



# 2019 Multifamily Market Update



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# Today's Agenda

- Macroeconomic Outlook
- Multifamily Demand Fueled by Secular Changes
- Affordability: The Problem is Real



# The Yardi Matrix View

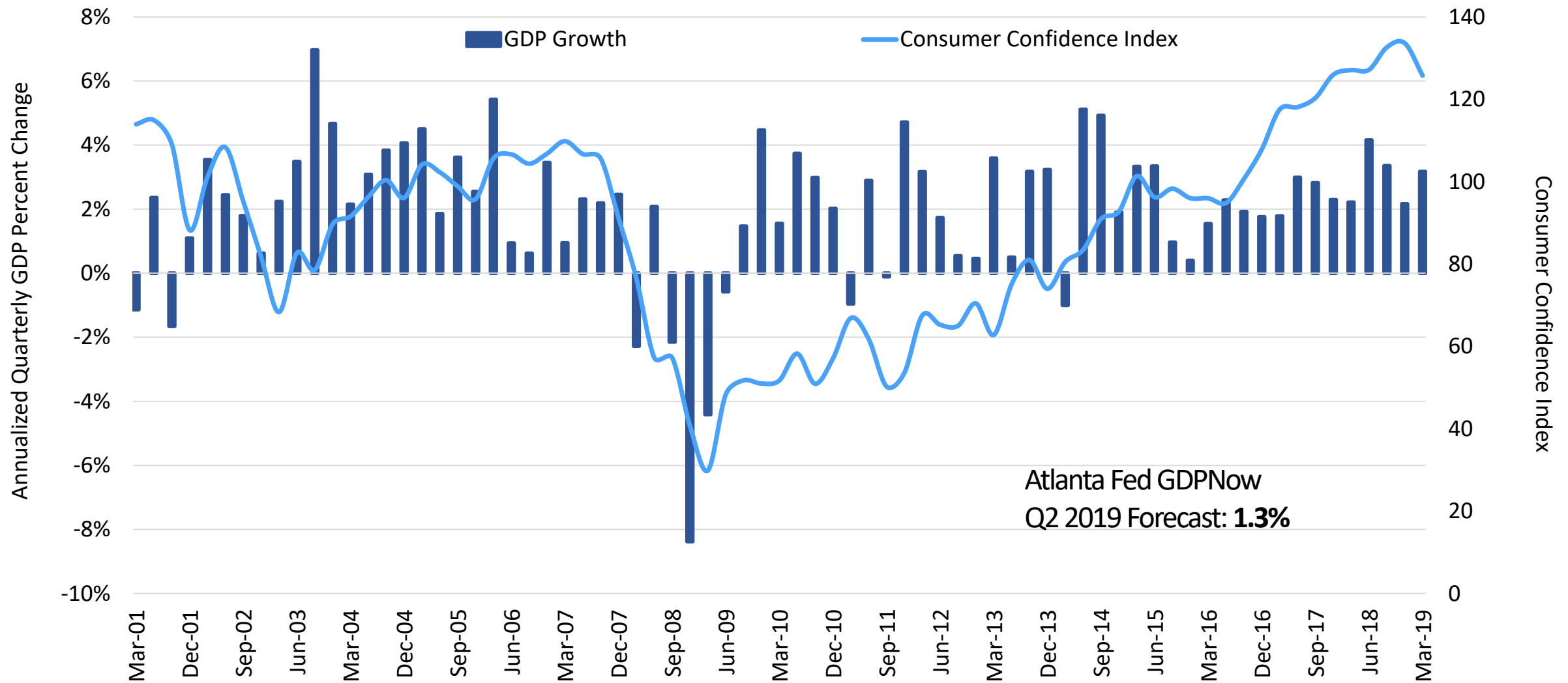
- **U.S. economy is in decent shape**
  - GDP growth in Q1 was stronger than expected – Q2 will likely show deceleration but will remain north of 2%
  - U.S. oil production is keeping inflation low below 2% – and low inflation is a global phenomenon
  - The yield curve briefly inverted, but the Fed pulled back from the brink
  - The labor market is extremely tight, and wages continue to rise, particularly in office-using industries
    - The increase in labor force participation rate among women has been large
- **Demographic and lifestyle changes are fueling strong demand for multifamily, north of 425K units/year**
  - An aging population, increasing divorce rates, and more younger people living at home all contribute to more people renting apartments versus owning
  - Other lifestyle changes, including people getting married later in life, and having less children mean people are renting longer than they have in the past
  - Total housing production is unlikely to catch up to household formation, putting upward pressure on rents, occupancy rates and pressures for rent control

# The Yardi Matrix View

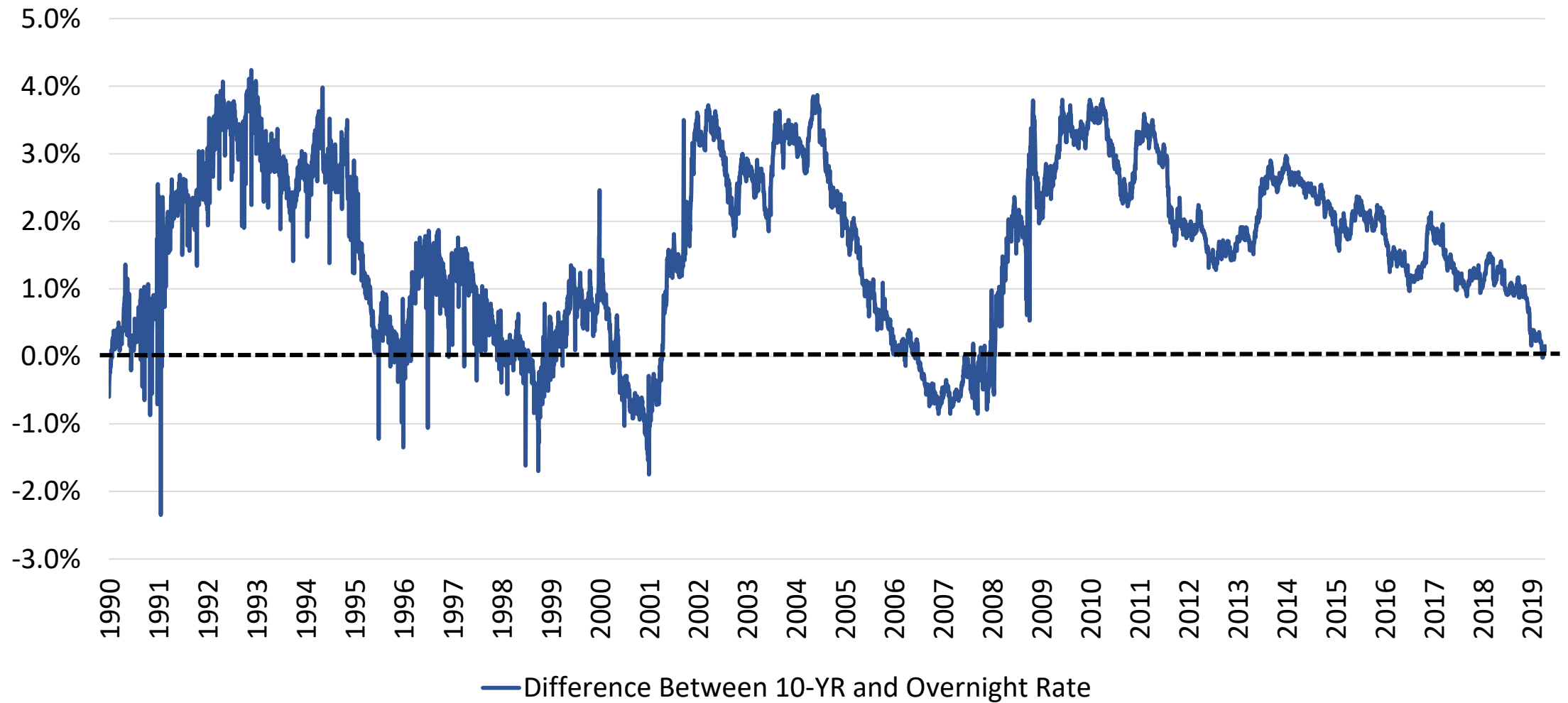
- **Below the national level, tech hubs are emerging both in formerly non-tech metros and traditionally overlooked cities**
  - Cost advantages and emerging intellectual hubs are shifting the geography of jobs
  - Tech hub markets have had the most dynamic job growth as companies look for areas that can attract top talent at a moderate cost
  - The longer the expansion goes on the more we see this trend trickle down to tertiary markets, and our forecasts show tech hubs and tertiary markets will have the most rent growth over the next few years
- **Affordability is a headwind for the industry, but the cost of home ownership has risen even more than the cost of renting**
  - Affordability issues have been building for a long time, and certain markets are fairing better than others
  - Over the past ten years, rents have risen significantly faster than wages, but wages have caught up over the past three years, so it's not all bad news
  - There are a number of public and private responses to affordability emerging
    - Rent control, higher density zoning, coliving, Airbnb, etc.
  - Although multifamily affordability is an issue – rents aren't growing as fast as the cost of owning, which is a positive force for the multifamily industry

# Macroeconomic Outlook

# U.S. GDP Growth in Q1 at 3.2% Stronger Than Expected



# The Yield Curve Has Been Inching Down, With a Transient Inversion Early This Year



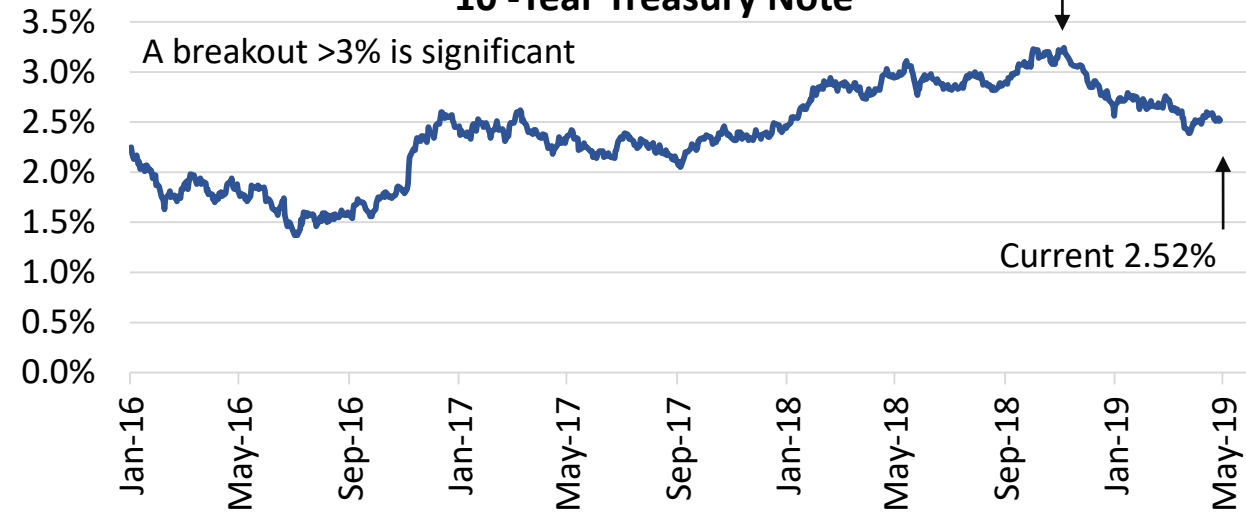
Source: Moody's Analytics; U.S. Board of Governors of the Federal Reserve System (FRB)

# U.S. and International Financial Market

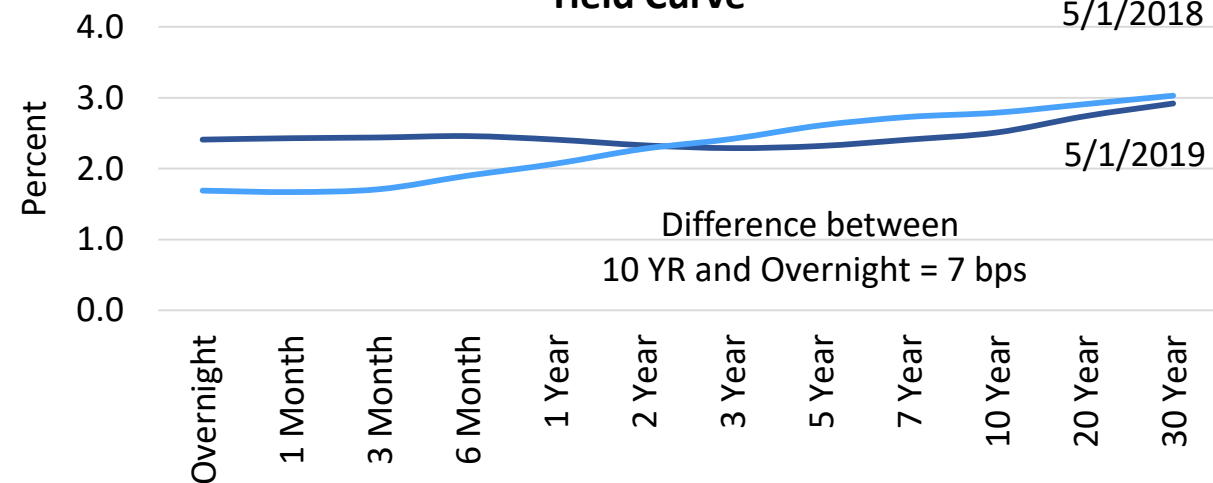
### S&P 500



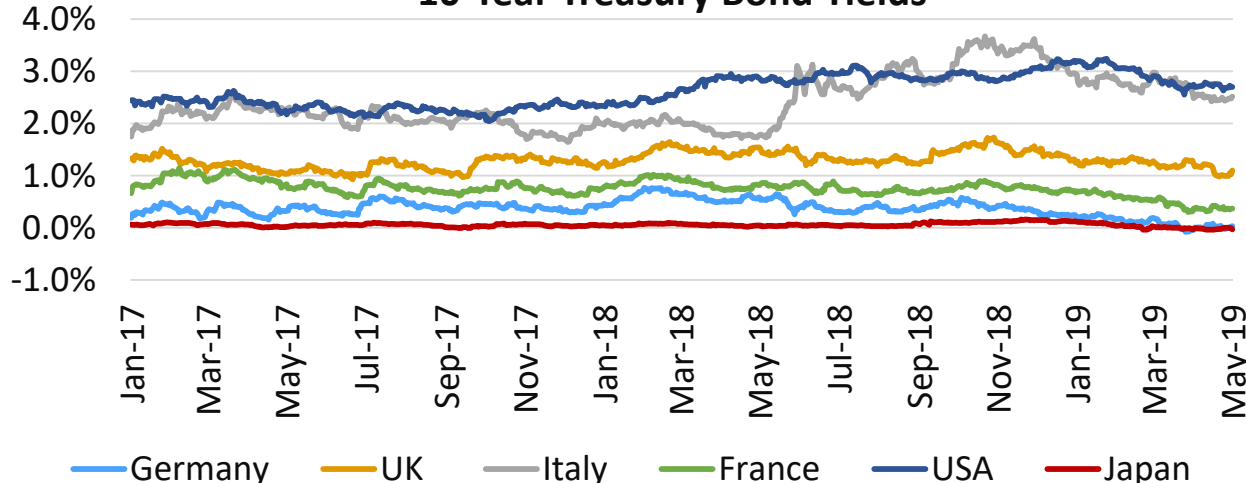
### 10 -Year Treasury Note



### Yield Curve

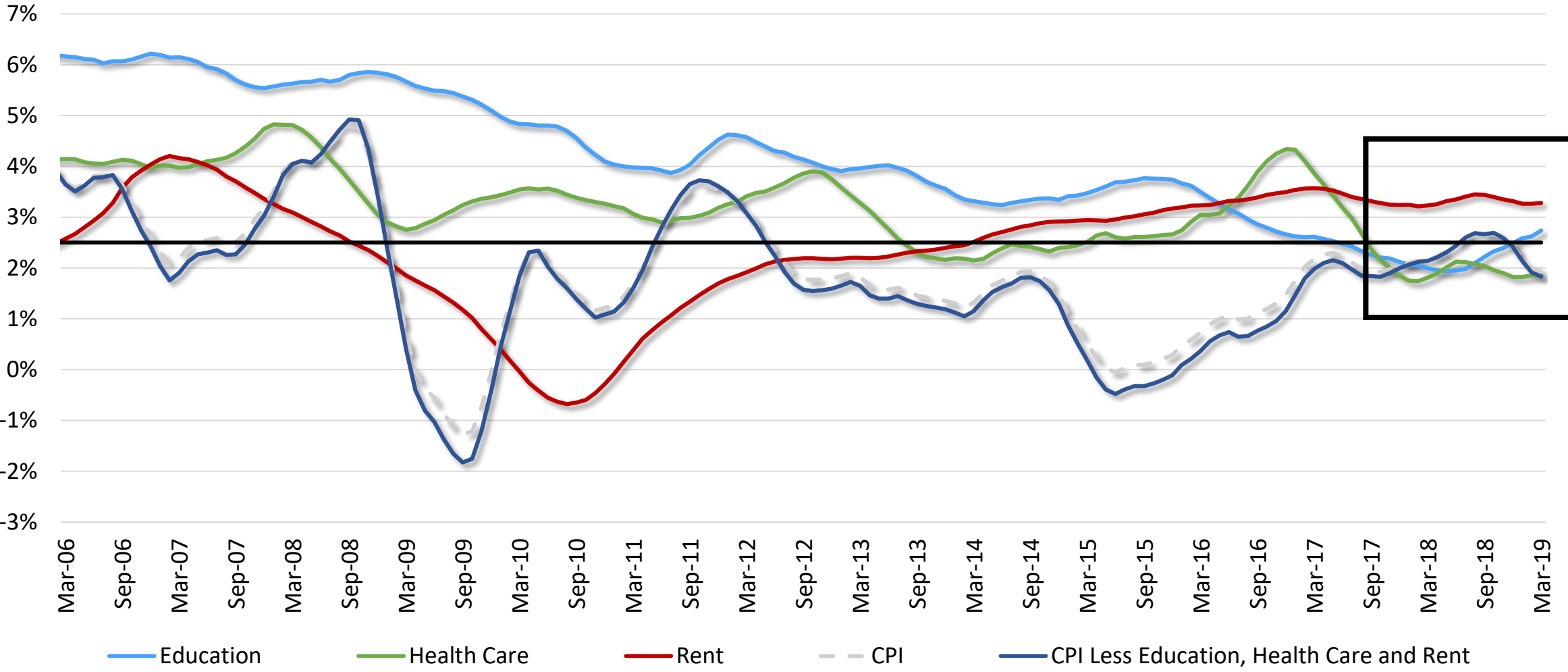


### 10-Year Treasury Bond Yields





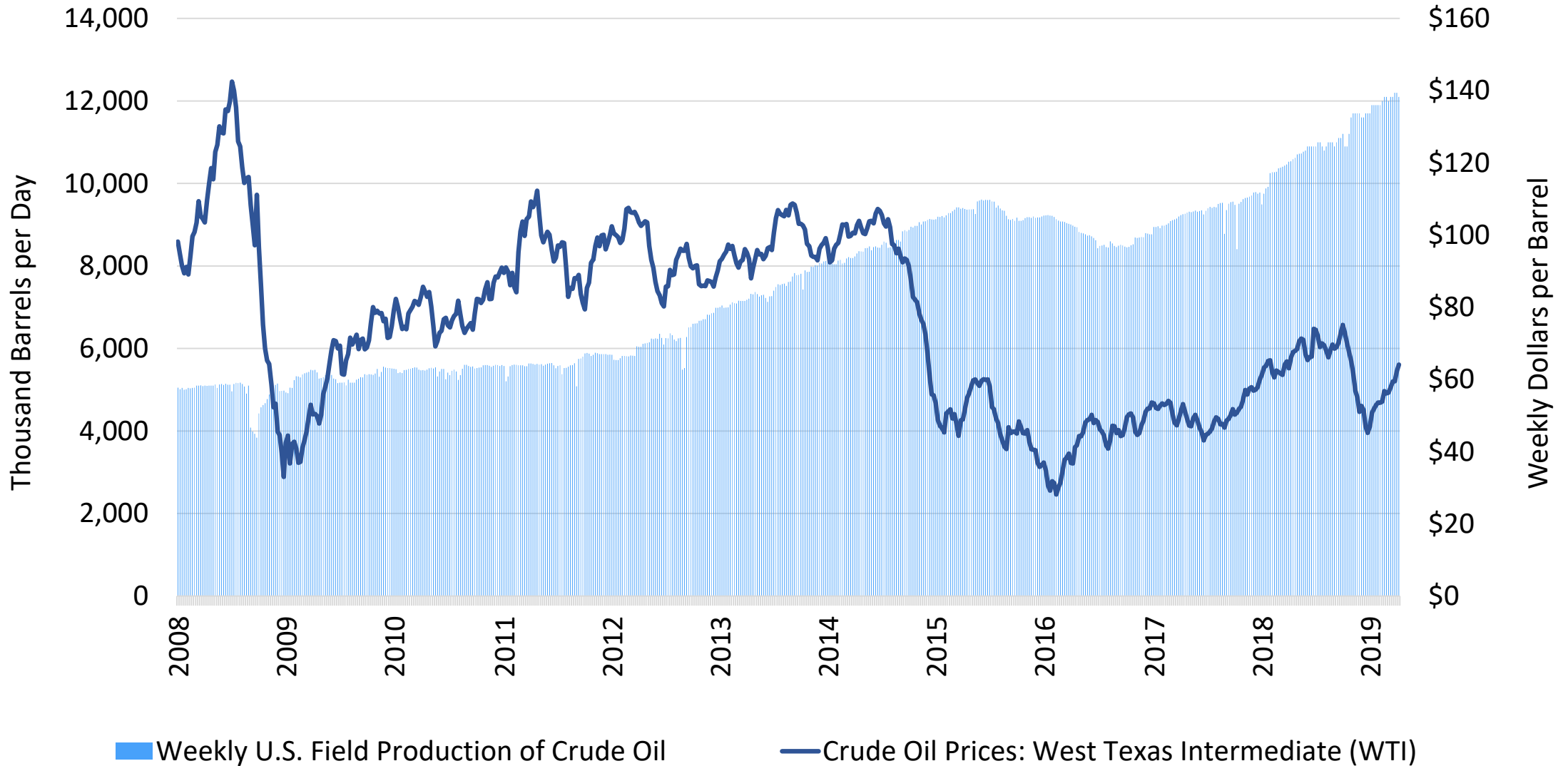
# Inflation Was Rising, But is Now Well Below 2%, and is Unlikely to Break Out >2.5%



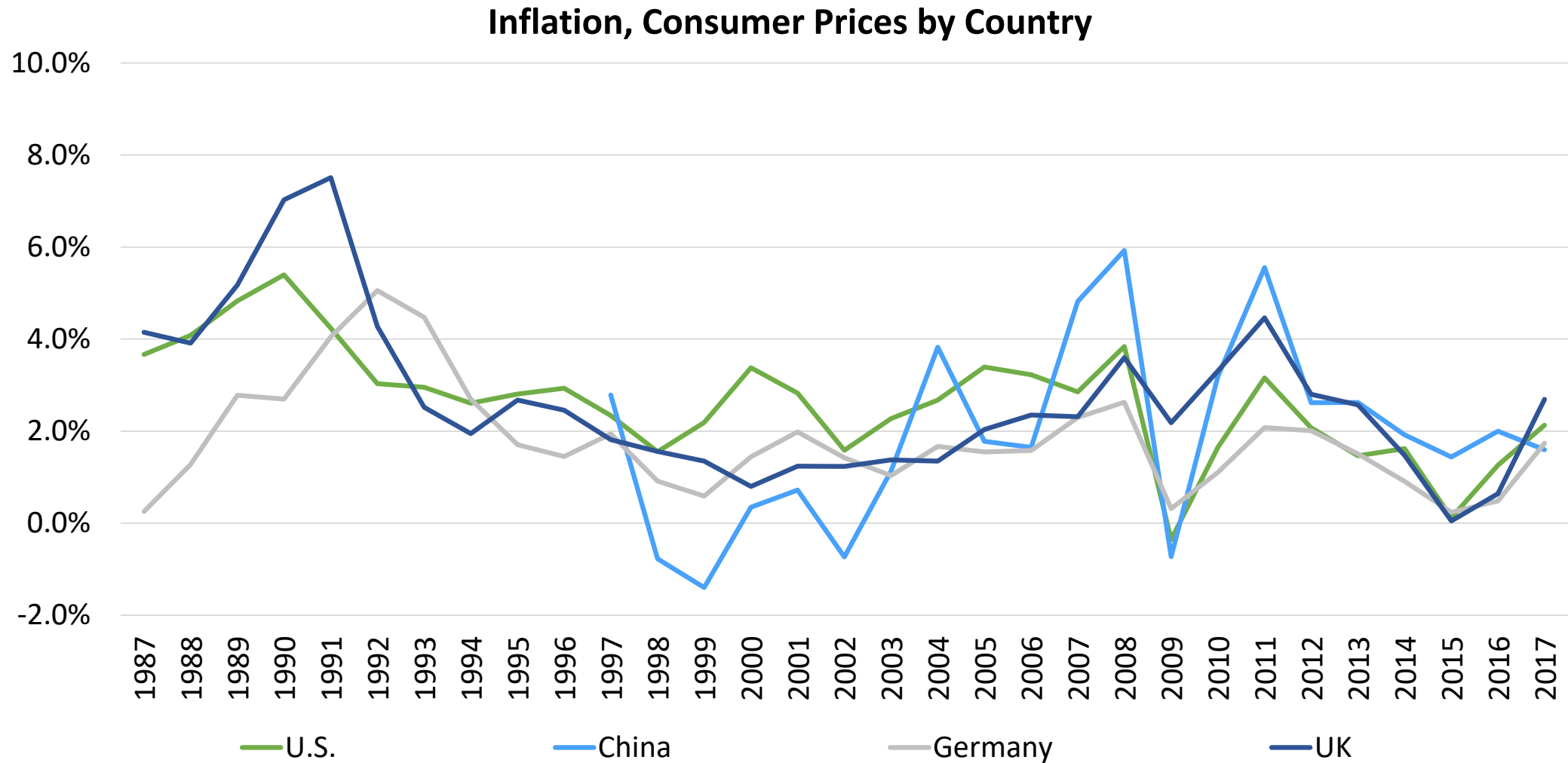
\*YOY 6 month moving avgs. CPI Less Health Care, Education and Rent is an estimate using BLS document "Math calculations to better utilize CPI data"  
 Source: Moody's Analytics; Bureau of Labor Statistics (BLS)



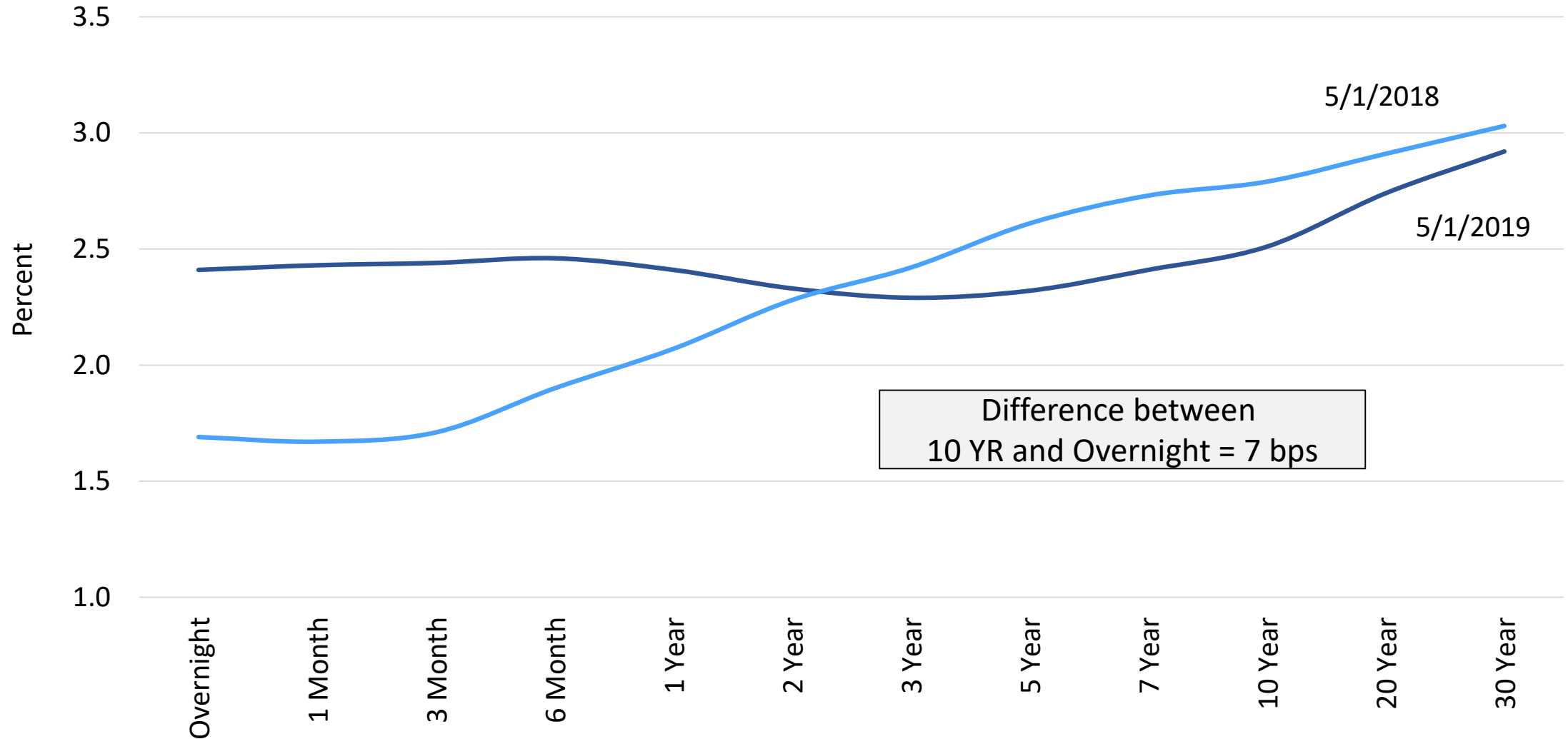
# Why is There No Inflation? U.S. Oil is Flooding the Market



