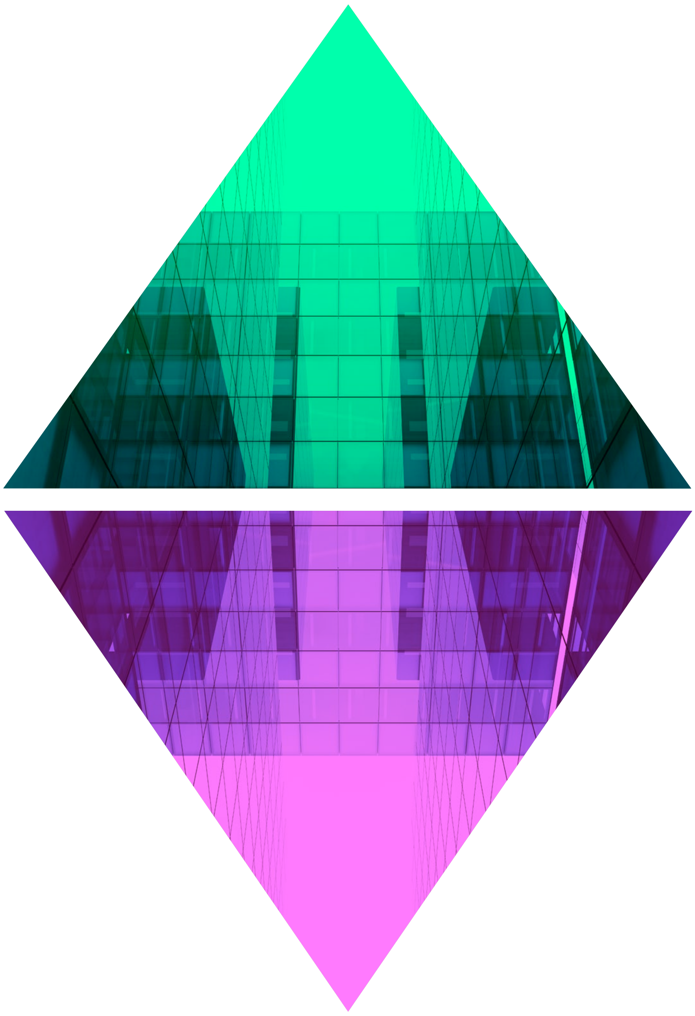
CBRE RESEARCH | U.S.



REAL ESTATE MARKET OUTLOOK 2019

CBRE

INTRODUCTION

Spencer G. Levy
Chairman & Senior Economic Advisor
CBRE Americas Research

During a recent meeting with a large Canadian pension fund advisor, Kansas City—not normally identified with prime real estate investment—became the focal point of an "emerging markets" strategy the advisor was developing for a client from Singapore.

In retrospect, foreign capital interest in Kansas City is not surprising since yields in major global markets have largely converged at record low levels. Investors increasingly are testing new markets—and testing new lows on yield—simply to deploy capital. A large German investor is still actively deploying capital to the United States despite hedging costs that lowered its yield by up to 350 basis points annually. Extremely low yields plus super-expensive hedging costs mean we are in a new investment world where institutional investors are willing to accept more risk for less return.

In late-cycle environments, it's not unusual to see capital shift to smaller secondary markets. What is unusual is that we have not seen cap rate convergence in primary and secondary markets, which often happens at the end of the cycle. This creates opportunity, as one of the most effective long-term investment strategies is to "lead" rather than "follow" the money. Leading the money means going into "emerging" U.S. markets like Seattle 20 years ago, Austin 15 years ago, Nashville seven years ago and maybe Tampa, Portland and Kansas City today. Leading the money may result in cap rate compression even in a rising interest rate environment like we have today. This doesn't mean that investors should ignore the major markets like New York and Los Angeles, whose long-term growth prospects are buoyed by a critical mass of talent, capital and infrastructure.

Another compelling trend is the re-definition of what constitutes Class A space. Until recently, you could not find any Class A office space in the Arts District in L.A., Fulton Market in Chicago, Bakery Square in Pittsburgh and Midtown-South in Manhattan. Today, all of them have a ton of it and have attracted some of the top tech and blue- chip tenants in the market. This is because the definition of Class A is changing, with lots of adaptive re-use projects, local retail, great live-work-play environments and partnerships with local universities to attract and retain talent. In short, the scarcity of investors (yield) has now converged with the scarcity of occupiers (talent clusters) to drive Class A office space into the frontier of emerging markets that only a few years ago were laden with only Class B and C product.

Just as these new markets combine all elements of commercial real estate into one package, so too does this CBRE 2019 Market Outlook. Although we are late in the cycle, the outlook remains very good for each of the four major real estate asset types. Continued economic growth bodes well for the office, retail and industrial sectors, while less homebuilding is benefitting multifamily and lenders and developers have avoided the temptation to overbuild in this cycle. Some new opportunities have emerged, including multistory industrial, life-sciences/health-care facilities and workforce housing. As always, CBRE combines its industry-leading research with industry-leading "facts on the ground" from our brokerage professionals to produce our forecast. Please reach out to your local research or transactional professional to learn more.

PAGE 5

ECONOMY

2.7% GDP growth is forecast for 2019, slightly lower than 2018

Momentum from strong employment and economic growth in 2018 will continue next year as consumer and business confidence remain high. The strong economy will support interest rate hikes in 2019, leading to gradual, moderate increases in long-term rates. However, inflationary pressure from a surge in wages or higher import prices due to tariffs is a potential concern. If markets reevaluate inflation risk, bond rates will rise more sharply than expected, likely reducing debt capital and foreign capital inflows (due to a stronger dollar). Slowing growth in China and Europe also poses risk, but the U.S. economic outlook is generally positive for next year.

PAGE 9

CAPITAL MARKETS

Cap rates' spread over 10-year Treasury yields is expected to average 350 bps in 2019

Cap rate compression likely will not continue next year, except potentially in some high-growth secondary markets. Overall, cap rates likely will be flat, though certain retail segments may see moderate increases. Stable yields will continue to attract investors even as interest rates rise, and the substantial capital allocations to real estate will fuel acquisitions. Investment volume likely will be on par with 2018 levels, with entity-level transactions continuing to boost total volume as they did in 2018. Minimal appreciation in commercial real estate values is expected in 2019, but income returns should remain healthy.

PAGE 13

OFFICE/OCCUPIER

37 million sq. ft. of net absorption expected in 2019, marking the 10th-straight year of positive absorption

Flexible space offerings could account for 10% of Class A space by 2028

Office-using employment growth, albeit at a slower rate due to labor market constraints, will drive further office market expansion in 2019. Relatively high levels of new supply will bring the market into greater balance, although construction levels remain below previous cyclical highs. New product will help meet strong tenant demand for modern, efficient, highly amenitized space to attract and retain employees in an increasingly competitive labor market. Occupiers will continue to seek flexible space offerings and lease structures that keep them adaptable to changes in the economy and their organizational needs.

PAGE 20

INDUSTRIAL & LOGISTICS

Demand has exceeded supply for nine consecutive years by an average of 94.1 million sq. ft. The imbalance between supply and demand has driven the vacancy rate to a historic low of 4.3%

The industrial real estate sector will continue to evolve in 2019 amid the integration of logistics and retail. Major markets with large population centers and complex supply chains will continue to capture much of the logistics demand; however, significant growth prospects are evident in secondary markets with strong demographic shifts. Occupier demand should remain strong in 2019; however, lack of available logistics space will challenge the expansion or relocation plans of some users. As a result, absorption gains may soften while average asking rents rise.

PAGE 25

RETAIL

Total retail sales increased by 6.1% year-over-year in Q3 2018—the biggest gain since 2012

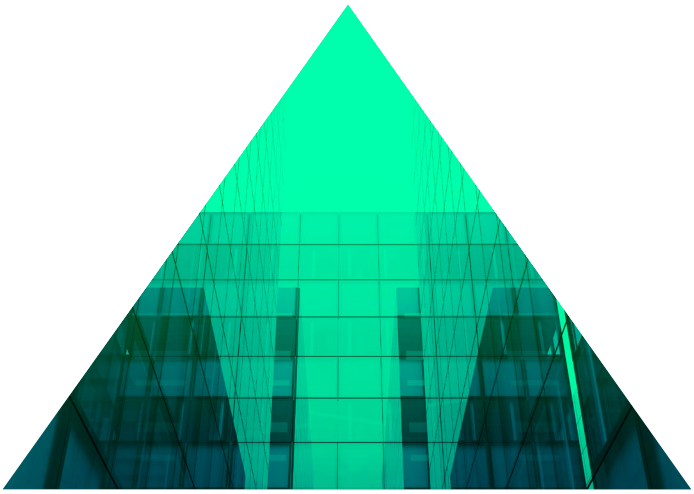
Continued healthy retail sales growth—the result of rising consumer confidence, a strong job market, lower taxes and higher wage growth—will drive strong retail fundamentals in 2019. As mall owners seek to drive traffic flow and reposition shuttered department store space, they will increase redevelopment and re-tenanting activity. Across categories, retailers will continue to develop their omnichannel strategies and make significant reinvestment in their physical stores. In response to growing consumer demand, 2019 should be a pivotal turning point for omnichannel in the food & beverage category.

PAGE 28

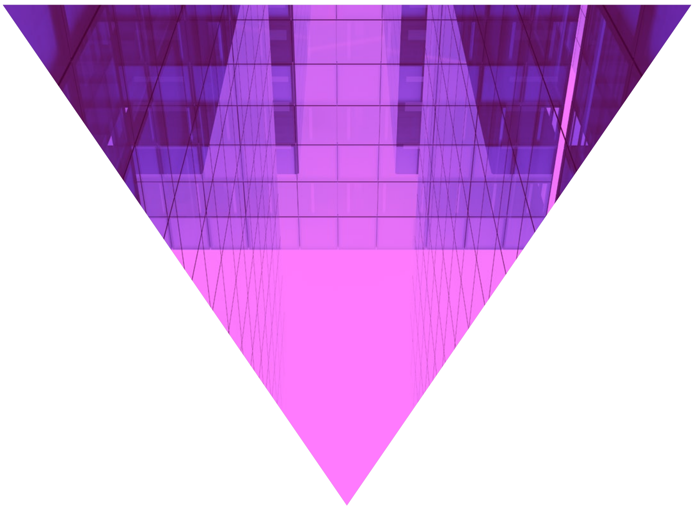
MULTIFAMILY

280,000 multifamily units will be delivered in 2019, slightly under 2018's 290,300 units

Multifamily completions will remain high in 2019, but construction starts will finally fall, promising greater market balance in 2020. Secular and cyclical trends are positioned to remain highly favorable for multifamily demand in 2019, and translate into robust net absorption next year. Nevertheless, vacancy will inch up and rent growth will be under its long-term average. The multifamily sector will continue to attract high levels of investment and debt capital, and workforce housing will remain an appealing investment strategy given its favorable supply/demand balance.



