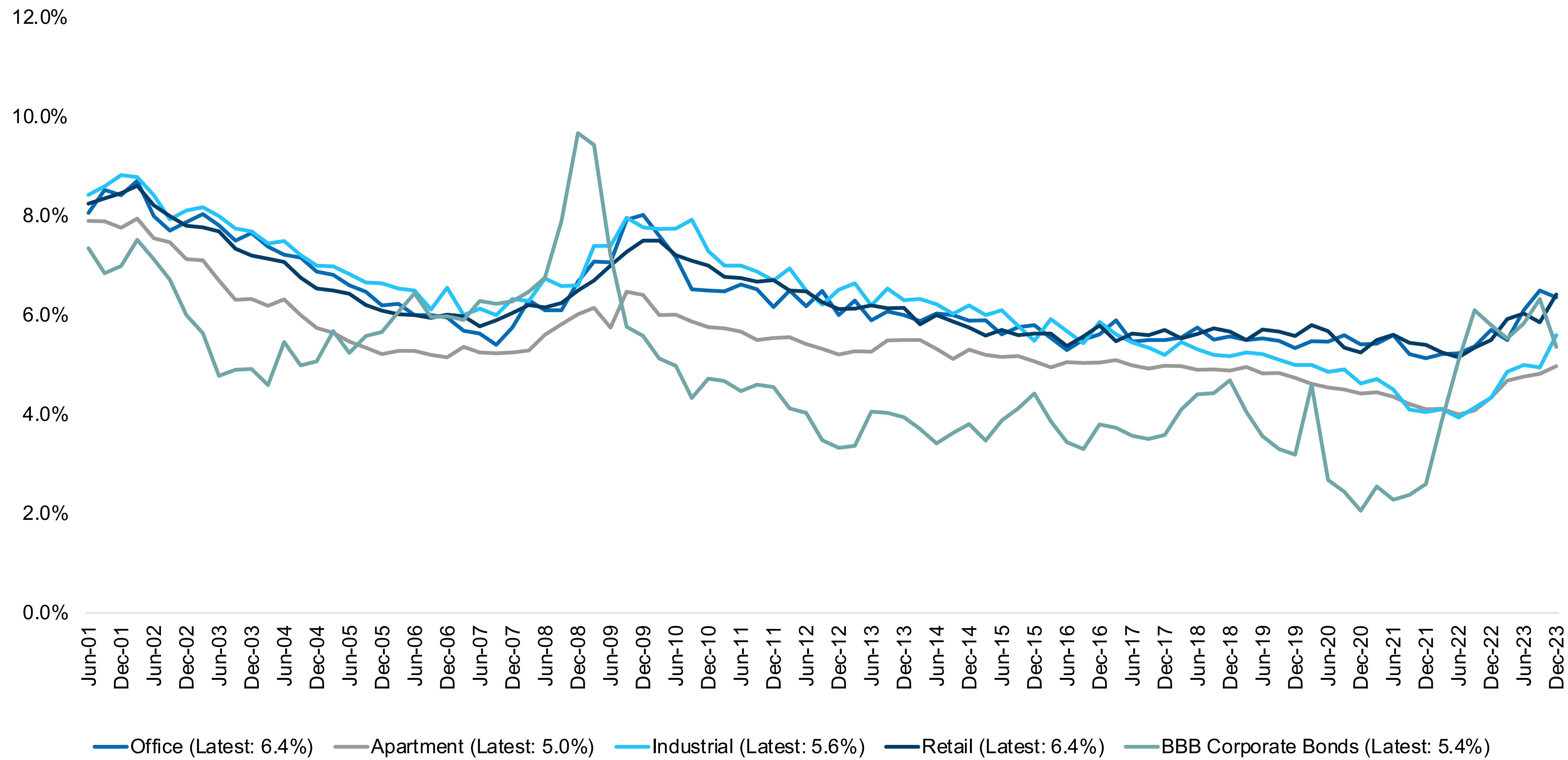
Source: Hodes-Weill Institutional Real Estate Allocations Monitor November 2023, Newmark Research

Pricing and Returns

Transaction Cap Rates Continued Their Upward Trend in 4Q23

Cap rates face upward pressure from rising debt costs and higher yields on alternatives to CRE investments – both of which are proxied here by BBB corporate bonds. Long-term Treasury yields fell in the fourth quarter of 2023 and corporate bond spreads compressed, amplifying the effect. This removed some but by no means all the upward pressure on cap rates.

