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COMMERCIAL REAL ESTATE  
DEVELOPMENT ASSOCIATION

CHICAGO CHAPTER

## 2016 Real Estate Forecast

Guest Speaker:  
**Mark J. Eppli**

*Robert B. Bell, Sr., Chair in Real Estate  
and Professor of Finance  
Marquette University*



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**CHICAGO CHAPTER**



# Mark J. Eppli

*Robert B. Bell, Sr., Chair in Real Estate  
& Professor of Finance*

Marquette University

- Served as Interim James H. Keyes Dean of Business Administration from 2012-2015
- Coauthor of the bestselling real estate development text in the nation
- Prior to obtaining doctorate, worked in commercial real estate for PM Realty Advisors and GE Capital
- Awards from Greater Washington Urban League and the Urban Land Institute for his efforts to attract minorities to the real estate profession
- Board member for the Federal Home Loan Bank of Chicago
- Ph.D. from the University of Wisconsin, in Real Estate and Urban Land Economics

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**CHICAGO CHAPTER**

2016 Market Update and Forecast

Mark J. Eppli

Bell Chair in Real Estate

Marquette University

January 12, 2016

# Presentation Outline

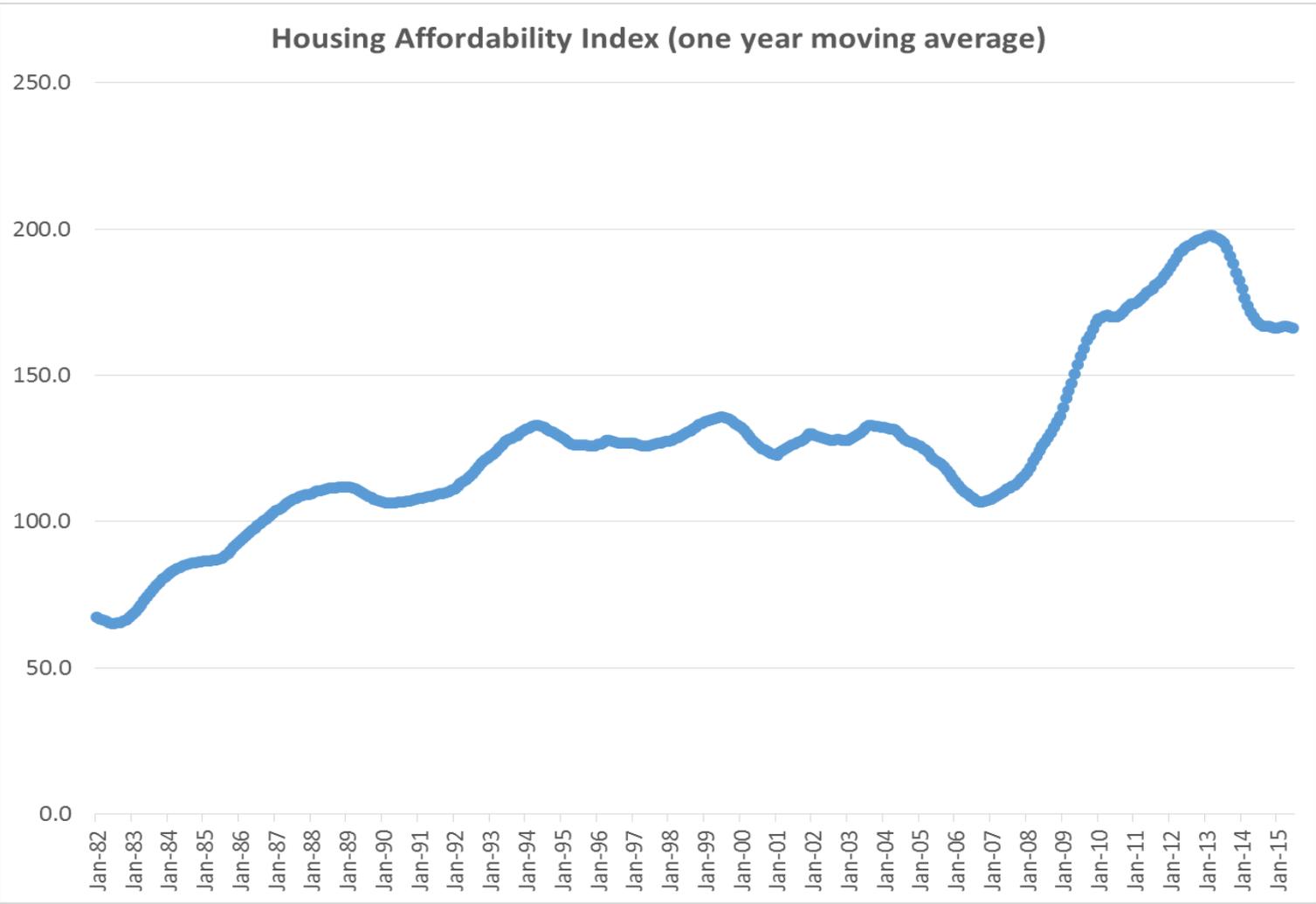
- I. Demographics, Millennials, and Housing
- II. GDP and Employment
- III. Rates and the Capital Stack
- IV. Space Markets
  - A. Multifamily
  - B. Retail
  - C. Office
  - D. Industrial
- V. Summary



# Demographics, Millennials, and Housing

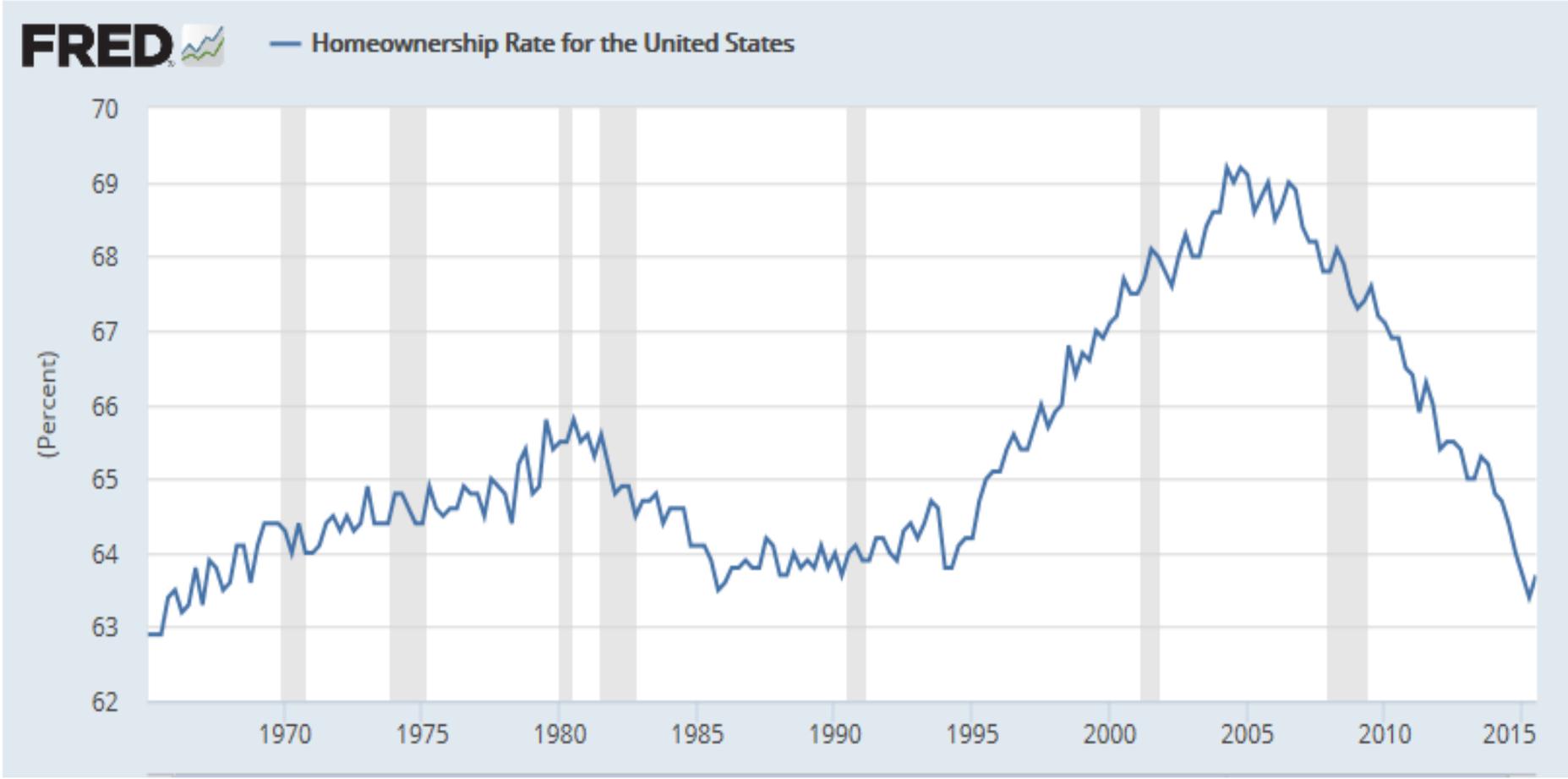


# Demographics: Homeownership is very affordable . . . .



Source: Federal Reserve Economic Data, NAR, and Marquette University.

