

US Housing Supply: A Growing Deficit

FHFA Fall Summit

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Summary

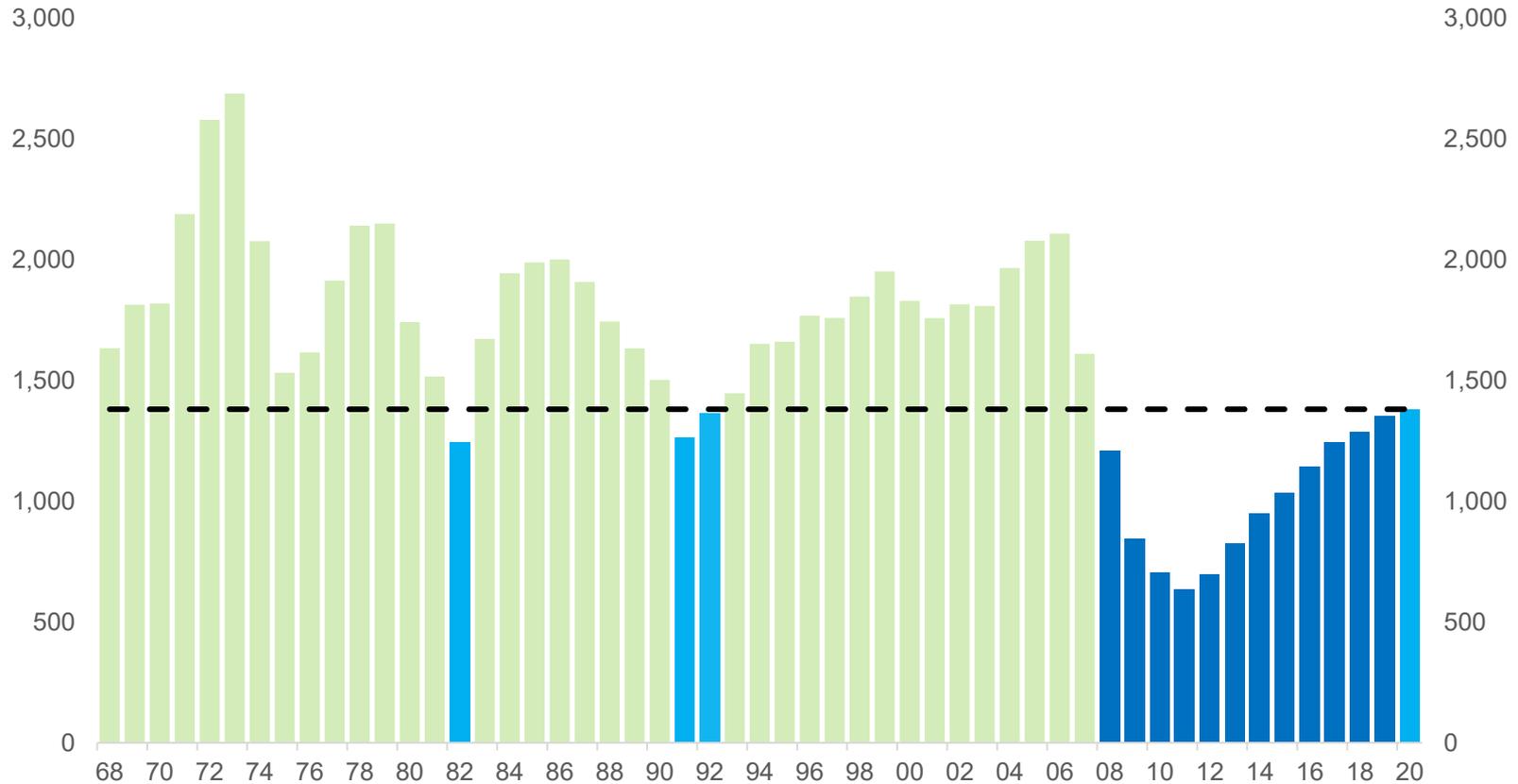


- Housing inventory at historical lows
- Housing shortage of 3.8 million units as of 2020
- Range of estimates of housing shortage: vary from housing market being 20% overbuilt to 40% underbuilt
- Entry level supply has been falling for decades and putting pressure on home prices

New Housing Supply Remains at Recession Levels



U.S. Annual Housing Completions and Manufactured Housing Shipments (1,000s)

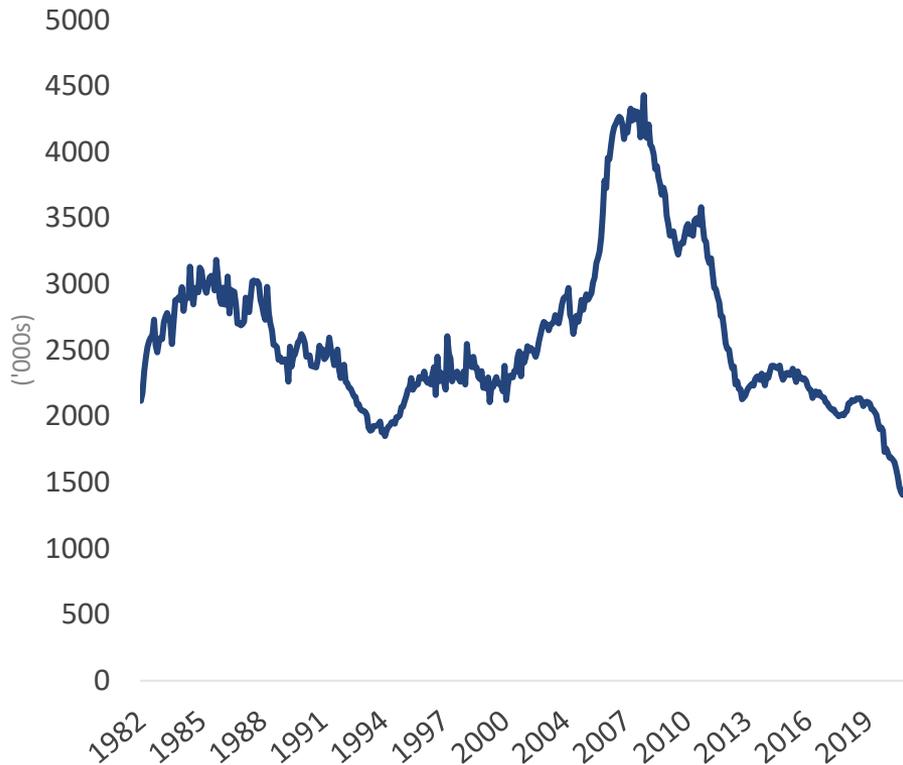


Source: U.S. Census Bureau and Department of Housing and Urban Development, Institute for Building Technology & Safety

