Insights

1Q 2023

Inside Look

Public Market Returns

	4Q22	1 Year	3 Year
S&P 500	7.56%	-18.11%	7.66%
Dow	15.39%	-8.78%	5.12%
Nasdaq	-1.03%	-33.09%	5.27%
FTSE NAREIT[1]	4.14%	-24.94%	0.21%
U.S. Core Bond	1.85%	-12.99%	-2.73%
10-yr Treasury[2]	3.88%	1.52%	1.92%
CPI[3]	0.00%	3.23%	14.99%

Private Market Returns

	4Q22	1 Year	3 Year
NCREIF Property Index			
Total Return	-3.50%	5.53%	8.06%
Income	0.95%	3.90%	4.11%
Appreciation	-4.45%	1.58%	3.83%
Hospitality	3.37%	9.97%	-4.78%
Industrial	-3.56%	14.55%	22.43%
Multifamily	-3.21%	7.07%	9.35%
Office	-4.80%	-3.37%	1.37%
Retail	-1.61%	2.69%	-0.33%

Source: NCREIF, Morningstar, Federal Reserve Bank of St. Louis (FRED)
1. FTSE NAREIT All Equity REITs Index.
2. Represents current yield at the end of 4Q22, 4Q21, and 4Q19, respectively.
3. Consumer Price Index (USACPIALLMINMEI): All Items for the US, not seasonally adjusted. Represented as a percentage change at beginning of the quarter over the specified time frame.

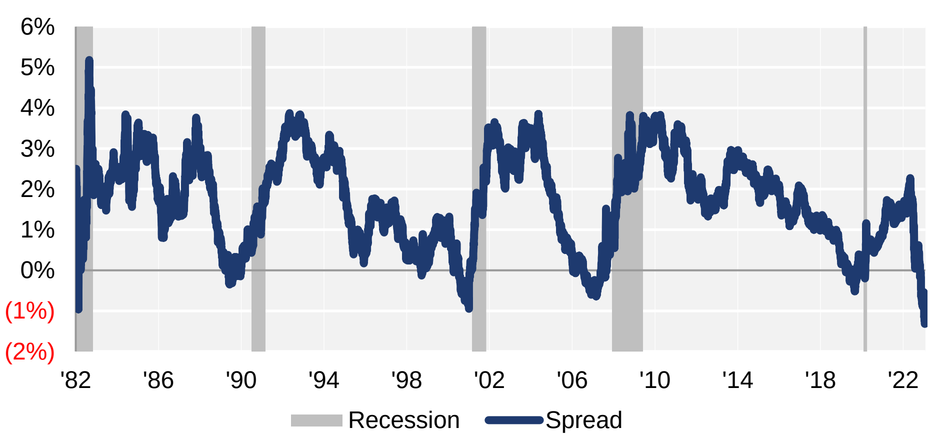
While key economic indicators continue to point towards an incoming recession, the recent U.S. banking crisis has made the timing and severity of a downturn even more uncertain.

State of the Economy

The U.S. economy grew 2.9% in the fourth quarter of 2022, ending an otherwise weak year on a stronger note. However, the components of growth driving the fourth quarter GDP, including a buildup of inventories and federal government spending, do not imply that such sturdy growth will continue into 2023. Residential and manufacturing investment declined in the second half of 2022 while consumption also declined in November and December 2022, the first two-month consecutive decline in nominal consumption since 2020. Further consumption declines are expected in early 2023 as excess deposits continue to burn off, the savings rate remains well below its historical average, and real disposable income levels decline. With the recent increase in inflation, real disposable income was lower at the end of 2022 than it was in February 2020.

Other leading economic indicators including the yield curve continue to signal a recession is imminent. The gap between the 3-Month Treasury yield and the 10-Year Treasury yield inverted in October, reflecting market expectations that the Federal Reserve would need to cut rates by the end of 2023 to spur the economy. Despite the inversion, the 10-Year Treasury yield peaked in October 2022 at 4.25%, before retreating to 3.8% by the end of the quarter and continued to decline through January 2023.

