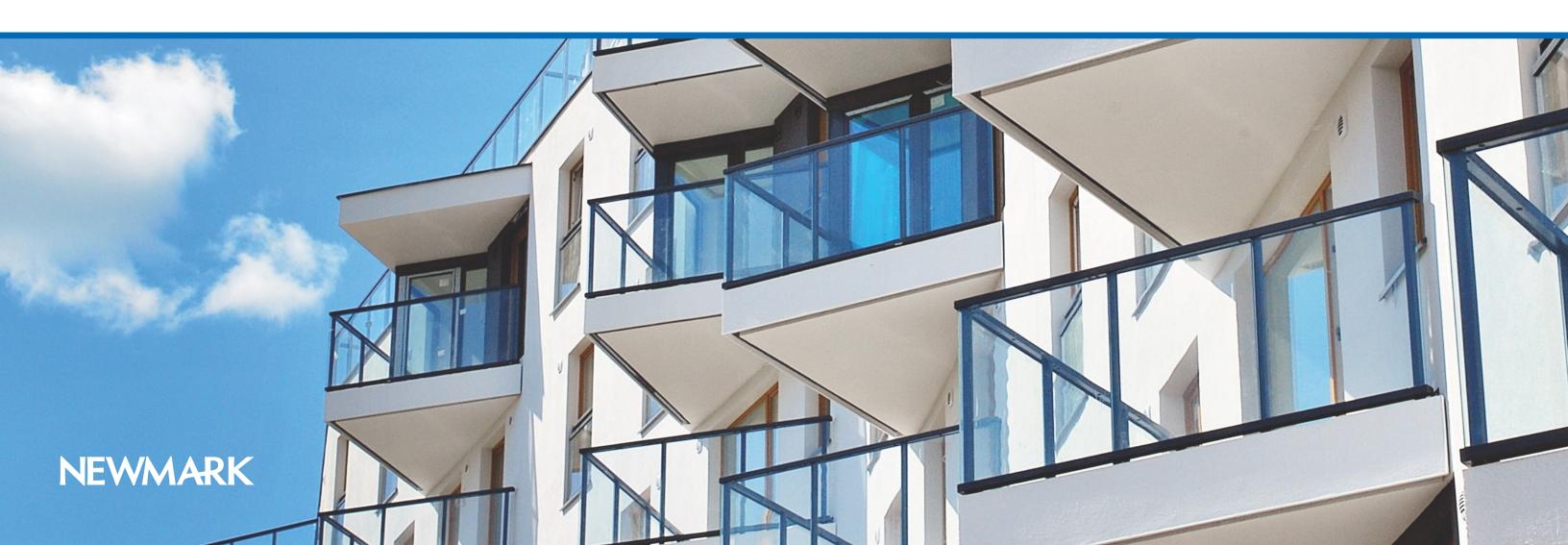
United States Multifamily Capital Markets Report



Market Observations

- Despite a slowdown in transaction volume throughout the second half of 2022, investment sales volume for the year totaled \$294.1 billion, the second largest annual sum on record and 75.0% greater than the 2015-2019 average. Investor appetite for multifamily remains robust, with \$233.9 billion in dry powder earmarked for North American commercial real estate; however, in the first half of 2023, activity is likely to be sluggish as price dislocation and valuations are scrutinized.
- Total returns decelerated sharply in the second half of 2022, totaling 7.1% for the full year, outpacing inflation by 70 bps. Income as a percentage of total returns normalized following 2021, where appreciation beat income growth substantially. Multifamily returns turned sharply negative in the fourth quarter of 2022, with garden properties outperforming high-rise properties by 4.0% for the year.
- Coming off a record high level of demand of 662,000 units in 2021, absorption slowed significantly in 2022. Demand is expected to reach 493,000 units in 2023, but high levels of new supply coming online in the new year will offset this, with 576,000 new units set to be added to the current national stock; 2024 demand is also forecasted to experience high levels of supply, expected to total 477,000 units absorbed, compared with approximately 510,000 units added.
- Markets with concentrated technology employment, as well as markets located on the West Coast, have seen the greatest disparity between the cost to rent and own. Across all markets, the one-year change in home ownership cost has grown substantially more than change in apartment rents, in part due to higher mortgage rates. While rents have increased substantially throughout the Sunbelt, the all-in cost of home ownership in Atlanta, Charlotte, Nashville, Orlando and Tampa outpaced rental growth by 40% or greater.
- After 20 straight months of positive month-over-month rental growth, rental growth stalled to in September where it was 0%, then has since declined 0.4% in October, November and December. It is normal for rents to decline in September to December; 2021 was in fact the outlier. Rents peaked at 14.0% above pre-pandemic levels, ending the year 11.0% higher.
- The GSE's act as a backstop to the market; however, their overall function has been somewhat diluted of late, as: 1) lending caps have been imposed and those are growing slowly; and 2) they have become more exclusively focused on mission-driven lending. As the market growth, they are providing less proportional and more targeted liquidity support, which makes a repeat of 2009 less likely but also leaves the market subject to greater "normal" volatility.
- Transactional cap rates have expanded in back-to-back quarters, averaging 4.92% nationally as of the fourth quarter of 2022. After several years of converging yields, particularly between core/core-plus and value-add product, risk is currently being repriced.
- Banks are likely to be less active as they digest their expanded loan books, and the GSE's will be active but static on volumes. The recent decline in spreads and reduced volatility in bond yields could incentivize market-driven lenders, such as CMBS, debt funds and life insurance companies to be more active on the margin. There is already some evidence of this in the corporate bond market, with new issuance picking up.

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4Q22 US MULTIFAMILY CAPITAL MARKETS REPORT

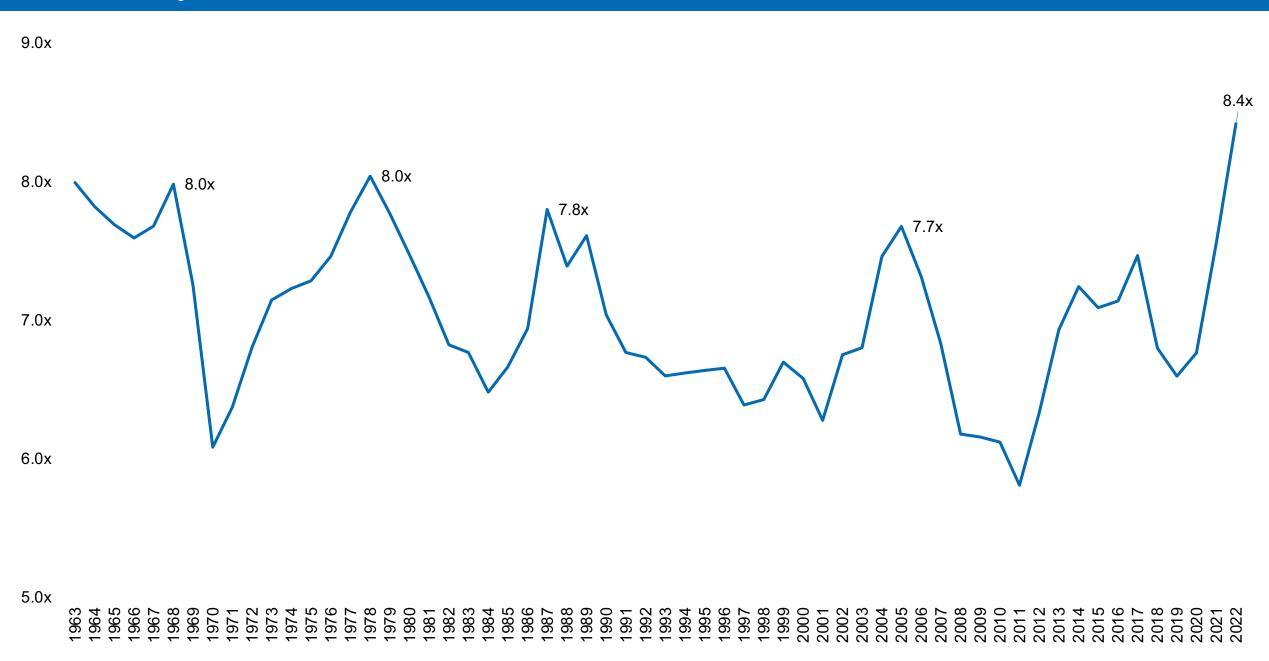
Demand Drivers



Buyers Forced to Sidelines as Prices Increase and Disposable Income Has Decelerated

Affordable housing remains out of reach of most would-be buyers, as the median price of homes sold compared with disposable personal income per capita rose to all-time highs in 2022. Since 2020, there has been a 24.5% increase in the difference between home prices and disposable personal income, compared with just a 17.6% growth in the previous two decades. History suggests that the ratio will mean revert sharply, which can only happen through falling prices. Until that happens, ownership will be unattainable for many, which supports rental demand.

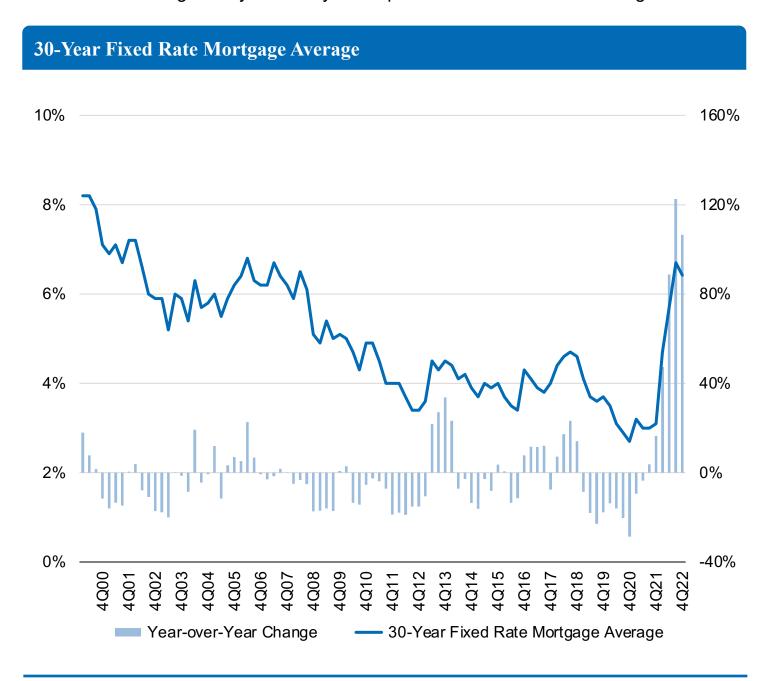
Median Sales Price of Houses to Disposable Personal Income Ratio

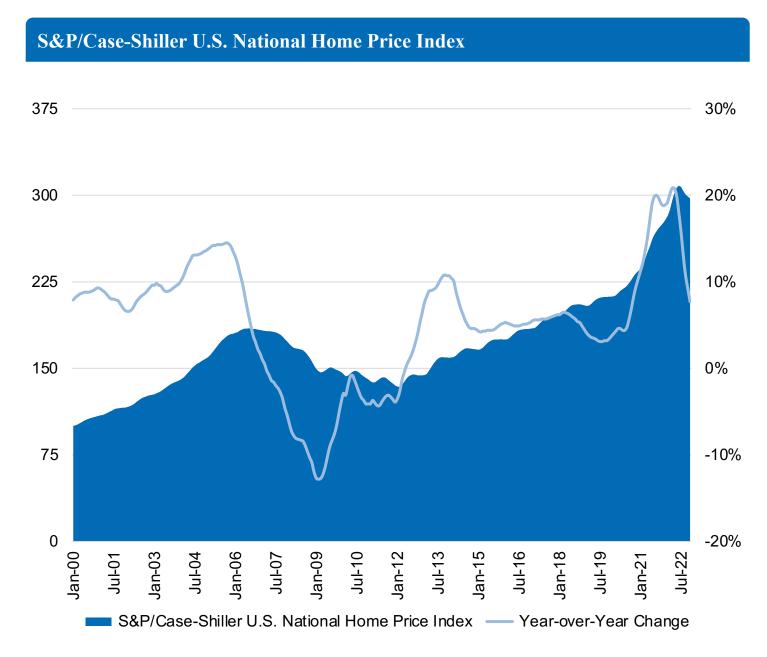


Source: Newmark Research, Federal Reserve Bank of St. Louis

Mortgage Rates and Elevated Home Prices Continue to Benefit Multifamily

The 30-year fixed rate mortgage average decreased quarter over quarter from 6.70% to 6.42% in the fourth quarter of 2022. While mortgage rates have stabilized, debt costs remain elevated, putting pressure on home buyers after surging 106.4% over the trailing 12 months. Simultaneously, the pace of growth for home prices have moderated each month since April, albeit still increasing 7.7% year-over-year as prices remain near historical highs.

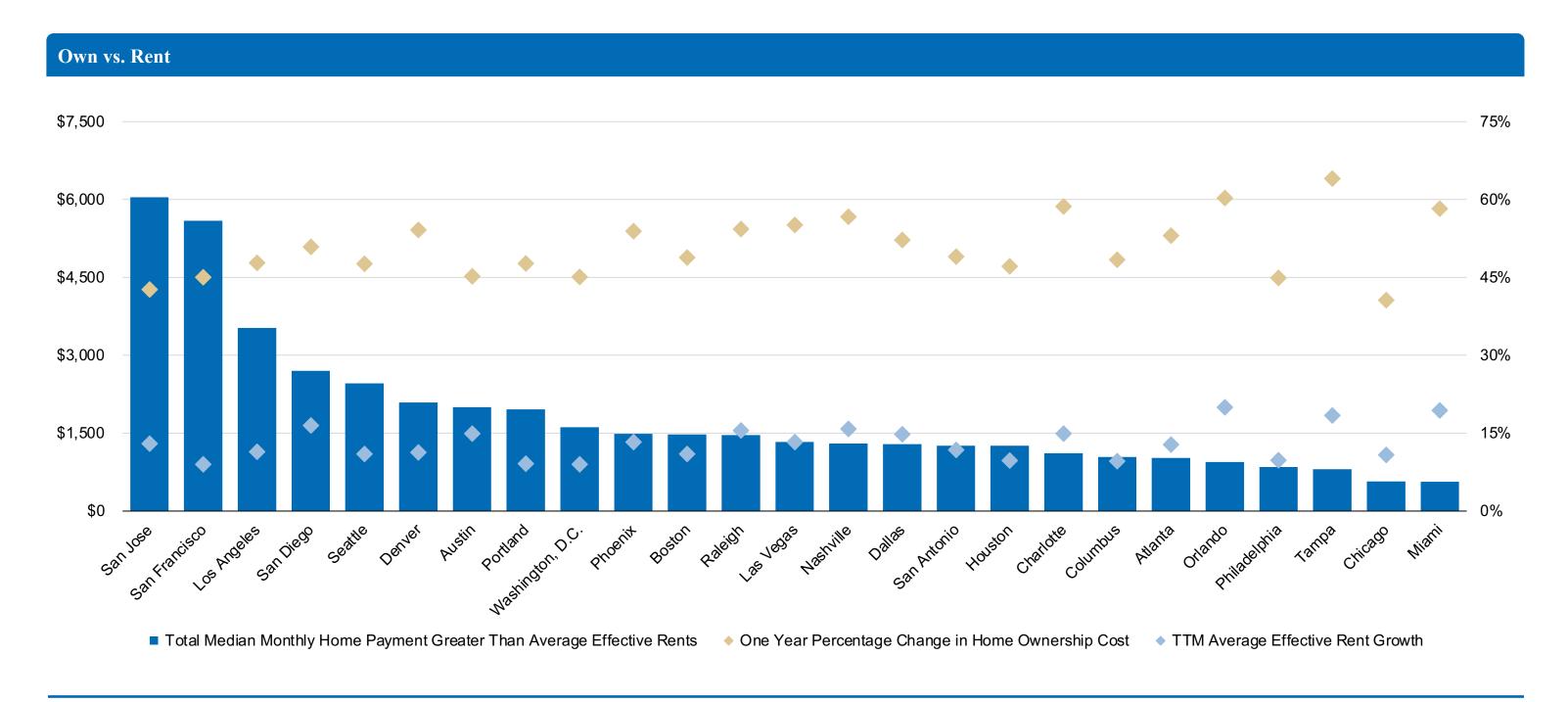




Source: Newmark Research, Federal Reserve Bank of St. Louis

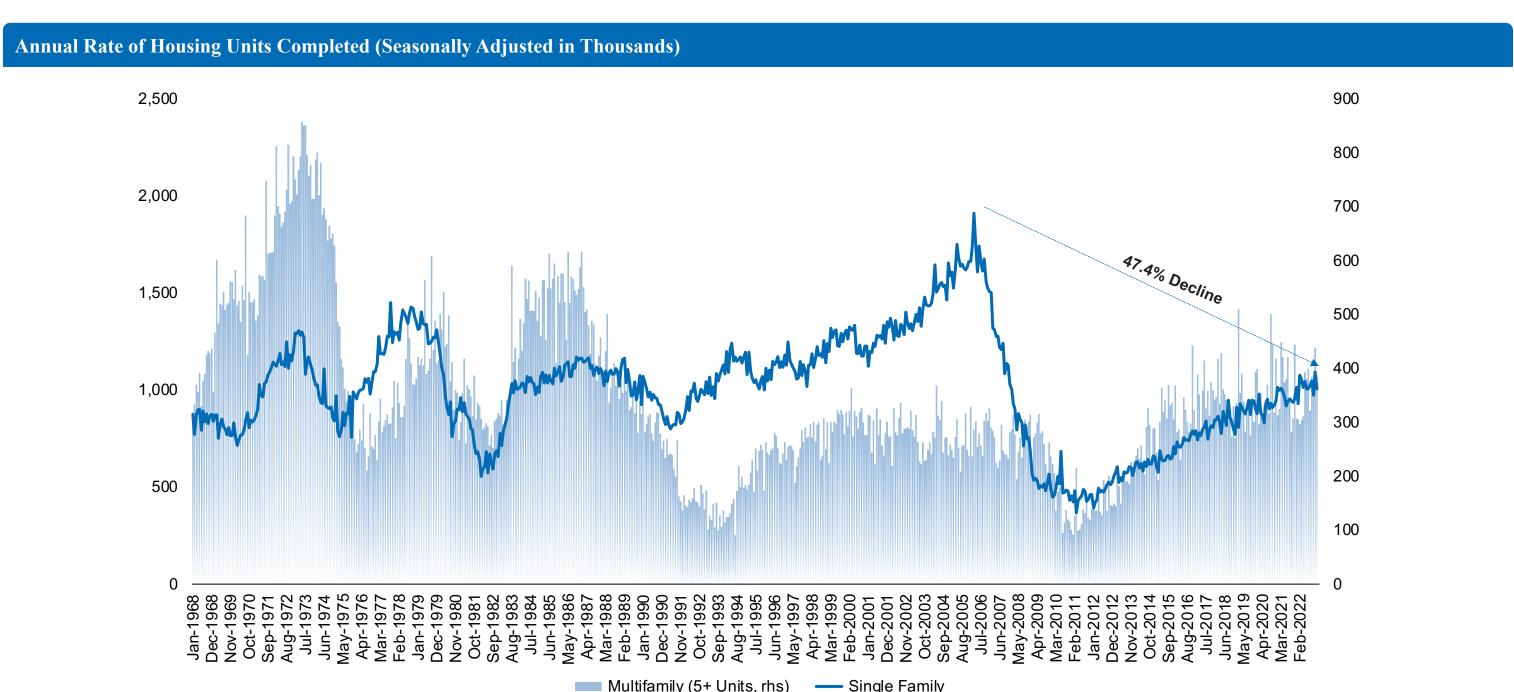
West Coast and Tech Markets Offer Renters Best Relative Value

Markets with concentrated technology employment, as well as markets located on the West Coast, have seen the greatest disparity between the cost to rent and own. Across all markets, the one-year change in home ownership cost has grown substantially more than change in apartment rents, in part due to higher mortgage rates. While rents have increased substantially throughout the Sunbelt, the all-in cost of home ownership in Atlanta, Charlotte, Nashville, Orlando and Tampa outpaced rental growth by 40% or greater.



