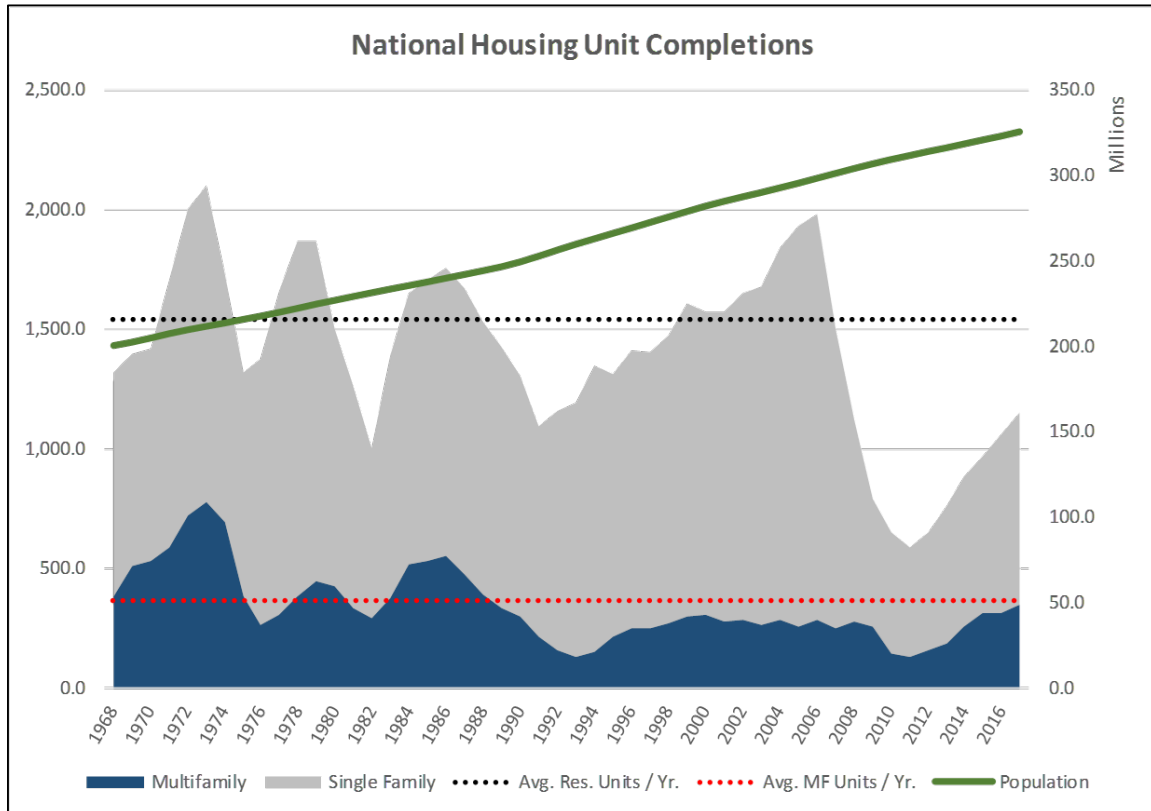


Economics 101

By Todd Williams, Chief Investment Officer, Grubb Properties

- **Demand for multifamily housing has outpaced supply** for 10 straight years, a trend that our research projects will last over the next 10 years.
- **75% of new supply is targeted to affluent people**, a small segment of the population, while the greatest demand is coming from workers making 60-140% of the area median income.
- **We are at the Goldilocks Moment for office investments** - Millennials, the most educated generation, are creating strong demand for office jobs when there are still distressed office investment opportunities.

