Yardi® Matrix

U.S. Multifamily Outlook

Winter 2023

Economy's Fate Tied to Rate Hikes

Rent Growth to Slow in 2023

Cost of Capital Roils Deal Flow

Yardi Matrix

Market Analysis

Winter 2023

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Multifamily Outlook Hopeful Amid Volatile Economy

- After two exceptional years of performance, multifamily rent growth began moderating in the fall, a trend that will carry into 2023 as housing demand and economic growth weaken. The U.S. economy enters the year in good shape in respect to many measures, but all eyes are on interest rates and how quickly inflation recedes. Economic growth will likely wane in the second half as the impact of rapid rate hikes takes effect.

- Multifamily rent growth will be closer to its historical average in 2023. Nationally rents increased by 6.4% in 2022 after year-over-year growth peaked near 16% earlier in the year, per Yardi Matrix. This year we foresee rent growth dropping in half to 3.1% as demand lessens and deliveries remain high. Factors that drive demand include less migration, fewer new households and declining affordability.

- The robust pipeline of projects under construction will ensure a sizeable number of deliveries. Our forecast calls for 440,000 new deliveries this year, an increase in stock of 2.9%. Deliveries will be concentrated in fast-growing markets, including Dallas, Austin, Miami, Houston and Phoenix. However, starts will ebb due to rising construction costs, the shortage of construction workers and delays in the entitlement process.

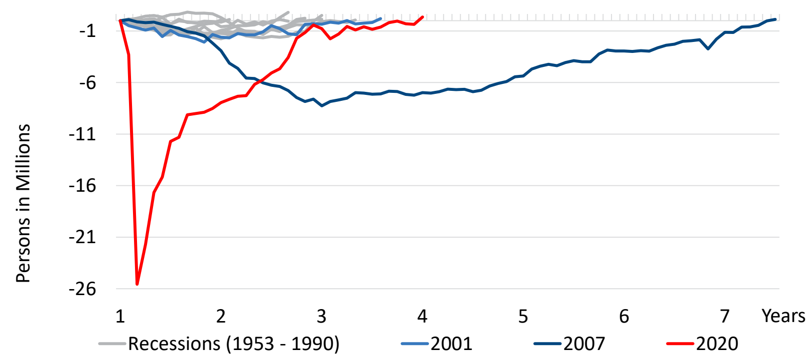
- Transactions and pricing will significantly subside due to the increase in mortgage rates and projections of slower rent growth. Pricing uncertainty amid the rising cost of capital has created a gap between buyers and sellers, with investors cautious although multifamily remains in demand relative to many other property types and products. We expect property sales will be slow at the beginning of the year. When and how much sales recover will depend on the economy and mortgage rates.

- Debt availability will be constrained in 2023, with lenders acting with a significant amount of restraint. Lenders will focus on lower leverage, with an emphasis on debt service coverage. Fannie Mae and Freddie Mac remain active, in line with their mandate to provide liquidity to the market, but they have had their allocations reduced. Banks, life companies, securitization programs and private equity funds all have constraints that will limit activity relative to recent years.

Economy: Will the Landing Be Soft or Hard?

The U.S. economy commences 2023 with generally solid economic numbers but a consensus that trouble is brewing and growth will weaken during the second half of the year. Indeed, the consensus is split between those who foresee a recession in late 2023/early 2024 and those who believe the economy will merely decelerate into a "soft landing."

Change in U.S. Employment From Beginning of Recessions (1953-2022)



Source: Bureau of Labor Statistics

The soft-landing argument stands on the strong job market and steady consumer spending. The U.S. economy added 3.8 million jobs in 2022 and 23 million jobs since the pandemic bottomed in April 2020. Gains have been broad-based, reflecting strength throughout the economy. Leisure and hospitality led with 1.1 million jobs added in the 12-month period ending in November, while 932,000 jobs were added in education and health services and 729,000 in professional and business services. At a meager 3.5%, the unemployment rate remains near historical lows heading into 2023.