Single-Family Completions Well below Previous Peaks, Limiting Risk of Oversupply

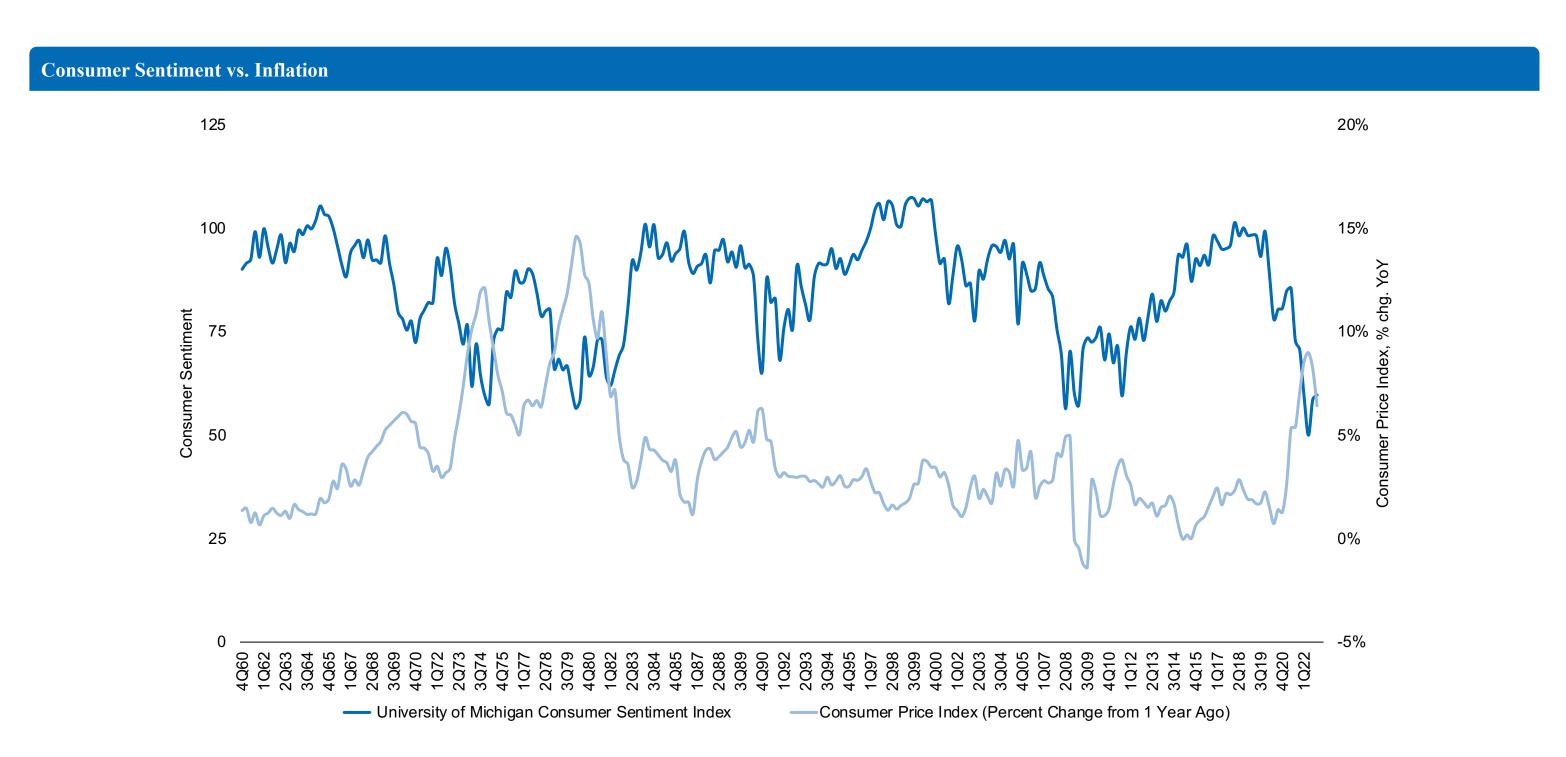
While supply of single-family home completions has rebounded following the Global Financial Crisis, as of December 2022, completions are down 47.4% from the 2006 highs. This mitigates the risk of a full-blown housing bust. As home prices moderate, there will not be a flood of renters into ownership. Multifamily deliveries are at their highest levels since the 1980s in terms of total units but not on a population-adjusted basis.



Source: Newmark Research, United States Census Bureau

Consumer Sentiment Likely to Keep Renters from Buying And/or Trading Up

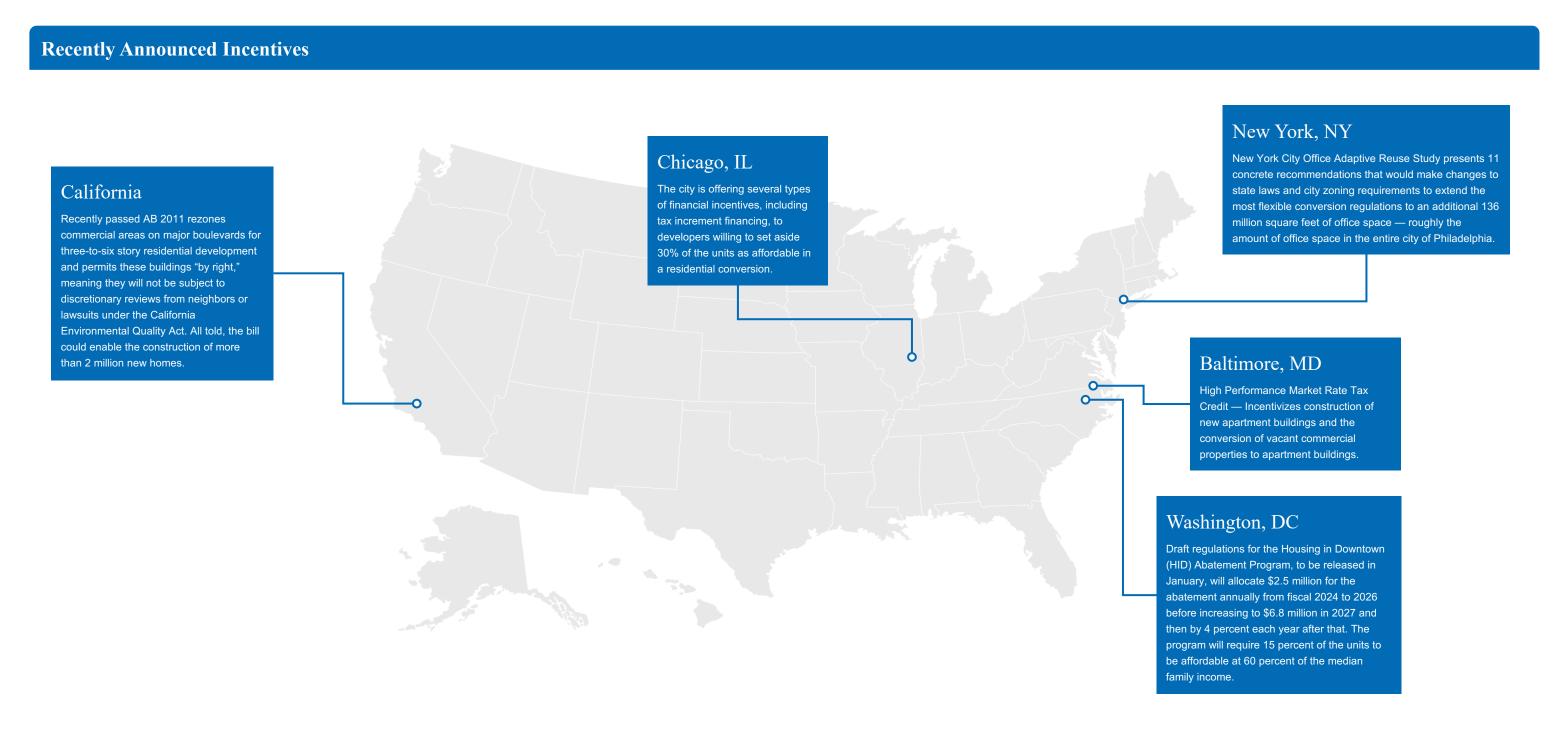
Both consumer sentiment and inflation improved in the second half of 2022. Nonetheless, with uncertainty in the global economy looming, many renters will likely continue to rent.



Source: Newmark Research, University of Michigan, Federal Reserve Bank of St. Louis

Multifamily Conversion Incentive Programs Springing up Nationwide

Introduced in 2021, the Revitalizing Downtowns Act provides a 20.0% tax credit to developers who convert unused office space into residential housing, while reserving 20.0% of the new space for low-income affordable housing.



Source: Newmark Research, California Legislative Information, Congress.gov, Costar, NYC.gov, Baltimorecity.gov

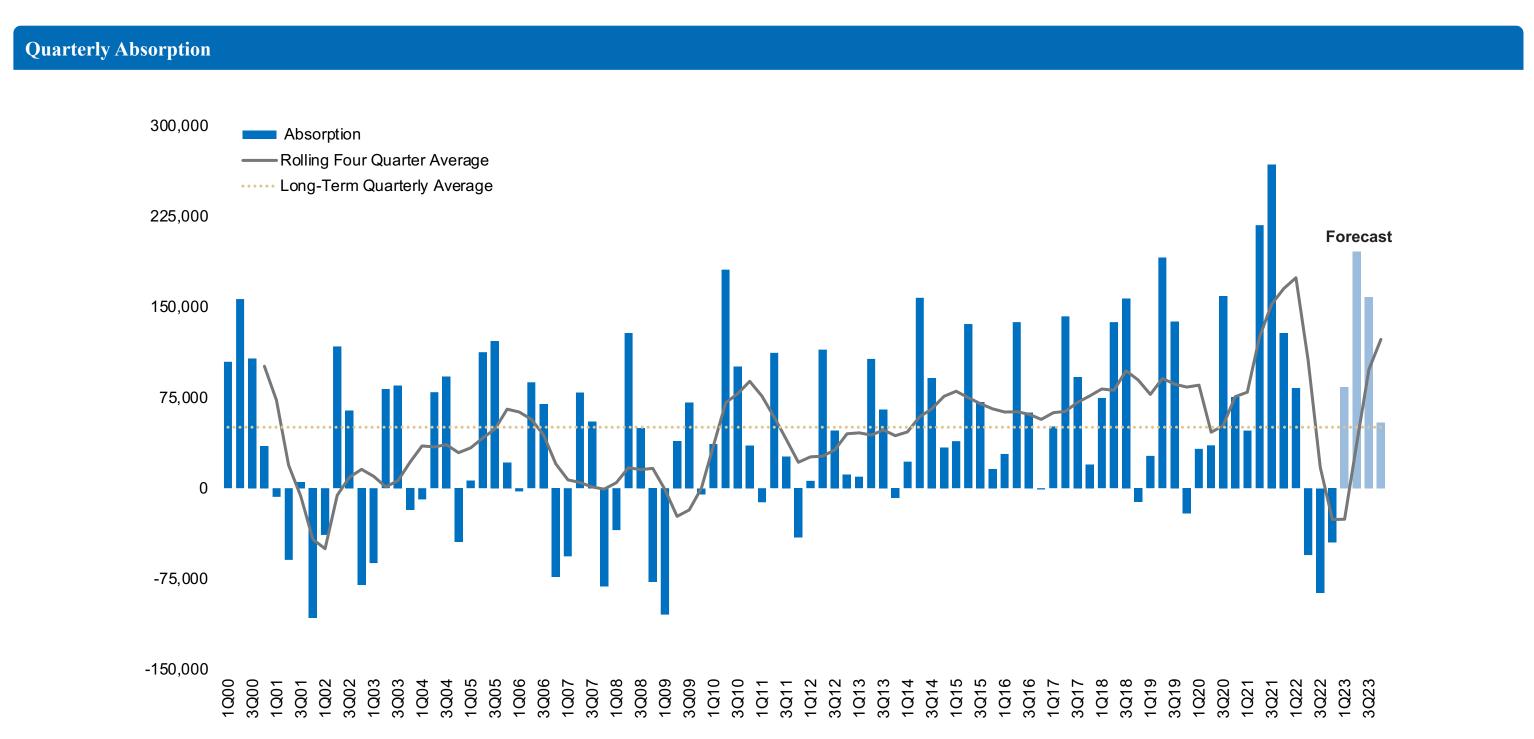
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Leasing Market



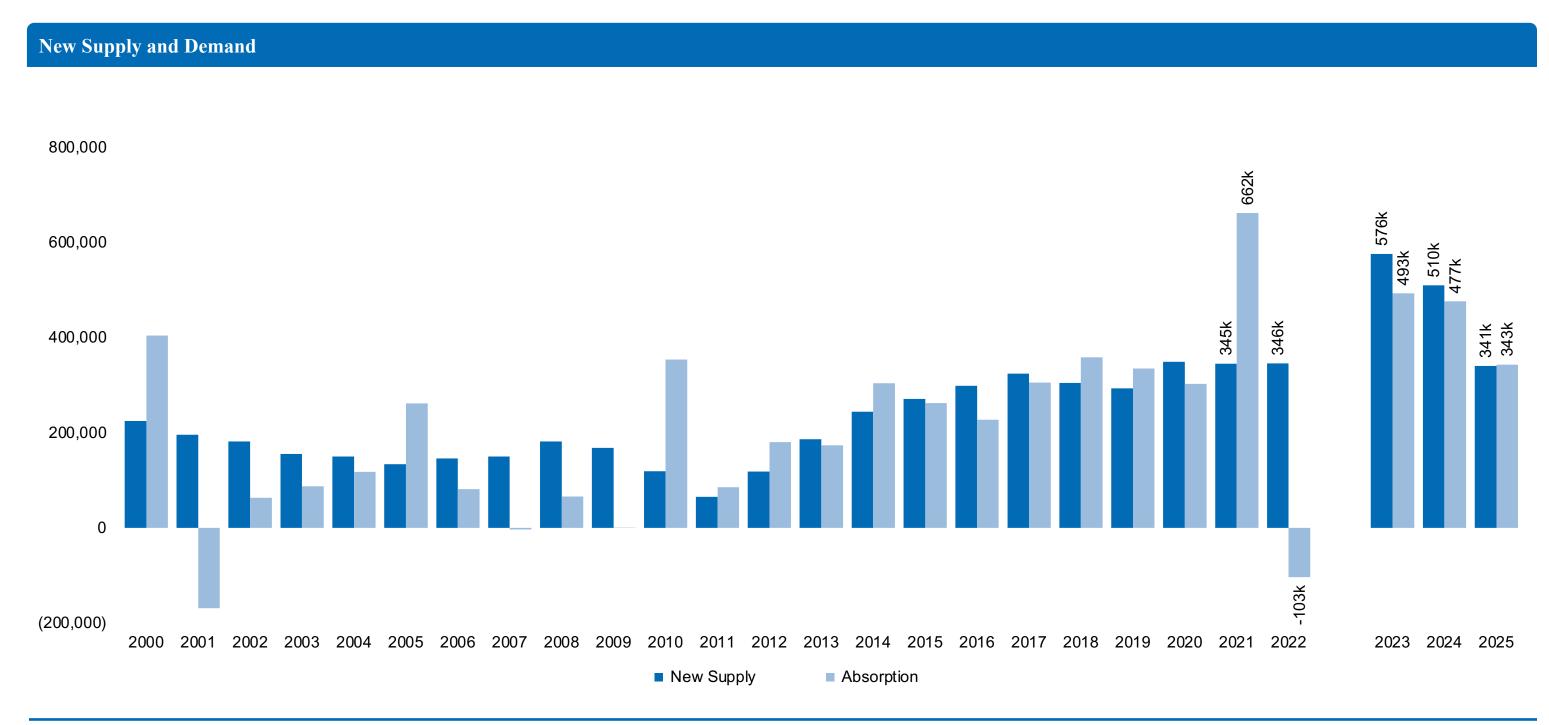
Absorption Historically Down in 2022; Set To Rebound in 2023

Absorption fell by 44,718 units in the fourth quarter of 2022, the third consecutive quarter of negative absorption. This brought absorption for the full year of 2022 to negative 103,485. Although market conditions inhibited leasing activity in 2022, absorption activity is projected to rebound throughout 2023.



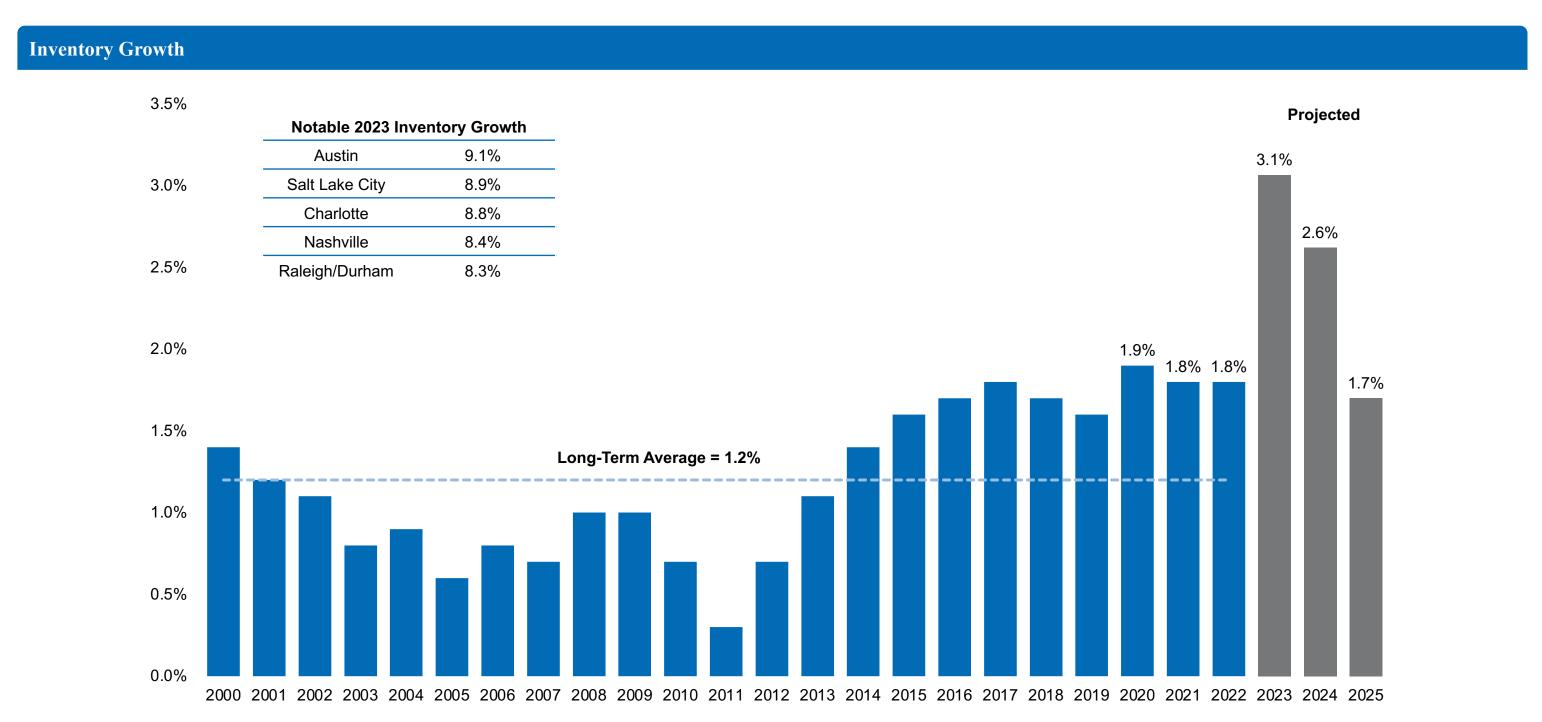
Demand Falls from Record 2021 Activity; Supply to be High in the Short Term

Coming off a record high level of demand of 662,000 units in 2021, absorption slowed significantly in 2022. Demand is expected to reach 493,000 units in 2023, but high levels of new supply coming online in the new year will offset this, with 576,000 new units set to be added to the current national stock; 2024 demand is also forecasted to experience high levels of supply, expected to total 477,000 units absorbed, compared with approximately 510,000 units added.



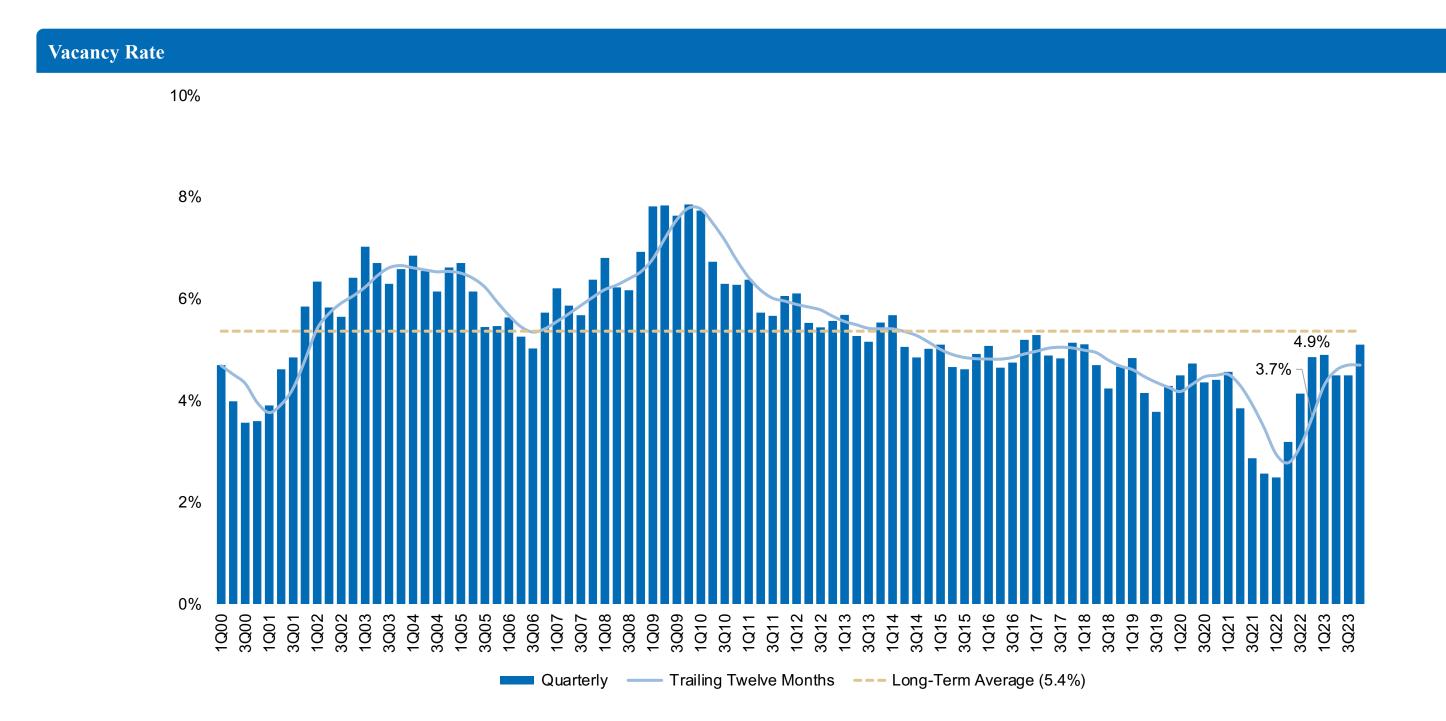
Inventory Growth Expected to Surge over the Next 24 Months

New construction is expected to be robust in 2023 and 2024. Inventory growth is projected to reach an all-time high of 3.1% in 2023, nearly three times the long-term average; 2024 is also expected to be robust before normalizing in 2025.