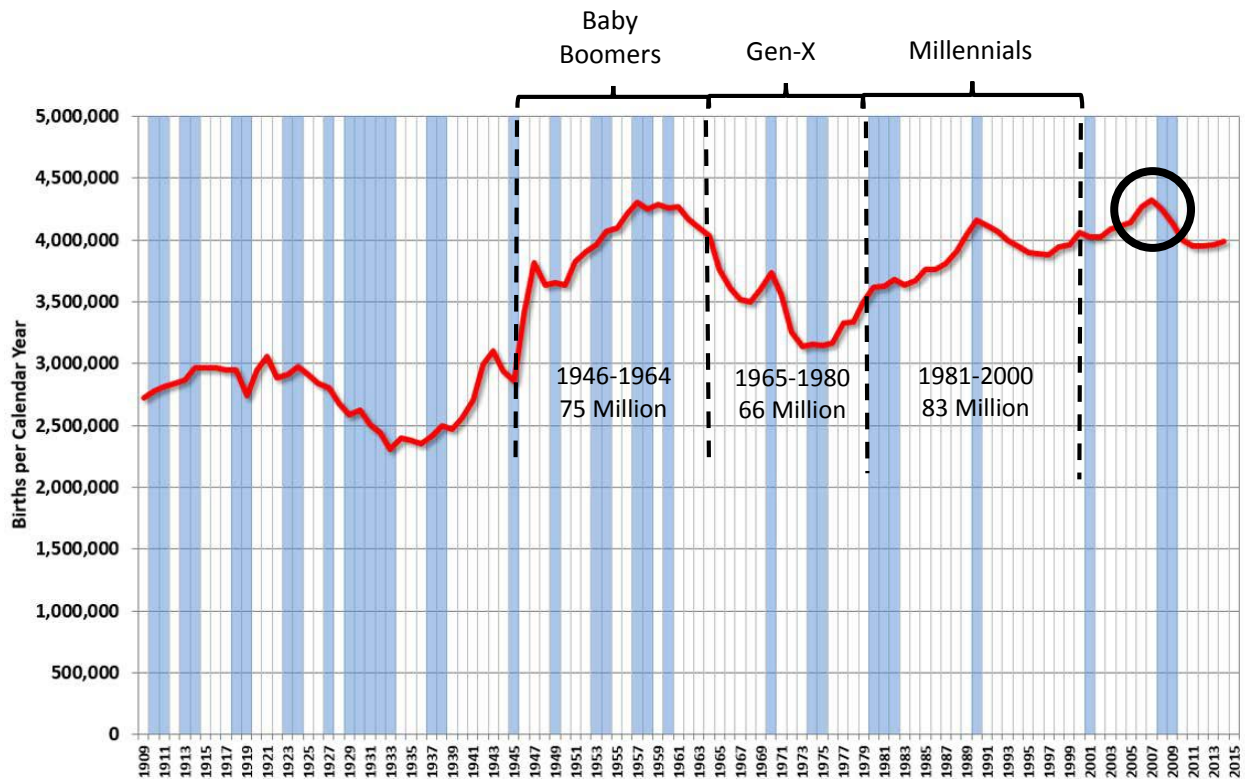
Although it may seem like developers are building lots of apartments, we are still seeing development at a rate that is less than half of peak production, and the biggest drag on housing supply continues to be a lack of single-family construction. According to the U.S. Census Bureau, the country started more than 1.8 million single-family homes in 2006.ⁱ A decade later, single-family housing is still seeing about 300,000 fewer starts than the long-term averageⁱⁱ – and during that time period, the U.S. population has continued to grow considerably.



Source: Grubb Properties using U.S. Census Bureau data

As a result, value-based housing, particularly in urban areas, remains scarce as demand for such housing continues to accelerate. Driven by continued population growth and by the large Millennial generation entering the workforce, the demand is anticipated to outstrip supply until 2030, when a dip in births, as a result of the 2008 global financial crisis, will result in the first year of relief of what will be a bulging number of young folks in their twenties.