ECONOMY



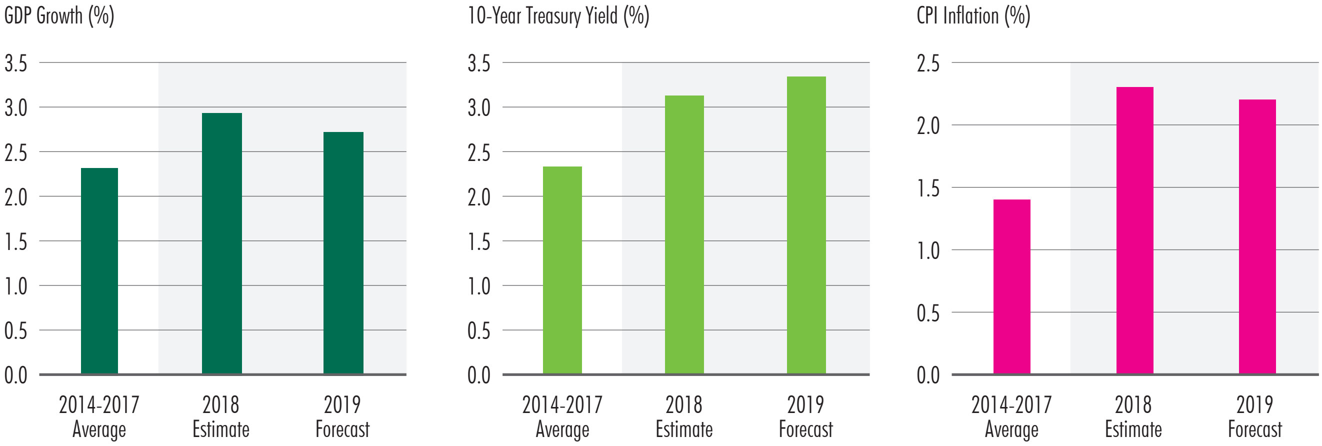
ECONOMY

Fiscal stimulus helped drive robust expansion in 2018, with the pace of both GDP and employment growth well above the norm for this cycle. Will it continue in 2019?

CBRE's view is that confidence and momentum will drive consumer spending and business investment in 2019, leading to solid economic growth that will benefit all sectors of the U.S. economy, including commercial real estate. The positive effect of the fiscal stimulus may fade over the course of the year, particularly as it relates to the housing market, so growth may be lower than in 2018, but not by much. Our forecast is for 2.7% GDP growth.

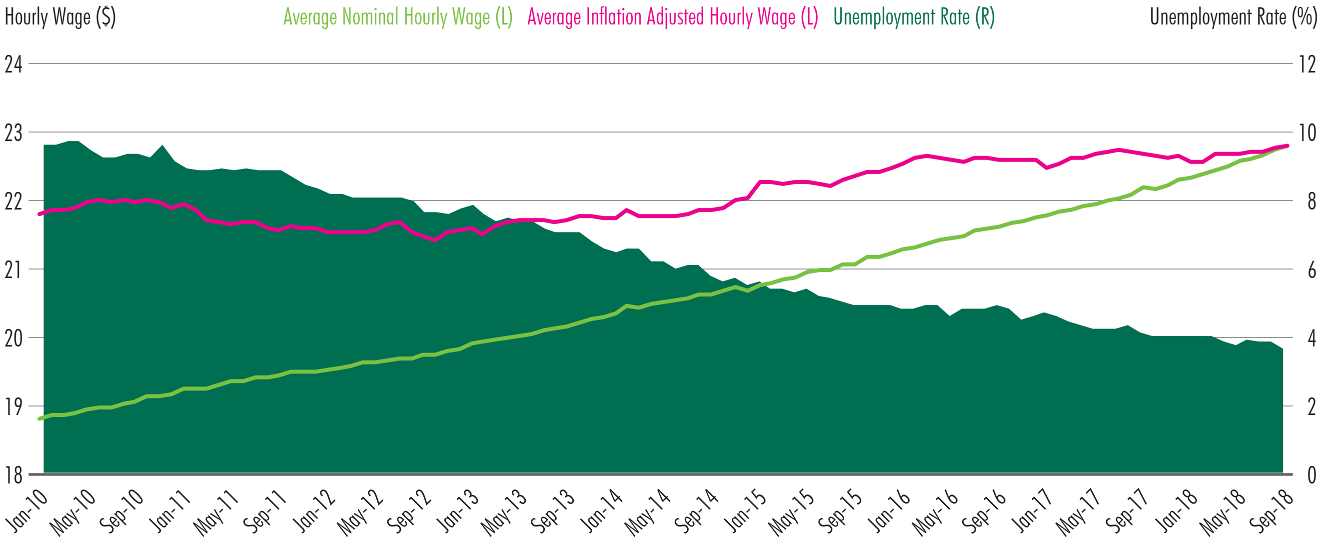
Despite record-low unemployment, growth in real (inflation-adjusted) wages has been relatively slow. Nevertheless, this has helped to extend the current economic cycle by keeping inflationary pressure low.

FIGURE 1: KEY ECONOMIC METRICS ACCELERATED IN 2018



Source: U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, U.S. Federal Reserve Board, CBRE Research, CBRE Econometric Advisors, November 2018.

FIGURE 2: REAL WAGE GROWTH HAS LAGGED EMPLOYMENT GAINS



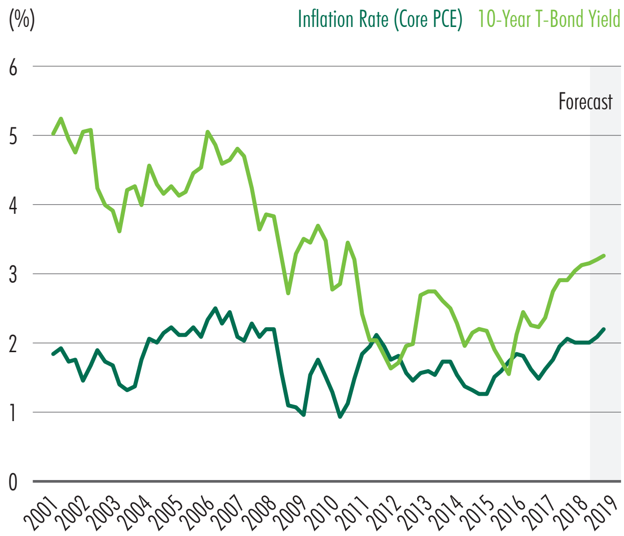
Source: U.S. Bureau of Labor Statistics, CBRE Research, November 2018.

Real wages will continue to increase in 2019, allowing the Fed to cautiously raise interest rates.[1] However, there is a risk to this outlook. Companies are under pressure from labor shortages and there is a growing risk that wages will surge. If that happens, markets will reevaluate the inflation risk to the economy and bond rates will rise more sharply than expected.

An additional risk is from import tariffs imposed by the U.S. on China and other countries. While these could stimulate domestic production by bringing manufacturing jobs back to the U.S., they also raise the price of goods and may increase inflationary pressure.[2] Retaliatory tariffs by U.S. trading partners pose risk to domestic producers through higher export prices, which could impact demand.

Core inflation should hover around 2% next year, but there is a near-term risk that it could be higher in the first half. Nevertheless, growth with continued strong hiring will require the Fed to increase interest rates to above 3% by the end of 2019 (one more hike in 2018 and two in 2019). The risks to this outlook are equally balanced: Surging wages would prompt more aggressive tightening (three hikes in 2019); a deterioration in the global economy, perhaps in China or Europe, would cause the Fed to pause (no hikes in 2019). The increase in inflation, although mild, will also push up the 10-year Treasury yield.

FIGURE 3: INFLATION AND INTEREST RATES ARE ON THE RISE



Source: U.S. Bureau of Labor Statistics, U.S. Federal Reserve Board, CBRE Econometric Advisors, CBRE Research, November 2018.

[1] Despite low employment, a range of factors is suppressing wage growth. These include: 1) the ability of companies to outsource jobs to lower-cost locations or replace them with technology; 2) lingering worker insecurity from the Great Financial Crisis; 3) low levels of inflation, including falling prices in some areas allowing households to maintain the standard of living without wage growth; 4) the growth of part-time working.

[2] USMCA, which will replace NAFTA, specifically limits the level of components that can be sourced in "Non-Market Economies," such as, according to World Trade Organization rules, China.

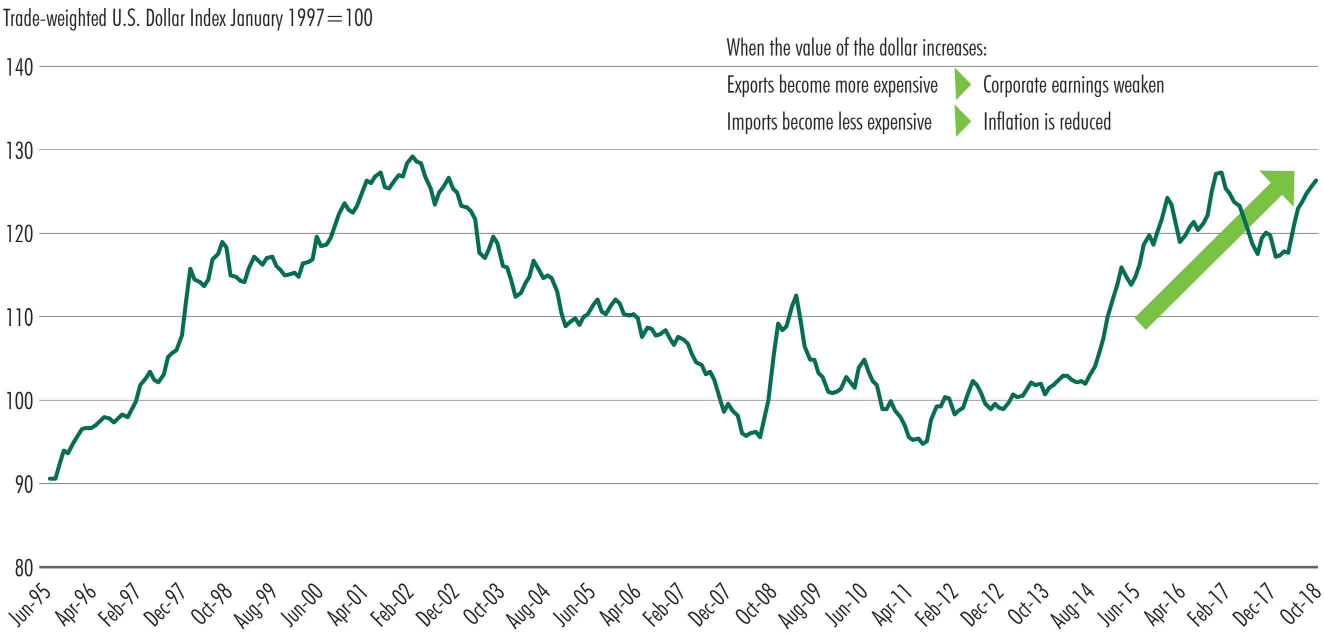
One area of domestic weakness is the single-family housing market. After robust price growth in recent years, rising mortgage rates have made homeownership less affordable and home sales have been decreasing across the U.S. for several months. While house prices are not falling, the S&P CoreLogic Case-Shiller Home Price Index has been losing growth momentum since April 2018. The slowdown in home ownership and rise in renting will benefit the multifamily sector. Since the housing market is an important and large component of U.S. economic sentiment, there may also be an impact on consumer spending in the second half of 2019.

Looking internationally, the Chinese and European economies have started to slow, in part as a result of trade tensions. Planned fiscal stimulus in both regions in 2019 should offset the current weakness. However, the risk of a bigger slowdown in China in the first half of 2019 is growing due to earlier policies to reform the economy and limit the growth of debt.

