



# *Data Talk* Institutional Investors' Impact on the Housing Market

#LiveAtUrban



# Institutional Investors and the U.S. Housing Recovery

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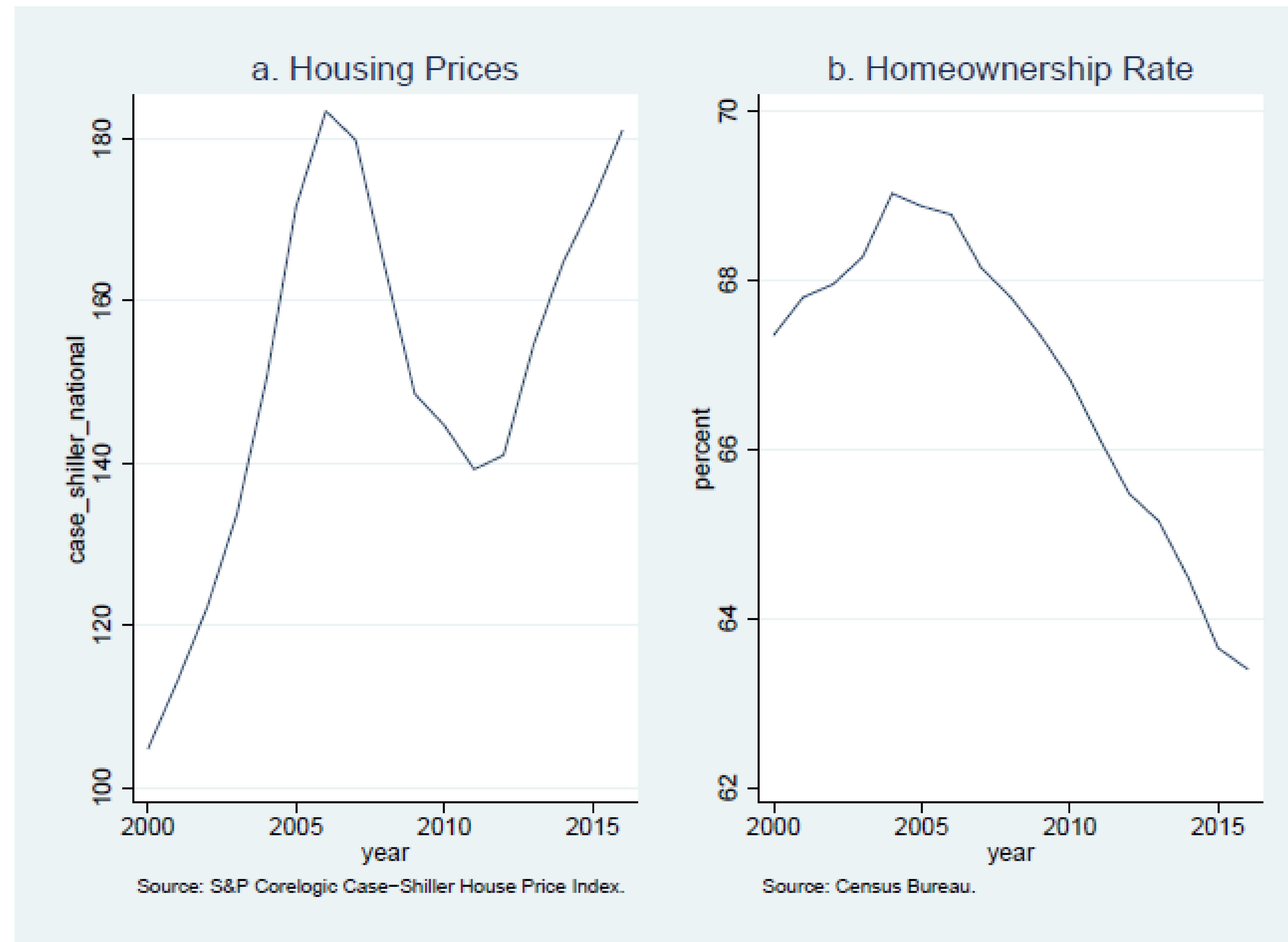
Lauren Lambie-Hanson, Wenli Li, and Michael Slonkosky  
Federal Reserve Bank of Philadelphia\*

Urban Institute  
February 5, 2020

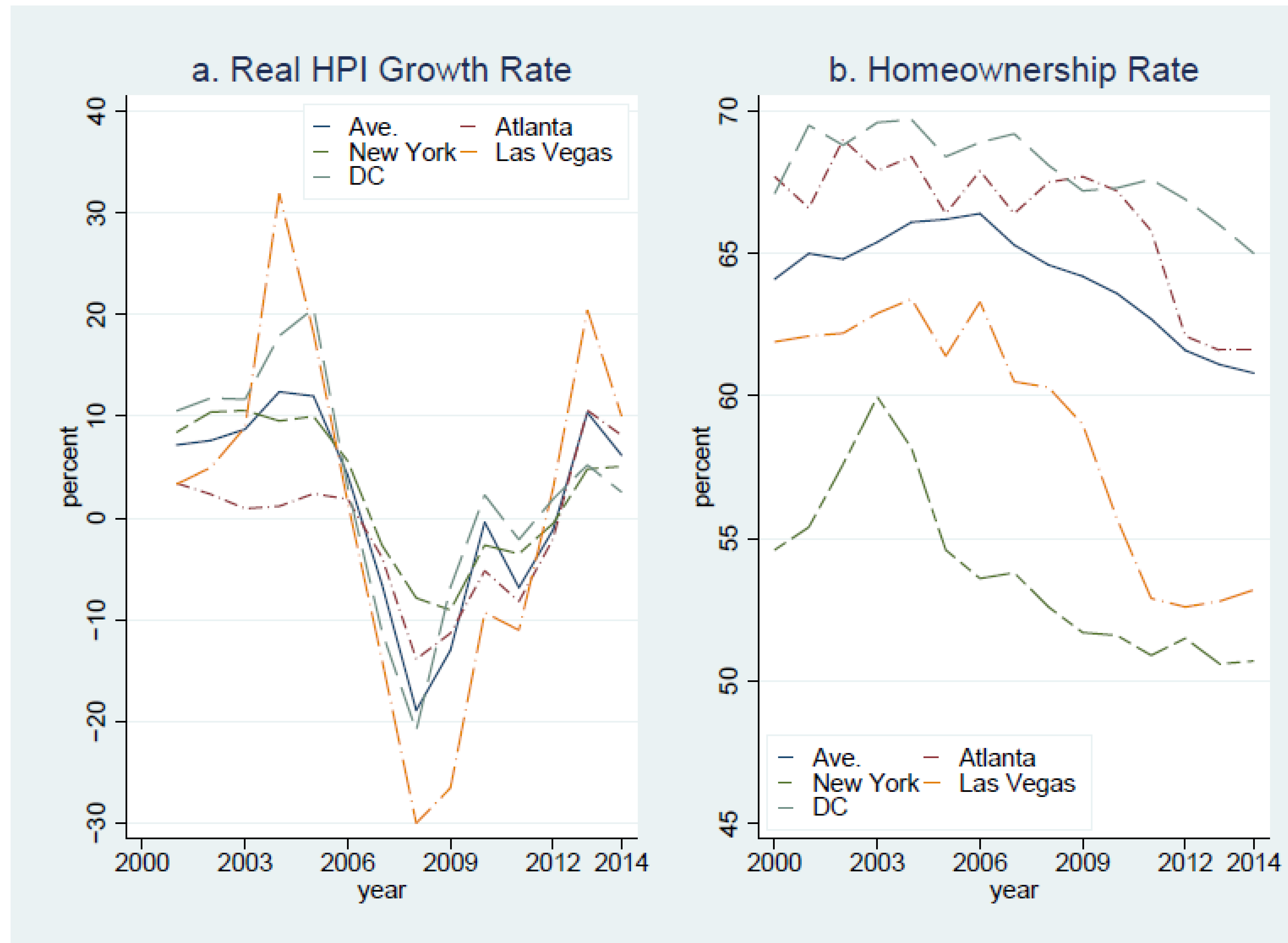
\*The views in this presentation do not necessarily reflect those of the Federal Reserve Bank of Philadelphia or the Federal Reserve System

# Motivation

- A housing recovery without homeowners



# Regions Differed in Recovery Paths



Data source: CoreLogic Solutions

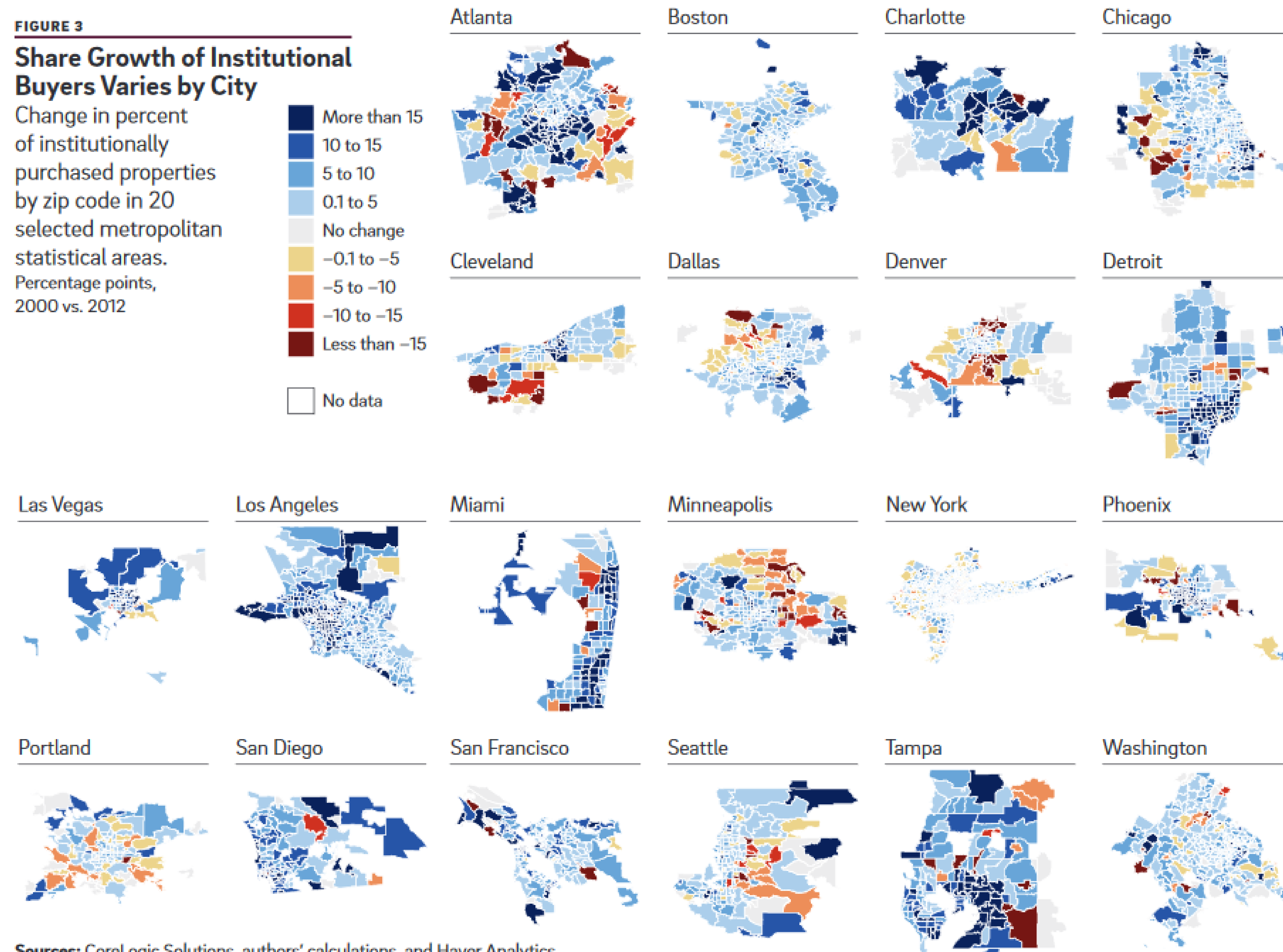
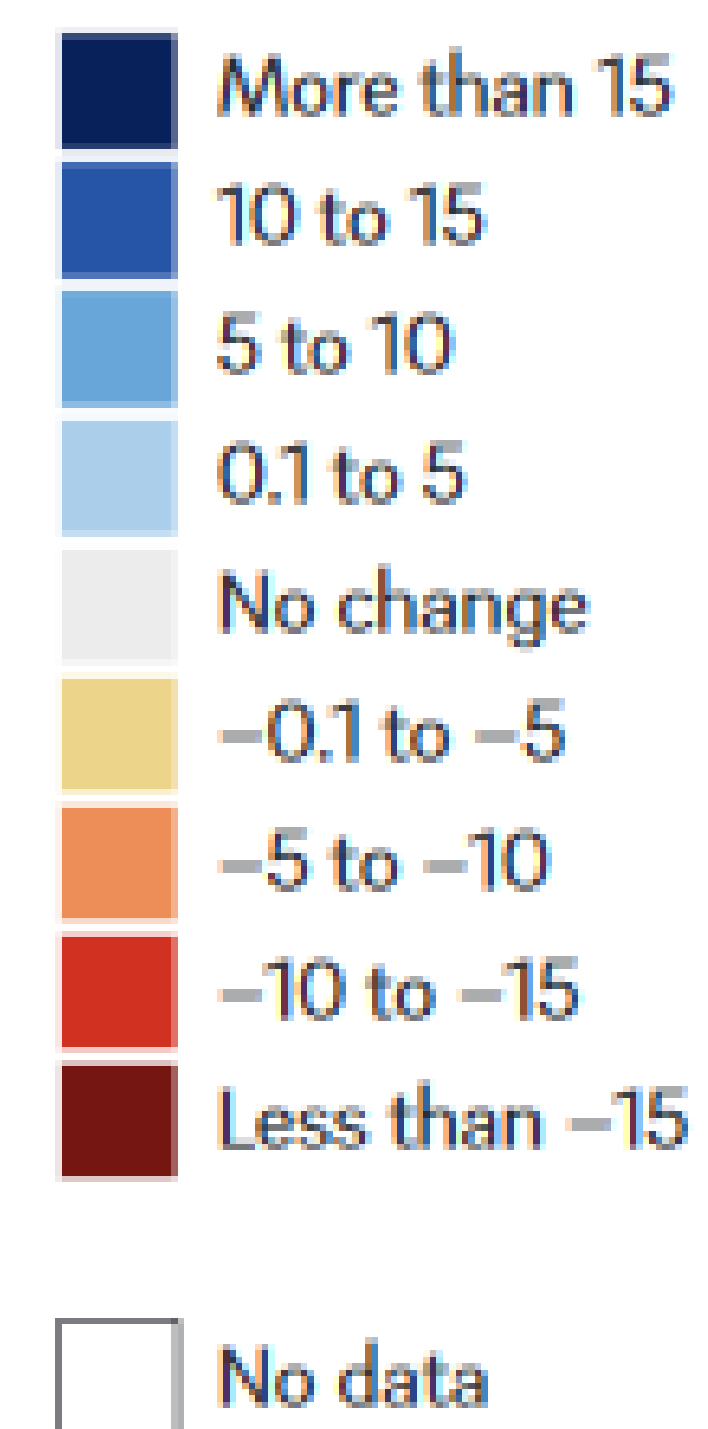
# What We Find

- Differences in recovery paths can be explained largely by the emergence of “institutional” investors purchasing through corporate entities
- Presence of institutional buyers had been mostly flat since the early 2000s but picked up significantly since the mortgage crisis
  - Phenomenon is widespread, but particularly prominent in distressed markets
  - Some investors are affiliated with large financial or real estate firms
- An increase in the share of institutional buyers helps boost local house prices and reduces vacancy rates
- No significant effect on local rent-price ratio or eviction rates
- Decreased homeownership rates

# Presence of Institutional Investors Varies Between – and within – Metro Areas

**FIGURE 3****Share Growth of Institutional Buyers Varies by City**

Change in percent of institutionally purchased properties by zip code in 20 selected metropolitan statistical areas. Percentage points, 2000 vs. 2012



**Sources:** CoreLogic Solutions, authors' calculations, and Haver Analytics.

**Notes:** Not to scale. The 20 MSAs are those covered by the S&P/Case-Shiller 20-City Composite Home Price Index.



# Investors Have Different Business Models

- Most common business models:
  - Buy-to-rent
    - With or without investment
    - With or without intention to sell once the market improves
  - Flip (with or without renovation)
- Sometimes, business model simply depends on how market performs
  - Larger investors may be more committed to a particular strategy



Wall Street's new housing frontier: **Single-family rental** homes

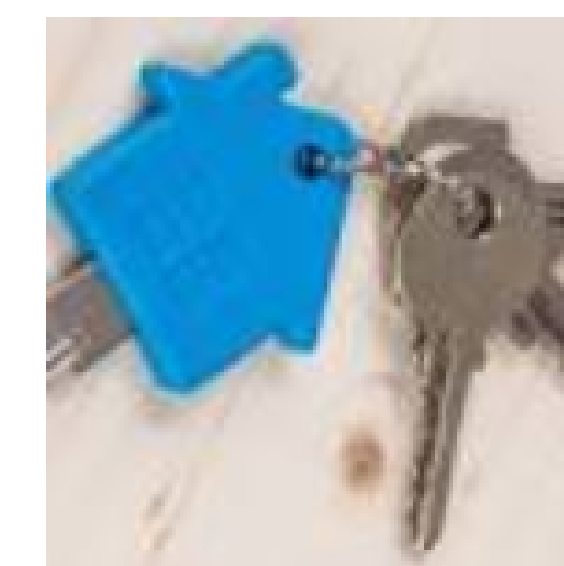
Curbed - May 18, 2018

Because **single-family rental** companies own such a small portion of the .... In 2015, **Colony** American Homes merged with **Starwood** Waypoint ...

