
2Q23

United States Office Market Overview



NEWMARK

Market Observations

- **Demand Drivers.** The Federal Reserve’s efforts to combat inflation have modestly slowed employment growth, but overall, labor markets remain in expansion and national GDP growth was healthy at 2.4% in the second quarter of 2023. National office-using employment is now 6.3% above December 2019 levels, led by technology, advertising, media and information companies. Accordingly, technology companies drove much of the leasing activity over the last two years; however, in the year-to-date, technology companies have accounted for just 8.7% of leasing activity, down from 37.0% in 2022.
- **Leasing Fundamentals.** Net absorption continued to contract in the second quarter of 2023, driven most strongly by the West and East. Both major gateway and secondary markets shed a comparable amount of occupancy in the quarter. The South and Sun Belt regions continue to perform well relative to the nation, though occupancy saw further declines in the second quarter of 2023. Leasing activity was again sluggish in most markets in the second quarter of 2023, decelerating nationally to 0.8% of inventory. Minimal leasing activity as a percent of inventory was relatively ubiquitous across most regions and market sizes, indicating a slowdown in the momentum that had been gained in the prior two years in some secondary and Sun Belt markets.
- **Segmentation Analysis.** Quality office assets continue to command a disproportionate share of the market’s limited activity. While Class A leasing activity as a percentage of inventory is pointing downward in the second quarter of 2023, it still exceeds the national average by 20 basis points; however, the Class A advantage appears to be eroding on the margin, having averaged 40 basis points in the preceding four-quarter period. Class A vacancy has increased 170 basis points year-over-year, in line with the overall market. Downtown markets continue to struggle: NCREIF suburban office vacancy was 14.7%, compared with 20.5% for Central Business District office vacancy. With national office vacancy at 19.0%, institutional core assets are outperforming.
- **Debt Capital Markets.** The office market faces unprecedented challenges over the next 18 to 24 months. Nearly \$400 billion in office loans mature between 2023 and 2025. Of these, we estimate \$351 billion would have an LTV of 80% or greater if marked to market. They will struggle to refinance existing loans, and legacy debt issues will impede new financing for the sector.
- **Investment Activity.** Office investment activity decelerated once again in the second quarter of 2023. While activity increased 4.8% quarter-over-quarter, it has declined 64.9% year-over-year in the first half of 2023. Office loan originations declined 59.9% year-over-year in the second quarter of 2023, while total originations so far in 2023 are down 55.4% compared with the first half of 2022. No market segment has been spared from the slowdown in transaction activity, though on the margin nonmajor markets, suburban assets, as well as Midwestern and Sun Belt markets, have been more resilient.
- **Pricing.** Transaction cap rates increased by 80 basis points quarter-over-quarter in the second quarter of 2023 after months of puzzling stability in the face of rising rates and uncertainty. Further adjustments are likely, given the continued elevated cost of capital. While cap rates have risen for both CBD and suburban properties, CBD office markets have seen larger adjustments, causing cap rate levels to converge. Similarly, major metro yields now appear to be higher than in nonmajor metros. The increases in cap rates have been catalyzed by the rapid increases in the cost of debt, which have risen from 3.3% in the third quarter of 2021 to 6.7% today in the fixed-rate market. REIT-implied cap rates have been far more reactive and, in our view, far more honest compared to the illiquid transaction market. Office REITs are trading an implied 9.7% cap rate and are the only sector offering above-average spreads to the cost of debt.
- **Returns.** Office REITs have rallied off of new lows set in May of 2023; nonetheless, they are still down 40.0% since December 2021, the worst performance of any sector. While the truth of valuation typically lies somewhere between the public and private markets, it seems this time the public markets were closer to the mark. Private markets have only recently begun to capitulate. According to NCREIF, office properties returned negative 21.2% annualized in the second quarter of 2023, making it the worst quarter since the second quarter of 2009.

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2Q23 US OFFICE MARKET OVERVIEW

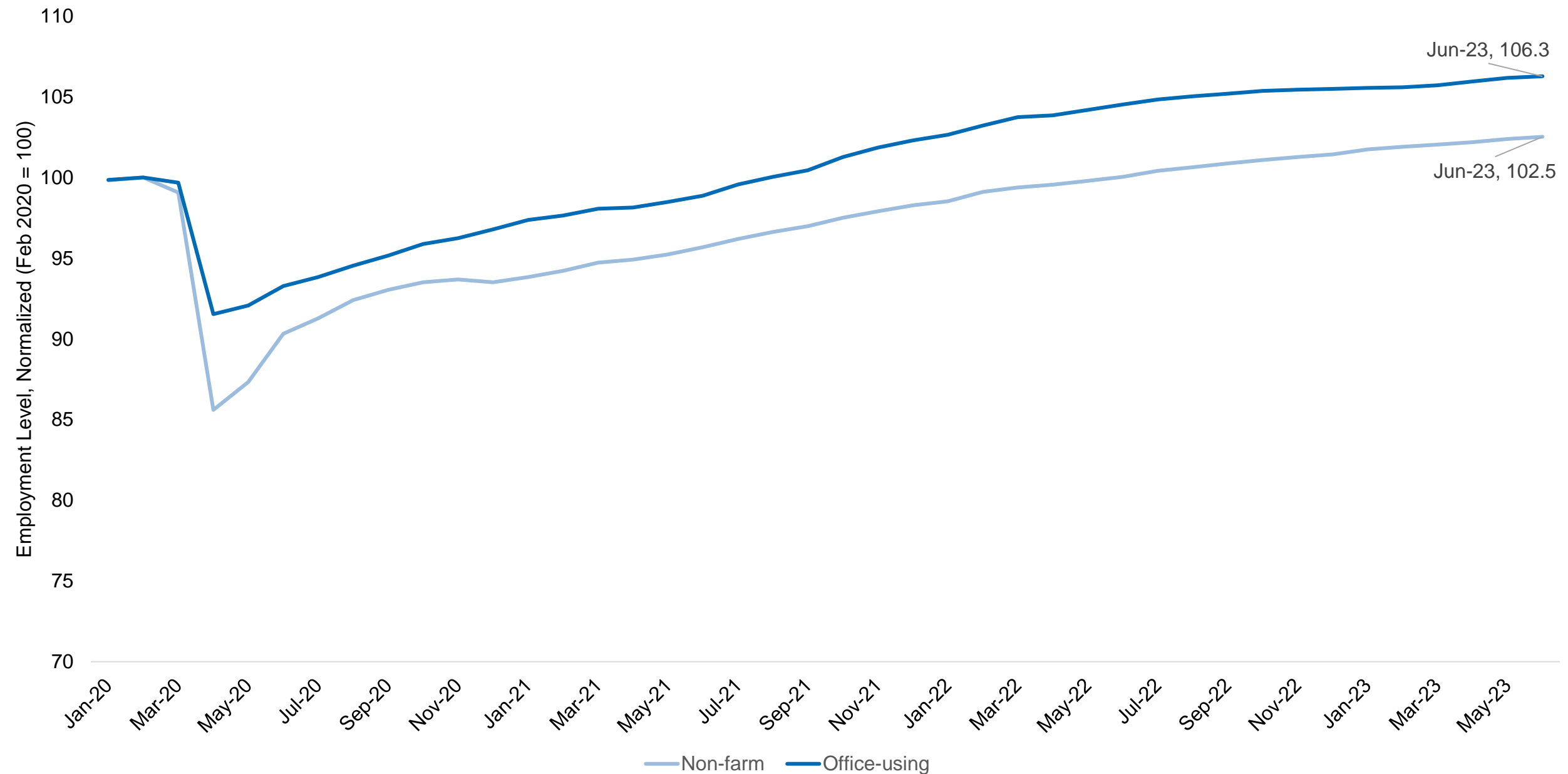
Demand Drivers



Office-Using Employment Has Outpaced the Overall Labor Recovery

National nonfarm employment recovered to pre-pandemic levels in June 2022 and is up 19.8% from the pandemic low in April 2020. Office-using employment was less impacted during the pandemic and has maintained a consistent pace of recovery, measuring 2.1 million jobs above pre-pandemic levels. This is significant because net-new jobs can provide a counterweight to the negative demand effects from remote work. Conservatively assuming 120 feet of office space for each of these workers suggests that new jobs have added or replaced 249.5 million SF of office demand.

Employment Recovery Comparison – Normalized to February 2020

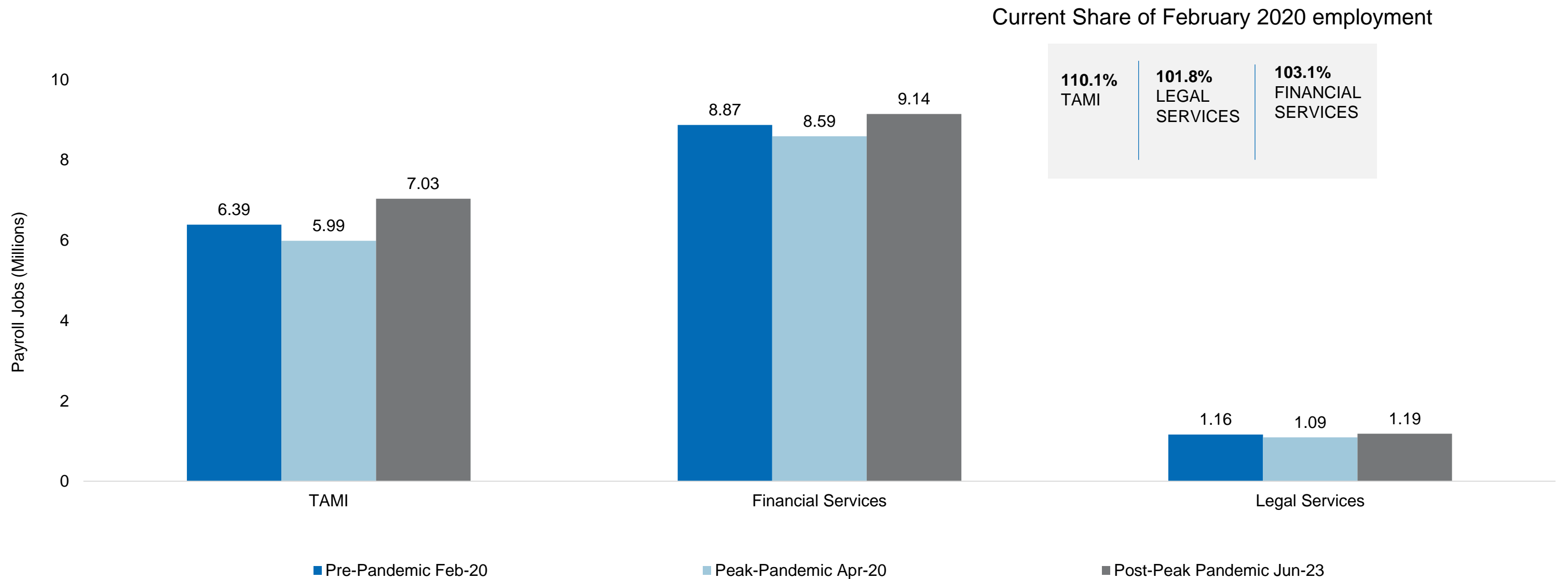


Sources: U.S. Bureau of Labor Statistics, Newmark Research
Seasonally Adjusted

Employment Growth across Office-Using Industries

Employment now exceeds pre-pandemic levels across office-using industries. The recovery in TAMI has been particularly strong, with employment 10.1% above February 2020 levels. Impressive gains have been made across a range of professional and business services, which in the aggregate are up 5.7% from February 2020. Legal services have more than fully recovered as well, but less than these other categories.

Employment by Industry

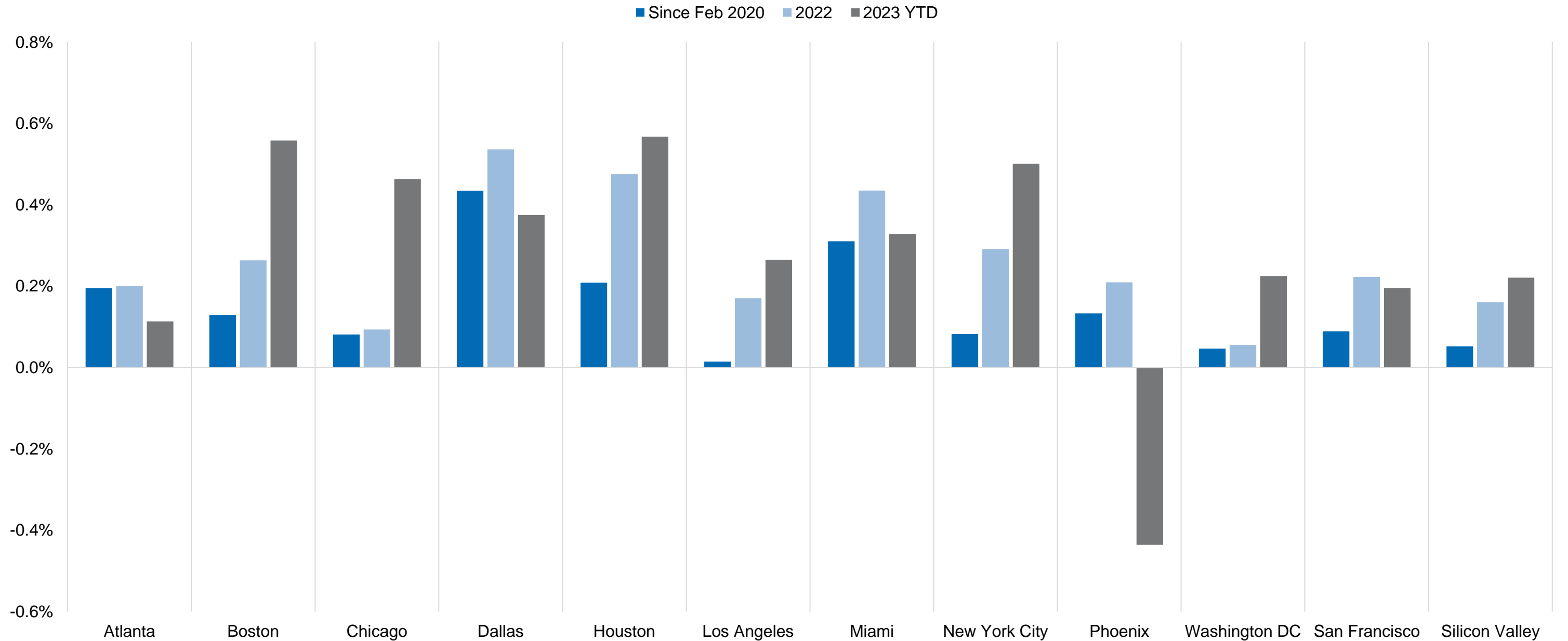


Sources: United States Department of Labor, Newmark Research

Office-Using Employment Accelerating in Gateways, Slowing in Sun Belt

Office-using employment continues to expand nationally, though the growth rate has slowed in Atlanta, Dallas, Miami and San Francisco, while Phoenix has experienced negative growth in the first half of 2023. On the other hand, Boston, New York City, Chicago, Los Angeles and Silicon Valley have seen office-using jobs growth accelerate in 2023.

Compounded Average Monthly Office-Using Employment Growth, Select Large U.S. Metro Markets

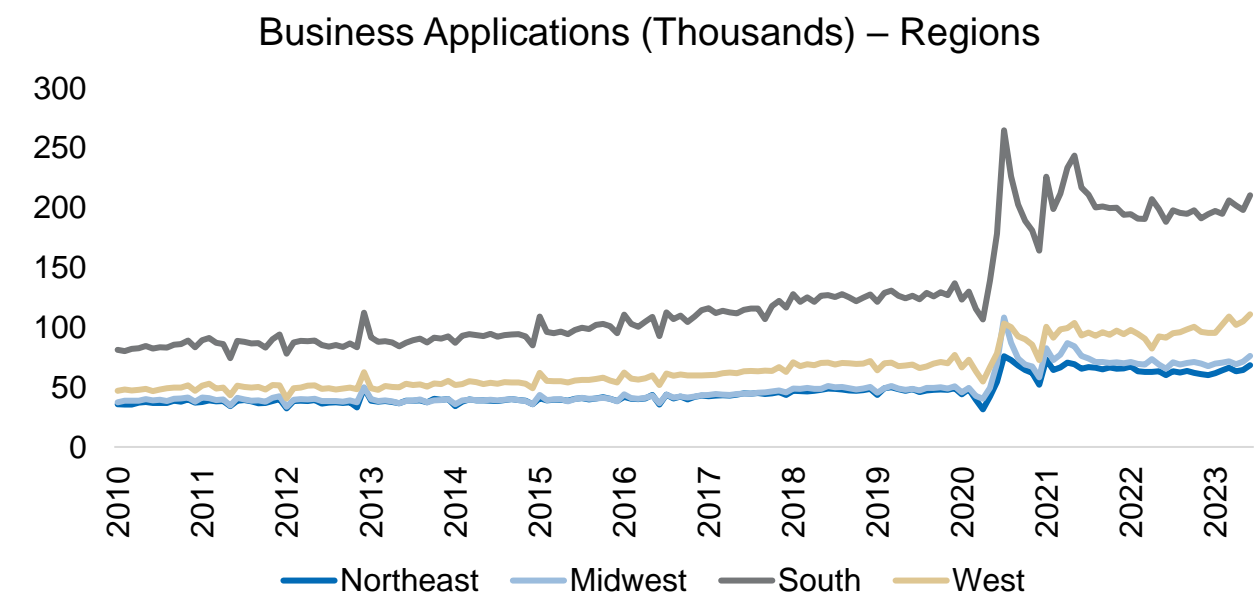
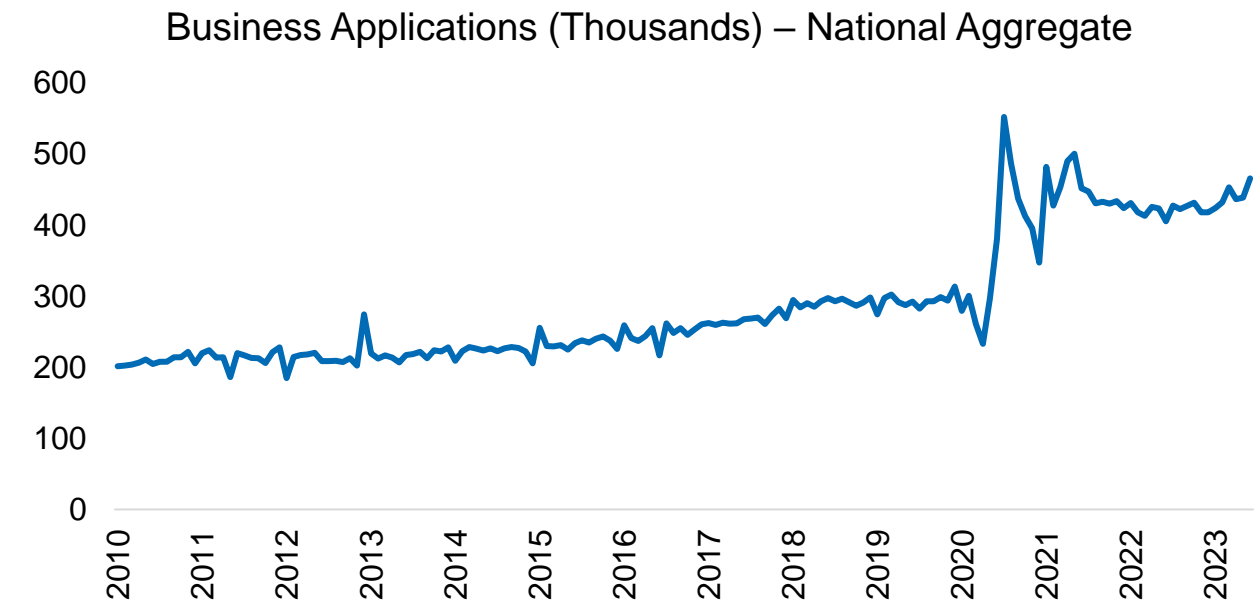
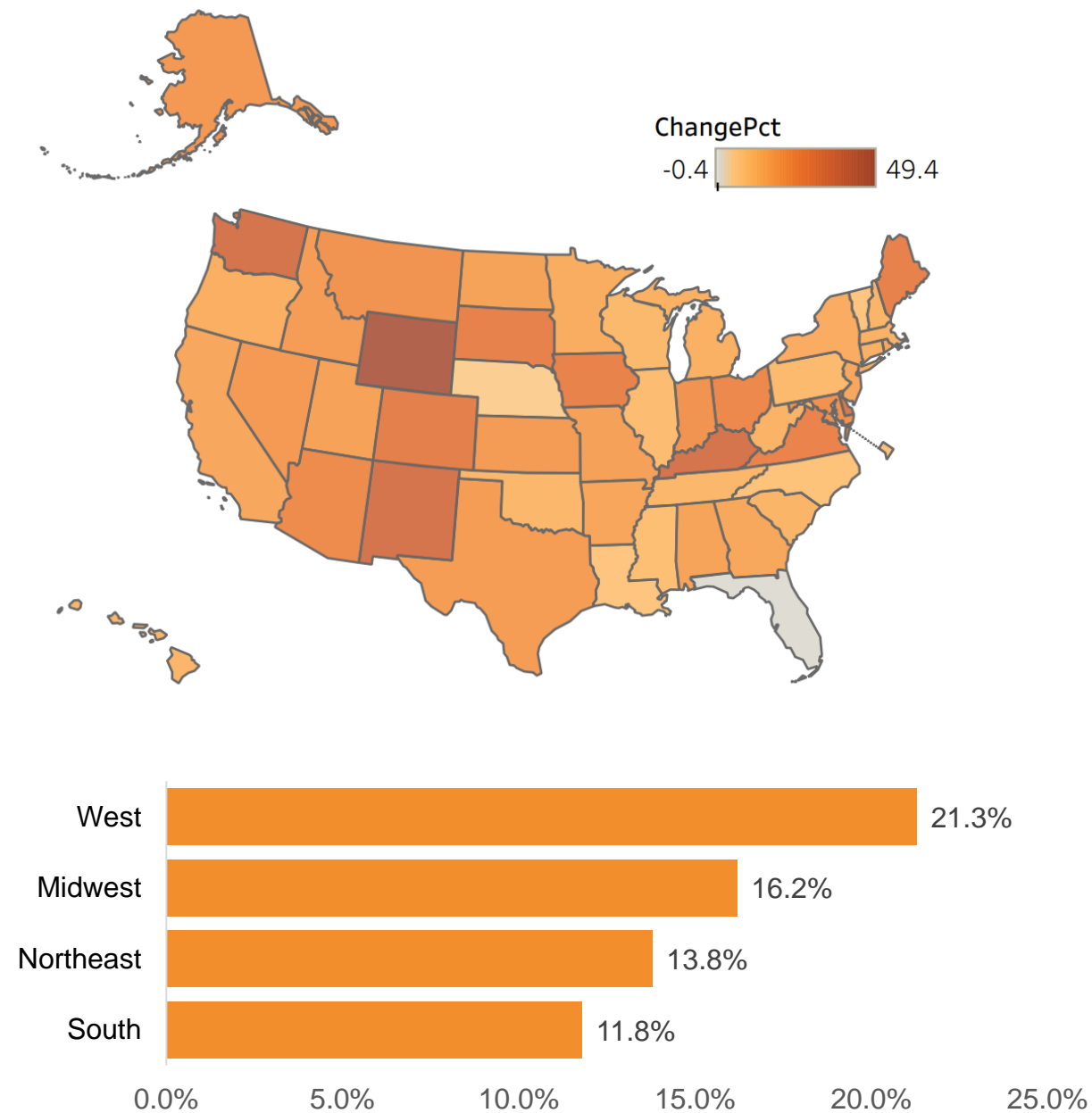


Source: Bureau of Labor Statistics, Newmark Research

New Business Formation Maintains Momentum

Business formation accelerated healthily in June 2023; 465,906 new business applications were filed, which is up 14.9% from June 2022. This acceleration was realized in every US region, with the West region realizing a 21.3% increase from this time last year. Overall business creation remains notably higher than pre-pandemic levels in all geographic regions.

Business Applications: Change from June 2022 to June 2023 (Seasonally Adjusted)

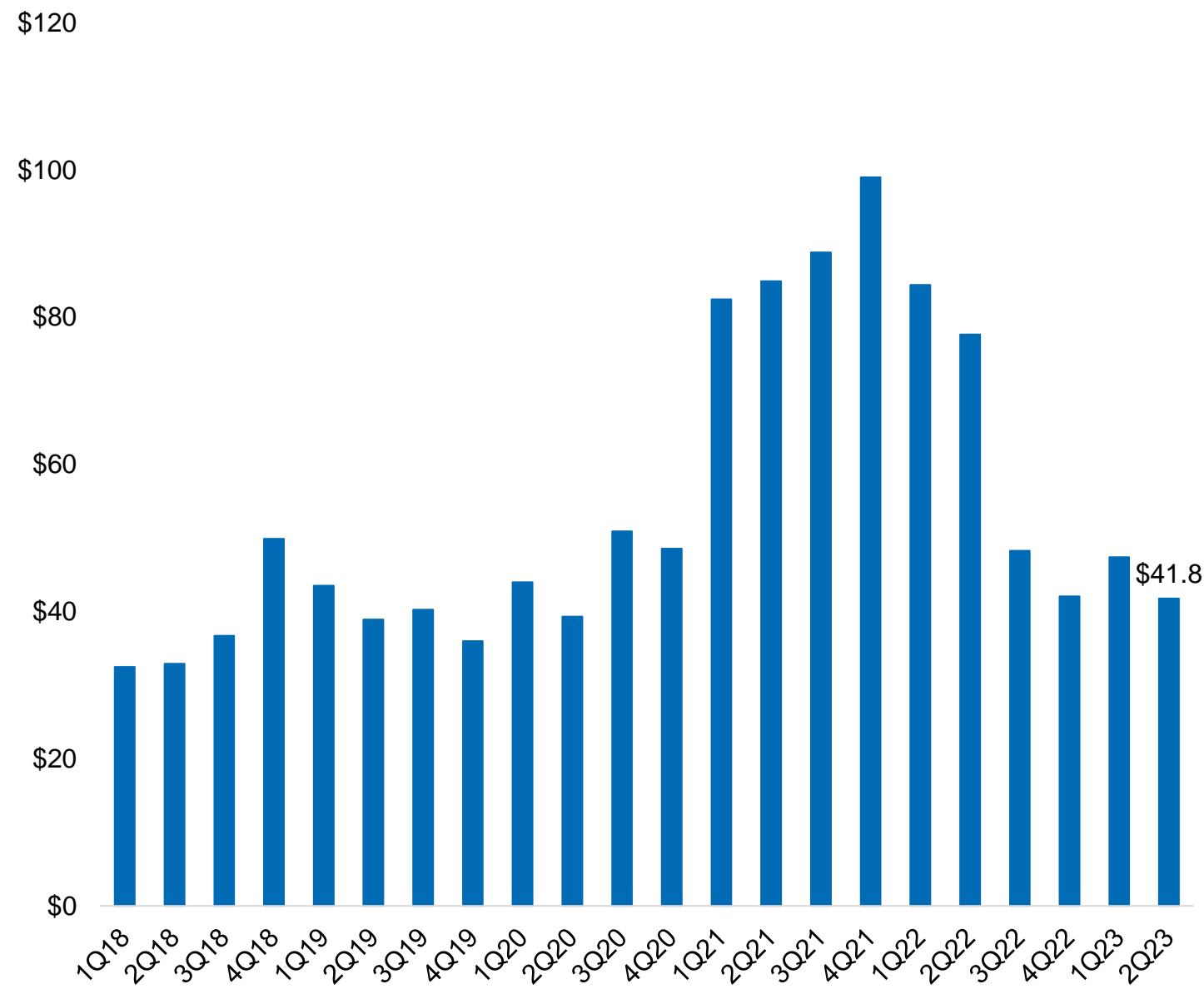


Source: United States Census Bureau, Newmark Research

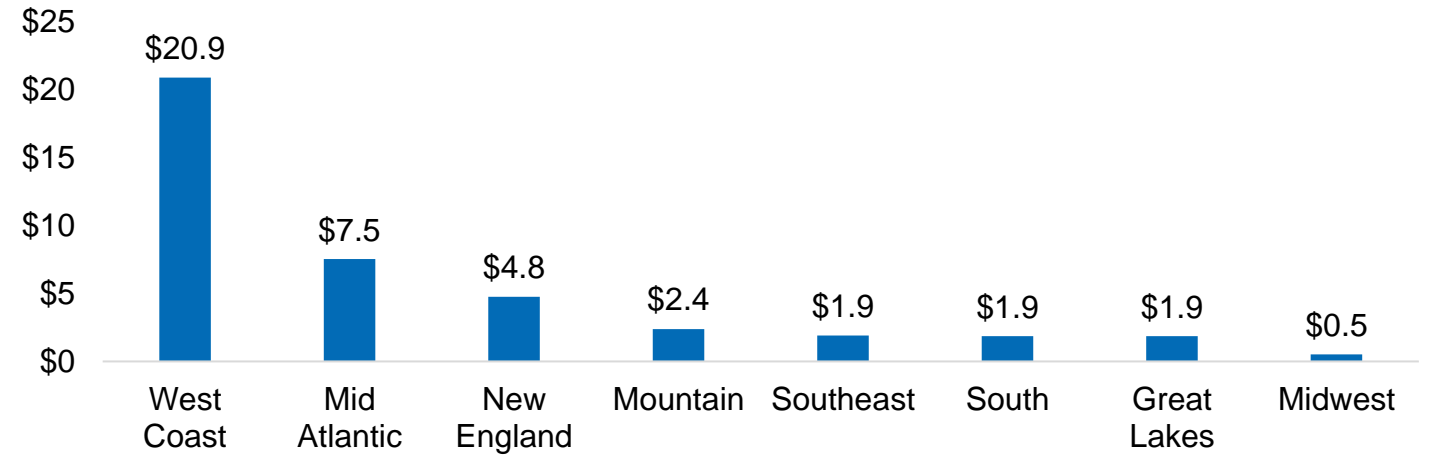
Venture Capital Investment Activity Returned to Pre-Pandemic Level

Overall venture capital investment declined slightly in the second quarter of 2023 as investors remain cautious. Although total investments are down from the cycle's recent peak in 2021, activity in the past year is elevated from a historical perspective. Investment activity trended down across all industries in the second quarter of 2023, save for the materials and resources sector, and the business to consumer sector realized the largest annual decline of negative 65%. The market's largest funds are likely to experience the greatest contraction in activity, but high levels of dry powder should continue to support investment activity among smaller funds.