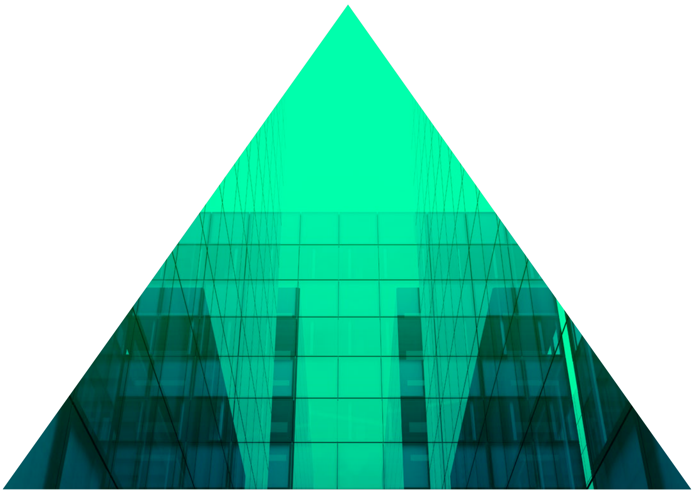
The U.S. will enter 2019 as the fastest-growing advanced economy. International investors are betting that U.S. interest rates will continue to rise and have driven up the value of the U.S dollar. This should continue throughout 2019 and will have several consequences. U.S. real estate has become more expensive for foreign investors due to a rise in hedging costs, so a small decline of overseas capital inflow may occur. U.S. exports are more expensive, so, as 2019 unfolds, U.S. corporate earnings growth may moderate and stock market volatility may increase. Finally, the strong dollar will put emerging markets under pressure as they struggle to pay the interest on their large levels of dollar-denominated debt. There is some upside to a strong dollar, chiefly cheaper goods for American consumers, which will boost port operations, and by extension industrial demand and the retail sector.

Overall as we head into 2019, the U.S. economy is in good shape. There are some risks from wage inflation and its potential impact on the bond market and from developments in the international economy, but good growth should continue throughout 2019. This will benefit commercial real estate, assuming companies can find the workers they need to take advantage of buoyant economic conditions.

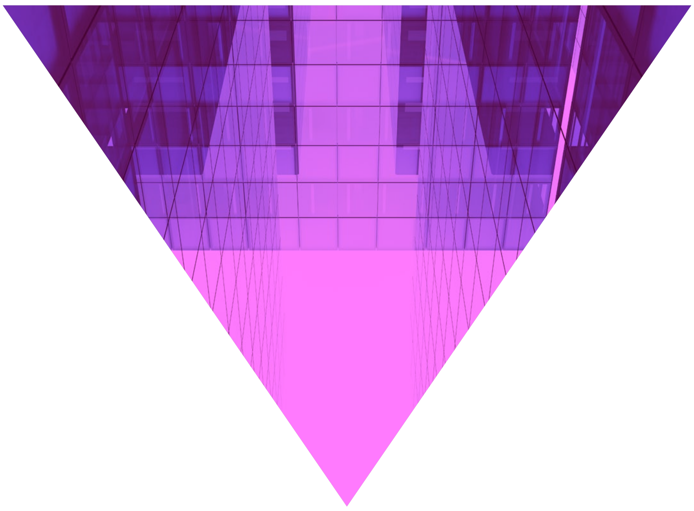
FIGURE 4: IMPLICATIONS OF A STRONGER U.S. DOLLAR



Note: Broad index; data is not seasonally-adjusted.
Source: Board of Governors of the Federal Reserve System, November 2018.



CAPITAL MARKETS



U.S. capital markets were very active in 2018, with robust investment appetite, continued cap rate compression and healthy commercial mortgage availability. Transaction volume in particular surprised on the upside. Total volume should exceed $500 billion (including entity-level deals) by year's end, nearly 10% above 2017 levels.

The multifamily sector continued to attract the largest share of investment, while industrial maintained the fastest rate of growth. Hotel investment also had a significant upswing in 2018, primarily in markets with high population growth. Large-ticket entity-level transactions, many of which involved foreign buyers, boosted the retail sector. The $16 billion merger of French company Unibail-Rodamco with Westfield, which included an $8 billion portfolio of U.S. properties, and the $15 billion acquisition of GGP by Canada-based Brookfield Properties are key examples. Notably, the dollar volume of real estate investment stemming from M&A activity during the first three quarters of 2018 was the highest since the first three quarters of 2007.

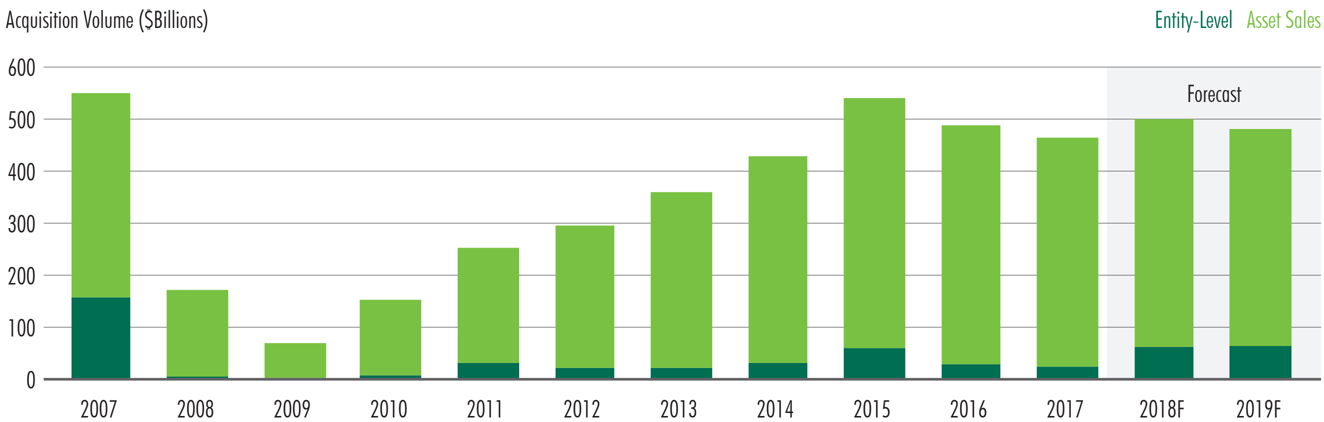
M&A momentum likely will carry over into 2019. Given the high prices and more limited supply of individual assets available for purchase, we expect that entity-level transactions—offering an alternative option for investors to deploy large amounts of capital or to build scale in portfolios—will increase. The REIT sector, in which many companies are priced at a steep discount to net asset values, may prompt more investors to buy before this gap closes, bringing upside surprises beyond the retail sector in 2019.

Overall, robust investment volume in 2019, including entity-level deals, should match that of 2018 levels. However, when excluding entity-level deals, investment volume could fall modestly. The strength of the U.S. economy will continue to support rent growth, and thus total returns, maintaining investor sentiment. On the other hand, the strength of the economy will also support further interest rate hikes in 2019. But while tightening will drive up borrowing costs, likely reducing debt capital, the amount of equity available to be deployed into real estate is remarkable.

"The bidding pools are wide and deep for core, core-plus and value-add investment opportunities," Chris Ludeman, CBRE's Global President of Capital Markets, noted. "With limited supply of core products, we are seeing rising capital interest in light value-add and core-plus products, which keep cap rates very tight."

Institutional investors' targeted and actual allocations to real estate increased in 2018, and there remains marked under-investment relative to target amounts, indicating that these institutions still have significant capital available to deploy. The gap between targeted and actual allocations is much higher for foreign institutions, which acts as a counterweight to the rising dollar that makes acquisitions more expensive.

FIGURE 5: 2018 INVESTMENT VOLUME SURPRISED ON THE UPSIDE, 2019 WILL REMAIN HEALTHY



Note: Asset sales include individual assets and portfolios.
Source: Real Capital Analytics, CBRE Research, November 2018.

Still, the downside risk to investment volume is greater than the upside potential because it is late in the cycle and the Fed has indicated it will continue to increase interest rates. Nevertheless, if equity flows remain strong and there is no spike in long-term interest rates, 2019 activity should mirror that of 2018.

HOW WILL CAP RATES AND RETURNS FARE IN A RISING INTEREST RATE ENVIRONMENT?

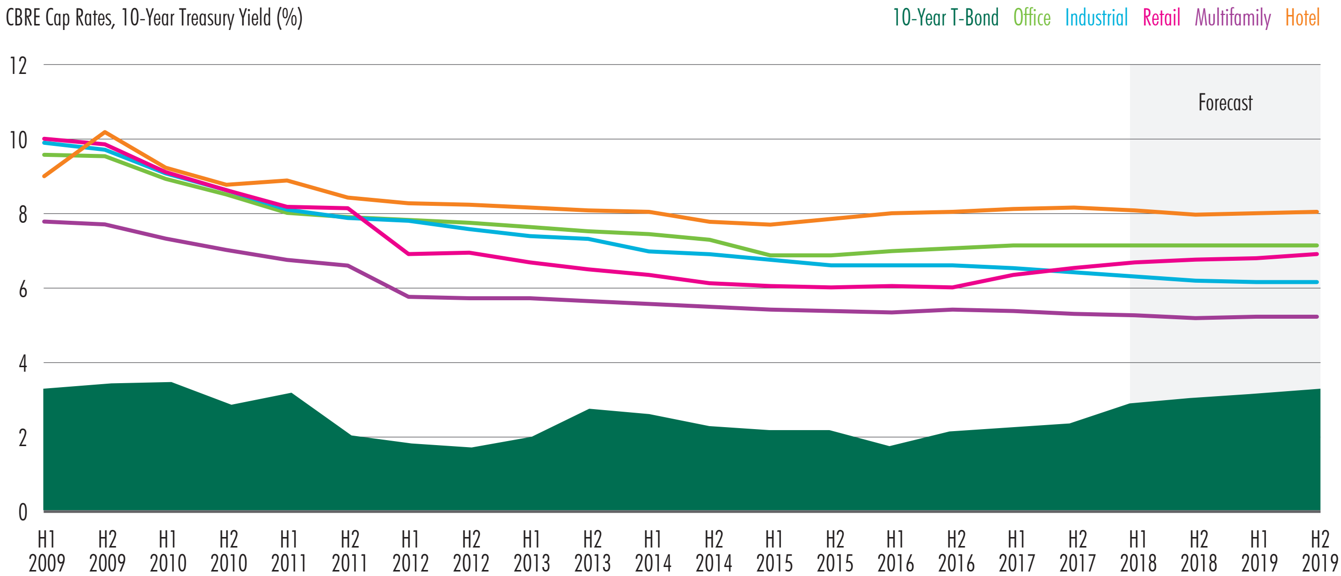
Cap rates are currently at or near historic lows across all sectors, except for certain retail segments. With yields compressed and strong competition for assets in gateway markets (including competition from foreign capital), many investors diversified into secondary markets in 2018. This trend likely will continue in 2019 as wage growth picks up and investors shift to smaller markets with strong job growth.

Rising interest rates have caused the cap rate spread over the 10-year Treasury yield to narrow. This may cause some investors to reevaluate the risk-to-return ratio of their portfolios and decide they require higher cap rates. CBRE believes the spread is sufficiently wide to defuse upward pressure, but that depends to a certain extent on sentiment remaining at its current high level. Our view is that cap rate compression has ended, but cap rates won't rise significantly either.

CBRE Econometric Advisors has recently developed a new econometric model to understand the broad range of factors that drive cap rate movement (Figure 7). Some factors will put upward pressure on cap rates next year, but others will cause downward pressure, effectively canceling one another out.

As a result, cap rates should remain broadly stable, though sensitivity to macroeconomic factors will vary by property type and market. In some secondary markets, where cap rates have more room for compression and strong employment and population gains attract investor interest, modest cap decreases may continue in 2019.

FIGURE 6: CAP RATES FLAT BUT SPREAD OVER 10-YEAR TREASURY YIELD HAS NARROWED



Source: CBRE Cap Rate Survey, CBRE Research, U.S. Federal Reserve Board, November 2018.

