

Economics Group

Special Commentary

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Q4 CRE Chartbook: Construction Outlook

Rising labor costs emerge as the top headwind for 2019.

Despite mounting supply side headwinds, 2018 was a solid year for construction. Total construction spending experienced the slowest rate of growth since 2011, but still managed to rise 3.8%. Most of the slowdown occurred as a result of a 2.6% rise in residential spending, a meager result when compared to the previous five consecutive years of double-digit gains. Nonresidential construction outlays fared slightly better, bouncing back from a small decline in 2017 to rise 4.7% for the year. Private nonresidential spending rose 3.4%, while the vastly improved fiscal health of many local governments spurred a 7.0% increase in state & local spending, the most since 2007. The improvement in construction outlays occurred against a backdrop of stronger overall economic growth. Real GDP increased 2.9% in 2018, driven higher by strong consumer spending, fiscal stimulus and sturdy business fixed investment. We expect some moderation in 2019 as the simulative effects of the new tax law fade, but still expect real GDP to grow at a solid 2.4% pace.

Construction spending will support overall economic growth in 2019.

Construction will continue to be supportive of overall GDP growth in 2019. Structures investment, which includes spending on new and existing nonresidential buildings as well as mining and oil and gas field structures such as rigs and pipelines, rose 5.0% in 2018. Given that overall investment in structures remains subdued by historical standards, construction activity should continue to steadily march higher. Structures investment was 3.1% of GDP in 2018, below the long-term average of 3.5%. Excluding investment in oil and gas field structures, expenditures are even lower using that same measure. While construction has steadily trended higher for much of this expansion, the pace of activity falls short of prior cycles. For example, at the peak of the 2001 cycle, nonresidential structures investment had expanded a cumulative 81% over the course of six years. The 1990s expansion saw a 75% rise in investment over 10 years. Nearly 10 years after the end of the last recession, structures investment has only risen 48%.

Figure 1

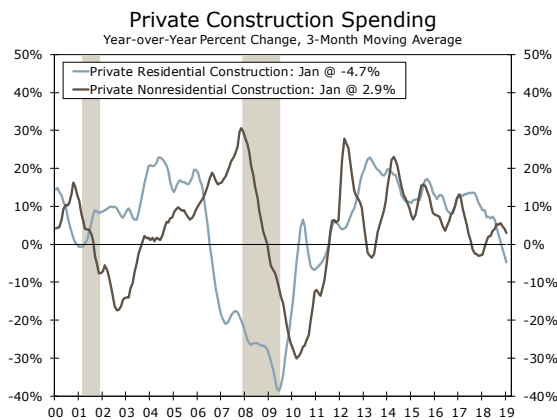
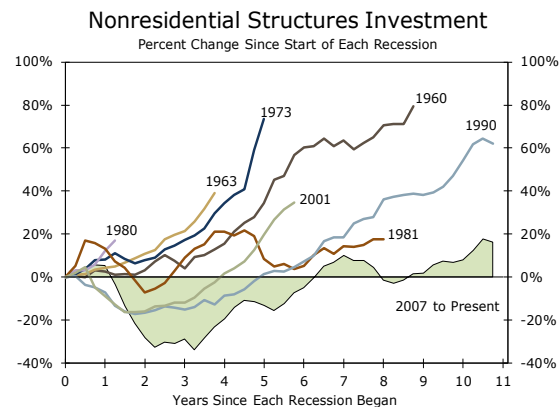


Figure 2



Source: U.S. Department of Commerce and Wells Fargo Securities



Shortages of skilled labor will continue to constrain construction activity.

Skilled Labor Will Still Be Hard to Find in 2019

We anticipate the recent momentum in commercial building to extend throughout the year; however, there appears to be no relief in sight for the increasingly dire shortage of skilled workers. The number of construction job openings remains highly elevated, rising to 302,000 in January. Adding to this challenge, labor shortages have steadily applied upward pressure on wages, as firms have raised compensation to both attract and retain workers. The Employment Cost Index (ECI) for construction workers, which measures total compensation, continues to trend higher and recently breached 3.0% year-over-year for the first time in this expansion. We expect wages will continue to rise, especially for more niche skilled occupations that often require licensing or vocational training, such as welders, pipefitters and elevator installers.

Rising wages across the industry will help to pull in workers who have been marginalized by the lack of opportunity brought on by nearly a decade of subdued construction spending. Vast improvements are unlikely given the long-term structural forces affecting the supply of needed workers, however. Worker shortages may spur some loosening of hiring standards, especially with respect to drug use, although wholesale changes are difficult to imagine given the inherent danger of construction work. The pace of retirements will also continue to far exceed new entrants given that construction work has mostly fallen out of favor with younger generations thanks to the rise in less physically intensive service-based occupations. The industry will continue to see increasingly stark competition from occupations that demand a similar skillset, such as the resurgent energy and manufacturing sectors, both of which are also in dire need of skilled workers. More restrictive immigration controls will only add to the industry’s hiring challenges.

Figure 3

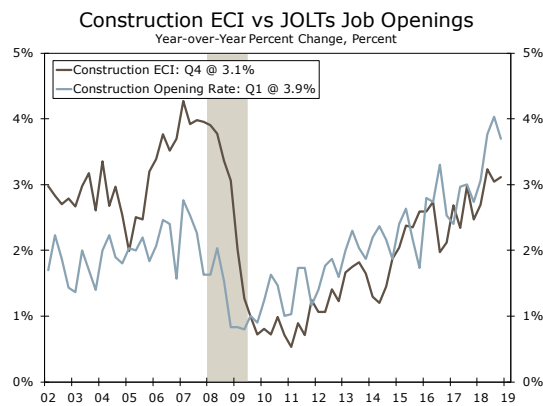
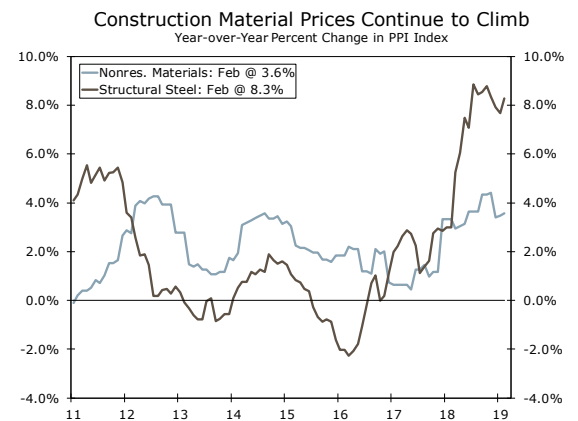


Figure 4



Source: U.S. Department of Commerce, U.S. Department of Labor and Wells Fargo Securities

Despite Higher Labor Costs, Construction Momentum Will Continue to Build

In contrast to steadily rising labor costs, the construction industry may see some moderate relief from the rapidly rising material prices which have become a hallmark of recent years thanks to strengthening demand and newly imposed tariffs on key materials such as lumber and steel. Structural steel prices surged 8.9% mid-2018 following the new levies against a host of major trading partners, but more recently have shown signs of easing amid progressing trade negotiations and slower global economic growth. Lower oil prices should also lead to further easing in asphalt-based products prices, while lumber, gypsum wallboard and copper prices have also pulled back. Material prices tend to be seasonal, and we expect a more modest rise in material costs as demand heats up in the spring.