Property management tech provider Mynd raises \$20 million

HousingWire - May 18, 2018

[View all](#)



**Zillow** to buy and sell homes in the Peach State

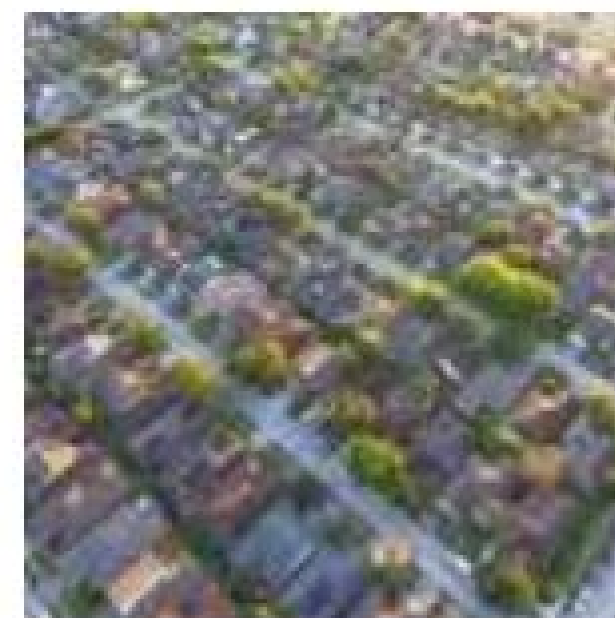
HousingWire - Sep 10, 2018

**Zillow** took the industry by storm when it announced the launch of "**Zillow** Instant Offers," ushering the real estate titan into the business of home ...

**Zillow** settles on newest city for its homebuying program

The Real Deal - Sep 10, 2018

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**Single-family rental** units have never been easier to buy

Curbed - Jul 17, 2018

**Single-family rental** units have never been easier to buy ... Beasley, for example, was the CEO of **Colony** **Starwood** Homes, which merged with ...



**Single-family rental** giant bets big on house flipping market

HousingWire - Sep 18, 2018

**Amherst** Holdings, one of the largest **single-family rental** entities in ... raising another roughly \$1 billion to purchase more **rental properties**. ... indicator that institutional **investors** are about to take over the house flipping market.

Big **Single-Family** Landlord Bets \$1 Billion on the Home-Flipping ...

Bloomberg - Sep 18, 2018

[View all](#)

- Institutions, large and small, have advantages in buying
  - As Mills, Molloy, and Zarutskie (2017) explain, they are not as sensitive to financing constraints (and post-crisis contraction of mortgage credit availability), have better institutional knowledge, facilitated by new technology

# Datasets

- **CoreLogic Solutions (Real Estate Deeds)**
  - Property-level information on deed and mortgage transactions as originally electronically keyed at county registries
  - Tax assessor data (mailing address for tax bill)
- **CoreLogic Solutions Home Price Index Data**
  - County-level series
- **Black Knight McDash Data**
  - Loan-level mortgage servicing data
- **Home Mortgage Disclosure Act (HMDA)**
- **And more!**
  - Homeownership rates from Census
  - Unemployment from Bureau of Labor Statistics
  - Rent indices and rent-to-price ratios from Zillow\*
  - Eviction rates from the Eviction Lab at Princeton University

\*Source: Zillow Research at Zillow.com (data downloaded between January 2008 and August 2008)



# Identifying Investors: The Literature

- Various methods have been used in the literature; each has drawbacks:
  - **Self- or lender-reported** (Gao and Li 2015, Gao, Sockin and Xiong 2017, using HMDA; Li, White and Zhu 2011 using Black Knight McDash Data)
    - Can suffer from fraud (Elul and Tilson 2015)
  - **Based the number of first-lien mortgages** (Haughwout, Lee, Tracy, and van der Klaauw 2011, using Federal Reserve Bank of New York/Equifax Consumer Credit Panel data)
    - Will miss those who don't borrow using a loan tied to their personal credit
  - **Number of transactions within a short period** (Bayer, Mangum, and Roberts 2016, using public records)
    - Hard to link investors together, given different names
  - **Property address vs. mailing address** (Fisher and Lambie-Hanson 2012 and Chinco and Mayer 2012, using public records)
    - Messy data, may not be reliable

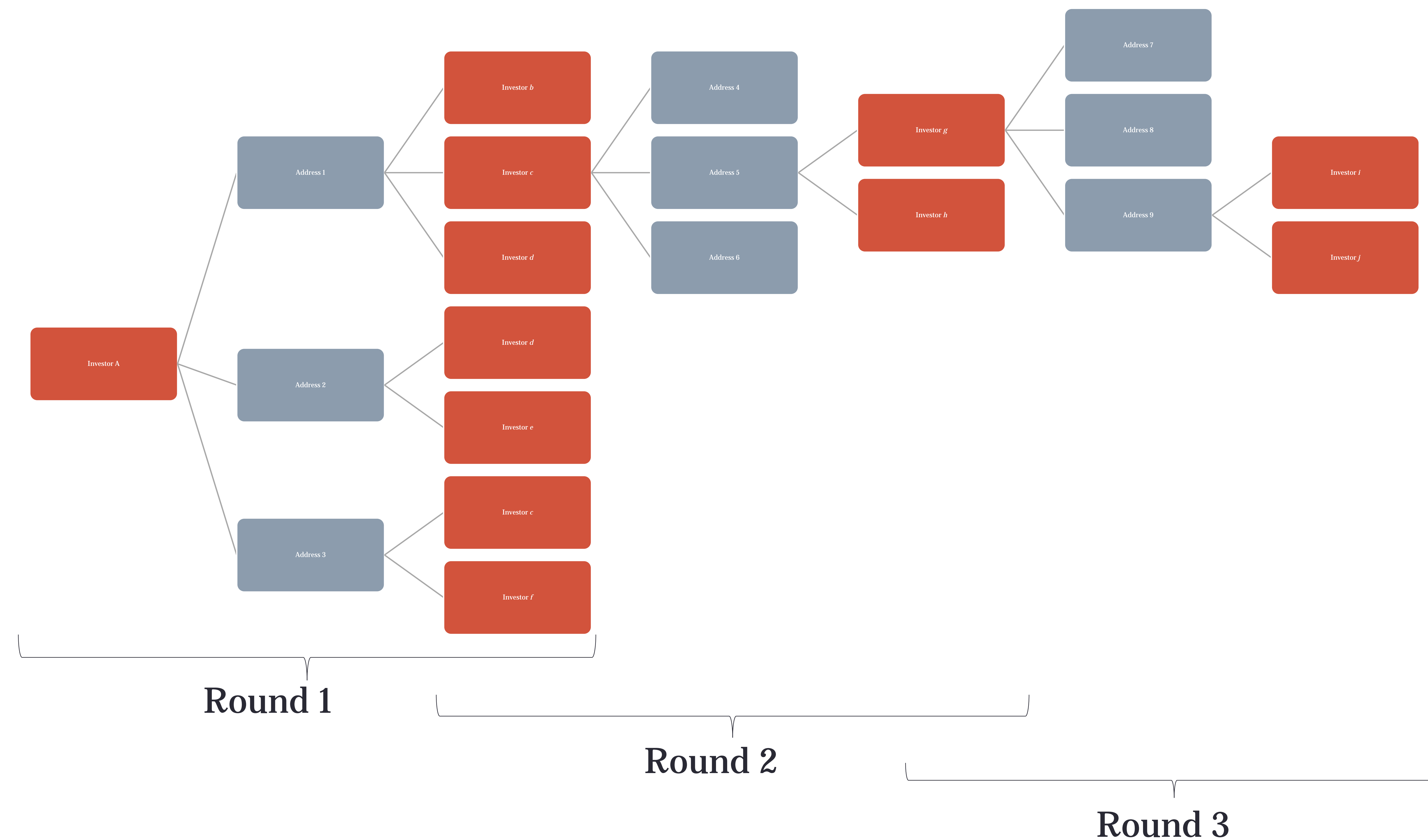
# Identifying Investors: Our Approach

- Our approach: in public records, determine if buyer (seller) is an institution or an individual, based on name
  - Who we capture:
    - Large institutions: (Top 20 identified by 2017 Amherst Capital Market Report)  
(Blackstone (Invitation Homes), American Homes 4 Rent, Colony Starwood, Progress Residential, Main Street Renewal, Silver Bay, Tricon American Homes, Cerberus Capital, Altisource Residential, Connorex-Lucinda, Havenbrook Homes, Golden Tree, Vinebrook Homes, Gorelick Brothers, Lafayette Real Estate, Camillo Properties, Haven Homes, Transcendent, Broadtree, and Reven Housing REIT)
    - Smaller investors (e.g., LLCs not affiliated with large institutions)
  - Like Mills, Molloy, and Zarutskie (2015), we exclude government entities, corporate relocation services, banks, etc.



# Identifying Large Institutions Using Associated Mailing Addresses

- “Snowball” approach to collecting names under which the top 20 large investors purchase properties
  - Begin with a company’s name, cycling through 3 rounds of collecting mailing addresses from tax assessor data
  - Confirm no false matches (shared addresses)
  - Aggregate number of purchases to “top holder” investor, confirm they are similar to Amherst Capital 2017 report



# What about individual investors?

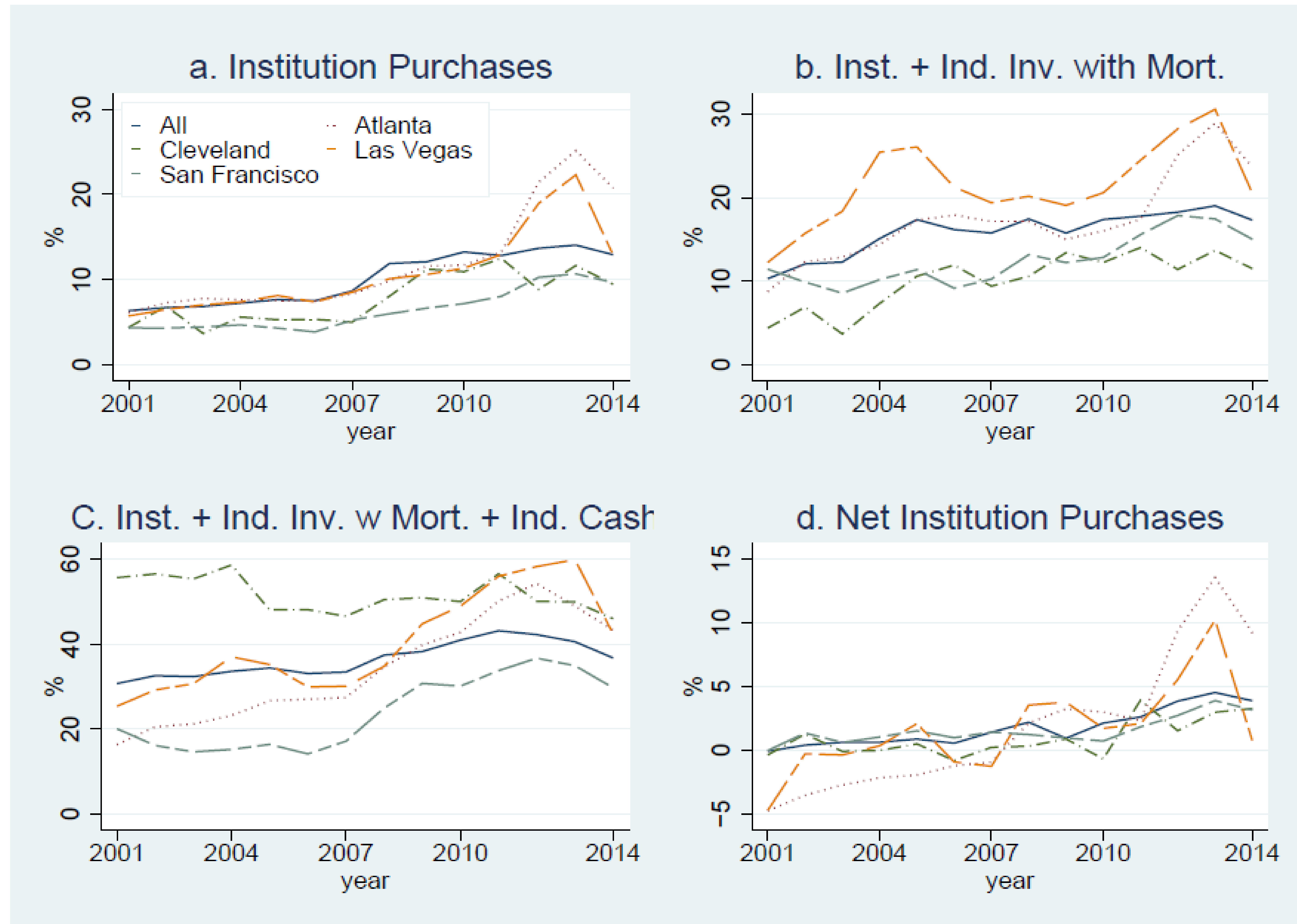
- Some investors buy in their own names, rather than through corporate entities.
- We proxy for this group in two ways:
  1. Estimating the fraction of buyers in a county who are individual investors buying with a mortgage
  2. Counting up buyers who use cash (risks over-counting investors)



# Dataset Summary

- Single-family purchase transactions 2000 – 2014 for background; 2007 – 2014 for regression analysis on recovery
- Exclude nominal sales with transaction price under \$1000, relocation sales, sales into REO (foreclosure deeds with bank purchasers), bank-to-bank transactions, etc.
- About 600 counties
  - Within 300 MSAs in the continental U.S.
  - 5,000 county-year observations (2007 – 2014)

