Statement before the Senate Committee on Banking, Housing, and Urban Affairs

On Separate and Unequal: The Legacy of Racial Discrimination in Housing

How the Federal Government's Policies Have Helped to Make Housing Outcomes Separate and Unequal

And how these policies continue to put low-income and minority borrowers needlessly in harm's way and have severely limited their opportunities to build generational wealth

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Chairman Brown and Ranking Member Toomey, thank you for the opportunity to testify today.

Executive Summary:

Many of the housing problems we face today as a nation have occurred, not in spite of federal policies, but because of them. Two policies in particular have been major contributors to the separate and unequal housing legacy we find ourselves in today. Racial discrimination in residential zoning policies espoused by the federal government may be traced back to 1921 and foreclosure-prone affordable housing policies back to 1954. These two policies continue to contribute to disparate outcomes and put low-income and minority borrowers needlessly in harm's way and severely limit their opportunities to build generational wealth.

- Zoning policies espoused by the federal government and widely adopted around the country have constrained the private sector's ability to build adequate housing, thus fueling housing unaffordability.
    - Starting in 1921, one-unit detached zoning policies became widespread through the actions of the federal government. Justified as actions "promoting health, safety, morals, or the general welfare", they were in fact thinly veiled efforts to promote racial segregation of residential development.
    - These policies have created an artificial supply shortage. We estimate without these policies an additional eight million homes would have and can still be built without subsidy by private enterprise.
    - This supply shortage has resulted in higher home prices and rents and greater levels of debt in order to become a homeowner.
    - Worsening affordability has severely affected low-income households, especially Black ones, by severely restricting the opportunity to sustainably purchase a home.
- Foreclosure-prone affordable housing policies began in 1954, when Congress authorized FHA to use the 30-year loan, and have been primarily targeted at low-income and minority borrowers.
    - These policies have subsidized debt by providing excessive leverage.
    - Coupled with the supply shortage, the increased demand from additional leverage has fueled unsustainable lending and higher home prices.
    - This is the paradox of accessible lending: When supply is constrained, credit easing will make entry-level homes less affordable.
    - During the Financial Crisis, these policies contributed to 8.6 million of foreclosures and other forced dispositions, which were proportionally higher in low-income and minority neighborhoods.
        - The foreclosure rate of 27% in low-income census tracts (defined as <80% of area median income) was 1.5 times as high as the 18% foreclosure rate in high-income census tracts (defined as ≥120% of area median income).
        - The foreclosure rate of 30% in census tracts with a Black and/or Hispanic share of households of at least 50% was twice as high as the 16% foreclosure rate in census tracts with a Black and/or Hispanic share of households of less than 10%.
    - These policies have not built generational wealth.
- Today, the nation finds itself in the midst of the second home price boom in less than a generation.
    - The national seller's market is now in its 101st month and levels of supply are at record lows. Home prices are rising in the 10-15% range compared to a year ago.

    - Home price appreciation is being propelled by the Fed's low interest policies and quantitative easing, the desire for more space as more people work from home, and a wide credit box, particularly at FHA.
    - Across the states you represent, affordability has worsened, especially for low-income and minority households. ***You can trace just how bad affordability has become from key housing market indicators for your state provided in Appendix A.***
- The COVID-19 pandemic has revealed the same fault lines that were present before the Financial Crisis, thus maintaining separate and unequal outcomes in the housing market.
    - Delinquencies are still largely geographically concentrated in low-income and minority neighborhoods, where federal policies provide widespread access to default-prone leverage.

Most importantly these federal policies have impeded the creation of generational wealth for lower-income and minority households and have served to perpetuate the legacy of racial discrimination and socio-economic stratification in housing. Due to their ongoing impact, there is a growing danger that housing is going to become even more separate and unequal. This is not a viable path forward.

1) The federal government's role in promoting racial discrimination in housing

Zoning ordinances limit residential development to one-unit, detached housing in large swathes of the U.S., restricting housing supply. How did we get to this point?

In 1916, New York City became the first U.S. municipality to adopt a zoning ordinance, with other localities following shortly behind. Commencing in 1921, the federal government became the driving force behind the widespread adoption of zoning by municipalities and the near universal move to adopt one-unit zoning districts. This effort was spearheaded by the U.S. Department of Commerce (hereafter "Commerce Department"), its Division of Building and Housing, and the department's long-time cabinet secretary and later U.S. president, Herbert Hoover.

The Commerce Department promoted the use of geographically separated zoning districts consisting of (i) 1-unit, single-family structures or (ii) multifamily structures (including 2-4 units) as a tool to keep racial and ethnic groups separate. While the stated goals of zoning policies espoused by the Department of Commerce were written in high-minded prose advocating American values including thrift and independence, the true purposes were thinly veiled: keeping immigrants from southern and central Europe, and, particularly, African Americans in zoning districts segregated from whites. In short, zoning could be used to create geographically separate districts where one-unit single-family detached housing was segregated from multifamily housing, resulting in the segregation of households by income and race.

In 1926, a pivotal Supreme Court decision on The Village of Euclid v. Ambler Realty Co. gave the practice of zoning constitutional sanction. This decision, along with the Supreme Court ruling on Zahn v. Board of Public Works the following year, created the legal foundation for the predominance in the United States of zoning districts consisting entirely of one-unit detached dwellings.

Beginning in 1934 the Federal Housing Administration (FHA) took over from the Commerce Department and went on to play a pivotal role in using zoning and housing finance to segregate residential development.

The lasting impact of the federal government's role through the actions of the Commerce Department and FHA is clear: The vast majority of residential land in major American cities is zoned exclusively for single-unit homes.

The legacy of zoning has created an artificial supply shortage. We estimate without these policies an additional eight million homes would have and can still be built without subsidy by private enterprise.[1] This becomes clear when considering two case studies (shown below) that provide natural experiments of the power of the private sector to deliver new housing when zoning to higher densities is by-right and when localities make infill construction legal, easy, and feasible. As shown below, this supply shortage has resulted in higher home prices and rents and also greater levels of debt in order to afford homeownership. Worsening affordability has had a disparate impact on low-income households, especially Black ones.

2) **Foreclosure-prone affordable housing policies have contributed to the separate and unequal housing legacy we find ourselves in today.**

Foreclosure-prone affordable housing policies for single-family lending have subsidized debt by providing excessive leverage. These policies have been primarily targeted at low-income and minority homebuyers and began in 1954, when Congress authorized the 30-year loan for use on existing FHA home loans. Congress also raised loan-to–value (LTV) limits around the same time. The average FHA loan term and LTV in 1954 was 21.4 years and 79.9%. These rose to 27 years and 90% by 1959.

Congress doubled down on this policy with the passage of the Federal Housing Enterprises Financial Safety and Soundness Act of 1992, which would have a devastating effect. During the Financial Crisis, these policies contributed to 8.6 million of foreclosures, which were proportionally higher in low-income and minority neighborhoods. For example, the 27% foreclosure rate in low-income census tracts (defined as <80% of area median income) was 1.5 times as high as the 18% foreclosure rate in high-income census tracts (defined as ≥120% of area median income). Similarly, the foreclosure rate of 30% in census tracts with a Black and/or Hispanic share of households of at least 50% was twice as high as the 16% foreclosure rate in census tracts with a Black and/or Hispanic share of households of less than 10%.

Table: Foreclosure Rate by Neighborhood Type

Census Tract to Area Median Income Ratio	**Foreclosure Rate**
<80%	27%
80% - <120%	22%
≥120%	18%
All	22%

Census Tract Black and/or Hispanic share	**Foreclosure Rate**
≥50%	30%
20% - <50%	24%
10% - <20%	18%
<10%	16%

Note: Foreclosure rate is for loans originated between 2004 and 2008.
Source: LLMA and AEI Housing Center.

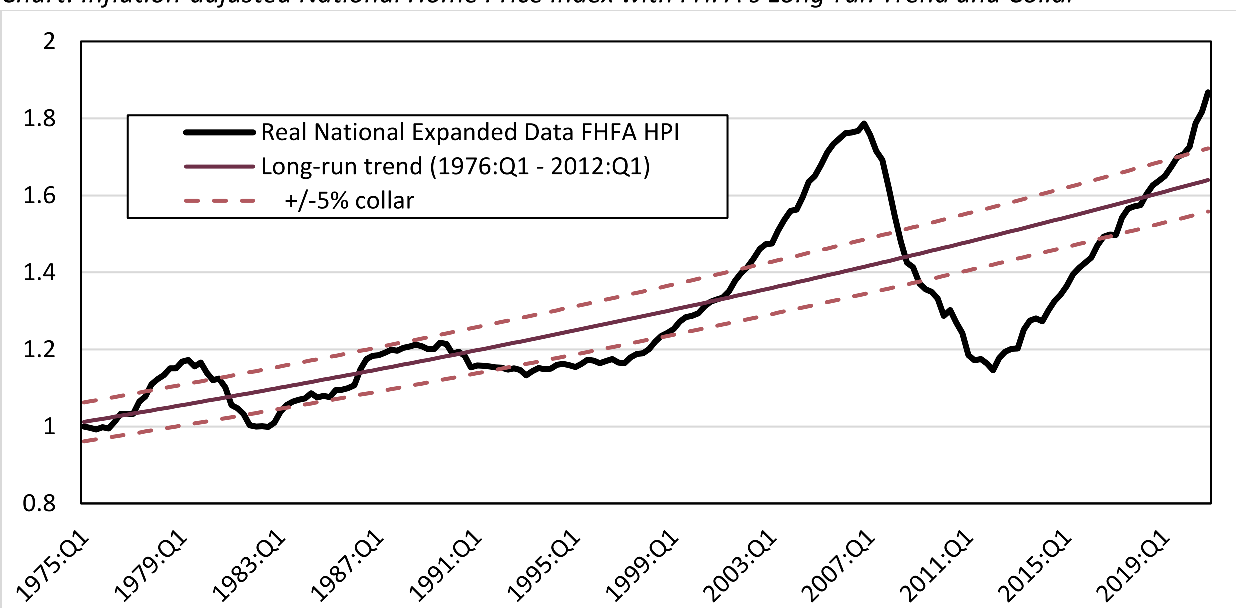
[1] The combined share of 2-, 3- and 4-units and single-family attached units as percentage of the total U.S. housing stock has shrunk by 8.0 percentage points from 1940 (26.5%) to 2008 (18.5)%. If these units had been built, it would have added 8 million more units (6.7 million in 2-4 structures and 1.3 million as single-family attached units) to the 100 million units of 1-4 unit housing stock.

Yet, the homeownership rate in 2020:Q4 was 65.8%, only marginally higher than the rate of 63.0% in 1964:Q4.[2] Today, the federal government's twin legacy of racially-motivated zoning and poorly designed affordable housing policies continue to make the housing market separate and unequal.

This is the paradox of accessible lending: When supply is constrained, credit easing will make entry-level homes less, not more, affordable. Credit easing merely permits one borrower to bid up the price against another would be buyer for a scarce good.[3] Thus, much of the credit easing that these federal policies provided are quickly capitalized into higher home prices. This is especially pertinent for entry-level homes, which are perennially in short supply. This puts upward pressure on home prices, does not expand access, and is dangerous; concepts we have had to learn and relearn.

Yet, merely a decade after the last housing crash, the country is in the midst of yet another housing boom already nine years in the making and which according to Nobel Laureate Robert Shiller was "already gigantic" by 2018.[4] The Federal Housing Finance Agency has developed a measure of the current state of the housing market in terms of the long-term inflation-adjusted home price trend. We are well above the long term trend and home prices are expected to continue to significantly increase in 2021 and likely 2022. An extended price boom not only makes homes unaffordable, but also promotes price volatility and unforgiving mean reversion.

Chart: Inflation-adjusted National Home Price Index with FHFA's Long-run Trend and Collar



Source: FHFA and AEI Housing Center.

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[2] Pinto, "Housing finance fact or fiction? FHA pioneered the 30-year fixed rate mortgage during the Great Depression?" June 2015, https://www.aei.org/economics/housing-finance/housing-finance-fact-or-fiction-fha-pioneered-the-30-year-fixed-rate-mortgage-during-the-great-depression/

[3] Fed Chairman Marriner Eccles, Federal Reserve Bulletin, The Current Inflation Problem, 1947.

[4] Robert Shiller, "The Housing Boom Is Already Gigantic. How Long Can It Last?" NYT Dec. 7, 2018.

3) Many additional congressional actions have also contributed to the separate and unequal housing legacy we find ourselves in today. This might serve as a warning for many of today's proposed policies.

Over the past decades, Congress has enacted many reforms such as the Housing Act of 1949, which provided subsidies for high-rise public housing, the Housing and Community Development Act of 1968, which further expanded FHA into high risk single-family and multifamily FHA insured lending, and the Tax Reform Act of 1986, which authorized the Low-Income Housing Tax Credit (LIHTC). What they have in common is that they have made housing outcomes more separate and unequal.

Today, Congress is considering new affordable housing proposals providing hundreds of billions of new funding. However, poorly designed housing assistance programs have not served this country well.

Seventy years after the Housing Act of 1949, we considering spending $40 billion of more to try to get public housing right. But consider these observations made in 1954 by housing leaders of the National Association of Home Builders:

> There are outstanding examples … of federal programs that have hampered home building. The most glaring is public housing, subsidized at the expense of the tax payer, yet normally failing to meet the needs or services of the community as well as they could be met through private industry…. Public housing is not low-cost housing. It is high-cost housing offered at low rent. And the low rent is possible only because of government subsidies charged to all tax payers….The initial construction cost of public housing projects, however, is not the worst cost…. [There] is an operational subsidy of nearly $19,000 per apartment, which cost $11,000 to build.[5]

Fifty years have passed since the passage of the Housing and Community Development Act of 1968, the last time Congress provided subsidies to build or rehabilitate millions of homes. Today there are proposals to spend "five times in inflation-adjusted dollars that Congress authorized in the seminal Housing and Urban Development Act of 1968 to develop new affordable housing following widespread riots in the wake of Martin Luther King's assignation."[6] This 1973 book's title sums up devastation that followed the 1968 Act: *Cities Destroyed for Cash: The FHA Scandal at HUD.*[7]

Thirty-five years ago, Congress established the Low-Income Housing Tax Credit (LIHTC). Yet the LIHTC program has worked to reinforce racial discrimination. Just last month the City of Chicago reported that "since 2000, the majority of Chicago's LIHTC developments have been new construction located in high-poverty, majority Black areas, with a quarter located in higher-income "opportunity" areas."[8]

What is undeniable is that many of the housing problems we face today have occurred, not in spite of

[5] *Housing ... U.S.A. : as industry leaders see it*, 1954, https://catalog.princeton.edu/catalog/SCSB-3002043
[6] *How Biden hopes to fix the thorniest problem in housing*, Politico, April 10, 2021, https://www.politico.com/news/2021/04/10/biden-housing-plan-480676#
[7] For example, the 1968 Act contributed to unprecedented levels of FHA foreclosures as documented in Boyer's *Cities Destroyed for Cash: The FHA Scandal at HUD* (1973).
[8] https://www.chicago.gov/city/en/depts/doh/provdrs/developers/news/2021/march/the-chicago-department-of-housing-announces-new-racial-equity-fo.html

federal policies, but because of them.[9] This should serve as a warning for future proposals.

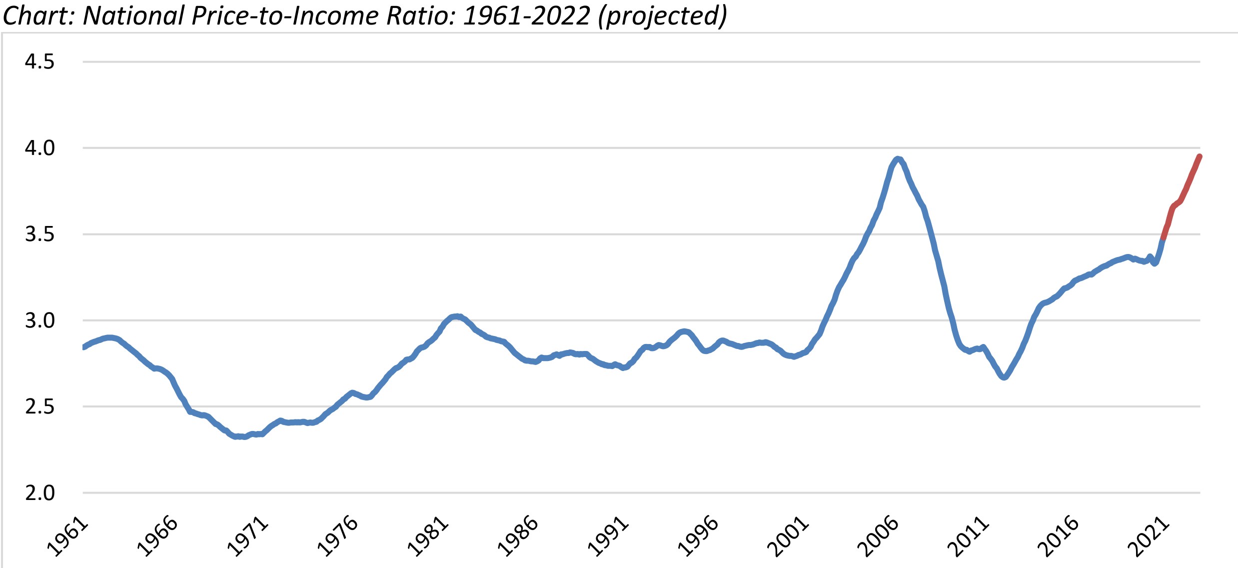
4) Today, there is a real danger that the Fed's low interest rate policies will worsen housing affordability, making the housing market even more separate and unequal.

As demand has outstripped supply since 2012, home price growth, which has averaged over 7%, has far outpaced household income growth, which has averaged about 3.5%. As a consequence, the national price-to-income ratio has risen significantly from 2.8 in 2012 to 3.5 at the end of 2020.

With national home prices currently appreciating in the 10-15% range, which is to be expected to continue until at least 2022 due to the Fed's low interest rate, and income growth about unchanged, the price-to-income ratio will invariably worsen. Furthermore, it is to be expected that these price increases will become permanent features. The longer prices outpace income growth, the harder it will be for low-income households to afford homeownership. The larger the difference between HPA and income growth is, the sooner we will be at a point where few low-income households will be able to afford homeownership.

At 10% home price appreciation combined with wage growth of about 3.5%, the national price-to-income ratio would go from today's 3.5 to 4.0 by 2022. This is the same level as was reached in 2006, at the height of the last boom. If that were to happen, even more renter households with incomes at 40-80% of area median would be permanently priced out of the housing market. Forty-four percent of these households are Black and Hispanic, thus making the housing market even more separate and unequal.

Chart: National Price-to-Income Ratio: 1961-2022 (projected)



Note: Red line is a projection for 2021 and 2022.
Source: Evercore ISI and AEI Housing Center.

[9] While our research has found no evidence of systemic racism on the part of residential real estate appraisers or FHA's lenders, we have found evidence of vestiges of separate but equal policies promoted by the federal government and of ongoing federal policies that put low-income households in harm's way.

As the Housing Market Indicators for every member's state show, this is a phenomenon affecting nearly the entire country, even states with currently relatively high affordability as certain regions are becoming more attractive due to Work from Home flexibilities. This implies that the pockets of affordability that existed in certain regions are quickly disappearing and more parts of the country will have price-to-income ratios similar to today's California.

The next table shows what a prolonged period of double digit home price growth will do to the affordability of lower-income households across the country.

For this analysis, we first divide wage earners into roughly equally-sized income thirds based on the median occupational wage and multiply the median income by 150%, which, according to Census Bureau data, is roughly the average multiplier for a household with a second wage earner. The low third is roughly equivalent to service sector workers, for who the wages across the country do not vary by much.

We then compute the metro's median home price and create a price-to-income ratio for each income third. The data for 2012 and 2019 are actual data. The data for 2022 are projections based on metro-specific assumptions about income and home price growth.[10] We display a number of representative metros: Pittsburgh and Columbus as illustrations of metros that currently are relatively affordable even for low-income households; Minneapolis, Atlanta, Charlotte, Phoenix, and Nashville are metros that were still fairly affordable in 2012 but have seen sharp declines in affordability; Sacramento and Riverside-San Bernardino are relatively lower-priced California metros and San Diego, San Francisco, and San Jose are high-priced California metros.

As is evident from the table, affordability has worsened across the board since 2012 for all income thirds. However affordability has worsened much more for low-income households than high-income households, a trend that will become even more problematic by 2022. By then, the ratio will have significantly worsened across all metros, and low-income households in Pittsburgh and Columbus will potentially be approaching the high price-to-income ratios Riverside-San Bernardino had in 2012.

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[10] We first create wage thirds based on the median wage for occupational subcategories from the BLS Occupational Data Employment Statistics (OES). Each wage third contains roughly the same number of employees in each metro. Then multiply the median household income by 150%, which, according to Census Bureau data, is roughly the average multiplier for a household with a second wage earner. For the 2022 data, we project the median income by applying the respective growth rate for each wage third from 2018-2019 to the 2019 result for each projection year. Median home prices come from an Automated Valuation Model (AVM) for each single family property. The 2012 value applies a 5% home price appreciation to the Dec. 2011 AVM, which was roughly the national home price growth rate in 2012. For 2019, we use the Dec. 2019 AVM without any adjustment. For 2022, we project the median home price by applying the average of the AEI metro specific home price growth rate for Nov. and Dec. 2020 to the Dec. 2019 AVM for each projection year.

Table: Median Home Price to Median Household Income Ratio by Household (HH) Income Thirds

	Low-income HH			Middle-income HH			High-income HH		
	2012	**2019**	**2022p**	**2012**	**2019**	**2022p**	**2012**	**2019**	**2022p**
Pittsburgh, PA	3.5	4.5	5.5	2.3	2.8	3.3	1.3	1.6	1.8
Columbus, OH	4.2	5.7	6.7	2.5	3.6	4.9	1.4	2.0	2.6
Minneapolis, MN	4.9	6.5	7.1	2.9	4.0	4.8	1.6	2.2	2.8
Atlanta, GA	4.3	6.8	7.5	2.6	4.1	4.9	1.3	2.2	2.8
Charlotte, NC	4.9	6.9	8.1	3.0	4.3	5.3	1.7	2.3	2.6
Phoenix, AZ	4.1	7.2	8.7	2.5	4.9	6.8	1.4	2.6	3.2
Nashville, TN	4.7	7.5	9.6	3.0	4.9	6.0	1.8	2.9	4.0
Boston, MA	N/A	10.6	12.1	N/A	6.4	7.4	N/A	3.5	4.3
Sacramento, CA	5.8	10.7	12.1	3.5	6.5	7.8	1.8	3.7	4.7
Riverside-SB, CA	6.6	9.8	13.2	4.2	6.8	8.8	2.1	3.7	5.7
San Diego, CA	9.9	14.1	15.2	5.9	9.1	11.2	2.9	4.3	4.6
San Francisco, CA	11.8	19.0	19.4	6.1	11.0	12.6	3.1	5.2	5.2
San Jose, CA	14.0	21.3	21.6	6.0	11.0	11.9	2.9	5.1	4.7

Note: 2022 is a projection.
Source: BLS and AEI Housing Center.

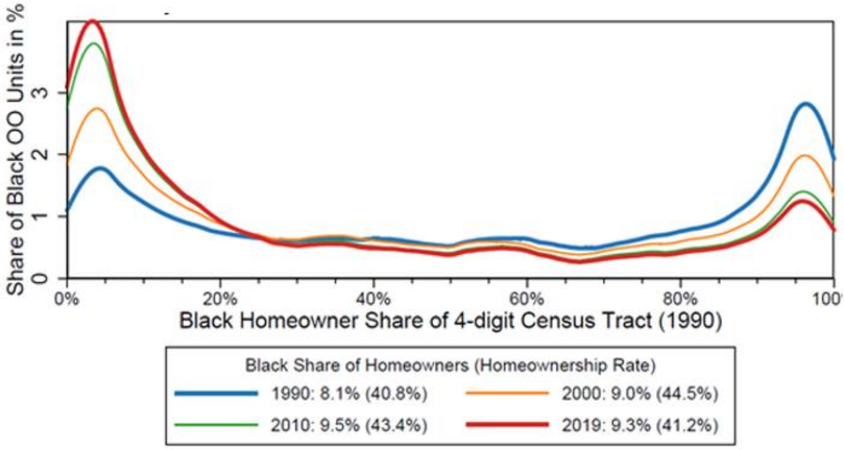
The consequences will be dire. Some people will never be able to afford homeownership. Even worse, they will be permanently priced out of the chance to move to areas of greater opportunity. (This also applies to rentals.) This could create a generation of permanent renters without expectation of ever affording the American Dream of homeownership. Such an outcome would permanently worsen wealth inequality and lead to permanent segregation along socio-economic status lines.

This would be a very unfortunate outcome given the progress the county has been making in racial integration, which has improved since 1990, but progress has slowed since 2010 perhaps because of the disparate impact of the Financial Crisis on minorities and the rapid level of home price appreciation during the current boom that started in 2012.[11]

While the Black homeownership rate in 2019 is below its rate in 1990, the stock of Black homeowners has increasingly shifted to areas that were predominantly White in 1990. We find the same pattern for renters (not shown). As shown in the chart, in 1990, about 32% of housing units with a Black householder were in tracts with 80% or more Black residents; in 2019 about 17% remained in such tracts. At the same time, the dissimilarity index between Blacks and Whites, which measures the share of Black residents (owners and renters) that would have to move to produce a distribution that matches that of the larger area, has fallen from 70% in 1990 to 59% in 2019.

[11] This is quite interesting given that according to recent report by WBEX Chicago, the Chicago Department of Housing (DOH) that is "In the last 20 years, the allocations from a tax credit program to build affordable housing in Chicago have mostly gone to high-poverty majority Black areas on the South and West sides and are underrepresented in more affluent white areas — another sign of stubborn segregation in the city."

Chart and Table: Black Owner Occupied (OO) Units by Black Homeowner Share of the Census Tract (left panel) and Black-White Dissimilarity Score (right panel)



Note: OO denotes 'owner occupied.' Share of black OO units (y-axis) and tract-level black Homeowner share (x-axis) are from the Census. Kernel bandwidth is set to 2.5%. Numbers in legend denote the black share of homeowners (homeownership rate). Census tracts are abbreviated to 4 digits to account for changes in census tract definitions between decennial censuses.

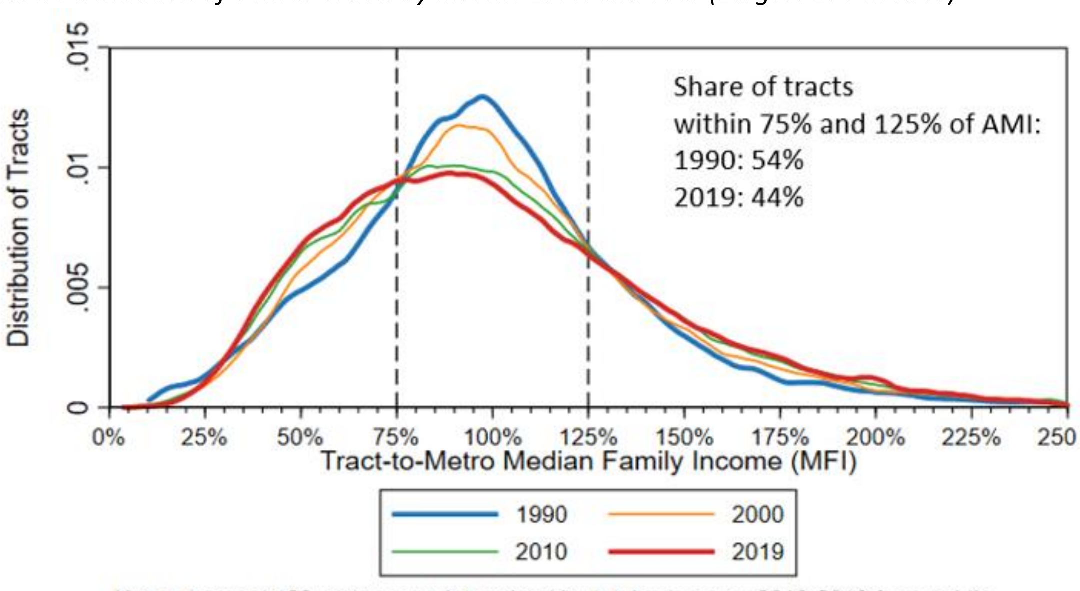
Dissimilarity Score* (largest 100 metros):
1990: 70%
2000: 66%
2010: 61%
2019: 59%

*The dissimilarity index measures the share of Black residents (owners and renters) that would have to move to produce a distribution that matches that of the larger area.

Source: Census and AEI Housing Center, www.AEI.org/housing.

At the same time, however, income stratification has been increasing. The next chart measures the share of tracts within 75% and 125% of area median income, which is a proxy for the middle class. By this simple measure we can see that 54% of tracts in 1990 were within this range, compared to 44% in 2019. Income stratification has grown in virtually all of the largest 100 metros and does not appear to be correlated with a metro's minority share.

Chart: Distribution of Census Tracts by Income Level and Year (Largest 100 Metros)



Notes: Largest 100 metros are determined by total sales over 2012-2019 from public records. Sample of tracts is limited to tracts with nonmissing income data and below 250% of the area MFI. Dashed lines indicate income levels at 75% and 125% of the area MFI. Kernel bandwidth is 2.5%.

Note: MFI stands for Median Family Income and AMI stands for Area Median Income.
Source: Census, FFIEC, and AEI Housing Center, www.AEI.org/housing.

Increasing income stratification by geography is a poor policy outcome and threatens the ability of low-income households to build wealth. As home prices rise faster than incomes, it will permanently price low-income and minority households out of areas of opportunity.

Our research finds that economic class and family patterns, regardless of race, are more powerful drivers of home valuation gaps than race alone, even after adjusting for structural and neighborhood amenities.[12] While the country has a long history of explicit racial discrimination, this research founds that up to 20% of the gap in home valuations between majority Black and entirely White neighborhoods can be attributed to current or past vestiges of racial bias in the housing market or perhaps also omitted variables, while the other 80% or so could be attributed to the income and family pattern gap between Black and White neighborhoods. These findings underscore the need to not only focus on policy solutions for the housing market, but also to provide and support economically sound opportunities for income and wealth growth for lower income households, regardless of race or ethnicity. This is a topic I expand upon at the end of my testimony.

5) **The current housing boom is being driven by the paradox of accessible lending: When supply is constrained, credit easing, including extremely low interest rates, are quickly capitalized into higher home prices. This is making all homes, but particularly entry-level homes, less affordable.**

The national housing market is overheated with rapid home price appreciation and housing becoming unaffordable, especially for entry-level buyers. This is the result of a lack of supply combined with robust demand driven by a wide credit box, low mortgage rates, and recently Work from Home flexibilities. As a consequence, home price appreciation has been much faster than market fundamentals, such as changes in income or construction costs would support.

With the national seller's market now in its 101st month and levels of supply at record low levels, credit easing from federal guaranty agencies would again hurt homebuyers by stoking even more demand. Given the low level of supply, leverage from credit easing will again be easily capitalized into higher home prices. High leverage merely permits one borrower to bid against another would be buyer for scarce goods—specifically for low price tier, entry-level homes. This puts upward pressure on home prices, does not expand access, and is dangerous.

The housing market indicators for Ohio illustrate its broken housing ladder which is the result of home prices rising much faster than incomes. This makes it harder and harder for aspiring homebuyers to climb onto the first rungs. Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates (which work in the same manner as leverage) combined with unduly restrictive land use regulations.