# Inflation Going Down is a Global Phenomenon



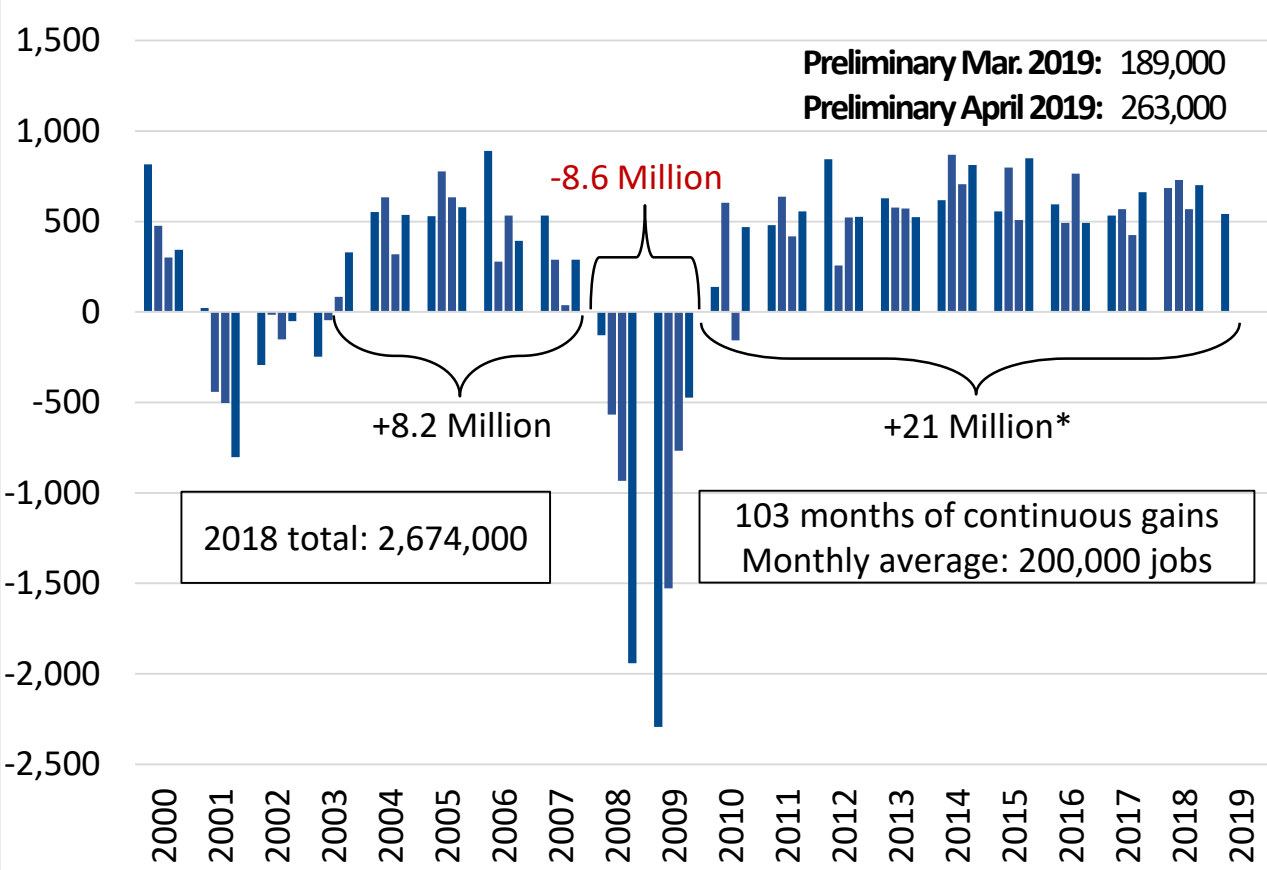
# The Yield Curve is Very Flat



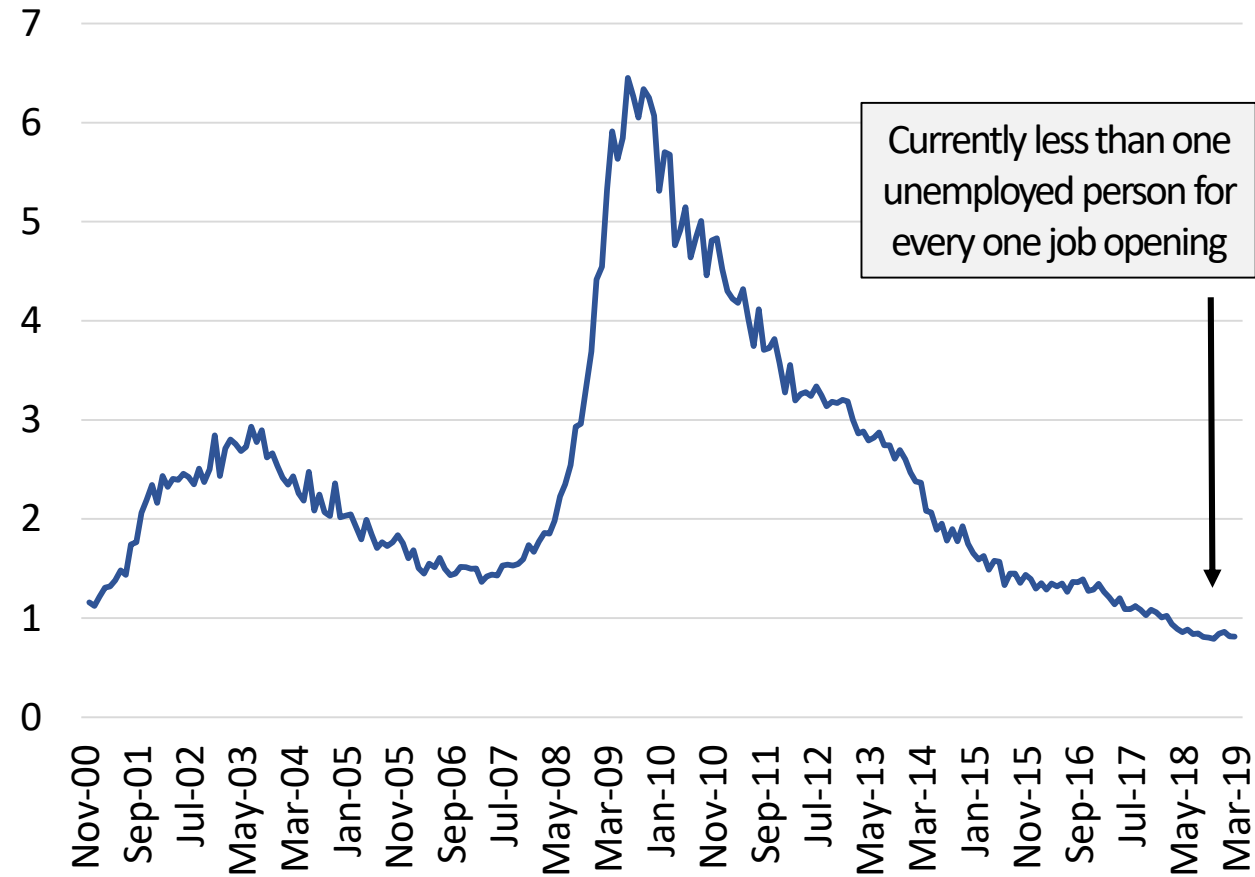
# Tight Labor Market, Pulling People Off the Sidelines

It is difficult to find labor at the right *price*, with the right *skills*, in the right *city*

### Long Stretch of Continuous Job Gains



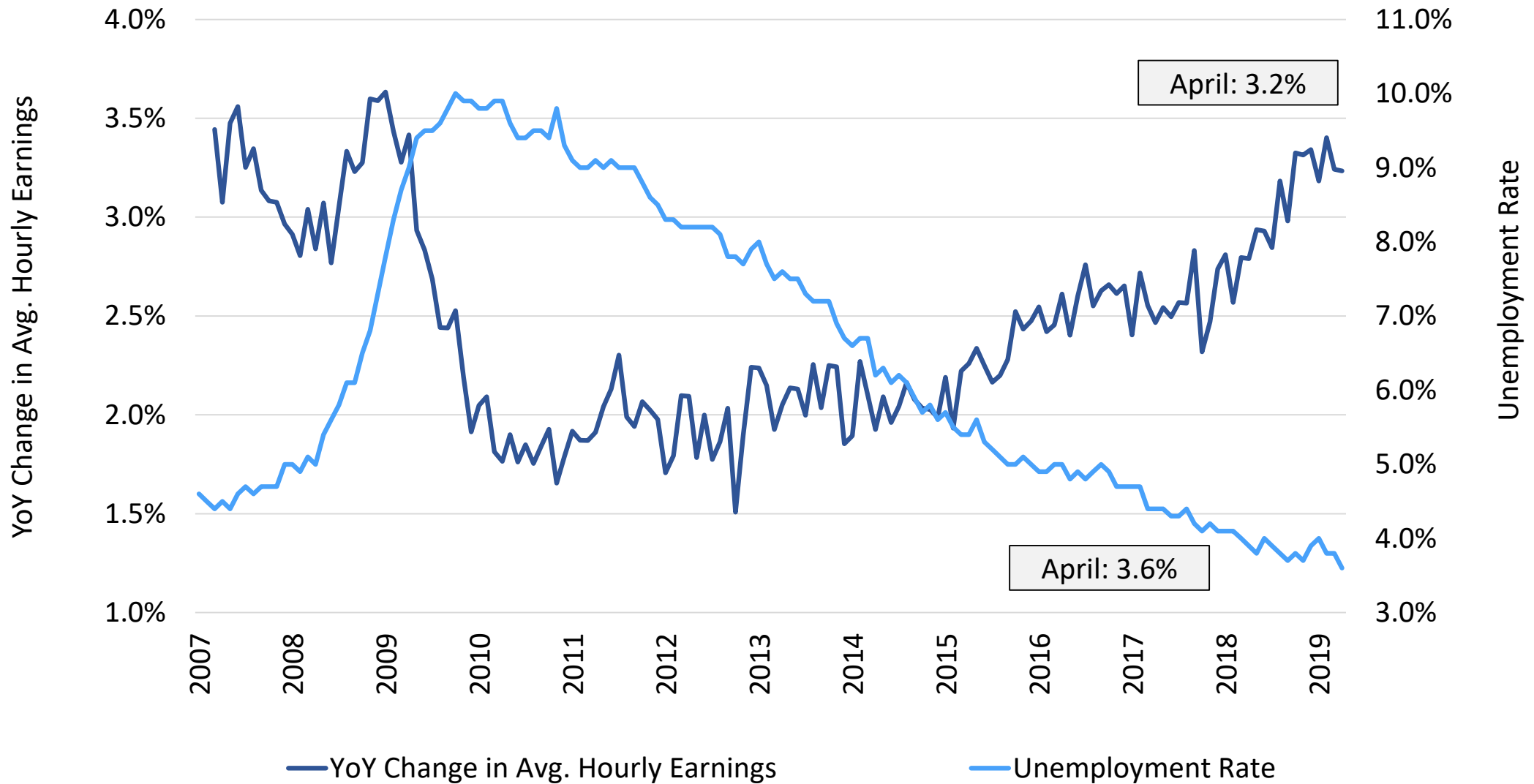
### Unemployed Persons per Job Opening



\*Through March 2019

Source: Moody's Analytics; Bureau of Labor Statistics (BLS); The Conference Board

# U.S. Wage Pressure Increasing, but Not Out of Hand

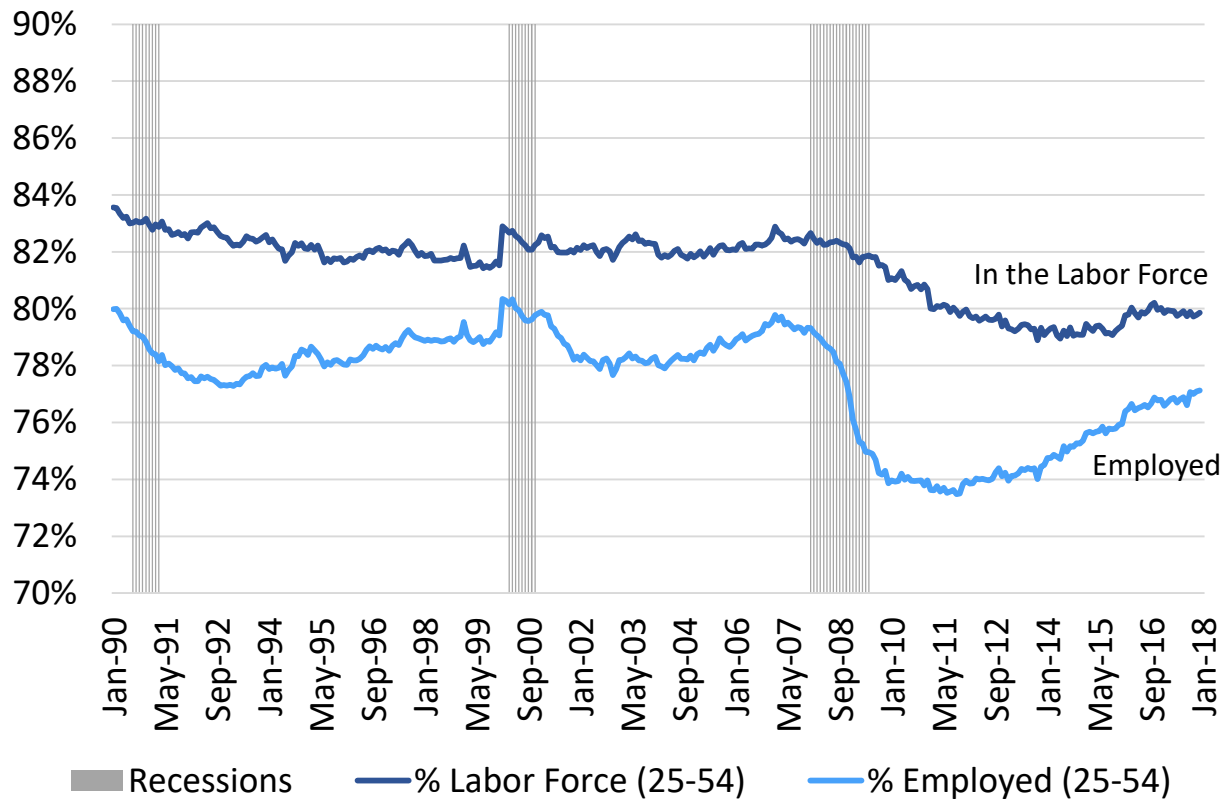


Source: Yardi® Matrix; Moody's Analytics; Bureau of Labor Statistics (BLS); Current Population Survey (CPS)

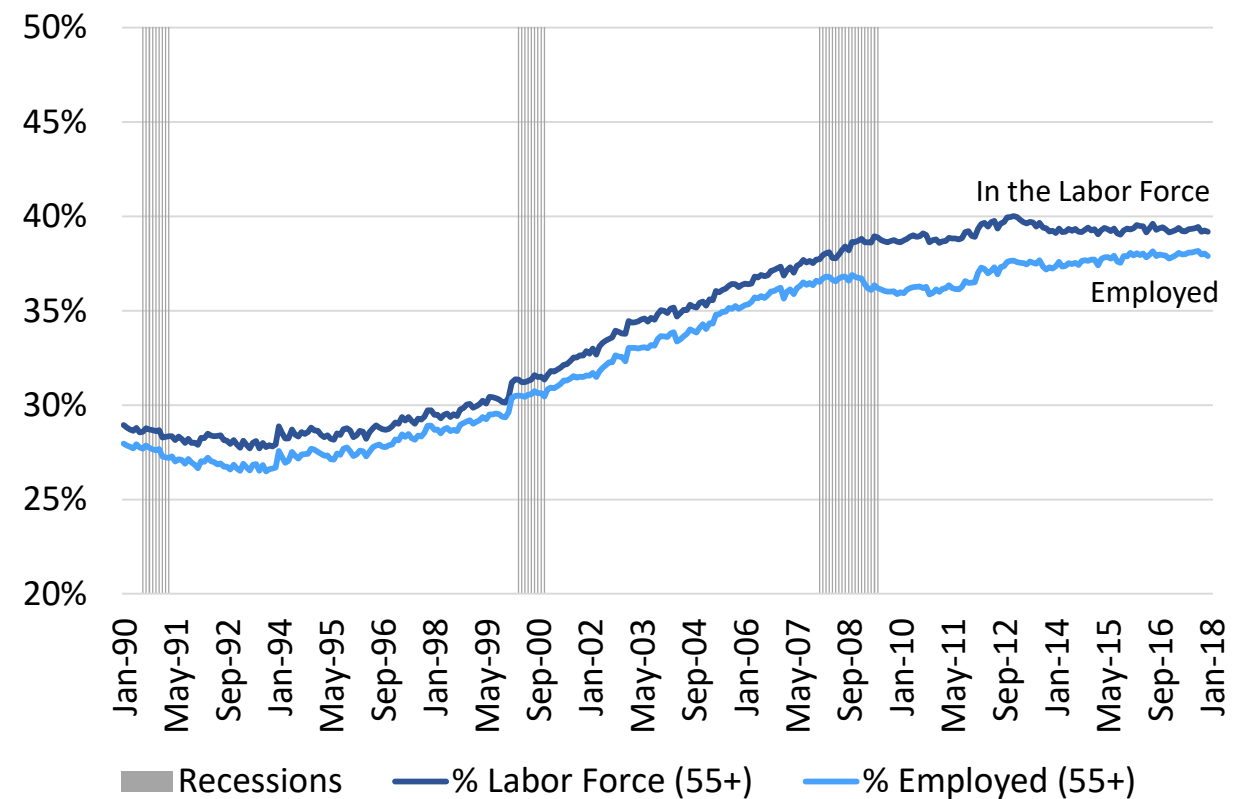
# Reserve Supply of Labor

- Another 2% of the prime-age population could get engaged – approximately 2.6 million people
- Participation rates for people age 55+ are rising – buoying the expansion

Share of Prime-Age Population (25-54) That Is...

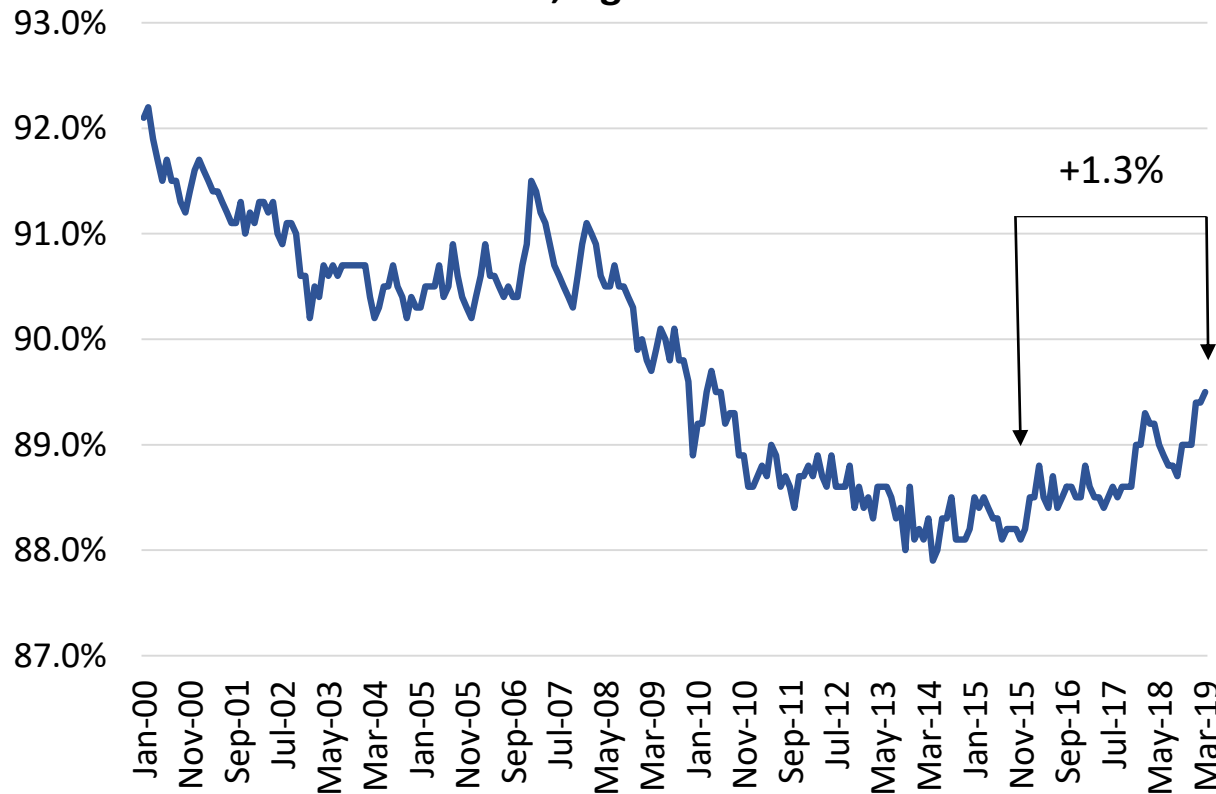


Share of Age 55+ Population That Is...

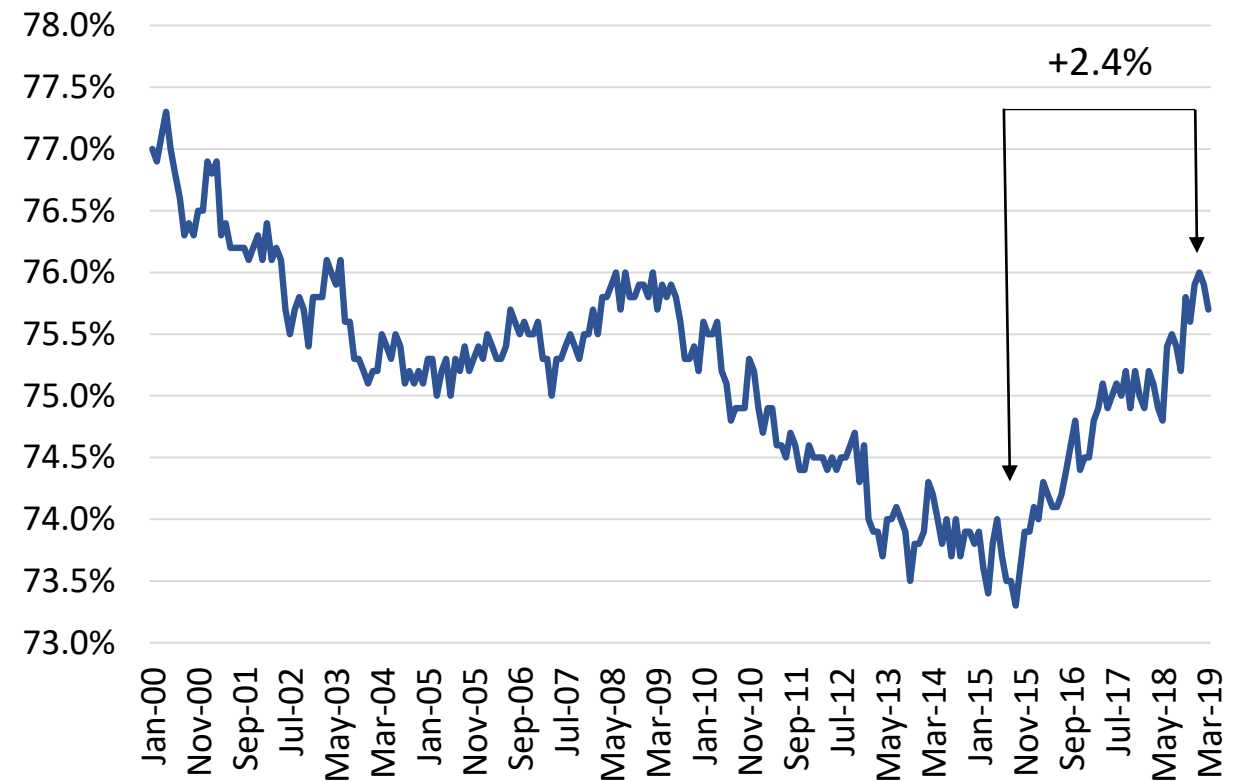


# The Increase in the Labor Force Participation Rate Among 25-54 Year Olds is Driven by Women

### Labor Force Participation Rate Male, Ages 25-54



### Labor Force Participation Rate Female, Ages 25-54





# U.S. Federal Policy Mix is Mildly Pro-Growth – Shifting Away From Consumers Towards Producers

## Pro-Growth

- Tax Reform
- Regulatory Relief
- Executive Orders
  - Energy
  - Finance
  - Labor Costs



Generally Positive Progress

## Pro-Growth but Slow

- Infrastructure
- Education Reform
  - German Model
- Healthcare Reform



Progress in Tone, but Not Yet Substantive

## Anti-Growth

- Immigration Control
- Trade Renegotiation
  - President Trump announced U.S. will impose tariffs on steel and aluminum imports



Recent Tariff Move a Potential Drag on Growth

# In Summary:

- GDP growth was unexpectedly high in Q1, but we think it will be in the 2.0%-2.5% range in Q2
- The Yield Curve briefly inverted, but Fed easing has pulled it back
- Low inflation is a global phenomenon – with oil production keeping it low in the U.S.
- The labor market is extremely tight, and employment and wage growth are in excellent condition, particularly in office-using industries

**“The Party Goes On”**

# Multifamily Demand Fueled by Secular Changes

# Demographic and Lifestyle Changes

- Aging Population
- Increasing Divorce Rates
- Young people living at home
  - Student debt burden
- Lifestyle Changes
  - People getting married later in life
  - People having less kids and later in life

**All of these in combination created a surge out of the recession, but the effects seem to be durable**

# Demographic Impacts Imply Multifamily Demand North of 425K Units a Year

Factors	2000 – 2018	2019 - 2030
Age (less Divorce impact)	587,000 new renters/year	410,000 new renters/year
Divorce	172,000 new renters/year	96,000 new renters/year
Young People Living at Home	305,000 backlog of new renters/year	305,000 backlog of new renters/year
Lifestyle Changes	Delaying marriage and having children later prolongs renting by about 3 years	Delaying marriage and having children later prolongs renting by about 3 years

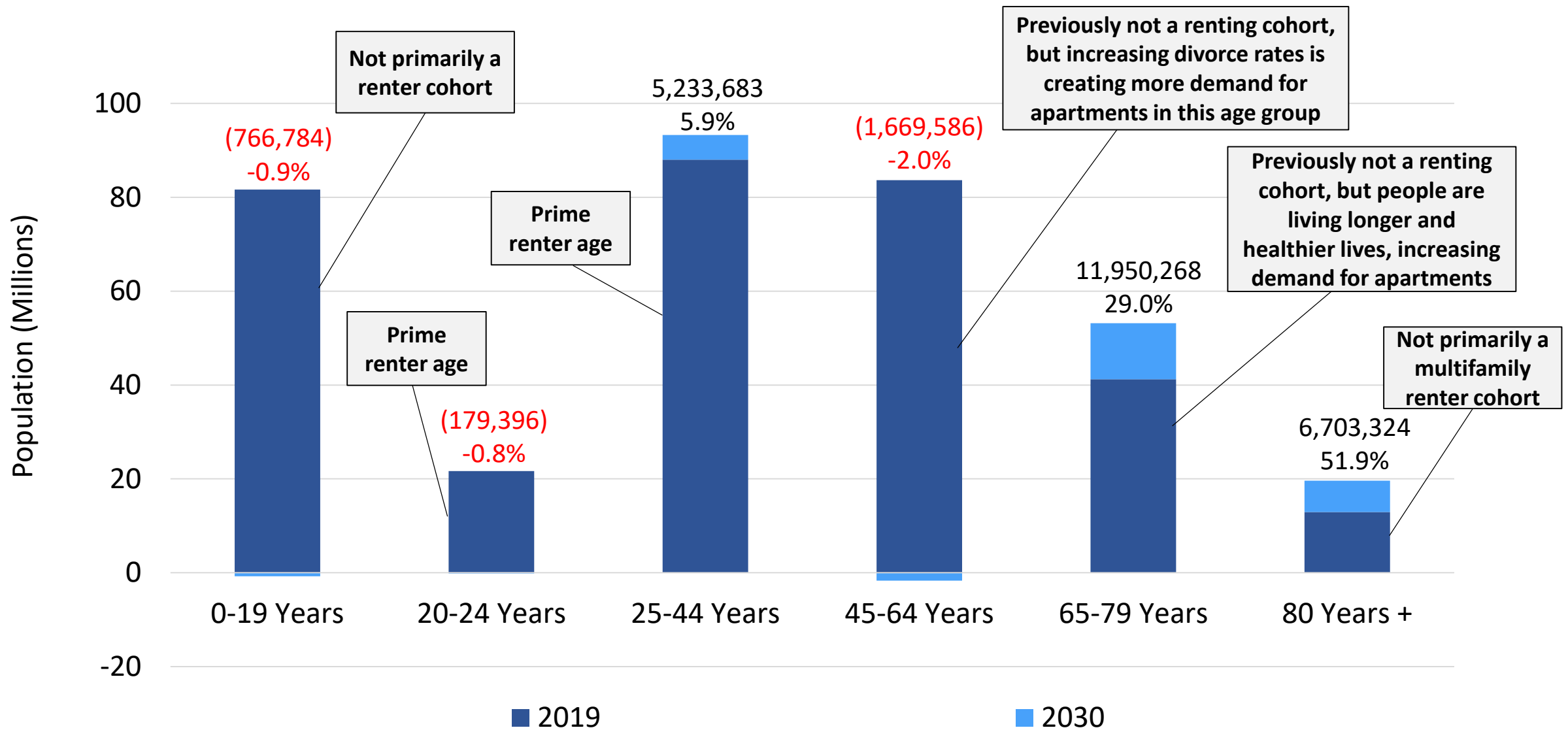
**Total Renter Demand =  
 2/3 Multifamily and 1/3 Single Family Rental**

\*2019-2030 Methodology: Forecast age assumes the 2018 rentership rate for each age cohort will remain constant. Forecast divorce assumes the 2018 rate of divorcees as a % of total population will remain constant. Young people living at home and lifestyle changes are assumed to remain constant.