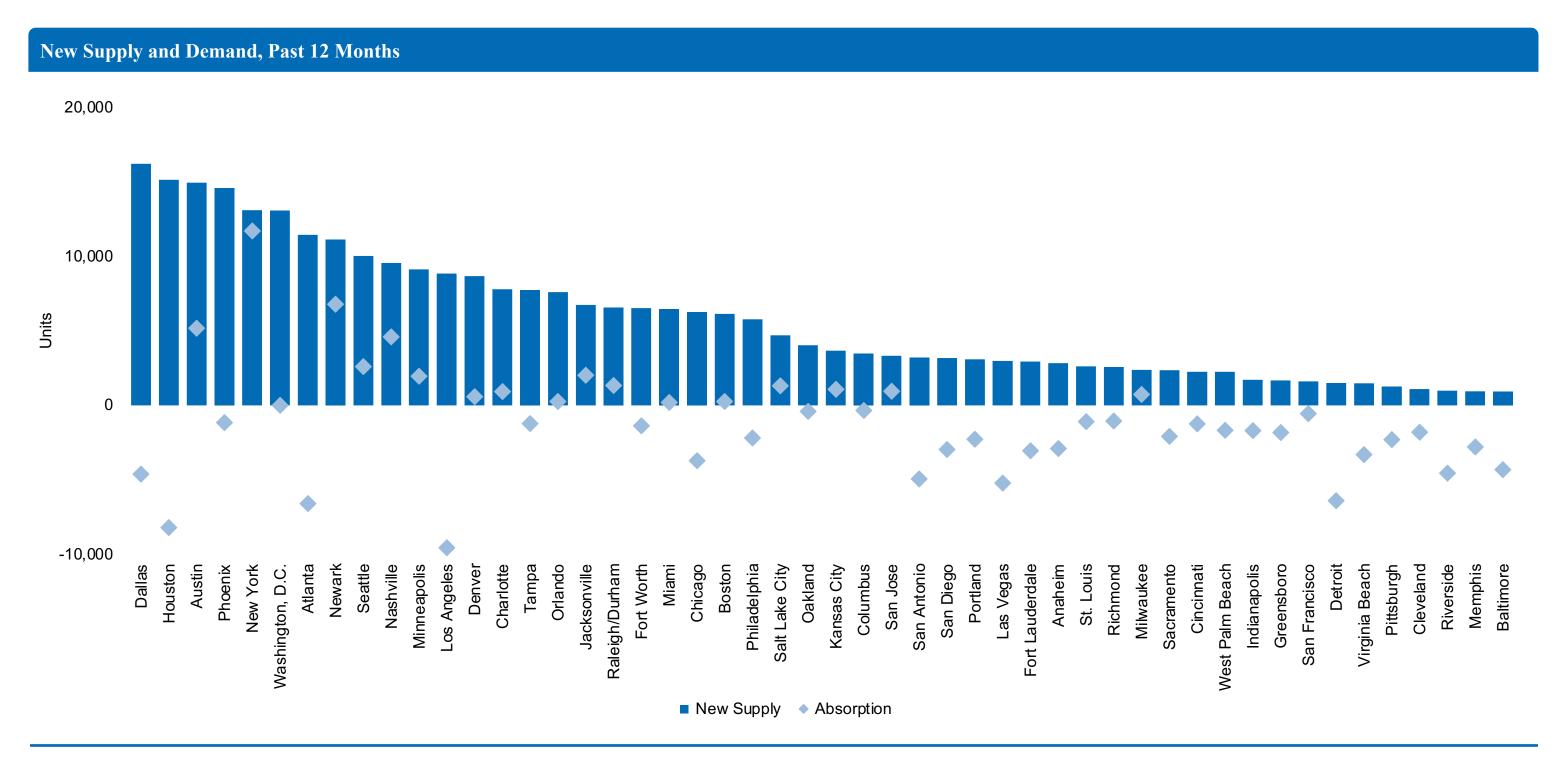
Vacancies Increase in 2022, but Remain Historically Strong

Despite the 60-bps increase in vacancies over the trailing 12 months, vacancy remains well positioned at 3.7% nationally, 170 bps below the long-term average of 5.4%.



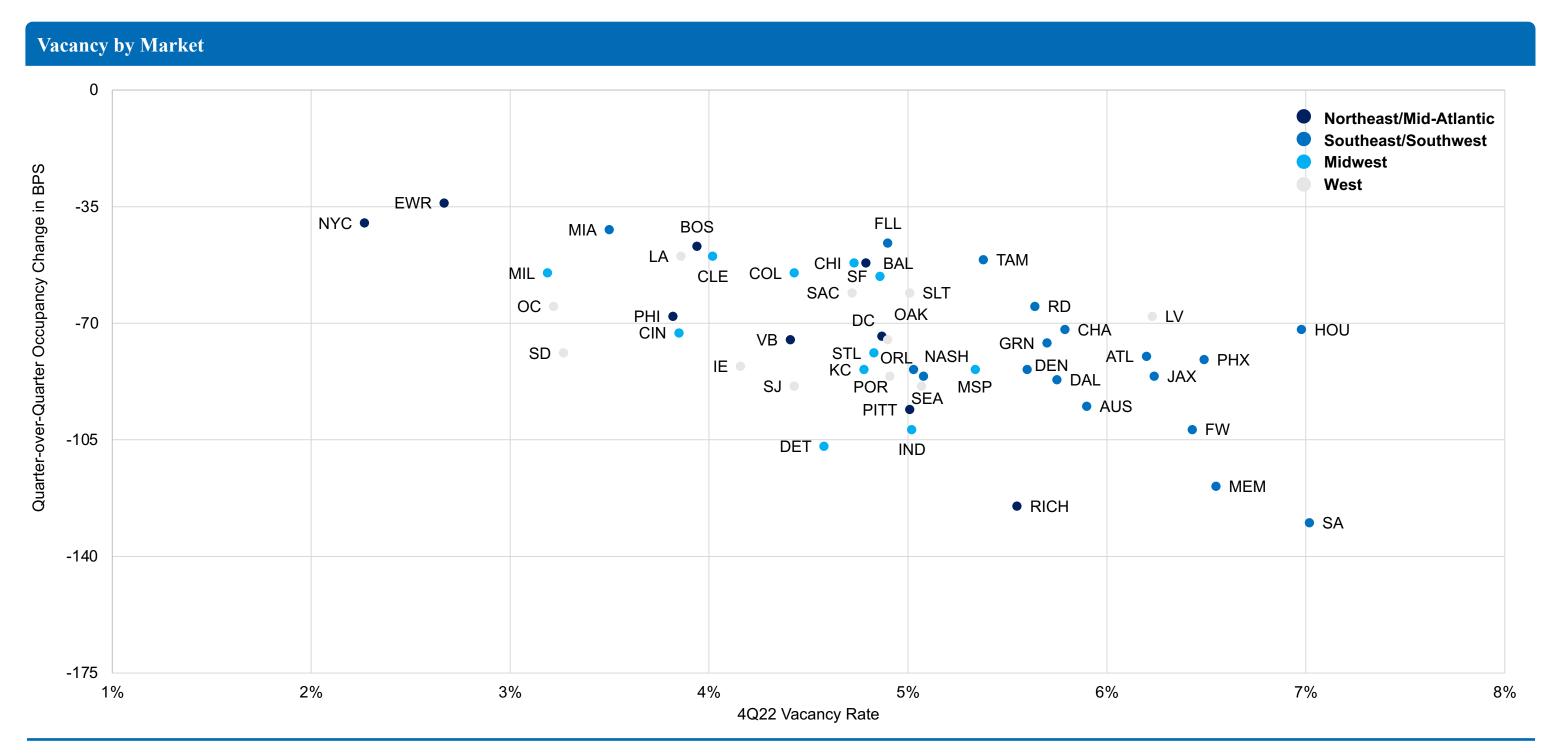
New Supply Outpacing Demand Universally

New supply exceeded absorption in each of the top 50 markets over the past 12-month period. Following post-pandemic bottlenecks, construction was robust in 2022, combined with weaker demand.



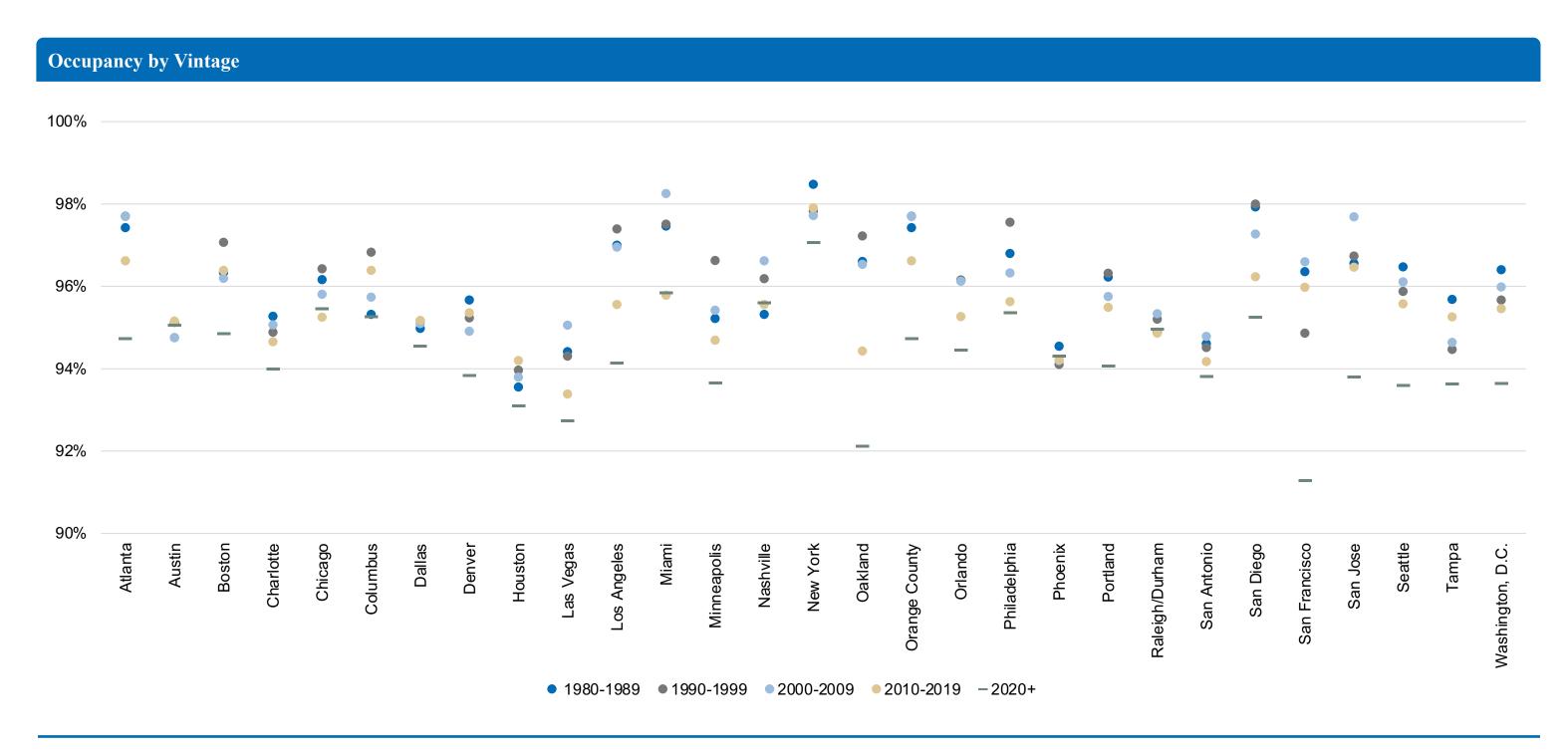
Top 50 Markets All Experiencing Occupancy Reduction

For the second consecutive quarter, Sunbelt markets are being hit the hardest, while coastal markets are exhibiting relative outperformance. Despite the short-term pain in Sunbelt markets, this region is likely to perform well long term, given demographic trends.



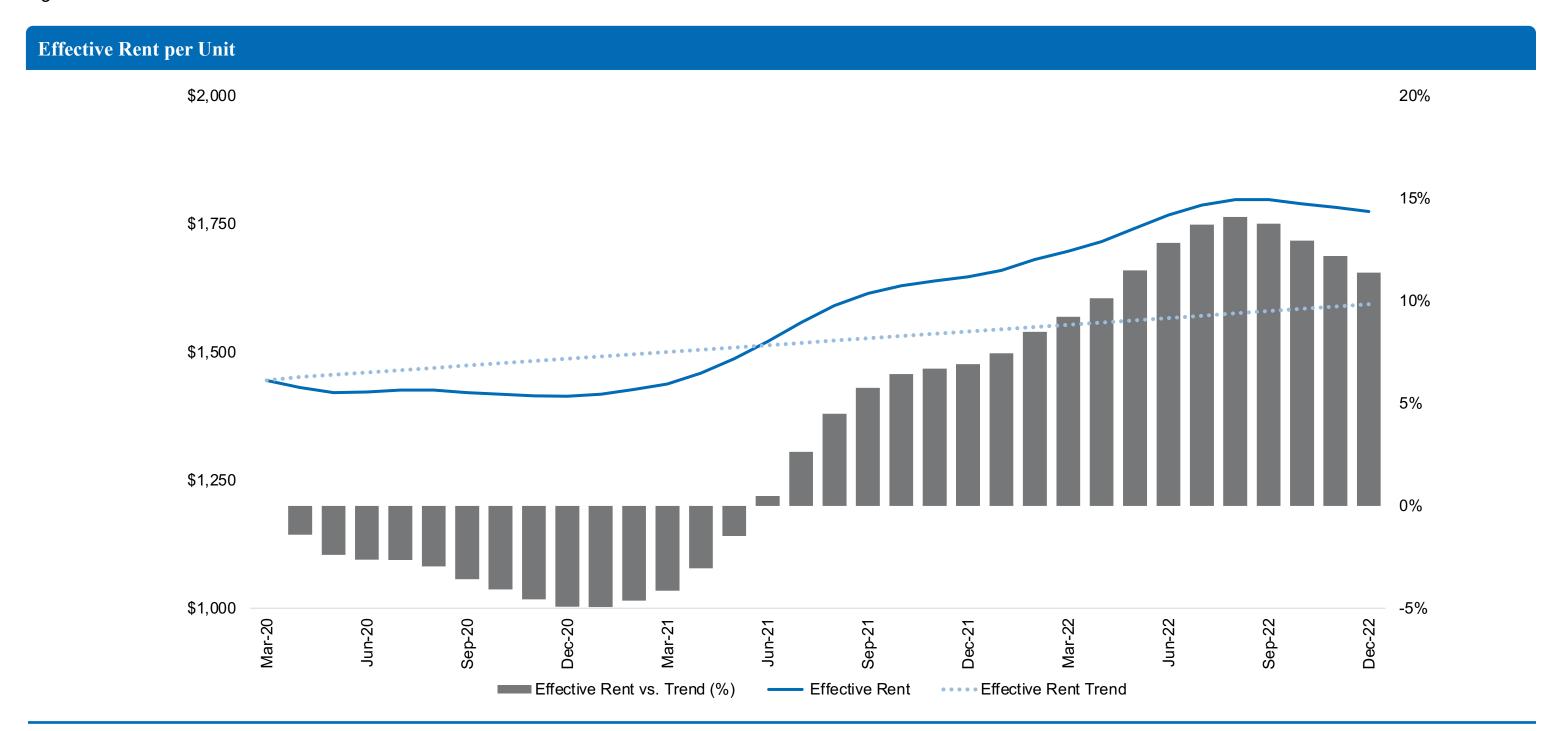
Occupancy Performance Strongest with Older Vintage Properties

Across the largest markets, properties built from 1990 to 1999 have the highest levels of occupancy. Of properties built from 2010 to 2019, assets in Austin, Dallas and Houston are performing above average.



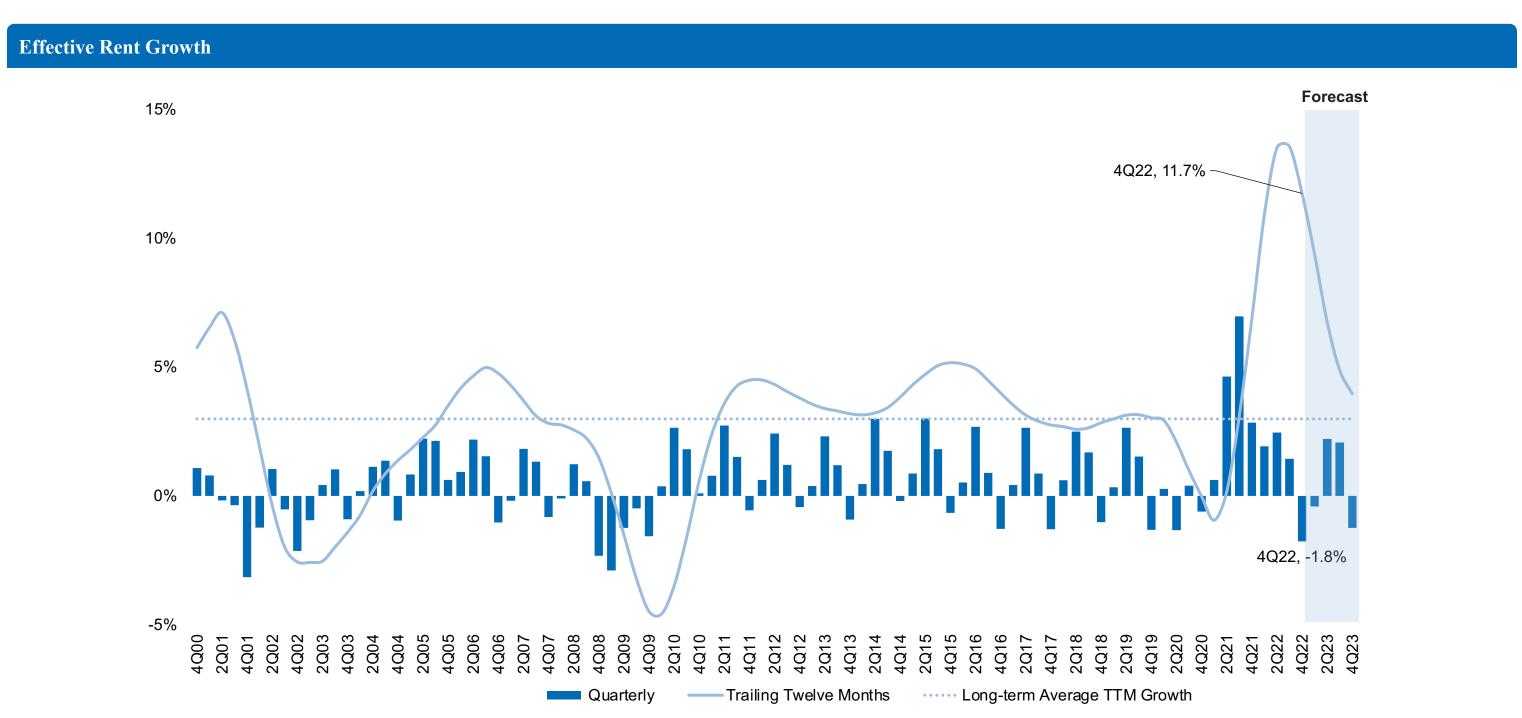
Rents Seasonally Peaked in September; Remain 11.0% Above Trend at Year-End

After 20 straight months of positive month-over-month rental growth, rental growth stalled in September to where it was 0%, then has since declined 0.4% in October, November and December. It is normal for rents to decline in September to December; 2021 was in fact the outlier. Rents peaked at 14% above their pre-pandemic trend-line, ending the year 11.0% higher.