Consumers, despite a weak November, have rallied, with spending up 6.5% year-over-year through that month. Spending was driven by hearty post-pandemic household savings and pent-up demand for goods and services. However, the build-up in savings that started with the pandemic is deteriorating, an indication that growth in consumer spending is likely to diminish. Households had a cumulative $2.5 trillion in excess savings coming out of the recession that helped boost spending levels in 2021 and 2022. The level of savings, concentrated in upper-income households, is still in effect but is dwindling, which means the spending party might fade as well.

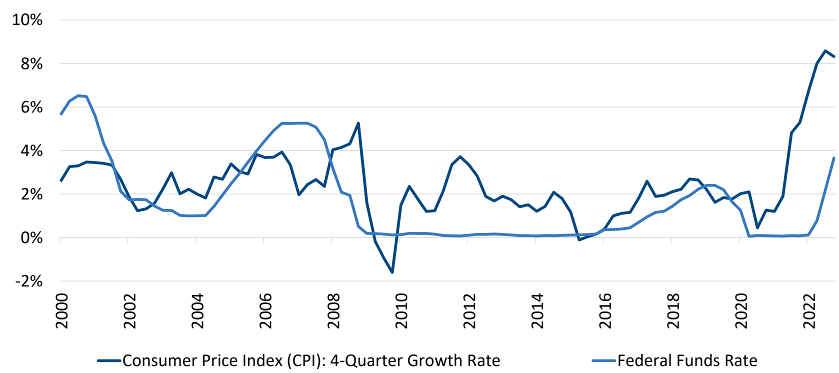
Arguments for a harder landing start with inflation and the Federal Reserve's actions to reduce inflation so it's closer to its target 2% level. Policy rates rose from zero early in 2022 to 4.25% to 4.5% by the end of the year, with more increases expected in the first quarter of 2023. The rate hikes are already having an impact—the debate now is whether the Fed has done enough and when it should stop.

By the end of 2022, many of the components of inflation—such as shipping costs and housing—have come down, which is an argument in favor of a pause in rate increases. But Federal Reserve chair Jerome Powell said in a late 2022 speech that the labor market remains too tight, and he feared allowing expectations of high wage growth to get baked into the system. Consequently, Powell said that it would be a mistake to stop raising rates until inflation is back to target.

Increasing policy rates to 5% and above would have severe implications for the overall economy but even more for housing. The average single-family mortgage rate more than doubled during 2022 and topped 6% at year-end. Home sales dropped precipitously, and the average home sale price fell sharply at year-end as monthly payments surged. The single-family housing market is likely to remain weak if mortgage rates remain elevated.

Signs point to a recession starting in the second half of 2023. One is the inverted yield curve, as short-term Treasury yields have increased well above the 10-year Treasury rate. In early January, the yield curve was severely inverted (90 basis points between the three-month and 10-year Treasury rates), which historically heralds a recession in coming quarters. Another argument for a second-half recession is that interest rate hikes take six to 12 months to take full effect on the economy.

Quarterly Consumer Price Index and Federal Funds Rate



Sources: Yardi Matrix; Board of Governors of the Federal Reserve System; Organization for Economic Co-operation and Development

Other headwinds include weaker consumer spending, the depletion of household savings and corporate layoffs in industries such as the technology sector. Tech firms including Amazon, Apple, Meta and Twitter either have announced layoffs or are slowing the pace of new hires. One can find many factors to support the case for weakness in the economy in the second half of 2023.

Yet we don't expect the recession to be severe. With inflation cooling, the Fed will likely decelerate or halt rate increases in early 2023. Corporations are unlikely to push layoffs too hard, given the difficulty they had finding workers in recent years and the dearth of skilled labor. U.S. consumers usually find ways to buy the products they want, and if unemployment stays low, the impact on spending may be moderate. And unlike the start of past recessions, financial institutions are not heavily overleveraged. Consequently, we expect slow growth but not the systemic shocks such as we saw in the global financial crisis.