Across the states you represent, affordability has worsened, especially for low-income and minority households. ***Below is an example for Ohio, but you can trace just how bad affordability has become in your state from the same key housing market indicators on your state provided in the appendix.***

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[12] Edward Pinto and Tobias Peter, *Special briefing on the impact of race and socio-economic status on the valuation of homes by neighborhood* (2021), https://www.aei.org/economics/special-briefing-on-race-and-socioeconomic-status-on-the-valuation-of-homes-by-neighborhood/

Infographic: Housing Market Indicators for Ohio

AEI Housing Center

Additional data and methodology available upon request.
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Housing Market Indicators for Ohio

The Paradox of Accessible Lending:

When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

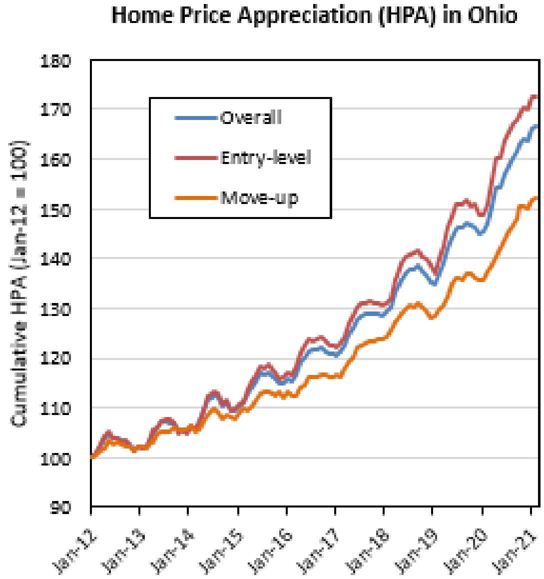
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Ohio has totaled 67%. In the entry-level, HPA has totaled 73%, but only 52% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying **$14,500 less** for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 13.4%, up from 7.4% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



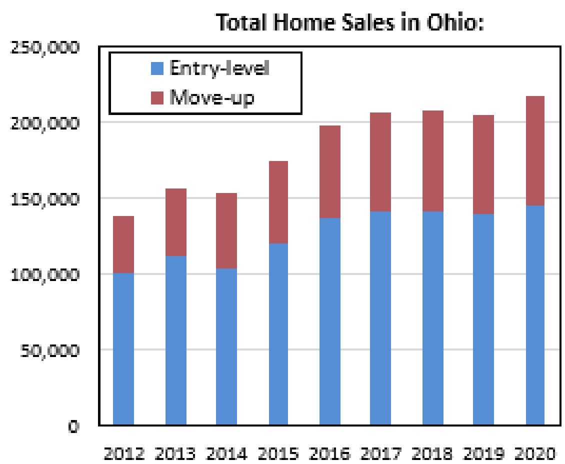
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Ohio:

2020	All	FHA
Note Rate	3.25	3.38
Combined LTV	95	99
Credit Score	733	664
Debt-to-Income	36	42
Down payment (DP)	$10,600	$1,600
% with DP assistance	N/A	27%
% FTBs	55%	77%
MRI*	9.3%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

Additional data and methodology available upon request.
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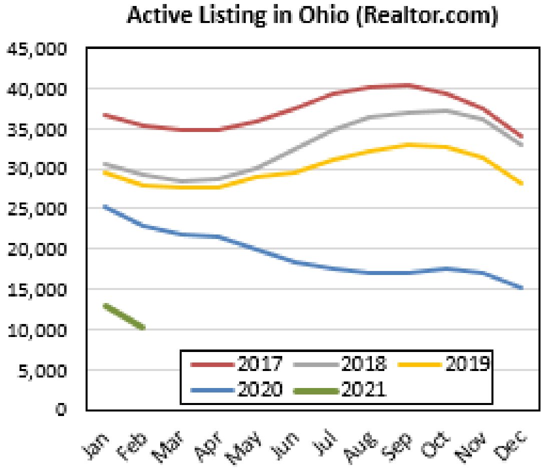
Housing Market Indicators for Ohio

3 Supply

Strong demand and lack of new supply are depleting inventories in Ohio. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Ohio	2019	2020
Entry-Level	1.5	1.0
Move-Up	5.6	2.9
Overall	1.9	1.2

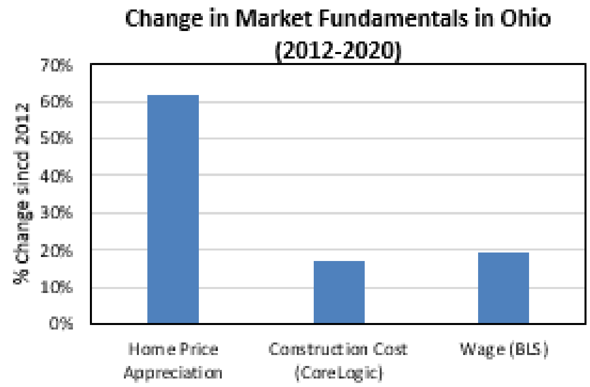
* Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, Ohio has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

4 Market Fundamentals

The Ohio housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.



5 Recap

Ohio has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

6) **Ill-advised government policies and interventions have broken the housing ladder by inflating home prices. This has had a disparate impact on low-income and minority households that want to purchase at the entry-level.**

Due to the legacies of the federal government's promotion of racially biased zoning and its support for risky high-leverage mortgage loans, low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates.
We have examined one of these leverage policies, FHA's mortgage insurance premium cut from 2015 in greater detail. At the time, the FHA claimed that the premium drop would result in 250,000 new first-time buyers over the next three years, and save each FHA buyer $900 annually. In research by the AEI Housing Center, we along with our colleagues found that home prices went up by about 2.5% for FHA borrowers. These borrowers had to use part their new found "wealth" — obtained by paying lower FHA insurance premiums —to pay for the higher house price.[13]

Prices also went up for non-FHA buyers in neighborhoods with FHA insured sales. After all, it is one housing market, where borrowers, no matter the financing, compete for houses. This caused the non-FHA buyers, who did not receive the benefit of lower premiums, to largely offset the price increase by buying a home of lesser quality (perhaps a smaller home, a smaller lot, or in a different location) – they were the clear losers.

We estimate that about 500,000 of these non-FHA borrowers were first-time homebuyers. Each of these non-FHA homebuyers paid approximately $6,200 extra per house, a total extra payment of about $3.1 billion. From a cost-benefit perspective, this averages to an incredible $180,000 for each of the roughly 17,000 new FHA first-time buyers!

The big winners were the realtors who received hundreds of millions of dollars in higher commissions from higher prices. Little wonder the National Association of Realtors lobbied heavily for the cut in 2015. The increase in commissions from the 2015 cut averaged about $325 per sale. If you multiply that by the over 1.22 million home sales in tracts with high FHA concentration in 2015, you get a windfall of almost $400 million per year—not a bad return on the tiny fraction spent on lobbying.

Economic principles, ironically first described by Ernest Fisher, the FHA's first chief economist in the 1930s, gave us reasons to be doubtful of the FHA's predictions: liberalizing credit when the inventory of homes for sale is tight fails to bring in a lot of new buyers, and increased buying power in a sellers' market drives prices higher as buyers compete over a limited supply of houses. In 2015, the FHA ignored the fact that the nation was already two and one-half years into a seller's market — defined by the National Association of Realtors (NAR) as a market with less than a six month supply of homes for sale at the current selling pace.

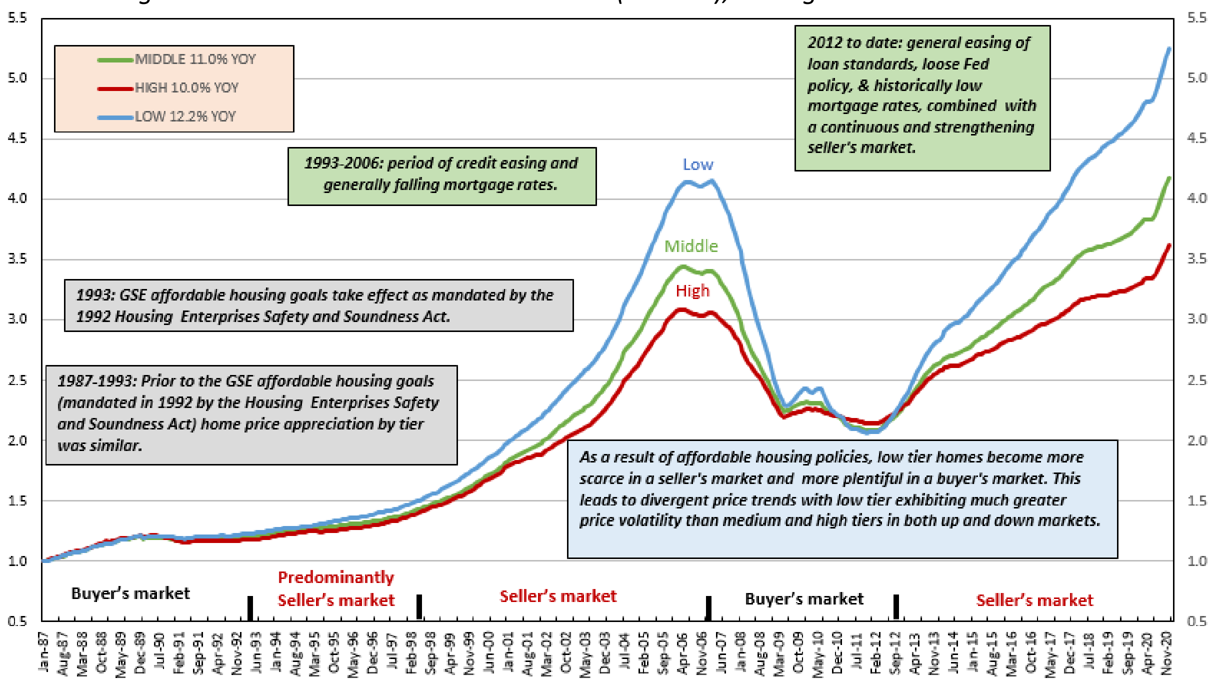
We also found that even though FHA's loan volume increased substantially in the first year after the 2015 premium cut, only about 17,000 were new first-time buyers, far short of FHA's prediction. The rest were borrowers poached from other federal agencies or buyers who purchased homes unrelatedly to the premium drop.

[13] Davis, Oliner, Peter, and Pinto, *The impact of federal housing policy on housing demand and homeownership: Evidence from a quasi-experiment*, http://www.aei.org/wp-content/uploads/2018/01/Oliner-homeownership-WP-Update.pdf?x91208

Policies that stoke demand while constraining supply beget a vicious cycle until prices and debt amounts reach an unsustainable level. By 2007–08, these policies had contributed to a financial crisis and ultimately hurt homeowners who were unprepared for the decline in prices. Today, we are again seeing the same phenomenon as evidenced by [Case-Shiller house price]() data for 16 large metro areas. Since 2012, homes in the bottom third price tier have risen more than 150%, over twice the 69% increase in the top third tier. In addition, homes in the bottom third have also experienced far greater price volatility than homes in the top third. This has had a detrimental impact on many first-time or first generation home buyers who either need to take on more leverage to afford home ownership or are priced out of the market. Since 2007, this has resulted in millions of foreclosures, which affected low-income and minority neighborhoods more.

It is this continuing boom in home prices, particularly for entry-level homes, that makes credit easing a danger to entry-level buyers. The longer this upward trend continues, the greater the risk of a serious house price correction, a correction that would pose a serious threat to borrowers and taxpayers.

Chart: CoreLogic Case-Shiller Tiered Home Price Index (1987=1), through December 2020



Tiers price breakouts are calculated by breaking up all sales for each period, so that there are the same number of sales, after accounting for exclusions, in each of the 3 tiers. 16 metros are used to derive the Tiered HPI: Boston, NYC, Chicago, DC, Denver, Las Vegas, Los Angeles, San Diego, San Francisco, Miami, Atlanta, Minneapolis, Phoenix, Portland, Seattle, and Tampa, with only 8 metros included at beginning of series. This number grows until 1993, when all 16 metros are reported.
*A seller's market: an economic situation in which supply is limited and sellers can ask for high prices.
**A buyer's market: an economic situation in which supply is abundant and buyers can demand low prices.
Source: CoreLogic Case-Shiller (Data: Dec-20, Pub: Mar-21), compiled by AEI Housing Center ([www.AEI.org/housing]()).

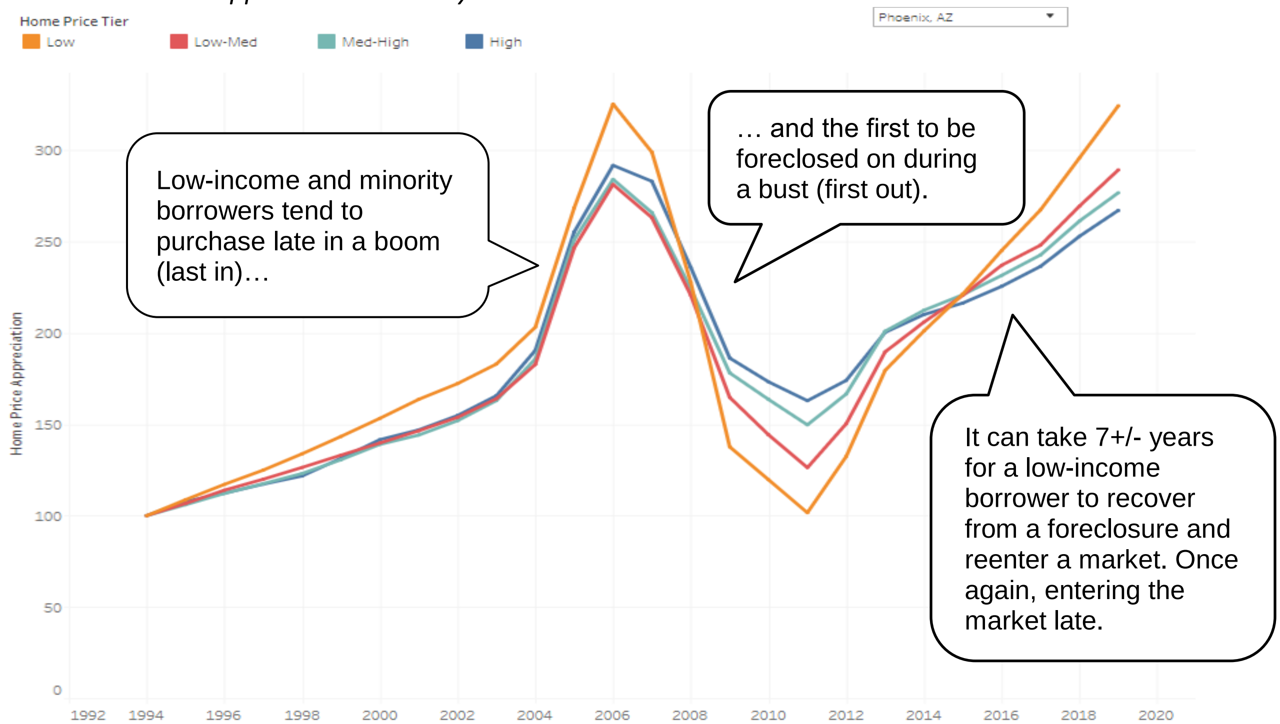
7) The disparate impact of the federal government's legacies during the Financial Crisis – Case Study: Phoenix, AZ

This section demonstrate how the impact of high leverage, provided through foreclosure-prone affordable housing policies, operates to the detriment of low-income homebuyers. The example for the Phoenix, AZ metro is emblematic for most other metros, where supply is also artificially limited.[14]

Due to pro-cyclical policies mainly aimed at low-income borrowers buying in neighborhoods most severely constricted by supply, homes purchased by such households have the highest home price volatility. The home price appreciation (HPA) chart for Phoenix by various price tiers from 1994 to 2019 shows the highest price appreciation during booms and the biggest price correction during the bust for the low price tier. This is emblematic for HPA trends across the nation.

During this current housing boom, the Qualified Mortgage (QM) Rule and the QM Patch also had a disproportionately adverse impact in promoting higher home prices and higher risk outcomes for low-income households, especially ones of color, who tend to purchase lower priced homes with risk-layered mortgages mainly later in the real estate cycle. Once the housing cycle turns, it will be the highly-leveraged borrowers that entered the market late that default first. This is similar to what happened during the last housing boom/bust cycle.[15]

Chart: Home Price Appreciation Index by Home Price Tier in the Phoenix Metro: 1994-2019



Note: The index is set to 100 in 1994.
Source: FHFA and AEI Housing Center.

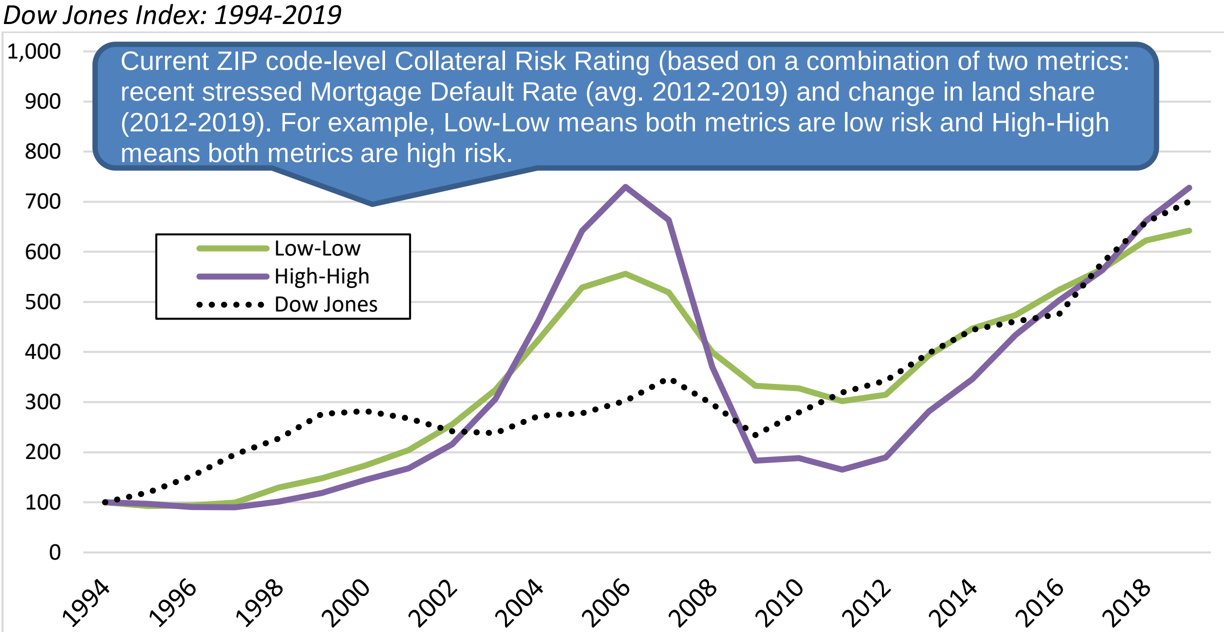
[14] Additional charts on other metros are provided in the appendix.
[15] See for example "The Real Causes – and Casualties --- of the Housing Crisis, Knowledge@Wharton, https://knowledge.wharton.upenn.edu/article/housing-bubble-real-causes/

Since each home purchase is a combination of the structure and land and the structure generally only appreciates at the rate of inflation, these large swings in HPA are reflected in even larger swings in the price of land. (This also means that the share of land of the structure-land package increases.) Previous work found that this increase in the land share of house value during the last boom was a significant predictor of the decline in house prices during the bust.[16] This highlights the value of focusing on land in assessing house-price risk.

Thus, housing policies in the U.S. promote rampant and unknowing land speculation by low-income households. The most important indicator of speculation and home price volatility is a rapid rise in land prices unsupported by an increase in the value of the land driven by the utility of its location, such as the proximity to jobs or good schools.

Nothing strips wealth from low-income homeowners faster than being sandwiched between high LTVs and high debt-to-income ratios (DTIs). High LTVs and high DTIs fuel unknowing land speculation by owners, with minimal resources to fall back on during a negative feedback loop of declining prices and incomes. In certain places as demonstrated by the next chart, the land portion of the home price package is extremely volatile, much more so than the Dow Jones Industrial Average. For individual borrowers, speculation in such a risky asset is made all the more dangerous when combined with high leverage. This is the common theme between Housing Boom 1.0 (1998-2006) and Boom 2.0 (2012 and ongoing). Land speculation is encouraged with leverage vastly higher than would be allowed for stock market purchases on margin. When buying a home, leverage is commonly 30 to 1 or higher, while it is capped at 2 to 1 when buying stocks on margin. The federal government's promotion and financing of land speculation by low-income and minority home buyers is dangerous and creates a disparate impact.

Chart: Home Price Appreciation Index (1994 = 100) by Collateral Risk Group in the Los Angeles Metro and Dow Jones Index: 1994-2019



Note: The index is set to 100 in 1994. The annual Dow Jones Industrial Index is the average of daily close prices adjusted for dividends and splits.
Source: Yahoo Finance, FHFA, and AEI Housing Center.

[16] See https://www.sciencedirect.com/science/article/abs/pii/S0166046216301508?via%3Dihub.

We can demonstrate based on new data that the land share increases are predominantly located in ZIP codes with lower-income borrowers, many of color. The next chart for the Phoenix metro demonstrates this relationship. Each circle represents one ZIP code. The x-axis displays the percentage point increase in a ZIP codes land share change between 2012 and 2019. The y-axis displays a ZIP codes measure of mortgage risk over the same period as measured by the Mortgage Default Rate (MDR).[17] The size of the circle indicates a ZIP codes historical MDR; the larger the circle is, the more mortgages that were originated in 2006 and 2007 defaulted over the ensuing years. The coloring of the dot indicates into which income quintile the borrowers in that ZIP codes fall.

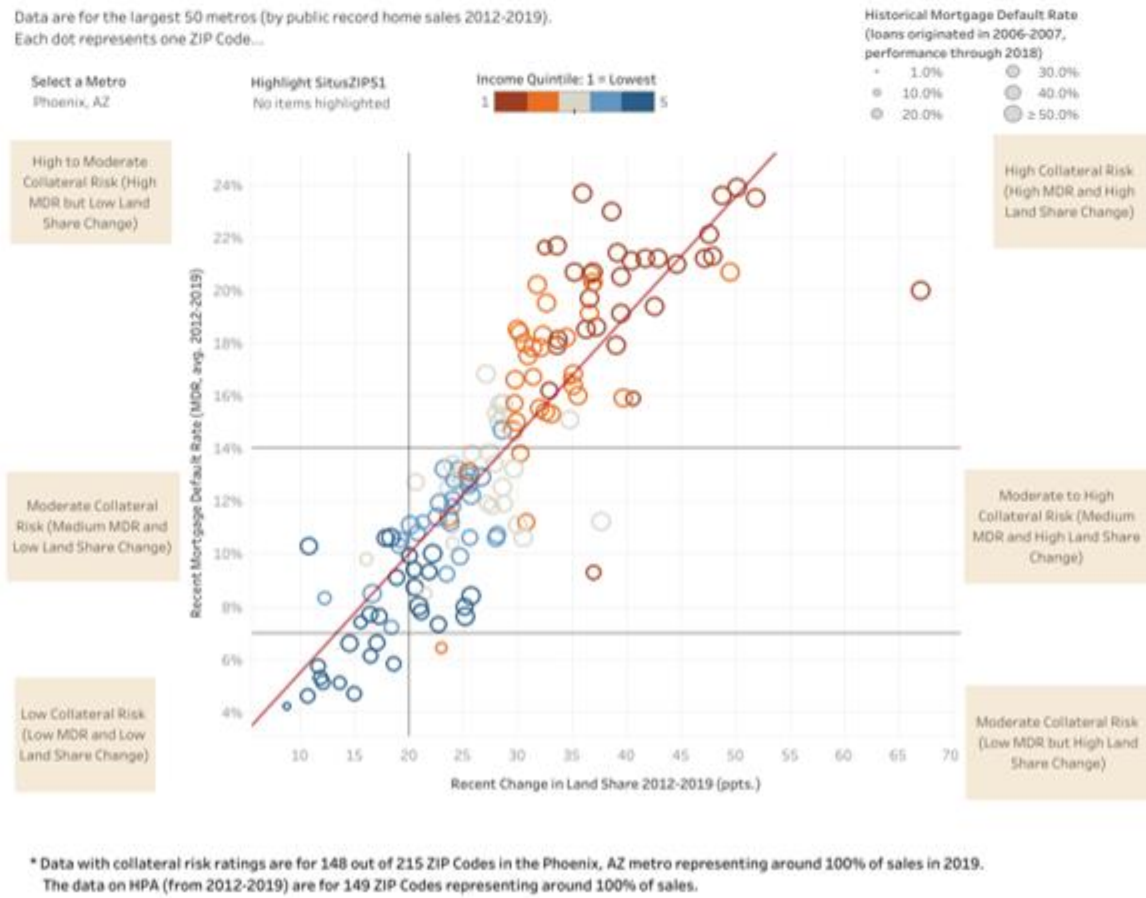
Multiple strong positive relationships emerge. The circles tend to slope upward from lower left to upper right and, as they do, they become larger in size and more orange. The interpretation is that lower income buyers tend to purchase in ZIP codes that have experienced the largest land share increase and the highest levels of mortgage risk. Coincidentally, these are the same ZIP codes that were disproportionally affected by foreclosures when the last housing cycle turned.

It becomes apparent that policies that stimulate even greater availability of leverage during a seller's market will only expose low-income households to heightened risk of default. The risk comes in two forms: Individual exposure due to a greater debt burden from higher mortgage payments, and neighborhood risk due to a concentration of high risk borrowers. As the foreclosure of one borrower can quickly ripple through a neighborhood and depress home values creating a vicious cycle of foreclosures and further price declines.

Thus, high risk loans harm low-income buyers by worsening affordability and increasing foreclosure risk. This is not what responsible access to credit ought to look like. In the past, such policies have created illusory wealth for recent buyers as demonstrated above. The same thing is happening again during the current housing boom. When land prices eventually deflate again, those mostly hurt will be low-income households.

[17] The MDR is a stressed default rate that measures how many borrowers could be expected to default under a severe stress event like the Financial Crisis.

Chart: Relationship between Change in Land Share, Recent Stressed and Historical Mortgage Default Rates, and Borrower Income: Phoenix Metro



Source: FHFA and AEI Housing Center.

While the chart only shows the trends for the Phoenix metro, the same pattern holds across virtually all of the nation's largest metros (see Appendix B for other metros). Similarly, if one were to swap out borrower income quintile for the minority borrower share, we find mostly borrowers of color purchasing in the very high-risk ZIP codes.

Thus, buyers of color are disproportionally harmed by rising entry-level home prices (see next chart, which is identical to the prior chart except that the coloring of the bubbles is based on the borrower minority share). This is a Fair Housing Act violation.

After connecting the dots, it is hard to imagine how the federal government's actions, which allow and encourage consumers – especially lower income ones and those of color - to borrow multiples of their financial savings at even greater exposure to risk, invest this money in land (an asset far more volatile than the stock market) while telling these consumers that this is the best way to build wealth. Policies like the QM Patch and other demand boosters that disproportionally affect low-income households have failed in the past and they will fail again and they will continue to perpetuate a separate and unequal housing market.

Chart: Relationship between Change in Land Share, Recent Stressed and Historical Mortgage Default Rates, and [Borrower Minority Share](): Phoenix Metro

* Data with collateral risk ratings are for 148 out of 215 ZIP Codes in the Phoenix, AZ metro representing around 100% of sales in 2019. The data on HPA (from 2012-2019) are for 149 ZIP Codes representing around 100% of sales.

** Minority is defined as Black or Hispanic.

Source: FHFA and AEI Housing Center.

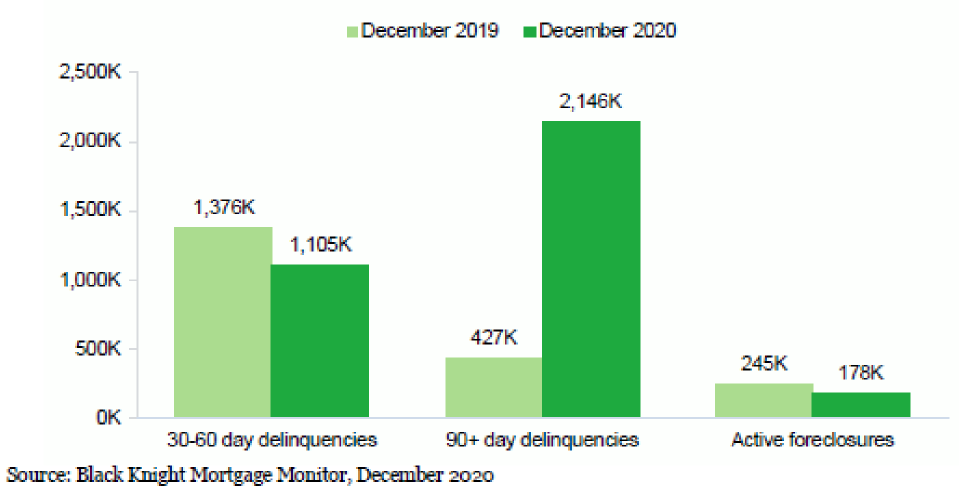
8) The COVID-19 pandemic has revealed the same fault lines as before the Financial Crisis, thus maintaining the disparate impact federal housing policies have on low-income and minority borrowers.

A recent report by the Consumer Financial Protection Bureau on [*Housing insecurity and the COVID-19 pandemic*]() found that "the housing crisis is deepening racial inequality: Black and Hispanic homeowners were more than two times as likely to be behind on housing payments as of December 2020."

This ought to come as no surprise given the legacies of the federal government's involvement in the housing market. Since home price inflation has far outpaced growth in incomes, borrowers, especially at the entry-level, have had to take on more debt to afford to purchase a home. The greater level of debt service means that borrowers have less resiliency to fall back on during hard financial times, which can arise from economic conditions, but also personal conditions such as an unexpected illness or a divorce.

Due to the disruptions of the pandemic, the CFPB's report showed the massive increase in 90+ days delinquencies during 2020. Due to forbearance programs, the rise in serious delinquencies has not resulted in a foreclosure wave, but that risk remains when these programs are eventually wound down.

Chart: Year-end Mortgage Delinquencies Comparison 2019 vs. 2020

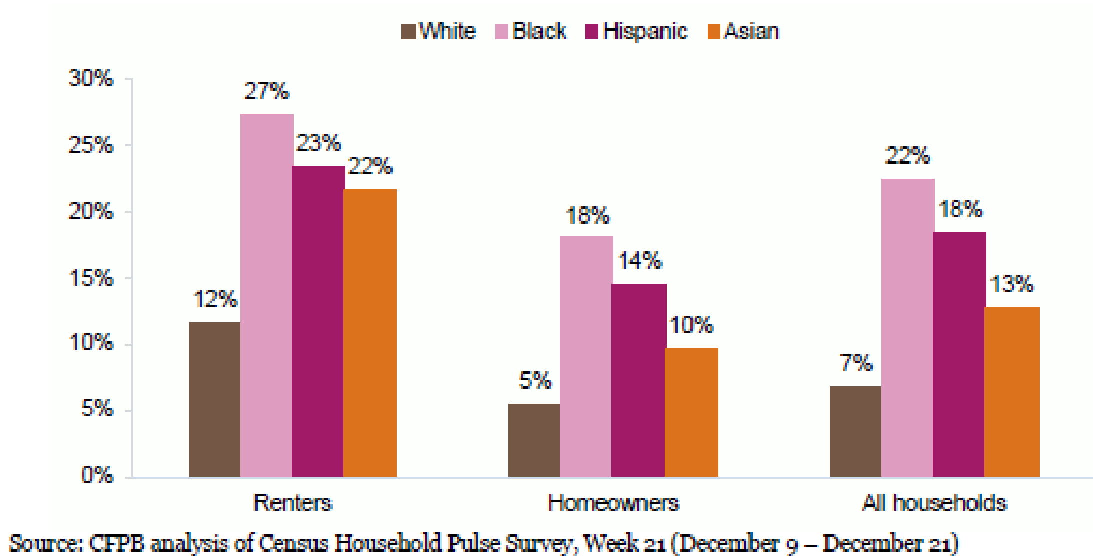


Source: CFPB.

Because of their greater exposure to the job losses in the leisure and hospitality industries, minorities have been hit harder by unemployment and also COVID-19 infections. As pointed out by the CFPB, the unemployment rate for Blacks and Hispanics initially spiked with the onset of Covid-19 and remains at elevated levels today. Furthermore, the gap in the unemployment rate between Blacks and Hispanics to Whites and Asians has further increased.

As a consequence of the economic hardship, minority borrowers have disproportionally fallen behind on housing payments as evidenced by the CFPB's chart on the share of households behind on housing payments by race/ethnicity.

Chart: Share of Households behind on Housing Payments by Race/Ethnicity and Tenure, December 2020



However as becomes clear from our analysis of the underwriting characteristics of the loans in forbearance, forbearance is also associated with loose underwriting that is overleveraging borrowers so that they are unable to withstand an economic shock.

Loan characteristics of agency (Ginnie Mae, Fannie Mae, and Freddie Mac) borrowers in forbearance show that forbearance is associated with higher CLTVs, lower credit scores, higher DTIs, and more generally with entry-level buyers and minorities. Thus, the pandemic is exposing the disparate impact of the federal government's lending practices on these groups.

This finding is consistent with a paper by the Federal Reserve Bank of Philadelphia, which found that "lower-income and minority borrowers have significantly higher nonpayment rates during the COVID-19 pandemic, even after controlling for conventional risk factors."[18]

Table: Borrower Characteristics (at Origination) of the Agency MBS Outstanding Stock: by Forbearance

	In Forbearance	Rest
Combined LTV (Median)	95	80
Credit Score (Median)	685	749
Debt-to-Income Ratio (Median)	42	36
Down Payment (Median)	$12,500	$47,000
% First-time Buyers	42%	24%
MRI**	19%	7%
% Black***	14%	5%
% Hispanic***	15%	9%

Note: Data are for roughly 30.7 million agency purchase and refinance MBS loans that were originated on or after September 2012 and that are currently on the books of Ginnie, Fannie, and Freddie.
** Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.
*** Data are for purchase loans only.
Source: AEI Housing Center.