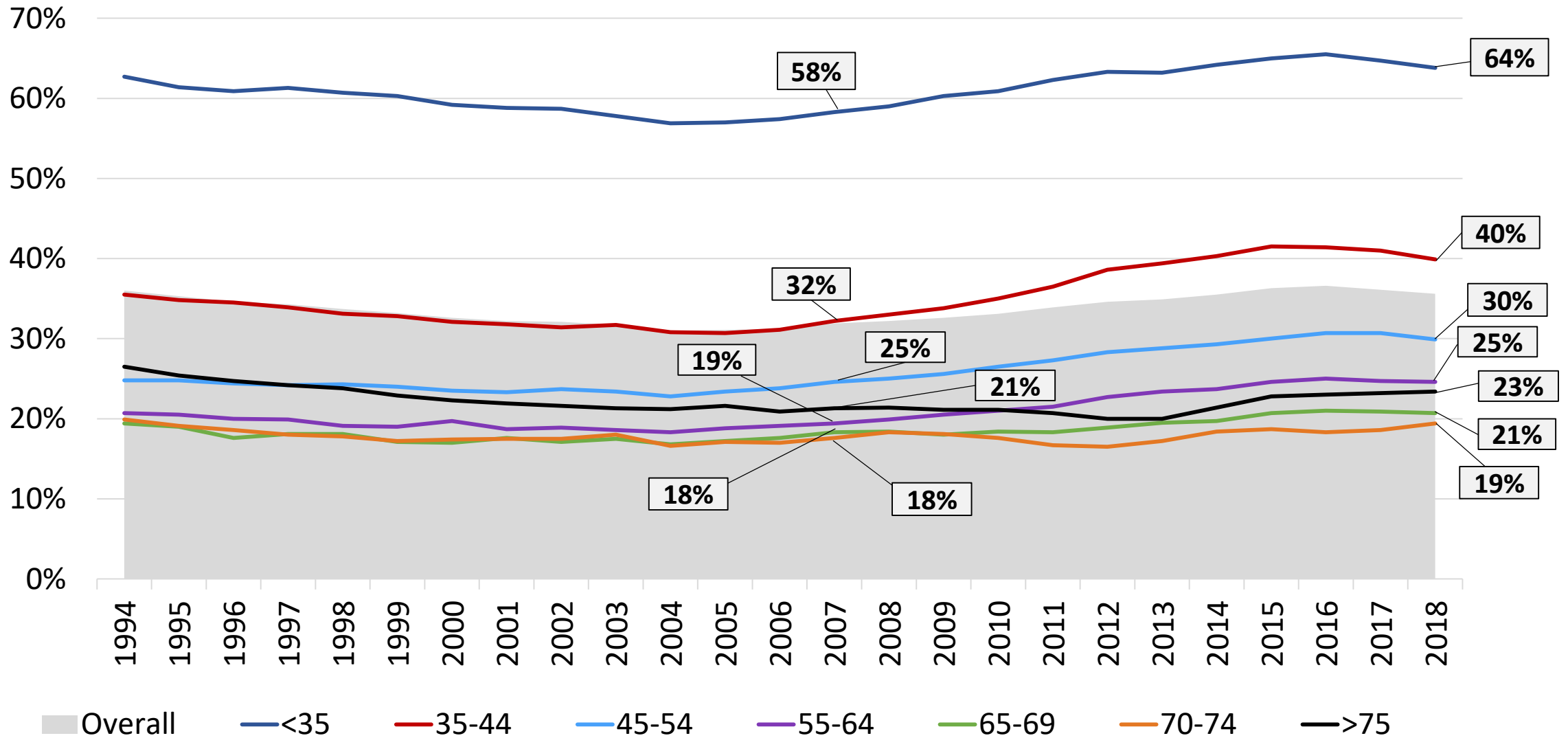
Source: Yardi®Matrix; Moody's Analytics; U.S. Census Bureau (BOC), Current Population Survey



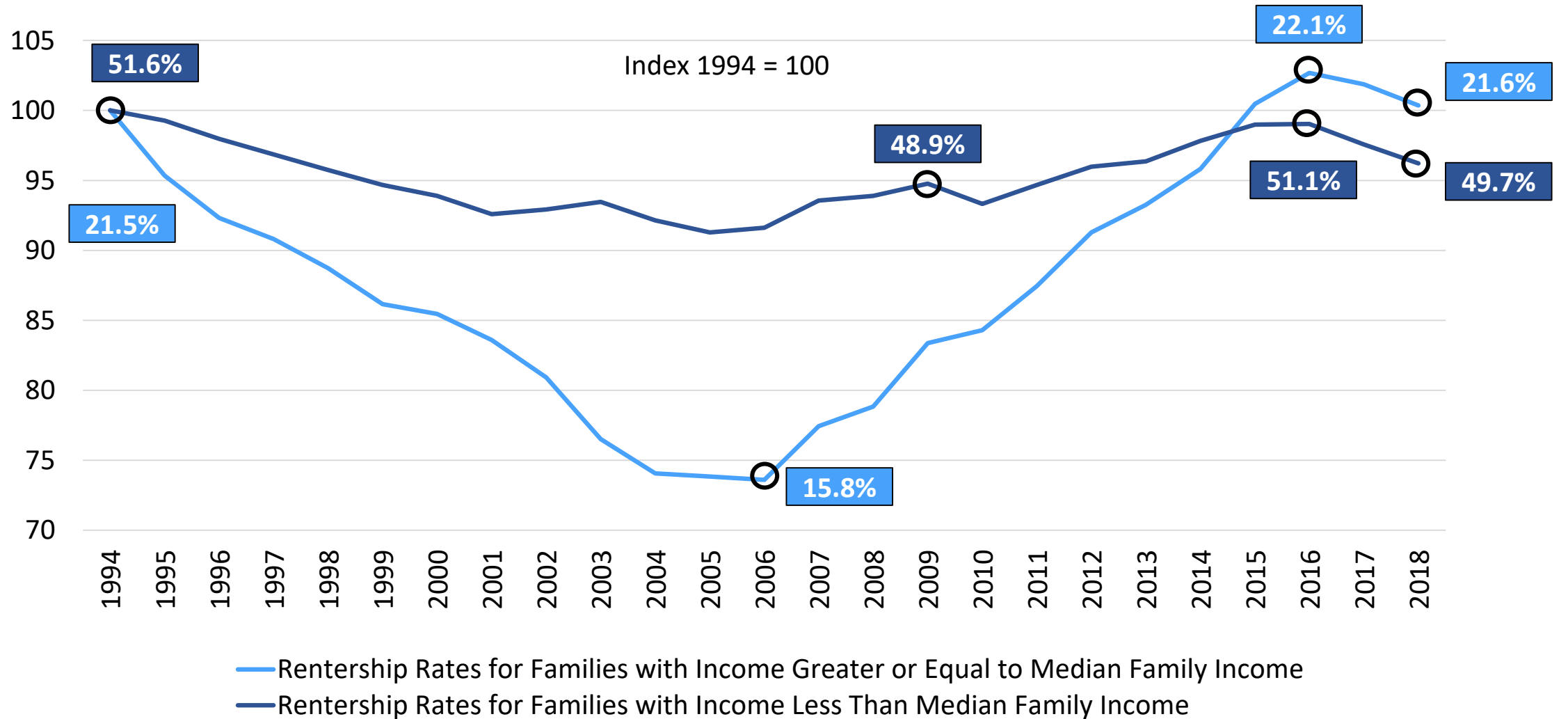
# Within Each Age Group, There are Drivers of Demand



# Historic Rentership by Age Cohort

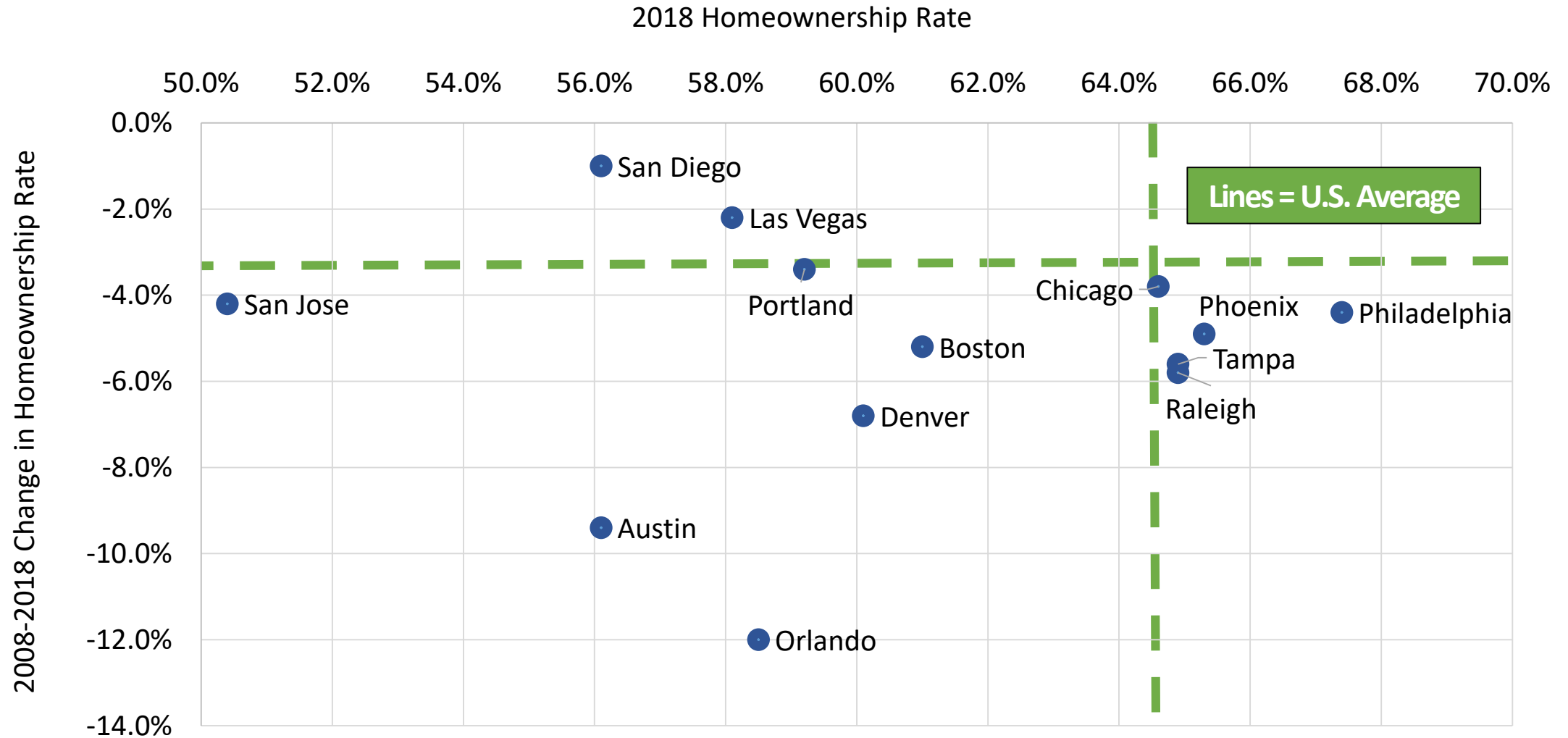


# Rentership Rate by Family Income Returns to Historical Norms

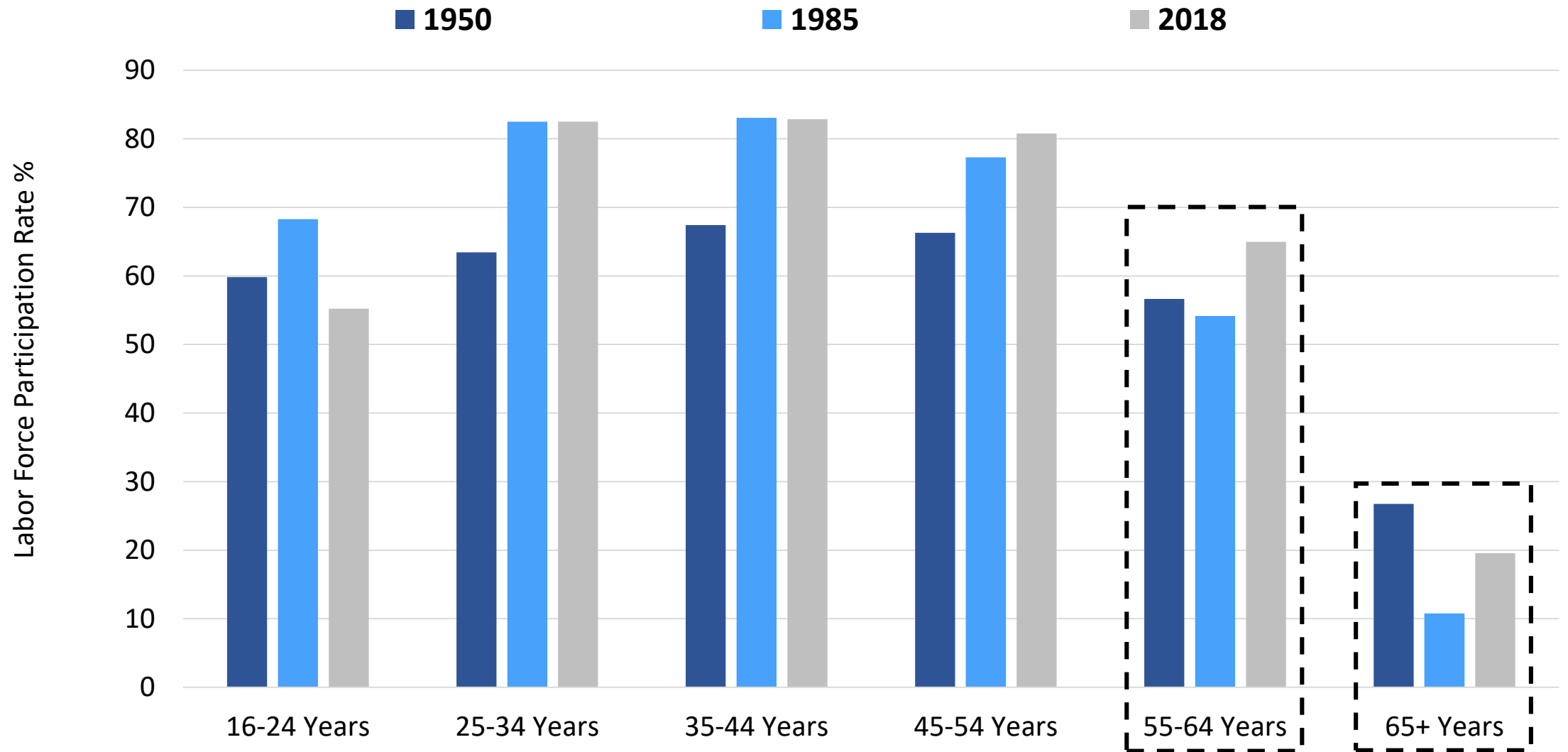




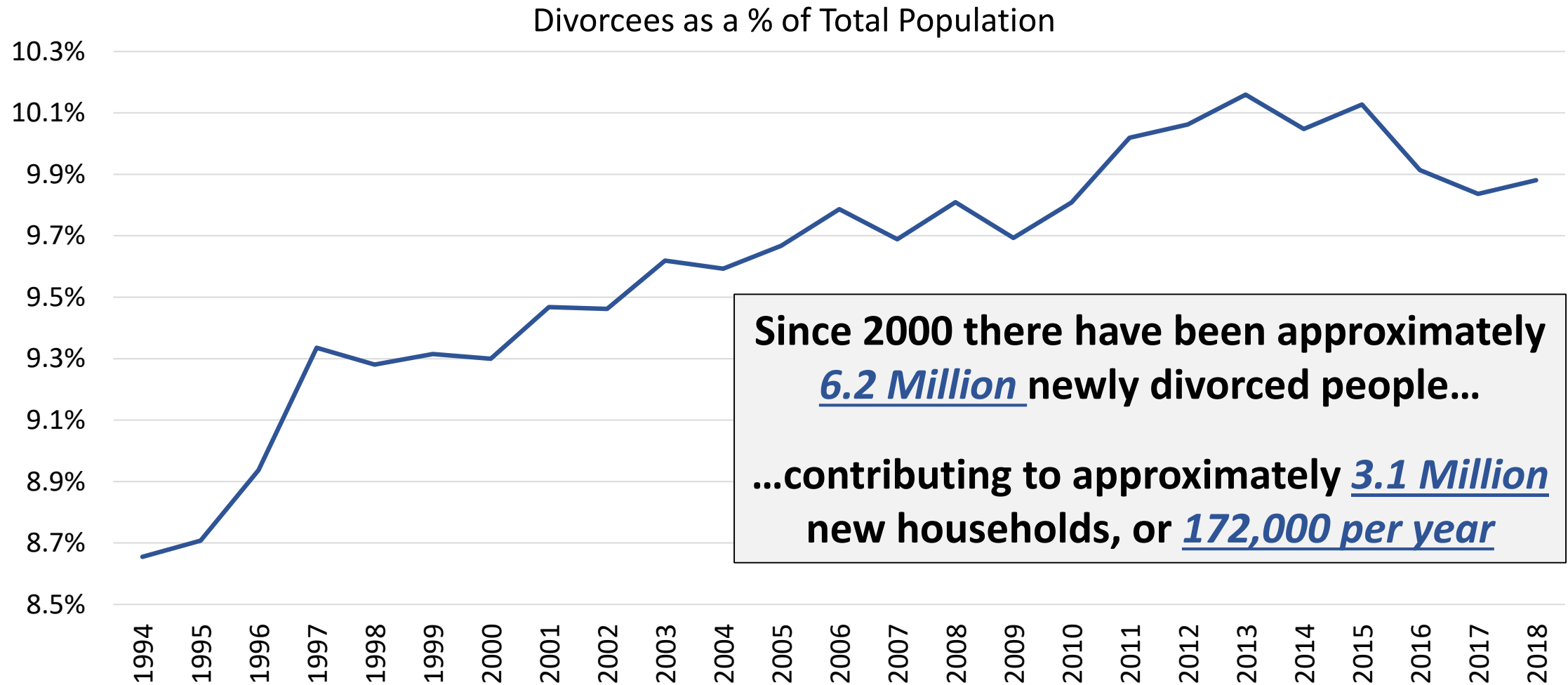
# Homeownership Rates Have Fallen in Major Markets Over the Past 10 Years



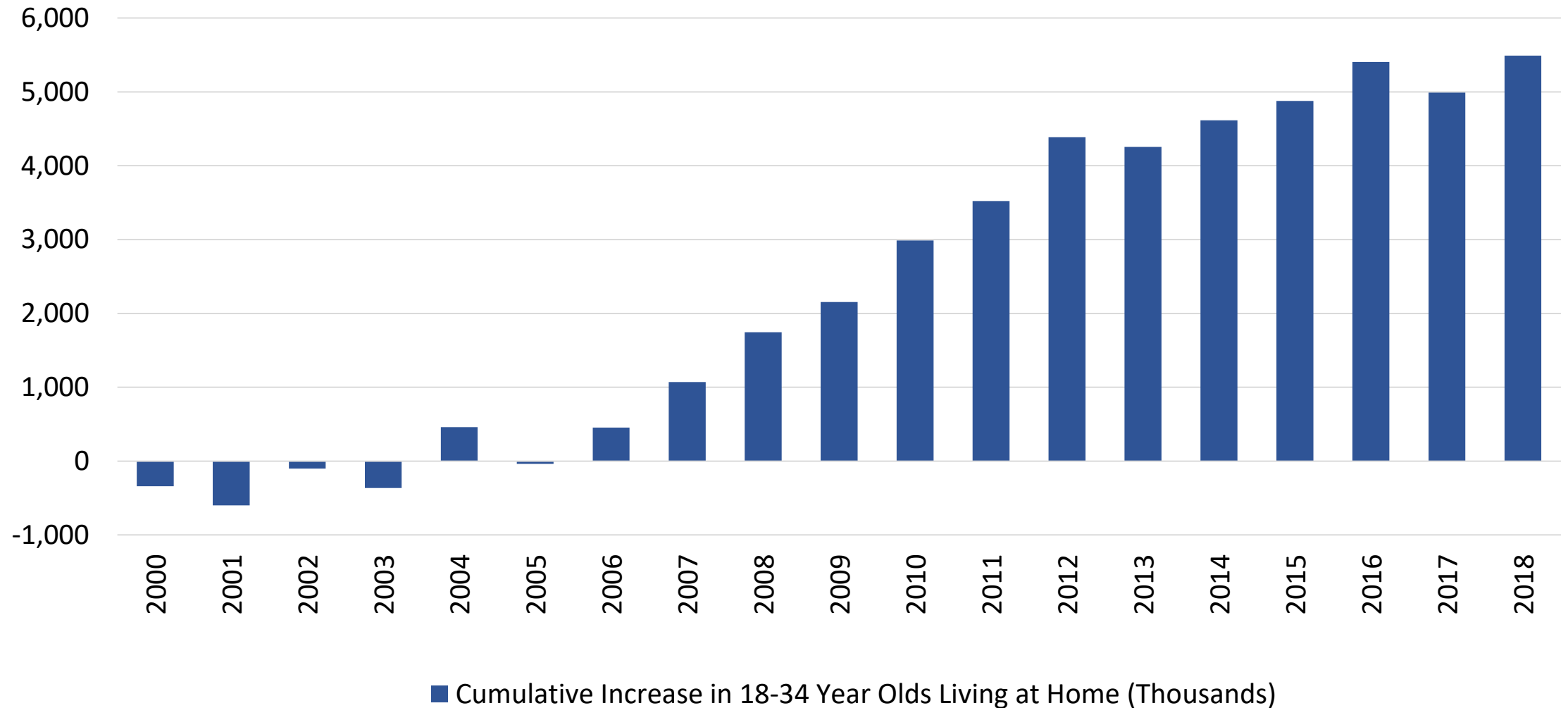
# More People are Working Longer



# Rising Divorce Rates Create Additional Demand for Multifamily Rentals

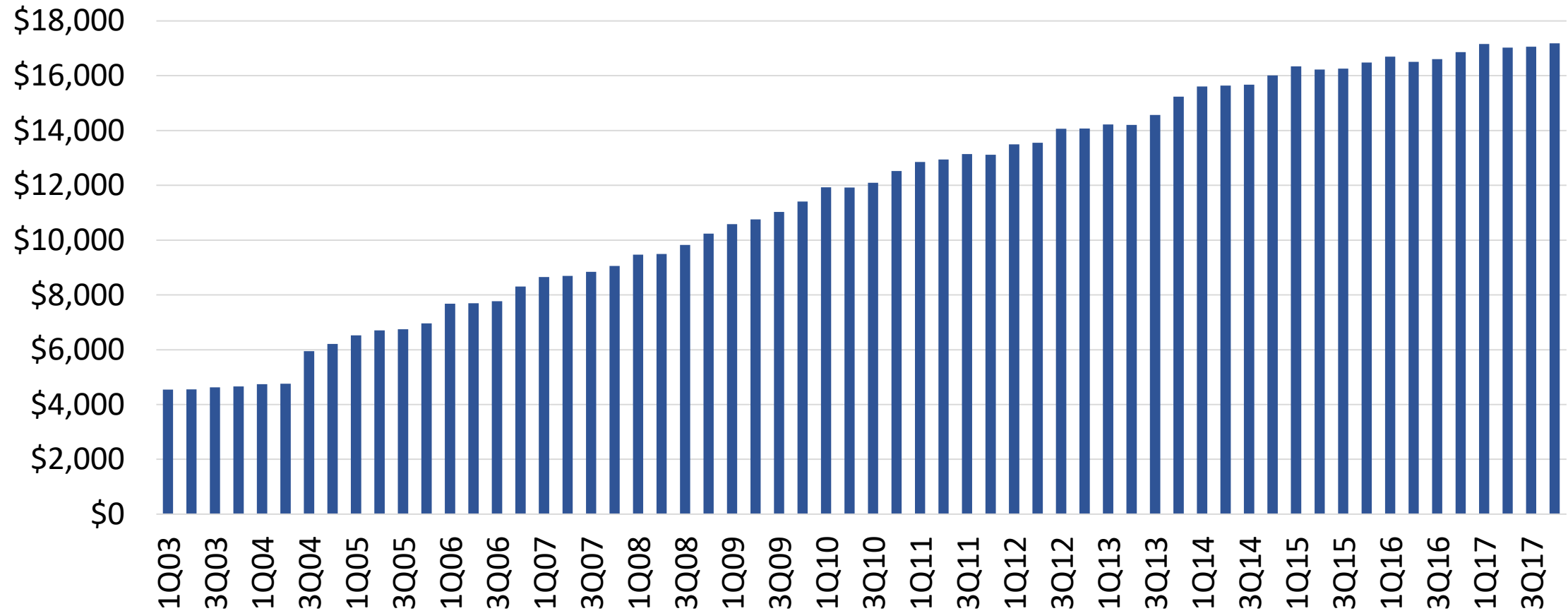


# Pent Up Demand – After the Financial Crisis, There was a Surge in Young People Living at Home

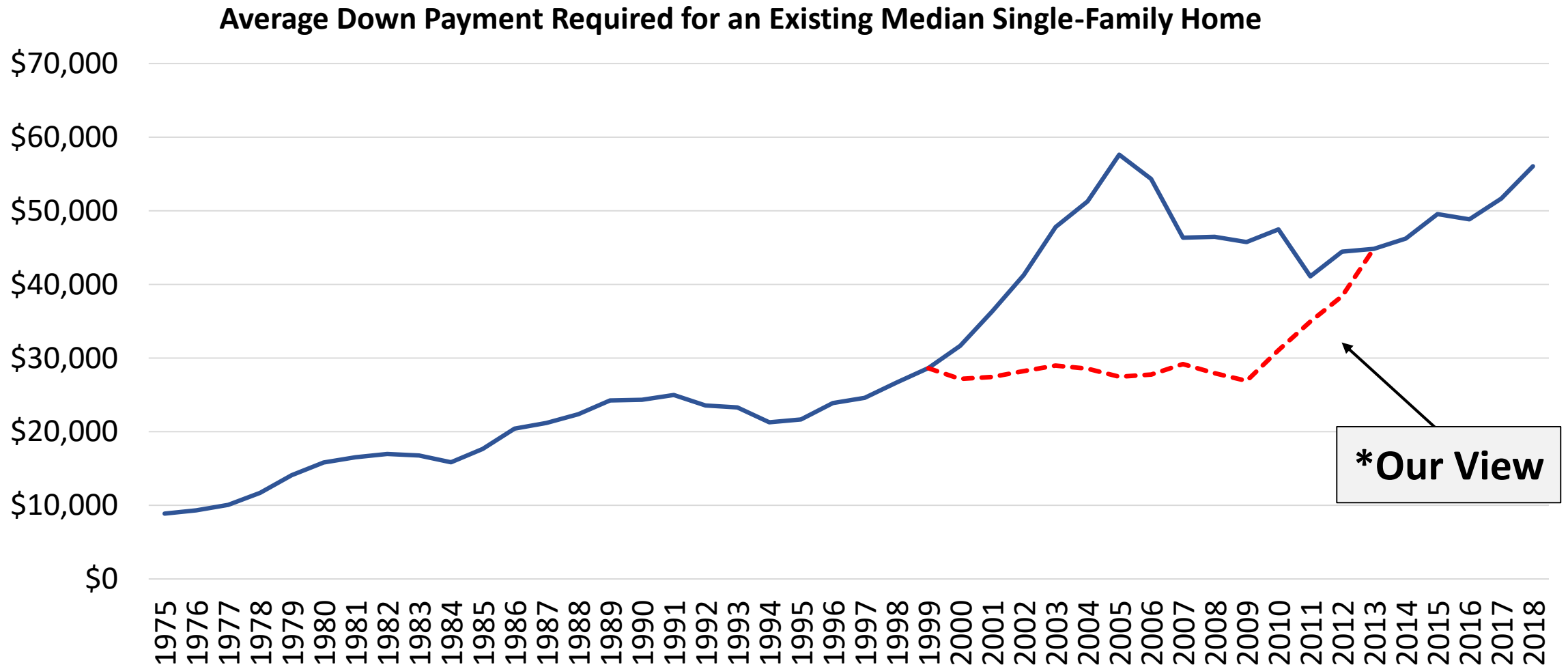


# Student Debt Increased 505% Since 2003...Diverting Funds Available for a Down Payment

Student Loan Debt per Person with a Bachelor's Degree or Higher



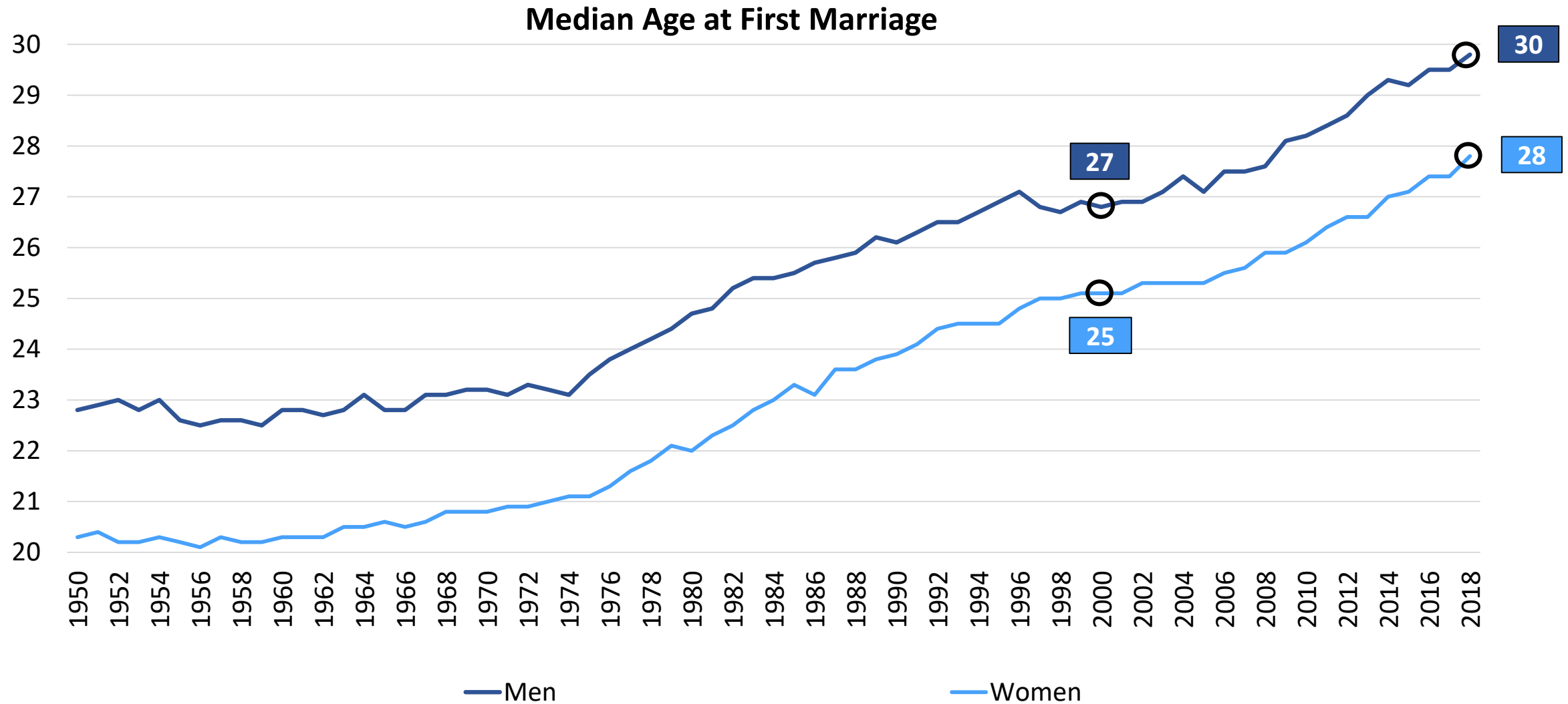
# The Avg. Percentage Down Required for a Mortgage Has Fallen Since 1975, But Median Home Prices Have Risen