Even with costs rising, overall construction spending appears set to remain firm in 2019. The Architectural Billings Index (ABI), which measures architecture firm billings and leads construction spending by roughly 9-12 months, has been solidly above 50 for the past 25 consecutive months, indicating that more firms are increasing billings—a signal that nonresidential construction activity has strong momentum. The strength also likely reflects the

The construction industry may see some relief from rapidly rising material prices.

drive by developers to make their projects more desirable to younger and more mobile workers and consumers.

Residential Construction Poised for Modest Improvement

Residential construction should see gradual improvements this year. New single-family starts slowed throughout 2018 to a 2.5% pace, mostly due to higher land, labor and material costs, unusually adverse weather conditions and affordability challenges that steered many buyers towards renting. Buying conditions have become more favorable to start the year thanks to lower mortgage rates and slowing home price appreciation. This should stem the current downswing in single-family construction and boost activity moving forward.

New multifamily construction fared somewhat better in 2018, rising 5.6%. The rapid build-up of new apartments in many of the country’s largest metro areas has thus far been met with a continued stream of sturdy demand owed to single-family affordability hurdles. After a supply-related spurt in 2017, vacancy rates reversed course and hit a cycle low in 2018. Despite the onslaught on new supply delivered recently, we do not anticipate a dramatic pull back in new apartment construction, and see a gradual moderation as more likely. At present, multifamily building permits are currently running roughly 25% ahead of starts and finished the year at 465,000, just above the 462,000-unit pace hit in 2017.

Residential construction should see gradually pick-up this year.

Overall, we look for somewhat more moderate 1.7% growth for total nonresidential structures investment in 2019. Robust spending in the oil and gas industry boosted overall investment to double-digit rates in the first half of 2018, but has since pulled back alongside a sharp downward movement in oil prices, making a repeat of the robust upturn in energy investment this year unlikely. Still, spending should hold firm in 2019 as prices have since stabilized. In addition, while prior price swings led to subsequent drops in investment, a new paradigm has emerged in the past decade which has brought record levels of cost-controlled domestic production, increased export capabilities and an overall more balanced market which is less susceptible to price fluctuations. Furthermore, a substantial amount of pipeline construction is underway to relieve capacity constraints, especially in West Texas, which will keep construction activity humming through the next several years

Figure 5

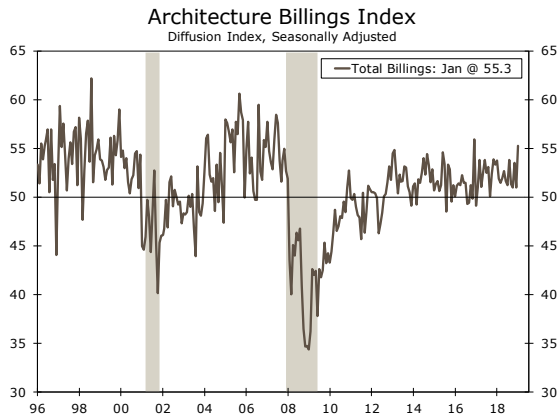
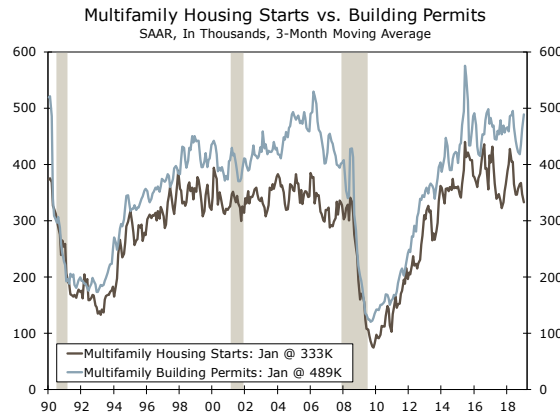


Figure 6



Source: American Institute of Architects, U.S. Department of Commerce and Wells Fargo Securities

Office Development Will Remain Buoyant

Outside of the energy sector, commercial construction has strong momentum. New office development has been restrained for much of the past decade and concentrated in gateway cities where the bulk of job creation has occurred. Demand for new office space has been solid on balance, and despite a subdued pace of new development, the office vacancy rate has been gradually declining and fell below 10.0% for the first time since 2001.

Commercial construction has strong momentum.

Several factors point to growth in office development slowing.

The rise of flexible co-working space and an overall shift toward fewer square feet per employee by efficiency-focused employers will continued to crimp demand somewhat, however a number of factors point to office construction remaining solid in 2019. Employment growth in heavy office-using industries such as tech, financial services and professional business services strengthened in the second half of 2018. Moreover, tight labor markets will keep firms focused on attracting and retaining talent while also increasing productivity through highly efficient and technologically enhanced office space, which will bolster renovation spending on more outdated buildings.

According to Dodge Data and Analytics, the number of office projects started in January rose 18% from last year. New office development continues to be centered in markets with large tech and energy presences. Texas, which has boasted rapid growth in both these sectors, has recently seen several new large scale projects begin, such as the Oracle Tower in Austin and Hines Tower in Houston. We expect to see some moderation in spending next year. There were roughly 131 million square feet of office space under construction in 2018, slightly below the 134 million square feet in 2017. After rising 9.1% in 2018, we look for office construction to remain solid and rise 6.8% in 2019.

Industrial Will Remain a Bright Spot

Despite rapid new development over the past decade, new industrial construction has struggled to keep pace with surging demand for warehouses and distribution facilities. Nearly one billion square feet of industrial space has been added since 2010, yet the vacancy rate has steadily trended lower and currently sits at a modern-era low of 4.8%. E-commerce inspired supply chain modernization and a focus on last mile logistics have spurred incredible amounts of construction around markets proximate to central logistics hubs with robust transportation networks, such as the Inland Empire, Chicago, Atlanta and Dallas. Amazon, which already leases over 2 million square feet of warehouse space in the Dallas-Fort Worth airport, recently announced it would expand its footprint and create the company’s first “air hub” at Alliance Airport in Fort Worth.

Industrial development should moderate but remain a growth area.

The push to minimize costs is leading industrial operators to areas with less congestion and lower rents, but that still maintain a high degree of regional and global connectivity. Reno, Las Vegas and Phoenix have seen a rapid influx of industrial operators from less-affordable California. The Lehigh Valley I-78/I-81 corridor, which sits in the shadow of both New York and Philadelphia and boasts easy access to the wealthy consumer base of the Northeast, has seen industrial construction at a breakneck pace to keep pace with surging demand. While we expect more moderate growth relative to the rapid rise seen in prior years, new industrial development will continue to remain robust and expand at a solid rate in 2019.

