Yardi® Matrix

Economic and Coronavirus Update
National Multifamily Report

February 2020

Coronavirus Likely to Cause Technical Recession

- The spread of COVID-19 has brought a technical end to the 11-year bull market in equities, forced a European travel ban and sent Treasury rates to historic lows.
- Travel, hotel, restaurant and trade industries will likely be hurt the worst, as business travel grinds to a halt and as leisure travel declines.
- The multifamily industry may feel the impact of the domestic spread of COVID-19, although the majority of the industry remains well capitalized and strong enough to weather a modest slowdown. Owners and operators may face short-term rent collection issues if there is a tightening in the employment market, and value-add projects will likely slow. However, most real estate investors are poised to sustain their operations, and may see an investment opportunity as the market shocks continue.

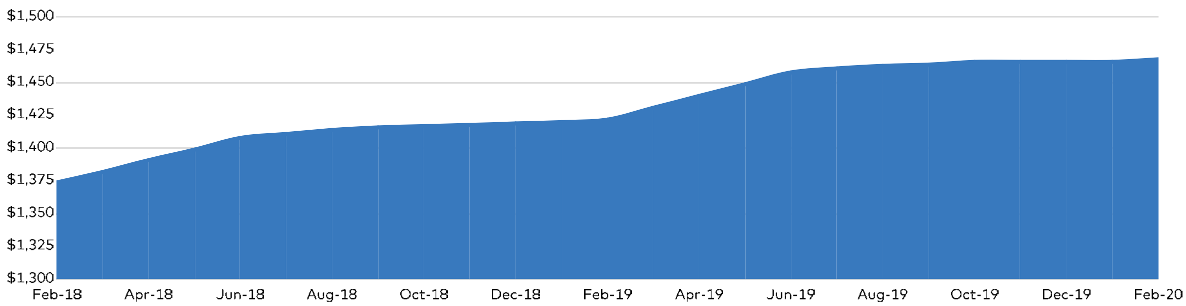
The 2019 coronavirus, or COVID-19, has taken over headlines and public policy and shocked global markets. On March 11, Donald Trump implemented a 30-day travel ban against all European citizens entering the U.S., and even more drastic measures have taken place in Italy and Wuhan, China, the site of the initial outbreak. The virus' rapid spread has led to major disruption in airline traffic, conference schedules and cultural activities, including sporting events and festivals.

It seems inevitable that the U.S. economy will experience a technical recession. Business travel has all but stopped and personal travel has slowed considerably, leading the airline industry to be one of the hardest-hit sectors. Restaurants and tourism will also feel significant pain as trips are canceled and social distancing increases.

While the data has yet to reflect the impacts of COVID-19 (February employment growth was very strong, jobless claims did not increase, and rent growth continued its steady increase), the coming weeks and months are likely to show employment cuts and a slowdown in trade.

But what impact will the current shock have on the multifamily industry? Short term, owners and operators may face rent collection issues from tenants who have either fallen ill or lost their jobs, and some flexibility with impacted tenants may be required. From an investment perspective, however, most real estate portfolios remain well balanced and not over leveraged. We expect the impacts of coronavirus to last three to six months, before a steady recovery boosts the economy once again. Given the short-term nature we anticipate, this could offer an investment opportunity for owners with ample cash available. Borrowing rates remain at all-time lows and financial institutions are well capitalized, marking a significant difference between the current shock and the 2008 financial crisis.

National Average Rents

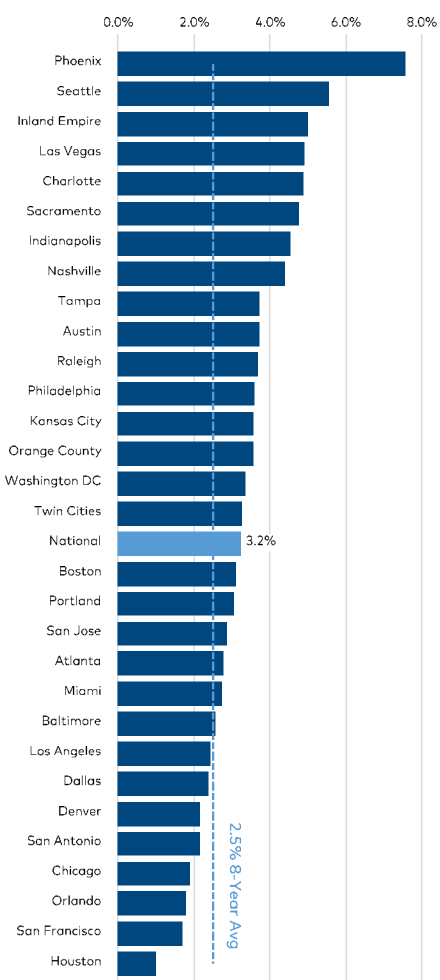


National averages include 127 markets tracked by Matrix, not just the 30 metros featured in the report.
All data provided by YardiMatrix.

