

A Review of Middle-Income Housing

Winter 2019

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EXECUTIVE SUMMARY

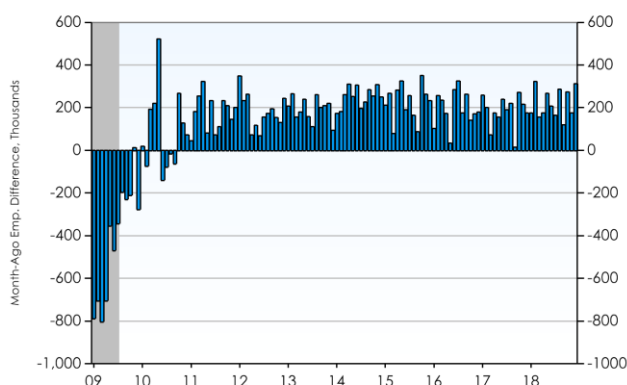
The Praedium Group and Ten-X Research have jointly produced this report, which focuses on the outlook of the US apartment market, with an emphasis on Class B multifamily housing and middle-income renters earning 90-140% of Area Median Income (AMI). For purposes of this discussion, Class B multifamily housing which targets middle-income renters is referred to as "Middle-Income Housing". **We believe that strong demand for middle-income housing is fueled by several long-term economic and demographic trends and a beneficial supply/demand dynamic, providing attractive growth prospects in this sector of the multifamily market.**

- **Deteriorating Affordability of Single Family Housing** – A firm labor market and improving wage growth continue to drive healthy housing demand, although opportunities remain limited for potential buyers of single family homes. The price of single family homes has increased at almost triple the rate of wage growth over the past 6 years. The decline in affordability of single family homes can be attributed to several factors including: **a rise in construction costs as a result of a tight labor market and an increase in the cost of materials, which has been further exacerbated by tariffs;** a lack of starter or entry level home inventory; stricter lending standards; and **rising mortgage rates**. This decline in the **affordability of single family homes is deterring many potential buyers, shifting additional demand towards renting.**
- **Propensity to Rent Among Millennials and Baby Boomers** – **Demographic shifts are also fueling apartment demand**, as millennials and baby boomers both enter notable renting ages and show a higher preference for renting over ownership. At present, a record number of millennials are living at home, but this appears to be shifting, representing a potentially huge pool of Middle-Income Housing pent-up demand.
- **Substantial Middle-Income Housing Renter Pool** – **Middle-income renters, focused on people earning 90-140% of Area Median Income (AMI), account for a considerable segment of rental demand.** Based on national median household income of approximately \$60,000 per household, this equates to household income levels of approximately \$54,000 to \$84,000. As the decline in affordability of single family housing continues, **many in this sizeable portion of the population will turn towards the affordable rents of Middle-Income Housing.**
- **Lack of Newly Built Supply in Middle-Income Housing** – **Middle-income multifamily housing demand remains high, but newly built supply additions are minimal, keeping vacancy rates for Class B & C apartments in the mid-3% range, where they should remain for some time.** As land, labor and construction costs continue to escalate, **multifamily developers need to achieve Class A rents for projects to be economically feasible and are overwhelmingly building at the high-end of the market.** As a result, **Class A apartment inventory has also grown more than 32% in the last decade, compared to 0.1% growth in Class B & C inventory.** Although the demand for affordable and lower-rent multifamily housing is evident, **rising cost structures make it difficult for investors and developers to build new units with non-luxury rents.** Costs are increasing rapidly from both a labor and materials perspective, as the residential construction price index is up 6% from a year ago. With the labor market expected to remain tight in the foreseeable future, as materials costs remain elevated, and the likelihood of additional tariffs, **high building cost conditions are not likely to ease any time soon.**

Economic & Demographic Background

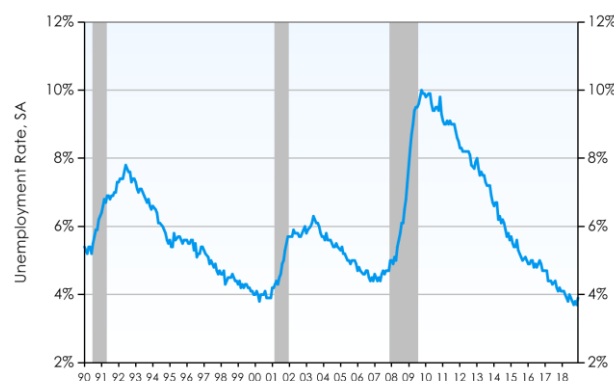
The duration of the current US economic cycle has extended for a relatively long period of time, which has been facilitated by a solid labor market that continues to fuel this lengthy economic expansion, adding an average of nearly 220,000 monthly jobs over the past year. Unemployment is considerably low after falling to 3.7% in November, its lowest mark since 1969. Though financial markets have seen some volatility of late while the Fed raises rates, GDP growth measured a robust 3.4% in the third quarter, as healthy labor market conditions continue to support strong consumer activity and drive an impressive level of housing demand.