Top Quartile Transaction Cap Rate*



Source: Real Capital Analytics, Federal Reserve Bank of St. Louis, Moody's as of 2/6/2024
*Quarterly

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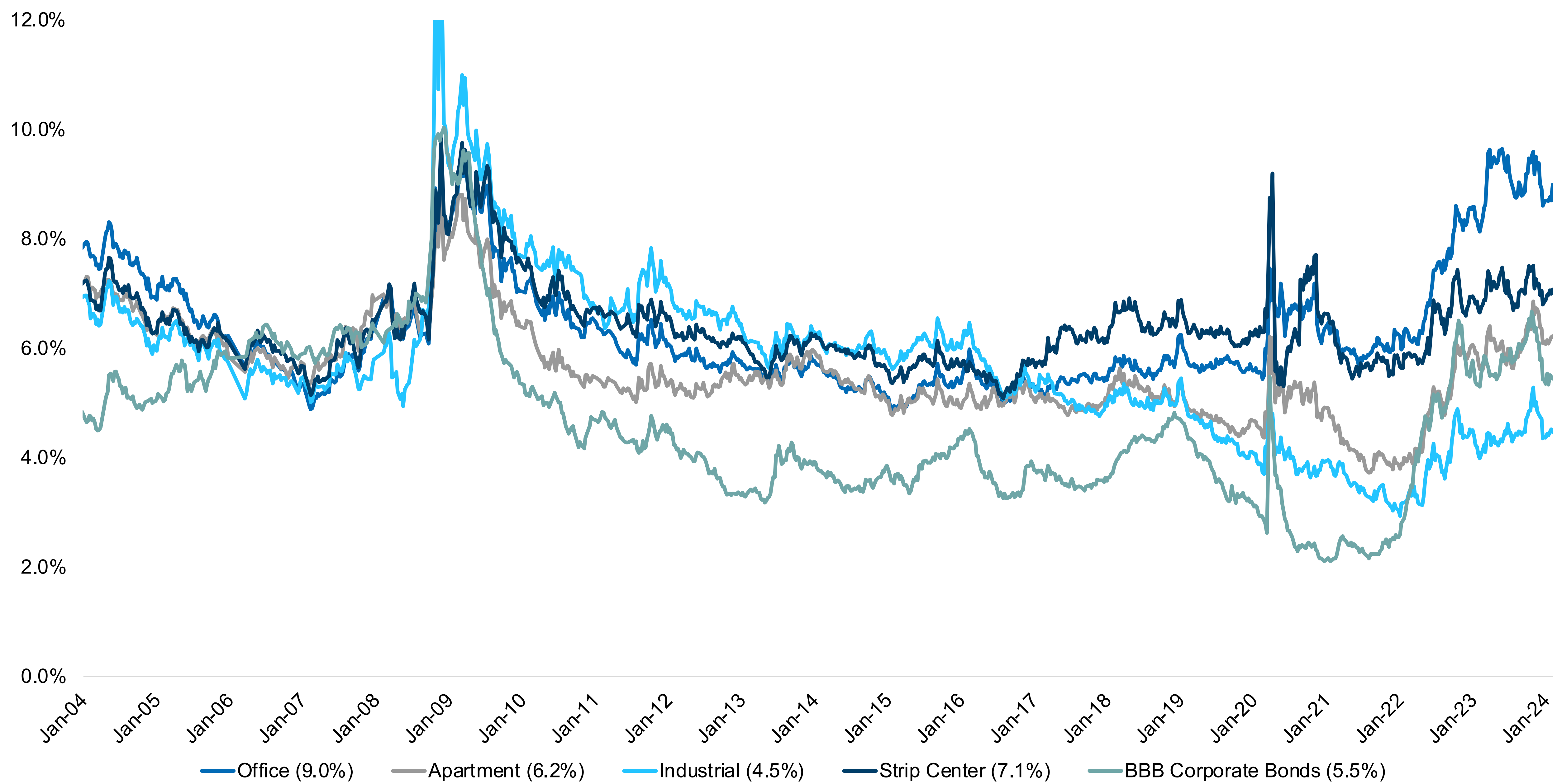
Public Markets Highly Sensitive to Rates, Valuations Generally More Attractive

Office spread is 93rd percentile relative to history*, apartment 37th, industrial 5th and strip center 41st. Spreads have risen broadly as BBB bond rates have come down. Industrial implied cap rates declined alongside corporate bonds, resulting in the spreads remaining extremely narrow (indeed, negative).