Rents: Growth Returning to Normal

After two years of extraordinary rent increases, there is little doubt that growth will diminish significantly in 2023—the only question is how much. Our expectation is that despite economic and demographic headwinds, and weakness in some markets, multifamily rent growth will be tempered during the year. Unlike past years, which saw huge disparities in growth, most metros will see gains in the 2% to 3% range. That's because in many cases metros with the strongest demand also feature the biggest increases in stock. San Jose, which saw a strong rebound in demand in 2022, leads our metro rent growth forecast at 4.9% in 2023.

Potential headwinds include a slowdown in migration between metros, the weakening economy and affordability. The post-COVID-19 surge in migration from high-cost coastal markets to Sun Belt metros is cooling. Although that migration to the Sun Belt predates the pandemic and will continue, it has decelerated in some locales. Some Sun Belt markets such as Austin and Miami continue to see strong migration and job growth, but others such as Phoenix, Las Vegas and Sacramento are seeing demand wane.

Meanwhile, household formation in the U.S. remains positive, but it is weakening from the extraordinary 2021 levels that created massive demand for apartments. Reasons include slowing of employment growth and diminishing consumer confidence because of inflation and personal savings ebbing. Weaker home sales will give multifamily a small boost. The National Association of Realtors (NAR) forecasts 4.8 million home sales in 2023, well below the 6.5 million sales at the peak a year ago.

Another impediment to apartment demand is the lack of affordability. The average U.S. asking rent grew in November to 29.2% of the average income, up 2.8 percentage points from 26.4% in January 2019, per Matrix. Tenants in Renter-by-Necessity units now pay an average of 30.9% of their income in rent, up 2.7 percentage points from the first quarter of 2020. The NAR Affordability Index fell last year to levels last seen in the mid-1980s. While tenants are paying rent in line with historical averages, stress is growing and rent growth is likely to slow as a result.

Despite affordability issues, gateway markets are showing resiliency, attracting households at both ends of the age spectrum for lifestyle reasons. Unlike the Sun Belt, gateway market supply growth is weak, enabling occupancy levels and rents to rise in 2022. The possibility of an economic slowdown may also give companies the leverage to force workers to return to the office, which would benefit large metros such as New York City, Chicago, Boston, San Francisco and Washington, D.C. Yet young people are moving to coastal markets to live with peers and enjoy cultural amenities even if they don't have to return to offices.

Nationally, we expect modest multifamily absorption in 2023. Some 282,000 apartments were absorbed nationally through November 2022, a robust amount but well below the record 575,000 units absorbed in 2021.

2023 Forecast Rent Growth by Metro

Metro	YoY Rent Forecast 2023	Average Rent as of December 2022
National	3.1%	$1,715
San Jose	4.9%	$3,078
New York	3.7%	$4,190
Tampa	3.7%	$1,798
Miami Metro	3.7%	$2,356
Charlotte	3.6%	$1,608
Austin	3.6%	$1,766
Boston	3.6%	$2,655
San Francisco	3.6%	$2,787
Seattle	3.5%	$2,206
Inland Empire	3.4%	$2,118
Nashville	3.3%	$1,648
Los Angeles	3.3%	$2,594
Portland	3.2%	$1,770
Baltimore	3.1%	$1,659
Raleigh–Durham	3.1%	$1,618
Denver	3.1%	$1,896
Dallas	3.0%	$1,560
Houston	2.9%	$1,324
Kansas City	2.9%	$1,216
Orange County	2.9%	$2,709
Orlando	2.8%	$1,840
Chicago	2.8%	$1,817
Indianapolis	2.8%	$1,227
Washington DC	2.8%	$2,068
Philadelphia	2.7%	$1,701