Payroll Gains Remain Solid Despite Aging Economic Cycle



Sources: BLS, Ten-X Research

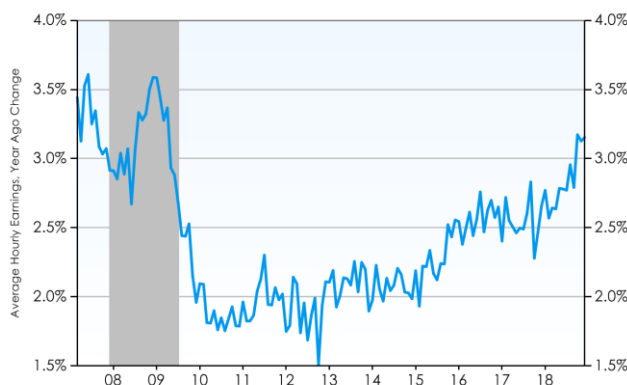
Unemployment at Low Level Not Seen for Decades



Sources: BLS, Ten-X Research

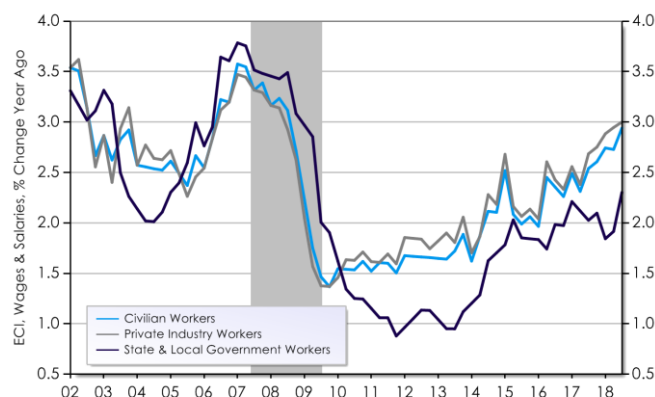
Amid persistent payroll gains and low unemployment, wage growth has gradually accelerated in recent years by various measures. Though average hourly earnings growth remains short of prior cyclical peaks, they recently hit a cycle high just above 3% as an extremely tight labor market increasingly forces firms to compete for labor. Demographic shifts also may be putting a damper on stronger wage growth readings, so these gains are encouraging as wage growth remains the key to the continuation of this economic cycle, particularly as housing costs continue to rise.

Average Hourly Earnings Accelerating to Cycle Highs



Sources: BLS, Ten-X Research

Employment Cost Index on the Rise



Sources: BLS, Ten-X Research

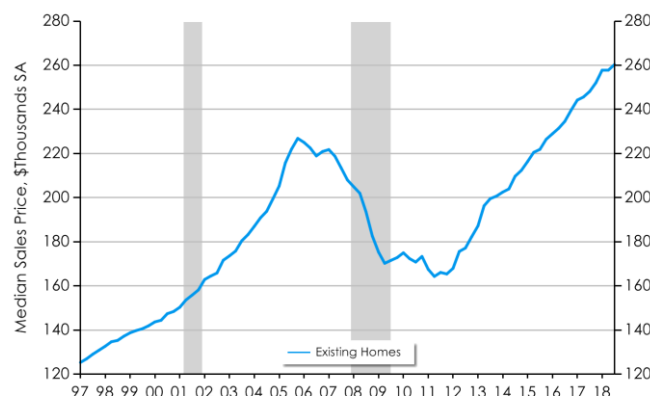
While a strong labor market and rising wages continue to drive broader housing demand, single family housing market conditions remain challenging for many potential buyers. Despite a recent uptick, inventory of existing homes for sale remain at historically low levels, particularly in the starter or entry level home category. New inventory, particularly in the starter home or entry level category, will also remain limited by rising land, labor, and material costs, particularly as tariffs begin to take effect. With a strong labor market fueling demand amid these historically low supply levels, home price growth has surged in recent years. Median existing home prices have risen 57% since the end of 2011 to an all-time high above \$260,000, pressuring affordability for potential buyers.

Existing Home Inventories Remain Historically Low



Sources: NAR, Ten-X Research

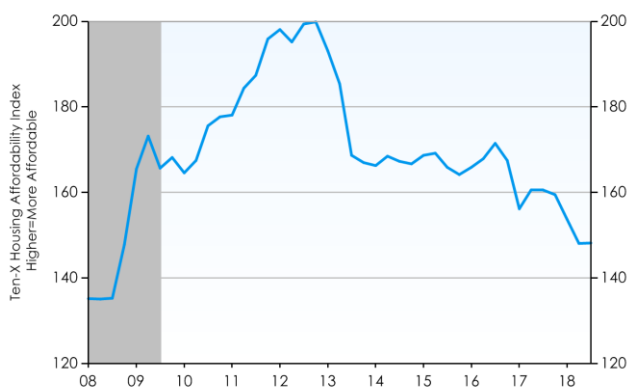
Existing Home Prices at an All-Time High, Surging 57% Since the End of 2011



Sources: NAR, Ten-X Research

With substantial home price growth outpacing wage gains in recent years, affordability prospects for buyers have suffered. While not at historically low levels, the Ten-X housing affordability index has declined a considerable 26% since the end of 2012, a trend that is expected to persist as mortgage rates continue their recent climb and construction costs continue to increase. With the supply of affordable homes dwindling as competition intensifies, many potential buyers will be priced out of the market and forced into more affordable rentals.