REIT Implied Nominal Cap Rate



Source: Green Street, FRED, Moody's, Newmark Research as of 2/6/2024
*Using normal distribution

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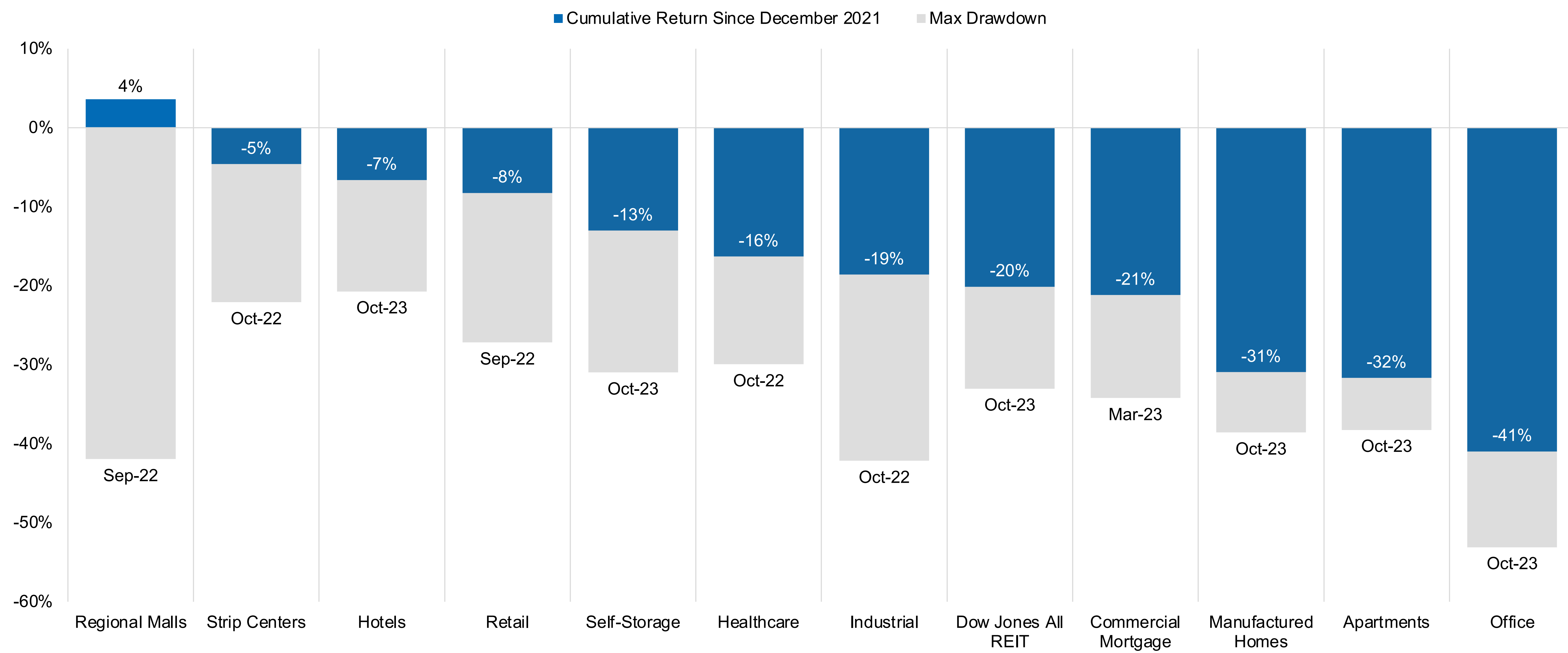
REITs Have Fallen across Sectors since the Start of the Hiking Cycle

REITs had a tumultuous 2023 exhibiting strong momentum in January and February before declining sharply into June, then a summer rally before setting new lows in October. The recent decline in treasury yields has fed a new rally with REITs returning 19% since the October bottom. As a result, REITs have returned 6.6% since December 2022. Future performance will require some combination of greater evidence of firming fundamentals and/or further declines in the cost of capital.