10-Year Minus 3-Month Treasury Yield (%)

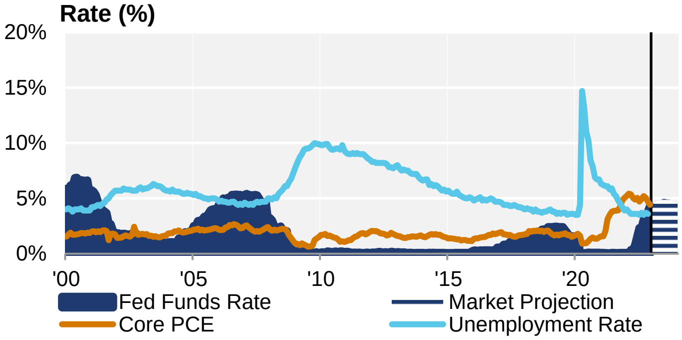


Source: U.S. Treasury; Macrobond; CoStar Advisory Services

As of January 2023

While there have been some signs of pressure, the labor market remained strong with nearly 785,000 jobs added in the fourth quarter of 2022. The recent labor force growth is healthy based on pre-recession standards, but it represents the lowest quarterly job growth since the second quarter of 2020 as businesses continue to struggle to find workers. The unemployment rate remained effectively unchanged at 3.5% in the fourth quarter of 2022, and there were 1.77 job openings per unemployed worker. However, wage growth has begun to decelerate, down sixty basis points in the fourth quarter of 2022 as companies have begun to slow down or cancel growth plans, particularly in the tech sector.

The Fed increased interest rates 125 basis points in the fourth quarter of 2022, which when combined with the increases earlier in the year, the overall hike represents the most hawkish Fed policy shift in over four decades. However, the two most recent rate hikes in December 2022 (50 bps) and February 2023 (25 bps) represented a modest taper after four straight rate hikes of seventy-five basis points as inflation fears begin to dissipate. The Fed's efforts have returned results, and inflation in the second half of 2022 was lower than the first half. The progress on inflation had initially led to an easing of financial conditions, as markets saw an end to Fed rate hikes, but the cumulative stress of rapid rate hikes on the banking system led to concerns about and eventually the collapse of Silicon Valley Bank and Signature Bank. Regional banks, or banks just below the size needed to be tagged as "Systemically Important Financial Institutions", experienced a run on their uninsured deposits, pressuring their funding and rapidly tightening credit in the financial system. As of the end of March, the panic has quelled to a degree, but banks face funding pressure as deposit rates remain at effectively 0% and short-term treasuries yield 4%. This is particularly concerning for the Commercial Real Estate, where 70% of loans are in small and regional banks.



Sources: Macrobond; CME Group; Federal Reserve; BEA; BLS; CoStar Advisory Services
As of 01/26/23

The U.S. economy is likely to slow in the first half of 2023, as low investment in 2022 turns into low growth.

A recession remains the base case for many forecasters. Inflation has shifted down, particularly for goods as supply chain issues resolve, and the labor market is still strong. However, real incomes remain below trend while consumption is above trend, and excess savings are shrinking. The corporate bond market is also of some concern, as companies refinance their debt into a far higher interest rate environment than they expected a year ago, and the financial system remains fragile. Other exogenous factors like global recession or a looming debt ceiling battle could negatively affect growth. The U.S. economy is likely to slow in the first half of 2023, as low investment in 2022 turns into low growth, but a normalization of price growth and a well-timed Fed pivot would help to limit the severity of a downturn.