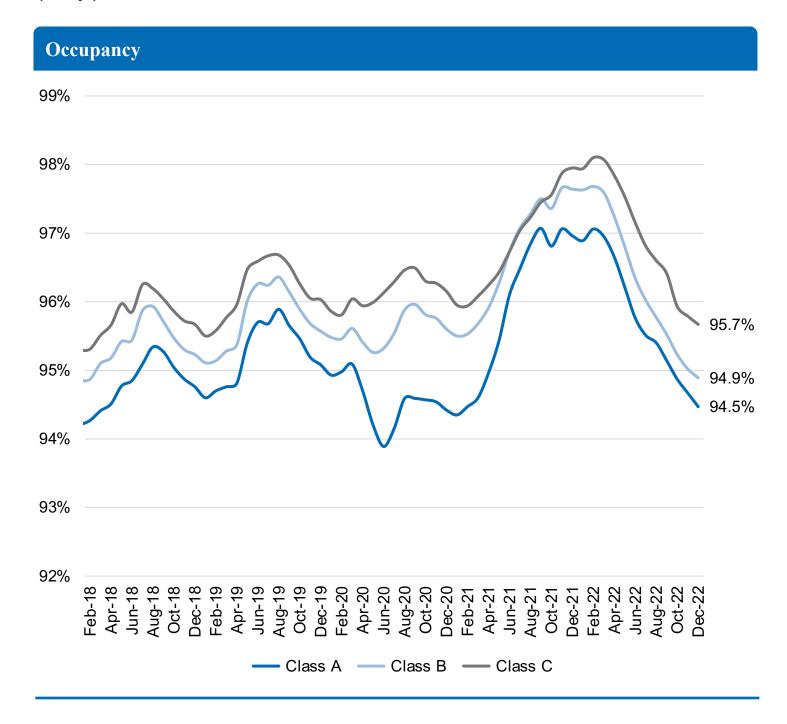
Record Rent Growth Remains Intact for Now, but Moderation Coming in 2023

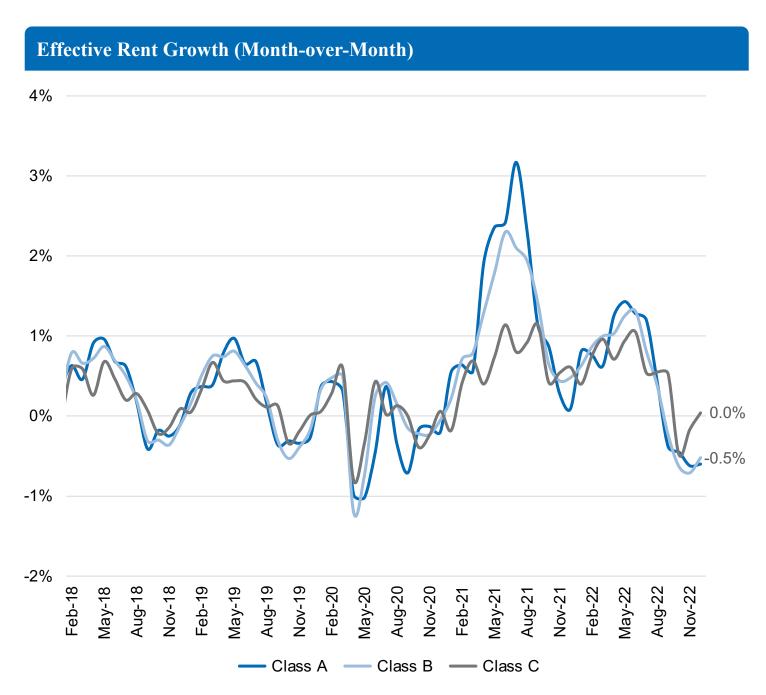
Trailing 12-month average effective rent reached 11.7% in the fourth quarter of 2022, falling 180 bps from the peak in the third quarter of 2022. Effective rental growth is projected to materially slow in 2023, as absorption has declined in the past two quarters and inventory growth is anticipated to rise throughout 2023. Despite this, annual average rental growth is expected to total 4.0% for 2023, well above the long-term average of 3.0%.



Occupancy and Rent Growth Fell in Tandem during the Second Half of 2022

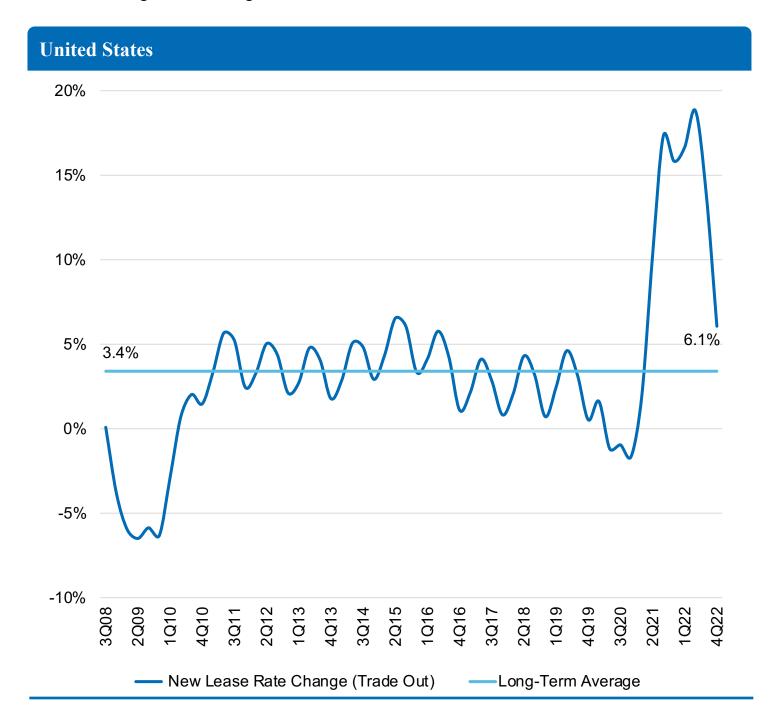
While occupancy fell across all asset classes, Class C apartments proved more resilient than Class A and Class B, as effective rent growth did not suffer as much as it did for higher quality product in 2022.

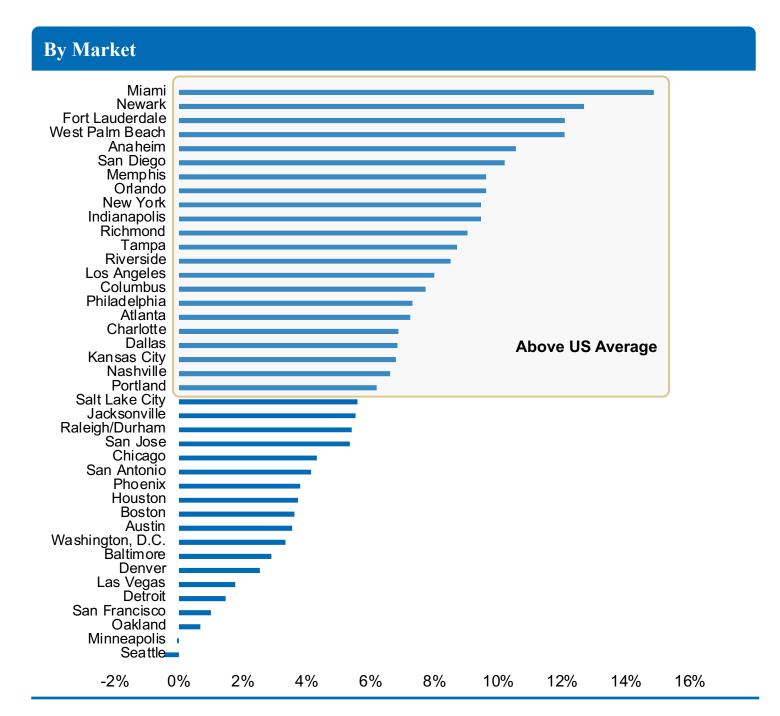




New Lease Trade-Outs Stall; Sunbelt Remains Largest Beneficiary

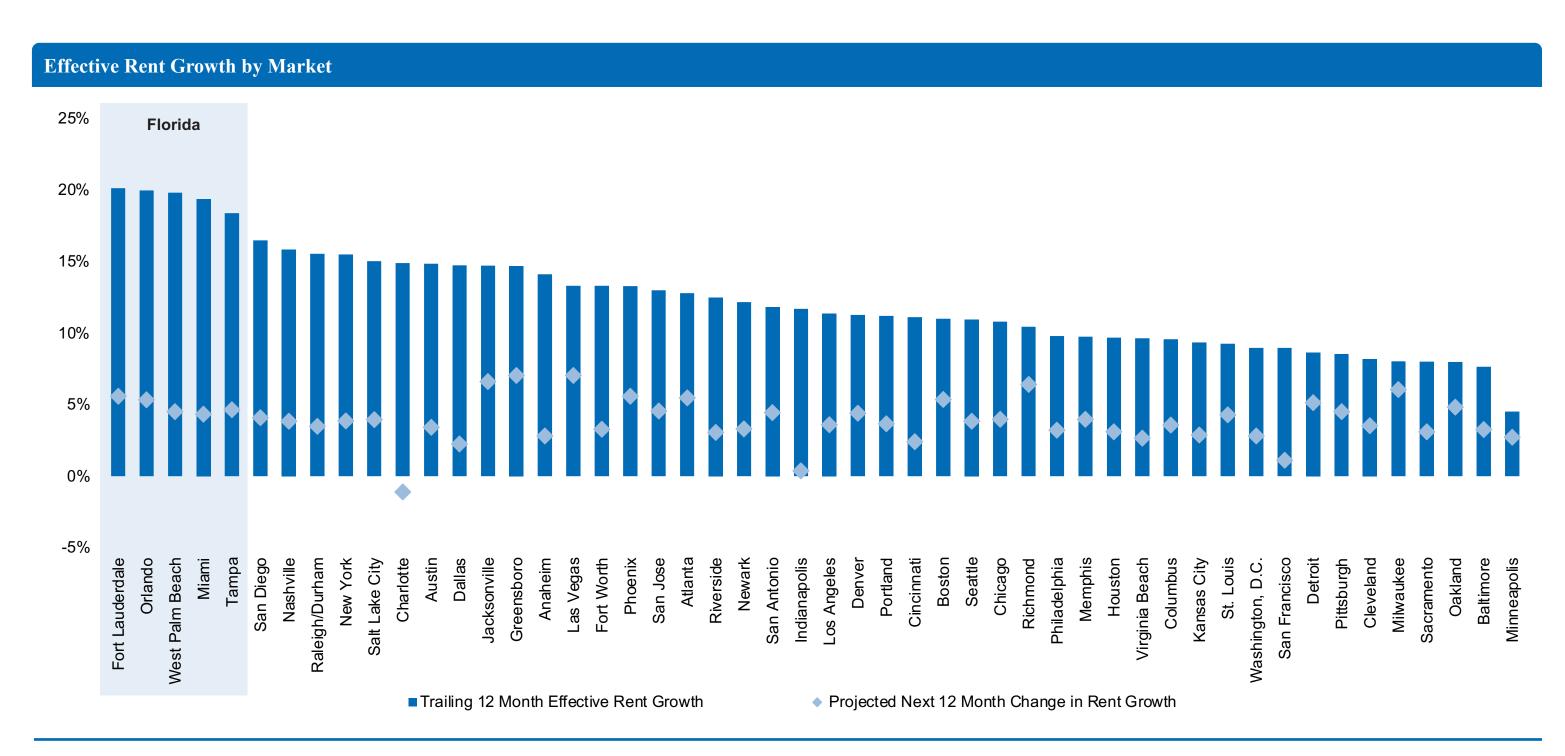
After surging to all-time highs of 18.8% nationally in the second quarter of 2022, new lease trade-outs have decelerated in the second half of 2022, albeit remain 270 basis points above the long-term average.





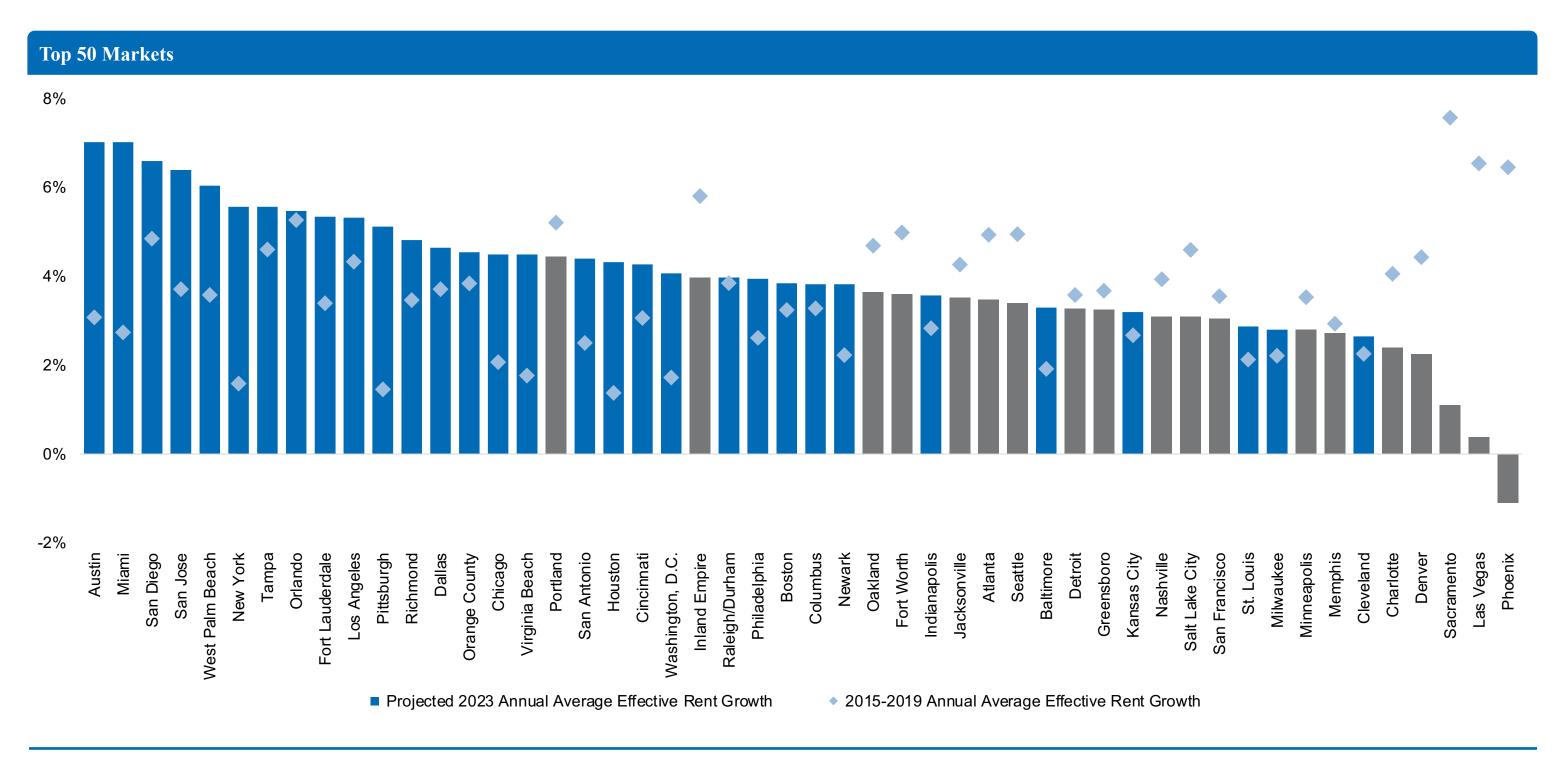
Broad-Based Deceleration in Rent Growth in '23, Especially in '22 Leading Markets

In 2022, rental growth was particularly robust throughout Florida, with growth exceeding 18.4% in Fort Lauderdale, Orlando, West Palm Beach, Miami and Tampa. The top performing markets of 2022 are expected to experience rental growth slow to more normal levels in 2023.



However, Rent Growth Will Continue; in Most Cases, at above Average Rates

31 of the top 50 markets are forecasted to achieve above pre-pandemic rent growth in 2023. Most notably, Austin, Miami and New York are projected to exceed the 2015-2019 rental growth average by 390 bps. Markets such as Las Vegas and Phoenix, which saw substantial rental growth following the onset of COVID-19, are projected to cool and experience rental growth below the pre-pandemic average.



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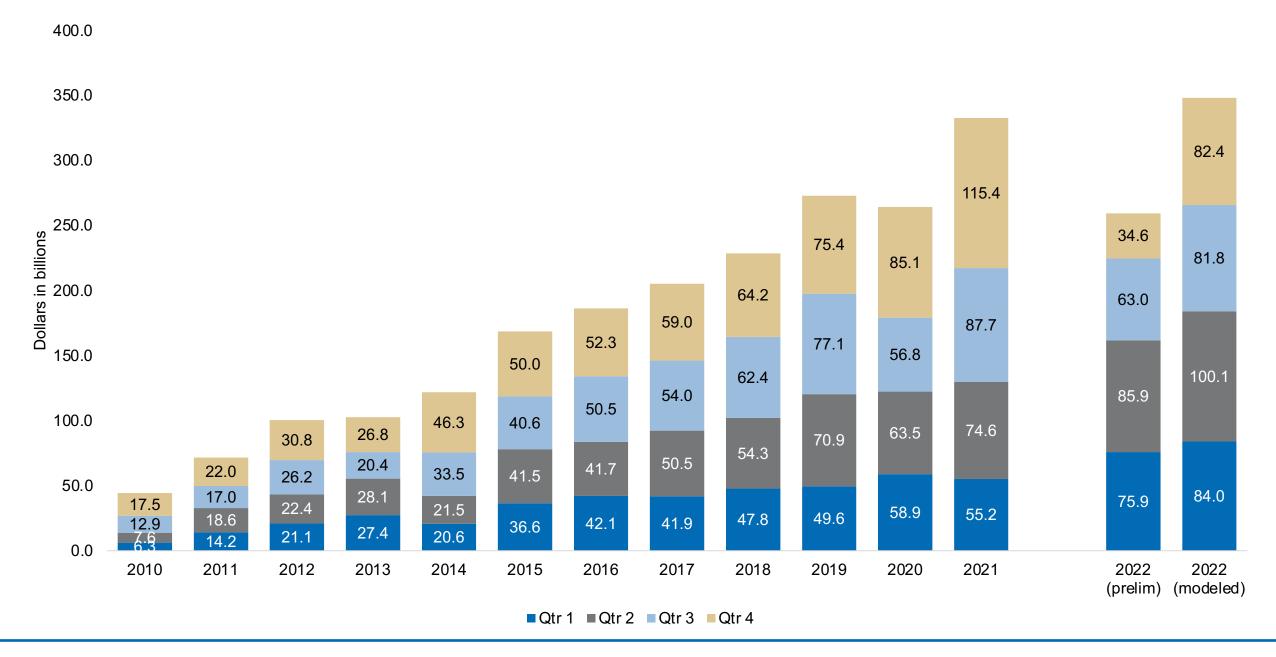
Capital Markets



Projected Multifamily Debt Originations Down 29% Year-over-Year in 4Q22

Debt originations started the year at an unprecedented pace. The first quarter of 2022 was the second-best quarter on record. Since then, activity has gradually decelerated. The preliminary loan figures overstate the severity of the slowdown in the fourth quarter of 2022. Historical patterns for revision suggest a quarter-over-quarter decline but not nearly as stark. The year-over-year comparison is severe, but the fourth guarter of 2021 was a very high bar to match. Projected volumes for the fourth guarter of 2022 are still the third-best fourth-guarter performance.

Multifamily Debt Origination Volume*

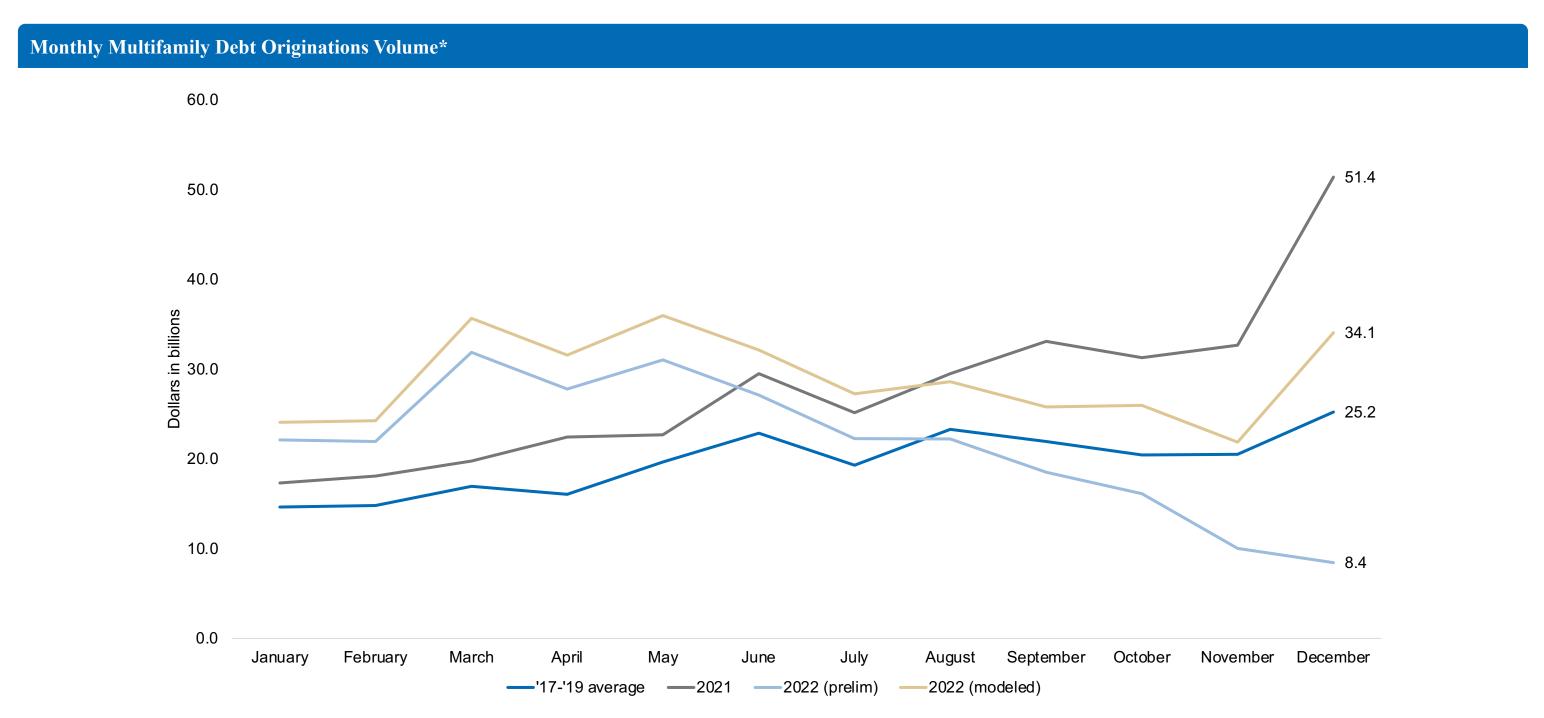


Source: RCA, Newmark Research

^{*}Excludes construction loans. *Modeled origination volumes are adjusted for expected future revisions to originations volumes based on patterns observed in the 2020 Q1 to 2021 Q4 quarterly periods. The revision factors were calculated based on total quarterly origination volumes but for simplicity applied equally to different debt origination categories.