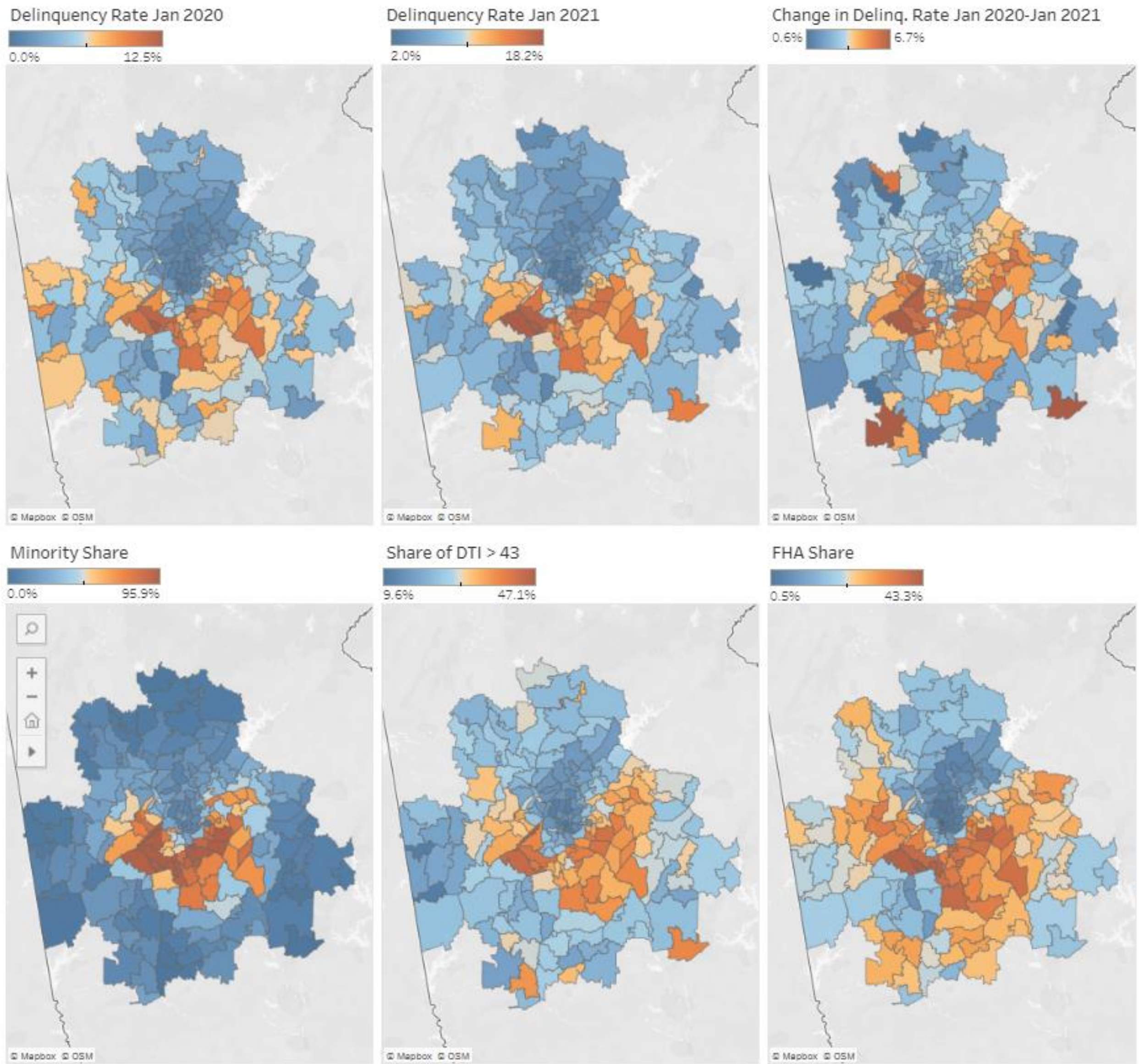
As is evidenced by the three charts on the top panel for the Atlanta, GA metro below, there has been a disproportionate jump in delinquencies (defined as D30+) during the COVID-19 pandemic. D30+ rates were already much higher before the pandemic, but the pandemic has certainly increased the wedge between certain ZIP codes thus revealing a disparate impact.

The three lower panel charts correlate the change in the delinquency rate for each ZIP code with a higher share of minority borrowers, a higher share of borrowers with a DTI > 43%, and a higher share of FHA borrowers.

This is further evidence that in the Atlanta, GA metro the COVID-19 pandemic has revealed the same fault lines as before the Financial Crisis, thus maintaining the disparate impact federal housing policies have on low-income and minority borrowers. Similar patterns hold across the largest 50 metros.

[18] "Inequality in the Time of COVID-19: Evidence from Mortgage Delinquency and Forbearance"

Chart: Delinquency Rates and Other Indicators: Atlanta, GA Metro



Note: We compute ZIP code delinquency rates by loan type from subset of loans from CoreLogic's Loan Level Market Analytics (LLMA) and Black Knight's McDash. We then combine and weight the resulting delinquency rates for an overall delinquency rate using HMDA 2019 data. We focus on around 9,300 ZIP codes in the largest 50 metros.
Source: CoreLogic, Black Knight, HMDA, and AEI Housing Center.

As the Federal Reserve Bank of Philadelphia's working paper states "government and private-sector forbearance programs have mitigated these inequalities in the near term, as lower-income and minority borrowers have taken up the short-term debt relief at higher rates."

However, the pandemic has nevertheless exposed that many low-income and minority borrowers do not have the staying power to withstand financial duress, which can arise from economic conditions, but also personal conditions such as an unexpected illness or a divorce. Therefore, federal zoning and "accessible and affordable housing policies" have a disparate impact on low-income and minority borrowers as they are enabled to take on more debt, which is exposing them to greater risk. The take-away is that we are in the process of again setting up low-income and minority for failure through our housing policies.

9) How zoning is holding back new home construction by the private sector.

To add meaningfully to supply, heavy handed government approaches must be avoided. What is fundamentally a local and state issue can and should be solved at these levels. As the two cases below show, modest changes to zoning can have a big impact on supply. However, this will only materially add to supply when the zoning to higher densities is by-right and localities make infill construction legal, easy, and feasible.

Case Study 1: Palisades Park and Leonia Boroughs in Bergen County, NJ

Most urban and suburban areas across the U.S. have almost uniformly adopted single-family detached zoning for the majority of their residential land. However, some jurisdictions, including a number in Northern New Jersey are an exception to this rule. These permit what we call light-touch density (LTD), which we define as small-lot single-family houses, townhouses, duplexes, triplexes, and fourplexes. This provides the opportunity for a natural experiment.

We focus on two landlocked boroughs with relatively little empty land in Bergen County, NJ: Palisades Park and Leonia.

Palisades Park first adopted a zoning ordinance in 1939, when policymakers chose to implement combined one- and two-family zoning districts for nearly the entire jurisdiction with no zones that exclusively permit single-family detached homes. Nonetheless, market forces and land prices led Palisades Park to be initially developed primarily with single-family detached housing. However, as home prices and land values increased, Palisades Park saw progressively more extensive two-family structures, especially duplex redevelopment.

Leonia, took a different path, zoning almost all of its residential land for single-unit structures only. Its small areas zoned for multifamily development are mostly pushed to the edges of the borough.[19] This is in spite of the fact that the average lot size in Leonia is more than sufficient to accommodate duplexes (Palisades Park undertook its transformation with an average lot size of 5,300 square feet, compared to 8,000 for Leonia). Leonia has been generally successful at achieving its stated objective of preventing "out-of-character development" through its zoning rules.[20] The single-family housing stock, meanwhile,

[19] What little 2-4 unit development the borough does have should not be taken as any indication of the Leonia's friendliness to denser development. In 1975, the New Jersey Supreme Court pronounced The Mount Laurel doctrine, an interpretation of the state's constitution which required municipalities to use their zoning powers to affirmatively expand affordable housing opportunities for low- and moderate-income families. Leonia was forced to allow small pockets of multifamily in order to meet Mt. Laurel obligations. See https://fairsharehousing.org/mount-laurel-doctrine/.

[20] Ibid (pg. 6)

has been stagnant and aging (see right panel chart below).[21]
The housing outcomes of these two landlocked boroughs with relatively little empty land are telling:

- Since 1940, Palisades Park's population has grown 154%, Leonia's only 57%.
- This is in part due to the fact that 51% of Palisades Park's housing stock has been built post-1969. In Leonia, only 24% has been added since 1969;
- Palisades Park experienced a 24% increase in its housing stock over the period from 2000 to 2013, this share was flat for Leonia.

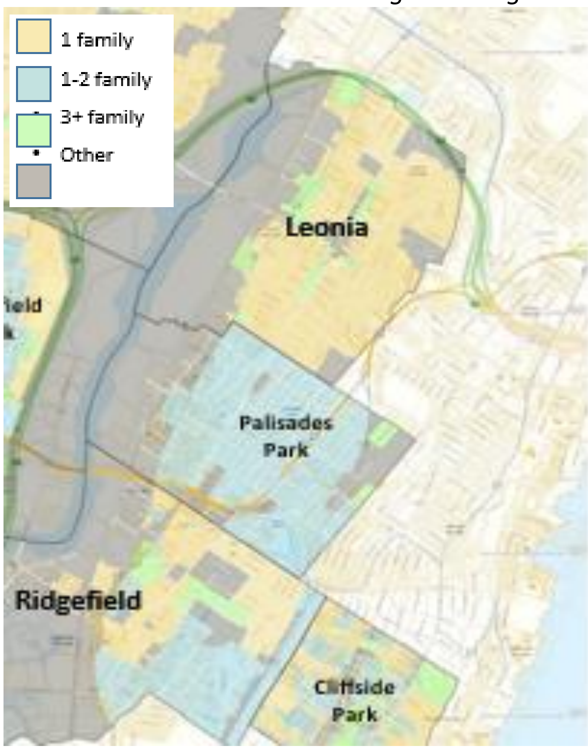
The private redevelopment of 1-unit structures into duplexes accelerated greatly during the 1990s and 2000s, when home price increases (or really land price increases) made it economical to convert to a higher and better use of the land. Today, only 25% of the 1-4 unit single family housing stock in Palisades Park is detached 1-unit, while nearly 50% are 2-unit, mostly side-by-side duplexes. The expansion in the 2000s can be seen clearly on the right chart below, which shows that Palisades Park has a higher share of houses built post-2000 than Leonia.

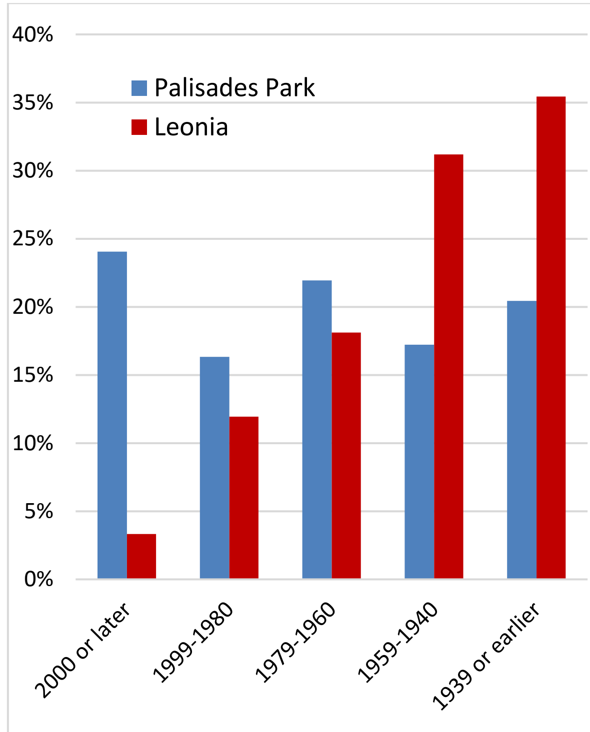
The breadth of redevelopment has provided the borough a newer housing stock. Through prudent city planning, the borough's infrastructure has been able to handle the increased population. The resulting higher population base supports a vibrant commercial district. Thus, Palisades Park is contributing to regional affordability by accommodating population growth and the filtering process that its new construction facilitates.

This case study provides a roadmap as to how LTD structures can play an important part in accommodating the need for additional housing in high-demand areas. However, by-right LTD zoning by itself is not enough. Only localities which make infill LTD construction legal, easy, and feasible will experience anything like the transformation that Palisades Park has seen.

[21] While residents often describe Leonia's single-unit houses as unique and beautiful, this requires strict regulation of land use by local policymakers. An aging housing stock potentially constitutes a safety risk for the inhabitants due to common contaminants including lead and asbestos. Furthermore, new homes offer advantages in terms of energy efficiency and handicap accessibility. Anecdotally, our on-site interviews noted that some builders who redevelop single-unit homes in Palisades Park find that many of the homes they purchase have serious structural problems.

Map and Chart: Residential Zones (left panel) and Share of Structures by Year Built (right panel): Palisades Park and Leonia Boroughs in Bergen CO, NJ





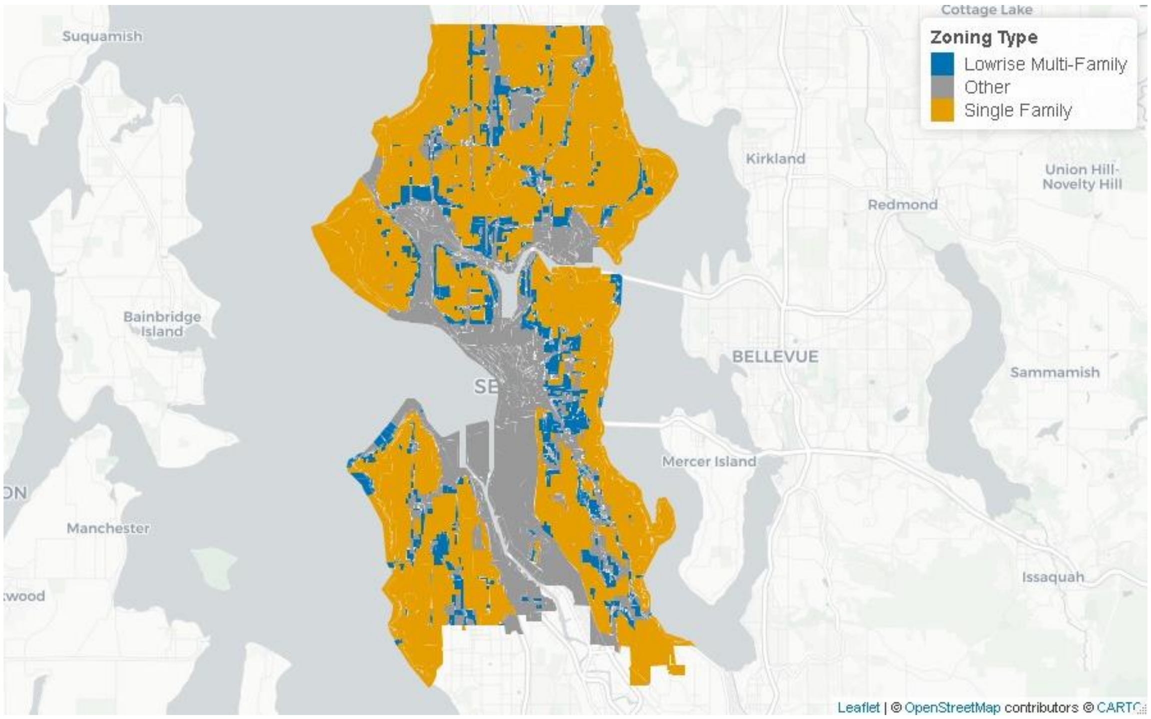
Note: "Other" is industrial or land not used for housing. Source: Most recent borough zoning maps and AEI Housing Center.

Source: 2018 5-year ACS and AEI Housing Center.

Case Study 2: City of Seattle, WA

The City of Seattle, WA has many different zoning areas. The simplified zoning map below focuses on two zones in particular: Single-family (SF), which allows only 1-unit detached structures, and Low-rise Multifamily (LRM), which allows for small multifamily structures with higher densities. Together these two zones account for 78% of all residential units in the City of Seattle, which allows for a natural experiment on the impact of zoning on new construction activity.

Map: Simplified City of Seattle Zoning Map



Note: Other consist of industrial, downtown, major institutions, industrial, etc.
Source: City of Seattle and AEI Housing Center.

As seen from the table below, the SF zone contains almost 3 times as many units as the LRM zone. However in terms of new construction activity, the LRM zone has about twice as many new units build as the SF zone. The new construction share for homes built in 2000 or later added about 7% to the existing stock in the SF zone, but added a whopping 35% to existing stock in the LRM zone and 10% was added to stock just since 2015. This should not come as a surprise given the LRM zone allows private owners to convert to a higher and better use of the land, which means that older 1-unit homes may be torn down and replaced with duplexes, triplexes, or other higher unit count structures.

It is also illustrative to compare what is being built in each of the two zones. In the SF zone, 1-unit homes are either replaced with newer, much larger 1-unit homes (2,600 sq. feet of the new ones vs 1,800 of the existing ones) and at much higher costs ($1.25 million for the new ones vs $875,000 of existing ones). In the LRM zone, lots that had a 1-unit structure are generally replaced with single-family attached townhomes. These townhomes are only marginally larger in sq. feet than the existing stock of detached homes and come at only a modest price premium over existing homes in the same zone. This is a noteworthy accomplishment given the combined cost of land and new construction.

Similar to Palisades Park, the conversion becomes economical for the private sector when land prices rise. However, the conversion can only occur if the conversion to higher densities is by-right under the zoning law and only when localities make infill construction legal, easy, and feasible.

A simple back of the envelop calculation suggests that if the City of Seattle could up-zone all of its SF zone to a LRM zone, and 20% of the 1-unit structures were replaced with duplexes, private enterprise without subsidies could potentially add up to 25,000 housing units or 11% to the housing stock over a decade.[22]

Table: City of Seattle Existing Housing Stock and New Construction Activity by Zone

Zone	# of units	# of 1-units	Median Lot Size	Median Living Area	Median Price (in $)*
All units					
Low-rise Multifamily	46,000	9,200	4,500	1,300	715,000
Single Family	124,000	116,000	5,700	1,800	875,000
Built in 2000 or more recent					
Low-rise Multifamily	16,000	1,200	1,400	1,400	765,000
Single Family	8,800	7,700	5,100	2,700	1,245,000
Built in 2015 or more recent					
Low-rise Multifamily	4,600	300	1,300	1,500	845,000
Single Family	2,700	2,000	5,000	2,600	1,300,000

*Based on an Automated Valuation Model from Dec. 2020.
Note: Values are slightly rounded for readability.
Source: AEI Housing Center.

10) Policy solutions

Zoning policies espoused by the federal government and foreclosure-prone affordable housing policies have been major contributors to the separate and unequal housing legacy, in which we find ourselves today. These two policies continue to contribute to disparate outcomes and put low-income and minority borrowers needlessly in harm's way and severely limit their opportunities to build generational wealth.

Most importantly these federal policies on affordable housing policies have served to perpetuate the legacy of racial discrimination and socio-economic stratification in housing and have not built generational wealth. Due to their ongoing impact, there is a growing danger that housing is going to become even more separate and unequal. This is not a viable path forward.

Observations made in 2014 by Edward DeMarco (former Federal Housing Finance Agency acting director) and Joseph Smith (monitor of the 2012 National Mortgage Settlement) sum up well the policy challenges we face today in crafting principles for policy reform:

> *As a country, it's time to rethink some basic things about housing policy. So much of it is about increasing debt, rather than building equity . . . and subsidizing the cost of that debt. Homeownership is about owning a home, not having a mortgage on it. We've seen the tremendous financial damage to families of getting overleveraged: Housing prices can come down, and in a recession people do get laid off. [DeMarco]*
>
> *Is the thirty year fixed-rate mortgage what we need? Contrary to the opinion of many people*

[22] Assumes a 20% conversion rate over 10 years in the SF zone, which is about the pace of the conversation rate between 2015 and 2020 in the LRM zone. Assumes a teardown will be replaced with a duplex. The housing stock in the city is about 220,000 units, including areas outside of SF and LRM zones.

whom I admire and respect, the thirty-year fixed rate mortgage is neither a Constitutional nor [a] human right ... a lot of things can happen to a borrower over those thirty years—job loss, health problems, divorce. [Smith]

One could also add that instead of a narrow focus on just getting people into homeownership, more focus should be placed on protecting consumers and building wealth, which would by giving them a fighting chance to stay in their homes for the long run, to actually build equity, and not to have it all wiped out when the housing cycle turns.

Also we must be wary of government programs that promise an easy fix. Many programs have been tried and have not produced the desired results. In addition, unintended consequences can and have arisen from them. Take the case of LIHTC developments in Chicago, which has led to a concentration of these units in high-poverty majority Black areas on the South and West sides.

While there are unfortunately no quick fixes to correct the zoning and affordable housing policies that have over decades helped to create a separate and unequal housing market today, the following proposals are based on the reform principles outlined above and are designed to avoid unintended consequences. They would reduce leverage, add to supply, and allow regulators and private actors to identify mortgage market participants that engage in racial bias.

Today Congress is considering new affordable housing proposals providing hundreds of billions of new funding. However, poorly designed housing assistance programs have not served this country well. We must not repeat the mistakes of the past related to poorly designed affordable housing policies, which have made housing separate and unequal:

- Relaxing underwriting requirements in an overheated housing market has been tried many times since 1954 and has not worked.
    - Given the uncertain and overheated housing market, maintain FHA's current level of mortgage insurance premiums (MIP). Secretary Fudge has for the moment ruled out a cut to the MIP, but if a cut were to be implemented during an overheated housing market, it would have similar consequences as the 2015 MIP cut, which drove up prices and did not materially expand homeownership.
    - Refrain from providing first-time buyer down payment assistance in an overheated housing market.
    - Refrain from forgiving student loan debt during an overheated housing market, which would increase first-time buyer buying power and increase demand, which would result in higher home prices.
    - The CFPB's 2020 replacement of the QM rule with a new standard based on the Average Prime Offer Rate) would similarly relax underwriting requirements and thus promote higher risk loans and unsustainable home price appreciation. The same applies to an expansive stand-alone DTI limit. The CFPB is currently pondering delaying the rule's implementation. Delaying the implementation can only be justified if, and only if, the revised rule will base QM eligibility on a Mortgage Default Rate (MDR) threshold. The MDR is a comprehensive stressed default rate, which represents the worst-case scenario stress test similar to a car crash test or a hurricane safety rating. The MDR is effective and meets all three of the CFPB's criteria for such a rule (1. less impairment of responsible, affordable access to credit, 2. a more holistic and flexible measure of ability to repay, and 3. less burden.) The MDR would also help end policies, especially risk

layering, that have had a disparate impact on low-income households, especially ones of color, and would therefore affirmatively further fair housing under the Fair Housing Act.[23]

- End once and for all the dangerous bidding wars between FHA and the GSEs for low-income and minority borrowers, which leads a race to the bottom in terms of lending standards.
- Stop pouring tens of billions of dollars to public housing, in a futile effort to get public housing right.
- Stop providing tens of billions in subsidies to build or rehabilitate millions of homes, in a futile effort to subsidize our way out of our housing supply problems.
- Stop expanding the LIHTC program which has worked to reinforce racial discrimination and crowd out naturally affordable housing that could be built by the private sector.

We know why these mistakes and failures happen. Government involvement in lending and housing development subsidies set in motion political pressures for increasingly risky lending, such as "affordable loans" to constituent groups or expanding programs like LIHTC that enrich developers, but keep tenants impoverished. The liberalization of credit terms creates demand pressure, which easily becomes capitalized into higher prices when undertaken in a market with constrained or inelastic supply. The actual beneficiaries of these price inflating policies tend to be existing homeowners, real estate brokers, builders, developers, building labor, the suppliers of building materials, and speculators.

Besides the impact that single-family policies have in driving home prices higher, the wrong policy choices would risk putting minority and first-time home buyers in homes with high leverage and when they might not be quite ready. A dip in the market would wipe out both earned and paper equity and the possibility of creating generational wealth. It would also have a deleterious impact on credit scores, thereby delaying market reentry.

A sounder approach for the federal government's involvement in single-family financing would be to focus on wealth building, not debt, as this would sustainably build generational wealth for low-income and minority households through home ownership.

- One should buy a home one can comfortably afford, with a 20-year term to minimize risk of default and pay off principal more rapidly.
- A shorter term loan builds generational wealth as the earlier pay-off date provides access to additional cash flow to pay children's post-high school education, and fund retirement.
- Any financial assistance provided should build wealth using a 20-year loan, not subsidize debt using a 30-year term loan.
    - The 20-year term reduces default incidence and limits the subsidy from being capitalized into higher prices.
    - Assistance should be narrowly targeted to lower income, first-generation homebuyers, who as a group have historically had greater difficulty accumulating generational wealth.
    - The 20-year term addresses the need to sustainably expand the credit box so as to grow home ownership opportunities, especially for minorities.

[23] In 2020, 70% of FHA purchase loans were risk-layered, defined as a loan having at least three of these four risk factors: CLTV ≥95%, DTI >43%, credit score <660, and a 30 year loan term.

Unleash the private sector to add to supply by restoring owners' property rights.
Reversing the effects of 100 year old policies on zoning will take decades. Here are sensible steps for state and local governments to take:

- Increase supply and reduce income stratification by legalizing Light Touch Density, defined as making 2, 3, and 4 unit and single-family attached housing legal in 1-unit single-family detached neighborhoods. This would return property rights to owners, who would be able to realize the highest and best use of their land. This would unleash the private sector to undertake new construction activity in places with the greatest demand for new housing.
- Allow extra rooms in homes to be rented out.
- Promote walkable neighborhoods with a mix of residential and commercial properties.

Identify and prosecute bad actors that propagate racial discrimination using sound data analysis, while allowing others to defend themselves using the same approach.

- Maintain HUD's 2020 disparate impact rule to identify a disparate impact by lenders.
    - Use a statistical test developed by the AEI Housing Center to identify racially biased lenders. This test requires no new data collection and we stand ready to help HUD or the CFPB to implement it.
    - Mortgage lenders, including smaller lenders, should have the option to use a credit outcomes-based statistical approach as a valid defense. This improves the fairness, operation, and statistical basis of the rule.
    - The ability to use credit outcomes would enhance clarity and reduce uncertainty.
- While our research has found no evidence of systemic racism on the part of residential real estate appraisers or FHA's lenders, we have developed a statistical test to identify racially biased appraisers and lenders—that is bad actors.
    - This test requires no new data collection and we stand ready to help regulators and individual firms with access to even more data than we have to easily test for appraiser or lender bias.
    - Using this methodology one would be able to confirm the presence or lack of a statistically significant pattern of bias being experienced by the protected class, by rendering outcomes directly comparable between the protected and non-protected classes.

Provide and support economically sound opportunities for income and wealth growth for lower income people.
Several such policy solutions, which might be explored, are:

- Encouraging two parents in households with children
    - Child tax credits should focus on low-income households and should reward having two parents in the household.
- Enact occupational licensing reforms and allow small businesses to be run out of one's home
    - This would give families another path to upward mobility.
- More economical childcare by rolling back burdensome government regulations
    - This would allow parents to decide whom they trust with their children.
- Real school choice for access to quality elementary and secondary education
    - Expand charter schools and voucher programs.
    - Parents would not have to buy a more expensive home to get access to a better education.
- Improving access to technical and apprenticeship training

- Public-private partnerships to promote training and skill development.
- Provide flexible vouchers to low-income students, thereby letting them spend the money in a way to quickly and efficiently gain job skills.

Appendix A: Housing Market Indicators for the states that you represent (in alphabetical order)

Alabama

AEI Housing Center

Additional data and methodology available upon request.
Edward Pinto - pintoedward1@gmail.com
Tobias Peter - tobias.peter@aei.org

Housing Market Indicators for Alabama

The Paradox of Accessible Lending:

When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

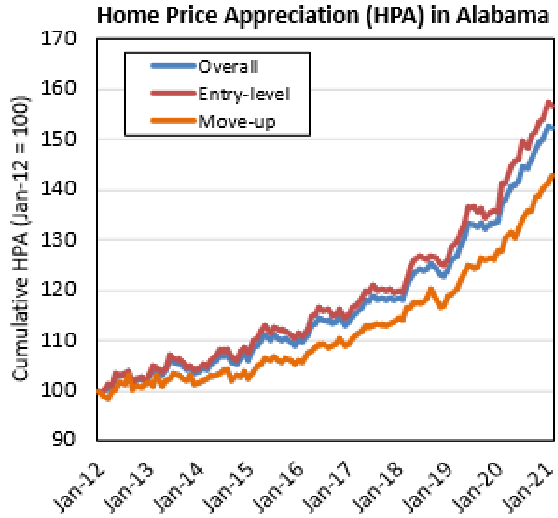
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Alabama has totaled 52%. In the entry-level, HPA has totaled 57%, but only 43% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $9,700 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 11.0%, up from 9.2% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



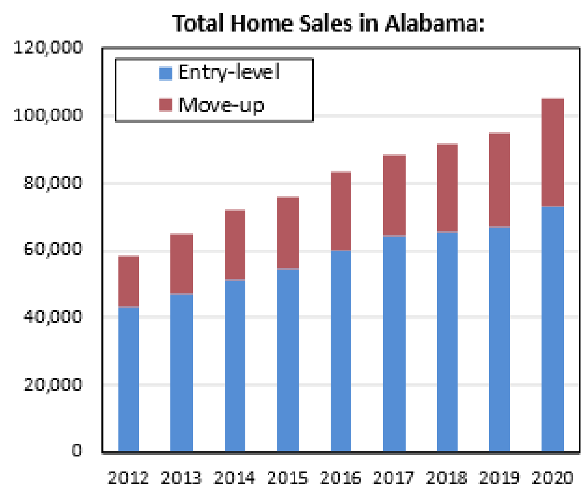
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Alabama:

2020	All	FHA
Note Rate	3.13	3.13
Combined LTV	95	99
Credit Score	733	669
Debt-to-Income	36	42
Down payment (DP)	$9,000	$1,930
% with DP assistance	N/A	24%
% FTBs	45%	69%
MRI*	9.7%	25.6%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

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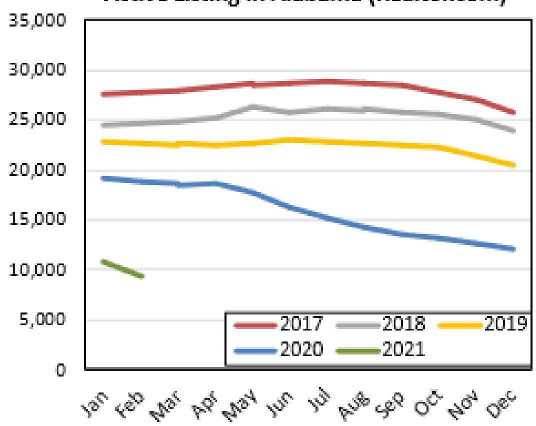
Housing Market Indicators for Alabama

3 Supply

Strong demand and lack of new supply are depleting inventories in Alabama. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in Alabama (Realtor.com)



Months supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Alabama	2019	2020
Entry-Level	2.8	1.9
Move-Up	10.1	6.8
Overall	3.3	2.2

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

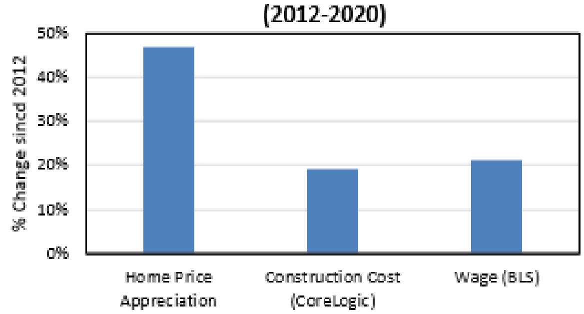
Since 2012, Alabama has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The Alabama housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in Alabama (2012-2020)



5 Recap

Alabama has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

AEI Housing Center

AEI Housing Center

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Housing Market Indicators for Arizona

The Paradox of Accessible Lending:

When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

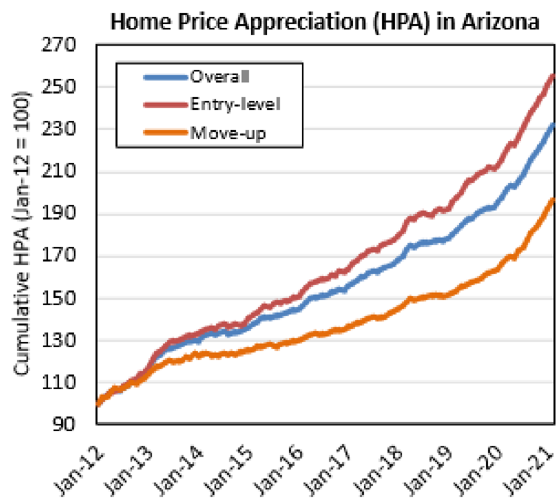
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Arizona has totaled 132%. In the entry-level, HPA has totaled 155%, but only 97% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying **$66,000 less** for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 17.6%, up from 9.6% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



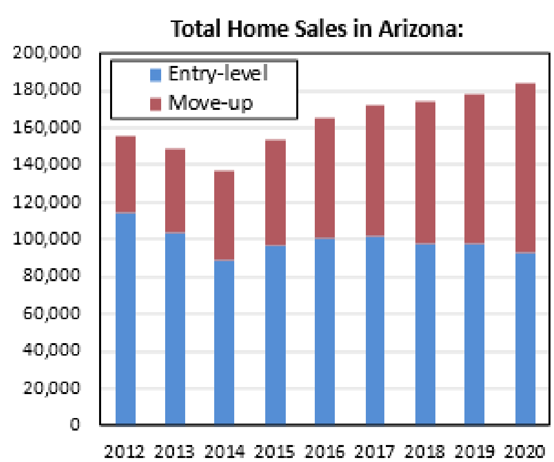
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2014.

