CBRE ECONOMETRIC ADVISORS Presents

NEW LANDSCAPE

CBRE AMERICAS RESEARCH CONFERENCE 2017

MULTIFAMILY BREAKOUT

Tyler Wiggers, U.S. Federal Reserve Board
Matt Vance, CBRE Research
Jeanette Rice, CBRE Research
Mark Obrinsky, National Multifamily Housing Council

SEPTEMBER 14, 2017

CBRE Build on Advantage

A ***Better*** Freddie Mac

…and a ***better*** housing finance system

For families

...innovating to improve the liquidity, stability and affordability of mortgage markets

For customers

...competing to earn their business

For taxpayers

...reducing their exposure to mortgage risks

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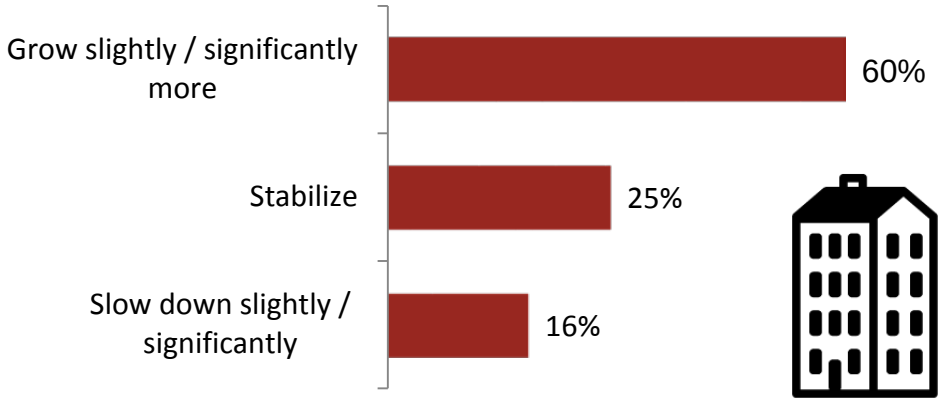
KEY FINDINGS – ANTICIPATED GROWTH, OWN VS RENT SENTIMENT

Most respondents anticipate the multifamily housing market to *grow slightly more* over the next 3-5 years, while only about 15% see it slowing down.



Asked why they expected the multifamily housing market to grow, most said they just see a continuing demand for Multifamily housing. Those who said it is slowing mostly said it was due to an oversupply on the market.

Of those that said "significantly more growth" / "grow slightly more"

32% mentioned Demand / Supply reasons

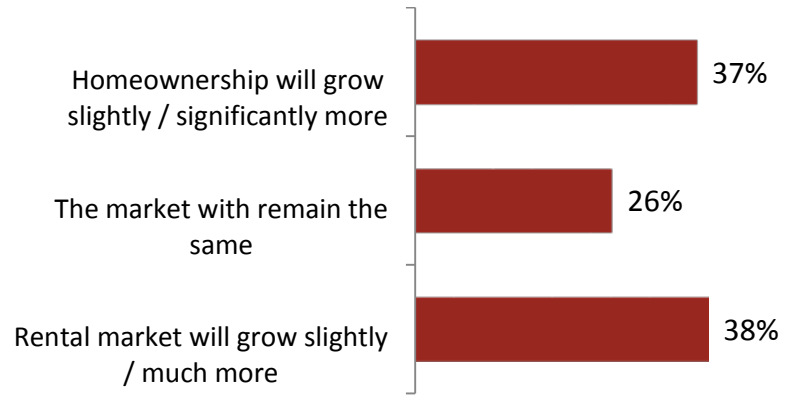
12% said How it's been trending

17% said Growing population

Of those that said "slow down slightly" / "slow down significantly"

42% said Saturation or oversupply

Slightly more respondents (38.0%) believe the rental market will grow more than the homeownership market (36.5%).



Asked what they felt the current 'rent vs own' sentiment is, many believe the sentiment is more towards renting.

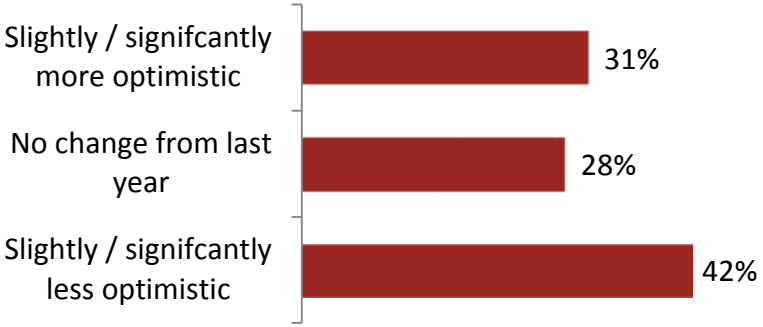
21% said *more people are choosing to rent*
11% said *it is too expensive to buy*
5% said *it is hard to qualify for a mortgage*

17% said they see no change in sentiment

8% said *more people are choosing to buy*
5% said *people still want to own a home*
3% said *rent is too expensive*

KEY FINDINGS – RENTAL HOUSING OPTIMISM, AFFORDABLE HOUSING CHALLENGES

Asked how optimistic they are about the outlook for affordable rental housing today compared to last year, slightly more respondents are less optimistic overall.



Most of the challenges to offering affordable housing have to do with cost and financing the housing projects.

Top challenges to offering affordable housing

40% said **Cost**

22% said **Financing**

On average 36% of a respondent's business deals with affordable housing. Most respondent's business dedicate about 20% (the median) to affordable housing.

Percentage of business dealing with affordable housing

20.5% said **Zero**

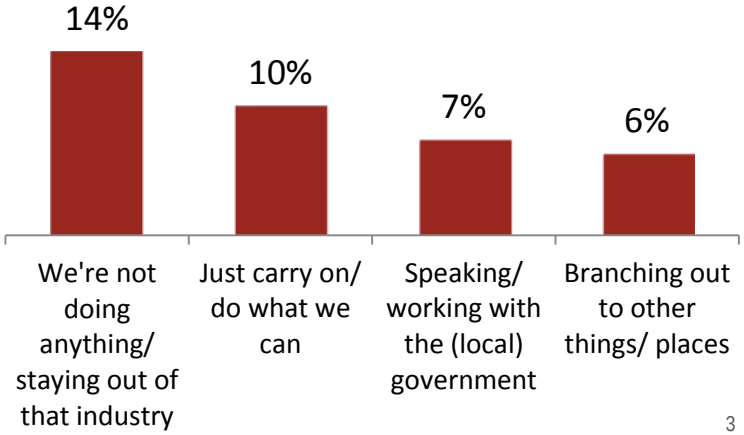
41.5% said **1% to 30%**

13% said **31% to 70%**

13% said **71% to 99%**

12% said **All of their business**

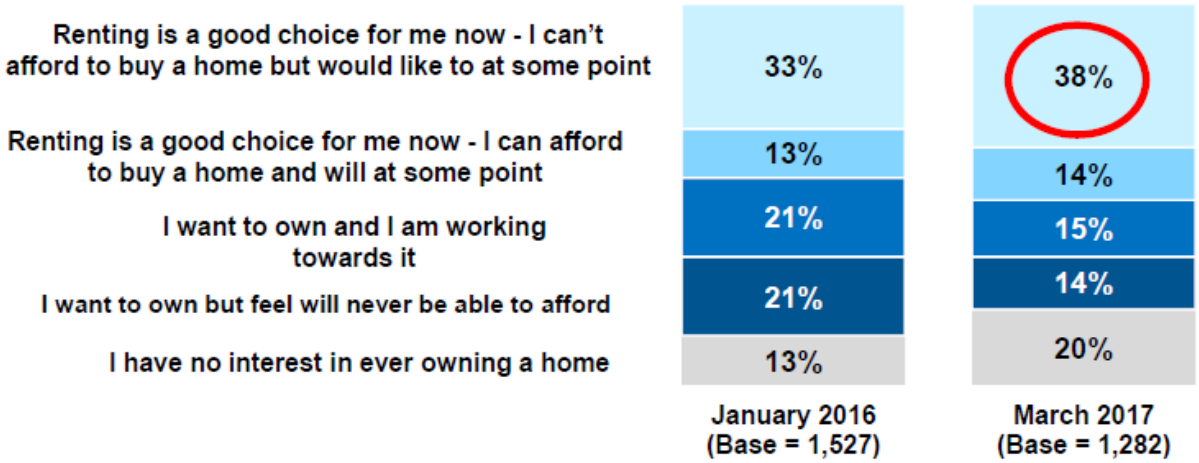
Asked how they respond to these challenges, most say they do nothing and carry on, or just try to stay out of this industry.



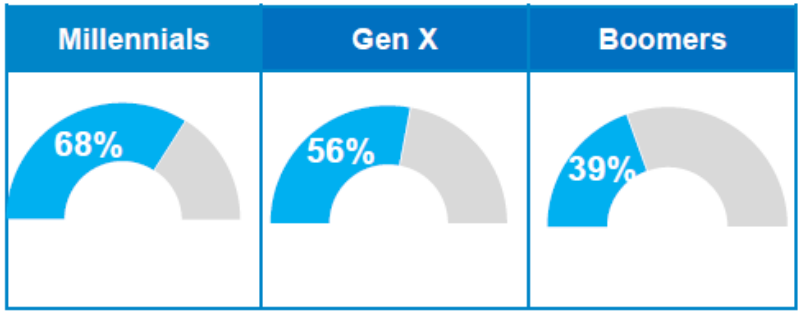
More Renters Say Renting Is a Good Choice for Them Now

Freddie Mac

Q: Which one of the these statements best reflects your views about why you are currently renting?