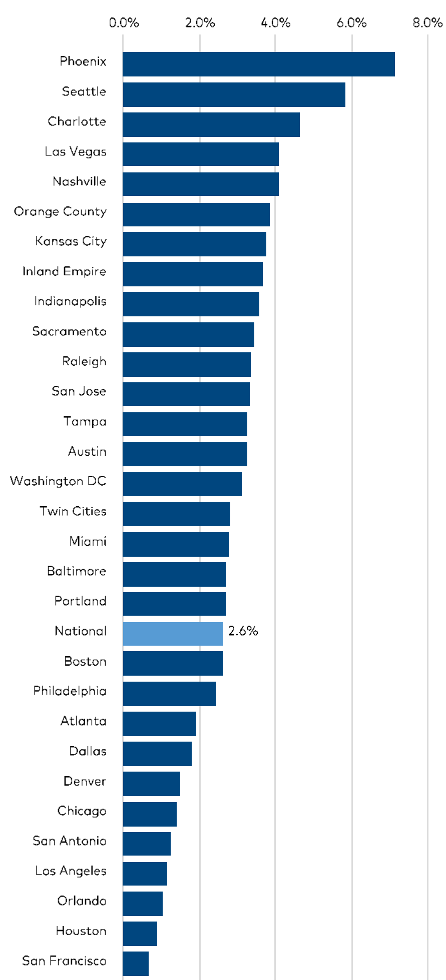
Year-Over-Year Rent Growth: Western Markets Lead the Way

- Rents increased 3.2% in February on a year-over-year basis, matching January's growth rate, as demand for multifamily has yet to feel any major impacts from the coronavirus outbreak.
- Phoenix (7.6%) led all major markets, followed by Seattle (5.5%) and the Inland Empire (5.0%). Seattle has maintained incredible demand for housing, as its tech economy continues to thrive. Despite adding nearly 35,000 units in the past three years, Seattle has once again emerged as one of the fastest-growing rental markets in the country.
- All primary markets, with the exception of Washington, D.C. (3.4%), fell below the national average for rent growth in February. While secondary markets in the West continue to grow strongly, San Francisco (1.7%) and Los Angeles (2.4%) are among the slowest-growing markets, as affordability issues and the emergence of rent control continue to curb growth.

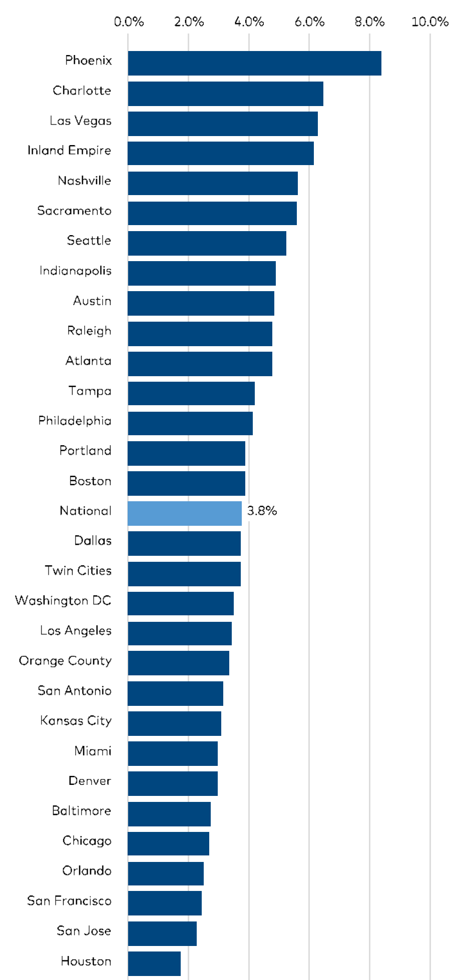
Year-Over-Year Rent Growth— All Asset Classes



Year-Over-Year Rent Growth— Lifestyle Asset Class



Year-Over-Year Rent Growth— Renter-by-Necessity Asset Class



Source: Yardi Matrix

Trailing 3 Months: Seattle Jumps to the Top

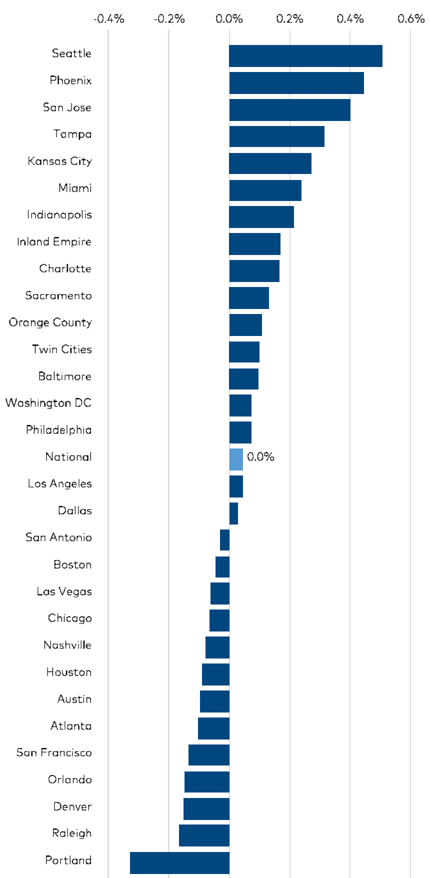
- Rent growth remained flat on a trailing three-month (T-3) basis.