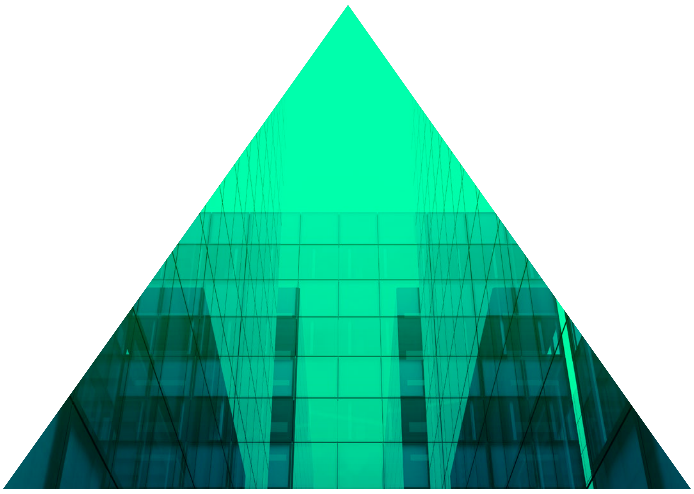
FIGURE 7: SEVERAL ECONOMIC FACTORS IMPACT CAP RATE MOVEMENT

Factor	Effect	Importance	Correlation	Impact on Cap Rates in 2019
10-Year Treasury Yield	Risk free rate	High	▲ Positive (Treasury up, cap rates up)	Upward pressure
AAA/Bond Spread	Economy-wide risk measure	Medium	▲ Positive (spread up, cap rates up)	Mild upward pressure
Inflation	Pushes up rent	Low	▼ Negative (inflation up, cap rates down)	Neutral
U.S. Dollar	Affects price paid by foreign capital	Low	▲ Positive (dollar up, cap rates up)	Mild upward pressure
Quantitative Easing	Affects demand for risky assets and sentiment	Low	▼ Negative (QE up, cap rates down)	Mild upward pressure
Change in Unemployment Rate	Indicates economic strength and confidence	High	▲ Positive (unemployment down, cap rates down)	Downward pressure
Debt Growth	Increases liquidity	High	▼ Negative (debt up, cap rates down)	Downward pressure
Real Rents	Pushes up asset values	Medium	▼ Negative (rent up, cap rates down)	Downward pressure

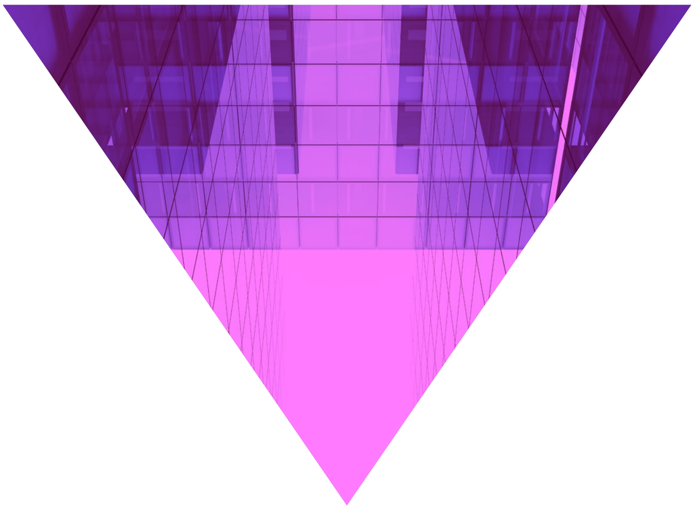
Source: CBRE Research, November 2018.

Though cap rates should be flat next year, total returns likely will decrease. Income returns should hold steady, but the pace of appreciation gains will slow. Deceleration in appreciation could be most pronounced in the industrial sector, where appreciation returns have been significantly higher than other property types in recent years. Retail returns already lagged the other sectors in 2018, so the change in overall returns likely will be minimal. Retail assets should broadly maintain steady income returns in 2019, though appreciation likely will decline.

Overall, U.S. commercial real estate fundamentals remain positive. With cap rates expected to hold steady and real estate a good hedge against rising inflation, an abundance of available capital should continue flowing into CRE next year. Although interest rates are rising, they remain low relative to historical levels, and investors will continue to seek higher yields than are available through the bond market. Given volatility in the stock market and geopolitical uncertainties, both domestic and foreign investors will remain motivated to allocate capital to U.S. commercial real estate, returns on which have been sizable and stable.



OFFICE/OCCUPIER

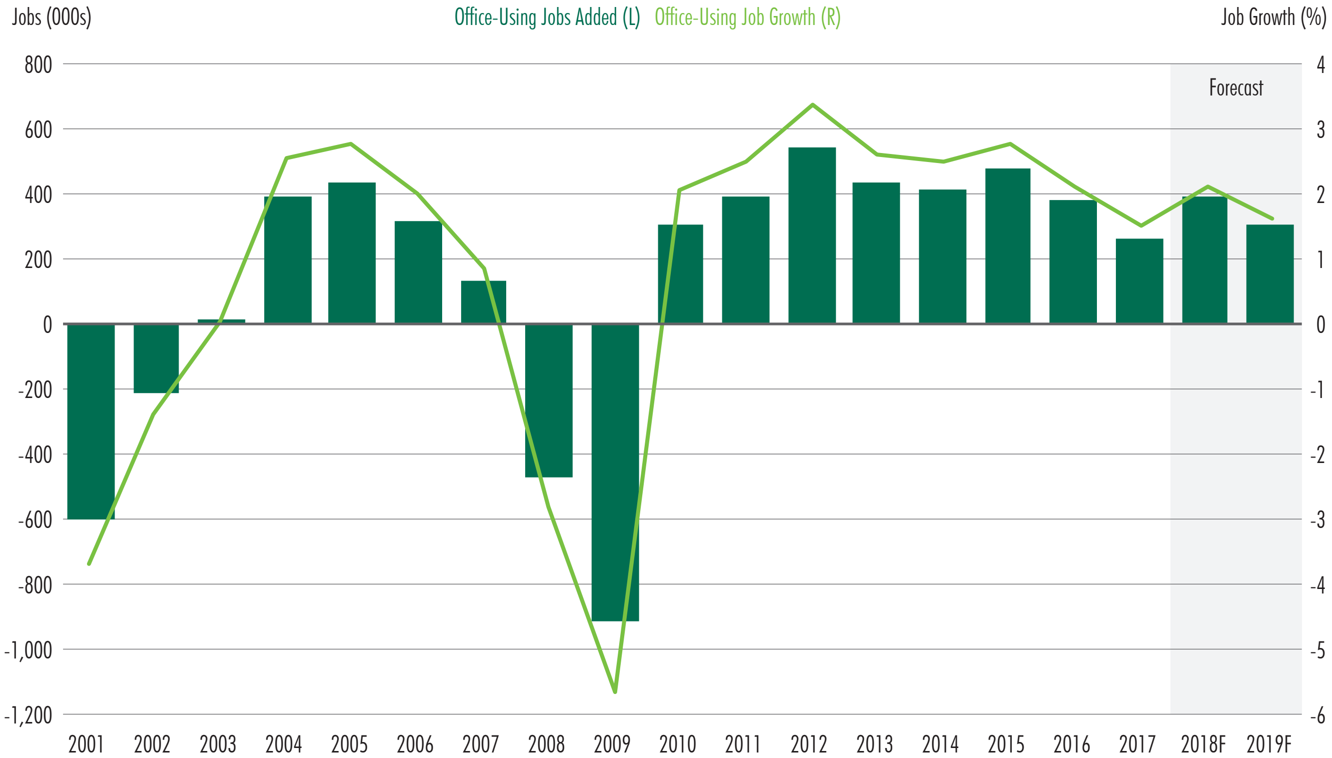


The U.S. office market is poised for moderate growth in 2019. Office-using employment is expected to grow by 1.6% or by more than 300,000 jobs—a modest deceleration from 2018 primarily due to a very tight labor market (Figure 8). Sunbelt and tech markets are expected to register the largest percentage gains in employment, led by San Francisco, Orlando, Houston, Austin and Tampa, each at 2.7% or more. San Francisco, Dallas/Ft. Worth, Houston, New York and Chicago are projected to add the largest numbers of jobs in 2019—between 15,000 and 25,000 each.

STEM & FLEXIBLE SPACE PROVIDERS TO DRIVE DEMAND

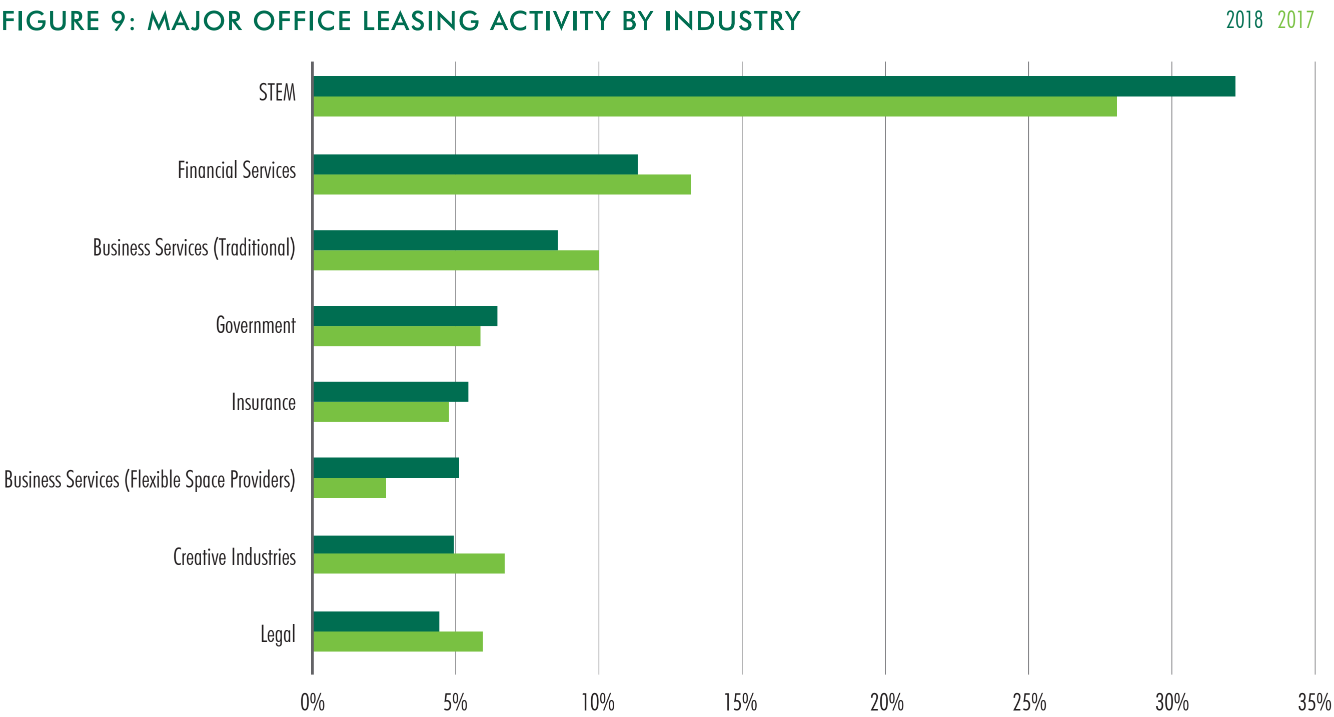
Tenants in the science, technology, engineering and math (STEM) industries and flexible space providers will remain key drivers of demand for office space. Tech job growth slowed slightly but continued to outpace overall employment growth through mid-2018. Technology and health care/life sciences firms currently represent more than one-quarter of space requirements on a square footage basis. Flexible space providers, including co-working companies, account for a small but rapidly growing share of the market; their share of major leasing activity doubled over the past year and increased sevenfold from 2013 (Figure 9). Demand from these firms remains robust in leading markets such as Manhattan, San Francisco and Seattle heading into 2019, but also is growing in non-traditional markets, including the suburbs, and for non-traditional buildings.