Median Borrower Statistics in Arizona:

2020	All	FHA
Note Rate	3.25	3.25
Combined LTV	95	99
Credit Score	744	670
Debt-to-Income	39	44
Down payment (DP)	$21,000	$2,600
% with DP assistance	N/A	24%
% FTBs	47%	81%
MRI*	7.8%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

AEI Housing Center

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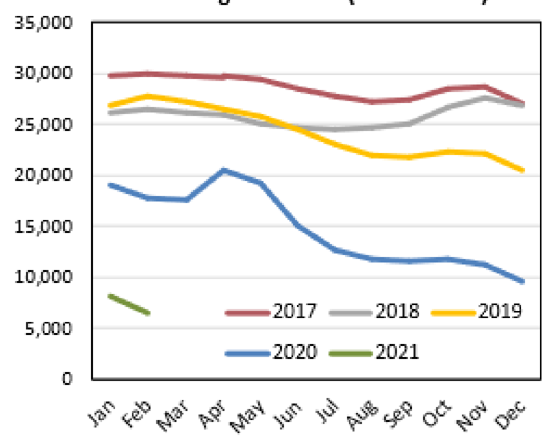
Housing Market Indicators for Arizona

3 Supply

Strong demand and lack of new supply are depleting inventories in Arizona. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in Arizona (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Arizona	2019	2020
Entry-Level	1.3	0.9
Move-Up	5.4	3.2
Overall	1.9	1.2

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

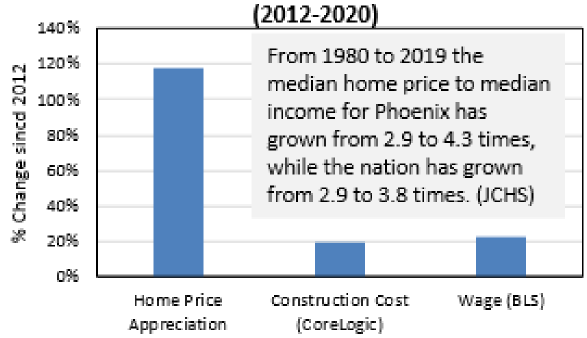
Since 2012, Arizona has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The Arizona housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in Arizona (2012-2020)



5 Recap

Arizona has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

AEI Housing Center

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Housing Market Indicators for Georgia

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

1 Home Prices and Affordability

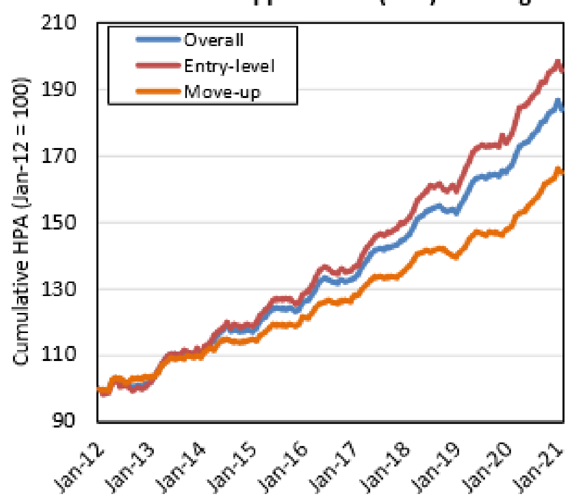
Since 2012, home price appreciation (HPA) in Georgia has totaled 84%. In the entry-level, HPA has totaled 96%, but only 65% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $23,000 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 9.8%, up from 7.8% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.

Home Price Appreciation (HPA) in Georgia



2 Demand

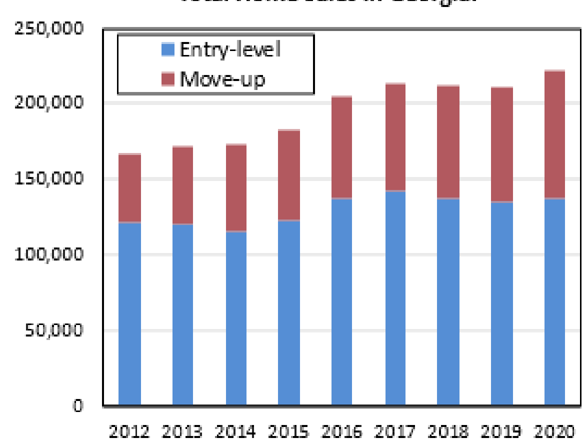
Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Georgia:

2020	All	FHA
Note Rate	3.13	3.25
Combined LTV	95	99
Credit Score	731	667
Debt-to-Income	39	45
Down payment (DP)	$12,000	$2,300
% with DP assistance	N/A	28%
% FTBs	52%	75%
MRI*	9.7%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.

Total Home Sales in Georgia:



Source: AEI Housing Center, www.aei.org/housing.

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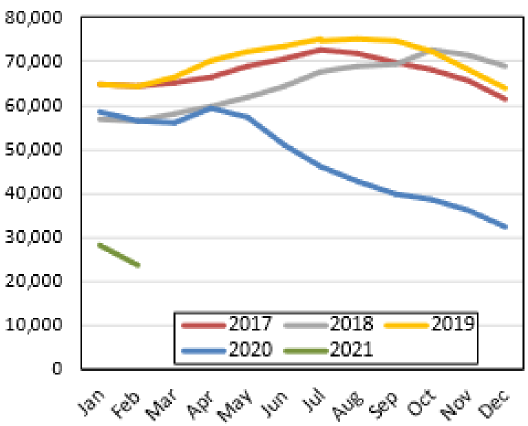
Housing Market Indicators for Georgia

3 Supply

Strong demand and lack of new supply are depleting inventories in Georgia. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in Georgia (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Georgia	2019	2020
Entry-Level	3.7	2.6
Move-Up	12.9	8.4
Overall	4.7	3.2

* Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

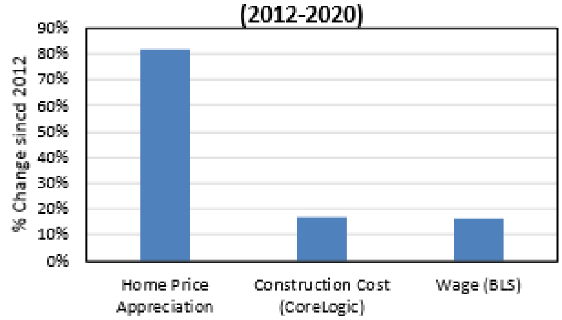
Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, Georgia has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

4 Market Fundamentals

The Georgia housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in Georgia (2012-2020)



5 Recap

Georgia has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

Source: AEI Housing Center, www.aei.org/housing.

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Housing Market Indicators for Idaho

The Paradox of Accessible Lending:

When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

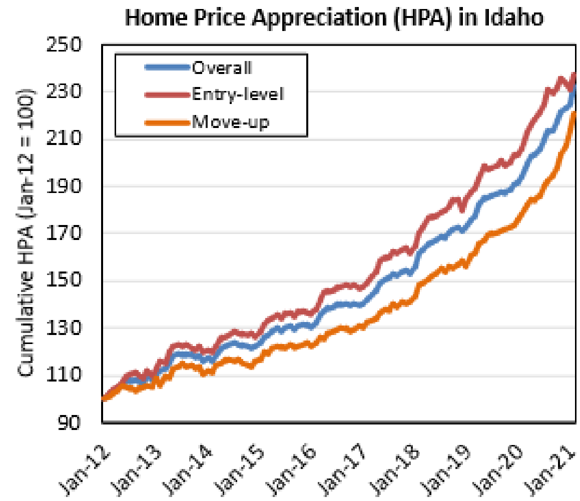
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Idaho has totaled 132%. In the entry-level, HPA has totaled 138%, but only 121% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying 20,000 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 19.7%, up from 10.2% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



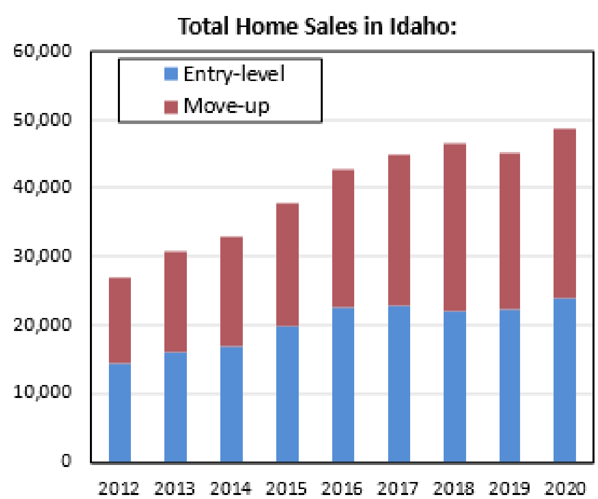
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Idaho:

2020	All	FHA
Note Rate	3.12	3.38
Combined LTV	90	99
Credit Score	748	667
Debt-to-Income	38	46
Down payment (DP)	$30,000	$2,600
% with DP assistance	N/A	21%
% FTBs	41%	75%
MRI*	6.7%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

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Housing Market Indicators for Idaho

3 Supply

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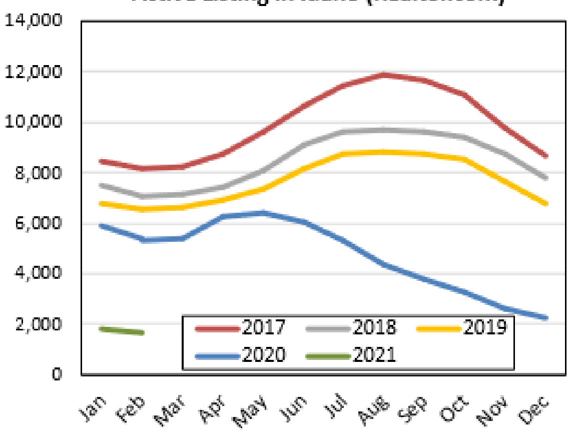
Active Listing in Idaho (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Idaho	2019	2020
Entry-Level	1.9	1.1
Move-Up	9.3	6.8
Overall	2.6	1.6

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

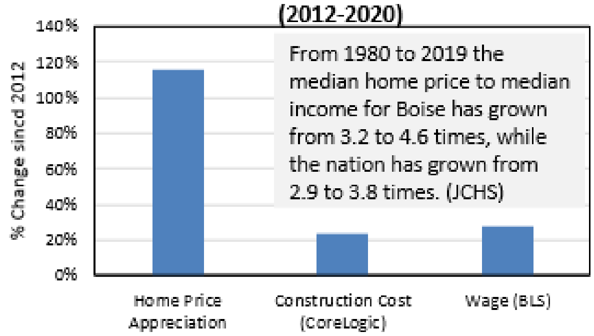
Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, Idaho has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

4 Market Fundamentals

The Idaho housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in Idaho (2012-2020)



5 Recap

Idaho has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

Additional data and methodology available upon request.
Edward Pinto - pintoedward1@gmail.com
Tobias Peter - tobias.peter@aei.org

Housing Market Indicators for Kansas

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

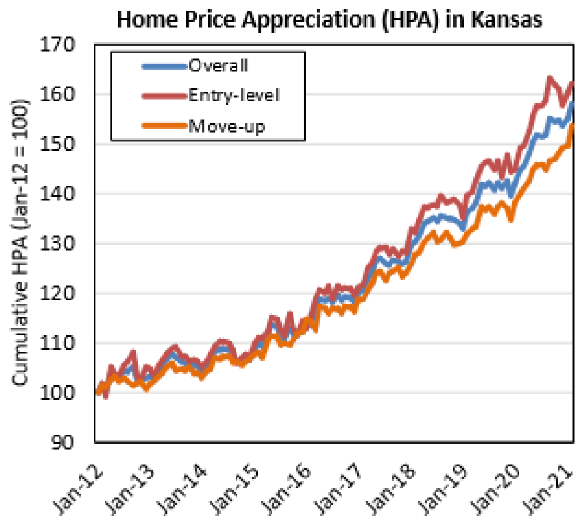
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Kansas has totaled 58%. In the entry-level, HPA has totaled 62%, but only 54% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $9,000 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 9.1%, up from 6.5% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



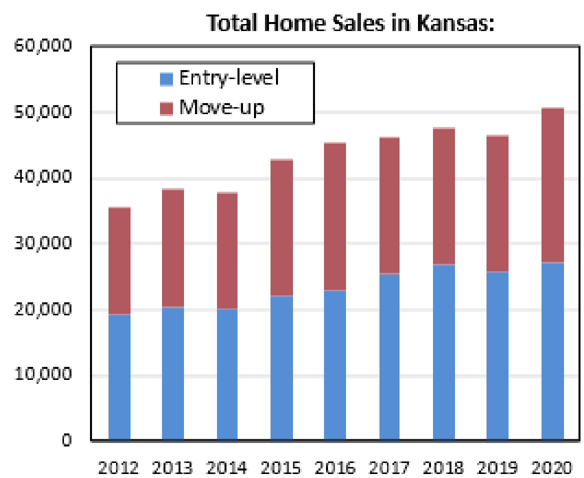
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Kansas:

2020	All	FHA
Note Rate	3.13	3.25
Combined LTV	95	99
Credit Score	739	667
Debt-to-Income	36	42
Down payment (DP)	$11,000	$1,800
% with DP assistance	N/A	28%
% FTBs	50%	75%
MRI*	8.7%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

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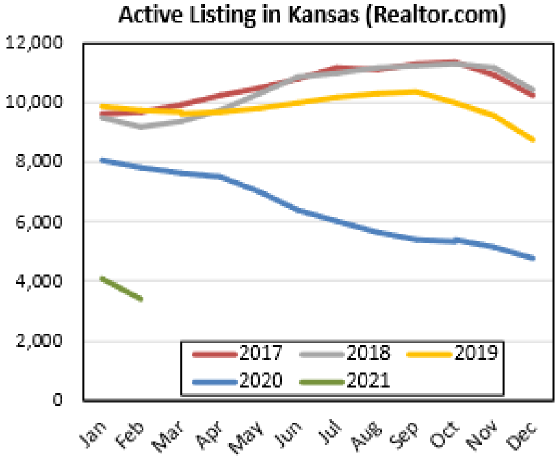
Housing Market Indicators for Kansas

3 Supply

Strong demand and lack of new supply are depleting inventories in Kansas. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Kansas	2019	2020
Entry-Level	2.7	1.8
Move-Up	6.4	4.3
Overall	2.9	1.8

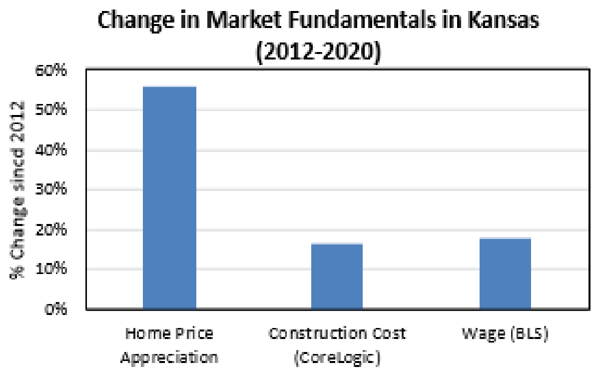
*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, Kansas has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

4 Market Fundamentals

The Kansas housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.



5 Recap

Kansas has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

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Housing Market Indicators for Louisiana

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

1 Home Prices and Affordability

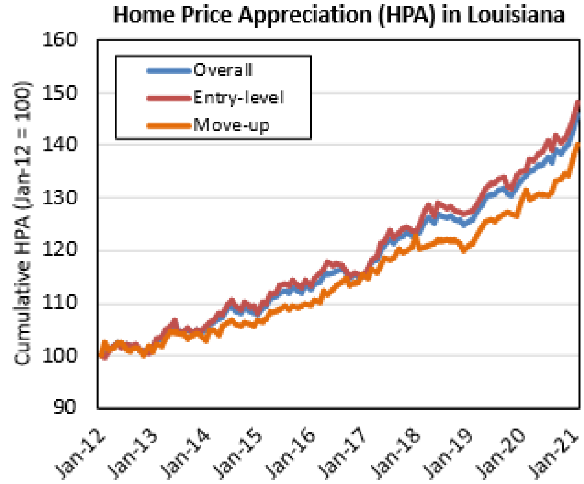
Since 2012, home price appreciation (HPA) in Louisiana has totaled 46%. In the entry-level, HPA has totaled 48%, but only 40% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $8,000 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 8.7%, up from 6.7% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.

Home Price Appreciation (HPA) in Louisiana



2 Demand

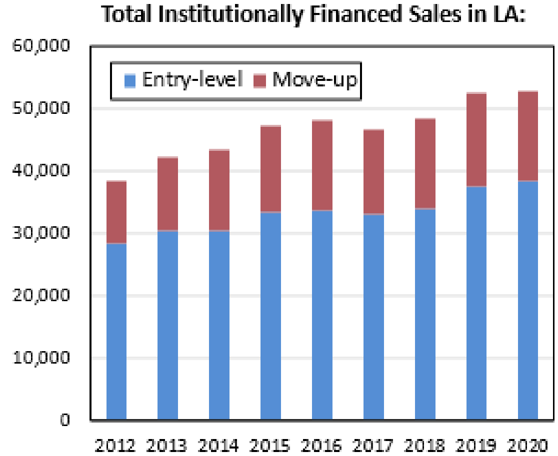
Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing since 2012.

Median Borrower Statistics in Louisiana:

2020	All	FHA
Note Rate	3.13	3.25
Combined LTV	97	99
Credit Score	723	668
Debt-to-Income	38	44
Down payment (DP)	$6,500	$2,00
% with DP assistance	N/A	24%
% FTBs	55%	73%
MRI*	10.5%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.

Total Institutionally Financed Sales in LA:



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

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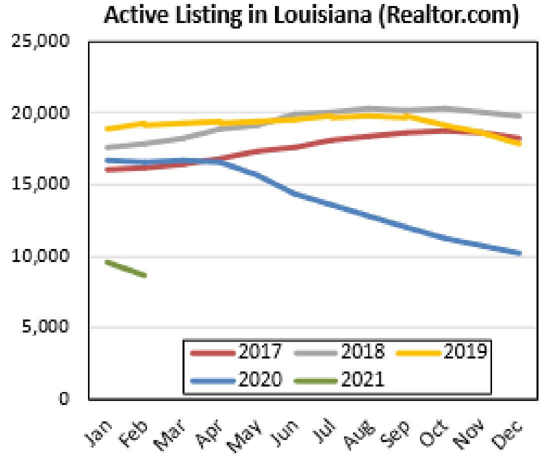
Housing Market Indicators for Louisiana

3 Supply

Strong demand and lack of new supply are depleting inventories in Louisiana. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Louisiana	2019	2020
Entry-Level	3.8	2.8
Move-Up	11.4	8.5
Overall	4.0	2.9

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

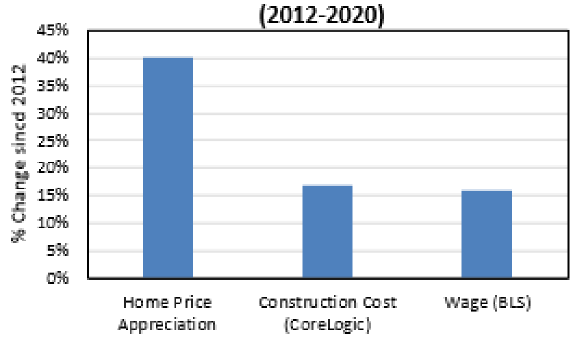
Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, Louisiana has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The Louisiana housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.



5 Recap

Louisiana has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

AEI Housing Center

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Housing Market Indicators for Maryland

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

1 Home Prices and Affordability

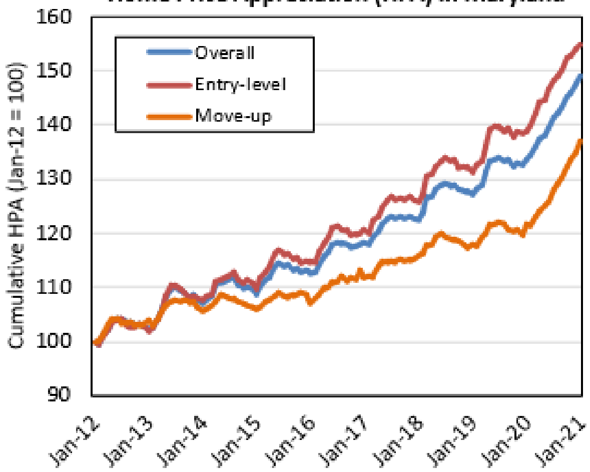
Since 2012, home price appreciation (HPA) in Maryland has totaled 49%. In the entry-level, HPA has totaled 55%, but only 37% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying **$33,000 less** for their home.

Home price appreciation has accelerated over the last year. HPA in January 2021 was 11.7%, up from 5.0% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.

Home Price Appreciation (HPA) in Maryland



2 Demand

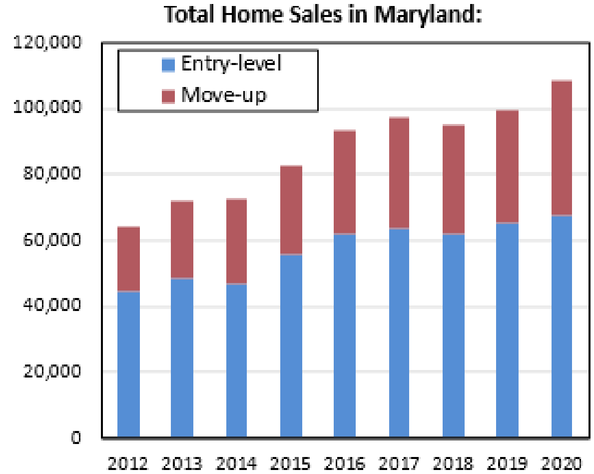
Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Maryland:

2020	All	FHA
Note Rate	3.13	3.25
Combined LTV	95	99
Credit Score	740	673
Debt-to-Income	39	45
Down payment (DP)	$14,000	$3,000
% with DP assistance	N/A	31%
% FTBs	58%	79%
MRI*	9.7%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.

Total Home Sales in Maryland:



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

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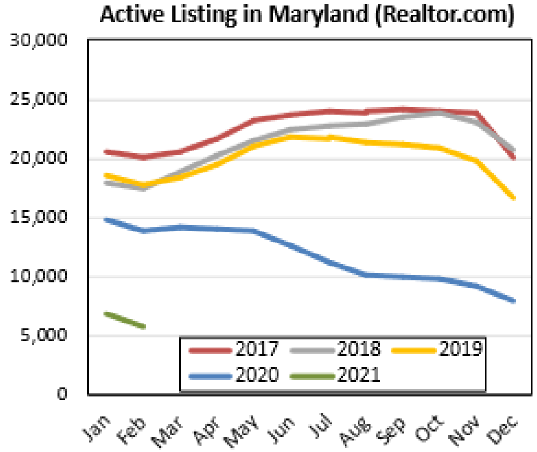
Housing Market Indicators for Maryland

3 Supply

Strong demand and lack of new supply are depleting inventories in Maryland. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Maryland	2019	2020
Entry-Level	2.5	1.5
Move-Up	6.0	3.2
Overall	2.7	1.6

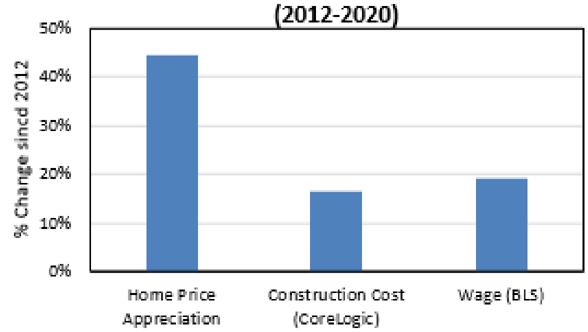
*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, Maryland has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

4 Market Fundamentals

The Maryland housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.



5 Recap

Maryland has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

Source: AEI Housing Center, www.aei.org/housing.

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Housing Market Indicators for Massachusetts

The Paradox of Accessible Lending:

When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

1 Home Prices and Affordability

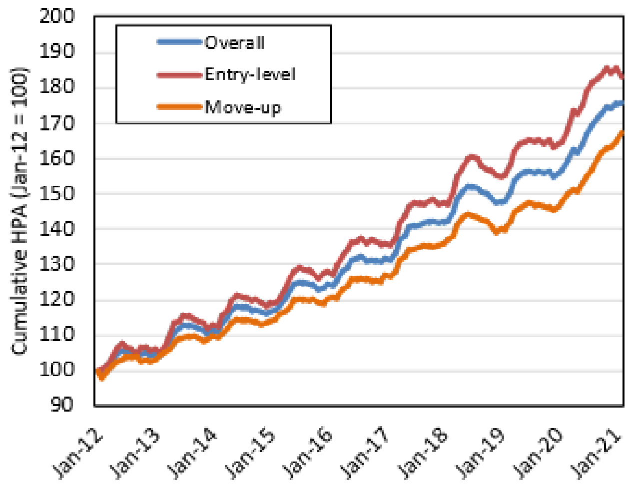
Since 2012, home price appreciation (HPA) in Massachusetts has totaled 76%. In the entry-level, HPA has totaled 83%, but only 67% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $30,000 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 11.9%, up from 5.9% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.

Home Price Appreciation (HPA) in Massachusetts



2 Demand

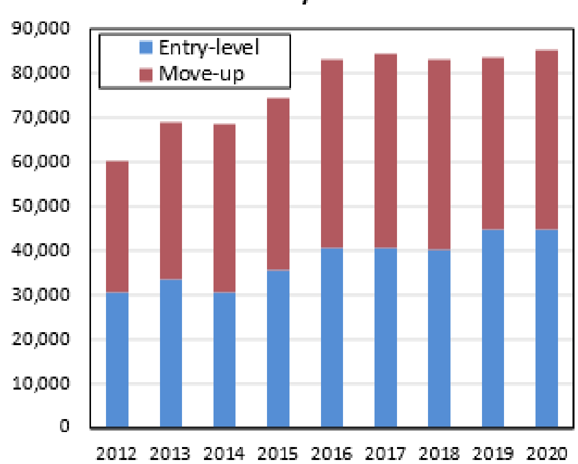
Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Massachusetts:

2020	All	FHA
Note Rate	3.0	3.13
Combined LTV	90	99
Credit Score	752	675
Debt-to-Income	38	47
Down payment (DP)	$46,000	$4,000
% with DP assistance	N/A	30%
% FTBs	57%	81%
MRI*	6.4%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.

Total Institutionally Financed Sales in MA:



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

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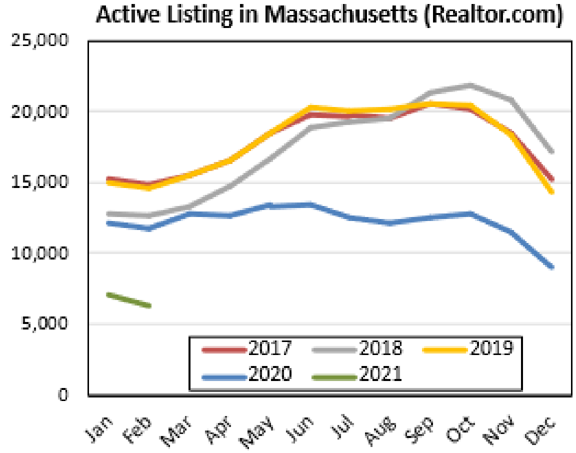
Housing Market Indicators for Massachusetts

3 Supply

Strong demand and lack of new supply are depleting inventories in Massachusetts. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in Massachusetts (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Massachusetts	2019	2020
Entry-Level	1.5	1.1
Move-Up	4.5	3.0
Overall	2.3	1.6

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

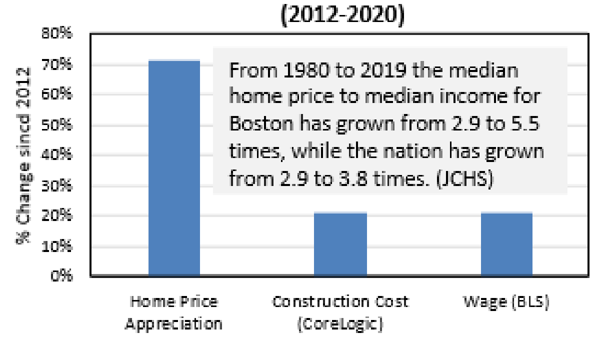
Since 2012, Massachusetts has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The Massachusetts housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in MA (2012-2020)



5 Recap

Massachusetts has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

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Housing Market Indicators for Minnesota

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

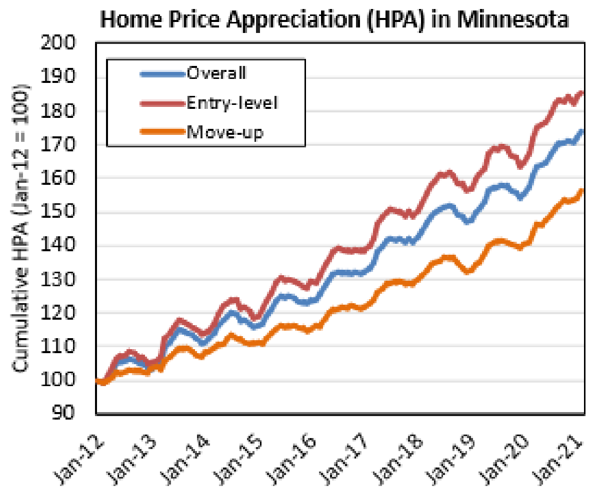
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Minnesota has totaled 74%. In the entry-level, HPA has totaled 85%, but only 57% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $34,500 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 10.5%, up from 4.9% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



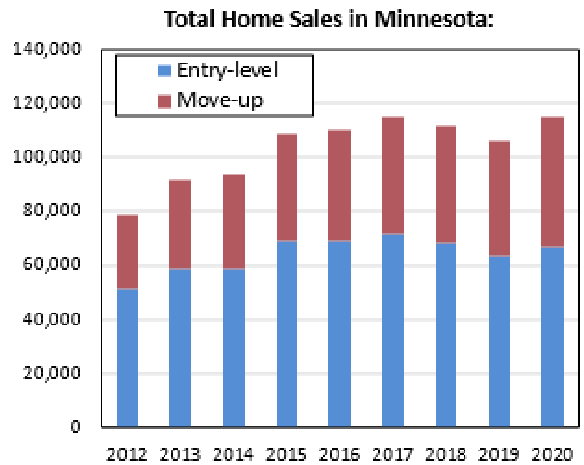
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Minnesota:

2020	All	FHA
Note Rate	3.12	3.25
Combined LTV	95	99
Credit Score	751	672
Debt-to-Income	37	45
Down payment (DP)	$19,000	$2,500
% with DP assistance	N/A	26%
% FTBs	51%	79%
MRI*	7.0%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

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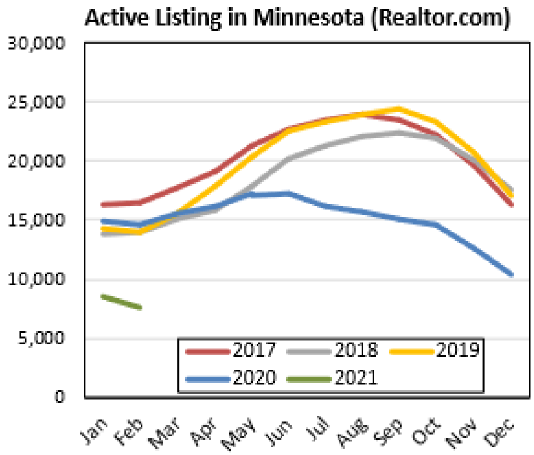
Housing Market Indicators for Minnesota

3 Supply

Strong demand and lack of new supply are depleting inventories in Minnesota. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Minnesota	2019	2020
Entry-Level	1.9	1.4
Move-Up	5.7	4.3
Overall	2.5	1.8

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

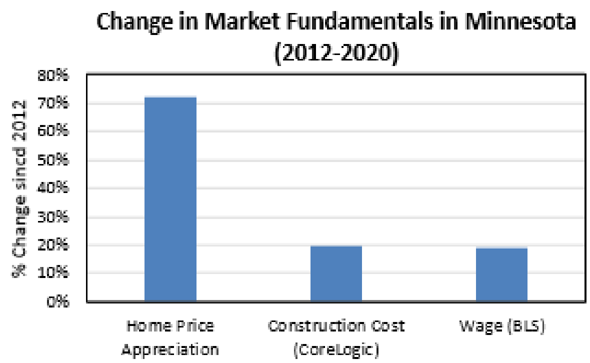
Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, Minnesota has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The Minnesota housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.



5 Recap

Minnesota has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

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Housing Market Indicators for Montana

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

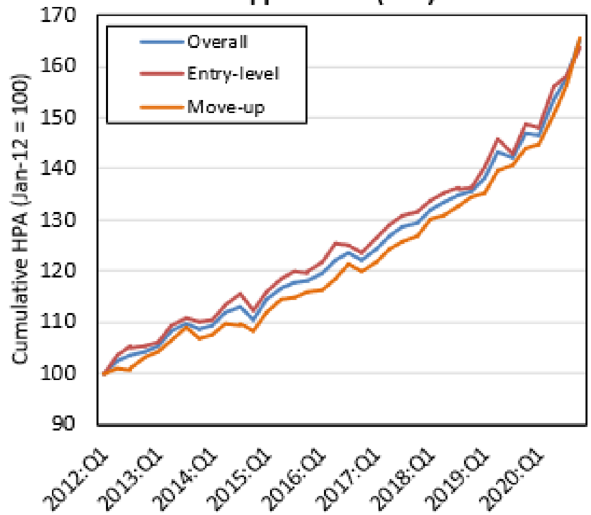
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Montana has totaled 65%. In the entry-level, HPA has totaled 64% and 65% in the move-up segment.

Home price appreciation has accelerated over the last year. HPA in 2020:Q4 was 12.5%, up from 8.1% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.

Home Price Appreciation (HPA) in Montana



2 Demand

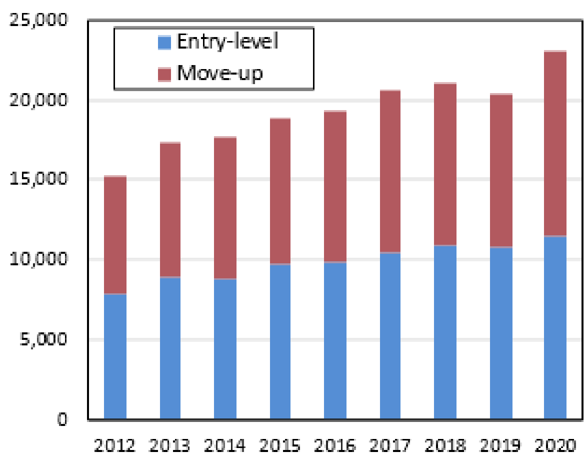
Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Montana:

2020	All	FHA
Note Rate	3.00	3.13
Combined LTV	90	99
Credit Score	755	676
Debt-to-Income	37	44
Down payment (DP)	$28,000	$2,600
% with DP assistance	N/A	29%
% FTBs	43%	76%
MRI*	6.4%	22.7%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.