Ten-X Housing Affordability Index Has Declined 26% Since the End of 2012



Sources: FHFA, US Census Bureau, IHS Economics, Ten-X Research

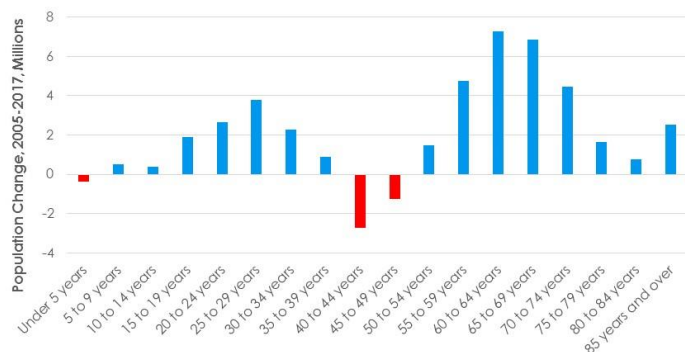
Rising Mortgage Rates Will Further Pressure Single Family Affordability



Sources: Freddie Mac, Ten-X Research

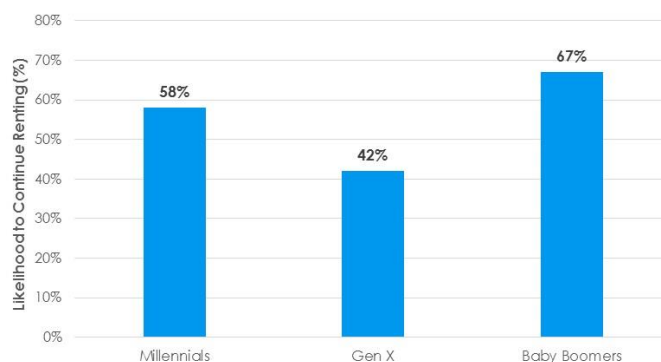
Demographic trends are also aligning to drive future rental demand. Millennials and baby boomers are the two most prominent generations dominating housing demand, as age groups from 20-39 and 55-74 have seen the largest population gains since 2005. These age groups are notable renting ages; people both enter the workforce and begin renting, as well as retire and look to downsize. Not only are millennials and baby boomers hitting notable renting ages, survey data indicates they prefer renting compared to other generational cohorts. These demographic trends and generational preferences will continue to account for heavy rental demand in the coming years.

Notable Renting-Age Cohorts Seeing the Fastest Population Growth



Sources: US Census Bureau, Ten-X Research

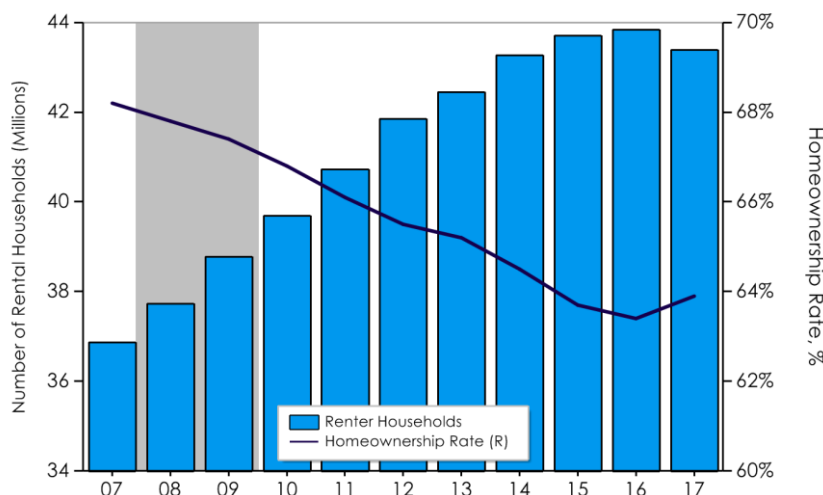
Millennials and Baby Boomers Show a Far Greater Preference for Renting Than Gen X



Sources: Freddie Mac, Ten-X Research

As these demographic trends developed, renter households surged 18% over the past decade to more than 43 million in 2017, while homeownership plunged in the aftermath of the housing bust and facilitated a shift from owning to renting. Though a recent uptick in homeownership has softened renter household growth, homeownership remains at extremely low levels relative to recent decades and will likely remain subdued with both a decline in the affordability of single family homes and a rise in mortgage rates, all pointing to sustained multifamily demand.