- Fewer markets saw rents decline as we approach the traditional rental season. Increases and declines were modest in most markets as rent volatility slowed in the winter months.

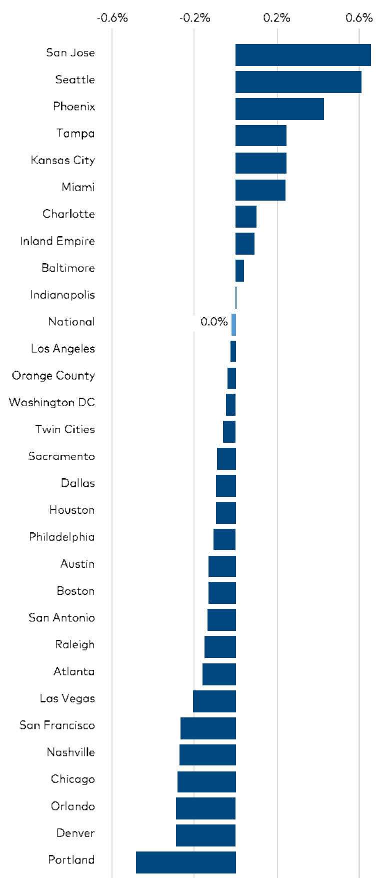
Rents were flat nationally on a trailing three-month (T-3) basis, which compares the last three months to the previous three months. The T-3 ranking demonstrates short-term changes and not necessarily long-term trends.

Seattle (0.5%) led major markets in rent growth on a T-3 basis, mirroring growth seen in the year-over-year data. Strong economic fundamentals and comparatively affordable costs of living are driving the market. As housing regulations intensify in California, Seattle stands poised to benefit. So too does Phoenix (0.4%), the second-ranked market in the February T-3 survey. Strong migration and job creation have fueled the desert metro and will likely continue to do so. Portland (-0.3%) and San Francisco (-0.1%) are among the worst-performing markets on a T-3 basis. The impacts of 2019 rent control legislation are beginning to show in the data for many of the markets covered under the new laws. Overall, rents in 20 of the top 30 markets remained flat, increased or decreased by only 10 basis points in February.

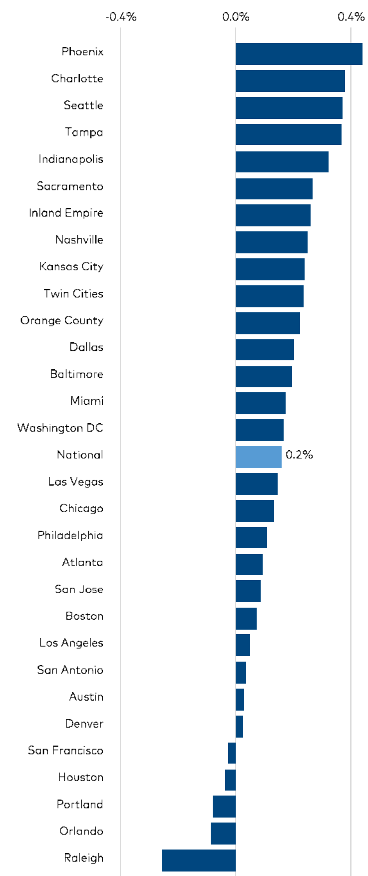
Trailing 3 Months Sequential—
All Asset Classes



Trailing 3 Months Sequential—
Lifestyle Asset Class



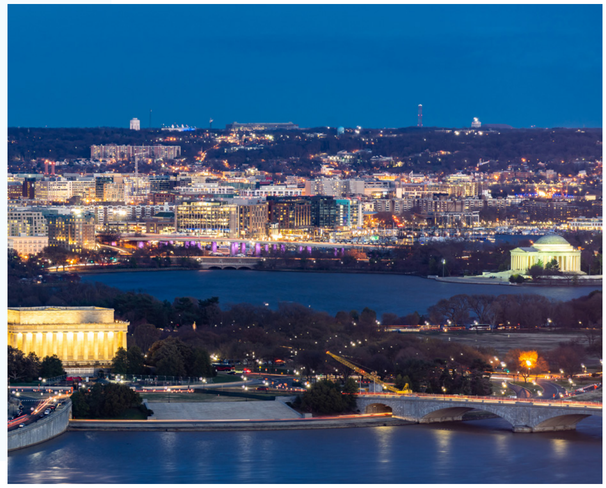
Trailing 3 Months Sequential—
Renter-by-Necessity Asset Class



Source: Yardi Matrix

Employment, Supply and Occupancy Trends; Forecast Rent Growth

- While economic data lags current activity, the bond and equity markets have already reflected a significant decline as a result of the spread of coronavirus.
- The U.S. economy is likely already experiencing a technical recession, and the data will reflect the slowdown in the coming months.
- We expect the impacts of coronavirus to last roughly three to six months. However, certain industries will be impacted more than others, and hard-hit sectors like leisure and hospitality and trade may take much longer to recover.



