

U.S. SINGLE-FAMILY RENTAL HOUSING

Satisfying Rising Demand Through 2030

January 2022 | Investment Research

KEY INSIGHTS

- There is no single definition for single-family rental housing; the term is now used to refer to a range of suburban rental-housing options: from collections of scattered single-family parcels to low-density rental communities with on-site management and maintenance.
- Demographic trends, declining homeownership affordability and the increased adoption of flexible working arrangements will continue to support strong demand for suburban residential during the next decade.
- The dearth of suburban residential construction in the past decade, particularly for single-family residential. means national supply-side risks remain low for now.
- Major risks to the outlook are local supply constraints and construction trends, operating and capital expenditure uncertainties, regulatory environment shifts, and macroeconomic impacts on house prices.

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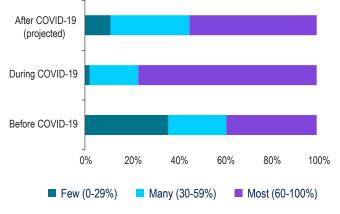
CHANGING DEMOGRAPHICS AND WORK PATTERNS: THE NEED FOR LARGER RESIDENCES

The global financial crisis was followed by a shift in U.S. housing demand that favored urban housing, particularly in rentals. Declining incomes, rising foreclosures and restrained bank lending forced many homeowners to rent and delayed the home-buying plans of many potential owners. The accompanying surge in demand for urban housing was driven by millennials — a large cohort of younger

Exhibit I: Changing Work Arrangements

Anticipated Increase in Work From Home Arrangements (%)

Survey question: What percent of your office employees do you anticipate will work remotely at least one day a week?



Sources: PwC US Remote Work Survey, June 2020, PGIM Real Estate. As of December 2021.

Exhibit 2: Aging of the Millennial Population

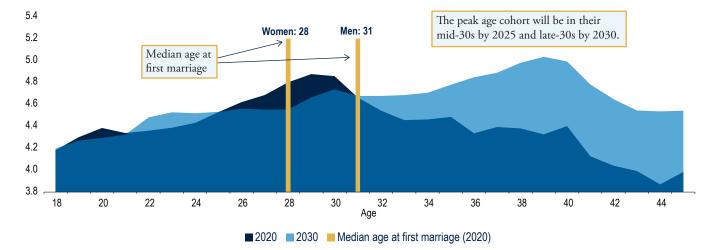
2020 Versus 2030 Population by Age (millions)

workers born from 1981 to 1996 — who were entering the workforce and who preferred an urban live–work–play environment.

Fast-forward to today, and the drivers of housing demand no longer overwhelmingly favor urban locations. For one, the adoption of work-from-home arrangements has diminished the relative benefits of urban housing that are related to proximity to work (Exhibit 1).

Although we believe that firms will remain clustered in office buildings centrally located within a metropolitan area, flexible working arrangements will enable workers to visit their offices on a part-time basis. This type of working arrangement will make longer commuting distances more tolerable to employees and will let them expand their residential options to areas located farther from city centers.

Second, and most important, the underlying demographic profile of the United States has shifted. The large, millennial cohort that bolstered demand for urban housing a decade ago is now entering their 30s. As of 2021, 30-year-olds are the most populous age-group in the country, which is in line with the current median age of first marriage as of 2020. As has been the case historically, housing preferences shift in a person's 30s to prioritize space and proximity to schools as couples marry and start families (Exhibit 2).



Sources: U.S. Census Bureau, PGIM Real Estate. As of December 2021.



Exhibit 3: Shift in Construction Needed To Satisfy Suburban Household Growth

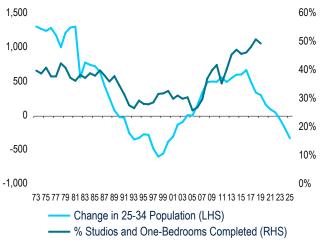
Change in Households (thousands)

Sources: Joint Center for Housing Studies, U.S. Census Bureau, PGIM Real Estate. As of December 2021.

For these key reasons, housing demand is set to favor suburban locations during the next decade. This trend is not entirely new: household formation in the suburbs was already picking up in the years before 2020 as the oldest millennials entered their 30s. From 2016 to 2019, household formations in the suburbs of large metropolitan areas of more than one million residents were 31% higher than the previous four years. That compares with an increase of 14% for large metro cities during the same time frame (Exhibit 3).