# Investors made up a growing share of buyers in the recovery

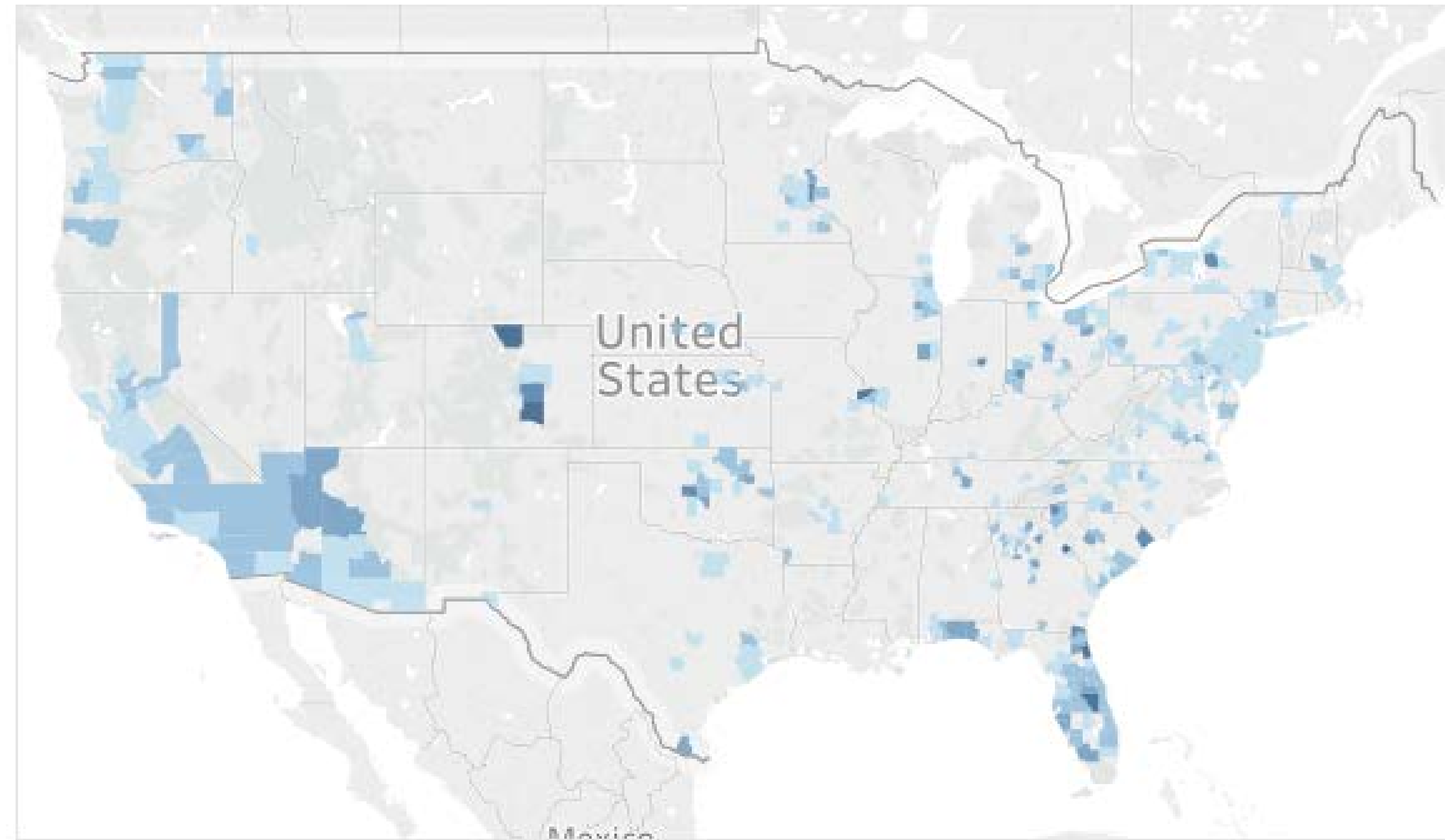


Data source: CoreLogic Solutions, Black Knight McDash.

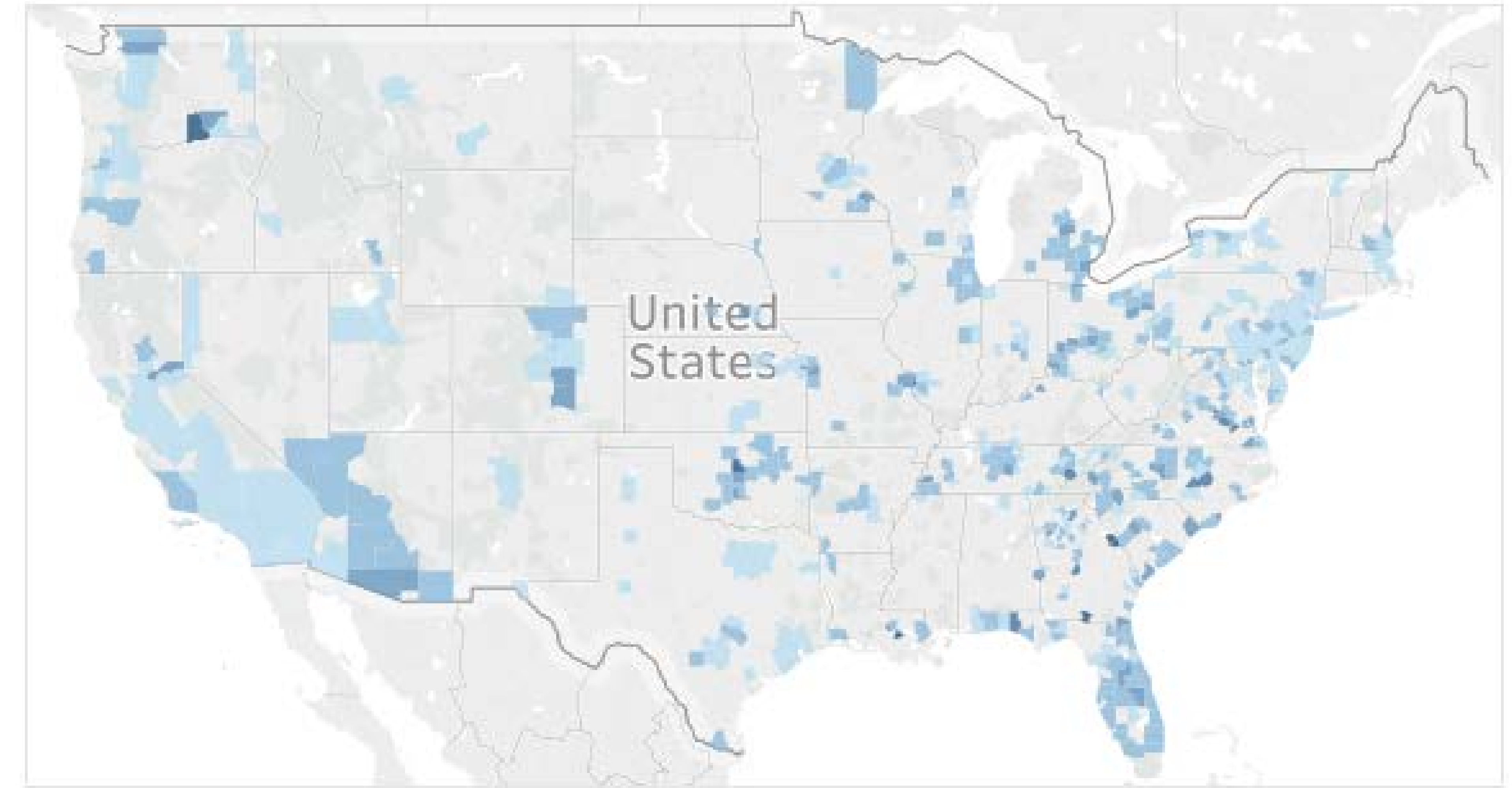


# Institutional Purchases

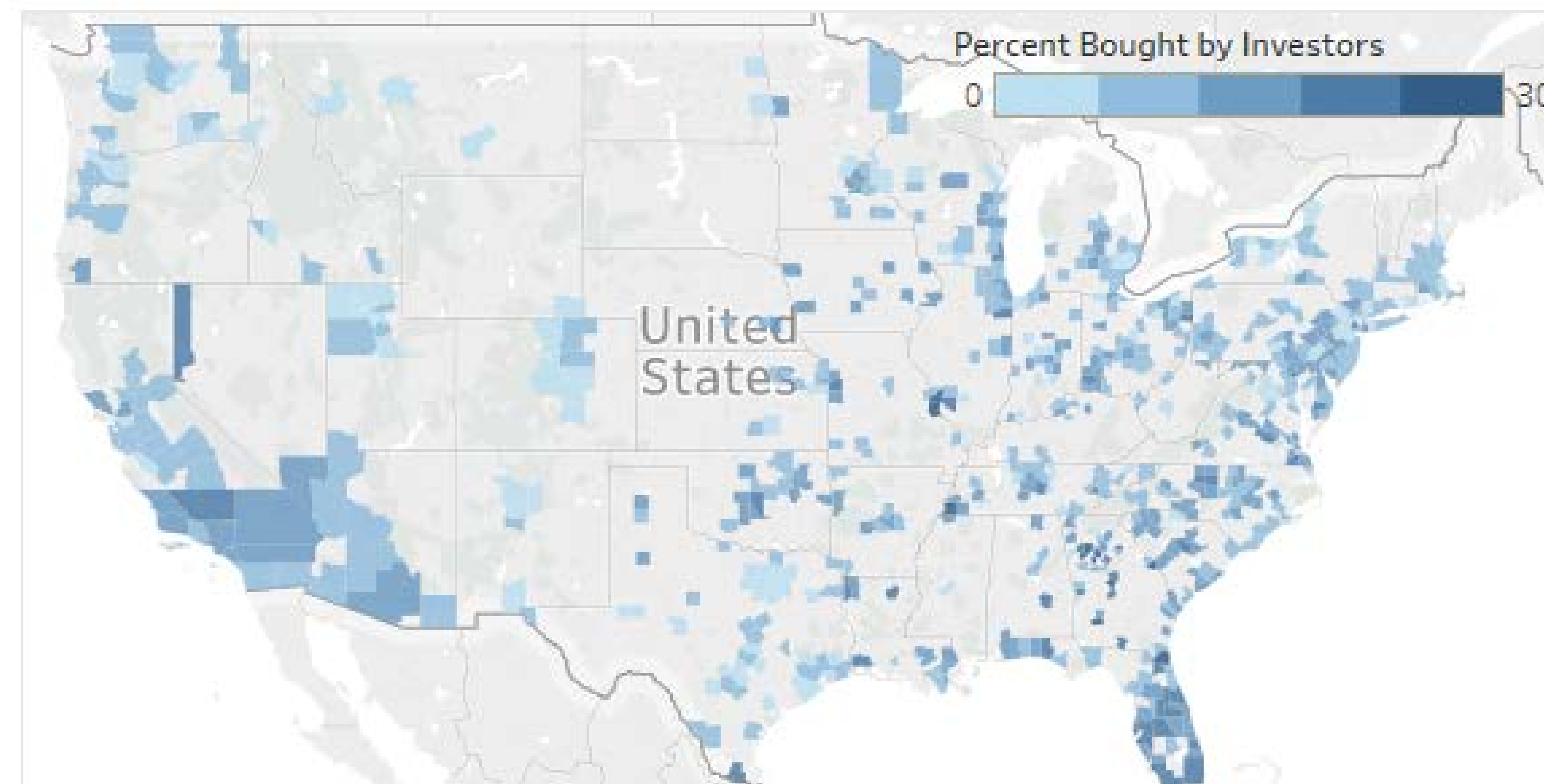
2000



2006

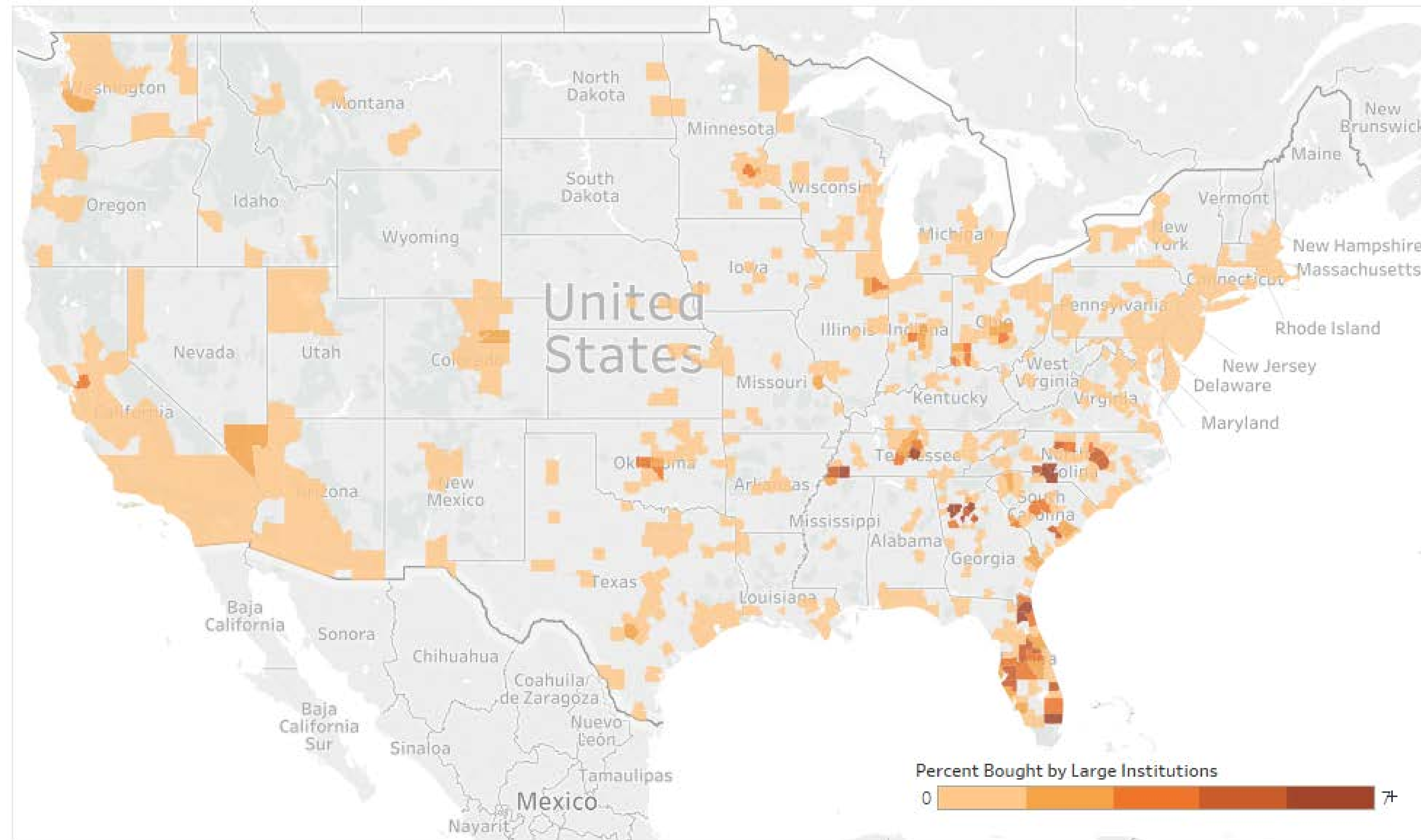


2014



Data source: CoreLogic Solutions

# Large Institutional Purchases in 2014



Data source: CoreLogic Solutions



# How have investors affected local markets?

Our model:

$$y_{i,t} = \beta_1 \mathbf{x}_{i,t}^1 + \beta_2 Z_{i,t-1} + \epsilon_{i,t}$$

where

- $i$ : county,  $t$ : year;
- $y_{i,t}$ : dependent variable, change in:
  - real HPI growth
  - homeownership rate
  - REO duration
  - vacancy rates
  - construction employment
  - and more (rent index, rent-price ratio, eviction rates);
- $\mathbf{x}_{i,t}^1$ : share of institutional buyers in county  $i$  in year  $t$ ;
  - **Potentially endogenous**
- $Z_{i,t-1}$ : other control variables
  - County and year fixed effects
  - Lagged: change in population, change in real HPI, unemployment, foreclosure rate, and real household income

# Instrument: GSE First Look Programs

- Fannie Mae instituted its First Look program in August 2009; Freddie Mac followed in September 2010.
- For initial 15 days REO properties are on market, homeowners and nonprofit organizations could bid on REO properties before they became available to investors
- Period since extended to 20 days, 30 in Nevada
- Using Black Knight McDash Data on single-family properties in foreclosure and REO, calculate for each county-year:
  - Average share of distressed mortgages that list Fannie Mae (2009) or Fannie/Freddie (2010+) as investors
  - The series takes a value of zero prior to 2009.
- More distressed loans held by GSEs → Less investor prevalence
  - County fixed effects in first-stage model



Source:

<https://www.homepath.com/firstlook-program.html>



## Results: More Investor Purchases → Greater House Price Growth

	2SLS Coefficient
Share of Institutional Buyers (%)	0.626***
Lagged real HPI growth rate (%)	0.451***
Lagged growth rate of real median household income (%)	-0.109***
Lagged changes in unemployment rate (%)	-1.425***
Lagged changes in foreclosure rate (%)	-19.257***
Lagged growth rate in population (%)	0.227***

Data sources: CoreLogic Solutions, Black Knight McDash Data, Census, and Bureau of Labor Statistics.

Note: \*\*\* indicates significance at the 1 percent level.

- **1-percentage-point increase** in institutional buyers → **63-bp increase** in real home prices.