Source: Yardi Matrix

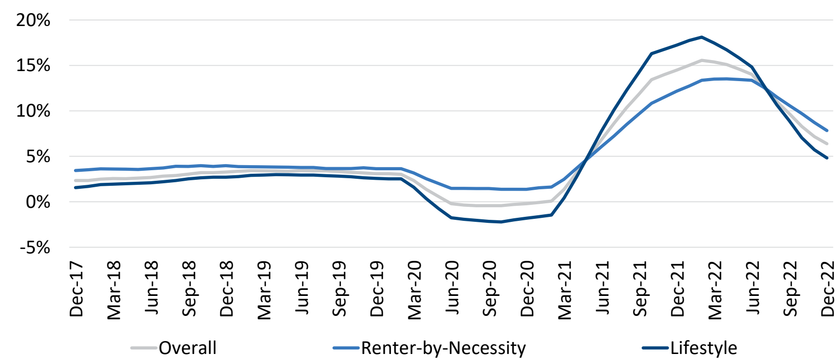
Although household formation is slowing, Census Bureau data shows immigration is rebounding. Given strong deliveries, occupancy rates are likely to continue to slide in 2023, but they are coming off all-time highs. The occupancy rate of stabilized properties in the U.S. was 95.3% in December 2022, 0.9% below the 2021 peak.

The bottom line is we expect rents will be propped up by the lack of housing options while single-family development declines and first-time homebuyers are frozen out. Meanwhile, property owners will continue to bring renewal rents closer to the rates on new leases. Our forecast is that rents nationally will grow at 3.1% in 2023.

Supply: Pipeline Supports Strong Deliveries in 2023

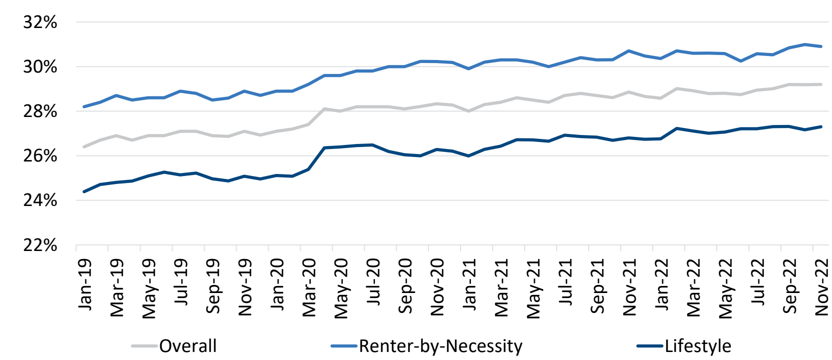
2023 should shape up to be a robust year for new supply, as it's starting with approximately 1 million multifamily units under construction. Some 325,000 new units were delivered in 2022, and we forecast 440,000 units in 2023, an increase in stock of 2.9%. As usual, rapidly growing Texas metros Dallas (28,000), Austin (20,600) and Houston (17,500), along with Miami (19,000), lead the list of metros in deliveries by unit. Austin (7.3%), Charlotte (5.7%) and Miami (5.5%) lead in percentage growth. Some gateway metros

National Multifamily Year-over-Year Rent Growth



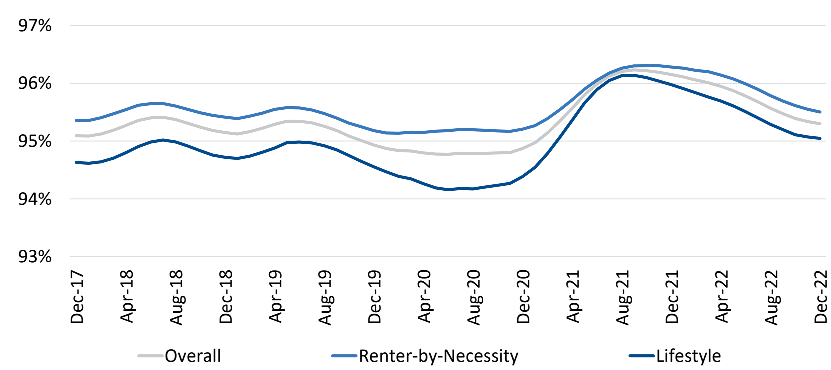
Source: Yardi Matrix

National Average Rent-to-Income Ratios



Source: Yardi Systems Screening Data

National Multifamily Occupancy Rates



Source: Yardi Matrix

will also gain a significant amount of new stock, including New York City (13,500), Los Angeles (13,000) and Washington, D.C. (11,600).