Renter Households Have Risen Substantially This Cycle Amid Homeownership Decline

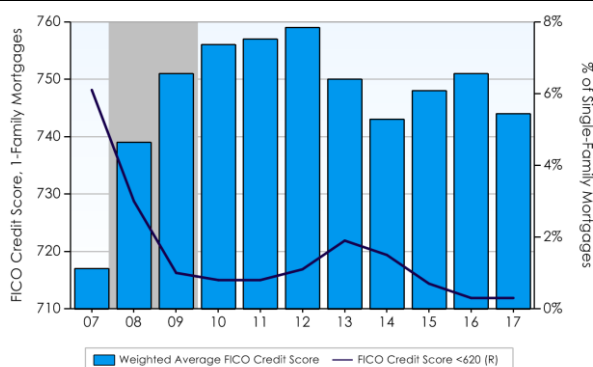


Sources: US Census Bureau, Ten-X Research

Middle-Income Rental Demand

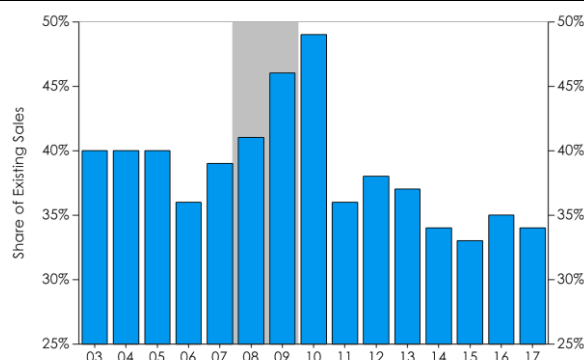
While broader apartment demand is fueled by a number of economic and demographic factors, Middle-Income Housing demand is particularly robust. Middle-Income Housing renters, focused on households earning between 90% and 140% of the area median income (AMI), or approximately \$54,000 to \$84,000, represent a considerable share of renters that are driven to more affordable Middle-Income Housing apartments rather than upscale Class A apartments. This class of renter is becoming more prominent due to both demographic shifts and limitations encountered by such middle-income households in the purchase of homes, such as stricter lending standards, which remain a major obstacle to many potential buyers. According to the Federal Reserve's July 2018 Survey on Bank Lending Practices, mortgage lending standards remain tight, and the share of banks that reported tightening their lending standards since 2005 has increased from a year ago. Fannie Mae data on single family mortgages also shows that the average FICO score on mortgages remains elevated compared to a decade ago, while the share of mortgages with poor credit (FICO score of less than 620) is down to just 0.1%, well below the roughly 6% seen a decade ago.

Mortgage Lending Standards Remain Tight



Sources: Fannie Mae, Ten-X Research

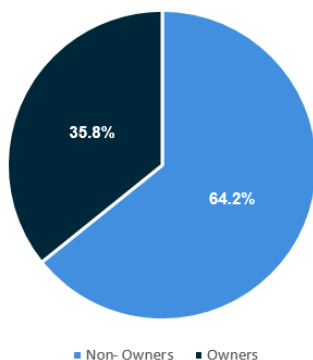
First-Time Homebuyers Remain Subdued



Sources: NAR, Ten-X Research

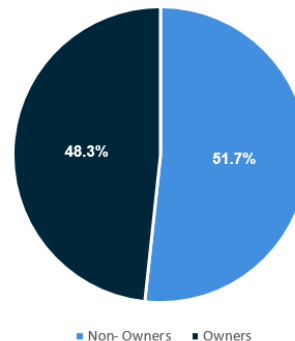
These stringent lending standards are another factor restricting the number of potential buyers in the marketplace. This is particularly acute among first time buyers, whose share of existing sales has plummeted this cycle and measured just 34% in 2017, well below the historical norm of 40% per the NAR. This decline is also reflected in comparing generational homeownership rates at age 30. Millennial homeownership at age 30 is just 35.8% compared to a whopping 48.3% for baby boomers at age 30, highlighting how middle-income housing demand is further shifting from owning to renting.