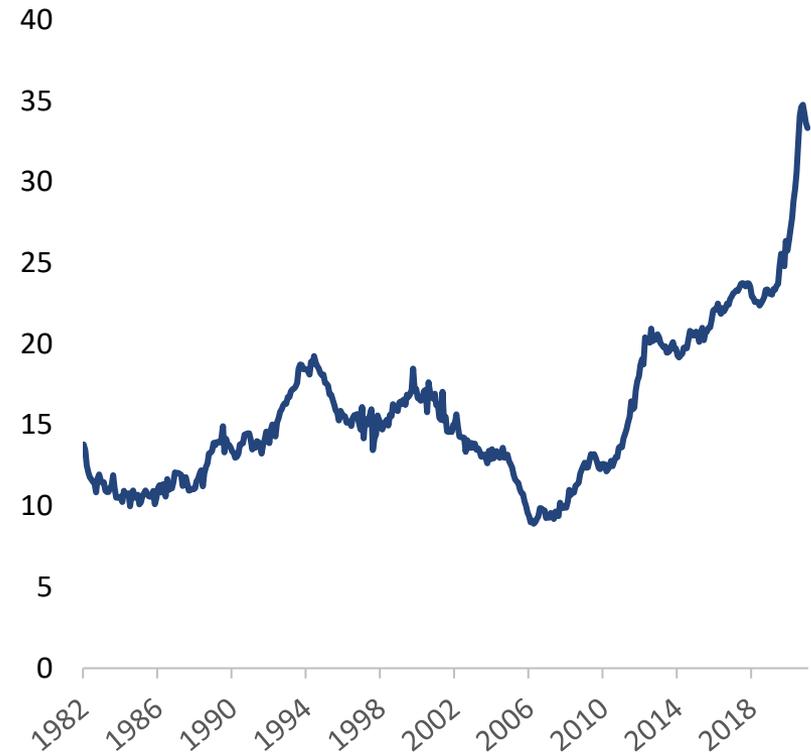


Inventory of Unsold Homes at Historical Lows - Even With the Modest Improvement in Recent Months, Inventory Not Enough for Renters Looking to Buy

Number of Homes Available for Sale



Number of renter households per homes available for sale

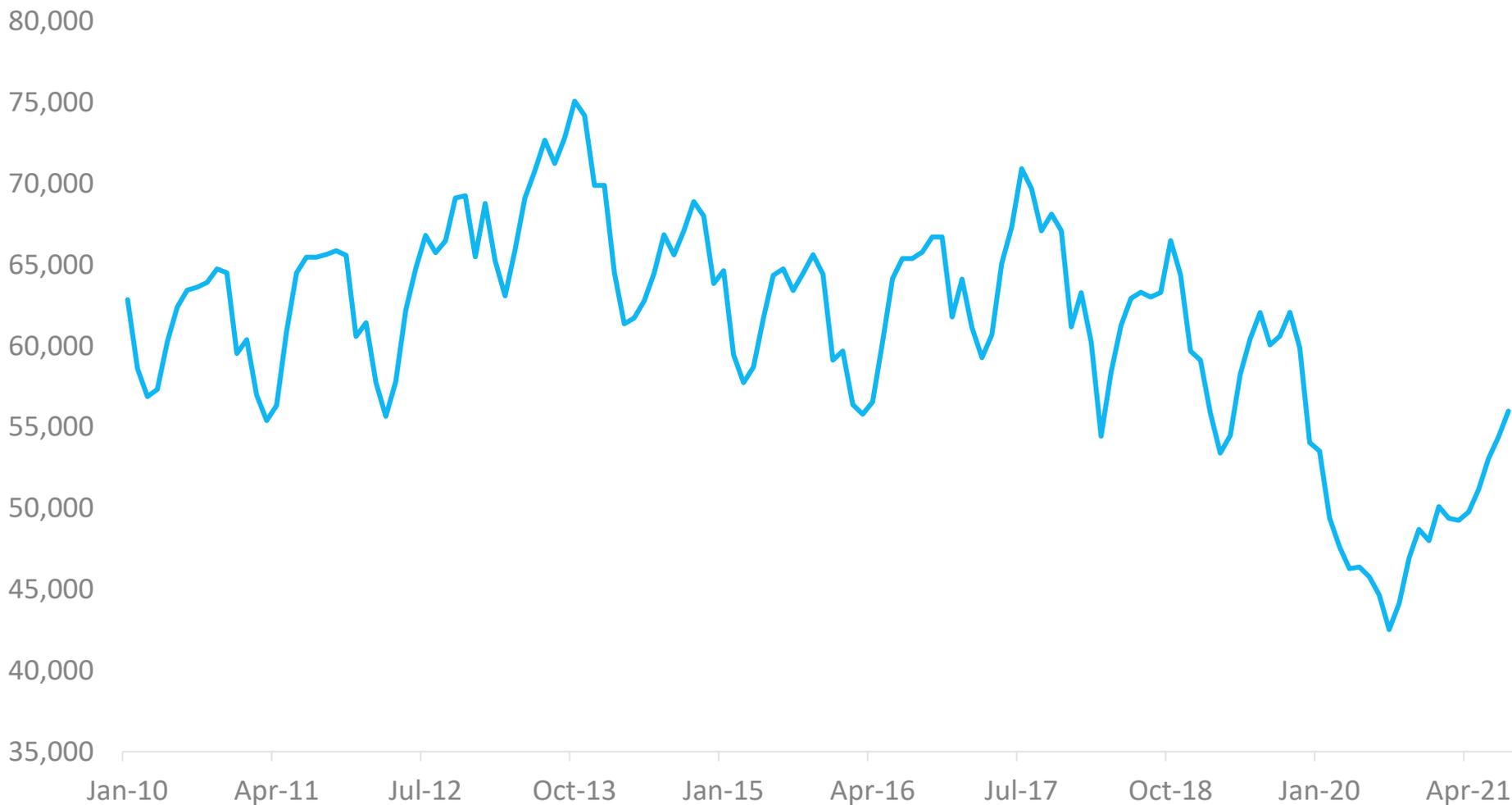


Source: National Association of Realtors (NAR); HVS, U.S. Census Bureau

While SF Rental Inventory is Improving, Available Rental Inventory is Also Low, Which Has Led to Rapid Increases in SF Rent Growth