The delivery pipeline has been robust in recent years, with roughly 2 million units delivered since 2018, per Matrix. The 1 million units under construction in January under normal circumstances would produce close to 500,000 units coming online. But the time between start and completion of projects has lengthened considerably due to shortages of materials and labor.

Starts are waning due to market conditions, so deliveries will begin to diminish after 2024. Going forward there are several impediments to future supply that include the difficulty of getting construction financing, ongoing delays in labor and challenges in getting entitlements from local planning and zoning boards.

Perhaps the most vexing issue is the difficulty of arranging financing. In anticipation of an economic slowdown and weaker demand, and under pressure from regulators, large commercial banks have cut back on non-income-producing loans such as real estate construction. Smaller banks have continued to lend on construction, but their capacity is limited. The amount of leverage available is very conservative, and loan rates have skyrocketed.

Increased costs are another impediment. The cost of construction debt has roughly doubled, making it difficult to pencil projects that get that far. Costs of materials and labor have risen sharply, as has insurance. Hurricane Ian's path through Florida last September caused more than $50 billion of damage, and the increasing number of severe storms is prompting some insurers to bow out of that market. Surging insurance costs could impact future development in high-activity states such as Florida and Texas.

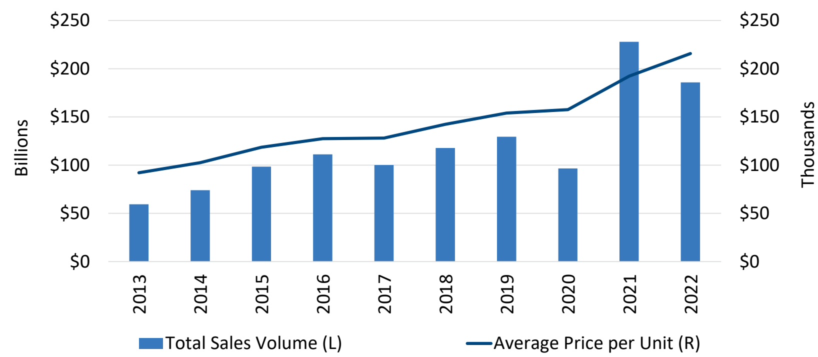
2023 Forecast Supply Growth by Metro

Metro	2023 Forecast Deliveries	2023 Forecast Deliveries as a % of Stock
National	440,818	2.9%
Dallas–Fort Worth	28,039	3.3%
Austin	20,686	7.3%
Miami Metro	19,047	5.5%
Houston	17,553	2.5%
Phoenix	16,456	4.8%
Atlanta	14,877	2.9%
New York	13,579	2.3%
Los Angeles	13,064	2.8%
Denver	12,478	4.0%
Orlando	11,792	4.7%
Charlotte	11,740	5.7%
Washington DC	11,644	2.0%
Seattle	9,517	3.3%
Raleigh–Durham	8,756	4.9%
Nashville	8,693	5.1%
Tampa–St Petersburg	8,666	3.6%
San Francisco	7,586	2.7%
Twin Cities	6,981	2.8%
Chicago	6,959	1.8%
Boston	6,180	2.4%
Portland	5,441	3.1%
Philadelphia	5,293	1.7%
Las Vegas	4,075	2.2%
San Jose	4,067	3.0%
Indianapolis	3,249	1.8%
Sacramento	2,705	2.0%
Kansas City	2,440	1.4%
Inland Empire	1,954	1.2%
Orange County	1,789	0.8%
Baltimore	1,774	0.8%

Source: Yardi Matrix

Zoning and entitlements also continue to stymie projects at the local level. Regulatory and other delays add nearly 40% to the cost of multifamily development, according to a study by the National Apartment Association and National Multifamily Housing Council. Despite the impediments, new supply is desperately needed in most metros. The nation has a shortage of housing, which is estimated at more than 2 million units and has contributed to the rapid run-up in rents.

