

Yardi® Matrix

U.S. Multifamily Outlook

Spring 2018

Performance In an Aging Cycle

South, West Lead
Nation in Rent Growth

Construction Hitches
Push Supply into 2019

Investors Look
To Place Equity, Debt

Market Analysis

Spring 2018

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Multifamily Still Solid, But Worries Mount as Cycle Ages

Despite a fair number of headwinds that include decelerating rent gains, growing supply, the advanced age of the economic cycle and the increase in interest rates, the multifamily market remains in a healthy state. Overall demand continues to be bolstered by positive demographic drivers and the consistent growth in jobs that has kept the nation near full employment.

With no signs that the economy is about to slow down, the apartment market is in a good spot, although the heady days from earlier in the cycle are past. We expect U.S. rent growth will remain moderate overall, led by growing Southern and Western metros in which supply growth has not gotten too far ahead of demand.

Economy: The economy remains healthy and growing.

- GDP growth clocked in at 2.3 percent for 2017 and first quarter 2018.
- More than 200,000 jobs have been added per month thus far in 2018.
- Consumers are confident, as tax cuts will increase income, despite stagnant wage growth.
- Long-term fiscal issues are a likely result of short-term benefits.

Rents: Supply/demand fundamentals and the steady economy point to solid rent growth in most metros.

- Rents are forecast to increase 2.9% nationwide in 2018.
- The fastest rent growth is in late-stage markets in the South and West.
- Affordability and new deliveries prevent increases from being higher.

Supply: Deliveries continue, but have begun to plateau after topping 300,000 in 2016 and 2017.

- Roughly 625,000 units are currently under construction.
- Completions are likely to remain in a range similar to the last few years.
- Development has been slowed by construction delays due to worker shortages and rising materials costs.

Capital Markets: Commercial real estate continues to thrive on an overabundance of capital flowing into the industry.

- Institutions remain attracted to healthy dividends.
- Money is flowing as much as ever into debt and equity funds, although developers are beginning to show hesitation due to rising costs.
- Due to steady cash-flow history, multifamily remains a favored class within the industry.

Economic Outlook

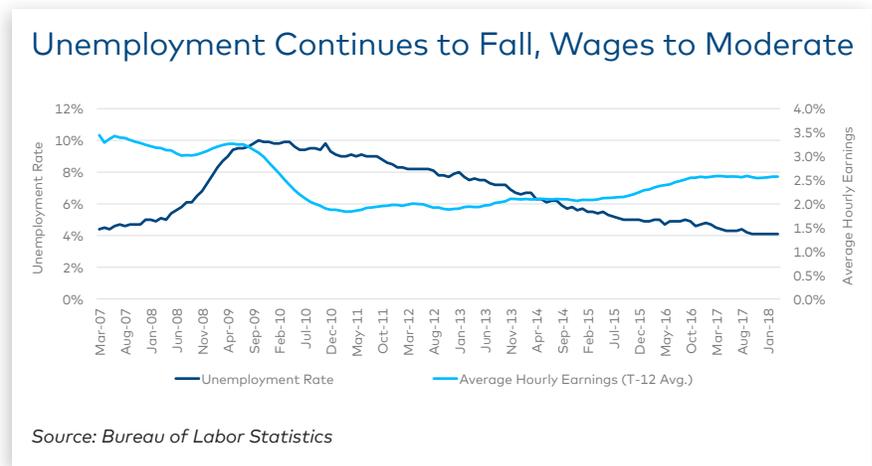
Increases in interest rates and mildly disappointing first-quarter GDP growth have led to some concerns that the economic cycle is running on fumes, but underlying U.S. economic fundamentals remain steady. Employment continues its upward trajectory, with 164,000 new jobs created in April and more than 800,000 added in 2018 to date. Given that the unemployment rate has steadily declined to 3.9%, the continued job growth is a surprising and welcome sign for the economy.

Wage growth, which remains below 3%, has shown some positive signs, but has yet to break out into inflationary levels. However, while wages may not have increased significantly, most Americans received an added boost to their paychecks in early 2018 as the Tax Cuts and Jobs Act went into effect.

The reduced taxes, combined with a red-hot equity market in January and February and the continued upward movement in home prices, have left consumers feeling confident. The Consumer Confidence Index reached an 18-year high in February, although it retreated slightly in March. However, initial consumer spending numbers for first quarter 2018 were disappointing—up 1.1 percent year-over-year, the weakest quarterly growth since 2013.

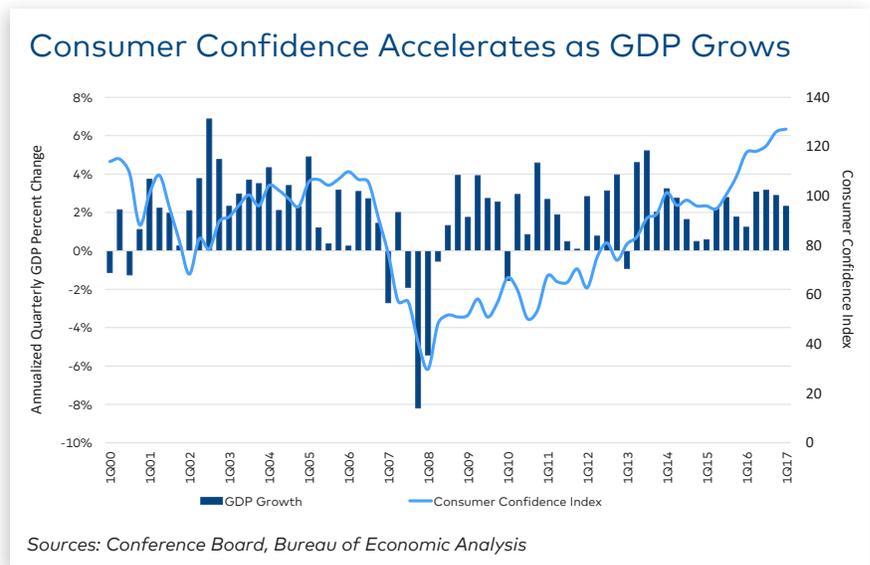
First-quarter 2018 GDP rose 2.3 percent, down 60 basis points from the prior quarter but also the highest first-quarter growth number in several years. Full-year 2017 GDP growth was also 2.3 percent. Most of the gains in 2017 were driven by business investment and exports, however, and both may be at risk, as new tariffs and restrictive trade policies are on the table. The tax cut may help drive business investment, but the benefit from tax reductions will likely have a diminishing return for businesses throughout the next few years. It remains too soon to determine the impact of the tax cuts passed by Congress in December 2017, but growth should be 40 to 60 basis points higher in 2018.

Market volatility has increased, as the good feelings about lower corporate taxes were mitigated to some degree by President Trump's foray into tariffs on aluminum and steel and the prospects of a trade war between the United States and China intensified. The tariffs remain somewhat symbolic, as some of the U.S.'s major trade partners will be exempted and the date for the tariffs to take effect has been pushed back to June, but markets have bounced around based on day-to-day developments. Oil prices have started to rise, which could diminish some of the capital available to consumers and help push inflation over the Federal Reserve's 2 percent target.



Maybe the biggest concern for commercial real estate is the impact of rising interest rates, as the 10-year Treasury rate started May flirting with 3 percent, the highest it has been in several years. With a rising federal deficit, a more hawkish Federal Reserve and higher growth anticipated, rates are more likely moving up than down. That could drive up the cost of debt and depress REIT stock prices.

While the financial markets may stagnate for the foreseeable future, we expect to see continued steady job growth, which will put downward pressure on the unemployment rate. Workers continue to come off the sidelines and enter the labor force, increasing the participation rate and driving down the underemployment (U-6) rate. As these trends persist, expect wages to continue rising, which may finally force overall inflation upward as well.



Rent Growth Trends

After stagnating over the winter, rent growth has picked up in the spring, a good sign that the cycle has not run out of steam. With the economy continuing to perform well, adding more than 180,000 jobs per month, demand remains healthy.

Gains are led by the late-cycle markets such as Orlando, Tampa, Las Vegas and Phoenix. Some high-growth Western tech markets—such as San Jose, Seattle, Denver and San Francisco, where rent increases had decelerated the most between the frothy period in 2015 and the end of 2017—have once again perked up. Improvements are smaller in slow-growth Northeast and Midwest metros, and in high-growth markets such as Nashville, Austin and Raleigh that are trying to absorb a greater level of new deliveries.

Metros	2018 Rent Forecast % Change	YoY Change 2018 Indexed Rents March 2018
National	2.9%	2.3%
Sacramento	7.2%	6.4%
Tacoma	6.6%	7.0%
Colorado Springs	6.5%	4.8%
Phoenix	5.0%	4.3%
Inland Empire	4.9%	4.4%
Salt Lake City	4.9%	3.8%
Las Vegas	4.8%	5.2%
Seattle	4.8%	2.5%
Los Angeles	4.7%	3.9%
Orlando	4.5%	7.0%
Dallas	4.4%	2.0%
Columbus	4.3%	3.1%
Jacksonville	4.1%	4.4%
Tampa–St Petersburg	3.7%	4.2%
Atlanta	3.7%	3.1%
Twin Cities	3.7%	3.2%
Raleigh	3.5%	1.5%
Long Island	3.5%	3.9%
San Diego	3.5%	4.4%
Tucson	3.5%	4.2%

Source: Yardi Matrix

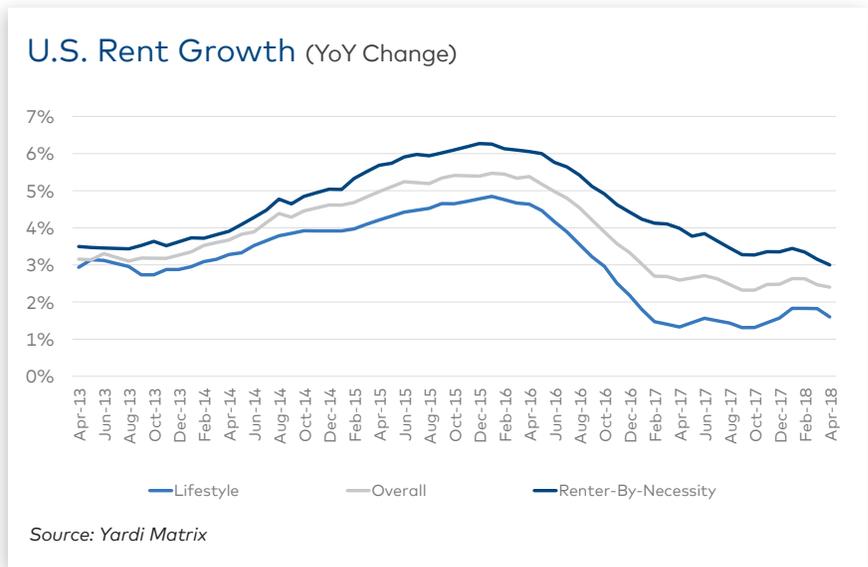
Nationally, rent growth has settled into the 2.5 percent range, and we expect the momentum will pick up over the summer. Our forecast is for rents to appreciate 2.9% in 2018, slightly above initial forecasts for the year. That rate is still relatively tame compared to some of the highs we've seen over parts of the cycle.

Demand continues to be strong, but rent increases will be constrained by the amount of supply that has led to a roughly 80-basis-point drop in the occupancy rate over the last year. Metros with the biggest drop in occupancies—Nashville, Portland and Seattle, all down 160 basis points year-over-year through March—have seen severe moderation in rent growth. Still, the occupancy rate remains above historical averages, and more housing stock is needed in many markets. Another constraint on rents is affordability, which is a problem in gateway markets such as New York, San Francisco and Washington, D.C. Meanwhile, smaller markets are leading growth, thanks mostly to the spillover effect from major technology-driven economies—such as Tacoma (7.1%), Sacramento (6.8%) and Colorado Springs (5.0%).

At a time when rents are finally inching upward after a lengthy interval of middling performance, there has been significant shuffling at the top of our rent growth rankings. Although still improving at a very quick rate, Sacramento has yielded its position as the top market for rent growth to

Orlando this spring, following a 21-month run during which the capital of California led all major metros in rent gains. Orlando rents had risen 7.2% year-over-year as of April, leading the nation in rent growth for the first time this cycle.

While Houston’s post-Harvey recovery efforts, combined with a stabilization in the city’s energy sector, have yielded a resurgence for the multifamily market, New York City will likely continue to see a slide in rents—of about 1.0%. Significant inventory growth in both rentals and condos across the five boroughs has led to rents flattening over the past few quarters, with New York City the only major metro where depreciation is expected in 2018.



Supply

Development activity continues to be strong, although deliveries might not reach the 300,000-plus units that were completed in the last two years, as a large swath of projects are likely to be pushed into 2019. We expect roughly 290,000 units to be delivered this year—an increase in total stock of 2.2%. Some metros will experience a peak in inventory expansion, while others will taper from peaks earlier in the cycle.

With more than 625,000 units under construction nationally, construction activity isn't sluggish. However, many projects are taking longer to be completed due to construction worker labor shortages and rising materials costs. The end result is that instead of deliveries peaking in 2018, we are more likely to see a consistent number of units come online this year and next.