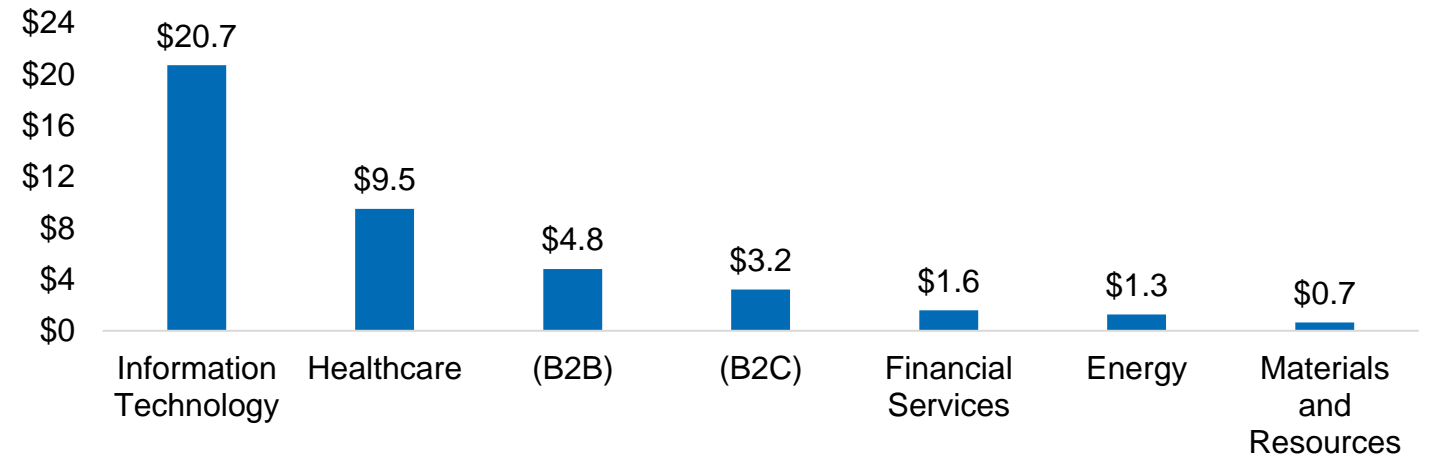
Venture Capital Deal Value (\$ billions)



2Q23 VC Funding by Region (\$ billions)



2Q23 VC Funding by Industry Sector (\$ billions)

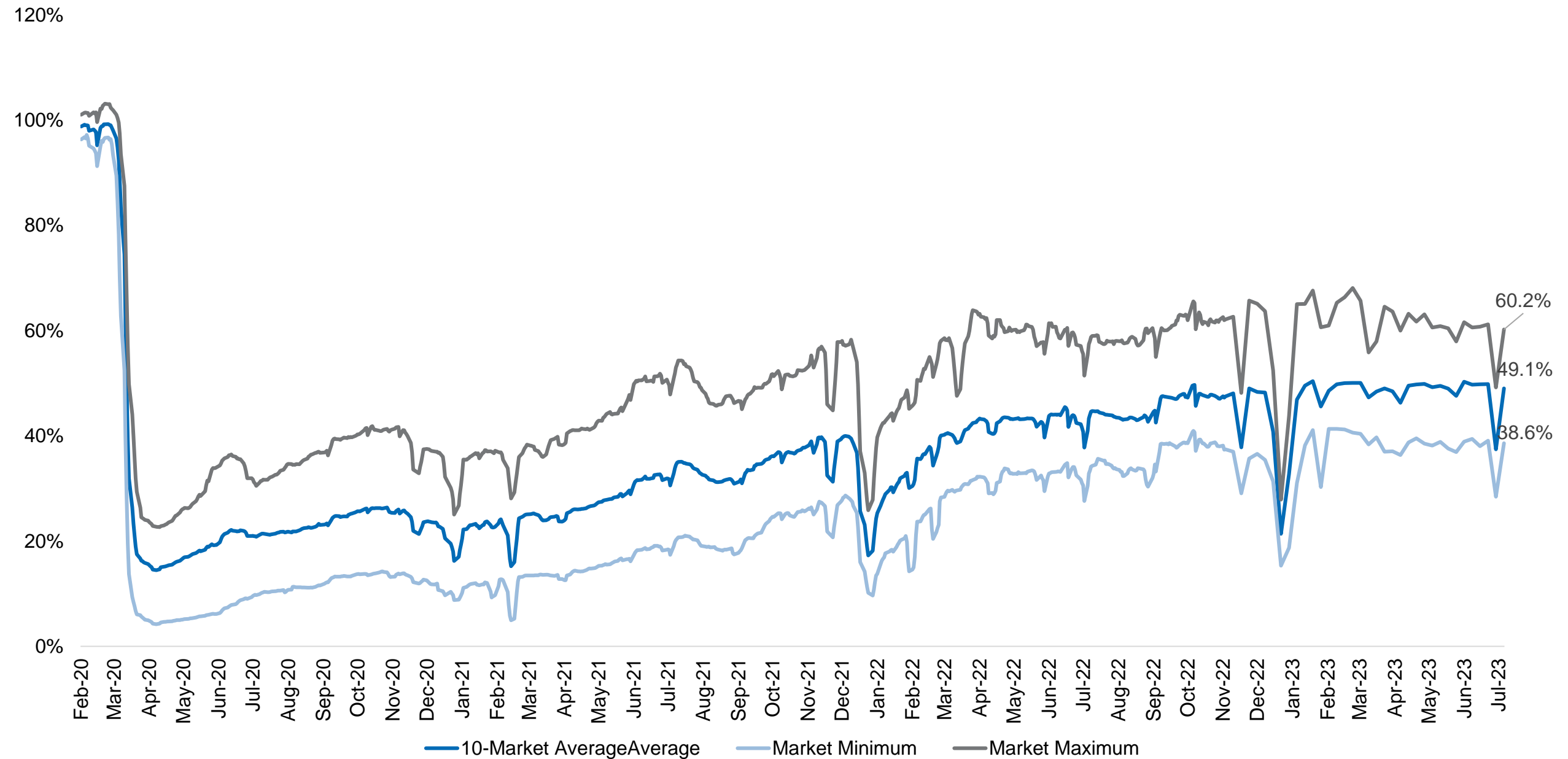


Sources: PitchBook, Newmark Research

Return to Office Has Stabilized

Kastle Systems' office utilization has been fairly static in the first half of 2023. The 10-market average set a record of 50.4% of pre-pandemic occupancy in January and currently stands at 49.1%. There continues to be significant variation in daily office attendance during a given week, suggesting that peak office attendance may have been as high as 70% and pushing 80% in the markets with the most robust return to office. Regardless, there continues to be volatility in the context of the subtle upward march.

Kastle Systems Daily Office Physical Occupancy Index – 5-Day Trailing Average (Baseline = February 2020)

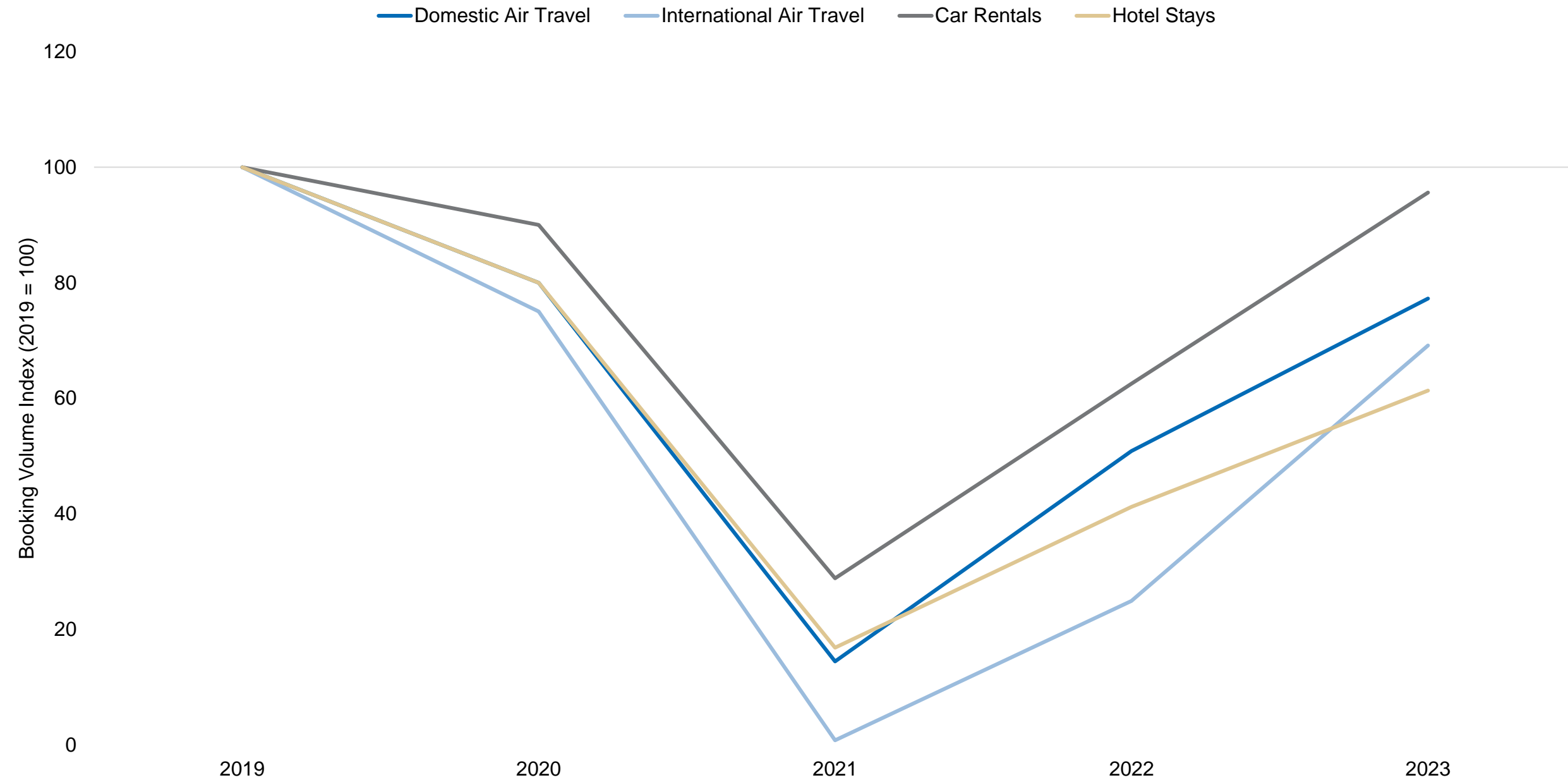


Source: Kastle Systems, Newmark Research

Business Travel Recovering Well in 2023

Business travel continued accelerating in the first quarter of 2023, with very few health restrictions left in place restricting the return of in-person business meetings, conventions and tradeshows both in the United States and abroad. The return of business gatherings is an encouraging indicator for the utility of office space in the period ahead. According to data from Emburse, a global leader in spend optimization for businesses, booking volume for car rentals travel has increased dramatically and has nearly recovered to pre-pandemic levels.

Booking Volume Indexed to 2019 Baseline



Source: Emburse Travel Trends, Newmark Research

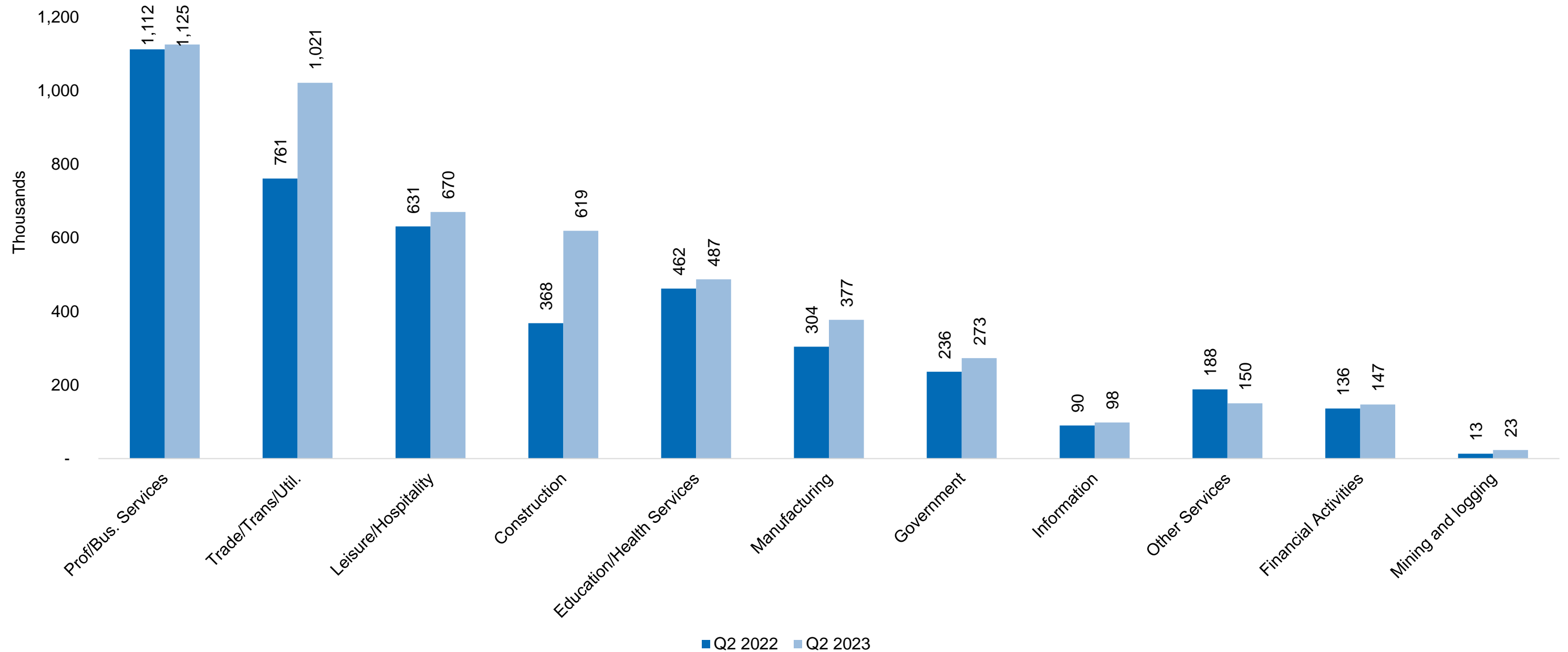
Gap between Worker and Employer WFH Expectations Has Stabilized

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Layoffs Have Risen, but Muted in Office-Using Sectors

Occupations in the trade, transportation, and utilities sector saw the greatest rise in layoffs, with 260,000 more layoffs in the second quarter of 2023 than the second quarter of 2022, representing a notable 34.2% annual increase.

Second Quarter Layoffs by Industry*

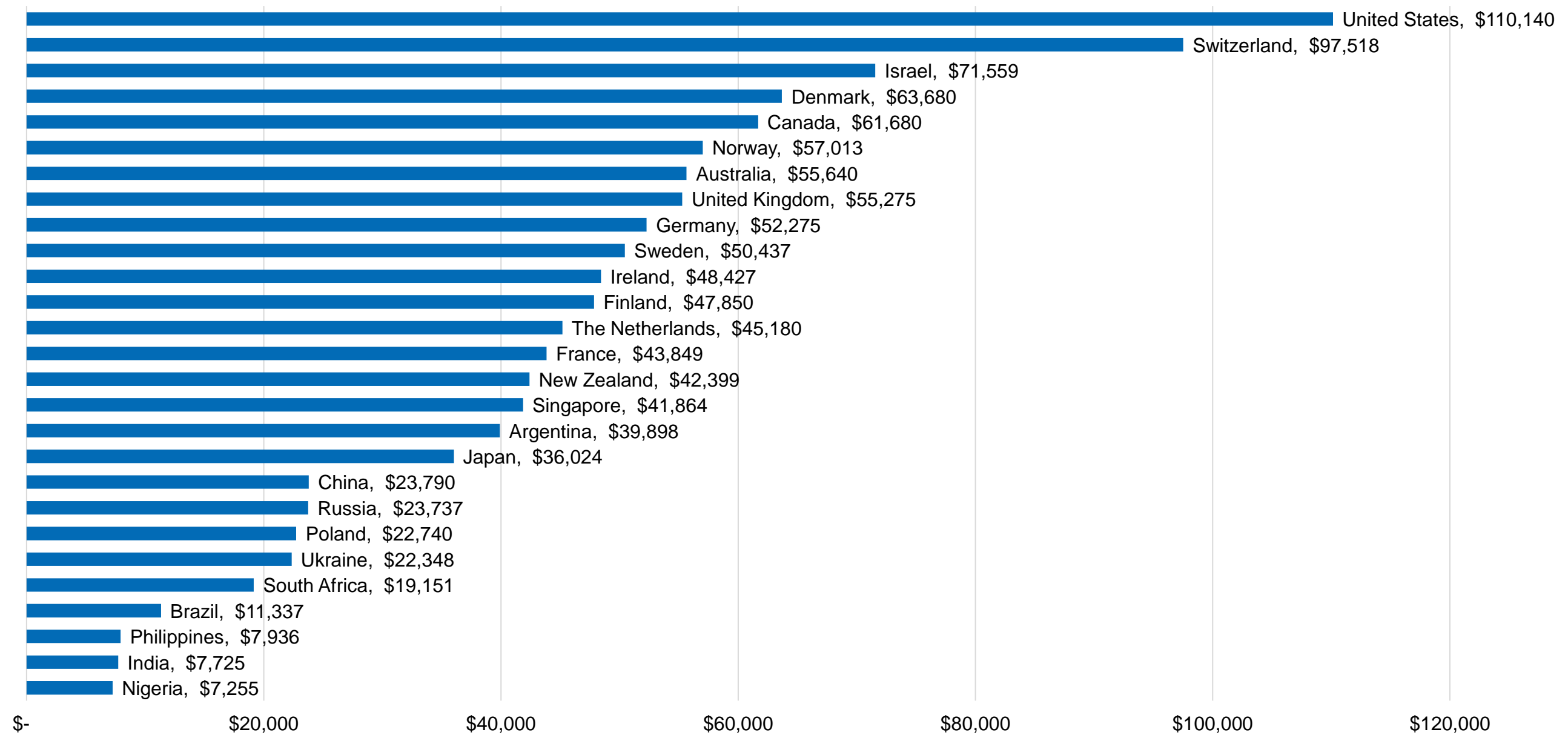


Source: Bureau of Labor Statistics, Newmark Research
 Note: seasonally adjusted
 *Q2 2023 Based on March – May Data

Remote Work Implies More Outsourcing of Office-Using Jobs

Fully remote workers reap the benefits of geographic flexibility, permitting them to work anywhere, regardless of their employer's office locations; however, employers also can reap the same benefits by expanding the geographic boundaries upon which they can recruit talent. For many technology and developer roles, including software engineers, fully remote arrangements are becoming increasingly common. With firms' newfound ability to recruit from less expensive international labor pools, it could come at the cost of some domestic jobs.

Average Annual Salaries for Software Engineers by Select Countries



Source: CodeSubmit, Newmark Research

2Q23 US OFFICE MARKET OVERVIEW

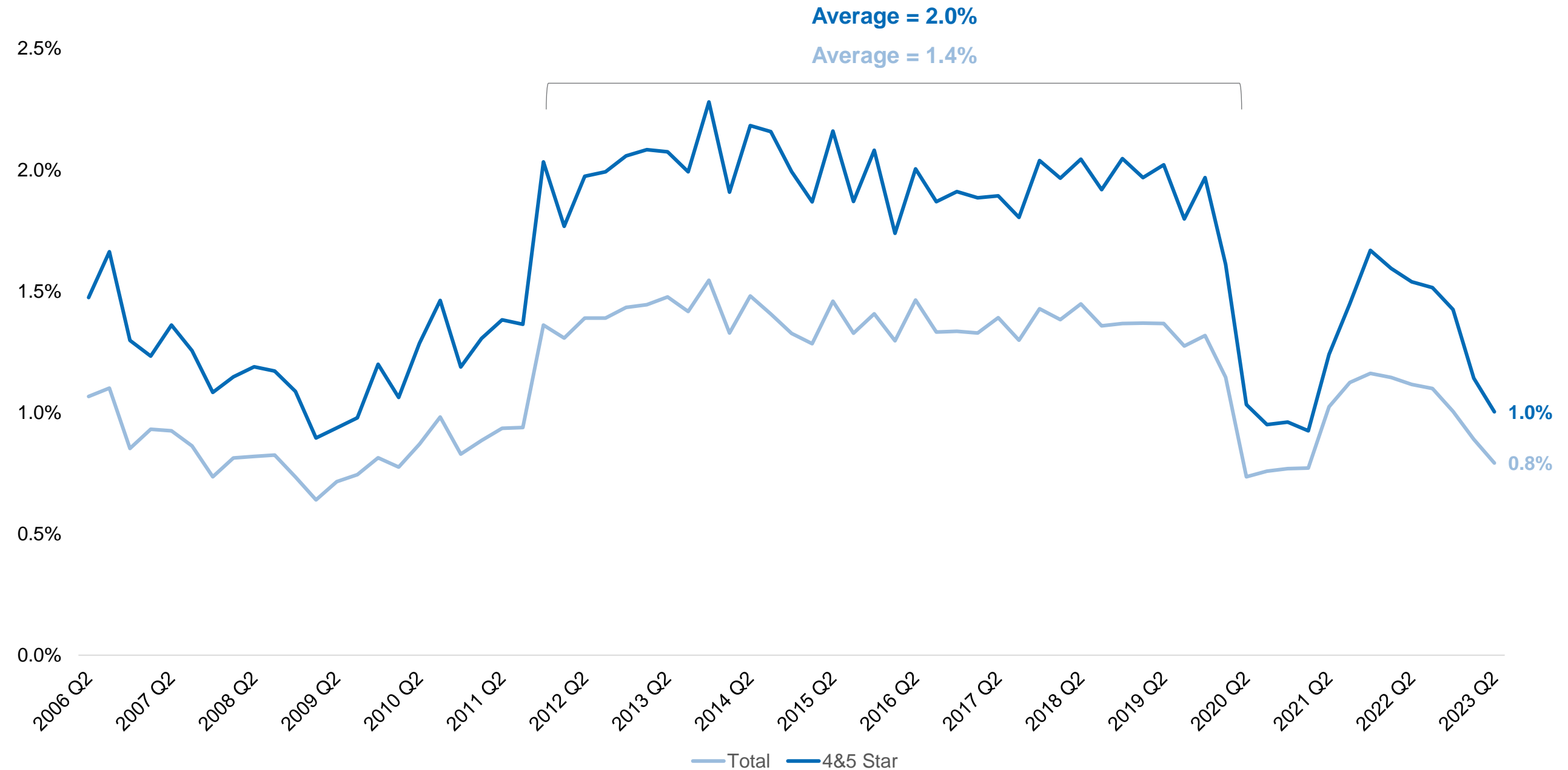
Leasing Market



Office Leasing Returned to 2020 Levels in 2Q23

Higher-quality buildings are outperforming the overall market and driving a larger share of leasing activity. Although four- and five-star buildings only account for 38.5% of inventory, these assets captured 48.7% of leasing activity in the second quarter of 2023, a downward trend from the first quarter of 2023.

Leasing Activity as a Share of Inventory



Source: CoStar, Newmark Research

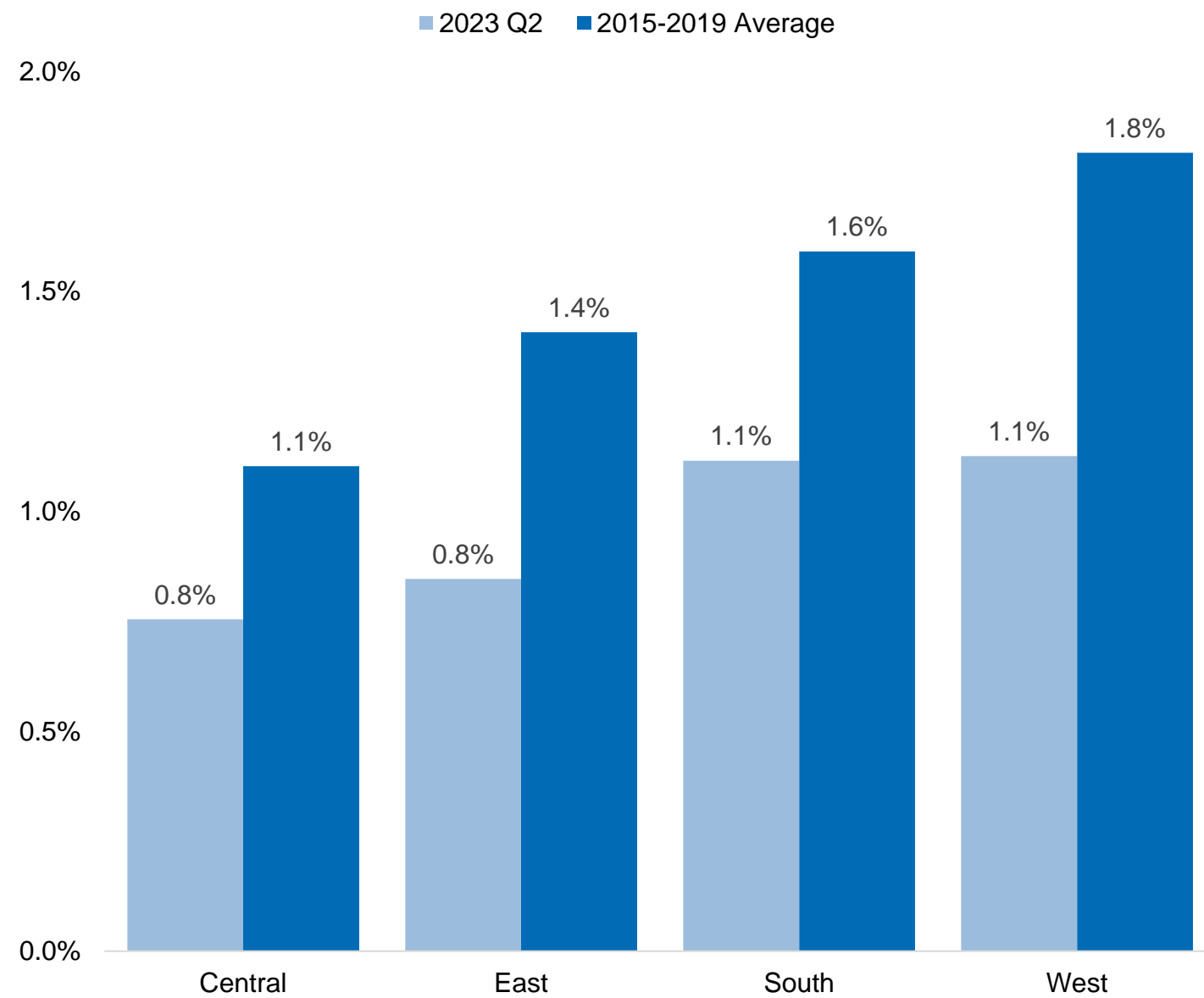
Leasing Activity by Year

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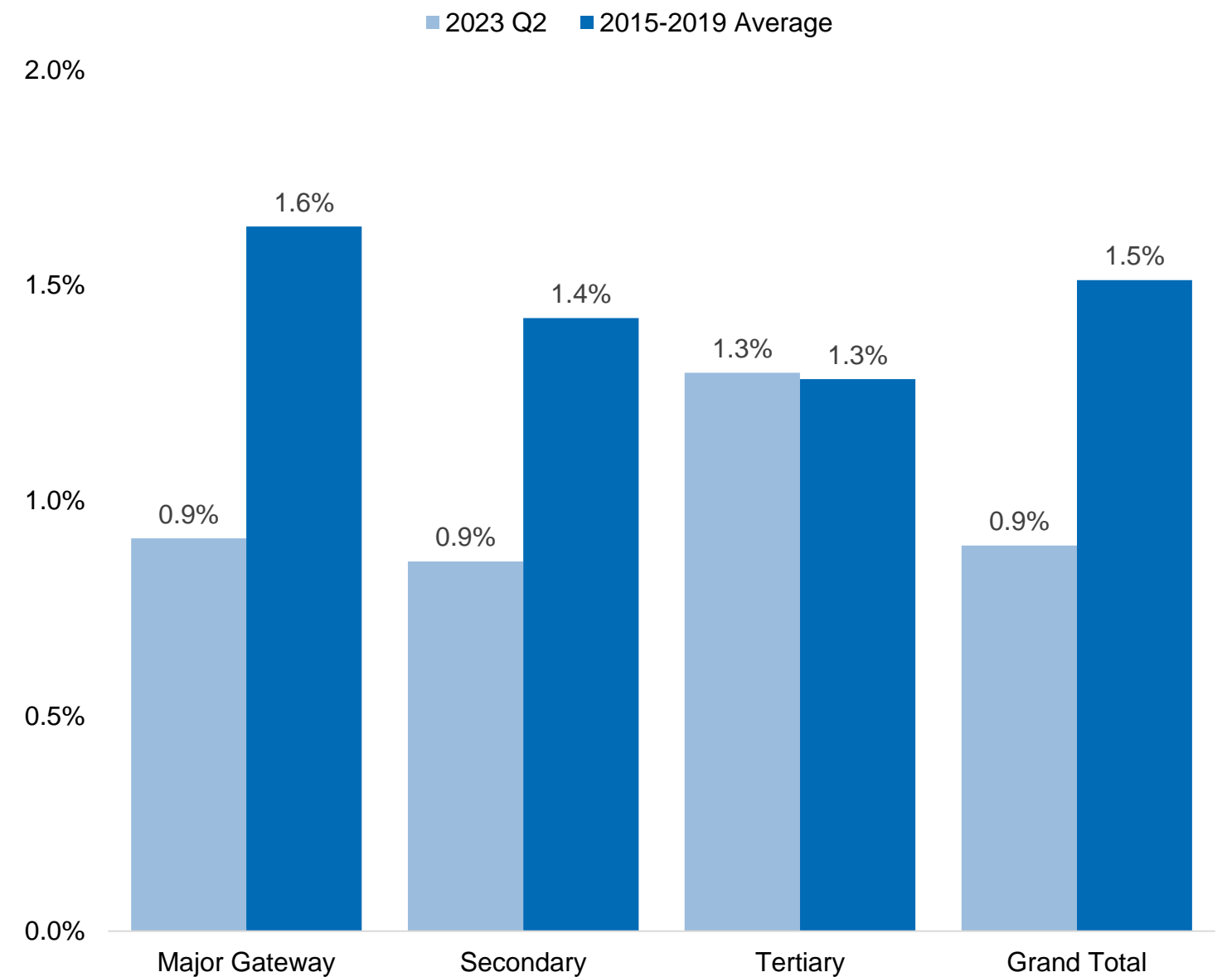
Leasing Activity Lags Pre-Pandemic Baseline

Leasing activity was again sluggish in most markets in the second quarter of 2023. Leasing momentum had been more varied prior to the onset of the pandemic, with Western and major gateway markets commanding a large share of leasing relative to inventory. In the second quarter of 2023, leasing activity as a percent of inventory was relatively even across most regions and market sizes, with tertiary markets being a notable exception.