Multifamily Investment Outlook

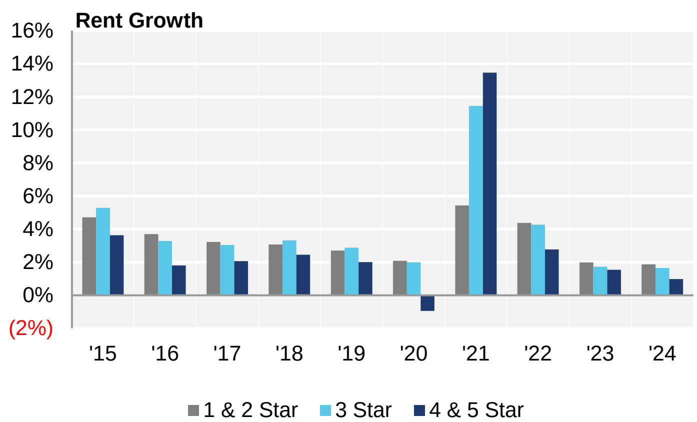
Fundamentals in the national multifamily market moved closer toward historical average trends in 2022 as occupancy and rent growth moderated from a record-setting pace in 2021. It was expected that demand growth would decelerate in 2022 from the peak in 2021 when eviction moratoriums, pandemic-era stimulus payments, and a rebounding economy combined to fuel record renter demand. However, economic uncertainty and stubbornly high inflation weighed on potential renter lease signings over the course of 2022, slowing demand further. With supply growth continuing at a steady pace, the average vacancy rate moved up 140 basis points in the last year from an historical low of 4.9% in the fourth quarter of 2021 to 6.3% in the fourth quarter of 2022, in line with the market's historical average vacancy of 6.6% since 2005. In turn, the pace of rent growth slowed from 11% in 2021, trending closer to pre-pandemic norms of 3.7% in 2022.

The deceleration in demand impacted all segments of the market, although high-end vacancies remain the most elevated given stronger supply pressure in this segment. The average 4- & 5-Star vacancy rate rose from 6.9% to 8.4%, the average 3-Star vacancy rate increased from 4.3% to 6%, while the average 1- & 2-Star vacancy ticked up modestly, from 3.9% to 4.7% during 2022.

Despite multifamily demand and rent growth beginning to moderate, construction has remained steady, setting the stage for further pressure on vacancy in 2023. Roughly 865,000 units were delivered 2022, 11% above the trailing five-year average. Meanwhile the total number of units under construction increased to 5.1% of the existing inventory in 2022, up from 4.5% of inventory in 2021. Given strong demographic growth in recent years, Sun Belt markets are experiencing heavier amounts of construction as a share of their inventory, with 6.9% of total inventory underway, while core coastal markets have a more muted construction pipeline, with the under construction share at 4.1% of inventory.

Construction labor and material shortages that have been exacerbated by supply chain disruptions since the pandemic has lengthened the development timeline for many projects. Additionally, the majority of new developments are in mid- and high-rise buildings that have construction lead times that are two to three times longer relative to garden properties. Therefore, while the share of units under construction is elevated relative to historical averages, the delivery of units is expected to be spread out over a range of several years.

Rent Growth by Building Quality



Sources: CoStar Advisory Services | As of Q4 2022

The slowdown in demand growth amid steady deliveries has translated into moderating rent gains in 2022. Nationally, rent growth decelerated from 11.2% in 2021 to 3.6% in 2022, although this was still sixty basis points higher than the annual growth rate in the five years prior to the pandemic.

Higher construction levels in the 4- & 5-Star segment drove a deceleration in growth from 13.5% in 2021 to just 2.8% in 2022. Meanwhile rent gains in the 1- & 2-Star and 3-Star segments maintained steadier growth of 4.3% in 2022. Several Sun Belt markets still held some of the top spot rent growth markets in the last year, although increasing construction amid softer demand has dampened rent growth in others.

Among the top markets for rent growth in 2022 were Miami (7%), Orlando (6.1%), and Fort Lauderdale (5.2%). Other slower-growing Midwest markets are also providing more stability in the current environment. Indianapolis (7.5%), Cincinnati (6.9%), and Kansas City (5.7%), while not typically at the top of list, have registered some of the strongest rent growth in the last year.

