

## The Housing Supply Puzzle: Part 3, Price Gaps

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In Part 1 (“Divergent Markets”) of this series, we argue that the recent divergence in housing supplies likely signals a decline in inventories of lower- and middle-tier homes nationwide. Part 2 (“Rental Demand”) discusses the role that rental-market developments have played in exacerbating this shortage. In this third and final essay, we document another trend that might have contributed to the scarcity of lower- and middle-tier homes: the widening price gaps between different housing tiers.

Growth in the price gaps between housing tiers appears to have reduced for-sale inventories in U.S. residential markets.

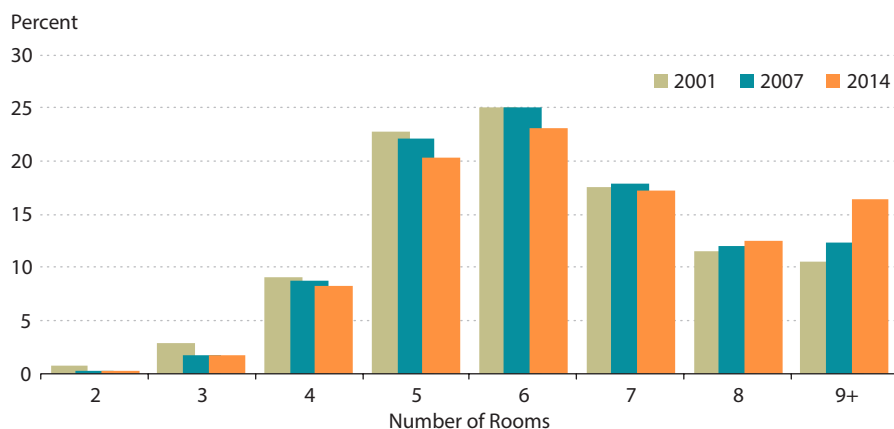
In recent years, the differences in quality between housing tiers—that is, upper-tier, middle-tier, and lower-tier homes—have widened significantly insofar as price reflects quality. According to data from the real estate company Zillow, the median prices of upper-tier and middle-tier homes rose by 7 percent and 4 percent, respectively, from 2010 to 2014.<sup>1</sup> By comparison, the median price of lower-tier homes declined by 1 percent. This means that, over

the four-year period, the difference in median prices between upper-tier and middle-tier homes increased by 11 percent, while the difference between middle- and lower-tier homes increased by 12 percent.

Additionally, the Census Bureau American Community Survey (ACS) provides suggestive evidence that the distribution of the U.S. housing stock, though slow moving, has skewed toward extremely large homes, which may have magnified the price gap between middle-tier and upper-tier homes. Figure 1 shows that the fraction of occupied single-family homes with at least 9 rooms edged higher from 2001 to 2007, rising from about 11 percent to 12 percent. This trend accelerated in the years following, as homes with at least 9 rooms reached 16 percent of all occupied single-family homes in 2014. Meanwhile, the shares of every other size group either shrank or remained essentially unchanged over the entire 13-year span. These changes to the stock of U.S. homes in part reflect the cumulative effect of inflows of new, large homes. As we illustrate in Part 1 of this essay series, homebuilders have concentrated more heavily on developing upper-tier single-family homes in recent years.<sup>2</sup>

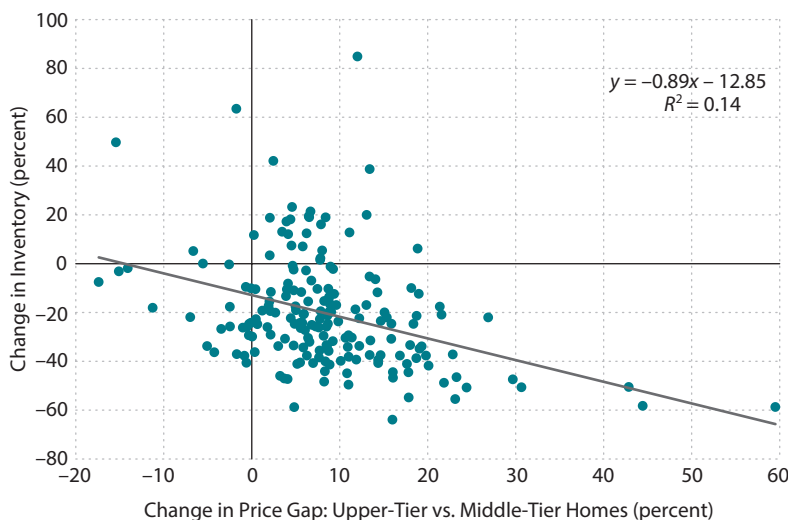
One way larger price gaps could reduce the supply of lower- and middle-tier homes is by making it relatively more expensive for owners to trade up. That is, when home-

Figure 1  
Distribution of Occupied Single-Family Homes



SOURCE: ACS and authors' calculations.

Figure 2  
**Price Gap vs. Inventory (2010-14)**



NOTE: Inventory is the overall supply of homes for sale in a metro area.  
 SOURCE: Zillow Group and authors' calculations.

owners cannot trade up to better houses, they cannot make new inventory available by selling their old homes. Between 2010 and 2014, the median number of years that homeowners stayed in their homes before selling ticked up from 8 years to 10 years, the highest level ever recorded by the National Association of Realtors.<sup>3</sup>

To examine the relationship between price gaps and inventories, we look at changes in the characteristics of housing markets across the United States from 2010 to 2014. Figure 2 illustrates that in a sample of the 185 largest metro areas, there is a negative relation between the price spread for upper-tier homes relative to middle-tier homes and the overall supply of homes for sale. The spread in San Francisco, for example, rose from \$330,000 to \$480,000 between 2010 and 2014 while inventory declined by 60 percent. Over the same period, the price gap in Philadelphia rose from \$140,000 to only \$160,000 while inventory declined by just 20 percent.

**Outlook**

In 2017, lower-tier homes experienced the strongest price growth (9 percent), followed by middle-tier homes (7 percent), and then upper-tier homes (5 percent), result-

ing in narrower price gaps between housing tiers.<sup>4</sup> Rising prices of lower-tier and middle-tier homes should draw homebuilders to produce more of those units over time, while a smaller price gap will incentivize owners to trade up, yielding additional inventory. In the near-term, however, it is likely that low- and middle-income homebuyers will suffer as affordability worsens in those market segments. ■

**Notes**

<sup>1</sup> Zillow defines a home as bottom-tier/middle-tier/upper-tier if its estimated price falls in the bottom/middle/top third of all estimated home values in a given geographic area.

<sup>2</sup> Renovations and tear-downs also impact the distribution of home size and quality. Renovations tend to increase overall size and quality. The effects of tear-downs on the distribution depends on the relative size and quality of the homes being destroyed, though outflows from demolitions have been historically smaller than inflows from new construction.

<sup>3</sup> Kusisto, Laura and Rexrode, Christina. "Stuck in Place, U.S. Homeowners Hunker Down as Housing Supply Stays Tight." October 29, 2017; <https://www.wsj.com/articles/stuck-in-place-u-s-homeowners-hunker-down-as-housing-supply-stays-tight-1509274802>.

<sup>4</sup> The 9 percent price growth of lower-tier homes is consistent with the average seen in 2005-06, before the Great Recession.