Metros	Total Inventory as of 4/18	2018 Forecast Completions	2018 Completions % Change
National—All Markets	13,311,250	290,000	2.2%
Dallas	708,010	16,619	2.3%
Denver	250,403	16,107	6.4%
New York City	544,764	14,040	2.6%
Miami	274,720	11,520	4.2%
Phoenix	294,092	11,354	3.9%
Washington, D.C.	508,492	10,699	2.1%
Atlanta	424,386	10,354	2.4%
Chicago	332,280	10,197	3.1%
Los Angeles	409,138	10,077	2.5%
Seattle	230,454	9,790	4.2%
Austin	218,695	8,472	3.9%
San Francisco	247,932	7,127	2.9%
Houston	628,510	6,475	1.0%
Charlotte	162,106	5,861	3.6%
Raleigh	145,422	5,601	3.9%
Nashville	123,820	5,426	4.4%
San Diego	180,425	5,221	2.9%
Salt Lake City	93,183	5,109	5.5%
Boston	213,862	4,876	2.3%
San Jose	122,812	4,857	4.0%

Source: Yardi Matrix

Demand remains strong, as does the need for housing in some high-growth metros. But developers are being more cautious as the cost of land, labor and materials rises, and due to signs that some markets have a glut of new luxury units. Even single-family housing has started to pick up, as both starts and permits recently hit cycle highs, according to U.S. Census data.

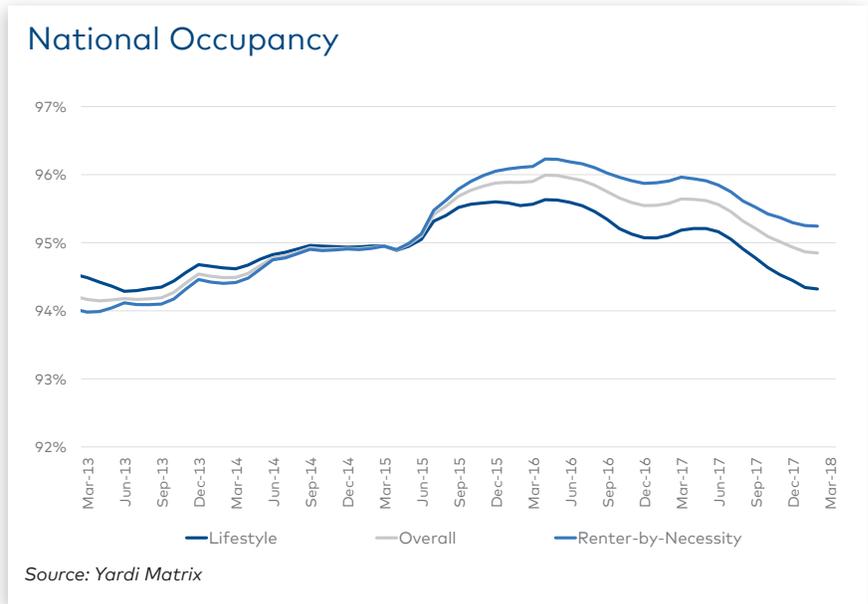
Multifamily inventory growth is highest in the Sunbelt and Western U.S. markets. Dallas and Denver—each with more than 16,000 units scheduled for delivery in 2018—are leading the way as demand there continues to be robust. Both markets have some of the strongest rates of employment growth and below-average unemployment rates.

Meanwhile, some high-volume markets where development has been rampant are now tapering, leading to a slide in overall stock expansion. Washington, D.C. (2016 cycle high of 16,000 units; 10,000 expected in 2018), Austin (more than 12,000 units delivered in 2016; 8,400 slated for completion in 2018) and Houston (18,000+ units added in both 2016 and 2017; 6,500 forecast this year) are among the metros illustrating that trend. Rent growth in these markets is likely to be below average in 2018 as incoming stock outpaces demand.

Because the overall number of deliveries this year is likely to be lower than originally expected and demand should remain elevated, development will roughly be in lockstep with the rate of new

household creation. Nationally, the average occupancy rate of stabilized properties will continue to regress to the mean. As of March, the rate had slid yet again, at 94.8%, 80 basis points lower than it was 12 months ago.

Development continues to be almost exclusively in the luxury Lifestyle segment, which constitutes about 88 percent of deliveries, while demand is stronger in the working-class Renter-by-Necessity segment. That has led to a deepening average occupancy divide between assets in Lifestyle (94.3 percent) and Renter-by-Necessity (95.2 percent).

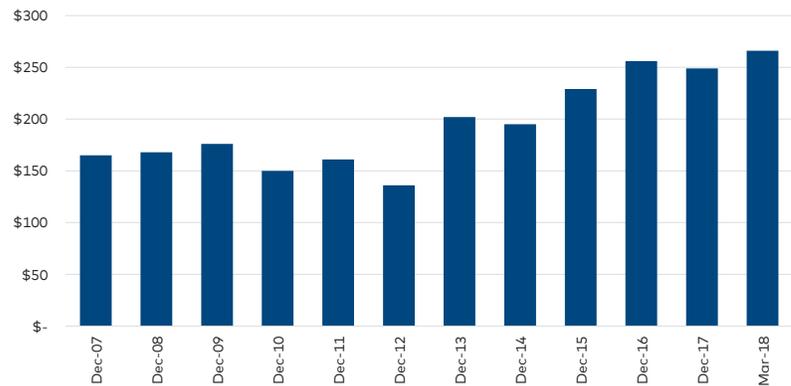


Capital Markets

Despite ongoing nervousness about rising interest rates, growing supply in some segments and weakening of income growth, capital flows into commercial real estate continue to be very strong. Although there is some pullback from capital sources—the public reduction of funds coming from China, for example—equity capital remains more than abundant and debt sources continue to grow.

Prices have remained firm even as interest rates finally began their long-awaited increase, with 10-year Treasury rates moving closer to 3 percent after years of being nearer to 2 percent. One reason is the huge amount of undeployed capital waiting to be used, which is a record \$266 billion globally, according to Preqin. The market is saturated with funds that have dry powder and unspent allocations. In part, that's because either they don't want to overpay or buying at today's low acquisition yields would leave them unable to meet return targets. Plus, many funds have specific strategies/return hurdles and there aren't enough assets on the market that thread some particular needles.

Dry Powder Available to Real Estate Funds Globally
(\$ in billions)



Source: Preqin

Some of the impacts of this development include:

- The amount of undeployed capital should keep cap rates low, despite market worries about whether the cycle is long in the tooth and rising interest rates. Even with some investors dropping out, there is still far more capital looking to buy than sell.
- Large blue-chip money managers that can find deals and execute strategies in any environment begin to look more attractive to institutions and will soak up a bigger share of investors' funds.
- More capital will be deployed in niche sectors and secondary/tertiary markets, where there is less competition for acquisitions.
- More funds are using debt strategies because they can achieve comparable returns to equity with less risk. It is also easier to find and win debt deals, since banks are avoiding riskier loans and CMBS is now less competitive on pricing for loans on B- and C-quality properties.

As of late April, REITs were down about 10% since late last year, mostly due to the increase in interest rates, the second-biggest decline in the post-Great Recession cycle. That has impacted REITs' ability to add through acquisitions and raises the threat of being acquired by private operators. REITs with development arms will find it makes more sense to build properties rather than buy. There is even talk that some REITs

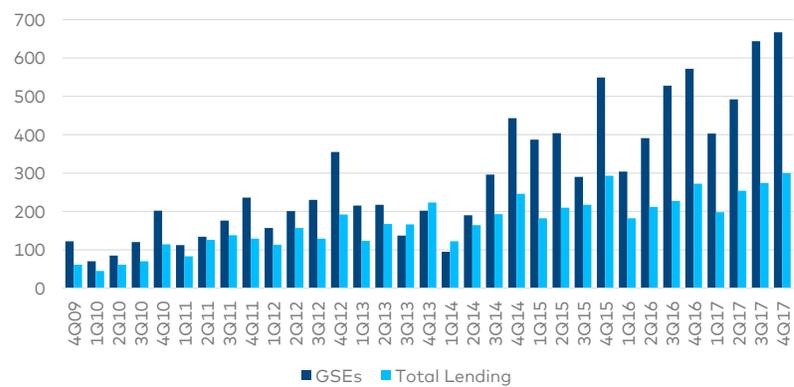
will convert to C-corporations because the tax advantage of the REIT structure is diminished by the lowering of the corporate tax rate to 21 percent.

Another reason that prices are firm is that debt spreads are compressing, so the cost of debt is not moving in lockstep with the increases in Treasury rates. As of April, the 10-year Treasury has increased by about 50 basis points over the past 12 months, while the average cost of debt originated by the government-sponsored enterprises (GSEs) has increased only 25 basis points, according to PGIM. That means mortgage coupons are up roughly 25 basis points. However, the increase isn't big enough to affect pricing too much, especially since rates are so low by historical standards.

One reason for the compression is competition in the debt space, especially for multifamily loans. A growing number of institutional investors are channeling capital to debt funds as a way of diversifying risk. This late in the cycle, many funds deem it wise to issue debt and assume second-lien risk rather than execute an equity strategy that would leave them with first-lien risk and the possibility of greater and faster losses in the event of a downturn.

The result for borrowers is that interest-rate increases have not been quite as drastic as the headlines imply, although even the small increase in debt costs has made some deals harder to pencil, particularly those with low debt service coverage ratios.

Mortgage Bankers Association Index



Source: Mortgage Bankers Association

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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.

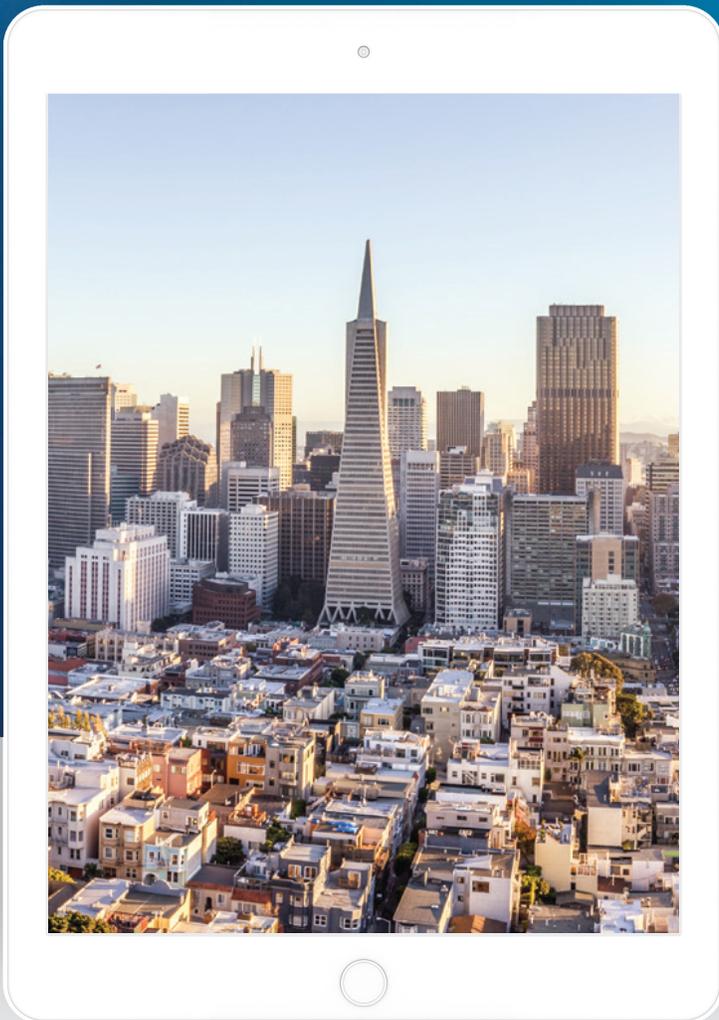
The Yardi® Matrix Context rating is not intended as a final word concerning a property's status—either improvements or location. Rather, the result provides reasonable consistency for comparing one property with another through reference to a consistently applied standard.

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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Yardi® Matrix

U.S. Multifamily Outlook

Winter 2018

Sustainable Pace?

Investors Benefit From
Tax Plan, Cost of Debt

Apartment Deliveries
To Hit Cycle Peak

Continued Demand
Drives Growth in Rents



Market Analysis

Winter 2018

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A Year of Moderate Growth

After several years of sizzling improvements in fundamentals, 2017 was a year of retrenchment in the multifamily market. Rent growth cooled amid robust development, and occupancy levels—although still solid—began to trend down in some metros. The question heading into 2018 is whether the market has passed its peak and is headed for a correction or whether the sector's bull run has more steam left in it. Our view is that there is some growth left—though it will be tepid for the next 18 to 24 months.

On a big-picture basis, demand for multifamily shows no signs of slowing. The number of Millennials in the prime 20-to-34-year-old renter cohort will keep growing, while retirees will continue to downsize. Forecasts call for household growth of roughly one million per year for the next few years, and although housing is recovering, rental demand will be fueled by urbanization and other social trends such as fewer cars on the road.

