Insights

4Q 2022

Quarterra

Inside Look

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Amidst a looming recession, a tight U.S. labor market and strong household balance sheets continue to provide some support to the economy. Multifamily and Single Family Rental sectors remain favored asset classes given the backdrop of structurally undersupplied housing in the U.S. and the increase in the propensity to rent driven by lack of mortgage affordability.

Public Market Returns

	3Q22	1 Year	3 Year
S&P 500	-4.88%	-15.47%	8.16%
Dow	-6.66%	-15.12%	2.19%
Nasdaq	-4.11%	-26.80%	9.76%
FTSE NAREIT[1]	-10.83%	-16.27%	-1.09%
U.S. Core Bond	-4.83%	-14.45%	-3.26%
10-yr Treasury[2]	3.83%	1.52%	1.68%
CPI[3]	0.17%	8.20%	15.60%

Private Market Returns

	3Q22	1 Year	3 Year
NCREIF Property Index			
Total Return	0.57%	16.08%	9.91%
Income	0.93%	3.98%	4.17%
Appreciation	-0.37%	11.76%	5.58%
Hospitality	2.69%	11.31%	-5.77%
Industrial	1.11%	34.62%	25.21%
Multifamily	1.20%	18.17%	11.08%
Office	-0.66%	3.21%	3.62%
Retail	0.39%	6.65%	0.23%

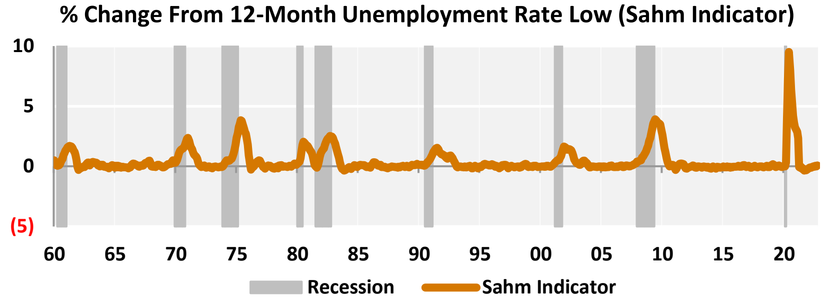
Source: NCREIF, Morningstar, Federal Reserve Bank of St. Louis (FRED)

1. FTSE NAREIT All Equity REITs Index.
2. Represents current yield at the end of 3Q22, 3Q21, and 3Q19, 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.

State of the Economy

Recession fears loomed large in the third quarter of 2022, even as U.S. GDP turned positive after two straight negative quarters. The 10-year Treasury yield shifted up 85 basis points in the quarter, tied with the fourth quarter of 2016 for the sharpest quarterly increase since 1995, leading to 7% 30-year fixed mortgage rates, the highest in 20 years. High interest rates weighed heavily on the housing market, and new home sales are down 17.6% year over year while the NAHB/Wells Fargo housing market index fell to 38, its lowest level since May 2020. While interest rates have introduced some pain in financial markets, inflation has continued to cause problems for households. Real disposable income in the third quarter of 2022 was 4% lower than a year earlier, beating the pre-pandemic record for fastest decline in income by one percentage point. Despite falling real incomes, consumption has remained strong, growing at an annualized rate of 1.4% in the third quarter.

Despite major economic headwinds, the U.S. labor market has remained solid, and total employment surpassed pre-pandemic records in July 2022. Nearly 1.12 million jobs were added in the third quarter roughly equal to the second quarter, and the unemployment rate dropped to 3.7% (within 30 basis points of 60-year lows). However, the labor force participation rate remains one percentage point below its February 2020 level, as older workers and those with less than a college degree retired or gave up on finding employment. Job openings remain high as well with roughly 1.86 job openings per unemployed worker. However, a pending recession will likely soften the labor market further and lead to a higher unemployment rate. Since 1960, every recession has been accompanied by at least a 1.5 percentage point increase in the unemployment rate.