**\*Our View**

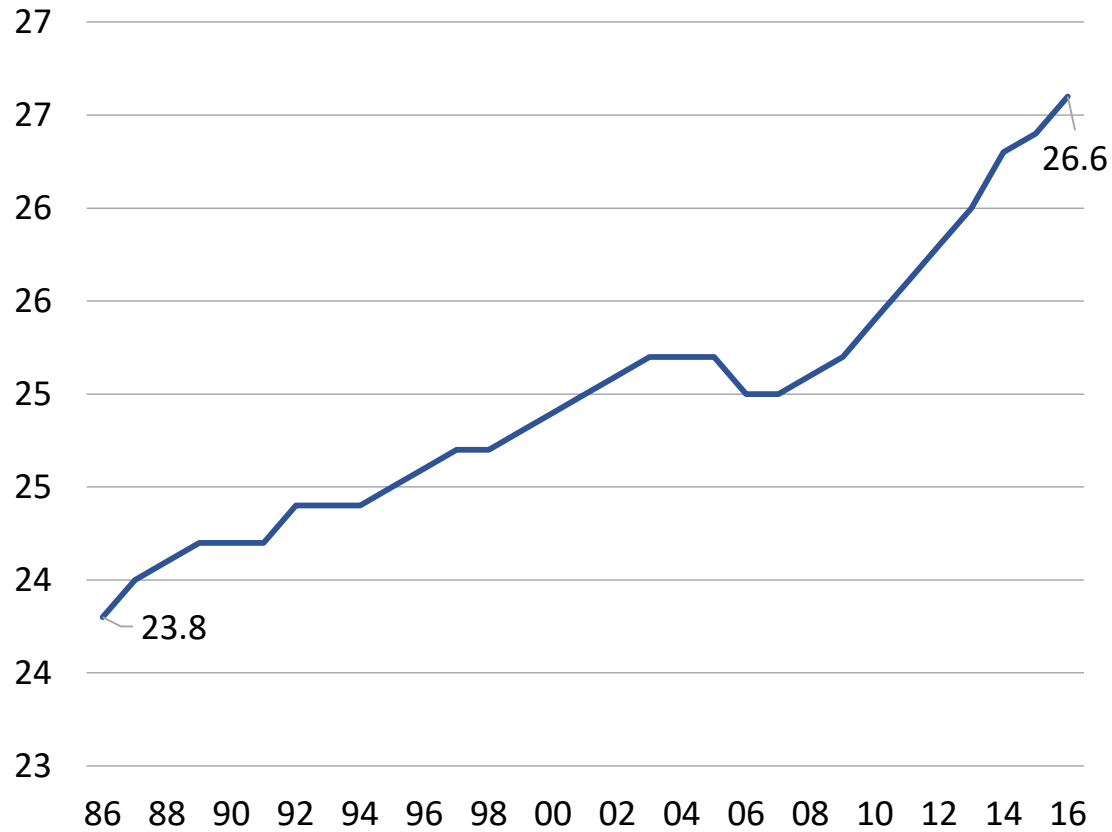
\*FHFA LTV data only includes a sample of fixed rate loans. Many highly-leveraged loans were floating leading up to the financial crisis  
Source: Yardi®Matrix; Moody's Analytics; U.S. Federal Housing Finance Agency (FHFA); National Association of Realtors (NAR)

# People Getting Married Later, Renting Longer

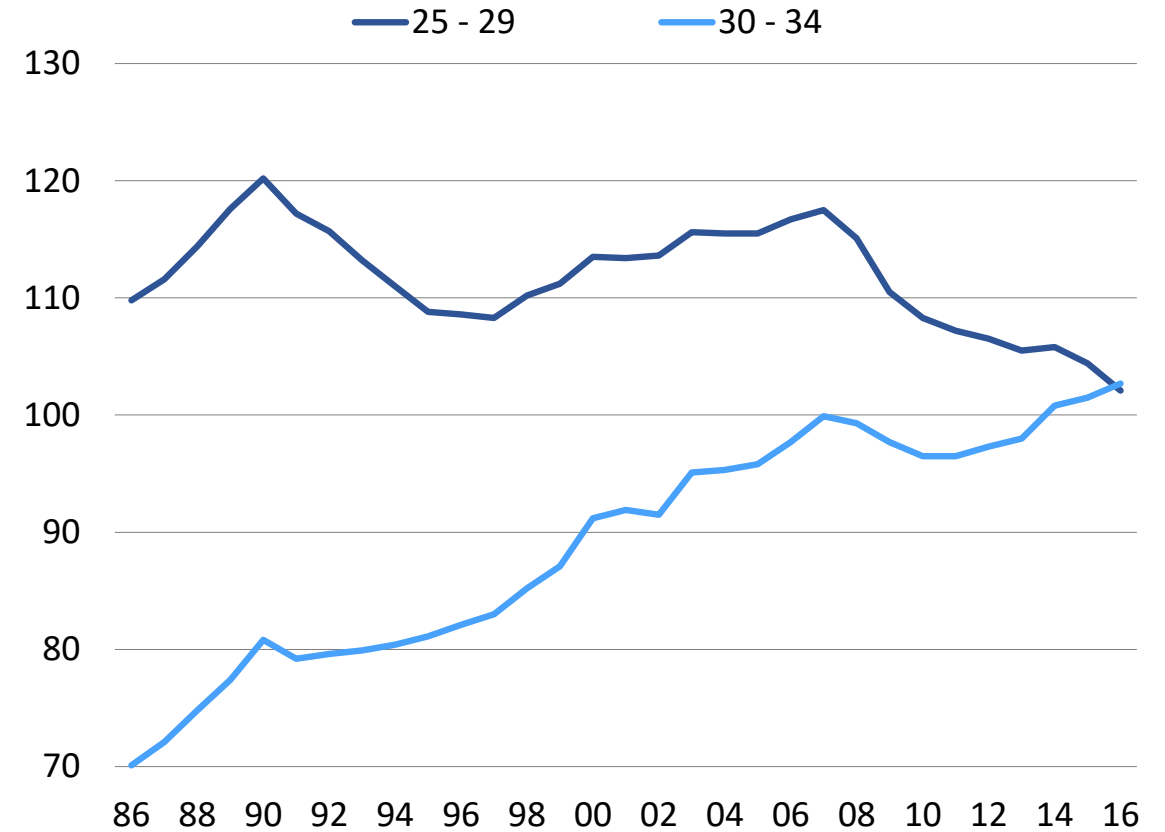


# People are Having Fewer Children, Later in Life

## Average Mother's Age at First Birth



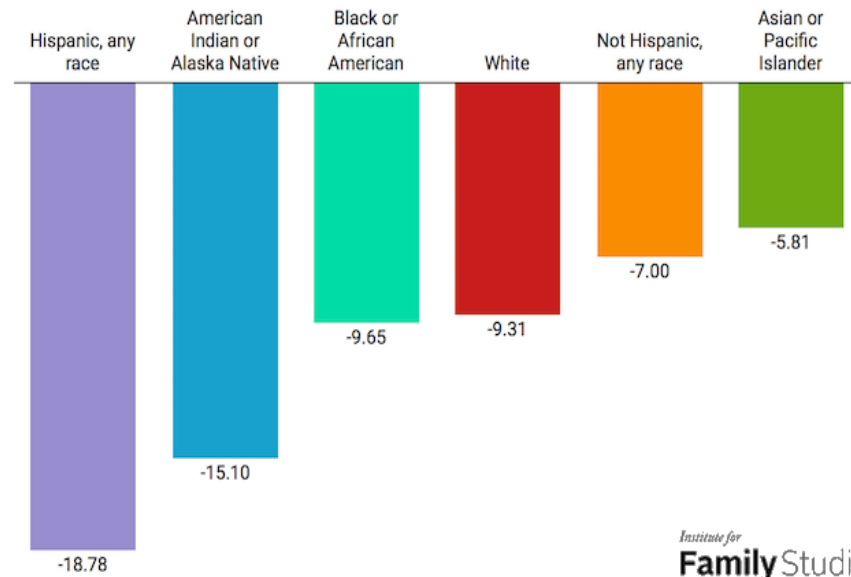
## Birth Rate for Major Age Cohorts: 1986-2016





# Declining Fertility in the U.S. – Not Unlike the 1930's

## Fertility Declines Have Been Most Severe for Hispanics, American Indians



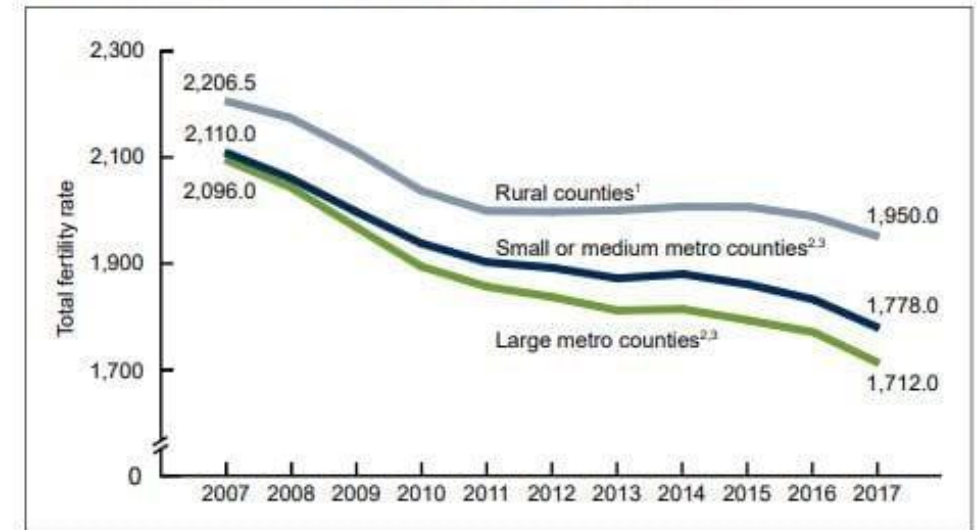
Difference between 2008-2016 counterfactual births using actual cohort sizes and 2007-fixed age-specific birth rates, and actual annual births, divided by 2008-2016 sum total counterfactual births.

Race	Fertility Rate 2008 Births per Woman	Fertility Rate 2016 Births per Woman
Hispanic, any race	2.85	2.10
American Indian or Alaska Native	1.62	1.23
Black or African American	2.15	1.89
White	2.14	1.82
Not Hispanic, any race	1.95	1.72
Asian or Pacific Islander	N/A	N/A

## Why?

- Record student debt – childcare is too expensive
- Teen birth rate has declined to around a third of what it was in 1990
- Changing marital patterns – delaying marriage
- Changed social and cultural expectations of parents and parenting

Figure 1. Total fertility rate, by urbanization level: United States, 2007–2017



<sup>1</sup>Significant decreasing trend for 2007–2011 ( $p < 0.05$ ); stable trend for 2011–2017.

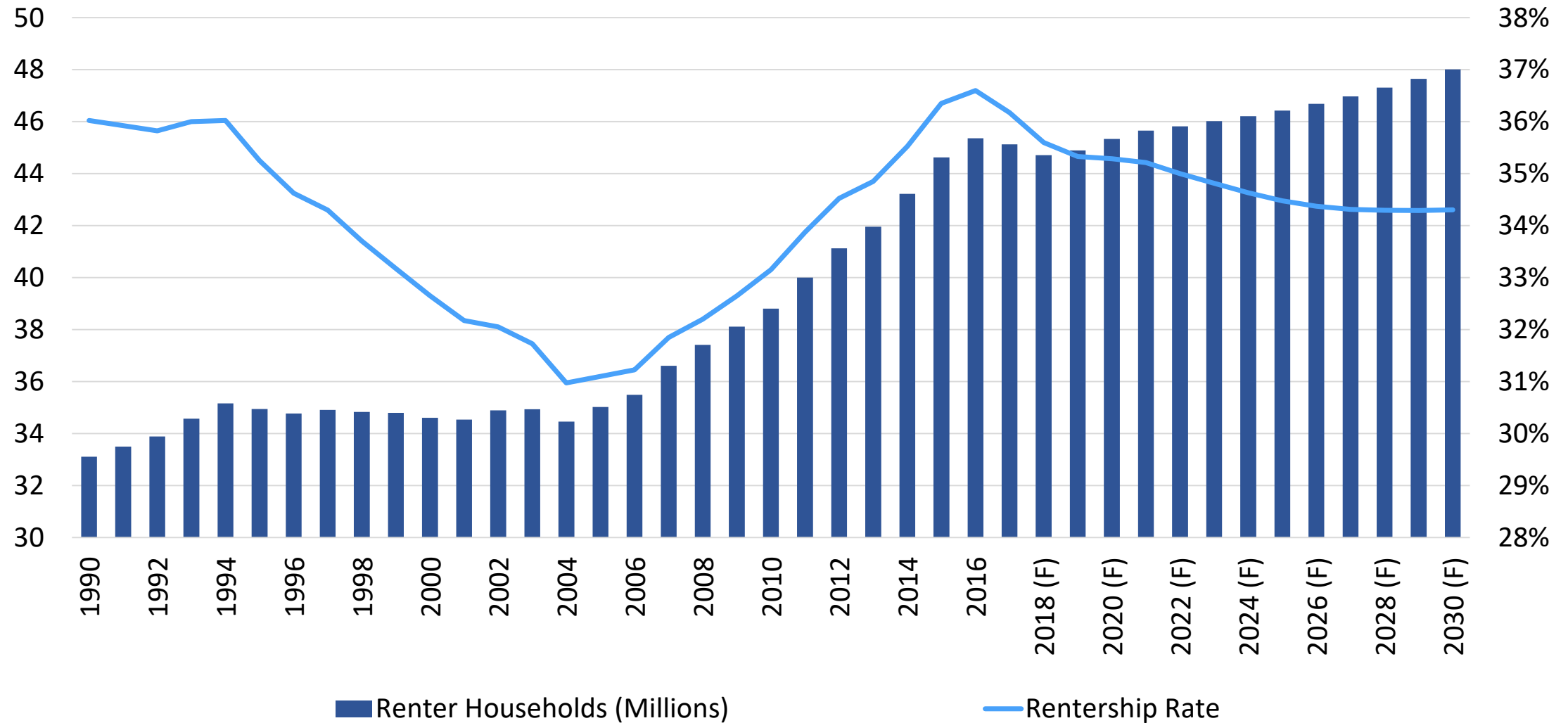
<sup>2</sup>Significant decreasing trend for 2007–2017 ( $p < 0.05$ ).

<sup>3</sup>Significant difference in rate compared with rural counties for all years ( $p < 0.05$ ).

NOTES: Total fertility rate is based on births per 1,000 women in a specified area. County designation is based on mother's county of residence. County classification is based on the 2006 and 2013 NCHS Urban–Rural Classification Scheme for Counties. Access data table for Figure 1 at: [https://www.cdc.gov/nchs/data/databriefs/db323\\_table-508.pdf#1](https://www.cdc.gov/nchs/data/databriefs/db323_table-508.pdf#1).

SOURCE: NCHS, National Vital Statistics System, 2007–2017.

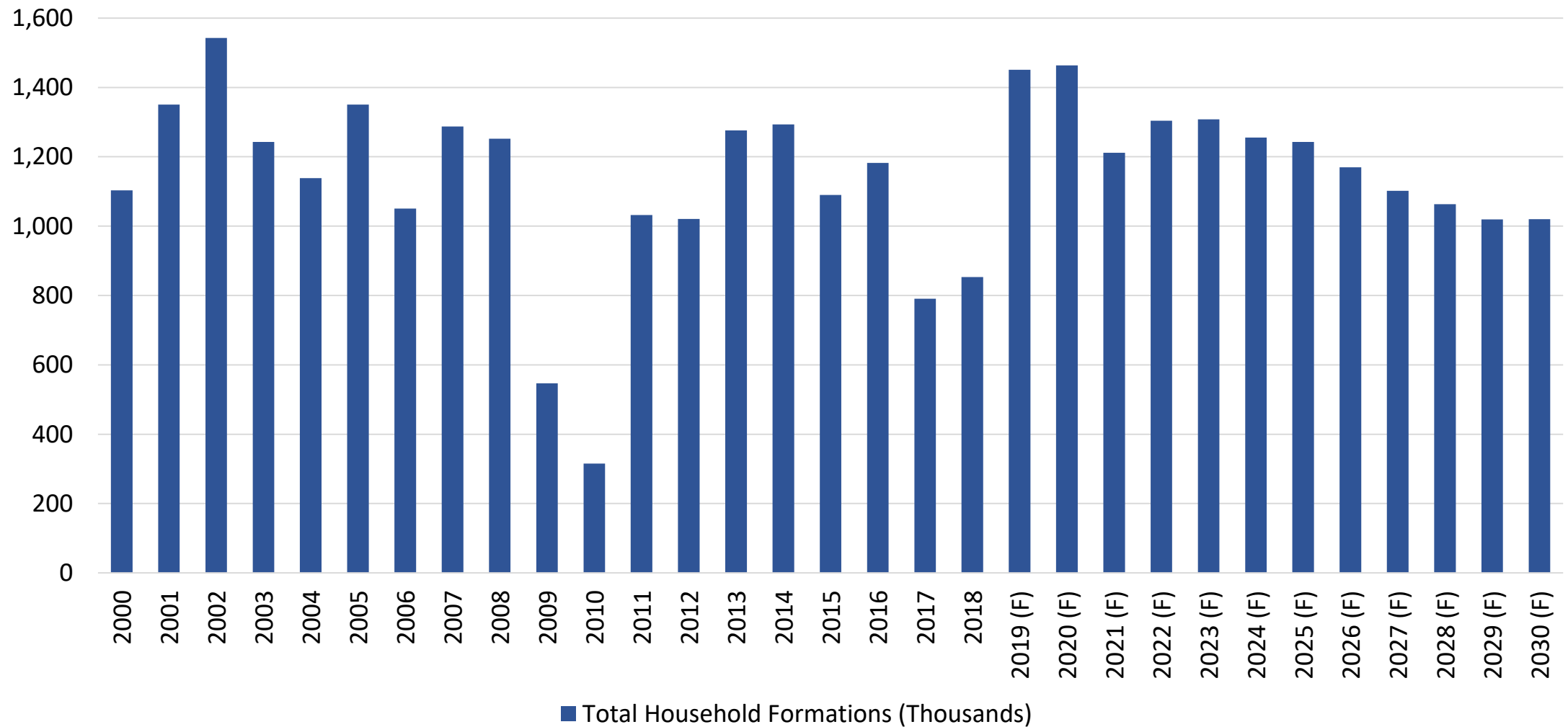
# Rentership Rates are Expected to Level Out, Even in the Face of a Growing Millennial Generation



■ Renter Households (Millions)

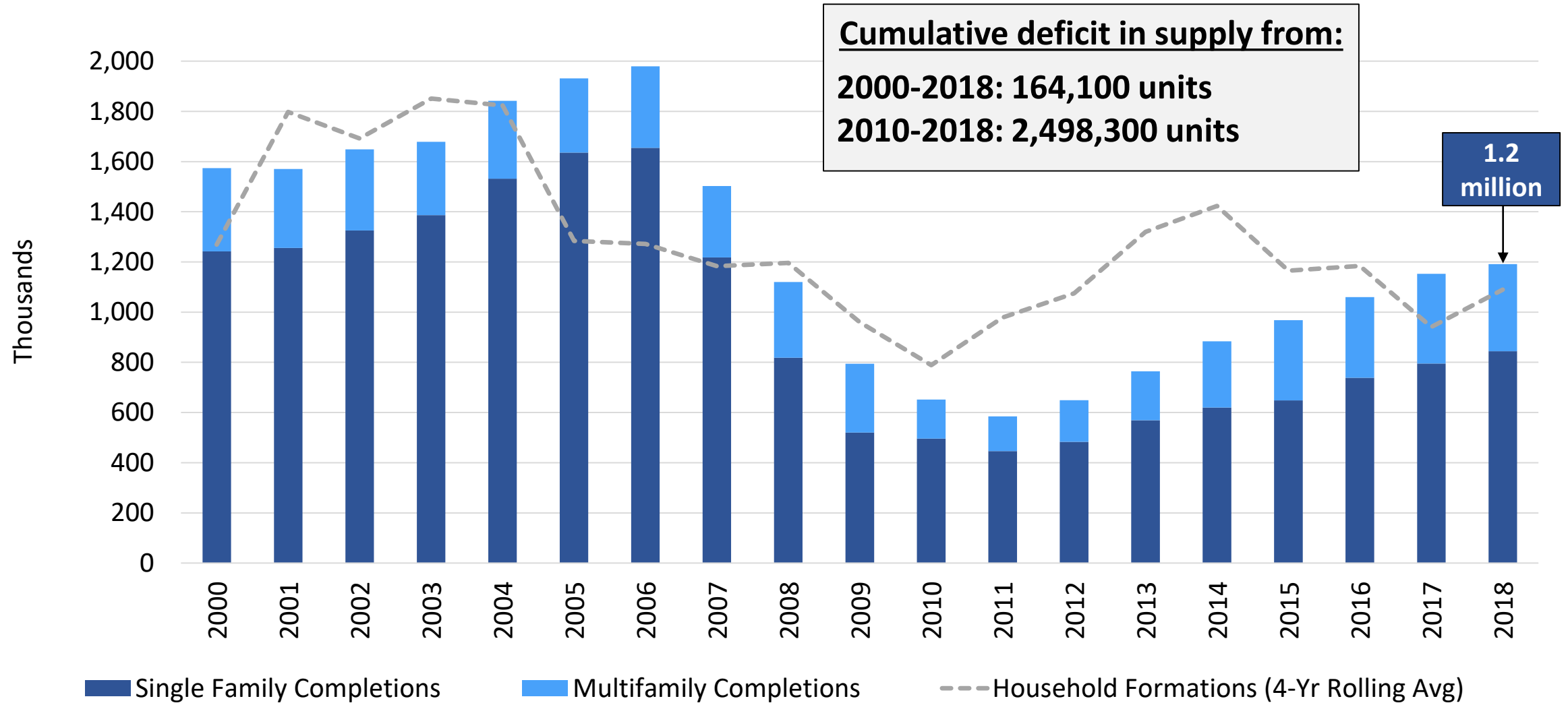
— Rentership Rate

# Total Household Formation Has Bounced Back and is Expected to Level Out

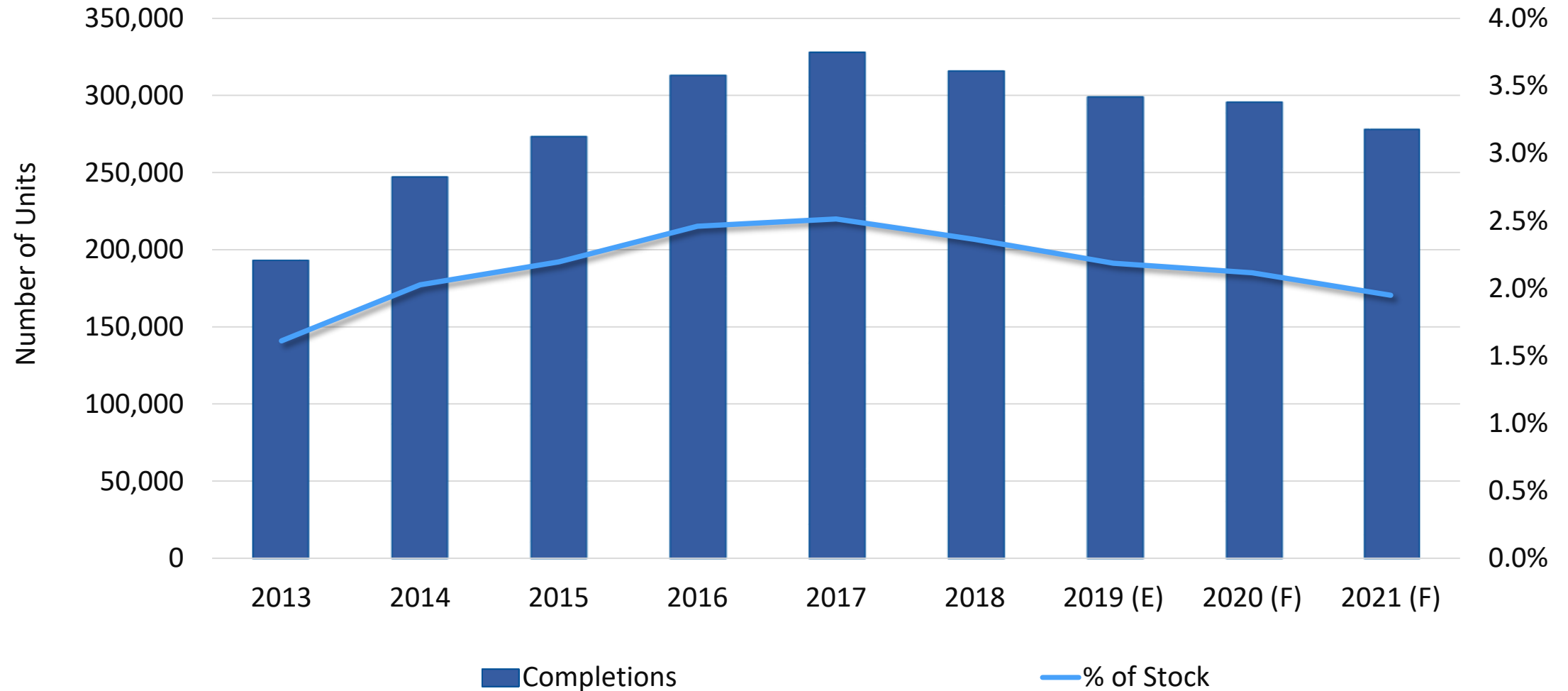


■ Total Household Formations (Thousands)

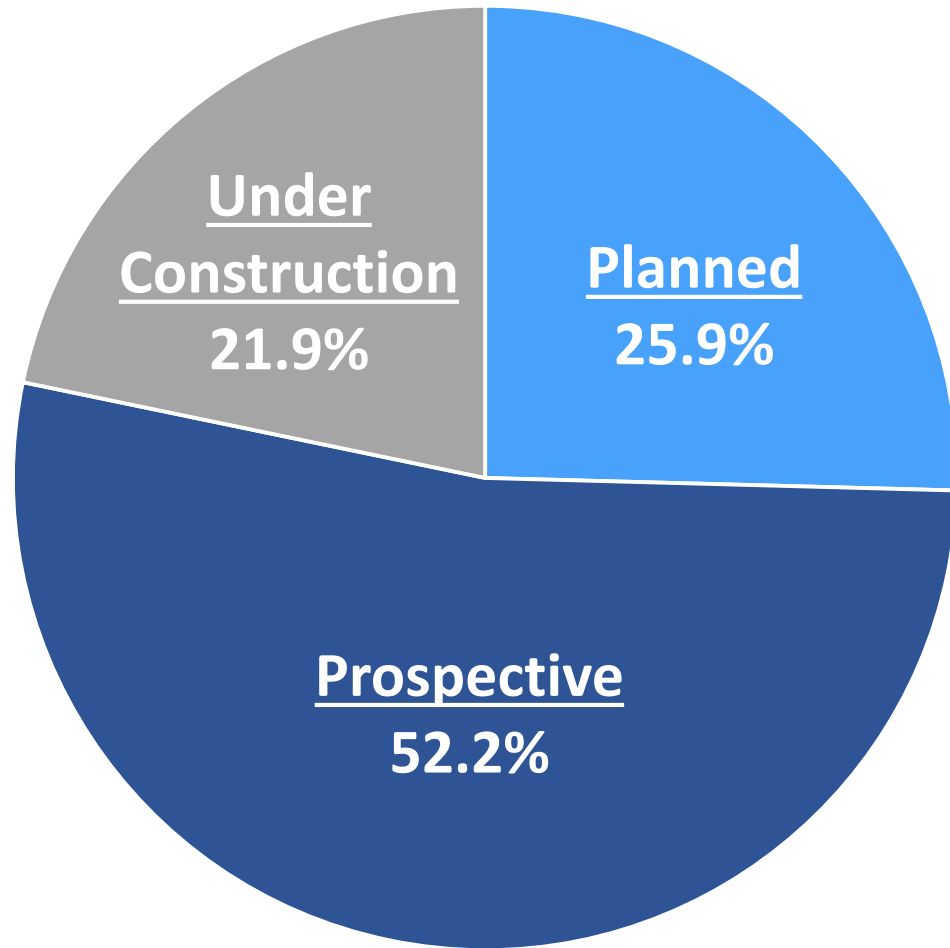
# Total Housing Production is Unlikely to Catch Up to Household Formation