Economy: We expect another year of moderate economic growth, with potential upside from the recently passed tax reform bill that will lower tax rates and encourage corporate investment. It likely will take at least a couple of quarters before the impact is felt, though. Job growth could slow as the labor market nears full employment, but should remain healthy.

Rents: Rent growth decelerated significantly in 2017, and we expect moderate increases in the 2% range nationally. Growth will be kept in check by the increases in supply, especially in luxury properties, and the lack of affordability in high-cost metros such as New York and the Bay Area. Demand will remain high in the Sunbelt and growing markets in the West and Southwest.

Supply: We forecast 360,000 deliveries in 2018, which would mark a peak for the cycle and would be up from roughly 300,000 new units that came online in 2017. We expected more deliveries last year, but the shortage of construction workers slowed down the delivery pipeline by lengthening the construction period. The delays do have an upside, giving owners more time to absorb the heavy pipeline.

Capital Markets: There is some healthy caution being interjected into the equity and debt markets, but capital forces remain robust. Property sales have declined slightly for two straight years as buyers start to question how long the positive fundamentals cycle will last, but there is no shortage of capital for appropriately priced assets. Debt availability remains as strong as ever, led by Fannie Mae and Freddie Mac, which could hit another year of record lending.

Economic Outlook

Economic fundamentals remain stable as employment continues its steady pace, despite the anticipated deceleration of new job growth as the labor market nears full employment. The economy produced 174,000 new jobs per month year-to-date through November, down slightly from the 187,000 created in 2016.

Inflation remains tame and below expectations, even though the economy has been bolstered by two consecutive quarters of 3%-plus GDP growth. If fourth-quarter GDP proves to have increased by another 3%, it would mark the first time in the current cycle that the economy will have achieved three straight quarters at that level of growth.

Another key metric is pushing the economy forward, as well. Consumer confidence remains at peak levels, reaching 129.5 in November, a 17-year high. Americans are even more confident in the current economy, as the present situation index, which makes up roughly 40% of the consumer confidence index and focuses on consumers' short-term views of the economy, reached 153.9.

Trailing 12 Month Average Job Formation (in thousands)



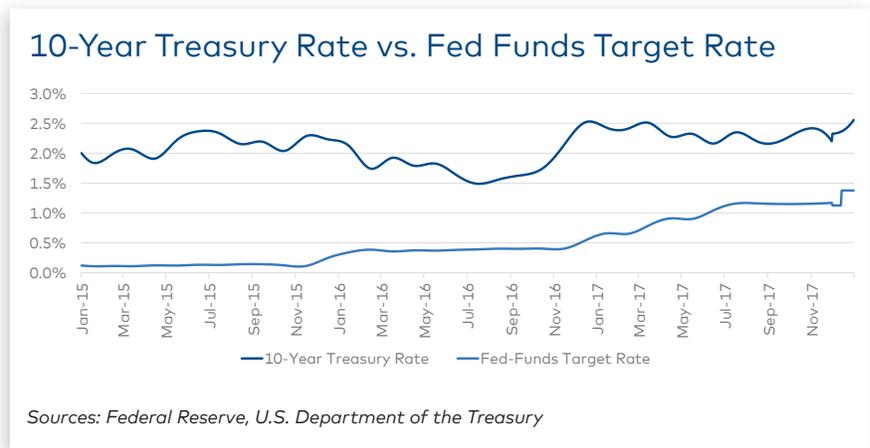
Source: Bureau of Labor Statistics

We anticipate that growth in 2018 will exceed 2017's performance. Major segments of the economy—such as housing, autos, manufacturing and commercial real estate—are healthy, and there is no segment that appears so ripe as to be the next bubble about to burst. Meanwhile, the economy should get a shot in the arm from the stimulus created by the recently enacted tax reform. Although the historical record is somewhat mixed in terms of the correlation between tax cuts and economic growth, corporations are likely to invest some of their lower tax billets into productive uses, and consumers will use lower personal tax rates to spend on consumer goods.

The new tax laws are especially favorable for commercial real estate. Reducing the corporate tax to 21% from 35% will benefit major players in the real estate industry, from banks and lenders to REITs and large institutional property owners. Tax rates for income earned by pass-through entities such as LLCs and LLPs will be eligible to deduct 20% of their income. The initial concern over items such as the treatment of the 1031 exchange tax deferral has also been mitigated, as the legislation will not change the current system.

In addition to a boost from the tax bill, real estate investors should continue to experience historically low costs of debt, despite the steady interest rate increases from the Fed over the past 24 months. At the end of 2017, the 10-year Treasury rate fluctuated around 2.5%, similar to where it began the year, after having fallen to a 2017 low of 2.01% in September.

Jerome Powell will replace Janet Yellen as chairman of the Federal Reserve in February, but despite the changing leadership, indications are that the Fed will continue its monetary tightening as well as its balance-sheet contraction. The Fed in December raised overnight interest rates to 1.5%. There are legitimate concerns that rising rates will increase the cost of mortgage debt and acquisition yields, but the slow and orderly increase in rates has so far been shrugged off by the commercial real estate market. At some point, higher rates will translate into pain for the market, but we expect that the impact in 2018 will continue to be minimal if property performance is steady.



Long-term rates, which track more closely to inflation expectations and international demand for U.S. Treasuries, may increase, but at a slower pace than short-term rates. If interest rate trajectories continue, a flat or inverted yield curve may pose a significant threat to the real estate market and the macro economy.

The U.S. economy is poised to begin 2018 on a strong note. While the tax bill may stimulate the economy, and specifically the real estate economy, the added growth will likely be small. But unemployment of 4%, rising housing and equity markets, and slow but steady wage increases have many Americans confident about the current state of the economy. Long-term issues related to the national debt, overheated financial markets and geopolitical risks may bring about the next economic downturn, but the near decade-long expansion will likely continue in 2018.

Rent Growth and Occupancy

We expect that fundamentals will weaken only slightly in 2018, and thus rents will continue their moderate rate of growth. Our forecast of a 2.5% increase in rents in 2018 is on par with the rate of growth in 2017.

Demand drivers will remain healthy. Overall job growth continues to impress, and the growing Millennial cohort is contributing significant numbers to household creation. However, supply is the biggest headwind. Apartment deliveries will hit a cycle peak of 360,000 in 2018, outstripping demand and prompting the occupancy rate to slide, albeit slowly. The average occupancy rate of stabilized properties declined 40 basis points in 2017 to 95.3%. As we expect a new cycle high in deliveries this year, that rate will likely continue to drop, tempering rent growth.

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Salt Lake City	4.9%	4.1%
Las Vegas	4.8%	5.8%
Seattle	4.8%	3.1%
Los Angeles	4.7%	3.7%
Orlando	4.5%	5.1%
Dallas	4.4%	2.6%
Columbus	4.3%	3.4%
San Fernando Valley	4.2%	4.7%
Jacksonville	4.1%	4.9%
Tampa–St Petersburg	3.7%	3.1%
Atlanta	3.7%	2.5%
Twin Cities	3.7%	3.9%
Raleigh	3.5%	1.6%
Long Island	3.5%	3.1%
San Diego	3.5%	4.3%
Tucson	3.5%	4.8%

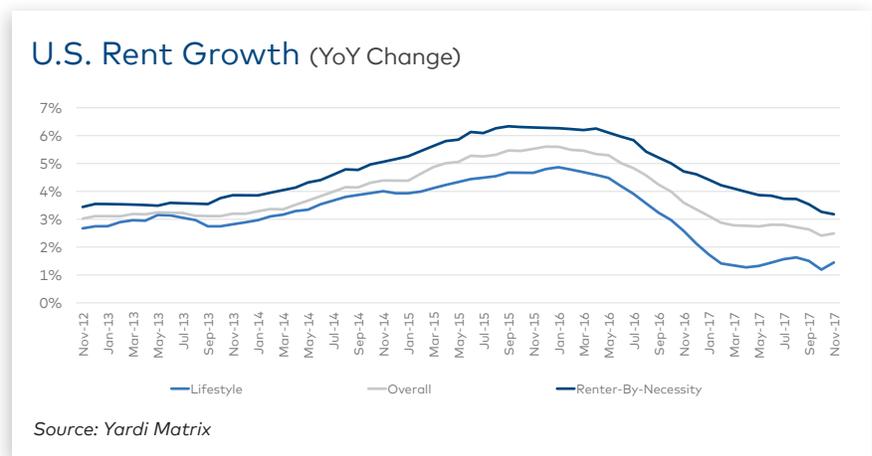
Source: Yardi Matrix

The increase in deliveries will be felt most in metros with the highest rate of increase—such as Nashville, Austin, Seattle and Charlotte—and in large coastal markets such as New York City where affordability is already a serious issue. The slowdown in delivery that took place last year offered traditionally supply-constrained markets a further push in growth, and gave markets with concerns about overbuilding some room to breathe.

Markets with above-trend increases are those with healthy employment gains, rapidly diversifying economies and growing populations. Other markets will continue to rely on the spillover effect—due to their proximity to popular technology and lifestyle centers that are highly in demand and plagued by affordability issues—to sustain growth.

Sacramento is projected to lead metros in rent growth in 2018. We forecast a 7.2% increase due to low inventory growth and demand from a stable and growing job market, as well as the city's proximity to the Bay Area. Other western metros expected to see high rates of growth include Colorado Springs (6.5%), Phoenix (5.0%), the Inland Empire (4.9%) and Salt Lake City (4.9%)—all either relatively affordable markets with growing technology-driven industries or located near major urban centers with significant affordability woes.

Following an uptick in crude oil prices and growing demand following the events of Hurricane Harvey, Houston rents have battled back, finding a road to growth by the end of 2017. The damaging of roughly 45,000 apartments in the metro has led to quick absorption of vacant units, in a market plagued by an occupancy rate of about 93%. Strengthening fundamentals and expectations that the local job market could expand by 70,000 jobs in 2018 are poised to get the rent growth rate to 2.3% this year.



Rents are expected to grow at the slowest rates in Oklahoma City (0.8%), Washington, D.C. (1.3%), New Orleans (1.4%), Portland (1.5%) and Baltimore (1.5%). Inventory expansion in markets like the District and Portland has caught up to occupancy and rent growth rates, as the increased availability of space is moderating improvement. Meanwhile, the only major metro where rents are expected to contract in 2018 is New York City. Manhattan is set to add multifamily units at one of the fastest rates in the nation, which, coupled with very high rents, will yield some slippage.

Supply

Multifamily development activity remains high and should hit the peak of the current cycle in 2018. We expect that 360,000 new units will be delivered in 2018, an increase in total stock of 2.8% and a 20% increase over deliveries in 2017.

With demand for apartments robust, developers have moved into high gear in recent years. Roughly 600,000 units were under construction nationwide as of the fourth quarter of 2017. We originally expected that 360,000 units would be completed in 2017, but the shortage of construction workers has slowed down the number of deliveries. The average start-to-finish time for projects increased to 22 months as of the third quarter of 2017 from 16.5 months in the third quarter of 2013, according to Yardi Matrix's database. Through three quarters in 2017, about 220,000 units were delivered nationally, up 2.3%.

Metros	Total Inventory as of 12/17	2018 Forecast Completions	2018 Completions % Change
National-All Markets	12,987,933	360,000	2.8%
Dallas	704,191	22,158	3.1%
Manhattan	543,945	21,768	4.0%
Denver	246,296	15,661	6.4%
Houston	623,369	14,334	2.3%
Miami	270,823	13,483	5.0%
Los Angeles	407,785	12,472	3.1%
Seattle	291,315	12,362	4.2%
Washington	505,144	11,249	2.2%
Atlanta	422,154	10,231	2.4%
San Antonio	185,509	9,385	5.1%
Austin	215,380	8,603	4.0%
Charlotte	160,683	8,165	5.1%
Chicago	328,954	8,018	2.4%
Nashville	122,069	7,562	6.2%
Phoenix	292,137	7,495	2.6%
Tampa	203,714	7,291	3.6%
Twin Cities	197,209	6,888	3.5%
Boston	213,065	6,887	3.2%
Orlando	201,532	6,450	3.2%
San Francisco	246,554	5,893	2.4%

Source: Yardi Matrix

We expect that deliveries will peak in 2018, since starts have been slow. The number of new multifamily permits was down by 8% year-over-year through November. The growth in supply remains healthy, but some developers and lenders are starting to exercise caution in the face of rising vacancy rates, a slowdown in rent growth and regulations aimed at putting the brakes on construction lending. This year will likely mark a pickup in completions, as units under construction are finished up, along with the already in-place pipeline for 2018. This will likely result in a new cycle high for deliveries to occur this year, while 2019 will mark the start of a more moderate rate of completion.