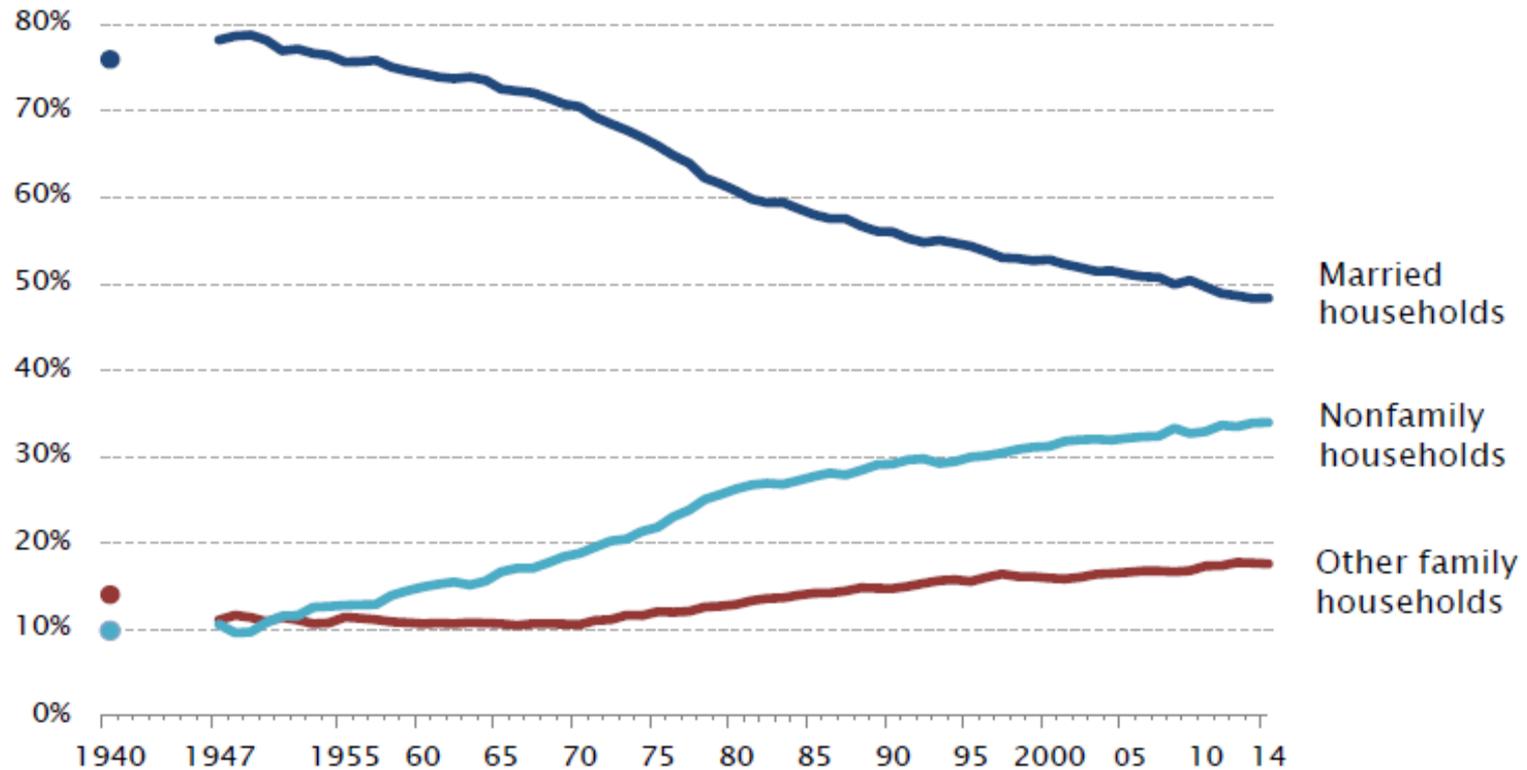
Demographics: . . . . yet homeownership rates are at or near 48 year lows . . . .



Source: Federal Reserve Economic Data.

Demographics: We are less frequently married and we are often without children (only 20% of households are married with children)

## Trends in the prevalence of households, 1940 to present



Source: U.S. Census Bureau, Decennial Census, 1960, and Current Population Survey, Annual Social and Economic Supplements, 1968 to 2014.

Source: U.S. Census and Marquette University.

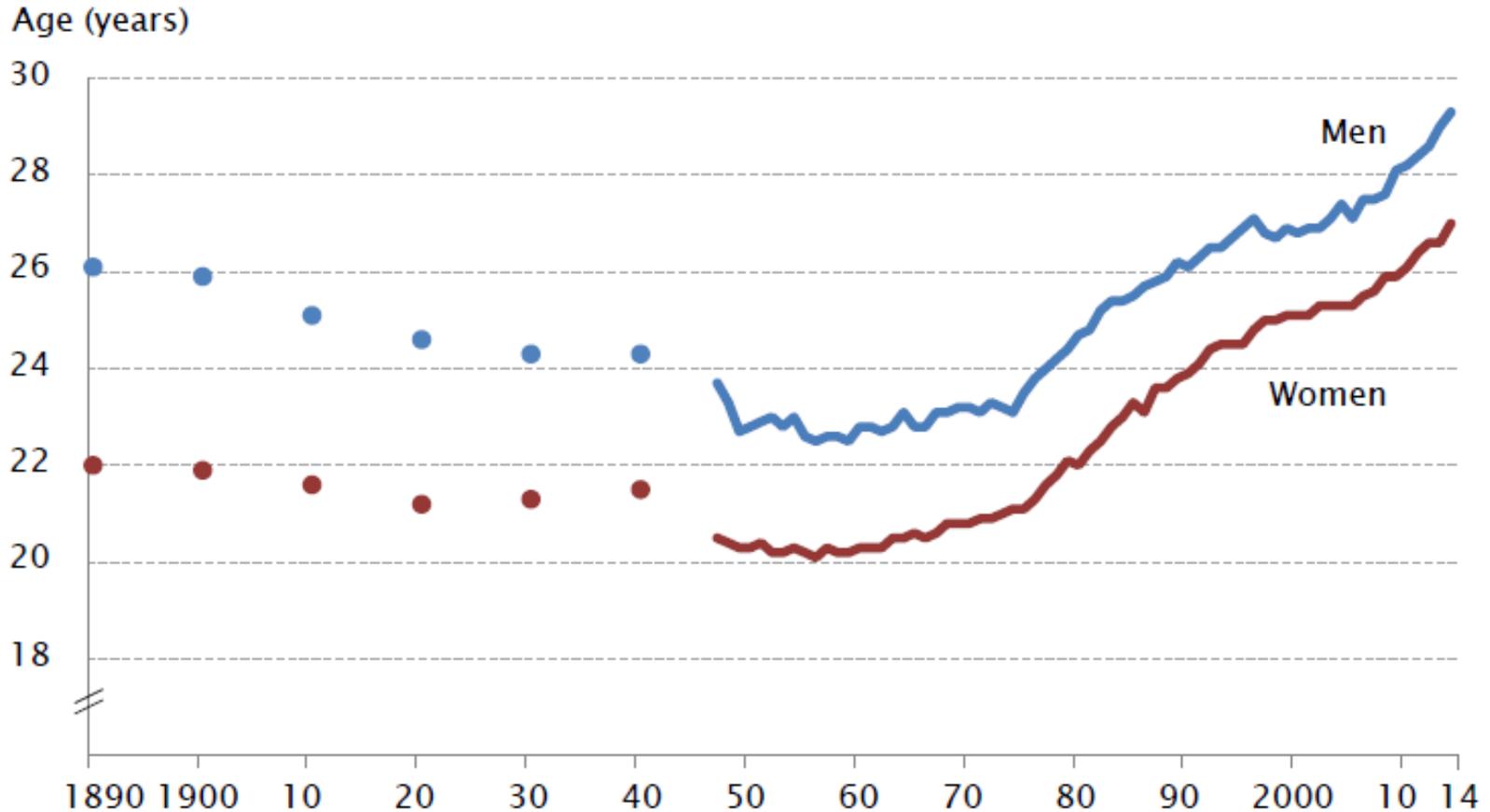


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# Demographics: Millennials marry much later in life.