The World Health Organization has declared COVID-19 to be a global pandemic. Equity and bond markets, which had been heading for correction territory for about two weeks, dropped further, creating the first bear market in 11 years. Shortly thereafter, Donald Trump implemented a European travel ban for all non-essential travel. While official cases in the U.S. are currently just over 1,000, unprecedented measures are now in place in an effort to slow the spread of the coronavirus and ease the strain on the health-care industry. The virus is still in its nascent stage in the U.S. compared to other parts of the world, but these actions are necessary in order to contain the spread and allow health-care professionals the most opportunity to treat the sick.

Most economic data has yet to reflect the impacts from the coronavirus, but given the fundamental strength of the economy prior to the outbreak, most industries should be able to recover from the oncoming technical recession. Employment growth in February remained incredibly strong, although the data was collected prior to the virus impacting the U.S. en masse. New unemployment claims remain near record lows, and will likely provide a better barometer than other metrics, as claims are reported on a weekly basis.

In the housing sector, some reports have speculated that social distancing would lead to a slowdown in home purchasing or rental activity. We have yet to see a negative impact on housing demand.

The length of the recent expansion, as well as the cautious approach of banks and lenders, has left most owners well balanced from a leverage standpoint. Financial institutions are well capitalized, and despite the recent equity sell-off remain rather healthy. Treasury rates have fallen to an all-time low, as the global flight to quality has increased demand for U.S. bonds, and while most real estate loans are tied to the Treasury benchmarks, it appears lenders will only allow mortgage rates to fall so low. In recent days, spreads have widened, indicating the lenders are putting a floor on new loan rates.

For investors well positioned with cash, the current shock may lead to buying opportunities if the small subset of overleveraged owners is forced into sales. Overall, however, the multifamily market and the real estate industry as a whole are positioned favorably compared to other industries during this time of rising uncertainty.

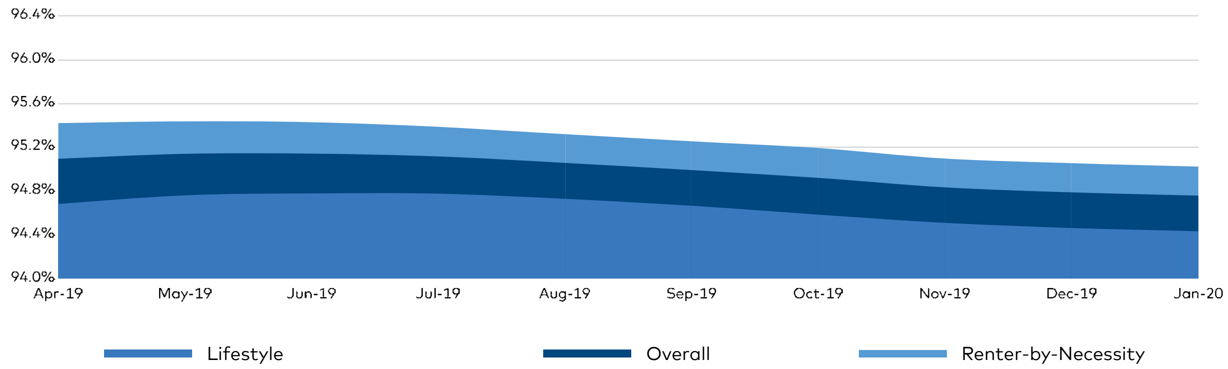
Employment, Supply and Occupancy Trends; Forecast Rent Growth

Market	YoY Rent Growth as of Feb - 20	Forecast Rent Growth (YE 2020)	YoY Job Growth (6-mo. moving avg.) as of Dec - 19	Completions as % of Total Stock as of Feb - 20	Occupancy Rates as of Jan - 19	Occupancy Rates as of Jan - 20
Seattle	5.5%	5.8%	3.3%	3.9%	95.3%	95.1%
Las Vegas	4.9%	5.4%	2.2%	1.6%	95.0%	94.5%
Orlando	1.8%	5.4%	3.4%	3.3%	95.2%	94.6%
Portland	3.0%	5.2%	1.9%	3.1%	95.2%	95.0%
Phoenix	7.6%	3.7%	2.8%	2.7%	95.4%	95.0%
Tampa	3.7%	3.6%	2.1%	2.2%	95.0%	94.5%
Indianapolis	4.5%	3.5%	0.8%	1.7%	94.2%	93.9%
Boston	3.1%	3.5%	1.5%	2.8%	96.3%	96.2%
Houston	1.0%	3.3%	2.7%	1.7%	92.6%	92.6%
Inland Empire	5.0%	3.2%	2.2%	1.4%	96.0%	95.7%
Twin Cities	3.3%	3.1%	0.0%	2.7%	96.7%	96.4%
Atlanta	2.8%	2.9%	2.0%	2.4%	94.2%	93.9%
San Jose	2.9%	2.7%	2.8%	2.5%	95.7%	95.5%
Kansas City	3.6%	2.7%	1.4%	2.0%	94.5%	94.6%
San Antonio	2.1%	2.7%	2.6%	1.9%	93.0%	92.7%
San Francisco	1.7%	2.6%	2.3%	2.3%	95.8%	95.6%
Dallas	2.4%	2.6%	3.2%	3.3%	94.2%	93.9%
Austin	3.7%	2.6%	2.5%	4.2%	94.4%	94.5%
Chicago	1.9%	2.3%	1.0%	3.0%	94.4%	94.3%
Miami Metro	2.7%	2.3%	1.9%	4.1%	95.2%	94.9%
Nashville	4.4%	2.3%	1.8%	2.2%	94.7%	94.9%
Denver	2.2%	2.1%	2.1%	5.0%	94.7%	94.3%
Orange County	3.6%	1.8%	1.2%	1.3%	96.0%	96.0%
Philadelphia	3.6%	1.8%	1.1%	1.2%	95.5%	95.5%
Los Angeles	2.4%	1.8%	1.4%	1.9%	96.4%	96.2%
Sacramento	4.8%	1.4%	1.6%	0.7%	96.3%	95.7%
Charlotte	4.9%	1.2%	2.5%	4.5%	95.0%	94.7%
Raleigh	3.7%	1.1%	2.3%	3.7%	94.7%	94.7%
Baltimore	2.5%	1.0%	1.2%	1.0%	94.8%	94.6%
Washington DC	3.4%	0.9%	1.4%	2.2%	95.3%	95.2%