Single-Family Rental Inventory (Supply)



Source: CoreLogic

Before the Coronavirus Pandemic Hit, the US Was Facing a Massive Housing Shortfall



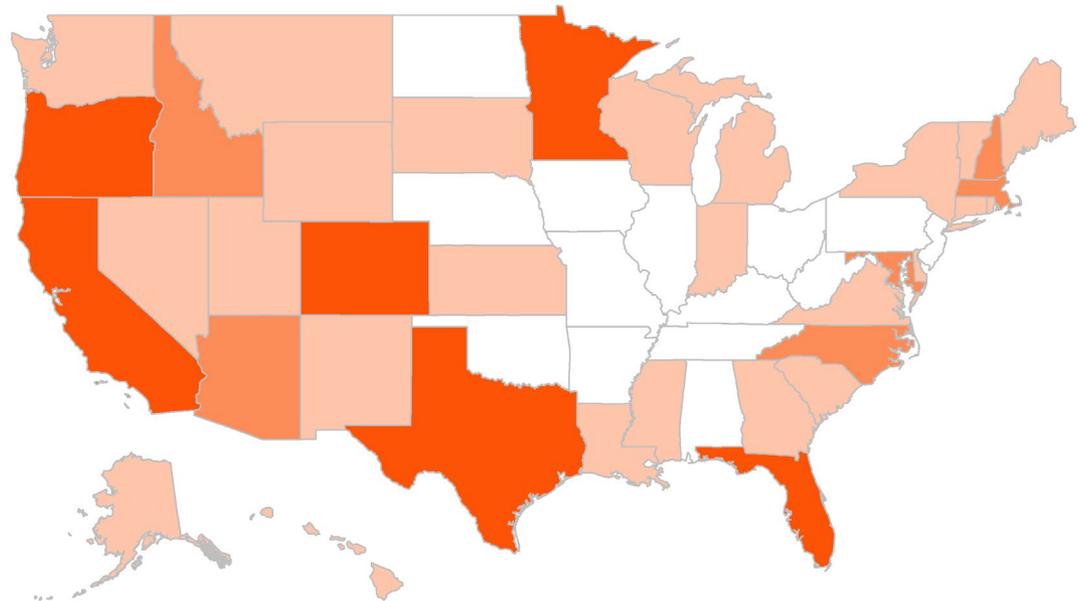
Housing Stock Deficit as Proportion of State's Housing Stock

Target housing stock in the second quarter of 2018

About 2.5 million housing units are needed to match long-run demand: a huge shortfall.

	Millions
Current households	121.2
Target households	122.5
Current housing stock	138.3
Target housing stock	140.8

Housing stock target minus current housing stock **2.5**



Less than 0% 0% to 1% 1% to 2% 2+%

Source: Freddie Mac Economic and Housing Research analysis of U.S. Census Bureau's Current Population Survey/Housing Vacancy Survey
Accounts for historical vacancy rates, net migration between states, and pent-up housing demand

How Did We Arrive At This Shortage Estimate?



1. Number of Current Households - CPS

2. Target Households: To obtain the target households, we need a target headship rate:

$$hh^* = \sum_{i=15}^{65+} pop_i * hr_i^*$$

where i = 5-year population age groups from 15-19 to 65+;

hr_i^* - target headship rate;

hh^* - target households

- a. Obtain the headship rate by age bucket.
- b. Adjust headship rate based on factors identified as affecting household formation (Housing Costs, Income, Employment, Marriage and Children, Race and Ethnicity). Run Oaxaca Blinder decomposition to estimate the contribution of each of the factor to the headship rate. Based on the contribution of the factors, we add back factors related to housing costs based on the assumption that housing costs become more favorable.

$$hr_{bi}^* = hr_{(i,2020)} + \alpha_{(housing\ cost,\ i)},$$

- c. To convert from CPS to HVS data, we apply a multiplier based on the ratio of the CPS and HVS households.

How Did We Arrive At This Shortage Estimate?



3. **Vacancy Rate:** We use the latest available vacancy rate.
4. **Target Vacancy Rate:** The target vacancy rate is at **13%**. It is estimated to ensure that there is a well-functioning housing market, which requires some vacant properties for sale and for rent.
5. **Housing Stock:** We use the latest available housing stock estimate.
6. **Target Housing Stock:** Based on the target households and the target vacancy rate of **13%**, we estimate the target housing stock (k^*) as

$$k^* = \frac{hh^*}{1 - v^*}$$

Where hh^* is target households and v^* is the target vacancy rate
Difference between k^* and k would give us the shortage.

Housing Shortage Worsened During the Pandemic – 3.8 million Housing Units Needed to Match Rising Demand



Housing Stock Estimate		2018			2020		
		Actual	Target	Gap	Actual	Target	Gap
(1)	Households (HVS, Millions)	121.2	122.5	1.3	125.8	126.2	0.4
(2)	Vacant Units (HVS, Millions)	17.0	18.3	1.3	15.4	18.9	3.5
=(1)+(2)	Housing Stock (HVS, Millions)	138.3	140.8	2.5	141.2	145	3.8

Other Housing Shortage Estimates:

	Housing Shortage (Millions)
NAR	5.5
NLIHC (Affordable Homes)	6.8
Zelman	“20% overbuilt”

Source: Freddie Mac Economic and Housing Research analysis based on U.S. Census Bureau’s Current Population Survey/Housing Vacancy Survey data.