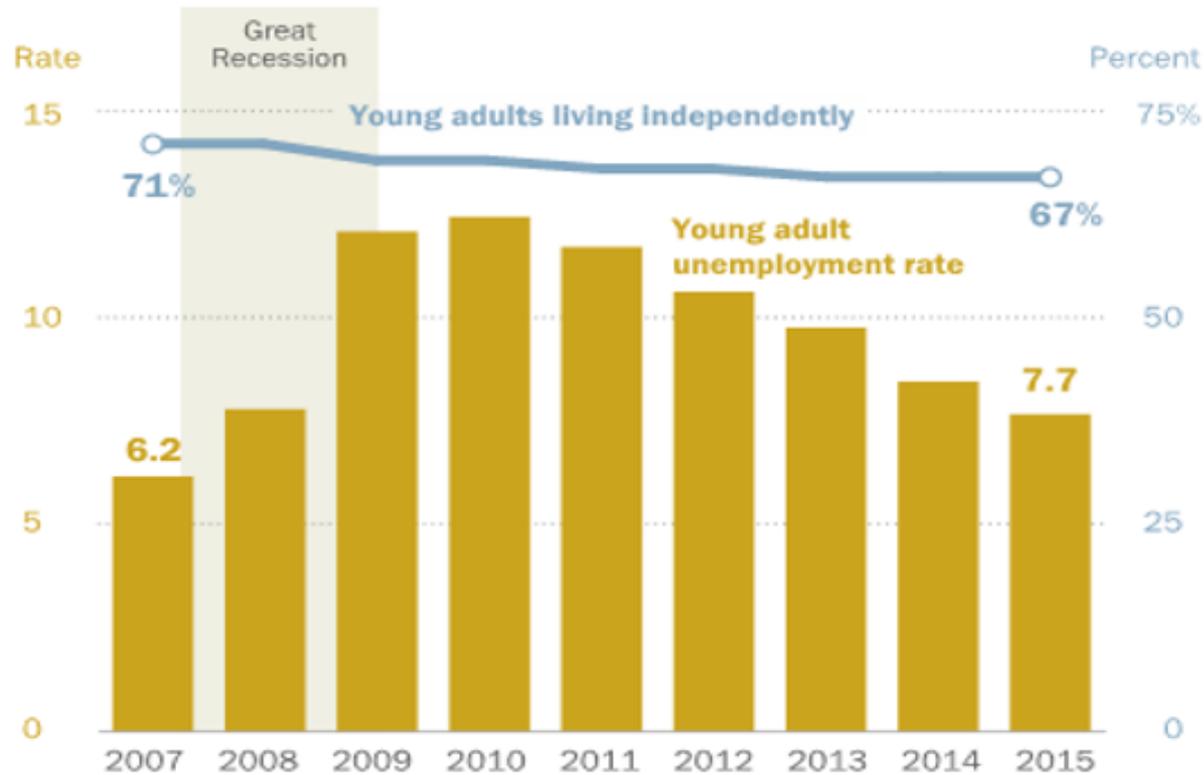
## Median age at first marriage: 1890 to present



Source: U.S. Census.

# Demographics: Millennials continue to boomerang even with improving employment.

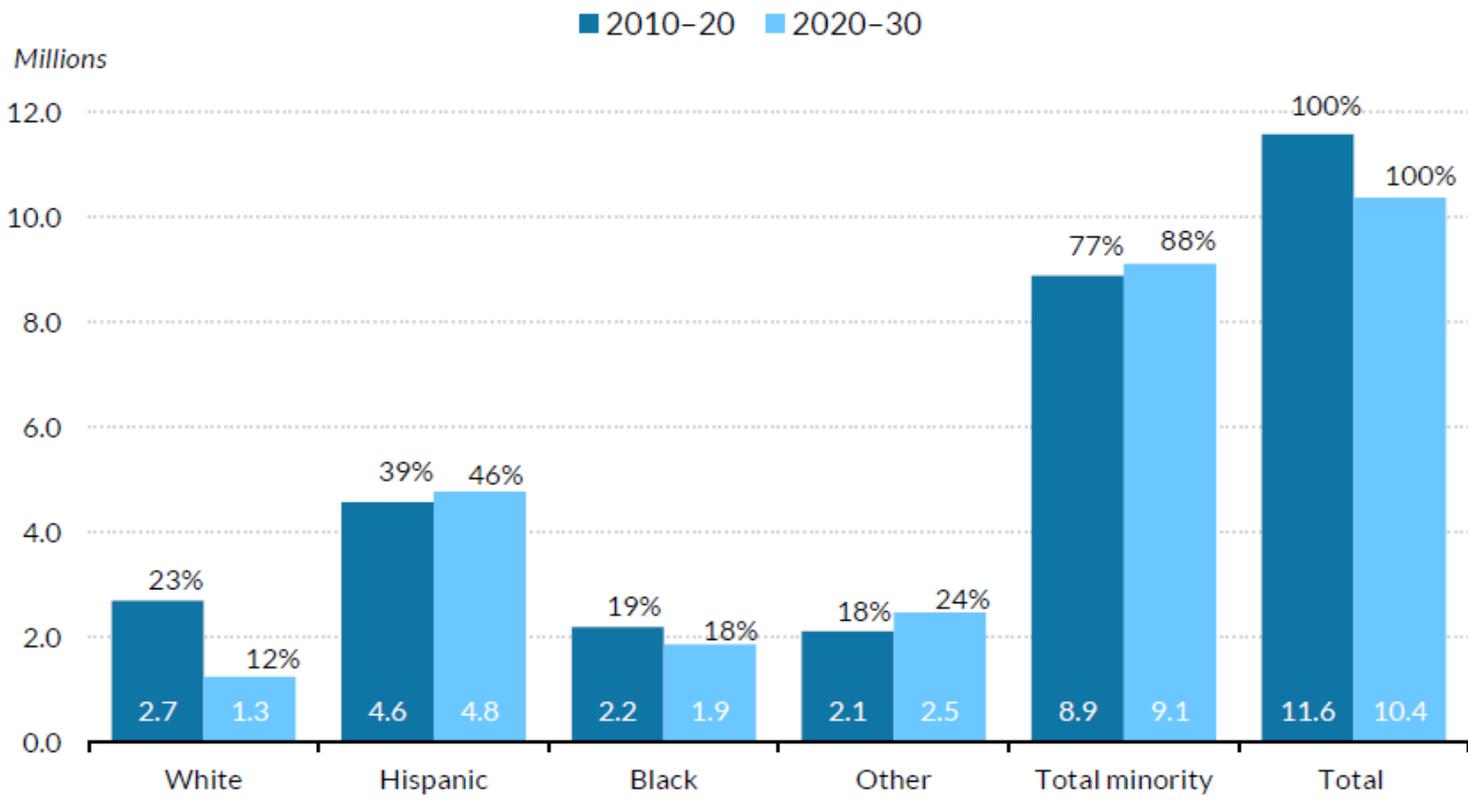
## Labor Market Has Improved for Young Adults, Yet Living Independently of Family Has Declined



Source: "The Kids Aren't Alright: More Millennials Living with Their Parents," The Fiscal Times, Michael Rainey, July 29, 2015.