# Robustness: Definition of Investors

Share of Institutional Buyers (%)	2SLS Coefficient
Institutions [main model]	0.626***
Institutions + individual investors with mortgages	1.021***
Institutions + individual investors with mortgages + individuals with cash purchases	0.709**
Net institutional investor purchases	0.594***
Top 20 Institutional Investors	1.022***

Data sources: CoreLogic Solutions, Black Knight McDash Data, Census, and Bureau of Labor Statistics.  
Note: \*\*\* indicates significance at the 1 percent level, \*\* at the 5 percent level.

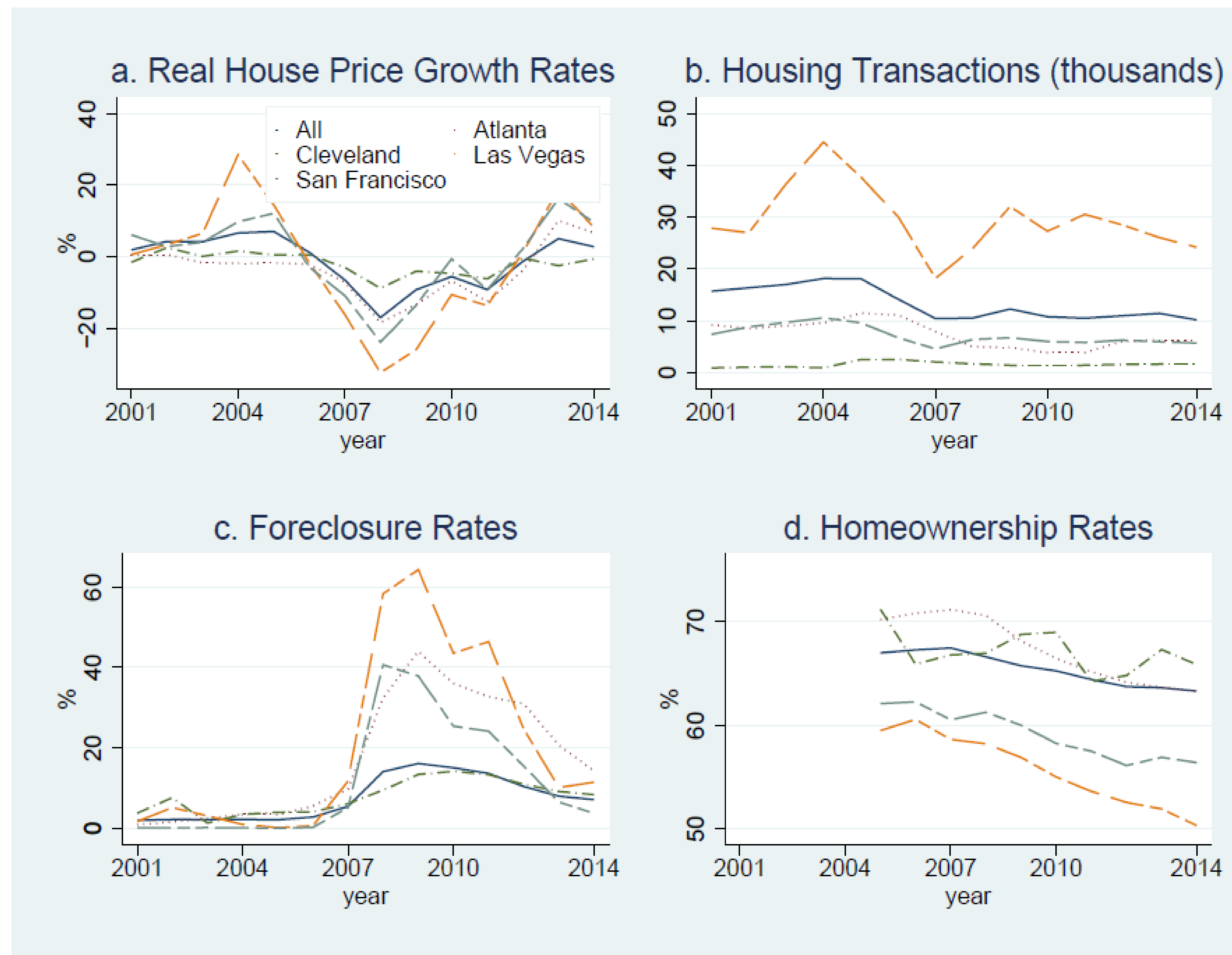


# Concluding Thoughts

- Institutional investors increased their presence in the housing market during and after the crisis.
- They sped local house price recovery and reduced vacancies.
- No evidence that more investors led to higher rents or greater eviction rates.

For the latest version of the paper, please contact [Lauren.Lambie-Hanson@phil.frb.org](mailto:Lauren.Lambie-Hanson@phil.frb.org)

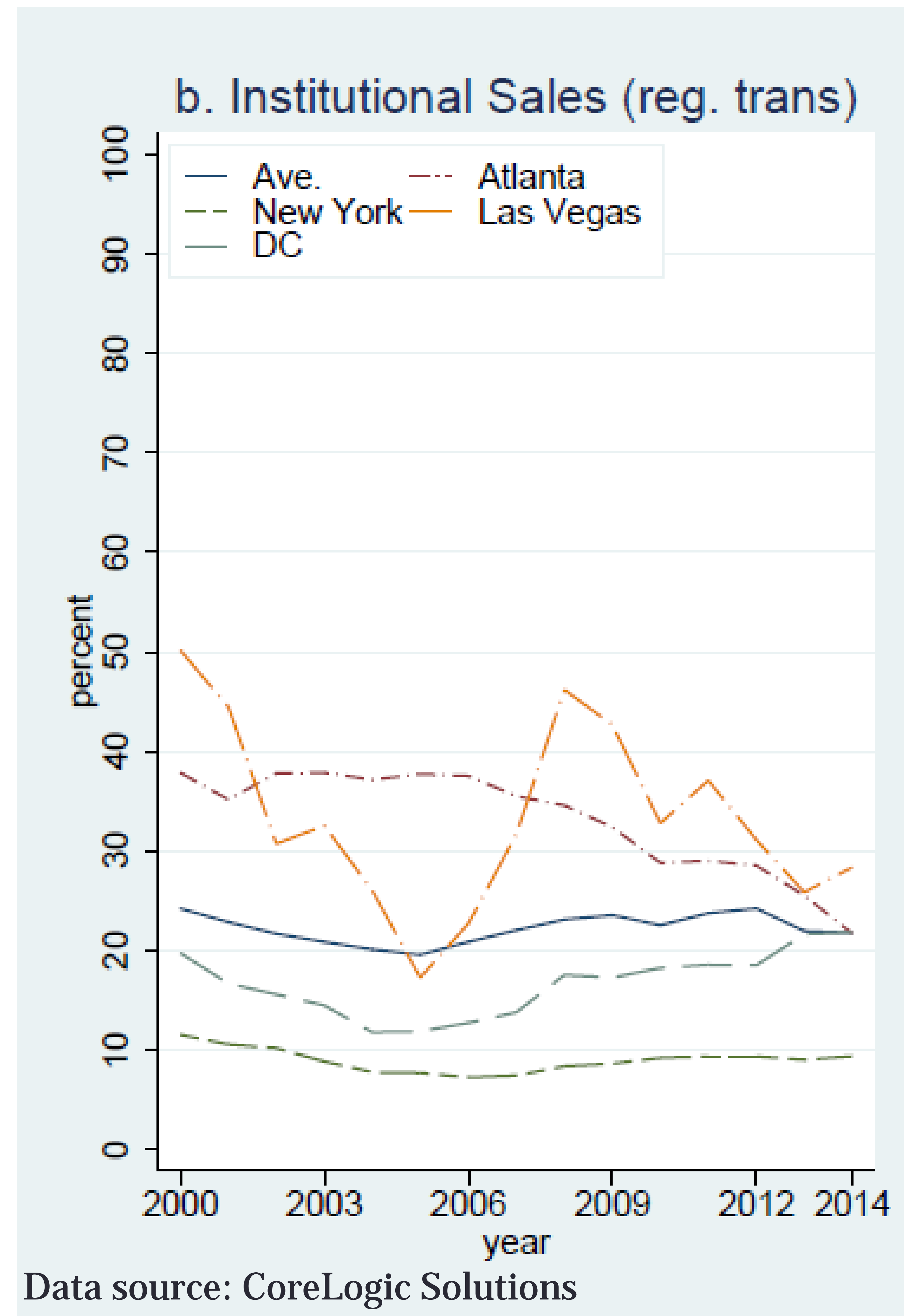
# Appendix



Data source: CoreLogic Solutions; Census.



# Appendix: Institutional *sales* show no consistent pattern across MSAs during the recovery.



## Tracing the Source of Liquidity for Distressed Housing Markets

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<sup>1</sup>Emory University <sup>2</sup>University of Texas at Dallas

Urban Institute

February 5, 2020



## Motivation

- Foreclosure crisis following the 2007–2010 financial crisis:
  - 7.8 million homes were foreclosed between 2007–2016.
  - Foreclosure crisis peaked in 2011 at 1.6 million foreclosed homes ( $\sim 20\%$  of all foreclosed homes).

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- The large wave of foreclosures resulted in:
  - Depressed prices for the foreclosed properties (Clauret & Daneshvary 2009, Campbell et al. 2011).
  - Depressed prices for nearby properties (**spillover effect**) (Harding et al. 2009, Lin et al. 2009, Frame 2010, Campbell et al. 2011, Anenberg & Kung 2014, Gerardi et al. 2015, Fisher et al. 2015)



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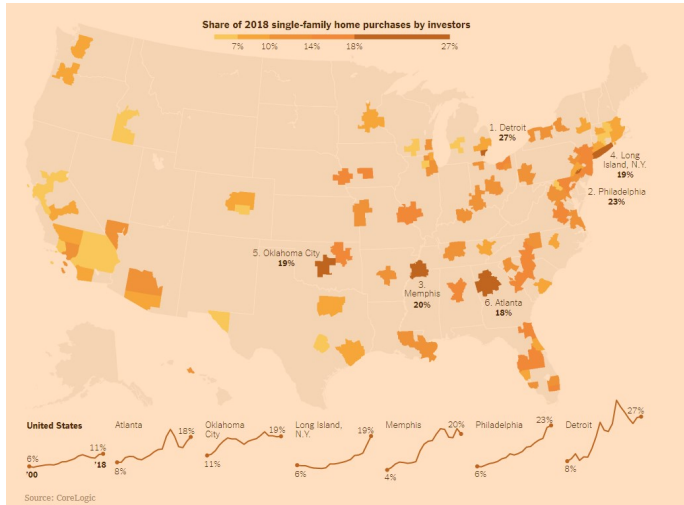
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- Several government-led initiatives to mitigate the foreclosure crisis and stabilize neighborhoods (e.g., *NSP*, *REO-to-Rental*, *VRPOs*, *HAMP* etc.).

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- Several government-led initiatives to mitigate the foreclosure crisis and stabilize neighborhoods (e.g., NSP, REO-to-Rental, VRPOs, HAMP etc.).
- Simultaneously, institutional investors (e.g., Blackstone, Starwood) were purchasing the deeply discounted distressed properties (Allen et al. 2018, Mills et al. 2019, Lambie-Hanson et al. 2019).
  - Returns from price appreciation.
  - Returns from rental income.



# Single family homes purchases by institutional investors



- Institutional investors have purchased more than 300K homes between 2010–2018 (30-fold increase), and still growing.
- Largest owners are comparable in scale to the large multifamily owners.
- **Blackstone (Invitation Homes)** (\$12 Billion), **American Homes 4 Rent** (\$10.7 Billion), **Colony Starwood Homes** (~\$8 Billion).

## Research question

- We study the effect of institutional investment on the local real estate market.
  1. We focus on institutional investment in *distressed homes*.
  2. We focus on the *foreclosure crisis period*.

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- We study the effect of institutional investment on the local real estate market.
  1. We focus on institutional investment in *distressed homes*.
  2. We focus on the *foreclosure crisis period*.
- **Research question:** How do institutional purchases of distressed homes affect neighborhood home prices?



## Preview of results

- Institutional investors were an important source of liquidity for distressed housing markets during the foreclosure crisis.
- Institutional purchases of distressed properties have a positive spillover effect of neighboring home values.
  - Homes that are within *0.25 miles* ( $\sim 5$  blocks) from an institutional purchased home sell at **\$1.33 per sqft**, or a **1.4% higher** value relative to properties that are within *0.25–0.50 miles* away.
  - Above estimates imply 20% less underpricing of homes in distressed areas after institutional purchases.
- Positive spillover effect is greater for:
  - Neighboring **foreclosed** transactions (4.3%)
  - **Similar** properties (e.g., 2.5% of same-age properties)
  - In more **distressed** neighborhoods (7.4%)

## Effect of institutional purchases on neighboring homes

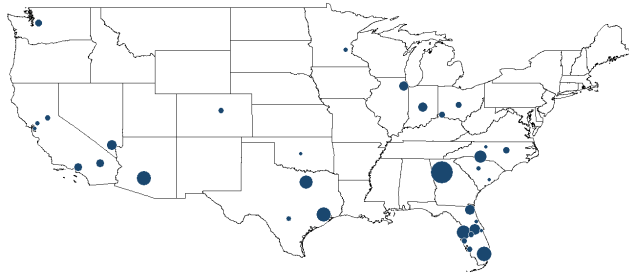
- Ex ante, the effect is not obvious:
  - Institutional investment reduces the supply of properties available for sale (+).
  - Institutional investors can bargain for deeper discounts (−).
  - Lower preference for rental properties in neighborhoods (−).
  - Purchases by informed institutional investors can subject unsold properties to adverse selection issues (−).

## Data

- **Primary Data:** [Zillow's ZTRAX Database](#).
  - 400 million detailed public records across 2,750+ U.S. counties.
  - 20 years of deed transfers, mortgages, foreclosures, auctions, property tax delinquencies for commercial and residential properties.
- **ZTRAX transactions data:** *transaction date, sales price, buyer and seller's identity, foreclosure information, etc.*
- **ZTRAX assessment data:** *property type, address, year built, lot size and building area, number of bedrooms and bathrooms, etc.*
- Manually identify institutional owners based on owner mailing address and name.
- We find 166,635 SFH owned by 26 institutional investors as of 2016.
  - Amherst Capital Market Report 2016: 190,000 SFH owned by institutional investors.
  - Therefore, we are able to identify 88% of all the SFHs owned by institutional investors.

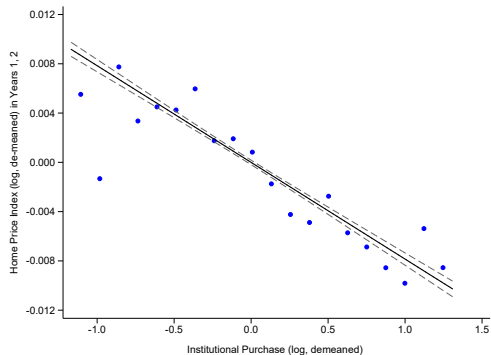


## Geographic Distribution of Institutional SFR Holdings

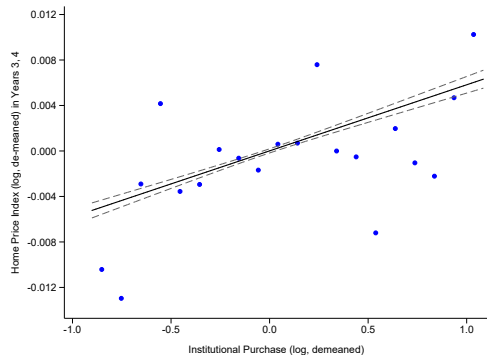


Rank	Investor	Properties (#)
1	Invitation Homes	41,735
2	American Home 4 Rent	36,231
3	Starwood Waypoint	27,290
4	Progress Residential	13,890
5	Silver Bay	6,872
6	Main Street Renewal	5,819
7	Tricon American Homes	5,677
8	Altisource	4,256
9	Havenbrook Homes	3,568
10	Cerberus	3,440
11	Camillo Properties	2,817
12	Golden Tree Insite Partners(GTIS)	2,515
13	Connorex-Lucinda	2,434
14	Haven Homes	1,728
15	Gorelick Brothers Capital	1,717

## Institutional Investment and House Prices



(A) House prices in  $t+1$ ,  $t+2$



(B) House prices in  $t+3$ ,  $t+4$

## Empirical challenge

- Selection concerns:
  - **Selection bias in favor (+)**: Institutional investors can cherry-pick properties in neighborhoods that have the greatest potential for future growth.
    - $\implies$  Neighboring home prices trending up regardless of institutional purchases.
  - **Selection bias against (—)**: Institutional investors more likely to invest when they get the deepest discounts – i.e., in the most distressed neighborhoods.
    - $\implies$  Neighboring home prices trending down regardless of institutional purchases.