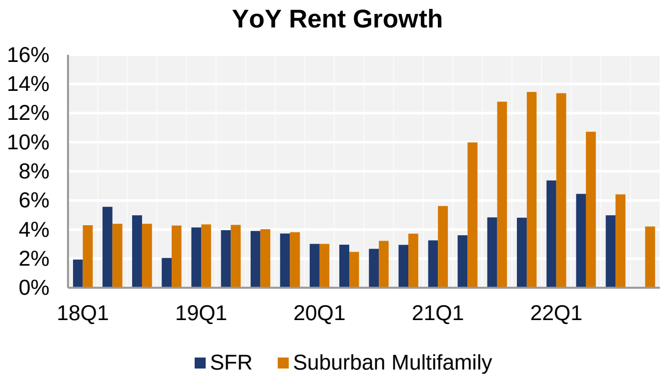
Investment capital flows into multifamily remained resilient in 2022.

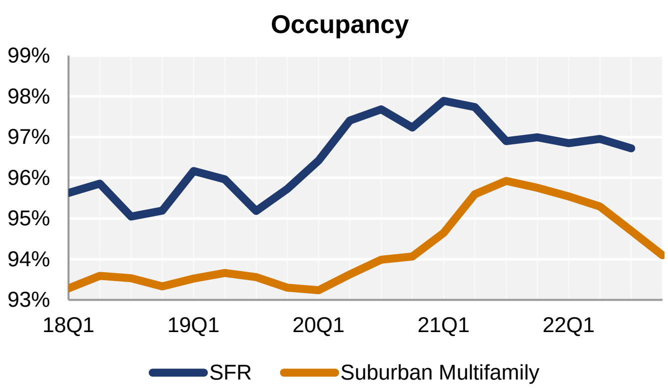
Given the solid performance of the multifamily sector, especially relative other property types, investment capital flows remained strong for the sector in 2022. Multifamily transaction volume totaled more than $227 billion, down from the peak of $262 million in 2021 but 60% higher than the average annual investment volume in the five years prior to the pandemic. Transaction volume in 2022 was weighted toward the first half of the year, as higher interest rates put downward pressure on investment activity across the CRE market in the second half of 2022. Rising interest rates have put pressure on pricing, with multifamily cap rates moving up modestly from cyclical lows in the second half of 2022.

Single-family rentals (SFR) remain an important complementary component to multifamily in the U.S. housing market. While the headwinds of an economic slowdown will impact household formation broadly, the SFR market remains a viable alternative for young families that desire the space and location provided by a single-family home but for whom homeownership remains unattainable. The large Millennial generation in the U.S. is now aging into the stage of life that traditionally suggests suburban living. However, with both home prices and mortgage rates at elevated levels, many of these prospective buyers will remain as renters with such conditions expected to persist.

Fundamentals in the SFR market have remained favorable, with Invitation Homes and Tricon Residential data showing a 96.7% occupancy rate, 200 basis points higher than suburban multifamily occupancies in the third quarter of 2022, while year over year rent growth remained above 5%.

Single-Family Rental Fundamentals Remain Healthy



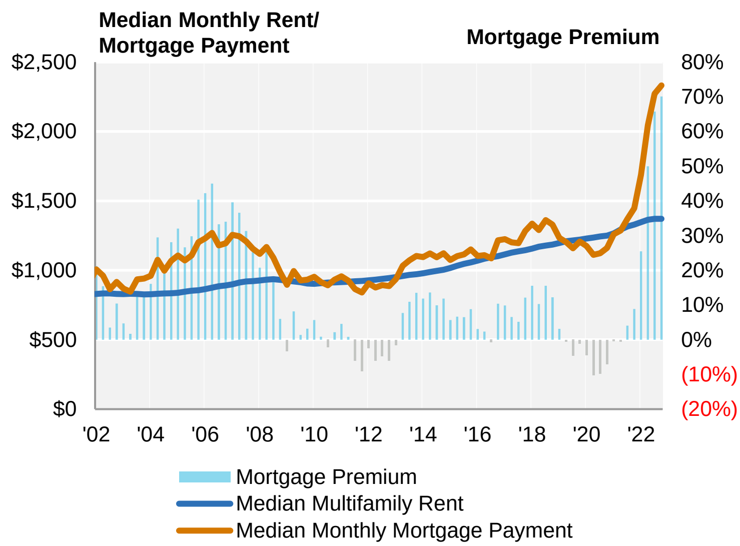


Sources: Invitation Homes; Tricon Residential; SEC Filings; CoStar Advisory Services
Note: Invitation Homes and Tricon Residential data as of 3Q22, all other data as of 4Q22