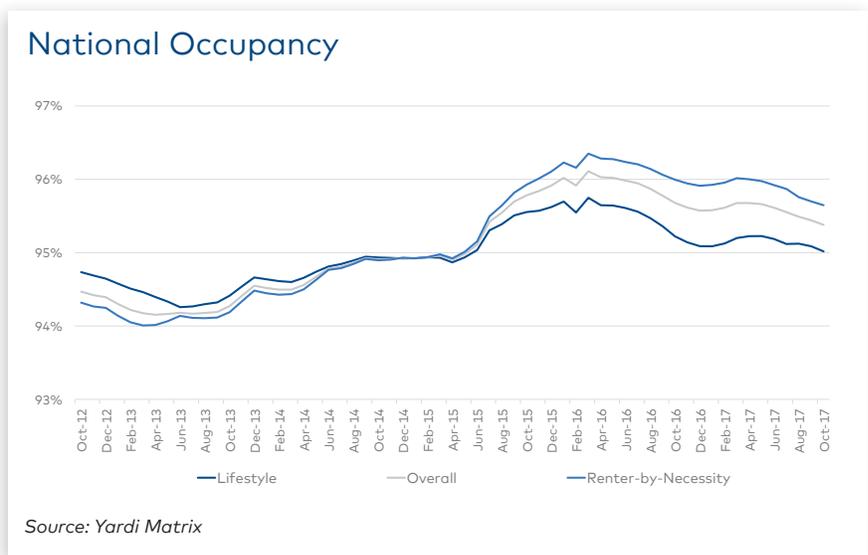
The recent surge in Lifestyle-segment units has posed a challenge for rent growth in most markets, with improvement rates declining throughout the better part of last year. While the below-expectations number of deliveries has had a role in maintaining rent growth in markets where overbuilding had become a problem, 2018 will pose a new challenge for those metros.

Supply improvements will be focused on growing markets, with 143,000 completions slated in the top 10 markets. The Dallas Metroplex is once again set to lead all major markets for completions, with 22,000 deliveries forecast in 2018. The metro added roughly 90,000 new jobs in 2017, and its rapidly expanding economy continues to fuel demand

for rentals. Manhattan follows with 21,768 units. The market's notorious weighting in condos, co-ops and townhomes is making way for a surge in the development of rentals on the island. Other markets with large pipelines include Denver (15,600), Houston (14,300), Miami (13,500), Los Angeles (12,500) and Seattle (12,400).

Markets with the biggest percentage increase in total stock include Charleston (6.8%), Denver (6.4%) and Nashville (6.2%). Last year's best-performing market

for rent growth, Sacramento, will continue its restricted rate of inventory expansion in 2018, with only 1,093 units scheduled for completion, 0.9% of existing stock. Another California metro with high regulatory barriers, the Inland Empire, also will see stock grow at less than 1% in 2018. Midwest metros Detroit (0.4%), Cleveland (1.3%), Cincinnati and St. Louis (both 1.4%) can expect to see tepid growth in inventory.



Capital Markets

How much steam is left in the recovery is the main issue that preoccupies the real estate capital markets. On the surface, the good times continue to roll. Property values and total mortgage volume have reached all-time highs, and the economy is expected—at the very least—to maintain its moderate level of growth. Some expect growth to increase because of the stimulative effect of tax cuts.

Both equity and debt capital remains abundant in the market. Multifamily is still a popular investment class due to its sterling performance—the segment has had several years of above-trend rent growth, high occupancy rates and extremely low levels of distress. Even if the rate of growth cools off, multifamily should be a safe investment over the next few years.

That said, the length and depth of the recovery in commercial real estate also have led capital forces to exhibit signs of nervousness.

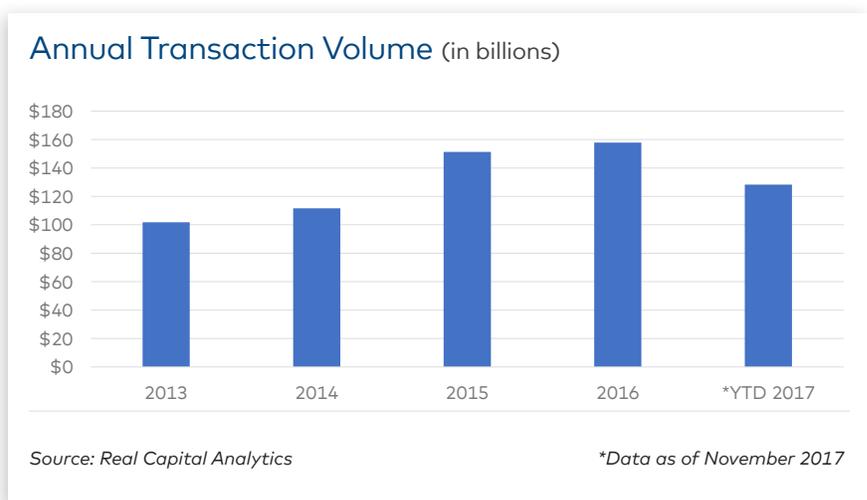
Property transactions have declined from cycle highs, as buyers are being a bit more cautious and sellers are not willing to budge from high valuations while property fundamentals remain strong. That has led to less competition in some transactions and a stalemate in others, which has resulted in an approximate drop of 10% in deal flow.

Through November 2017, apartment property sales were \$126.7 billion, down 7.8% year-over-year from 2016, which was the cycle peak, according to Real Capital Analytics. Crossborder acquisitions, led in 2017 by investors from Canada and Singapore, have fallen from a 2015 peak but remain elevated. Ongoing low acquisition yields have kept REITs quiet, but all major sources of U.S. capital are active. Despite the cooling of transaction activity, the amount of capital in the sector remains elevated.

Lending on commercial properties continues to be healthy, as overall commercial mortgage debt rose by \$45 billion year-over-year, a 1.5% increase to \$3.1 trillion in the third quarter of 2017. Multifamily mortgage debt rose at an even faster rate, up \$24.9 billion, or 2.1%, to \$1.2 trillion.

Multifamily lending growth was led again by the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac, which originated roughly \$70 billion apiece in 2017. The agencies lent to near the limit of their \$36.5 billion caps and were also active in programs for loans on small-balance properties, affordable housing and “green” assets.

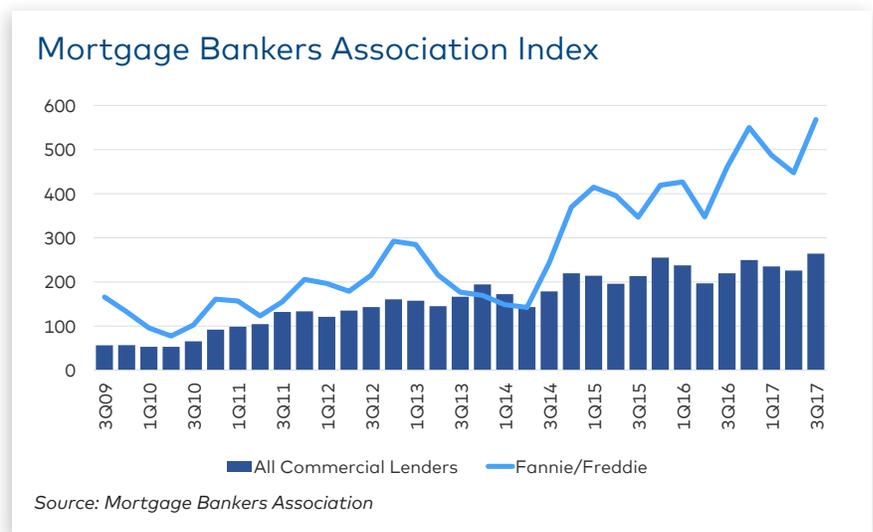
There will be changes in the GSEs in 2018, but just how extensive is not clear. Their caps will drop to \$35 billion in 2018 as the Federal Housing Finance Authority expects demand for loans to fall slightly. Another minor change involves the green lending programs. To qualify, property owners must show 25% reductions in either water or electricity usage, where in the past they could combine reductions from the two utilities.



In the bigger picture, reform of the GSEs will again be on the table in 2018, though what will happen remains a mystery, as there is little consensus on policy and federal agencies such as the FHFA that oversee the GSEs will have new leadership. Without a lot of alternate options, the odds are that the GSEs' structure will largely remain intact.

Other major lender types are robust. Insurers will maintain their share. Large banks will be more cautious about construction lending and are likely to focus more on permanent lending. Local and regional banks and alternative lenders are being more active in financing new construction. Private debt funds will step into the space vacated by banks in the transitional-loan segment.

The CMBS market got through its first year under risk-retention unscathed. Fears that issuers would be unwilling to comply with the regulation, or that there would be no demand for junior bonds, proved unwarranted. The market did undergo some changes, however, as the requirement that issuers hold a 5% portion of deals did tilt the playing field toward large banks, prompting some smaller lending operations to drop out of the market. CMBS volume was \$96 billion in 2017, up 26%, according to "Commercial Mortgage Alert," although volume is likely to shrink in 2018, as demand could be weak. Transaction activity is not likely to grow, and refinancings may decline due to the end of the maturity wave from 2006-07 loans.



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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.

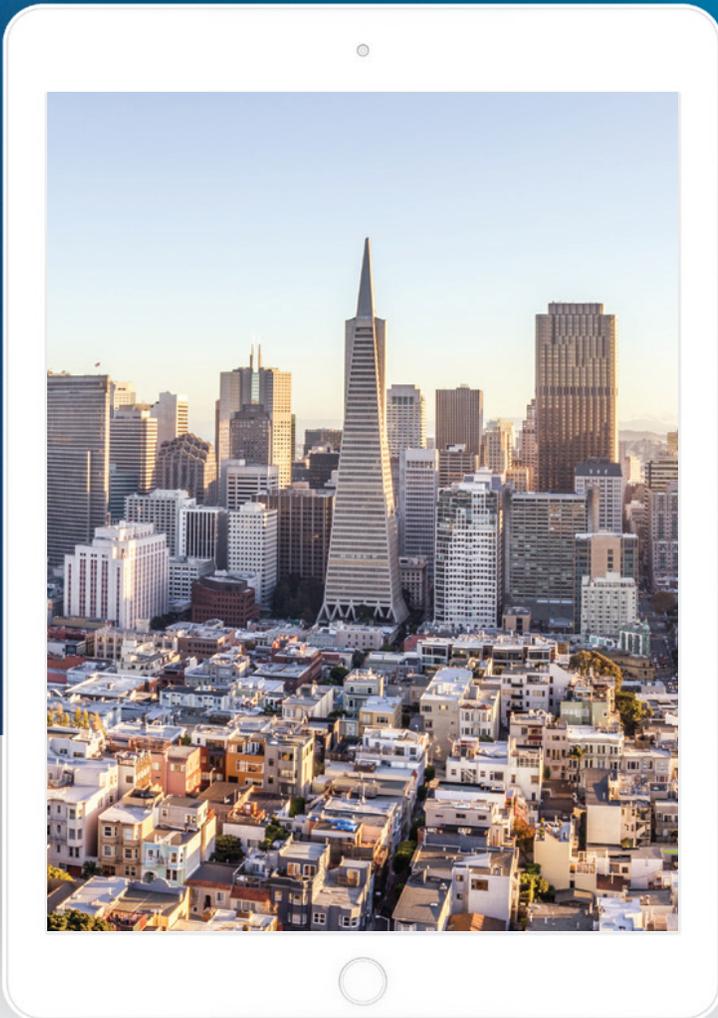
The Yardi® Matrix Context rating is not intended as a final word concerning a property's status—either improvements or location. Rather, the result provides reasonable consistency for comparing one property with another through reference to a consistently applied standard.

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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YARDI[®] Matrix

U.S. Multifamily Outlook

Spring 2017

Peaking Market?

**Rent Growth Drops
To Half Previous Year's Rate**

**New Units Top Decade,
But Permits to Slow in 2018**

**Investors Favor Sector,
Debate Prices with Sellers**

Market Analysis

Spring 2017

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A Return to More Normal Growth

After several fat years, changes are starting to come into focus in the multifamily market. Although it would be too strong to say that the market is worried about a downturn, there is growing consensus that we are close to a peak. Rent growth has slowed from spectacular to moderate, acquisition yields have nowhere to go but up and high-end supply is saturating some markets.

That isn't to say that what comes next is necessarily bad. Supply-demand fundamentals continue to be solid, occupancies are high and new supply remains manageable in most markets. Yet market players are beginning to realize that they can't count on the above-trend growth we have had over the past few years. That means underwriting income gains and price appreciation in line with historical averages. In other words, a market that is more normal than frothy.



Economy Strong While DC Fiddles: As political wars and policy fights are sucking the air out of Washington and intense factionalism prevents much of anything from getting accomplished, the economy is humming along. Job growth continues at a 2 million-per-year rate and GDP is growing by about 2 percent. The market is coming to grips with the fact that President Trump's ambitious agenda may be scaled back, and a moderate-growth economy supports a strong real estate market.

Rent Growth Continues to Moderate: Nationally, average rents grew 2.7% year-over-year through the end of the first quarter. That's half the rate of growth through the same period a year earlier, and rents have only increased by 0.5% since last July. The slowdown is entirely in keeping with our forecast for a return to growth consistent with long-term averages, and is nothing to worry about as long as fundamentals for the multifamily industry remain strong.

Supply Peaking: Our model foresees 360,000 units coming online nationally in 2017, the highest number in more than a decade. The total volume will be led by Dallas and Houston, while Nashville, Salt Lake City and Miami lead as a percentage of stock. We expect that deliveries will peak in 2017, as new permits are starting to slow and banks have become more conservative with construction financing due to tighter regulatory policy and concerns about oversupply.