Note: Totals may not add up due to rounding

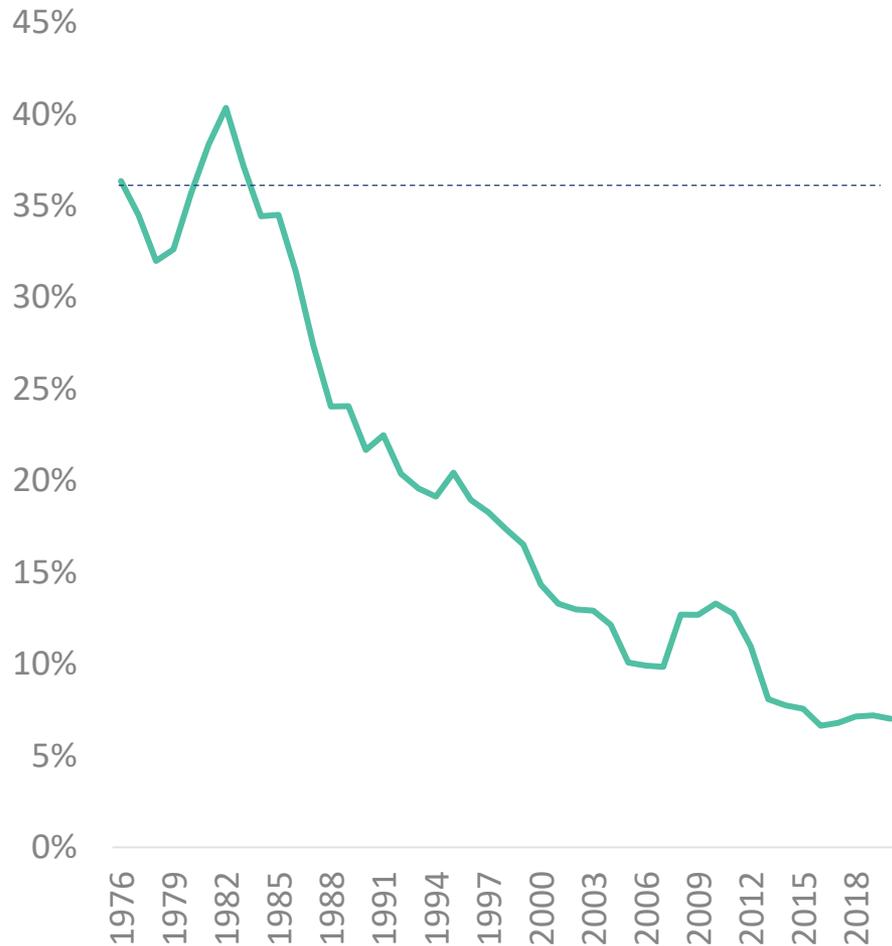


Decline in Entry Level Supply

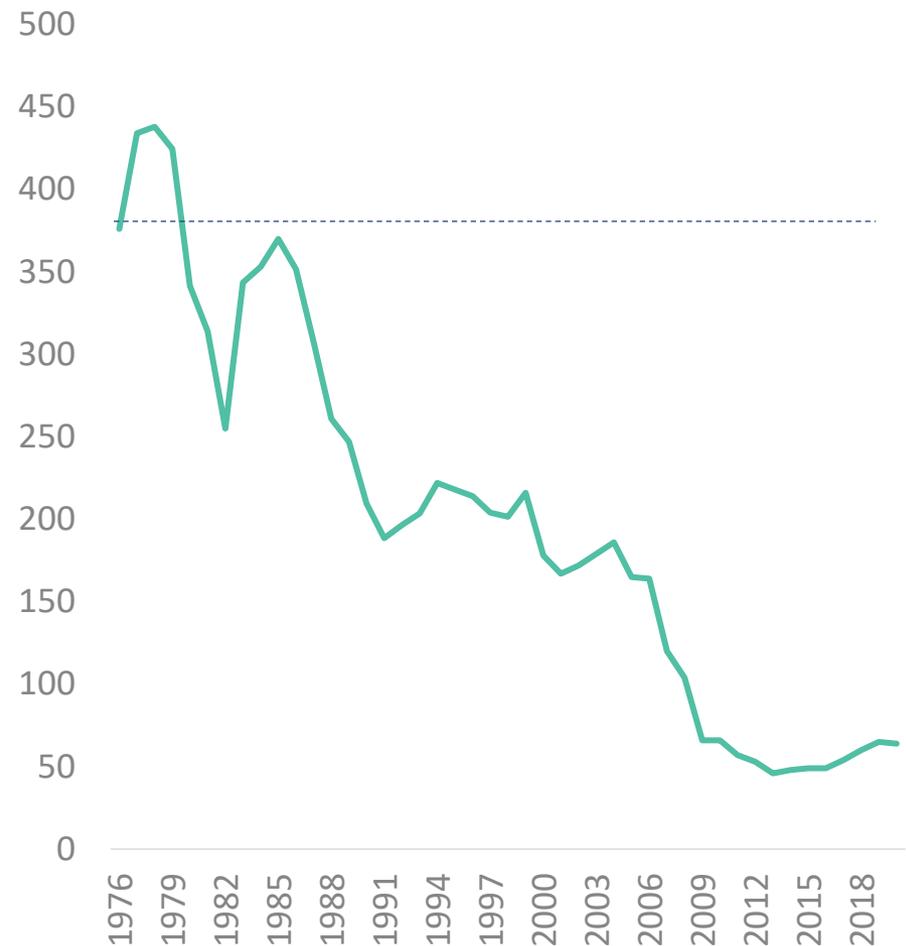
Entry-Level Supply Has Been Declining for Decades