Renting is a good choice for me now…



(2017 Base = 388 Millennials, 383 Gen X and 395 Baby Boomers)

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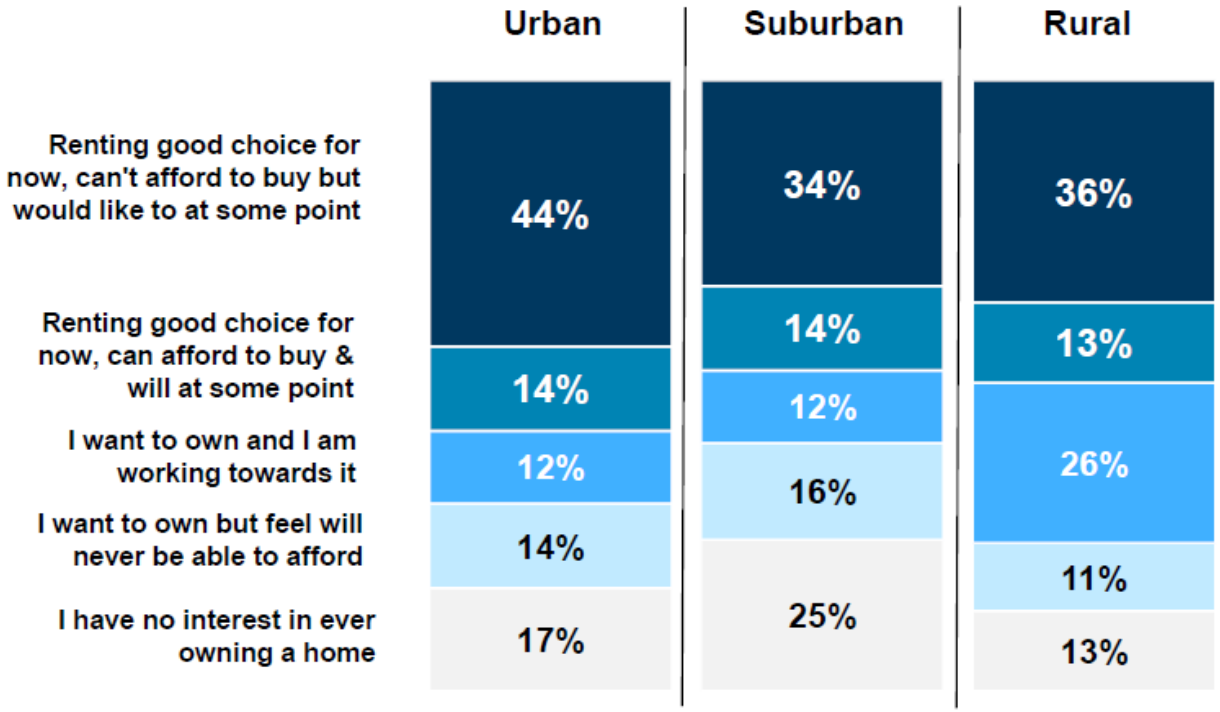
Urban Renters More Likely to Say Renting Is a Good Choice for Them Although They Would Like to Own at Some Point

Freddie Mac

Q: Which one of these statements best reflects your views about why you are currently renting?



Please refer to table Appendix C for detailed sample size information.

(March 2017 Base = 463 Urban Renters, 586 Suburban Renters, 233 Rural Renters)

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Renters Like Where They Live and Don't Plan to Move Despite Rent Increases

Freddie Mac

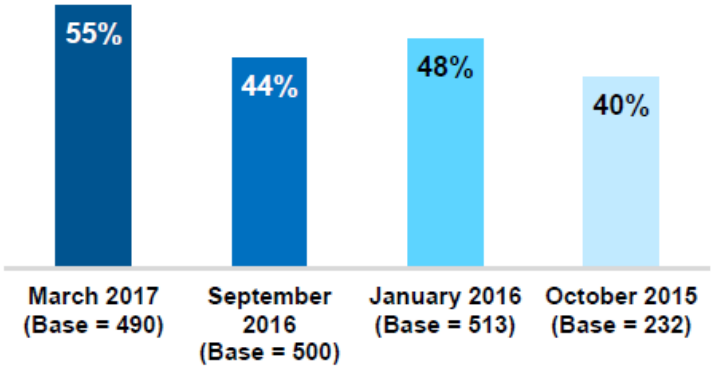
Q: Given the recent changes in your rent, please indicate how much you agree or disagree with each statement regarding what, if any, changes you have had to make or how this change has impacted you.

I like where I live and don't plan to move despite the changes in my rent

% Strongly Agree/Somewhat Agree

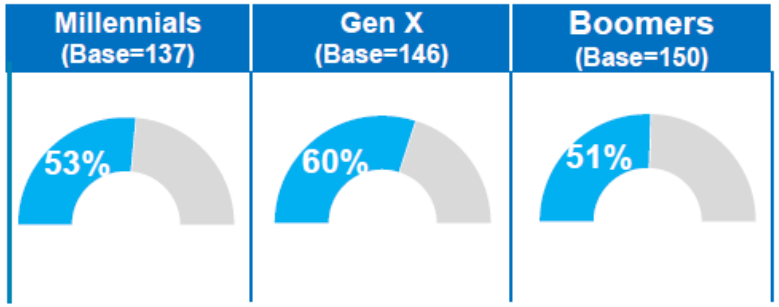
Total

% Strongly Agree/Somewhat Agree



By Generation

% Strongly Agree/Somewhat Agree



(Base = 490 Renters who indicate they have experienced a rent increase in the past two years)

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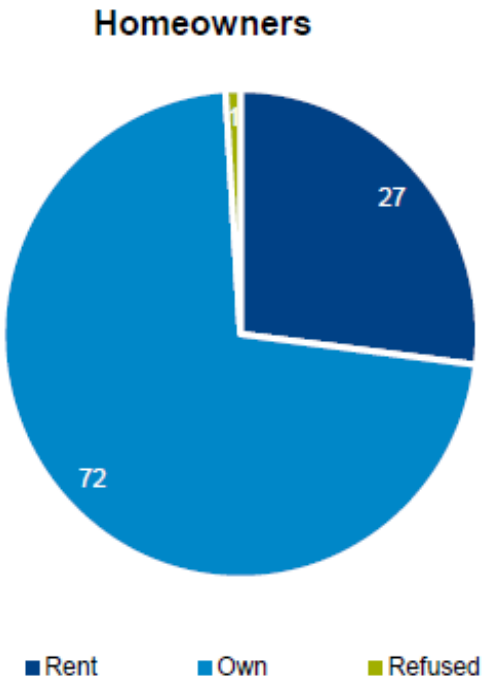
Next Move: Rent or Buy?

For their next move (among those who would consider moving), seven in ten homeowners plan to buy a home.



Base = Homeowners who might move again (n= 3,413)
B05. For your next residence, which of the following would you be most likely to do?

© GfK 2016 | Freddie Mac | Study Fielded February 2016

Public

BOARD OF GOVERNORS *of the* FEDERAL RESERVE SYSTEM

Banking System Risks

CBRE Americas Research Conference

Washington, DC

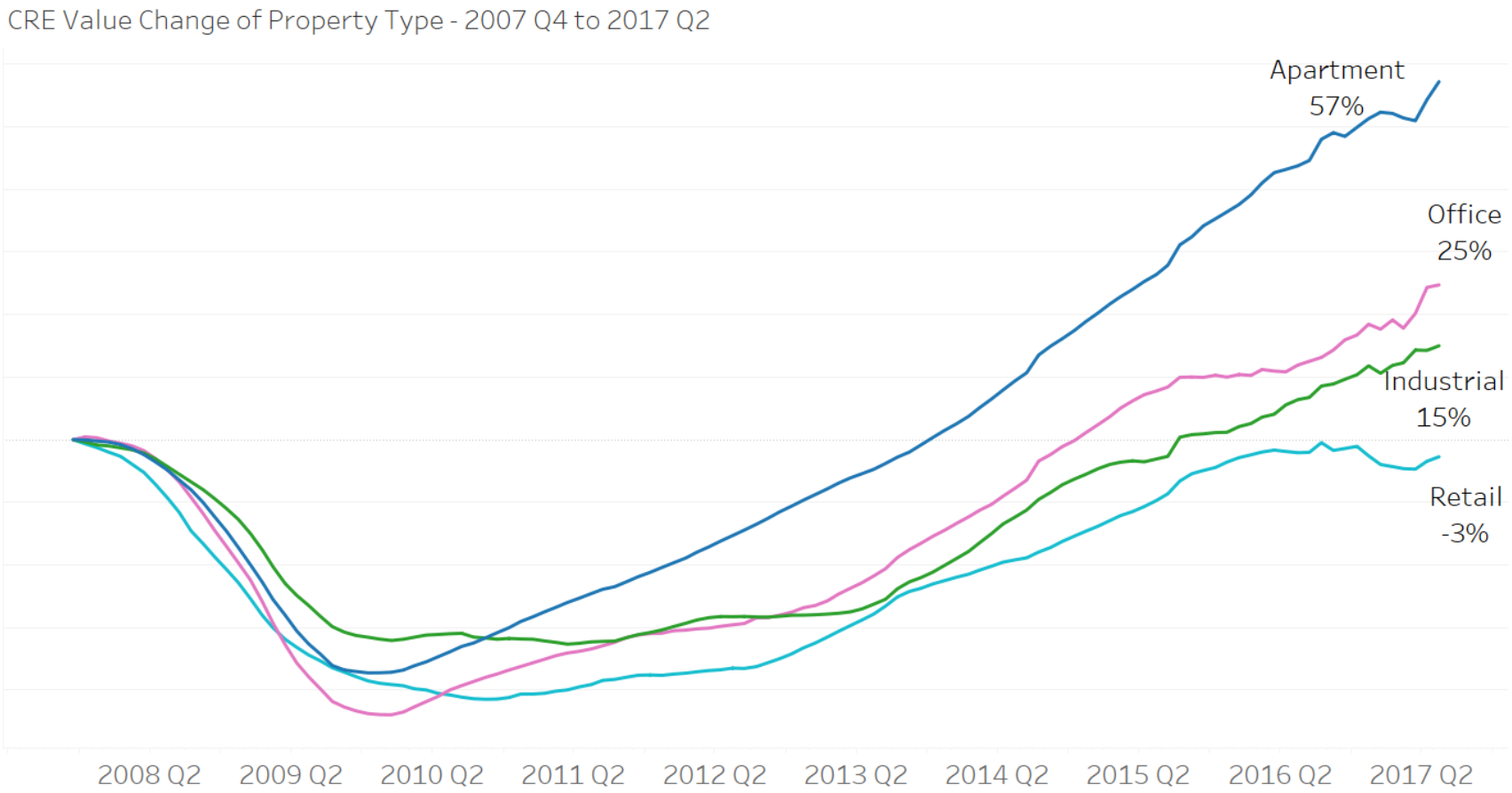
Tyler Wiggers

September 14th, 2017

The opinions expressed in the presentation are statements of the speaker's opinion, are intended only for informational purposes, and are not formal opinions of, nor binding on, the Board of Governors of the Federal Reserve System.