Figure 7

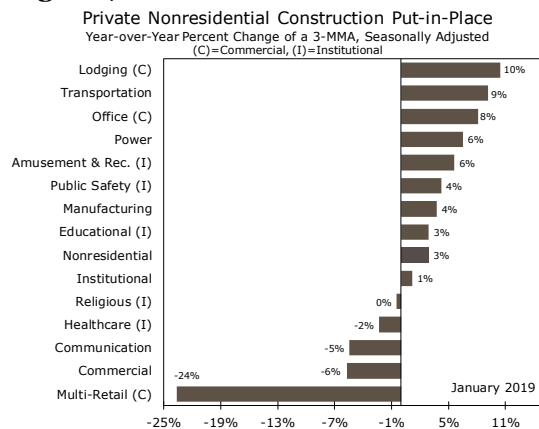
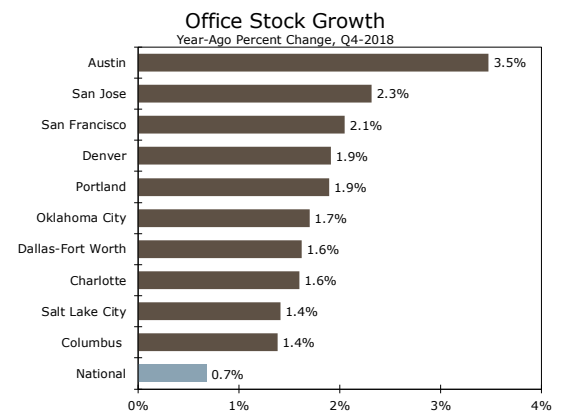


Figure 8



Source: U.S. Department of Commerce, CoStar, Inc. and Wells Fargo Securities

Manufacturing and Retail May Surprise to the Upside

There is also a case for cautious optimism for manufacturing outlays to improve in coming quarters. Expenditures on manufacturing plants fell 2.1% in 2018, the third straight yearly decline. The new tax law may provide some modest support for manufacturing spending; it allows full and immediate expensing of new equipment. While similar tax treatment for new buildings were left out of the law, the incentive to invest in new equipment may induce spending to revitalize and reconfigure older plants. Furthermore, ongoing trade negotiations and tariffs placed on several trading partners will likely lead to a modest pickup in domestic manufacturing production. While the core tenets of NAFTA were left in place, the preliminary trade agreement with Canada and Mexico will likely bring some auto production back into the United States. Uncertainty surrounding the fate of a future trade relationship with China have caused businesses to reevaluate existing supply chain networks. While remaining subdued by historical standards, manufacturing capacity utilization has trended higher recently, and manufacturing payrolls also continue to expand at a strong pace, bucking the downward trend of prior cycles. We look for a 4.5% rise in manufacturing spending in 2019.

There is a case for cautious optimism for manufacturing.

Overall outlays for retail projects dropped 6.8% in 2018. The sector continues to scale back after decades of rapid development, which saw new space expand at a rate that far exceeded population growth. Given the growing proportion of retail sales executed online, the rationalization of some of this supply was somewhat predictable. We are not expecting big things from retail in 2019, but by no means is the sector on the verge of collapse as many headlines suggest, and the sector’s darkest days are likely behind it. Retailers are having success incorporating a “bricks and clicks” strategy which utilizes the efficiency and time-saving aspects of e-commerce while having a physical store to fulfill the need for younger generations to vet products for quality and authenticity. Well-located retail properties with a diverse tenant base and experiential offerings such as bars, restaurants and live entertainment continue to perform well, which should keep overall retail development firm as the sector continues to transition.

Retail’s darkest days are likely behind it.

Hotel construction will continue to rise solidly as demand for hotel rooms remains exceptionally robust. Lodging expenditures, which include both hotels and motels, rose 11.2% in 2018 after rising 6.3% in 2017. Demographics are providing a strong tailwind, with baby boomers traveling more and Millennials opting for experiences and travel over consumption of goods. Strong economic growth is boosting business travel, which has induced spending on renovations to older properties as visitors demand more lifestyle amenities and greater technological access. Given the sheer volume of new building since 2012, occupancy has likely reached a peak and will gradually trend lower in coming months. The number of new hotels coming to market should slow off the torrid pace seen recently, as the pipeline of projects under construction and in planning stages has moderated in 2018 relative to prior years.

Figure 9

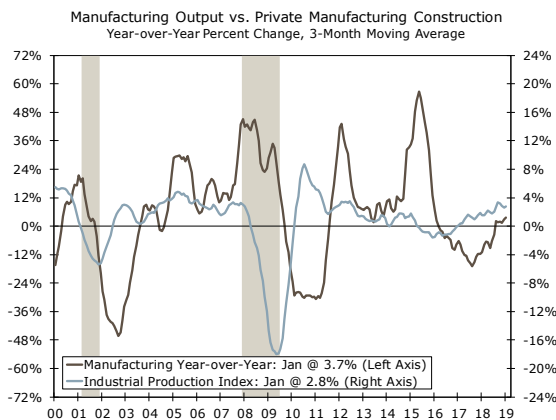
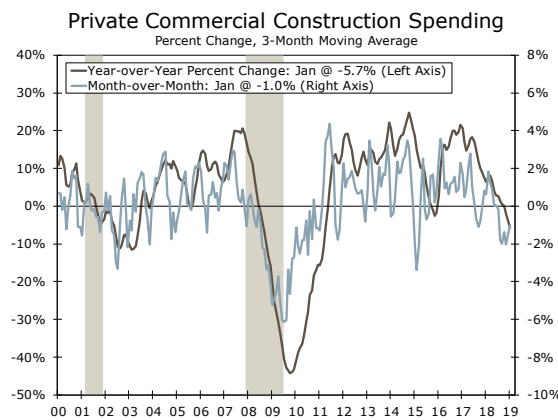


Figure 10



Source: Federal Reserve Board, U.S. Department of Commerce and Wells Fargo Securities

Demographics will increasingly drive expenditures on medical buildings.

Institutional Building Trending Higher

Spending on institutional projects has also picked up modestly, driven by shifting demographic patterns and innovative technological disruptions. Expenditures on healthcare buildings were essentially flat in 2018. Rising operating expenses continue to propel consolidation among existing healthcare providers looking to achieve size and scale, making building new hospitals a challenging endeavor. Providers will continue to embrace more cost-effective outpatient facilities as well as new technologies which can reduce hospital stays such as specialized wearable medical devices, virtual visits and telehealth. An aging demographic will be the primary driving factor of future outlays, however, as baby boomers age and spend more on medical expenditures.

Spending at both public and private educational facilities rose 3.4% in 2018, driven higher by a 6.5% increase in spending at primary and secondary school buildings at the state and local level. Higher K-12 enrollment rates will continue to be a boon for education projects, as many schools undergo much needed renovations of older buildings. Outlays at the higher education level fell 0.5%, owed to a 4.2% drop in spending on dorms. Spending on instructional buildings and athletic facilities posted a modest 0.3% and 0.6% increase, respectively. Expenditures have been constrained by slower tuition revenue growth and growing expenses. In addition, an improving economy may serve to detract potential students. Looking ahead, overall higher educational spending will be challenged by a college-bound age cohort which is significantly fewer in number relative to the recently matriculated huge wave of Millennials, the youngest of which are 22 years old.

Heavy construction should grow modestly in 2019.

Heavy construction and civil engineering should also see modest growth in 2019. We expect overall outlays to rise 4.5%, as spending for transportation and infrastructure projects remains strong. We expect spending for highways, streets and road improvements to rise 5% this year. Spending for mass transit systems rises somewhat faster than that but is growing off a significantly smaller base. Expenditures for both light rail and subway projects remains in high gear, although the bulk of the impact is limited to a relative handful of markets. Spending for airport projects looks set to grow about 6% this year, with all facets of airports seeing growth, including parking, terminals, runways and rental car facilities. Investment in seaports and harbors should rise about 4%, reflecting growing demand for container and rail facilities to move freight efficiently to the growing number of inland ports operating around the country.