Percent of SF Completions Below 1,400 Square Feet

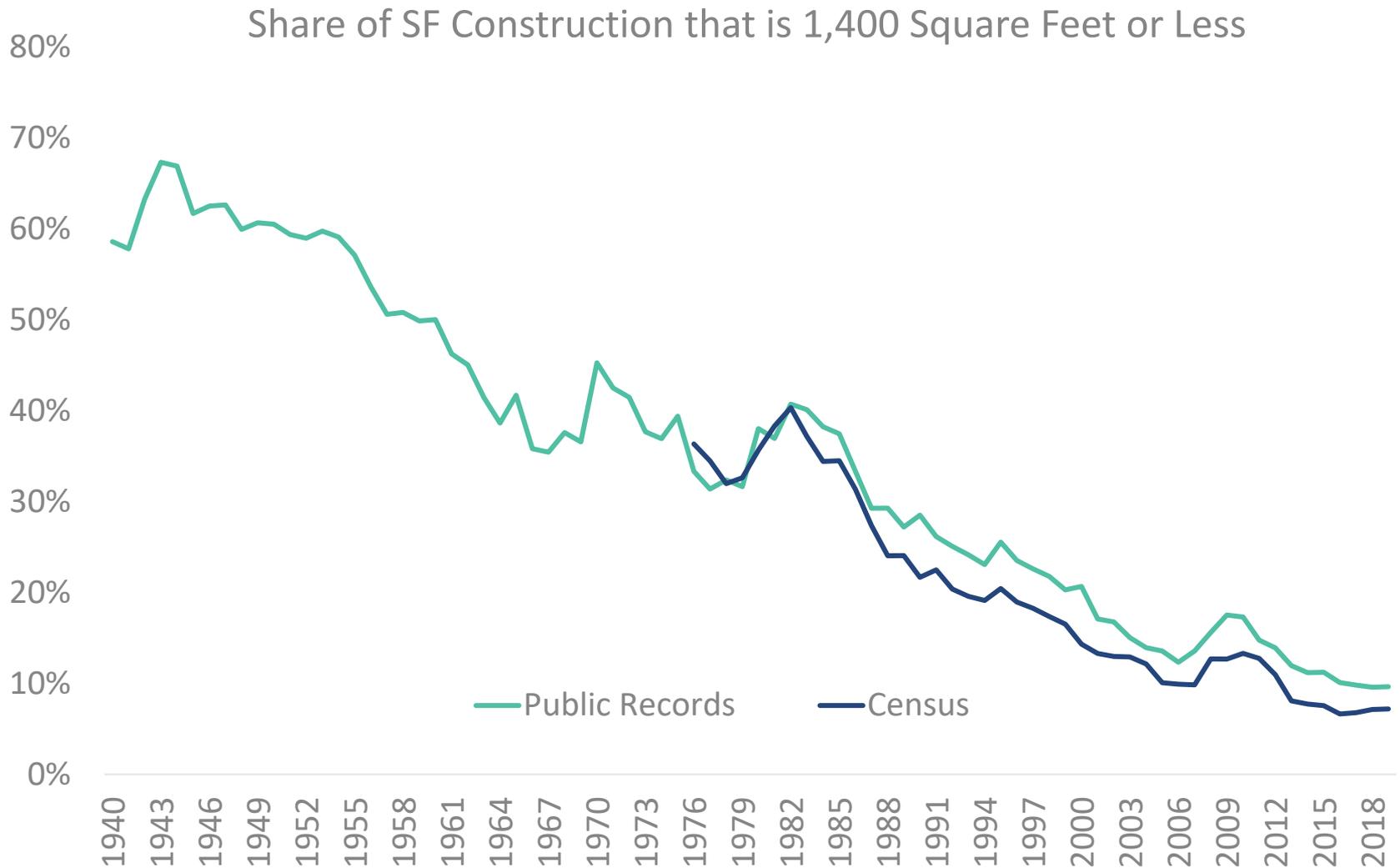


Number of SF Completions Below 1,400 Square Feet (in Ths)



Source: Census

The Decline in Entry-Level Supply Began in the 1950s...

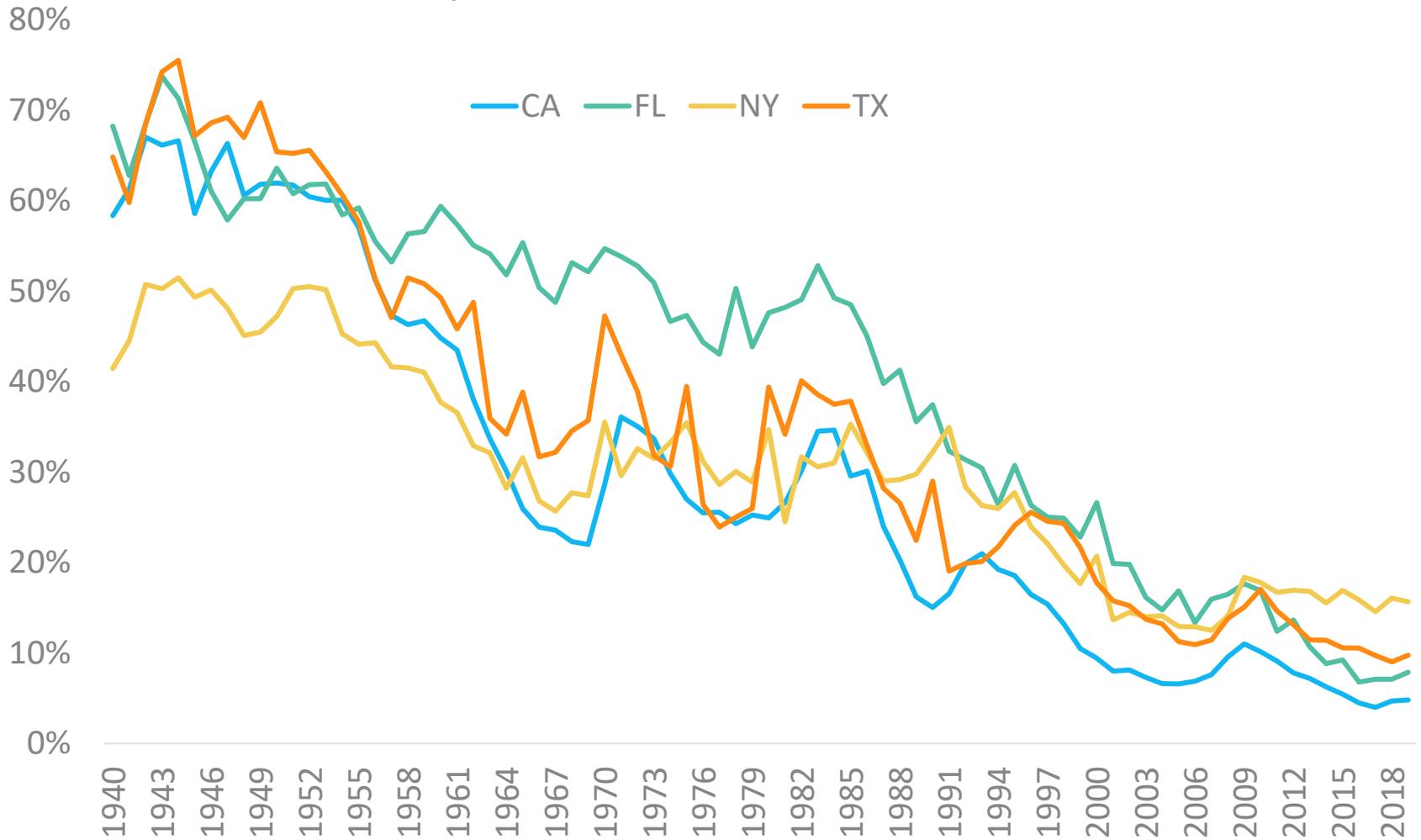


Source: Census and CoreLogic

...and the Drop is Occurring Across All Large States...