Births Per Year in the US



Source: U.S. Census Bureau 2016 Annual Report

Meanwhile, the United States has added less new housing over the past decade than it has over any other 10-year period dating back over 50 years.ⁱⁱⁱ We believe high land prices, combined with exorbitant construction costs and increasing interest rates, will continue to create significant barriers to supply, especially of housing that the majority of the population can afford. Currently:

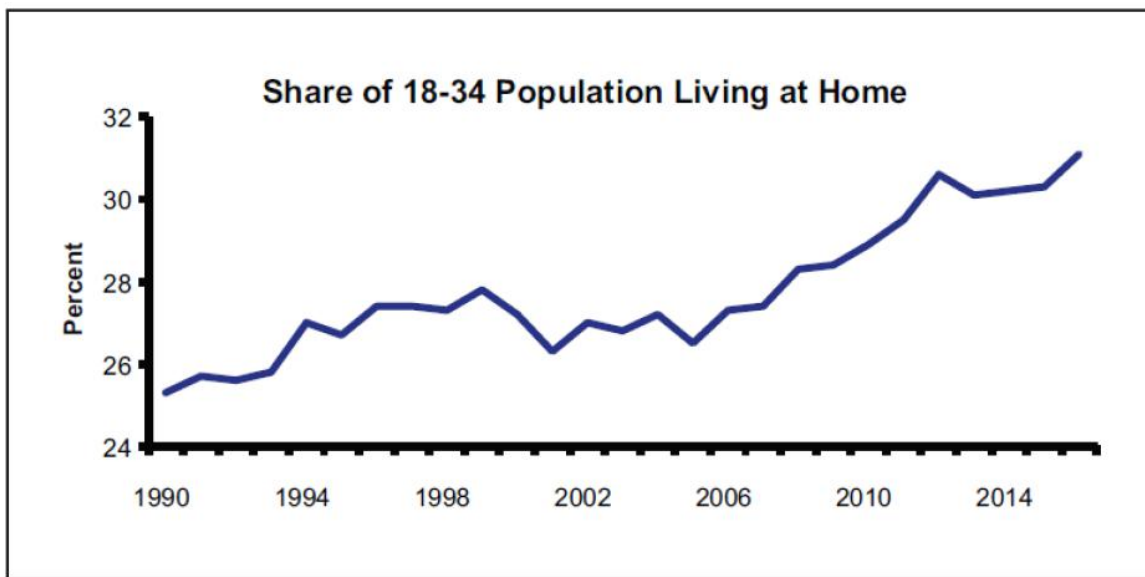
- 38.1 million households are cost-burdened, spending more than 30% of their gross income on housing,^{iv} and
- Nearly half of renter households, 47.5%, are cost-burdened.^v

Wage growth has been slow to recover from the recession, and 80% of Millennials earn \$50,000 a year or less.^{vi} On top of that Millennials – the most educated generation – are heavily burdened by student loan debt, which currently exceeds the total of credit card and auto debt combined.^{vii} With these constraints, nearly four out of five Millennials cannot afford the rent on the average apartment, which reached \$1,361 in January 2018.^{viii}



Compounding this problem is the fact that most new construction in the past few years has been in the luxury market. According to CoStar, 84% of the 189,100 apartments completed between the fourth quarter of 2015 and the third quarter of 2016 in 54 U.S. metropolitan areas were luxury units.^{ix}

As a result of the high barrier created just to live in an apartment in the United States, more young people are living with their parents than in the previous two generations.^x In fact, in 2015, more 25- to 34-year-olds lived in their parents' home than in any other arrangement.^{xi} This pent-up renter demand has not yet been realized, nor do we see relief coming any time soon. With peak births in the United States occurring in 2007, the young people following the Millennial generation will continue to drive the demand for new, affordable workforce housing far beyond the available supply at our current pace of construction.



Source: *The Linneman Letter*, Volume 18, Issue 2, Summer 2018

As a result, the greatest margin of safety for new investment dollars is building appealing, new apartments that Millennials can afford in desirable urban locations. This investment strategy more than doubles the pool of potential renters when compared to luxury apartment developments. It should result in less risk and a higher upside for investors, all while helping this underserved renter population by providing greater access to jobs and entertainment, as well as educational opportunities that boost economic mobility.