Originations Have Decelerated since May but Remains above Pre-Pandemic Levels

Even with adjustments for likely future revisions, originations have clearly been trending downwards since May. The exception was in December 2022, which may have experienced a larger-than-usual seasonal boost, possibly as borrowers sought to take advantage of a sharp decline in Treasury yields and spreads. This could have been particularly strong, as many borrowers who would have otherwise prefunded had delayed in previous months. The question is whether this momentum will have carried into the first quarter of 2023.

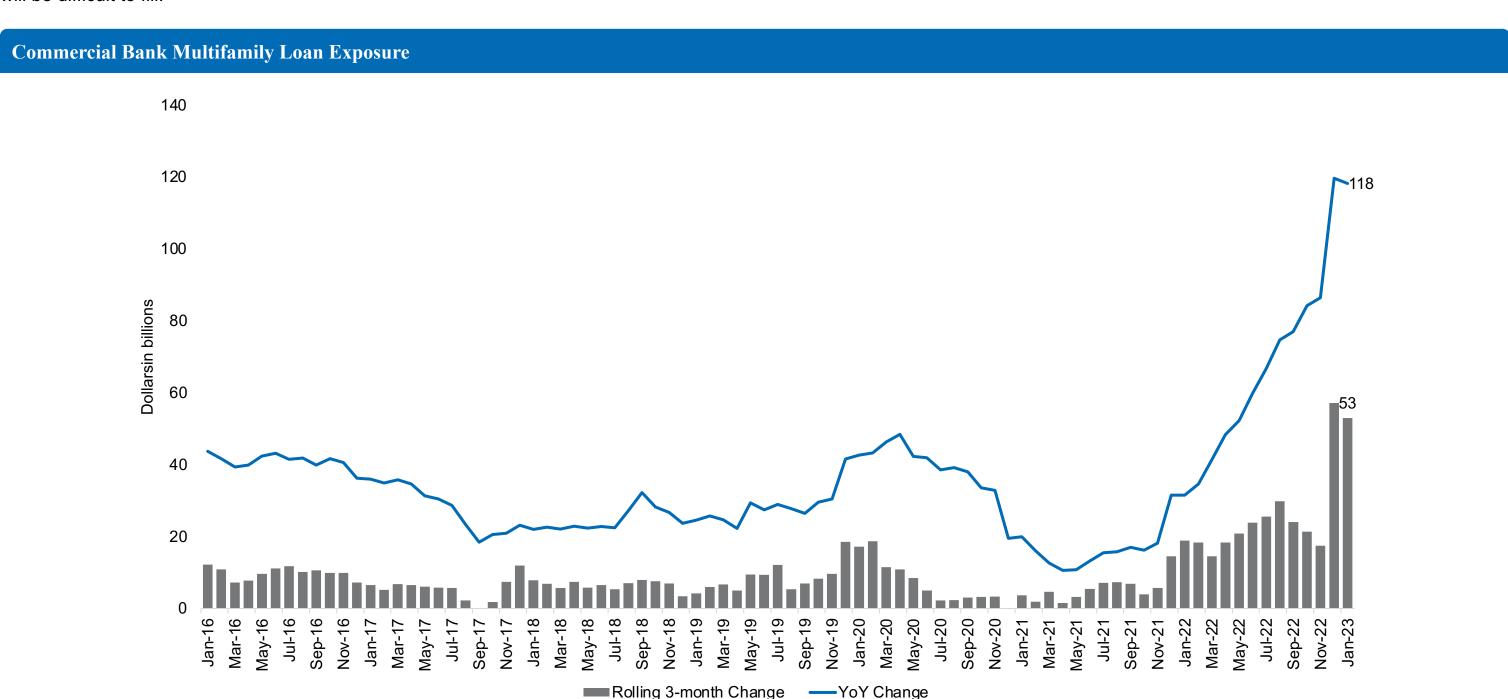


Source: RCA, Newmark Research

^{*}Excludes construction loans. *Modeled origination volumes are adjusted for expected future revisions to originations volumes based on patterns observed in the 2020 Q1 to 2021 Q4 quarterly periods. The revision factors were calculated based on total quarterly origination volumes but for simplicity applied equally to different debt origination categories.

Banks Leaned Heavily into Multifamily Lending in 2022, Particularly in 4Q22

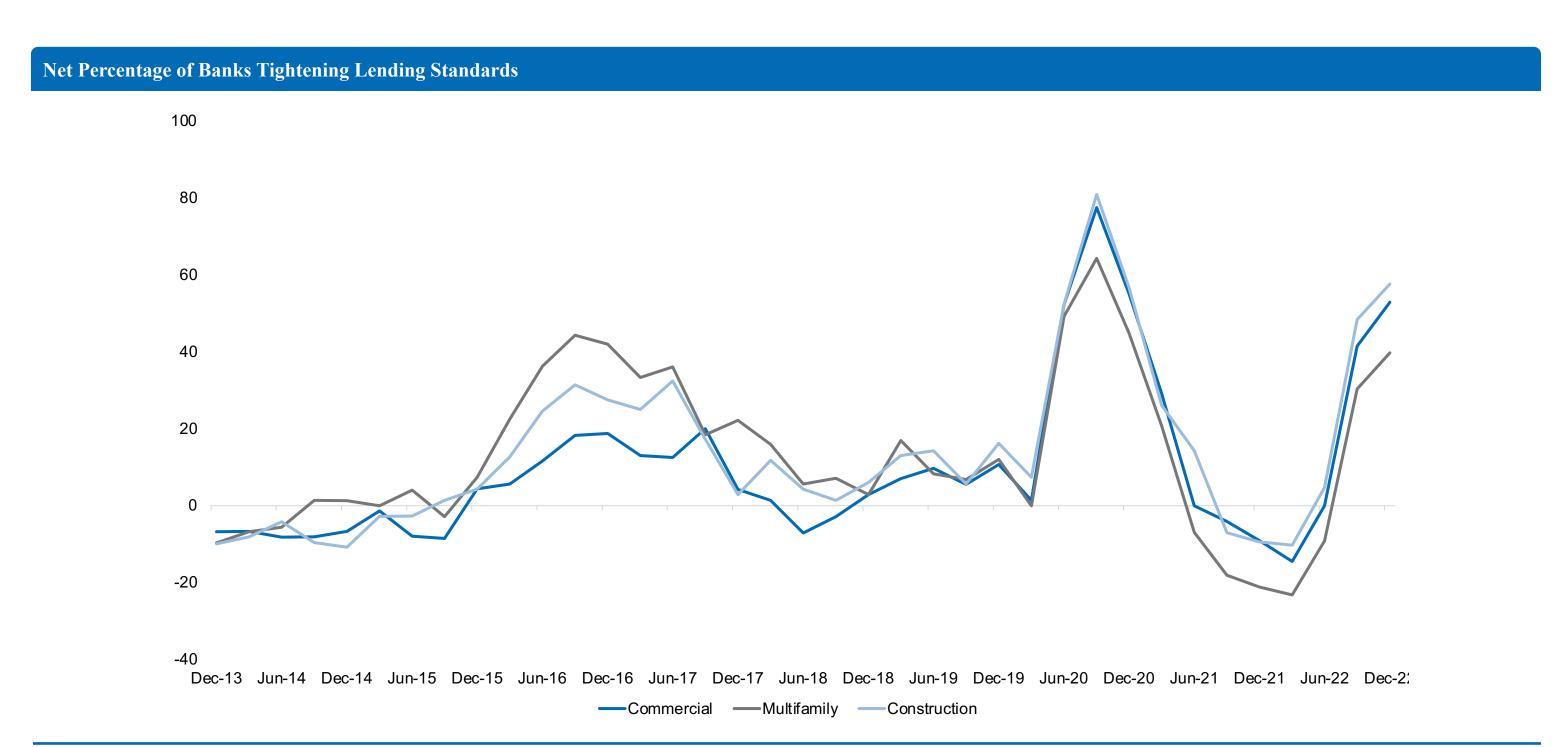
Bank exposure to loans secured by multifamily properties, which does not even include construction finance, increased by \$118.0 billion from Jan 2022 to Jan 2023, with just under half of this exposure growth in the last three months. Banks are unlikely to repeat this performance for the foreseeable future, creating a gap in the liquidity structure of the market that will be difficult to fill.



Source: Federal Reserve, Newmark Research

Bank Lending Standards Are Rapidly Tightening

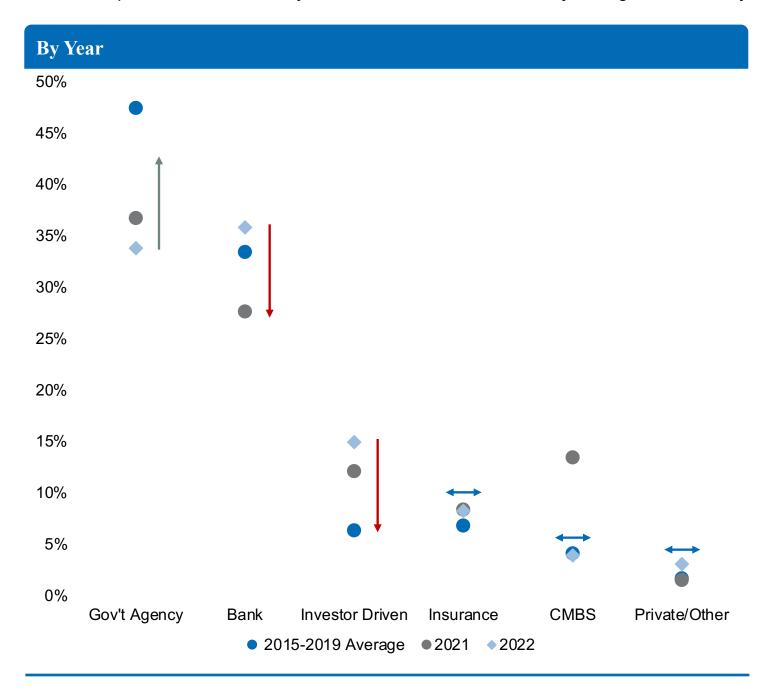
The resurgence of bank lending has been short-lived. Banks are tightening their lending standards, which, as in 2020, means shrinking the profile of not only assets but sponsors with whom they are willing to lend. While delinquencies remain low, bank managers anticipate increased distress across their credit portfolios, including within their CRE books.

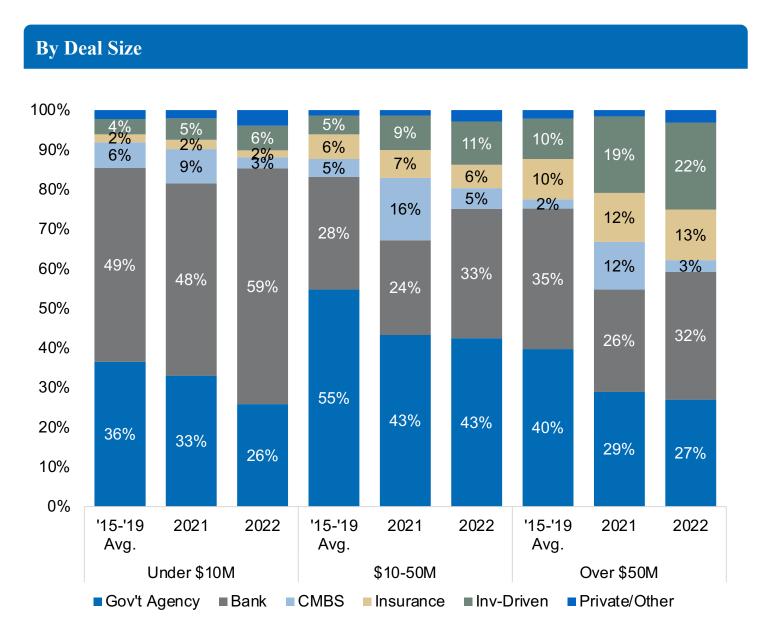


Source: Federal Reserve, Newmark Research

GSEs Provide a (Limited) Buffer against Cyclical Lending Conditions

The GSE's act as a backstop to the market; however, their overall function has been somewhat diluted of late as: 1) lending caps have been imposed and those are growing slowly; and 2) they have become more exclusively focused on mission-driven lending. As the market grows, they are providing less proportional and more targeted liquidity support, which makes a repeat of 2009 less likely but also leaves the market subject to greater volatility.

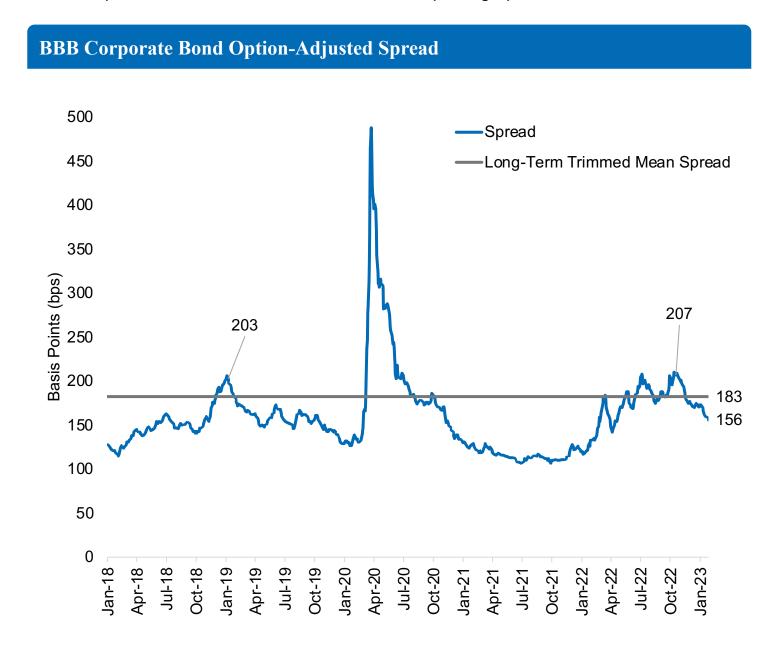


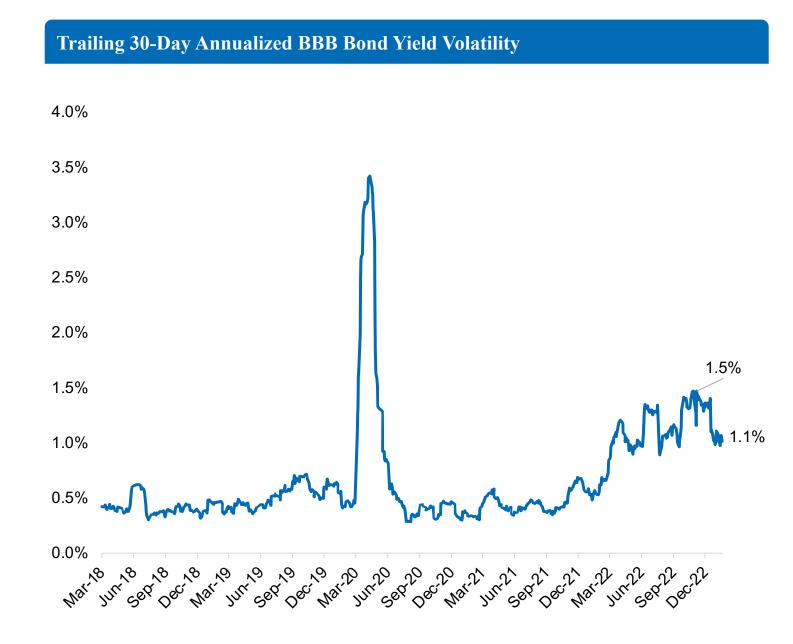


Source: Newmark Research, MSCI Real Capital Analytics Includes construction financing, transactions over \$5M in total deal value

Corporate Bond Markets Point To Improved Lending Conditions in Early 2023

Banks are likely to be less active as they digest their expanded loan books and the GSEs will be active but static on volumes. The recent decline in spreads and reduced volatility in bond yields could incentivize market-driven lenders, such as CMBS, debt funds and life insurance companies to be more active on the margin. There is already some evidence of this in the corporate bond market, with new issuance picking up.

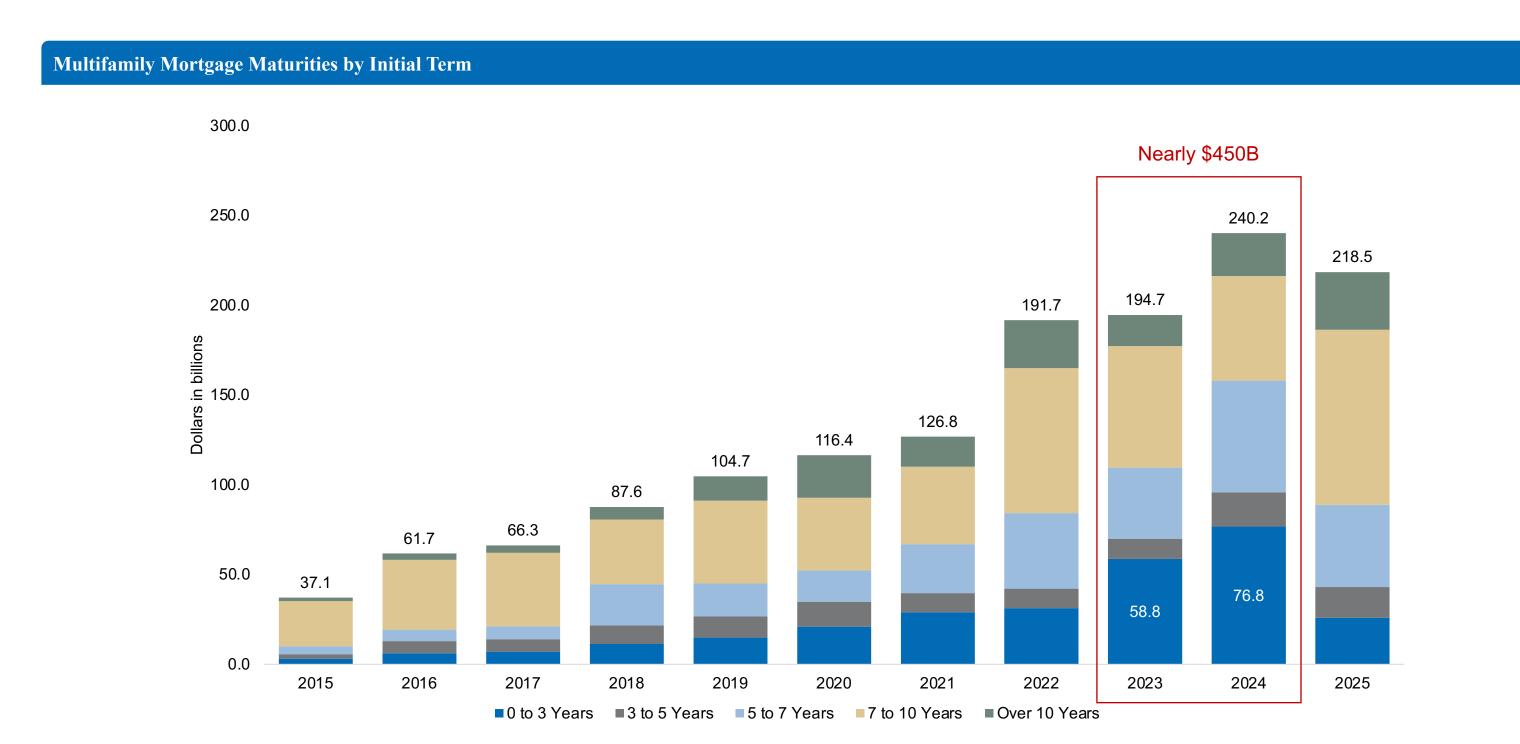




Source: Ice Data Indices, LLC, Newmark Research as of 1/27/23 Note: Trimmed mean = removed 10% of values and top 10% of values

Record Quantities of Debt Maturing in 2023 to 2024

Nearly 1/3 of the maturing debt had an initial term of three years or less, which means that it was: a) priced at the lowest cost on record; and b) likely involved a transitional asset.