Regional Leasing Activity as a Percent of Inventory



Market Size Leasing Activity as a Percent of Inventory



Source: CoStar, Newmark Research

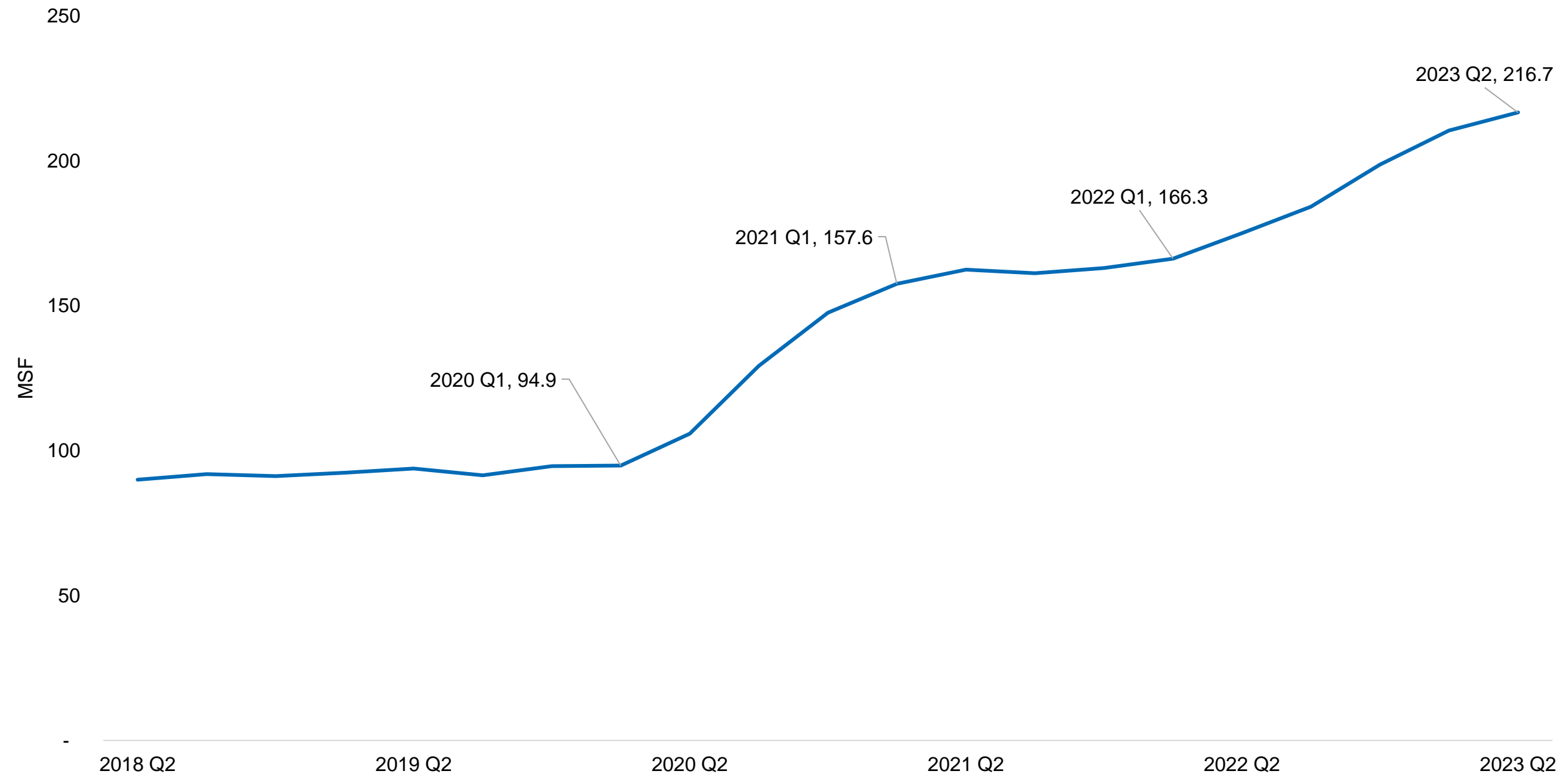
Southern and Western Markets Have Greatest Leasing Activity in 2Q23

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Sublease Availability Steadily Accelerates in 2023

Sublease availability continued rising at a measured clip in the second quarter of 2023, having risen 3.0% from the first quarter of 2023. National square footage available for sublet is currently at an all-time high of 216.7 million SF.

National Sublease Availability

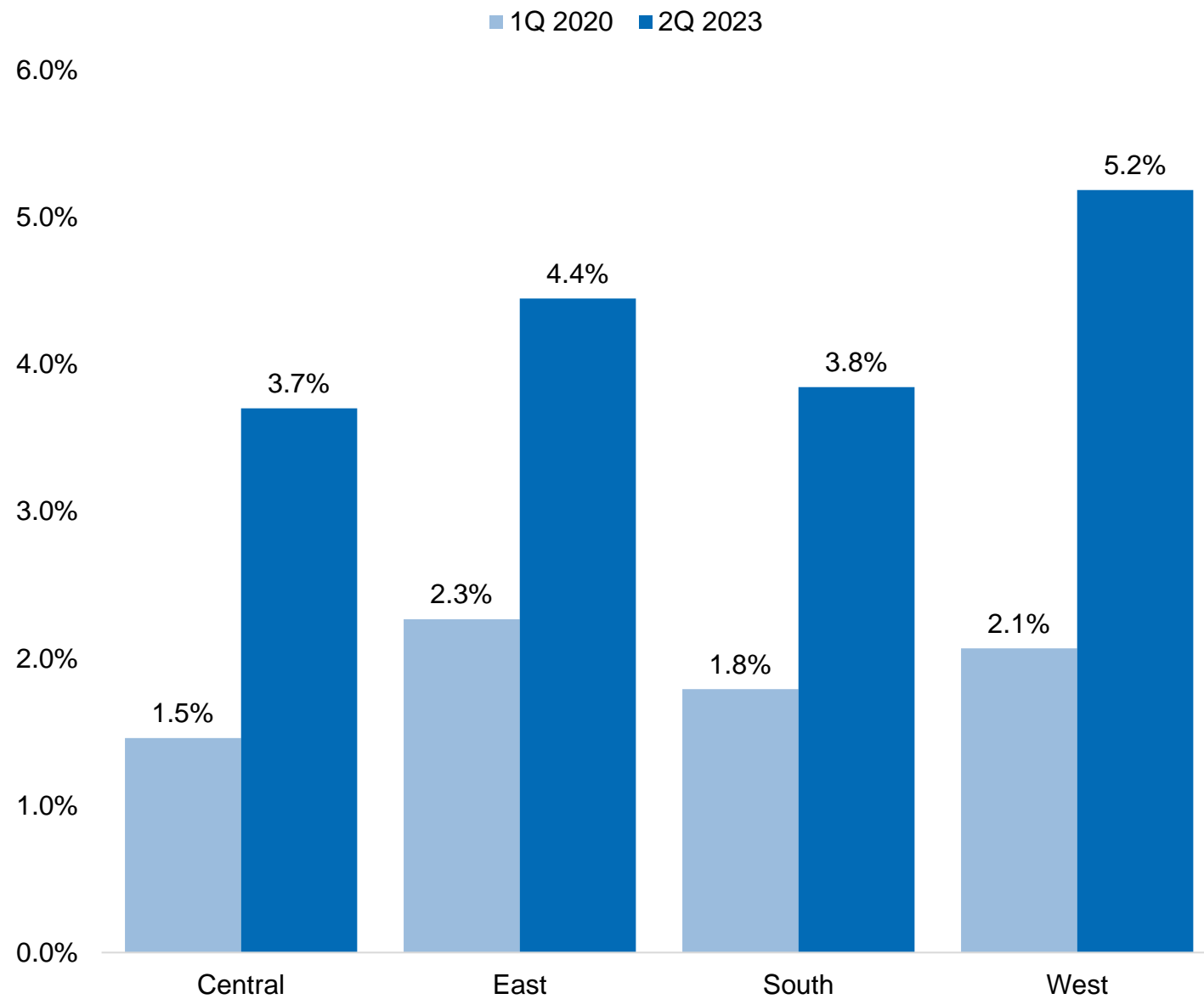


Source: CoStar, Newmark Research

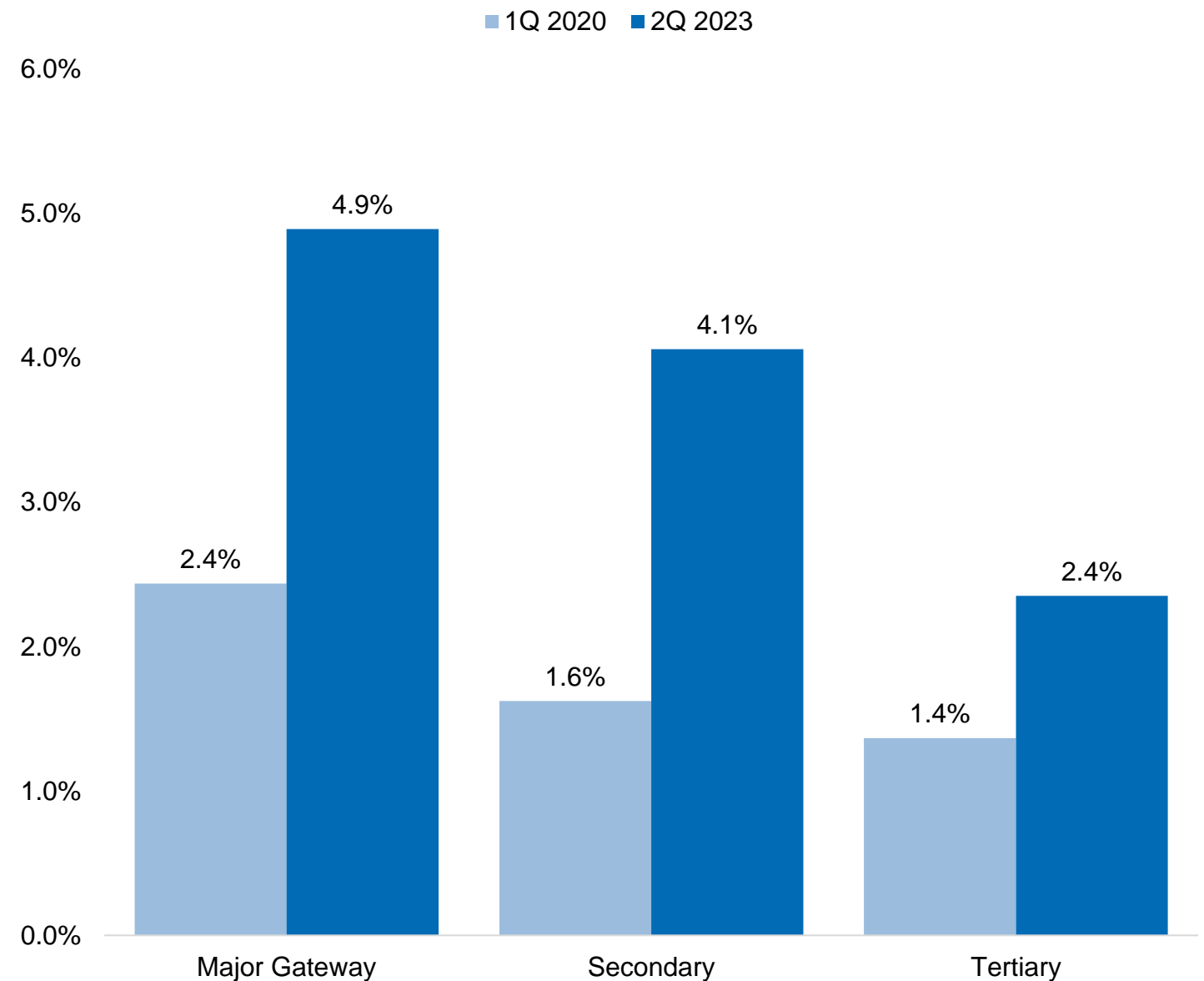
Sublease Availability Significantly Elevated above Pre-Pandemic Baseline

Sublease availability rose steadily across nearly all segments of the national office market in the second quarter of 2023. Sublease availability is highest in West Region markets, notably San Francisco, as well as major gateway markets more generally.

Regional Sublease Availability Rate



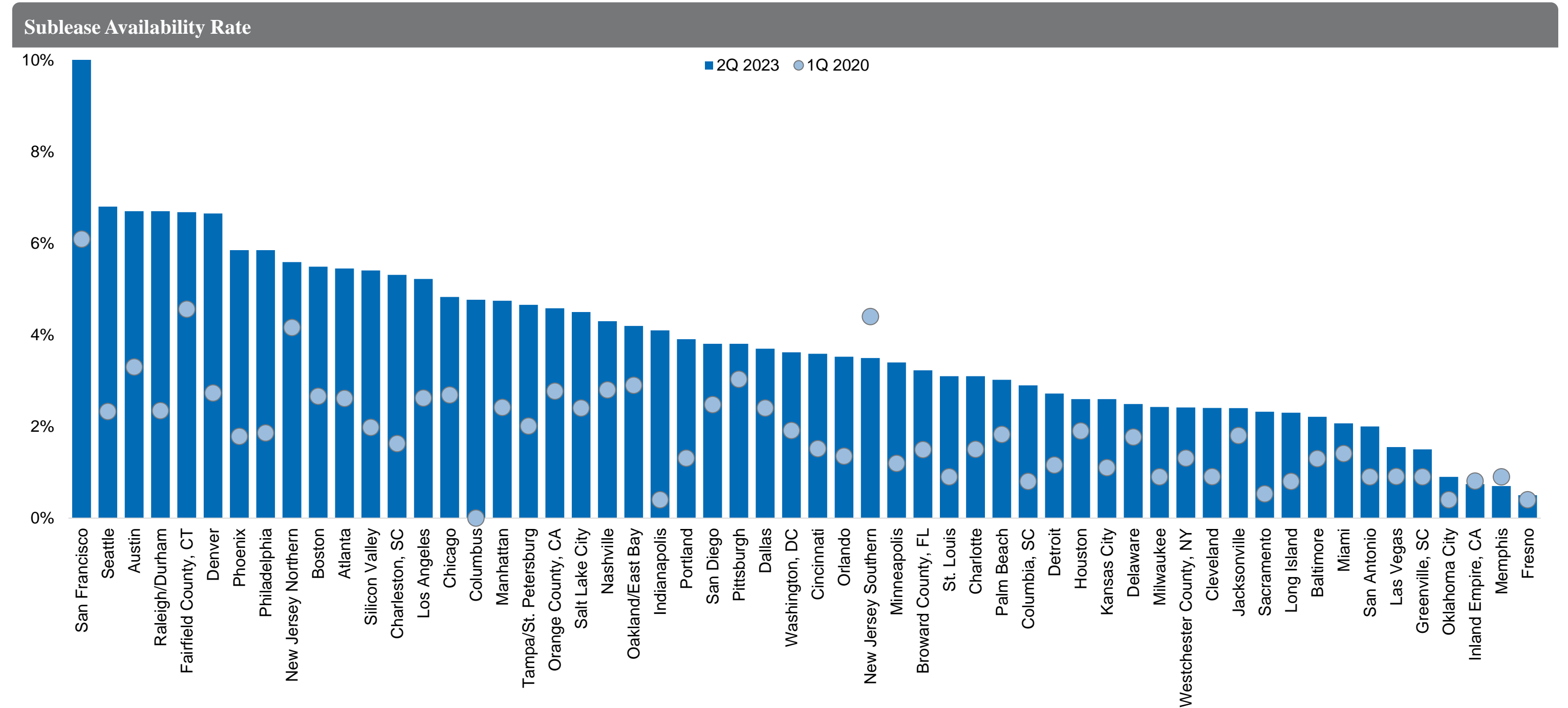
Market Size Sublease Availability Rate



Source: CoStar, Newmark Research

Sublease Availability by Market

Sublease availability remains elevated above pre-pandemic baseline levels in most U.S. markets. Larger markets exhibiting particularly challenging sublease environments include San Francisco, Seattle, Austin, Raleigh/Durham and Fairfield County. Instability in the tech industry, evidenced by layoffs in late 2022 and early 2023, indicate these markets could experience greater increases in sublease availability, further softening fundamentals.

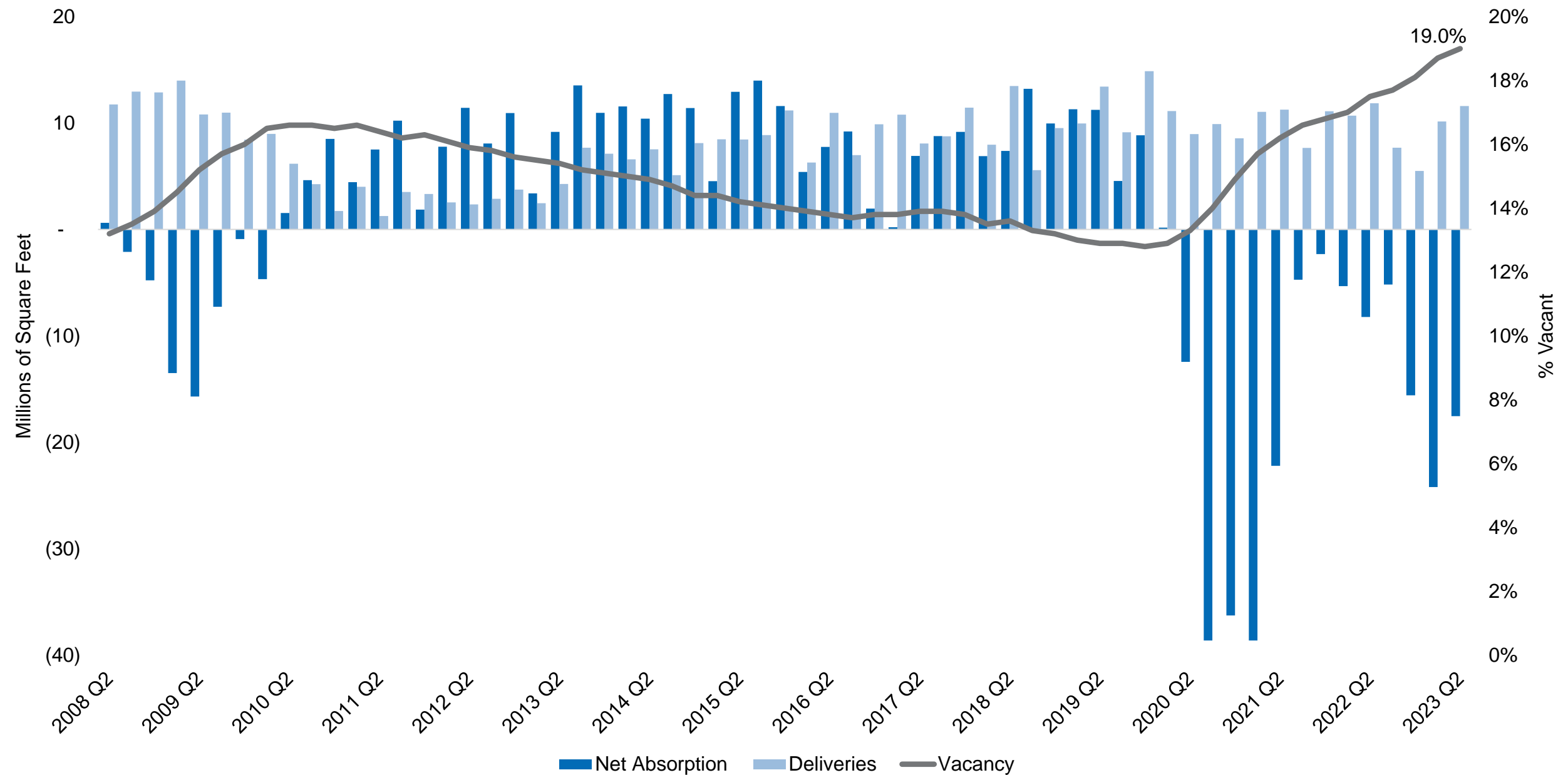


Source: CoStar, Newmark Research

Continued Vacancy Growth Driven by Greater Occupancy Losses

Net absorption continued contracting in the second quarter of 2023, resulting in space givebacks totaling negative 17.5 million SF. Since the first quarter of 2020, net absorption has totaled over negative 231 million SF, significantly worse than either the Great Recession (negative 51.6 million SF) or dot-com (negative 75.7 million SF) market downturns. Despite consistent delivery of new product, the noteworthy reduction in demand has driven vacancy to its highest levels in the cycle, reaching 19.0%.

Supply and Demand: Net Absorption, New Construction Deliveries, and Vacancy

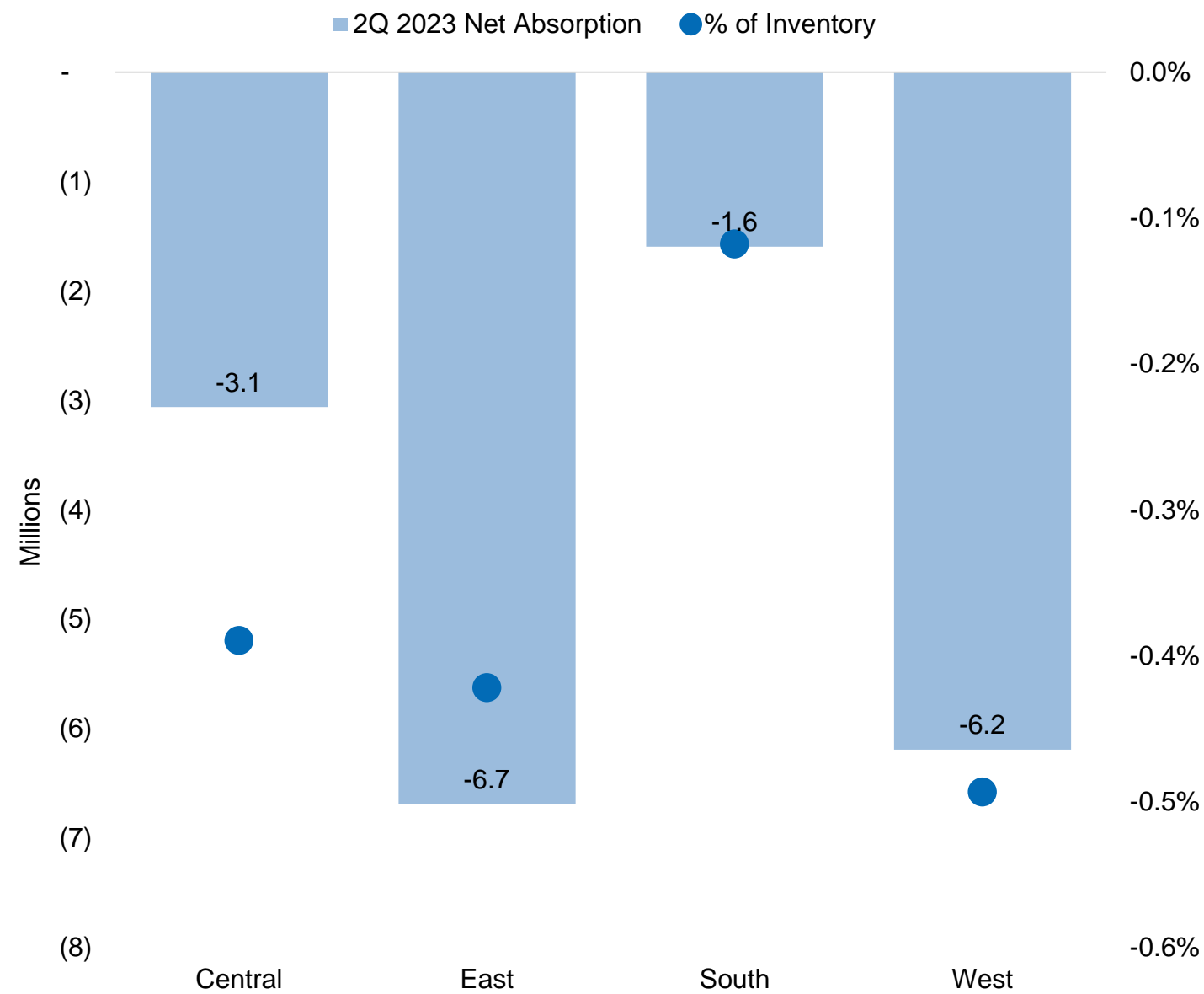


Source: CoStar, Newmark Research

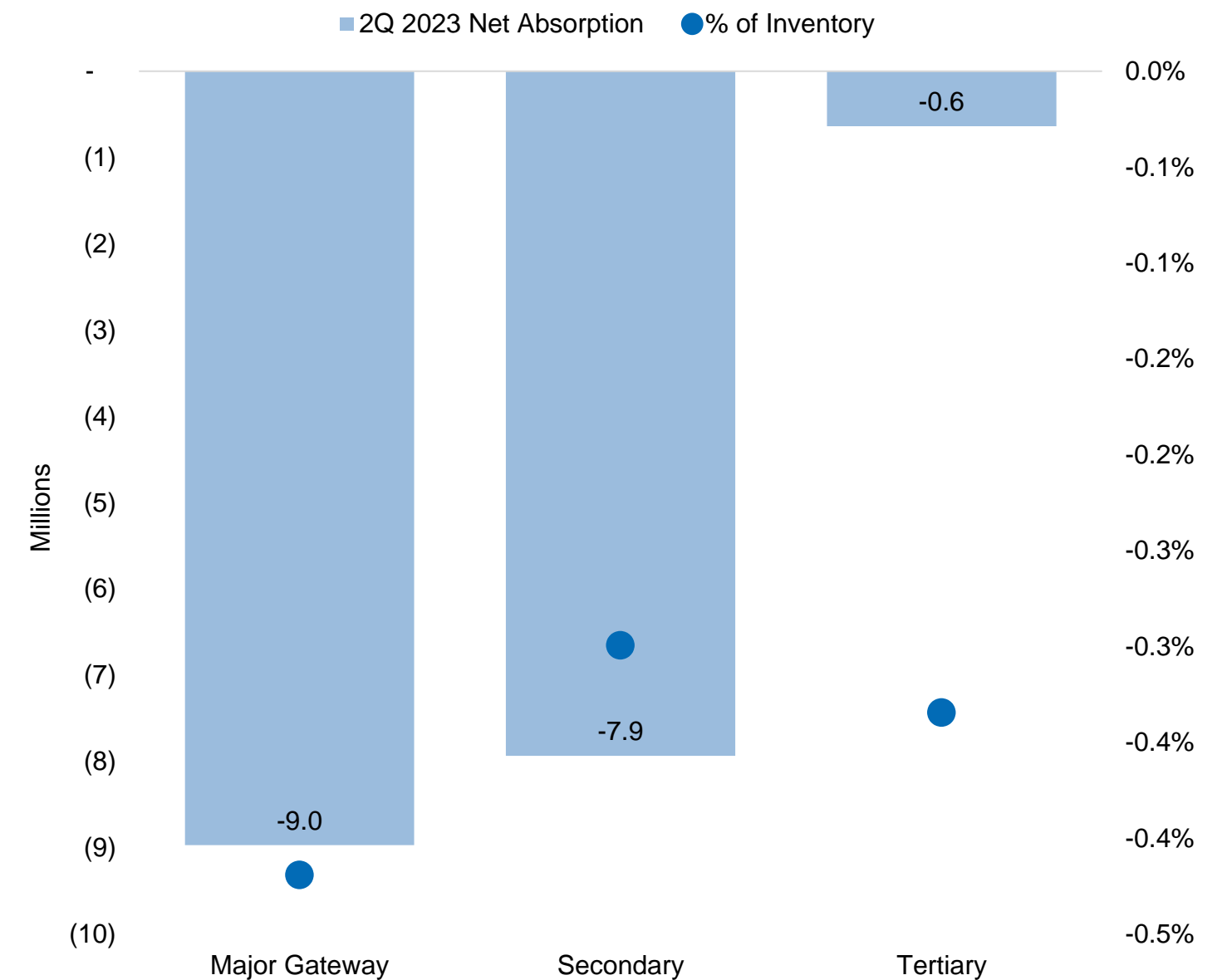
Net Absorption Contracted in 2Q23 across Region and Market Tiers

Occupancy losses continued to mount in the second quarter of 2023, driven most strongly by the Eastern region, where losses in the second quarter of 2023 amounted to negative 6.7 million SF. Both major gateway and secondary markets shed a comparable amount of occupancy in the quarter. The South and Sun Belt continue to perform well relative to the nation, though there were occupancy losses in the second quarter of 2023 within this region as well.

