Office of the Comptroller of the Currency

ON POINT

ECONOMIC AND POLICY ANALYSIS FROM THE OCC

The Geographic Mismatch Between Housing Construction and Shortages

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Since late 2020, the largest wave of new construction in decades has been under way in both single-family and multifamily housing markets.[1] This resurgence of home building was triggered by previous underbuilding, a severe pandemic housing supply shortage, and a "rate lock-in" effect limiting the number of existing homes for sale. Given the supply shock from this building boom, are U.S. housing markets still in a state of shortage or are they oversupplied?

As discussed herein, there is still a national housing supply shortage in the single-family housing sector, but there are signs of overbuilding in the multifamily sector. At the metropolitan level, there is a great geographic mismatch between where new homes are being built and where acute supply shortages still exist. As a result, housing markets in some metropolitan areas are still running hot, while single-family and multifamily markets in other metropolitan areas are more sluggish. This geographic mismatch is likely caused by rapidly shifting migration patterns as well as emerging demographic forces, especially the "millennial effect" of migration by the mostly millennial 25–44-year-old cohort.

Single-Family Housing in Short Supply; Multifamily Overbuilding Signs Emerge

There is a broad consensus that a housing shortage existed in the United States during the COVID-19 pandemic of 2020–2023.[2] Several elements contributed to this pandemic housing shortage: years of underbuilding, historically low mortgage rates, and pandemic-related shifts in

[1] The United States Census Bureau defines a single-family house as "fully detached, semidetached (semiattached, side-by-side), row houses, and townhouses. In the case of attached units, each must be separated from the adjacent unit by a ground-to-roof wall in order to be classified as a single-family structure. Also, these units must not share heating/air-conditioning systems or utilities." Multifamily housing is defined as "residential buildings containing units built one on top of another and those built side-by-side which do not have a ground-to-roof wall and/or have common facilities (i.e., attic, basement, heating plant, plumbing, etc.)."

[2] The supply and demand imbalance during the pandemic was estimated to be 2.3, 3.8, and 4.4 million housing units by the National Association of Realtors (NAR), Freddie Mac, and Fannie Mae, respectively. More recently, the NAR estimates that the housing supply deficit reached 2.5 million units in 2023.

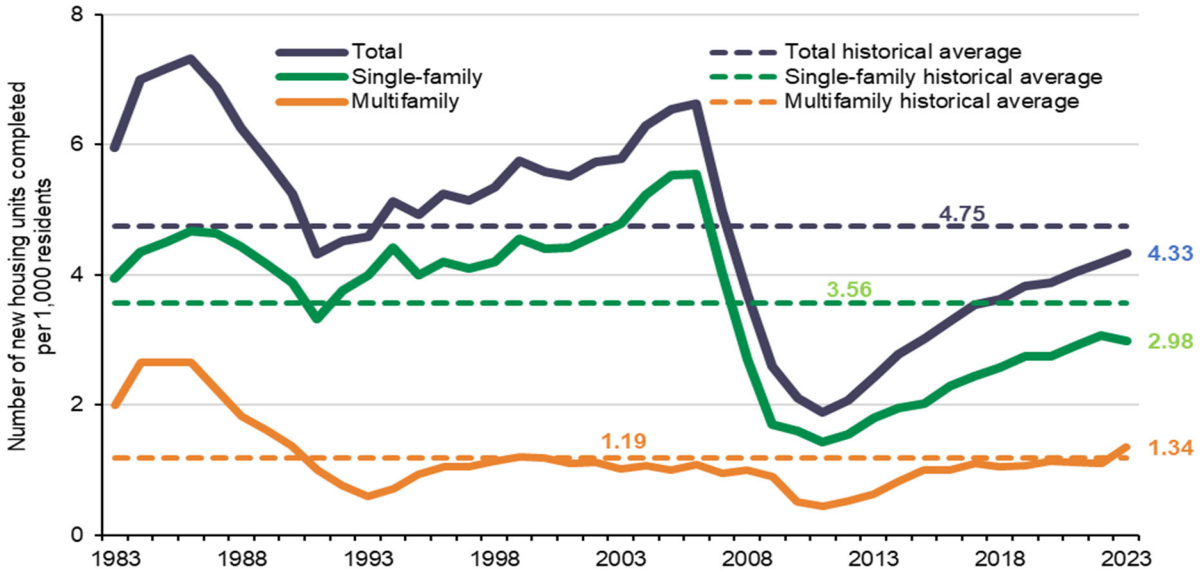
housing preferences generated additional housing demand. The shift to remote work coupled with the public health necessity for social distancing triggered the demand for more housing as homeowners' preferences shifted toward more space and location flexibility.