Total Home Sales in Montana:



Source: AEI Housing Center, www.aei.org/housing.

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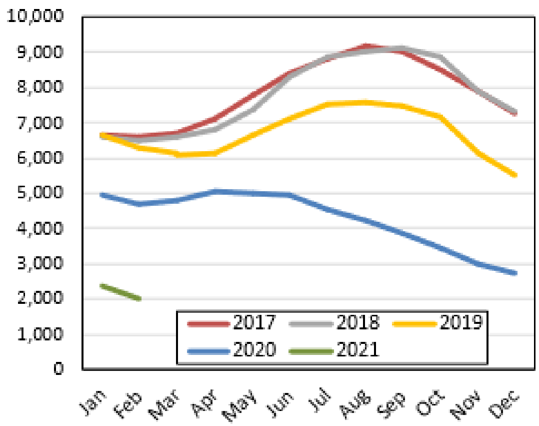
Housing Market Indicators for Montana

3 Supply

Strong demand and lack of new supply are depleting inventories in Montana. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in Montana (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Montana	2019	2020
Entry-Level	3.5	2.3
Move-Up	15.9	10.6
Overall	4.7	2.8

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

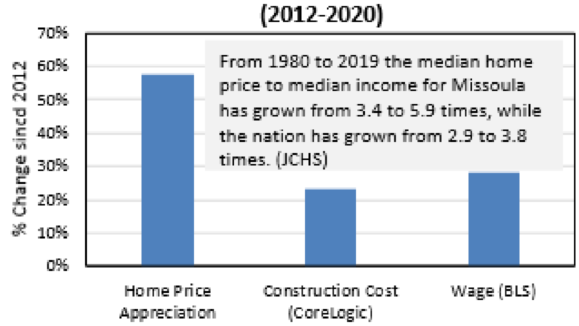
Since 2012, Montana has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The Montana housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in Montana (2012-2020)



5 Recap

Montana has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

AEI Housing Center

AEI Housing Center

Additional data and methodology available upon request.
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Housing Market Indicators for Nevada

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

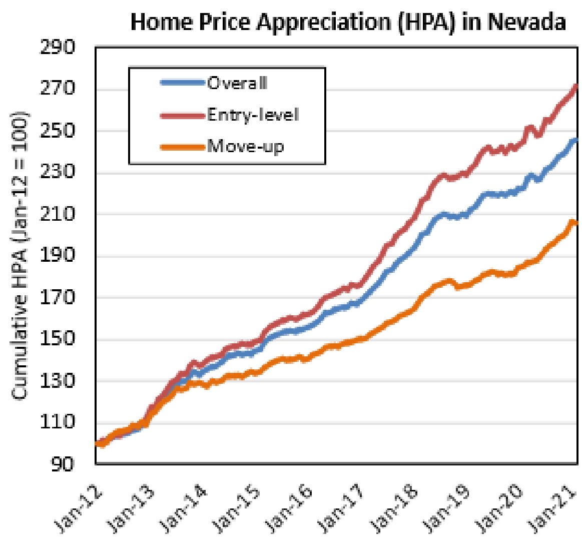
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Nevada has totaled 146%. In the entry-level, HPA has totaled 171%, but only 106% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying **$70,000 less** for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 10.3%, up from 5.3% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



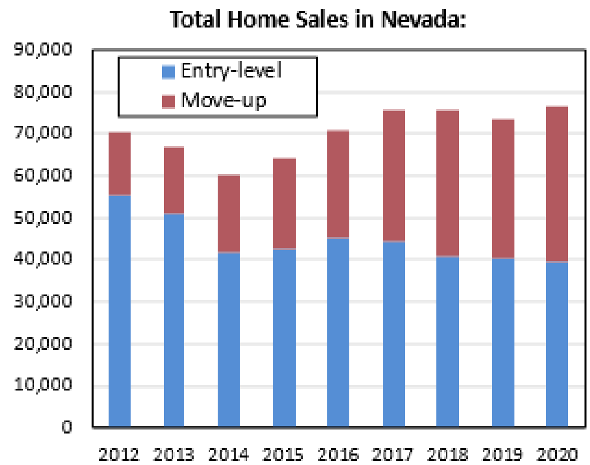
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2015.

Median Borrower Statistics in Nevada:

2020	All	FHA
Note Rate	3.13	3.25
Combined LTV	95	99
Credit Score	736	678
Debt-to-Income	40	45
Down payment (DP)	$19,000	$3,000
% with DP assistance	N/A	28%
% FTBs	53%	84%
MRI*	9.3%	24.2%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

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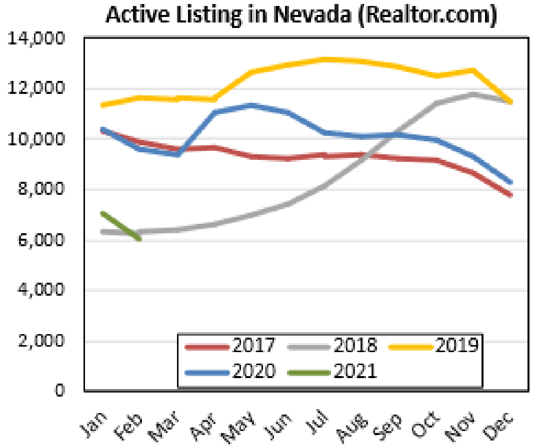
Housing Market Indicators for Nevada

3 Supply

Strong demand and lack of new supply are depleting inventories in Nevada. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in Nevada (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Nevada	2019	2020
Entry-Level	2.1	1.9
Move-Up	5.8	3.7
Overall	2.4	2.0

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

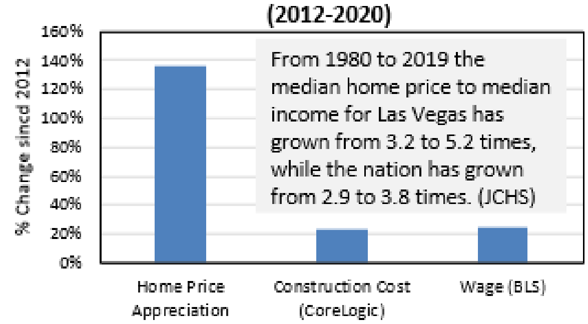
Since 2012, Nevada has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The Nevada housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in Nevada (2012-2020)



5 Recap

Nevada has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

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Housing Market Indicators for New Jersey

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

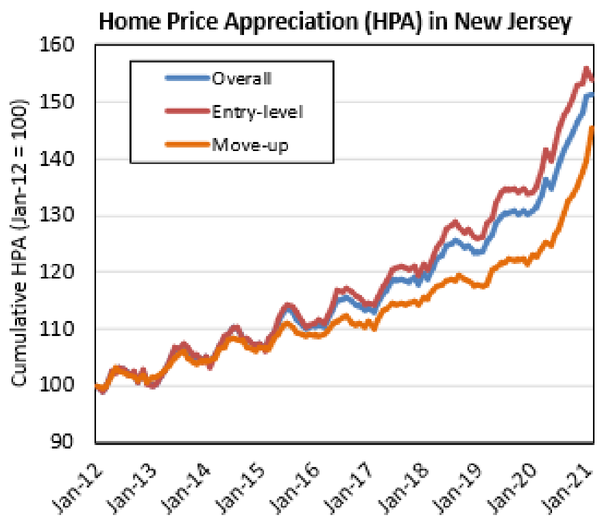
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in New Jersey has totaled 51%. In the entry-level, HPA has totaled 54%, but only 46% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $16,500 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 15.1%, up from 6.3% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



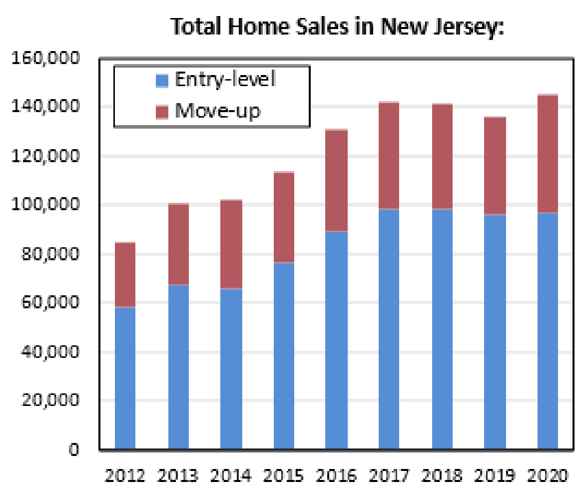
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in New Jersey:

2020	All	FHA
Note Rate	3.13	3.13
Combined LTV	90	99
Credit Score	747	675
Debt-to-Income	39	47
Down payment (DP)	$36,000	$3,500
% with DP assistance	N/A	30%
% FTBs	58%	81%
MRI*	6.7%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

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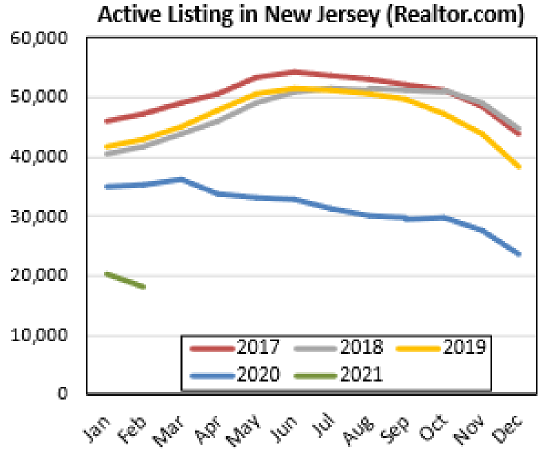
Housing Market Indicators for New Jersey

3 Supply

Strong demand and lack of new supply are depleting inventories in New Jersey. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in New Jersey	2019	2020
Entry-Level	3.6	2.5
Move-Up	9.3	6.2
Overall	4.4	3.0

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

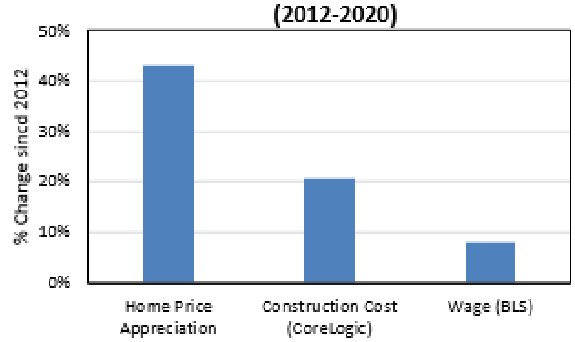
Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, New Jersey has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The New Jersey housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.



5 Recap

New Jersey has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

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Housing Market Indicators for North Carolina

The Paradox of Accessible Lending:

When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

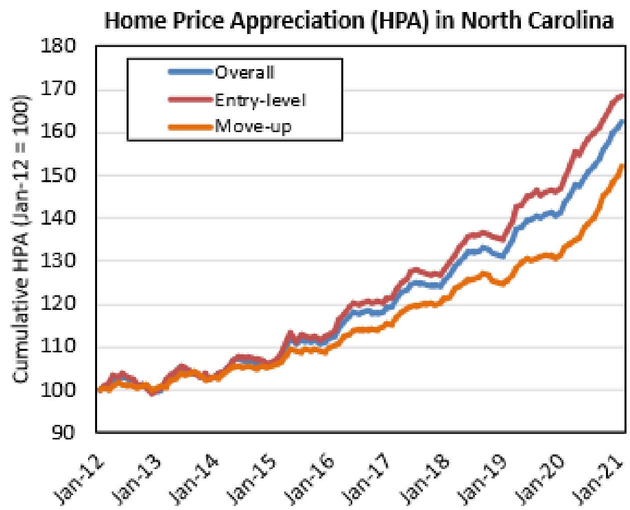
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in North Carolina has totaled 63%. In the entry-level, HPA has totaled 69%, but only 52% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $18,000 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 13.3%, up from 8.0% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



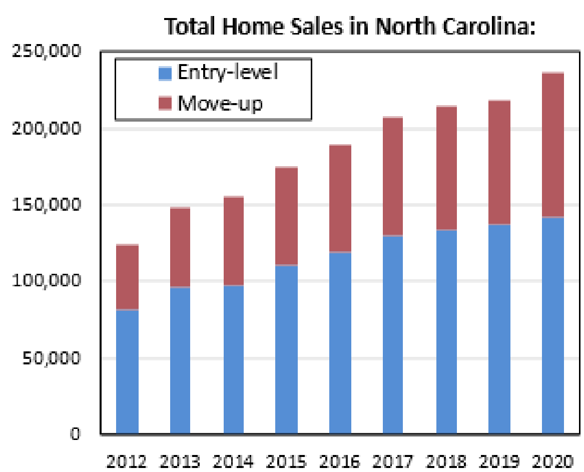
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in North Carolina:

2020	All	FHA
Note Rate	3.13	3.25
Combined LTV	95	99
Credit Score	747	666
Debt-to-Income	37	43
Down payment (DP)	$17,500	$2,300
% with DP assistance	N/A	26%
% FTBs	45%	70%
MRI*	7.0%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

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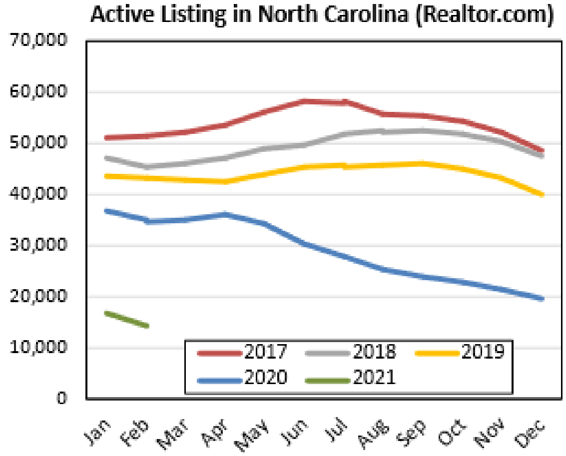
Housing Market Indicators for North Carolina

3 Supply

Strong demand and lack of new supply are depleting inventories in North Carolina. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in North Carolina	2019	2020
Entry-Level	2.0	1.3
Move-Up	9.5	5.8
Overall	2.9	1.9

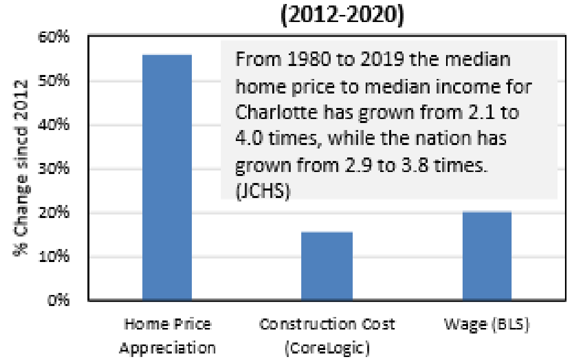
*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, North Carolina has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

4 Market Fundamentals

The North Carolina housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.



5 Recap

North Carolina has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

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Housing Market Indicators for North Dakota

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

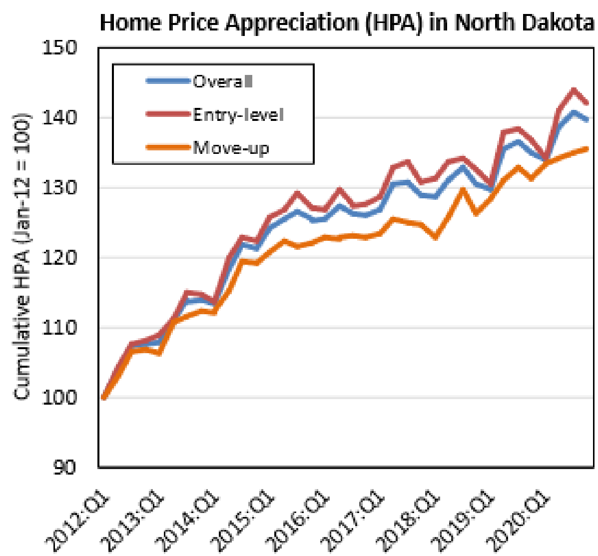
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in North Dakota has totaled 40%. In the entry-level, HPA has totaled 42%, but only 35% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying **$10,800 less** for their home.

Home price appreciation has accelerated over the last year. HPA in 2020:Q4 was 3.5%, up from 3.4% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



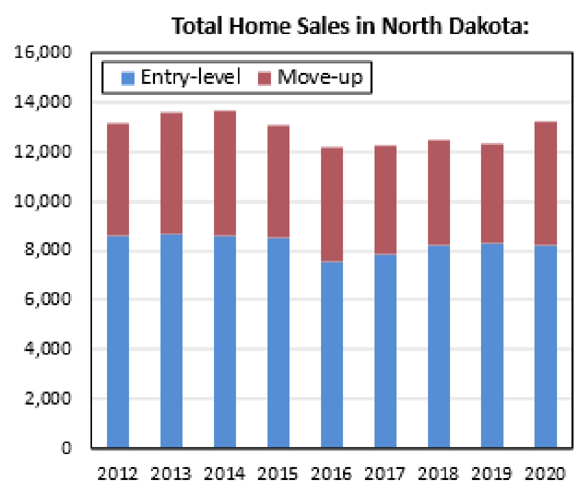
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been very robust in North Dakota.

Median Borrower Statistics in North Dakota:

2020	All	FHA
Note Rate	2.99	3.25
Combined LTV	95	99
Credit Score	752	674
Debt-to-Income	36	44
Down payment (DP)	$15,500	$2,200
% with DP assistance	N/A	19%
% FTBs	50%	78%
MRI*	6.7%	25.6%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

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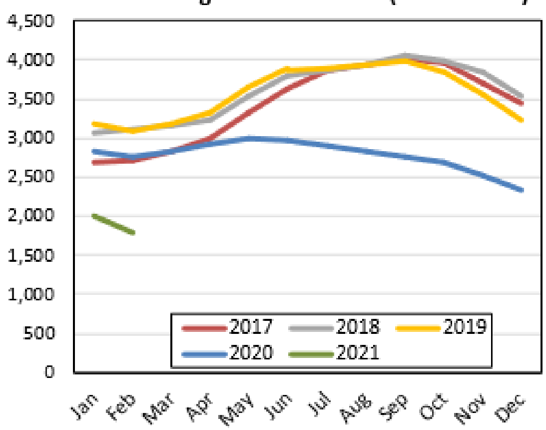
Housing Market Indicators for North Dakota

3 Supply

Strong demand and lack of new supply are depleting inventories in North Dakota. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in North Dakota (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in North Dakota	2019	2020
Entry-Level	4.1	3.1
Move-Up	7.2	5.7
Overall	4.1	3.1

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

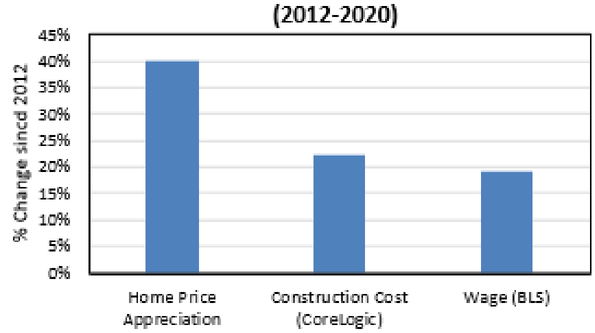
Since 2012, North Dakota has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The North Dakota housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in ND (2012-2020)



5 Recap

North Dakota has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

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Housing Market Indicators for Ohio

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

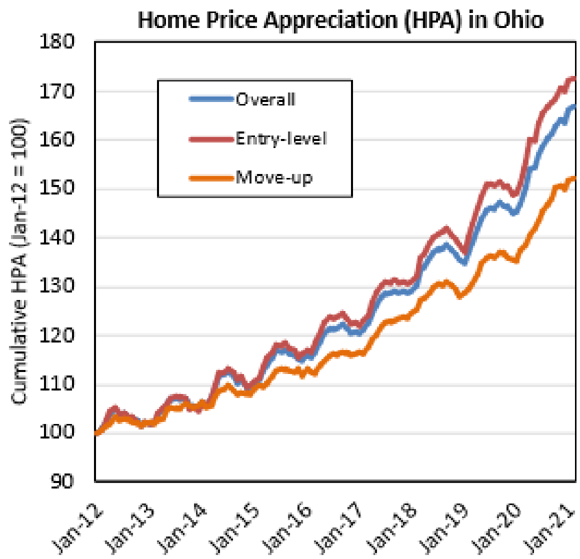
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Ohio has totaled 67%. In the entry-level, HPA has totaled 73%, but only 52% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $14,500 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 13.4%, up from 7.4% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



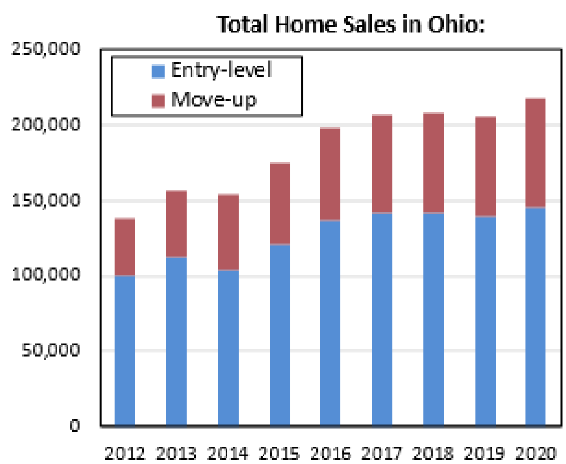
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Ohio:

2020	All	FHA
Note Rate	3.25	3.38
Combined LTV	95	99
Credit Score	733	664
Debt-to-Income	36	42
Down payment (DP)	$10,600	$1,600
% with DP assistance	N/A	27%
% FTBs	55%	77%
MRI*	9.3%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

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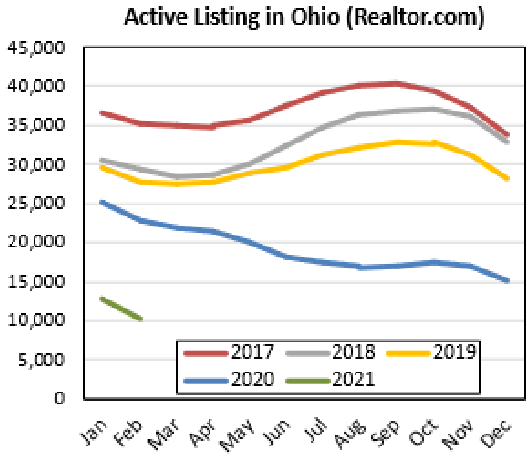
Housing Market Indicators for Ohio

3 Supply

Strong demand and lack of new supply are depleting inventories in Ohio. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Ohio	2019	2020
Entry-Level	1.5	1.0
Move-Up	5.6	2.9
Overall	1.9	1.2

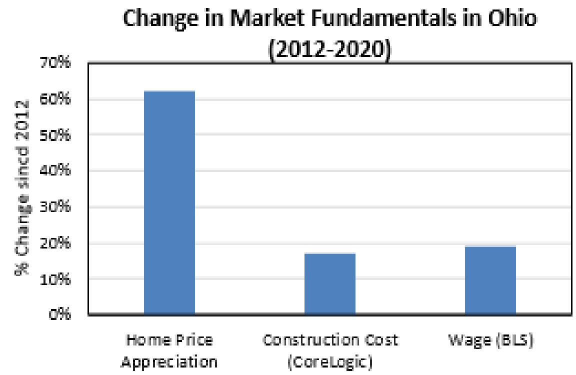
* Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, Ohio has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

4 Market Fundamentals

The Ohio housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.



5 Recap

Ohio has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

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Housing Market Indicators for Pennsylvania

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

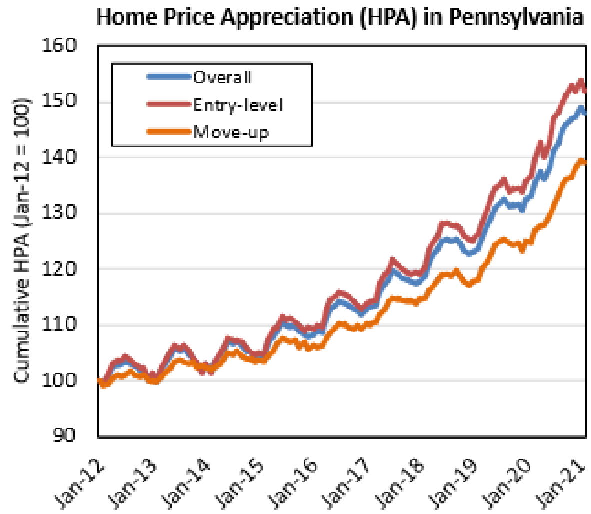
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Pennsylvania has totaled 48%. In the entry-level, HPA has totaled 52%, but only 39% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $12,600 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 11.0%, up from 7.6% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



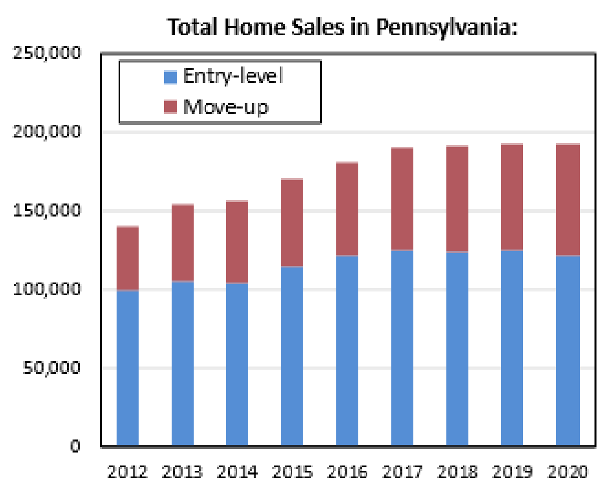
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Pennsylvania:

2020	All	FHA
Note Rate	3.13	3.13
Combined LTV	95	99
Credit Score	744	673
Debt-to-Income	397	43
Down payment (DP)	$15,000	$2,000
% with DP assistance	N/A	32%
% FTBs	57%	79%
MRI*	7.9%	25.6%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

AEI Housing Center

Additional data and methodology available upon request.
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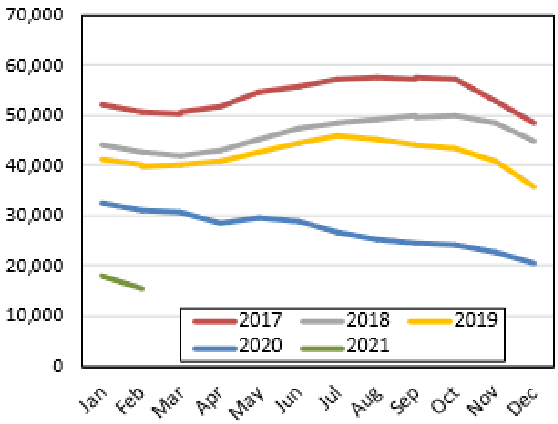
Tobias Peter - tobias.peter@aei.org

Housing Market Indicators for Pennsylvania

3 Supply

Strong demand and lack of new supply are depleting inventories in Pennsylvania. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in Pennsylvania (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Pennsylvania	2019	2020
Entry-Level	2.4	1.6
Move-Up	6.7	4.7
Overall	2.8	2.0

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

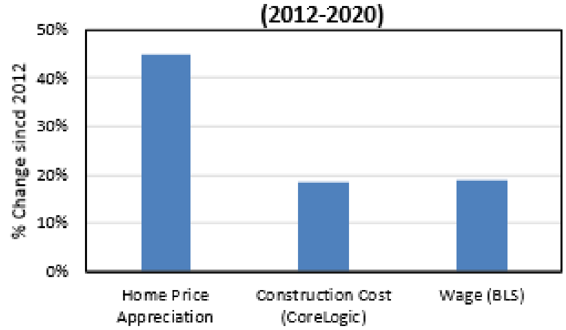
Since 2012, Pennsylvania has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The Pennsylvania housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in PA (2012-2020)



5 Recap

Pennsylvania has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

AEI Housing Center

AEI Housing Center

Additional data and methodology available upon request.
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Housing Market Indicators for Rhode Island

The Paradox of Accessible Lending:

When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

1 Home Prices and Affordability

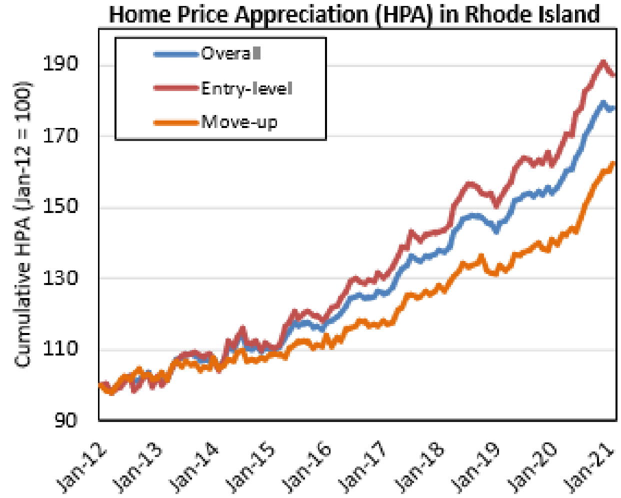
Since 2012, home price appreciation (HPA) in Rhode Island has totaled 78%. In the entry-level, HPA has totaled 87%, but only 62% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $33,000 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 14.5%, up from 6.8% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.

Home Price Appreciation (HPA) in Rhode Island



2 Demand

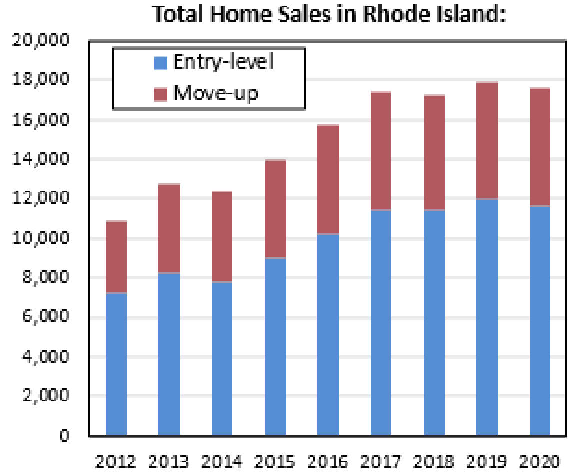
Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Rhode Island:

2020	All	FHA
Note Rate	3.19	3.25
Combined LTV	95	99
Credit Score	738	680
Debt-to-Income	40	47
Down payment (DP)	$16,500	$3,000
% with DP assistance	N/A	25%
% FTBs	59%	83%
MRI*	9.7%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.

Total Home Sales in Rhode Island:



Source: AEI Housing Center, www.aei.org/housing.

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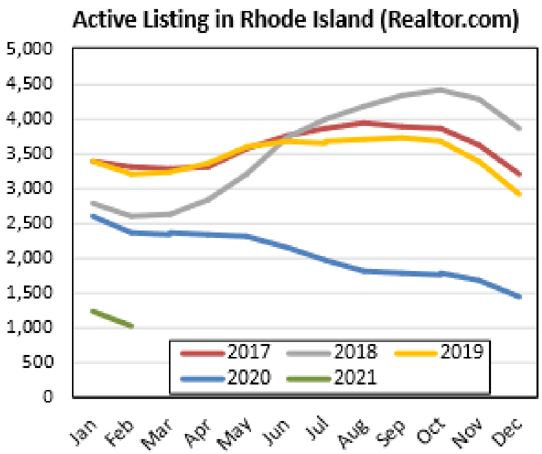
Housing Market Indicators for Rhode Island

3 Supply

Strong demand and lack of new supply are depleting inventories in Rhode Island. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Rhode Island	2019	2020
Entry-Level	1.7	1.1
Move-Up	6.4	4.0
Overall	2.5	1.6

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

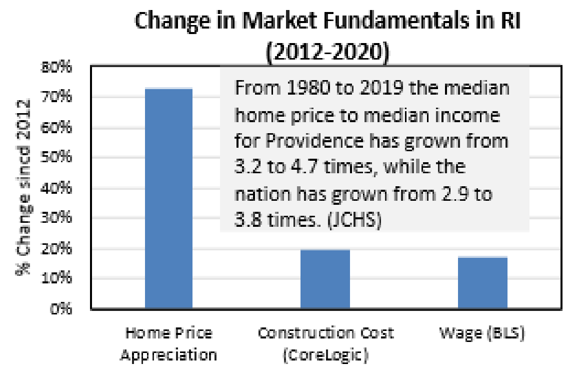
Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, Rhode Island has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The Rhode Island housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.