FIGURE 8: OFFICE-USING EMPLOYMENT GROWTH



Source: CBRE Research, CBRE Econometric Advisors, Q3 2018.

FIGURE 9: MAJOR OFFICE LEASING ACTIVITY BY INDUSTRY



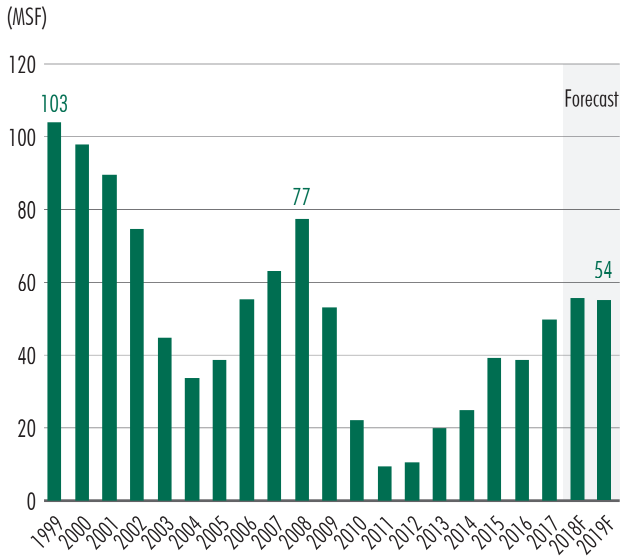
Note: 2018 = YTD through Q3; data includes the 25 largest transactions by sq. ft. each quarter for each of the 54 markets tracked by CBRE Research. STEM includes high-tech and health care/life sciences leasing activity. Business services includes flexible space providers as well as accounting, consulting, employment services and real estate firms.

Source: CBRE Research, Q3 2018.

SUPPLY GROWTH REMAINS STRONG, BUT LOWER THAN IN PAST CYCLES

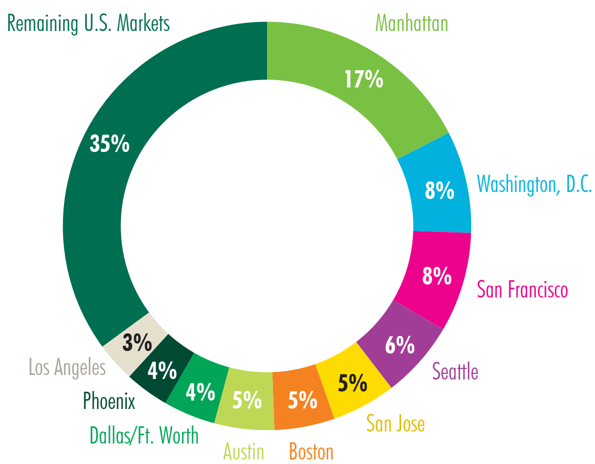
Although still well below previous cyclical peaks, a relatively high amount of new office completions will occur in 2019, particularly in downtown markets. Approximately 54 million sq. ft. of new space will hit the market in 2019, on par with the amount in 2018 (Figure 10a). Continuing a trend throughout this cycle, construction is disproportionately concentrated in a small number of markets where demand and rent growth have been strong. Manhattan, Washington, D.C., San Francisco, Seattle and San Jose account for 45% of construction currently underway, much higher than their 25% share of existing inventory (Figure 10b). Much of the new supply in 2019 is already preleased, potentially resulting in or exacerbating supply shortages in the near term, particularly for the high-quality, efficient, high-amenity space that many tenants prefer. Moderate rent growth and rapidly increasing construction costs have constrained development in many other markets this cycle. In three-quarters of the markets tracked by CBRE Research, square footage under construction represents less than 2% of existing inventory.

FIGURE 10A: OFFICE CONSTRUCTION COMPLETIONS



Source: CBRE Econometric Advisors, Q3 2018.

FIGURE 10B: SHARE OF OFFICE SQ. FT. UNDER CONSTRUCTION, Q3 2018



Source: CBRE Research, Q3 2018.

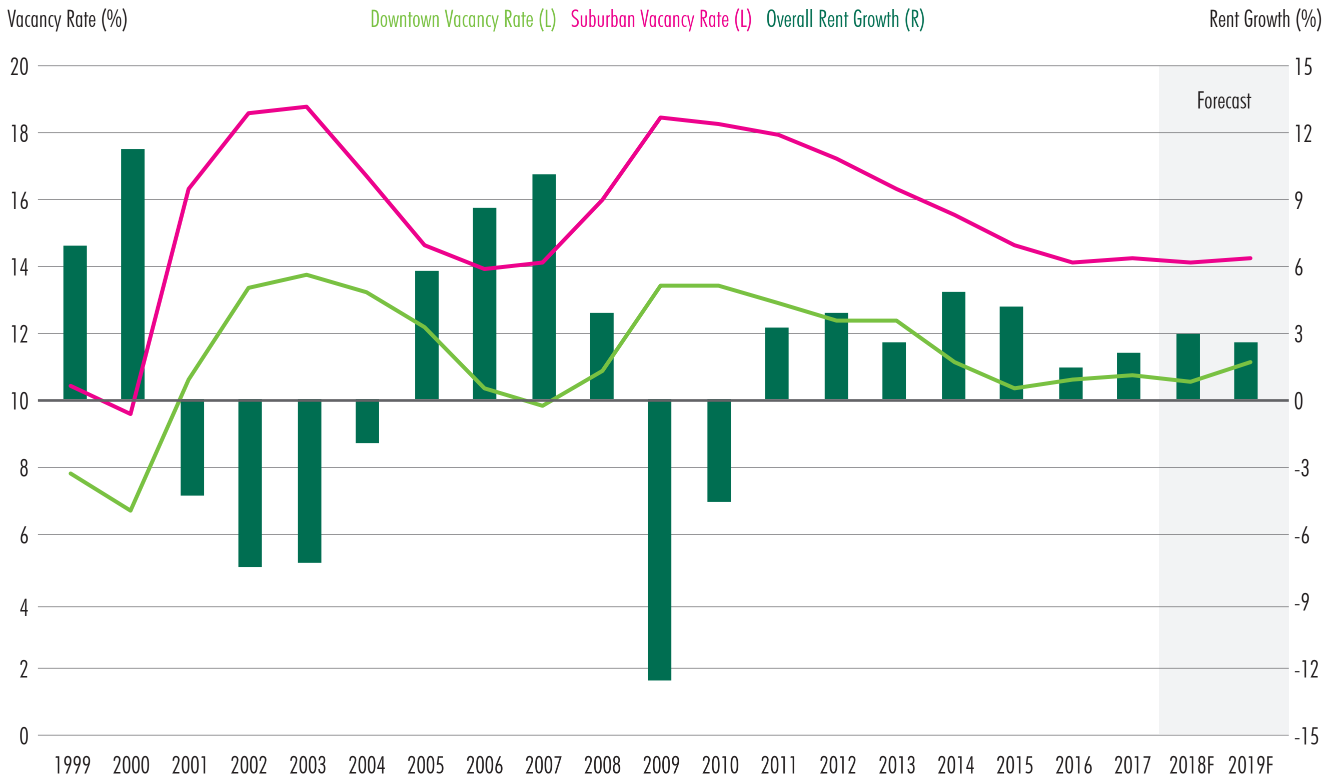
MODERATE RENT GROWTH EXPECTED, PARTICULARLY IN SUBURBAN MARKETS

If economic and job growth moderate, positive net absorption could slow in 2019. CBRE Econometric Advisors (CBRE EA) projects 37 million sq. ft. of positive absorption, slightly below the annual average of 40 million sq. ft. since 2010. With construction completions outpacing net absorption, the vacancy rate is forecast to tick up by 30 basis points (bps) to 13.1% but remain near cyclical lows. In part due to the relatively large amount of construction completions, the downtown vacancy rate is projected to increase by 60 bps to 11.1% and the suburban vacancy rate by 10 bps to 14.2% (Figure 11). Greater supply-demand balance likely will contribute to stronger rent growth of 3% in the suburbs versus 1.9% in the downtown market.

AGILE REAL ESTATE STRATEGIES TO GAIN PROMINENCE

With shorter business cycles and with technological advancements and markets becoming more unpredictable than ever, occupiers will continue the shift to agile real estate strategies. Workplace environments and lease structures must be adaptable to support organizational objectives that are highly dynamic and to ensure talent retention. Occupiers expect their real estate to be productive, efficient, flexible and highly experiential for their employees. Corporations are increasingly demanding more of their real estate service providers and landlords to help them meet complex objectives. Partnerships between tenants, landlords and service providers will remain a priority in the coming year.

FIGURE 11: OFFICE VACANCY RATE VS. RENT GROWTH



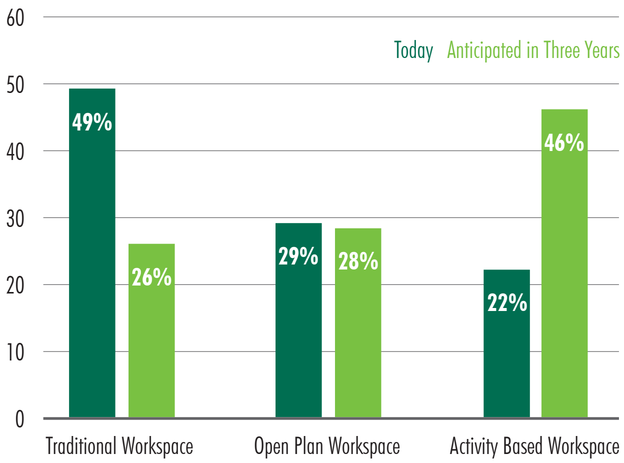
Source: CBRE Research, CBRE Econometric Advisors, Q3 2018.

REINVENTING THE WORKPLACE

CBRE's 2018 Americas Occupier Survey found that the next iteration of design for traditional core space will focus on an activity-based workplace and an unassigned seating format to allow flexibility in movement of employees and reconfiguration of space. The trend toward higher density enterprise portfolios that has defined this cycle will continue. Although companies anticipate adding more office space in 2019, it will be done so on a much lower square-footage- per-employee basis than in the past.

FIGURE 12: WORKPLACE DESIGN TRENDS

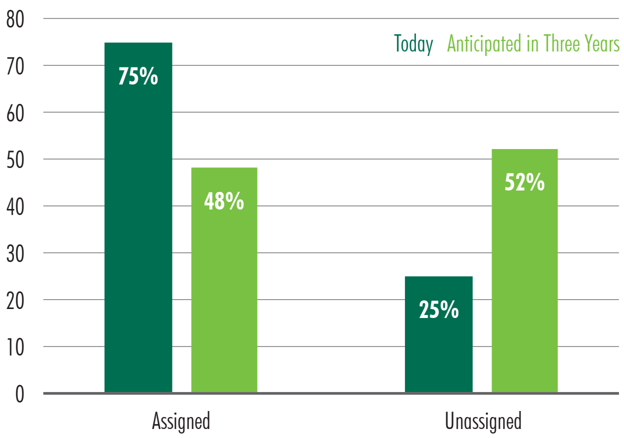
% of respondents indicating primary workplace design today and anticipated in three years



Source: CBRE Americas Occupier Survey, 2018.

FIGURE 13: SEATING ALLOCATION TRENDS

% of respondents indicating primary seating allocation standard today and anticipated in three years



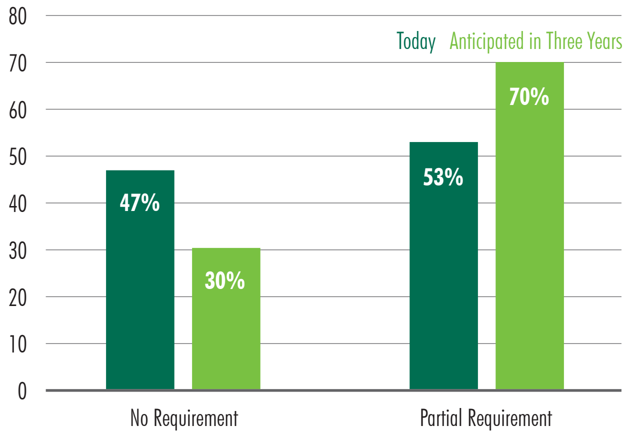
Source: CBRE Americas Occupier Survey, 2018.