Moreover, mortgage rates began to rapidly rise in early 2022. Since then, the U.S. housing supply has been constrained by the "mortgage rate lock-in" effect, whereby homeowners with low-rate mortgages are unwilling to sell their current homes to buy another home at a substantially higher mortgage rate. According to recent research by the Federal Housing Finance Agency (FHFA),[3] this mortgage rate lock-in led to a 57 percent reduction in the sales of existing homes with fixed-rate mortgages in the fourth quarter of 2023 and resulted in 1.33 million fewer home sales between the second quarter of 2022 and the fourth quarter of 2023. The subsequent constrained supply of existing homes for sale increased home prices by 5.7 percent.

Together, this mix of housing shortages, supply constrained by the mortgage rate lock-in effect, and years of underbuilding triggered a strong multiyear response from builders starting in late 2020. In 2023, multifamily housing completions reached 450,000 units, a 35-year record. The number of multifamily units under construction in 2023 skyrocketed to 997,000 units, the highest level in more than 53 years. To some extent, single-family housing construction has also moved in tandem with multifamily construction. Completed single-family housing units hit the 1 million mark in 2023, with another 657,000 units under construction—each a 15-year record.

How does this building boom affect the balance of housing supply and demand? While the 2023 construction statistics provide useful context, their impact on housing shortages or excess supply cannot be fully assessed without comparing them with housing demand. One way of doing this is to calculate "production rates": the ratio of housing completions to resident populations for single-family, multifamily, and total housing units.

Figure 1: U.S. Per Capita Housing Production Rate: Single-Family vs. Multifamily



Sources: U.S. Census Bureau; OCC calculations

[3] Ross M. Batzer, Jonah R. Coste, William M. Doerner, and Michael J. Seiler, "The Lock-In Effect of Rising Mortgage Rates," FHFA Staff Working Paper Series, March 2024.

The per capita production rates from 1983 through 2023 are plotted in figure 1, which illustrates that the United States produced 2.98 new ***single-family units*** per 1,000 residents in 2023, a production rate lower than the historical 40-year average of 3.56 units per 1,000 residents. This is not a completely new trend; the completion of new single-family homes has been below the historical average since 2007. Thus, from a historical perspective, population growth has been able to absorb the increased single-family supply from new production in the United States.

However, per capita production of ***multifamily housing*** is running above the historical average. The United States added 1.34 new multifamily units per 1,000 residents in 2023, a rate that is nearly 13 percent higher than the historical average of 1.19 units per 1,000 residents (figure 1). The pace of the per capita multifamily production rate has been close to the historical average for some years now. This suggests that multifamily construction has largely kept pace with population growth but slightly outpaced population growth in 2023.

Finally, the combined construction of single-family and multifamily housing was 4.33 units per 1,000 residents in 2023. This indicates that ***total housing production*** is still running well below its historical average, as it has been for some years, which points to a total housing supply shortage. This is not surprising as single-family homes dominate the U.S. housing markets.