Regional Net Absorption



Market Size Net Absorption



Source: CoStar, Newmark Research

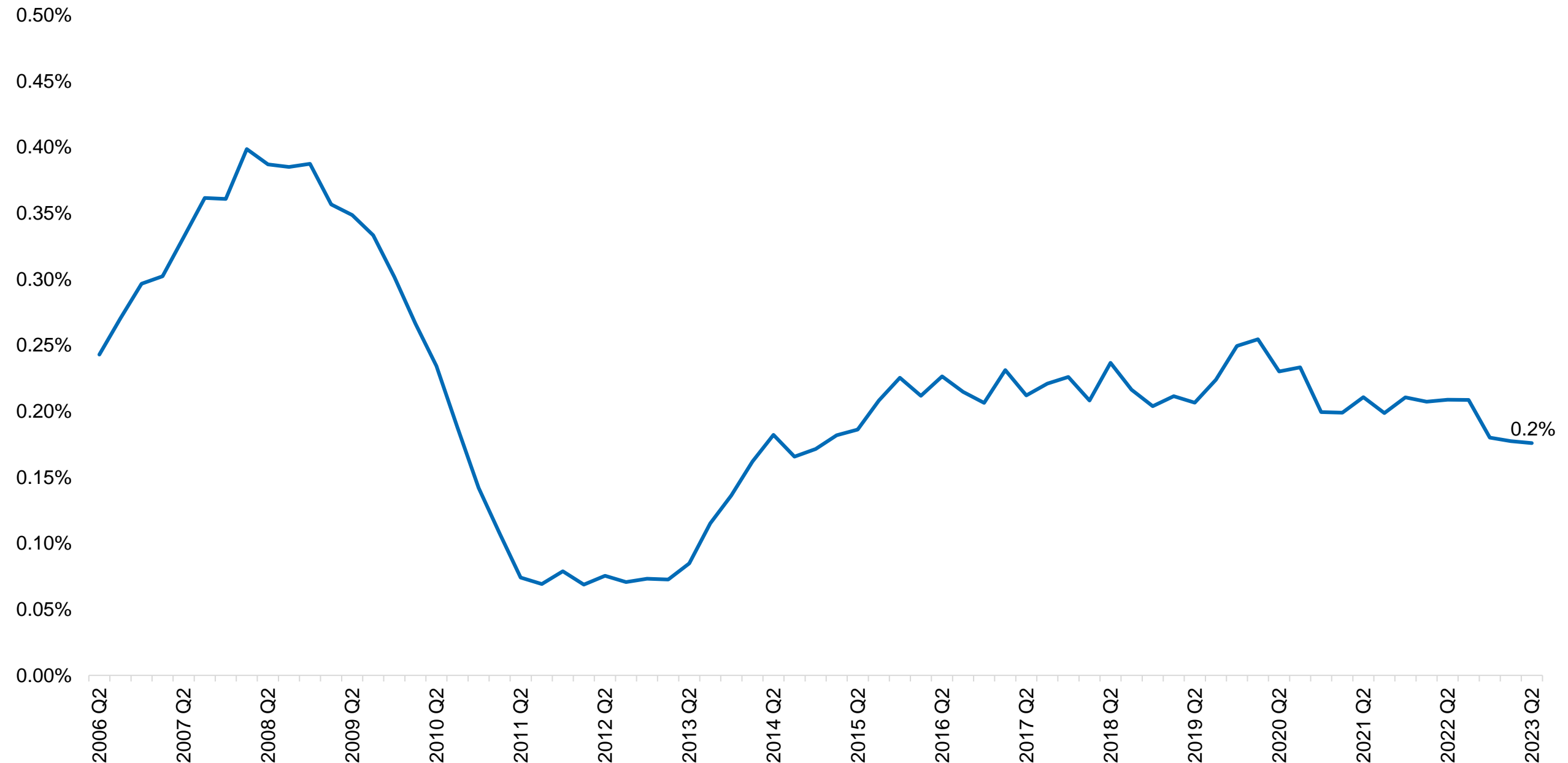
Occupied Space Contracted in 41 out of 56 Markets in 2Q23

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Office Deliveries Edge Up Slightly in 2Q23

Office deliveries increased 1.4 million SF from the previous quarter, with 11.6 million SF delivered in the second quarter of 2023. The pace of future deliveries is likely to remain low; however, the national construction pipeline is experiencing some upward pressure as moderation in construction costs and demand for top-quality office space encourages some developers to break ground on build-to-suit projects in select markets.

Office Deliveries as Percent of Inventory (4-Quarter Trailing Average)

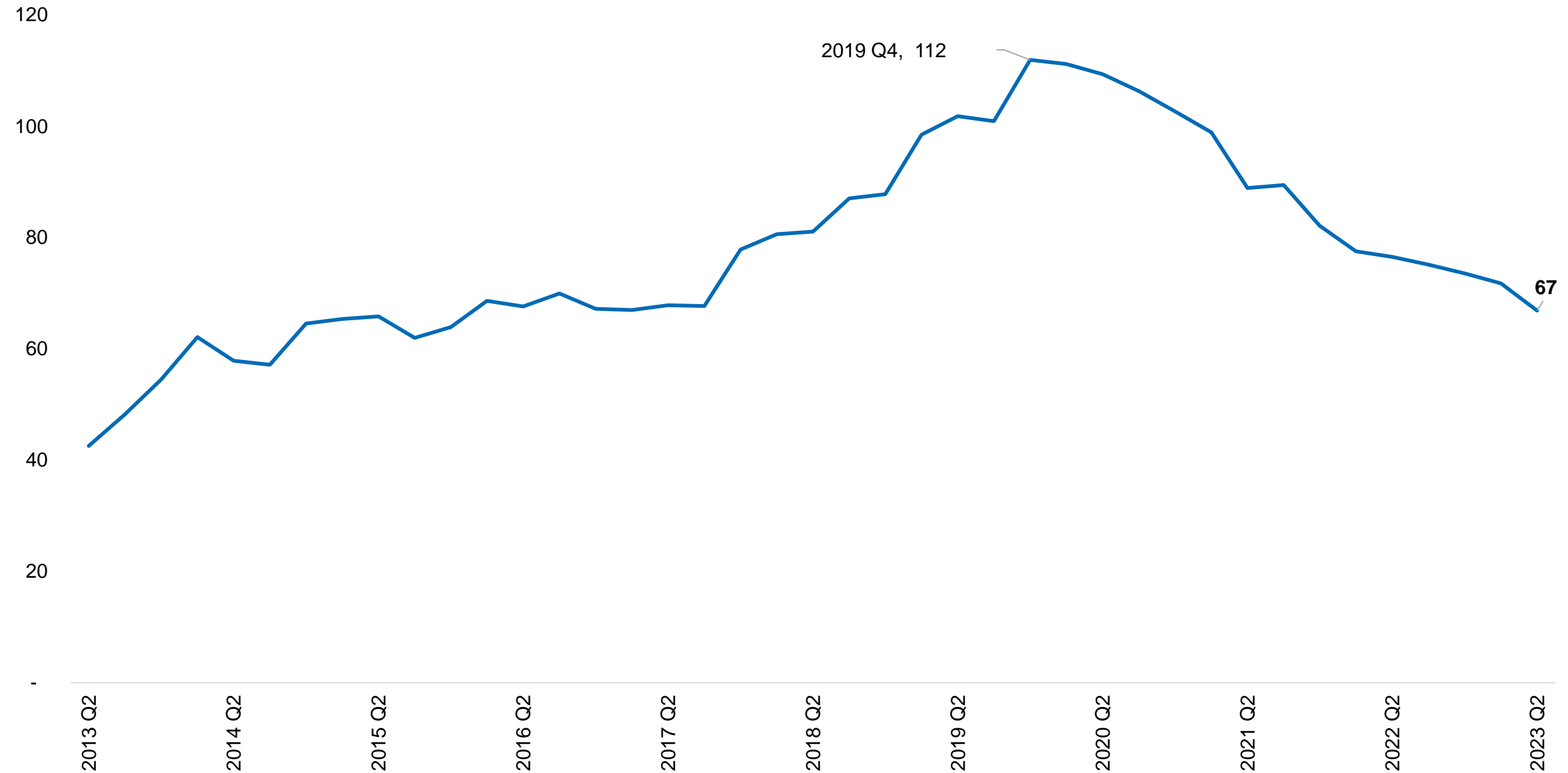


Sources: CoStar, Newmark Research

Office Construction Pipeline Contracts at Measured Pace

Office space under construction peaked in late 2019 at nearly 112 million square feet but has slowed as the pandemic influenced office demand in the years since. Construction activity inched down in the second quarter of 2023 as pessimism among some discouraged new groundbreaking activity. The pipeline is expected to at best remain stable in the near term due to decreased overall demand for office space and increased economic uncertainty.

Total Square Footage Under Construction In Millions

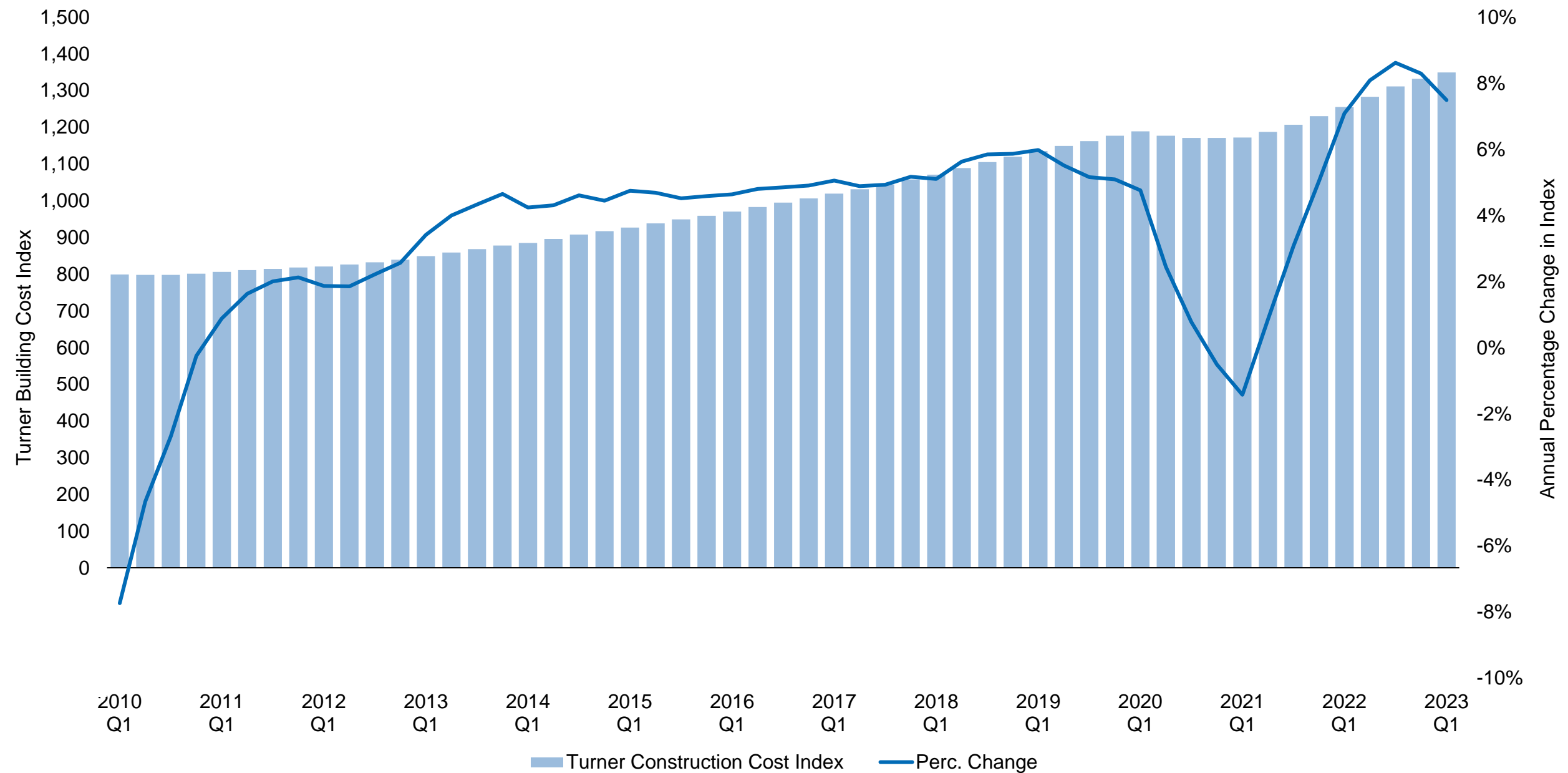


Sources: CoStar, Newmark Research

Office Construction Costs Increase in 2023

Overall inflationary pressures have begun to slightly ease in the first quarter of 2023, but construction pricing continued to rise unabated. Construction pricing generally increased from 4.0% to 5.0% through much of the mid-2010s. While the annual growth rate of the Turner Building Cost Index tipped down in the first quarter of 2023, it remains high at nearly 7.5%.

Turner Building Cost Index



Source: Bureau of Labor Statistics, Newmark Research

Low Construction Pipelines May Help Moderate Supply and Demand Imbalances

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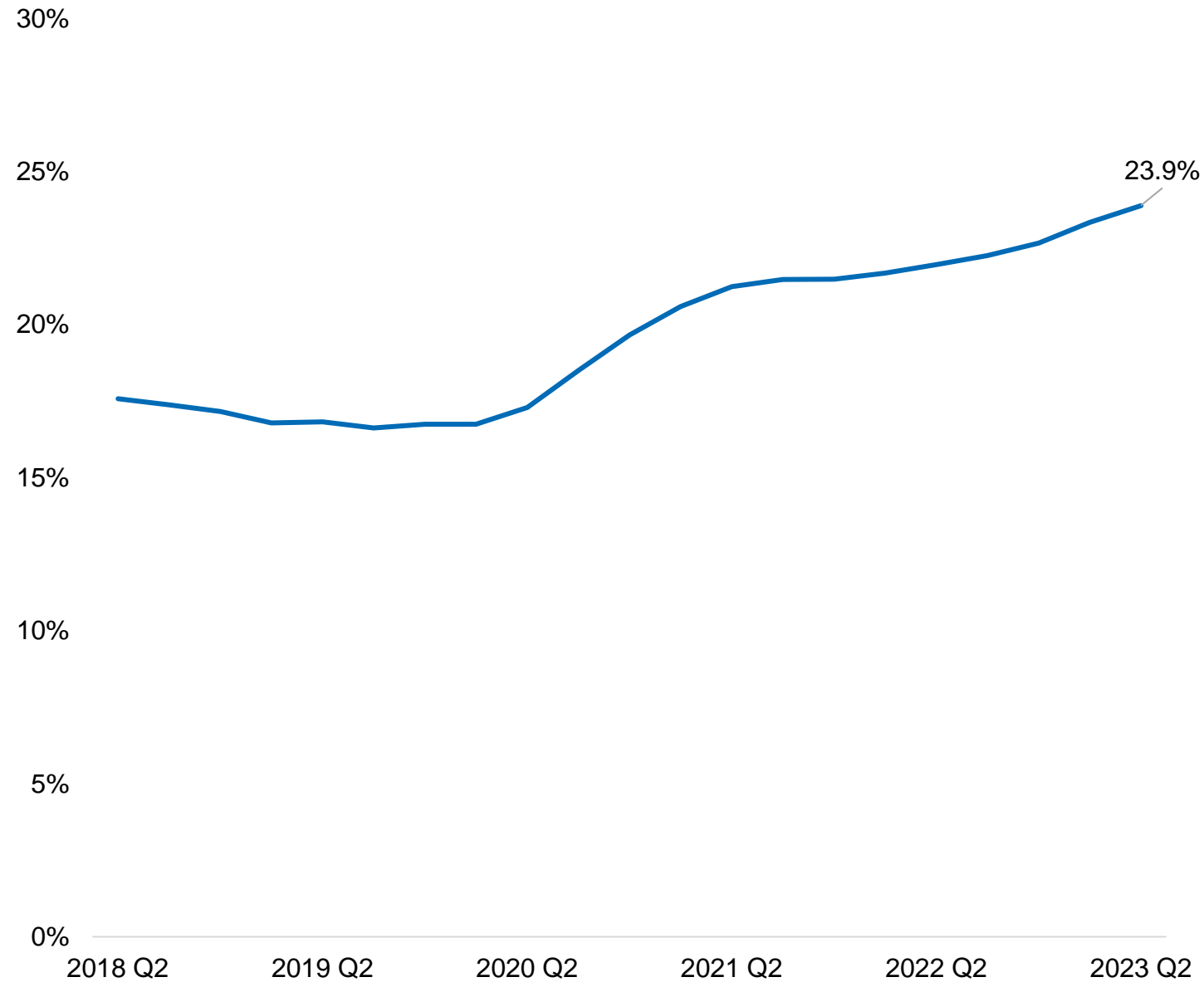
Percent of Inventory Under Construction Highest in West Coast and Sun Belt Markets

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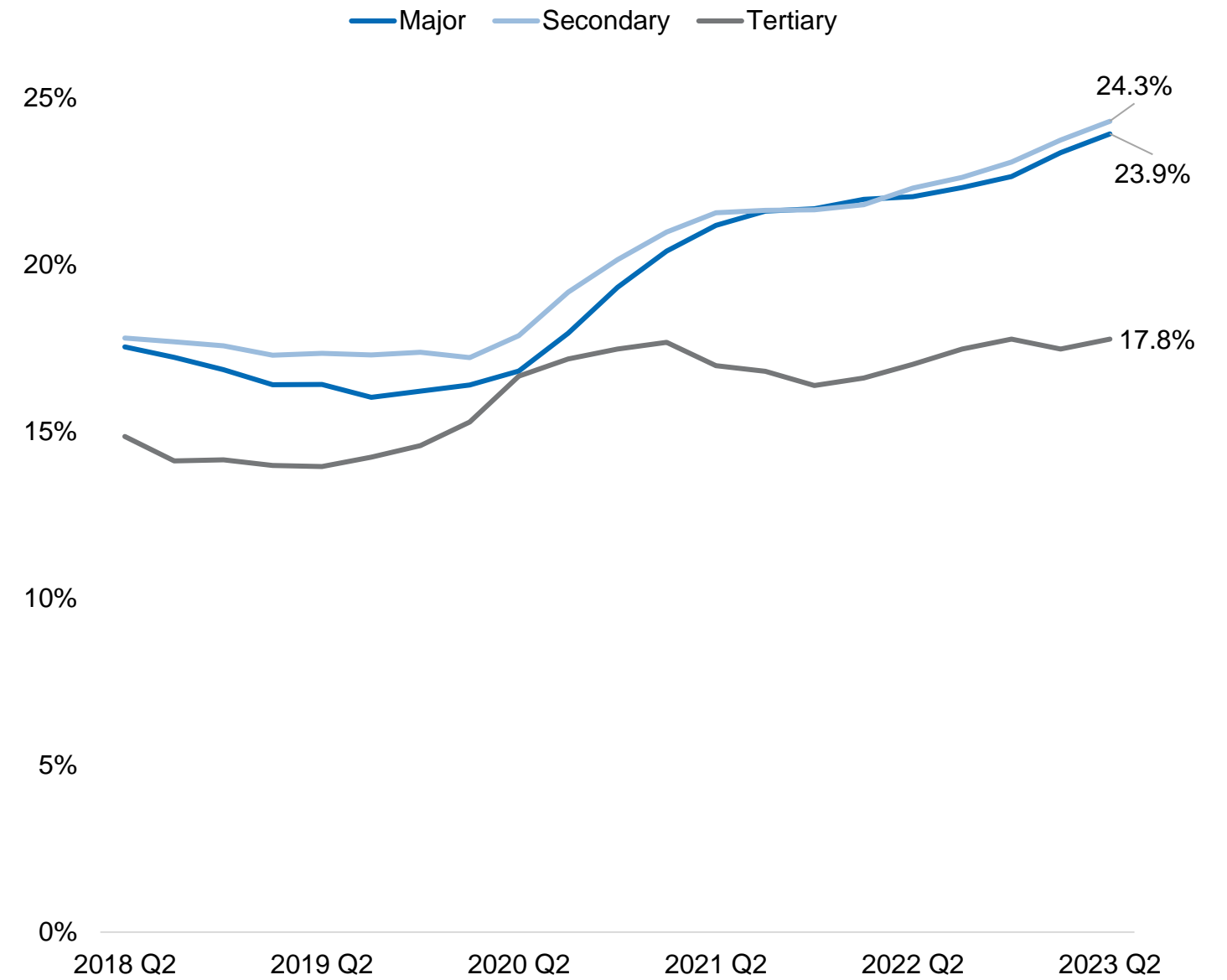
Availability Rates Have Not Yet Peaked

Availability rates increased in the second quarter of 2023, equitably supported by most market segments. Prior to the fourth quarter of 2022, tertiary markets had recorded stabilizing availability levels, but renewed uncertainty has driven up availability rates alongside other fundamentals, including sublease space and vacancy.

National Office Market Availability Rate



Availability Rate Comparison By Market Size

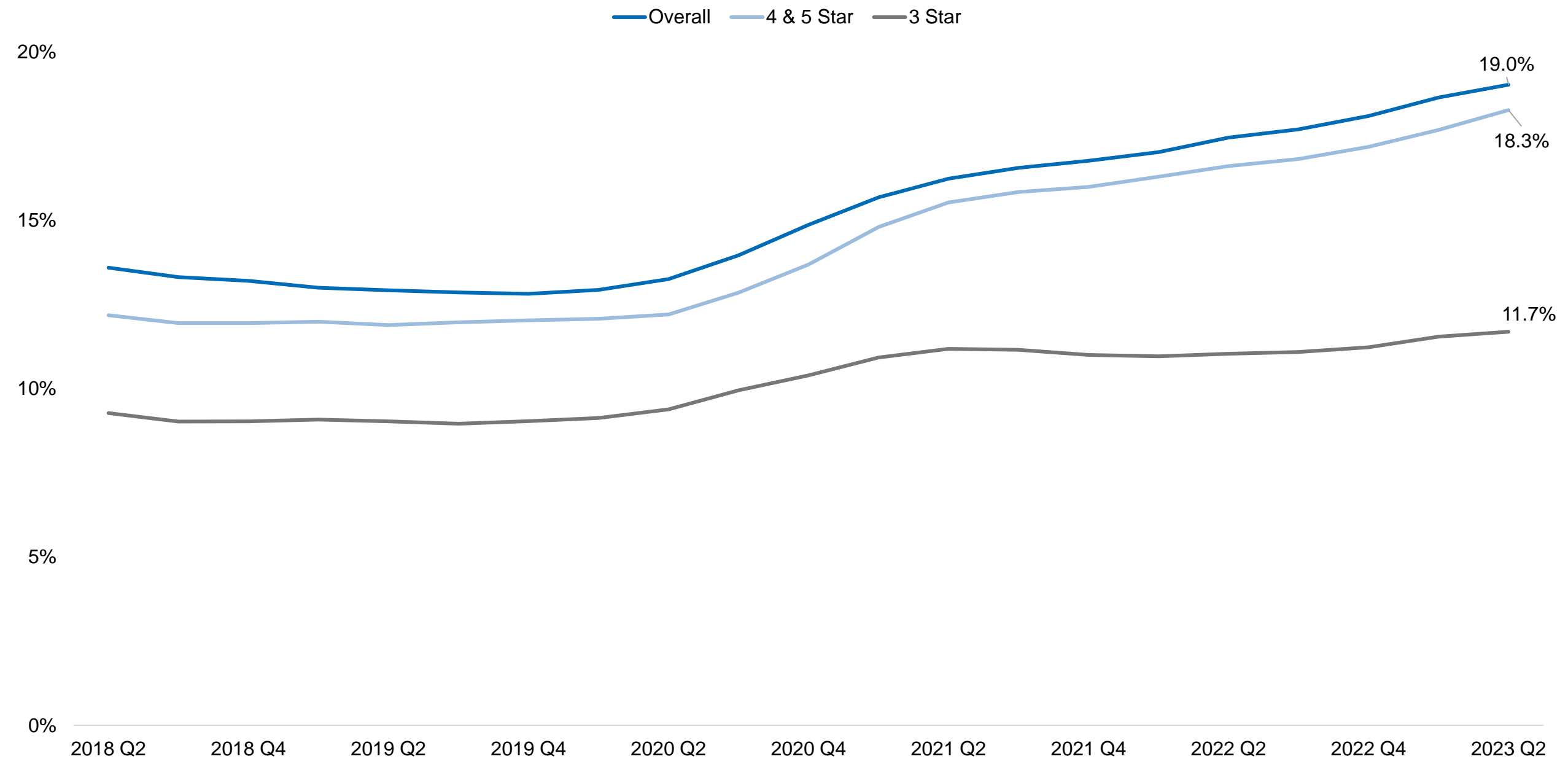


Sources: CoStar, Newmark Research

Continued Occupancy Losses and Slow but Steady Deliveries Drive Vacancy

Vacancy rates rose most notably in the quarters immediately following the onset of the pandemic but continues to marginally grow as overall demand for office space remains soft. Commodity-grade Class A space is generally the most oversupplied segment of the market.

