



Single-family housing supply tightest in 20 years, expected to get worse

- Single-family housing shortage has led to the tightest months supply since the series was published in 1999. Adding to the shortage, new construction has failed to rebound post GFC.
- We find that demographic trends based on stages of life among millennials – entering peak housing demand stages and boomers – who are living longer and likely to downsize later will likely worsen this shortage in the coming years.
- Net migration trends for several areas including Nashville, Houston, Orlando, Austin and Indianapolis are likely to put further pressure on housing in those areas.



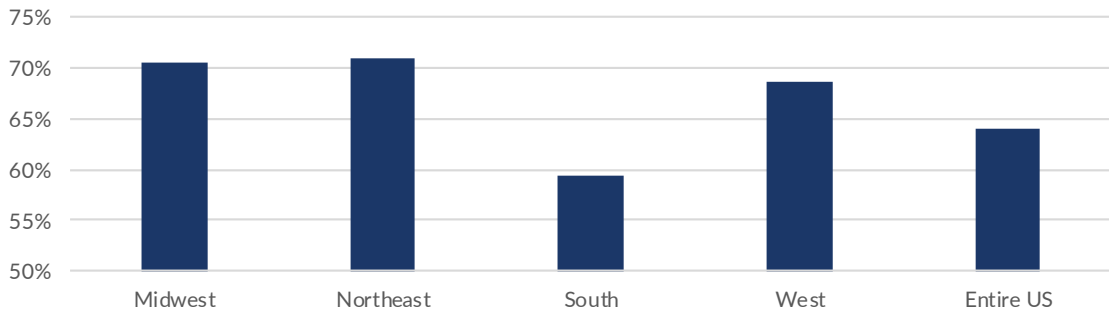
Sources: National Association of Realtors & U.S. Census Bureau data as of Q1 2018. Date range: January 1999 – December 2017.

The housing market is at historically tight levels as measured by the inventory of existing homes for sale. As the chart above shows, the months supply based on existing home sales was at the lowest ever of about 3.2 months in December 2017. Further, new construction of single-family homes has failed to return to levels seen even in the late 90s/early 00s (shown on the right axis on the chart above), in reaction to the Great Financial Crisis (GFC), housing construction collapsed across the country. County assessor data indicates that single-family home construction fell by nearly two-thirds in the decade following the GFC.



The South Census region was least affected – but still realized a decrease in new single-family home construction of nearly 60%. The Northeast, Midwest, and West all realized an approximate 70% collapse in single-family home construction in the decade following the GFC. Even if the US expected to exhibit straight-line demand for single family homes the supply fundamentals suggest a shortage of single family housing when compared to historical construction pace.

EXHIBIT 2 SINGLE FAMILY HOME CONSTRUCTION DECREASE



Source: CoreLogic County Records. Note: Percentage decline is for the decades 1998 – 2007 vs. 2008 – 2017

THE GAP IS LIKELY TO WORSEN FROM DEMOGRAPHIC/REGIONAL MIGRATIONS

While the low levels of construction are an obvious reason for the shortage in housing, the problem is likely to worsen over the coming years due to demographic factors – related to the dual forces of millennials entering peak housing demand ages and Boomers living longer and downsizing later. In addition, several metros, chief among them being Nashville, Houston, Orlando, Austin, Indianapolis, Dallas, Columbus OH and Phoenix are likely to be most acutely affected by this shortage and are crying out for a significant increase in new construction. These areas in particular have seen the lack of housing put under further pressure by positive net regional migration and an explosion in the number of households over the past few years.

DEMOGRAPHIC REASONS – EXTENDED LIFE-STAGES INCREASE NET HOUSING DEMAND

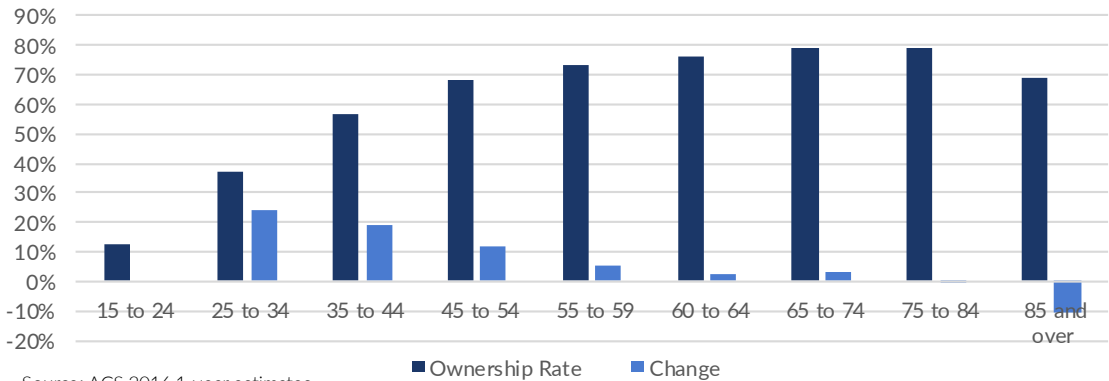
Calculations from Census Bureau data show that homeownership rate is highest between the ages of 55 – 85. The youngest of the Baby Boomer generation turn 54 in 2018. As a result, the Baby Boomer generation is hitting their peak years of home ownership now. Due to their increased lifespan, Baby Boomers have a net-larger demand for housing than the Silent Generation¹ on an individual basis. Further, the Baby Boomer generation is far larger in population than was the Silent Generation. Both of these factors suggest Baby Boomers will provide significant demand – and larger than their forbearers – for single-family homes for years to come.