Building Boom Concentrated in Overbuilt Areas of Southeast, South, and Mountain West

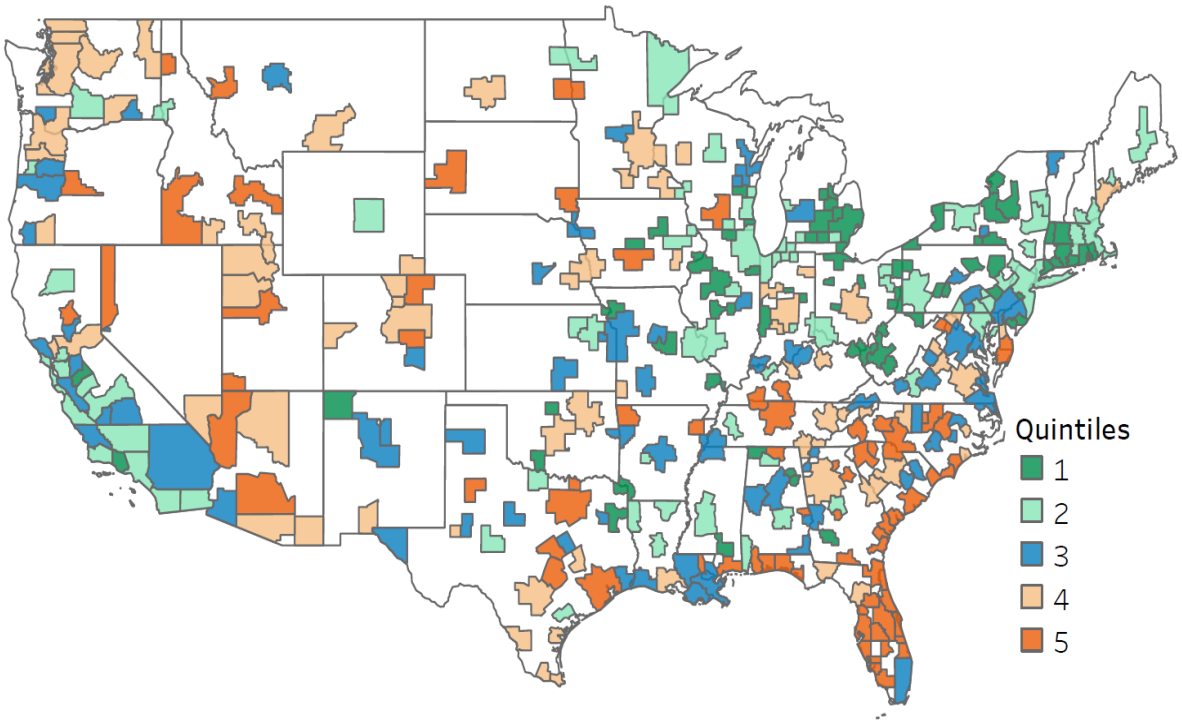
Housing markets are localized. The quantity of new homes being built relative to local demand is not necessarily evenly distributed across the country.

Applying the national methodology to metropolitan areas, per capita housing production rates were calculated for each of the 369 metropolitan areas based on the ratio of total housing completions to population in 2023. These metropolitan areas were then ranked and grouped into five quintiles based on their per capita housing production rates to see whether there are substantial differences in the supply and demand balance across metropolitan areas. The metropolitan area distributions by per capita housing production rate quintiles are mapped in figure 2, with the per capita housing production rate quintile averages illustrated in figure 3.

Single-family housing markets in quintile 5—the metropolitan areas with the highest production rates—stand out as the only metropolitan areas where the construction of new homes exceeded the long-term average. As shown in figure 3, the production rate in this quintile was 8.22 single-family units completed per 1,000 residents in 2023, which is above the historical average of 7.45 units. This quintile represents 73 metropolitan areas, most of which are located in the Southeast, South, and Mountain West regions (especially in states such as Florida, Texas, Georgia, North Carolina, South Carolina, Arizona, Utah, Colorado, Idaho, and Nevada, as mapped in figure 2). These are also the metropolitan areas that experienced oversupply from new construction during the last housing boom in the early 2000s.