Homeownership Among Millennials at Age 30



Sources: Stanford Center on Longevity, US Census Bureau, Ten-X Research

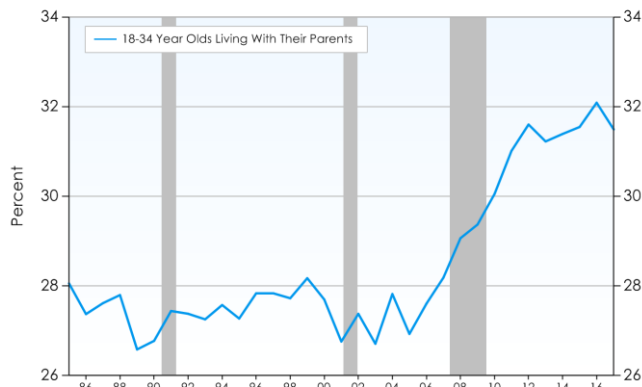
Homeownership Among Baby Boomers at Age 30



Sources: Stanford Center on Longevity, US Census Bureau, Ten-X Research

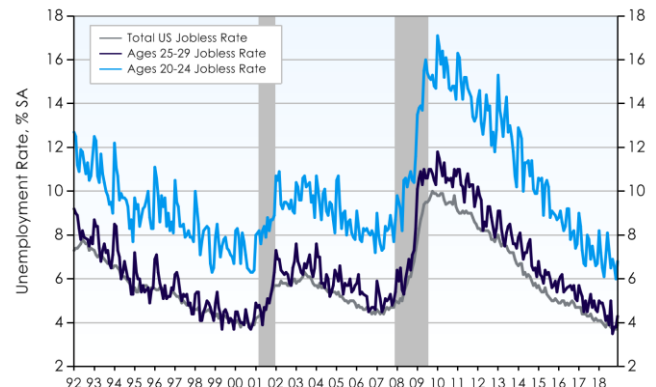
The share of 18-34 year-olds living with their parents substantially increased during the prior recession and has remained high, near 32%, in recent years. However, the economy is performing well, and the youth unemployment rate has declined on par with prior cycle lows. The share of young adults living at home dipped in 2017 for the first time in four years, and stronger job and wage prospects for young people may entice them to move out and form their own households in greater numbers. However, with lending conditions tight and mortgage rates rising, a large share of new millennial households may continue to prefer renting.

Nearly One Third of Millennials Still Live with Their Parents, but the Share Fell in 2017



Sources: US Census Bureau, Ten-X Research

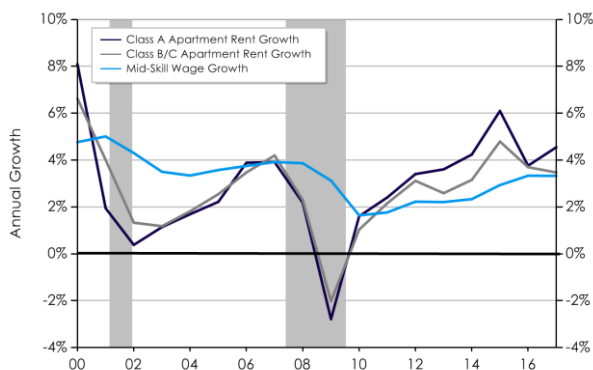
Falling Youth Unemployment Helping to Generate Household Formations



Sources: BLS, Ten-X Research

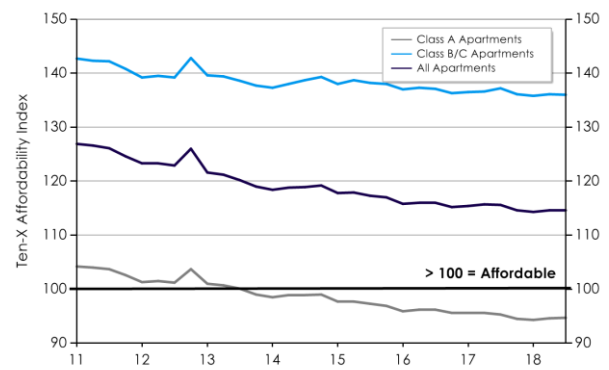
The diverging pace of rent growth between Class A and B & C apartments, relative to mid-skill wage growth, is greater evidence of the demand potential for affordable housing. Since 2010, Class A apartment rents have been rising by 3.7% per year, on average, while mid-skill wages are averaging gains of just 2.5% per year – this difference of more than 100 bps further prohibiting a mid-skilled worker's entry into the Class A market. By contrast, Class B & C rents are growing a more modest 50 bps ahead of mid-skill wages on average at 3.0% per year. The Ten-X Research Affordability Index also illustrates the relative affordability of Class B & C to Class A apartments. In addition to being less affordable overall, Class A apartments have seen a 9% decline in affordability since the end of 2012, while Class B & C affordability has declined by less than 5%.