National Office Market Vacancy Rate By Class



Source: CoStar, Newmark Research

Vacancy and Availability by Market

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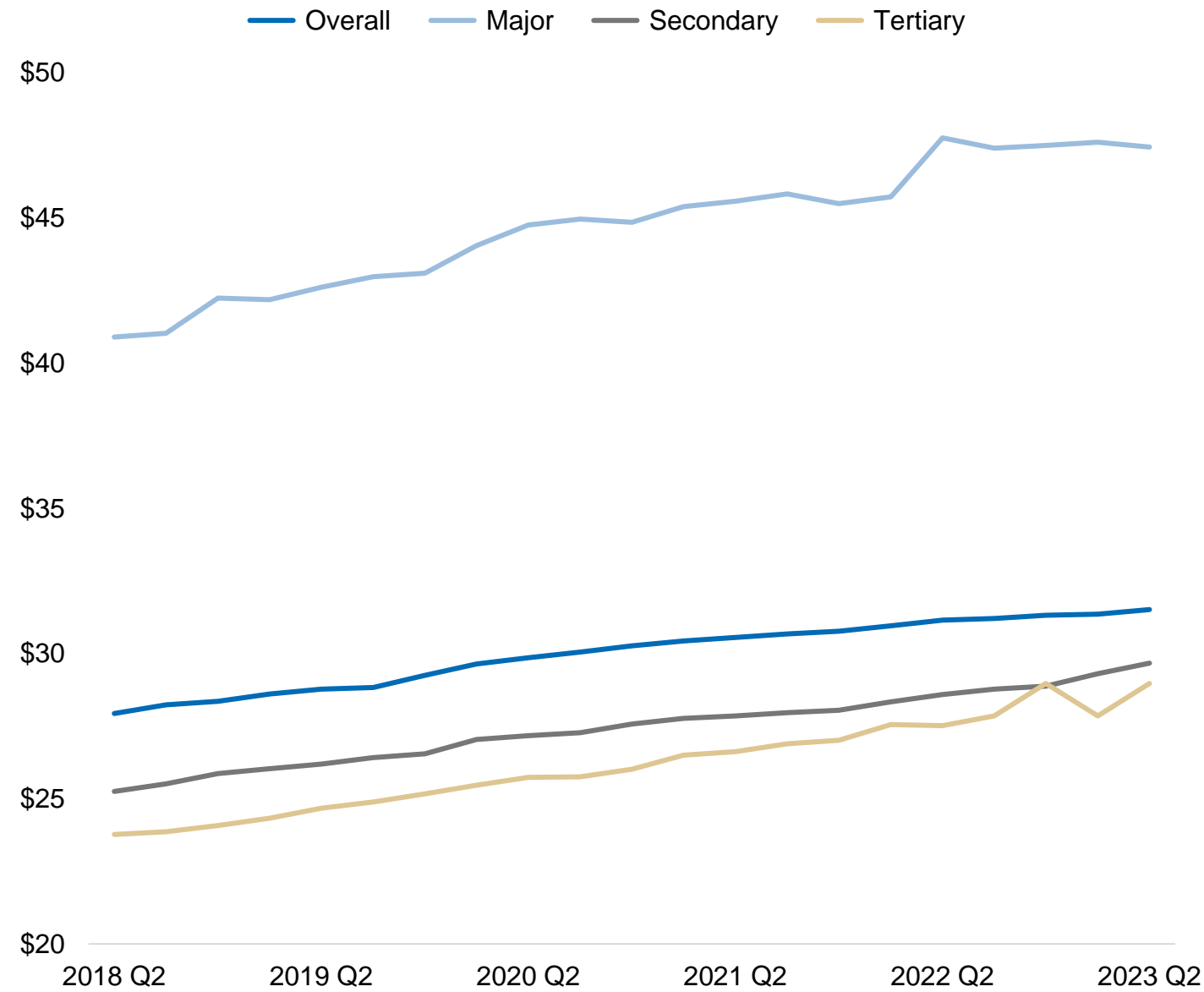
Institutional Properties Impacted, Suburban Office and Niche Categories Outperform

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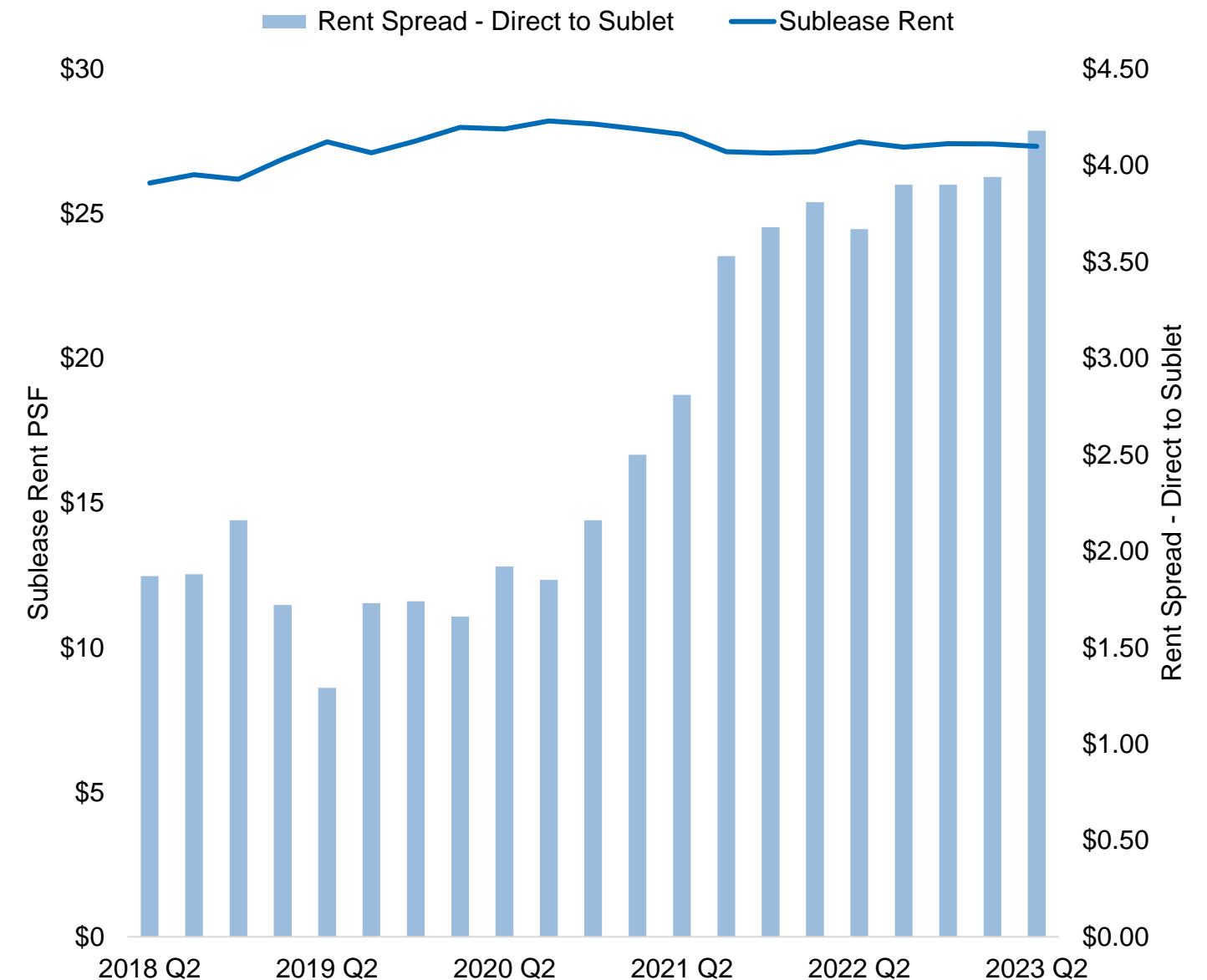
Asking Rents March On

In past cycles, asking rents have adjusted downward to account for depressed demand; however, asking rents have largely held value since the onset of the pandemic. Some rent compression is being experienced among major markets, but secondary and tertiary markets continue to appreciate. Sublease rents have been holding relatively flat for much of the last three years, which more visibly exhibits the impact of low demand. As a result, the spread between sublease space and direct space has widened to near all-time highs.

Overall Asking Rents Up 1.2% YoY in Q2, Led by Major Markets



Sublet Rents Stabilized; Rent Spread Relative to Direct Rates Near All-Time High

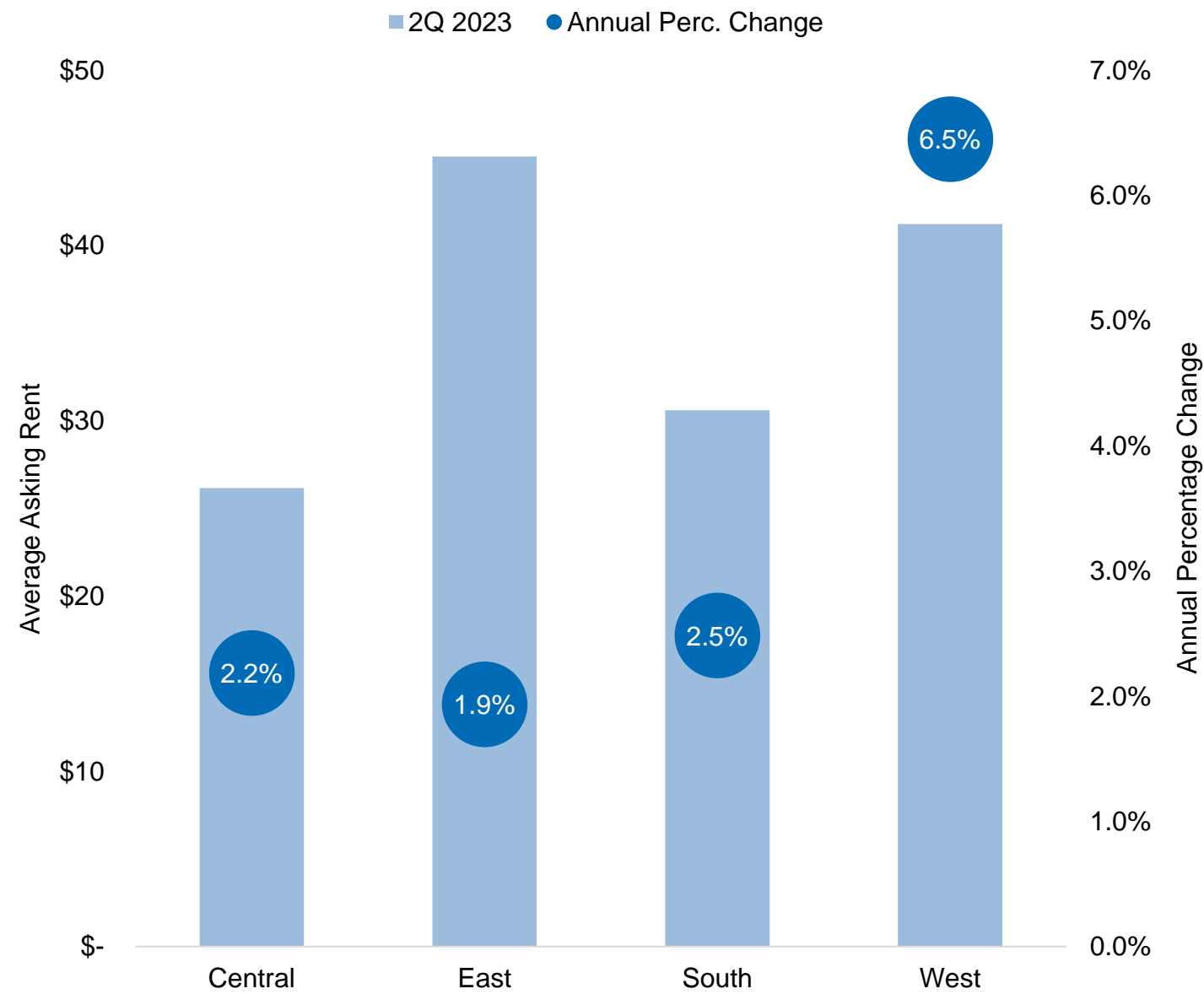


Source: CoStar, Newmark Research

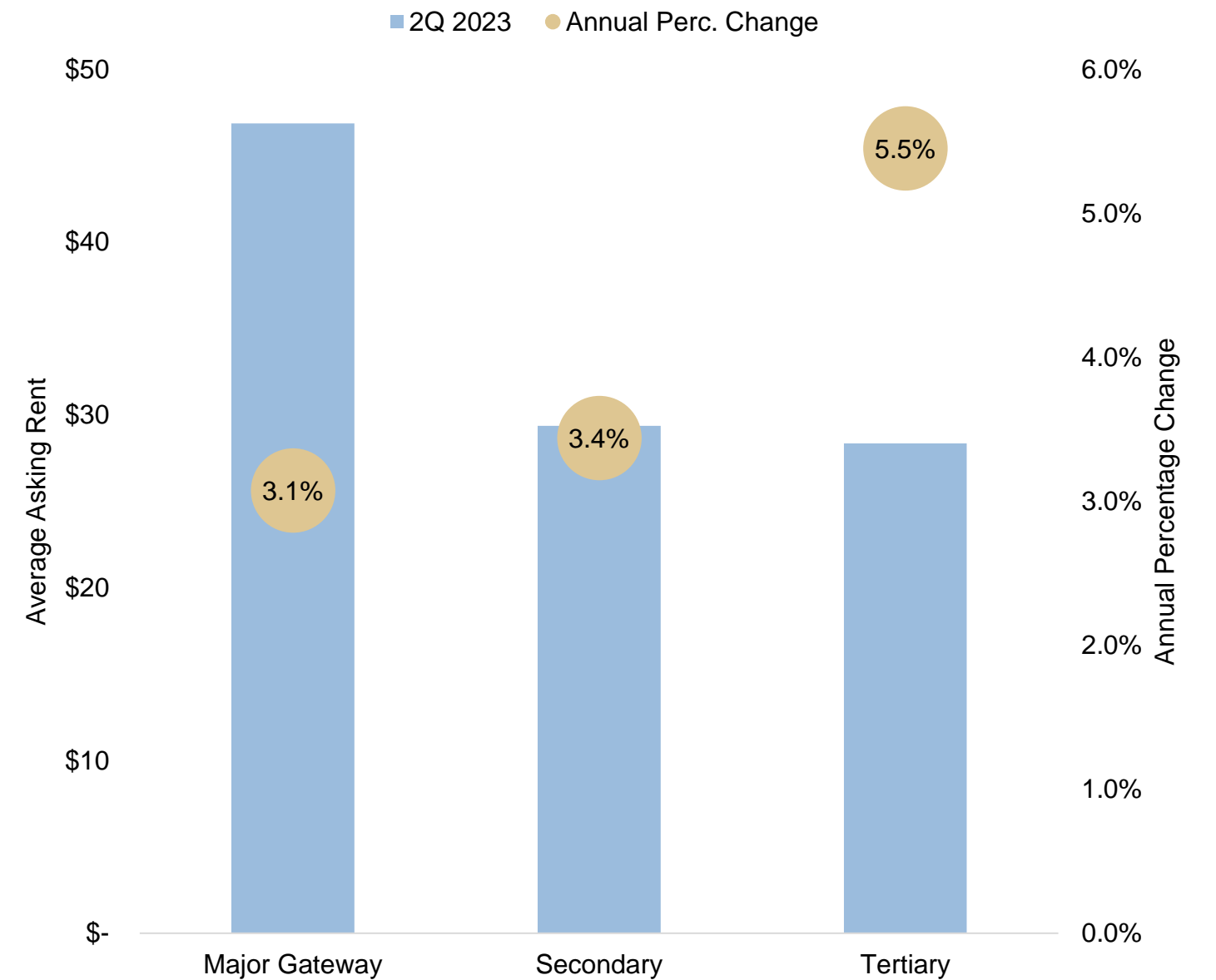
Rent Growth Varies by Market

Overall asking rents are most elevated in major coastal Eastern and Western markets, including San Francisco, Manhattan and Silicon Valley. The West Coast continues to experience the most aggressive rent appreciation among the four key regions, driven partly by inventory expansion and the success of secondary markets in attracting office demand in an otherwise challenging time. Effective rents are under downward pressure and modest rent compression is being felt in some markets.

Asking Rents Growing Fastest in the South and Central Regions



Non-Major Markets Experiencing the Most Rent Growth



Source: CoStar, Newmark Research

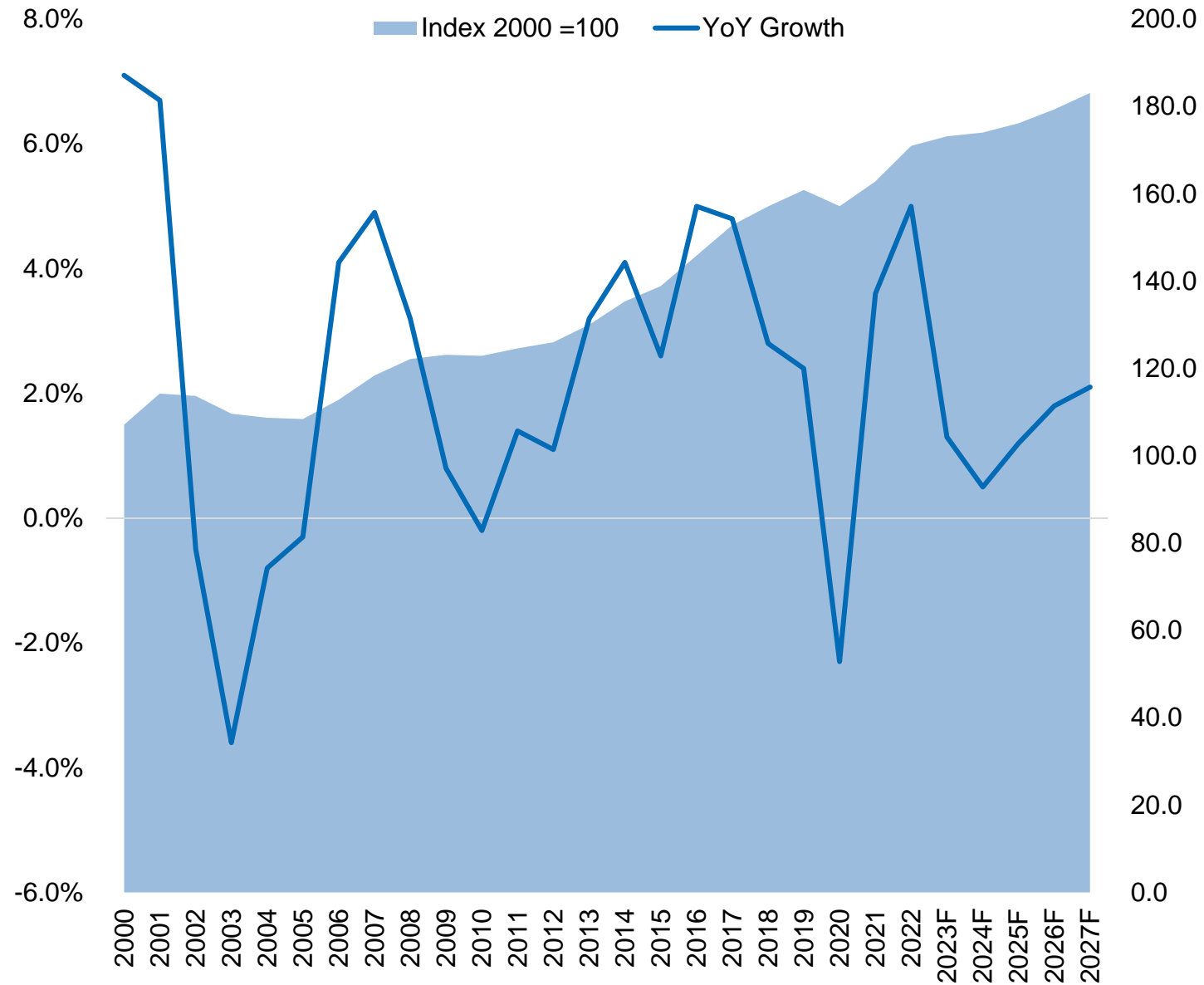
Institutional Core Building Rent per SF Has Broadly Grown Since 4Q19

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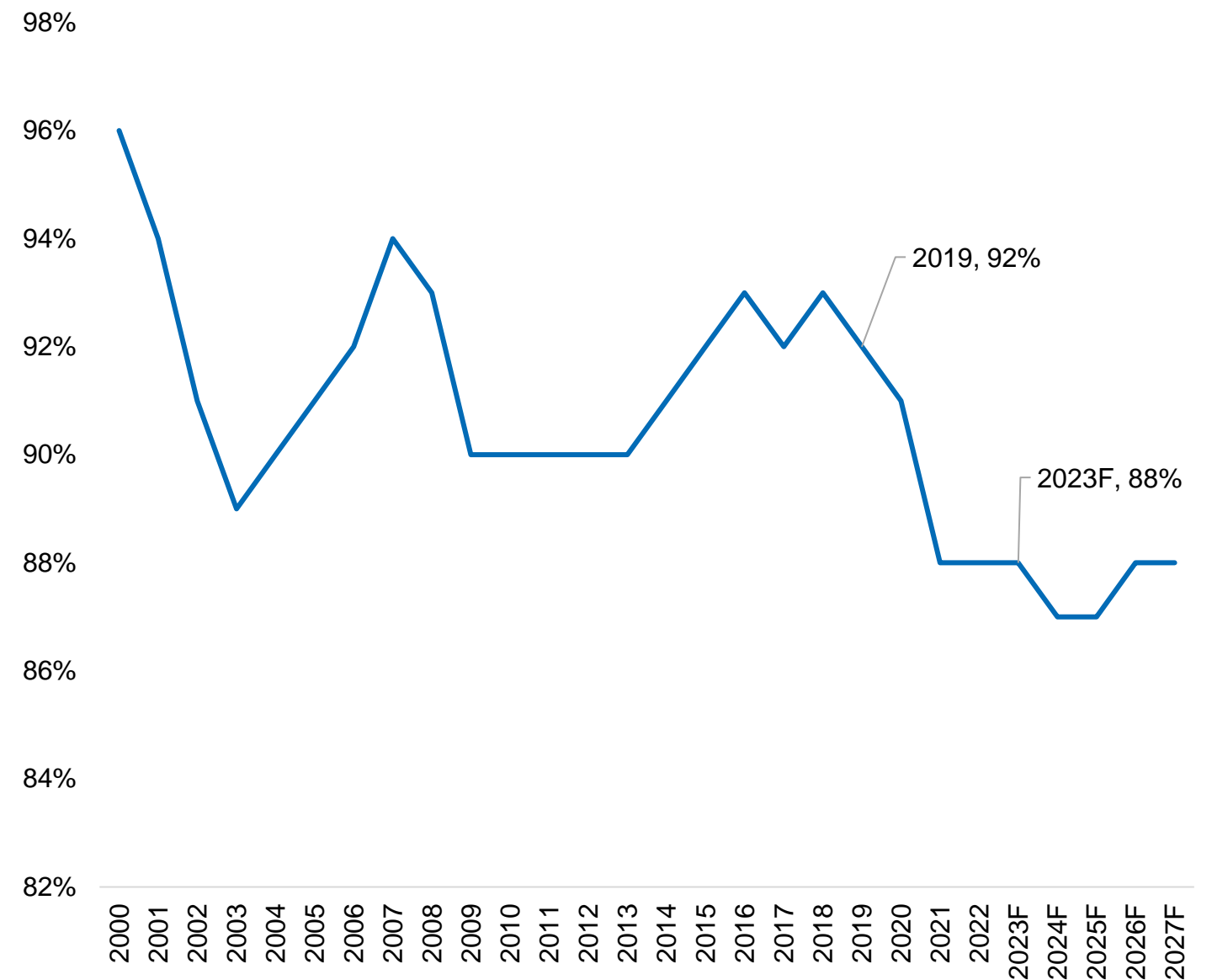
Office REITs Also Show Better than Expected Cash Flow Trends

Despite the significant deterioration in overall leasing market conditions, office REITs have continued to grow their same-store NOI. Partly, this reflects disposition of underperforming assets, but this still means that the pruned portfolios are performing. Occupancies are at their lowest levels since at least 2000, but they appear to have stabilized.

Same-Store NOI Has Already Recovered and Forecast to Experience Growth



REIT Same-Store Occupancy Stabilizing

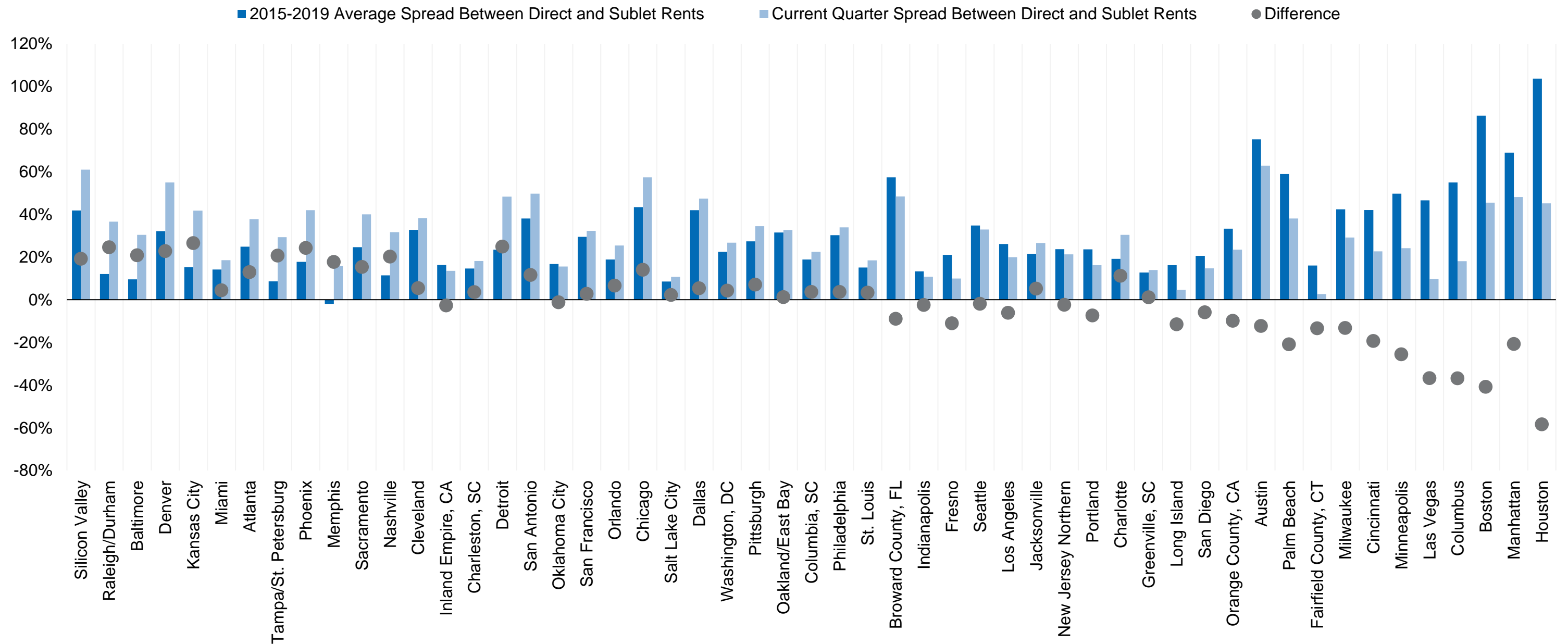


Source: Green Street data as of 7/21/2023, Newmark Research

Spread Between Sublet and Direct Rents Rising in Most Markets

The spread between average direct and sublet asking rents has been on the rise nationally, but variations exist within markets. In most cases, this rising spread has been perpetuated by steadily increasing asking rents and stability in sublet rates.

Direct-to-Sublet Rent Spread Comparison Between Pre-Pandemic and Current Period



Source: CoStar, Newmark Research

Spread Between Sublet and Direct Rents Rising in Most Markets

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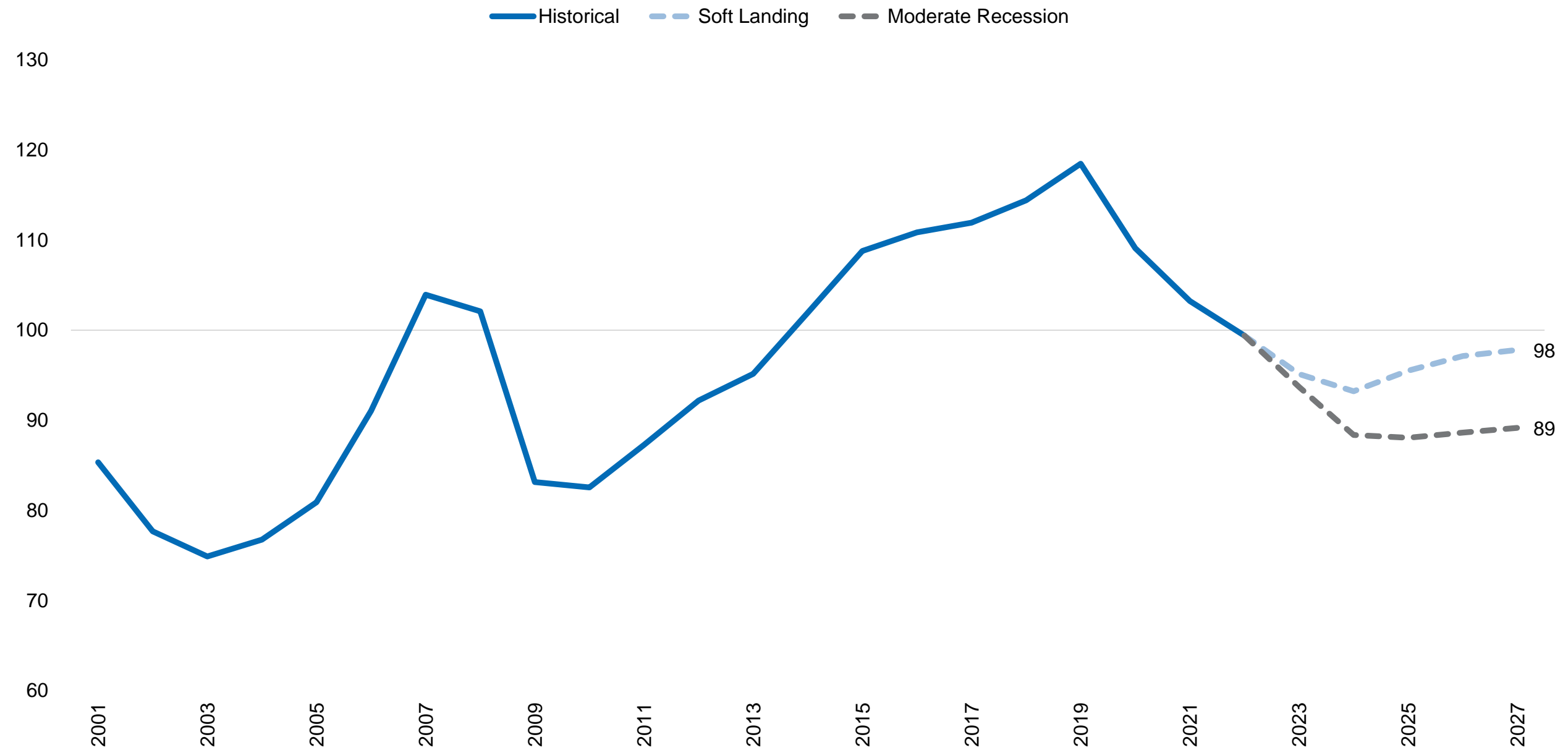
Secondary Markets Outperforming in Sun Belt

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Broad Market Fundamentals Are More at Risk

Market revenue per available foot has been trending downward since 2019, and its recovery will be impacted by the depth of the recessionary pressures in the coming year. Under a soft-landing economic scenario, M-RevPAF is expected to settle around the baseline growth set in 2000; however, a moderate recession could result in continued contraction in M-RevPAF into 2027.