Unlike the quintile 5 metropolitan areas, the production rates in the other four quintiles remained below their historical averages in 2023. In fact, very few new homes were added in the quintile 1 and 2 metropolitan areas (mostly located in the East, Northeast, Midwest, and Coastal West regions). For instance, the production rate for quintile 1 was only 0.85 single-family units per 1,000 residents in 2023, less than half the historical average of 1.84 units.

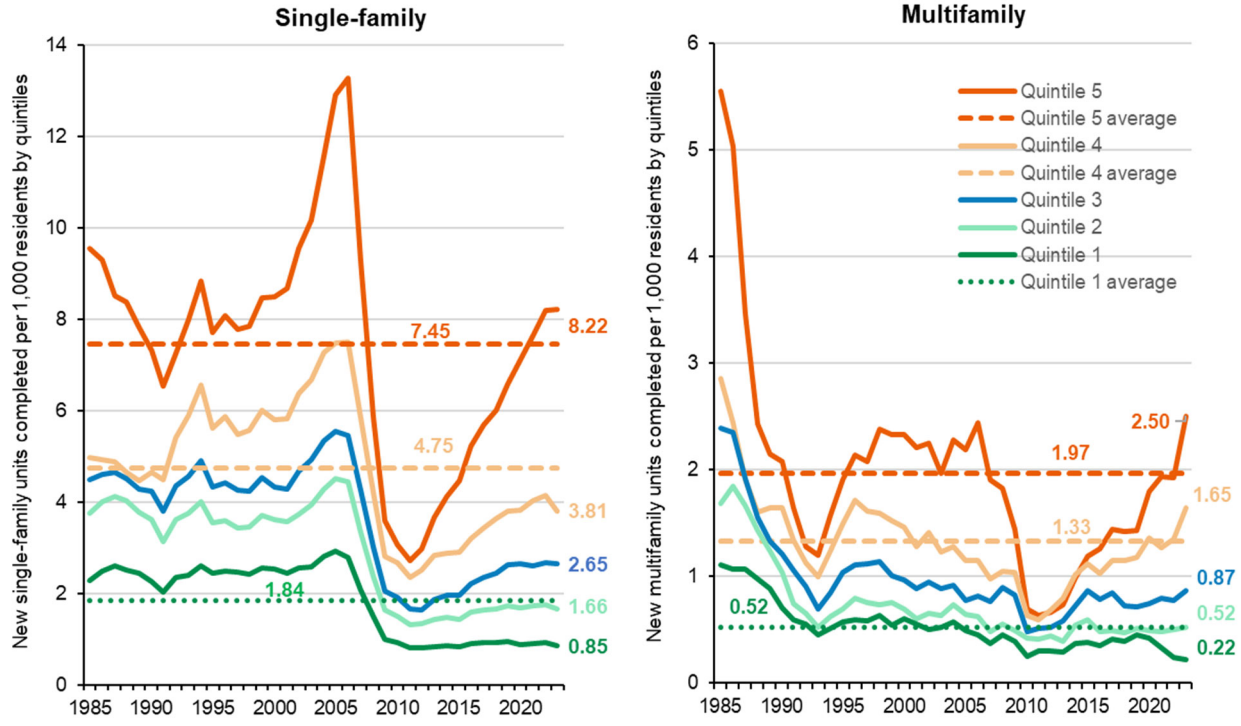
Figure 2: 2023 Metropolitan Area Quintiles Ranked by per Capita Housing Production Rate



Sources: U.S. Census Bureau; Moody's Analytics; OCC calculations

Note: The five metropolitan area quintiles are ranked from low to high by total housing completions per 1,000 resident population in 2023.