The Post-crisis Price Environment

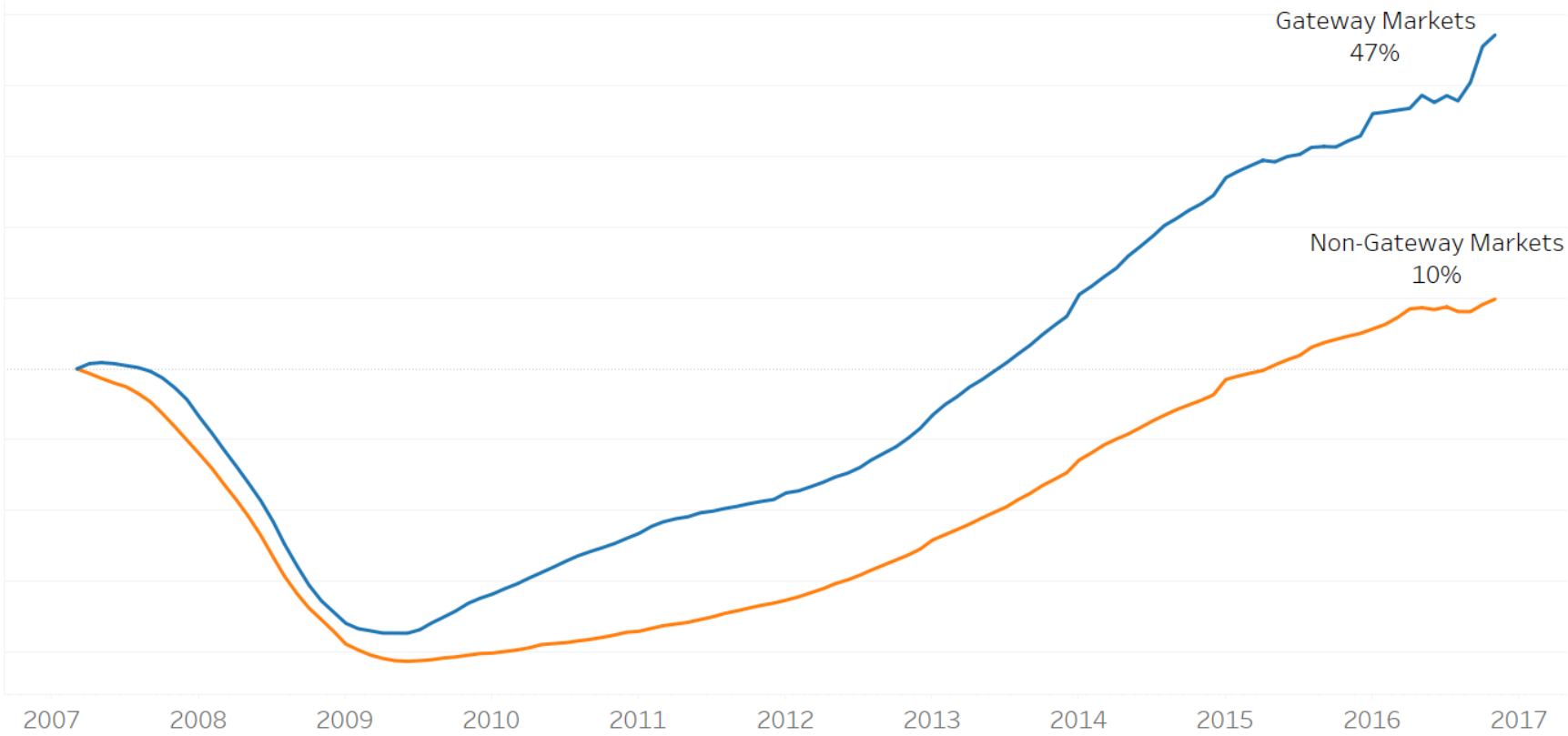
Property Type Prices



Source: Moodys/RCA CPPI

Geographic Prices

CRE Value Change by Geography - 2007 to 2017



Source: Moodys / RCA CPPI Index

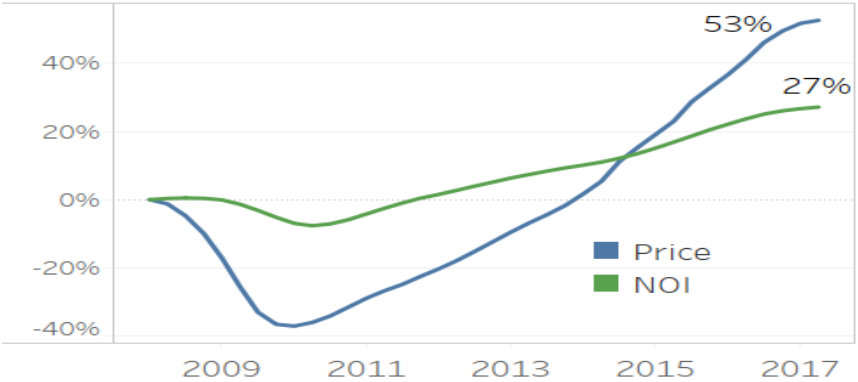
Note: Gateway cities include Boston, New York, Washington DC, Chicago, San Francisco, and Los Angeles

Reason Behind Post-crisis Value Increase

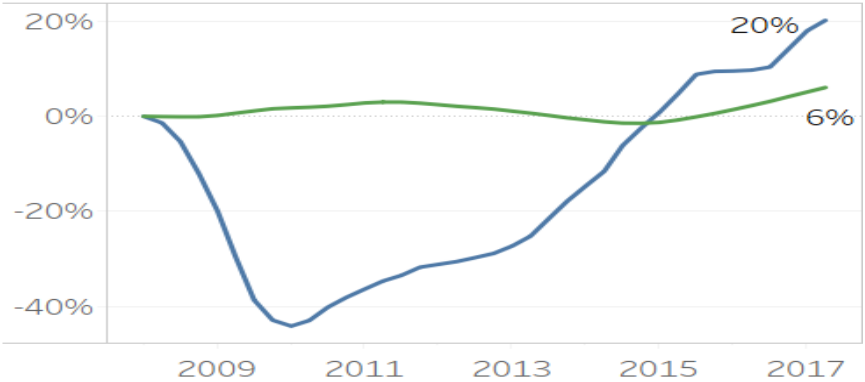
- Price growth has been supported by
  1. Improved property cash flows via an improving economy
  2. Increased investor demand
     1. “Search-for-yield”
     2. “Safe-haven”

Post-crisis Price – NOI Relationship

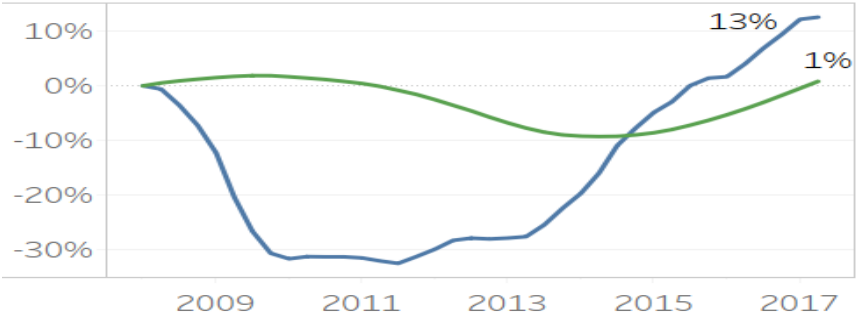
Multi-family Growth Rates from Pre-crisis Peaks: Price and NOI



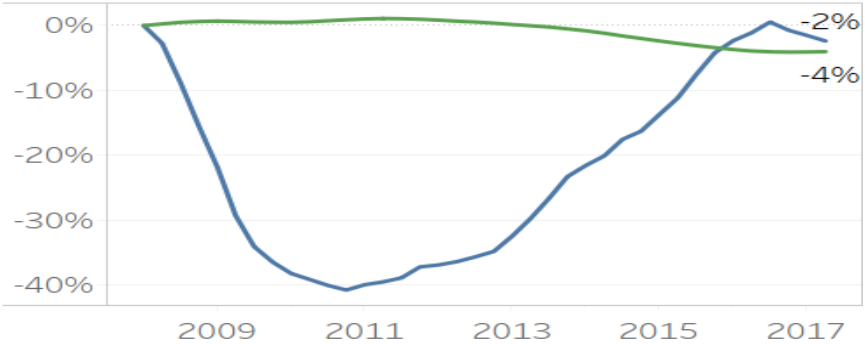
Office Growth Rates from Pre-crisis Peaks: Price and NOI



Industrial Growth Rates from Pre-crisis Peaks: Price and NOI



Retail Growth Rates from Pre-crisis Peaks: Price and NOI



Source: Prices come RCA's CPPI. NOI comes from CBRE's NOI index.