Mid-Skill Wage Growth More Closely Tied to Class B & C Apartment Rents



Sources: Reis, Atlanta Fed, Ten-X Research

Class B & C Apartments Are More Affordable

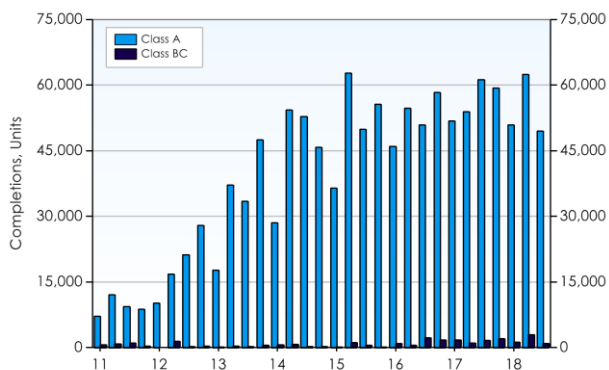


Sources: Reis, US Census Bureau, IHS Ten-X Research

Class Cut Fundamentals

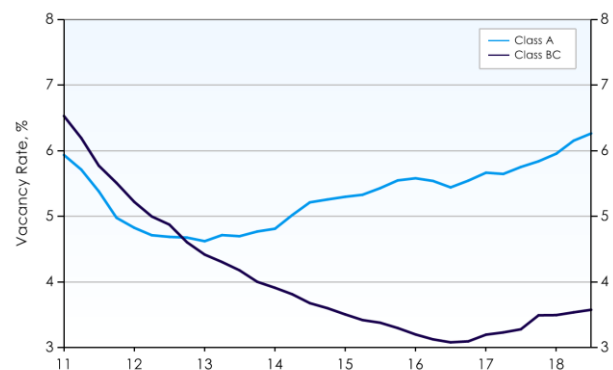
As the economic and commercial real estate cycle moves into its latter stages, trends in Class A vs. Class B & C fundamentals have demonstrated differences. Supply continues on the Class A side, and Class A apartment vacancies have increased from a low point of 4.6% in 2013 to a new cycle peak of 6.3% most recently (although this figure does include newly constructed properties undergoing lease-up). Conversely, vacancies in Class B & C apartments remain low, as newly built supply additions are minimal at that end of the market. Class B & C vacancies, per REIS, measured 3.6% in 3Q'18, a scant 50 bps increase from the cyclical low set in mid-2016. Class B & C vacancies are still far below their 8% peak set in 2009.

Class A Completions Are Considerably Surpassing Newly Built Class B & C Supply



Sources: REIS, Ten-X Research

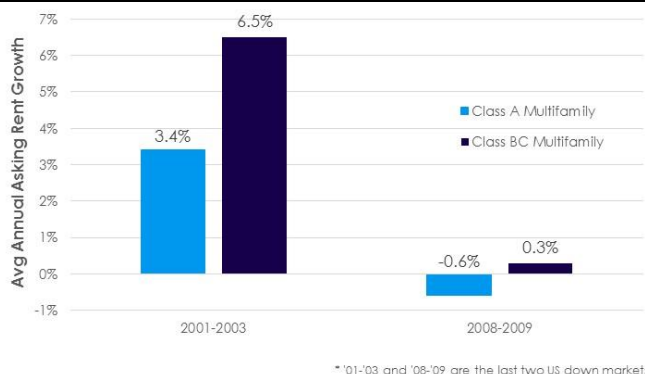
Class A Vacancies Are Above Class B & C Apartments



Sources: REIS, Ten-X Research

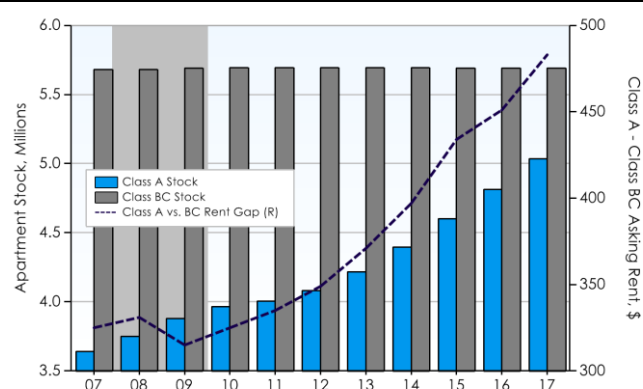
Class B & C apartment rents have also exhibited some outperformance relative to Class A during the two recent U.S. economic downturns of 2001-2003 and 2008-2009. Class B & C apartment rents grew an aggregate 6.5% during the 2001-2003 downturn, outpacing 3.4% Class A growth. Both class cuts performed worse during the 2008-2009 financial crisis, but Class B & C rents managed to eke out marginal growth while Class A rents contracted. Although Class B & C apartment rental rate performance here is viewed as a single group, we believe that in the event of a disruption in the overall economy, Middle-Income Housing (primarily Class B) would potentially fare better than that of lower income properties (primarily Class C), due to the inherent credit risk of the tenant profile of Class C properties.