# Current Factors Show New Supply Leveling Out, but Strong Demand Forces Require Another Ramp Up

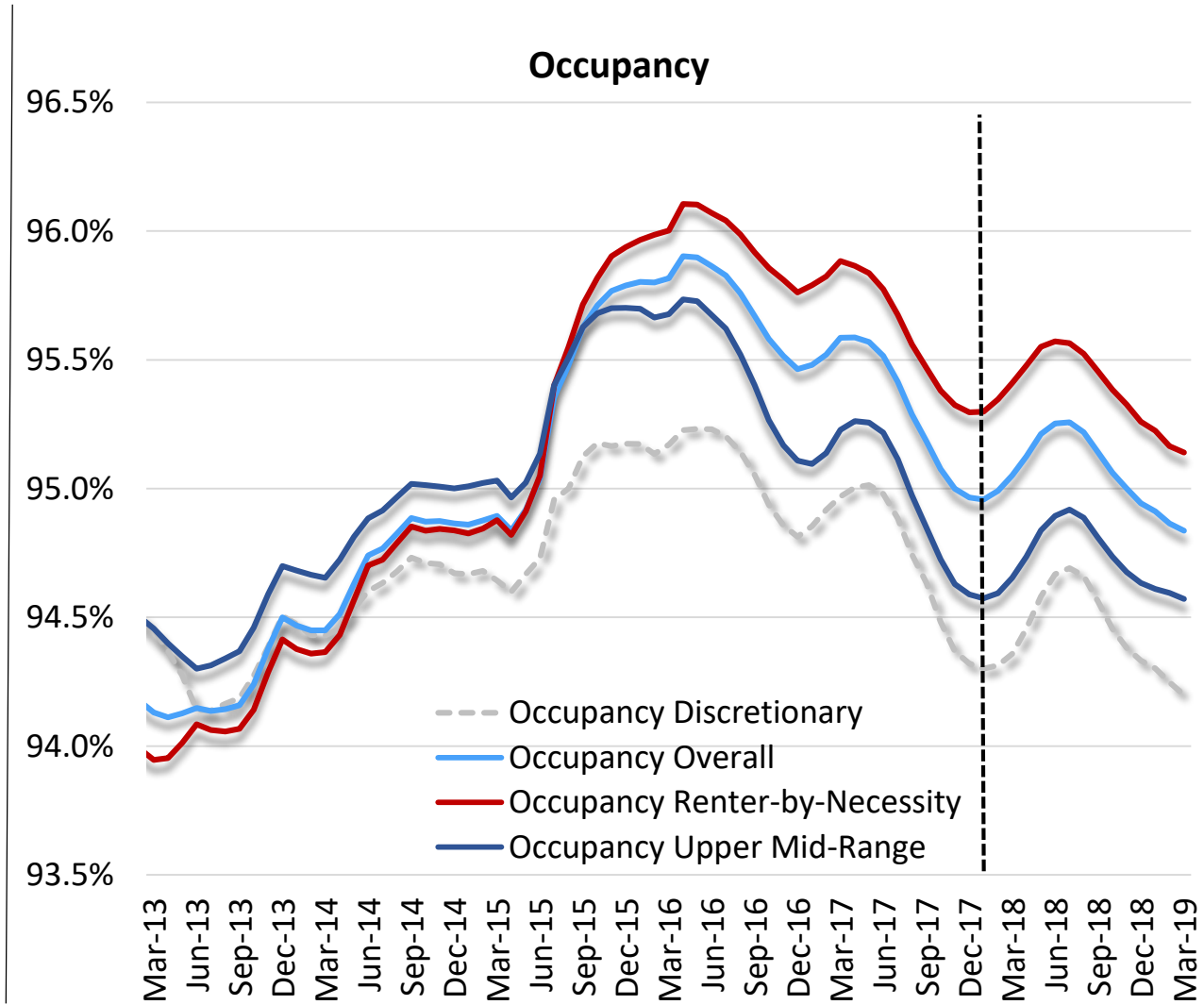
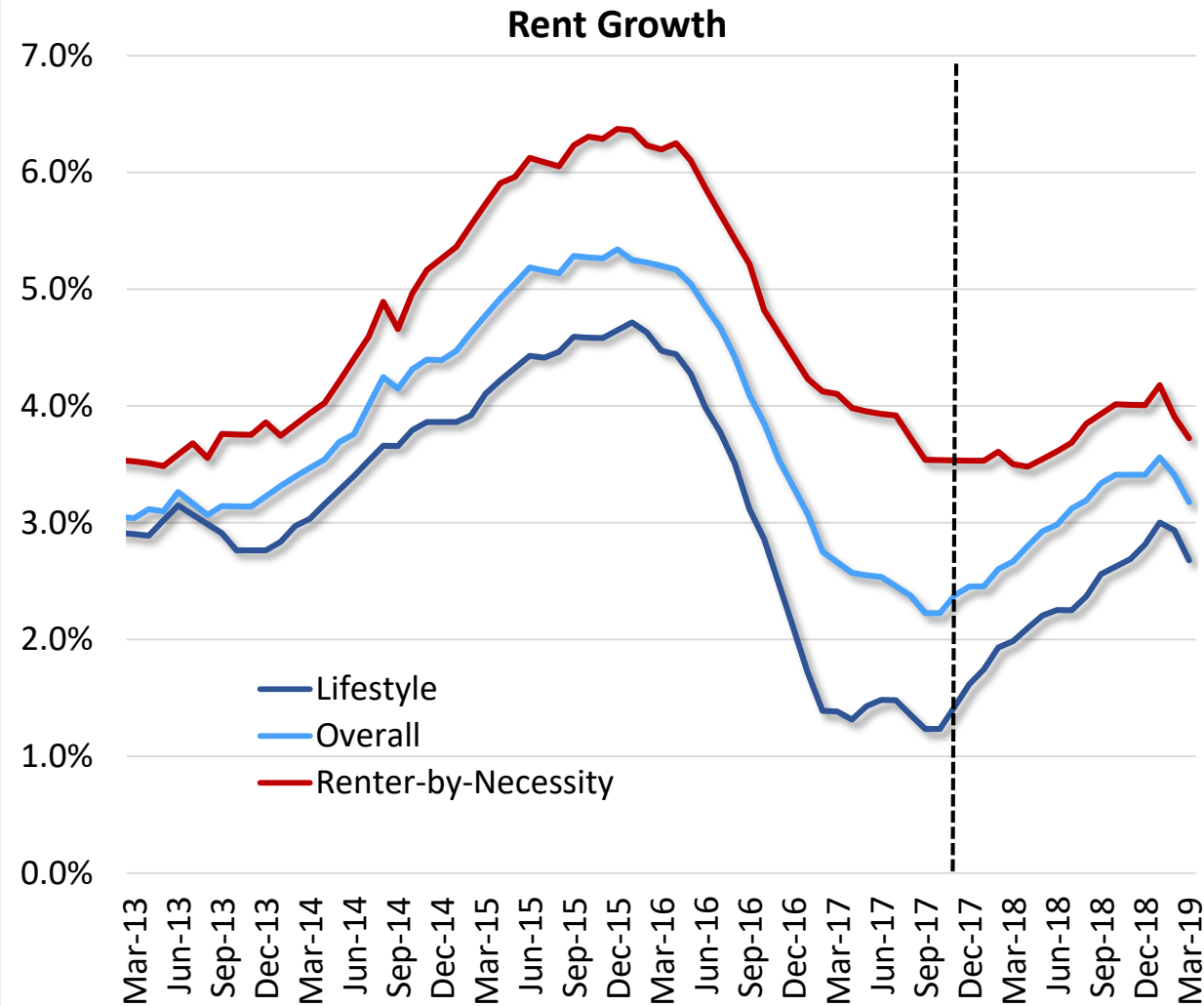


# Based Upon What We See, New Supply Is Unlikely to Break Out Above 300K a Year



Property Status	Units	% of Total
Prospective	1,626,207	52.2%
Planned	806,515	25.9%
Under Construction	681,287	21.9%
<b>TOTAL:</b>	<b>3,114,009</b>	<b>100.0%</b>

# Multifamily Rent Growth Has Rebounded While Occupancy Levels Out

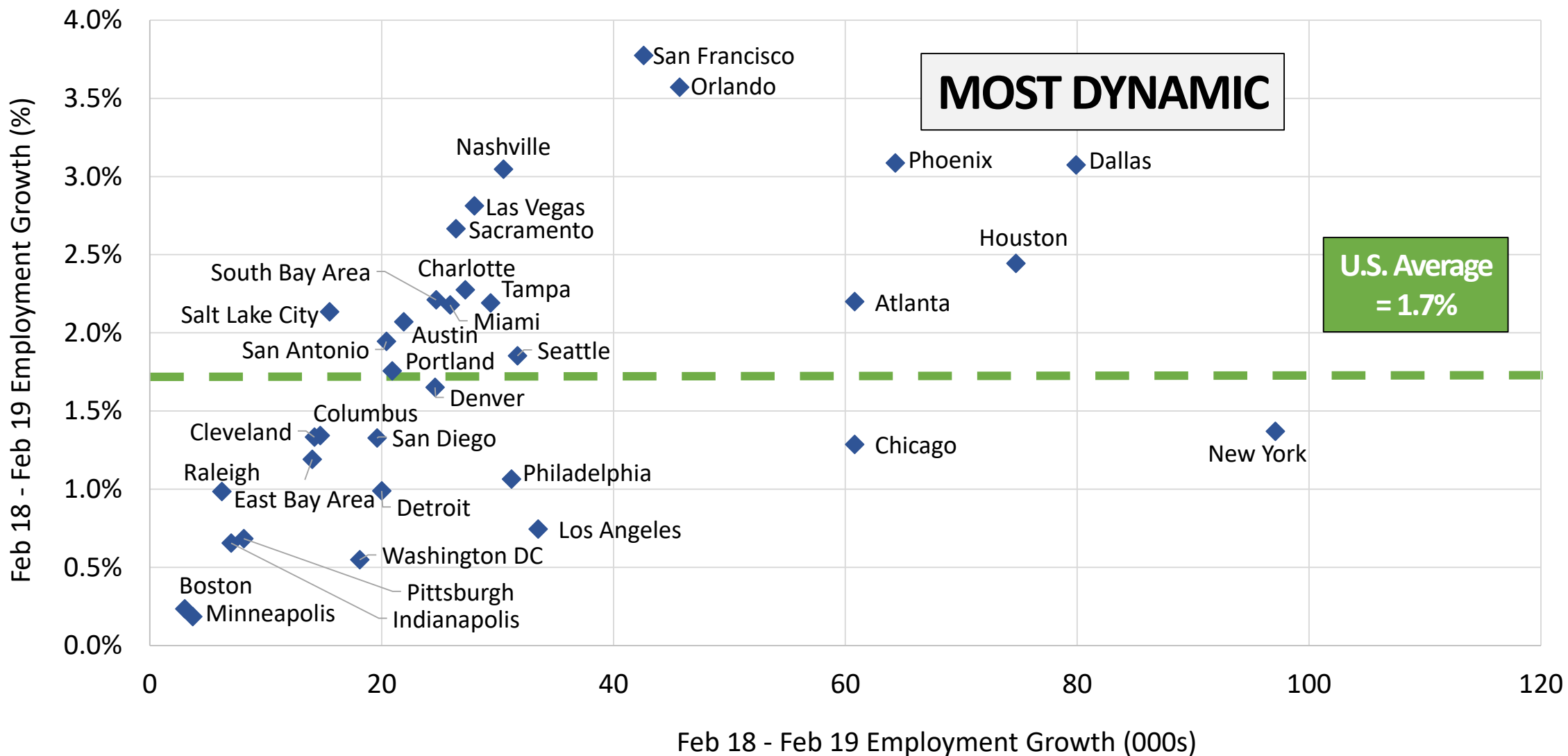


# Below the National Level – Our Market Classifications

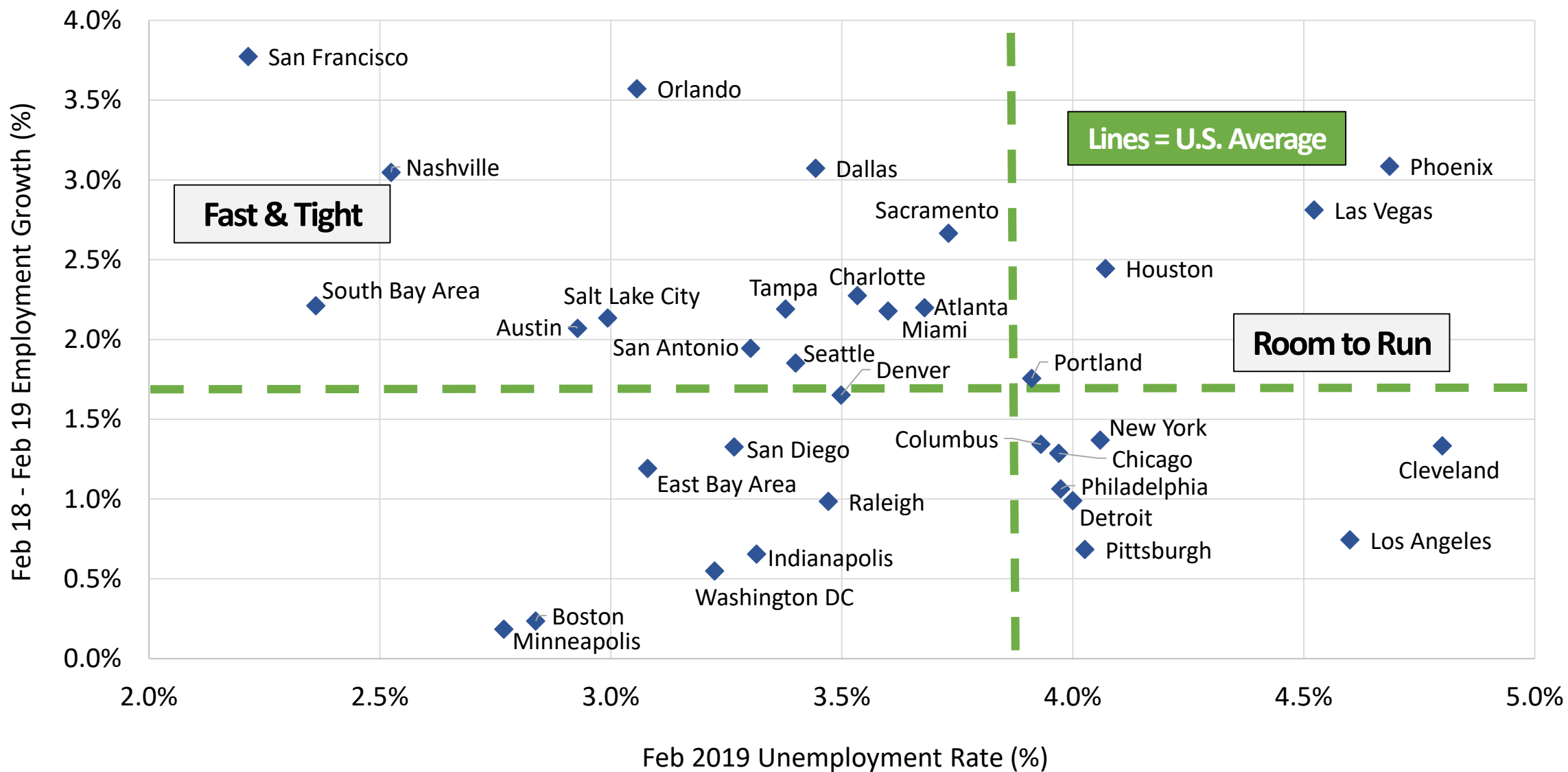
Gateway Markets	Tech Hub Markets	Tertiary Markets
Bay Area Boston Brooklyn Chicago Long Island Los Angeles Manhattan New Jersey Queens San Francisco Washington, D.C	Atlanta Austin Boise Charlotte Columbus Dallas Denver Detroit Houston Indianapolis Jacksonville Kansas City Las Vegas Madison Miami Minneapolis-St. Paul Nashville Omaha Orlando Philadelphia Phoenix Pittsburgh Portland Raleigh-Durham Sacramento Salt Lake City San Diego Seattle Tampa	Remaining 85 Yardi® Matrix office markets



# Tech Hub Markets Have the Most Dynamic Job Growth



# Tech Hub Markets Have the Most Dynamic Job Growth



Source: Moody's Analytics; U.S. Bureau of Labor Statistics (BLS)



# Population Growth is in Non-Gateway Markets

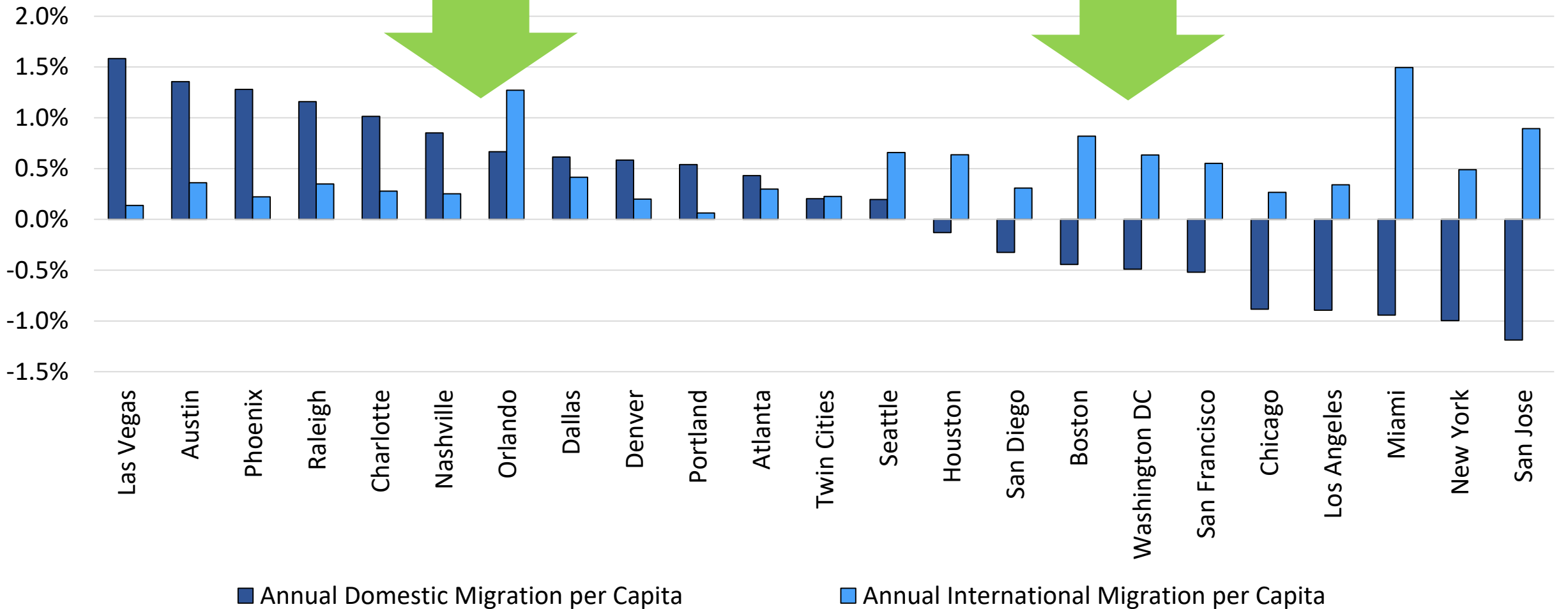
Market	2016 Pop. Growth	2017 Pop. Growth	2018 Pop. Growth	Overall Trend
Austin	3.0%	2.6%	2.5%	Decelerating
Orlando	2.7%	2.4%	2.4%	Steady
Las Vegas	2.0%	2.0%	2.2%	Accelerating
Raleigh	2.6%	2.3%	2.1%	Decelerating
Phoenix	2.1%	1.8%	2.0%	Accelerating
Dallas	2.2%	2.1%	1.8%	Decelerating
Charlotte	2.1%	2.0%	1.8%	Decelerating
Tampa	2.2%	1.9%	1.7%	Decelerating
Nashville	2.1%	1.8%	1.6%	Decelerating
Salt Lake City	1.7%	1.7%	1.4%	Decelerating
Denver	1.6%	1.2%	1.4%	Accelerating
Seattle	2.0%	1.8%	1.4%	Decelerating
Houston	2.0%	1.4%	1.3%	Decelerating
Atlanta	1.8%	1.5%	1.3%	Decelerating
Columbus	1.2%	1.5%	1.2%	Decelerating

Market	2016 Pop. Growth	2017 Pop. Growth	2018 Pop. Growth	Overall Trend
Indianapolis	1.0%	1.1%	1.1%	Steady
Sacramento	1.3%	1.2%	1.1%	Decelerating
Minneapolis	1.0%	1.1%	1.0%	Steady
Portland	1.9%	1.2%	0.9%	Decelerating
Washington DC	0.9%	1.0%	0.8%	Decelerating
Boston	0.8%	0.8%	0.6%	Decelerating
Miami	1.3%	0.8%	0.6%	Decelerating
San Diego	0.8%	0.5%	0.5%	Steady
San Francisco	0.7%	0.4%	0.3%	Decelerating
Philadelphia	0.2%	0.2%	0.3%	Steady
San Jose	0.7%	0.2%	0.3%	Steady
Detroit	0.1%	0.1%	0.1%	Steady
Los Angeles	0.2%	0.0%	-0.1%	Decelerating
New York	0.1%	-0.2%	-0.2%	Steady/Negative
Chicago	-0.2%	-0.2%	-0.2%	Steady/Negative

# Immigration is Key to Gateway Population Growth

Secondary Markets:  
High Migration, Modest Immigration

Gateway Markets:  
High Immigration, Low/Negative Migration



\*Migration data July 2017-July 2018  
Source: U.S. Census Bureau (BOC)

# Case Studies:

- Philadelphia (Northeast)
- Dallas (Texas)
- Tampa (Emerging Southeast)
- Seattle (Tech Pacific Northwest)
- Phoenix (Emerging Tech)



# What's Going on in Philadelphia?

## Public and Private Partnerships

- 30th Street Station District – Amtrack, Brandywine Realty Trust, Drexel University, PennDOT, SEPTA and SOM
- Schuylkill Yards – Brandywine Realty Trust, Drexel University, the City of Philadelphia, etc.
- Schuylkill River Development Corporation – many city, state, private foundations and organizations teaming up to maximize the potential of the Schuylkill Banks

## Community and Amenities that Retain and Draw in Talent

- Schuylkill Yards – innovation community
  - Connected to city's economic and education centers
  - Office, residential, retail, hotel, lab space, innovation space, improved greenspace and streetscape
  - Restaurants, bars and storefronts
- Schuylkill Banks – construction, programming, and maintenance of a continuous 8-mile riverfront trail and greenway with associated access points and amenities along the Banks

## Friendly Business Environment

**STATE RANK #30**

- The State of Pennsylvania is not very business friendly
- Schuylkill Yards & Keystone Opportunity Zone, giving residents and businesses various state and city tax benefits that will further stimulate investment and growth
- Aramark received significant state incentives – some reported \$20.5 million – to keep World Headquarters in city, bringing ~1,200 employees to the new office

## Educated Workforce

University	Approx. Enrollment 2018
Temple University	40,240
University of Pennsylvania	25,860
Drexel University	24,190
Lincoln University	2,376
The University of the Sciences	2,359

27.1% of adults in the city of Philadelphia have a bachelor's degree or higher

# What's Going on in Philadelphia?

Average Rent Compared to Nearest Gateway Cities	
Market	Avg. Rent – March 2019
Philadelphia	\$1,348
Washington DC	\$1,770
New York	\$3,806



**31,691,956** passengers flew in and out of Philadelphia International Airport in 2018

**23,464,618** passengers flew in and out of Ronald Reagan Washington National Airport in 2018

**61,909,148** passengers flew in and out of John F. Kennedy International Airport in 2018

41 multifamily transactions valued at \$1.7 billion in 2018

**SCHUYLKILL YARDS**

- 14 acres of land
- 6.5M sq. ft. greenspace
- 987K sq. ft. innovation space
- 2.8 M sq. ft. office
- 1M sq. ft. lab
- 1.6 M sq. ft. residential
- 247K hotel
- 132K retail



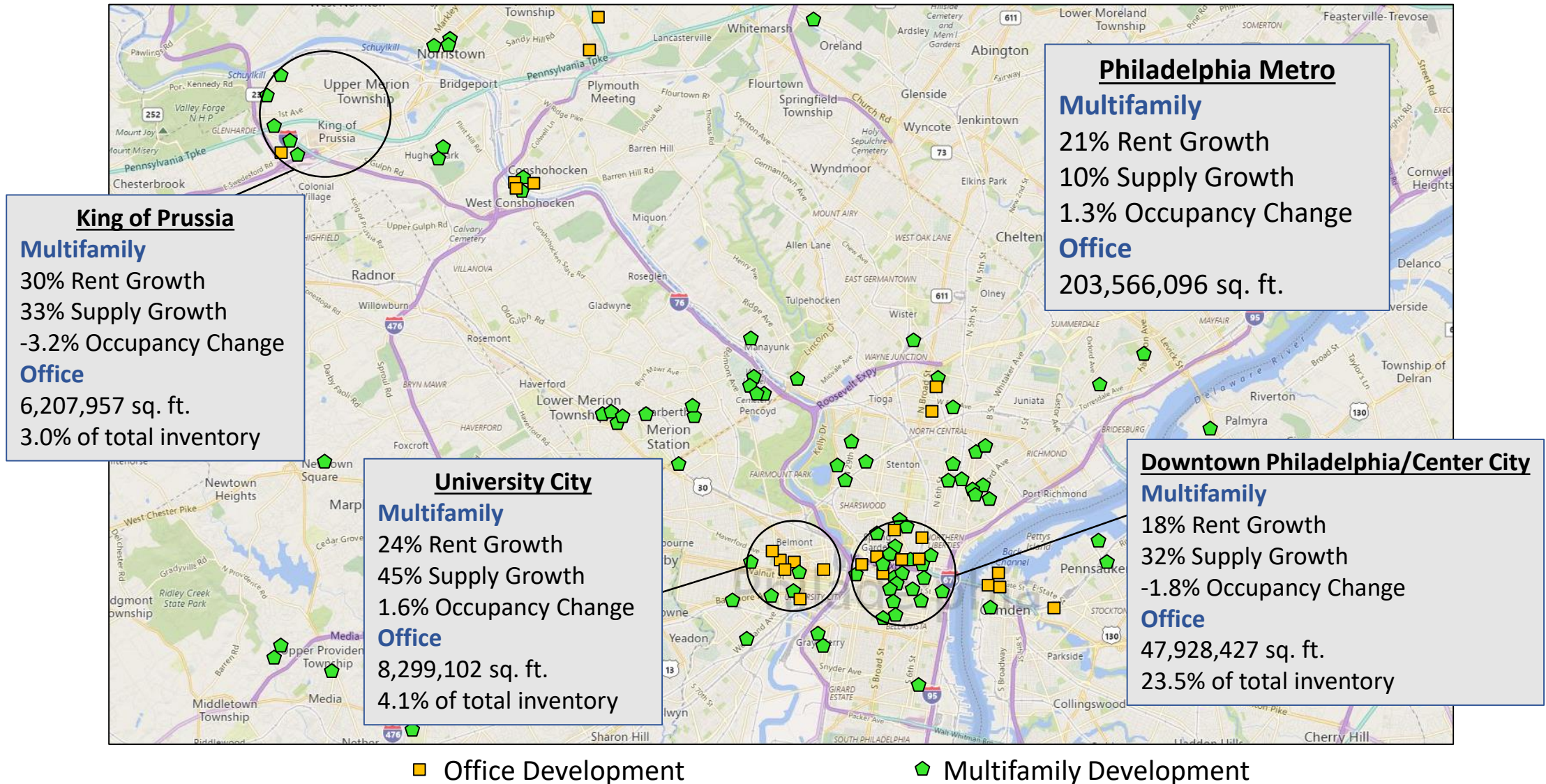
- Comcast Technology Center
  - \$1.5 billion, 60-story, 1,121 sq. ft. tower, next to current world headquarters
  - Host technologists, engineers and software architects, a media center and startup incubator
- Presidential City
  - High-rise community currently under redevelopment, 1,000+ units coming online this year
- Entercom Communications Corp.
  - Nation's #2 radio station group owner
  - Planning to relocate corporate headquarters to building on Schuylkill waterfront
- Aramark
  - \$15 billion, Fortune 200 global leader in food, facilities management and uniforms
  - Planning to relocate world headquarters to Schuylkill waterfront, 1,200+ new employees
- Home prices increasingly rapidly- some young professionals being priced out
  - Discussion of law requiring property developers to set aside 10% of new projects as below-market units
- Schuylkill Yards
  - Innovation community – connection to economic and education centers
  - Knowledge neighborhood, leveraging the R&D resources of:
    - Drexel University, University of Pennsylvania, Penn Medicine, Children's Hospital of Philadelphia, University of the Sciences, Lincoln University, Science Center, Wistar Institute
  - Potential to add 25,000 new jobs and create millions of dollars in new tax revenue
  - Encourages human interaction – walking, meeting, shared experiences, collaboration
  - Fully engaged ecosystem – physical spaces become the framework to accelerate creativity, academic research, and commerce