Dow Jones REIT Index Total Returns



Source: Dow Jones, Moody's, Newmark Research as of 2/9/2024

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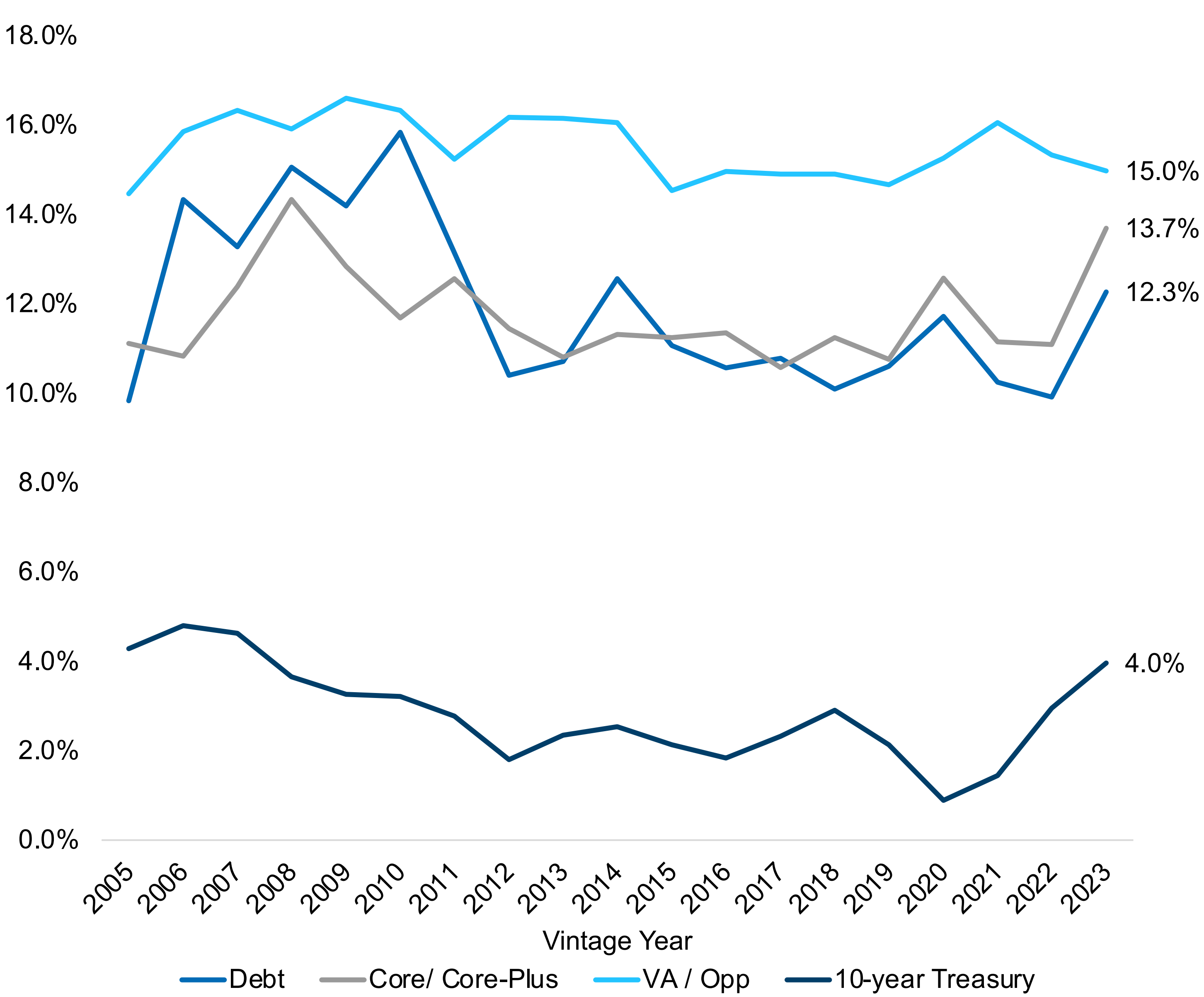
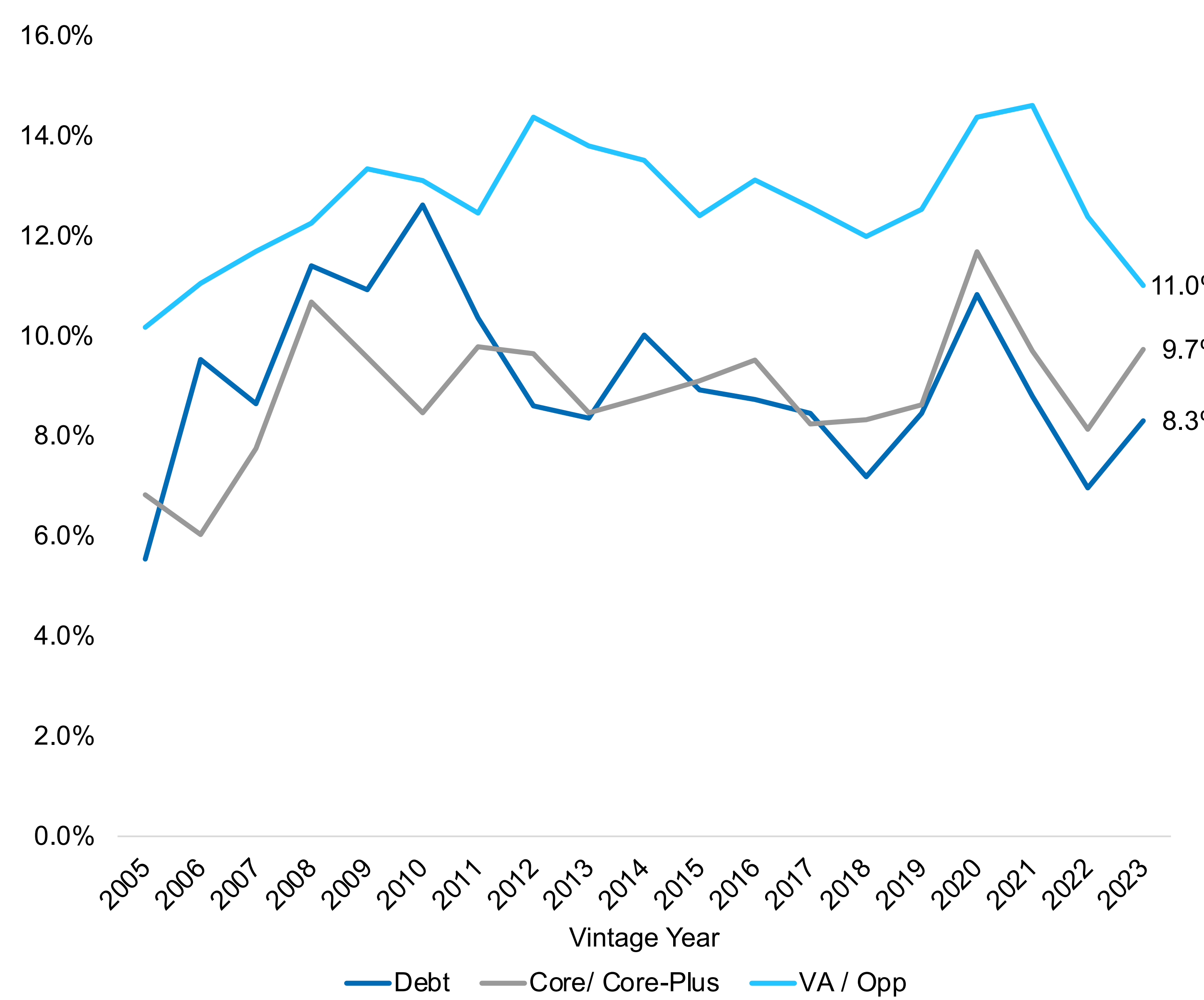
Private Equity Target Returns Surprisingly Insensitive to Changes in Rate Environment