Figure 3: Per Capita Housing Production Rates by Metropolitan Area Quintiles: Single-Family vs. Multifamily

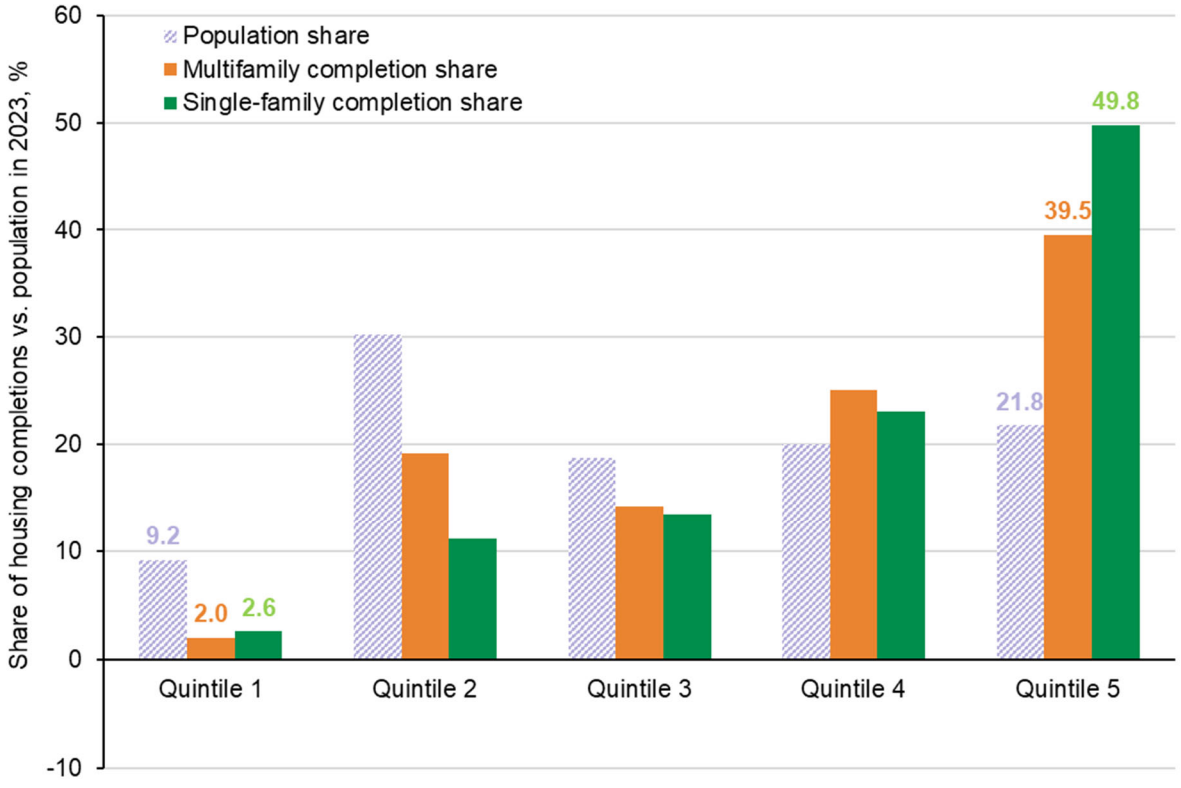


Sources: U.S. Census Bureau; Moody's Analytics; OCC calculations

Figure 3 shows that multifamily housing production rates in 2023 had similar development patterns to single-family housing production rates across all five quintiles, but with a few notable differences. For 2023, quintile 5 again stands out as the group of metropolitan areas where the production rate of new multifamily homes exceeded the historical average by as much as 27 percent (2.5 multifamily units per 1,000 residents in 2023 vs. the historical average of 1.97 units). Similar to quintile 5, but to a lesser extent, in 2023 the quintile 4 metropolitan areas also had a higher production rate than the historical average and are mostly located in the Southeast, South, and Mountain West regions. Perhaps surprisingly, the quintile 2 metropolitan areas had a very low production rate of 0.52 multifamily completions per 1,000 residents in 2023. This quintile includes many populous mega-metropolitan areas such as Chicago, New York, San Francisco, Los Angeles, and San Diego.