(1) Generally defined by demographers as those born ~1925 - ~1946 (born between the Greatest Generation that fought WWII and the Baby Boomer generation).



Millennials are entering the years when they transition to independent living (15 – 24) and home ownership (25 – 44). Given that Millennials are the largest generation America has ever seen, demand for single-family homes is set to boom from this generation, as well. On balance, demand for single-family housing is set to be extended by Baby Boomers and to increase substantially by Millennials.

EXHIBIT 3. HOME OWNERSHIP BY AGE COHORT

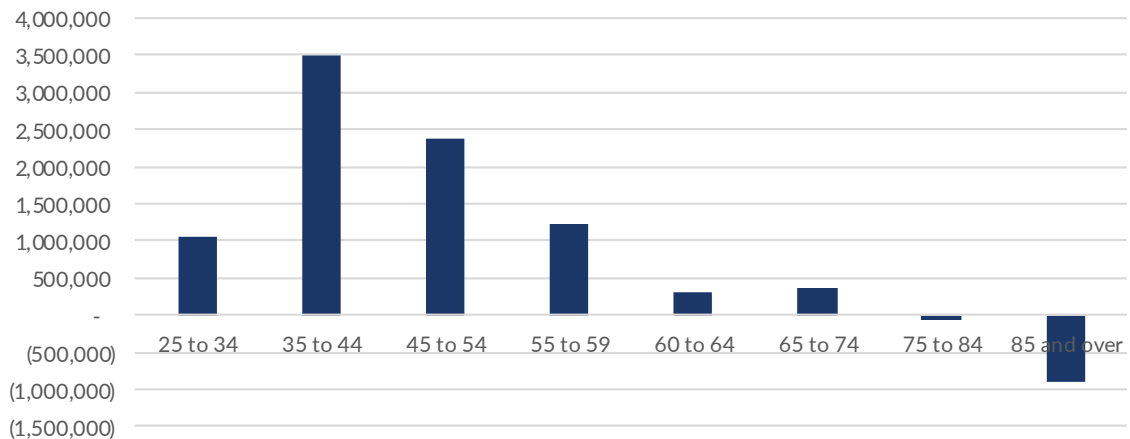


Source: ACS 2016 1-year estimates.

The estimate was calculated in February 2018; data is as of/from the 2016 ACS

These lifecycle effects alone could drive demand for a further 7.9mm owner-occupied homes over the next decade. As illustrated in exhibit 4 below, the effect of aging the current United States population by ten years and assuming the same home ownership rates (and household size) for each age group demonstrates the likely incremental demand for 7.9mm owner-occupied homes over the next decade. Even if actual homeownership rates are lower among millennials, the demand for space peaks at the ages 25-44 (*US SFR – An Emerging Institutional Asset Class*) and is expected to translate into strong demand for single-family housing (whether owned or rented).

EXHIBIT 4. EXPECTED CHANGE IN OWNER-OCCUPIED HOME DEMAND (2018-2027)



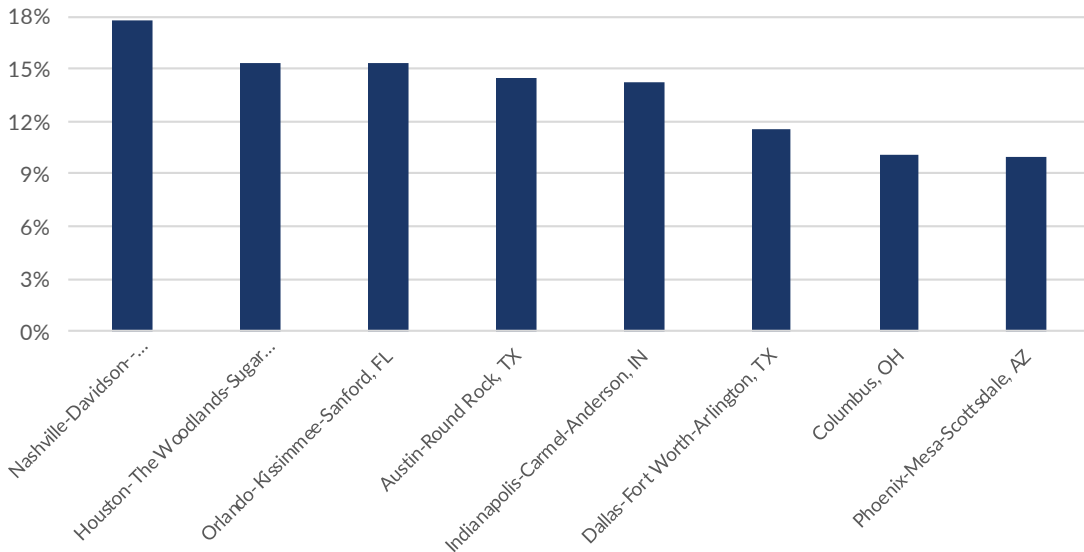
Source: ACS 2016 1-year estimates, Amherst Capital