## Empirical Strategy

- In February 2012, FHFA announced the REO-to-Rental Pilot Initiative:
  - **Purpose:** Help clear the national backlog of real estate owned (REO) foreclosed homes.
  - **Strategy:** Sell **pre-packaged** REO foreclosed properties **in bulk** to institutional investors.
  - **Implementation:** Auction process, where investors bid on pre-packaged pools of foreclosed properties (individual homes only privately valued).
  - **Other requirements:** Investors were required to rent out the properties.
- Importantly, pre-packaging of foreclosed properties ensured investors were not allowed to cherry-pick individual properties.



## Empirical Strategy

- Difference-in-differences (DD) setup in hyper-local areas around the pilot bulk-sale transactions (e.g., within 0.5 miles).
- **Treatment group:** Properties close to the pilot institutional bulk-sale transactions.
- **Control group:** Properties far away from the pilot institutional bulk-sale transactions.
- **Assumption:** In the absence of the institutional bulk-sale transaction, house prices for properties close to, and far away from the bulk-sold property trend similarly.
- Plausible because of investor's inability to cherry pick properties at highly local levels (however, while bidding, investors likely accounted for house price growth at broader geographic levels, such as county.).

## Empirical Strategy

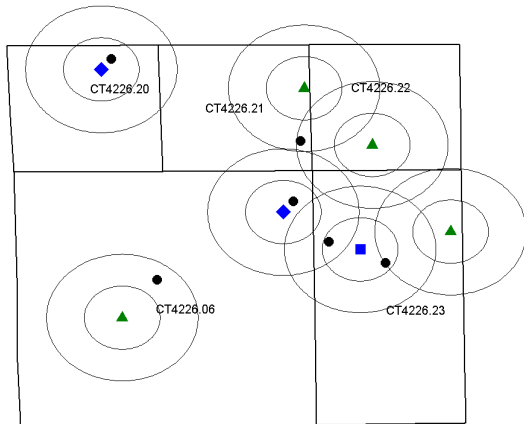
- DD model around REO bulk transactions:

$$P_{i,t} = \alpha + \beta_1 Post_t \times BS_i^{Close} + \beta_2 BS_i^{Close} + f(\mathbf{X}_{i,t}) + \gamma_{c,t} + \delta_s + \varepsilon_{i,t}$$

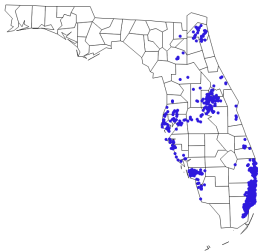
- Sample: transactions within 0.5-mile radius from bulk-sold properties that are neither related to the bulk transactions nor purchased by other institutional investors
- Period: six months before and after bulk transactions, excluding the event month (June, 2012).
- $P_{i,t}$ : residual transaction price from a hedonic regression for single family home  $i$  that is sold at time  $t$ .
- $BS_i^{Close}$ : treatment variable that equals 1 for all properties within 0.25-mile radius of the bulk-sold property

## Illustration of Treated and Control Properties in Maricopa County, AZ

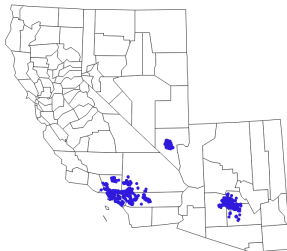
- **Black circle:** Bulk-sold institutional property.
- **Blue diamond:** Nearby treated property.
- **Green triangle:** Farther away control property.



## Bulk Sale Transactions



*Florida*



*West*



*Chicago*

Transaction Name	Transaction Size (# of Properties)	Geography	Winning Bidder	Vacancy Rate	Third Party Valuation	Transacted Value (% of Third Party)
SFR 2012-1-Florida	699	Florida (Central, NE, SE, West Coast)	Pacifica L 47, LLC	32.62%	\$81,527,995	95.8%
SFR 2012-1-Chicago	94	Chicago, Illinois	Cogsville Capital Partners Fund I, LP	38.74%	\$13,689,012	86.2%
SFR 2012-1 West	970	Arizona, California, Nevada	Colony Homes, LLC	36.05%	\$156,771,744	112.3%
<b>Total</b>	<b>1763</b>				<b>\$251,988,751</b>	

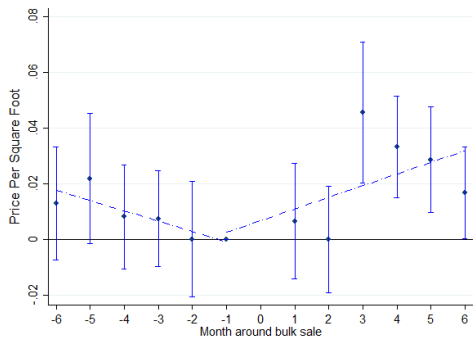


## Neighboring House Prices Around Bulk Transactions.

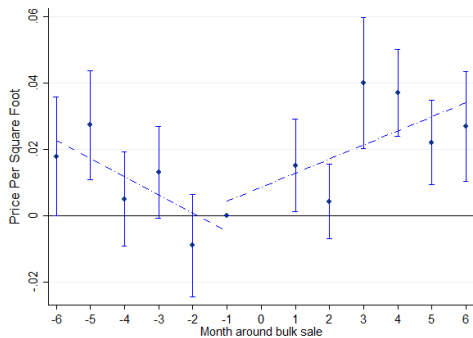
Dependent Variable:	Adjusted price per sqft	Adjusted ln(total price)
	(1)	(2)
Post-sales $\times$ I(Distance<0.25mi)	1.330** (0.64)	0.014*** (0.00)
I(Distance<0.25mi)	-1.673** (0.70)	-0.012* (0.01)
County $\times$ Year-Month FE	Yes	Yes
Census-tract FE	Yes	Yes
N	13,593	13,593
adj.R-sq	0.623	0.556

- Homes in bulk-sale areas sell at \$6.52/sqft discount relative other homes in same zip-code  $\rightarrow$  \$1.33/sqft higher sale price reduces underpricing by 20%.
- Spillover effect is greater if there are more number of nearby bulk-sold properties (i.e., greater treatment intensity).
- Results unchanged even after controlling for other potential spillover effects (e.g., due to neighboring sales via regular transactions, neighboring foreclosures).

## Neighboring House Prices Around Bulk Transactions



*0–0.25 mi (close) vs. 0.25–0.5 mi (far)*



*0–0.25 mi (close) vs. 0.25–1 mi (far)*

## Neighboring foreclosed transactions.

- Positive price spillover effect is greater for neighboring distressed properties.

Dependent Variable:	Adjusted price per sqft	Adjusted ln(total price)
	(1)	(2)
Post-sales $\times$ I(Distance<0.25mi)	0.410 (0.69)	0.005 (0.01)
Post-sales $\times$ I(Distance<0.25mi) $\times$ Foreclosed	3.844* (2.04)	0.038* (0.02)
County $\times$ Year-Month FE	Yes	Yes
Census-tract FE	Yes	Yes
N	13,593	13,593
adj.R-sq	0.634	0.577

## Neighboring foreclosed transactions.

- Positive price spillover effect is greater for more illiquid distressed properties.

Dependent Variable:	Adjusted price per sqft	Adjusted ln(total price)
	(1)	(2)
Post-sales $\times$ I(Distance<0.25mi)	4.215 (2.52)	0.043 (0.03)
Post-sales $\times$ I(Distance<0.25mi) $\times$ ln(Foreclosure time)	2.774*** (0.59)	0.027*** (0.01)
County $\times$ Year-Month FE	Yes	Yes
Census-tract FE	Yes	Yes
N	2,574	2,574
adj.R-sq	0.695	0.610



## Similarity between Focal and Bulk-sold Properties.

- Positive price spillover effect is greater for properties that are more similar to the bulk-sold institutional property.
- Channel: Evidence suggests **supply effect** rather than the **disamenity effect**.

Similarity: Dependent Variable:	Size		Age		Property Type	
	price per sqft (1)	ln(total price) (2)	price per sqft (3)	ln(total price) (4)	price per sqft (5)	ln(total price) (6)
Post-sales $\times$ I(Distance<0.25mi)	0.634 (0.80)	0.009* (0.00)	3.269*** (1.00)	0.023*** (0.01)	1.800** (0.69)	0.015** (0.01)
Post-sales $\times$ I(Distance<0.25mi) $\times$ Similarity	1.655*** (0.08)	0.007*** (0.00)	0.487* (0.24)	0.002*** (0.00)	2.383 (4.93)	0.002 (0.03)
County $\times$ Year-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Census-tract FE	Yes	Yes	Yes	Yes	Yes	Yes
N	11,703	11,703	11,753	11,753	13,593	13,593
adj.R-sq	0.626	0.556	0.620	0.556	0.623	0.556

## Most Distressed Neighborhoods

- Positive price spillover effect is greater for properties that are in the more distressed areas.

Dependent Variable:	Adjusted price per sqft	Adjusted ln(total price)
	(1)	(2)
Post-sales $\times$ I(Distance<0.25mi)	-0.004 (0.71)	0.006 (0.01)
Post-sales $\times$ I(Distance<0.25mi) $\times$ Bottom Quintile Neighborhood	8.404*** (2.54)	0.068** (0.03)
Baseline Controls	Yes	Yes
County $\times$ Year-Month FE	Yes	Yes
RegionID FE	Yes	Yes
N	7,130	7,130
adj.R-sq	0.542	0.421

## Bulk sale vs. individual sale

- Compare spillover effects between the bulk-sold properties and individually-sold properties.
- *No evidence for positive spillover effect from individually-sold properties.*
- Suggests that through bulk sales, investors accept some less desirable properties in the pool.

<b>Spillover effect due to individually-sold properties</b>		
<b>Dependent Variable:</b>	<b>Adjusted price per sqft</b>	<b>Adjusted ln(total price)</b>
	(1)	(2)
$\text{Post-sales} \times I(\text{Distance} < 0.25\text{mi})$	-0.276 (1.06)	0.002 (0.01)
$I(\text{Distance} < 0.25\text{mi})$	-0.295 (1.05)	-0.010 (0.01)
County $\times$ Year-Month FE	Yes	Yes
Census-tract FE	Yes	Yes
N	16,782	16,782
adj.R-sq	0.588	0.519

## Conclusion

- Institutional purchases of distressed properties have a positive spillover effect of neighboring home values.
- Positive price spillover effect is stronger for:
  - Neighboring **foreclosed** transactions.
  - **Similar** properties.
  - In more **distressed** neighborhoods.
- Institutional investors were an important source of liquidity for distressed housing markets during the foreclosure crisis.



## Implications

- Liquidity provision to distressed housing markets is difficult when credit markets are tight, and significant negative price externalities are present.
- Institutional investors can play an important part in providing this liquidity and stabilizing housing markets.
- Importantly, this liquidity provision is market-driven, which contrasts with other government spending programs.
- Bulk sales not limited to FHFA's program; banks such as Wells Fargo also implemented pre-packaged bulk sale strategies.

# Urban Institute Discussion

Institutional Investor Impact on Housing Market

*February 2020*

# Thoughts, Questions, and Reactions

## Lauren Lambie-Hanson: “Leaving Households Behind: Institutional Investors and the U.S. Housing Recovery”

- Are institutional investors large enough to impact housing prices or homeownership rates at the submarket or zip code level?
- How do we think about the difference in impact between large investors (1,000+ homes) and smaller investors (1-10 units) in 2008-14?
- Initial investment allocations were to areas with substantial decreases in home values. Today, focus has shifted to identifying assets with the best long-term cash flow returns. What does that mean for the impact of institutions going forward?
- Foreclosures were 25-30% of home sales in 2008-2010 in 20 largest markets. If the next downturn is driven less by mortgage distress (and therefore fewer foreclosures) how does that shape the magnitude of institutional buying on home prices?

## Rohan Ganduri: “Tracing the Source of Liquidity for Distressed Housing Markets”

- Supply effect (institutions buying excess homes for sale) was positive for local / MSA home prices in 2009-2014 – how does that dynamic change in an environment of historically low inventory for sale?
- Disamenity effect – Largest investors have a significant incentive to repair and maintain homes in excellent condition, for residents, for cash flows, and for reputational risk. One-off owners and smaller investors may potentially have different incentives.
- Today, there is a move away from buying discounted homes and a move to buying homes with the highest potential cash flows in the right submarkets. A considerable amount of time and resources are spent identifying the right markets and home attributes.
- Does the impact of institutions on home prices change as institutions keep these homes as rentals for the long-term, thereby adding to the rental stock but reducing for sale stock.

# Agenda

- I. Institutional SFR: Growth and Differentiation of Large Owners
- II. Acquisitions: Comparison of Current to Post-GFC, and Concentration of Owners
- III. Focus on Higher Growth MSA and Submarkets

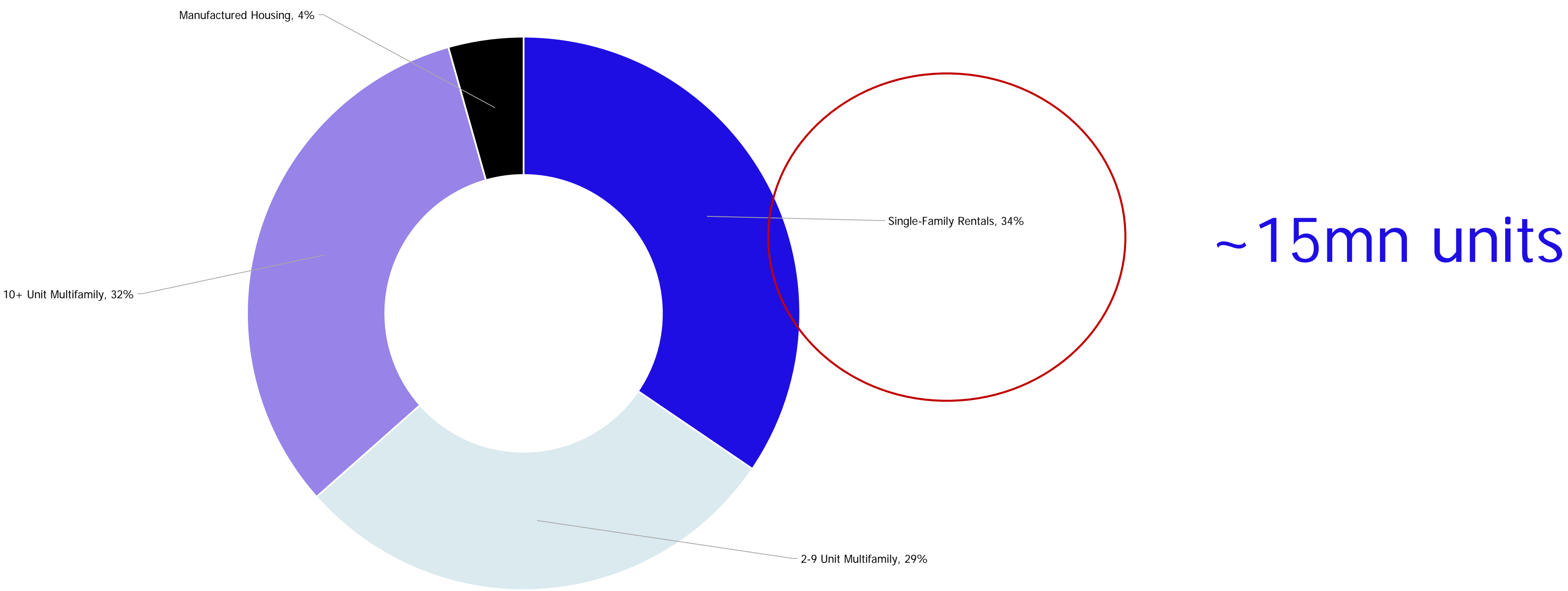
1. [Footnote 1]