Demographics: We are becoming overwhelmingly minority, the current white, non-Hispanic birth rate is 1.8 per woman.

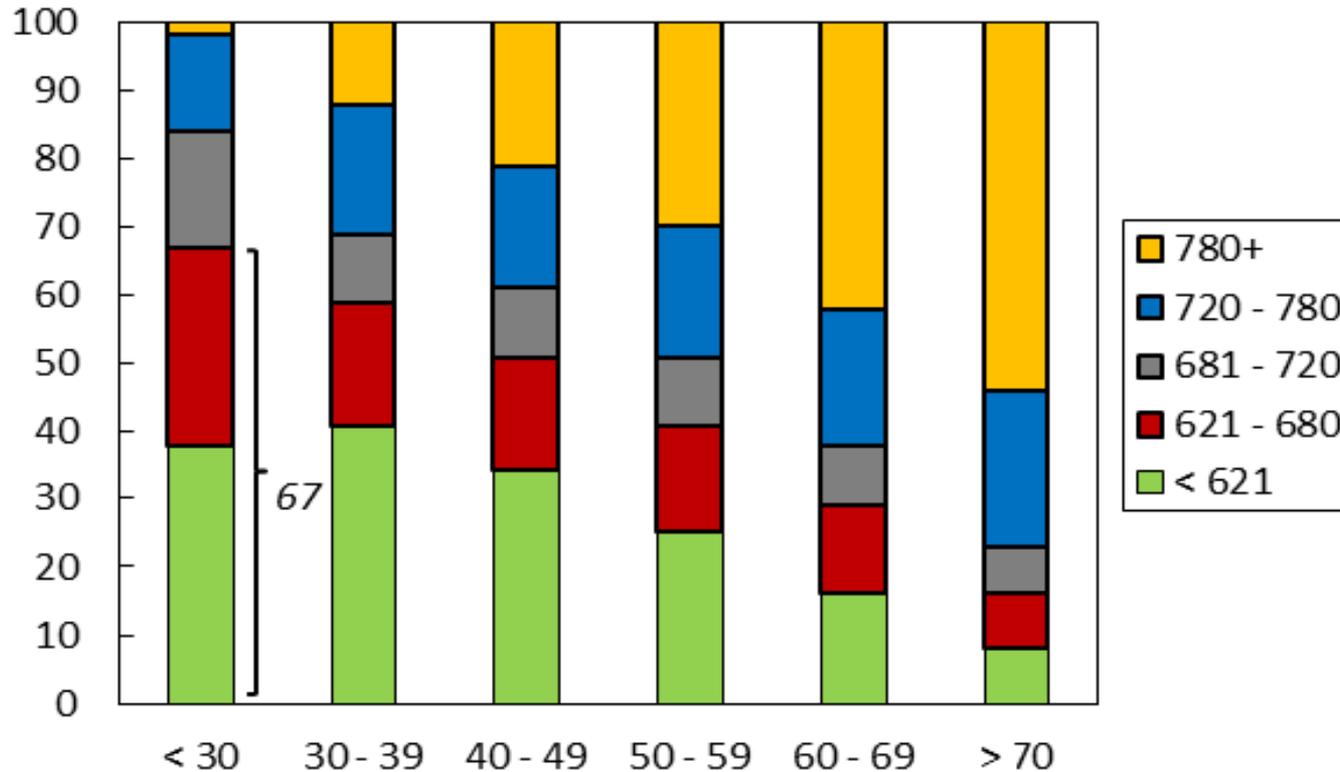
### Change in household formation 2010-2030 (in millions)



Source: "Headship and Homeownership: What does the Future Hold?"  
Goodman et al., June 2015, Urban Institute.

# Demographics: Young adults have weak credit scores

## FICO Score Distribution by Age Group in 2013



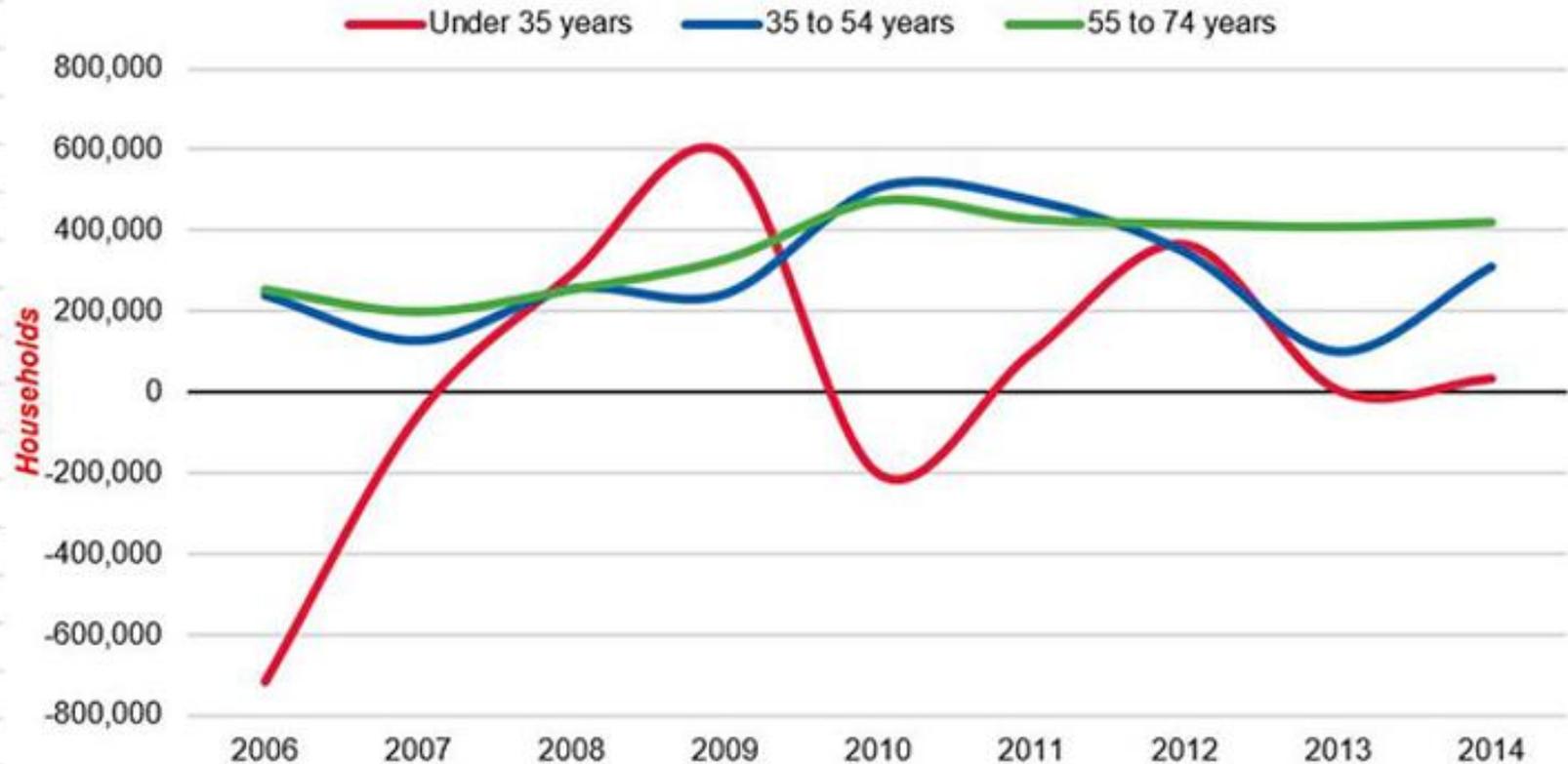
Source: Federal Reserve Bank of New York.

Source: "15 Economic Facts about Millennials,"  
The Council of Economic Advisors, Oct. 2014.