Commercial Real Estate & the Banking System

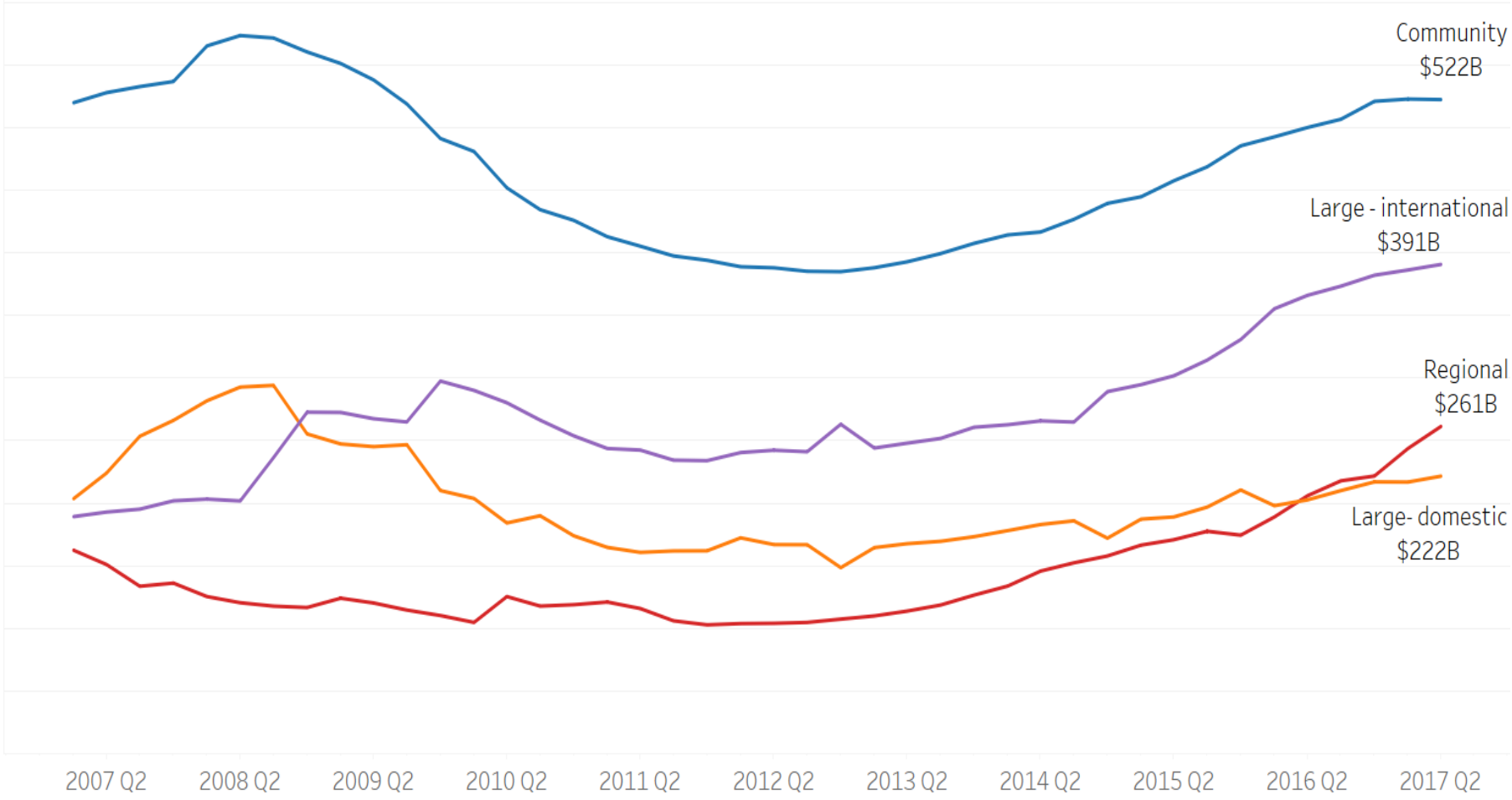
Commercial Real Estate Debt Universe

CRE Debt Source	Amount ($M)	Percent of Total
Bank and Thrift	1,506,293	46%
Agency CMBS	520,989	16%
Non-agency CMBS	458,860	14%
Insurance	435,816	13%
REITs	66,792	2%
Government	193,104	6%
Pension / Retirement	24,542	1%
Other	63,174	2%
Total	3,269,570	

Source: MBA. Includes construction loans, but not owner-occupied loans.

Banking System CRE

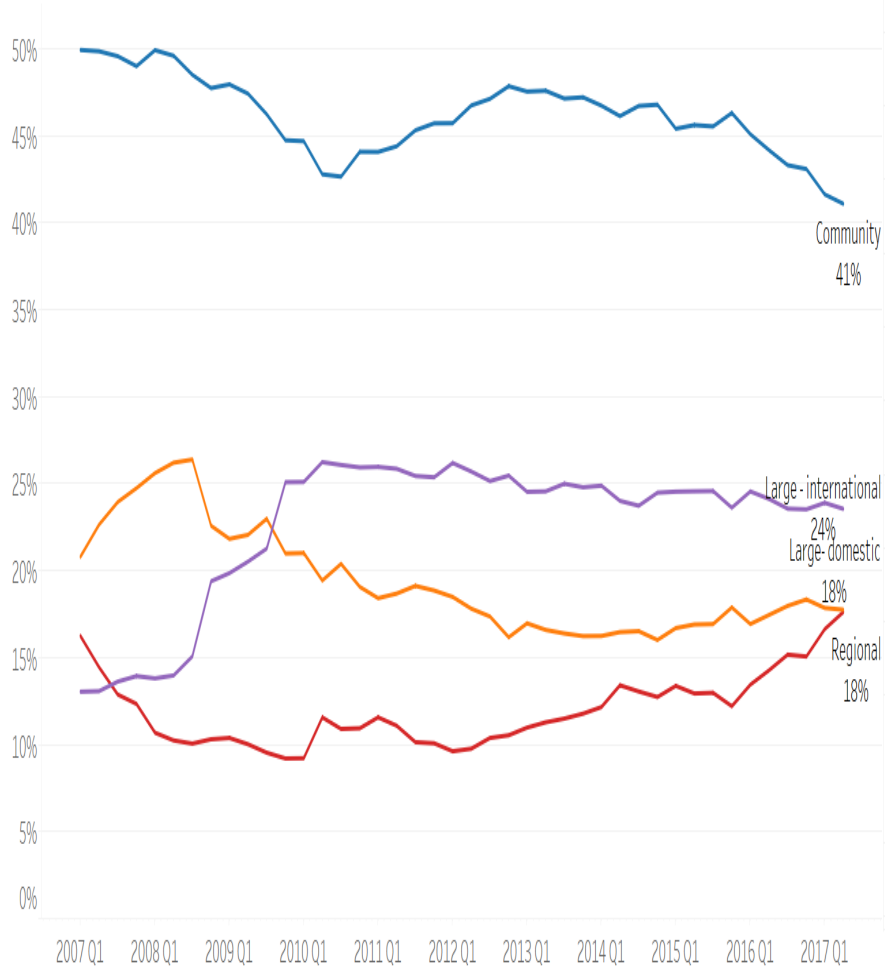
Banking Portfolio Share of Banking System CRE Exposure (excluding owner-occupied)