Figure 11

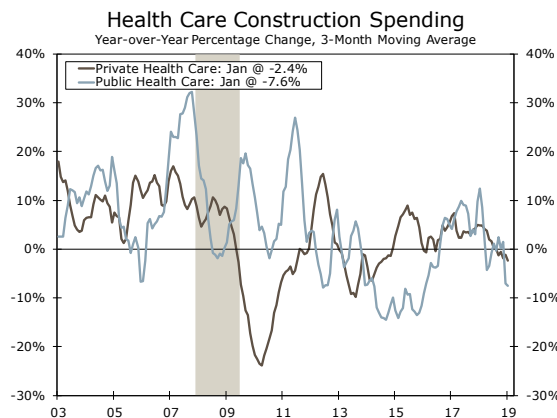
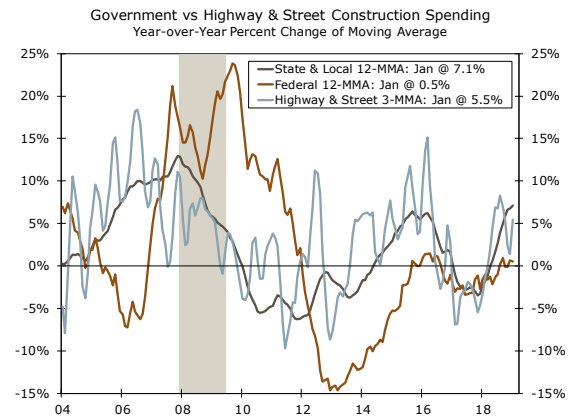


Figure 12

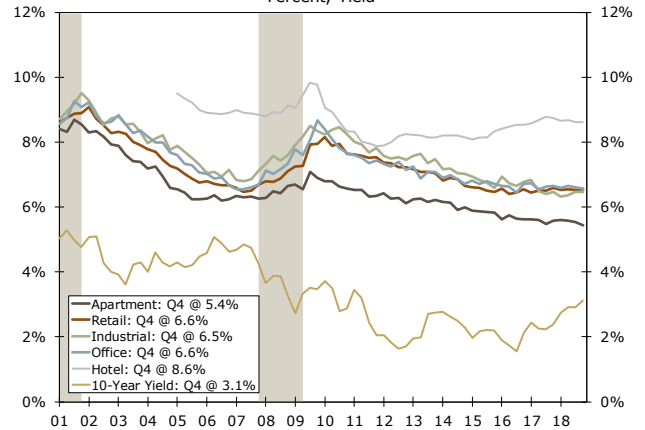


Source: U.S. Department of Commerce and Wells Fargo Securities

CRE Property Pricing & Fundamentals

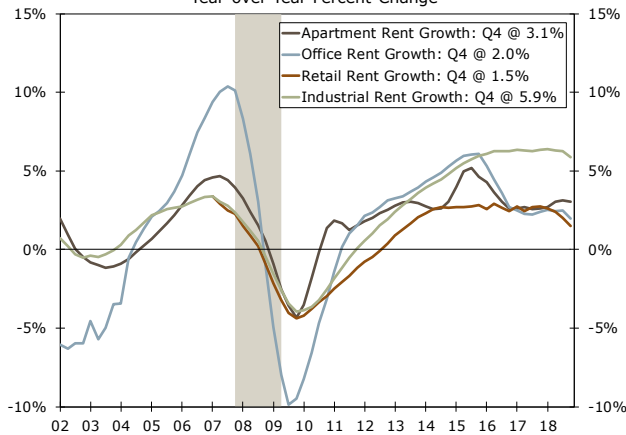
- Commercial property prices increased to fresh highs across the board in the fourth quarter. The late stage of the business cycle and fairly lofty valuations are becoming more apparent in the data. Prices for apartment, office, retail and industrial properties all rose at a slower sequential rate in the fourth quarter.
- Investors remained sanguine, as transaction volumes remained steady at a near-record \$160B. We have urged caution against ‘cap rate angst’ over the past few years, and the financial market volatility-induced plunge in the 10-year Treasury yield in December should further quell fears of ascendant rates.