Demographics: Since 2009 renter demand has largely come from non-Millennial cohorts

### Change in Renter Households by Age Group



Sources: Axiometrics Inc., Census Bureau American Community Survey

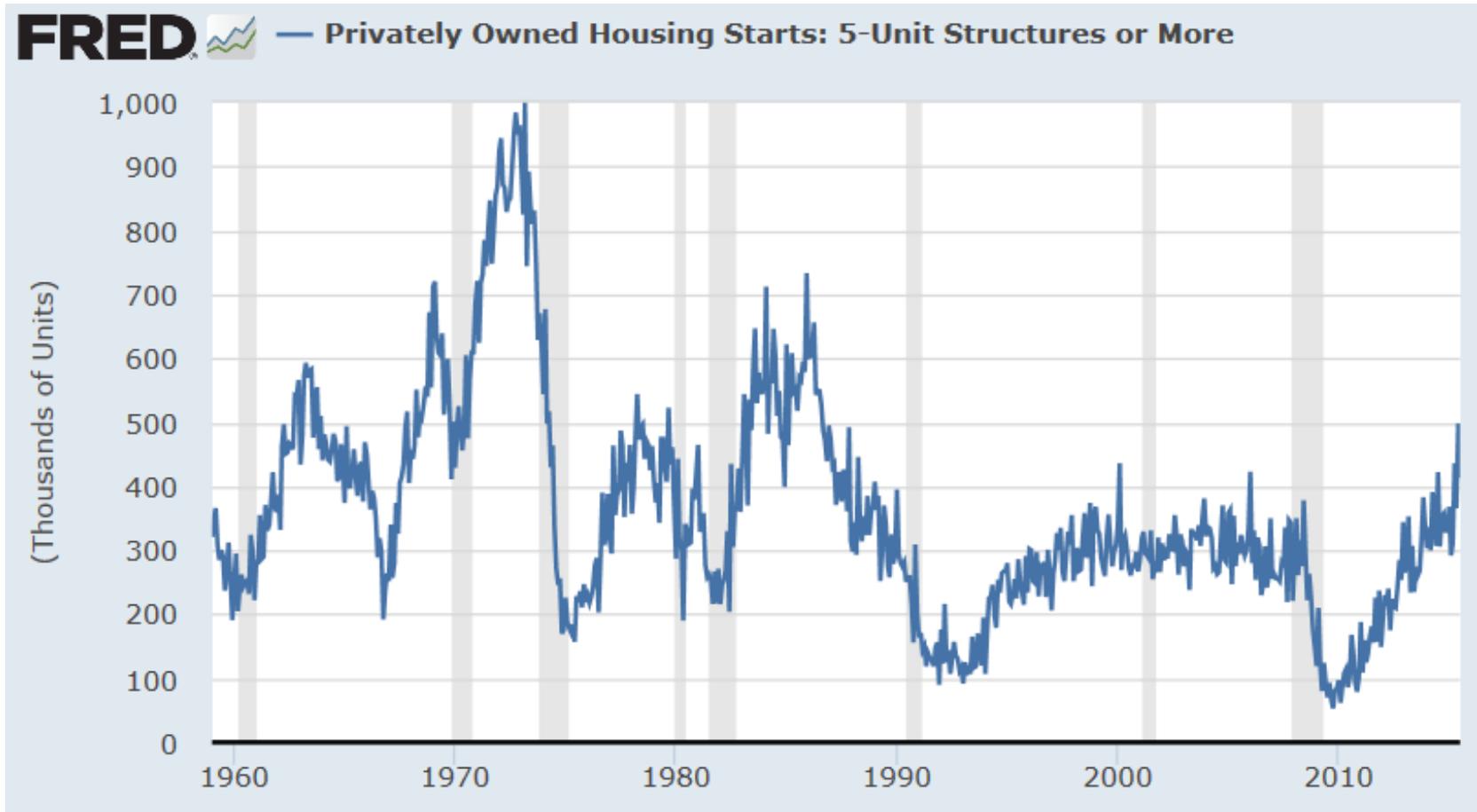
# Demographic: Expected reduction in homeownership rates due to demographic shifts, mortgage finance, and consumer behaviors

....are less likely to own homes, which will drag down the U.S. homeownership rate....



Source: WSJ, June 7, 2015 and “Headship and Homeownership: What does the Future Hold?” Goodman et al., June 2015, Urban Institute.

Demographics: On average of 360,000 rental housing units were started since 1958



Source: Federal Reserve Economic Data.



# Demographics: The coming 15 years . . . .

## Demographic impacts:

- Less than 50% are married
- Delay marriage (about 2 years later over the past 10 years)
- Minorities dominate future household growth
- Pent up demand from boomerang Millennials
- Tighter underwriting (increased FICO scores)
- Perceptions and realities housing ownership

. . . . .will reduce homeownership rates and increase demand for multifamily housing by 500,000-600,000 units per year.

# GDP and Employment

# Credibility Check

<u>Attribute</u>	<u>2015 Estimate</u>	<u>Actual</u>
GDP Growth	2.75%	mid--2.0%
Employment (monthly)	250,000	221,000
Interest Rates (10 year UST)	2.50-2.75%	2.27%