Office

Just as location is the most important factor in choosing a home, we believe good locations are critical for office. The good news is that at a time of strong job growth, opportunities to buy office buildings at a significant discount to replacement costs in desirable locations are still available. The high cost of

75

Percent of workers
who will be
Millennials by 2025

Source: Brookings Institution

construction is limiting new office supply, and what is getting built is not economically viable for many companies. When combined with the increased office demand driven by the most educated generation entering the workforce, there is a high probability for an affordability issue for office space in the future, similar to the current one in housing.

The rental rate for Class A office is now at its widest premium to Class B in many markets, as is the cost of new construction versus the acquisition price for many buildings. This creates a significant margin of safety for a value-add office strategy with strong rent growth potential over the next decade.



Source: Grubb Properties, data from CoStar

Value is Always in Vogue

In conclusion, we remain bullish over the next decade on a value-based strategy for both multifamily and office properties. Being below replacement costs in great locations is a time-tested strategy. Grubb Properties has relied on this strategy to survive seven recessions without losing a single property to a lender. We are committed to this disciplined approach for our long-term real estate investors.

About Grubb Properties

Grubb Properties is a 55-year-old employee- and board-owned real estate investment and development firm. Our fully integrated management team identifies strategies to create long-term value for our clients. Over the past 15 years, Grubb Properties has completed approximately \$800 million in round trip investments, resulting in a net IRR in excess of 40% and a net multiple of 2.2x on a weighted basis. We have a proven property and fund track record. We made no new investments from August 2005 to December 2008 because supply was outstripping demand and pricing was skewed. Today, we believe the opposite is true and we continue to be bullish on real estate investment prospects.

For more information, please reach out to Jet Taylor, managing director – investments, at jet.taylor@grubbproperties.com, or James Holleman, director – investments, at jholleman@grubbproperties.com.

ⁱ U.S. Census Bureau, <https://www.census.gov/construction/nrc/pdf/startsan.pdf>

ⁱⁱ Ibid.

ⁱⁱⁱ Harvard Joint Center for Housing Studies, “The State of the Nation’s Housing 2017 Fact Sheet.” http://www.jchs.harvard.edu/sites/default/files/harvard_jchs_son_2017_fact_sheet.pdf

^{iv} Harvard Joint Center for Housing Studies, “The State of the Nation’s Housing 2018,” http://www.jchs.harvard.edu/sites/default/files/Harvard_JCHS_State_of_the_Nations_Housing_2018.pdf

^v Ibid.

^{vi} ZeroDayFinance with data from Don’t Quit Your Day Job. “We Need To Talk About Millennial Income Inequality.” April 8 2017. <https://www.zerodayfinance.com/need-talk-millennial-income-inequality>

^{vii} Forbes. “Student Loan Debt Statistics in 2018: A \$1.5 Trillion Crisis,” June 13, 2018.

<https://www.forbes.com/sites/zackfriedman/2018/06/13/student-loan-debt-statistics-2018/#7fe72fec7310>

^{viii} RentCafe with data from Yardi Matrix. “Same Trend, Different Year: January brings further rent increases, fueled by demand,” Jan. 31, 2018, <https://www.rentcafe.com/blog/rental-market/apartment-rent-report/rentcafe-apartment-market-report-january-2018/>

^{ix} Wall Street Journal, “Luxury Apartment Boom Looks Set to Fizzle in 2017,” Jan. 2, 2017.

<https://www.wsj.com/articles/luxury-apartment-boom-looks-set-to-fizzle-in-2017-1483358401>

^x Pew Research, May 5, 2017. <http://www.pewresearch.org/fact-tank/2017/05/05/its-becoming-more-common-for-young-adults-to-live-at-home-and-for-longer-stretches/>

^{xi} U.S. Census Bureau Report, “The Changing Economics and Demographics of Young Adulthood: 1975-2016.” <https://www.census.gov/content/dam/Census/library/publications/2017/demo/p20-579.pdf>