PUSHING THE ENVELOPE IN FLEXIBLE OFFICE SOLUTIONS

The pace of change in the workplace has not only impacted core leased assets. It also has brought about short flexible-term space solutions beyond traditional serviced offices and coworking. Many of the more prominent players in this space are rapidly reconfiguring their offerings as new enterprise needs emerge. Enterprise clients are testing this space and, as success stories and lessons learned emerge, new and more far-reaching possibilities are conceived. CBRE's view is that, following the success of niche flexible space offerings in recent years, the amount of office supply dedicated to this function will increase from under 1% of Class A office space today to up to 10% by 2028.

FIGURE 14: FLEXIBLE SPACE AS AN ENTERPRISE SOLUTION

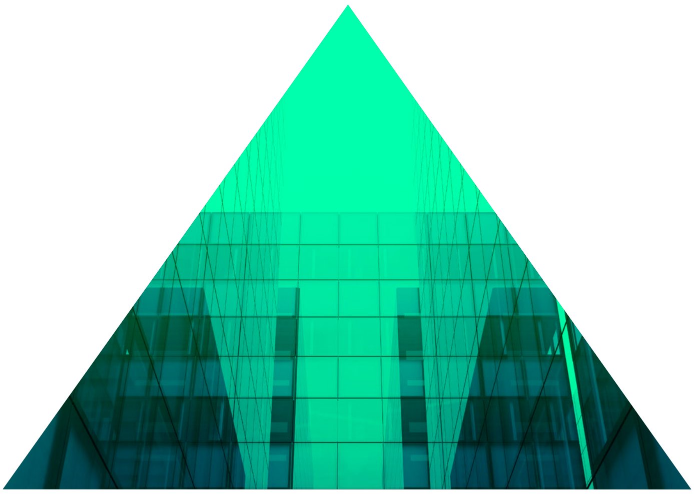
% of respondents indicating they have 50 or more people in flexible today and anticipated in three years



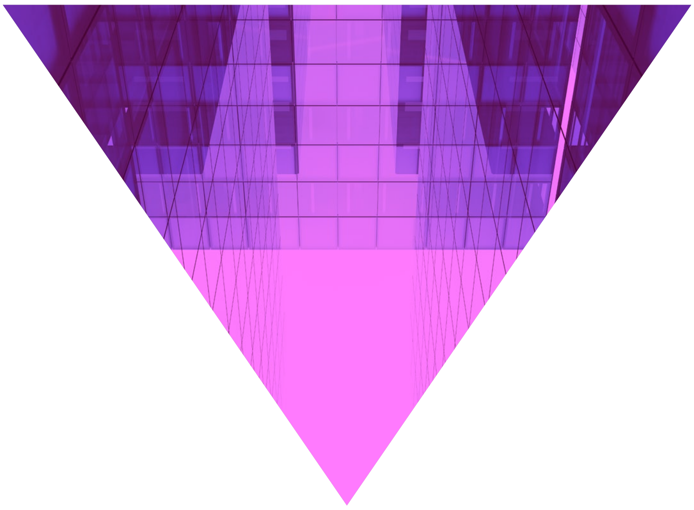
Source: CBRE Americas Occupier Survey, 2018.

GROWING FOCUS ON REAL ESTATE TECHNOLOGY

Because employees are increasingly treated as consumers of workplace amenities, implementing the right technology to ensure a great consumer experience is essential. Connecting employees to their building, available services and extended community through technology will be a focus for landlords and employers alike in 2019. Technology-delivered personalized experiences in the workplace will create a workforce that is more global, mobile, interconnected and distributed than ever before.



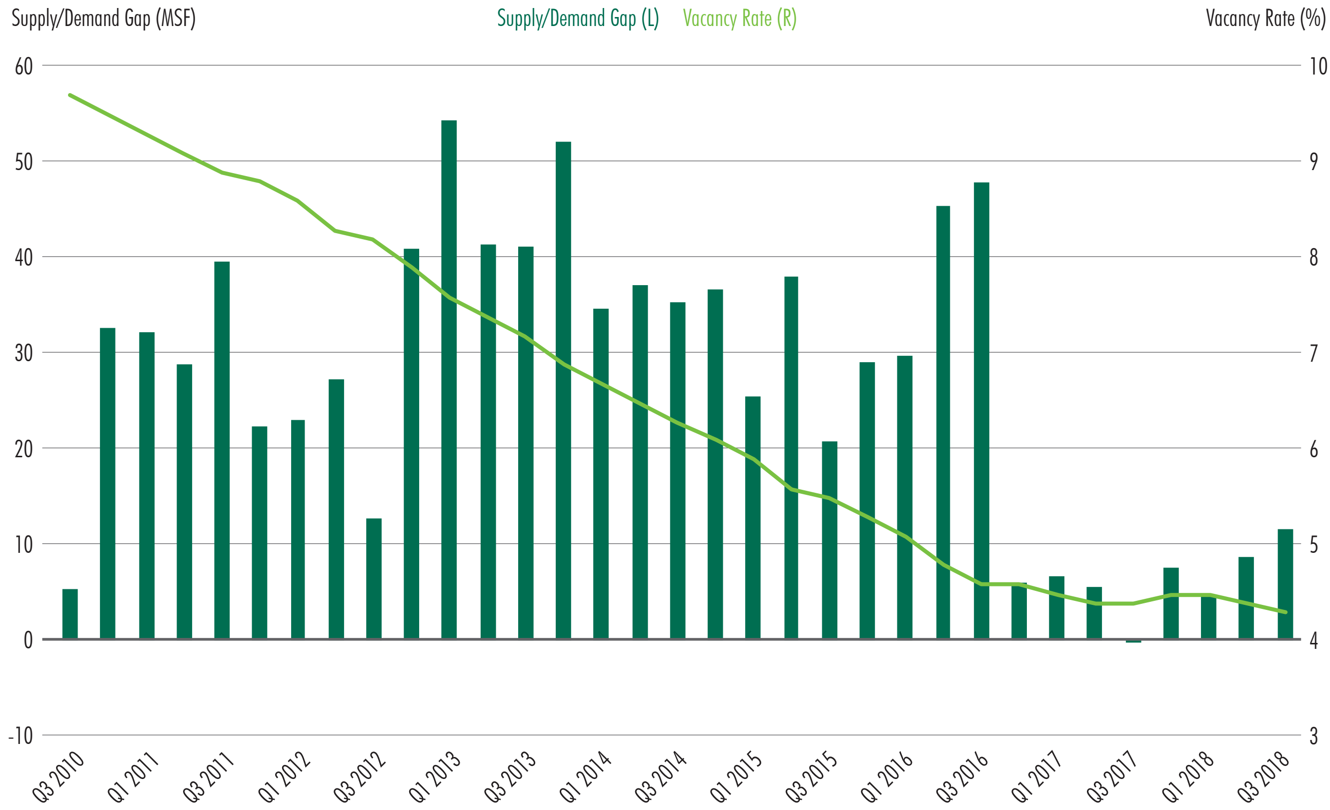
INDUSTRIAL & LOGISTICS



The U.S. industrial & logistics (I&L) sector retained strong market fundamentals in 2018, driven by growth in consumer spending, business inventories and industrial production. As in 2017, demand for logistics space outstripped supply, with net absorption exceeding completions and driving the vacancy rate down to a historic low of 4.3% in Q3 2018. The integration of retail and logistics real estate continues apace, with e-tailers looking for physical outlets and traditional retailers strengthening their online channels and restructuring their warehousing footprints. These structural factors that have supported I&L expansion during this cycle should continue in 2019 with robust occupier demand. However, low vacancy and restrained new construction will limit available logistics space options for occupiers, thus tempering absorption gains and pushing up net asking rents. From a capital markets perspective, investor appetite has accelerated, and I&L was chosen as the preferred asset class for the second year in a row by global institutional investors.

Top of mind for many I&L stakeholders in the U.S. is the contentious international trade environment, since the movement of goods impacts supply chains and demand for logistics space. According to CBRE EA, a $1 increase in imports consumes three times as much warehouse space as a $1 increase in exports. However, in the immediate and near term, it is highly likely that with continued near-full employment, strong hiring, a strong dollar and robust consumer confidence, imports will not level off.

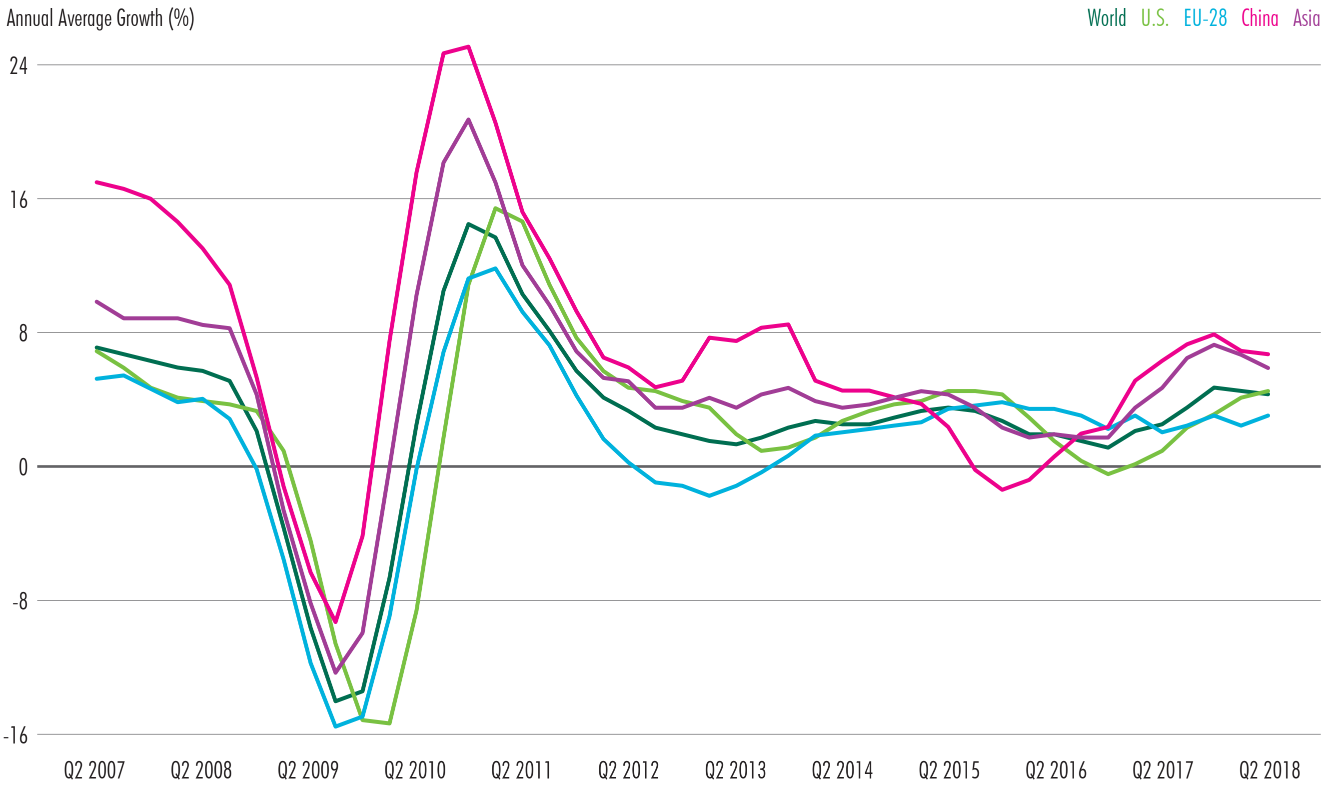
FIGURE 15: DEMAND EXCEEDS SUPPLY FOR 32 OUT OF 33 QUARTERS, DRIVING VACANCY TO HISTORIC LOWS



Source: CBRE Research, CBRE Econometric Advisors, Q3 2018.