Furthermore, the quintile 5 metropolitan areas also had the largest share of single-family and multifamily construction in 2023. Figure 4 shows that about 40 percent of U.S. multifamily completions and 50 percent of single-family completions were in the quintile 5 metropolitan areas, whereas their resident populations accounted for only 22 percent of the total U.S. population. In contrast, although the combined population of the quintile 1 and 2 metropolitan areas had a 40 percent national share in 2023, their combined shares of the U.S. multifamily and single-family completions were only 21 percent and 14 percent, respectively.

Figure 4: New Construction Concentration by Metropolitan Area Quintiles Ranked by 2023 Total Completions per 1,000 Residents



Sources: U.S. Census Bureau; Moody's Analytics; OCC calculations

Note: Quintile population share is population in the metropolitan areas of the quintile as a share of the total U.S. population. Quintile multifamily completion share is the number of multifamily housing completions in that quintile divided by the total number of multifamily completions in the United States. Likewise, quintile single-family completion share is the number of single-family housing completions in that quintile divided by the total number of single-family completions in the United States.

Two Different Worlds: Evidence on Market Tightness and Performance

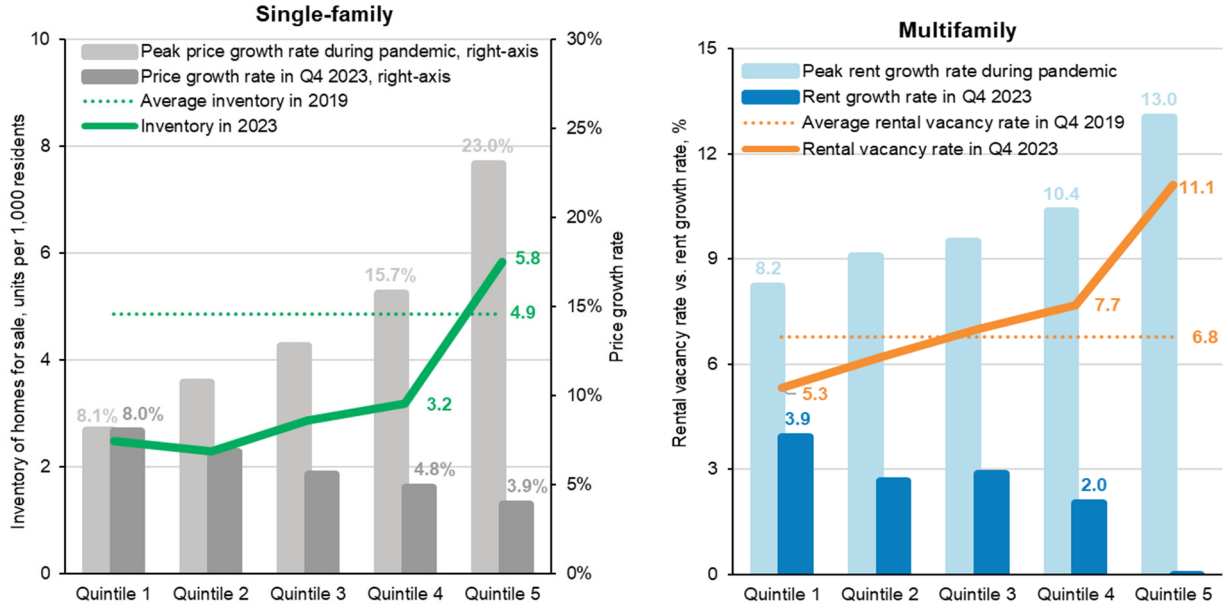
What are the implications of these single-family and multifamily construction patterns for market tightness and performance? Based on multiple criteria, figure 5 demonstrates that there are noticeable differences across different quintiles: Markets in quintile 5 tend to have cooled significantly while markets are still relatively hot in the quintiles 1 and 2.