Capital Markets Uncertainty: The amount of equity and debt capital available for multifamily remains extremely strong. Investors are bullish about the sector, prices are high and there is no shortage of lenders, led by Fannie Mae and Freddie Mac. There is uncertainty on many fronts, however. Buyers and sellers have differences about pricing, which cuts into transaction volume; there is a lack of clarity about bank regulations; and tax policy could have a major impact on the industry—not only what will be proposed but what has a possibility of passing through Congress.

Economic Outlook

While the debate over economic policy rages on in Washington, the fundamentals of the American economy continue to be healthy. Employment gains remain the backbone of growth, and although first quarter GDP was weak due to seasonal factors, another year of moderate 2% growth is likely. There is little reason to expect major changes to the economy.

The initial post-election euphoria in financial markets about implementation of pro-growth policies such as infrastructure spending and cuts in regulations has given way to resignation that new policies will take time to make their way through the legislative and regulatory system. Whatever impact the changes have—if any—will be quarters away.

For the time being, businesses and consumers have largely shrugged off the high level of uncertainty about domestic policies and global growth. Consumer spending is inconsistent month-to-month but increasing about 3% annually; auto sales have slipped from their peak but remain in a healthy 17 million-plus per year level; and the housing market shows steady progress.

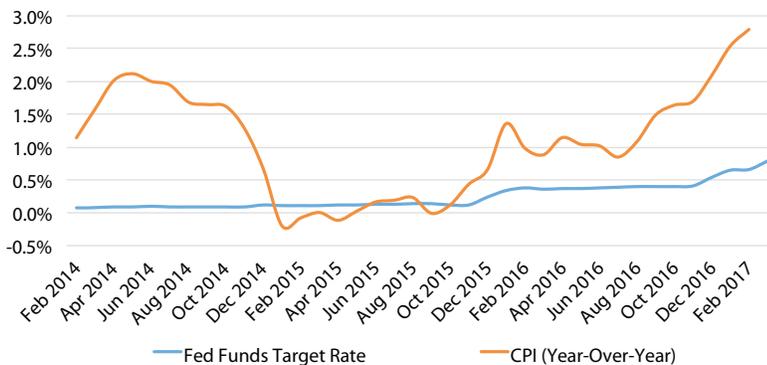
The economy added more than 700,000 jobs through the first four months of the year, and the unemployment rate dropped to 4.4% in April, the lowest jobless rate since May 2007. The number of unemployed individuals declined by 326,000 to 7.2 million, while the labor force participation rate is at a recent high of 63.0%. The tight labor market will propel wage growth. As multifamily rents decelerate, the gap between wage growth and rent growth has narrowed or evaporated entirely, which should help alleviate affordability in some markets.

Although inconsistent, inflation is flirting with the 2% target set by the Federal Reserve, making it increasingly likely that short-term interest rates will continue to rise. That could put pressure on Treasury yields and lead to an increase in financing costs for commercial properties; at the same time, it could possibly increase acquisition yields. Still, the recent trend for Treasury rates is down as optimism about higher growth wanes and uncertainty builds about policies.



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CPI vs. Fed Funds Target Rate



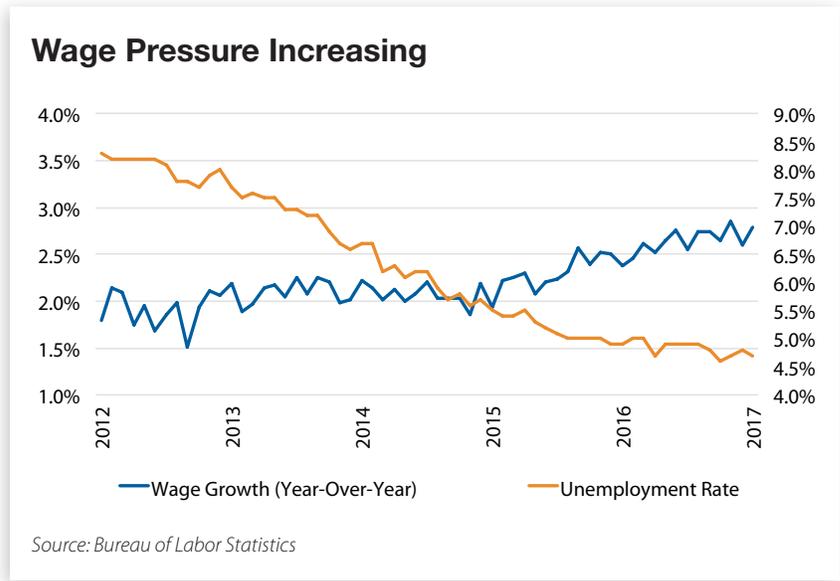
Source: Federal Reserve, Bureau of Labor Statistics

Republicans in Congress passed a health-care reform package but it faces an uncertain future in the Senate, and the same dynamics are in place for tax reform, replacing banking regulations and reform of the government-sponsored enterprises (GSEs) that provide much of the financing for the multifamily industry.

Changes to the tax code, such as the removal of 1031 exchanges or the tax deduction for interest expenses, would certainly have grave impact on the multifamily industry, but handicapping what will happen is

extraordinarily difficult given the fluidity of the political environment. President Trump has focused his actions on executive orders on immigration and reducing regulations in the energy industry, but the impact of these orders is limited.

At the same time, the global economy faces a series of changes. Great Britain will be negotiating its exit from the European Union over the next two years, while rising nationalist pressures on the continent are coming from countries such as Germany and France. The Trump administration has promised to take a new stance on trade with countries such as Mexico and China, the impact of which is far from certain.



Despite the political divides, the economy is continuing its forward momentum, which should bode well for the commercial real estate industry. Regional pain may be felt in overbuilt multifamily and office markets, and the increasing influence of e-commerce may continue to reduce demand for retail properties while increasing demand for modern logistics centers located near population centers.

Jobs are being created in high-growth and construction-heavy metros such as Dallas, Seattle, Atlanta and Denver, which may alleviate some of the absorption issues. Office-using employment—which includes sectors such as professional and business services and financial services—is outpacing overall employment growth, as demand for new office space increases and vacancies drop. Growth in office employment drives demand for multifamily housing, as today’s worker favors a shorter commute and values the live,-work,-play amenities of urban and close-suburban real estate.

Rent Growth and Occupancy

Rent growth continued its deceleration in the opening months of 2017. National average rents were up 2.0% year-over-year through April, half of the growth rate from a year earlier and a meager 0.5% increase since last July.

The slowdown is partly seasonal, as fewer tenants tend to move in winter. Since the beginning of the decade, rents in the first quarter of the year grew at an annualized rate of 2.3%, compared to 3.6% in the other three quarters. However, we believe that the current softness is not a seasonal pattern; rather it is indicative of rent growth that will level off for the remainder of the year. This signifies a return to more normal levels for rent growth, which spent the better part of two years well above the historical average.

Fundamentals for the multifamily industry will remain strong in 2017. Led by the growing number of Millennials, household formations are expected to top 1 million per year for the next few years; wage growth has been solid; and the homeownership rate continued to decline in most metros in 2016, per data released by the Census Bureau in March.

Metros	2017 Rent Forecast % Change	YoY Change 2017 Indexed rents - March 2017
National - reported metros	2.6%	2.8%
Albuquerque	3.1%	2.6%
Atlanta	4.7%	4.0%
Austin	2.5%	0.8%
Baltimore	1.7%	1.0%
Birmingham	2.7%	1.0%
Boston	1.8%	1.0%
Bridgeport	1.2%	1.6%
Charlotte	3.8%	2.5%
Chicago	3.3%	1.5%
Cincinnati	2.8%	2.0%
Cleveland-Akron	2.3%	2.0%
Colorado Springs	7.1%	8.5%
Columbus	3.5%	3.2%
Dallas	5.5%	3.8%
Denver	3.5%	2.1%
Detroit	4.1%	4.1%
Fort Lauderdale	4.3%	3.0%
Houston	0.7%	-2.2%
Indianapolis	3.7%	2.9%
Inland Empire	7.6%	6.5%
Jacksonville	3.1%	3.0%
Kansas City	3.1%	2.7%
Knoxville	4.4%	2.6%
Las Vegas	5.0%	4.4%
Long Island	2.5%	2.9%
Los Angeles	5.5%	5.5%
Louisville	2.1%	2.2%
Memphis	4.4%	1.6%
Miami	5.3%	2.9%
Milwaukee	2.0%	1.7%

Metros	2017 Rent Forecast % Change	YoY Change 2017 Indexed rents - March 2017
Nashville	4.5%	2.5%
New Jersey - Central	3.0%	3.5%
New Jersey - Northern	4.7%	1.6%
New Orleans	3.1%	0.8%
New York City*	-0.4%	-2.4%
Oklahoma City	0.5%	-2.0%
Orange County	5.0%	4.7%
Orlando	5.8%	3.8%
Philadelphia	3.4%	2.5%
Phoenix	6.0%	5.0%
Pittsburgh	2.5%	0.3%
Portland	5.0%	3.6%
Raleigh	4.2%	2.9%
Richmond	3.5%	1.8%
Sacramento	9.5%	9.4%
Salt Lake City	5.0%	5.7%
San Antonio	2.0%	2.0%
San Diego	4.5%	5.0%
San Fernando Valley	5.8%	5.1%
San Francisco	3.8%	-0.4%
San Jose	5.5%	2.0%
Seattle	8.3%	5.4%
Southwest Florida Coast	7.0%	3.7%
St. Louis	2.6%	2.0%
Tampa - St. Petersburg	5.8%	4.0%
Tucson	3.2%	3.7%
Twin Cities	3.2%	4.0%
Washington, D.C.	1.9%	1.4%
White Plains	4.1%	1.7%
Winston-Salem	3.6%	3.0%

Source: Yardi Matrix

*NYC pertains only to Manhattan

While it remains an open debate whether a significant number of young adults will eventually start families and gravitate toward single-family housing in the suburbs, that doesn't seem likely to happen over the short term. For example, one survey of renters recently conducted by Freddie Mac found that more than half of renters are happy with their apartments and do not plan to move if their rent increased.

Rent growth in the first quarter of 2016 was led by Sacramento (9.4%), Tacoma (8.8%), Colorado Springs (8.5%) and the Inland Empire (6.5%), all Western markets that are lower-cost alternatives to larger, nearby markets. Migration has been strong in the West, and high levels of rent growth in the early part of the decade have priced some residents out of popular markets such as the Bay Area, Seattle and Denver. That leads individuals to smaller, nearby metros that present similar lifestyle characteristics at a lower cost.

Two of the worst-performing markets in the first quarter of the year, Manhattan (-2.4%) and San Francisco (-0.4%), are gateway cities that have had outsize rent increases in recent years and are flirting with the upper limits of affordability. Meanwhile, Houston (-2.2%) and Oklahoma City (-2.0%) are energy-dependent metros still coping with the low prices that have hampered their local economies in the last two years. Another once-hot metro that has cooled is Austin (0.8%), which continues to have strong population and job growth. However, a large supply response in the Texas capital has had a big impact on rents in what was recently one of the hottest growth markets for rent.

A similar story emerges in other markets that led the pack in rent growth in the last few years but have since moderated due to an increase in supply. Denver (2.1%) and Nashville (2.5%) were among the fastest-growing markets as recently as 12 months ago, but rents have moderated as high levels of new supply have been coming online in many metros.

While new supply is hampering overall rent growth in some markets, construction is impacting rents and occupancies in the luxury segment of virtually every market. Upwards of 80% of new development is in the high-end Lifestyle segment, as increasing land and construction costs have made it difficult for builders to pencil out new units at lower price points. As a result of the high-end concentration of growth in supply, rent growth in the Lifestyle segment has fallen behind the Renter-by-Necessity segment. Through the first quarter of 2016, Lifestyle rents rose 0.1% nationally, compared to 0.8% for RBN properties.

This trend can be witnessed in occupancy rates across the country, as well. After converging in the summer of 2015, RBN occupancy rates began to exceed those of Lifestyle assets, with the spread growing larger each month. Since peaking last March, Lifestyle occupancy rates dropped 80 basis points to 94.8% as of March 2017 on a national level, compared to a 57-basis-point drop to 95.4% for RBN assets.

We expect these disparities between Lifestyle and Renter-by-Necessity to continue in 2017, although that might change after the current construction boom starts to weaken in the middle of 2018.

Supply

Apartment deliveries are booming. We expect 360,000 new units to be delivered by year-end, a 2.8% increase in stock and the highest total in the current cycle. The number would be a 21.7% increase over the 281,000 delivered in 2016. The increase in new supply has been a big factor in the moderation of rent growth and is producing concerns that overdevelopment is rearing its head.

Although there is no doubt that the growth in new units built is producing a drag on rents in many markets, we don't think the market is danger of being oversupplied. For one thing, demand for units is robust and likely to stay that way for several years. Roughly 1 million new households are expected to be created annually for the next few years, which means upwards of 300,000 new multifamily households.