Cap Rates vs. 10-Year Treasury Yield
 Percent, Yield



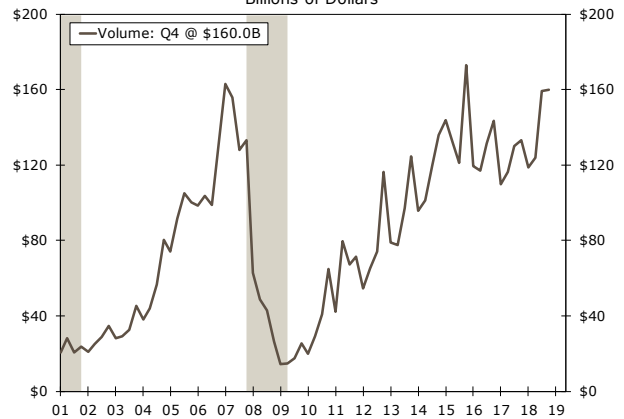
CRE Asking Rents

Year-over-Year Percent Change



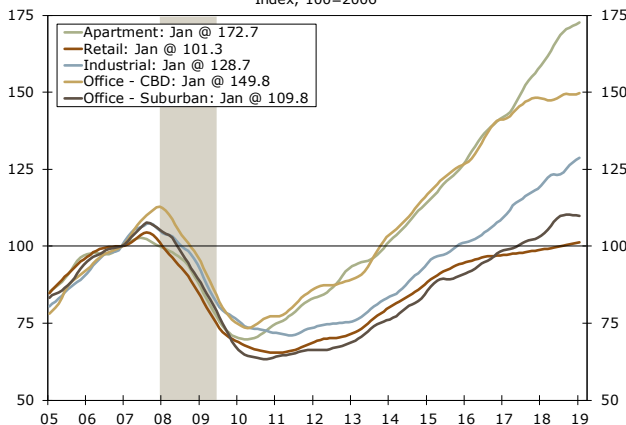
CRE Transaction Volume

Billions of Dollars



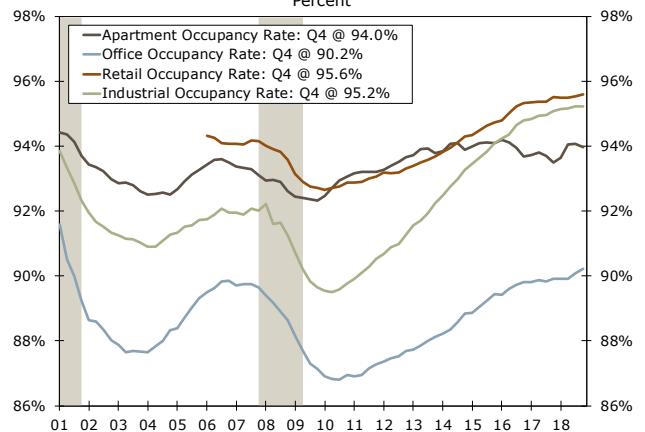
Commercial Property Price Index

Index, 100=2006



Occupancy Rates

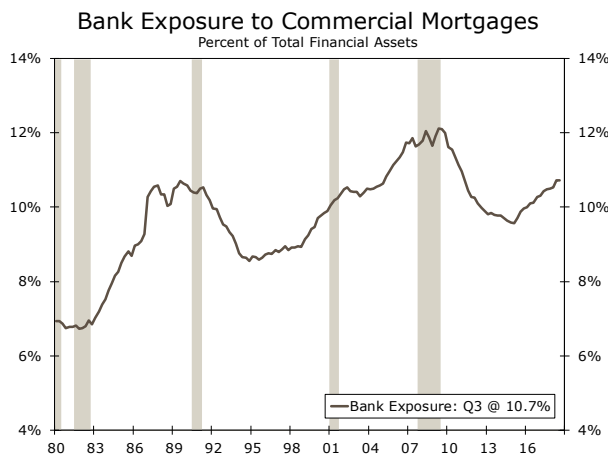
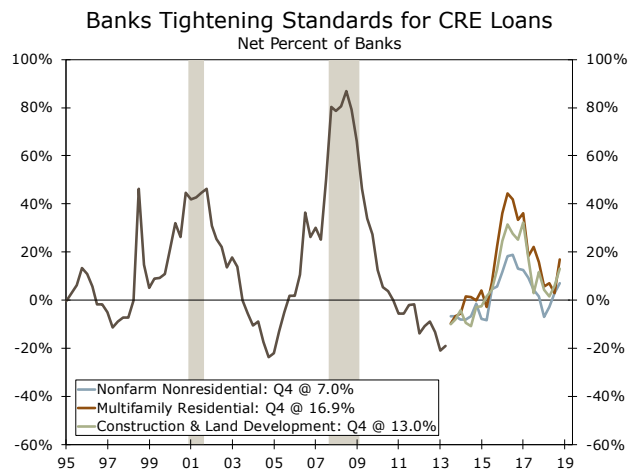
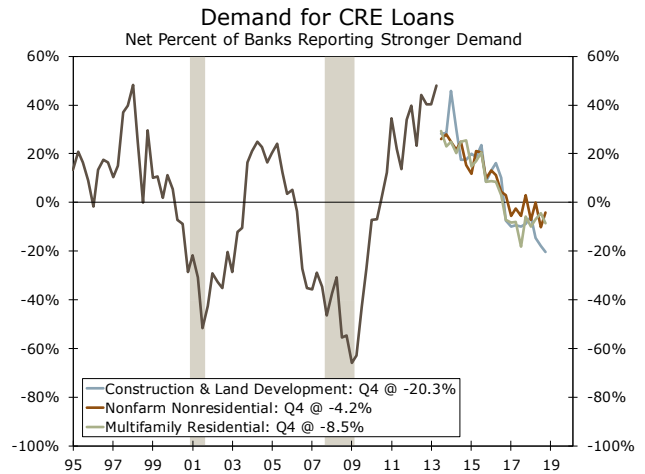
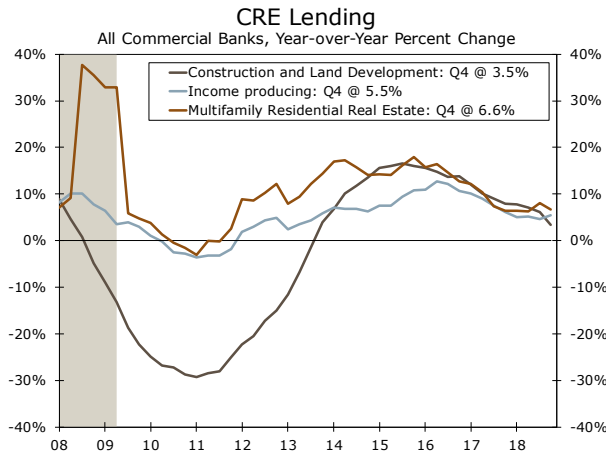
Percent



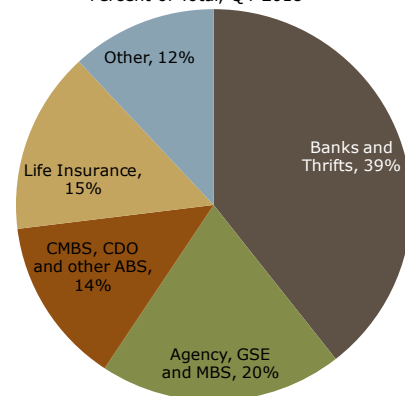
Source: CoStar, Inc., Real Capital Analytics and Wells Fargo Securities

Credit Availability & Lending

- A “patient” Fed should keep credit conditions modestly accommodative. Construction lending is becoming more cautious. Despite some expected moderation given a more cautious lending environment, the flow of credit to the CRE sector should slow yet remain strong.
- 74% of respondents to the MBA’s 2019 CRE outlook survey expected lending to be the same or higher compared to 2018. Solidly performing portfolios—delinquency rates remain near record lows—and a robust pipeline of projects requiring financing are driving lender optimism.
- The lending environment is highly competitive. Nonbank lenders are playing an increasingly large role within the industry.



Commercial & Multifamily Mortgages Outstanding
 Percent of Total, Q4-2018

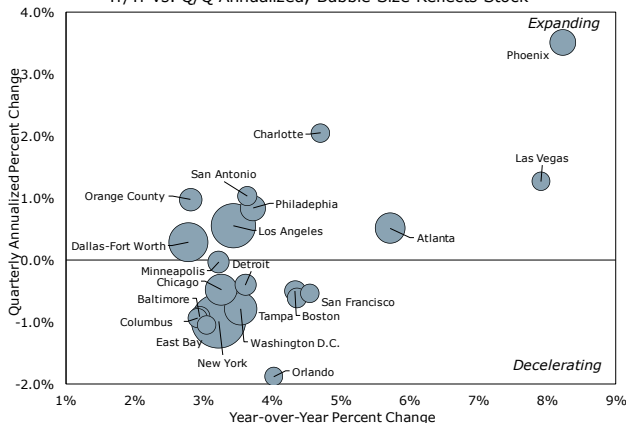


Source: FDIC, FRB, Mortgage Bankers Association and Wells Fargo Securities

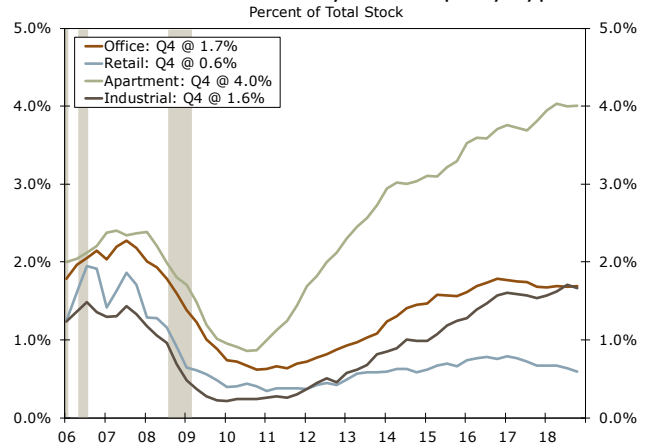
Apartment

- Robust new apartment construction in 2018 was met with hefty demand. However, demand has not quite caught up with supply in several large markets such as Chicago, New York and D.C., which have recently seen rents descend from lofty levels towards the end of the year. With lower mortgage rates and the Fed effectively on 'pause' in regards to further rate hikes, the second wind behind the apartment market may be dissipating.
- The diverging demographic trends of the coastal regions compared to the Southeast and the inner-West define a somewhat bifurcated outlook for the apartment market. Pockets of strength lie in metros such as Charlotte, Las Vegas and Phoenix where job growth and a steady influx of new Millennial residents support rents and occupancy rates, despite a healthy pipeline of new construction.
- Q4 apartment completions fell 20% below their three-year average to 64,000. Vacancy rates ticked up across all apartment types, and remain particularly elevated for 4 & 5 Star properties.
- The NAHB Multifamily Production Index, which tracks multifamily starts, fell in the fourth quarter to 47, indicating that more respondents report that conditions are worsening. Forty-three percent of NREI survey respondents think that construction is too high, but a majority still expect improving fundamentals in 2019.