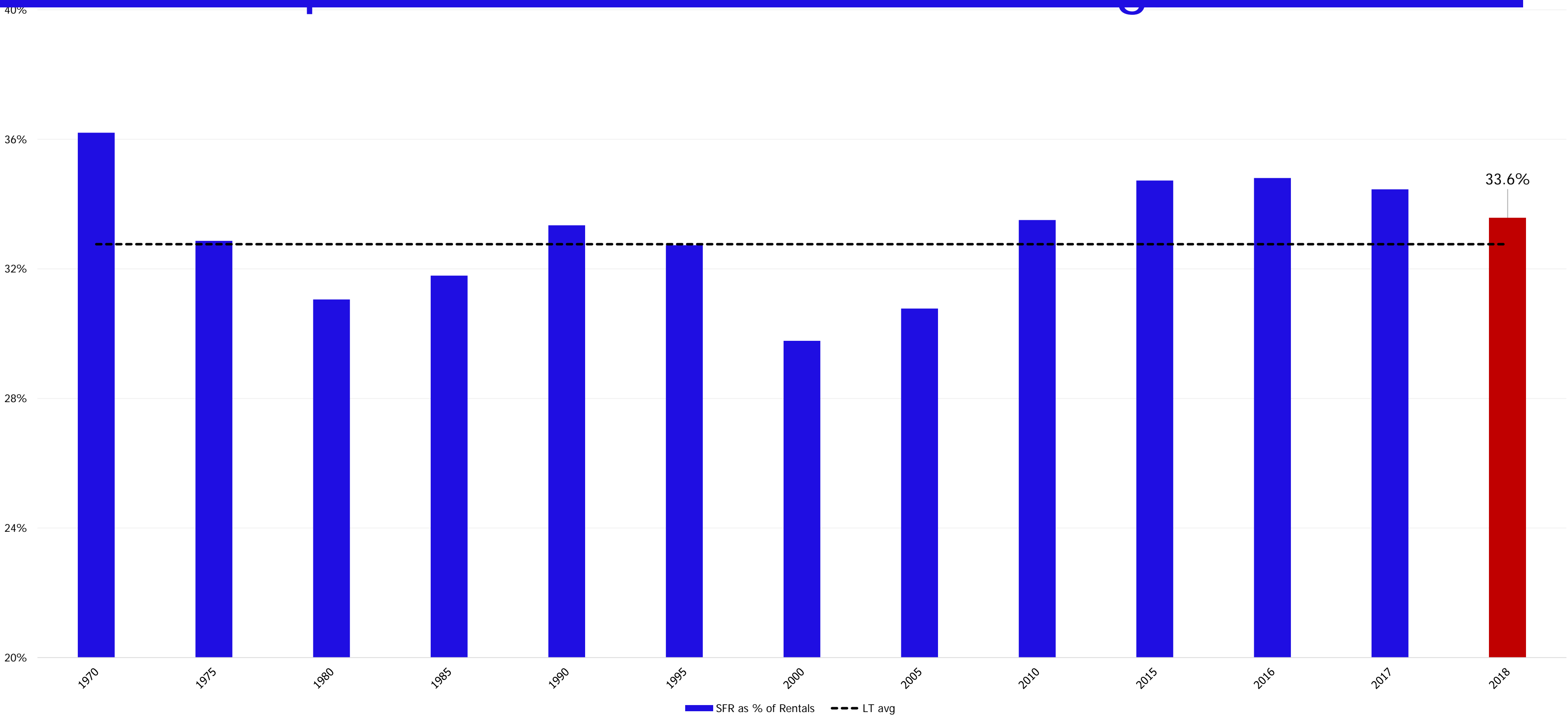
# SFR Has Always Been A Large Part of the U.S. Housing Landscape

15mn units today, and ~12% of all housing since 1970

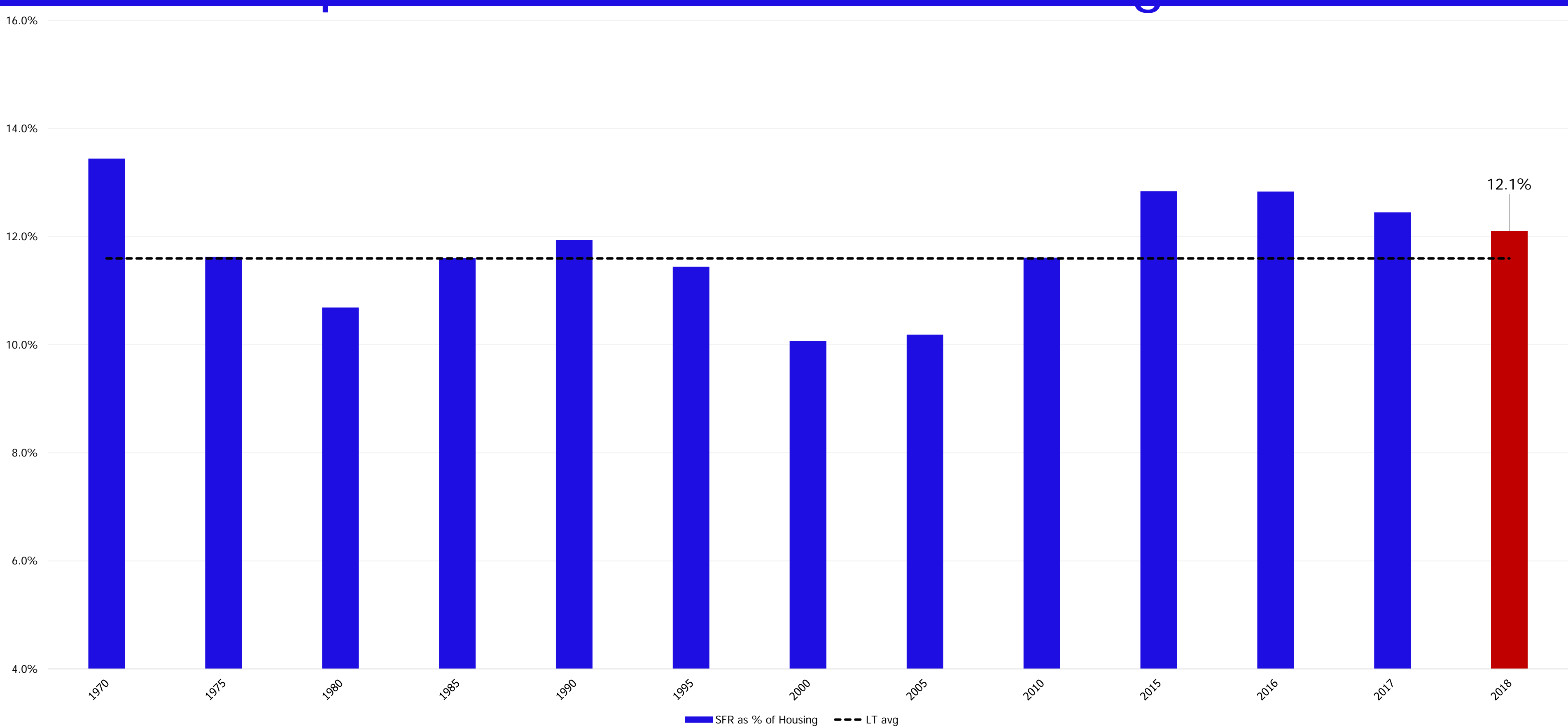
Components of Rental Housing<sup>1</sup>



SFR as % of Rentals<sup>2</sup>



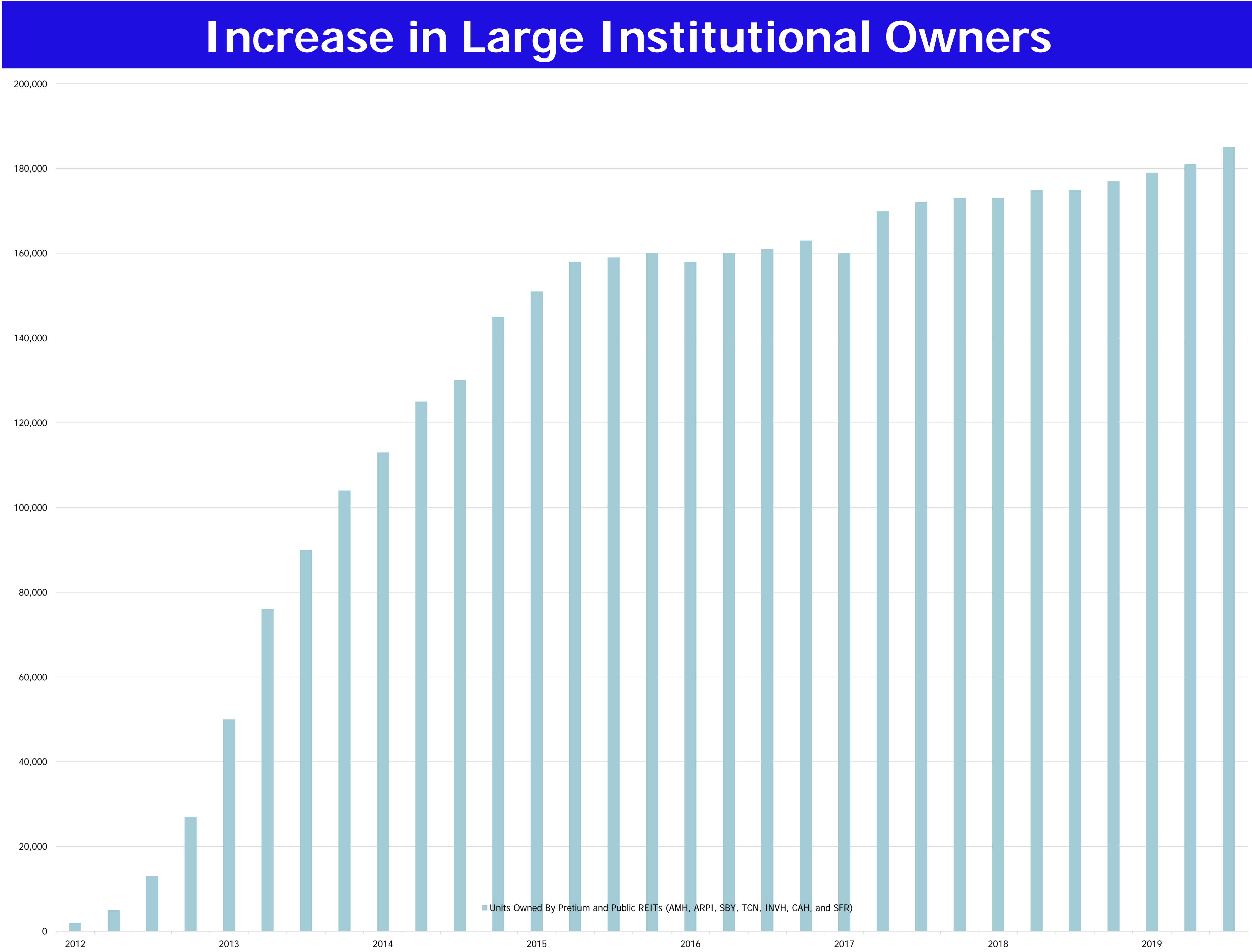
SFR as % of All Housing<sup>2</sup>



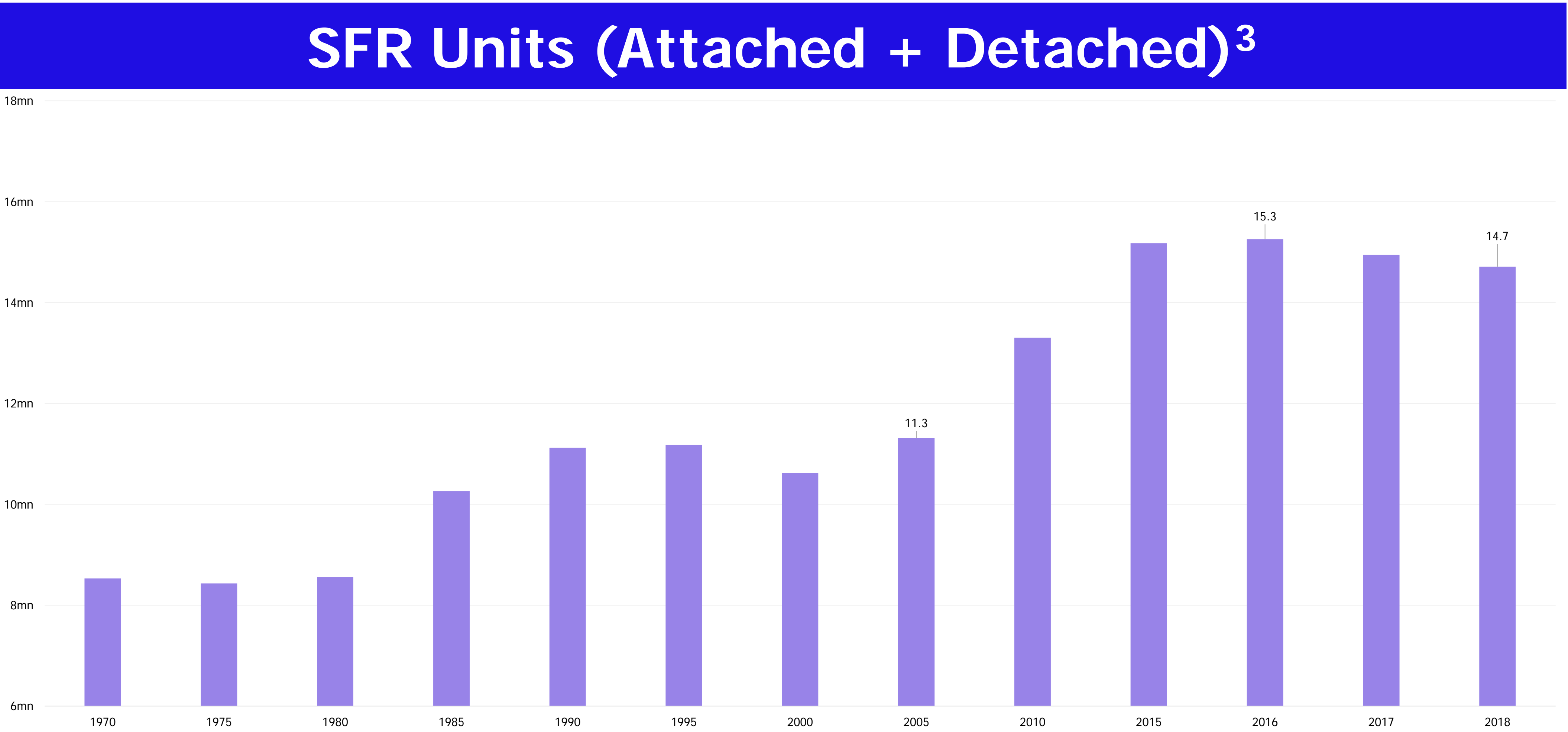
1. U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates, Table B25032 Tenure by Units in Structure.  
2. U.S. Census Bureau. For 1970-1995 data, we use the American Housing Survey data. For 2000 and 2010 we use the Decennial Census. For 2005, and 2015-2018 we use the American Community Survey 1 Year Survey. Any error in combining these various data series is ours.

# We’re Discussing the Increase in Institutional Ownership

Part of a larger increase in SFR stock from 2005 (11.3mn units) to 2016 (15.3mn units)



SFR Ownership by Number of Properties <sup>2</sup>				
	Portfolio Size	# of Investors	SFR Properties	Est. Market Share
Institutional Investors	2000+	18	~188,000	1%
Middle-Tier Investors	50-2000	~6,250	~703,000	4%
Small Investors	11-50	~88,000	~1.6mn	7%
Very Small Investors	1-10	15.5mn	~19.3mn	88%



1. Zelman and Associates, “The Floor Plan,” January 2020.  
2. Freddie Mac, Single-Family Rental, An Evolving Market”, December 2018.  
3. U.S. Census Bureau. For 1970-1995 data, we use the American Housing Survey data. For 2000 and 2010 we use the Decennial Census. For 2005, and 2015-2018 we use the American Community Survey 1 Year Survey. Any error in combining these various data series is ours.