Metros	Total Inventory as of 4/17	2017 Forecast Completions	2017 Completions % Change
National - All Metros*	12,785,155	359,958	2.8%
Albuquerque	51,806	85	0.2%
Atlanta	411,964	11,486	2.8%
Austin	208,813	8,355	4.0%
Baltimore	211,834	3,587	1.7%
Birmingham	68,497	1,032	1.5%
Boston	204,832	9,477	4.6%
Bridgeport	125,392	3,029	2.4%
Charlotte	147,046	6,810	4.6%
Chicago	322,341	8,022	2.5%
Cincinnati	105,108	1,678	1.6%
Cleveland-Akron	154,845	1,496	1.0%
Colorado Springs	37,093	372	1.0%
Columbus	157,374	3,778	2.4%
Dallas	688,182	26,689	3.9%
Denver	241,720	15,618	6.5%
Detroit	205,585	1,865	0.9%
Fort Lauderdale	149,633	8,431	5.6%
Houston	610,930	19,272	3.2%
Indianapolis	165,527	3,363	2.0%
Inland Empire	148,568	1,249	0.8%
Jacksonville	93,829	3,430	3.7%
Kansas City	143,982	4,219	2.9%
Knoxville	37,654	1,104	2.9%
Las Vegas	166,315	4,954	3.0%
Long Island	48,623	683	1.4%
Los Angeles	260,505	8,609	3.3%
Louisville	72,265	2,933	4.1%
Memphis	97,871	392	0.4%
Miami	111,077	5,597	5.0%
Milwaukee	76,858	3,016	3.9%

Source: Yardi Matrix

Metros	Total Inventory as of 4/17	2017 Forecast Completions	2017 Completions % Change
Nashville	117,280	8,641	7.4%
New Jersey - Central	121,331	2,516	2.1%
New Jersey - Northern	207,329	2,841	1.4%
New Orleans	54,154	501	0.9%
New York City**	311,511	7,638	2.5%
Oklahoma City	99,912	1,513	1.5%
Orange County	192,160	4,507	2.3%
Orlando	196,453	5,952	3.0%
Philadelphia	278,944	4,459	1.6%
Phoenix	286,296	6,113	2.1%
Pittsburgh	85,592	876	1.0%
Portland	141,697	5,197	3.7%
Raleigh	140,933	4,118	2.9%
Richmond	207,519	3,241	1.6%
Sacramento	125,972	937	0.7%
Salt Lake City	86,816	4,742	5.5%
San Antonio	182,918	7,943	4.3%
San Diego	176,546	3,987	2.3%
San Fernando Valley	139,562	2,418	1.7%
San Francisco	240,480	5,648	2.3%
San Jose	118,481	4,038	3.4%
Seattle	281,457	11,689	4.2%
Southwest Florida Coast	56,492	2,156	3.8%
St. Louis	118,492	1,784	1.5%
Tampa - St. Petersburg	198,220	4,582	2.3%
Tucson	66,614	278	0.4%
Twin Cities	192,814	6,509	3.4%
Washington, D.C.	492,857	13,443	2.7%
White Plains	64,889	1,194	1.8%
Winston-Salem	80,269	1,920	2.4%

*As of May 2017 **NYC pertains only to Manhattan

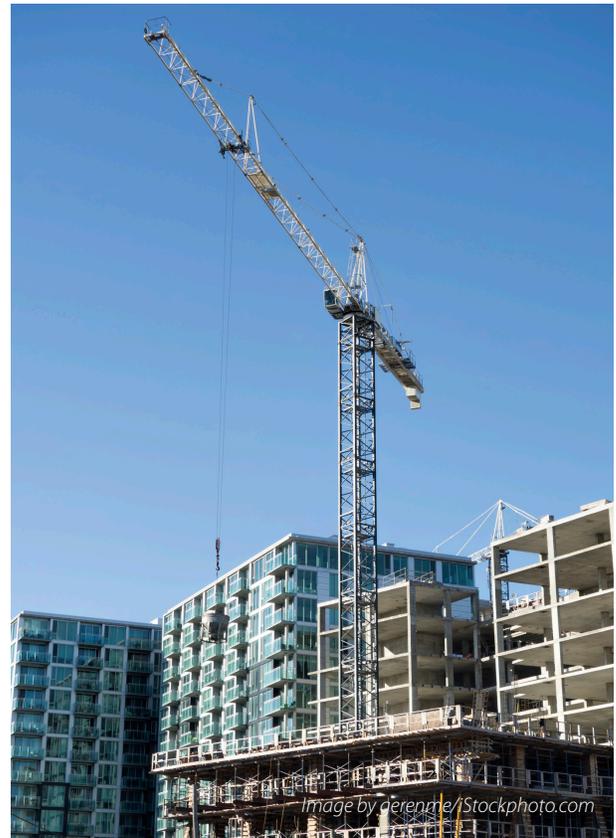
Another factor is that supply is expected to top out in 2017, with a slowing trend beginning in 2018. Some of 2017 deliveries involve construction projects that had completion dates pushed into 2017 for various reasons, including a national shortage of construction laborers, which could postpone until 2018 some of the supply scheduled to be completed this year. And construction lending is increasingly difficult as a result of federal regulations that impose higher capital charges on most development loans. That has made commercial banks more conservative and increased market share of higher-cost private equity funds.

Even if construction overshoots its targeted completion dates, though, the occupancy rates of stabilized properties was a very high 94.8% nationally as of March, and a slight increase would not change market dynamics significantly. That said, there are some metros in which construction is high enough to create imbalances that would cause rent growth to stagnate or decline.

Deliveries will be led this year by Dallas (26,700) and Houston (19,200), which exemplify the differences. Dallas appears to be well positioned, with strong employment, wage and population growth and a diversified economy. A host of companies—including Provision Data Services and Stream Data Centers, which are opening new data centers, and Toyota, Facebook, Liberty Mutual, JP Morgan Chase, FedEx and Fannie Mae—are expanding in the metro. Houston, on the other hand, has had limited wage growth and has a higher unemployment rate than most other markets. The economy is still recovering from the thousands of lost jobs and limited investment activity following the oil price collapse in 2015.

Markets with the most forecast completions as a percentage of existing stock include Nashville (7.4%), Salt Lake City (5.5%) and Miami (5.0%). All three markets are expected to absorb the new supply, although there may be short-term weakness in some submarkets. Salt Lake City and Nashville have been attracting both young professionals and established employers due to their strong economy and appealing lifestyle. Nashville has ventured away from solely relying on the entertainment industry, with job gains led by the health-care sector. Salt Lake City's technology and financial sectors are growing, while Miami still benefits from an influx of foreign investment.

New supply continues to be dominated by high-end Lifestyle developments, which account for about three quarters of the total. Rent growth has been weaker in that category than in the working-class Renter-by-Necessity segment, which has fewer deliveries and more demand.

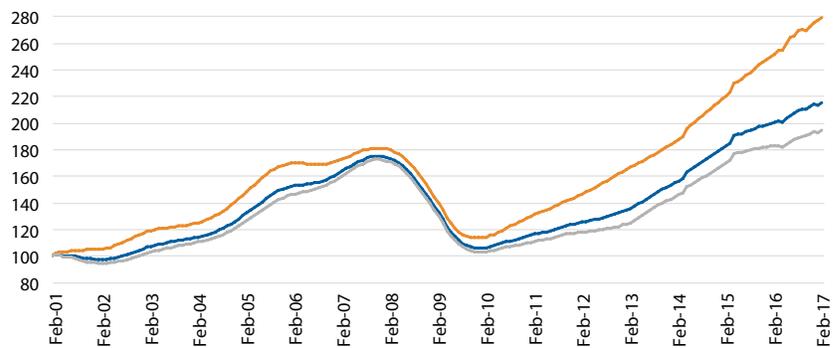


Capital Markets

The real estate capital markets continue to be healthy, although uncertainty has crept into the equation due to global economic and political factors. Questions include whether property prices have peaked, how much interest rates will rise, whether there will be any cracks in the wall of capital that has supported markets, whether CMBS origination will decline and lessen the availability of debt capital, how many changes there will be in the regulatory environment, and whether policy changes such as tax reform will have a major impact on the industry.

Commercial real estate prices are continuing to rise broadly, though the growth is slowing. The Moody's/Real Capital Analytics Commercial Property Price Index increased 7.7% in the 12 months ending in February. Apartment prices gained 10.7% during that time, while core commercial rallied with 6.5%. A consensus has formed in the market that multifamily acquisition yields—at 5.4% nationally, per RCA—have bottomed, and future price appreciation will be focused on income growth.

Commercial Property Price Index (Jan. 2000=100)



Source: Moody's Analytics, Real Capital Analytics

The direction of interest rates creates further concerns about property yields. Rates for 10-year Treasuries rose to 2.6% early in the year, although they dropped to about 2.3% in April as hopes diminished for quick activity on legislation and investors anticipated that an increase in short-term rates over the next few years might cool long-term economic growth. Rising interest rates could produce higher capitalization rates, though the historical correlation is spotty.

An increase in interest rates is more likely to have an impact on core markets and high-quality assets, where acquisition yields are already extremely thin. Transaction volume slid about 10% in the first quarter, although it is coming off cyclical highs and remains strong. There appears to be little or no diminishment in the amount of capital seeking apartments; however, buyers are being a bit more cautious about low yields, and sellers still appear to be demanding record prices.

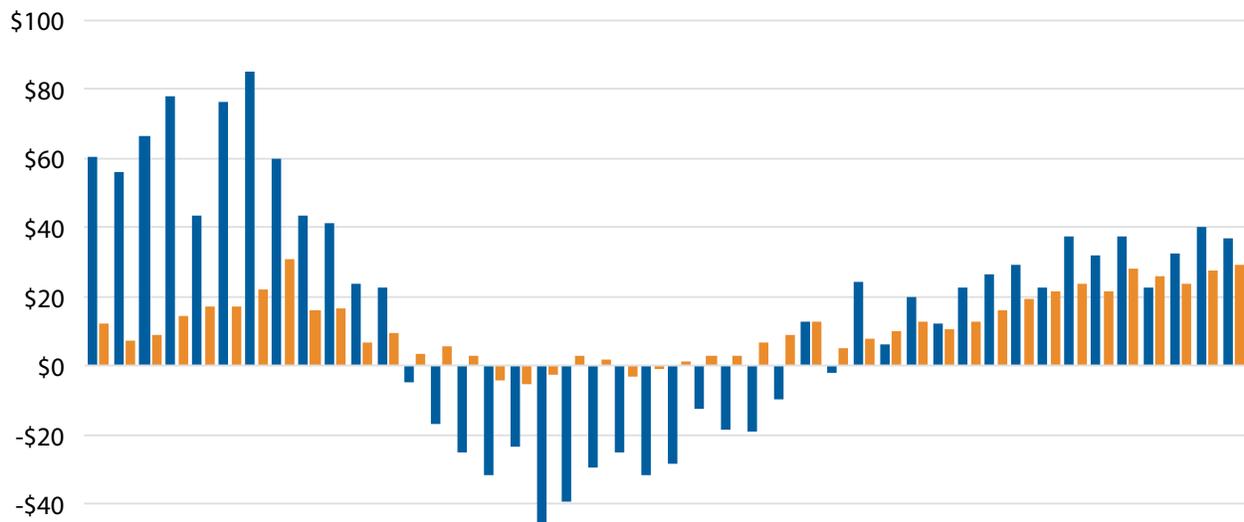
The market is generally bullish on REITs, with most publicly traded shares gaining thus far in 2017, on the heels of another strong finish to 2016. With central banks adopting a bias toward higher interest rates, equity REIT prices have been under pressure anytime the financing markets become more expensive. However, equity REIT prices have stabilized thus far in 2017 at the same time as have long-term interest rates. Most REIT property types face favorable fundamental and financing environments, though sentiment has been negative for some retail strategies as well as there being recent weakness in lodging.

While generally healthy, there are some concerns about the debt markets, although less so in multifamily. Net multifamily mortgage flows increased 12% in 2016, while non-multifamily mortgage flows decreased by about 25%. Since 2013, the volume of total commercial real estate mortgages outstanding increased by \$399 billion, and 74% (\$294 billion) was in the multifamily sector, according to the Federal Reserve. The support by government-sponsored enterprises (GSEs) for multifamily properties continues to underpin that health.

GSE reform still appears to be a year away, as health care and tax reform are the first heavy lifts of the new administration.

The banking industry is sorting out an unusually large number of regulatory and policy issues, as the Trump administration seeks to implement its economic vision. That includes trying to reduce or reverse the impact of banking regulations that were enacted in

Quarterly Change in Commercial Mortgages (Bil)



Source: Federal Reserve, Moody's Analytics

the wake of the last financial crisis, including Basel and Dodd-Frank. One example is "high volatility commercial real estate" (HVCRE) loans, a regulation that took effect in 2015 that requires banks to set aside more capital for construction and redevelopment loans. Banks have complained that what constitutes a redevelopment loan is open to interpretation, so in some cases they have cut back on lending for construction and redevelopment.

Another example would be recent risk-retention rules from Dodd-Frank that took effect in December and require CMBS issuers to hold 5% of the securities they sell. Banks have issued CMBS with a variety of structures this year, including a "vertical" one in which they hold a 5% strip of every class, a "horizontal" model in which they sell the junior 5% strip to a qualified investor, and an "L-shaped" model that is a combination of the two.