National Multifamily Transaction Volume



Source: Yardi Matrix

Capital Markets: Uncertainty Leading to Caution

A seemingly bottomless tap of liquidity was a key component of the multifamily sector's strong run over the last decade, but 2022 brought about a big change as the Fed's interest rate hikes ended the era of cheap money. Transaction activity, both property sales and mortgage originations, dropped in the second half of the year.

Capital markets will continue to be constrained in 2023. Property values will take a hit, and loan origination volume will be weaker. Transaction activity fell in 2022 to $184 billion, which is 17.4% less than the record high of $223 billion in 2021. Although volume fell, 2022 was the second-highest transaction year on record, and it came amid a second-half slowdown. The average price per unit continued to rise, to $213,000 per unit in 2022 from $189,000 in 2021.

That volume didn't drop more and prices remain robust is a testament to multifamily's popularity with investors. The segment is still in better shape than most competing segments and is likely to remain so because its fundamental performance is expected to remain stable.

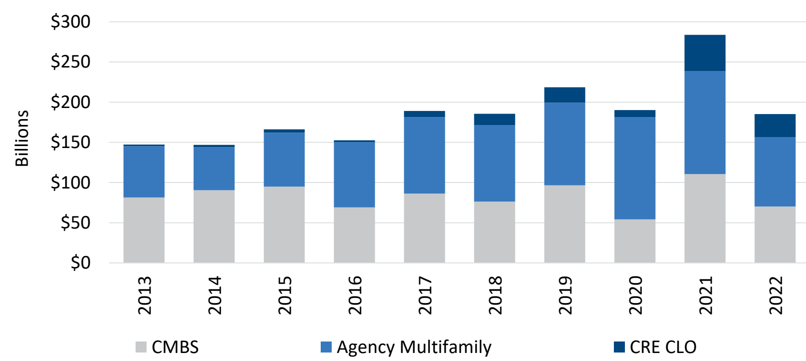
Transaction activity was led by popular secondary markets, as investors are betting on the Sun Belt or locations with rising technology industry concentrations, where job and population growth are expected to be concentrated in coming years.

Sales volume continues to be high in gateway metros such as New York, San Francisco and Los Angeles, but they are no longer the exclusive domain of institutional investors. Large institutions are increasingly spreading capital beyond the top 10 markets to the next 20 or 30 markets, where growth is expected to exceed that of coastal gateways. One uncertainty ahead is whether expectations of a downturn will prompt institutions to return to a focus on core markets, which historically have been more liquid and stable. Even if there is some retrenchment, how institutions define core likely has expanded beyond the traditional top six to eight metros.

Another question is how much values will drop from the peak. Multifamily acquisition yields (or capitalization rates) averaged about 4.5% in 2021 and early 2022, even less for high-quality assets or those with potential for income growth. But with the 10-year Treasury surging near 4% and mortgage rates in the 5.5% to 7% range, cap rates have nowhere to go but up.

The economic downturn baked into most forecasts means buyers won't squeeze yield premiums as they have in past periods when interest rates rose due to strong economic growth and rising rents. As a result, property values are likely to drop 20% to 30% from their peaks, although those peak values came at the end of a sharp and rapid increase in prices.

Securitization Volume by Year



Source: Commercial Mortgage Alert

The biggest factor in pricing is the rising cost of debt. Coupons of fixed-rate loans have roughly doubled from the 3% range in early 2022 as the 10-year Treasury rose 200-plus basis points and risk spreads widened. Floating-rate debt has also gotten immensely more expensive, as the SOFR index rose nearly 400 basis points and the cost of interest rate caps increased between 20 and 40 times from early 2021.

All lenders have cut back, some more than others. Banks face pressures from regulators to reduce commercial real estate risk going into a recession, while life companies have limited capacity that will be used on their best client relationships. CMBS and CLO shops are not competitive on pricing, as investor demand for those products is weak. The government-sponsored enterprises Fannie Mae and Freddie Mac remain active, but even they cut back in 2022, as neither lent their entire $78 billion allocation from the Federal Housing Finance Agency. As a result, the FHFA cut the GSEs' 2023 allocations to $75 billion.