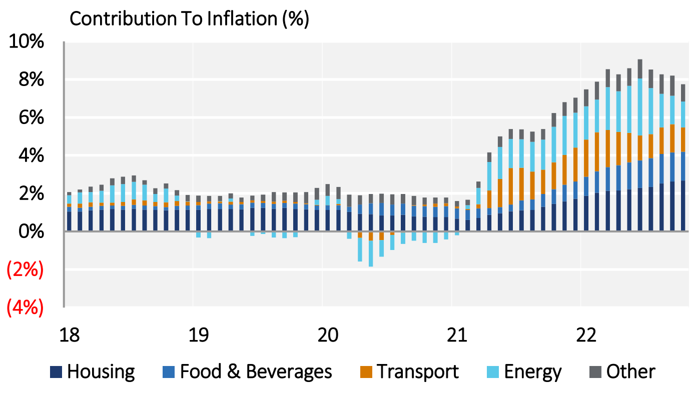
Source: Claudia Sahm, CoStar Advisory Services

As of October 2022

The third quarter saw the Federal Reserve hike rates 150 basis points over two meetings, plus another 75 basis points in early November and 50 basis points in mid-December, the fastest pace of rate hikes since 1982. The market expects more rate hikes on the way with the expected terminal rate for the Fed Funds rate reaching between 4.5% and 5% in Spring 2023. The Feds efforts are beginning to show results as price growth did begin to decelerate, dropping from a peak of 9% in June to 7.7% in October 2022. There is also evidence of supply chain bottlenecks, which had contributed to price increases, beginning to rectify with the Drewry Container Index (measuring freight costs on major routes) down 67% from a year ago. The pendulum of public opinion is beginning to swing, however, and there are concerns the Fed is doing too much too fast. Rising interest rates take months before the effects are fully felt in the economy.

Inflation is in part being driven by previous 12-month rent gains.

The driver of high inflation readings has shifted towards rent, which makes up roughly one-third of CPI. Rent in the CPI also lags industry measures by roughly 6 months to 1-year complicating the Fed's effort to bring the economy to a soft landing.



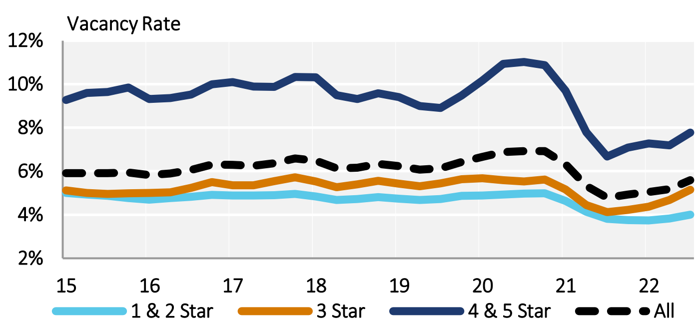
Sources: Macrobond; BLS; CoStar Advisory Services As of October 2022

While a recession is looming in the eyes of many forecasters, the base case assumes, without any additional shocks, the recession should be relatively mild. Both households and corporations have low debt payments compared to their earnings, and roughly $1 trillion of excess savings remains in household bank accounts. Additionally, the labor shortage that has prevailed since the pandemic should give the Fed some cushion for landing the economy more softly as the inability of businesses over the last year to hire and retain talent is fresh in many CEOs minds. The extent to which businesses hold on to employees in the face of an economic slowdown would provide ballast to the labor market.

Multifamily Investment Outlook

Multifamily demand has been more tempered through the first three quarters of 2022 after the record-setting levels reached in 2021. Higher inflation has begun to cut into renter household budgets while concerns about a possible recession have put downward pressure on household formation. Demand growth of 1.4% year over year in the third quarter of 2022 fell well below the peak rate of 4.4% in the prior 12-month period ending in the third quarter of 2021 but was in line with the 1.7% annual pace of demand growth in the 10 years prior to the pandemic. While demand growth is returning to more normal levels, new deliveries continue to come online at a steady pace. Completions outpaced net absorption in the last several quarters causing the national vacancy rate to climb from a low of 4.7% in the third quarter of 2021 to 5.5% in the third quarter of 2022.

The increase in the overall national vacancy rate has not been felt evenly across the different quality segments of the multifamily market. The focus on new construction in the luxury segment of the market has led to a more rapid rise in vacancy at the top end of the quality spectrum with vacancies in 4 & 5 Star assets rising from 6.5% in the third quarter of 2021 to 7.6% in the third quarter of 2022. Meanwhile, vacancy rates in 1- to 3-Star properties witnessed little movement during the last several quarters and remain below the national 5.5% vacancy.