However, progress on change is slow. Nearly six months into the new administration, very little is clear about when (or how) regulations affecting the commercial mortgage industry will be changed. Congress has been consumed by other issues, and the administration has been slow to propose policy or appoint officials to key posts that would work on the issues. Consequently, relaxed enforcement and reduced compliance hurdles for banks are going to be hallmarks of Trump administration regulatory policy. One of President Trump's first acts included signing an executive order directing federal agencies to reduce the number of regulations.

Tax policy is another area vexing the industry. Proposals that would have effects on the industry—such as elimination of interest deductions, depreciation and 1031 exchanges—are making their way into discussions about tax reform. At this point, however, it remains difficult to say what will be addressed by Congress.

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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.

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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YARDI® Matrix

U.S. Multifamily Outlook

Winter 2017

Can the Good Times Keep Rolling?

**Rent Growth Slows,
But Tops Long-Term Average**

**Occupancies Remain
Near All-Time Highs**

**Investors Bullish, Despite
Capital Market Uncertainties**

Market Analysis

Winter 2017

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Multifamily Outpaces Economy



The multifamily market has seen phenomenal growth in rents and property values for several years. Can the good times continue to roll in 2017?

We think they can, though the rate of rent increases is going to slow down, transaction yields have likely bottomed and oversupply is going to negatively impact some locales. However, we expect that the multifamily market in most metros will continue to enjoy positive fundamentals. Demand for units will remain strong, even if the growing amount of supply pushes occupancy rates down slightly.

Economic Growth, with Caveats: The new administration and Congress are expected to inject some stimulus into the economy in the form of tax cuts, infrastructure spending and reduction of regulations on business. That brings with it prospects for an improvement upon the moderate growth the U.S. economy has produced for the last several years. However, potential headwinds include the possibility of tariffs or focus on unproductive policies such as deportation.

Rents Continue to Moderate: The slowdown in rent growth from frothy 2015 levels should persist. Deceleration will be pronounced in metros that had unsustainable double-digit increases and those where supply, affordability issues or weakening employment growth will put pressure on rent gains. Even so, we expect national rent increases to be just under 4%, which is above the historical trend of 2.3% and a signal that the market is healthy overall.

Heavy Supply in Some Metros: 2017 is expected to be another strong year for supply, with 320,000 units scheduled to come online, up 5.3% from 2016. The pipeline could begin to diminish slightly in future years, as construction financing becomes harder to find due to higher capital charges and regulator pressure on banks to be less aggressive. The impact of new supply will vary by metro.

Questions About Capital: The capital markets have been friendly to the sector for years, and that should continue in 2017, although cracks may start to appear. Multifamily is still generally viewed as a safe investment with good prospects, but some investors are beginning to hold back due to concerns about interest rate increases when acquisition yields are at historical lows. The debt markets remain stable, although GSE reform is looming in the background.

Economic Outlook

The U.S. economy picked up in the second half of 2016, with ongoing gains in employment and strong GDP growth. Other key metrics—such as manufacturing, inflation and retail sales—also showed strength, which bodes well for economic growth and commercial real estate fundamentals in 2017.

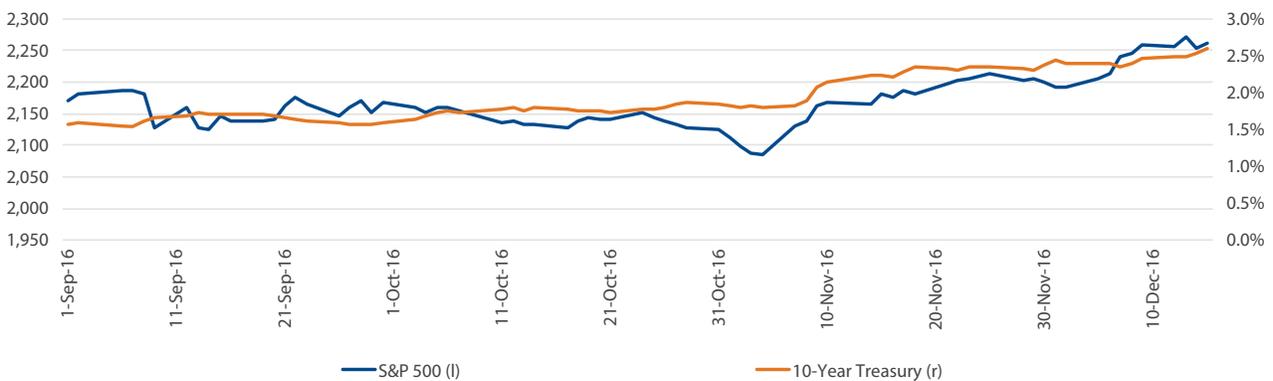
Though the prospects for moderate growth have not changed much from our last outlook, 2017 promises to be anything but just another year. The surprise election of Donald Trump as president, working with a Republican Congress, promises to bring swift and extreme changes in economic policy and regulations. After the initial shock of Trump's upset wore off, the financial markets grew optimistic about the prospects for growth, although details of many policies remain unclear.



As a result of the improved forecast for near-term growth, key equity indices—including the Dow Jones Industrial Average, NASDAQ and S&P 500—reached all-time highs in the few weeks following the election. Markets are optimistic about pro-growth policies centered around lower taxes, fewer regulations, more domestic production and increased infrastructure spending. Key officials have promised immediate reductions to government regulations, especially in the banking and energy sectors, which could jumpstart growth and put upward pressure on prices in the short term. Lending has been constrained in part by regulations, and a rollback of higher capital charges could spur more activity.

While tax cuts and less government regulation may be a near-term benefit, there are a number of potential pitfalls to the president-elect's economic vision. Repeal of the Affordable Care Act could create uncertainty for employers and the health-care system, depending on how it is handled, while a hard stance on immigration and deportations may have a dampening effect on the labor force and economic output. Deportations limited to illegal immigrants with criminal activity would have

S&P 500 Index Levels and 10-Year Treasury Yields



Sources: S&P Dow Jones Indices LLC; S&P Daily Indices; U.S. Board of Governors of the Federal Reserve System (FRB); H.15 Selected Interest Rates [RIFLGFCY10_N.B]

a negligible economic impact. A potentially larger problem is international trade, as president-elect Trump has voiced his interest in renegotiating trade deals and the outright removal of the United States from the Trans Pacific Partnership. If his positions on trade pacts are a strategy to negotiate more favorable terms, the impact will be muted. But there is potential downside in new tariffs, if they are enacted.

The economy may see the short-term benefits of tax reductions and infrastructure investment, but there are also some questions to be answered regarding the long-term economic viability of Trump's policies. What's more, some of the potential benefits from a pro-growth agenda, such as simplification of the tax code, must go through the legislative process, and changes will take time. Mainly, then, this is a question of which policies lead vs. lag and whether (and how) policies are staged into waves—regulatory action first, legislation second, and anti-growth policies third. The exact trajectory is at this point not known, but early indications are encouraging.

Despite the uncertain future, real estate fundamentals remain strong, keyed by healthy employment numbers. The economy averaged 180,000 new jobs per month in 2017. Unemployment sat at a cycle low of 4.6% as of November, underemployment is at cyclical lows while the number of job openings is at a cyclical high, and wage growth picked up in the second half of 2016. The health of the economy led the Federal Open Market Committee to raise its federal funds target interest rate by 25 basis points in December, and the committee is targeting three more increases in 2017, although it certainly is too soon to predict.

The stability of the job market and faster growth should provide steady demand for commercial real estate in 2017. Job gains and the growing number of renter-age households will boost demand for multifamily. Healthy consumer balance sheets should keep retail spending growing at a 3-4% rate, although the benefit to retail properties is concentrated in well-located and dominant centers due to the growth of e-commerce. Amazon and other major online retailers will continue to fuel a need for more warehouses close to population centers.

Rent Growth and Occupancy

Rents began decelerating nationally in the second half of 2016 and we expect that trend to continue into 2017. One reason is the mismatch between demand and supply, which is already producing a slowdown in high-rent markets such as San Francisco, Denver and Austin. Each of those metros has a strong economy and an attractive lifestyle that continue to drive in-migration. But all saw severe rent deceleration in the second half of 2016, as rent levels have surpassed what many tenants can afford.

New supply has largely been targeted at luxury units, while demand in most markets is stronger at the middle or lower end of the pricing scale. Although growth in many high-rent markets across the country—such as New York, Boston, Philadelphia and Los Angeles—is limited by affordability, the constraint posed on rent growth is a nationwide issue.

In a broader sense, increasing amounts of new supply are another factor that will weigh on rent growth. Metros with above-trend increases in supply as a percentage of stock include Dallas, Houston, Seattle, Denver, San Antonio, Orlando, Austin, Charlotte and Washington, D.C. Many of these metros have strong job engines that are attracting young workers, but even so, rent growth may slow down closer to historical norms until the new units are absorbed.

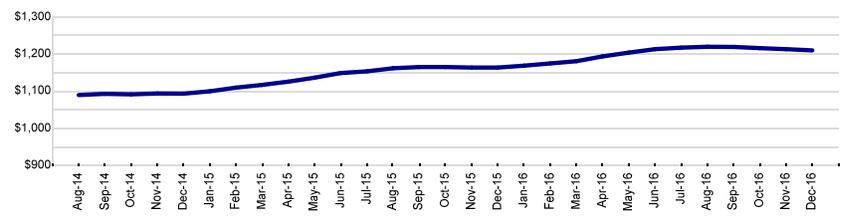
Market	2017 Rent Forecast, % Change	YOY Rent Growth December 2016
National	3.9	4.1
Sacramento	9.6	10.1
Seattle	8.6	8.0
Tacoma	8.0	11.4
Inland Empire	7.9	7.7
Portland	7.0	6.0
Atlanta	6.9	5.5
Austin	6.9	3.9
Nashville	6.9	5.5
Phoenix	6.5	6.3
San Francisco	6.5	2.3
Orlando	6.2	5.4
Colorado Springs	6.0	9.9
Dallas	5.8	5.6
Raleigh - Durham	5.8	4.5
Los Angeles	5.5	6.2
Miami	5.5	4.6
Tampa	5.5	5.5
Orange County	5.3	4.4
San Fernando Vall.	5.3	5.8
Denver	5.0	4.1
San Jose	5.0	0.0
San Diego	4.9	4.6
Las Vegas	4.7%	6.4

Source: Yardi Matrix

Market	2017 Rent Forecast, % Change	YOY Rent Growth December 2016
Northern New Jersey	4.5	4.3
Memphis	4.4	4.0
Philadelphia	4.4	3.9
Indianapolis	4.1	4.2
Boston	3.8	2.4
White Plains	3.6	4.1
Jacksonville	3.5	4.1
Kansas City	3.5	3.4
Long Island	3.5	4.9
San Antonio	3.5	3.1
Chicago	3.4	3.4
Houston	3.2	1.3
Washington, D.C.	3.2	2.6
St. Louis	3.1	2.8
Twin Cities	3.1	4.4
Birmingham	3.0	3.0
Central New Jersey	3.0	3.7
Louisville	2.9	1.8
Richmond	2.8	3.2
Baltimore	2.5	2.8
New Haven	1.1	2.4
Oklahoma City	0.3	0.9

One outlier on the high end of the spectrum is Sacramento, which has maintained double-digit rent gains due to its status as a low-cost alternative to the Bay Area, with very little new development. Houston is an outlier at the low end, as job growth has slowed while construction continues unabated.

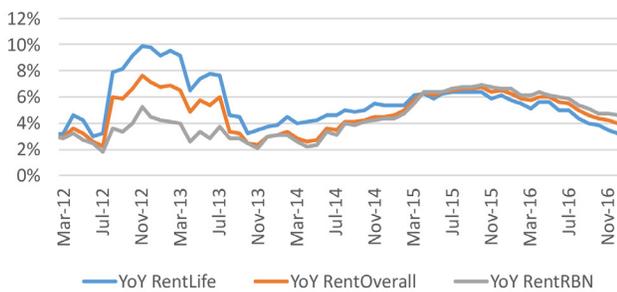
National Average Rents



Source: Yardi Matrix

When all is said and done, we expect rent growth to moderate to 3.9% in 2017, which is down from where it was through most of the last two years but still above the long-term average of 2.3%. Although growth will revert to more sustainable levels, multifamily remains a safe bet for most investors over the next few years.

U.S. Rent Growth, YoY Change



Source: Yardi Matrix

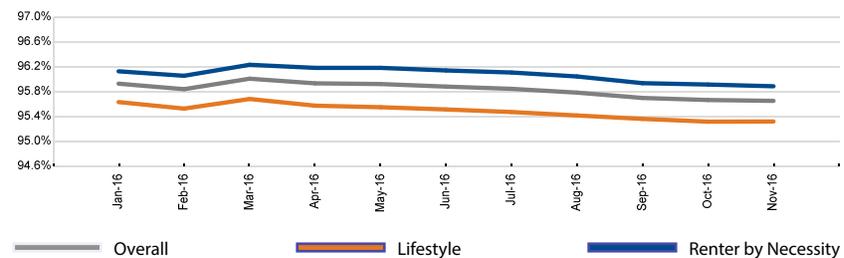
The biggest factor is that demand for multifamily will likely be robust for years—even as long as a decade. The number of Millennials between the prime renter ages of 20 and 34 is projected to increase by two million before it peaks at almost 70 million in 2024. That coincides with a bump in the number of white, college-educated renters relocating to urban areas for the “18-hour” city lifestyle that includes entertainment and access to public transportation.