# Larger Institutions Own A Higher Quality SFR Home Than Mom & Pops

## Pretium Fund I Home Attributes<sup>1</sup>



Avg. Home Age  
18 years



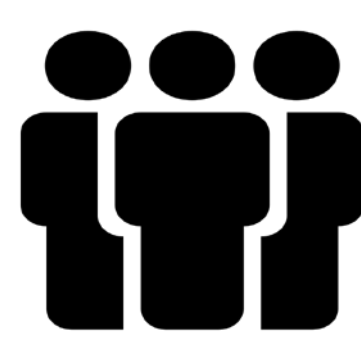
Home Attributes  
~1,900 sf  
3.4 bedrooms



School Score  
6.2



Total  
Investment  
~\$200,000 / home

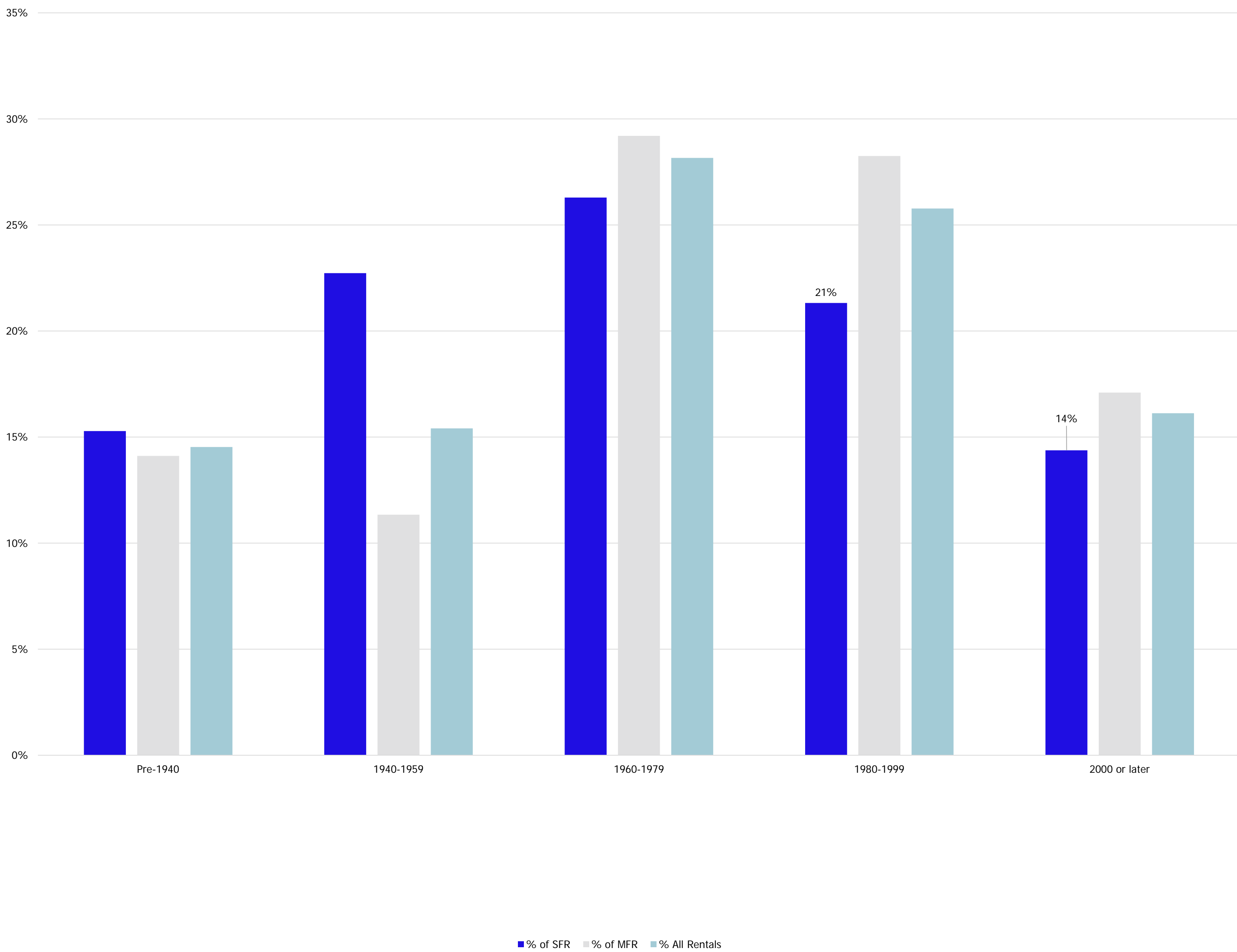


Homeowner  
Association  
~70%



Rent  
~\$1,600 / month

## Non-Institutional SFR is older<sup>2</sup>



Four largest institutional owners' average home is 20 years old.<sup>3</sup>

1. Past performance is not indicative of future results. There can be no assurance that these objectives will be achieved. Based on homes owned or managed as of June 30, 2019.  
2. Harvard JCHS, State of the Nation's Housing, 2018.  
3. Average for AMH, INVH, TCNB, and Pretium.



# Institutional SFR: Benefits and Challenges as Ownership Increases

## Benefits

- Provides high-quality housing in desirable neighborhoods and school districts to residents who are unable to or choose not to own their home
- Institutional ownership favors higher quality homes and effective governance practices demanded by institutional capital providers
- Provides a significantly higher level of service and convenience to customers than ‘mom and pop’
- National Rental Home Council (“NRHC,” SFR industry trade group) members:
  - Invest \$21,000 in upfront repairs for each home acquired; an investment that many first-time homebuyers may be unable to afford, at greater efficiency given institutional scale<sup>1</sup>

## Challenges

- As portfolios grow, incumbent on owners to continue to provide high-quality, timely service for residents
- Acquire homes primarily in neighborhoods with high rates of homeownership that may otherwise have been purchased by individuals or ‘mom and pop’ owners
  - In historically low periods of existing home inventory, this impact may be more significant than in normal supply / construction periods
- As Rohan’s paper pointed out, institutional owners are profit seeking firms, with a focus on generating rent and profit growth
  - Occupancy rate for 4 largest owners nearly 96% in 3Q 2019, suggesting rents are in-line with market<sup>2</sup>

1. NRHC data, through April 2018. [http://www.rentalhomecouncil.org/wp-content/uploads/2018/06/1479-2581\\_NRHC\\_National\\_Fact-Sheet\\_041218d.pdf](http://www.rentalhomecouncil.org/wp-content/uploads/2018/06/1479-2581_NRHC_National_Fact-Sheet_041218d.pdf)

2. Stabilized or same-property portfolio occupancy rates for AMH, INVH, TCN, and Pretium as of September 30, 2019.

# Agenda

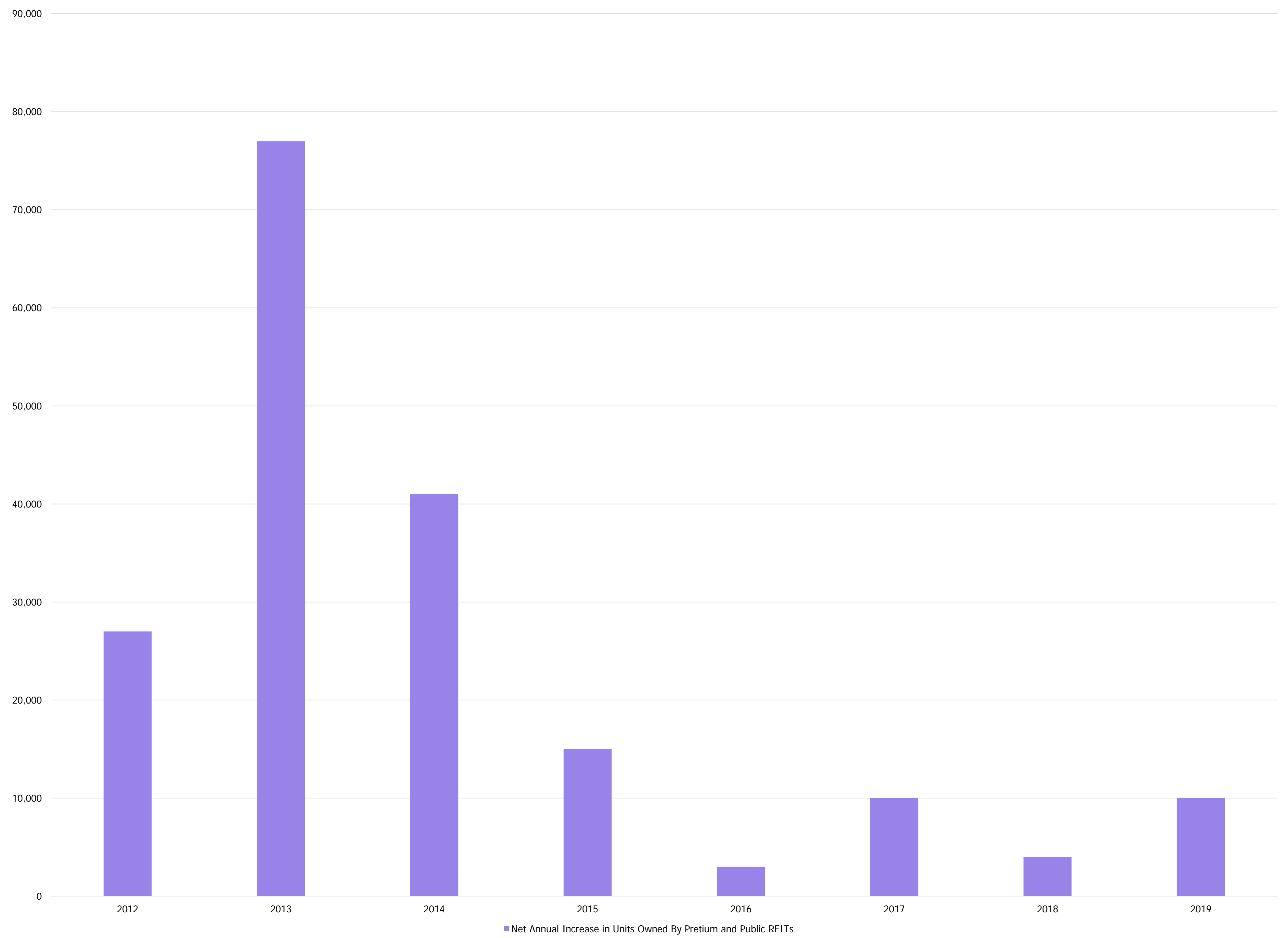
- I. Institutional SFR: Growth and Differentiation of Large Owners
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- III. Focus on Higher Growth MSA and Submarkets

1. [Footnote 1]

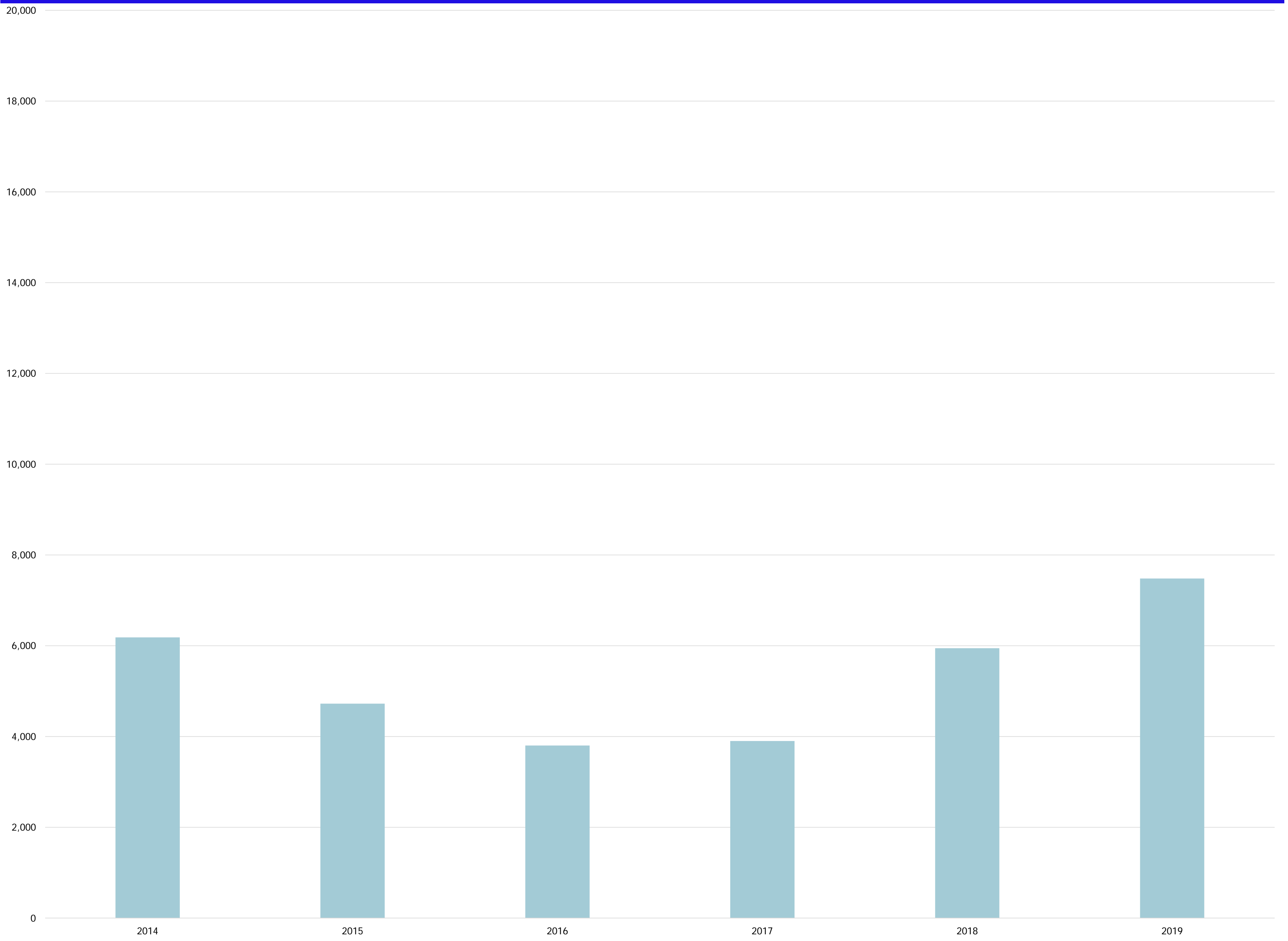
# Acquisitions in 2012-2013 vs. Today

Larger proportion of distressed purchases in 2012-14; today more selective

Institutional Owners Grew Quickly in 2012-14 <sup>1</sup>



Pretium Acquires Homes Primarily One By One<sup>2</sup>



1. Zelman and Associates, "The Floor Plan," January 2020.  
2. Pretium Partners, data through December 2019. Past performance is not indicative of future results. There can be no assurance that these objectives will be achieved.