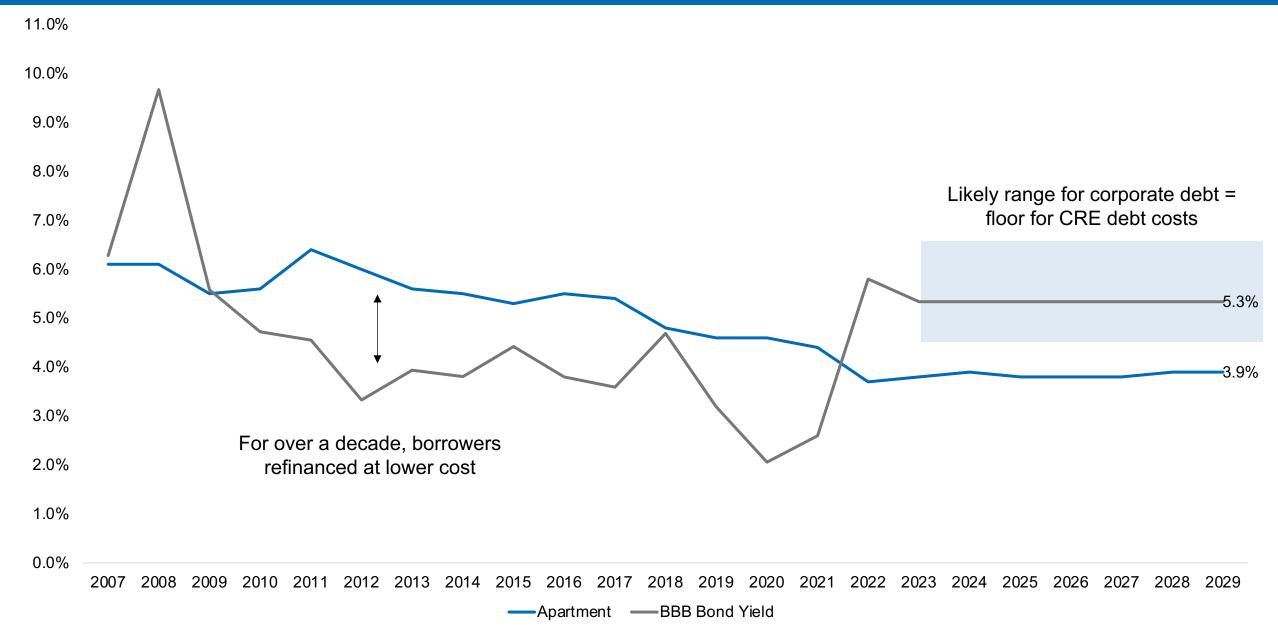
Source: RCA, Newmark Research

^{*}Assumes that loans for which the maturity is unknown have the same maturity distribution as loans with known maturities.

Borrowers Will Face Starkly Higher Costs as Loans Mature

Higher debt costs on refinancing will lower return for all and will give rise to a range of reactions within the market. Some borrowers will choose to pay down debt, especially if the asset has appreciated meaningfully. Others will refinance the principal or partially pay down, whereas in a lower cost of capital environment, they would have re-levered. Still others will be unable to make the math work and will need to pursue a loan modification, return the keys and/or source rescue equity at an appropriate price point.

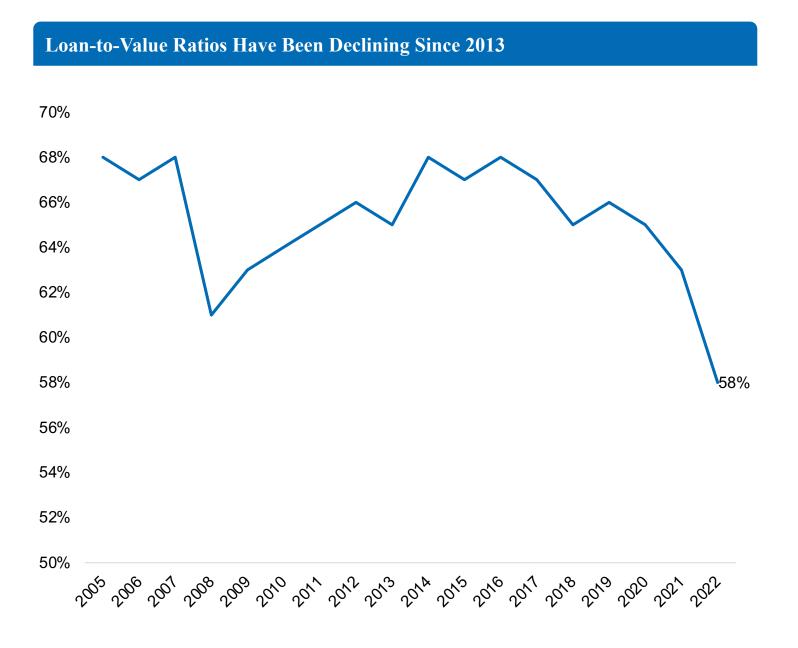


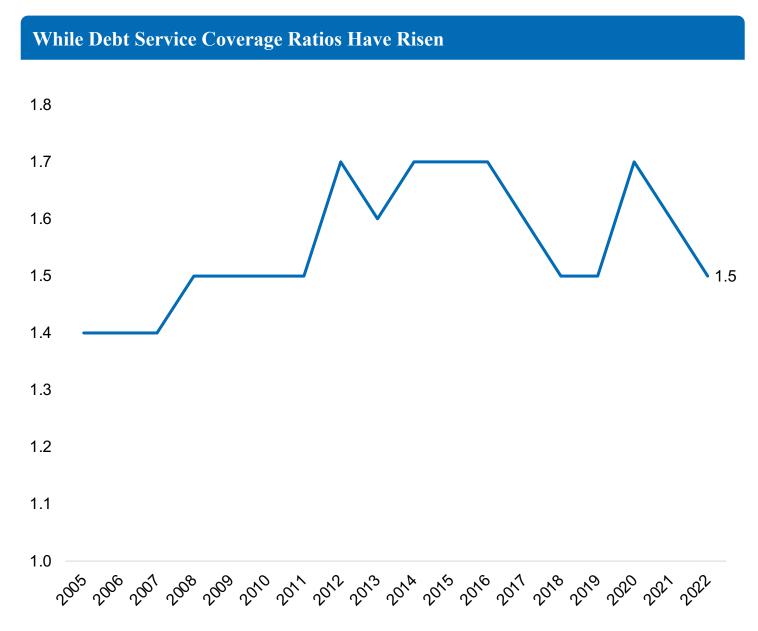


Source: RCA, ICE Data Indices, Newmark Research

Conservative Underwriting Could Help Mitigate Distress

LTVs became elevated and DSCRs depressed in the years preceding the Great Financial Crisis. Both borrowers and lenders learned from this experience, with the result that LTVs trended down throughout the 2010s expansion and DSCRs expanded significantly. Even during risk-on periods, lending standards remained conservative on these metrics. This conservatism now provides some wiggle room for borrowers to absorb the increased debt costs as loans come due.

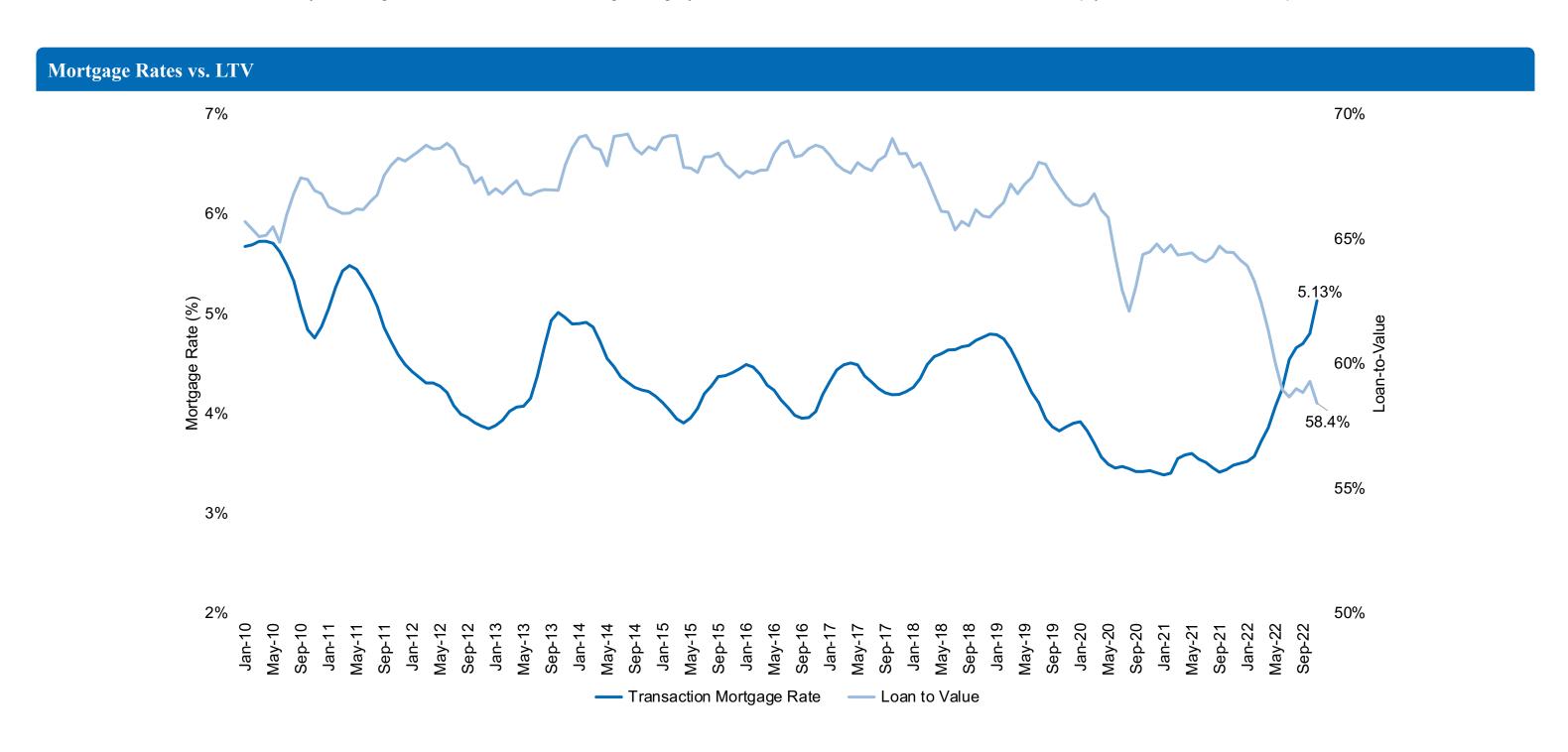




Source: Real Capital Analytics, Newmark Research

As Mortgage Rates Drastically Increase, LTVs Have Begun to Shrink

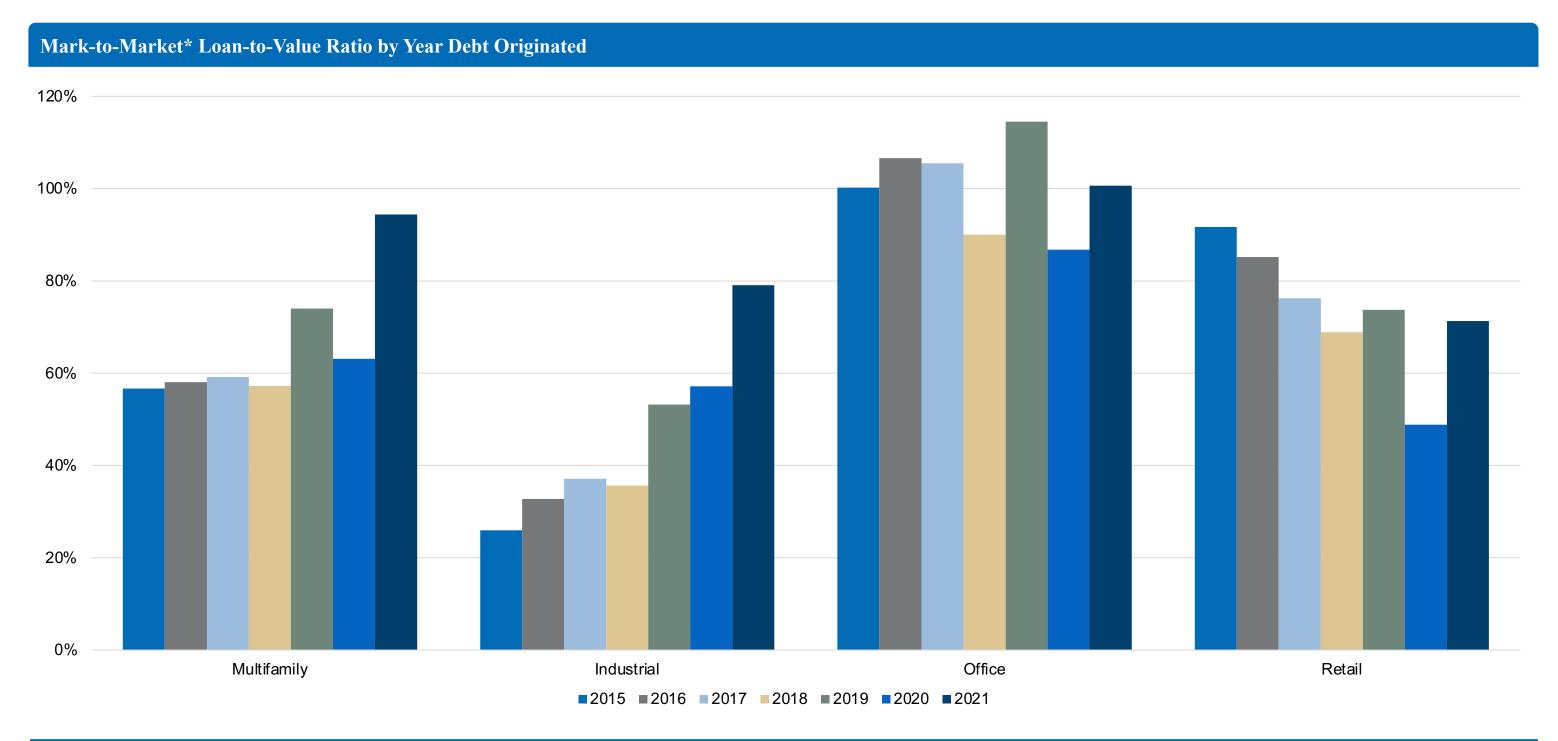
Loan-to-value rations were already trending down since the Fed's rating hiking cycle in 2018, but this trend has accelerated sharply in 2022 amid the sharp rise in interest rates.



Source: Newmark Research, MSCI Real Capital Analytics

Multifamily Will Experience Little Distress; 2021 Vintage Could Face Problems Later

Multifamily has experienced strong asset value appreciation (and cashflow growth) over the last seven years, notwithstanding the ongoing correction in values. The result is that, except for loans originated in 2021, mark-to-market LTVs are well-contained. The same cannot be said for many office and retail vintages.

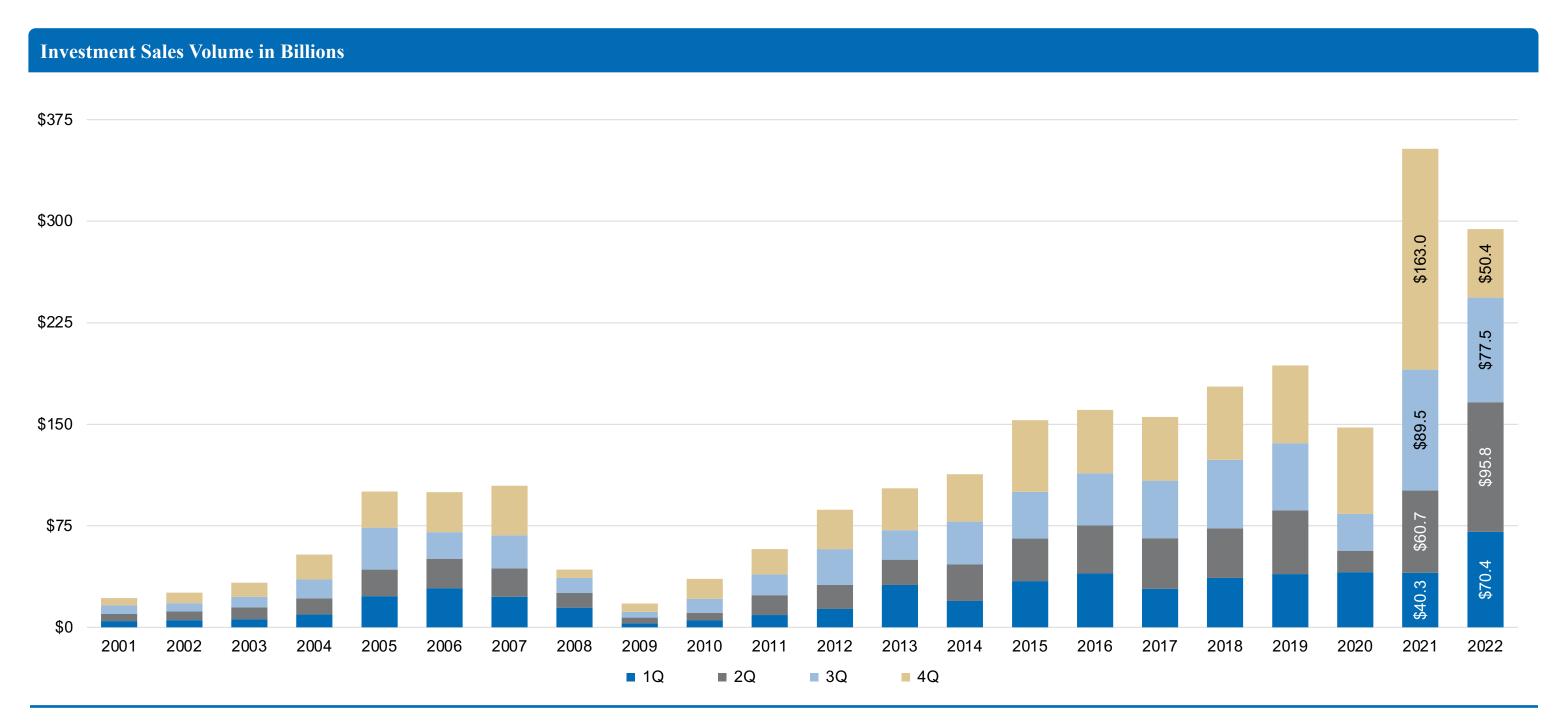


Source: RCA, NAREIT, S&P Capital IQ, Newmark Research

^{*}We take the average LTV in a given year and then increase the value of the denominator by the cumulative price return of the corresponding NAREIT property sector index since the year the loan was originated. For example, apartment loans made in 2005 had an average LTV of 68%. We would then increase the denominator by the cumulative REIT price return from 2006-2022 YTD.

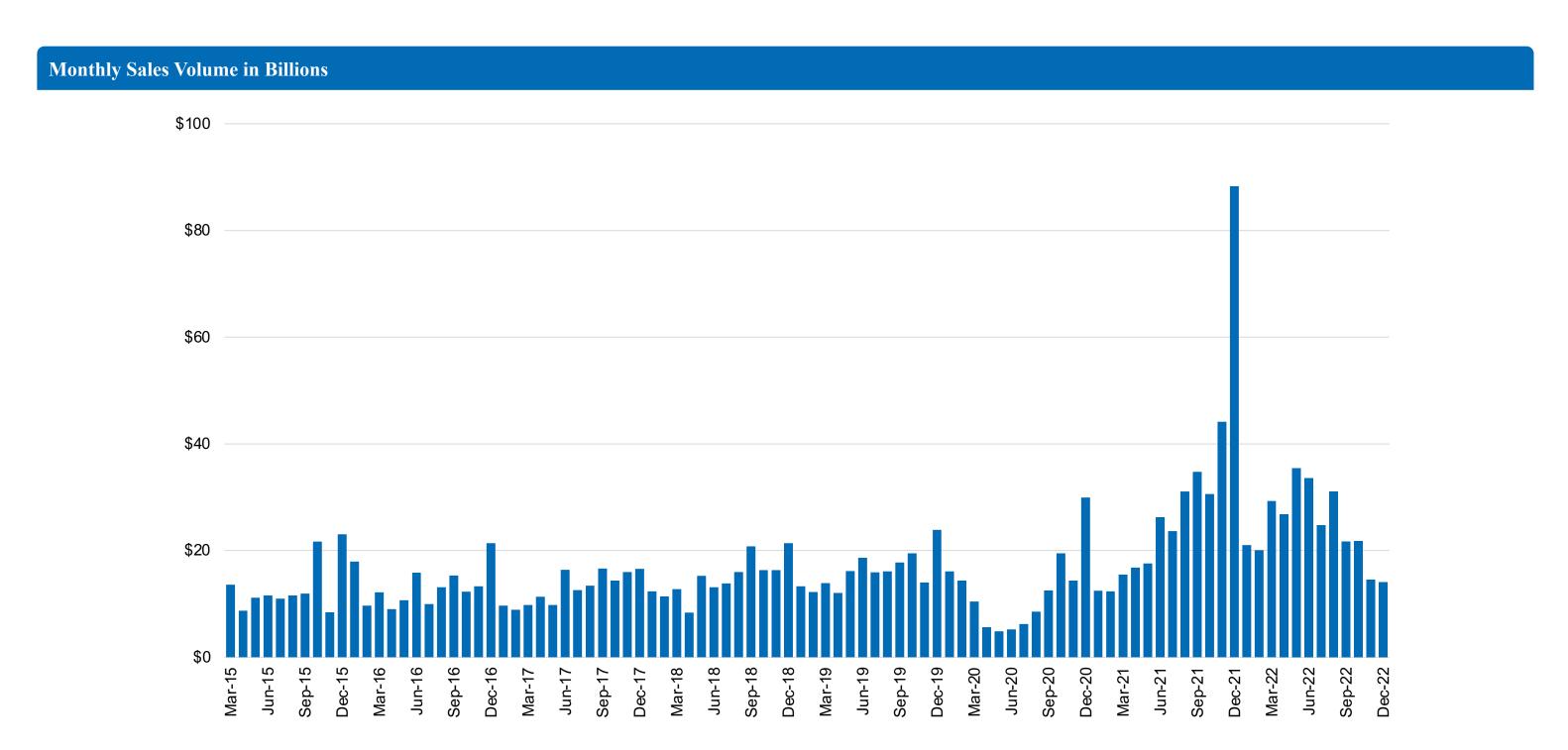
Sales Volume Declined 17% in 2022; Slowness Expected in First Half of 2023

Investment sales volume declined 16.8% year over year to \$294.1 billion compared with 2021, the largest annual transaction year on record with \$353.5 billion in deals. Despite a slowdown in activity, volume remains 75.0% greater than the pre-pandemic annual average of \$168.1 billion from 2015-2019. Quarterly, sales volume totaled \$50.4 billion, down 69.1% compared with the fourth quarter of 2021. Less volatility in the treasury market, as well as high levels of raised capital is likely to stimulate deal flow in the second half of 2023.