Class B & C Apartment Rent Growth Outpaced Class A in Each of the Last Two Downturns



Sources: REIS, Ten-X Research

As Class A Apartment Stock Has Risen, So Has the Gap with Class B & C Asking Rents



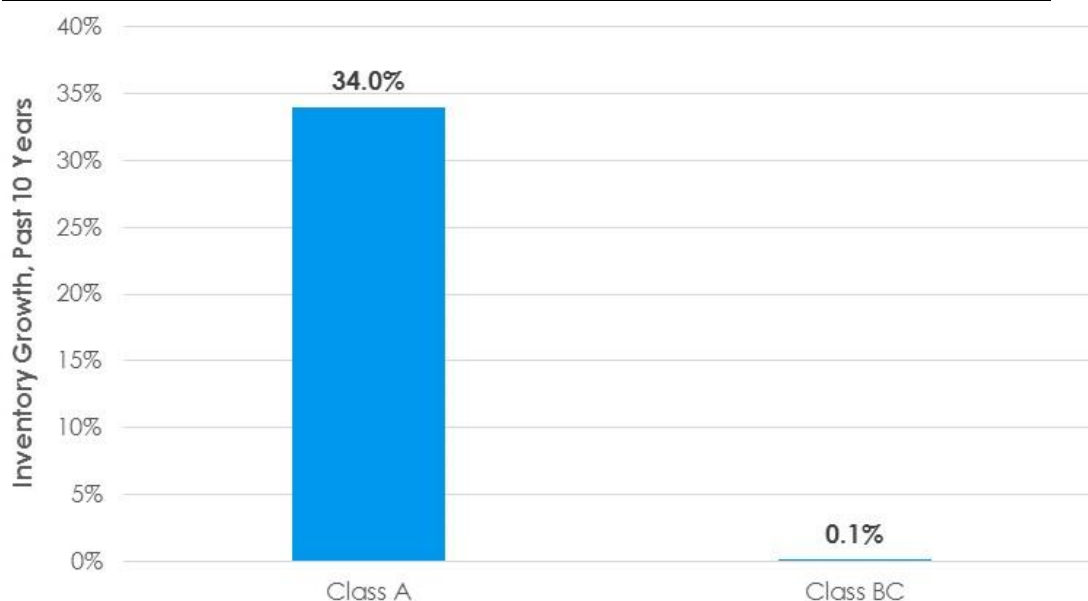
Sources: REIS, Ten-X Research

As we enter 2019, the tenth straight year of U.S. economic expansion, Class A apartment asking rents continue to grow quicker and widen the gap with Class B & C rents. The right-hand chart above illustrates this rising gap between Class A and Class B & C rents this cycle, in conjunction with the growth in Class A, luxury apartment housing stock. Class B & C inventory has generally failed to increase this cycle and is not expected to increase for the reasons previously discussed, and therefore vacancies are expected to remain low.

Class Cut Inventory Trends

Newly built multifamily inventory this cycle is heavily concentrated at the high-end of the rent spectrum. This ongoing trend is further supported by REIS data on new multifamily inventory cut by building class. Since 2009, Class A inventory has increased an aggregate 34%, while Class B & C inventory has grown 0.1%. Class B & C apartment inventory is nearly identical to where it was at the start of this economic cycle a decade ago, while total U.S. renter households have increased by more than 7 million in that span.

Class A Inventory Has Grown 34% in the Past Decade, Compared to 0.1% Class B & C Growth