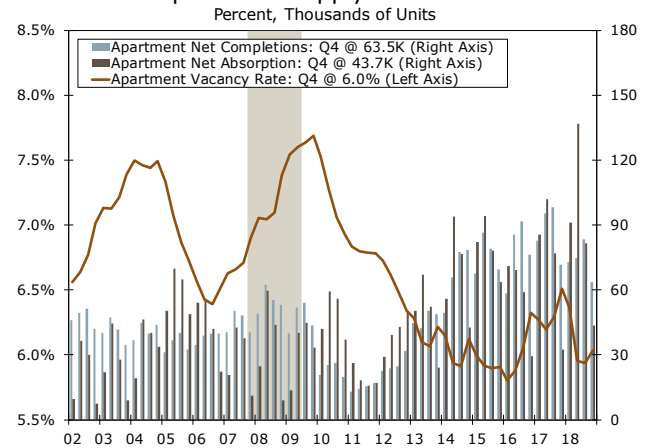
Apartment Effective Rent Growth: Q4 2018
 Yr/Yr vs. Q/Q Annualized, Bubble Size Reflects Stock



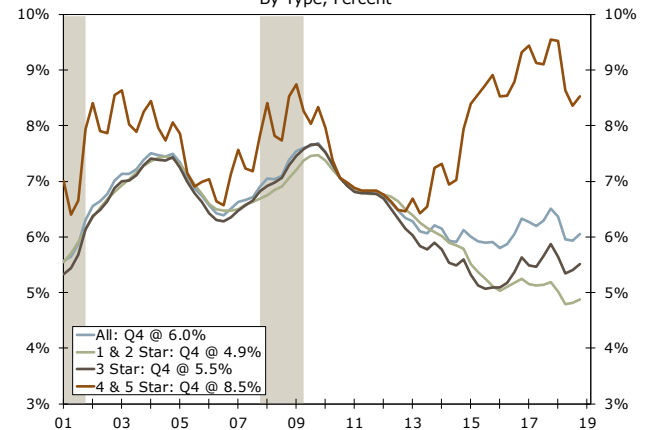
Under Construction by CRE Property Type



Apartment Supply & Demand



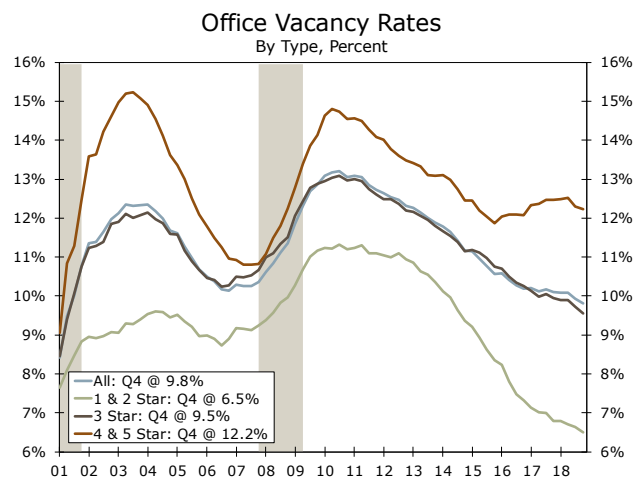
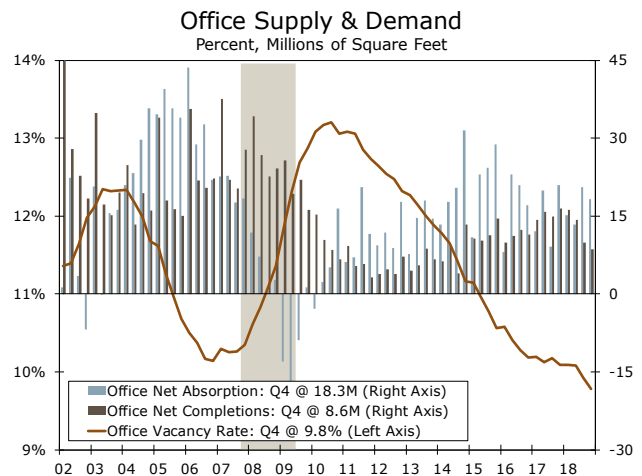
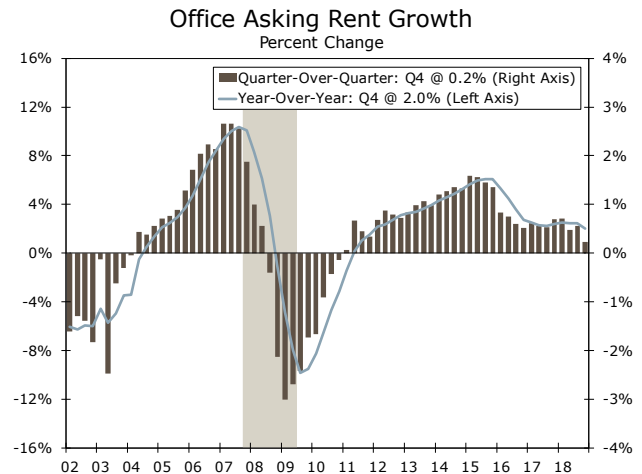
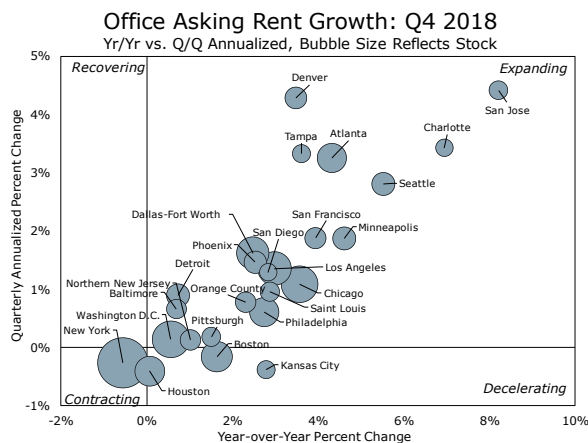
Apartment Vacancy Rates
 By Type, Percent



Source: CoStar, Inc. and Wells Fargo Securities

Office

- The national office market remains roughly balanced, with consistent new absorption driving occupancy rates lower across all property types. Payroll growth surged in the fourth quarter to a monthly average of 232,000 new jobs. While we expect job growth in 2019 to slow to an average of 178,000, relatively restrained new office development should keep rents growing modestly.
- The metros with the strongest rent growth tend to be those with bustling tech sectors, such as San Jose, Charlotte, Seattle and Denver. Investors continue to recognize secondary markets as sources of higher yield, driving capital into a wider swath of the country.
- In secondary markets and suburbs outside of urban cores, coworking is gaining in popularity, and has been promoted by city and local governments in efforts to incubate entrepreneurial and innovative business zones. Investors and developers are increasingly taking steps to “Millennialize” office properties by adding flexibility and the amenities attractive to the wave of young office workers.
- Local and vocal opposition to Amazon’s selection of Long Island City as one of its HQ2 locations successfully drove away the massive new tenant, providing no relief to contracting office rents across New York City. The decision likely further boosts the newly defined ‘National Landing’ outside of Washington, D.C., which had also seen office rent growth slow to near zero.