Source: Call reports

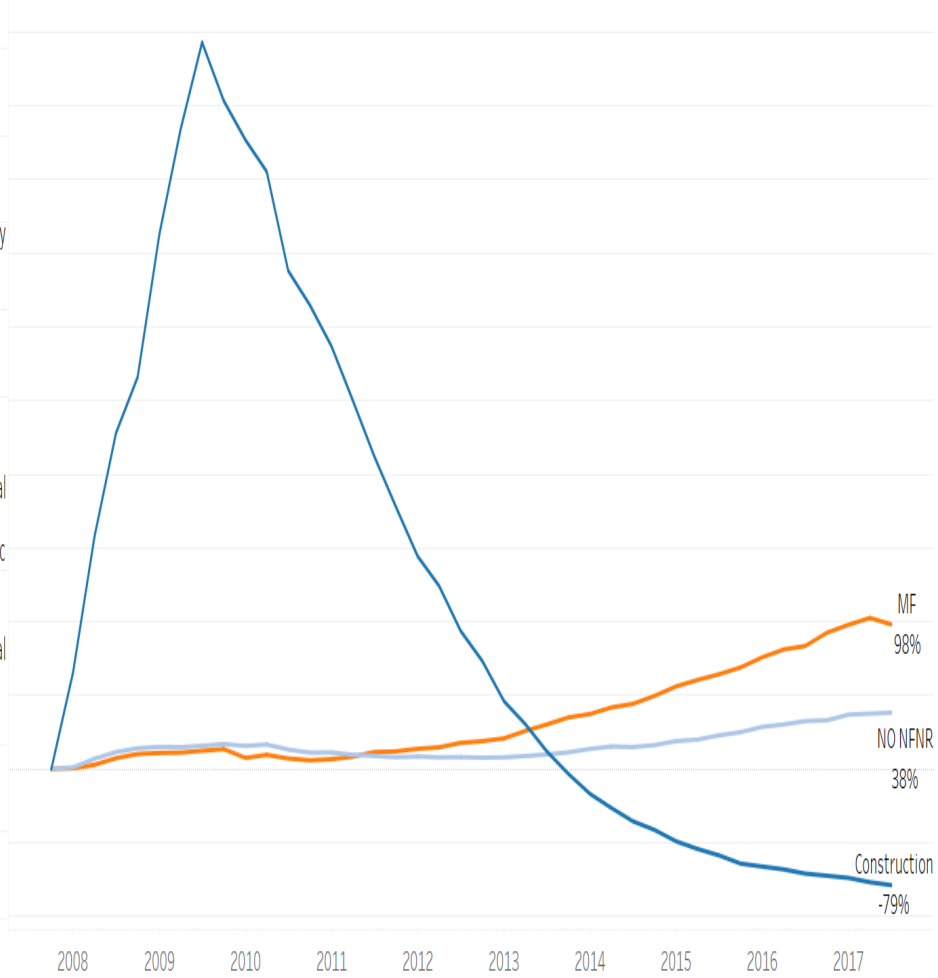
Community Bank Risk

Banking Portfolio % Exposure to Construction CRE



Source: Call Report

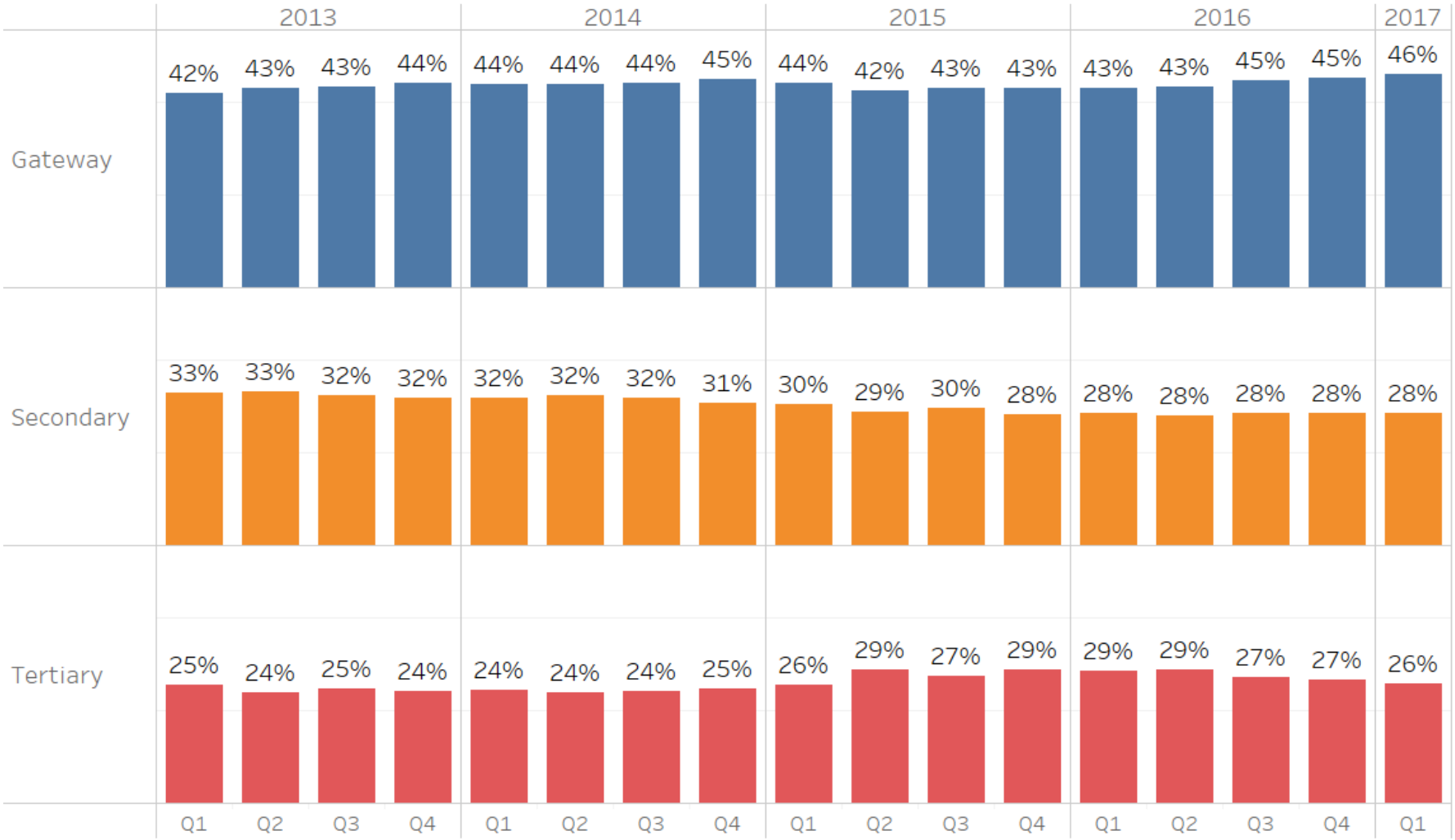
Community Bank CRE Growth Since Crisis Peak



Source: Call Report. Note: NOO NFNR= non-owner occupied non-farm non-residential properties

Large Bank Risk

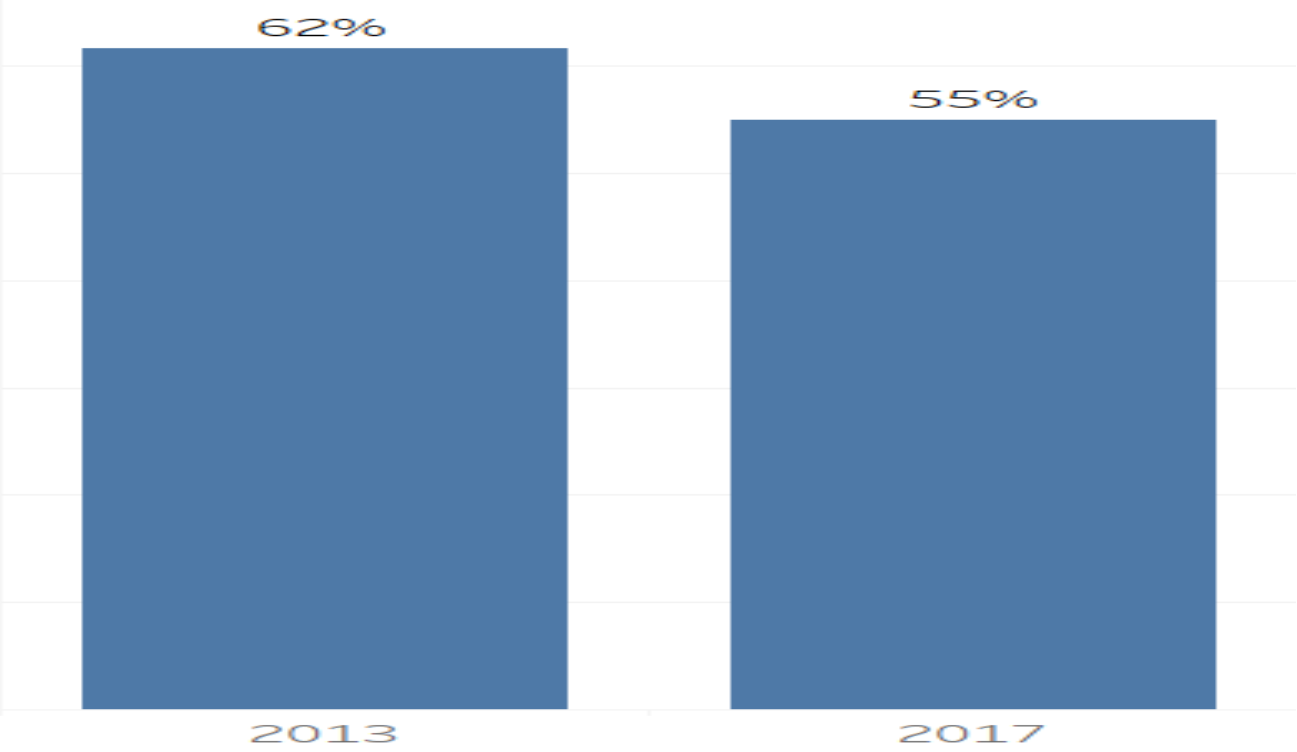
Bank Loans - Large International Banks



Source: Federal Reserve

Banking Underwriting Is More Conservative, but . . .