There recently has been a dramatic increase in imports as producers accelerated shipment schedules before a 10% U.S. tariff on $200 billion of imports from China, which took effect in late September. U.S. containerized imports increased 4.8% year-over-year in August, according to import/export data provider PIERS. The surge in Q3 imports has pushed up inventory carrying costs. In an environment of rising wages and limited labor supply, this poses a challenge for logistics operators. The tariffs come at a time of strong U.S. economic growth and while world trade (in value terms) has been on a mild cyclical upswing. I&L demand is highly correlated with GDP growth, which currently stands at 3.5% and should remain strong in 2019. Moreover, users have absorbed an annual average of 75 million to 90 million sq. ft. of additional I&L space since 2013, largely due to e-commerce growth—a structural trend that likely will continue in 2019.

FIGURE 16: WORLD TRADE ON A MILD CYCLICAL UPSWING



Note: Based on quarterly merchandise import/export volume indices, not seasonally adjusted.
Source: World Trade Organization, Q2 2018.

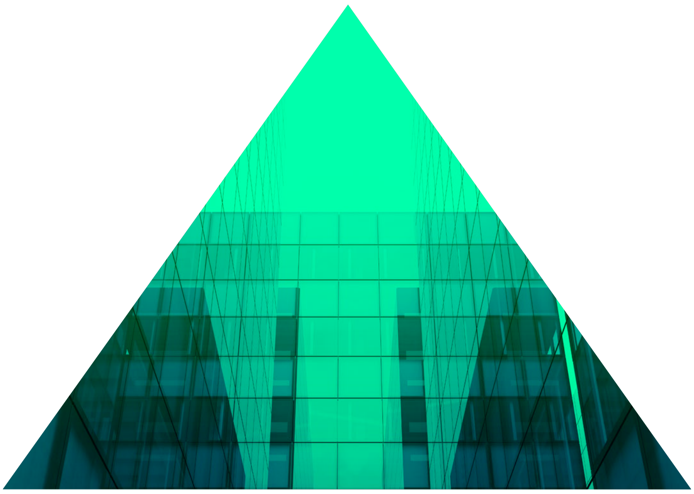
Two evolving trends will impact the U.S. I&L sector in 2019:

1. **Vertical solutions in I&L.** There is a growing shift toward multistory warehouse development in the U.S. With consumers expecting faster delivery times, there's a looming shortage of urban infill sites for new "last-mile" delivery, prompting developers to build vertically. The average land price for single-story warehouse development in the U.S. has doubled in the past five years to $30 per buildable sq. ft. Consequently, developers have a strong appetite for building small-bay infill warehousing facilities. Availability rates for this product have dropped by 27% and asking rents have risen by 20% since 2014—markedly better fundamentals than for big-box facilities over the same time. The key variables for multistory warehouse development are a high population density, strong e-commerce penetration and tight market conditions for suitable last-mile fulfillment buildings and development sites. While efficiently accommodating the 53-foot trucks commonly used in U.S. logistics is a challenge, at least seven multistory warehouses are underway or in the pipeline in New York City, Seattle and San Francisco.

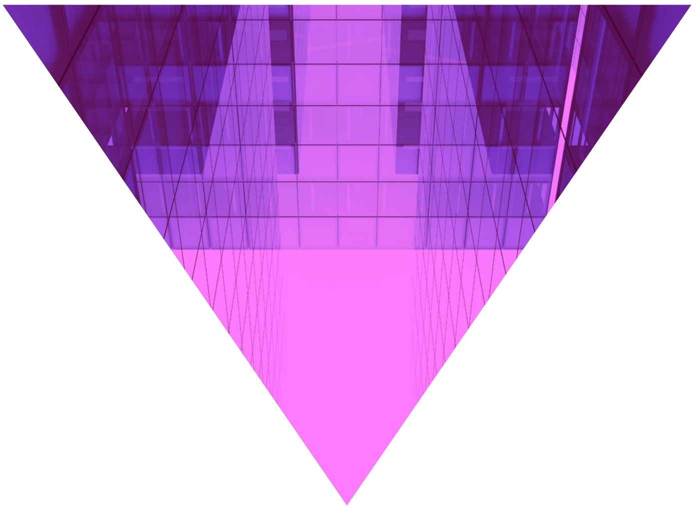
2. **Cold storage about to heat up?** To meet changing consumer preferences for convenience and speed, major grocers are making aggressive moves into e-commerce by acquiring or partnering with delivery platforms. U.S. traditional grocer Kroger recently partnered with U.K. online grocer Ocado for a high-tech cold storage distribution system. They have begun identifying sites for at least 20 cold storage warehouses across the U.S., which will employ Ocado's advanced digital and robotics capabilities and allow Kroger to extend its omnichannel reach. The U.S. currently has approximately 3.6 billion cubic feet (180 million sq. ft.) of industrial food commodity cold storage space and 2.0 billion cubic feet (300 million sq. ft.) of retail food cold storage. While online grocery sales represented only $19 billion or about 3% of total grocery sales in 2017, they're poised to reach $100 billion (13%) by 2024, according to FMI/Nielsen. Depending on how online grocery sales are fulfilled, up to 100 million sq. ft. of cold storage space for food distribution could be added or shifted from retail to industrial facilities.

Over the long term, the I&L sector will continue to modernize as technology and automation become more widespread. Speedy delivery expectations will continue to drive greater efficiencies within the logistics sector, translating into more mechanization and allowing for the expansion of order fulfillment. According to Bain Macro Trends Group, enhanced automation will result in a 46% increase in worker productivity for the transportation & warehousing industry in the next decade. This will undoubtedly have large implications for I&L labor markets and their supply chains for years to come.[3]

[3] For more information on I&L labor market dynamics, go here.



RETAIL



STRONG RETAIL SALES GROWTH EXPECTED

Continued healthy retail sales growth is the result of rising consumer confidence, a strong job market, lower taxes and higher wage growth. Total retail sales increased by 6.1% year-over- year in Q3 2018—the biggest gain since 2012. The Consumer Confidence Index closed Q3 at 135.3, approaching a level last seen in 2000. Consumer spending has been rising since March, according to the U.S. Bureau of Economic Analysis. Overall, strong consumer sentiment should boost retail sector demand in the year ahead.

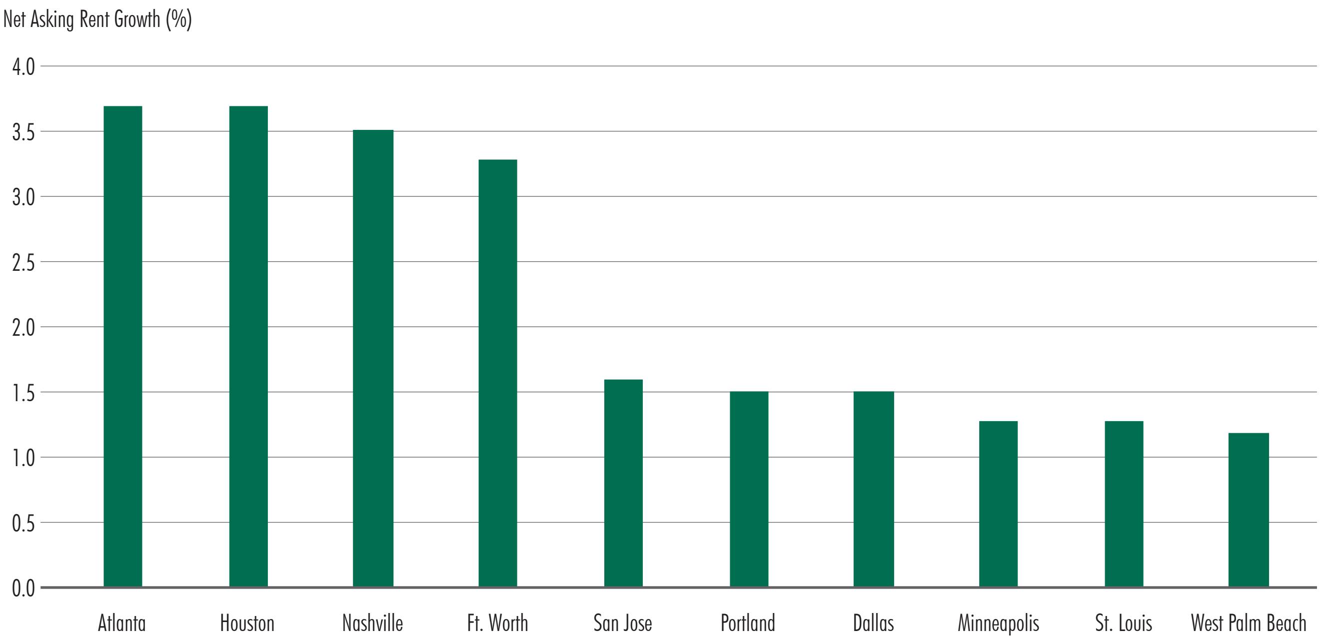
All of the markets tracked by CBRE EA are expected to record positive net absorption and more than half are expected to post rent growth in 2019. Atlanta, Houston and Nashville are forecast as the top-performing markets for rent growth next year because of their expected strong gains in jobs, population and average income. The specialty asset class is forecast as a major growth area in 2019, as smaller community centers and malls get a boost from re-merchandising by local merchants, co-working operators, gyms and other experiential retailers.

MALL REDEVELOPMENT ACTIVITY SPURRED BY DEPARTMENT STORE CLOSURES

The redevelopment of shopping malls will increase in 2019, as owners seek to maintain traffic flow and low levels of new supply create opportunities for repositioning assets. Sears' plans to close nearly 200 stores this year likely will trigger a wave of redevelopment activity. While some see this as a tragic dumping of millions of square feet of retail space, many mall owners see it as an opportunity to reposition and re-tenant their properties. Simon Property Group, the largest mall owner in North America, has diversified its tenant base with non-traditional users, including hotels, office space and athletic centers. As the bankruptcy process is long and tedious, it may temporarily drive up availability in the mall category.

Over the long-term, however, a rise in redevelopment and re-tenanting activity among mall owners will occur, especially in Class B and C properties. Expect more replacement of traditional soft goods and department store spaces with mixed-use development, food & beverage, entertainment, fitness and services.

FIGURE 17: TOP-10 MARKETS FOR ANNUAL RENT GROWTH, NEXT 5 YEARS



Source: CBRE Econometric Advisors, October 2018.

A RETURN TO THE STORE

Significant re-investment in physical stores also should occur in 2019, even as retailers continue to develop their omnichannel strategies. Since 2017, many retailers have invested in e-commerce and logistics platforms to drive last-mile efficiency and cut costs. As those investments finally begin to pay off in profitability and earnings growth, many major brands and investors are injecting capital into their physical stores. Sam's Club recently unveiled a concept store to test new technologies, including mobile checkout, electronic shelf labels and artificial intelligence for potential use in all 600 of its stores.