As the young worker pool grows, unemployment rates have dipped below 5% and wage growth has intensified, hitting 2.8% year-over-year as of October 2016. The result is a boom in household formations, which have steadily risen since slumping badly in the wake of the last recession.

A further reason for optimism is that new supply has not kept up with the surge in multifamily households. The number of renter households increased by 9.3 million in the 10 years between 2005 and 2015, according to the Census Bureau, while the number of owner-occupied households dropped by 2.1 million.

The result is that occupancies of stabilized properties are near all-time highs: 95.8% nationally as of October, according to Yardi Matrix. Even though supply has rebounded from the recessionary lows—Yardi Matrix forecasts about 320,000 units to come online in the U.S. in 2017—that is barely enough to match projected demand from renters.

Occupancy—All Asset Classes by Month



Supply

2017 is shaping up to be the biggest year for new supply since the financial crisis, as 320,000 new units are expected to come online. That would mark a 5.3% increase from the 303,000 units that came online in 2016. We expect that this year could be a high-water mark in the cycle, as new permits have leveled off. Some of 2017's growth represents a carryover from projects that were scheduled to be completed in 2016 but were delayed. Plus, lenders have become much more conservative about construction financing as a result of greater capital charges implemented on high-volatility commercial real estate loans.

Once again, new supply will be led by Dallas (25,000 units) and Houston (15,000), although the two metros have different outlooks. Dallas' diversified economy continues to grow and absorption of apartments remains strong, but Houston's more energy-centric economy remains weak, with vacancy rates likely to rise given the number of units coming online.

Market	2017 Forecast Completions	2017 Completions % Stock
National - all markets	319,458	2.5%
Dallas	25,093	3.7
Houston	15,450	2.6
Washington, D.C.	13,686	2.7
Seattle	12,351	5.5
Denver	12,080	4.9
Atlanta	11,113	2.7
Boston	8,727	4.3
Austin	6,883	3.3
Nashville	6,861	5.7
San Francisco	6,605	2.7
San Antonio	6,466	3.7
Miami	6,404	5.5
Chicago	6,244	2.0
Los Angeles	5,959	2.3
Phoenix	5,788	2.0
Twin Cities	5,553	2.9
Tampa	5,341	2.7
Raleigh - Durham	4,338	3.1
Orlando	4,211	2.2
Portland	4,211	3.0
Philadelphia	3,864	1.4

Market	2017 Forecast Completions	2017 Completions % Stock
San Diego	3,791	2.1%
Kansas City	3,632	2.6
Orange County	3,396	1.8
Richmond	3,249	1.6
New Haven	2,985	2.4
Indianapolis	2,892	1.8
Baltimore	2,586	1.2
Las Vegas	2,301	1.4
San Jose	2,224	1.8
Louisville	2,219	3.1
Jacksonville	1,882	2.1
St. Louis	1,827	1.6
Oklahoma City	1,614	1.7
Inland Empire	1,505	1.1
Memphis	1,119	1.2
Sacramento	1,060	0.9
San Fernando Valley	971	0.7
Birmingham	927	1.4
White Plains	863	1.3
Tacoma	848	1.4
Long Island	590	1.2
Colorado Springs	449	1.2

Source: Yardi Matrix

Other metros with large amounts of supply in 2017 include Washington, D.C. (13,700 units), Seattle (12,300), Denver (12,000) and Atlanta (11,100). Construction in these metros generally has been a response to strong demand for 18-hour cities that have been attracting young workers. However, the amount of supply could impact rent growth and has the potential to increase vacancies if the local economies slow down.

As a percentage of total stock, leading the pack are two metros at the opposite end of the geographic spectrum, Seattle and Miami, both of which will add 5.5% to their apartment inventory in 2017. Denver and Nashville (both at 4.9%) and Boston (4.3%) also are adding a high percentage of new units.

While some cities have been able to absorb new supply better than others, decelerating rents have been a trend in all cities, especially San Francisco and Denver, two metros that saw significant supply increases in 2016. Seattle, one of the best-performing metros for rent growth in 2016, could mimic San Francisco and Denver, as the new supply will likely put downward pressure on rents. Miami may be on the brink of oversupply, as rents have slowed ahead of the construction boom.

Conversely, some of the best-performing metros in rent growth have limited supply increases in the pipeline. California markets such as the Inland Empire (1.1%), Sacramento (0.9%) and the San Fernando Valley (0.7%), are expected to have low completions as a percentage of total stock, which may support long-term growth in rents.

The composition of new supply continues to create affordability issues, as most construction is concentrated at the high end of the quality spectrum in primary or secondary markets. Developers have been so focused because high construction and land costs make it difficult to produce profitable Class B and C units. However, the oversupply of Class A inventory has caused a bifurcation in the market, and as a result, units at the lower and middle part of the spectrum have outperformed in rent growth and occupancy, while the demand for more affordable housing remains robust.



Capital Markets

As we've noted in past outlooks, the capital markets and supply/demand fundamentals have moved to different beats during this cycle. Investor demand for commercial real estate allowed property values and debt availability to recover quickly, as vacancy rates and rent growth generally inched forward. However, after a huge run-up since 2010, apartments now seem fully priced and the sector appears vulnerable to a more cautious outlook and/or the rise in interest rates. On the debt side, lenders of all types are good to keep providing financing to the sector, though the potential changes to the government-sponsored enterprises (GSEs) looms in the background as a potential trouble spot.

Investor interest in multifamily remains high. Multifamily property values are 50 percent above pre-crisis peaks, and acquisition yields were at 5.6% nationally as of third-quarter 2016—lower than they were at the height of the financial crisis—according to Real Capital Analytics Inc. Although the amount of capital flowing to the sector is slowing slightly due to concerns about whether the market has peaked, investors are set to stay in for the long haul as the conditions that drove them there in the first place largely continue. Investors believe the fundamental outlook for multifamily is still strong, with historically high occupancy rates and rent growth in metros across the country. Even if the rate of growth slows, property income seems a stable bet, given demographic and market trends. What's more, barring unforeseen circumstances, the U.S. likely will continue to be seen as a safe haven relative to other markets around the world.

Commercial Property Price Index (Jan. 2000=100)



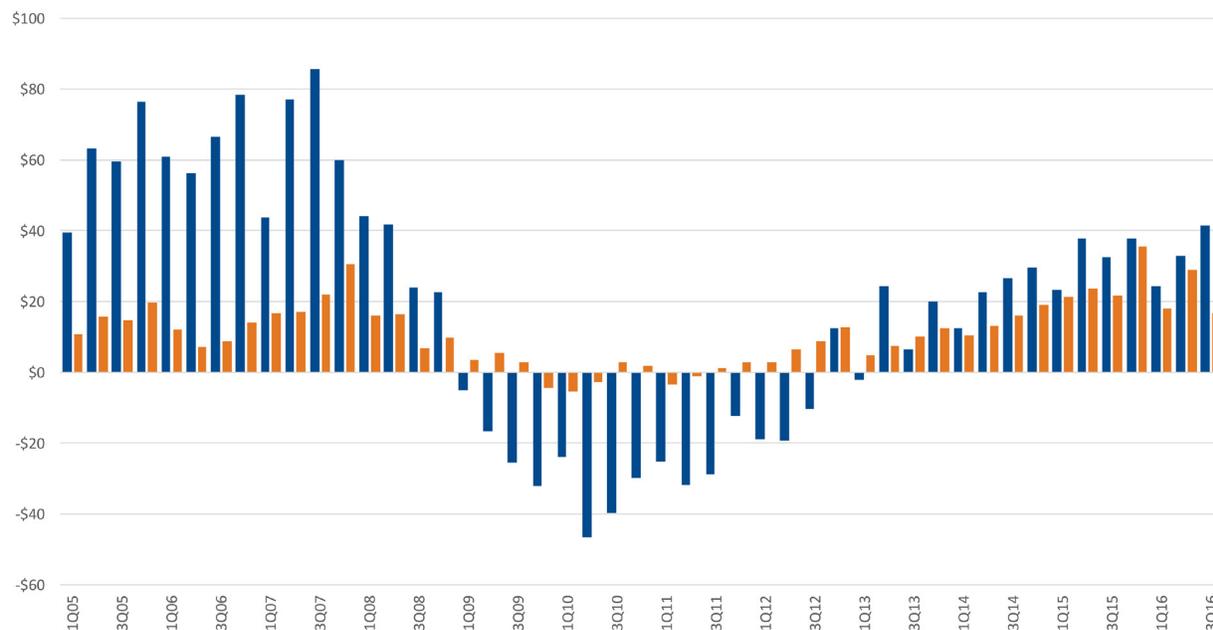
Sources: Moody's Analytics, Real Capital Analytics

One issue that could weaken the forecast is interest rates. The market has benefited from low interest rates throughout this cycle, but they may be on an upward trend. The 10-year Treasury rate climbed more than 70 basis points in the two months following the election, and the Federal Reserve has signaled its intent to gradually normalize rates.

Our view is that if rates don't climb much further, property yields should remain fairly constant because apartment cash flows are stable and the sector remains attractive relative to other investments. Even at 5.6%, apartment yields are roughly 300 basis points above the risk-free rate, which is acceptable given the alternatives and stable prospects. If 10-year Treasury rates increase much more, though, the likelihood is that cap rates will rise moderately in tandem. Over the next couple of years, investors should brace themselves for moderate returns that are limited mostly to increases in net cash flow, while appreciation gains slow down or pause.

The debt capital markets are one of the factors that have helped provide a shot to multifamily as an investment class. On the surface, 2017 looks to be another good year: Fannie Mae and Freddie Mac are—as of now—in good shape and originating at record levels, while other types of lenders remain eager to book loans. Fannie and Freddie's regulator, the Federal Housing Finance Authority, has increased their allocation to \$36.5 billion apiece, and they have authority to lend much more through new programs for properties with affordable components and sustainability efforts.

Quarterly Change in Mortgage Holdings (Bil)



Sources: Federal Reserve, Moody's Analytics

The individual lender segments, however, are each dealing with issues that could interrupt the level of service they provide to the industry. The GSEs, for example, have restructuring hanging over their heads. Although details are not yet known, the new administration and Congress are sure to impose new policies on the GSEs. How that impacts the agencies' role in the multifamily market is still not clear, but changes are likely coming in the next couple of years.

Similarly, commercial banks and CMBS programs have been spending a lot of time dealing with regulatory issues. For banks, the key issues include stress tests and higher capital charges for construction and redevelopment loans. Although banks have as a whole increased their multifamily mortgage holdings, most are being conservative about writing construction loans, while many regional and local banks have cut back on lending to avoid pressure from regulators. The result is that less well-capitalized sponsors and assets in tertiary markets are more difficult to finance.

CMBS programs likewise are trying to determine how best to deal with a host of new regulations, including risk retention, a requirement that they hold 5% of the CMBS securities they issue that went into effect at the end of 2016. CMBS volume dropped 25% in 2016 to \$76 billion, according to "Commercial Mortgage Alert." The new Congress is expected to reduce or repeal some of the regulations, though it is too soon to know the details.

Conclusion: Positive Outlook; Exercise Caution

Our outlook for 2017 is largely positive. We expect moderate gains in rents, and demand for commercial assets should remain healthy due to strong job growth and demographics. Multifamily rent growth will decelerate and some markets will struggle, but overall we expect rent growth to stay positive. However, market players need to exercise caution, as there are more risks to the downside than the upside. The capital markets forces that have pushed prices up are running out of steam. Debt costs are rising, and the mismatch between buyer and seller expectations could cool down transaction volume. That could mean fewer deals in core markets and more for secondary markets or value-add properties.

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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

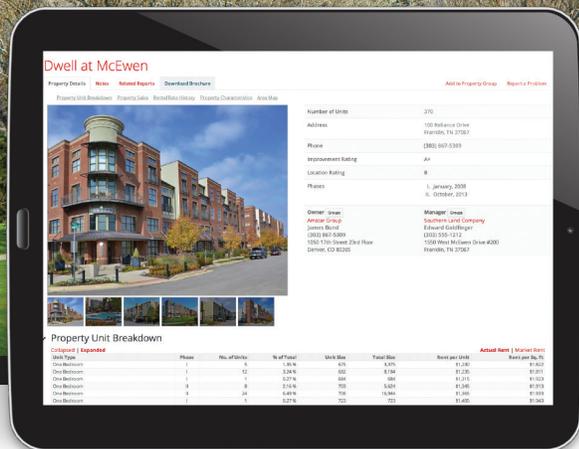
The value in application of the Yardi® Matrix Context rating is that standardized data provides consistency; information is more meaningful because there is less uncertainty. The user can move faster and more efficiently, with more accurate end results.

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.

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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