Median Origination LTV at Large Banks



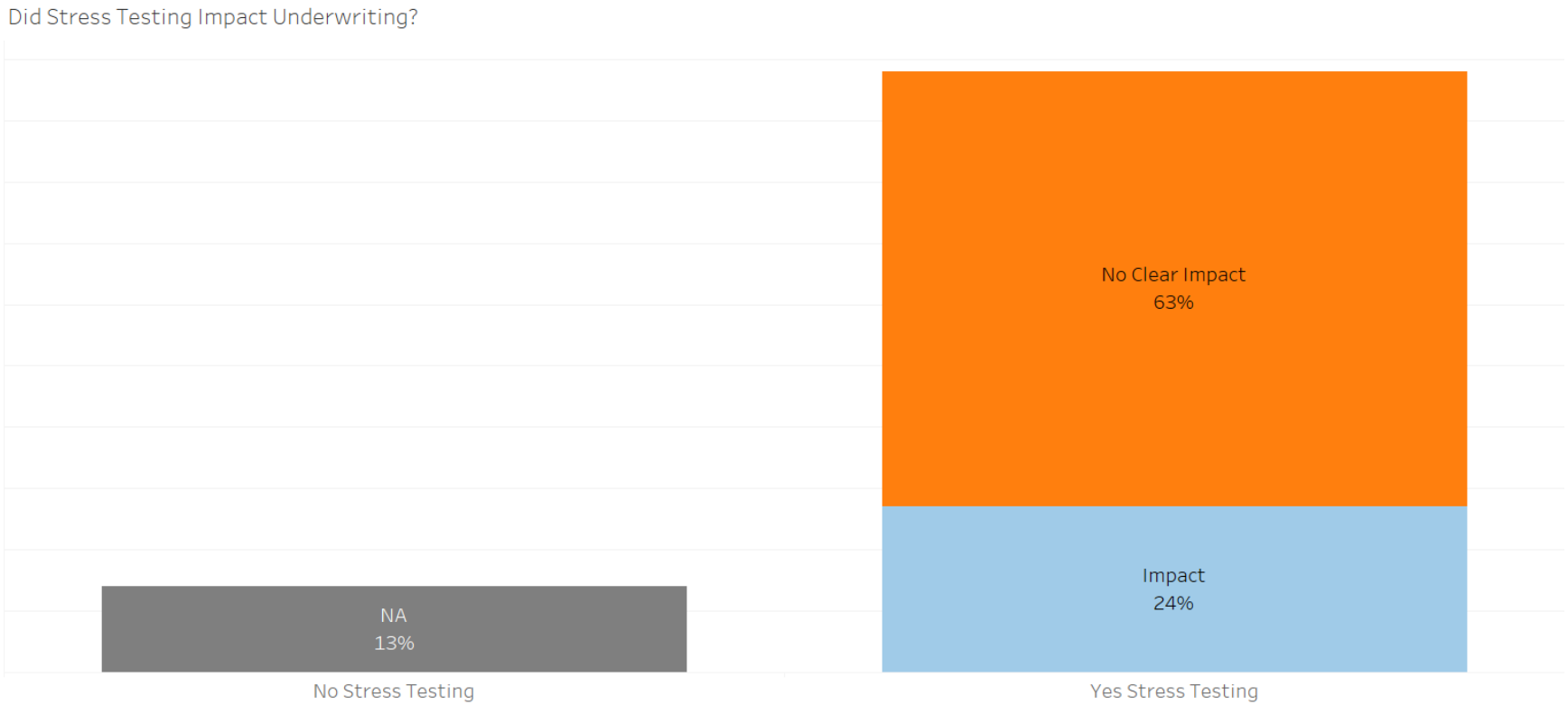
Source: Federal Reserve
Note: only includes income producing properties

Is It Enough in the Current Price Environment

Source: Moodys / RCA CPPI Index.

The median loan made on an income producing property in 2013 (assume a value of $100) resulted in a loan of $62. If that same property were to refinance today it would receive a loan in the amount of approximately $90 (lower LTV of 55 percent but the value of the property has increased to $164) – even though the property is not materially different.

Exam Evidence



Source: Federal Reserve

As prices and appraised values rise, banks continue to lend at similar LTV levels and structures with very little consideration of current price environment

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MULTIFAMILY: KEY TOPICS FOR TODAY'S MF INVESTOR

Matt Vance | CBRE Research

SEPTEMBER 14, 2017

CBRE Build on Advantage

HOMEOWNERSHIP

AN APPROACH TO FORECASTING

CBRE Build on Advantage

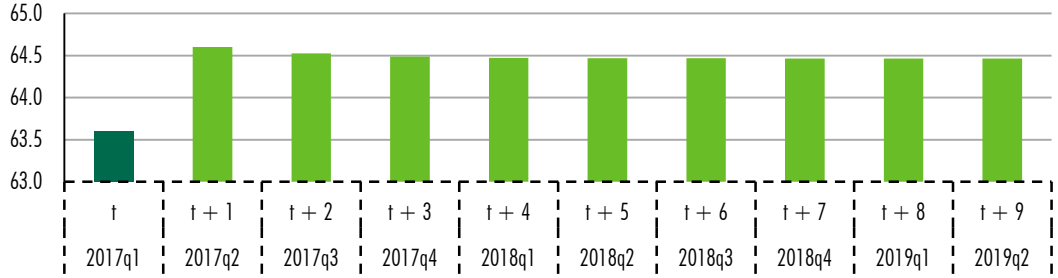
THE RESEARCH QUESTIONS

THE U.S. HOMEOWNERSHIP RATE (63.7%) SEEMS TO HAVE STABILIZED AFTER DROPPING 5.5 PERCENTAGE POINTS OVER THE PAST 12 YEARS, AND FALLING BELOW 63% FOR THE FIRST TIME SINCE 1965.

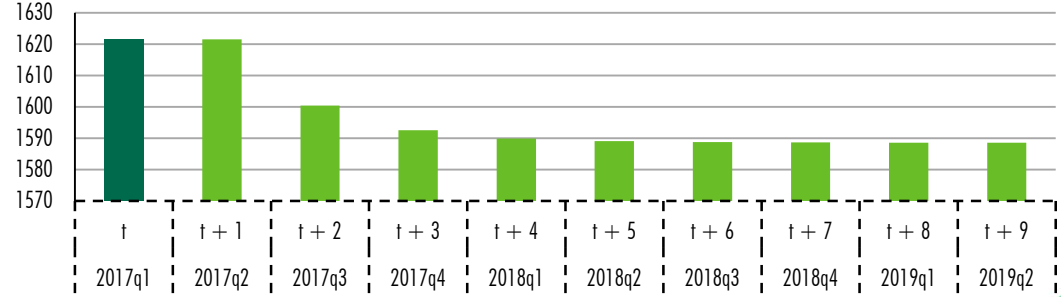
1. *Is there a relationship between changes in the homeownership rate and multifamily performance (i.e. rent growth)?*
2. *Can we expect a change in homeownership—and can we disentangle the drivers of that change?*
3. *Finally, which markets are most likely to experience changes in homeownership, and for what reasons?*

THE EFFECT OF HOMEOWNERSHIP ON RENT, QUANTIFIED

FOR A ONE PERCENTAGE POINT PERMANENT INCREASE IN THE HOMEOWNERSHIP RATE…



…RENT LEVELS ARE PERMANENTLY LOWER BY $32 (2%) OVER A 2-YEAR PERIOD



- BASED ON ECONOMETRIC ANALYSIS OF HISTORICAL DATA, WE MODELED HOMEOWNERSHIP'S INTERACTION WITH MULTIFAMILY PERFORMANCE.
- TO DEMONSTRATE THE EFFECT, WE USE THE MODEL TO "SHOCK" THE NATIONAL APARTMENT MARKET, PERMANENTLY RAISING THE HOMEOWNERSHIP RATE BY ONE PERCENTAGE POINT.

TWO FORCES AT PLAY IN HOMEOWNERSHIP

SHIFTING AGE DEMOGRAPHICS

SHIFTING PREFERENCES

How can we help guide investment strategy at the *market level*?

DATA & METHODOLOGY

THE DATA:

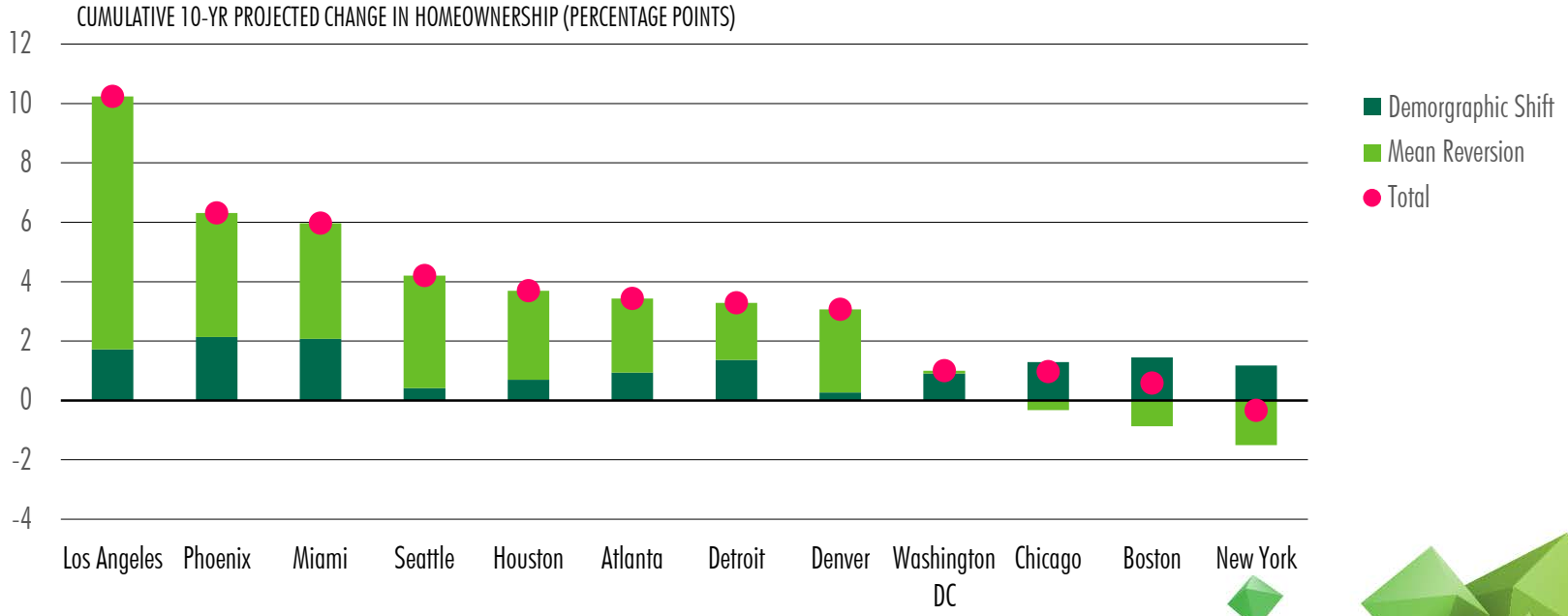
1. *The Census' American Housing Survey (AHS) micro-sample data*
2. *40+ years of history*
3. *12 chosen markets*
4. *Combined with Moody's population forecasts*