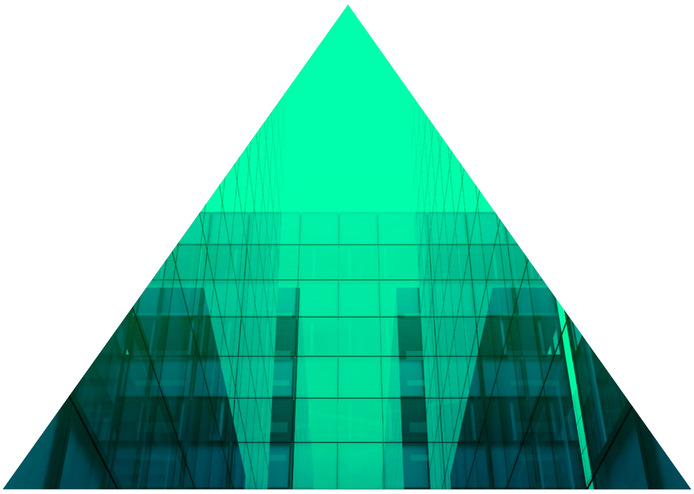
Store sales tend to have a higher profit margin than online sales, and leveraging stores as pick-up and drop-off points for online orders and returns saves significant shipping costs. Expect store investments aimed at driving traffic and reducing "friction points" in omnichannel shopping. More focus will be placed on in-store technologies that drive convenience, such as automated checkouts, as well as new store features dedicated to online orders, from curbside pickup to return kiosks. Most major retailers will expand programs to promote buy-online/pick- up-in-store and buy-online/ship-to-store services in 2019. Many retailers will invest in updated store design. For example, Dunkin Donuts announced plans in September to invest $100 million into U.S. store renovations, including upgrades and rebranding. Similarly, Target, Macy's and McDonalds are among the growing list of major retailers planning major redesigns of their stores.

FOOD AS THE FINAL FRONTIER OF OMNICHANNEL

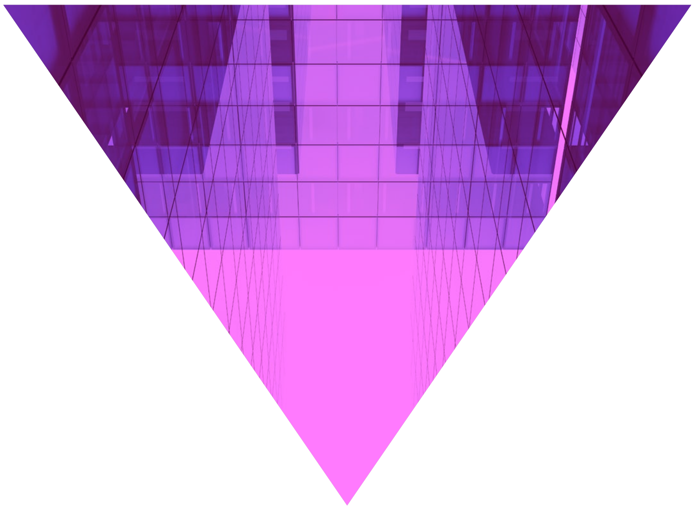
Next year will mark a pivotal turning point for omnichannel in the food & beverage (F&B) industry, as both grocers and restaurants adapt their offers to growing consumer demand. Faced with high logistical costs, the F&B segment is one of the last retail categories to go online, with estimated e-commerce share currently around 3% (versus overall retail's 9%).[4] In 2018, there were some major investments by grocers in technology and omnichannel partnerships, such as Kroger partnering with U.K. online logistics specialist Ocado and Albertsons partnering with Takeoff, a robot-powered micro-fulfilment center. In 2019, expect many of these pilot programs to be implemented and expanded.

Technology is also reshaping the restaurant industry. New concepts such as Spyce, which features robot-prepared meals and collects data on customer preferences, is an early example of advanced in-store restaurant automation. In addition to technology inside restaurants, the use of last-mile restaurant delivery technologies will increase. Dominos recently introduced an autonomous driving vehicle that delivers pizza to customers' doorsteps in select locations. In 2019, expect similar programs to take off and technology to play an increasingly important role in the F&B industry.

[4] Source: U.S. Census Bureau, Forrester Research, October 2018.



MULTIFAMILY



NO SLOWDOWN IN DELIVERIES, BUT DEMAND REMAINS STRONG

2019 should be another healthy year for the multifamily sector, though there will be some challenges. New supply will exceed market demand, thereby limiting rent growth. Although overbuilding and modest effective rent declines will characterize some submarkets, the overall multifamily market will retain its solid footing.

Demand for multifamily housing has been very healthy through this cycle due to a combination of cyclical and secular factors. Total multifamily demand in 2019 should mirror the high level achieved in 2018.

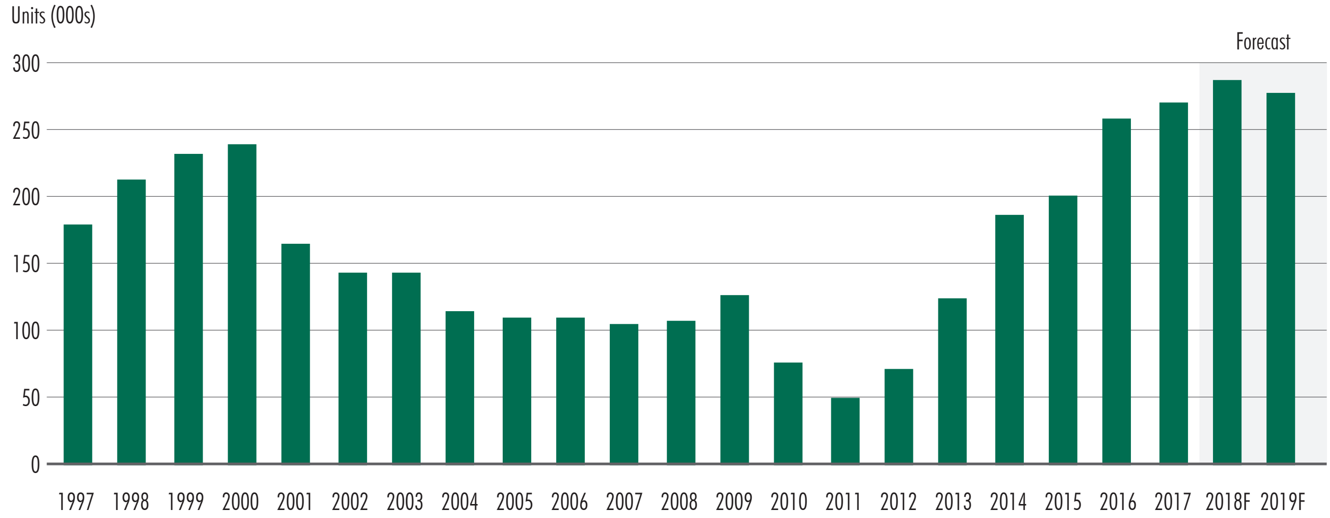
Lifestyle trends favoring multifamily housing in recent years should sustain multifamily demand in 2019. These include delayed marriage, delayed child-bearing and preference for renting (vs. owning) for financial flexibility and mobility. Sustained popularity of urban or "urban-like" living, combined with the development of new, attractive multifamily communities in the urban and "urban-suburban" conurbations, also will keep multifamily demand very strong in 2019.

The financial challenges of moving into homeownership will continue to bolster multifamily demand in 2019. Homeownership rates are likely to inch up one-half point to about 65% in 2019, largely due to the size of the millennial cohort and its age demographics. Yet even with moderate movement into homeownership, most millennials will remain in rental housing next year. Rising home prices (albeit it at a lower level than recent years), higher mortgage rates and limited availability of moderately priced homes will sideline many potential buyers.

Multifamily construction trends will move in two directions in 2019. Unit deliveries will keep pace with 2018, but construction starts should finally decline. Construction starts in 2017 and 2018 were at very high levels nationally. These translate into high levels of completions in 2019 and at least early 2020. Completions in 2019 will likely mirror the current cycle peak of 290,000 units in 2018.

The high level of new supply will constrain owners' ability to increase rents in some submarkets in 2019. While the pockets of oversupply will remain mostly in urban core submarkets, some suburban submarkets in higher growth metros will also be impacted.

FIGURE 18: MULTIFAMILY COMPLETIONS



Source: CBRE Research, CBRE Econometric Advisors, Q4 2018.
Note: 2018 is estimate by CBRE EA as of Q3 2018. 2019 is projection by CBRE Research.

Permits for multifamily construction fell in 2018, largely due to higher development costs and land prices, labor shortages, higher wages, higher materials costs and more restrictive development regulations. The decline in permits should lead to a reduction in starts next year, which in turn should create a more balanced market in 2020.

Given the expected high levels of new supply and demand, rent growth will be quite modest in 2019—at or under the historical average increase of about 2.5%. Vacancy will inch higher, though still stay at an acceptable rate of under 6%.

The strongest performance next year will be in the western markets of Phoenix, Las Vegas, the Inland Empire, San Diego, Los Angeles/Southern California and the Bay Area, and in Florida (particularly Orlando and Tampa). Columbus is poised to be the star performer in the Midwest. Houston also is positioned well to outperform in 2019, given relatively low levels of completions and a renewed economic vitality. Demand will outpace supply in these 10 markets, leading to rent growth far exceeding historical averages.

WORKFORCE HOUSING APPEALING TO INVESTORS IN 2019

Capital will continue to flow into the multifamily sector from all types of buyers and debt providers in 2019. While overall investment activity will remain robust on a historical basis, it may decrease modestly from 2018's near-peak level due to the low-return environment, higher borrowing costs and mediocre rent growth. Even with some reduction in investment volume, pricing should remain high and cap rates relatively low.

Investment in workforce housing—rental communities that are affordable for low- to medium-income families—will remain one of the more attractive investment strategies in 2019. Demand for workforce housing currently exceeds supply, resulting in above-average rent growth.

While there has been little growth in workforce housing supply, strong market demand for it will continue in 2019. Most people living in workforce housing are "renters by necessity" and are not moving into homeownership or into higher-quality multifamily product due to the costs. Wage growth has accelerated in recent years, and will likely continue in 2019. Yet a large percentage of renters are still financially stretched. Census data indicate that in 2017, more than 35% of workforce housing renter households were paying more than 30% of their income on rent (up from 20.6% in 2006).

CONTACTS

Richard Barkham, Ph.D.
Head of Research, Americas
and Chief Economist, Global
+1 617 912 5215
richard.barkham@cbre.com
@RichardJBarkham

Spencer G. Levy
Chairman of Americas
Research and Senior
Economic Advisor
+1 617 912 5236
spencer.levy@cbre.com
@SpencerGLevy

Melina Cordero
Head of Retail Research,
Global
melina.cordero@cbre.com
@melinascordero

Andrea Cross
Head of Office Research,
Americas
andrea.cross@cbre.com
@andreabcross

David Egan
Head of Industrial & Logistics
Research, Global
david.egan2@cbre.com
@egan2david

Taylor Jacoby
Senior Research Analyst
taylor.jacoby@cbre.com

Alex Krasikov
Economist
CBRE Econometric Advisors
alex.krasikov@cbre.com

Wei Luo
Senior Research Analyst
wei.luo@cbre.com
@weivluo

Jeanette Rice, CRE
Head of Multifamily
Research, Americas
jeanette.rice@cbre.com
@ricejeanette

Jing Ren, Ph.D.
Economist
CBRE Econometric Advisors
jing.ren@cbre.com

Andres Rodriguez
Research Analyst
andres.rodriguez@cbre.com

Matt Walaszek
Senior Research Analyst,
Industrial & Logistics
matthew.walaszek@cbre.com

Julie Whelan
Head of Occupier Research,
Americas
julie.whelan@cbre.com
@juliewhelancbre

To learn more about CBRE Research, or to access additional research reports, please visit the Global Research Gateway at www.cbre.com/research.