Rental Demand During Current U.S. Demographic Shift

The rapid change in interest rates has exacerbated affordability issues in the U.S. owner-occupied market. Home prices climbed 25% in October 2022 from the start of 2021, according to the S&P/Case-Schiller National Home Price Index for while the average 30-year fixed mortgage rate has grown 4.5 percentage points over the same period. Additionally, roughly 85% of existing homeowners have mortgage interest rate below 5%, well below the December 2022 average rate of 6.36%, locking many would-be sellers in place. While home price growth has begun to decelerate, rarely has purchasing a home been more difficult for the average American household. While multifamily rents have also grown significantly since 2021, the combination of home price growth and interest rate growth makes renting an attractive alternative to many households.

Higher Interest Rates Have Put Homeownership Even Further Out of Reach



Source: Federal Reserve Bank of St. Louis; NAR; CoStar Advisory Services; as of 4Q22
*20% down payment assumption applied to median sales price of houses sold

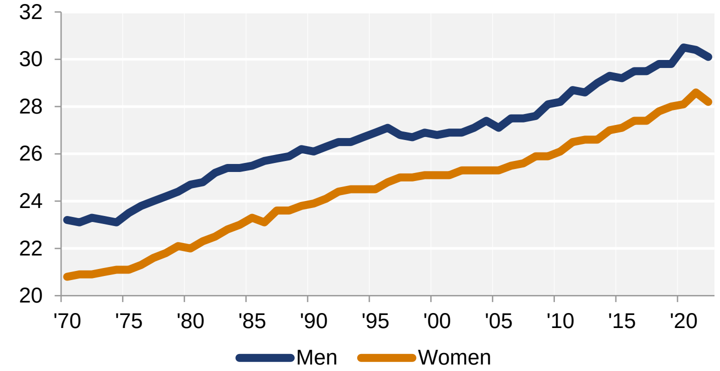
The premium that the average mortgage payment is commanding over the average rent payment is likely cyclical, especially as interest rates continue to put downward pressure on home prices. High mortgage premiums come at a crucial time for Millennial households, however. Households typically migrate out to the suburbs as they get married and have kids, milestones Millennials have been delaying under increased student loan debt, cost of living increases, and less social pressure to start families. There was a mass migration to the suburbs after the pandemic, with suburban counties gaining a net 800,000 residents while prime urban counties lost nearly a million residents. Initially, the main driver of the sudden shift was a rapid movement towards hybrid and remote work. However, the early 2020s was also when bulk of Millennials was expected to make the move away from city centers.

This helped push up housing prices, but suburban rents have also grown 24% since the start of the pandemic, vs 18% in urban areas.

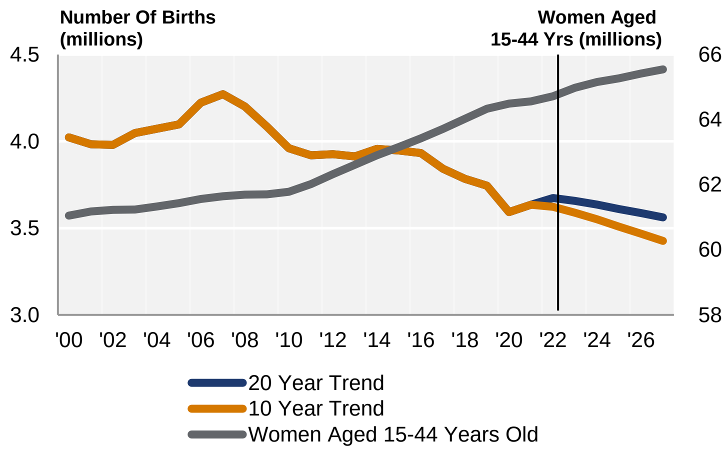
Looking through the cycle, households delaying marriage and having children likely means that more multifamily units per capita will be required as households rent for longer than previous generations.