Source: WSJ, Lamont Cranston, WSJONLINE

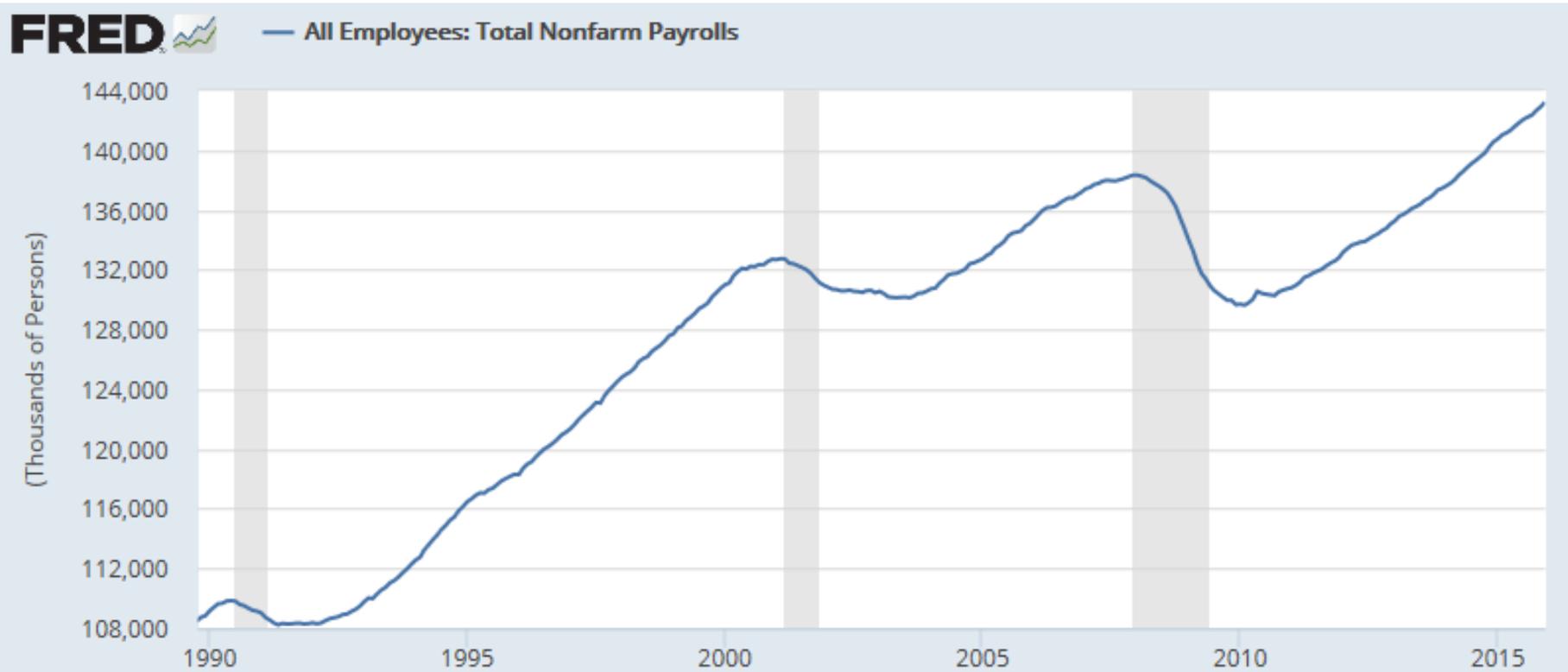
# Employment



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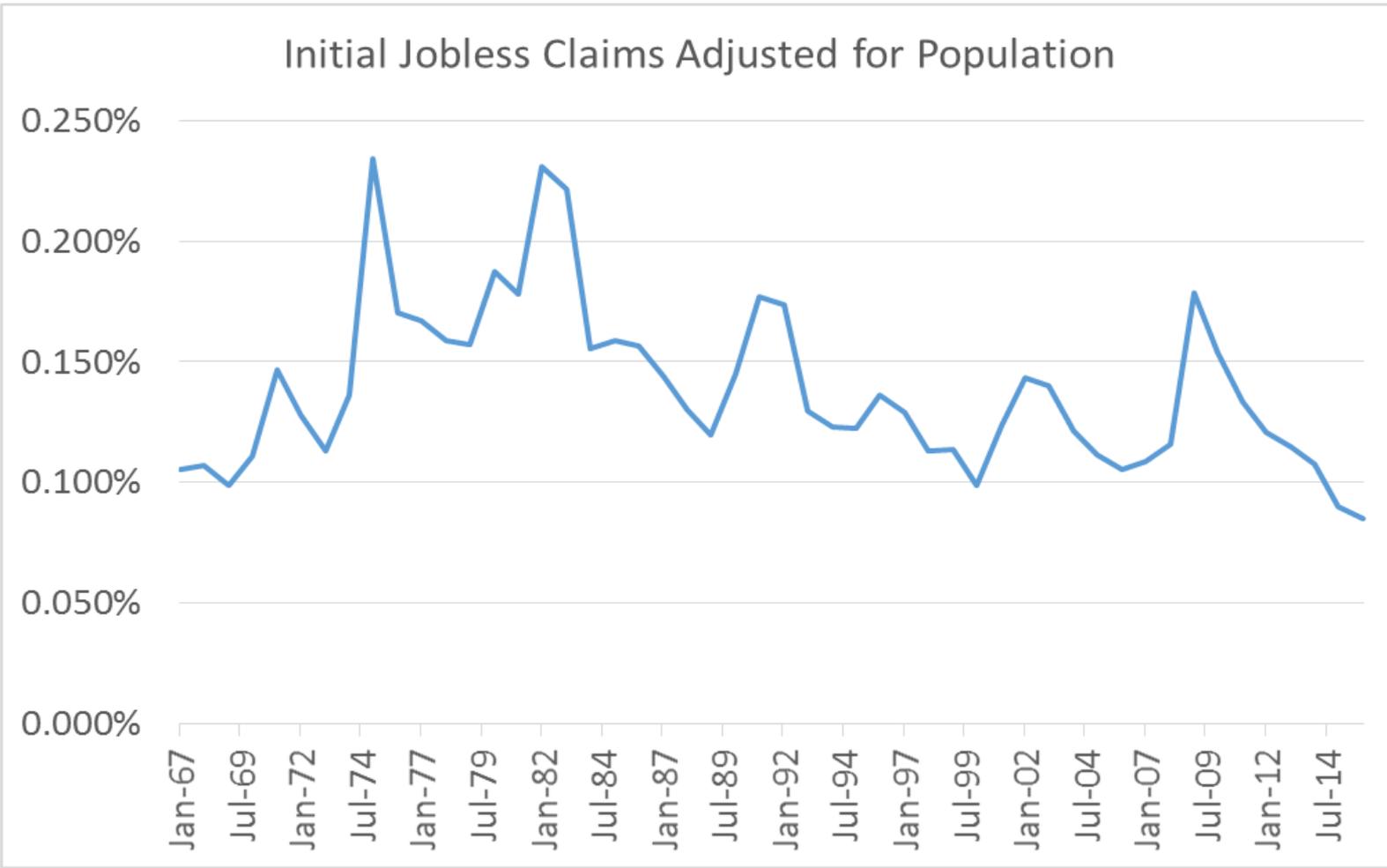
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Employment: U.S. employment growth is among the best, if not the best, across developed countries.



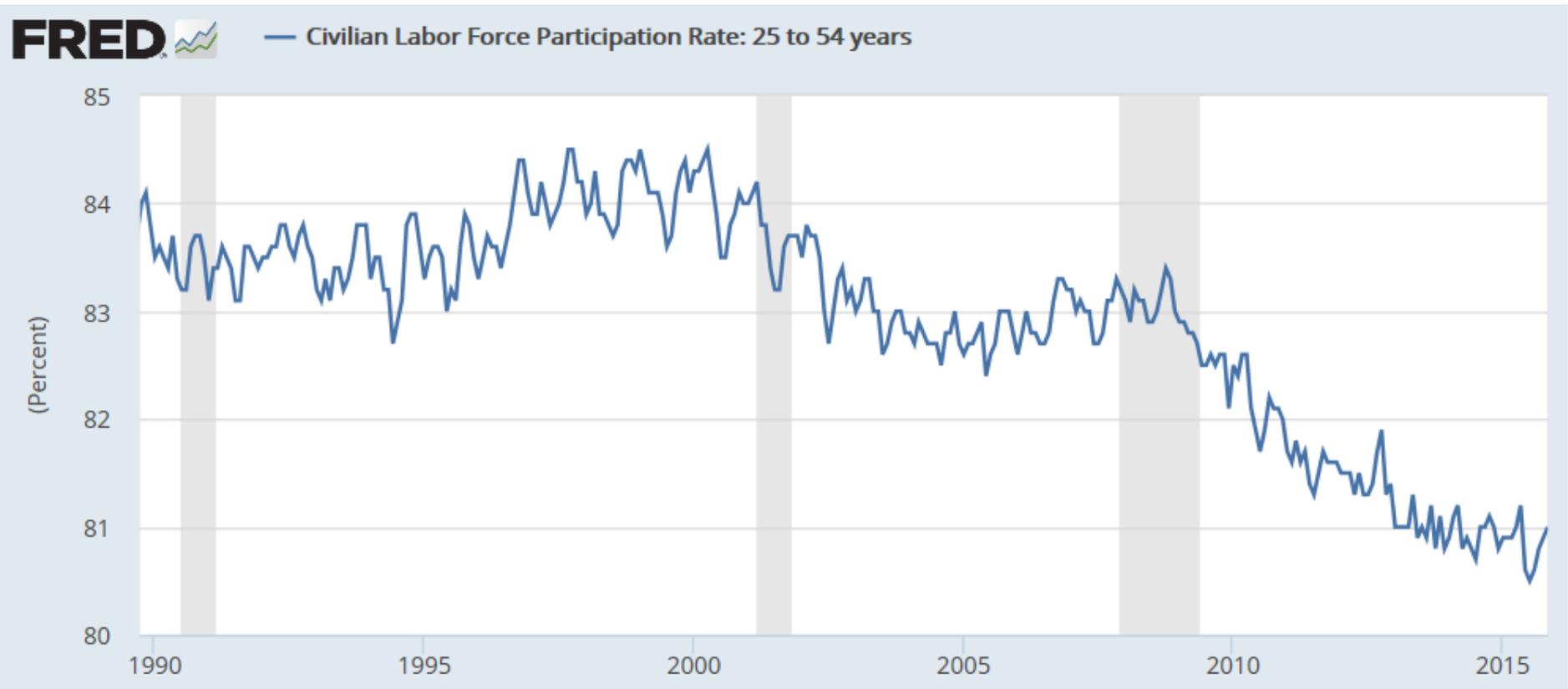
Source: Federal Reserve Economic Data.

# Employment: Initial jobless claims at historic lows



Source: Federal Reserve Economic Data and Marquette University.

Employment: At just under 81%, the proportion of 25- to-54-year-olds in the labor force is lower than at any time since 1984.