Generally, investors should only be willing to invest in risky strategies to the extent that they expect higher returns compared to less risky investments. Accordingly, if the return to low-risk investments (e.g. treasuries) rise, then required rates of return should rise for riskier strategies, such as real estate private equity. Since 2005, however, private-equity target IRRs have born little relation to changes in Treasury yields. In effect, this blunts the impact of rate volatility on valuations. This may have begun to change – at least for debt and core funds, which are now targeting returns within spitting distance of value-added and opportunity funds. This in turn could limit the latter's ability to raise capital.

Average Target Net IRR at Private Equity Real Estate Funds by Vintage Year



Average Target IRR less 10-Year Treasury Yield

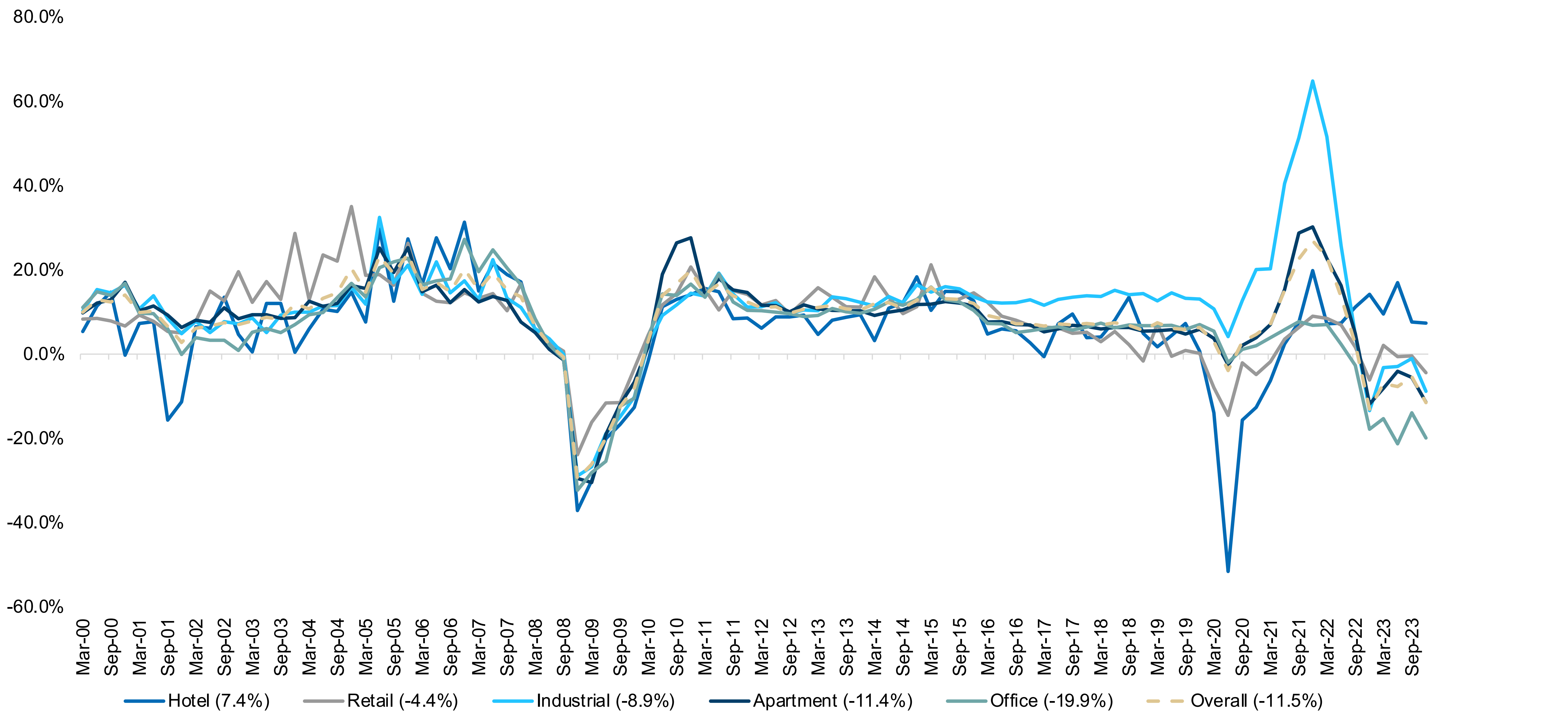


Source: Preqin, Federal Reserve, Newmark Research as of 2/6/2024

Private Market Core Properties Returned -11.5% Annualized in 4Q23

All major property types (with the notable exception of hotels) generated negative returns in 4Q23. Office continues to be a clear outlier to the downside as returns continued to decelerate and seem to be on a path to match the depths of the GFC. Apartment and industrial returns were negative though more modestly. Retail decelerated further into negative territory but continues to outperform. Keep in mind that appraisal-based returns are especially unreliable in illiquid periods like the current one.