5 Recap

Rhode Island has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

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Housing Market Indicators for South Carolina

The Paradox of Accessible Lending:

When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

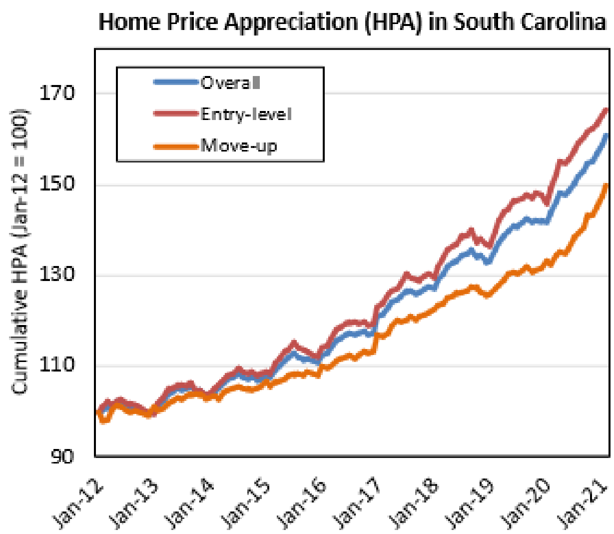
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in South Carolina has totaled 61%. In the entry-level, HPA has totaled 66%, but only 50% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $16,000 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 12.0%, up from 6.0% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



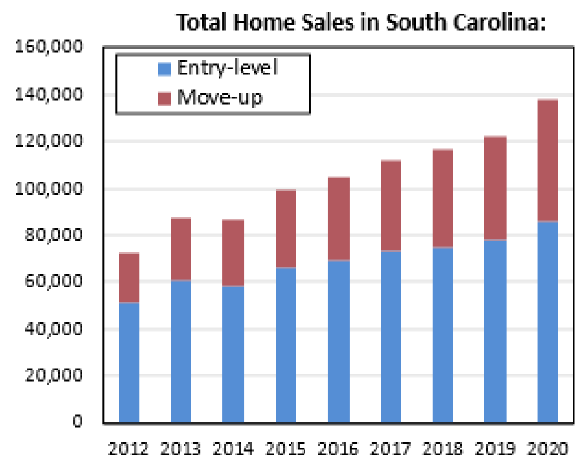
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in South Carolina:

2020	All	FHA
Note Rate	3.13	3.25
Combined LTV	95	99
Credit Score	739	663
Debt-to-Income	38	44
Down payment (DP)	$14,400	$2,200
% with DP assistance	N/A	26%
% FTBs	44%	69%
MRI*	8.4%	26.1%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

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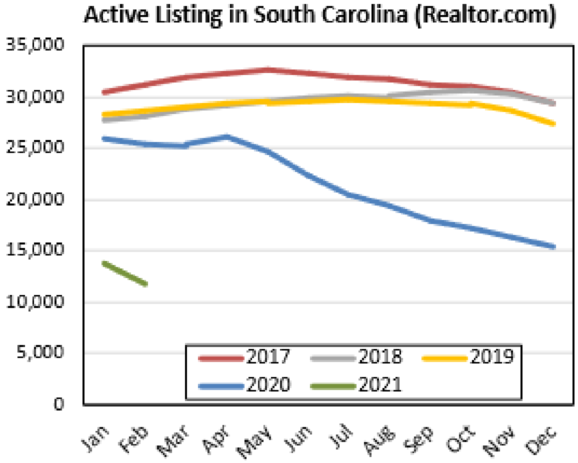
Housing Market Indicators for South Carolina

3 Supply

Strong demand and lack of new supply are depleting inventories in South Carolina. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in South Carolina (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in South Carolina	2019	2020
Entry-Level	3.0	2.2
Move-Up	11.1	6.4
Overall	3.6	2.5

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

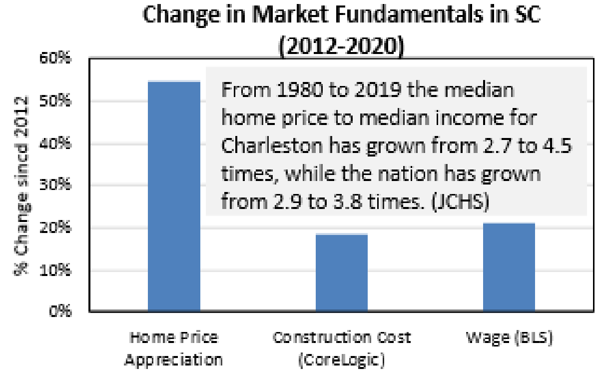
Since 2012, South Carolina has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The South Carolina housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in SC (2012-2020)



5 Recap

South Carolina has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

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Housing Market Indicators for South Dakota

The Paradox of Accessible Lending:

When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

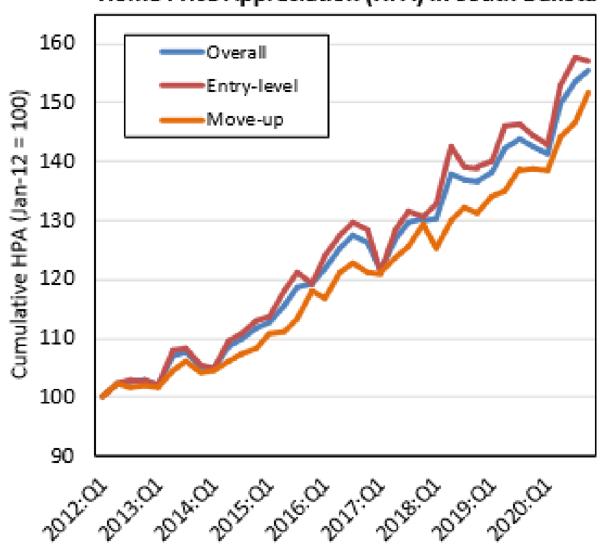
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in South Dakota has totaled 55%. In the entry-level, HPA has totaled 57% as well as 52% in the move-up segment.

Home price appreciation has accelerated over the last year. HPA in 2020:Q4 was 9.0%, up from 4.6% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.

Home Price Appreciation (HPA) in South Dakota



2 Demand

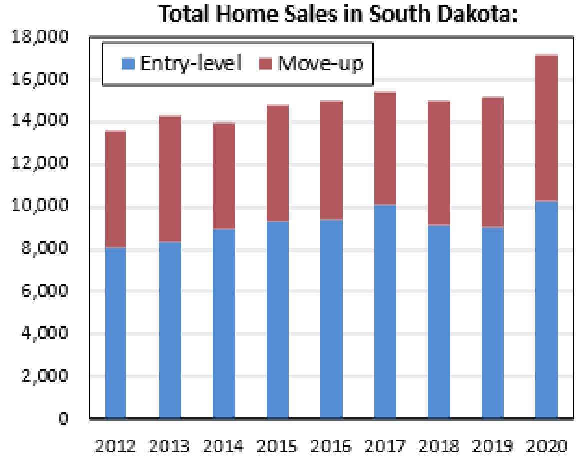
Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in South Dakota:

2020	All	FHA
Note Rate	2.88	3.00
Combined LTV	95	102
Credit Score	747	679
Debt-to-Income	37	45
Down payment (DP)	$10,700	$2,000
% with DP assistance	N/A	18%
% FTBs	50%	76%
MRI*	8.7%	25.6%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.

Total Home Sales in South Dakota:



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

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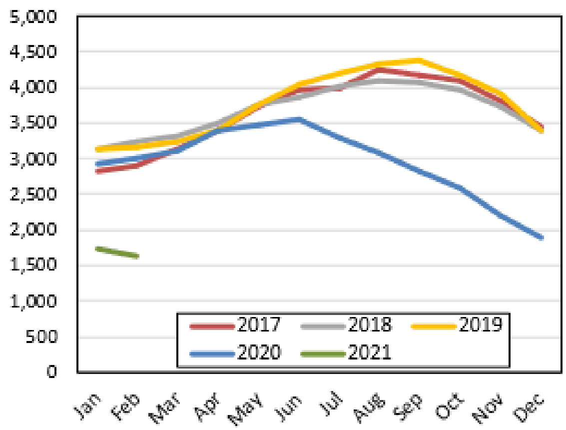
Housing Market Indicators for South Dakota

3 Supply

Strong demand and lack of new supply are depleting inventories in South Dakota. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in South Dakota (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in South Dakota	2019	2020
Entry-Level	2.9	2.2
Move-Up	6.0	4.9
Overall	3.5	2.6

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

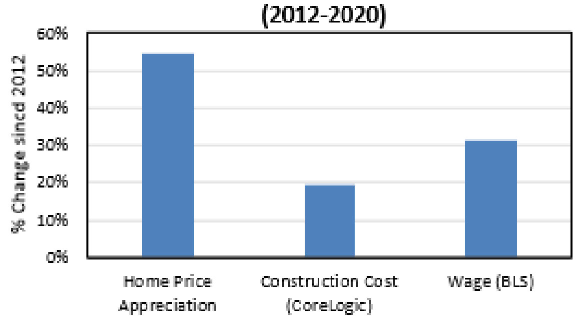
Since 2012, South Dakota has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The South Dakota housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in SD (2012-2020)



5 Recap

South Dakota has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

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Housing Market Indicators for Tennessee

The Paradox of Accessible Lending:
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

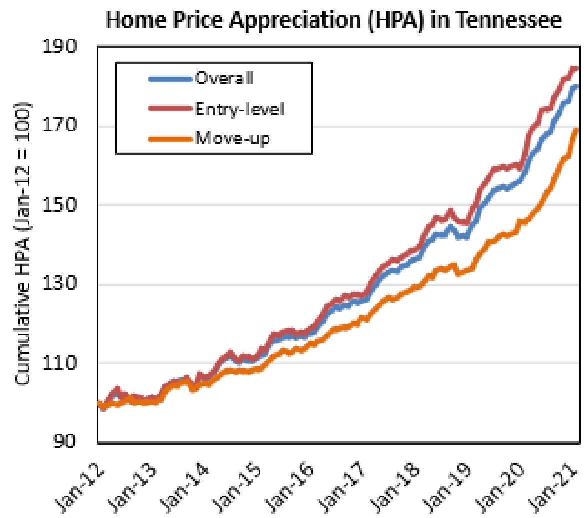
1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Tennessee has totaled 80%. In the entry-level, HPA has totaled 84%, but only 69% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $12,000 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 13.7%, up from 9.2% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



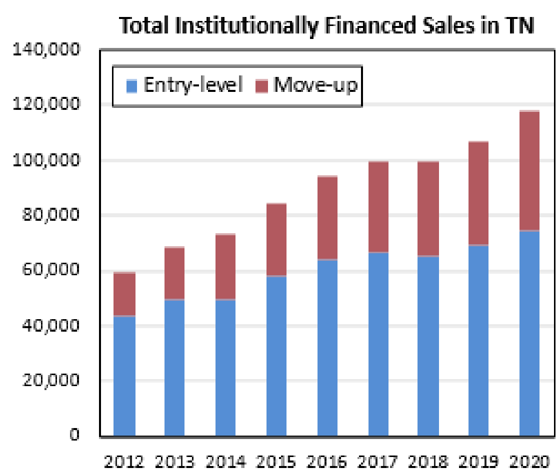
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Tennessee:

2020	All	FHA
Note Rate	3.13	3.25
Combined LTV	95	99
Credit Score	741	673
Debt-to-Income	37	44
Down payment (DP)	$15,500	$2,500
% with DP assistance	N/A	24%
% FTBs	45%	67%
MRI*	8.4%	25.6%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

Additional data and methodology available upon request.
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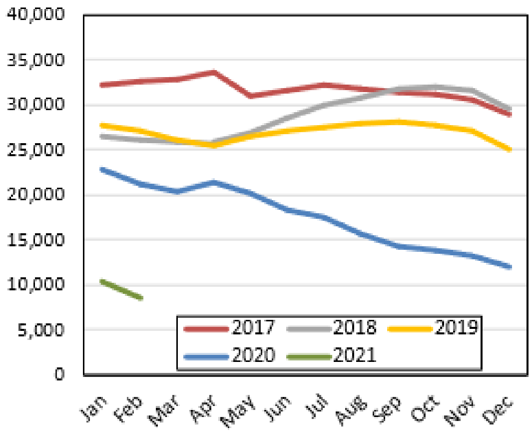
Housing Market Indicators for Tennessee

3 Supply

Strong demand and lack of new supply are depleting inventories in Tennessee. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in Tennessee (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Tennessee	2019	2020
Entry-Level	1.9	1.2
Move-Up	7.8	4.6
Overall	2.5	1.5

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

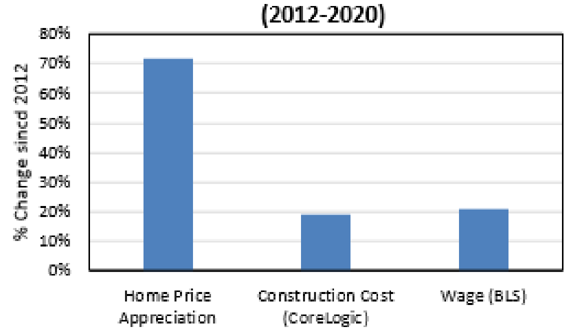
Since 2012, Tennessee has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The Tennessee housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in TN (2012-2020)



5 Recap

Tennessee has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

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Housing Market Indicators for Virginia

The Paradox of Accessible Lending:

When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

1 Home Prices and Affordability

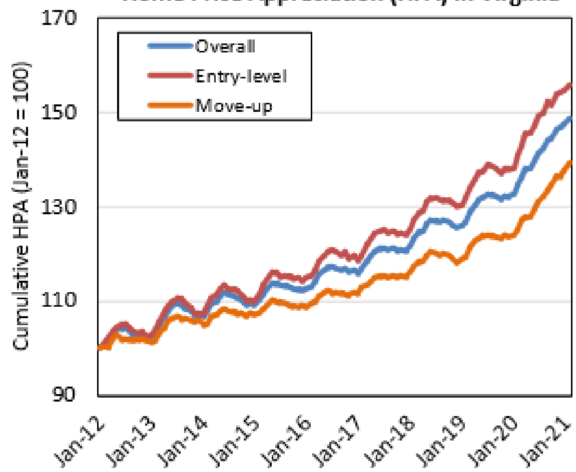
Since 2012, home price appreciation (HPA) in Virginia has totaled 49%. In the entry-level, HPA has totaled 56%, but only 39% in the move-up segment.

Had the entry-level segment experienced the same HPA as the move-up segment, then the median entry-level buyer today would be paying $27,000 less for their home.

Home price appreciation has accelerated over the last year. HPA in February 2021 was 10.4%, up from 6.2% a year ago and is expected to accelerate further.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.

Home Price Appreciation (HPA) in Virginia



2 Demand

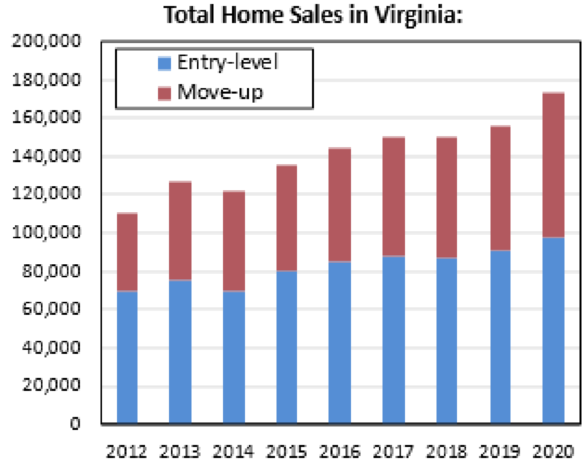
Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2012.

Median Borrower Statistics in Virginia:

2020	All	FHA
Note Rate	3.13	3.13
Combined LTV	95	99
Credit Score	748	672
Debt-to-Income	38	43
Down payment (DP)	$15,000	$2,600
% with DP assistance	N/A	31%
% FTBs	53%	78%
MRI*	7.8%	25.6%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.

Total Home Sales in Virginia:



Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

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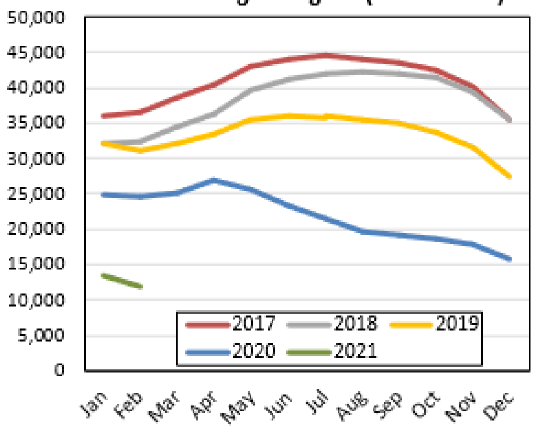
Housing Market Indicators for Virginia

3 Supply

Strong demand and lack of new supply are depleting inventories in Virginia. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in Virginia (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Virginia	2019	2020
Entry-Level	2.5	1.5
Move-Up	6.7	4.2
Overall	3.0	1.8

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

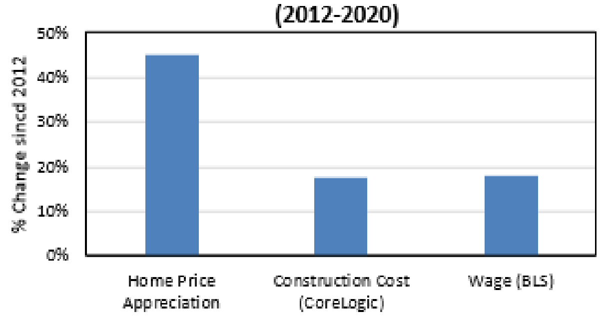
Since 2012, Virginia has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

Source: AEI Housing Center, www.aei.org/housing.

4 Market Fundamentals

The Virginia housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in Virginia (2012-2020)



5 Recap

Virginia has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

AEI Housing Center

Additional data and methodology available upon request.
Edward Pinto - pintoedward1@gmail.com
Tobias Peter - tobias.peter@aei.org

Housing Market Indicators for Wyoming

The Paradox of Accessible Lending:

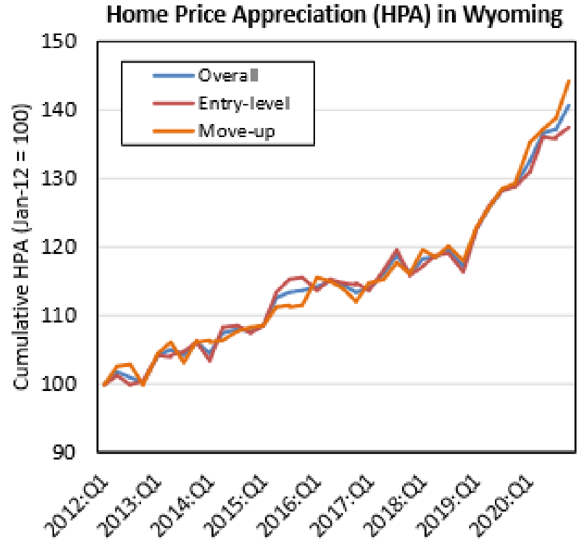
When supply is constrained, credit easing and extremely low interest rates are capitalized into higher home prices, making entry-level homes less affordable.

1 Home Prices and Affordability

Since 2012, home price appreciation (HPA) in Wyoming has totaled 41%. In the entry-level, HPA has totaled 37%, but 44% in the move-up segment.

Home price appreciation has noticeably ticked up starting in 2019 and remains very strong. HPA in 2020:Q4 was 9.0%, slightly down from 10.1% a year ago.

Due to faster HPA, home buyers, especially at the entry-level, have to spend more.



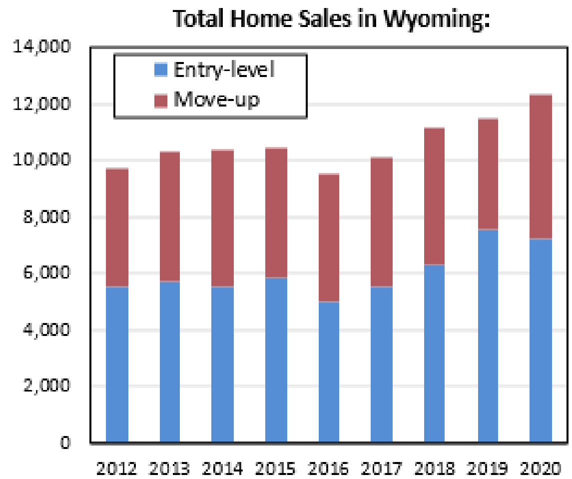
2 Demand

Due to the Fed's low mortgage rates and a wide credit box, home sales have been growing strongly since 2016.

Median Borrower Statistics in Wyoming:

2020	All	FHA
Note Rate	3.00	3.13
Combined LTV	95	99
Credit Score	742	672
Debt-to-Income	37	42
Down payment (DP)	$12,800	$2,500
% with DP assistance	N/A	19%
% FTBs	45%	68%
MRI*	8.7%	22.7%

* Share of borrowers that would be expected to default under a severe stress event like the last financial crisis.



Source: AEI Housing Center, www.aei.org/housing.

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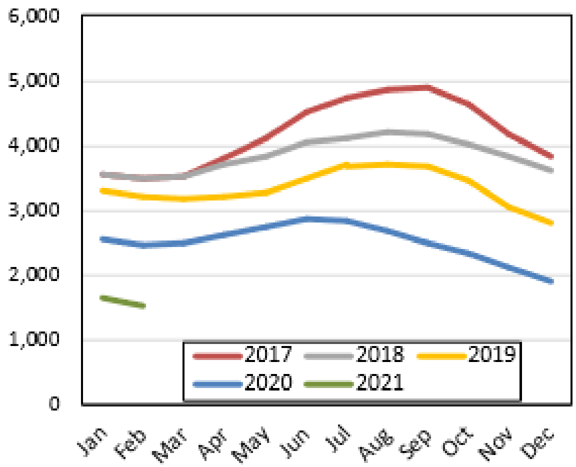
Housing Market Indicators for Wyoming

3 Supply

Strong demand and lack of new supply are depleting inventories in Wyoming. This occurrence has been exacerbated by Work from Home flexibilities. In 2021, inventory levels were far below prior years' levels.

Active Listing in Wyoming (Realtor.com)



Months' supply is at record lows. It measures how many months it would take for current inventories to be depleted at the current sale's pace.

Months' Supply* in Wyoming	2019	2020
Entry-Level	3.2	2.4
Move-Up	15.1	9.9
Overall	3.9	2.8

*Data are for existing homes. For the entire market, 6 months is generally considered the equilibrium point.

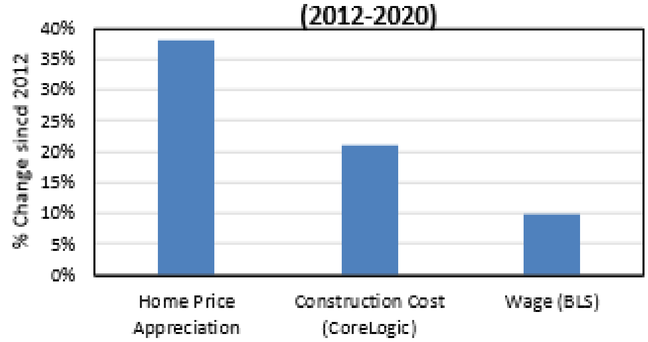
Land use restrictions and zoning laws are driving up land prices and construction costs, which are holding back new construction activity in many jurisdictions.

Since 2012, Wyoming has experienced inadequate levels of new construction to keep up with job growth. This has resulted in rapid home price appreciation.

4 Market Fundamentals

The Wyoming housing market has been far from equilibrium for quite some time. A lack of supply combined with the Fed's low rates and a wide credit box have driven up home prices far faster than market fundamentals (such as incomes or construction costs), which is indicative of unsustainable home price growth.

Change in Market Fundamentals in Wyoming (2012-2020)



5 Recap

Wyoming has a broken housing ladder. This is the result of home prices rising much faster than incomes, which makes it harder and harder for aspiring homebuyers to climb onto the first rungs.

Low-income homebuyers have been subjected to the inflationary effects of dangerous leverage and extremely low interest rates combined with unduly restrictive land use regulations.

The land use regulatory structure that is widespread in the United States is a legacy of the federal government's racially based zoning and land use regime that was conceived and implemented 100 years ago. This structure continues in force today in thousands of state and local land use codes.

Work from Home flexibilities are creating demand shifts and homebuyers are taking advantage of wide price differences across the United States- differences that as largely the result of restrictive land use regulations.

Source: AEI Housing Center, www.aei.org/housing.

AEI Housing Center

Appendix B:

High risk loans harm low-income buyers by worsening affordability and increasing foreclosure risk. This is not what responsible access to credit ought to look like. In the past, such policies have created illusory wealth for recent buyers as demonstrated above. The same thing is happening again during the current housing boom. When land prices eventually deflate again, those hurt will mostly be low-income and minority households.

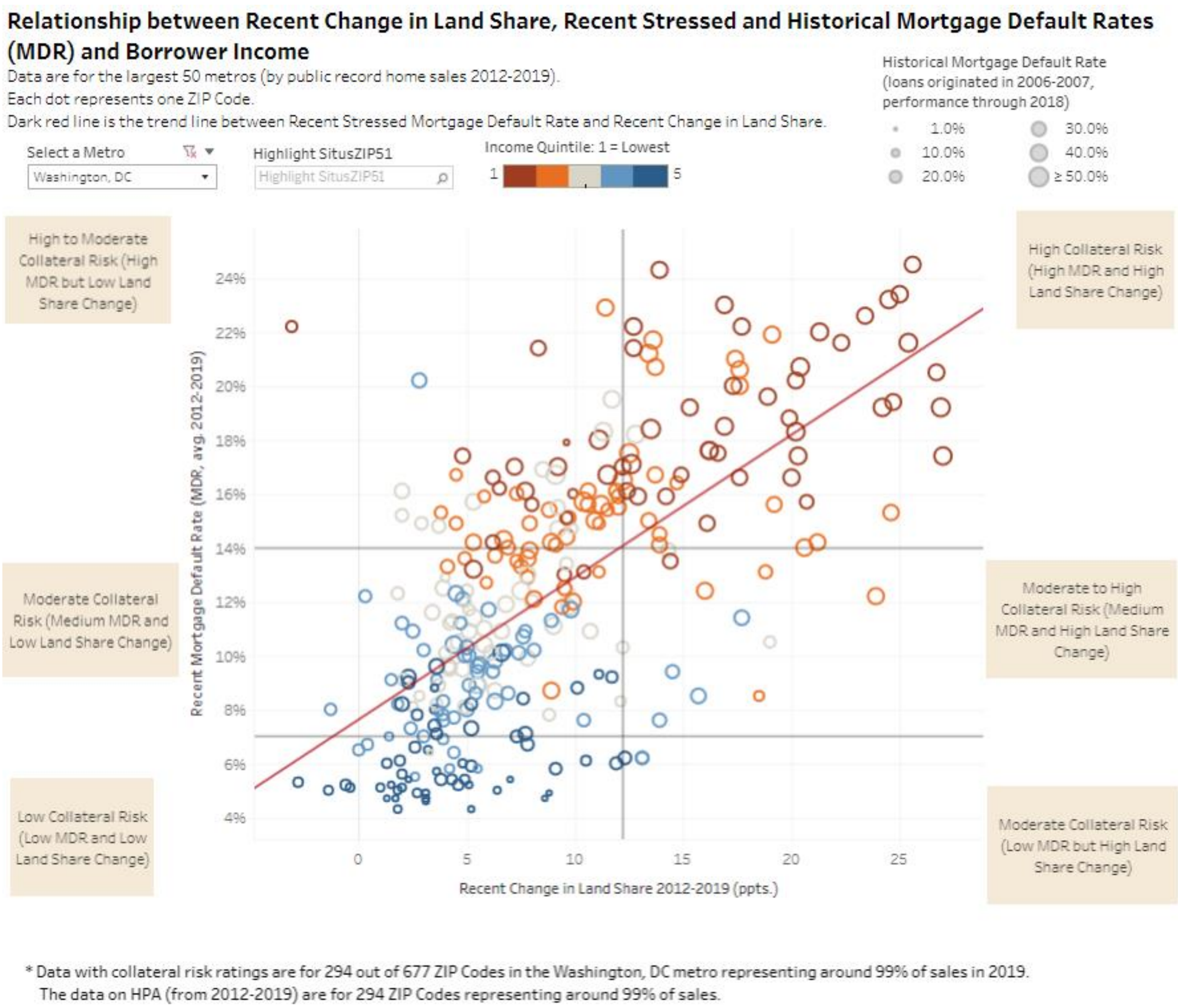
In the main text we highlighted the relationship between change in land share, recent stressed and historical mortgage default rates, and borrower income or minority share for the Phoenix metros. This section highlights other major metros. The trends are very similar in each one of the metros, with low-income and minority borrowers disproportionally harmed by rising entry-level home prices.

There are two charts for each metro: *The **first one examines** the relationship between change in land share, recent stressed and historical mortgage default rates, and **borrower income.** The s**econd one examines** the same relationship but instead of borrower income, focuses on **borrower minority share.***

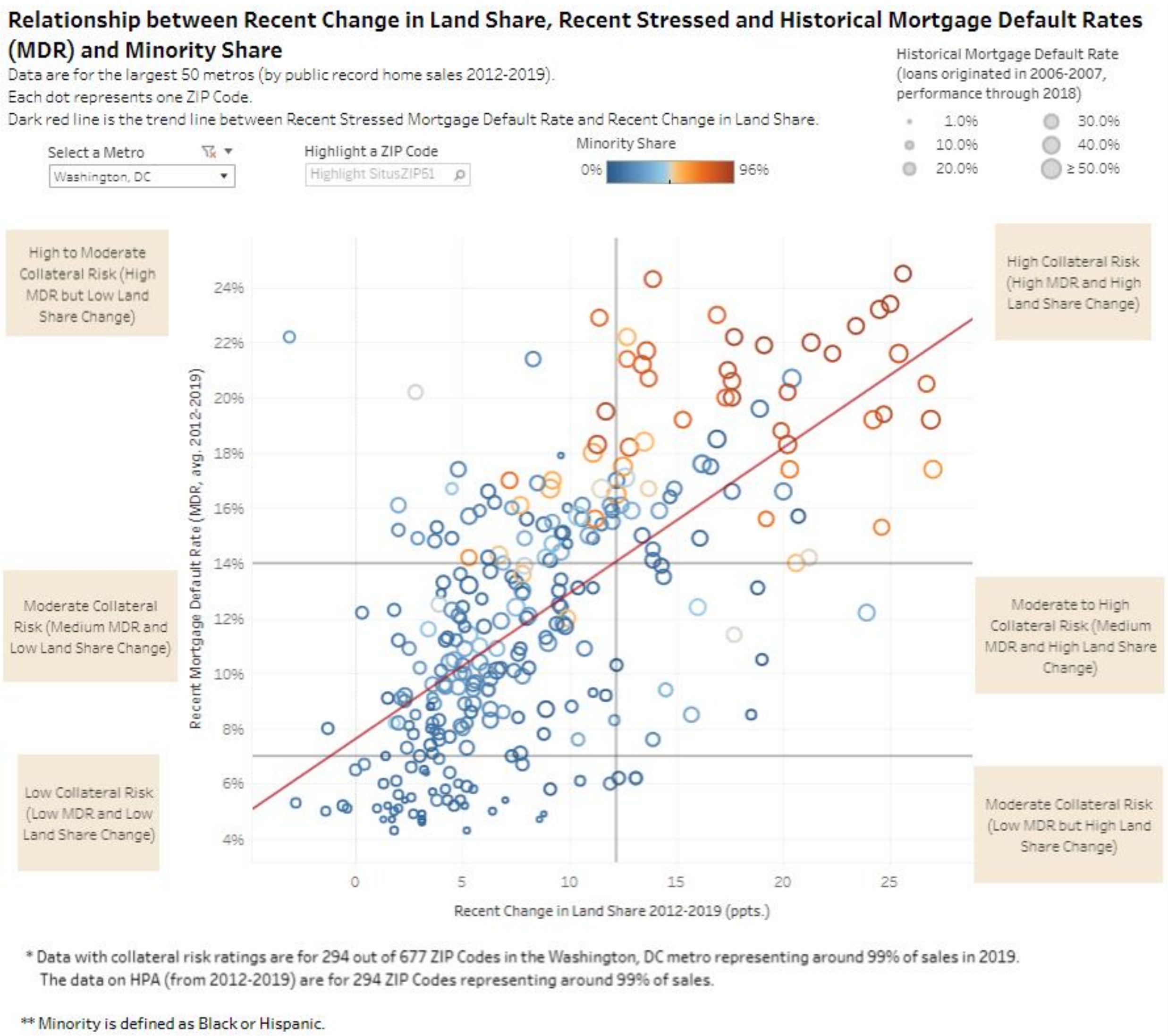
Each circle represents one ZIP code. The x-axis displays the percentage point increase in a ZIP codes land share change between 2012 and 2019. The y-axis displays a ZIP codes measure of mortgage risk over the same period as measured by the MDR. The size of the circle indicates a ZIP codes historical MDR; the larger the circle is, the more mortgages that were originated in 2006 and 2007 defaulted over the ensuing years. The coloring of the dot indicates into which income quintile the borrowers in that ZIP codes fall.

Multiple strong positive relationships emerge. The circles tend to slope upward from lower left to upper right and, as they do, they become larger in size and more orange. The interpretation is that lower income/minority buyers tend to purchase in ZIP codes that have experienced the largest land share increase and the highest levels of mortgage risk. Coincidentally, these are the same ZIP codes that were disproportionally affected by foreclosures when the last housing cycle turned.