To satisfy this large and growing demand, a shift in housing construction is needed. More than 50% of rentalapartment units built in the past five years were studio and one-bedroom units, which will not meet households' changing lifestyle needs. In particular, single-family rental (SFR) housing is poised to benefit from both an emphasis on more living space and workers' ability to opt for living accommodations located farther from their primary place of work.

Change in Age 25-34 Population (thousands) Versus Share of Studio and One-Bedroom Completions



Sources: Axiometrics, U.S. Census Bureau, PGIM Real Estate. As of December 2021.

THE LEGACY OF THE HOUSING BUST: A DECADE OF UNDERBUILDING AND DECLINING AFFORDABILITY

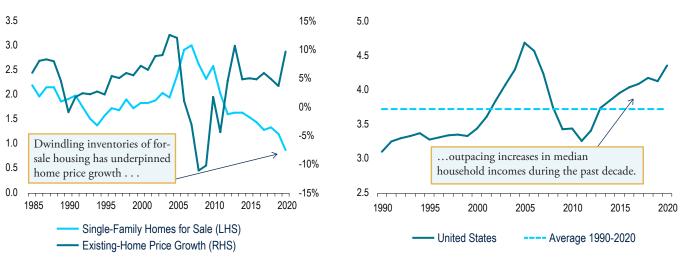
Although many SFRs are found in less-dense, less-supplyconstrained locations, the sector will continue benefiting from single-family housing supply shortages that remain a legacy of the housing market bust in the 2000s.

At the same time that housing demand shifted to rentals both during and after the great financial crisis, singlefamily-housing development ground to a halt. Multifamilyapartment construction rebounded relatively quickly to meet demand by the large millennial cohort, but single-family construction has been slower to regain ground. The result is that single-family-home inventories are failing to meet the shift in housing demand currently under way.

Unlike the run-up in house prices in the mid 2000s, today's affordability concerns are being fueled by a dearth of available inventory. The number of single-family homes available for sale is far below historical norms seen in the past 40 years, and homeowner vacancy rates are at levels last seen in the 1970s (Exhibit 4).

Exhibit 4: Housing Availability and Affordability





Median House Price to Median Household Income

Sources: Moody's Analytics, National Association of Realtors, U.S. Census Bureau, Joint Center for Housing Studies, PGIM Real Estate. As of December 2021.

Growth in the median price of an existing single-family home has outpaced growth in median household incomes in all but one year during the past decade. The ratio of the median house price to median household income across the United States hit a cyclical low of 3.3 in 2011 but has been climbing ever since. As of 2020, median house prices were 4.4 times higher than median household income, approaching historical highs reached in the mid 2000s.

Construction of for-sale, single-family product is rising, but the current mismatch between supply and demand together with further demand growth will continue supporting the performance of SFR product.

WHERE SINGLE-FAMILY RENTAL HOUSING FITS IN

Single-family rental is an umbrella term that covers a range of housing product. SFR housing is generally defined as nonstacked housing units in suburban areas with access to outdoor space. Typically, the units are rented to tenants at lower prices per square foot than multifamily units. Although SFR units usually offer no or fewer shared amenities, they are typically larger than multifamily units and often include attached garages.¹ There is no single industry definition for the sector, but most definitions encompass such housing as scatteredsite collections of traditional single-family homes for rent and purpose-built residential communities — also known as build-for-rent communities — that offer on-site management and maintenance.

Most institutional portfolios and all SFR portfolios assembled before the late 2010s comprise individual units assembled via one-off purchases. Since then, some investors have developed SFR build-to-rent parcels, which Amherst Capital defines as clustered, 125+ units of institutionally managed, one- and two-story units with designated community amenities. Other portfolios have been sourced from housebuilders via bulk purchases of blocks within forsale subdivisions.

The advantages of build-to-rent and bulk purchases are economies of scale, the potential to include shared amenities, and, potentially, volume discounts from builders looking to presell portions of their developments.

A decade ago, the sector comprised — almost exclusively — existing single-family homes bought from individual sellers or lenders. House price declines that occurred from 2006 to 2011 outpaced the decline in both rents and

¹ Note: Manufactured housing is classified as a separate property type because residents own the physical structures. However, the sector does share some of the same demand drivers as SFRs, particularly for lower-income tenants who are unable to afford single-family homes.