NCREIF National Property Index Quarterly Annualized Total Return

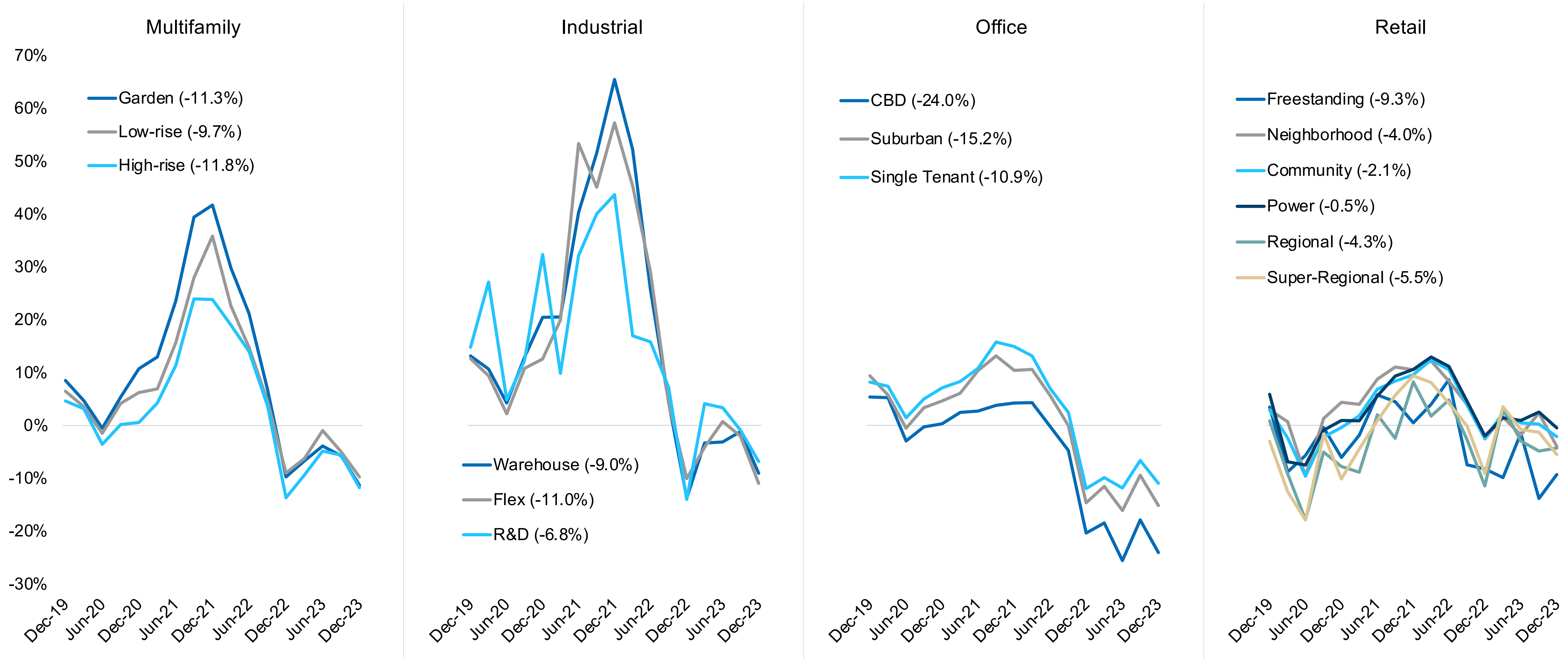


Source: NCREIF, Newmark Research as of 2/2/2024

Returns Remain Broadly Negative across Property Subtypes

Returns decelerating across multifamily subtypes with low-rise apartments now outperforming marginally. While R&D industrial has not improved, it continues to outperform relative to other industrial segments. Office, particularly CBD, continued to underperform in 4Q23, decelerating quarter-over-quarter. Overall, retail properties performed most strongly, particularly power and community centers.