Washington, DC

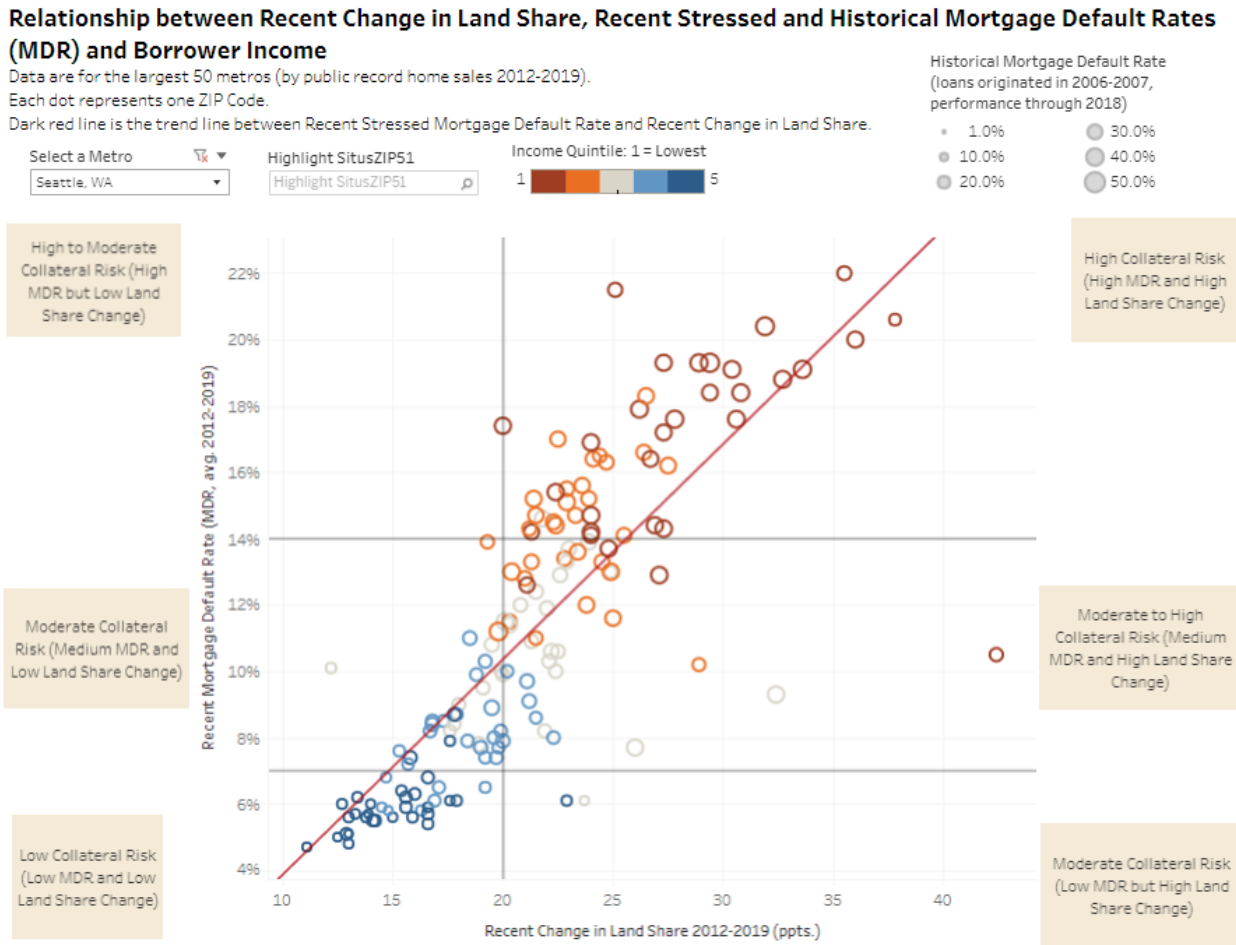


Source: FHFA and AEI Housing Center.



Source: FHFA and AEI Housing Center.

Seattle, WA

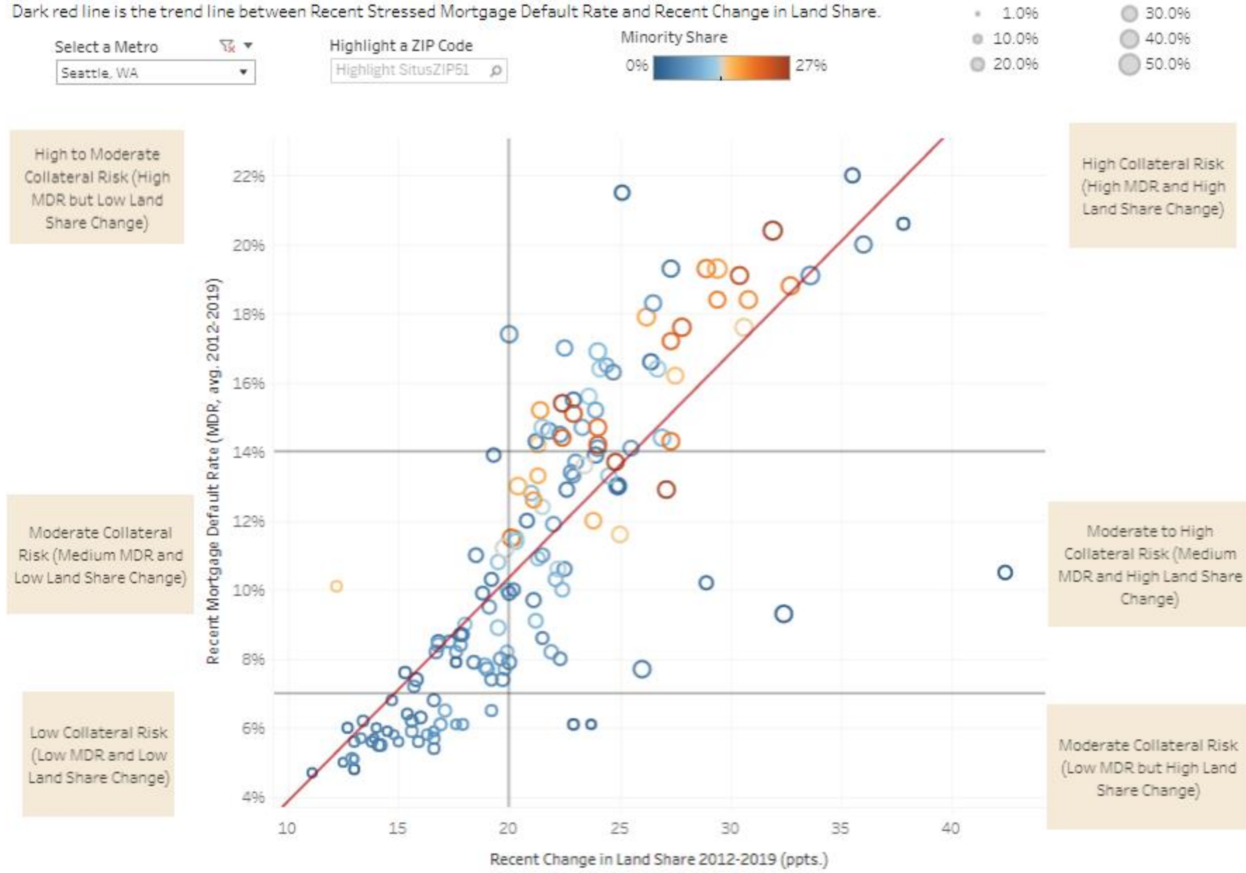


* Data with collateral risk ratings are for 153 out of 218 ZIP Codes in the Seattle, WA metro representing around 100% of sales in 2019. The data on HPA (from 2012-2019) are for 153 ZIP Codes representing around 100% of sales.

Source: FHFA and AEI Housing Center.

Relationship between Recent Change in Land Share, Recent Stressed and Historical Mortgage Default Rates (MDR) and Minority Share

Data are for the largest 50 metros (by public record home sales 2012-2019).
Each dot represents one ZIP Code.
Dark red line is the trend line between Recent Stressed Mortgage Default Rate and Recent Change in Land Share.

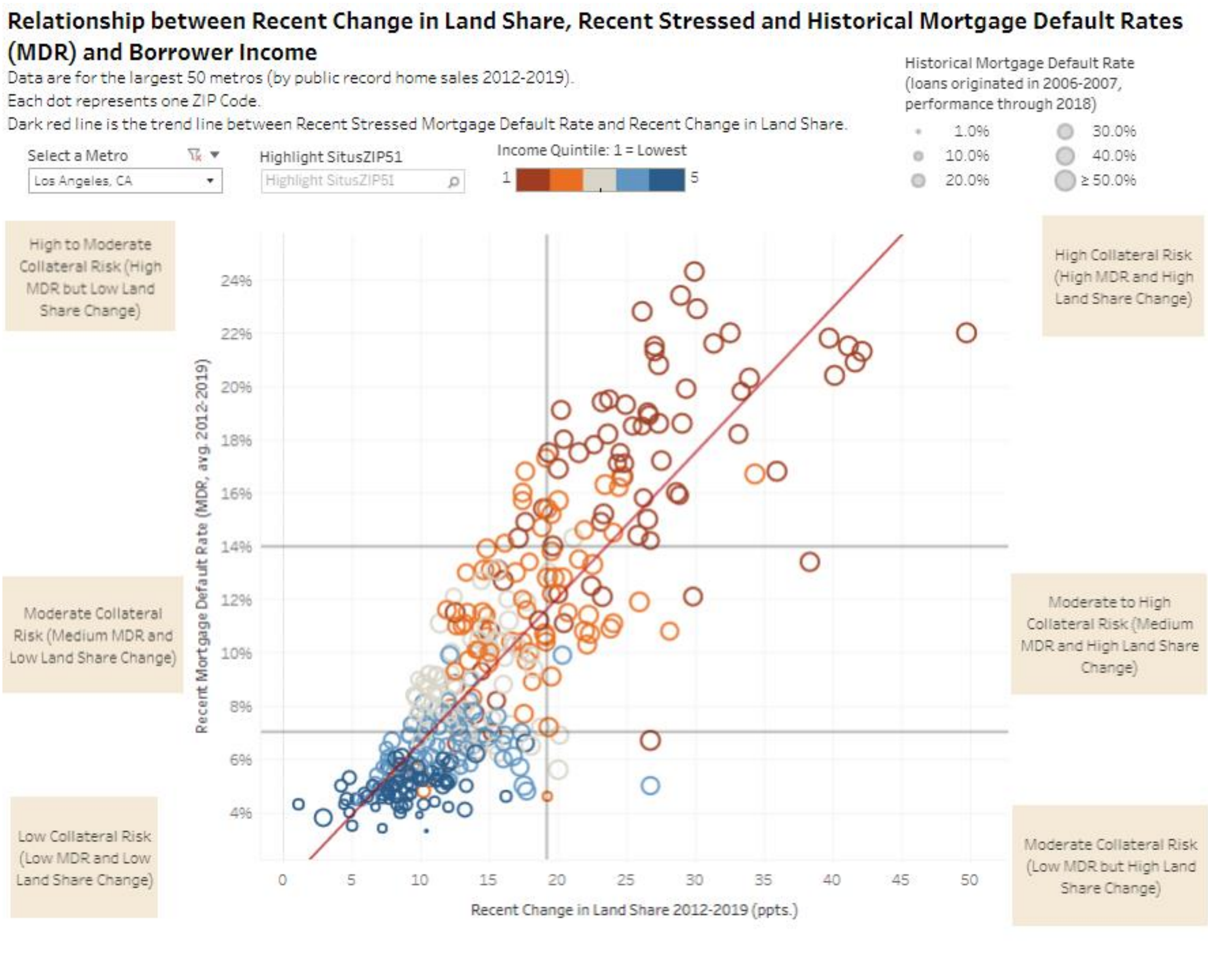


* Data with collateral risk ratings are for 153 out of 218 ZIP Codes in the Seattle, WA metro representing around 100% of sales in 2019. The data on HPA (from 2012-2019) are for 153 ZIP Codes representing around 100% of sales.

** Minority is defined as Black or Hispanic.

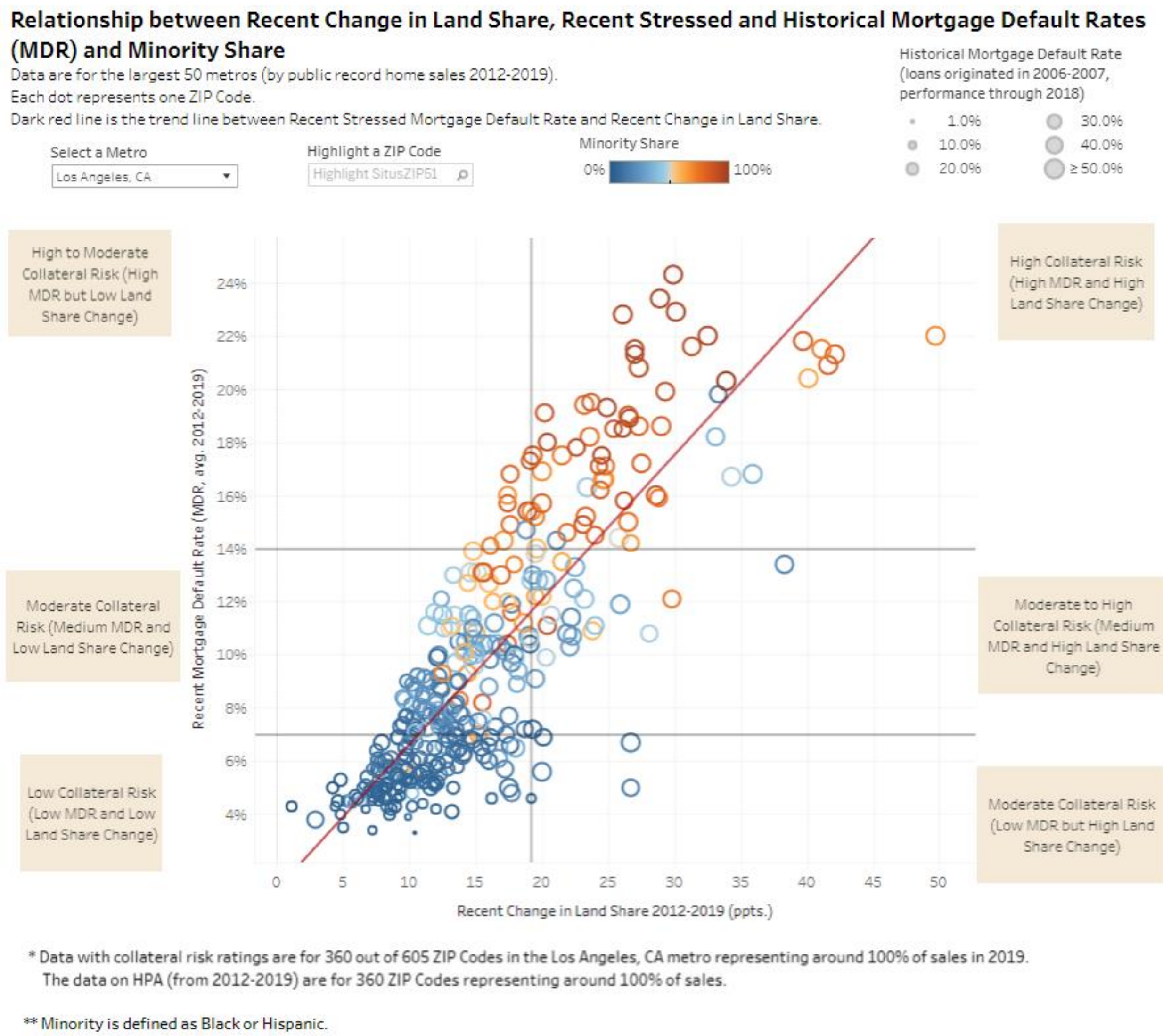
Source: FHFA and AEI Housing Center.

Los Angeles, CA



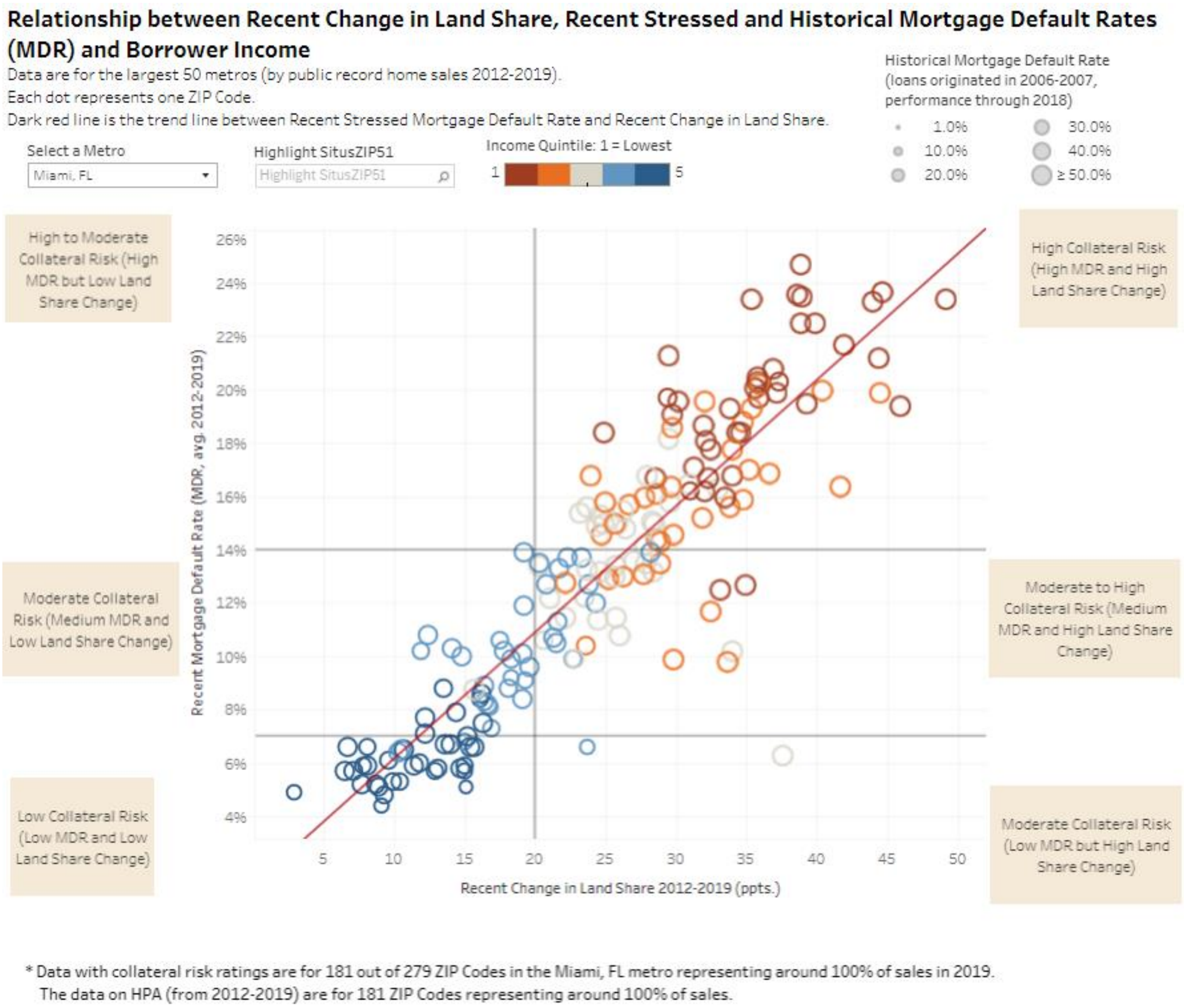
* Data with collateral risk ratings are for 360 out of 605 ZIP Codes in the Los Angeles, CA metro representing around 100% of sales in 2019.
The data on HPA (from 2012-2019) are for 360 ZIP Codes representing around 100% of sales.

Source: FHFA and AEI Housing Center.

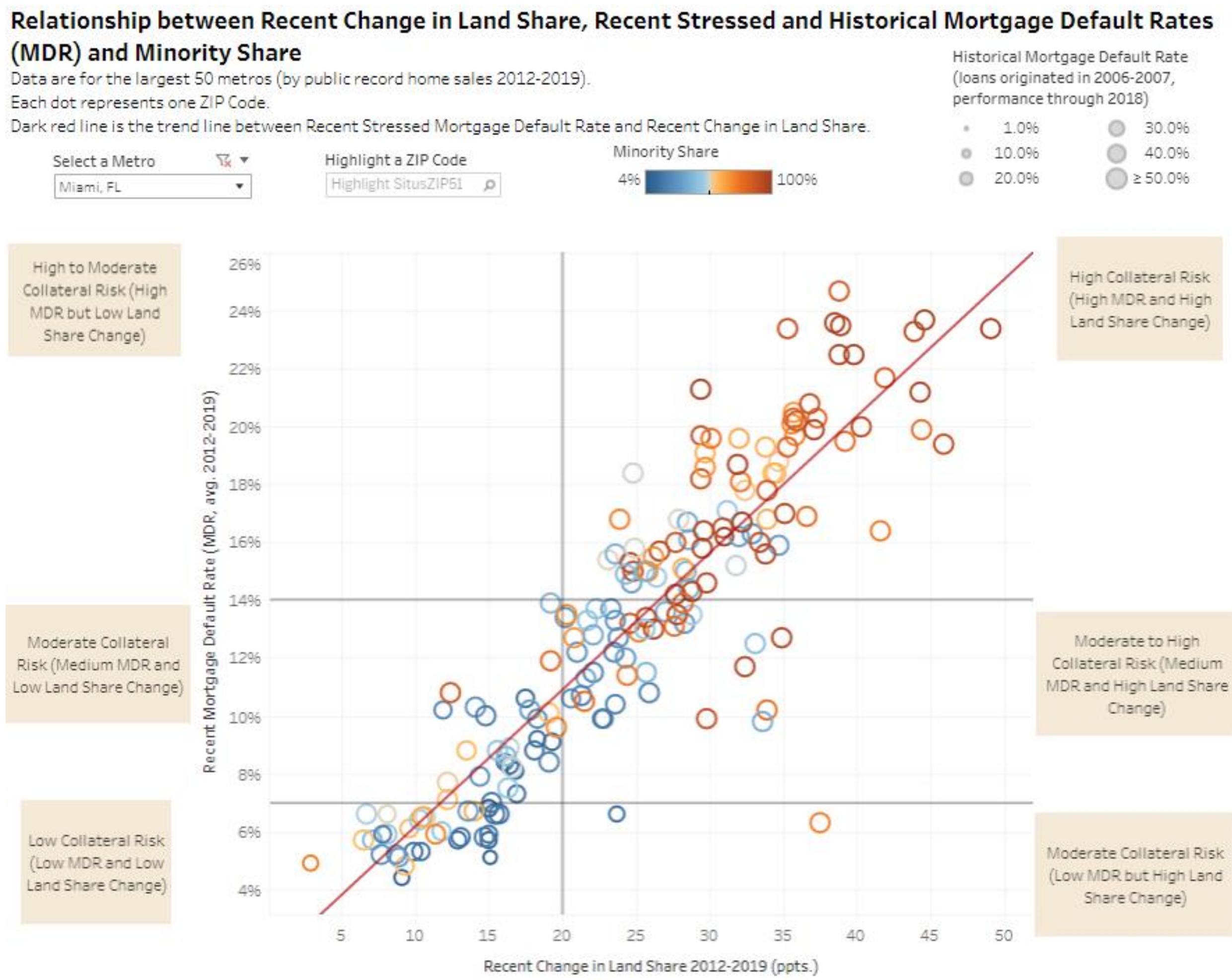


Source: FHFA and AEI Housing Center.

Miami



Source: FHFA and AEI Housing Center.

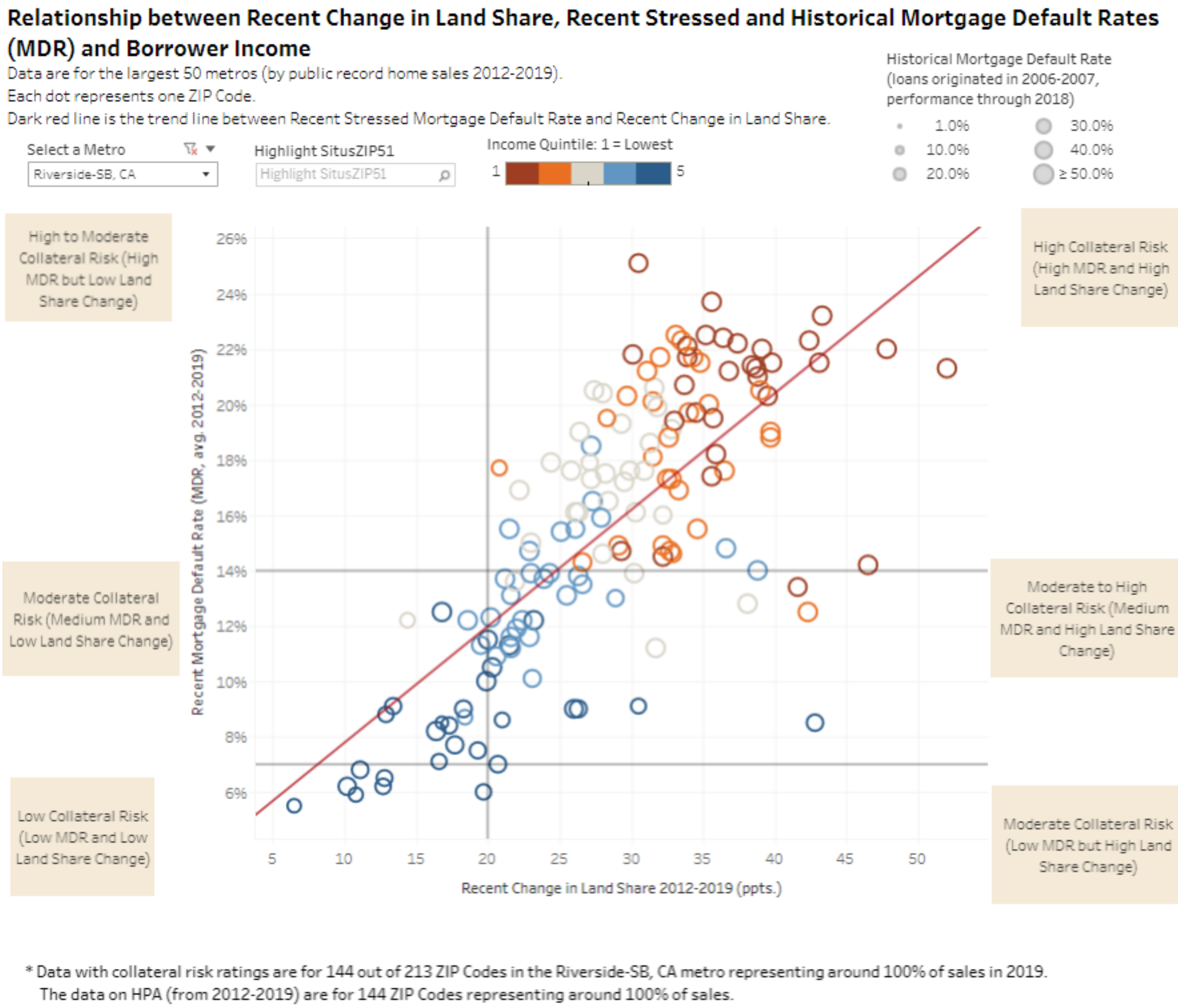


* Data with collateral risk ratings are for 181 out of 279 ZIP Codes in the Miami, FL metro representing around 100% of sales in 2019.
The data on HPA (from 2012-2019) are for 181 ZIP Codes representing around 100% of sales.

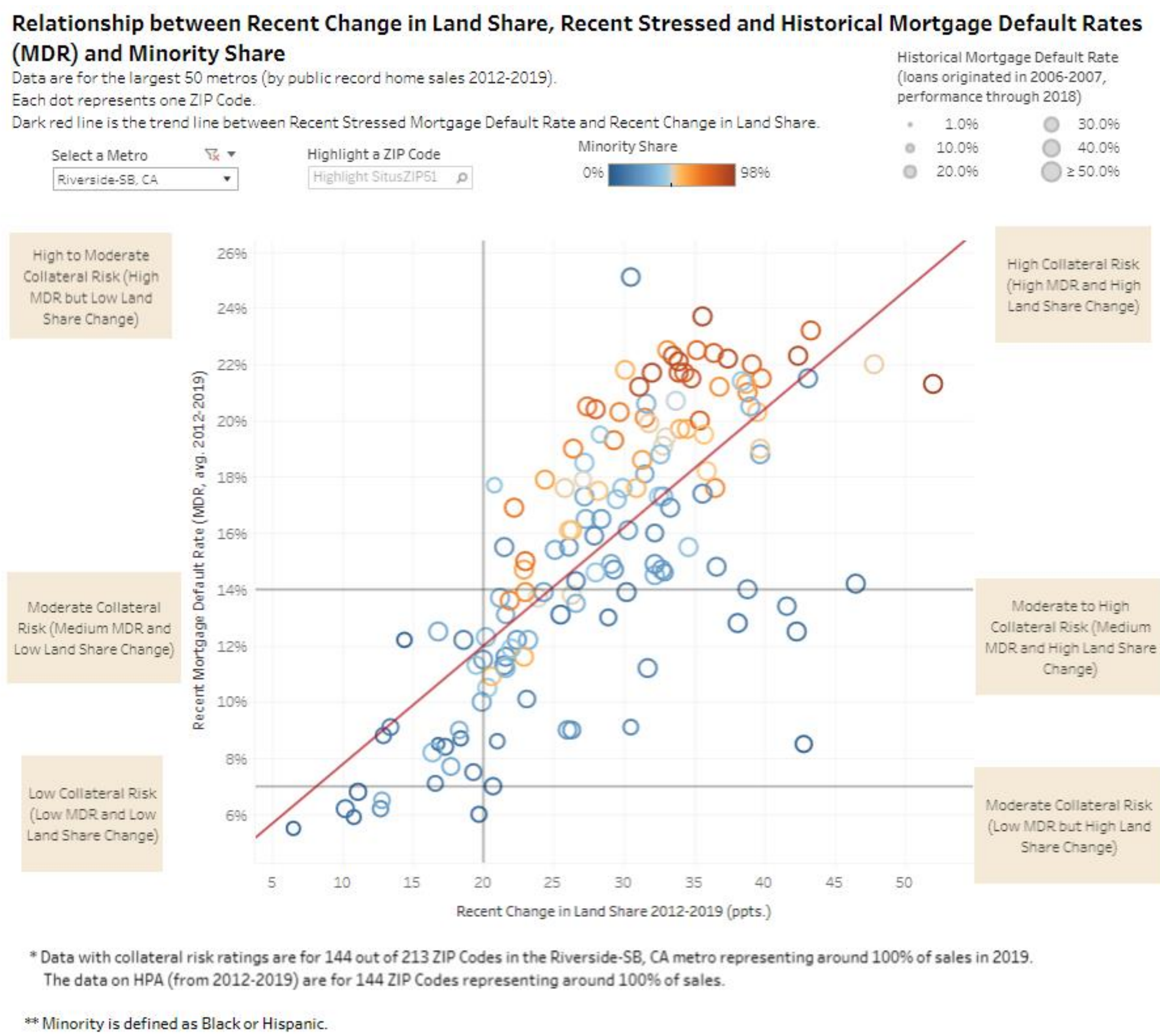
** Minority is defined as Black or Hispanic.

Source: FHFA and AEI Housing Center.

Riverside-San Bernardino

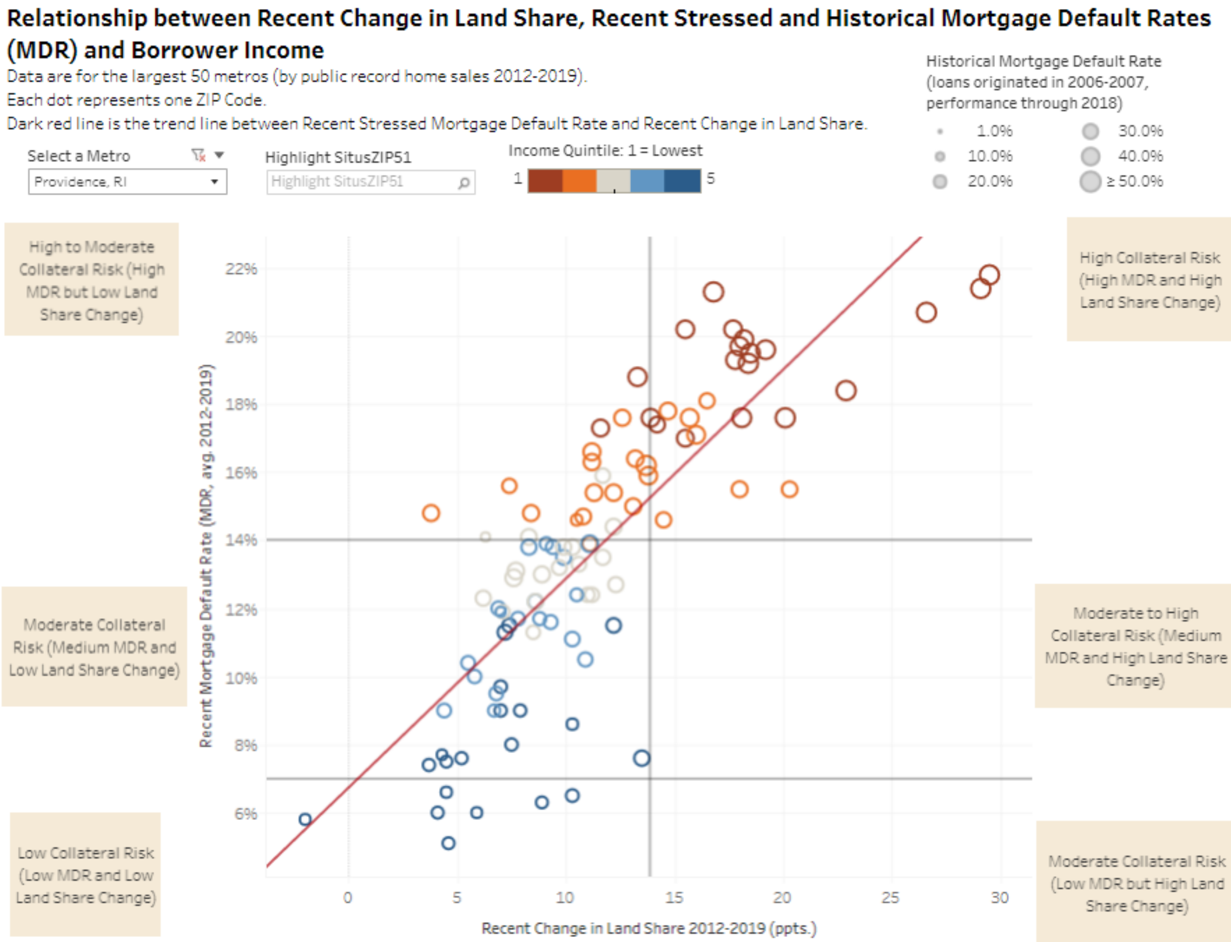


Source: FHFA and AEI Housing Center.