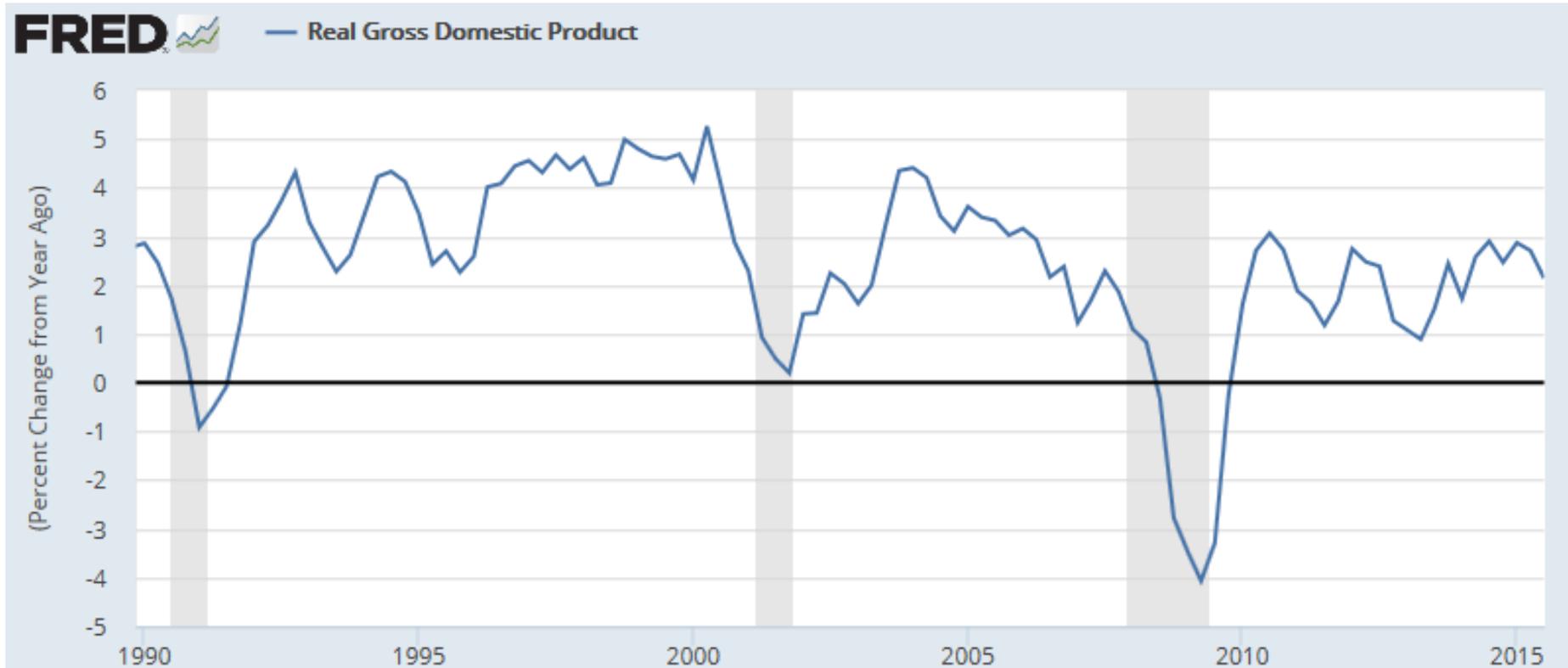


Source: Federal Reserve Economic Data and Economist (comments), 11/14/15, p. 28.



GDP

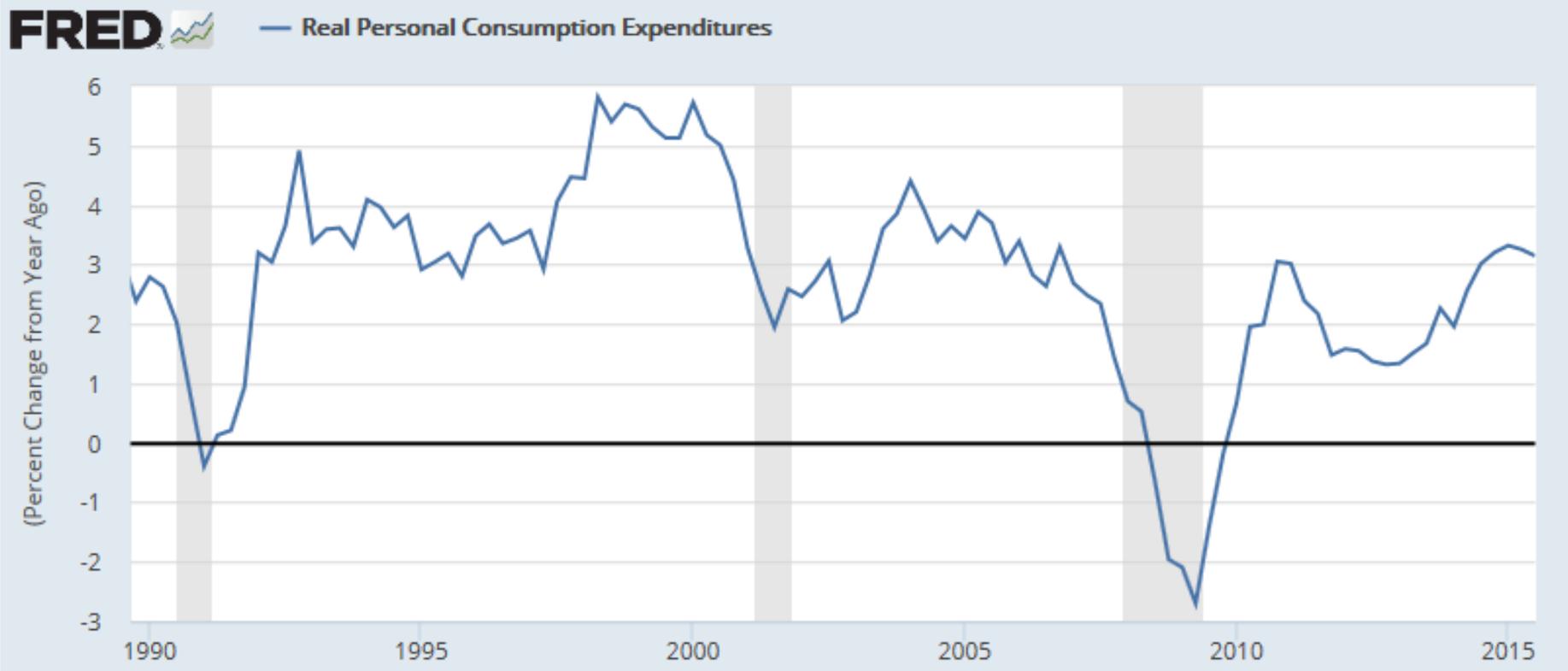
GDP: GDP remains range-bound between, averaging 2.4% over the past three years.



Source: Federal Reserve Economic Data.