Entry-Level Share of New Home Sales

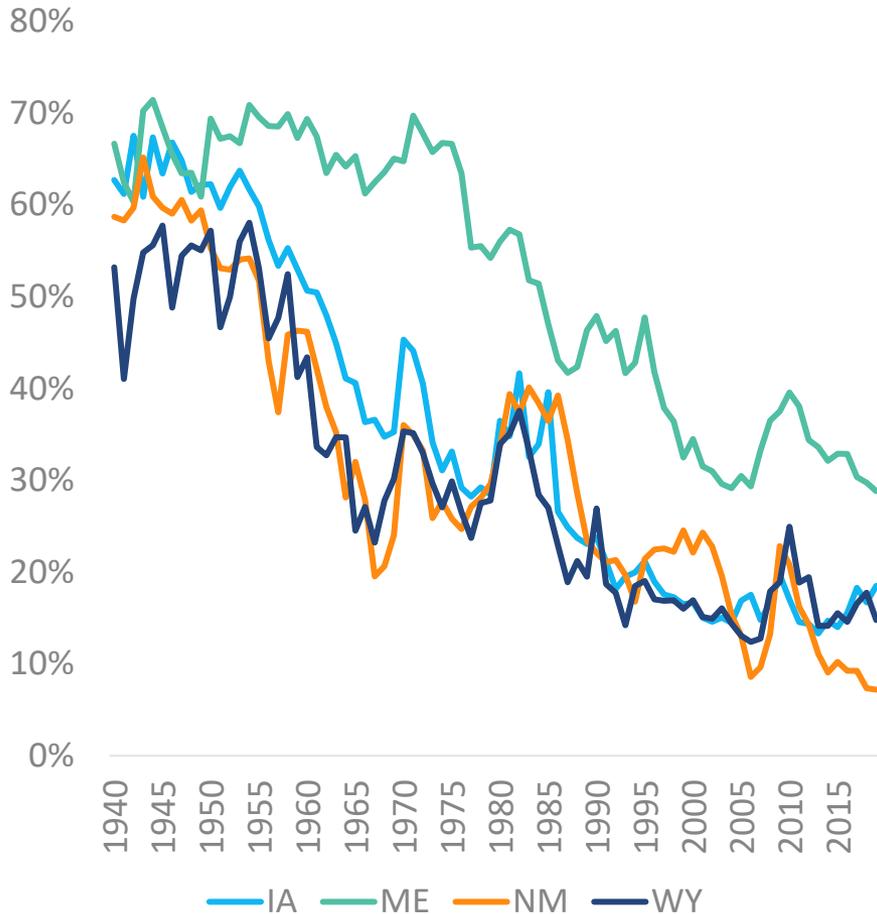


Source: CoreLogic

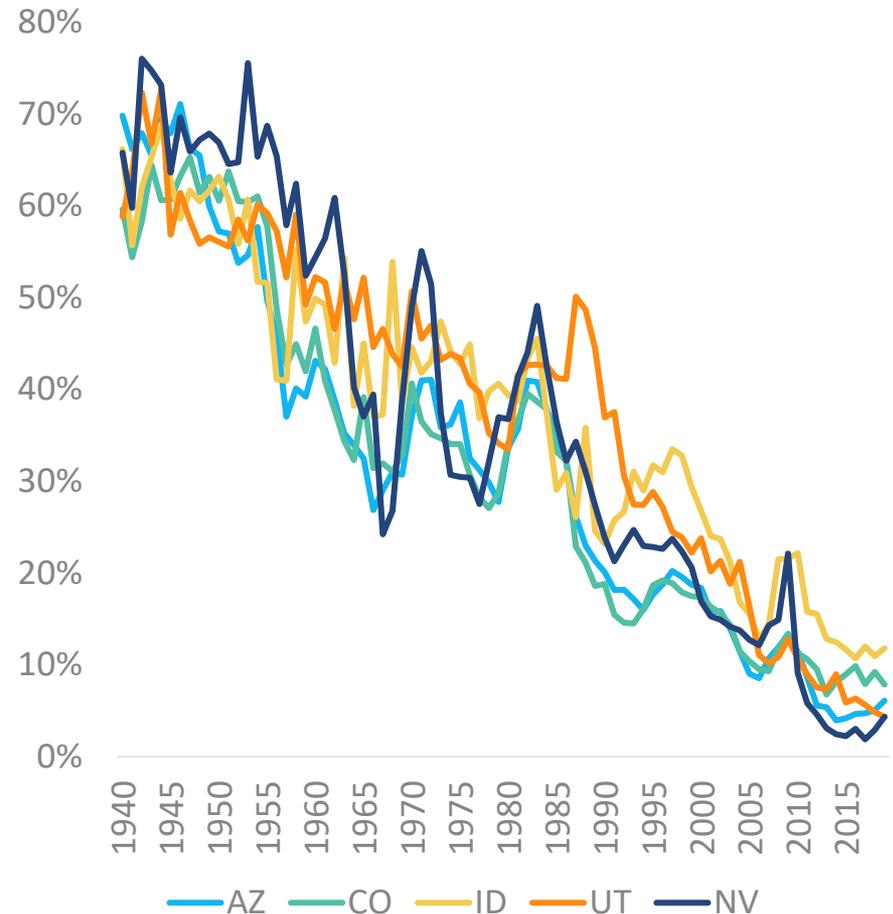


...and the Entry Level Share is Decreasing in Rural and Fast-Growing States

Entry Level Home Share for Rural States



Entry Level Home Share for Fast Growing States

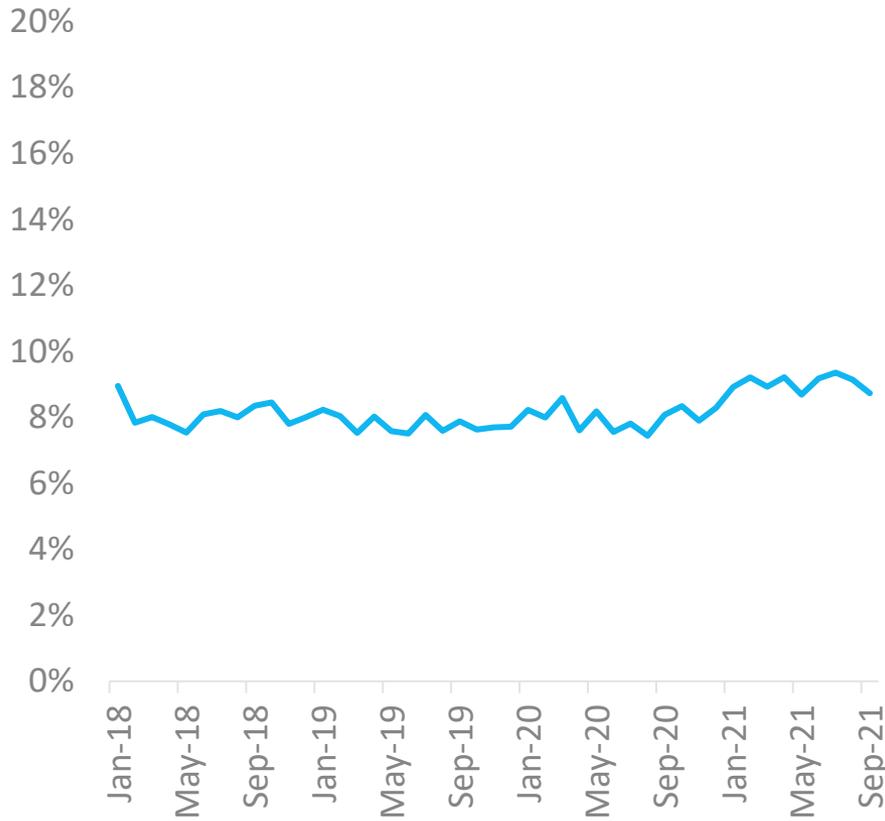