Source: FHFA and AEI Housing Center.

Providence, RI

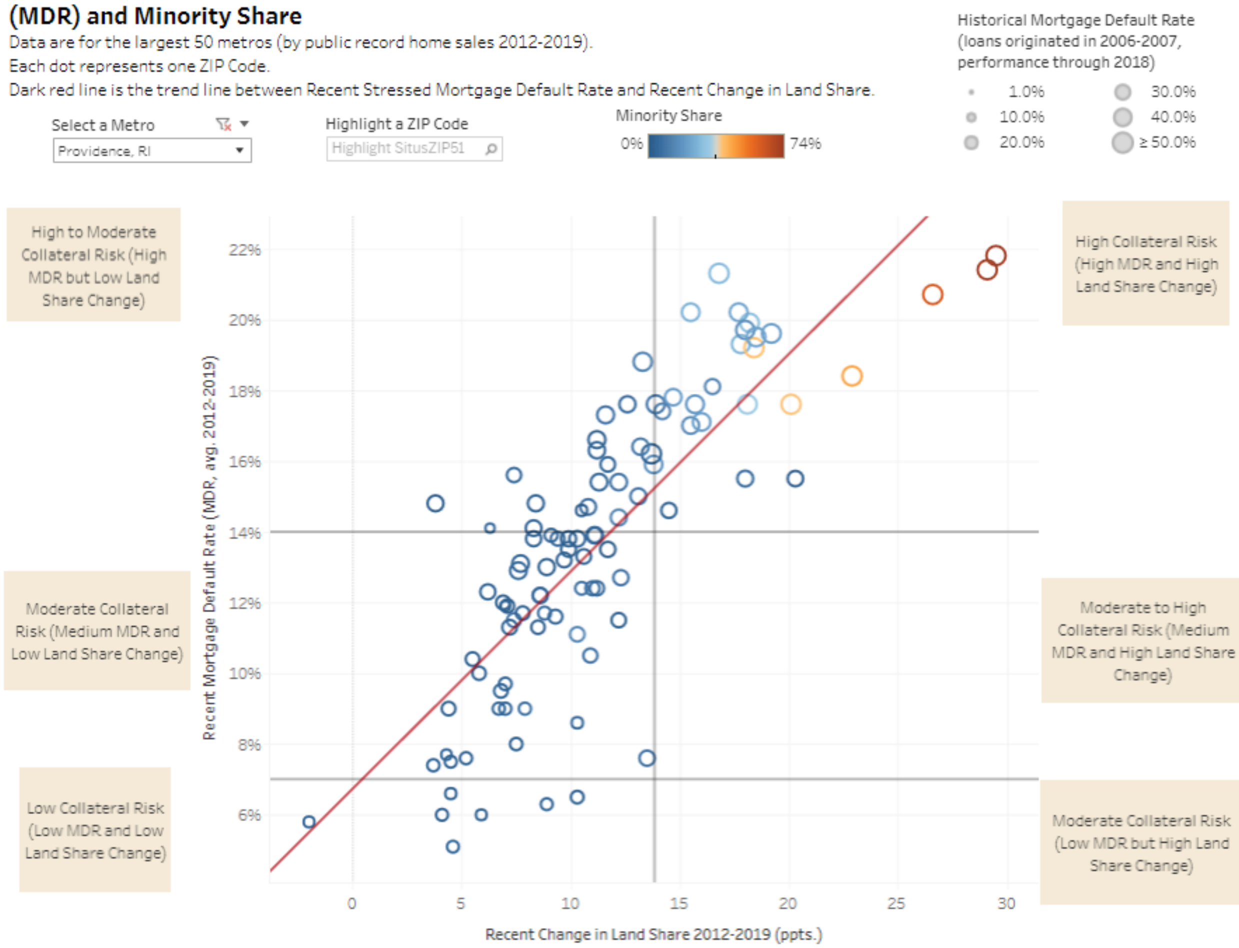


* Data with collateral risk ratings are for 100 out of 132 ZIP Codes in the Providence, RI metro representing around 100% of sales in 2019.
The data on HPA (from 2012-2019) are for 100 ZIP Codes representing around 100% of sales.

Source: FHFA and AEI Housing Center.

Relationship between Recent Change in Land Share, Recent Stressed and Historical Mortgage Default Rates (MDR) and Minority Share

Data are for the largest 50 metros (by public record home sales 2012-2019).
Each dot represents one ZIP Code.
Dark red line is the trend line between Recent Stressed Mortgage Default Rate and Recent Change in Land Share.

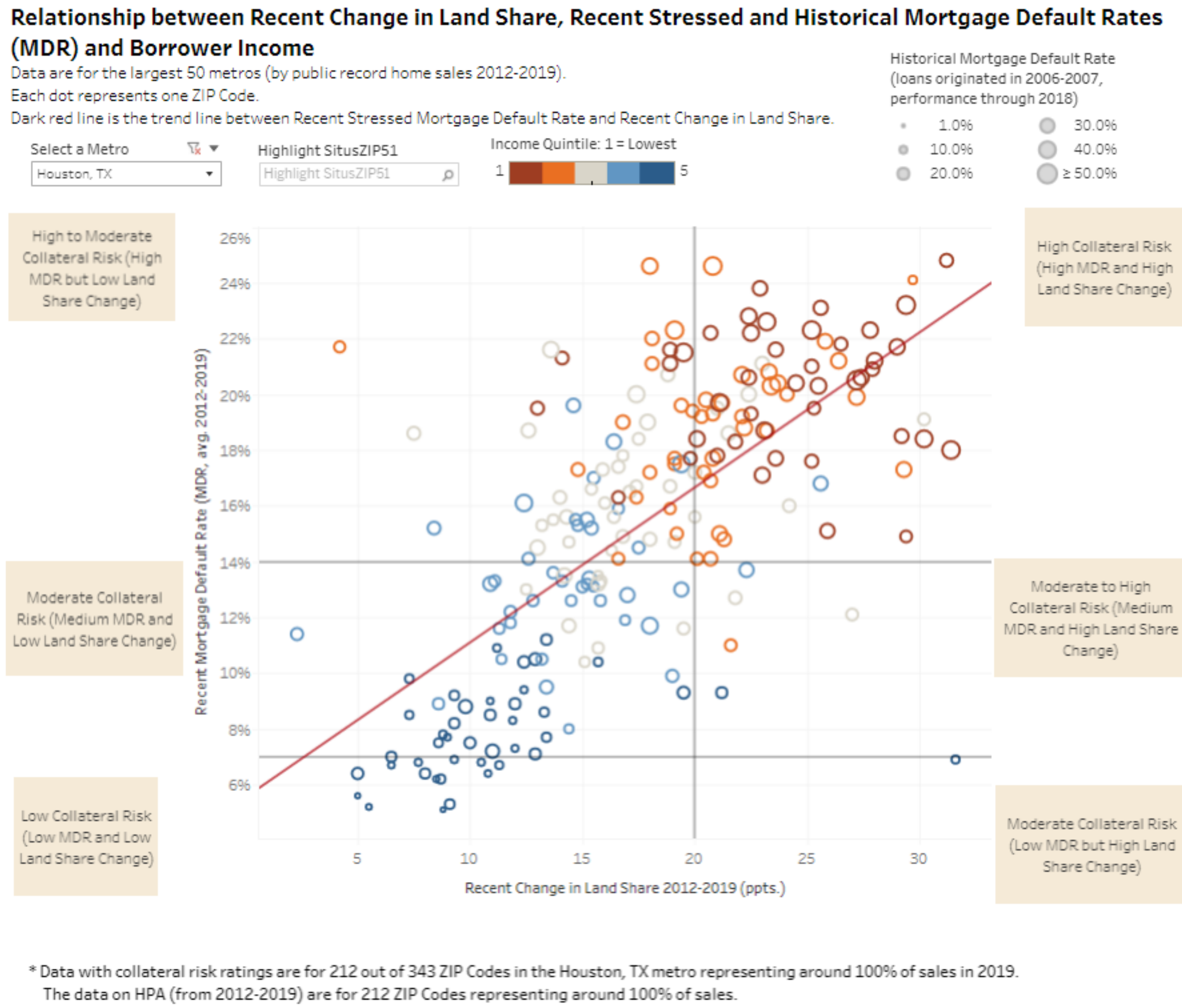


* Data with collateral risk ratings are for 100 out of 132 ZIP Codes in the Providence, RI metro representing around 100% of sales in 2019. The data on HPA (from 2012-2019) are for 100 ZIP Codes representing around 100% of sales.

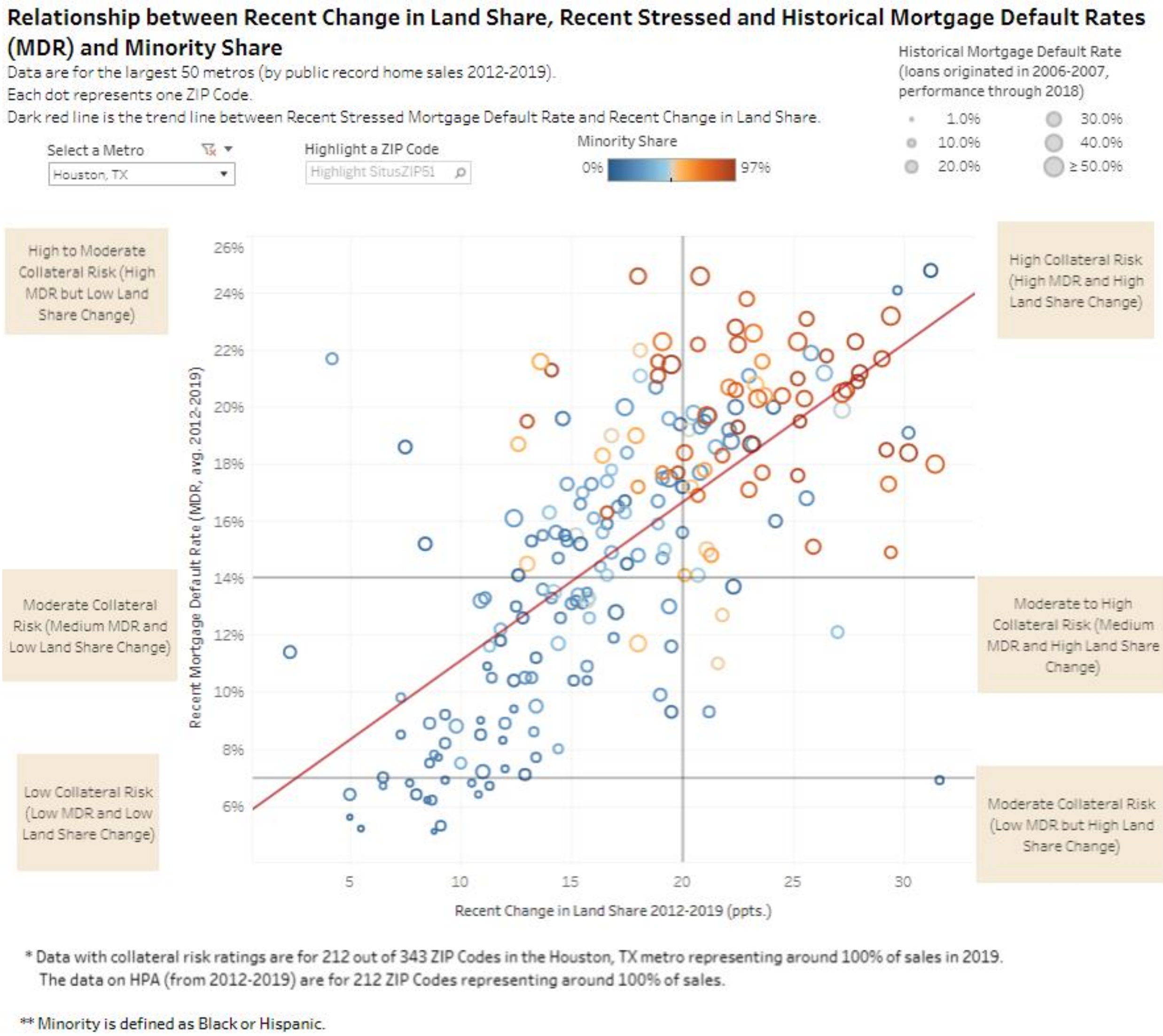
** Minority is defined as Black or Hispanic.

Source: FHFA and AEI Housing Center.

Houston

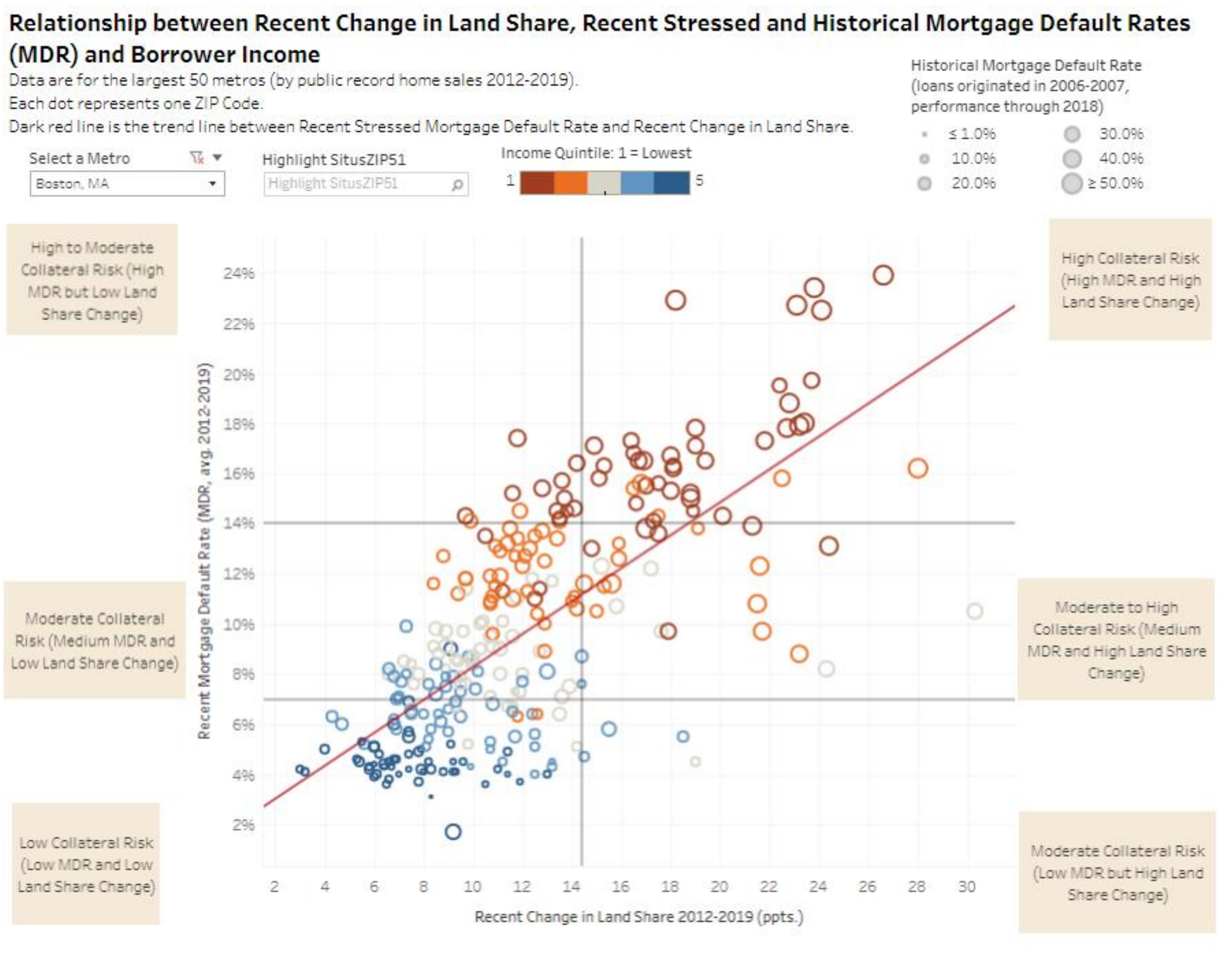


Source: FHFA and AEI Housing Center.



Source: FHFA and AEI Housing Center.

Boston



* Data with collateral risk ratings are for 269 out of 358 ZIP Codes in the Boston, MA metro representing around 100% of sales in 2019.
The data on HPA (from 2012-2019) are for 271 ZIP Codes representing around 100% of sales.

Source: FHFA and AEI Housing Center.

Relationship between Recent Change in Land Share, Recent Stressed and Historical Mortgage Default Rates (MDR) and Minority Share

Data are for the largest 50 metros (by public record home sales 2012-2019).
Each dot represents one ZIP Code.
Dark red line is the trend line between Recent Stressed Mortgage Default Rate and Recent Change in Land Share.

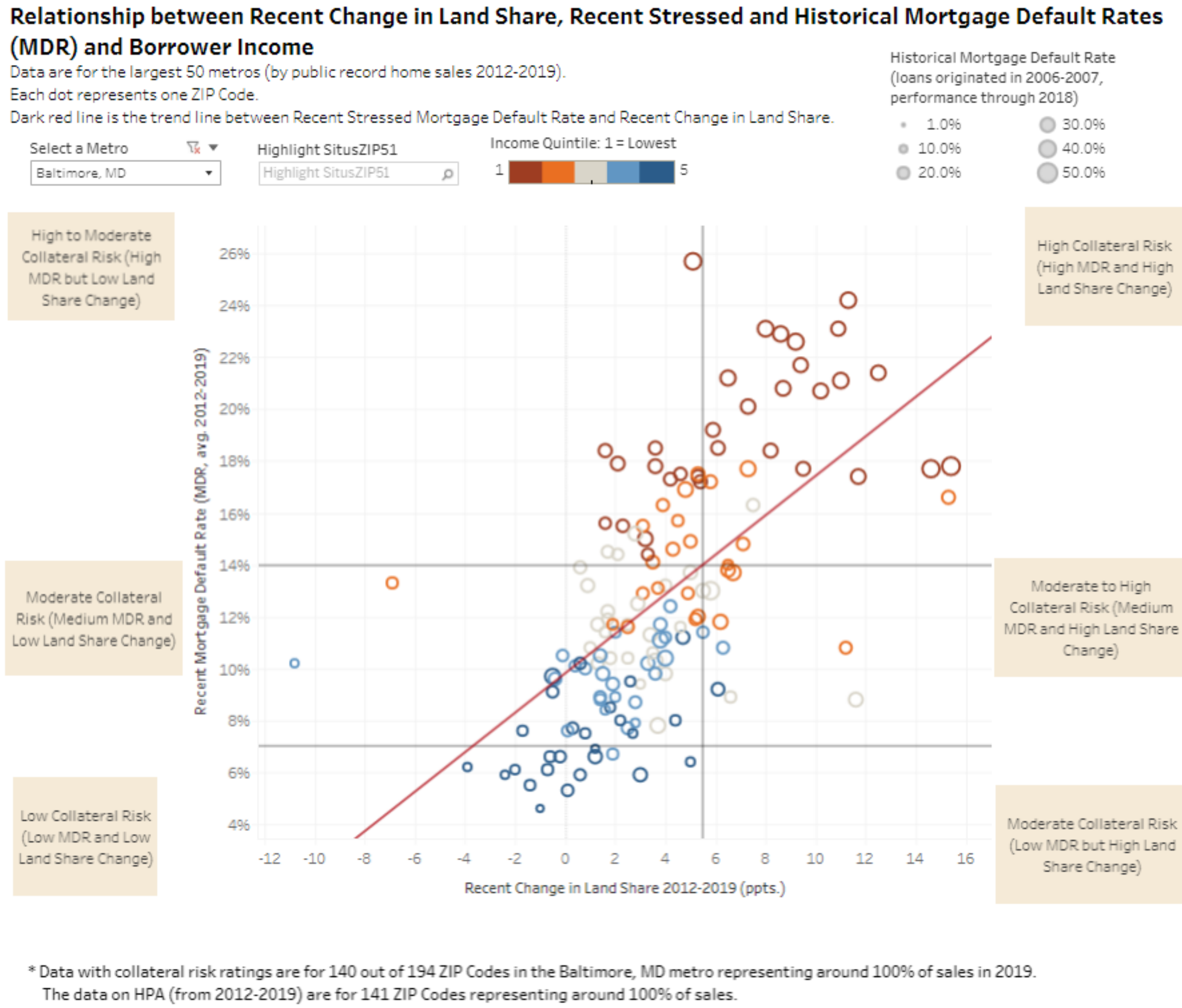
Historical Mortgage Default Rate
(loans originated in 2006-2007,
performance through 2018)

* Data with collateral risk ratings are for 269 out of 358 ZIP Codes in the Boston, MA metro representing around 100% of sales in 2019.
The data on HPA (from 2012-2019) are for 271 ZIP Codes representing around 100% of sales.

** Minority is defined as Black or Hispanic.

Source: FHFA and AEI Housing Center.

Baltimore



Source: FHFA and AEI Housing Center.

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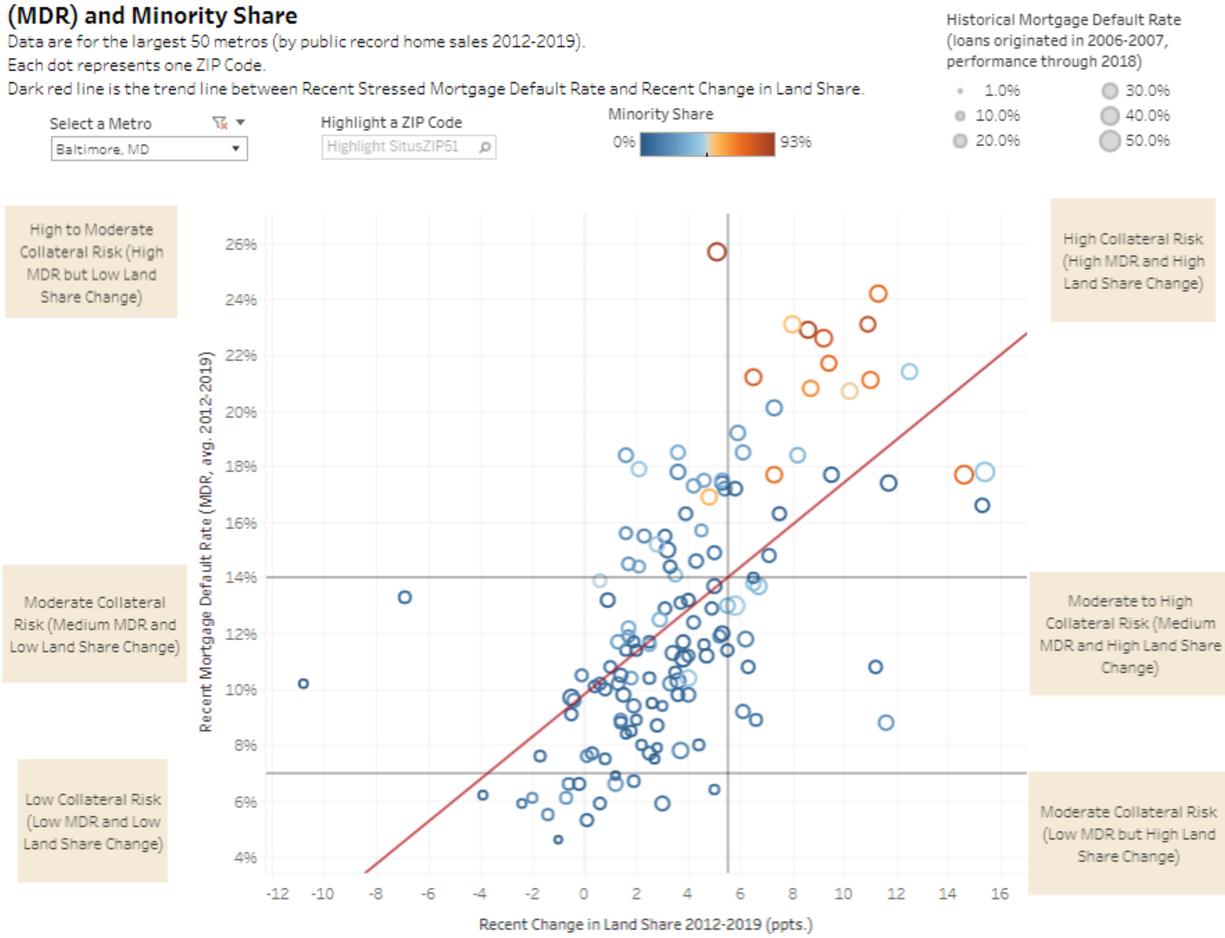
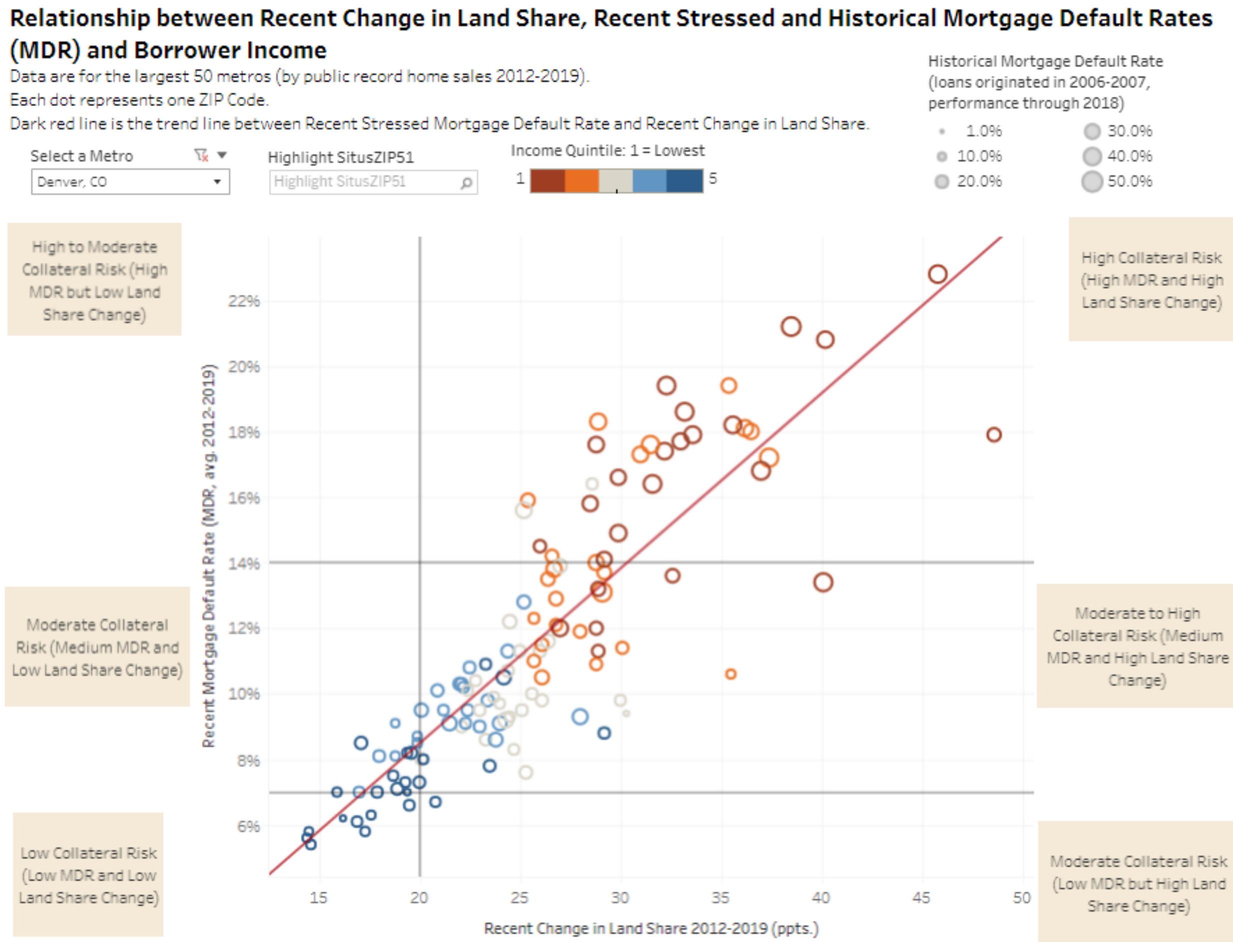


* Data with collateral risk ratings are for 140 out of 194 ZIP Codes in the Baltimore, MD metro representing around 100% of sales in 2019. The data on HPA (from 2012-2019) are for 141 ZIP Codes representing around 100% of sales.

** Minority is defined as Black or Hispanic.

Source: FHFA and AEI Housing Center.

Denver



* Data with collateral risk ratings are for 120 out of 178 ZIP Codes in the Denver, CO metro representing around 100% of sales in 2019.
The data on HPA (from 2012-2019) are for 120 ZIP Codes representing around 100% of sales.

Source: FHFA and AEI Housing Center.

Relationship between Recent Change in Land Share, Recent Stressed and Historical Mortgage Default Rates (MDR) and Minority Share

Data are for the largest 50 metros (by public record home sales 2012-2019).
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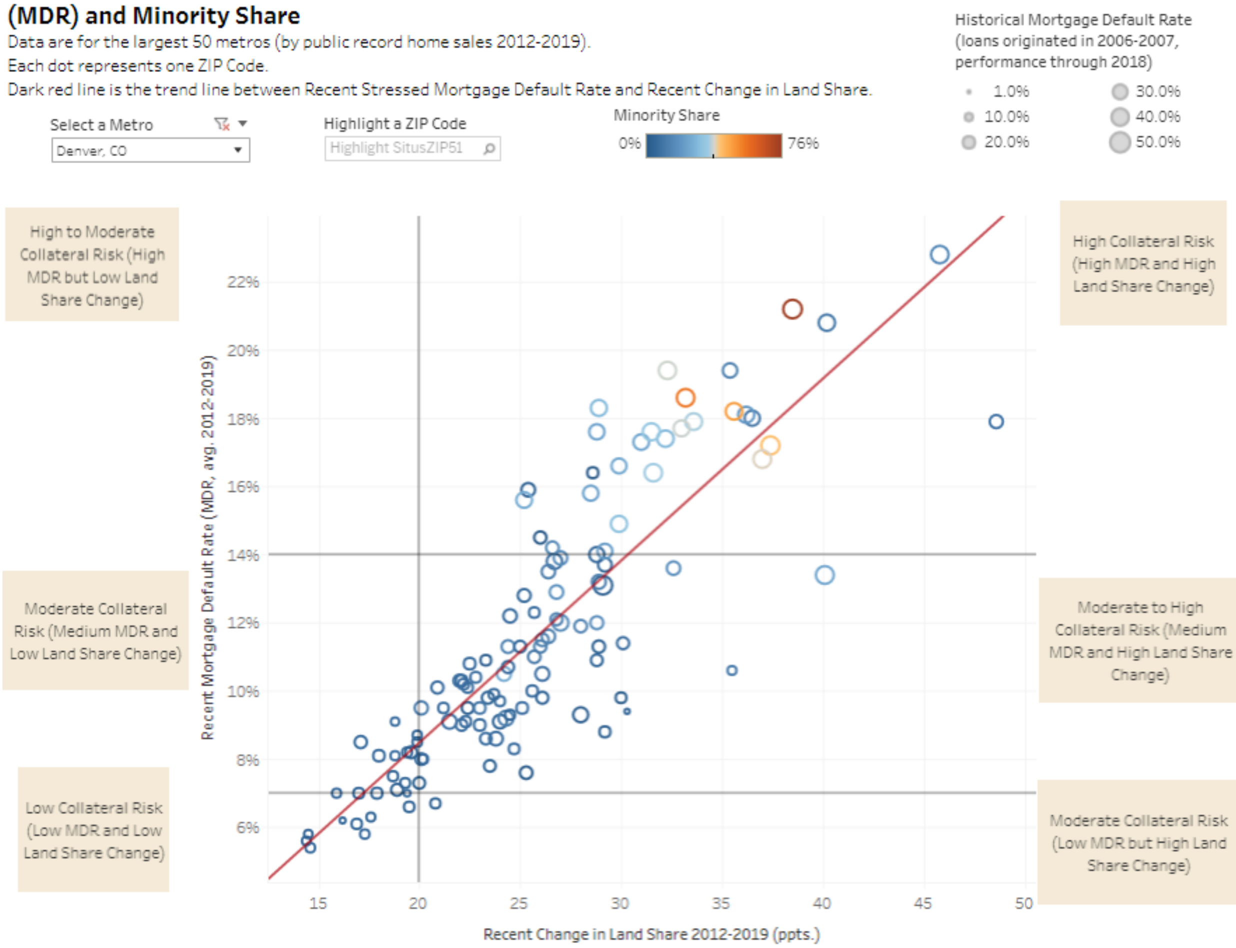

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** Minority is defined as Black or Hispanic.

Source: FHFA and AEI Housing Center.