Source: Yardi Matrix

Occupancy & Asset Classes

Occupancy—All Asset Classes by Month



Source: Yardi Matrix

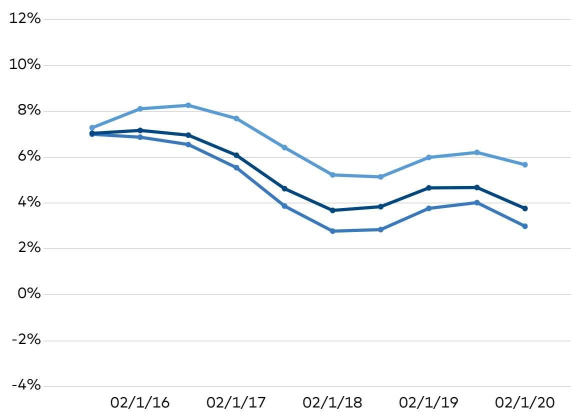
Year-Over-Year Rent Growth, Other Markets

Market	February 2020		
	Overall	Lifestyle	Renter-by-Necessity
Central Valley	6.3%	5.2%	6.5%
Albuquerque	5.7%	5.5%	6.0%
Colorado Springs	5.4%	4.5%	6.2%
Tucson	5.4%	4.0%	6.0%
Tacoma	5.2%	4.2%	6.1%
Indianapolis	4.5%	3.6%	4.9%
NC Triad	4.5%	3.0%	6.0%
St. Louis	4.2%	4.0%	4.1%
Long Island	4.2%	1.8%	5.3%
Jacksonville	3.2%	3.0%	3.6%
Reno	3.2%	2.8%	3.8%
San Fernando Valley	3.0%	2.8%	3.2%
Louisville	3.0%	1.5%	3.8%
El Paso	2.8%	2.1%	3.0%
Salt Lake City	2.7%	2.0%	3.4%
Northern New Jersey	2.7%	1.7%	3.4%
Central East Texas	2.2%	3.8%	1.0%
Bridgeport–New Haven	2.1%	1.5%	2.5%
SW Florida Coast	1.5%	2.0%	0.8%