# Philadelphia Employment Composition – March 2019

Employment Sector	Current Employment	% Share	Year Change	YOY % Growth	
Educational and Health Services	700.0K	22.22%	18,258	2.7%	
Financial Activities	222.3K	7.06%	251	0.1%	
Government	357.6K	11.35%	3,287	0.9%	
Information	49.2K	1.56%	-276	-0.6%	
Leisure & Hospitality	290.5K	9.22%	5,004	1.8%	
Manufacturing	214.6K	6.81%	2,398	1.1%	
Mining; Logging; and Construction	131.4K	4.17%	5,657	4.5%	
Other Services	130.5K	4.14%	2,363	1.8%	
Professional & Business Services	497.0K	15.78%	2,972	0.6%	
Trade; Transportation; and Utilities	557.1K	17.69%	185	0.0%	

# Intellectual Capital Nodes – Philadelphia



\*Multifamily rent, occupancy and supply growth based on Mar 14 – Mar 19

Source: Yardi® Matrix

# What's Going on in Dallas?

## Public and Private Partnerships

- Dallas City Council turned over operations of Fair Park to Spectra, a Time Warner subsidiary, which will operate the facility and be paid \$35 million over 10 years
  - After the management fee, all excess revenue will go back into operations or capital improvements
- City of Dallas and non-profit WellMed partner to open a \$1.4 million, 22,000-square-foot health & wellness center for adults 60 and over

## Community and Amenities that Retain and Draw in Talent

- The Union Dallas mixed-use development
  - 420,000 sq. ft. office tower, 87,000 sq. ft. retail, 309-unit apartment building, 60,000 sq. ft. grocery store
- \$1.1 billion Globe Life Field and adjacent \$250 million Texas Live! Entertainment district
  - New home of the Rangers will seat 41,000 fans and will open in 2020

## Friendly Business Environment

**STATE RANK – #3**

- City of Dallas tax abatements differ based on geography
  - Target areas: up to 90% for 10 years and/or a personal property abatement up to 50% for 5 years
  - Non-target areas: up to 50% for 10 years and/or personal property abatement up to 50% for 5 years
- \$6 million in incentives granted to The Home Depot to open a multimillion sq. ft. center that will bring 800 jobs

## Educated Workforce

University	Approx. Enrollment 2018
Texas A&M University	63,599
University of Texas at Dallas	28,755
Southern Methodist University	11,789
University of North Texas at Dallas	3,757

31.6% of adults in the city of Dallas have a bachelor's degree or higher

# What's Going on in Dallas?

## Average Rent Compared to Nearest Gateway Cities

Market	Avg. Rent – March 2019
Dallas	\$1,205
Chicago	\$1,507
Washington DC	\$1,770

**69,112,607** passengers flew in and out of Dallas/Fort Worth International Airport in 2018

**79,828,183** passengers flew in and out of O'Hare International Airport in 2017

**23,464,618** passengers flew in and out of Ronald Reagan Washington National Airport in 2018

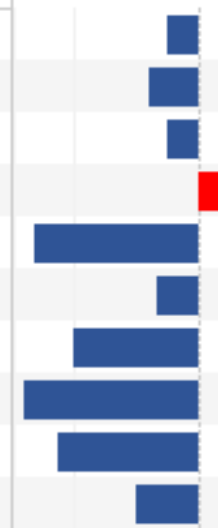
139 multifamily transactions valued at \$3.3 billion in 2018



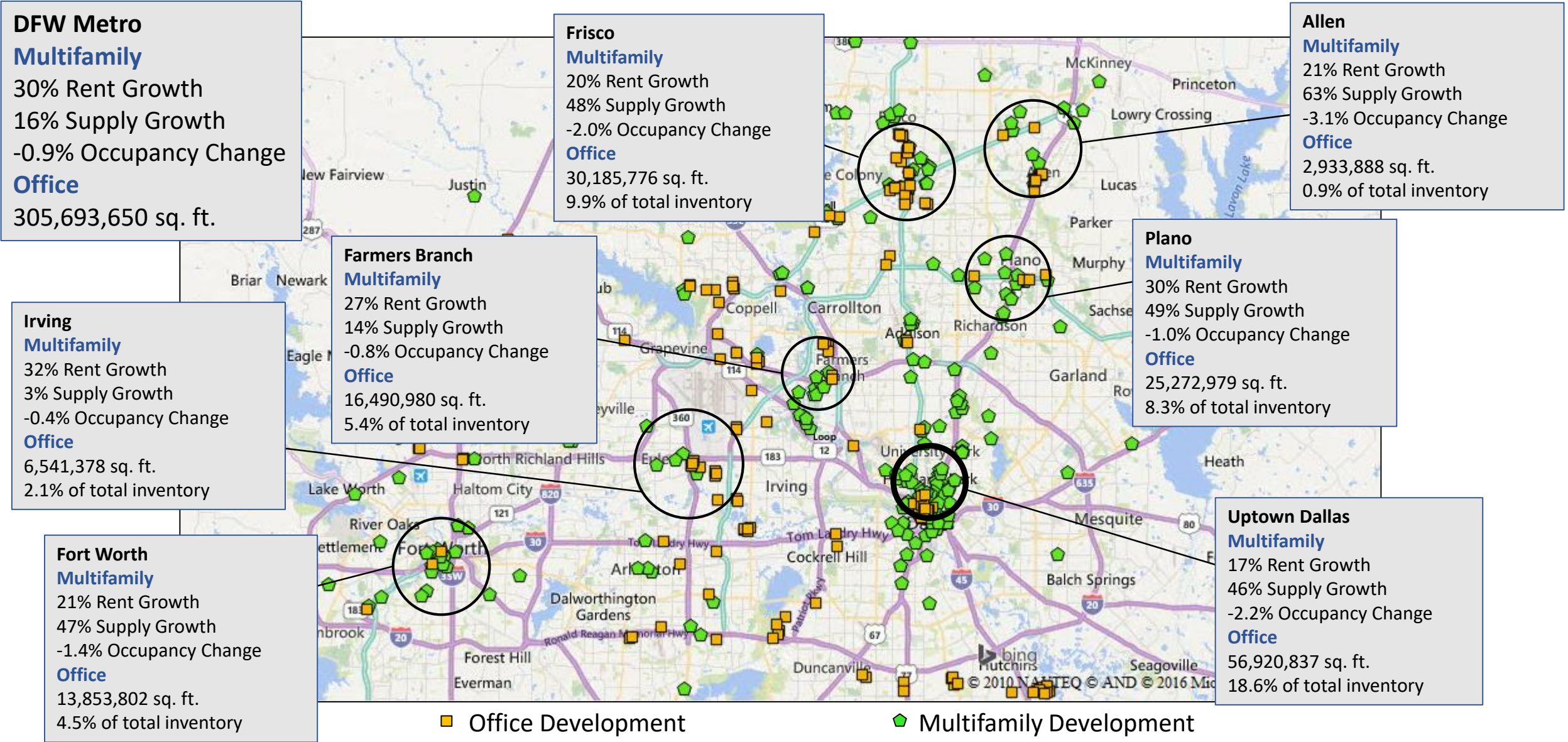
- McKesson Corp. is relocating headquarters from San Francisco to Irving in April 2019
  - Will move into a \$157 million, 525,000-square-foot campus which will include a 4,000-square-foot fitness center and a dining hall
  - The relocation will bring jobs in human resources, finance and accounting – with plans to bring more than 1,000 employees
- Core-Mark is relocating headquarters from San Francisco to the Dallas-Fort Worth area
  - Will lease 25,000-square-feet of office space in the Solana Business Park to house roughly 100 employees – transition will occur in the first half of 2019
- Construction has begun on a new high-rise, mixed-use project called The Crossing
  - Will be located near Dallas' Mockingbird Station and Southern Methodist University
  - Plans include 330 apartment units and 90,000-square-feet of retail
- \$150 million Trinity Park Conservancy Development designed to survive when the river floods
  - 200-acre park is in the planning phase and will be situated along the Trinity River, at the floodplain between the Margaret McDermott and Ron Kirk Bridges
- The Realm at Castle Hills, a 324-acre, live-work-play development is under construction
  - Phase I includes 235,000-square-feet of office space, 15,000-square-feet of restaurant space and a park - scheduled to be completed in mid-2019
  - Phase II includes a 260-unit apartment complex and 35,000-square feet of retail and is expected to be completed in mid- to late 2020
  - Future plans include condominiums, a large amphitheater, entertainment district and additional retail and restaurants
- Red Bird Mall will be redeveloped through a public/private partnership
  - The City of Dallas has agreed to invest \$22 million of the projected \$157 million cost to renovate the mall
  - Redevelopment will include a one-acre park, a hotel and repurposing existing buildings to create office space

# Dallas Employment Composition – March 2019

Employment Sector	Current Employment	% Share	Year Change	YOY % Growth	
Educational and Health Services	315.5K	11.73%	3,905	1.3%	
Financial Activities	244.4K	9.09%	4,672	1.9%	
Government	302.6K	11.25%	3,477	1.2%	
Information	71.8K	2.67%	-664	-0.9%	
Leisure & Hospitality	279.0K	10.37%	17,187	6.6%	
Manufacturing	181.5K	6.75%	2,991	1.7%	
Mining; Logging; and Construction	150.0K	5.58%	7,120	5.0%	
Other Services	89.3K	3.32%	5,866	7.0%	
Professional & Business Services	522.2K	19.42%	28,052	5.7%	
Trade; Transportation; and Utilities	533.3K	19.83%	12,695	2.4%	



# Intellectual Capital Nodes – Dallas-Fort Worth



\*Multifamily rent, occupancy and supply growth based on Mar 14 – Mar 19

# What's Going on in Tampa?

## Public and Private Partnerships

- Port Tampa Bay approved \$60 million widening/extension of Big Bend Channel to accommodate larger ships
  - U.S. Army Corps of Engineers, Florida Department of Transportation Tampa Electric Co., Mosaic Co. and Fed Gove
- Tampa River Walk
  - Friends of the Riverwalk, City of Tampa, Hillsborough County
  - Opening public access to Tampa's lovely waterfront and linking five museums, seven parks and numerous hotels, restaurants and outdoor gathering places

## Community and Amenities that Retain and Draw in Talent

- Tampa River Walk
  - Holds various events for the community, including Tampa Riverfest, 4th of July fireworks, riverwalk trick or treat, and downtown Tampa holiday lighted boat parade
  - Connects to museums, parks, hotels and restaurants
- Various live-work-play projects in the works, including Midtown Tampa and Waterstreet Tampa
  - Retail, office, hotel, entertainment, apartments, restaurants

## Friendly Business Environment

**STATE RANK #7**

- Tampa offers a wide variety of economic incentive programs through the city website
- KPMG Focus on Tax 2016 report ranked Tampa...
  - #5 in U.S. and #14 worldwide for most favorable tax structures for businesses, and #2 in the U.S. for its cost-effective tax structure for corporate services
- \$1.7 million incentive package to lure TouchPoint Medical to city

## Educated Workforce

University	Approx. Enrollment 2018
University of Central Florida	68,571
University of Florida	55,862
Hillsborough Community College	45,937
University of South Florida	43,866
University of Tampa	9,304

36.2% of adults in the city of Tampa have a bachelor's degree or higher

# What's Going on in Tampa?

- TouchPoint Medical, an engineering and manufacturer of high-tech hospital equipment, plans to bring global headquarters to Tampa
  - \$23 million, 125,000 sq. ft. industrial and corporate office building
  - Taking advantage of incentive packages
  - Expects to employ 228 people initially with plans to expand
  - Avg. annual wage for the news jobs ~\$57,546, nearly 60 percent higher than countywide avg.
- Fortune 500 phosphate company Mosaic moving headquarters to Tampa area
  - Estimated to move about 150 employees from MN office
- Validity Inc., a data quality and compliance company, opened new hub in Tampa
  - Plans to hire 75 employees by end of year
  - Latest tech firm to move, following Vendita Technology Group, Revature, and the Frank Recruitment Group
- Midtown Tampa
  - \$500 million dollar project on 22-acre site
  - Scheduled for completion in 2020
  - 1.8 million sq. ft. of retail, residential, office and entertainment space tied together with four acres of walkable leisure area
- Water Street Tampa
  - \$3 billion, 16-block mega-development
  - Recently broke ground on a new JW Marriott hotel and the \$164.7 million University of South Florida Morsani College of Medicine and Heart Institute
    - Goal is to become the centerpiece of an emerging medical-tech cluster
  - Plan to be the first WELL-Certified district in the world

## Average Rent Compared to Nearest Gateway Cities

Market	Avg. Rent – March 2019
Tampa	\$1,239
Washington DC	\$1,770

**21,013,788** passengers flew in and out of Tampa International Airport in 2018

**23,464,618** passengers flew in and out of Ronald Reagan Washington National Airport in 2018

78 multifamily transactions valued at \$2.5 billion in 2018





# Tampa Employment Composition – March 2019

Employment Sector	Current Employment	% Share	Year Change	YOY % Growth	
Educational and Health Services	247.6K	15.43%	5,154	2.1%	
Financial Activities	132.4K	8.25%	4,194	3.3%	
Government	183.8K	11.45%	-1,264	-0.7%	
Information	27.5K	1.71%	306	1.1%	
Leisure & Hospitality	186.5K	11.62%	5,437	3.0%	
Manufacturing	86.3K	5.38%	1,991	2.4%	
Mining; Logging; and Construction	95.8K	5.97%	4,593	5.0%	
Other Services	53.4K	3.33%	394	0.7%	
Professional & Business Services	282.0K	17.57%	12,795	4.8%	
Trade; Transportation; and Utilities	309.6K	19.29%	3,500	1.1%	

# What's Going on in Seattle?

## Public and Private Partnerships

- \$36 million public-private partnership with many private investors to modernize Port of Everett representing the largest maritime construction project on the West Coast
  - Upgrades to accommodate larger ships and increases in cargo
- Airport terminal being built in Everett at Paine Field
  - \$60 million in investment from Propeller Airports
  - Projected to operate 24 flights per day

## Community and Amenities that Retain and Draw in Talent

- New resort community from Westharbor Homes called Port Ludlow caters to families seeking non-urban settings close to the city
  - Access to fishing and walking trails
  - Waterfront homes with 360-degree architecture with views of surrounding landscapes
  - Access to marina, golf course, and community center

## Friendly Business Environment

STATE RANK #9

- Tax deferrals, reduced B&O rates, exemptions, and credits offered to many manufacturing industries doing business in Washington
- City of Everett offers a new jobs tax credit of up to \$500,000 for the creation of at least 50 new jobs
- Seattle City Council repeals controversial “head tax” of \$275 per employee for businesses

## Educated Workforce

University	Approx. Enrollment 2018
University of Washington	58,692
Western Washington University	16,121
Seattle University	7,291
Whitworth University	2,763

61.7% of adults in the city of Seattle have a bachelor's degree or higher

# What's Going on in Seattle?

- Planners and city officials in Seattle anticipating return of professional sports teams with the renovation of the former Seattle SuperSonics arena as well as a hockey team
  - Seattle Mayor Jenny Durkan said "...I'm committed to bringing back our Sonics, recruit an NHL team, and invest in our city"
  - Planned to be 100% privately financed by the Oak View Group
  - \$660 million proposal to renovate KeyArena by 2020
- Experia moving to Seattle in 2020 after property purchase on Elliot Bay for \$229 million
- Redesign of Northgate Mall 55-acre site to include 1,200 new housing units, retail, hotels, parks, and a community ice rink
  - The proposal to the city states "redevelopment will transform the majority of Northgate Mall into a walkable transit-oriented neighborhood with new office, residential, retail and restaurant uses, a state-of-the-art fitness facility, reconfigured parking, and new open spaces..."
  - 161,837 square foot public ice center and practice facility for the NHL hockey team proposed for the city
- 14 story, 432,360 square foot mixed-use project under construction from Vulcan Real Estate
  - Includes first floor retail space and another eight floors of residential units
  - Underground parking structure accommodating 362 vehicles
- The Windermere building is a planned 18 story, 325,000 square foot mixed-use high-rise from Martin Selig Real Estate
  - Ten floors for 150 residential units and four levels for parking
  - 25,000 square feet of retail space
- 1,050 units under construction on Stewart Street for the 44 story Westbank residential building development slated to be completed in 2021

## Average Rent Compared to Nearest Gateway Cities

Market	Avg. Rent – March 2019
Seattle	\$1,838
San Francisco	\$3,109
Los Angeles	\$2,323



**49,849,520** passengers flew in and out of Seattle-Tacoma International Airport in 2018

**57,793,313** passengers flew in and out of San Francisco International Airport in 2018

**87,534,384** passengers flew in and out of Los Angeles International Airport in 2018

67 multifamily transactions valued at \$3.0 billion in 2018



# Seattle Employment Composition – March 2019

Employment Sector	Current Employment	% Share	Year Change	YOY % Growth	
Educational and Health Services	228.0K	12.96%	8,332	3.8%	
Financial Activities	88.5K	5.03%	1,993	2.3%	
Government	213.7K	12.15%	-5,777	-2.6%	
Information	120.1K	6.83%	7,420	6.6%	
Leisure & Hospitality	178.9K	10.17%	8,009	4.7%	
Manufacturing	166.7K	9.48%	6,275	3.9%	
Mining; Logging; and Construction	107.9K	6.14%	6,345	6.2%	
Other Services	60.7K	3.45%	1,732	2.9%	
Professional & Business Services	265.8K	15.11%	5,151	2.0%	
Trade; Transportation; and Utilities	328.6K	18.68%	5,319	1.6%	

# What's Going on in Phoenix?

## Public and Private Partnerships

- \$77 million, 200,000-square-foot Phoenix Biomedical campus expansion – expected to open in late 2020
  - Public-private partnership between Wexford Science and Technology, Arizona State University, Ventas Inc. and the city of Phoenix
- \$35 million, 25-acre water sports complex financed through a partnership between the city of Gilbert and The Strand @ Gilbert

## Community and Amenities that Retain and Draw in Talent

- SkySong Innovation Center
  - 42-acre mixed-use development, office buildings 1-4 are all near full occupancy with building 5 nearing completion
- Toll Brothers has broken ground on a 780-acre master planned community called Sterling Grove
  - 2,200 homes, golf course, clubhouse

## Friendly Business Environment

STATE RANK – #17

- Research and Development Incentive provides income tax credit for R&D activities conducted in the state
  - 24% of the first \$2.5 million in qualifying expenses plus 15% of expenses in excess of \$2.5 million
- Job training for new employees – grants to cover 75% of an employers eligible training expenses
- Quality jobs tax credit available to employers

## Educated Workforce

University	Approx. Enrollment 2018
University of Phoenix	123,900
Arizona State University	103,567
University of Arizona	45,217
Grand Canyon University	20,500
Phoenix College	17,000

27.8% of adults in the city of Phoenix have a bachelor's degree or higher

# What's Going on in Phoenix?

## Average Rent Compared to Nearest Gateway Cities

Market	Avg. Rent – March 2019
Phoenix	\$1,197
Los Angeles	\$2,323
San Francisco	\$3,109



**44,943,686** passengers flew in and out of Phoenix Sky Harbor International Airport in 2018

**87,534,384** passengers flew in and out of Los Angeles International Airport in 2018

**57,793,313** passengers flew in and out of San Francisco International Airport in 2018

169 multifamily transactions valued at \$5.9 billion in 2018



- Job creation in the Phoenix metro
  - In Gilbert, Deloitte is planning a \$50 million capital investment in a 100,000-square-foot delivery center that will create as many as 2,500 high-wage technology jobs
  - Wells Fargo & Co. will create 1,200 new jobs in Chandler with its 190,000-square-foot expansion
  - Allstate will bring 2,500 new jobs to Chandler and is exploring the idea of opening a new corporate campus in the area
  - Voya Financial, Inc. announced it will open a new office in the Phoenix area that will create more than 1,000 jobs – making a capital investment of \$60 million
  - Nikola Motor Company announced plans to build its hydrogen-electric semi-truck manufacturing headquarters to the west side of Phoenix - will bring 2,500 jobs by 2024
- Waymo One, Google's self-driving car spinoff, is introducing a small-scale ride-hailing service in Phoenix – it will be confined to a 100-square-mile radius
- Multi-family developments downtown Phoenix
  - Block 23: area's first downtown Fry's grocery store, 330 apartments, 200,000-square-foot of office space, restaurant and retail space
  - Palm Tower (renovation of the Arizona Center residential tower): \$100 million, 31-story tower with 350 residences
  - City Center on the Park: 319 apartments and 4,500-square-foot of commercial space
  - The Link PHX: 257 apartments and 7,000-square-foot of retail space
- Phoenix-Mesa Gateway Airport is planning a long-term development to revolutionize the way products are transported from the U.S. to Mexico
  - SkyBridge is a \$230 million development that will increase cargo flights to 2,000 per year and 10,000 by 2036

### SkyBridge

- 1M sq.ft. of office space
- 800K sq.ft. of air cargo operations
- 900K sq.ft. of light industrial & flex space
- 100K sq.ft. of retail and restaurants

# Phoenix Employment Composition – March 2019

Employment Sector	Current Employment	% Share	Year Change	YOY % Growth	
Educational and Health Services	335.2K	15.61%	13,509	4.2%	
Financial Activities	192.7K	8.97%	1,068	0.6%	
Government	238.1K	11.08%	126	0.1%	
Information	39.0K	1.82%	273	0.7%	
Leisure & Hospitality	228.8K	10.65%	1,005	0.4%	
Manufacturing	131.7K	6.13%	4,342	3.4%	
Mining; Logging; and Construction	138.9K	6.47%	13,927	11.1%	
Other Services	69.6K	3.24%	1,462	2.1%	
Professional & Business Services	363.6K	16.93%	11,278	3.2%	
Trade; Transportation; and Utilities	410.1K	19.10%	9,909	2.5%	

# Our May 2018 Analysis Revealed Some Markets Vulnerable to Supply-Demand Imbalances in Two Years

Market	Current Inventory (000's units)	2-Year Supply Growth	2-Year Demand Growth	Net %	Excess Units
Denver	252	9.7%	4.5%	(5.2%)	13,692
Seattle	231	9.0%	4.4%	(4.6%)	11,192
Charlotte	163	7.0%	2.7%	(4.3%)	7,190
Dallas	709	5.4%	2.2%	(3.3%)	23,953
Phoenix	295	4.5%	1.9%	(2.6%)	7,876
Miami	275	8.3%	5.7%	(2.5%)	7,756
Kansas City	149	4.3%	2.3%	(2.1%)	3,286
Atlanta	424	3.6%	1.6%	(2.0%)	8,736
Pittsburgh	89	2.5%	0.8%	(1.7%)	1,531
Boston	214	6.1%	4.5%	(1.6%)	3,805
Portland	147	4.8%	3.4%	(1.4%)	2,306
Washington DC	510	4.5%	3.3%	(1.1%)	6,727
Twin Cities	199	3.3%	2.3%	(1.0%)	2,095
Orlando	204	4.2%	3.3%	(1.0%)	2,253
San Antonio	189	3.1%	2.3%	(0.8%)	1,816

Market	Current Inventory (000's units)	2-Year Supply Growth	2-Year Demand Growth	Net %	Excess Units
St Louis	120	2.5%	1.8%	(0.7%)	978
Baltimore	217	1.9%	1.4%	(0.4%)	1,114
Philadelphia	288	2.3%	2.0%	(0.3%)	1,006
Tampa	206	3.2%	3.4%	0.2%	10
Cincinnati	108	1.6%	1.9%	0.2%	(157)
San Francisco	248	5.7%	6.1%	0.4%	(274)
Detroit	208	0.9%	1.3%	0.4%	(752)
Las Vegas	169	1.8%	2.3%	0.5%	(661)
Chicago	333	3.9%	4.6%	0.7%	(1,328)
San Diego	181	3.2%	4.2%	1.0%	(1,516)
New York	1,000	4.3%	5.4%	1.1%	(10,384)
Sacramento	128	1.3%	2.6%	1.3%	(1,486)
Houston*	629	1.0%	2.6%	1.6%	(8,974)
Inland Empire	150	1.5%	3.8%	2.3%	(3,281)
Los Angeles	410	5.7%	9.2%	3.5%	(13,047)

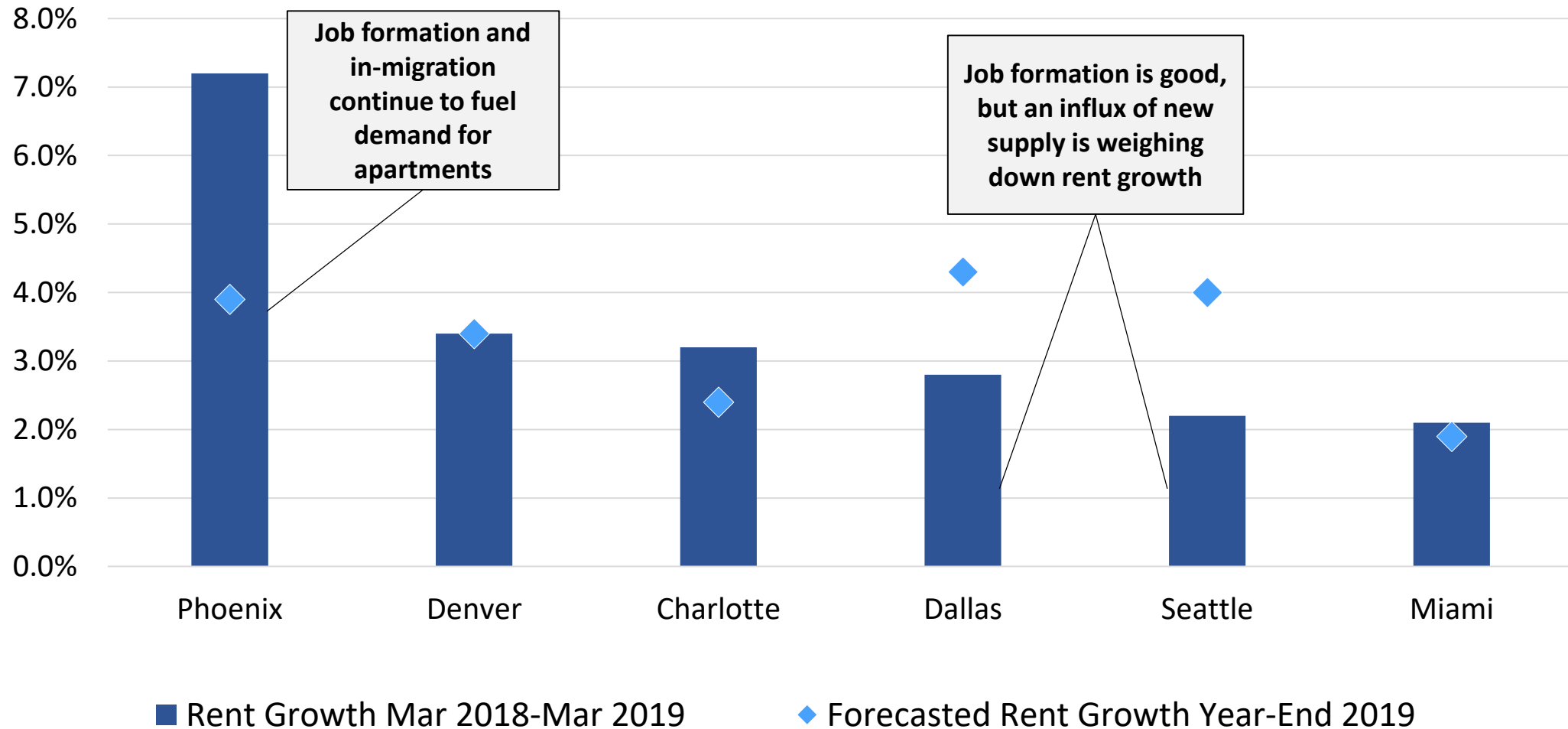
\*Demand is a function of renter households growth and apartments as a % of the rental market

Source: Moody's Analytics; U.S. Bureau of Labor Statistics (BLS); Yardi® Matrix



# What Has Happened a Year In?

## At-Risk Markets Had Healthy Rent Growth Over the Year



# What Has Happened a Year In?

Units are Being Absorbed Despite Significant Completions

YoY March 2018-March 2019				
Market	Completions	Completions as a % of Total Stock	Change in Occupancy	Occupancy March 2019
Denver	14,902	5.1%	-0.4%	94.6%
Seattle	12,691	4.9%	-0.1%	95.2%
Charlotte	7,098	3.9%	0.0%	95.0%
Miami	5,020	3.8%	-0.5%	95.6%
Dallas	20,454	3.3%	-0.3%	94.0%
Phoenix	9,636	2.9%	0.1%	95.3%

# These Markets At-Risk of Oversupply Still Have Hefty Development Pipelines

Market	Under Construction	Current Inventory	UC as a % of Inventory
Miami	17,808	123,263	14.4%
Denver	24,032	264,302	9.1%
Seattle	20,915	244,117	8.6%
Charlotte	12,846	169,488	7.6%
Dallas	37,699	537,949	7.0%
Phoenix	13,776	303,318	4.5%