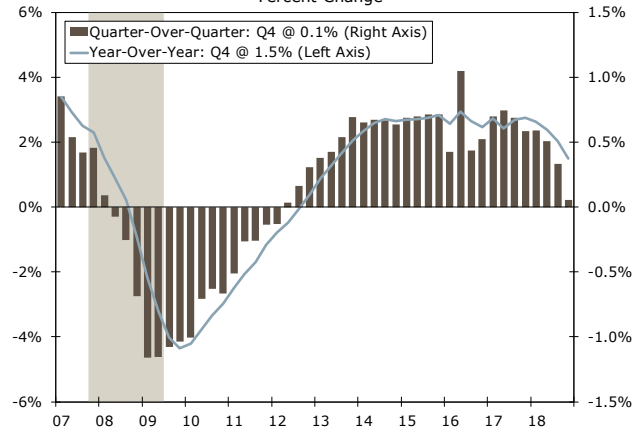


Source: CoStar, Inc. and Wells Fargo Securities

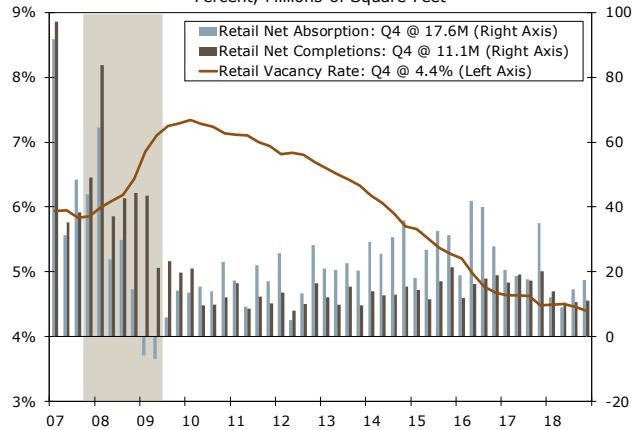
Retail

- Consumer spending limped into 2019. December retail sales tumbled 1.6% and control group sales fell 2.1%, which was the largest decline since the Great Recession. Overall sales rebound 0.2% in January and control group sales rose 1.1%. We suspect the government shutdown and seasonal adjustment have exaggerated the extent of the slowdown. The National Retail Federation expects sales to rise 4.1% in 2019, versus a 4.6% gain in 2018.
- Headlines of despair surrounding big-name bankruptcies of Sears and K-Mart belie the reality that the 5,500 estimated retail store closures this past year came in well below the 7,000 in 2017. Meanwhile, the vacancy rate has remained essentially flat.
- While retailers are no doubt facing challengers, we still see growth opportunities for those able to adapt to changing preferences. Consumers are thirsting for experiential goods and services, and will still pay for what can't be ordered online.
- Omni-channel distribution remains key, allowing brick and mortar properties to piggy back off the rapid growth of e-commerce. Smaller, more flexible stores allow retailers to more efficiently move product.
- Amazon announced it is closing its 'pop up' stores, but has committed to physical bookstores and '4 Star' stores, pointing to the evolving and somewhat ironic relationship between e-commerce and brick and mortar stores.

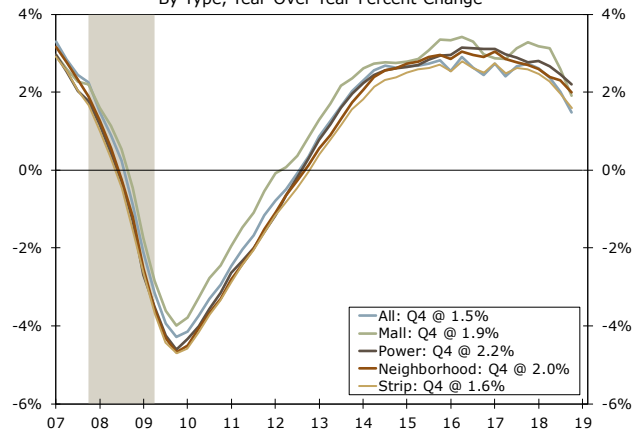
Retail Asking Rent Growth
 Percent Change



Retail Supply & Demand
 Percent, Millions of Square Feet

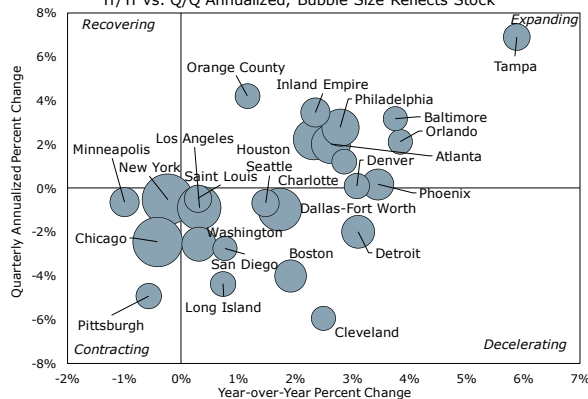


Retail Asking Rent Growth
 By Type, Year-Over-Year Percent Change



Retail Asking Rent Growth: Q4 2018

Yr/Yr vs. Q/Q Annualized, Bubble Size Reflects Stock

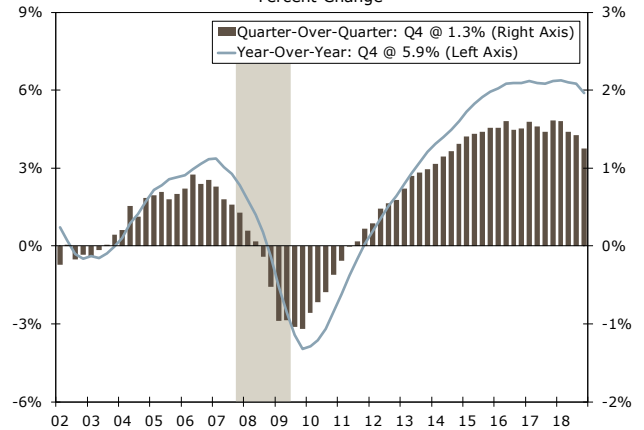


Source: CoStar, Inc. and Wells Fargo Securities

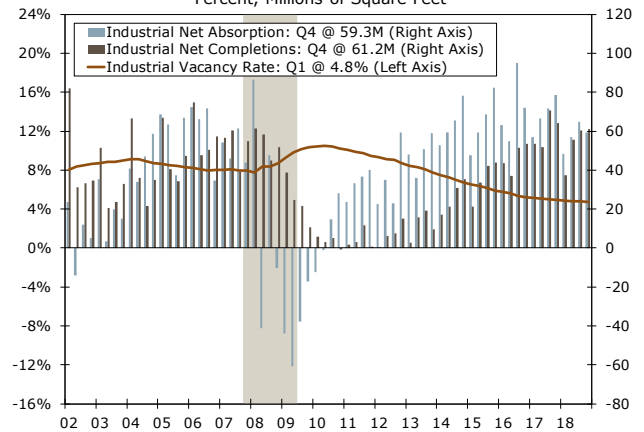
Industrial

- Industrial properties continue to be the best performing sector, with year-over-year rent growth just dipping under 6%. E-commerce expansion continues to drive massive demand for warehouse and distribution facilities, particularly in metros with competitive advantages of proximity to infrastructure and population centers. National retailers behind the ball are playing ‘catch-up’ and building out their omni-channel distribution capabilities.
- The Inland Empire—with access to the southern California population base and the Ports of Los Angeles and Long Beach—was responsible for more than 20% of total U.S. large warehouse and logistics leases signed last year. The pace of new activity vastly exceeds other top markets, such as Dallas-Fort Worth and the Lehigh Valley in Pennsylvania.
- Overbuilding has been constrained by rising construction costs, keeping new supply disciplined and helping drive rent growth. The markets with the hottest pipelines include Las Vegas, Raleigh, Salt Lake City and Atlanta.
- Weakening purchasing managers surveys—the ISM manufacturing index and regional Fed indices—suggest some caution about the outlook for the manufacturing sector as trade tensions linger and growth downshifts across the Eurozone, Japan and China. Still, the readings remain in expansion territory, and e-commerce is here to stay.