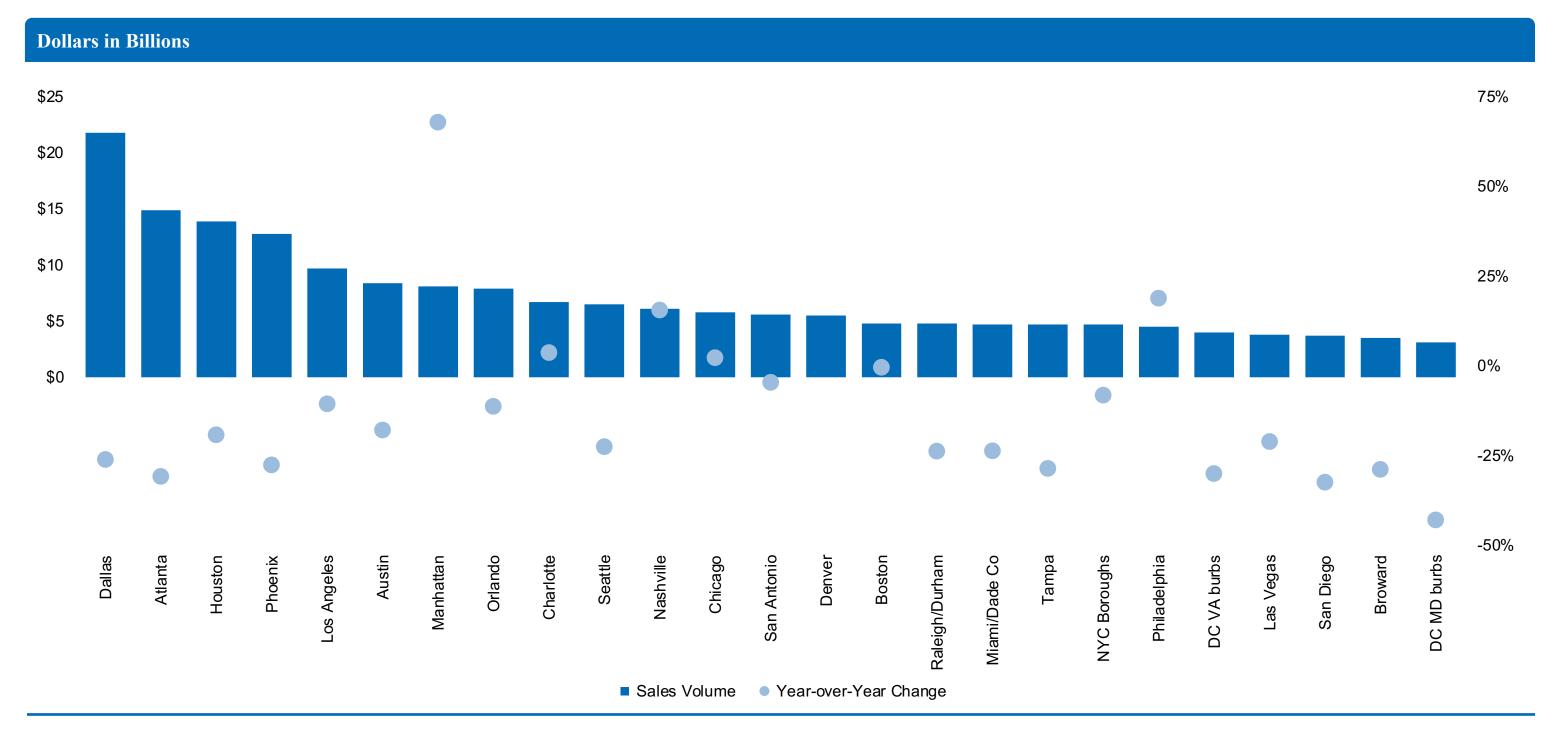
Monthly Volumes Slowed in the 3Q22; Fell throughout 4Q22

Average monthly sales volume in the fourth quarter of 2022 averaged \$16.8 billion; however, it trended downward each month.



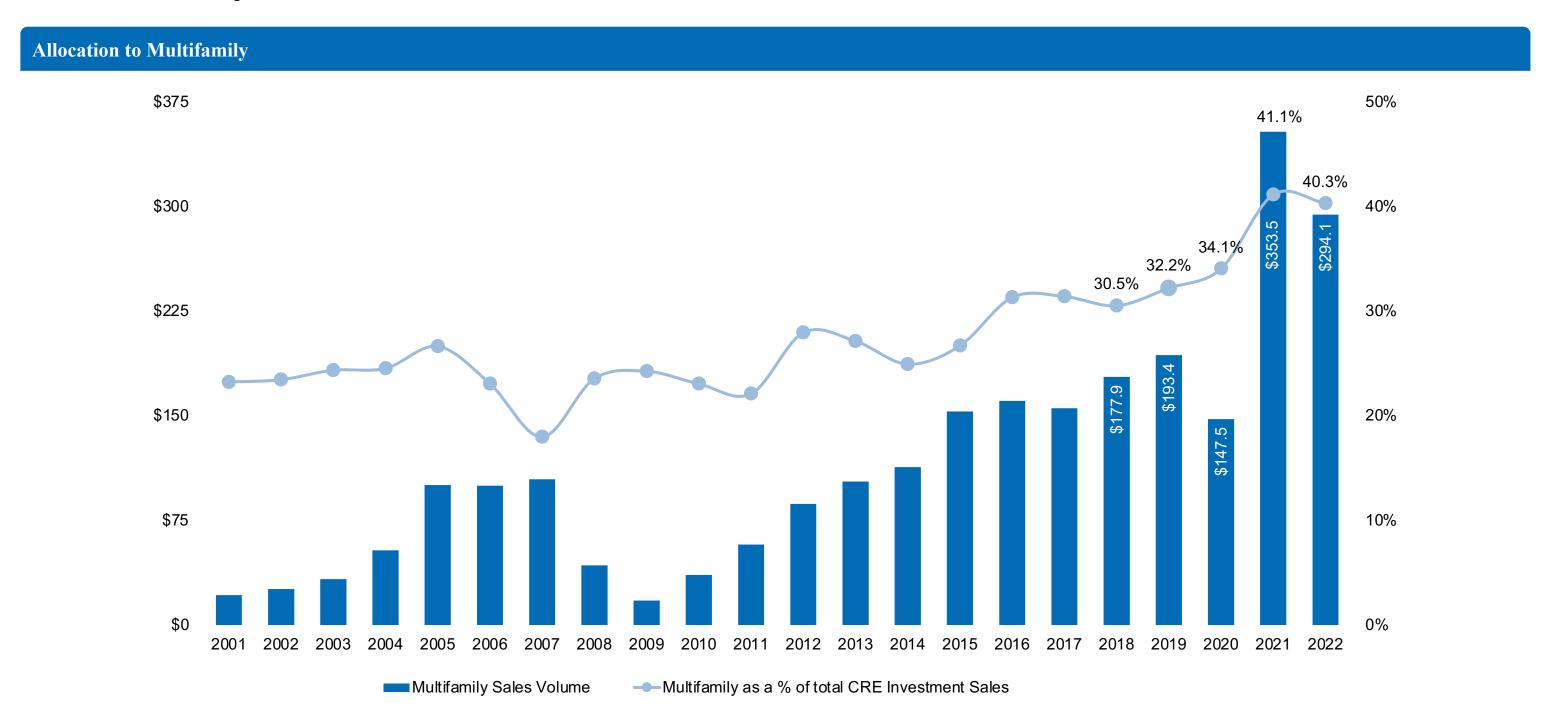
Capital Continues to Pour into Sunbelt; New York Surges Year-over-Year

The Southeast and Southwest regions (the Sunbelt) attracted 57.9% of overall multifamily investment in 2022, led by Dallas, Atlanta, Houston and Phoenix, which accounted for 21.6% of annual volume. Of the top 25 markets by volume, just New York, Nashville and Philadelphia posted double-digit year-over-year sales volume growth.



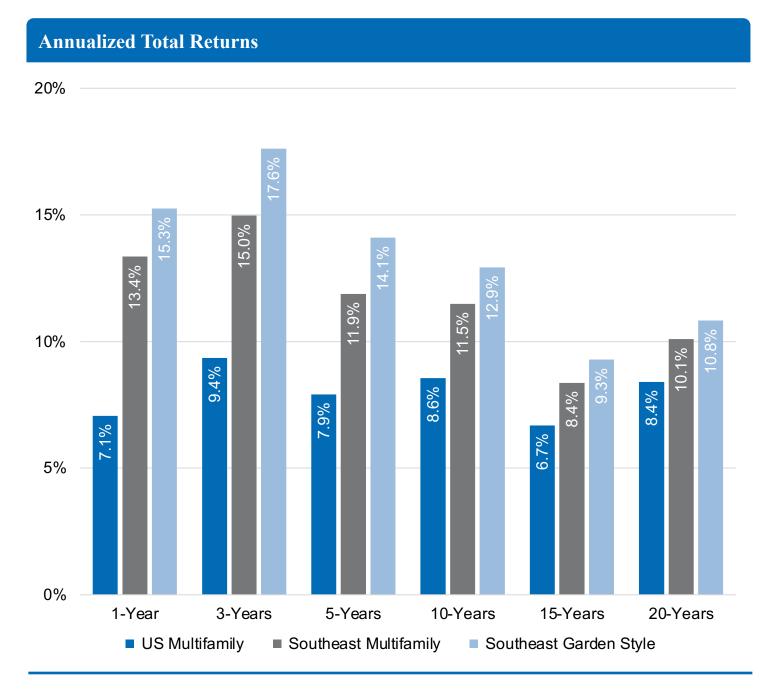
Multifamily Extends Dominance as Top Destination for Capital

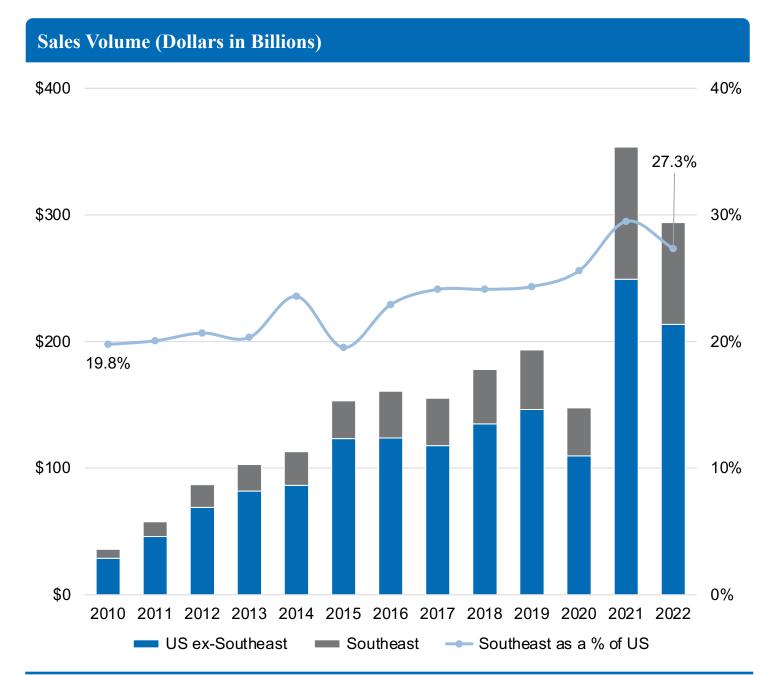
Investor appetite from global capital sources continues to be deployed into multifamily, as a percentage of total US commercial real estate totaled 40.3% in 2022, up 990 basis points from the 2015-2019 average of 30.4%.



As the Southeast Outperforms, Allocations to the Region Continues to Rise

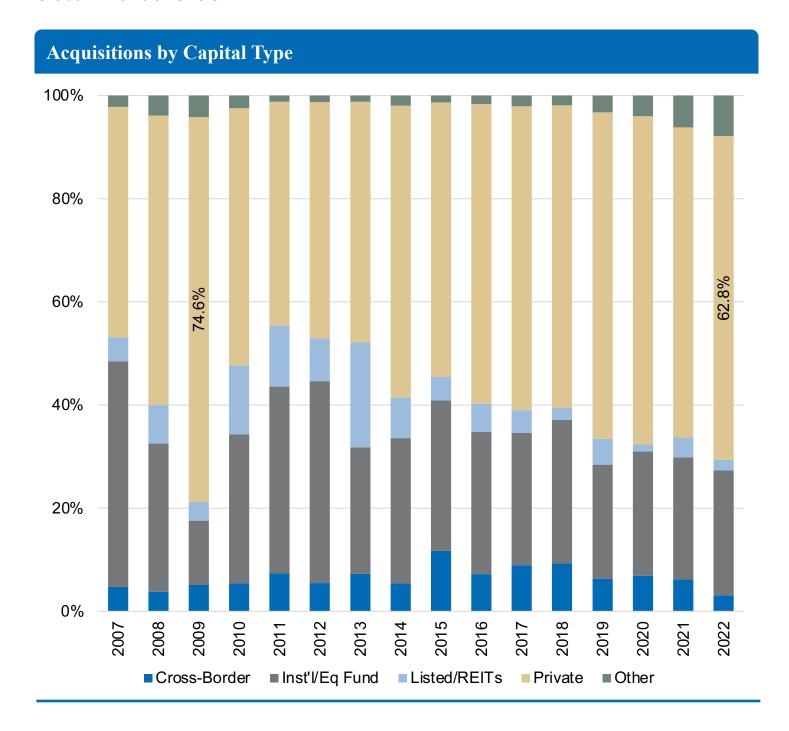
Total returns in the Southeast has outpaced the broader US multifamily total returns index on short, intermediate and long-term bases as the region exhibits strong job growth, demographic tailwinds and a favorable regulatory environment, resulting in increased allocations by capital sources. Of note, garden-style properties throughout the Southeast have generated superior alpha in each times series compared with the overall market, outpacing the US multifamily index by 440 basis points over the past 10 years.

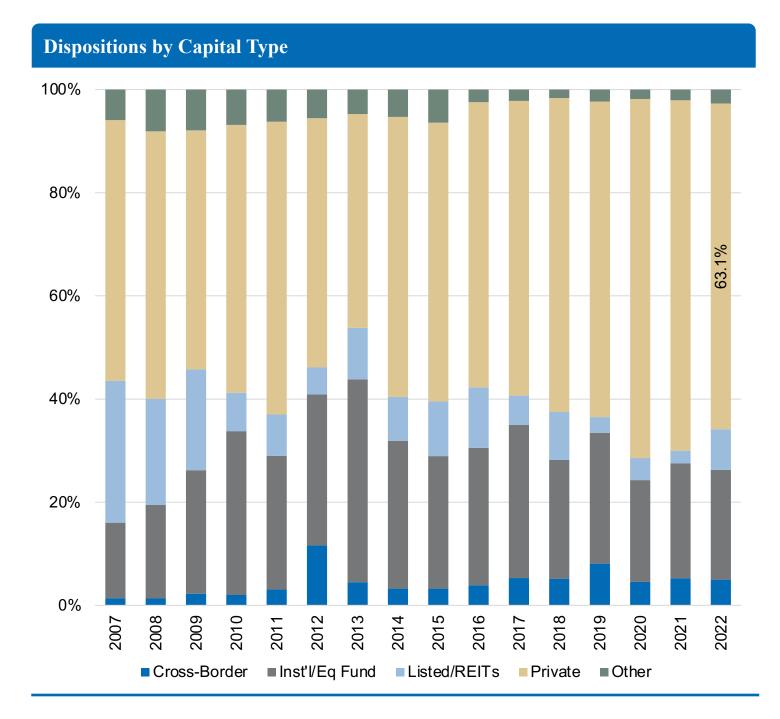




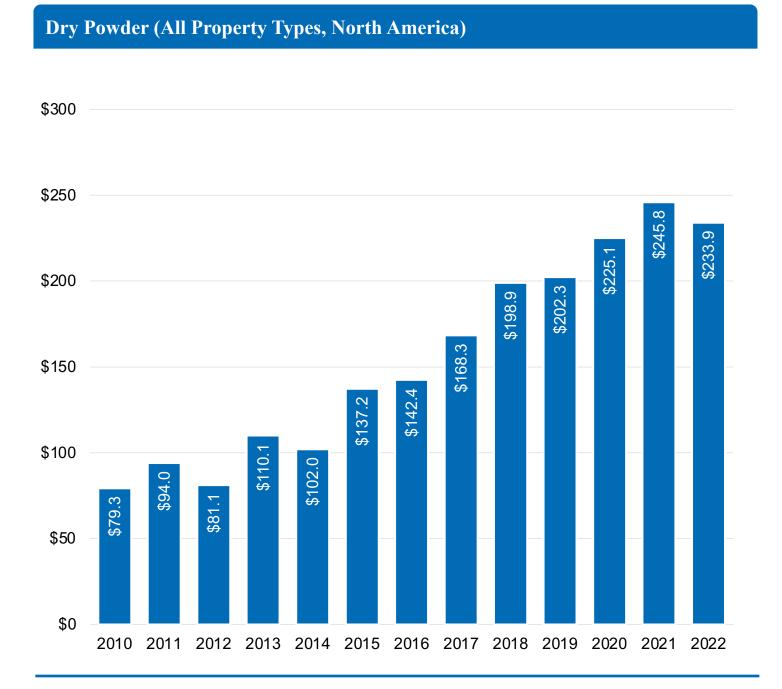
Private Capital Remains Most Active Buyer and Seller

In 2022, private capital groups were the largest buyers and sellers. It is expected that private capital will be the most active market participant on the buyside in 2023, similar to post-Global Financial Crisis.

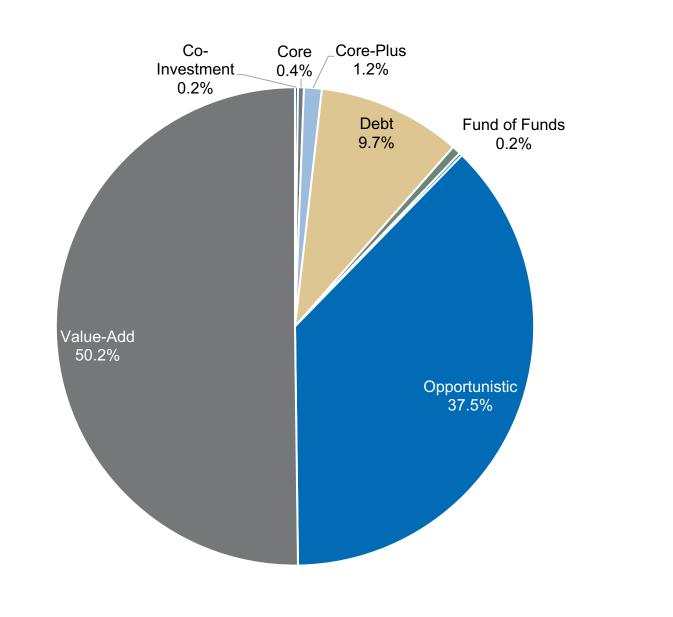




Plenty of Dry Powder to Place; Value-Add and Opportunistic Remain Most Sought Out



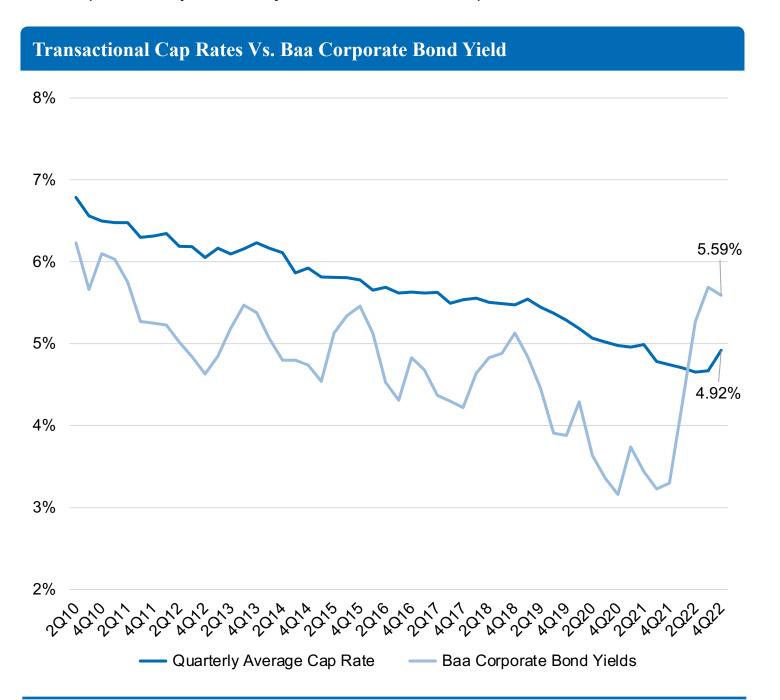
Allocation by Residential Strategy (2022 Vintage)

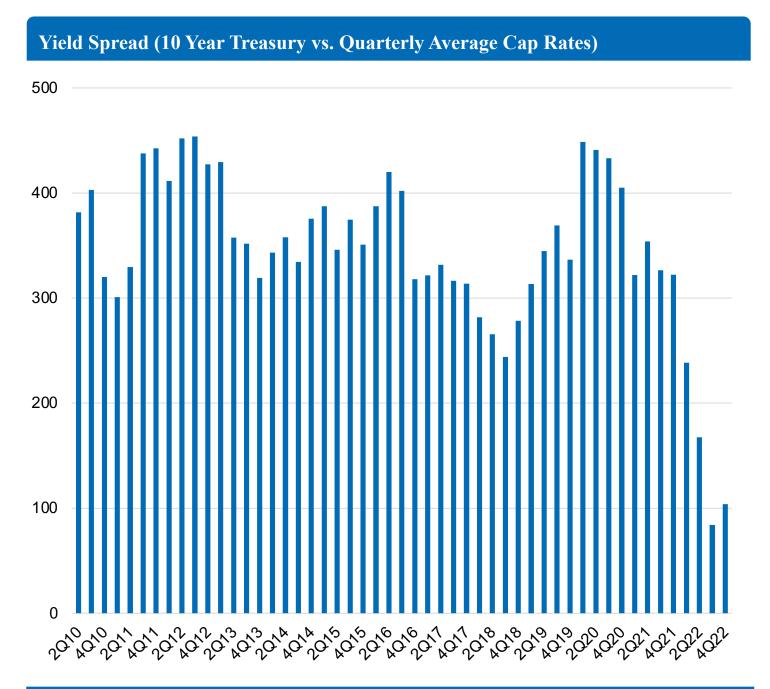


Source: Newmark Research, Preqin

Transactional Cap Rates Still Well below Industry Proxy; Yield Spread Bounces Back

Cap rates increased to 4.92% nationally, trending up two quarters consecutively. As yields on transactions increased, so did the spread between multifamily and the 10-year Treasury note. Expansion of yield is likely to continue in the first quarter of 2023.