Source: CoreLogic

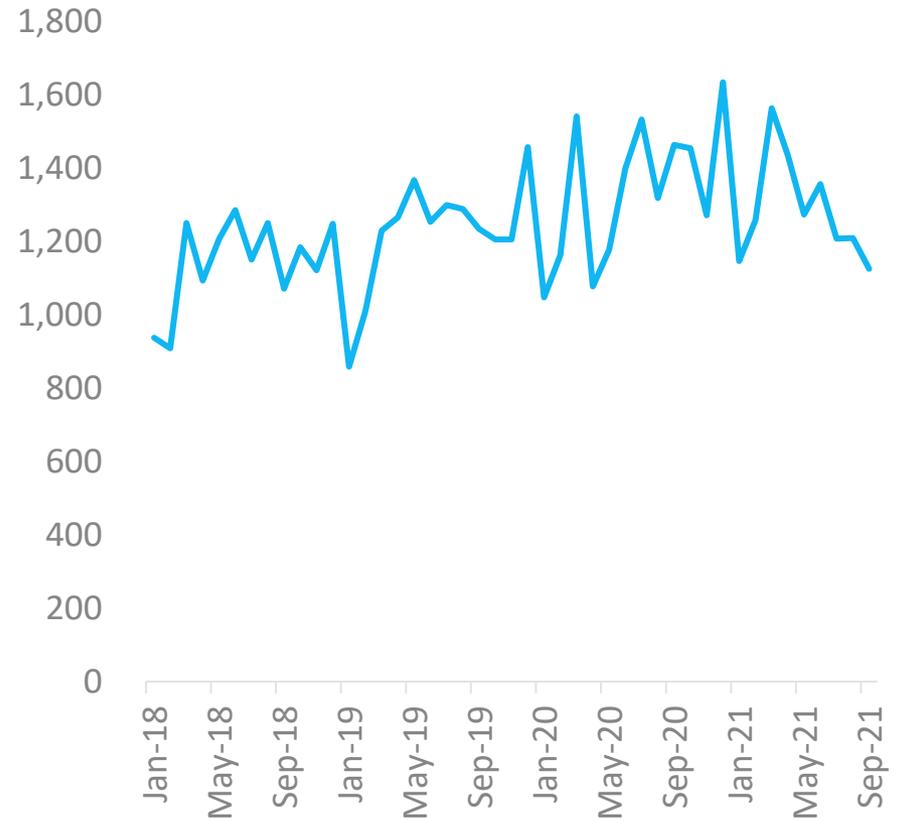
Entry Level Supply Share Remains Very Low Through September 2021



Percent of New Sales Under 1,400 Square Feet



Number of New Sales Under 1,400 Square Feet

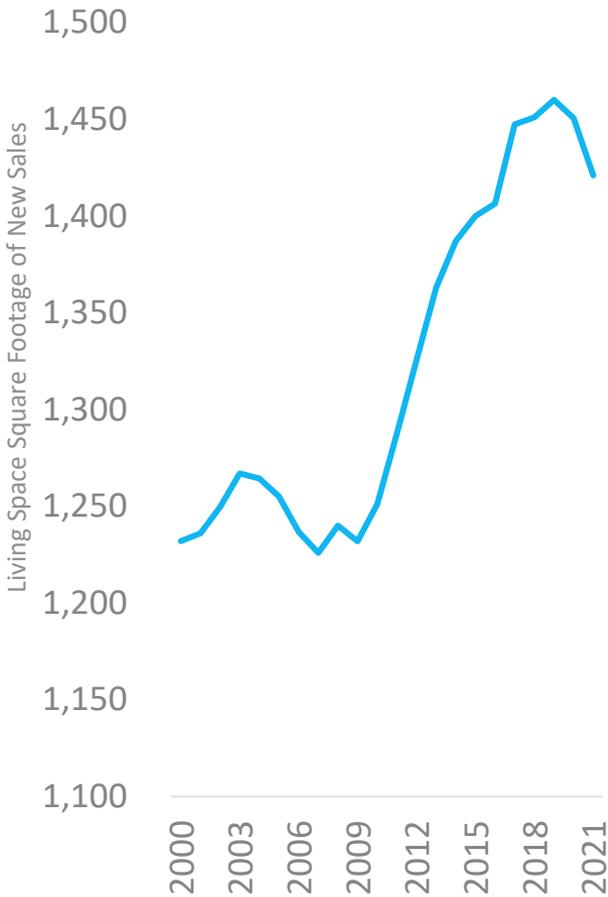


Source and Note: CoreLogic MLS data for 79 selected markets.