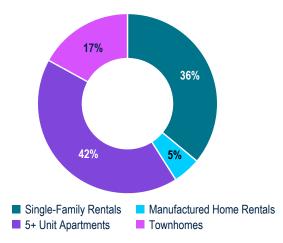
household incomes, which gave investors opportunities to acquire single-family units at deep discounts to peak pricing, including at foreclosure auctions, and to convert units to rentals. And even though existing house prices fell by 35% on average, the decline was much larger in many cities, and foreclosure price declines were even steeper. The weakness in the for-sale housing market, together with a decrease in homeownership rates and a growing number of renters-bynecessity with little savings and damaged credit records, brought institutional investors into the sector.

A decade later, the sector is very different. As noted previously, house prices have surged, especially since the onset of the COVID-19 pandemic. As a result, investors now must either acquire existing SFR units at much higher prices or build them.

According to Green Street Advisors (GSA),² there are approximately 16 million SFR units across the United States, which represents 36% of all rental units and 13% of total occupied housing units (Exhibit 5).

Exhibit 5: Breakdown of the U.S. Rental Housing Market



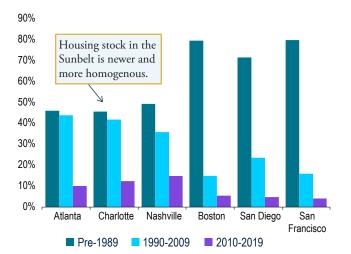


Sources: Green Street Advisors, U.S. Census Bureau, PGIM Real Estate. As of December 2021.

Institutional ownership of SFRs represents a small share of total housing stock (approximately 2%), whereas individual owners of one or two homes represent the majority of SFR owners in the United States. The two SFR REITs — Invitation Homes and American Homes 4 Rent — own about 1% of the SFR market. The sector consolidated during the past several years, with numerous mergers and buyouts creating larger owners that benefit from scale operating advantages such as maintenance personnel and procurement.

The concentration of the industry in the Sunbelt suggests the model may not work as well in higher-cost, more-regulated coastal markets. One reason may be that housing in Sunbelt markets is newer, and therefore more homogenous, making asset management more efficient. As evidence, the five markets that account for 48% of the two SFR REITs' holdings are located in the Sunbelt. In those markets, 31% of the housing stock was built after 2000 compared with 21% nationally (Exhibit 6).

Exhibit 6: Age of Housing Stock Varies by Market



Share of Total Housing Stock by Year Built

Sources: Joint Center for Housing Studies, U.S. Census Bureau, PGIM Real Estate. As of December 2021.

² Green Street Advisors U.S. Single Family Rental Outlook. February 3, 2021, pages 6-8.

Moreover, coastal markets are more densely populated and land constrained. Although those features are supportive of long-term rental growth, they do limit opportunities to satisfy demand by renters seeking less-dense, relatively affordable housing options.

SINGLE-FAMILY RENTAL FINANCING OPTIONS FOR INSTITUTIONAL INVESTORS

Financing SFRs on a home-by-home basis is not practical for institutional investors. Instead, there are two main sources of financing: government-sponsored enterprises (GSEs) in limited circumstances and securitized lending markets.

GSEs generally provide debt for SFRs if they are part of the same tax parcel, with terms that are similar to those for multifamily lending. Because of the challenges involved in consolidating existing SFRs on a single tax parcel, GSE debt is limited to purpose-built SFR developments, which often include shared amenities such as recreation facilities.

For SFRs not clustered on a single tax parcel, large institutional owners, including the two REITs, can access securitization markets. Most loans are secured by pools comprising individual SFRs. The pooled-asset lending market can also be served by balance sheet lenders through securitization markets.

PERFORMANCE NOW AND EXPECTED THROUGH 2030

SFR-property incomes held up well in 2020 despite COVID-19 lockdowns, with evidence pointing to rising demand as renters moved, on net, out of urban areas. Both SFR rents and occupancies increased in 2020 despite the deep contraction in employment. GSA estimates that the net-operating-income growth rate among SFR REITs was 3.1% in 2020, which outperformed — for the sixth consecutive year — REIT portfolios focused on traditional apartment space (Exhibit 7).