# Top 30 Markets: Rent, Occupancy, Employment, Supply

Market	YoY Rent Growth as of March 2019	Forecasted Rent Growth YE 2019	YoY Job Growth (6-mo. moving avg.) as of Feb 2019	Completions as a % of Total Stock as of March 2019	Occupancy Rates as of Feb 2018	Occupancy Rates as of Feb 2019
Sacramento	4.6%	6.5%	3.0%	0.8%	96.3%	96.1%
Inland Empire	4.8%	4.5%	2.2%	0.5%	95.9%	96.1%
Dallas	2.8%	4.3%	2.6%	3.3%	94.4%	94.0%
Las Vegas	7.5%	4.0%	3.0%	2.3%	94.5%	94.9%
Los Angeles	3.4%	4.0%	0.8%	2.2%	96.6%	96.4%
Orlando	3.4%	4.0%	3.9%	2.9%	95.9%	95.0%
Seattle	2.2%	4.0%	2.4%	4.9%	95.3%	95.2%
Phoenix	7.2%	3.9%	3.2%	2.9%	95.1%	95.2%
Twin Cities	3.5%	3.6%	0.4%	3.1%	97.2%	96.6%
Orange County	2.6%	3.5%	1.2%	1.9%	95.9%	95.9%
Denver	3.4%	3.4%	2.1%	5.1%	94.9%	94.6%
Raleigh	3.9%	3.4%	1.1%	3.0%	94.0%	94.6%
Tampa	3.6%	3.3%	2.5%	2.1%	95.3%	95.0%
Atlanta	4.8%	3.3%	2.1%	1.7%	94.0%	94.2%
Indianapolis	3.2%	3.2%	0.7%	1.0%	94.0%	93.9%

# Top 30 Markets: Rent, Occupancy, Employment, Supply

Market	YoY Rent Growth as of March 2019	Forecasted Rent Growth YE 2019	YoY Job Growth (6-mo. moving avg.) as of Feb 2019	Completions as a % of Total Stock as of March 2019	Occupancy Rates as of Feb 2018	Occupancy Rates as of Feb 2019
Boston	3.1%	2.7%	0.7%	3.1%	96.2%	96.1%
San Francisco	3.6%	2.7%	2.2%	1.6%	95.8%	95.8%
Charlotte	3.2%	2.4%	2.2%	3.9%	95.1%	95.0%
Chicago	2.7%	2.4%	1.2%	1.7%	94.5%	94.3%
San Jose	3.5%	2.4%	2.0%	1.0%	95.8%	95.7%
Kansas City	1.6%	2.3%	0.8%	2.6%	94.8%	94.4%
Philadelphia	2.8%	2.2%	1.0%	1.0%	95.3%	95.5%
Houston	0.6%	2.2%	2.6%	1.3%	93.8%	92.4%
Austin	4.0%	2.0%	2.7%	4.0%	93.8%	94.4%
Nashville	3.3%	2.0%	3.1%	4.6%	94.7%	94.5%
Miami Metro	2.1%	1.9%	2.4%	3.8%	95.3%	95.1%
Portland	2.0%	1.9%	1.7%	2.5%	95.2%	95.2%
San Antonio	2.7%	1.9%	1.8%	3.1%	92.6%	92.8%
Washington DC	2.5%	1.3%	0.8%	1.9%	95.2%	95.3%
Baltimore	2.5%	1.3%	0.7%	1.6%	94.4%	94.7%

# Tech Hub and Tertiary Markets Will Have the Most Multifamily Rent Growth Over the Next Couple Years

Market	YoY December 2017-2018	2019 (F)	2020 (F)	2021 (F)	Market	YoY December 2017-2018	2019 (F)	2020 (F)	2021 (F)
Reno	6.8%	7.9%	7.0%	5.0%	Inland Empire	4.8%	4.5%	4.3%	3.9%
Macon	4.0%	7.1%	6.6%	6.2%	Fort Worth	3.8%	4.5%	3.4%	3.2%
Sacramento	4.6%	6.5%	6.2%	4.9%	Dallas - Suburban	3.1%	4.5%	4.3%	3.3%
Tacoma	5.0%	5.8%	5.3%	4.9%	Central Coast	4.9%	4.5%	4.1%	4.1%
Fort Wayne	2.4%	5.5%	5.2%	4.9%	Boise	6.5%	4.3%	3.3%	3.0%
Central Valley	5.2%	5.2%	4.5%	4.0%	Orlando	3.4%	4.0%	4.0%	3.9%
Spokane	5.4%	5.1%	3.9%	3.7%	Las Vegas	7.5%	4.0%	3.5%	2.8%
Los Angeles - Eastern County	4.4%	4.9%	4.9%	4.5%	Colorado Springs	3.3%	4.0%	3.8%	3.5%
Eugene	5.2%	4.7%	4.5%	4.9%	Dallas - North	2.2%	4.0%	3.6%	3.5%
Salt Lake City	3.2%	4.6%	4.4%	3.8%	Seattle	2.2%	4.0%	3.9%	3.8%

\*Full market forecast on 133 markets and submarkets available for clients

\*Data ranked by 2019 forecast values

Source: Yardi®Matrix



# Tertiary Markets and a Couple Gateway Markets Will Have the Least Multifamily Rent Growth Over the Next Couple Years

Market	YoY December 2017-2018	2019 (F)	2020 (F)	2021 (F)	Market	YoY December 2017-2018	2019 (F)	2020 (F)	2021 (F)
Bridgeport - New Haven	2.3%	1.7%	1.4%	1.5%	Tulsa	2.3%	1.3%	1.4%	1.0%
South Bend	2.4%	1.7%	1.6%	1.6%	Oklahoma City	2.0%	1.3%	1.1%	1.5%
Mobile	4.4%	1.6%	2.0%	2.2%	Central East Texas	0.4%	1.2%	1.5%	1.0%
Washington DC	2.6%	1.3%	1.5%	1.7%	Columbus GA	3.8%	1.2%	1.3%	1.0%
Fort Lauderdale	1.7%	1.6%	1.7%	1.9%	McAllen	1.0%	1.0%	1.2%	1.8%
Baton Rouge	-0.9%	1.5%	1.9%	2.3%	Northern Virginia	2.4%	1.0%	1.6%	1.8%
Omaha	3.7%	1.5%	1.5%	2.2%	Manhattan	1.2%	0.7%	1.1%	1.4%
Toledo	2.2%	1.4%	1.4%	1.4%	Amarillo	0.4%	0.6%	0.4%	0.5%
Jackson	2.5%	1.4%	1.1%	1.3%	El Paso	3.2%	0.6%	0.5%	0.8%
Baltimore	2.5%	1.3%	1.4%	1.3%	Corpus Christi	1.9%	0.5%	0.4%	0.6%

\*Full market forecast on 133 markets and submarkets available for clients

\*Data ranked by 2019 forecast values

Source: Yardi®Matrix

# Matrix Expert National Operating Data Per Unit

12-month period ending March 2019	Austin	Boston	Denver	Manhattan	Miami	San Diego	Seattle	Washington DC
Total Income	\$14,649.61	\$24,218.86	\$17,359.62	\$37,533.23	\$19,583.23	\$22,724.98	\$21,140.82	\$20,552.02
Payroll	\$1,389.42	\$1,894.28	\$1,518.78	\$4,064.54	\$1,427.84	\$1,743.85	\$1,767.25	\$2,171.77
Marketing & Advertising	\$303.20	\$348.56	\$232.50	\$475.72	\$264.32	\$188.18	\$233.84	\$301.24
Repairs & Maintenance	\$812.46	\$1,753.08	\$870.60	\$2,199.07	\$1,622.93	\$1,402.76	\$975.06	\$1,909.24
Administrative	\$322.50	\$745.64	\$382.88	\$1,570.14	\$714.55	\$473.12	\$423.26	\$666.38
Management Fees	\$436.49	\$908.87	\$587.11	\$985.32	\$511.09	\$522.73	\$588.64	\$709.08
Utilities	\$1,017.52	\$1,444.44	\$983.41	\$1,921.63	\$872.77	\$1,275.26	\$1,348.18	\$1,506.88
Real Estate & Other Taxes	\$2,941.67	\$2,449.37	\$1,238.68	\$6,742.43	\$2,069.26	\$2,418.37	\$2,270.32	\$1,891.79
Insurance	\$229.76	\$355.00	\$246.25	\$467.24	\$544.84	\$285.88	\$277.96	\$265.44
Total Operating Expense	\$7,490.45	\$10,038.82	\$6,083.92	\$18,853.28	\$8,083.88	\$8,406.92	\$7,908.60	\$9,466.16
<b>Net Operating Income</b>	\$7,159.16	\$14,180.04	\$11,275.70	\$18,679.94	\$11,499.35	\$14,318.05	\$13,232.22	\$11,085.85
<b>Operating Margin</b>	48.9%	58.5%	65.0%	49.8%	58.7%	63.0%	62.6%	53.9%
<b>Cap Rate (March 2019)</b>	5.25%	4.01%	4.66%	2.58%	5.19%	4.89%	4.70%	5.84%

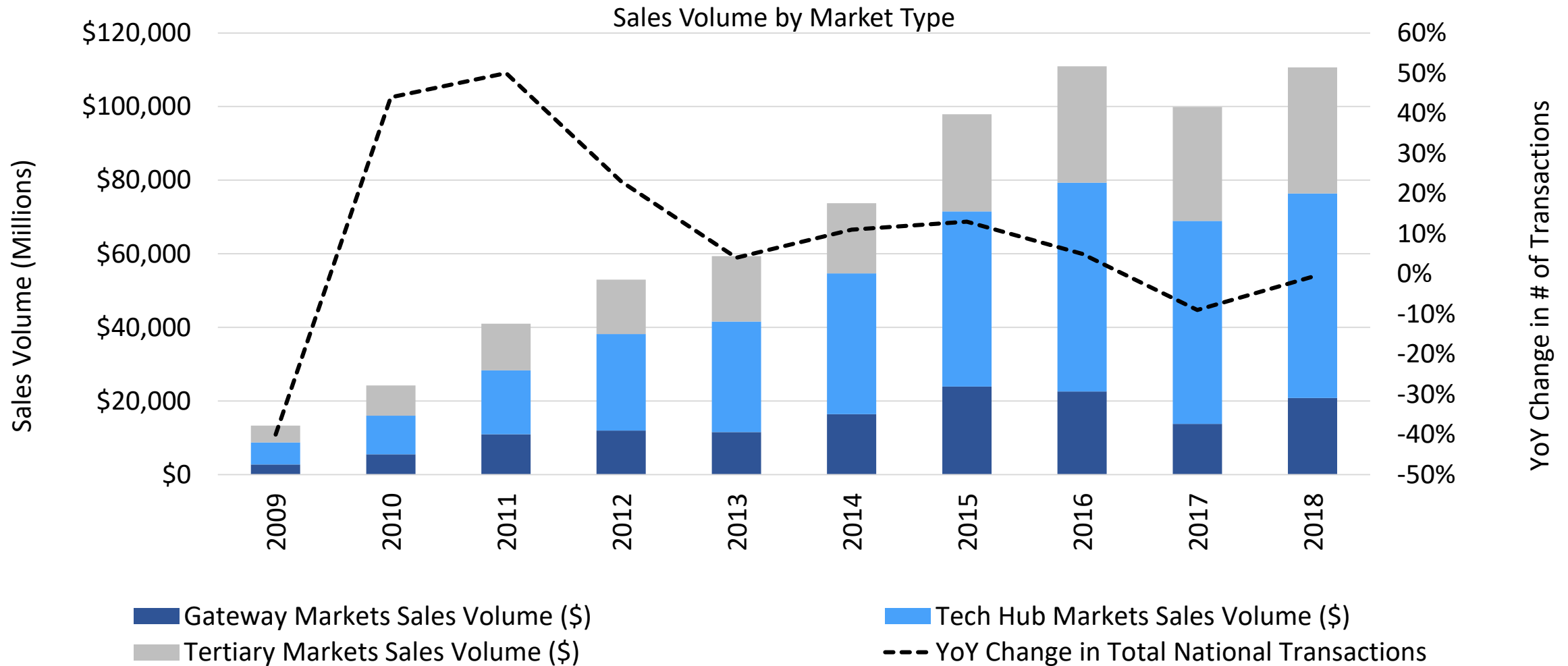


# Capital Expenditures in Multifamily Aren't as Severe as in Office – a Positive for the Industry

<b>MULTIFAMILY</b>	Denver	Atlanta	Austin	Boston	Manhattan	Seattle	Washington DC	Miami	San Diego
Net Operating Income	\$11,328	\$8,276	\$7,059	\$13,840	\$20,563	\$13,244	\$10,839	\$11,467	\$14,129
CapEx	\$2,223	\$2,044	\$1,528	\$1,710	\$2,425	\$1,359	\$1,375	\$1,210	\$1,676
<b>CapEx as a % of NOI</b>	<b>19.6%</b>	<b>24.7%</b>	<b>21.6%</b>	<b>12.4%</b>	<b>11.8%</b>	<b>10.3%</b>	<b>12.7%</b>	<b>10.6%</b>	<b>11.9%</b>

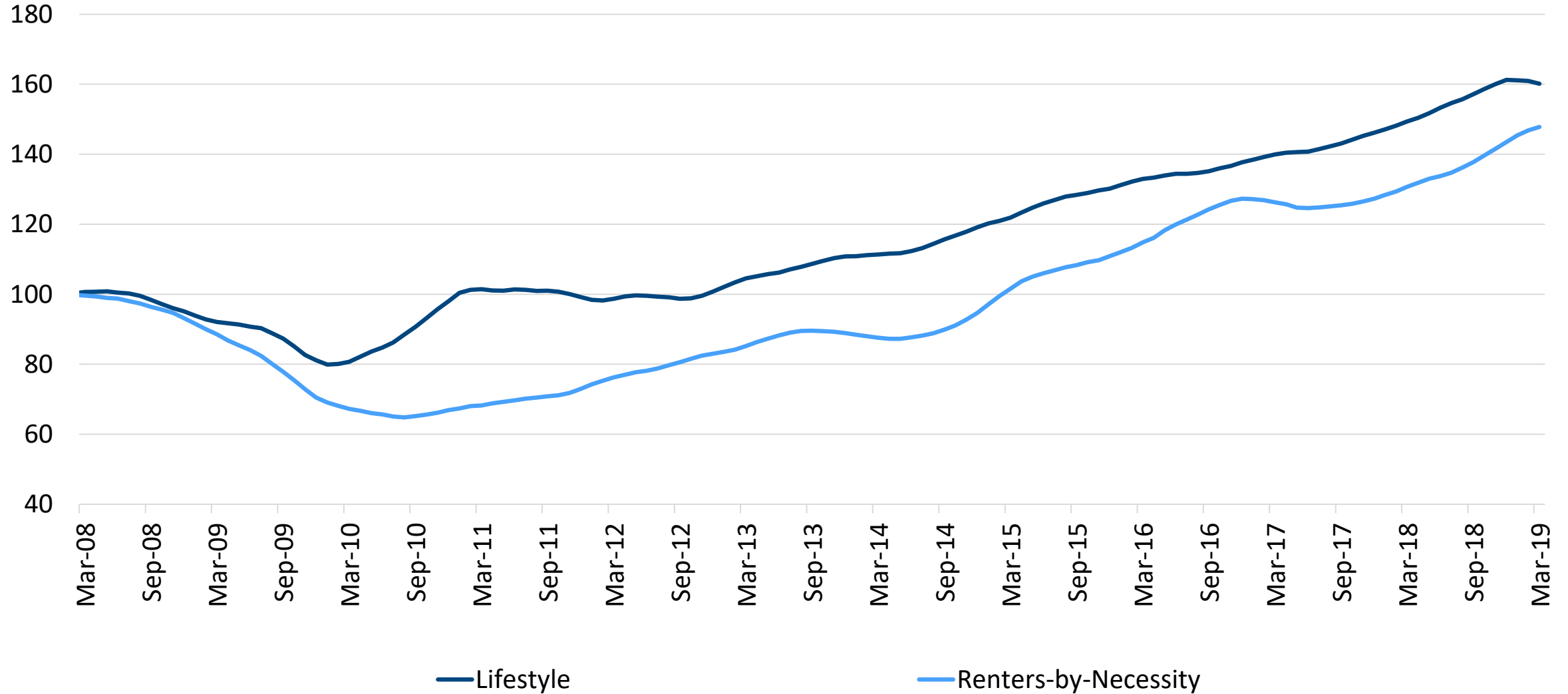
<b>OFFICE</b>	Denver	Atlanta	Austin	Boston	Manhattan	Seattle	Washington DC	Miami	San Diego
Net Operating Income	\$13.25	\$12.19	\$19.12	\$23.71	\$31.68	\$23.28	\$21.29	\$18.13	\$17.94
CapEx	\$3.89	\$3.60	\$4.03	\$5.76	\$7.19	\$4.21	\$3.96	\$4.19	\$5.03
<b>CapEx as a % of NOI</b>	<b>29.4%</b>	<b>29.5%</b>	<b>21.1%</b>	<b>24.3%</b>	<b>22.7%</b>	<b>18.1%</b>	<b>18.6%</b>	<b>23.1%</b>	<b>28.0%</b>

# Multifamily Transactions Have Been Fairly Stable Over the Past Five Years, but With Higher Dollar Amounts



# National Multifamily Values Keep Rising

Sales Price Per Unit Index 2008 = 100



# In Summary:

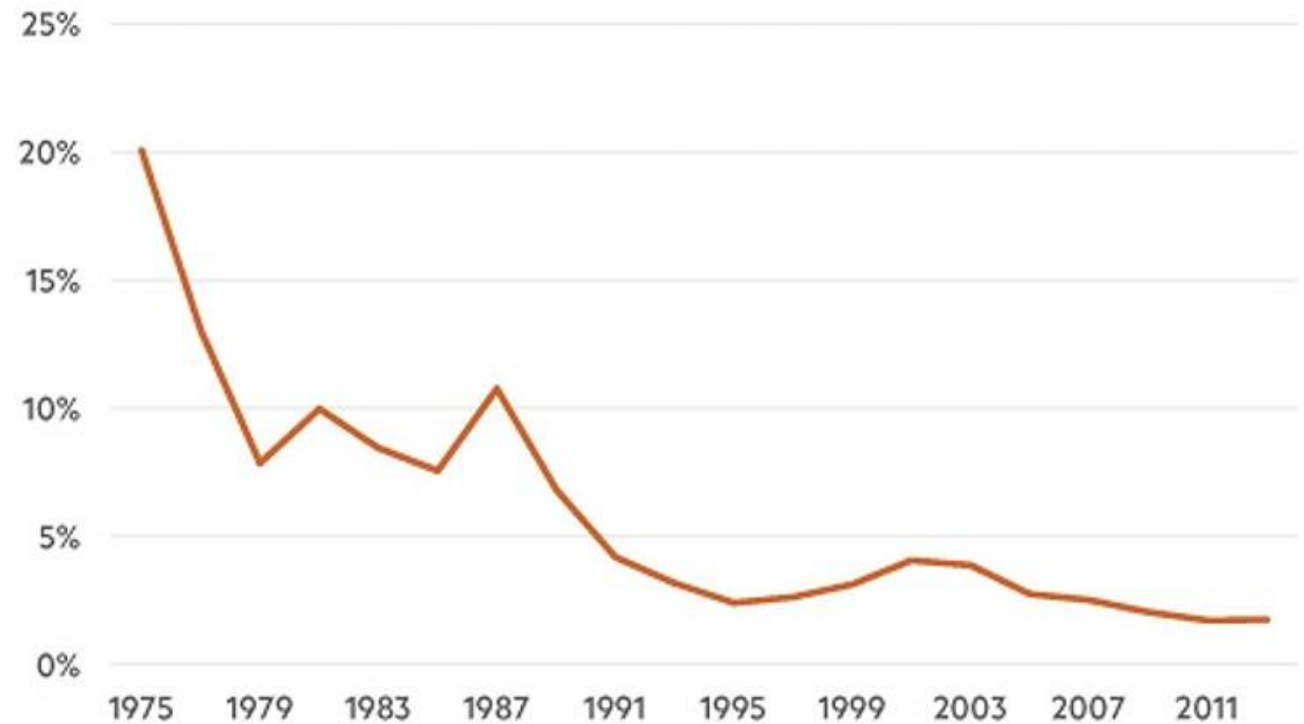
- Demographic and lifestyle changes indicate strong multifamily demand will continue
- Total housing production is unlikely to catch up to household formation, putting upward pressure on rents and occupancy rates
- Economic growth and population continue to move South and West to intellectual capital nodes within tech hub markets
- For new investments, it's a sharpshooter's game to find the right deal at the right price, and on the operational side, its about finding revenue and cost trimming opportunities to grow your NOI from your existing assets

Affordability: The Problem is Real

# Fewer New Apartments Are Affordable to Median-Income Residents – Reducing the “Filtering Effect”

- The share of all apartments that are affordable to median-income households and were no more than five years old ranged from about 10-20 percent in most of the 1970s and 1980s
- It fell to an average of 3.1 percent in the 1990s and 2000s and has slipped even further to only 1.8 percent in the current decade (data through 2013)

New Apartment Share of All Apartments Affordable to Median-Income Households



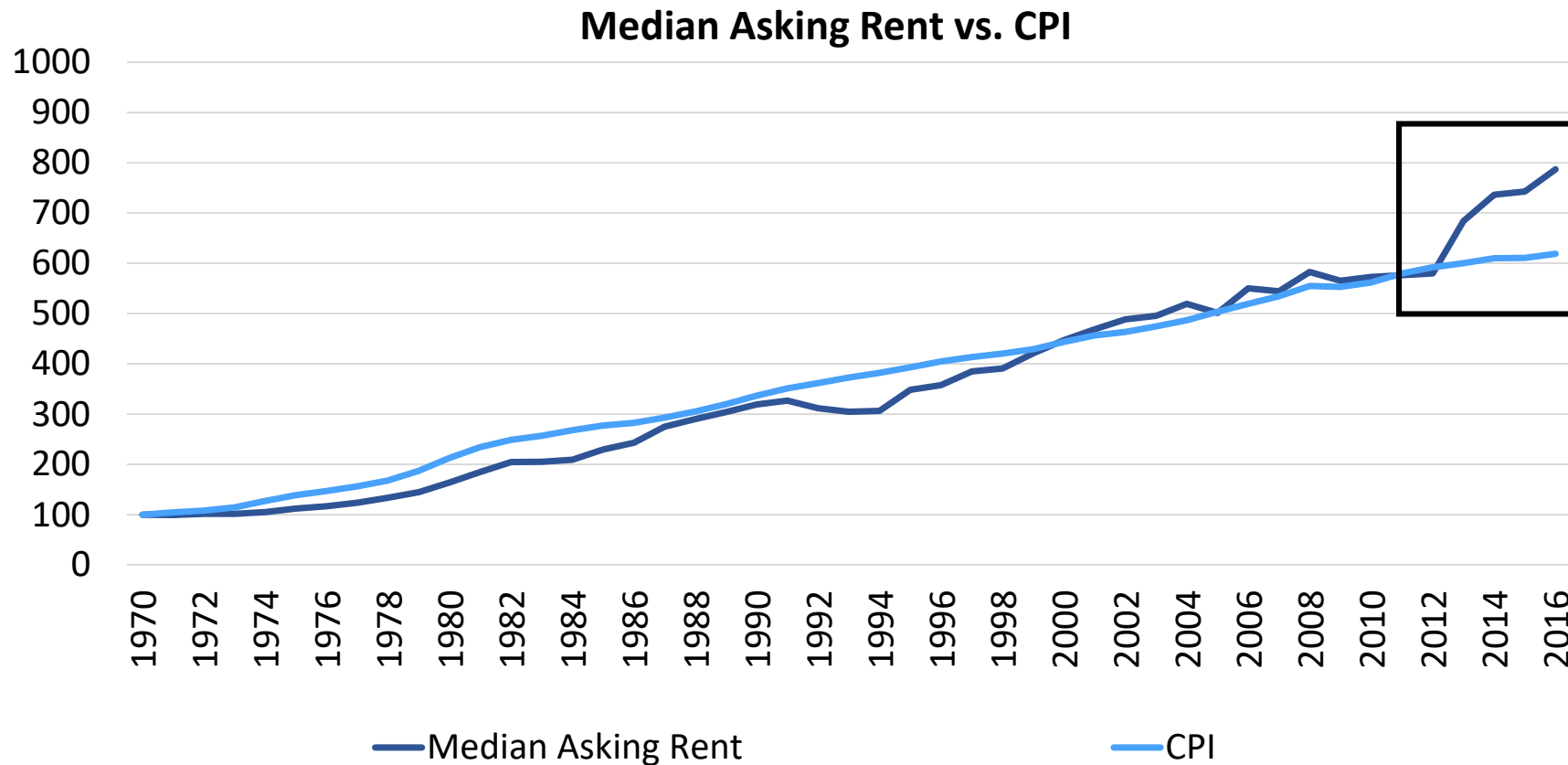
Source: AHS; NMHC

\*Affordable defined as rent no more than 30% of income

Source: Yardi®Matrix; National Multifamily Housing Council (NMHC), “Did We Ever Build Apartments for the Middle Market?”; American Housing Survey (AHS)

# Median Asking Rent Rising Faster Than Inflation

- Between 1970-2012, the periods in which the median rent grew more slowly than overall inflation were balanced by periods in which it grew faster
- Since then, the median asking rent has risen much more rapidly than inflation

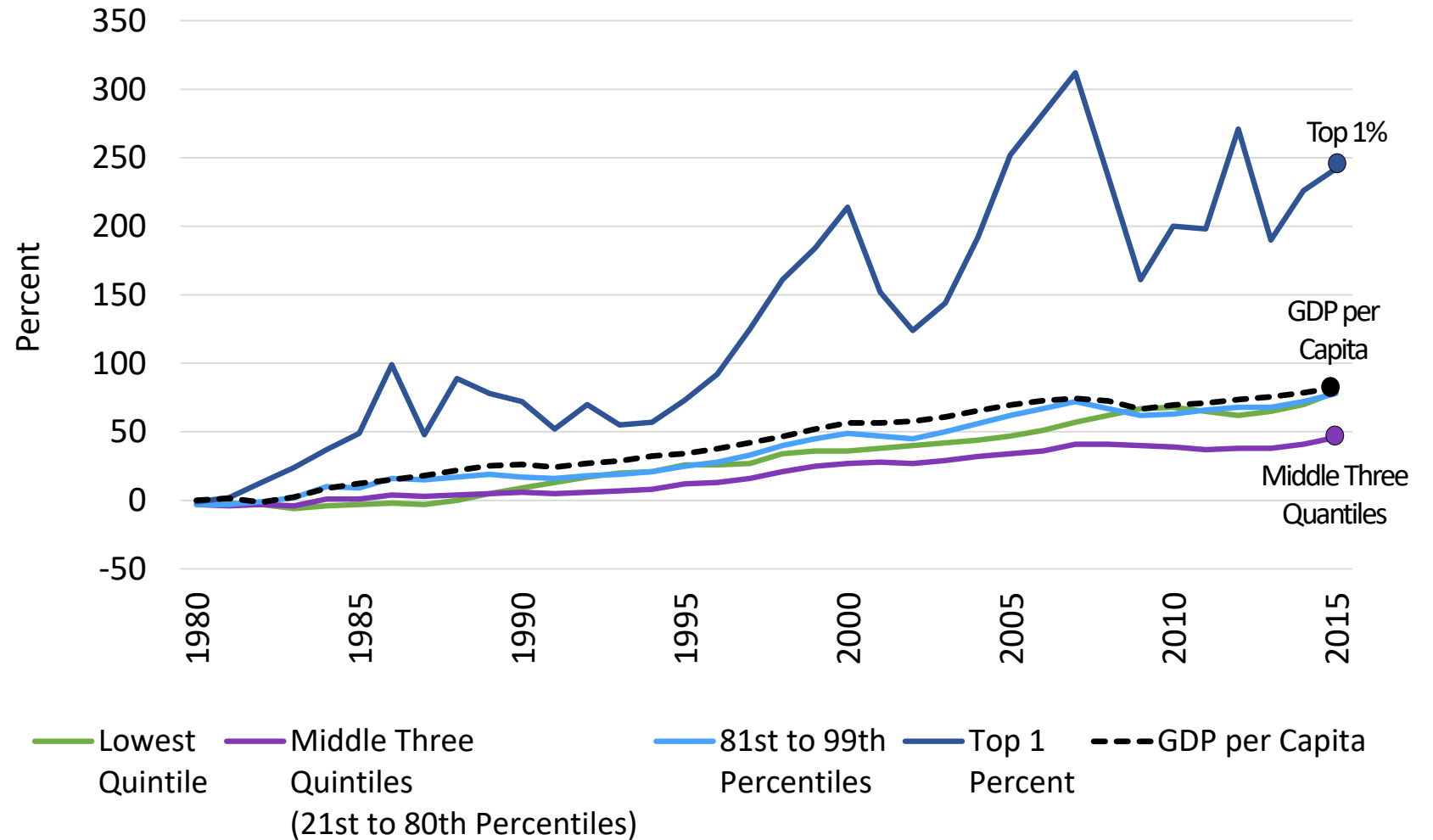


# Affordability Issues Have Been Building For a Long Time

*Since 1980...*

- Incomes have grown significantly faster for **the top 1%**
- **The bottom 20% and top 19%** have had incomes keep up with the growth of the economy
- Incomes have fallen behind for **the middle 60%**

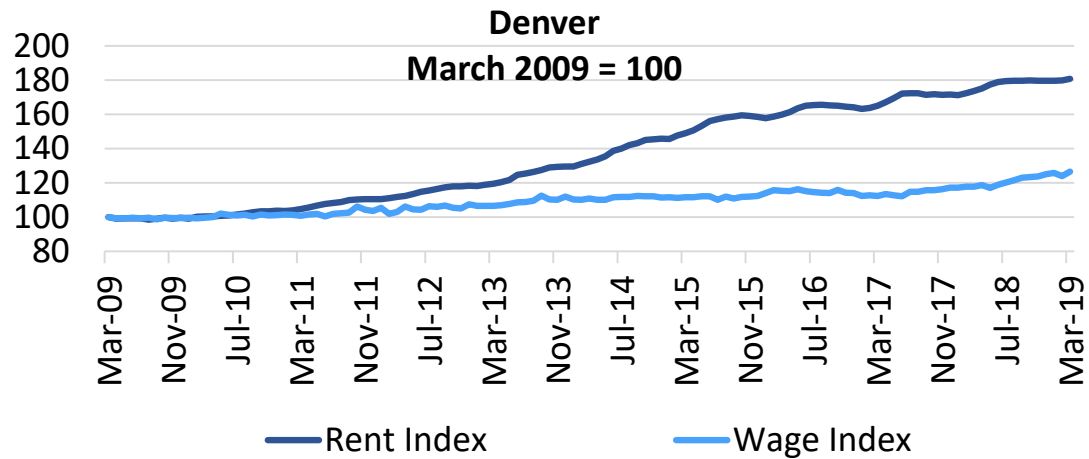
Cumulative Growth in Avg. Income and GDP per Capita