Green Street M-RevPAF (December 2000 = 100)

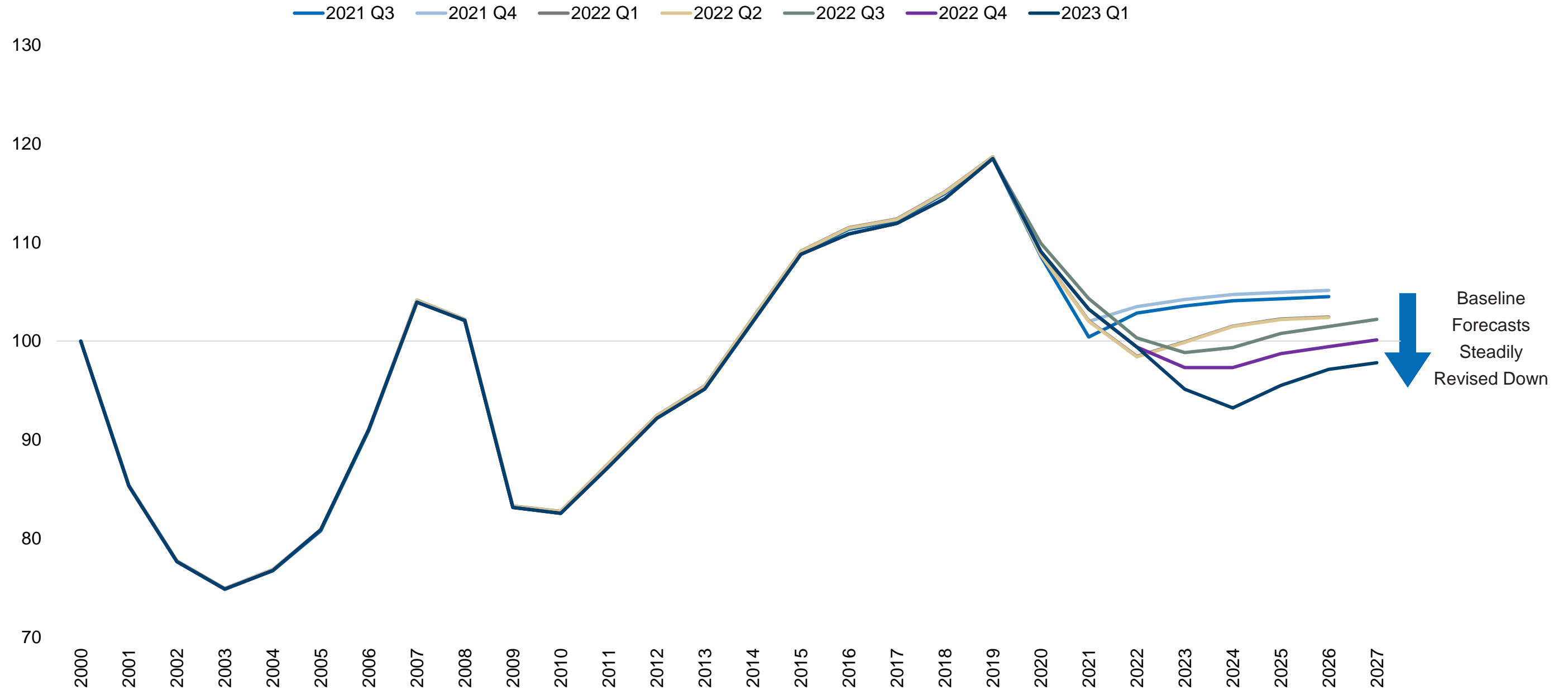


Sources: Green Street, Newmark Research

Forecasts Continue to Be Revised Downwards

Economic headwinds are strong and directly influencing office market projections. Conditions have become more tumultuous in 2023, resulting in steady downward revisions to Green Street's expected revenue per available foot (M-RevPAF) over the last 12 months.

Green Street M-RevPAF Forecast Revisions (December 2000 = 100)

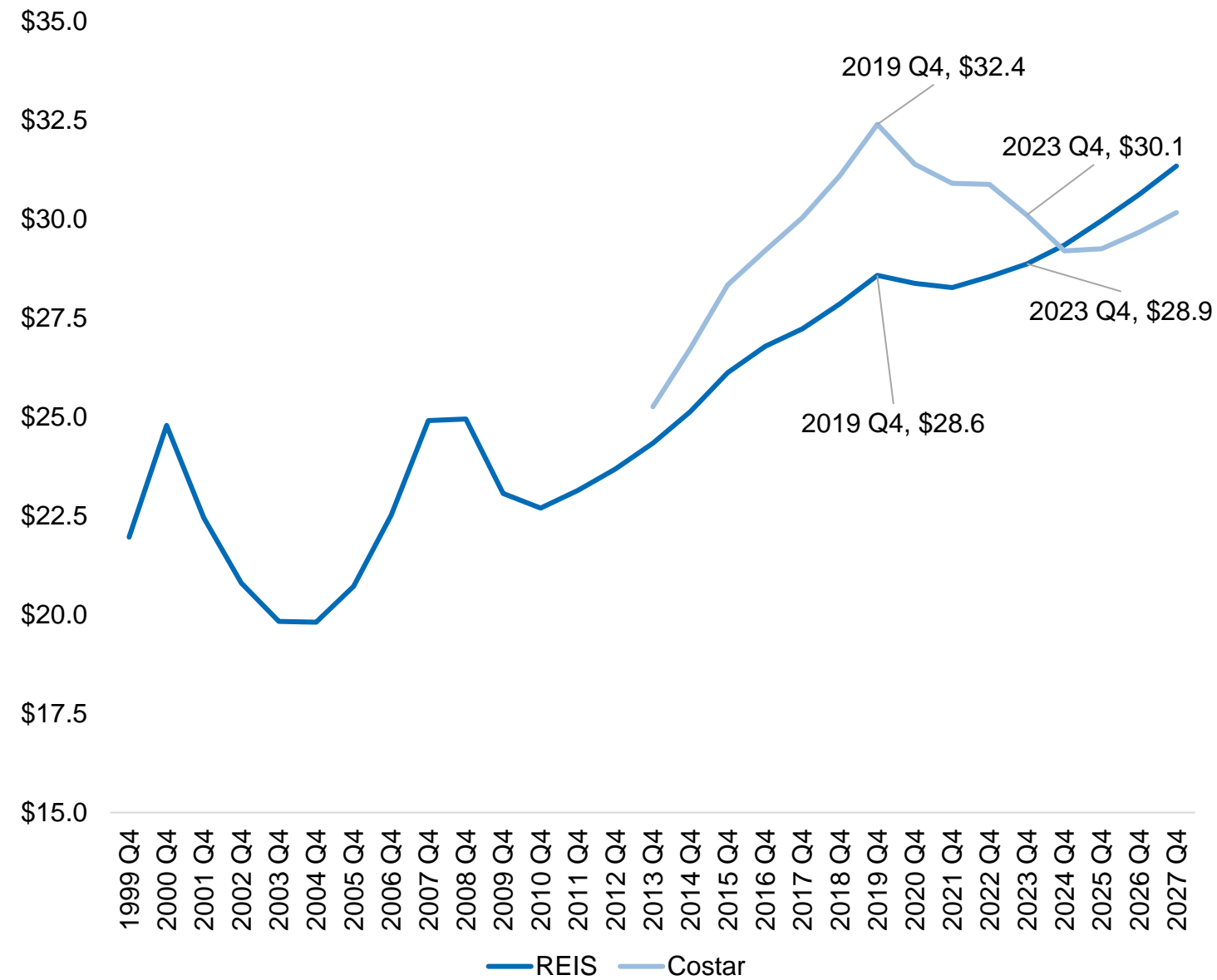


Sources: Green Street, Newmark Research

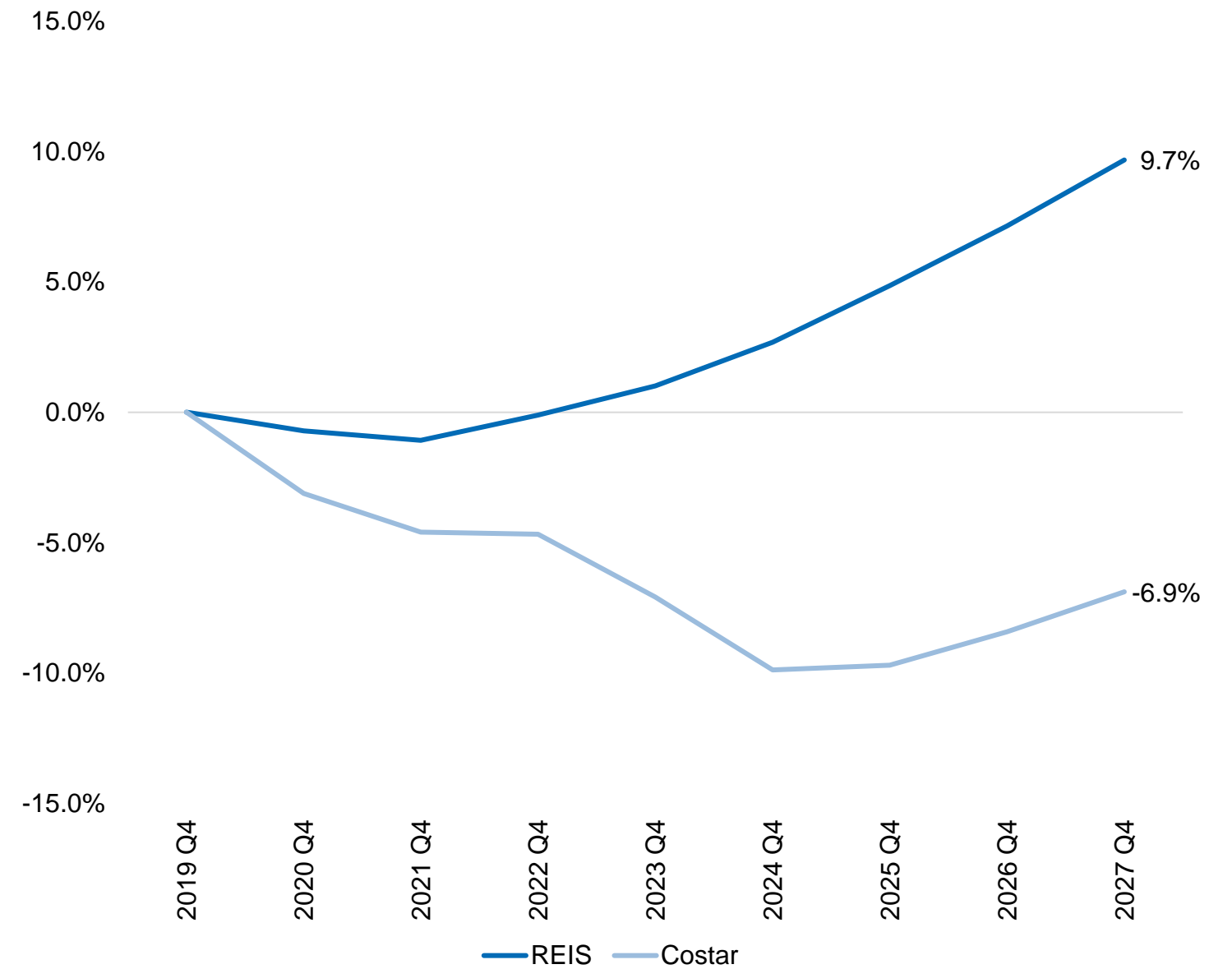
Two Very Different Forecasts

Costar's outlook for the office market is much closer to Green Street. The REIS forecast appears quite rosy in comparison.

Costar Shows A Much More Volatile Path of mRevPAF



Cumulative Change in mRevPAF Since 2019 Q4



Source: Costar, REIS, Newmark Research
 *Costar forecast based on 3+ star properties over 50K sqft

2Q23 US OFFICE MARKET OVERVIEW

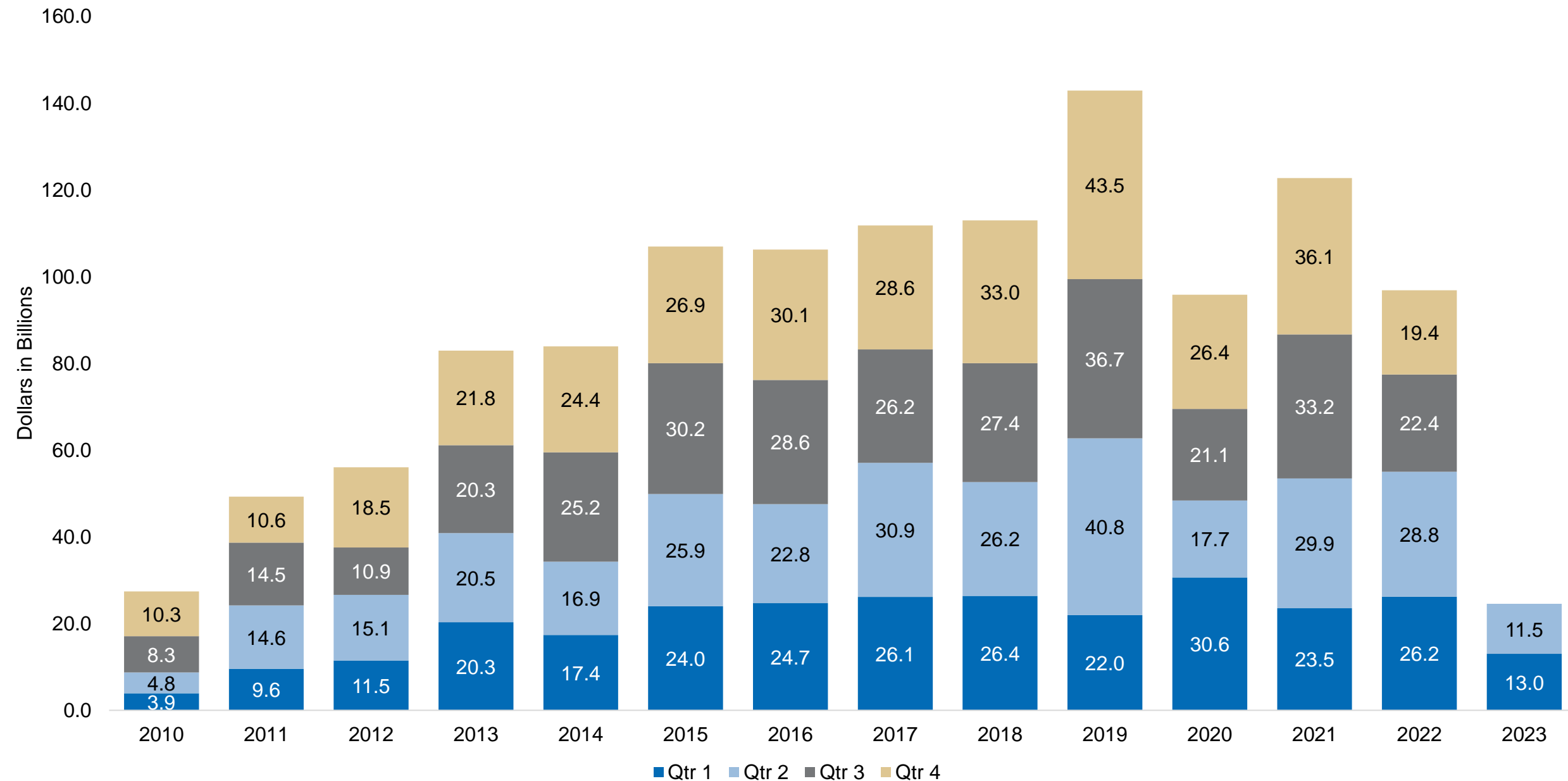
Debt Capital Markets



Office Debt Originations Down 55% Year-Over-Year in First Half of 2023

While figures are preliminary, revisions would only confirm the sharp deceleration in lending activity in the office sector. Office origination volumes were the lowest since 2011, according to RCA data. Both suburban and CBD office buildings experienced similar declines, both compared with the first half of 2022, as well as compared with pre-pandemic, specifically the 2017 to 2019 average.

Office Debt Origination Volume*



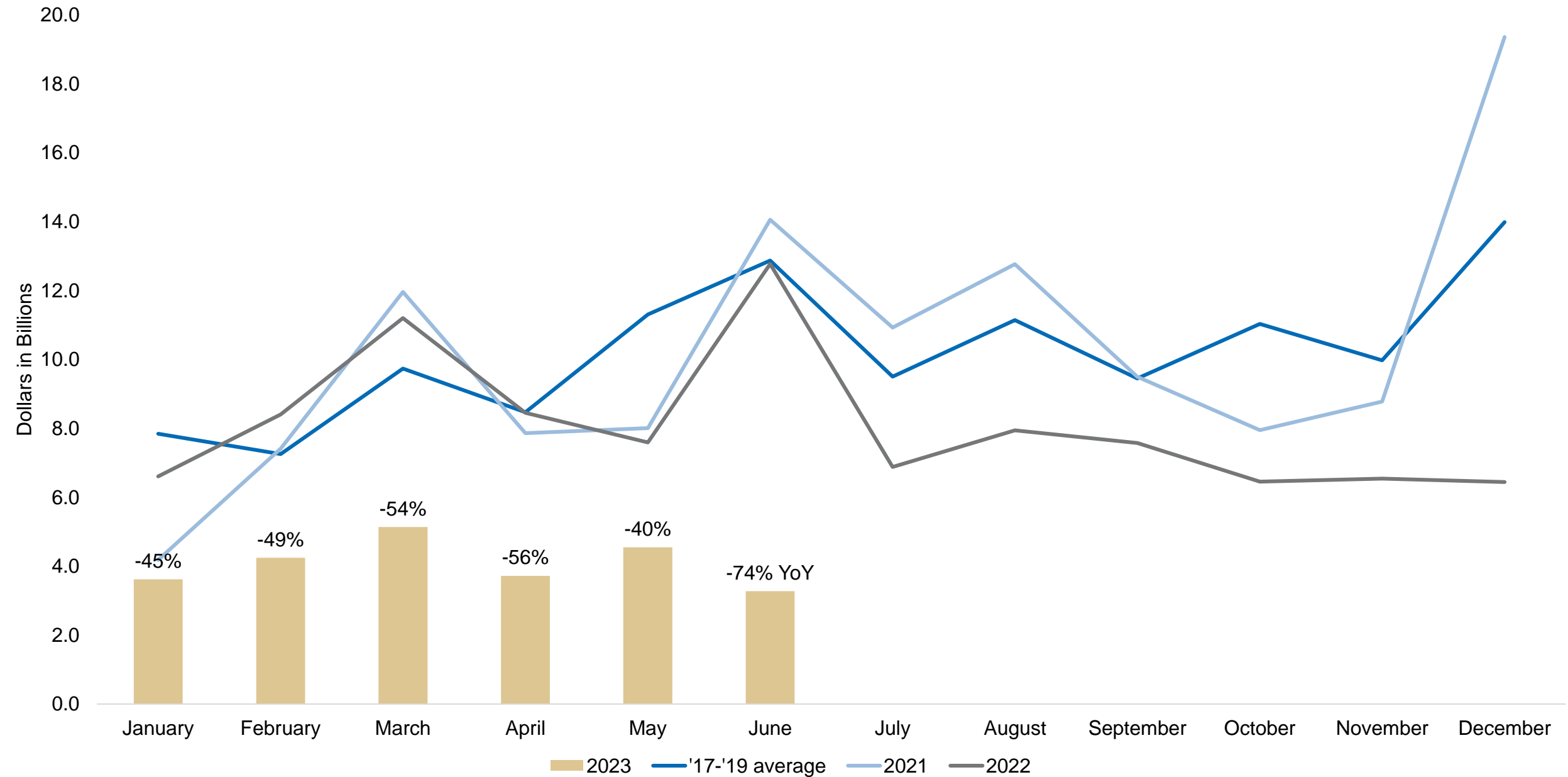
Source: RCA, Newmark Research as of 7/24/2023

* Excludes construction finance. Data is based preliminary loan sums, which are subject to future revision – potentially significant.

Monthly Originations Consistently Weak; Materially below Historical Levels

Office originations departed from the 2017 to 2019 average trend in July of 2022 and continuously weakened since then.

Monthly Office Debt Originations Volume*



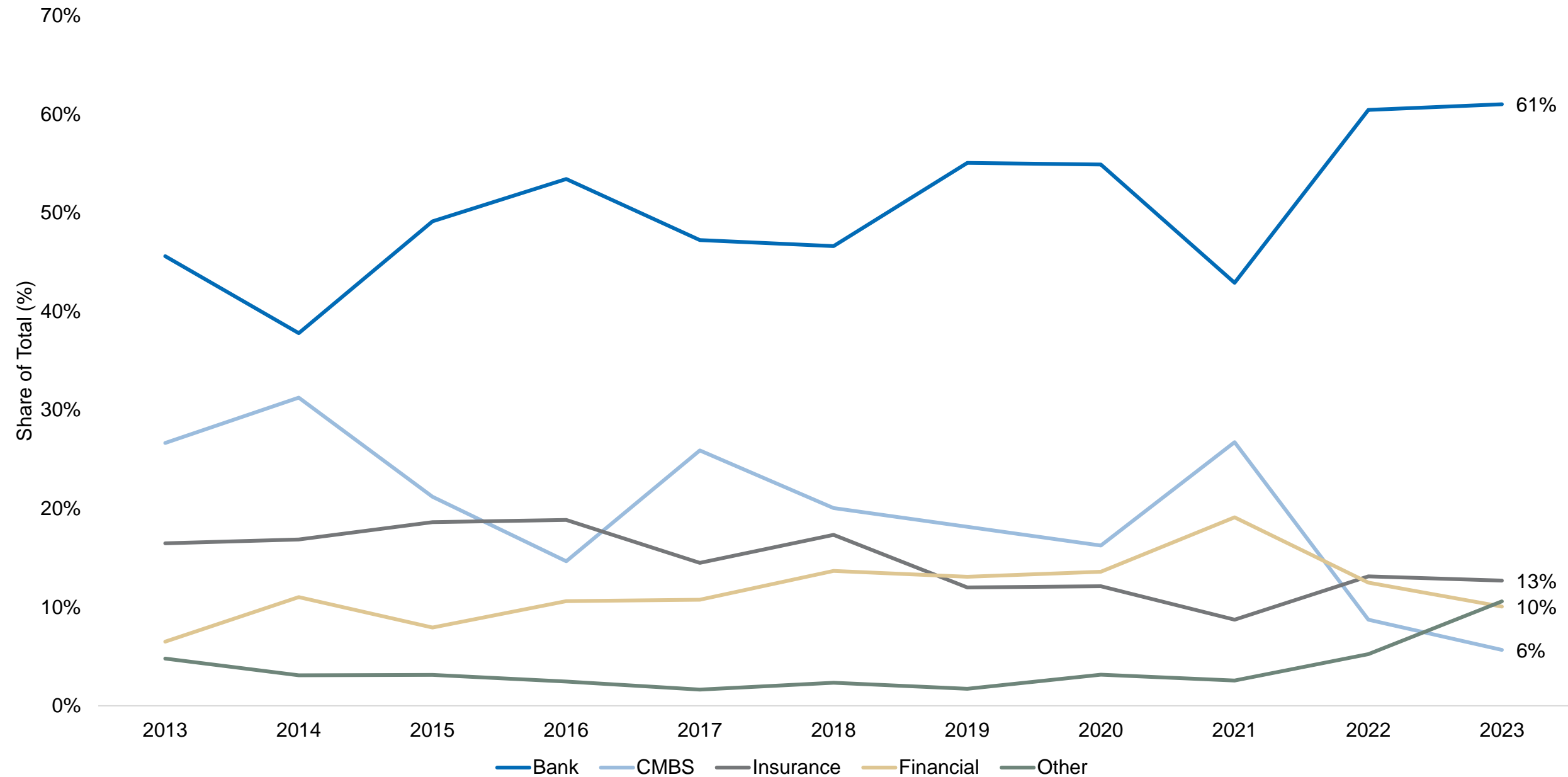
Source: RCA, Newmark Research as of 7/24/2023

* Excludes construction finance. Data is based preliminary loan sums, which are subject to future revision – potentially significant.

Office Borrowers Heavily Dependent on Bank Finance

Banks continued to dominate office property finance in the first half of 2023. Securitized debt finance by contrast has fallen sharply from its recent peak in 2021 amid a depressed issuance market. Other lenders, mostly private, increased their share sharply in the first half of 2023. Insurance lending has been stable on a share basis.

Origination Share by Lender Group



Source: RCA, Newmark Research as of 7/24/2023

* Excludes construction finance. Data is based preliminary loan sums, which are subject to future revision – potentially significant.

\$397 Billion in Office Loans Mature Between 2023 and 2025

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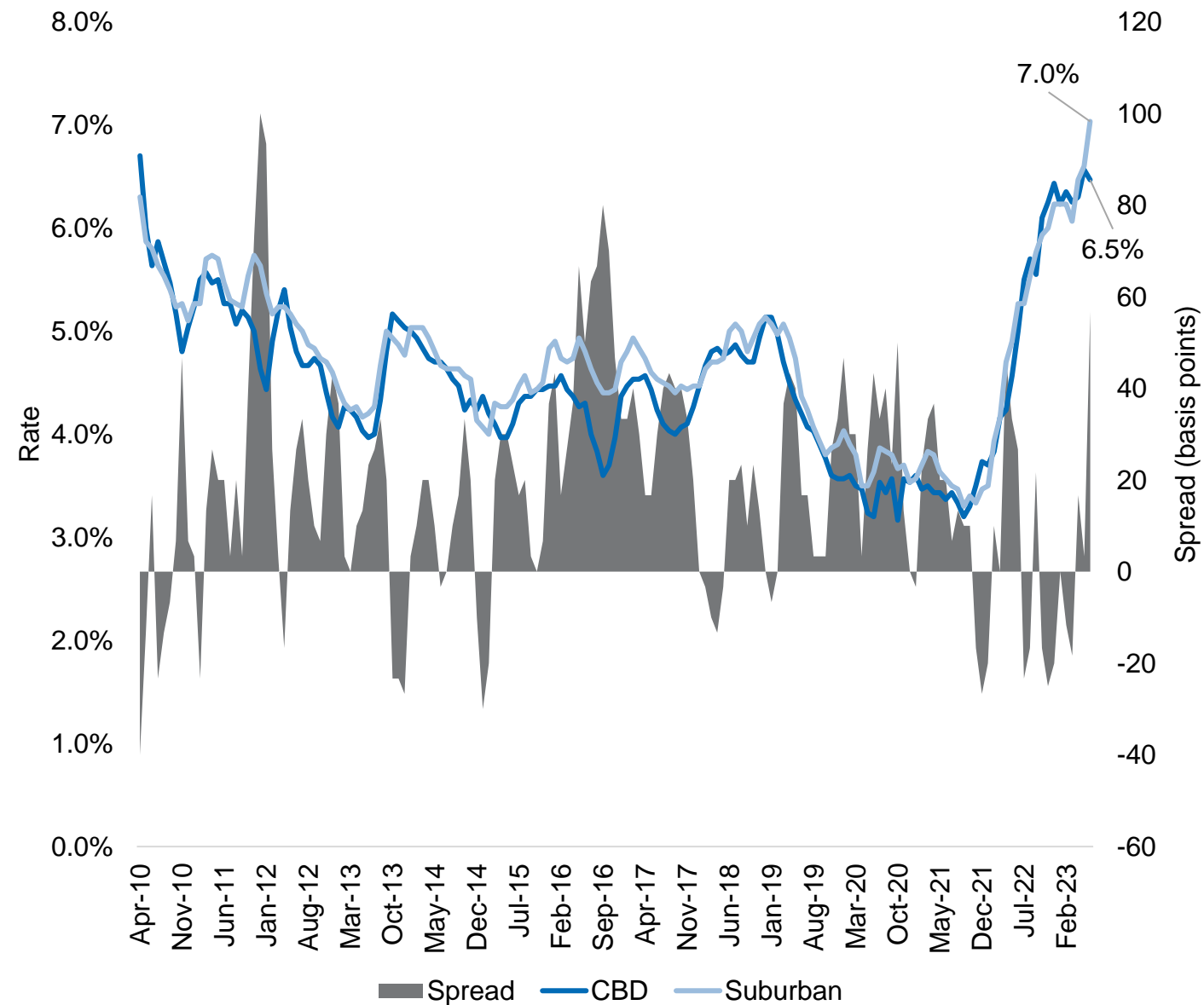
Most Maturing Office Loans Were Originated Pre-Pandemic

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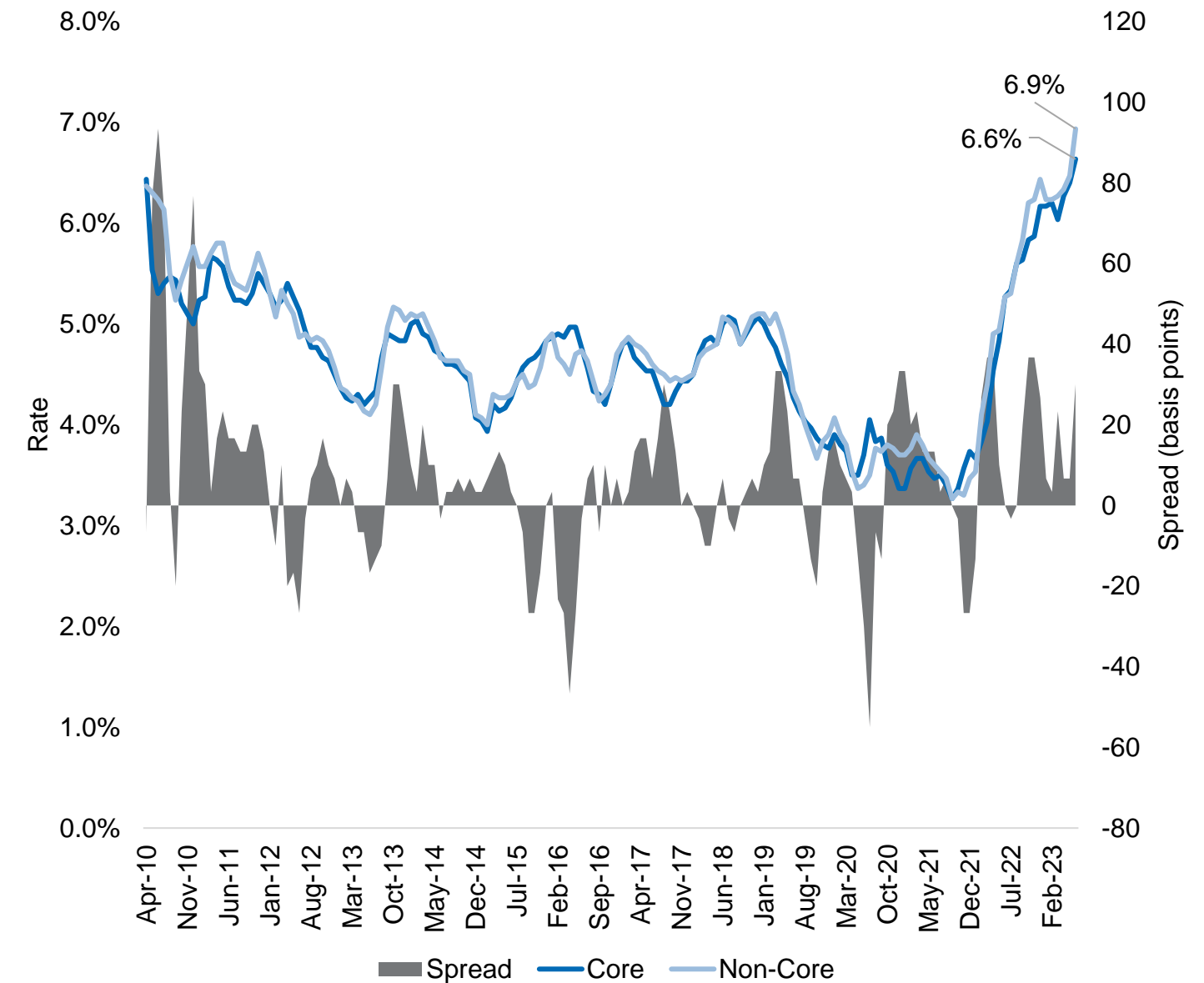
Debt Costs Have Risen Sharply, Especially for Suburban and Non-Core Properties