Exhibit 7: Vacancy Rates for Single-Family Rentals are Especially Low

Rental Vacancy Rates by Number of Units in Structure (%)



Sources: U.S. Census Bureau, PGIM Real Estate. As of December 2021.

GSA estimated that the SFR private market cap rate was 4.6% in November of this year, which is a 90-basis-point spread over multifamily apartments. However, spreads over multifamily apartments have typically trended around 40 basis points since the 2018 start of our limited data series. With multifamily cap rates having tightened to an estimated 3.7% and investor interest for SFR product rising, further cap rate compression in the sector is very likely.

GSA estimates that unlevered SFR private-market returns have exceeded 10% in every year since 2011, with a disclaimer that these are triangulated returns based on multifamily performance and for-sale house price estimates.³

Looking forward, we estimate SFR housing will provide above-average returns relative to other property types. The combination of a yield spread to traditional multifamily plus a strong outlook for net-operating-income growth caused by favorable supply-and-demand tailwinds backed by key demographic trends bodes well for future performance.

³ Private-market returns are not available from NCREIF, which does not currently have a data field for contributors to report performance, and the sector will not be included in NCREIF's imminent update of property-type definitions. Likewise, Real Capital Analytics does not track the SFR sector.

MAJOR RISKS TO THE OUTLOOK FOR SINGLE-FAMILY RENTALS

Four main risks to the outlook for single-family-rental performance are oversupply caused by lack of barriers to entry and general house building, uncertainties with regard to operating and capital expenditure needs, a significant decline in house prices, and a shift in the regulatory environment.

Oversupply Caused by Low Barriers to Entry and General House Building

Given the demonstrated demand and performance in the SFR space and interest on the part of institutional investors, supply headwinds will be greater in the coming years than has been the case in recent periods. There will also be rising competition from for-sale single-family-housing construction (Exhibit 8).

Exhibit 8: Construction is Accelerating



Annual Permits (millions)

Sources: U.S. Census Bureau, PGIM Real Estate. As of December 2021.

Because of the lower-density nature of SFR housing relative to traditional apartment buildings, investors will have to balance access to development opportunities against the risk of locations with lower supply barriers. Maintaining discipline on location selection and submarket quality will be key.

Locations that offer quality school systems and commutes to employment hubs that will be manageable on a part-time basis should outperform. In many cases, such locations will also demonstrate above-average incomes and educational attainment levels that are generally associated with aboveaverage barriers to supply.

Operating and Capital Expenditure Uncertainties

GSA estimates that the institutional SFR sector has only slightly higher operating capital expenditure drags than multifamily despite the challenges of maintaining nonstandardized properties that are often not in one location, but competition from new investors offering more amenities will require higher expenditure in the future. However, that risk applies mostly to scattered-site SFR portfolios and is mitigated largely by build-for-rent developments that offer shared amenities.

House Price Decline

Recent and rapid house price gains have caused homeowner affordability to dip to the lowest level since the period preceding the late 2000s housing downturn. House prices will be under pressure if mortgage rates rise or if the recent increase in supply outpaces demand. And although institutional SFR values are determined by rent streams and cap rates that may be disconnected from the for-sale market, their liquidation values are determined by for-sale pricing.

Shift in Regulatory Environment

Institutional SFR owners now operate in a largely deregulated environment in which they can use their scale advantages to operate portfolios more efficiently than individual owners can. Their holdings are also located largely in areas without rent controls and with landlordfriendly eviction policies. However, as institutional investment increases, new rent control regulations may get introduced at the national and local levels and be similar or complementary to restrictions that exist in many multifamily markets. The low-density nature of single-family rental housing may also conflict with ESG-related mandates, which investors will increasingly have to consider.

SFR TAILWINDS OUTWEIGH SECTOR-SPECIFIC RISKS

Tailwinds on both the demand and supply sides of the single-family rental-housing sector point to continued strong investment performance ahead. Institutional investors' increased interest means that market participants will face more-competitive pricing and increased supply in the future from both similar rental product and traditional for-sale housing. And together with that increased investor interest may come more scrutiny from regulators at both the local and national levels.

Regardless, the key trends underpinning growing demand — in the forms of demographic shifts, declining homeownership affordability and the increased propensity of working from home — are not going away soon. Supplyside and regulatory risks will have to be managed to a greater degree moving forward, but the investment case for singlefamily rentals remains strong.

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