Typically, the prime renter age is 25 to 34 years old, with the average first time home buyer roughly 33 years old. However, even with the post-pandemic buying spree, the home ownership rate for 35- to 44-year-olds is 1.9 percentage points lower than its pre-pandemic average. There has also been a shift in preference for both Millennials and Gen Z. A [study of generational preferences][1] found that newer generations care about access to consumption commodities, like entertainment and recreation retail, than did previous generations at the same age. Consumption commodities tend to be located in denser areas, where housing is more expensive and owning is either at a premium or unreachable for households. The changes in demographics and preferences tend to be slow moving and marginal, but likely do represent an important underlying tailwind for rental demand.

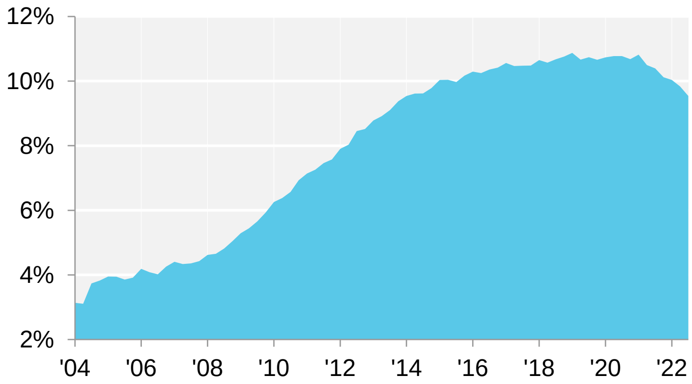
Median Age at First Marriage



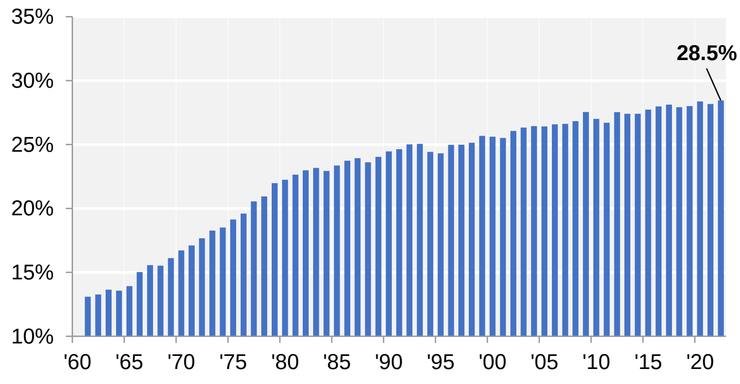
Number of Births vs. Female Population



Student Loan Debt as % of Total Debt



Single Person Households as % of Total Households



1) Lee, Yongsung and Lee, Bumsoo and Shubho, Md Tanvir Hossain, Urban Revival by Millennials? Intraurban Net Migration Patterns of Young Adults, 1980–2010 (June 2019). Journal of Regional Science, Vol. 59, Issue 3, pp. 538-566, 2019, Available at SSRN: https://ssrn.com/abstract=3611130 or http://dx.doi.org/10.1111/jors.12445

Source: U.S. Census Bureau; Federal Reserve Bank of New York; CDC; NCHS; Oxford Economics; CoStar Advisory Services
As of 2021-2022

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About Quarterra

Quarterra Multifamily, formerly known as Lennar Multifamily Communities, LLC ("LMC"), is a vertically integrated multifamily real estate investment firm focused on developing, acquiring and operating Class A apartments in the United States. The company was started as an initiative to combine the financial strength and entrepreneurial spirit of the nation's largest homebuilder with the onset of increasingly favorable apartment fundamentals nationwide. Quarterra currently employs over 925 professionals across 20 offices nationwide. With approximately $12.3 billion of gross assets under management[1], we offer multifamily investment strategies to a diverse set of institutional investors including pension funds, sovereign wealth funds, insurance companies, private equity companies, banks, and high net worth individuals.

1. AUM as of 12/31/2022