As shown in figure 5, the inventory of single-family homes for sale in quintile 5 metropolitan areas reached 5.8 units per 1,000 residents in 2023, an 18 percent increase from the 2019 pre-pandemic average of 4.9 units available for sale across all metropolitan areas. And single-family home prices in these metropolitan areas grew by only 3.9 percent in 2023, a sizable decline of 19.1 percentage points from its pandemic peak. In contrast, in the quintile 1 and 2 metropolitan areas, the inventory of homes for sale was very tight in 2023, with only 2.3 to 2.5 housing units available for sale per 1,000 residents—roughly half of the metropolitan average (4.9 units) available on the market in 2019. Thus, not surprisingly, single-family home prices in the quintile 1 and 2 metropolitan areas also had strong growth, ranging from 6.8 to 8 percent in 2023, which is only slightly lower than their peak rates during the pandemic.

Similar developments were observed in multifamily housing markets. Figure 5 shows that in the fourth quarter of 2023, the rental vacancy rate was 5.3 to 6.2 percent in the quintile 1 and 2 metropolitan areas, while it was 11.1 percent in the quintile 5 metropolitan areas, where new multifamily housing construction is overbuilt relative to population size.

The difference in rent growth is also striking. Rents in the quintile 1 and 2 metropolitan areas still had positive year-over-year growth rates of 2.7 to 3.9 percent at the end of 2023. In contrast, the rent growth rate in the quintile 5 metropolitan areas declined from 13 percent at its peak during the pandemic to -0.01 percent in the fourth quarter of 2023.

Figure 5: Housing Market Tightness and Price/Rent Growth by Metropolitan Area Quintiles Ranked by 2023 Total Completions per 1,000 Residents



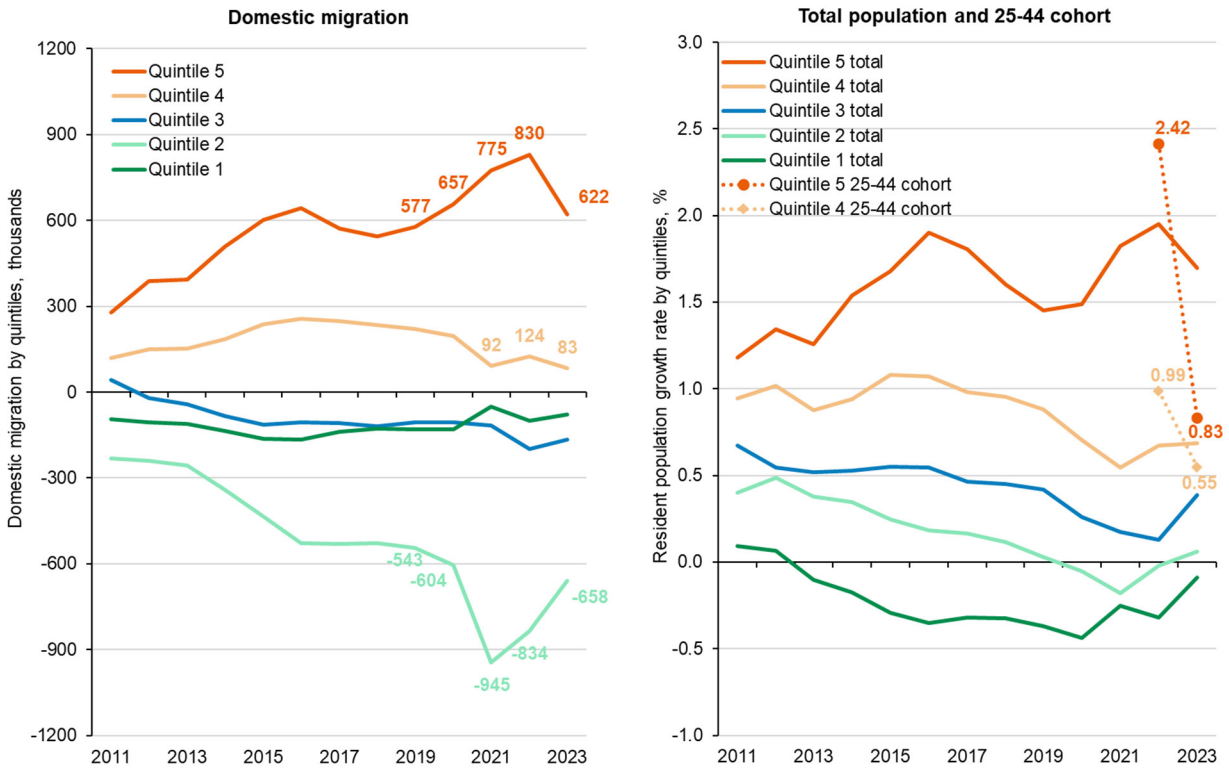
Sources: U.S. Census Bureau; Moody's Analytics; National Association of Realtors; CoStar; Intercontinental Exchange, Inc. (ICE); OCC calculations