The Decline In Home Size Chronicled in the Press is Concentrated in Very Large Homes



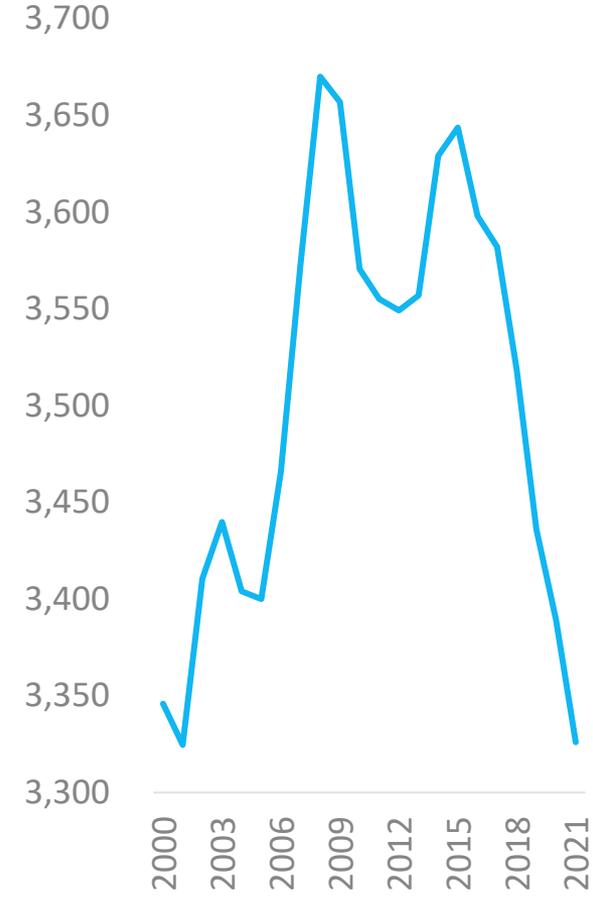
10th Percentile Square Footage of New Sales



50th Percentile Square Footage of New Sales

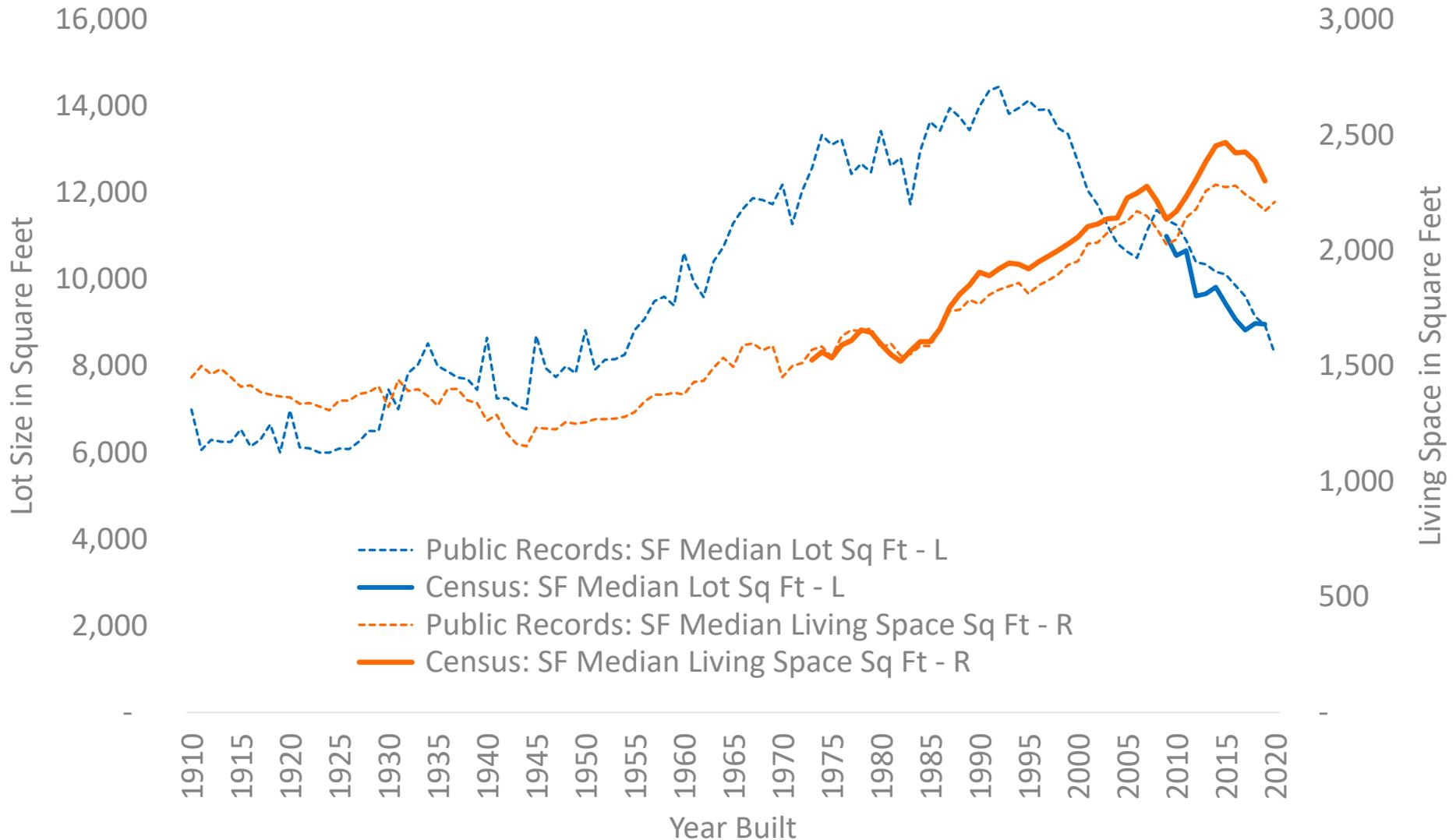


90th Percentile Square Footage of New Sales



Source and Note: CoreLogic MLS data for 79 selected markets.

While Most Attention is Paid to Interior Space, Lot Size Has Seen a Dramatic Drop Since the Early 1990s



Source: CoreLogic

For More Information



Economic and Housing Research: <http://www.freddiemac.com/research>

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