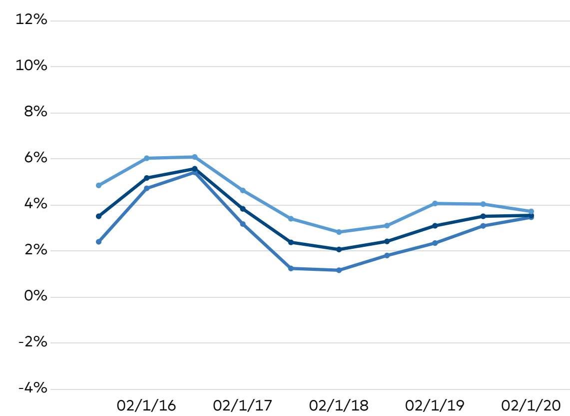
Source: Yardi Matrix

Market Rent Growth by Asset Class

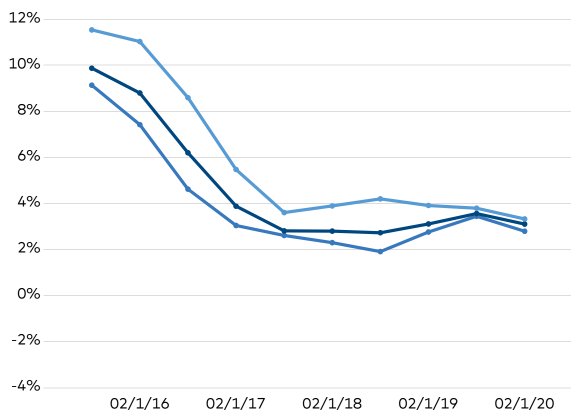
Atlanta



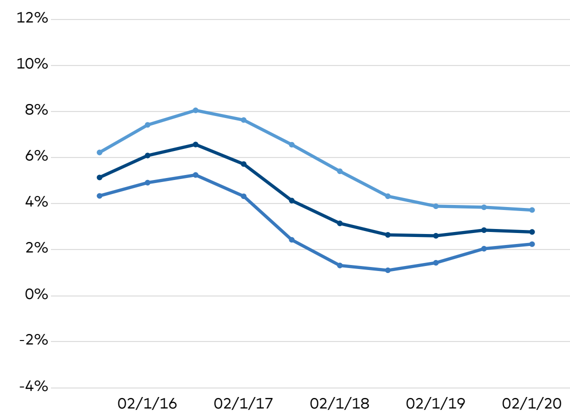
Boston



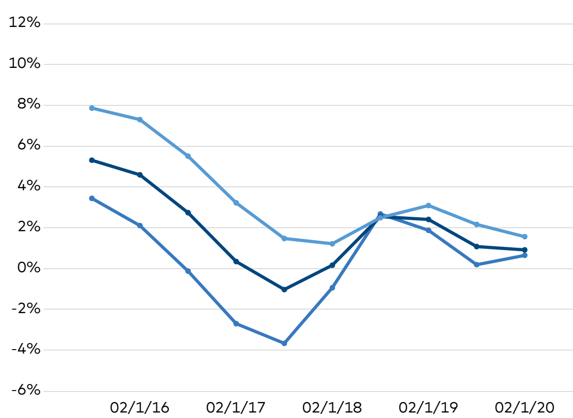
Denver



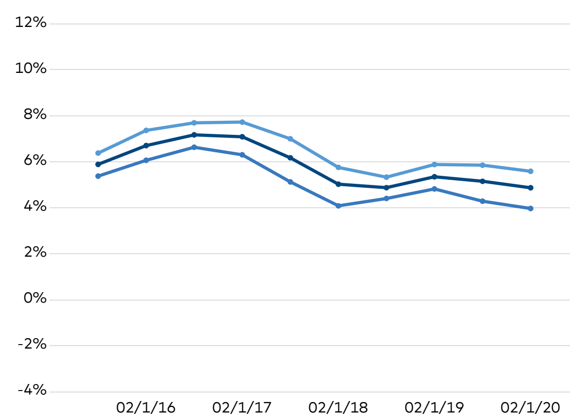
Dallas



Houston



Inland Empire

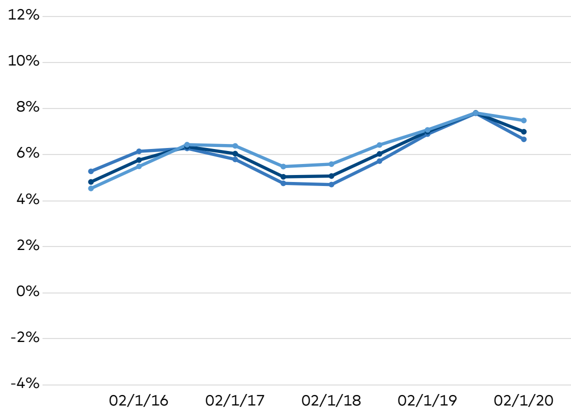


Trailing 12 Months Overall — Trailing 12 Months Lifestyle — Trailing 12 Months Renter-by-Necessity