DATA & METHODOLOGY

THE METHODOLOGY:

1. *Algorithmic approach to aggregating complex household-level data*
2. *Establish headship and homeownership rates over time, across markets and across age cohorts*
3. *Impact of Demographic Shifts: apply today's headship and homeownership rates to Moody's forecasted populations by age*
4. *Impact of Preferential Shifts: assume (naively) that headship and homeownership will return to LR means*

THE RESULTS



Source: Moody's, U.S. Bureau of the Census, CBRE Econometric Advisors

THE WRAP-UP

L.A., PHOENIX & MIAMI

- *An aging population & mean-reverting preferences should push homeownership*
- *All else equal, this would dampen multifamily demand & performance*

SEATTLE & DENVER

(HOUSTON, ATLANTA & DETROIT)

- *Demographic outlook is favorable for multifamily…*
- *But mean reversion could raise the homeownership rate*

BOSTON & NEW YORK

(WASHINGTON D.C. & CHICAGO)

- *Demographic outlook is favorable for multifamily…*
- *And mean reversion could **lower** the homeownership rate*

NATIONAL MULTIFAMILY HOUSING COUNCIL

APARTMENT LEADERSHIP RESIDES HERE™

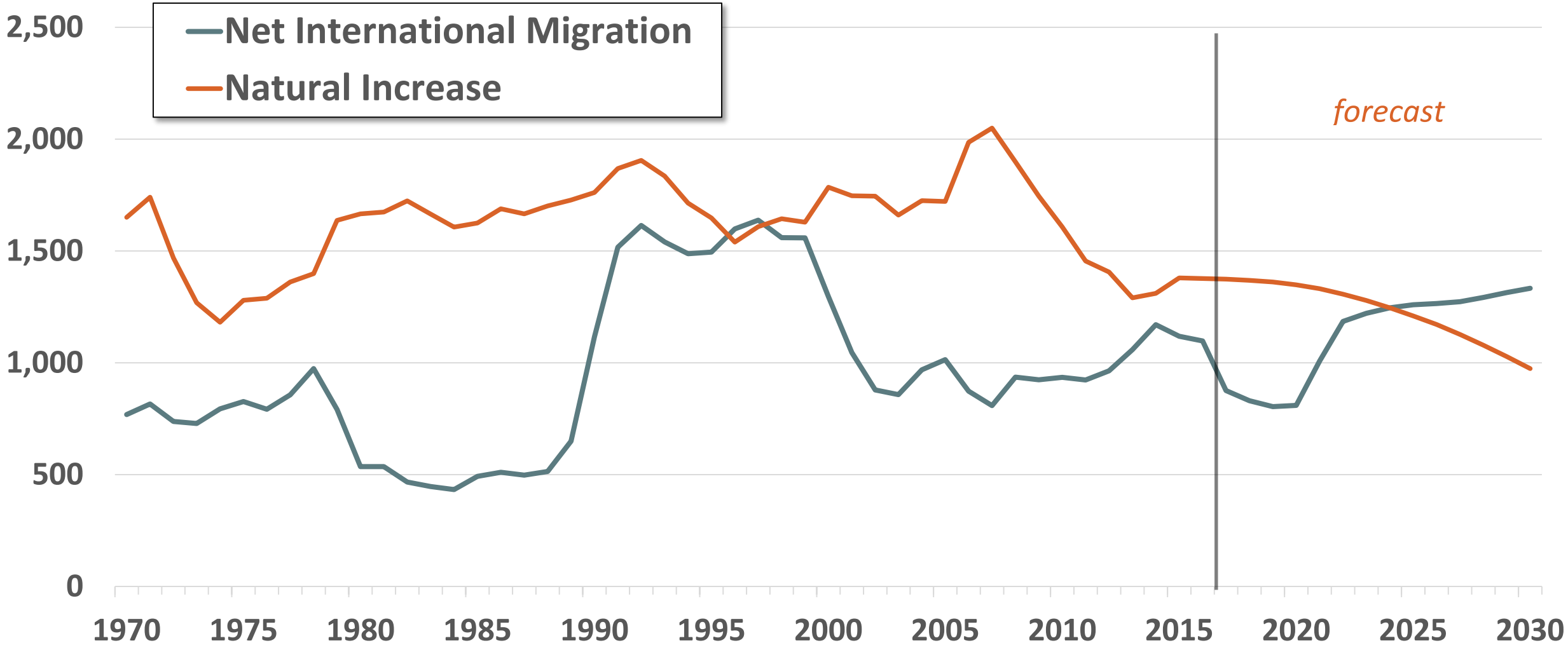
Apartment Demand Through 2030

New Landscape: CBRE Americas Research Conference 2017

Mark Obrinsky, SVP and Chief Economist, NMHC

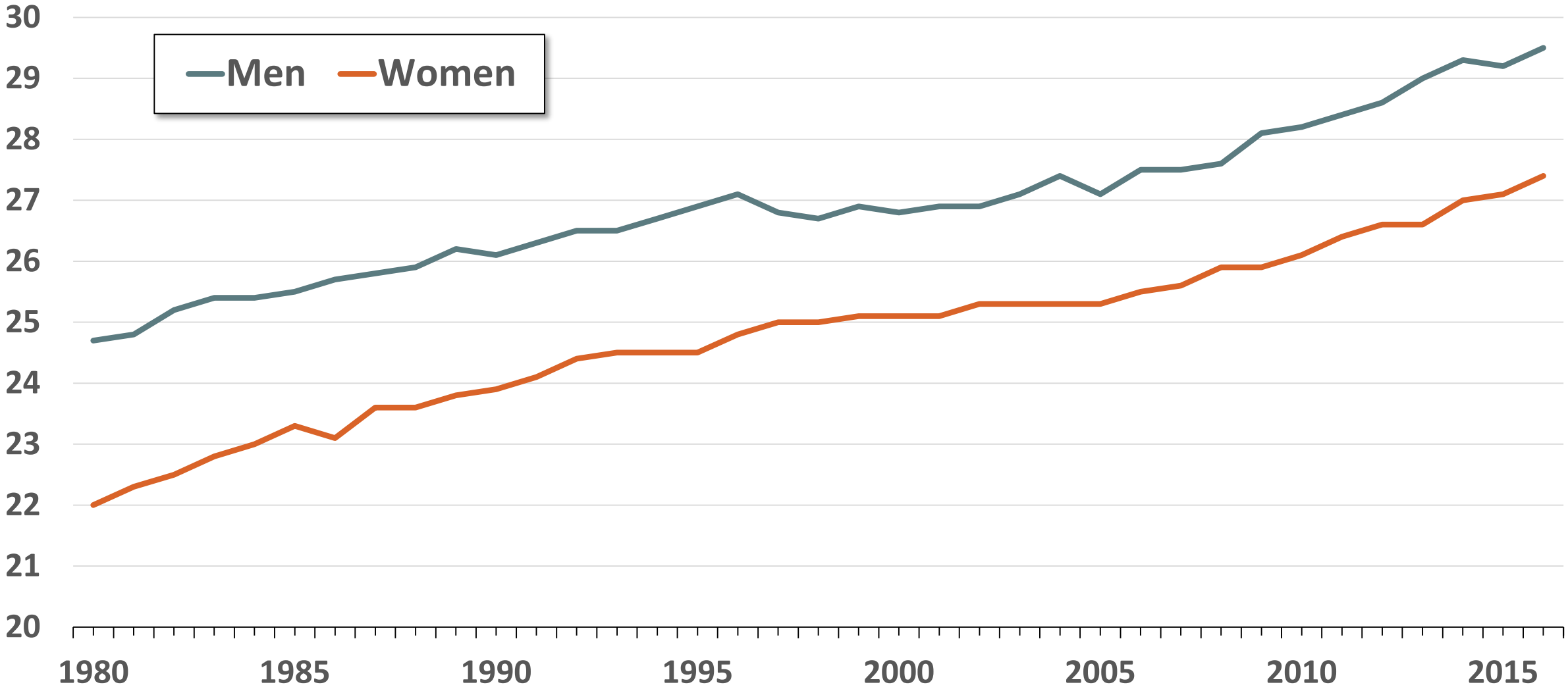
September 14, 2017

Slowing Population Growth, Greater Dependence on Immigration (000s)