Median Transaction Fixed Finance Rate; Rolling Three-Month

Fixed Rate Financing Cost: CBD vs. Suburban



Fixed Rate Financing Cost: Core vs. Non-Core



Source: RCA, Newmark Research as of 7/24/2023
Note: Excludes construction financing

Borrowers Face Starkly Higher Costs as Loans Mature

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

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Structural Health and Impairment in the Office Sector

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Declining Values Expose Office Sector to Distress

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\$1.2 Trillion of Outstanding CRE Debt is Potentially Troubled, \$584 Billion of It Office

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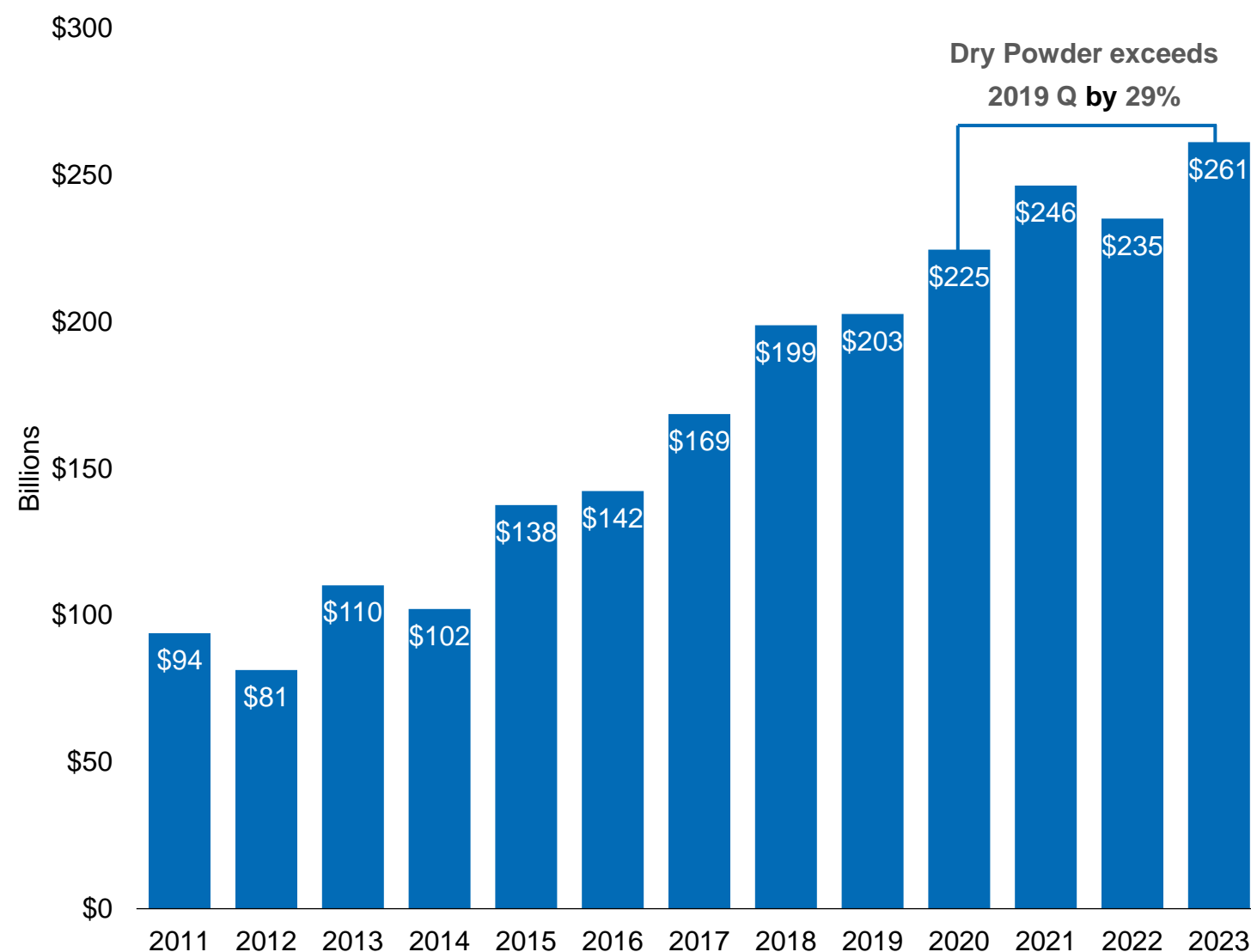
Potential Office Distress Spread across Capital Sources

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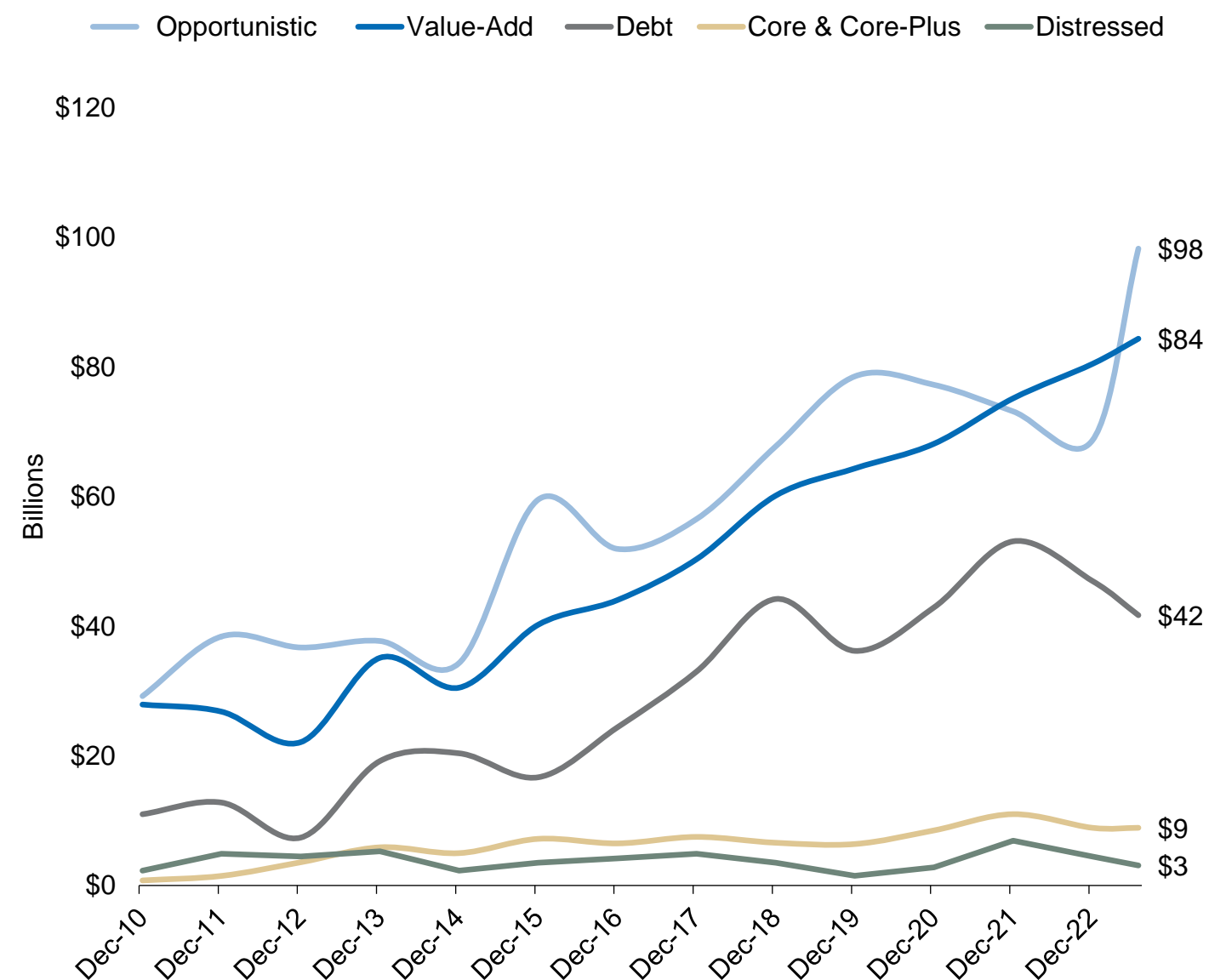
Private Equity Dry Powder Set New Record in 2023

Dry powder at closed-end funds has increased by 11% since the start of the year. The increase is due to continued growth in value-add funds and a sharp increase in dry powder at opportunistic vehicles, reversing a multi-year decline. These were more than able to offset declines in dry powder at debt and distressed funds – off very low levels in the latter case. Record fundraising by opportunistic funds in the second quarter of 2023 appears to have driven the increase as investors gear up to take advantage of asset repricing.

Dry Powder – Closed-End Funds



Dry Powder by Strategy*



Source: Newmark Research, Preqin as of 7/26/2024
 *Not shown: Fund of funds, co-investments, and secondaries strategies

But Little of the Dry Powder Appears to be Targeting Office

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2Q23 US OFFICE MARKET OVERVIEW

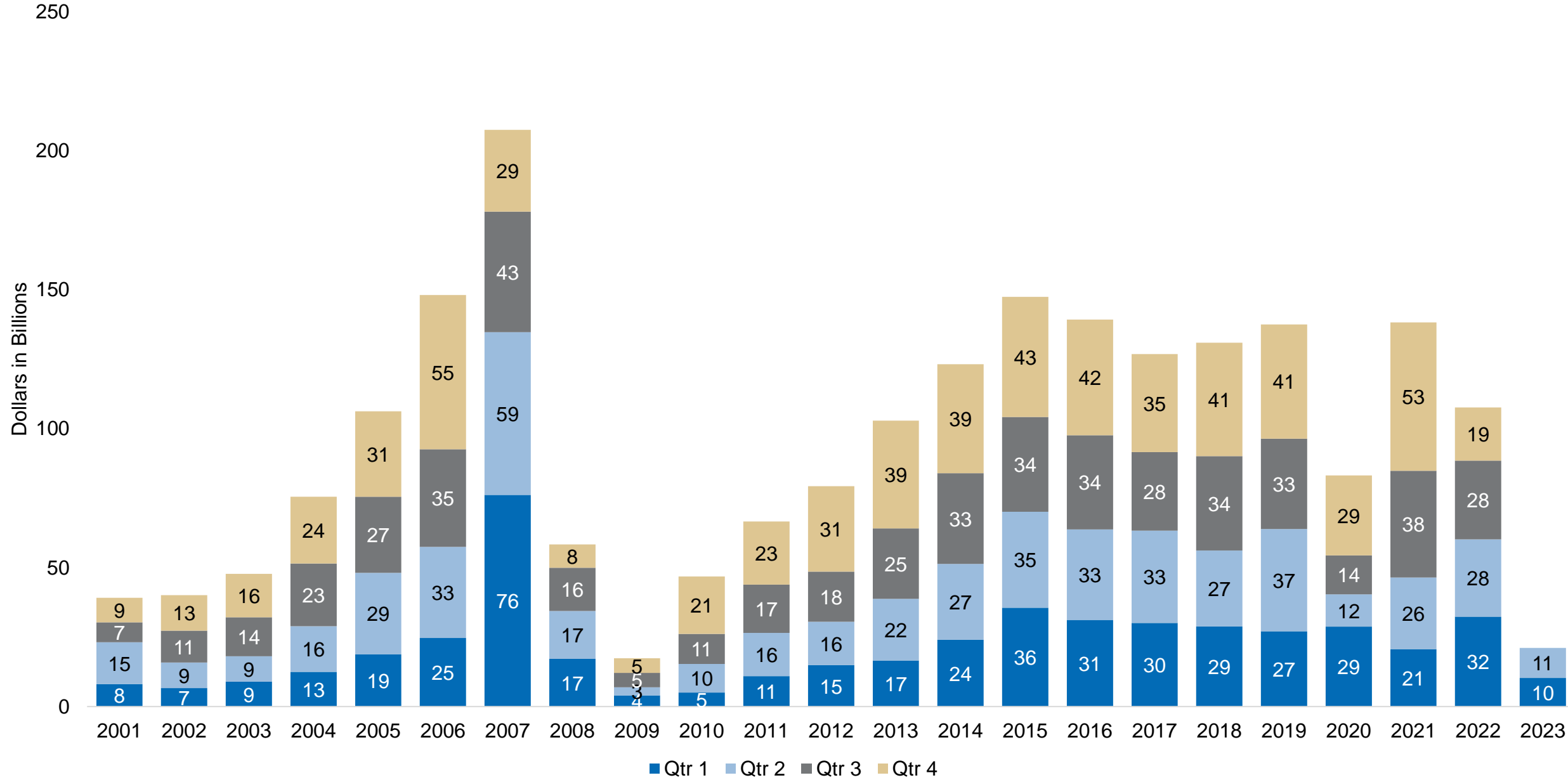
Investment Sales



Office Investment Sales Volumes Down 65% Year-over-Year in First Half of 2023

The last time office sales were this tepid was the first half of 2010.

Office Investment Sales Volume

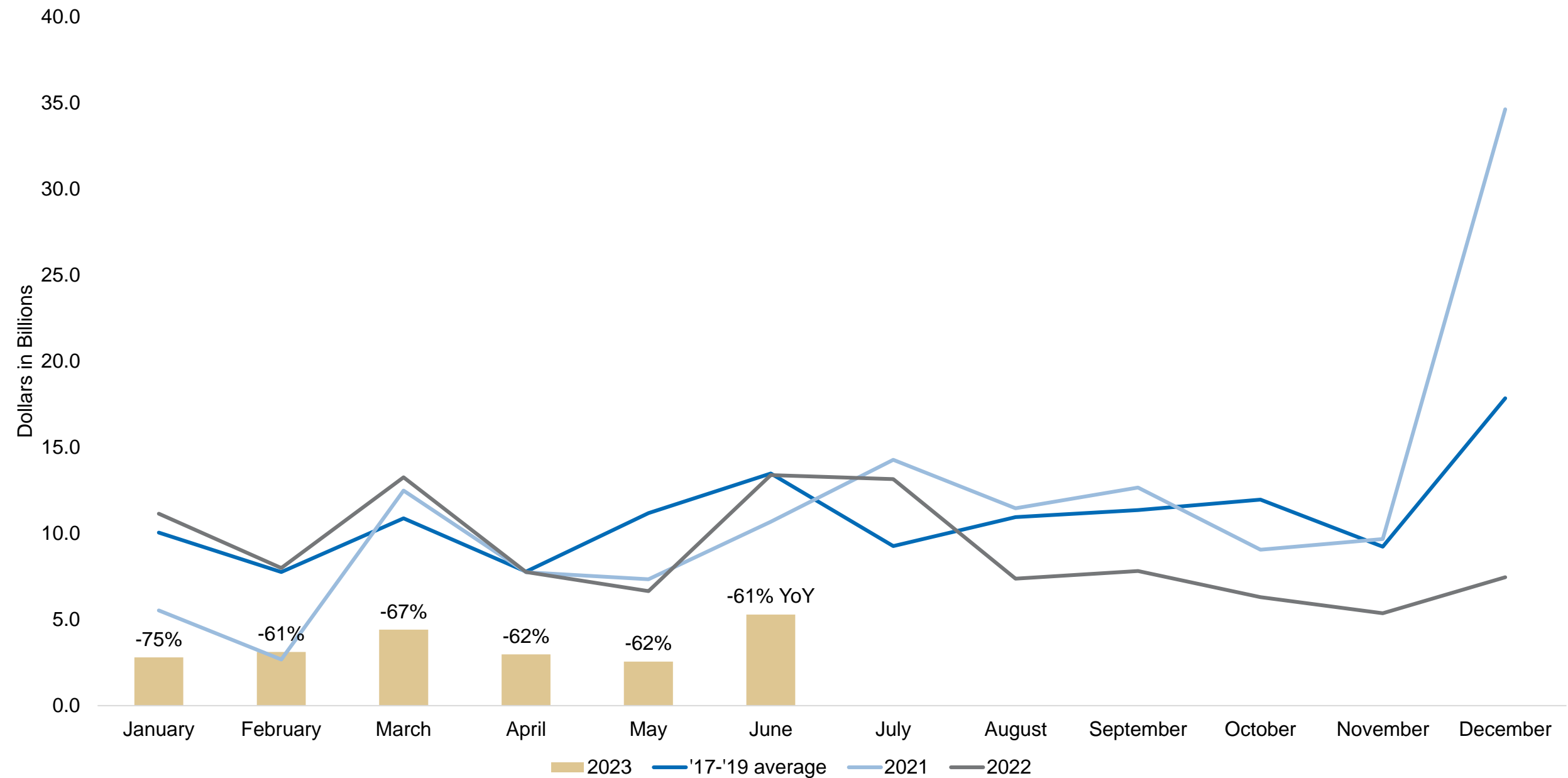


Source: Newmark Research, Real Capital Analytics as of 7/24/2023

Transaction Velocity Has Declined Sharply since July of 2022

Both suburban and CBD office sales have been similarly impacted, down 66% and 63% respectively in the first half of 2023 compared with the same period of 2022. CBD office sales (-72%) have declined somewhat more than suburban office sales (-61%) compared with the 2017 to 2019 period.

Office Investment Sales Volume

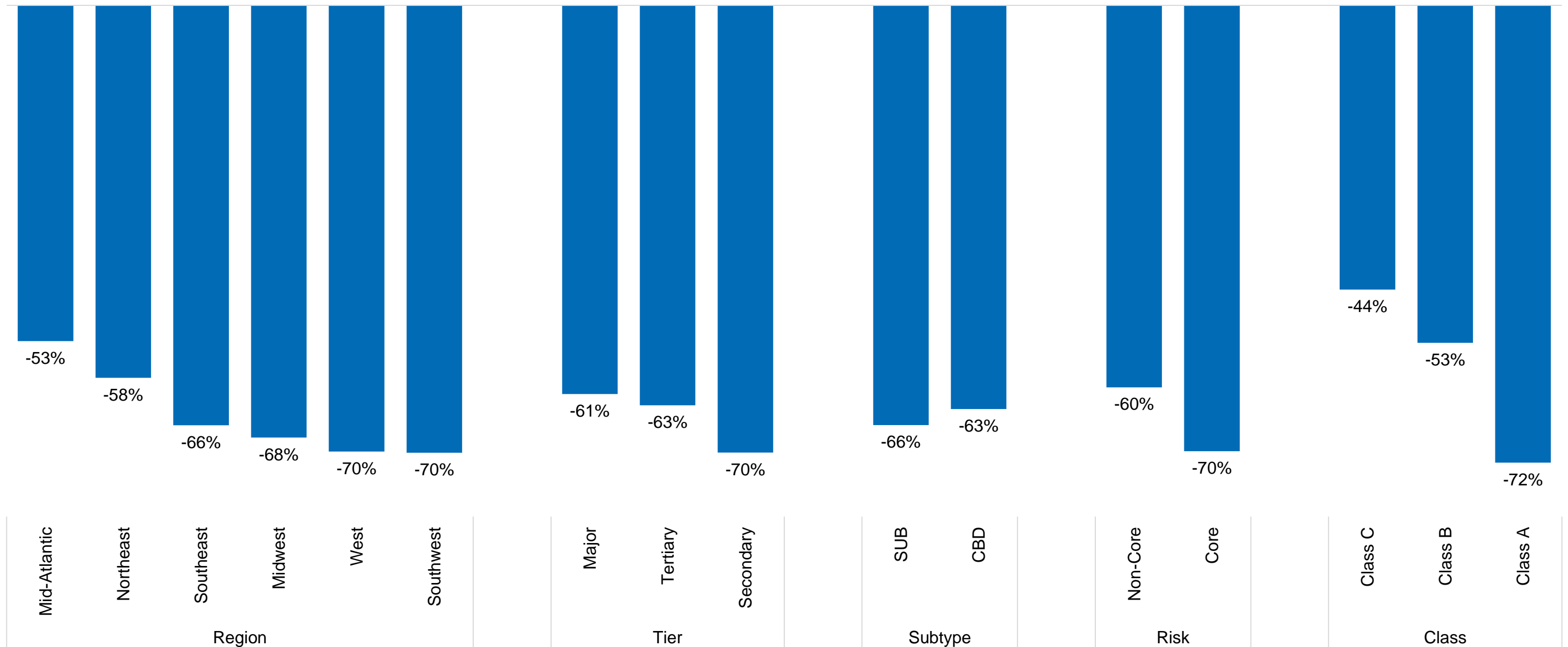


Source: Newmark Research, Real Capital Analytics as of 7/24/2023

Broad-Based Decline in Volumes in First Half of 2023

Office sales declined in the first half of 2023 across every major dimension: region, market tier, subtype, risk profile and class. Mid-Atlantic and Northeast markets outperformed on the margin, upsetting the recent trend of stronger sales in the Sun Belt markets. Similarly, major markets outperformed secondary markets. Curiously, Core and Class A office sales appear to have declined more sharply than their counterparts, though Class A remain the most active sales segment (47% of the first half of 2023 sales).

1H23 Office Investment Sales Volume YoY Percent Change

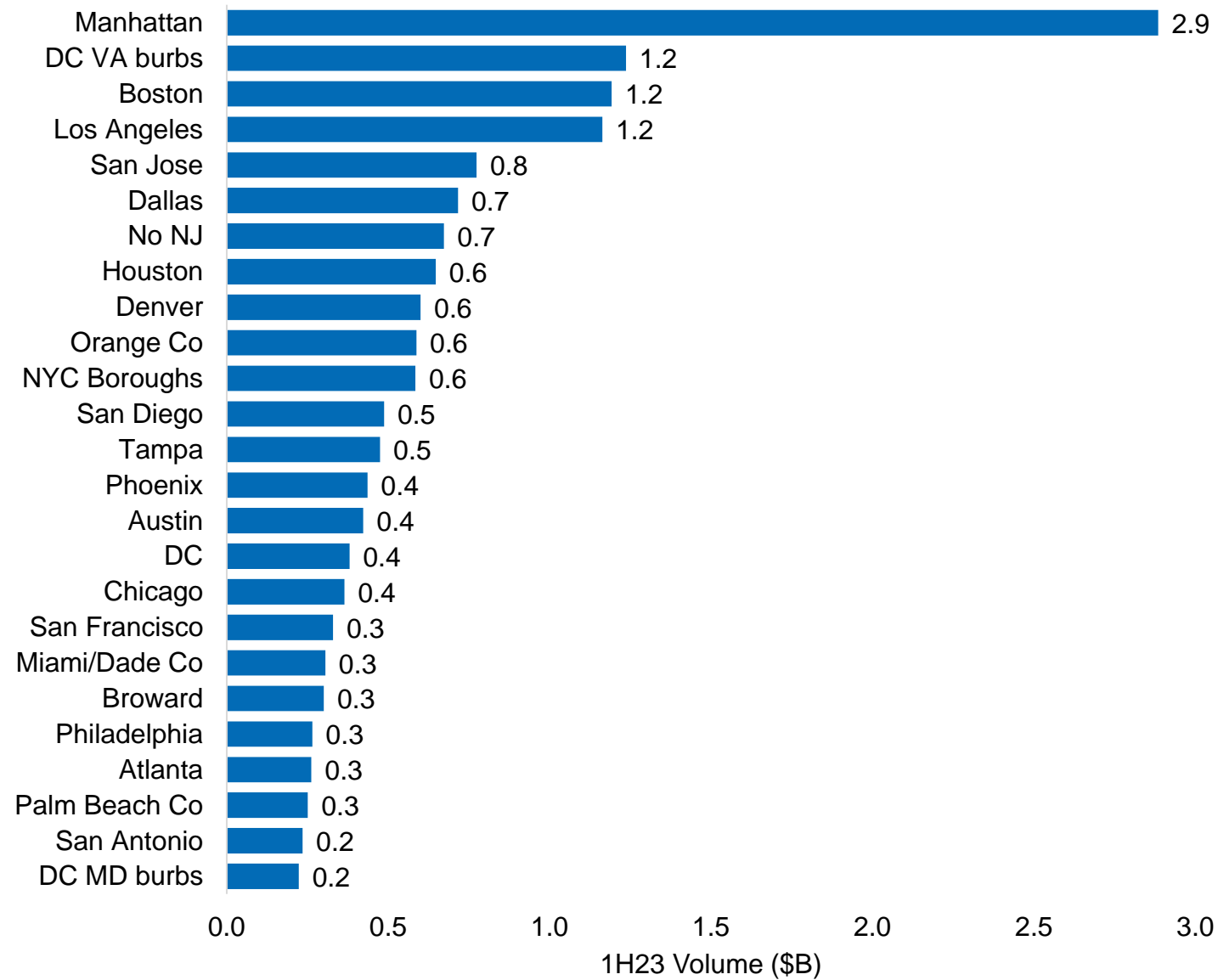


Source: Newmark Research, Real Capital Analytics as of 7/24/2023

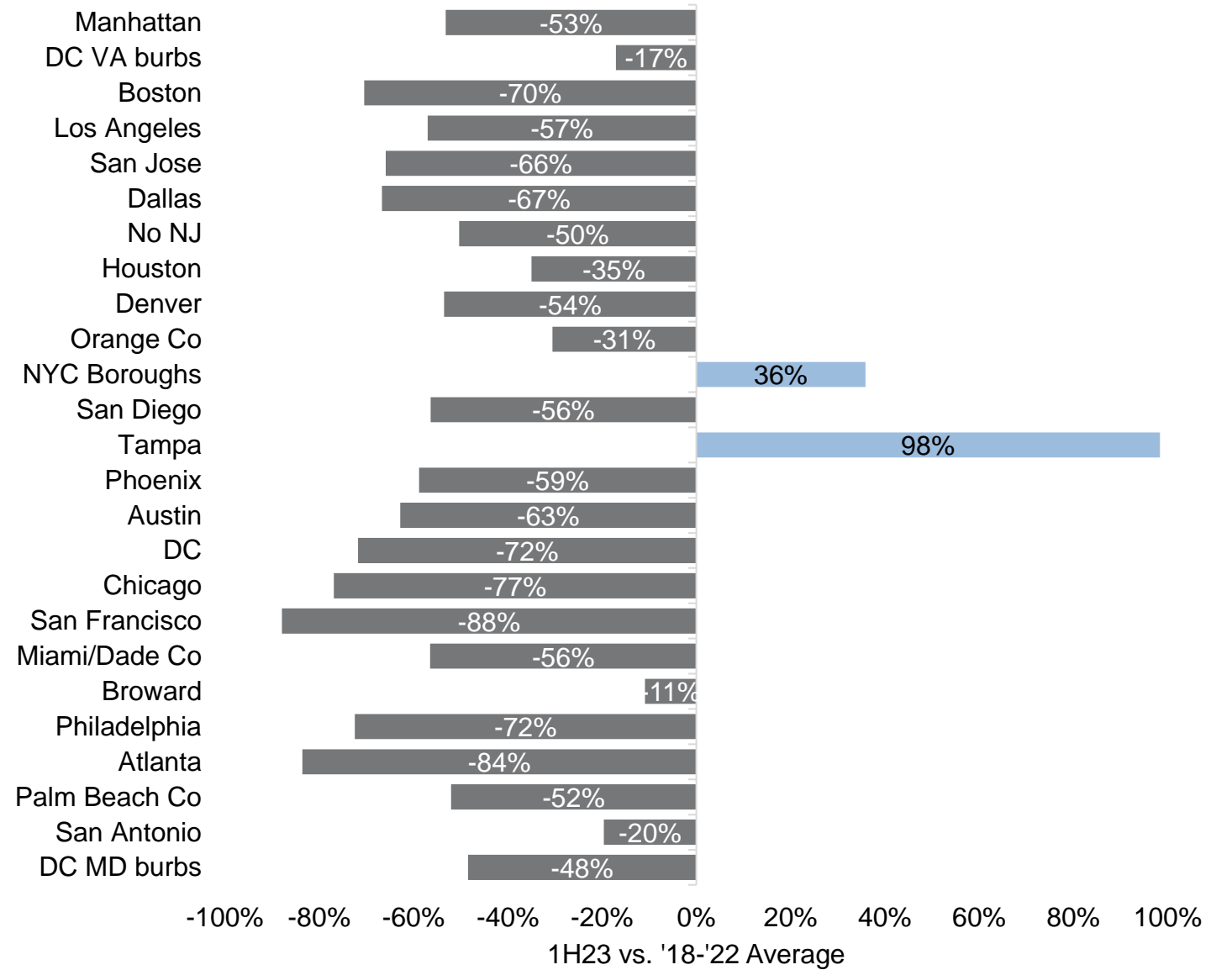
Volumes up versus Five-Year Average in 2 out of 25 Top Markets in the First Half of 2023

Manhattan remains the most liquid market. Markets adjacent to gateway markets, such as NYC Boroughs, DCVA suburbs, Broward County and Orange County, outperformed on the margin. Tampa office sales are a clear positive outlier in the first half of 2023.