Post-Pandemic Population Shifts Drive Geographic Mismatch in Housing Supply

What may have caused this great mismatch between housing construction and supply shortages across metropolitan areas? Although differences in zoning law and land availability may have played roles, a main driver of this mismatch may lie in the changing patterns of population migration during and after the pandemic. In general, there are three components of population change for a geographic area: natural increase (birth minus death), international migration, and domestic migration. Among them, domestic migration is the most volatile and critical component—and what may have led to a dramatic pattern shift on population movement between the pandemic and post-pandemic years.

As illustrated in figure 6, population growth in the quintile 5 metropolitan areas benefited from domestic migration during the pandemic years of 2020 through 2022. During that time, developers and builders aggressively obtained building permits and started housing construction projects in those metropolitan areas. But by the time the record numbers of new homes were delivered in 2023, domestic migration to those areas had decelerated. By comparison, metropolitan areas of the other quintiles (1, 2, 3, 4), especially quintile 2, did not benefit from domestic migration in the early pandemic years. Domestic migration accounted for much of their 2020–2022 population loss, but the population loss attributable to migration slowed considerably in 2023 for those metropolitan areas.

Figure 6: Migration and Population Growth by Metropolitan Area Quintiles



Sources: U.S. Census Bureau; OCC calculations

This dramatic shift in domestic migration is also reflected in the total population growth rates both during and after the pandemic (figure 6). In particular, the movement of people aged 25–44 years—the primary age to form households as either a renter or a first-time homebuyer—may have played a critical role in this pattern shift. As of now, there has never been a larger population of 25–44-year-olds, mostly millennials, in U.S. history. As shown in figure 6, the growth rate of the 25–44 cohort dropped substantially in quintile 5 metropolitan areas in 2023, as the United States entered the post-pandemic era.[4]

Rapid Migration Shifts Can Trigger Overbuilding, Underbuilding Risks

A rapid influx of new residents that subsequently moderates can trigger overbuilding. Overbuilding makes it more difficult to effectively absorb the elevated number of new homes coming on the market without adversely affecting single-family home prices and multifamily rents of existing homes going forward. Many metropolitan areas in the Southeast, South, and Mountain West could be vulnerable to overbuilding relative to population if a rapid influx of new residents were to moderate.

In contrast, underbuilding may occur when the pace of residents leaving a metropolitan area decelerates, resulting in the acute housing supply shortages discussed earlier. Housing affordability in these areas would be challenged by continually inflating home prices or rents. Going forward, without rapid production of more new homes by builders, the underbuilding could be exacerbated by rising home demand if mortgage rates decline substantially. Many metropolitan areas in the East/Northeast, Midwest and Coastal West could be vulnerable to underbuilding if out-migration decelerates rapidly.

The Point?

Although there is still a national housing shortage in 2024, especially in the single-family sector, the mismatch between housing construction and housing supply shortages differs across geographies, leading to dramatically different challenges and risks for US metropolitan housing markets, both now and in the future.[5]

[4] The U.S. COVID-19 public health emergency was terminated on April 10, 2023; see H.J.Res. 7.

[5] The views expressed in this paper are the author's own and do not represent the views of the OCC, the Department of the Treasury, or the United States government.