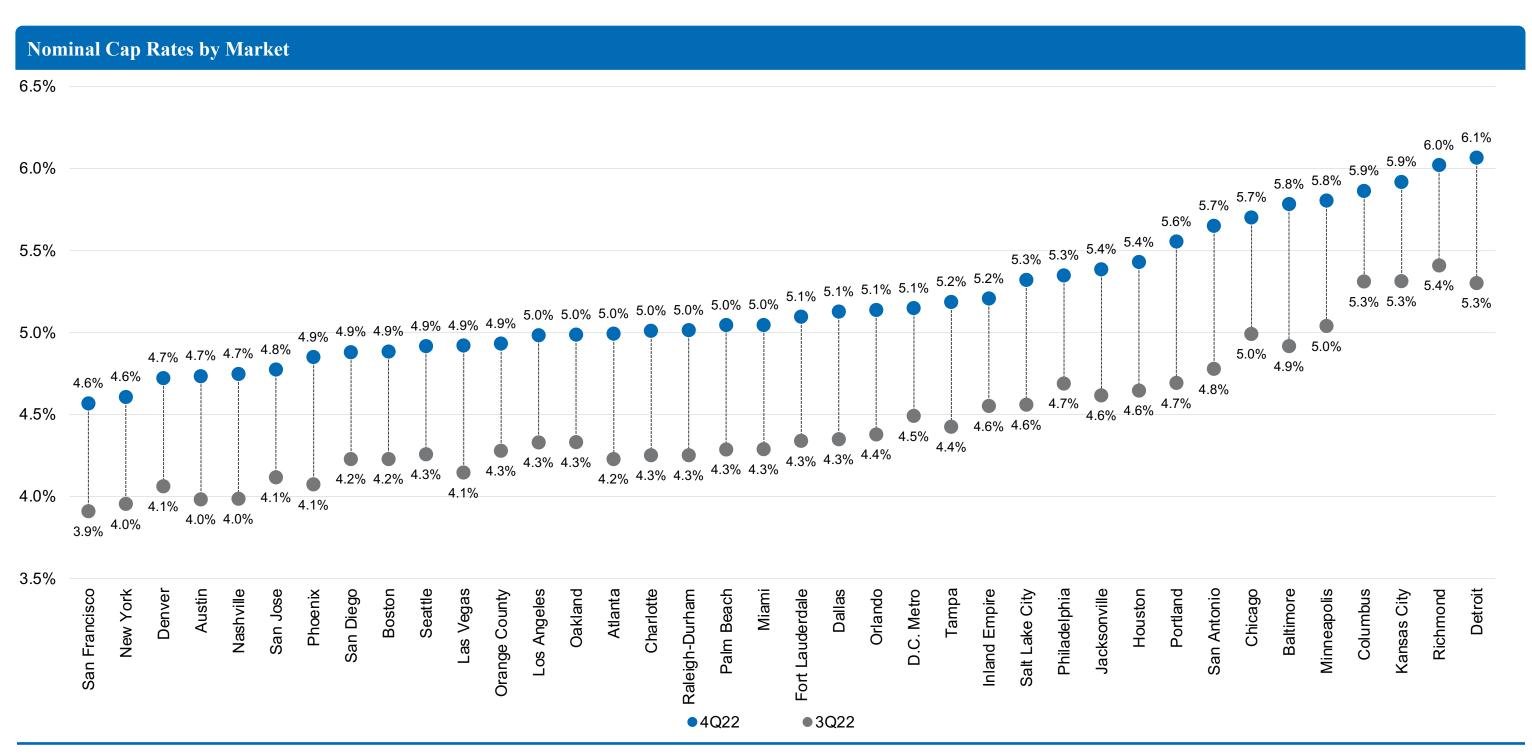




Source: Newmark Research, MSCI Real Capital Analytics, Federal Reserve Bank of St. Louis

While Transactions Lag, Nominal Cap Rate Expansion Underway

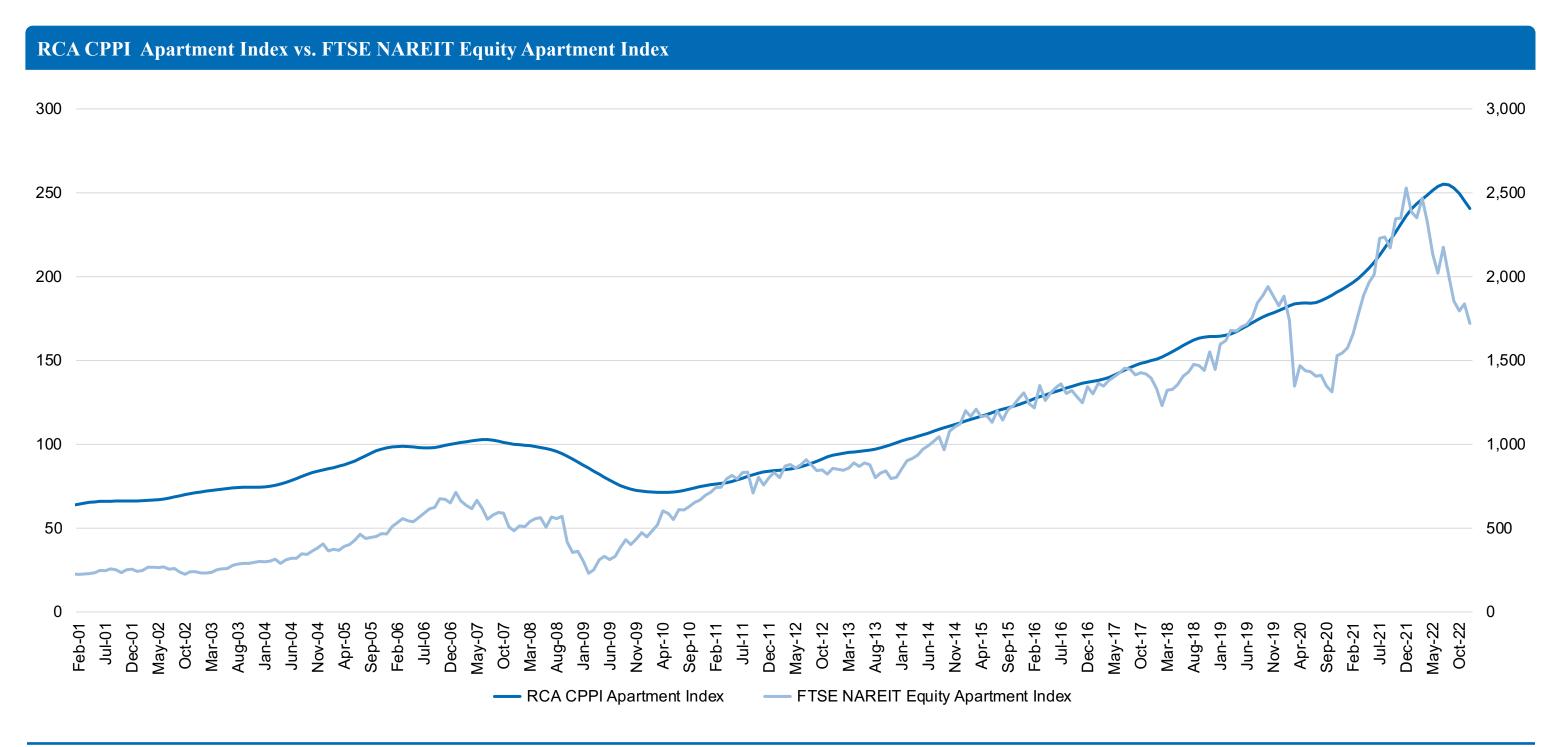
Quarter-over-quarter, Columbus experienced the least cap rate expansion, ticking up 55 basis points, followed by Kansas City and Richmond, which both increased 61 bps. On the contrary, San Antonio and Baltimore had the largest cap rate expansion, at 87 bps.



Source: Newmark Research, Green Street Advisors

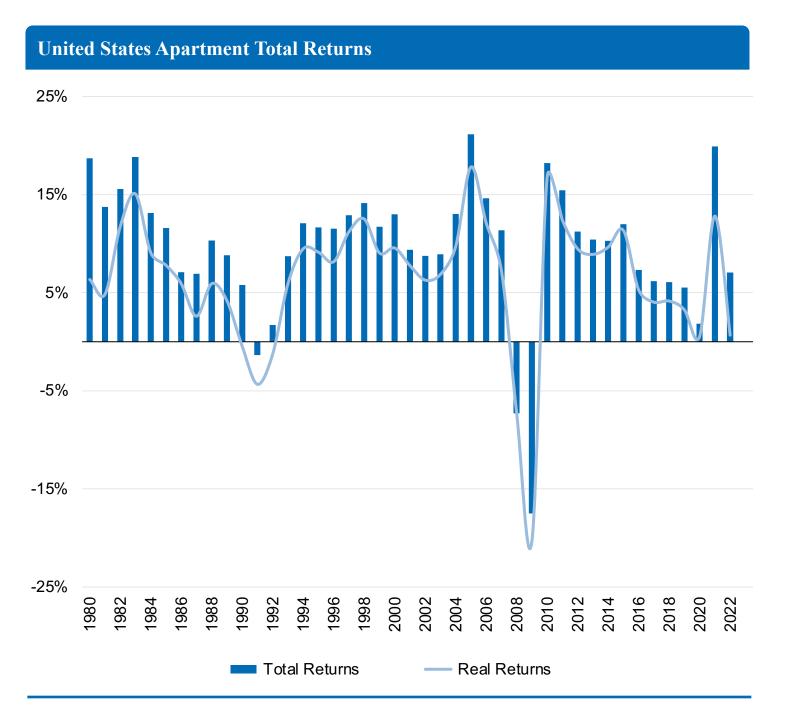
Private Real Estate Returns Outpaced Public Markets in 2022

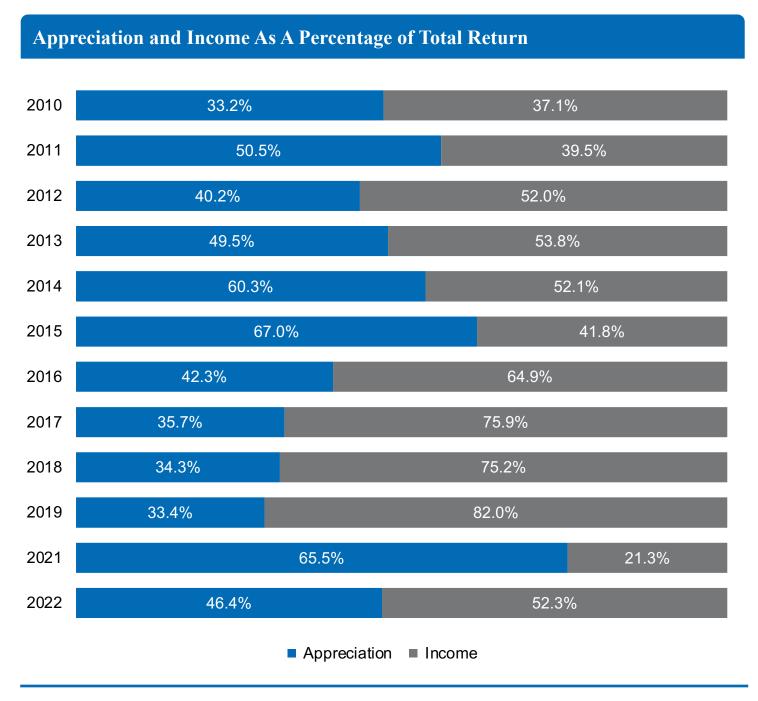
Volatility, paired with rate increases, has negatively impacted equities, leading to a 32.0% selloff in the NAREIT Apartment Index; however, in January 2023, the apartment REITs rebounded 8.97%. Private real estate returned 1.8% in 2023, according to RCA's CPPI Index.



Multifamily Returns for the Year (Slightly) Outperforms CPI

Total returns for multifamily decelerated sharply in the second half of 2022, totaling 7.1% for the full year, outpacing inflation by 70 bps. Income as a percentage of total returns normalized following 2021, where appreciation beat income growth substantially.

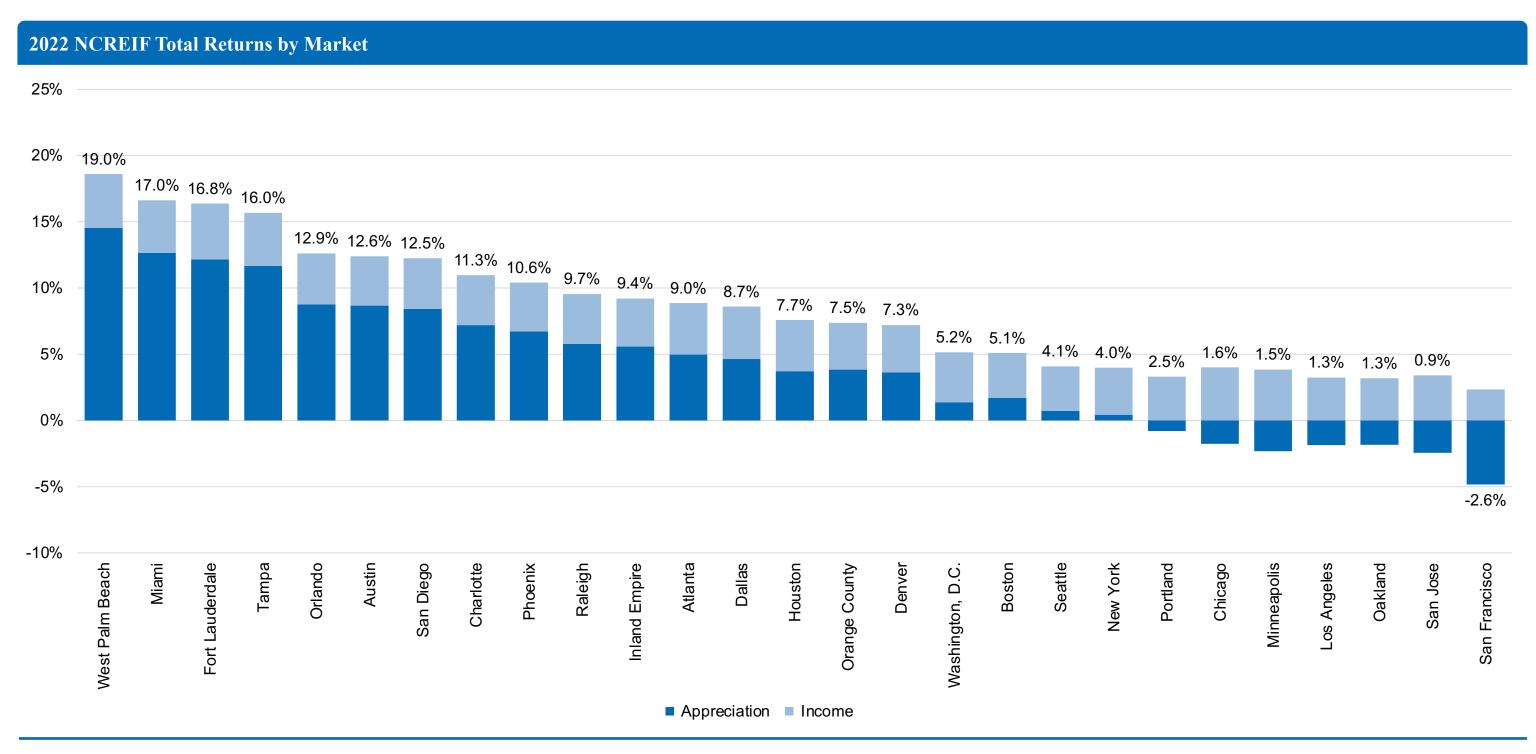




Source: Newmark Research, NCREIF

Florida Reigns Supreme for Total Returns, Thanks to Strong Appreciation Growth

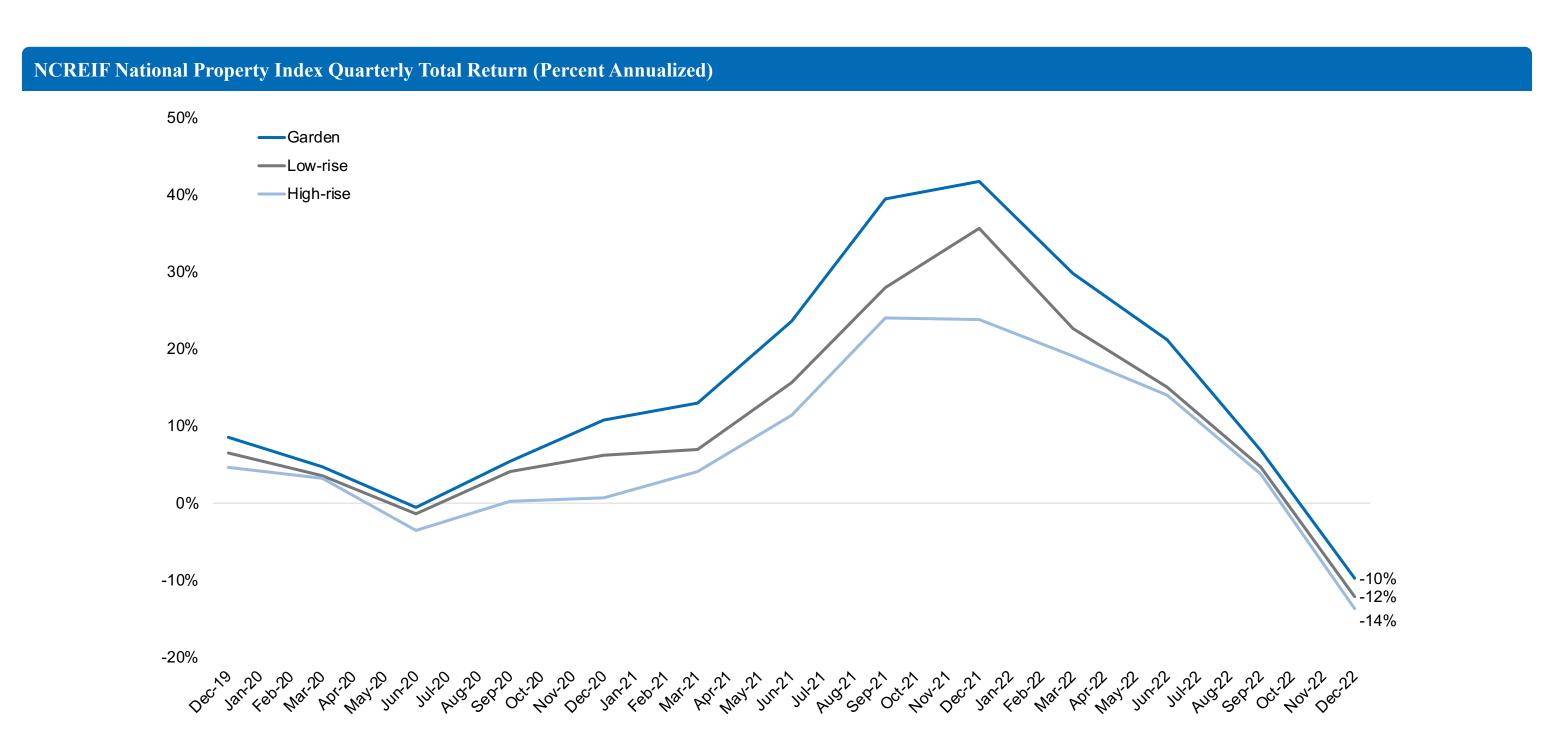
Similar to annual effective rent growth, the top five markets for total returns over the past 12 months all reside in Florida, largely driven by outsized appreciation growth.



Source: Newmark Research, NCREIF

Multifamily Returns Decelerated Sharply in 4Q22

Multifamily returns turned sharply negative in the fourth quarter of 2022. Garden properties outperformed on the margin with a negative 10.0% return, compared with negative 14.0% for high-rise properties. This negative performance was geographically broad-based. Naples, Florida was the only market to record a positive total return in the fourth quarter of 2022.



Source: NCREIF, Newmark Research

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