The focus for lenders in 2023 will be low leverage and ensuring loans have conservative debt-service coverage levels. Another theme is that market players will be watching maturing loans carefully. Many that were originated at low rates now being refinanced in a higher rate environment will require additional "gap capital" in the form of preferred equity or mezzanine debt. Banks and servicers will be deciding whether to work with borrowers and extend loans with maturity defaults or play hardball and force defaults. Investors are raising high-yield capital funds to prepare for the opportunity. We expect cautious activity in the first half of 2023, with few deals getting done due to the pricing uncertainty and inability to get appropriately priced debt. How the market recovers after that depends on the direction of interest rates and economic growth.

Definitions

Lifestyle households (renters by choice) have wealth sufficient to own but have chosen to rent. Discretionary households, most typically a retired couple or single professional, have chosen the flexibility associated with renting over the obligations of ownership.

Renter-by-Necessity households span a range. In descending order, household types can be:

- A young-professional, double-income-no-kids household with substantial income but without wealth needed to acquire a home or condominium;
- Students, who also may span a range of income capability, extending from affluent to barely getting by;
- Lower-middle-income (“gray-collar”) households composed of office workers, policemen, firemen, technical workers, teachers, etc.;
- Blue-collar households, which may barely meet rent demands each month and likely pay a disproportionate share of their income toward rent;
- Subsidized households, which pay a percentage of household income in rent, with the balance of rent paid through a governmental agency subsidy. Subsidized households, while typically low income, may extend to middle-income households in some high-cost markets, such as New York City;
- Military households subject to frequency of relocation.

These differences can weigh heavily in determining a property’s ability to attract specific renter market segments. The five-star resort serves a very different market than the down-and-outer motel. Apartments are distinguished similarly, but distinctions are often not clearly definitive without investigation. The Yardi® Matrix Context rating eliminates that requirement, designating property market positions as:

Market Position	Improvements Ratings
Discretionary	A+ / A
High Mid-Range	A- / B+
Low Mid-Range	B / B-
Workforce	C+ / C / C- / D

The value in application of the Yardi® Matrix Context rating is that standardized data provides consistency; information is more meaningful because there is less uncertainty. The user can move faster and more efficiently, with more accurate end results.

The Yardi® Matrix Context rating is not intended as a final word concerning a property’s status—either improvements or location. Rather, the result provides reasonable consistency for comparing one property with another through reference to a consistently applied standard.

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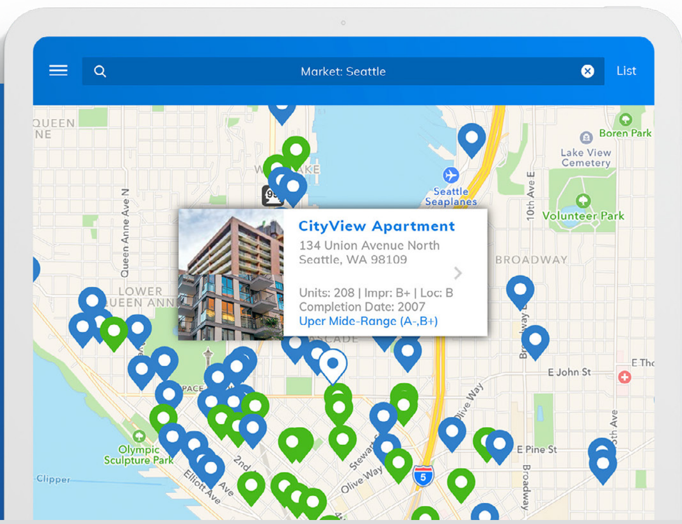
- Gain complete new supply pipeline information from concept to completion
- Find acquisition prospects based on in-place loans, maturity dates, lenders and originators
- Access aggregated and anonymized residential revenue and expense comps



Yardi Matrix Multifamily provides accurate data on **19.7+ million units**, covering over **92% of the U.S. population.**

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