NCREIF National Property Index Quarterly Total Return (Percent Annualized)



Source: NCREIF, Newmark Research as of 2/2/2024

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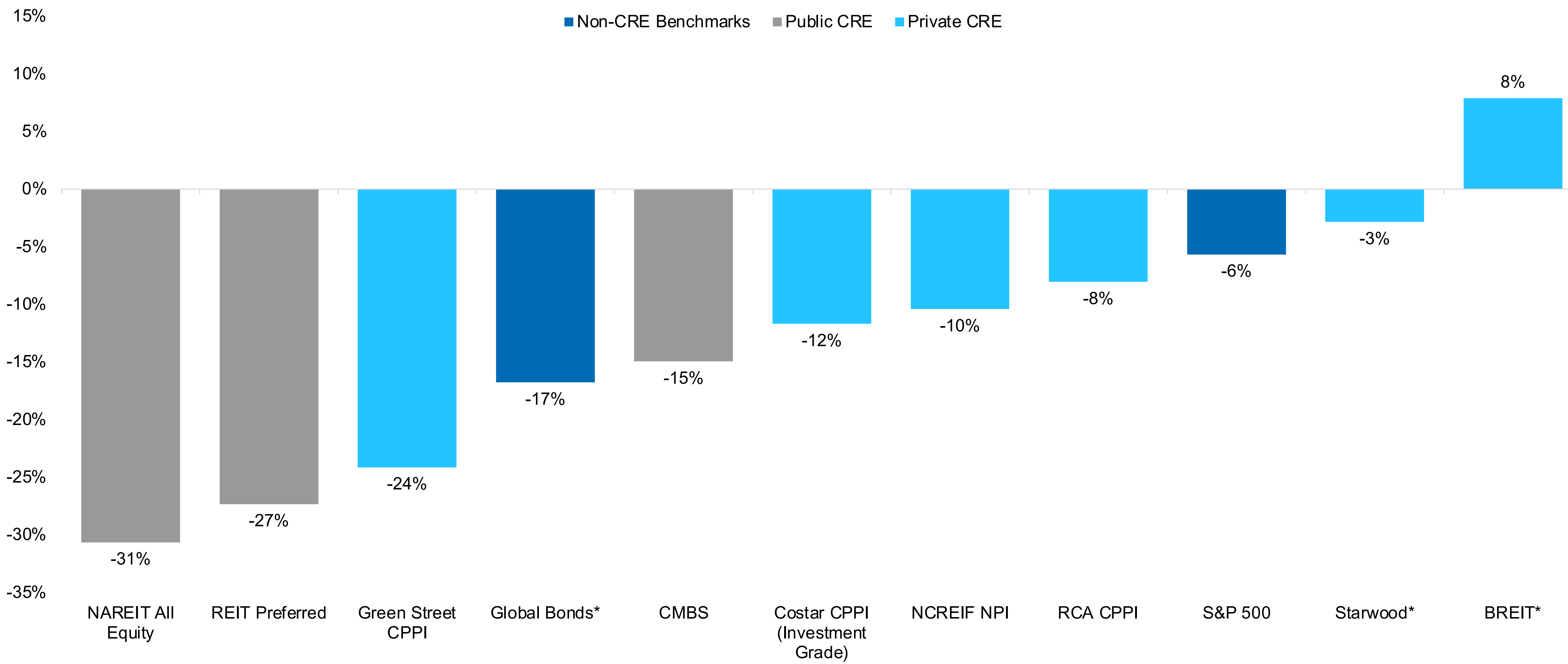
Private Markets Continue to Lag Public Markets in Adjusting Valuations

The non-traded REIT sector seems to be particularly disjointed from other benchmarks.

Cumulative Return Since December 2021



Source: Standard & Poor's, NAREIT, Bloomberg, iShares, RCA, Green Street, Costar as of 2/12/2024
*Total return; all else price return

For more information:

David Bitner
Executive Managing Director
Global Head of Research
david.bitner@nmrk.com

Jonathan Mazur
Executive Managing Director
National Research
jonathan.mazur@nmrk.com

Mike Wolfson
Managing Director
Multifamily Capital Markets Research
mike.wolfson@nmrk.com

New York Headquarters
125 Park Ave.
New York, NY 10017
t 212-372-2000

nmrk.com

Newmark has implemented a proprietary database and our tracking methodology has been revised. With this expansion and refinement in our data, there may be adjustments in historical statistics including availability, asking rents, absorption and effective rents. Newmark Research Reports are available at nmrk.com/insights.

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