Source: CoStar Advisory Services As of 4Q22

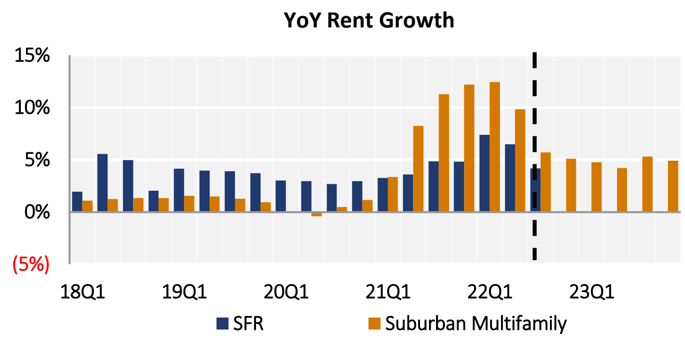
In-process construction levels remain elevated with over 905,000 units or 4.9% of the inventory underway nationally. However, construction labor and material shortages that have been exacerbated by supply chain disruptions have lengthened the development timeline for many projects. Additionally, the majority of new developments are in mid and high-rise buildings that have longer construction lead times relative to garden properties. Thus, while the share of units under construction is elevated relative to the historical average of 2.6%, the delivery of units will be spread out over a range from one to three years. Development activity is concentrated in markets to the south and west that also boast strong demographic growth. Nashville, Austin, Miami, and Orlando lead the way with 13% or more of inventory underway in each market. Larger markets including New York and Dallas lead the nation in terms of absolute units underway at 59,000 and 36,000, respectively, but as a share of their respective market inventory, development pipelines in these two markets are below the national average.

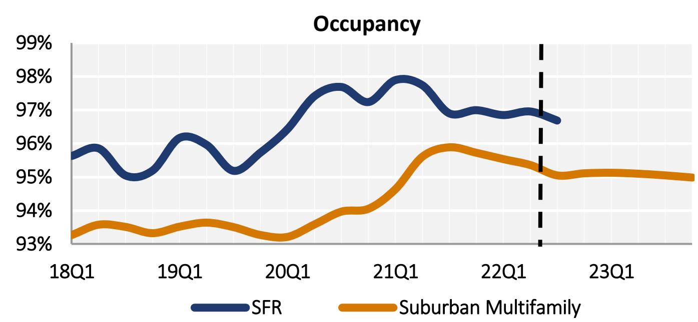
Rent growth has decelerated in recent quarters along with slower demand growth in the multifamily market. Nationally, rent growth decelerated to 5.7% year over year in the third quarter of 2022, down from the double-digit pace of growth registered in 2021, but more than double the annual growth rate in the 10 years prior to the pandemic. Strong demographic tailwinds propelled rent growth in the Sun Belt. Miami and Orlando remain market leaders with rent growth of 10.7% and 9.4%, respectively, while Fort Lauderdale, Dallas, and Nashville garnered rent gains of over 7% year over year in the third quarter of 2022. While supply heavy markets may be experiencing more downward pressure on rent growth, the slower-growing Midwest markets are also providing more stability. Markets including Indianapolis, Cincinnati, and Kansas City have registered rent gains in excess of 7% year over year in the third quarter of 2022 and have not experienced as significant a deceleration in growth over the last year.

Despite a return to more normal levels of multifamily demand and rent growth, the overall strength of market fundamentals attracted significant investment capital through the third quarter of 2022. Multifamily sales volume of $51 billion was the highest of the four major property sectors in the third quarter of 2022 and 44% higher than the quarterly average multifamily sales volume in the five years prior to the pandemic. Dallas-Fort Worth and New York led transaction volume with Houston and Phoenix not far behind as investor interest in Sun Belt locations remained strong.

Single-family rental occupancy is typically tighter than suburban multifamily.

The single-family rental (SFR) market is expected to face many of the same headwinds as multifamily. A looming downturn should make renters more cost-sensitive and younger renters are less likely to form new households. However, the current economic environment does present some additional upside for SFR investors. With for-sale housing prices dropping (but still expensive for buyers at a 7% 30-year fixed mortgage rate), SFR represents an alternative for younger families who need more space than the typical multifamily unit. A Harvard University study (https://www.jchs.harvard.edu/blog/young-families-and-growing-number-new-single-family-rentals) of new residential construction found that 77% of single-family build-to-rent units had three or more bedrooms, compared to just 11% of new multifamily unit construction. Fundamentals in the SFR market remain strong with Invitation Homes and Tricon Residential data showing a 96.7% occupancy rate, 170 basis points higher than the Suburban Multifamily average in the third quarter of 2022.