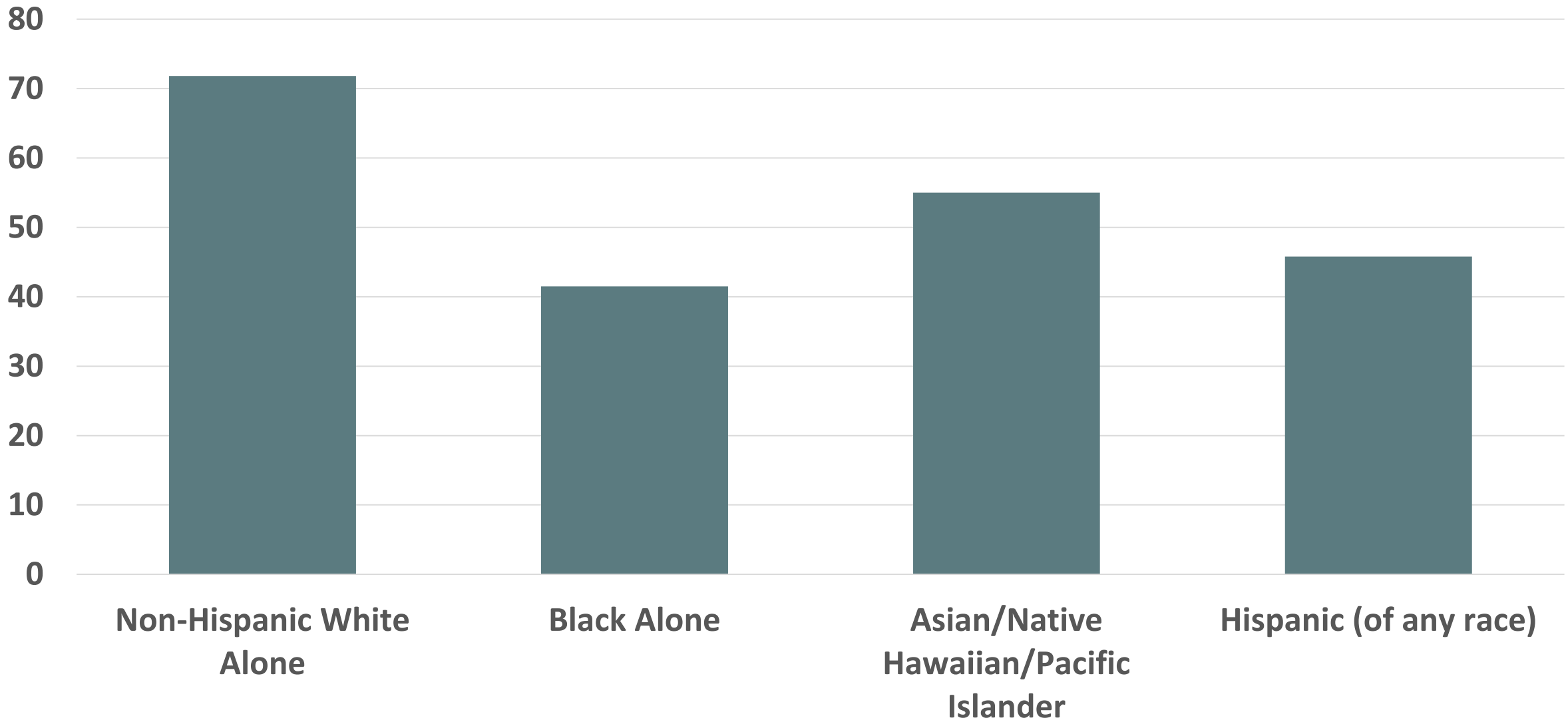
Younger Households Continue to Delay Marriage

(Age at First Marriage)

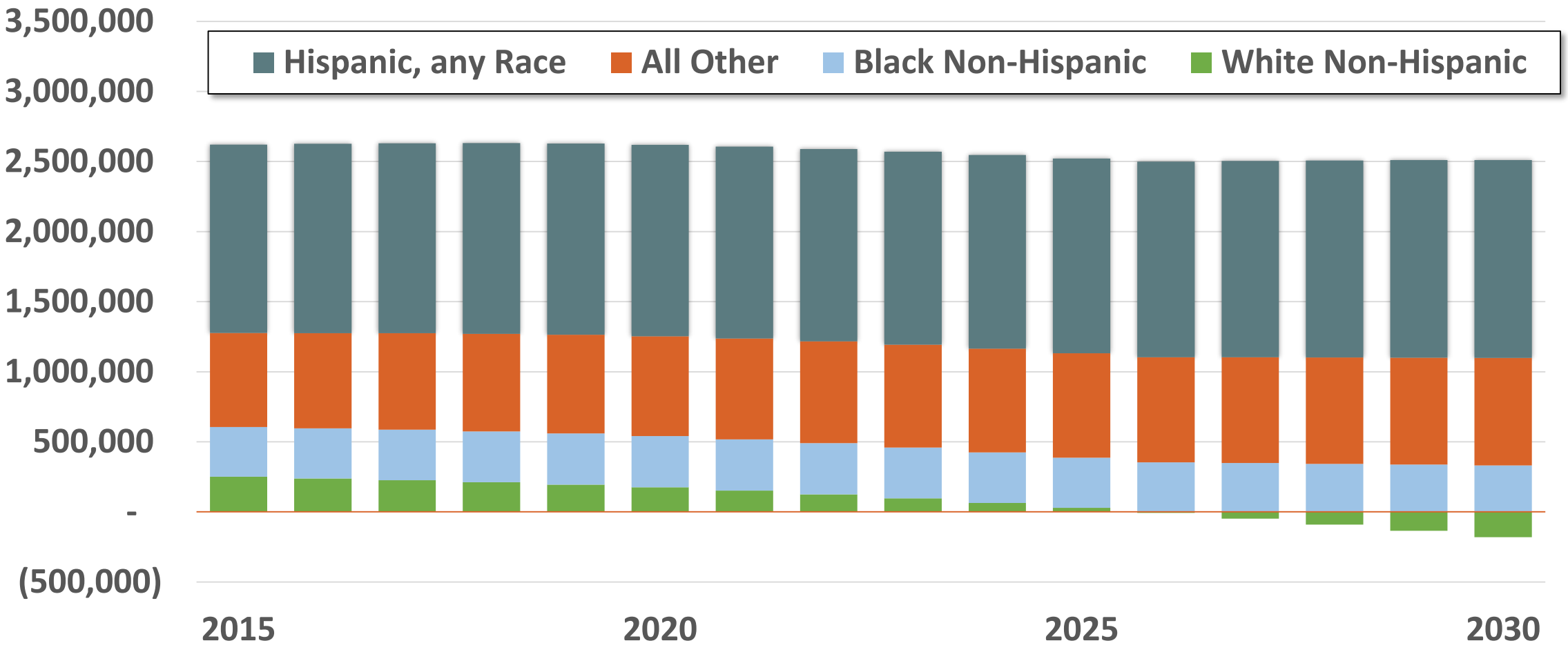


Homeownership Rates Lower For Nonwhite Households

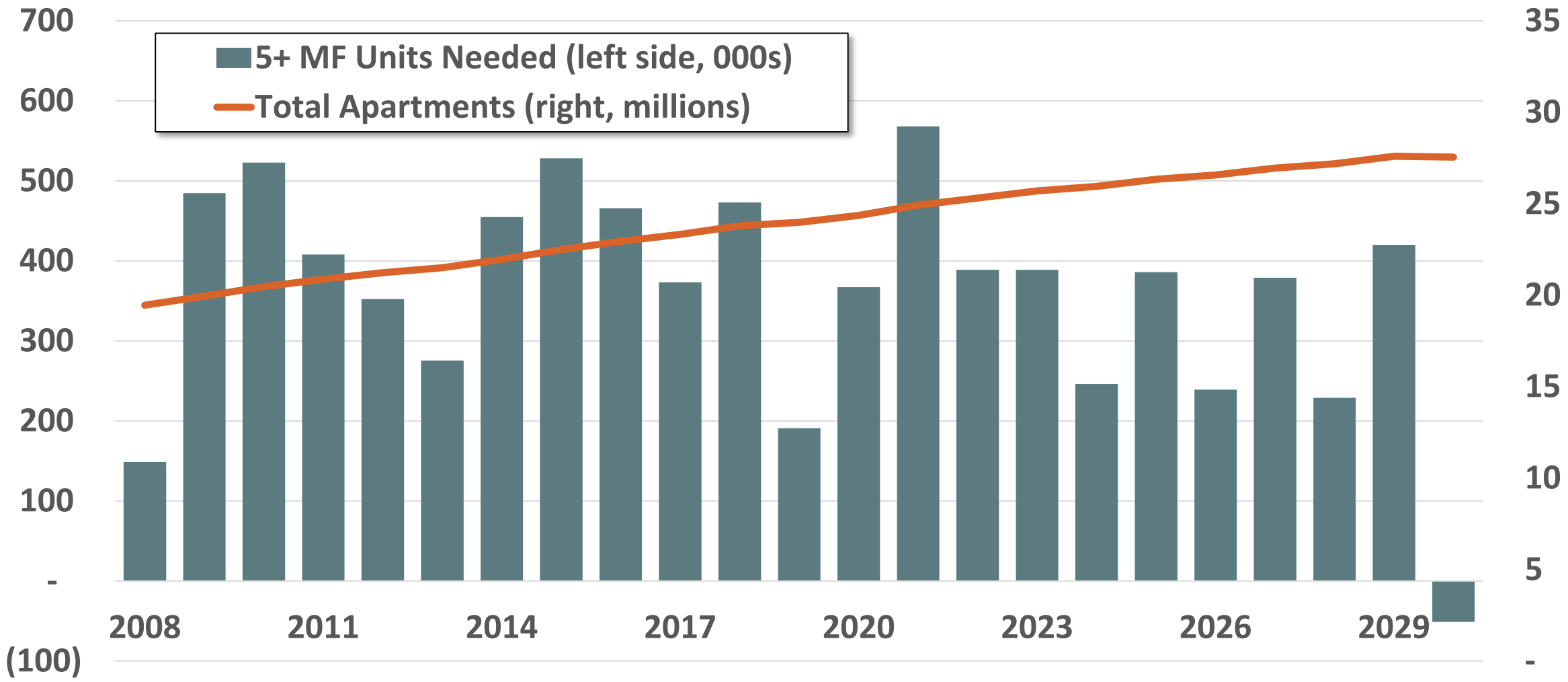
(homeownership rate 2016, percent)



Multifamily Must Cater To Changing Tenant Base
(year-over-year population change)



Steady and Significant Demand Ahead: 4.6 Million Apartments Needed By 2030



THANK YOU

MULTIFAMILY BREAKOUT

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JEANETTE RICE | Americas Head of Multifamily Research

MARK OBRINSKY | Senior VP Research & Chief Economist, NMHC

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