LOCAL NET MIGRATION/POPULATION GROWTH CAN RELIEVE OR ADD PRESSURE ON CERTAIN LOCAL MARKETS

In addition to the longer term demographic shifts, convergence of the macro single-family supply and demand factors are ameliorated in areas where the population is shrinking, but are magnified in areas experiencing significant household growth. Eight of the metros in which this effect is likely exacerbated via population migration appear in exhibit 5.

EXHIBIT 5. HOUSEHOLD GROWTH (2010 VS. 2016)



Source: ACS 2010 1-year estimates, ACS 2016 1-year estimates, Amherst Capital

According to Census data, each of the markets in exhibit 5 manifested more than 10% household growth from 2010 to 2016. The eight markets – Nashville, Houston, Orlando, Austin, Indianapolis, Dallas, Columbus OH, and Phoenix – have been perennial favorites of housing market watchers for some time. Each of these markets, which grew at a rate of 3x – 4.5x as fast as the country as a whole, clearly exhibit positive net population migration. Not surprisingly, these markets have exhibited some of the fastest home price growth in recent years.

Positive population migration generally creates housing demand and home price appreciation. Upward momentum in home prices often leads to further home price appreciation as people are attracted to move to an area or renters living in the local area compete to buy a home.



While these areas have experienced significant household growth and home price appreciation, that effect is only helpful to a point. Metro areas that realize too much home price appreciation too quickly may dampen future economic prospects via a regional housing environment that has grown too expensive to incentivize continued population growth.

The country as a whole appears to have a disequilibrium of single-family housing supply and demand, and that gap is likely to grow in future years. This shortage of single-family homes is exacerbated beyond the macro picture in high growth areas. Therefore, high growth areas have a risk of home prices rising too far, too fast, and crimping future area growth due to unfavorable housing market economics.

Incentivizing a significant increase in single-family home construction in each of these areas would be prudent in order to stabilize home price appreciation, increase tax base, and especially bring greater equilibrium to their housing markets.



IMPORTANT DISCLOSURES

The comments provided herein are a general market overview and do not constitute investment advice, are not predictive of any future market performance, are not provided as a sales or advertising communication, and do not represent an offer to sell or a solicitation of an offer to buy any security.

Similarly, this information is not intended to provide specific advice, recommendations or projected returns of any particular product of Amherst Capital Management LLC (Amherst Capital). These views are current as of the date of this communication and are subject to rapid change as economic and market conditions dictate.

Though these views may be informed by information from sources that we believe to be accurate and reliable, we can make no representation as to the accuracy of such sources nor the completeness of such information.

Past performance is no indication of future performance. Investments in mortgage related assets are speculative and involve special risks, and there can be no assurance that investment objectives will be realized or that suitable investments may be identified.

Many factors affect performance including changes in market conditions and interest rates and in response to other economic, political, or financial developments. An investor could lose all or a substantial portion of his or her investment. No investment process is free of risk and there is no guarantee that the

investment process described herein will be profitable.

No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Amherst Capital is a registered investment adviser and is an indirect majority-owned subsidiary of The Bank of New York Mellon Corporation.

ABOUT AMHERST CAPITAL

Amherst Capital Management LLC is a real estate investment specialist with approximately \$6.1 billion¹ of assets under management. Amherst Capital was established in 2014 as a majority-owned subsidiary of BNY Mellon, and is minority-owned by Amherst Holdings, LLC a financial services holding company with more than 10 years of history of utilizing its mortgage expertise to assist clients in navigating the real estate capital markets. Amherst Holdings is not an affiliate of BNY Mellon. Texas Treasury Safekeeping Trust Company is a founding seed investor of Amherst Capital². Amherst Capital offers traditional and alternative real estate investment strategies to private and institutional investors globally. Amherst Capital's investment strategies are grounded in deep intellectual capital and proprietary technology designed to help clients meet their portfolio needs. For more information please visit www.amherstcapital.com

(1) As of September 30, 2017. This amount includes \$4.4 billion assets pertaining to certain discretionary multi-sector fixed income clients of our affiliate Standish Mellon Asset Management Company, LLC ("Standish"), for which certain Amherst Capital employees provide advice acting as dual officers of Standish. In addition, discretionary portfolios with approximately \$386 million are managed by certain of our employees in their capacity as dual officers of The Dreyfus Corporation. AUM includes gross assets managed in the single family equity and commercial real estate strategies, which includes \$244 million and \$28 million of leverage, respectively.

(2) Seed capital Investor. It is not known whether the listed client approves or disapproves of the adviser or the advisory services provided.