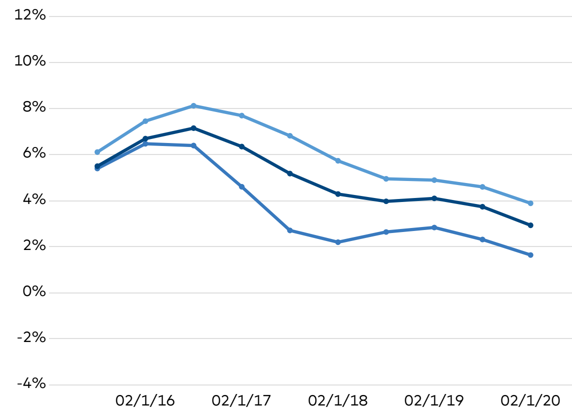
Source: Yardi Matrix

Market Rent Growth by Asset Class

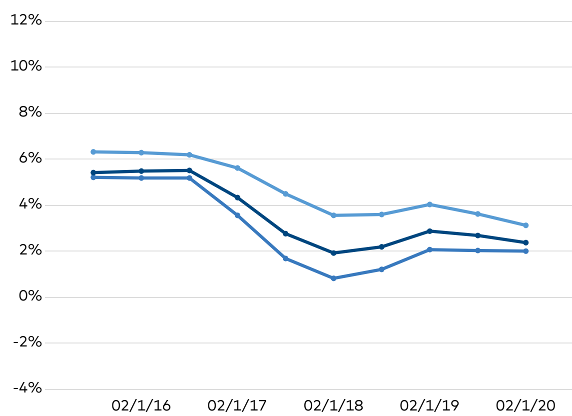
Las Vegas



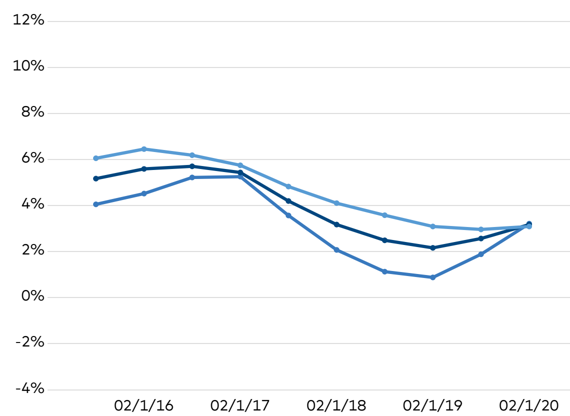
Los Angeles



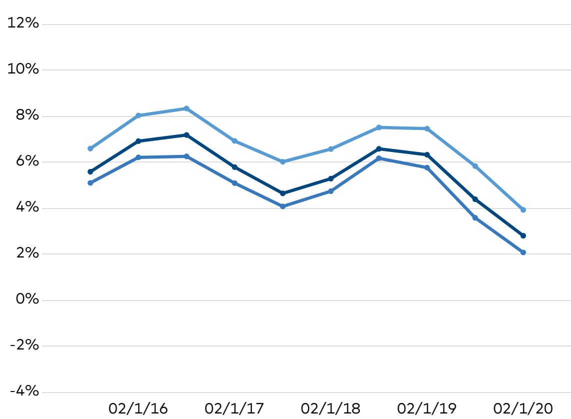
Miami



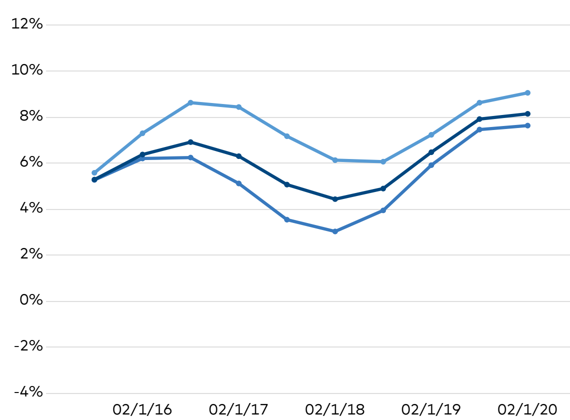
Orange County



Orlando



Phoenix

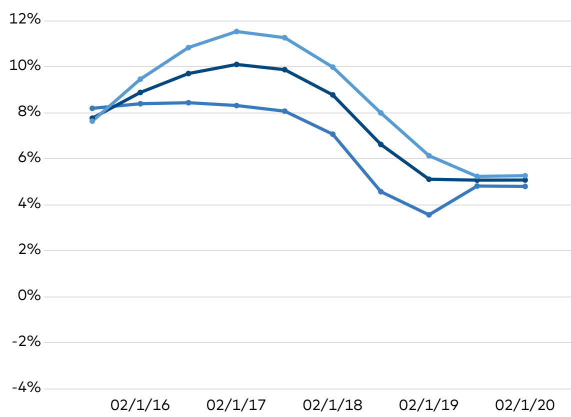


Trailing 12 Months Overall | Trailing 12 Months Lifestyle | Trailing 12 Months Renter-by-Necessity