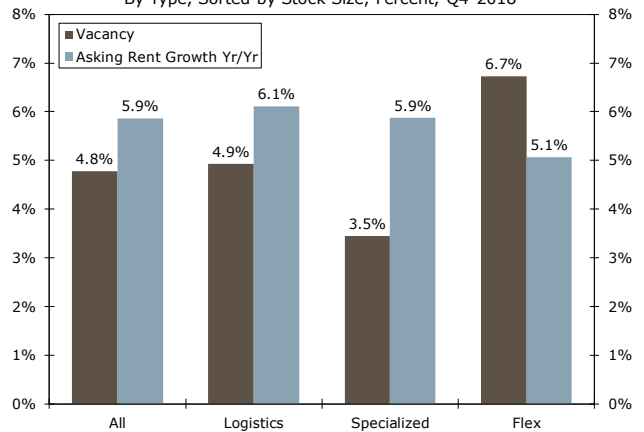
Industrial Asking Rent Growth
 Percent Change



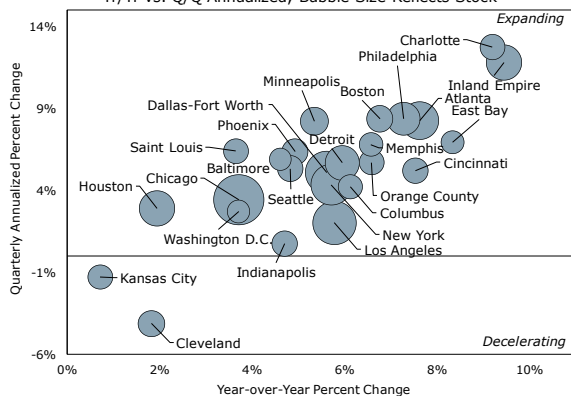
Industrial Supply & Demand
 Percent, Millions of Square Feet



Industrial Vacancy Rates & Rent Growth
 By Type, Sorted by Stock Size, Percent, Q4-2018



Industrial Asking Rent Growth: Q4 2018
 Yr/Yr vs. Q/Q Annualized, Bubble Size Reflects Stock

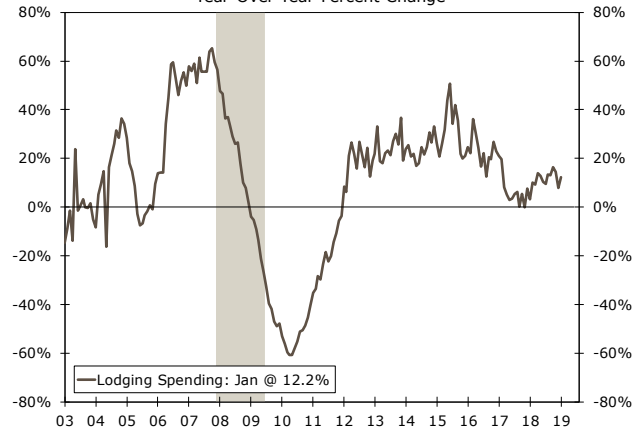


Source: CoStar, Inc. and Wells Fargo Securities

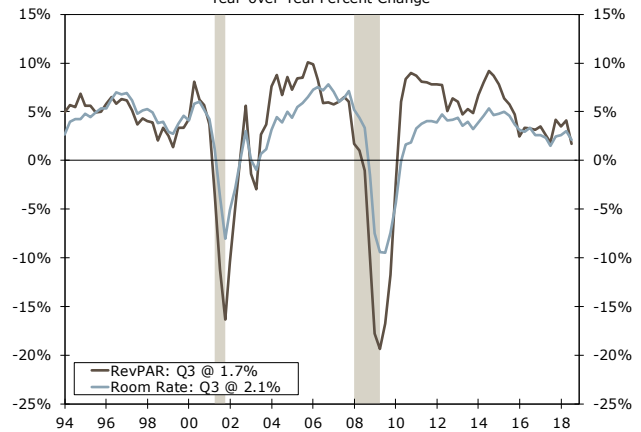
Hotel

- Hotel occupancy remains extremely high, yet the robust demand for lodging will likely be insufficient to keep revenues rising in line with accelerating operating costs.
- Despite cycle high wage growth, open positions and labor scarcity plague the hotel industry, driving compensation costs higher and squeezing margins.
- Supply remains healthy. Inventories rose 2% in 2018, as developers added the highest number of new rooms since 2009. More than 5,000 projects are under construction or in the planning stages.
- The average daily rate (ADR) rose 2.4% in 2018, with a similar increase expected this year. With occupancy rates bumping up against structural and cycle constraints, we expect RevPar growth to mirror ADR growth.
- Consumer spending and confidence dipped markedly at the end of 2018 amidst an equity market sell-off and uncertainty related to the government shutdown. While the political turmoil certainly hindered hotels in areas with large federal government presences, the retracement of the stock market sell off to start 2019 has put the consumer back on fairly solid footing. A persistently strong dollar and slowing growth across the developed world may hinder international arrivals and dampen hotel performance in key gateway cities.

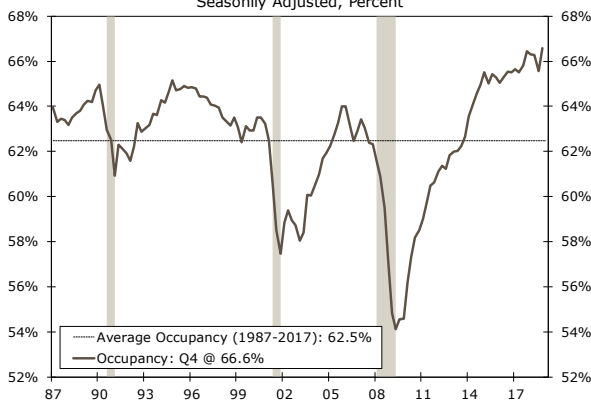
Lodging Construction Spending
 Year-Over-Year Percent Change



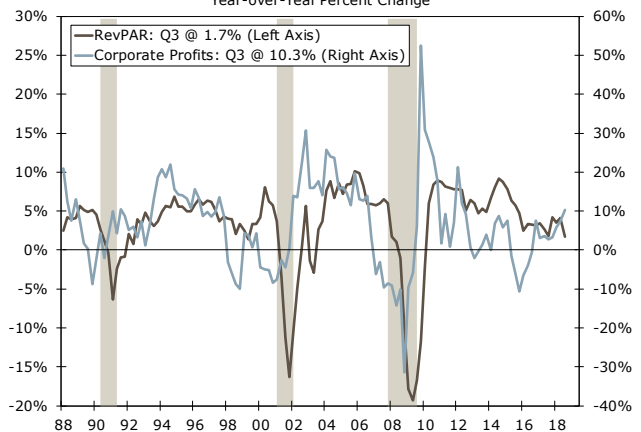
RevPAR vs. Average Daily Rate
 Year-over-Year Percent Change



Hotel Occupancy Rate
 Seasonally Adjusted, Percent



Hotel Real RevPAR vs. Corporate Profits
 Year-over-Year Percent Change



Source: STR, U.S. Department of Commerce and Wells Fargo Securities

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