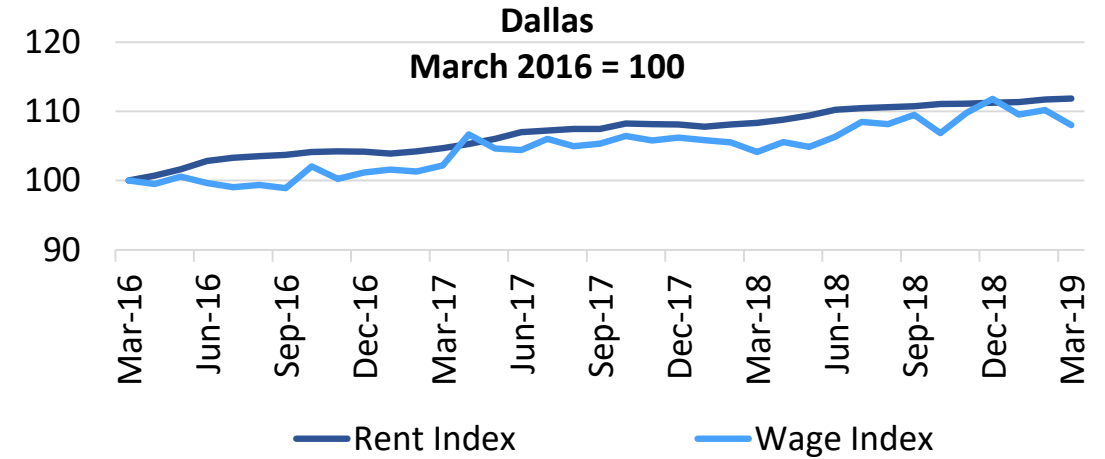
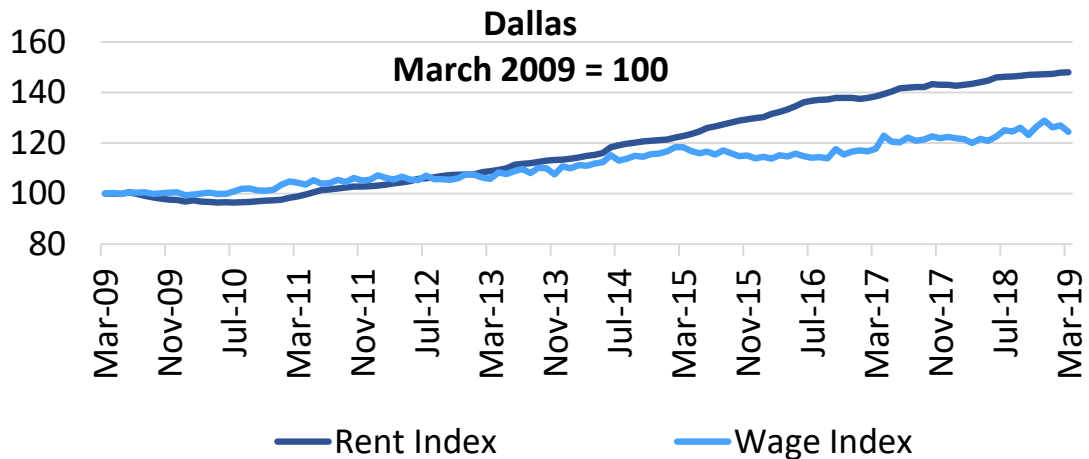
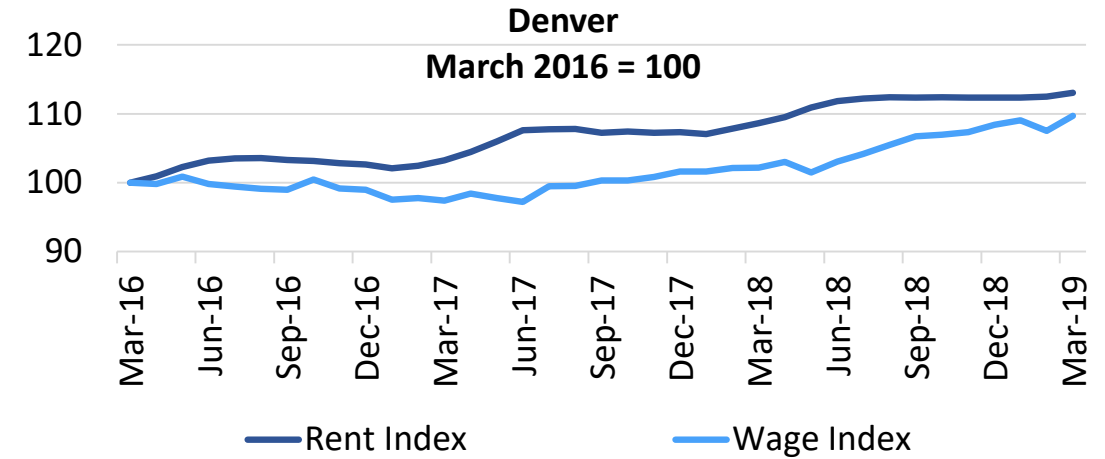


# Rents Have Risen Faster Than Wages in Key Metros Over the Past 10 Years, But Wage Growth Recently Caught Up

Since March 2009 (10 Years)

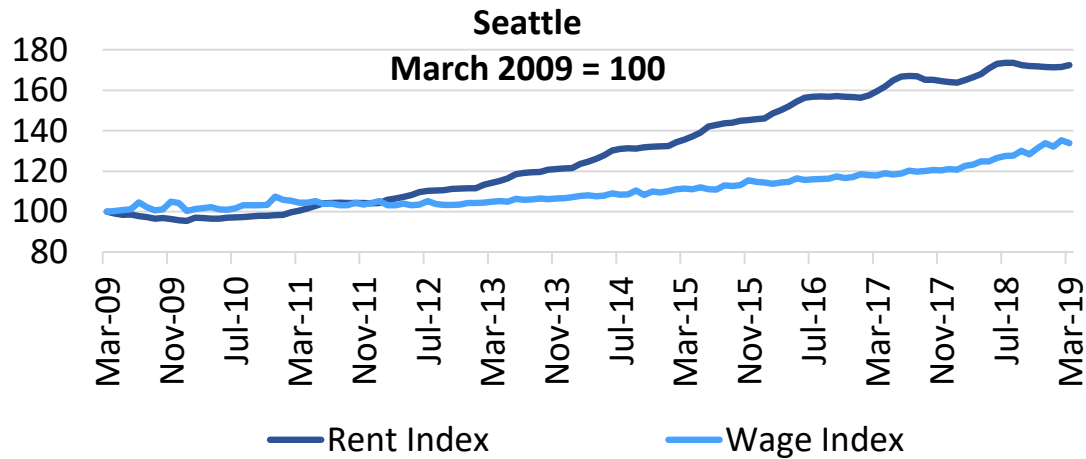


Since March 2016 (3 Years)

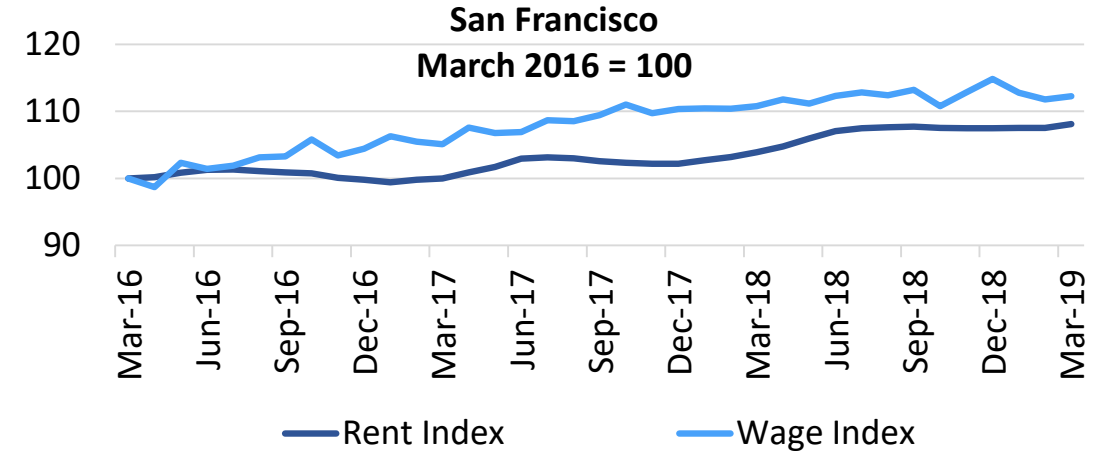
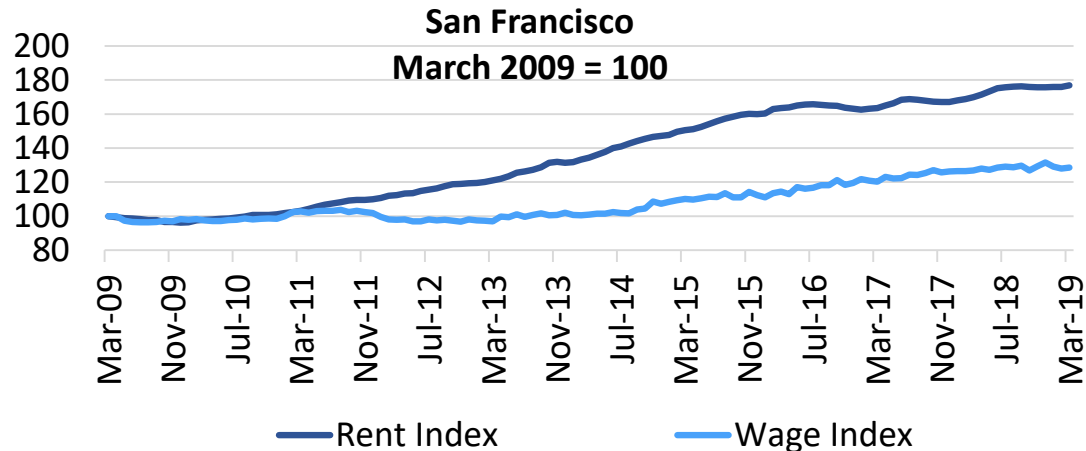
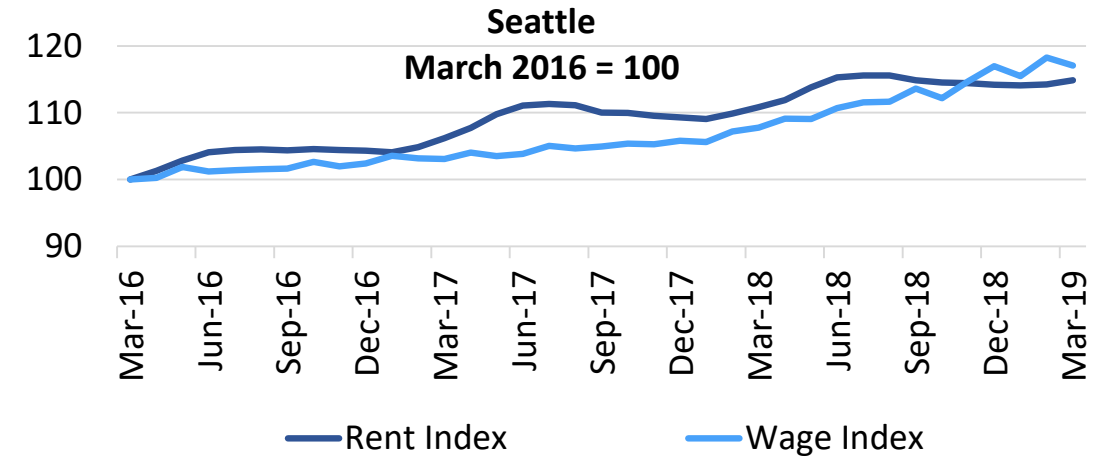


# Rents Have Risen Faster Than Wages in Key Metros Over the Past 10 Years, But Wage Growth Recently Caught Up

Since March 2009 (10 Years)



Since March 2016 (3 Years)



# Public and Private Policy Responses to Affordability Issue

## Command/Mandate Oriented

- Statewide Rent Control in Oregon
- Proposed Bills on Rent Control:
  - CA, CO, IL
- Inclusionary Zoning
- California Senate Bill 50
  - Would require local governments to allow higher-density development in areas close to transit and jobs
- Minneapolis 2040
  - Allows small apartment buildings in neighborhoods currently zoned for only single-family homes

## Market Oriented

- Coliving – Reduces Space Needs
- Airbnb – Monetizes Unused Time
- Streamlined Zoning
- Freddie Mac Loan Payments
- HUD Policy Changes
- Modular/Standardized Construction
- Opportunity Zones

# Differing Public Policy Responses

## Restrict Supply

**San Francisco**

**Los Angeles**

**Portland**

**New York City**



Then respond with rent control to shield current renters from impact

## Proactively Allow Supply to Respond to Demand

**Seattle**

**Dallas**

**Denver**

**Houston**

**Charlotte**

# Public Policy Response to Affordability in Oregon

- Oregon is the first state to impose rent control
- Prohibits landlords from raising rents more than 7% per year, in addition to inflation
  - Properties that are less than 15 years old are exempt
- Requires landlords to give a reason for evicting renters
  - In most cases, termination comes with 90 days' notice and one month's rent
- Landlords free to raise rents without a cap if renters leave by their own choice

★ ***Copy cat bills already entered in other states...CA, CO, IL***

# Private Responses: Niido Powered by Airbnb

- Airbnb-branded apartment buildings encourage homesharing in properties
- Every Niido property has a MasterHost available 24/7 to assist with homesharing needs and comes fully equipped with:
  - Keyless entry systems, bike-sharing, community rooms, swimming pool, on-site package receiving, 24-hour security, cleaning, linen services, high-speed WiFi, cable TV, and event programming
- The first Niido property is ***Domain in Kissimmee, FL***

Domain in Kissimmee, FL



# Private Responses: Niido Powered by Airbnb

## Domain in Kissimmee, FL

### Property Characteristics from Yardi Matrix:

- Completed in 2017
- Currently 65.7% occupied
- 324 units total:
  - 108 one bedroom
  - 180 two bedroom
  - 36 three bedroom

### Niido Calculator:

- By sharing a one bedroom Niido Orlando apartment on Airbnb for one day a month, you can cover 7.1% of your rent
- The landlord (Niido) takes a 25% cut from whatever revenues the tenant earns from renting their apartment on Airbnb

	Average Rent 2018
Orlando	\$1,316
Celebration Submarket	\$1,507
Subject Property	\$1,141-\$1,819

<b>\$1325</b>	<b>\$125</b>	<b>\$93.75</b>	<b>7.1%</b>
Monthly Rent	* Nightly Earnings	** Total Earnings	Rent Covered

\*Calculations are for estimate purposes

\*\*Reflects 25% Niido service fee. An Airbnb host fee of 3% may also apply

# Private Responses: "Rent By the Bedroom"

## X Social Communities

- PMG developing 10,000+ unit pipeline of X Social Communities in Chicago, Miami, Ft Lauderdale, Denver, Orlando, Phoenix
- Projects include mix of market rate and "Rent By Bedroom" units
- "Rent By Bedroom Rent" / Coliving = Private bedroom/bathroom in furnished 2-4 bedroom suite with shared kitchen and living area
- Couch and TV, dining table & chairs, cookware, bed and mattress included, along with in-unit laundry
- Kitchen and living areas professionally cleaned every two weeks
- Each member signs their own (typically 12 mo) lease and is billed separately for their share of utilities

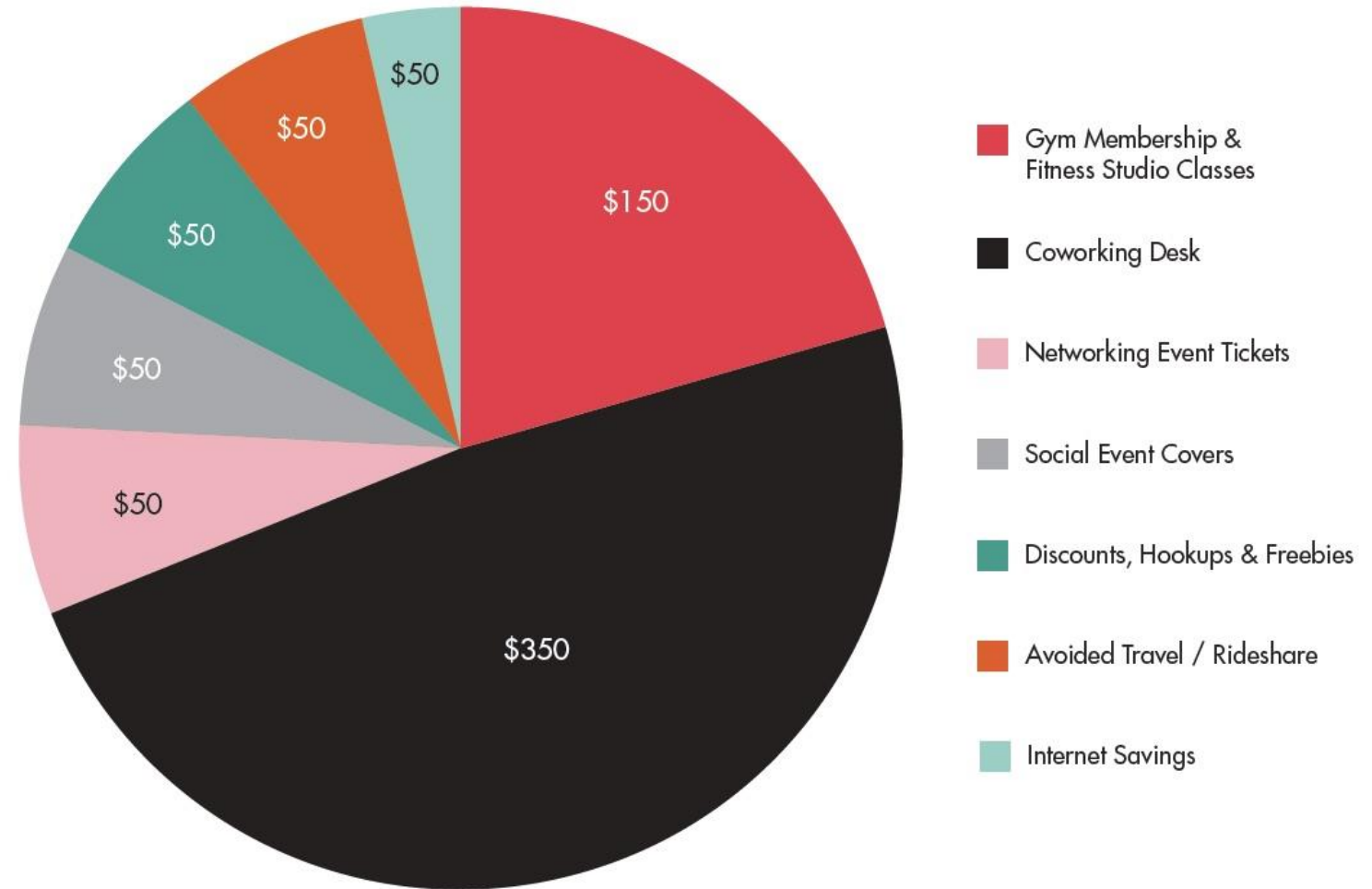




# Private Responses: “Rent By the Bedroom”

## Comparative Cost Analysis: X Social Communities Monthly Member Savings

- Rents starting in the \$1,200's (Miami)
  - Most attainable way to get into a new construction Class A building in the best location
  - Typical entry-point is \$1,800+
- Rent includes access to gym, coworking, social lounge, pool, and community events
- Members save \$700+/mo on services by living at X Miami



# Private Responses: Coliving with Common



- Currently in 6 cities, with 24 homes and 700+ members
- Rent a private bedroom, and all members in the unit have access to shared spaces
- All furniture, linens, cleaning supplies, kitchenware and utilities included with rent
- Weekly cleaning services for shared spaces
- Free on-site laundry with all necessary supplies
- Free high-speed WiFi
- Allows transfers to another room or home within the Common community

## Chicago: Damen



# Other Market Oriented Responses to Affordability

- Streamlined Zoning
- Freddie Mac Loan Payments
- HUD Policy Changes
- Modular/Standardized Construction
- Opportunity Zones



# 32% of Multifamily Development Costs are Attributable to Compliance with Local, State and Federal Regulations

## Common Impediments to Multifamily Projects Include:

- Zoning laws
- Onerous and extended entitlement requirements
- Excessive impact and linkage fees
- Business license taxes
- Assessment and inspection fees
- Outdated minimum parking requirements
- Lengthy environmental site assessments

*Notes taken from Daryl Carter's testimony on the behalf of the NMHC and NAA before the House Committee on Financial Services*

# Recommendations from the NMHC and NAA to Policymakers to Address Affordability at the Federal Level

## Strategies for Meeting Housing Demand and Addressing Affordability

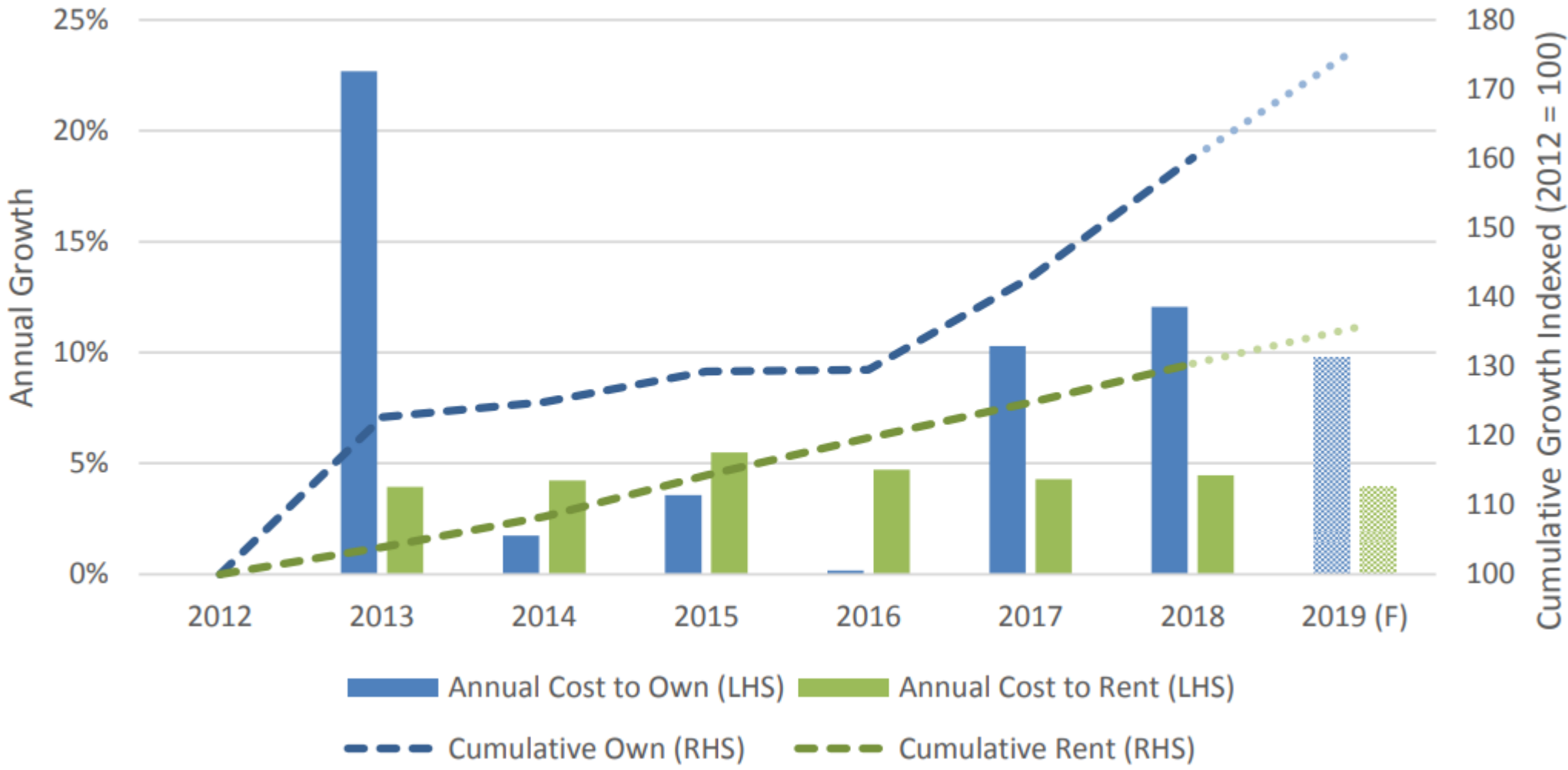
- Support housing finance reform that preserves the multifamily mortgage liquidity provided by the government-sponsored enterprises (GSEs)
- Increase funding for and enhance performance of the Section 8 program
- Increase support for other crucial HUD programs
- Modify the Community Reinvestment Act (CRA)

## Address the Following Tax Proposals That Have a Significant Influence on Affordability

- Expand and enhance the Low-Income Housing Tax Credit
- Enact the Middle-Income Housing Tax Credit to support workforce housing
- Enhance opportunity zones to incentivize rehabilitation of housing units
- Repeal foreign investment in real property tax Act

*Notes taken from Daryl Carter's testimony on the behalf of the NMHC and NAA before the House Committee on Financial Services*

# Rents are Growing, but Not as Fast as the Cost of Owning



Source: Yardi®Matrix; Freddie Mac



# Rents are Growing, but Not as Fast as the Cost of Owning

Cost to Own and Rent (Cumulative Over Past 3 Years)			
Metro	Own	Rent	Difference
Tampa	40.8%	15.9%	24.9%
San Francisco	32.0%	7.9%	24.1%
New Orleans	33.5%	11.7%	21.8%
Jacksonville	34.8%	13.0%	21.8%
Orlando	40.3%	19.5%	20.8%
Riverside	31.5%	13.6%	17.9%
Baltimore	26.7%	9.0%	17.7%
Cleveland	28.6%	11.5%	17.1%
Denver	35.4%	19.6%	15.8%
Sacramento	34.8%	19.4%	15.4%
Charlotte	31.1%	15.8%	15.3%
Indianapolis	27.5%	12.4%	15.1%
Phoenix	32.4%	17.3%	15.1%
Columbus	29.1%	14.3%	14.8%
Minneapolis	28.3%	13.6%	14.7%
Austin	28.1%	13.6%	14.5%
Portland	32.8%	18.6%	14.2%
Cincinnati	26.5%	12.4%	14.1%
Memphis	24.5%	10.8%	13.7%
Atlanta	33.0%	19.4%	13.6%

Cost to Own and Rent (Cumulative Over Past 3 Years)			
Metro	Own	Rent	Difference
Dallas	32.5%	19.5%	13.0%
Miami	30.1%	17.1%	13.0%
Boston	24.0%	11.7%	12.3%
San Antonio	23.5%	11.2%	12.3%
Nashville	33.4%	21.8%	11.6%
Los Angeles	30.8%	19.2%	11.6%
Kansas City	25.1%	13.7%	11.4%
Raleigh-Durham	26.4%	15.1%	11.3%
Seattle	38.2%	27.9%	10.3%
Milwaukee	22.9%	13.1%	9.8%
United States	23.8%	14.1%	9.7%
Richmond	23.2%	13.6%	9.6%
San Diego	24.5%	15.0%	9.5%
New York City	14.9%	5.6%	9.3%
Chicago	22.9%	14.4%	8.5%
Virginia Beach	14.7%	8.8%	5.9%
Houston	17.4%	13.0%	4.4%
Washington D.C.	17.0%	13.5%	3.5%
St. Louis	16.6%	13.7%	2.9%
Philadelphia	8.9%	13.5%	-4.6%

Source: Yardi®Matrix; Freddie Mac

# The Yardi Matrix View

- **U.S. economy is in decent shape**
  - GDP growth in Q1 was stronger than expected – Q2 will likely show deceleration but will remain north of 2%
  - U.S. oil production is keeping inflation low below 2% – and low inflation is a global phenomenon
  - The yield curve briefly inverted, but the Fed pulled back from the brink
  - The labor market is extremely tight, and wages continue to rise, particularly in office-using industries
    - The increase in labor force participation rate among women has been large
- **Demographic and lifestyle changes are fueling strong demand for multifamily, north of 425K units/year**
  - An aging population, increasing divorce rates, and more younger people living at home all contribute to more people renting apartments versus owning
  - Other lifestyle changes, including people getting married later in life, and having less children mean people are renting longer than they have in the past
  - Total housing production is unlikely to catch up to household formation, putting upward pressure on rents, occupancy rates and pressures for rent control



# The Yardi Matrix View

- **Below the national level, tech hubs are emerging both in formerly non-tech metros and traditionally overlooked cities**
  - Cost advantages and emerging intellectual hubs are shifting the geography of jobs
  - Tech hub markets have had the most dynamic job growth as companies look for areas that can attract top talent at a moderate cost
  - The longer the expansion goes on the more we see this trend trickle down to tertiary markets, and our forecasts show tech hubs and tertiary markets will have the most rent growth over the next few years
- **Affordability is a headwind for the industry, but the cost of home ownership has risen even more than the cost of renting**
  - Affordability issues have been building for a long time, and certain markets are fairing better than others
  - Over the past ten years, rents have risen significantly faster than wages, but wages have caught up over the past three years, so it's not all bad news
  - There are a number of public and private responses to affordability emerging
    - Rent control, higher density zoning, coliving, Airbnb, etc.
  - Although multifamily affordability is an issue – rents aren't growing as fast as the cost of owning, which is a positive force for the multifamily industry

# Contact Information

Thank you! We are happy to answer any questions. Please contact:

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