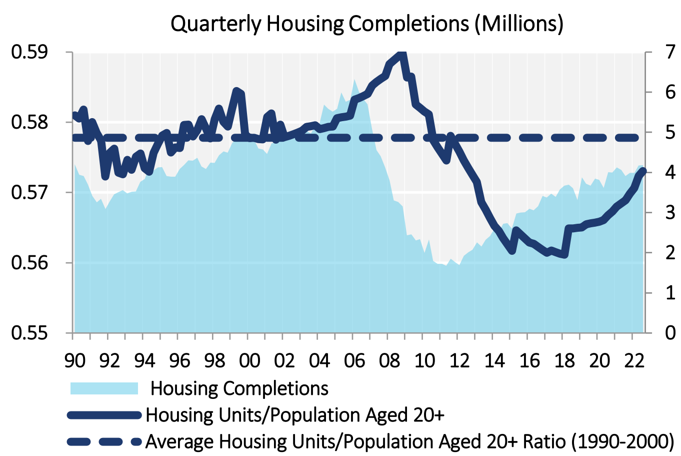
Sources: Invitation Homes; Tricon Residential; SEC Filings; CoStar Advisory Services
As of 3Q22

The rise in long-term interest rates has changed the composition of the acquisition pool as high leverage buyers are unable to operate with the elevated cost of debt. This has opened the door to more traditional institutional capital sources and well capitalized private buyers that focus on lower leverage to purchase properties. However, the combination of rising interest rates, more expensive debt and lower rent growth expectations have led to a modest uptick in cap rates in the third quarter. With the 10-year Treasury rate rising, upward pressure on cap rates will most likely continue in the short term.

Resilience of Multifamily During Recessions

The weak U.S. economic outlook stemming from rising interest rates and persistent inflation presents downside risks to real estate markets, including multifamily. However, housing remains a necessity and fulfills a basic human need for households even during a recession. Though downturns will put negative pressure on rents, occupancies have barely budged in previous recessions. Additionally, a rising interest rate environment, which does slow the economy and rental demand to some extent, also makes renting a relatively more attractive option than buying. The multifamily property sector also has an advantage that it did not in the previous recession. The economy will likely enter the next downturn with an estimated shortage of housing of 1.2 million units. The perennial lack of housing supply has been a potent driver of millennials into the multifamily rental market, as supply of entry level homes has all but dried up.

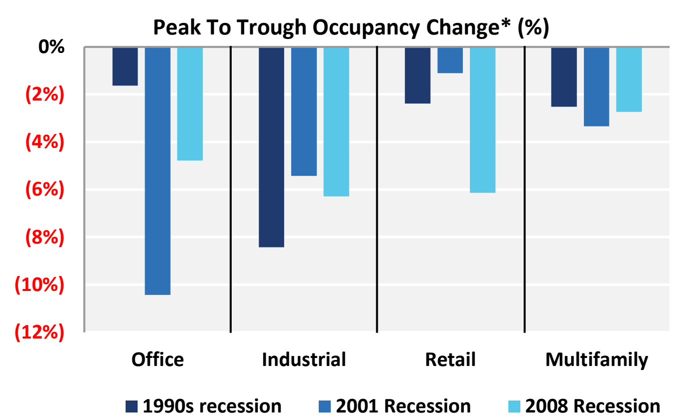
U.S. Needs 1.2 million Additional Units to Match 1990's Unit-to-Population Ratio



Source: U.S. Census Bureau; Oxford Economics; CoStar Advisory Services As of 3Q22
Note: Housing completions are seasonally adjusted

Of similar importance for multifamily operators is the ability to transition leases appropriately in recessionary periods. While leases expiring or tenants vacating due to bankruptcy might create long-term vacancies for other property types, the shorter lease length for apartments is an opportunity to price space appropriately, thus mitigating NOI losses. This, combined with a consistent pool of renter demand, is why multifamily occupancies hold up best among the four major property types. On average, multifamily vacancies rose by a little more than 2.9% on average between the 1990, 2001, and 2008 recession. Compare that to industrial, a clear outperformer over the last decade, which increased 6.7% on average. Short leases also spur rents to recover swiftly. For example, in major metros, multifamily rents returned to prerecession highs 60% faster than industrial and roughly 250% faster than office in the last three downturns.

Apartment Vacancies Tend to Decline Less in Recessions



Source: NCREIF; Costar Advisory Services As of 3Q22
*Peak to Trough defined as lowest occupancy during or after declared recession minus peak occupancy before or during declared recession

Lastly, multifamily values historically hold up better through a recession when gauged by cap rates. During the 2008 recession, office and retail cap rates rose on average between 1.5% and 2%. Multifamily cap rates expanded only 1.2%, the lowest of the four main property types. This muted volatility in pricing may explain why investor appetite for multifamily acquisitions increases even late in an economic cycle. As the U.S. enters what likely appears to be a downturn, investors looking for shelter might be well served to consider multifamily assets given the enduring nature of demand growth, an overall lack of housing supply nationwide, and the consistent ability for multifamily to hold up best in key performance indicators like pricing and occupancy during economic downcycles.

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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 875 professionals across 20 offices nationwide. With approximately $10.2 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 12/31/2021