Top 25 Office Markets by Year-to-Date Investment Sales Volume



1H23 vs. 5-year Average Office Sales Volume



Source: Newmark Research, Real Capital Analytics as of 7/24/2023

2Q23 US OFFICE MARKET OVERVIEW

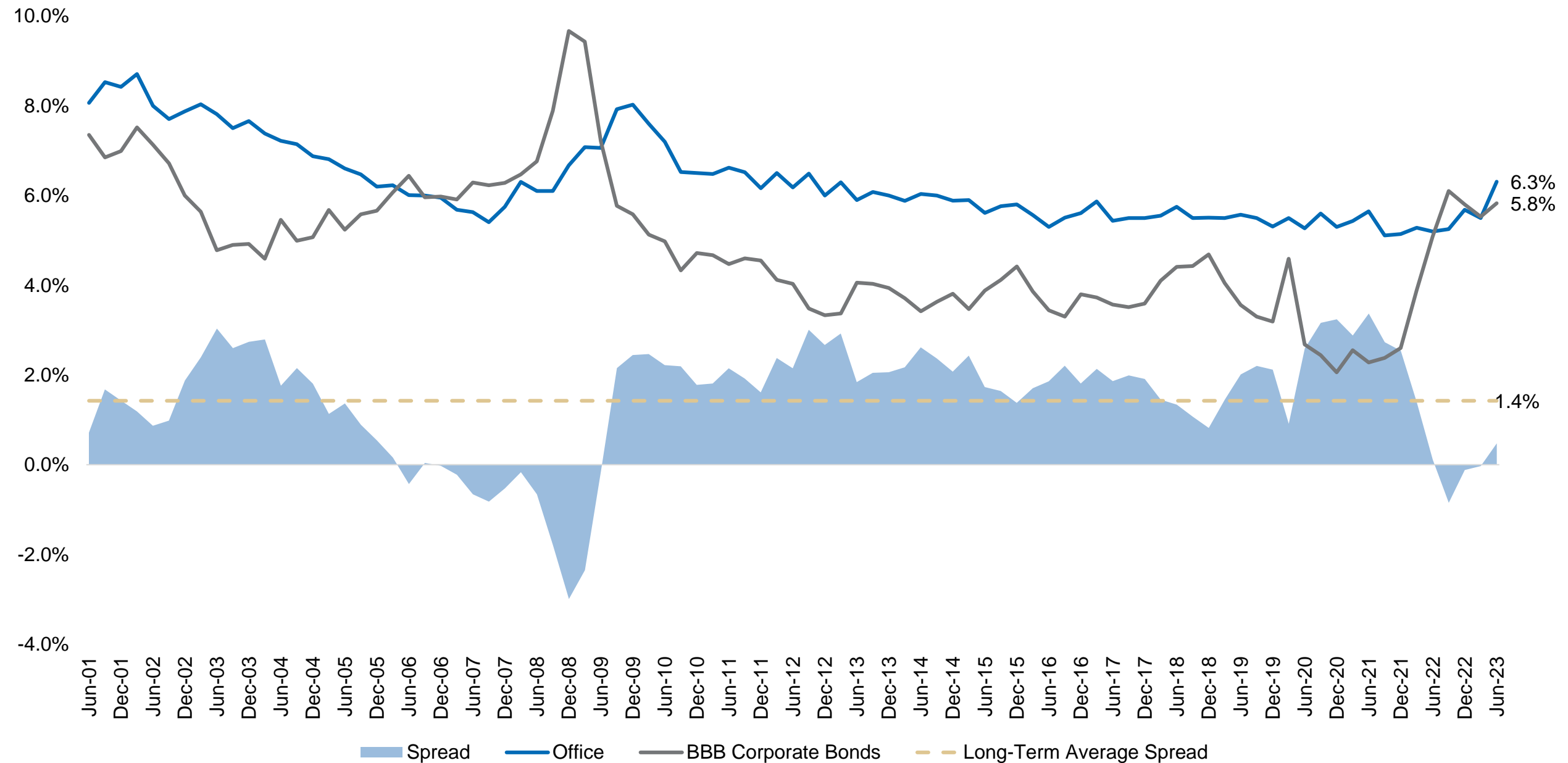
Pricing & Returns



Cost of Capital Suggests Cap Rates Will Go (Much) Higher

The top quartile of offices traded at a cap rate of 6.3% in the second quarter of 2023. The overall average was necessarily higher. In the fourth quarter of 2021, prior to the rise in interest rates, top quartile offices traded at a 5.2% cap rate for an increase of 1.2%. At the time, a 5.2% cap rate represented a historically wide spread of 2.5% over BBB corporate credit. That spread has since withered to just 0.5% versus a long-term average spread of 1.4%. This is not an equilibrium.

Top Quartile Transaction Cap Rate*

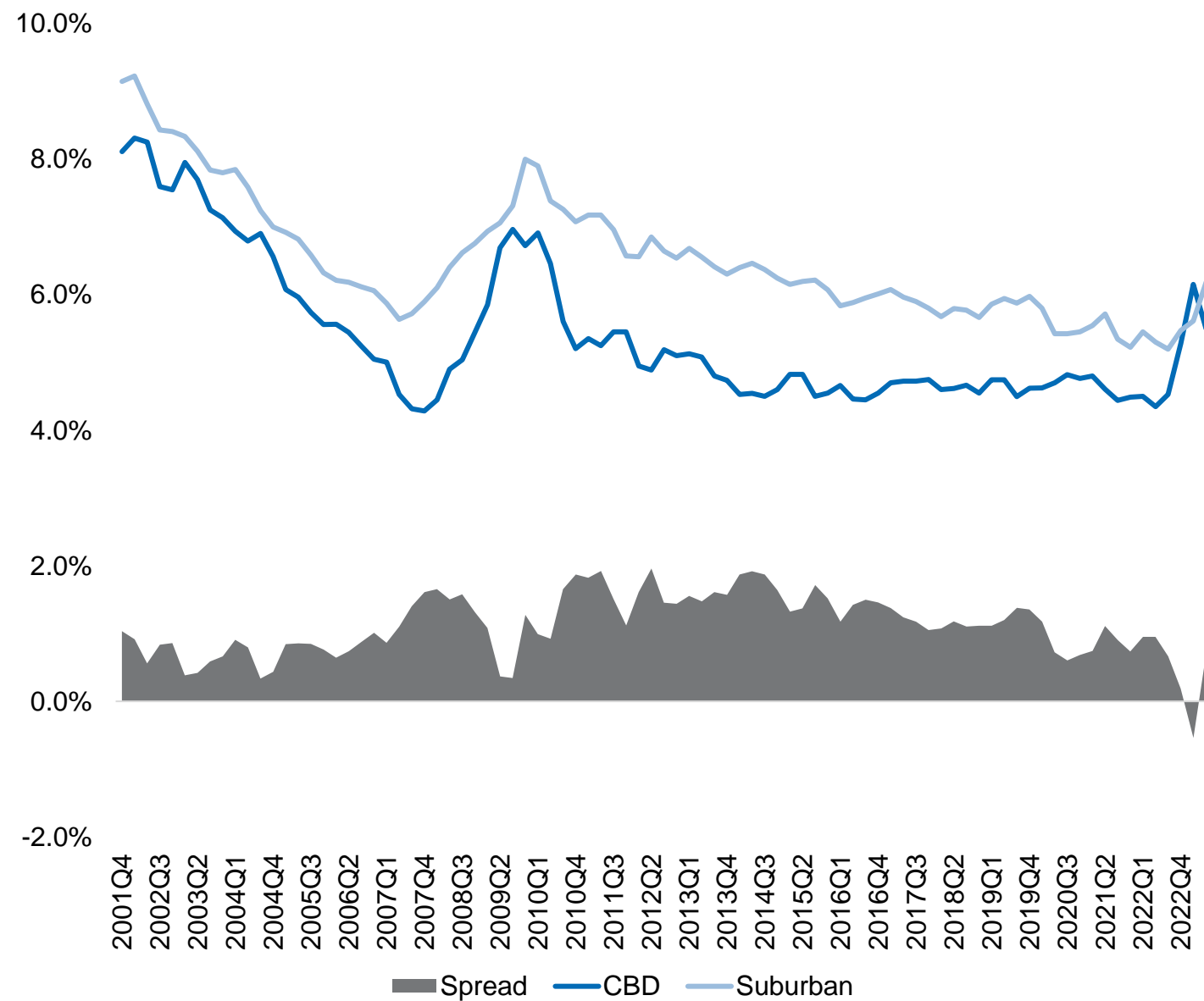


Source: Real Capital Analytics, Federal Reserve Bank of St. Louis, Moody's as of 8/10/2023
*Quarterly

CBD and Suburban Cap Rates Converging; Major Market Yields Rising Sharply

Transaction cap rates for CBD and Suburban Office have converged over the last several quarters. While the trend fits with recent outperformance of Suburban Office fundamentals, it is still important to interpret the transaction data with caution, given the sorry state of liquidity. The same is true when looking at cap rates by tier where secondary markets have been stable, while major and tertiary markets yields have risen sharply. It is likely the case that CBD Office and major markets were simply first to reflect changes affecting all segments.

Rolling 2Q Volume-Weighted Office Cap Rates

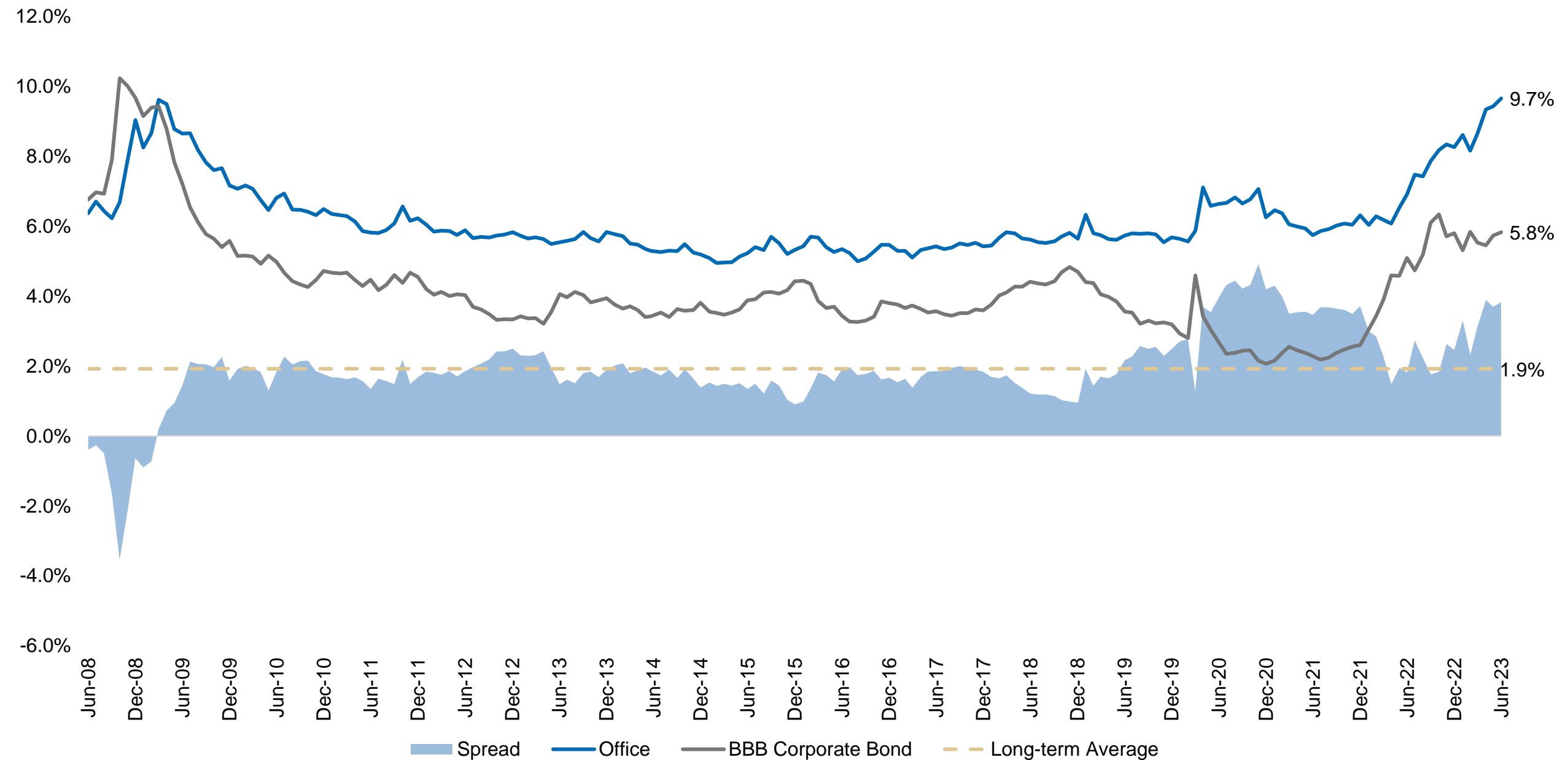


Source: RCA, Newmark Research as of 7/24/2023

Public Market Pricing Has Been Much More Responsive to Changing Conditions

REIT implied cap rates rose to 9.7% in August of 2023, up from 6.3% in December 2021 before the start of the current hiking cycle. The recent rise in cap rates has coincided with rangebound yields in corporate credit. As a result, the spread between the two has risen to 3.0%, well-above the long-term average of 1.9%. This seems generally appropriate; investors should demand above-average risk compensation for investing in office today. Note, however, that a) office financing costs have gapped wider than BBB bonds and b) REIT office holdings are significantly higher quality than the overall market.

REIT-Implied Nominal Cap Rate

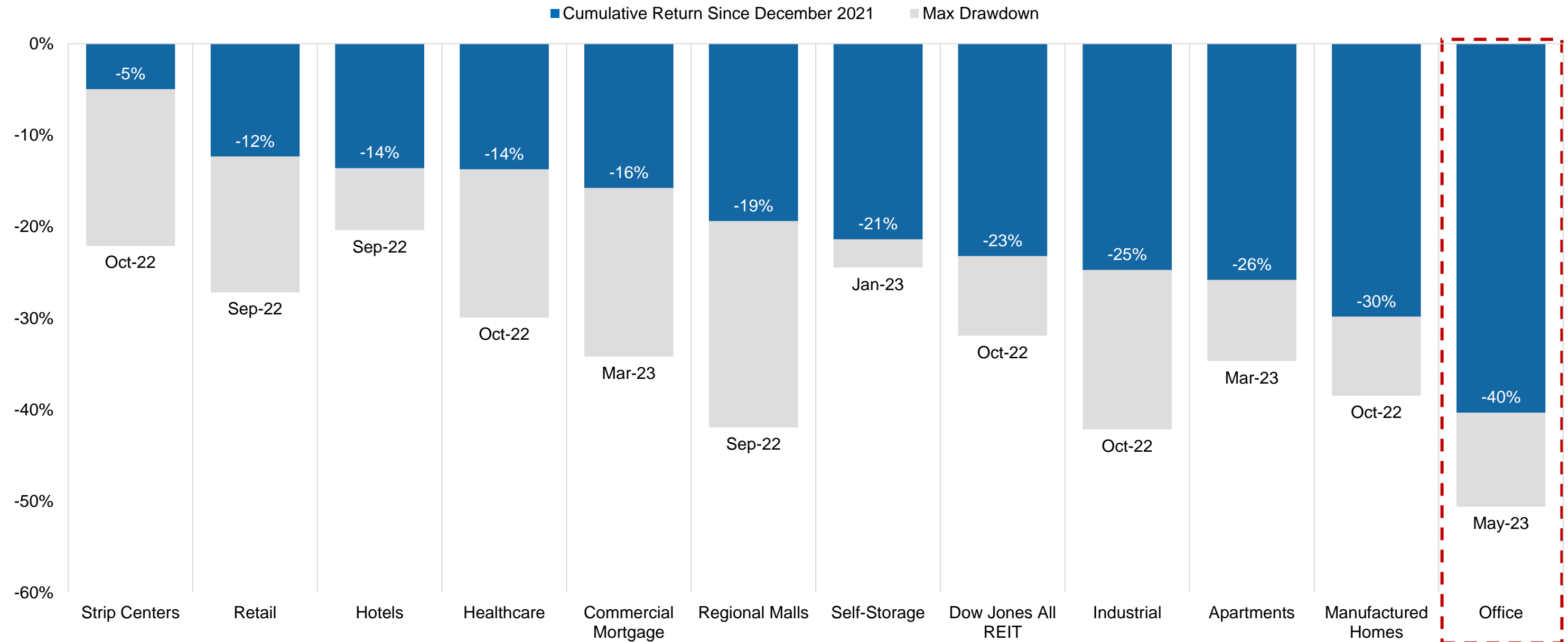


Source: Green Street, ICE BAML, Newmark Research as of 8/1/2023

Office REITs off the Bottoms, but Still Down 40% Since December 2021

Returns for REITs across sectors have rebounded 2.4% in 2023 year to date. Office REITs have lagged the index overall, down 7.4% year-to-date. Note, however, that office REITs have rallied since June 30th, having rising 9.8% through the week ended August 4th.

Dow Jones REIT Index Total Returns

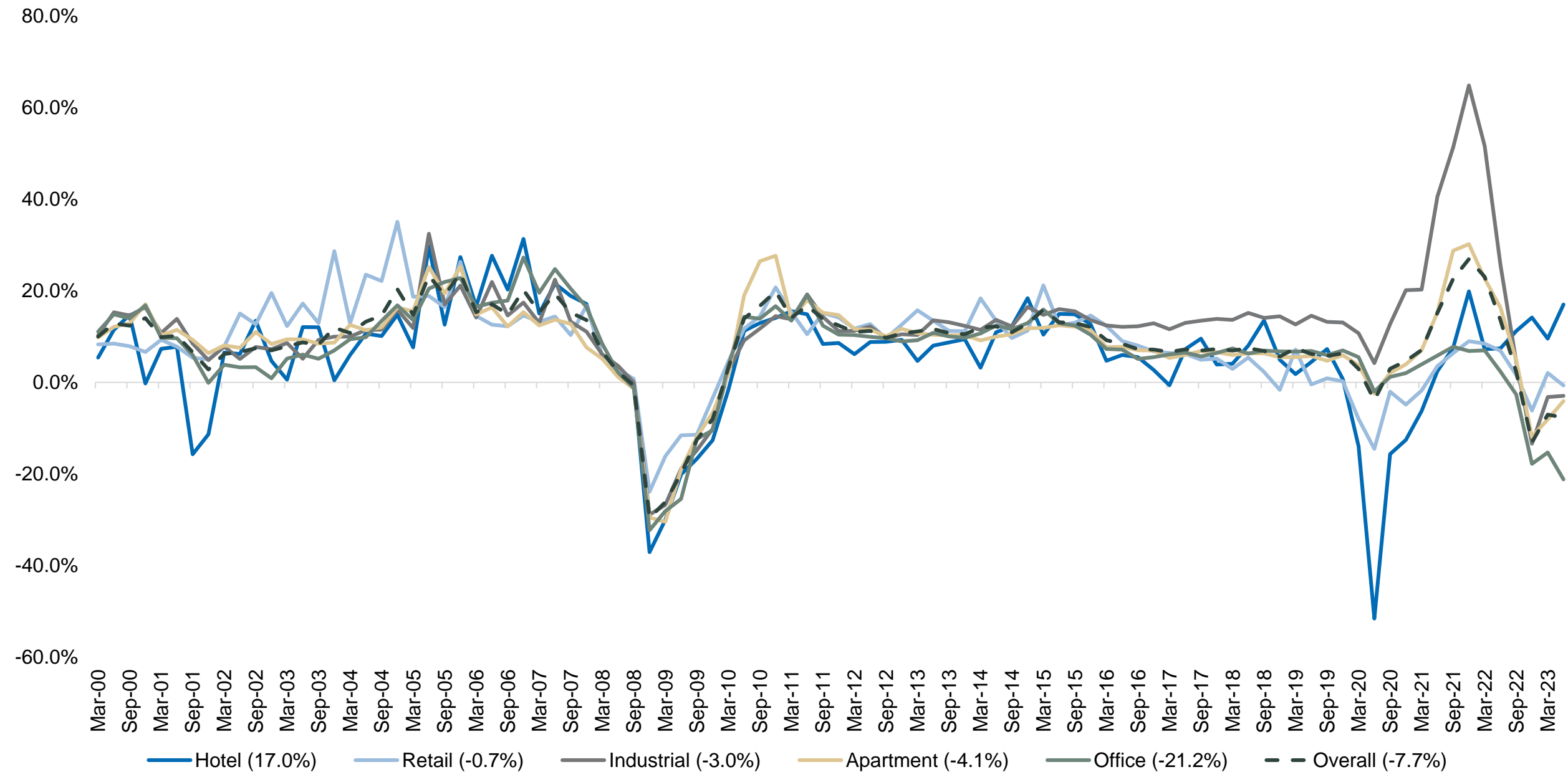


Source: Dow Jones, Newmark Research as of 8/10/2023

Private Market Core Properties Returned -7.7% Annualized in 2Q23

All major property types (with the notable exception of hotels) generated negative returns in the second quarter. 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 far more modestly, even improving on the margin. Retail decelerated 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

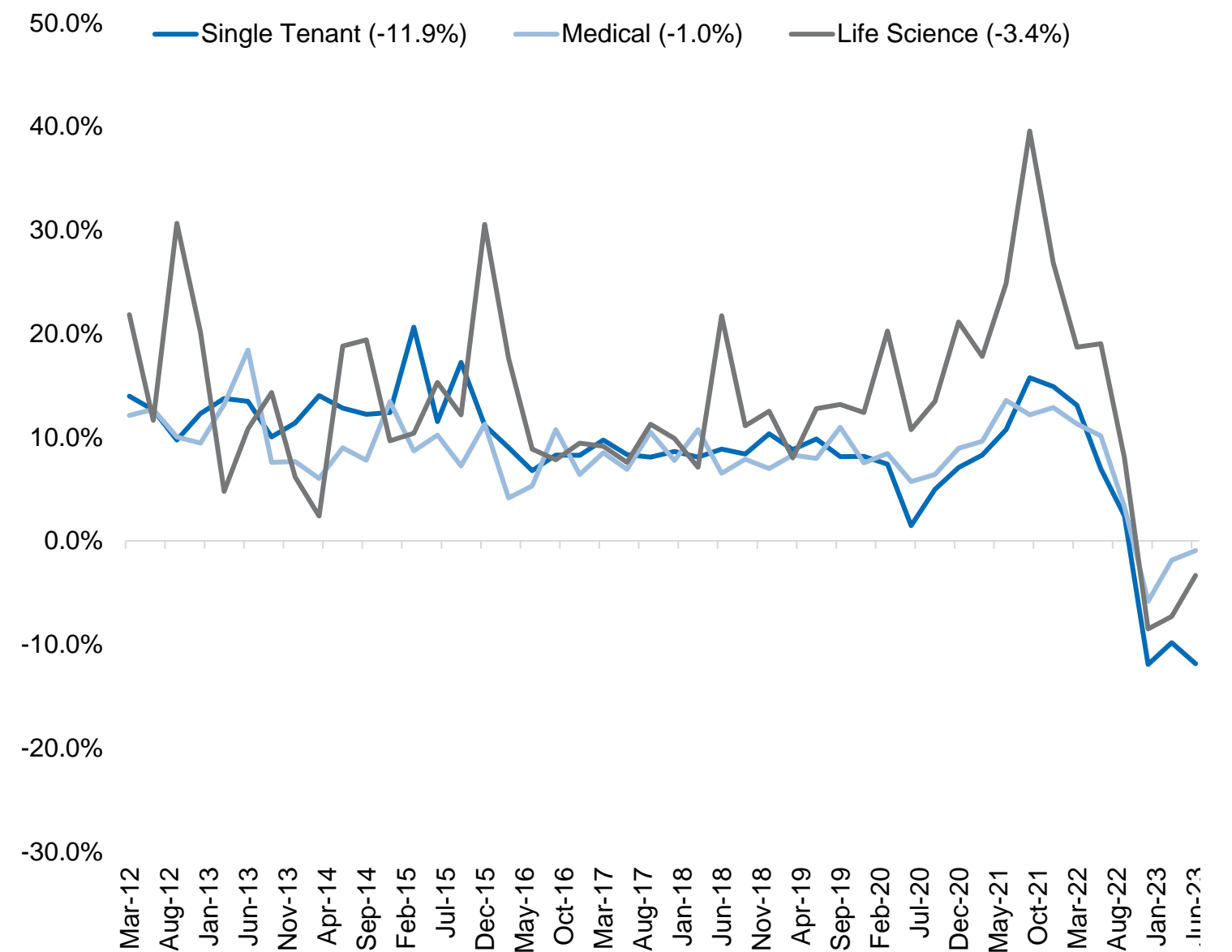
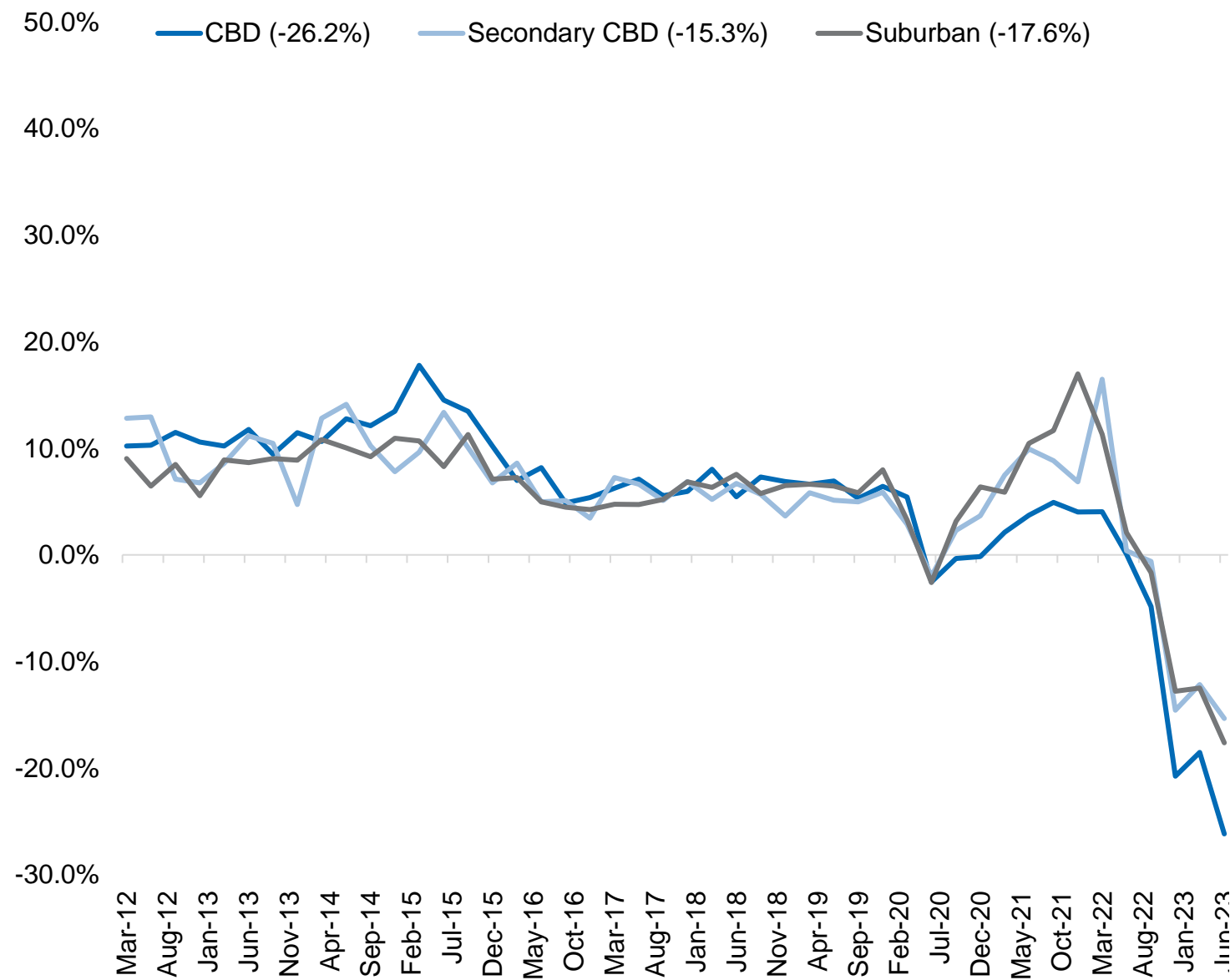


Source: NCREIF, Newmark Research as of 8/1/2023

NCREIF Office Returns Deeply Negative, But Niche Sectors Outperforming

Office values are rapidly contracting according to NCREIF in what is, if anything, a belated acknowledgement of the reality on the ground. CBD office buildings generated an annualized total return of negative 26.2% in the second quarter of 2023, while secondary CBD properties and Suburban Office buildings performed only modestly better. In contrast, single-tenant office and, even more so, medical office and life science have been far more resilient, though returns are still negative.

NCREIF Quarterly Annualized Total Return



Source: NCREIF, Newmark Research as of 8/1/2023

NCREIF Returns Negative in 83% of Office Markets in 2Q23

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2Q23 US OFFICE MARKET OVERVIEW

Office Market Statistics



National Office Market Statistics

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