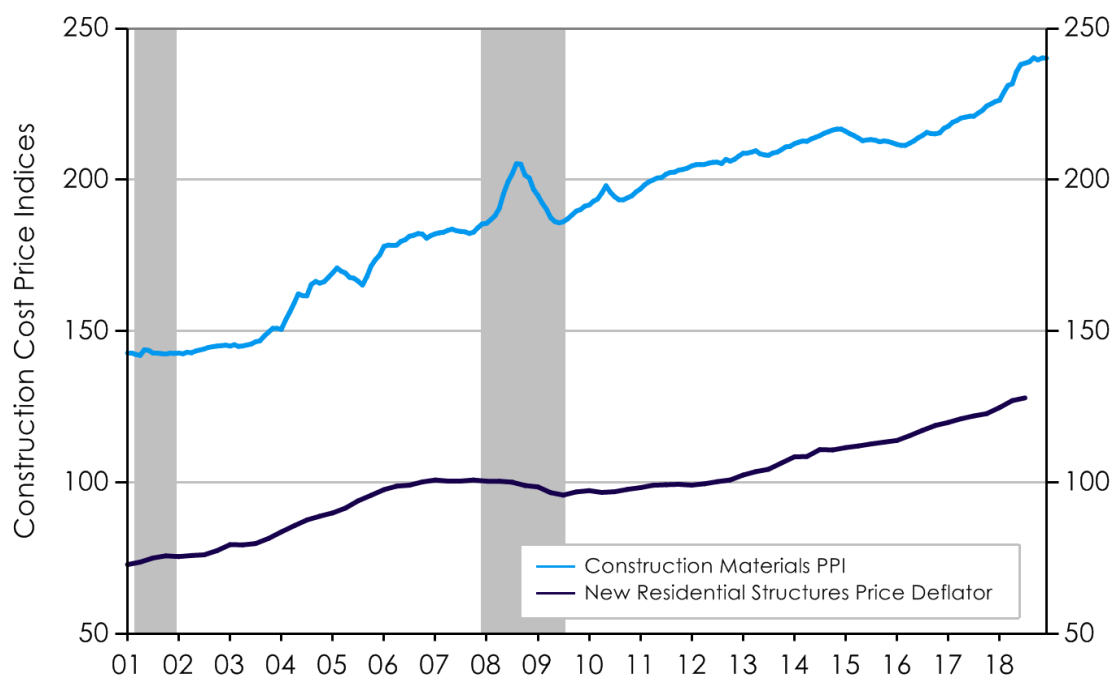


Sources: REIS, Ten-X Research

Construction Costs

Residential construction costs are on the rise and at all-time peaks according to multiple pricing indicators. Materials and labor costs are both increasing and face additional upward pressure, and growth in these cost structures has picked up of late. The construction materials producer price index is up 6.3% from a year ago and is more than 29% higher than its recessionary low point amid the housing bust in 2009. Rapid growth in residential materials and construction labor prices forces housing developers to build to higher rents to meet project profitability benchmarks, which is a key explanation for why developers have been concentrating at the high-end tier of the rental market this cycle.

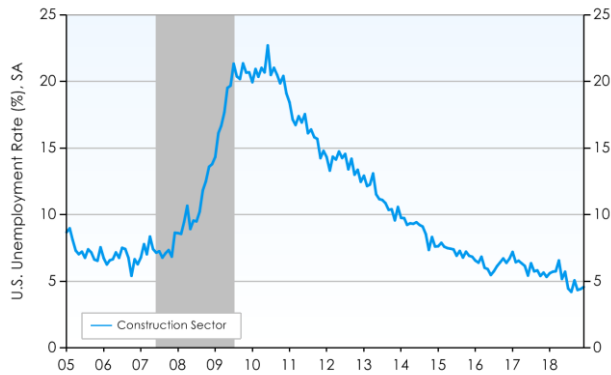
Residential Construction Cost Measures Are at All-Time Peaks, and Encourage Developers to Build at the High-End of the Rent Spectrum



Sources: BLS, BEA, Ten-X Research

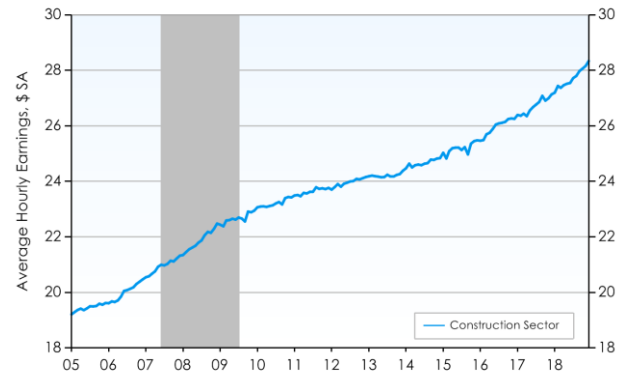
Much like the overall U.S. labor market, the construction sector specifically has seen labor availability tighten dramatically this cycle. In the wake of the last housing bust, the construction sector unemployment rate peaked at a seasonally adjusted 22.7% in 2010. The rate was trending in the low-4% range in mid-2018 and most recently measured 4.6%. The tight construction labor market is also beginning to drive stronger wage growth in the industry. Average hourly earnings in the sector hit a new peak of \$28.34 in December, 4.4% higher than a year ago. The pace of wage growth has steadily accelerated this cycle, and after bouncing around the 2% range through much of 2015-2017, year-over-year wage gains jumped to the 3-4% range across 2018. Limits on immigration can have a severe impact on the construction labor pool. The construction industry has the second-highest proportion of immigrant labor in the US after agriculture. Ongoing regulatory moves to limit immigration could exacerbate US construction labor cost increases. As the labor market remains tight and wages continue to grow at a heady clip in the months ahead, construction labor costs will continue to rise and increase the pressure to build to higher rent projects, leaving the inventory of Middle-Income Housing tight.

U.S. Construction Sector Unemployment Has Declined to Under 5%, from nearly 23% in 2010



Sources: BLS, Ten-X Research

Construction Wage Growth Is at an All-Time Peak and Growing in the 4% Range Annually



Sources: BLS, Ten-X Research

Residential construction materials costs have increased dramatically thus far in 2018, according to September data from the National Association of Home Builders. Gypsum prices have increased roughly 6% over the past three months and 8.1% year-to-date in 2018. Softwood lumber prices have stepped back off their increase this spring, but the average price paid remains the highest on record – 18.7% higher than the prior record set in 1997. The index for OSB and waferboard has also cooled over the past few months but remains up on the year, and ready-mix concrete prices are up around 6% from a year ago. With this substantial upward pressure on construction costs, developers are continually forced to focus on building upscale units to see profits, making Middle-Income Housing supply expansion extremely unlikely at this time.

Notes



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