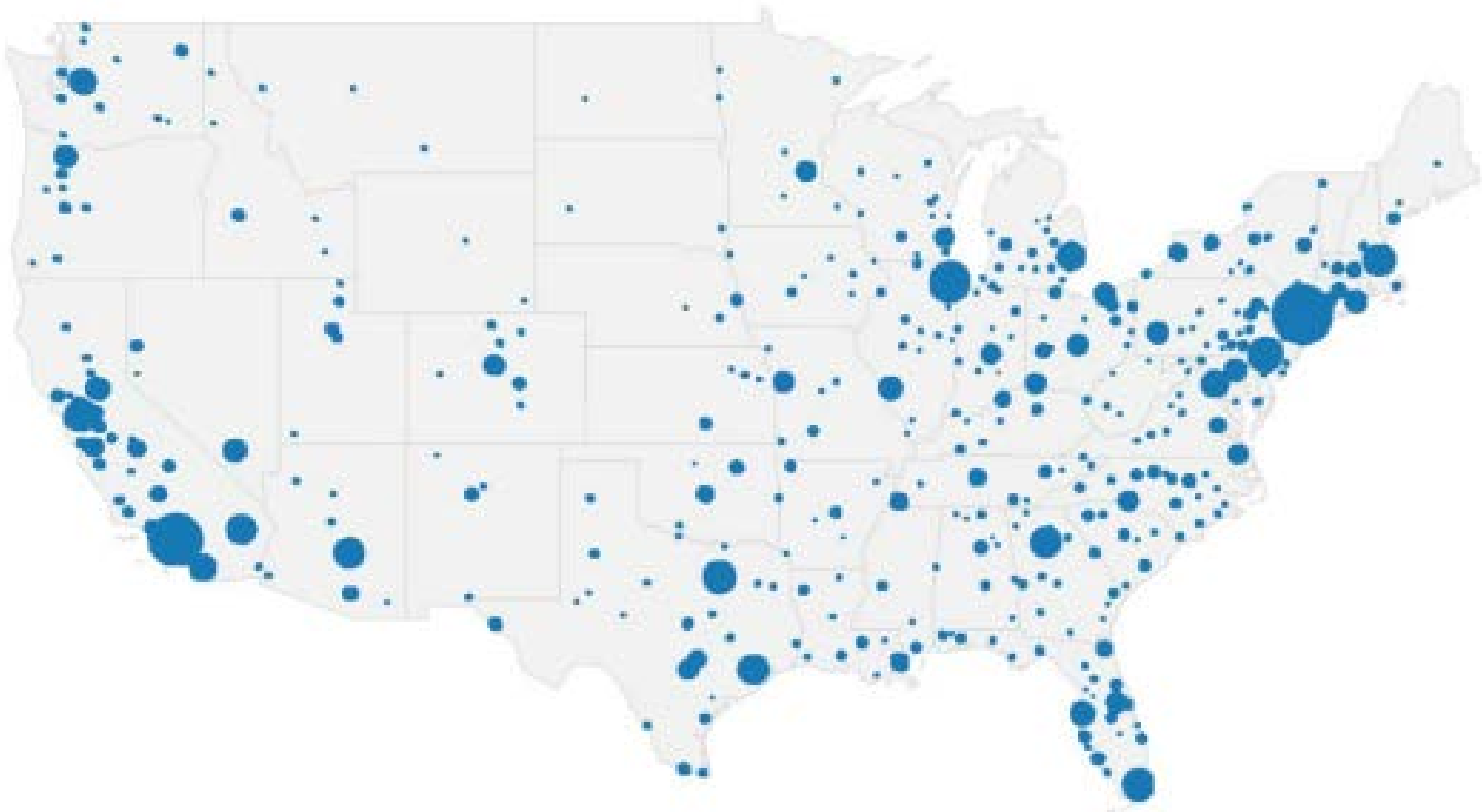


# Institutional Ownership Concentrated in High Peak to Trough HPA Markets

Freddie Mac analysis shows institutional ownership is concentrated than overall SFR inventory <sup>1</sup>

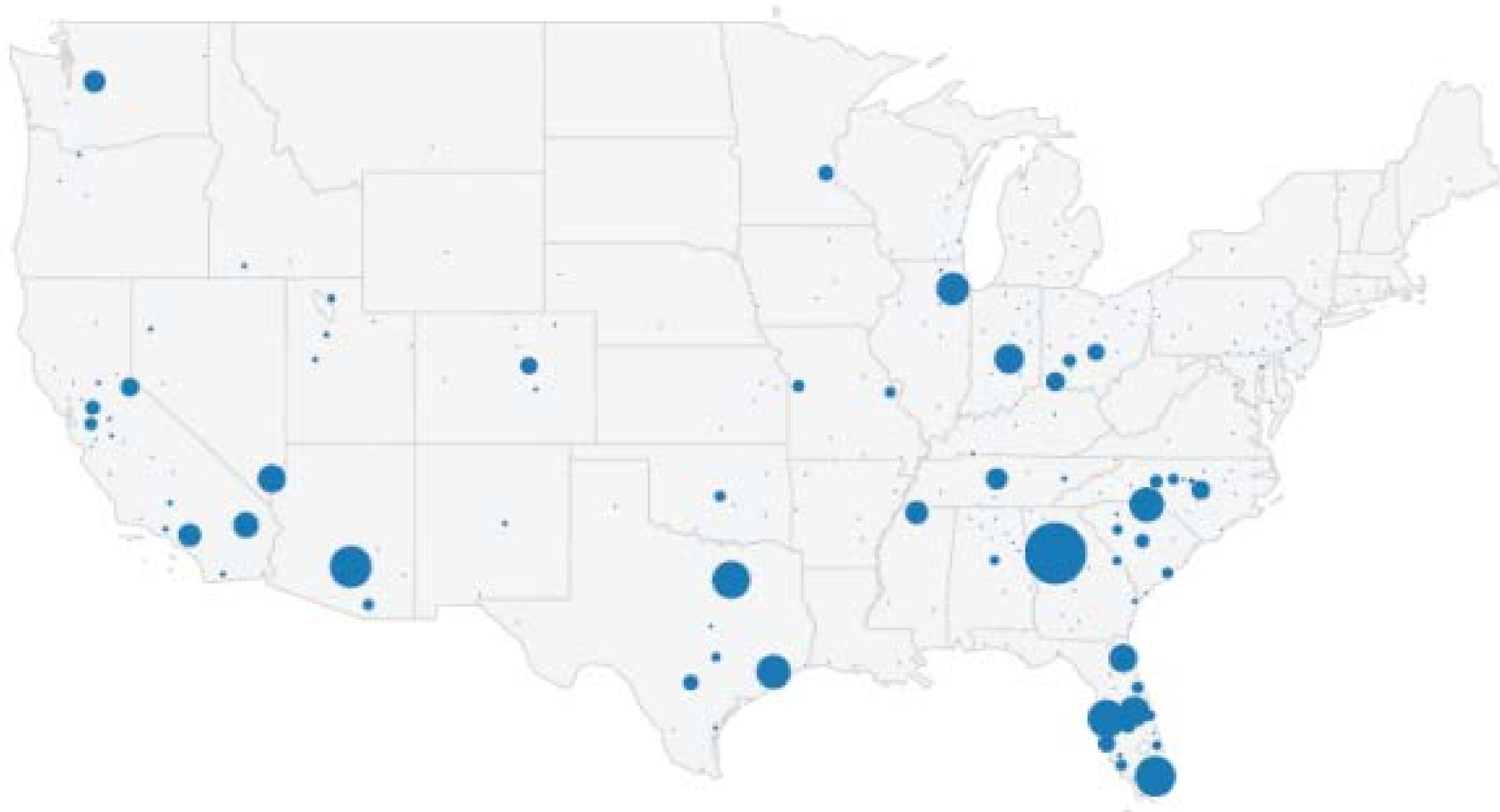
## All SFR in US

Figure 8: Geographic Concentration of All SFRs<sup>14</sup>



## Institutional Ownership of SFR

Figure 11: Concentration of SFRs Purchased by Institutional Investors<sup>22</sup>



1. Freddie Mac, *Single-Family Rental, An Evolving Market*, December 2018.

# Concentration of Institutional Investors

We estimate the four largest institutional investors own ~1.1% of the housing stock in the 15 markets where Pretium is most active<sup>1</sup>

Institutional Ownership as % of SFR and Housing in Select Markets				
		Institutional Ownership (000s)		
		Total Owned Homes (AMH, INVH, Prog, TCN )	% of SFR	% of All Single Family Housing
Atlanta	Overall MSA	24.6	8.4%	1.6%
Charlotte	Overall MSA	12.0	11.3%	2.2%
Dallas	Overall MSA	9.4	3.1%	0.6%
Houston	Overall MSA	8.2	3.1%	0.5%
Indianapolis	Overall MSA	4.5	4.7%	0.8%
Jacksonville	Overall MSA	5.7	7.4%	1.5%
Las Vegas	Overall MSA	5.7	4.0%	1.1%
Memphis	Overall MSA	1.5	1.7%	0.4%
Miami	Overall MSA	11.0	4.5%	0.9%
Nashville	Overall MSA	5.2	6.9%	1.1%
Orlando	Overall MSA	9.7	5.3%	1.1%
Phoenix	Overall MSA	14.3	5.4%	1.2%
Raleigh	Overall MSA	3.0	5.3%	0.9%
Sarasota	Overall MSA	0.8	0.7%	0.1%
Tampa	Overall MSA	14.7	9.6%	1.9%
Pretium Target Markets	Overall	130.3	5.3%	1.1%

1. Housing inventory data from 2018 1 Yr ACS survey. Institutional home counts by market through 3Q 2019, from public company financials and Pretium data.



# Agenda

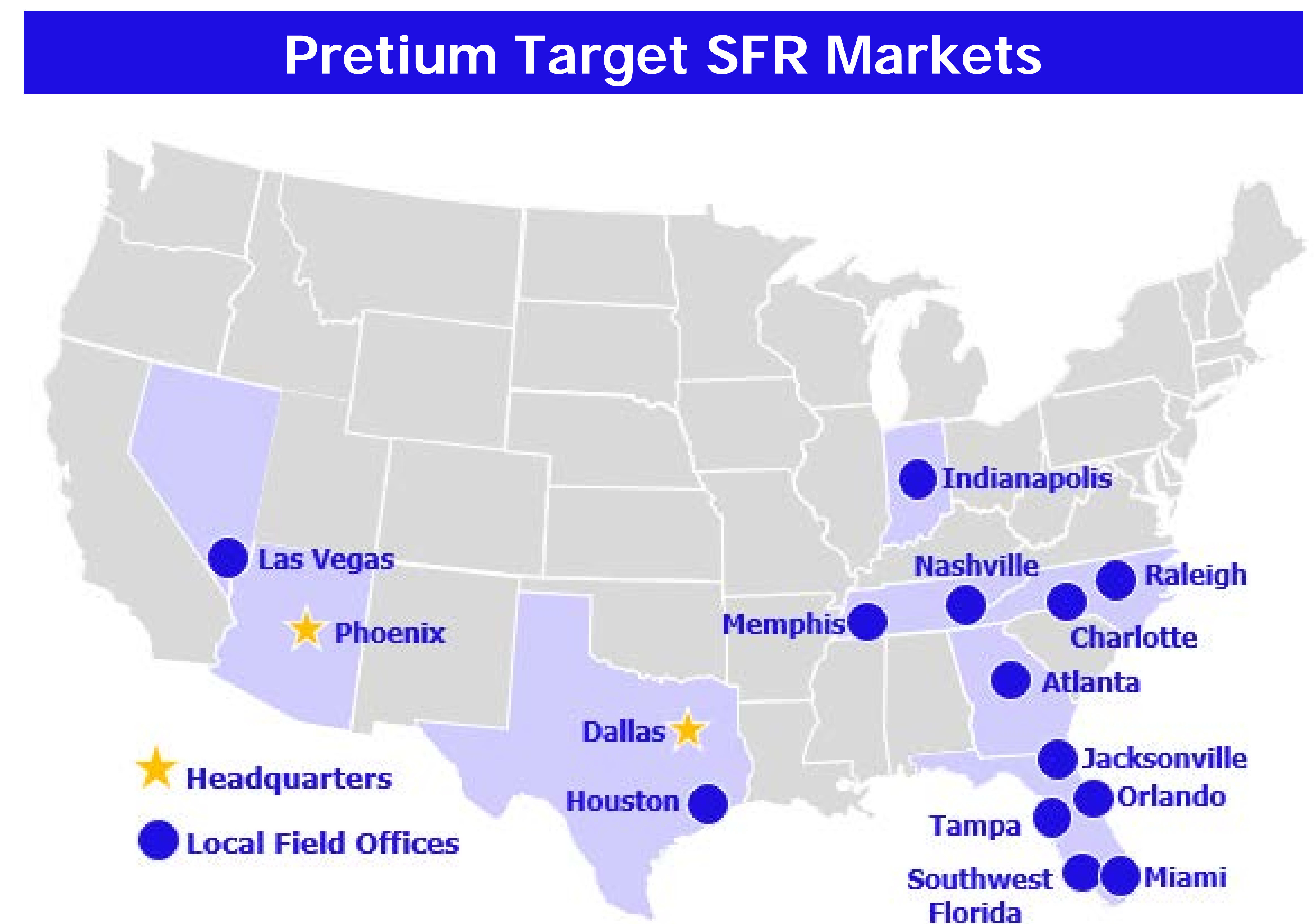
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1. [Footnote 1]

# Setting Acquisition Criteria: MSA and Submarket

Focused on adding homes in high growth, quality submarkets

- ▶ Pretium's investment team performs a comprehensive analysis on each target MSA based on demographic trends, job growth, school scores, delinquency rates, replacement cost, overall economic data, and HPA trends, with a zip-code score assigned to each neighborhood before any homes in the area are evaluated for acquisition.
- ▶ The initial target markets, and locations within those markets, have largely been selected for their:
  - Favorable outlooks for population, employment, and income growth
  - Strong demonstrated single-family rental demand
  - Fiscal stability and tax rates at the state, MSA, and local level
  - Community stability, good schools, and low crime rates
  - Business friendly environments
  - Newer, affordable housing stock
  - Attractive going-in yields and outlook for potential capital appreciation.
- ▶ These attributes have generally led us to invest in high growth Sun Belt markets.

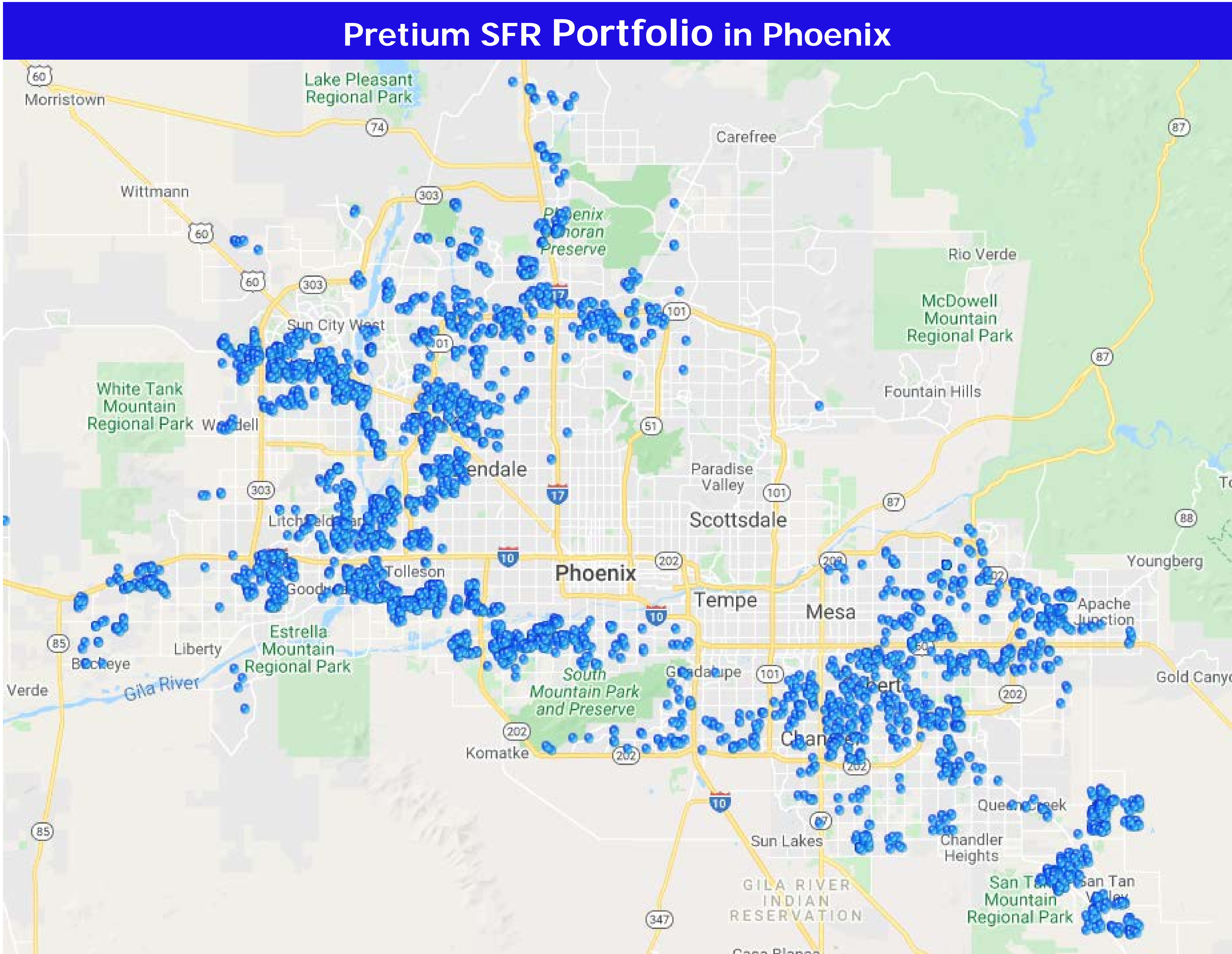


1. Represents homes managed by Pretium's Real Estate Platform across Pretium's investment vehicles. Past performance is not indicative of future results. There can be no assurance that these objectives will be achieved



# Setting Acquisition Criteria: MSA and Submarket

Focus on the submarkets where we expect above average growth, and where we can acquire the homes which work best for us as rentals



1. Represents homes managed by Pretium's Real Estate Platform across Pretium's investment vehicles.



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