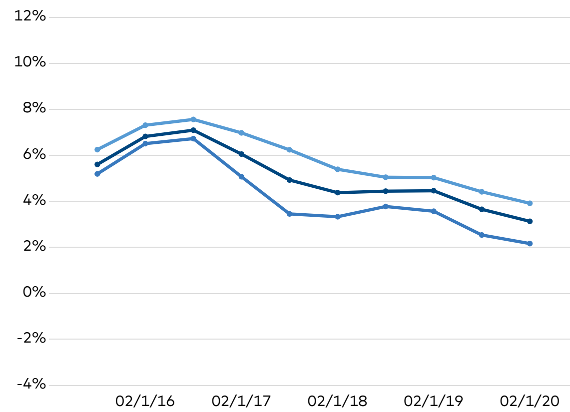
Source: Yardi Matrix

Market Rent Growth by Asset Class

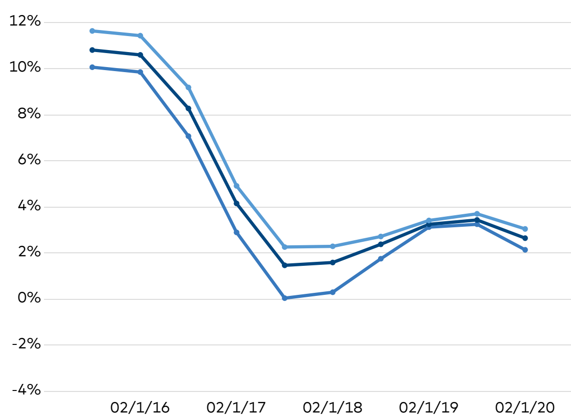
Sacramento



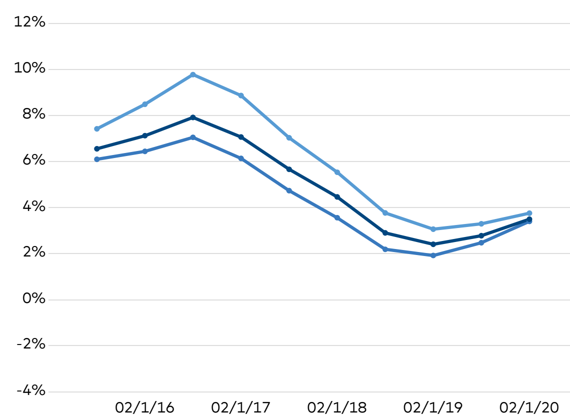
San Diego



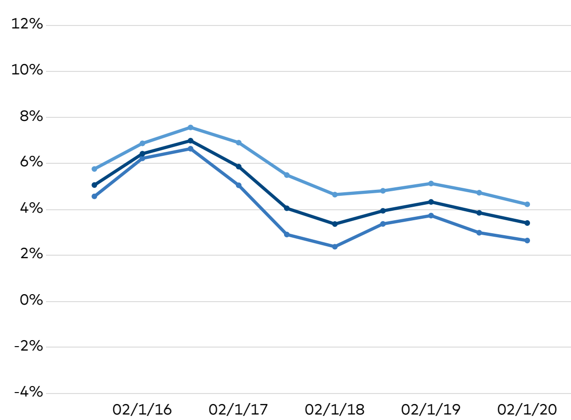
San Francisco



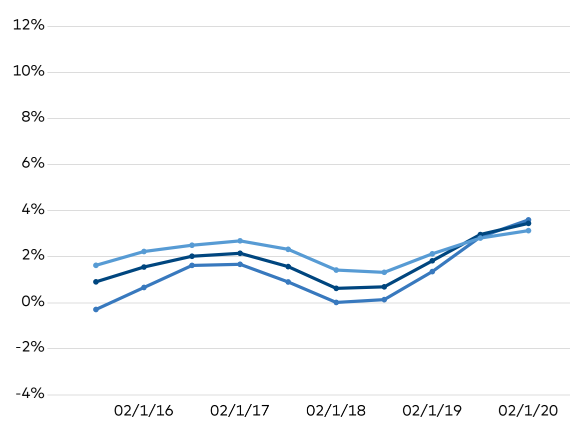
Seattle



Tampa



Washington, D.C.



Trailing 12 Months Overall   Trailing 12 Months Lifestyle   Trailing 12 Months Renter-by-Necessity

Source: Yardi Matrix

Definitions

Reported Market Sets:

- National rent values and occupancy derived from core 60 markets with years of tracked data that makes a consistent basket of data
- All 133 markets, including any that have been recently released

Average Rents: Average Same-Store index rent (mean), rolled up from unit mix level to metro area level, weighted by units

Rent Growth, Year-Over-Year: Year-over-year change in average market rents, as calculated by same month

Rent Growth, Quarterly: Year-over-year change in average market rents, as calculated by same quarter average. Partially completed quarters are only compared to partial quarters.

Forecast Rent Growth: Year-over-year change in average forecasted market rents, as calculated by same month

Market rent: Converted rent that reflects of the effect of differences in relevant attributes that hold reasonably quantifiable value.

Actual (effective) rent: Monthly rate charged to residents to occupy an apartment and is shown as-is without additional concessions or adjustments.

Same-Store index rent: Rents adjusted to new supply as it joins the market

Employment Totals: Total employment figures and categories provided by Bureau of Labor Statistics, seasonally adjusted

Employment Data Geography: Comprises entirety of United States, which Matrix data covers 90% of US metro population. Reported information is for MSAs that overlap Matrix Markets.

Market: Generally corresponds to a Standard Metropolitan Statistical Area (SMSA), as defined by the United States Bureau of Statistics, though large SMSA are split into 2 or more Markets

Metro: 1 or more Matrix markets representing an economic area. Shown with combined Matrix markets when necessary, and do not necessarily fully overlap an SMSA.

Occupancy Rates: Ratio of occupied unit count and total unit count, as provided by phone surveys and postal records. Excludes exception properties: closed by disaster/renovation, affordable, and other relevant characteristics.

Completions as % of Total Stock: Ratio of number of units completed in past 12 months and total number of completed units

Ratings:

- Lifestyle/Renters by Choice
- Discretionary—has sufficient wealth to own but choose rent
- Renters by Necessity
- High Mid-Range—has substantial income but insufficient wealth to acquire home/condo
- Low Mid-Range—Office workers, police officers, technical workers, teachers, etc
- Workforce—blue-collar households, which may barely meet rent demands and likely pay distortional share of income toward rent
- Other Categories
- Student—may span range of income capability
- Military—subject to relocation
- Subsidized—Partially to fully subsidized by a governmental agency subsidy. Can extend to middle-income households in high-cost markets.

Market Position	Improvement 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.

To learn more about Yardi® Matrix and subscribing, please visit www.yardimatrix.com or call Ron Brock, Jr., at 480-663-1149 x2404.

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