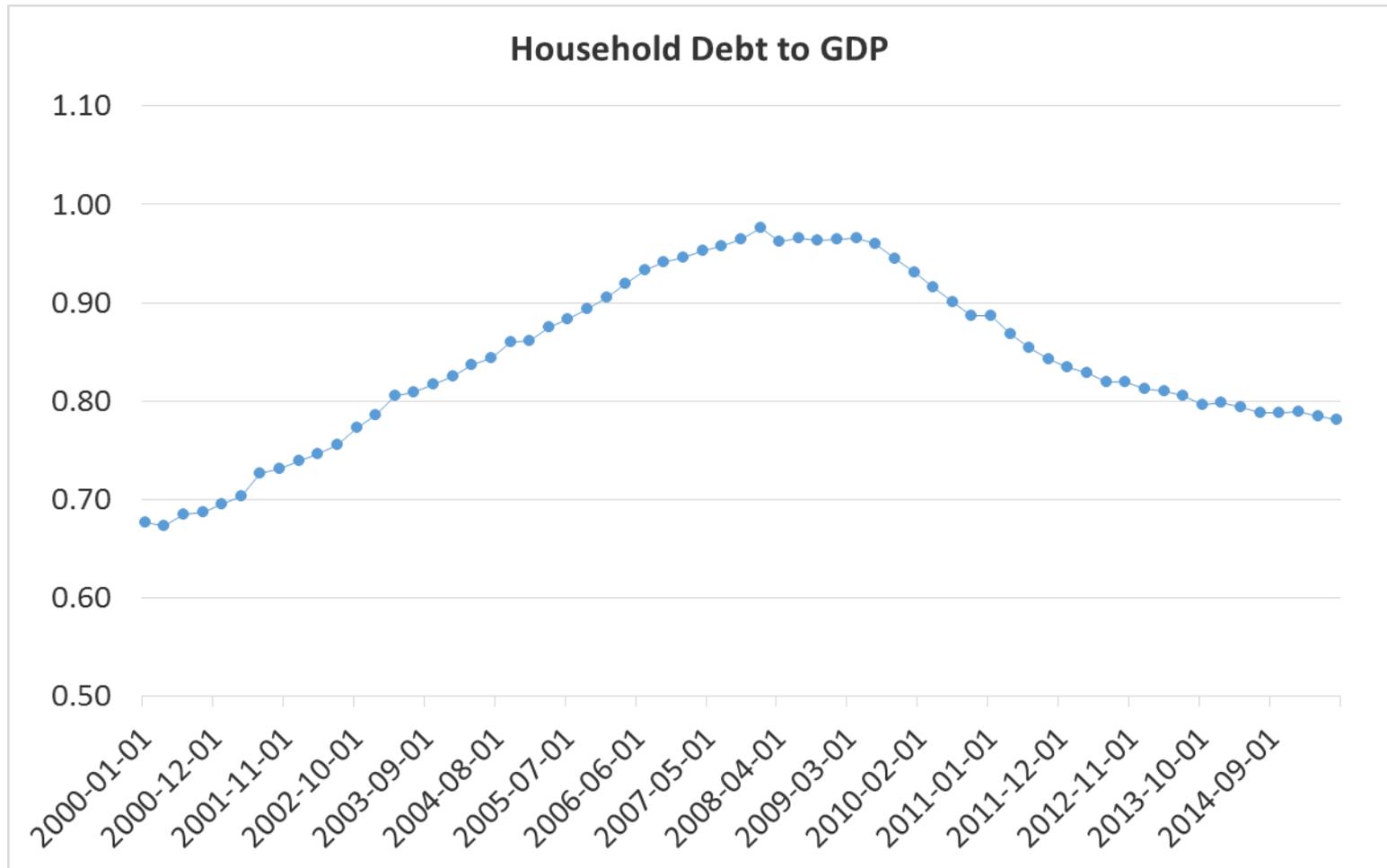


GDP: Consumer have done their part! Consumption accounts for 68% of GDP and has grown an average of 2.7% per year over the past three years.



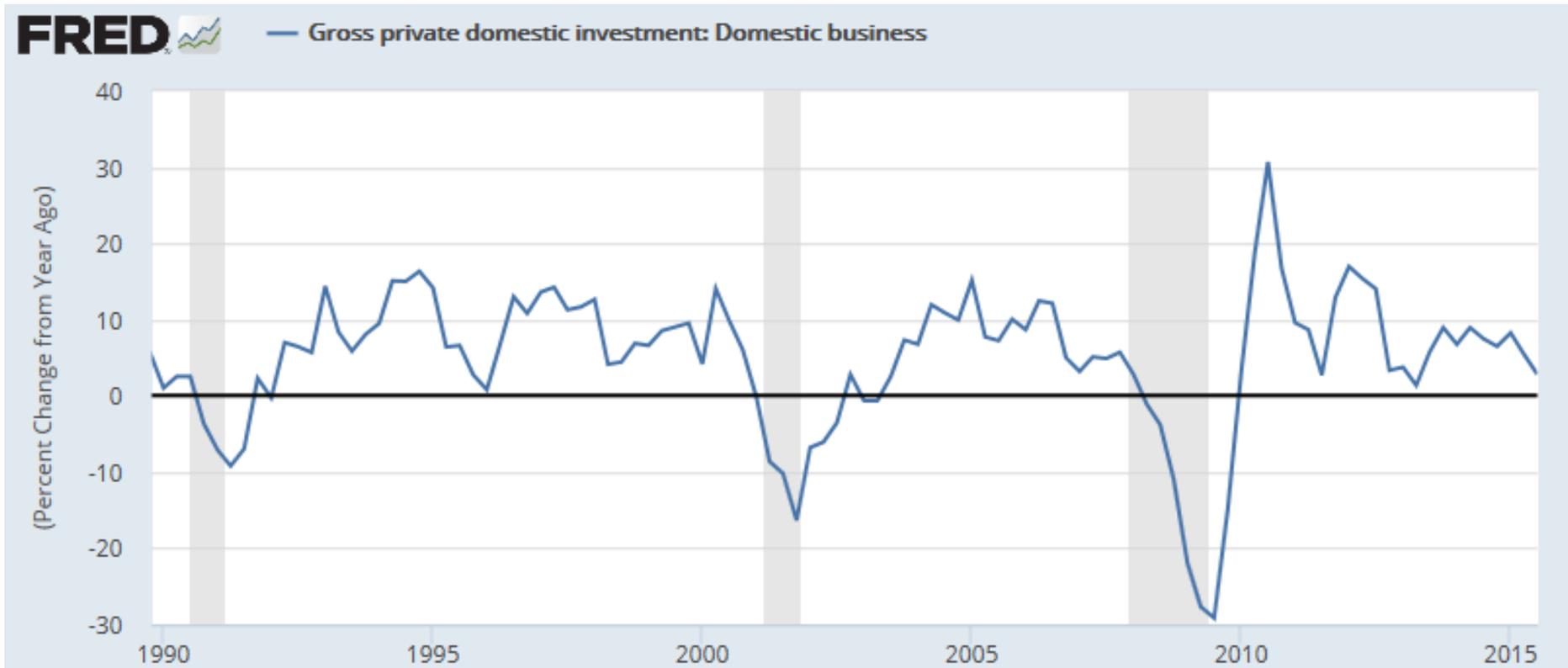
Source: Federal Reserve Economic Data.

GDP: Since 2008Q1, consumer debt has fallen by \$218 billion. The American consumer has dry power. During the eight years prior to 2008, household debt grew 7.4 trillion



Source: Federal Reserve Economic Data and Marquette University.

GDP: Business investment accounts for 16.5% of GDP and has tailed off significantly in recent quarters.



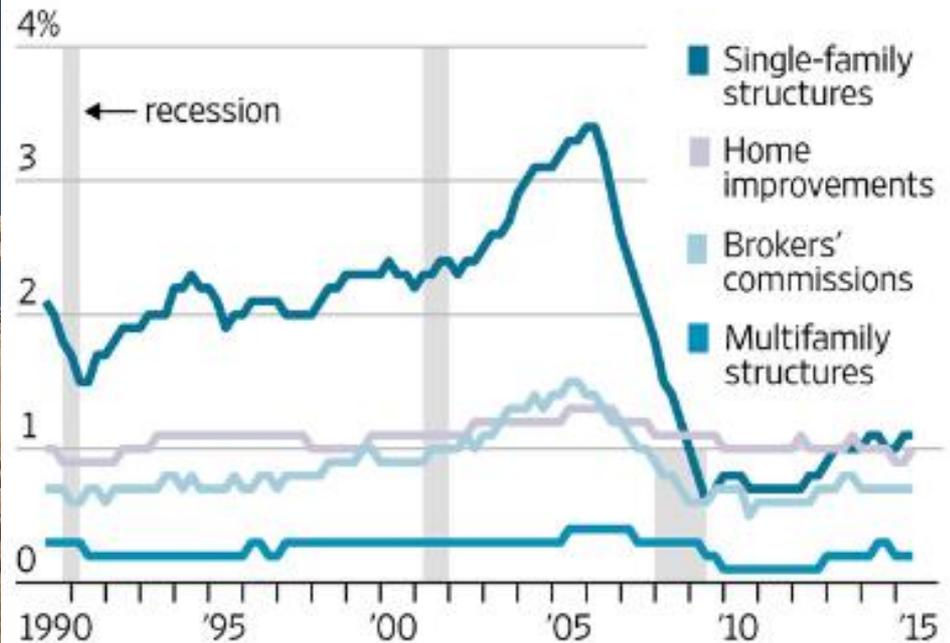
Source: Federal Reserve Economic Data.



GDP: One potential bright spot is single-family housing, but since the Great Recession continues to weigh on GDP as contributor to GDP



**Components of residential investment**  
as a share of GDP

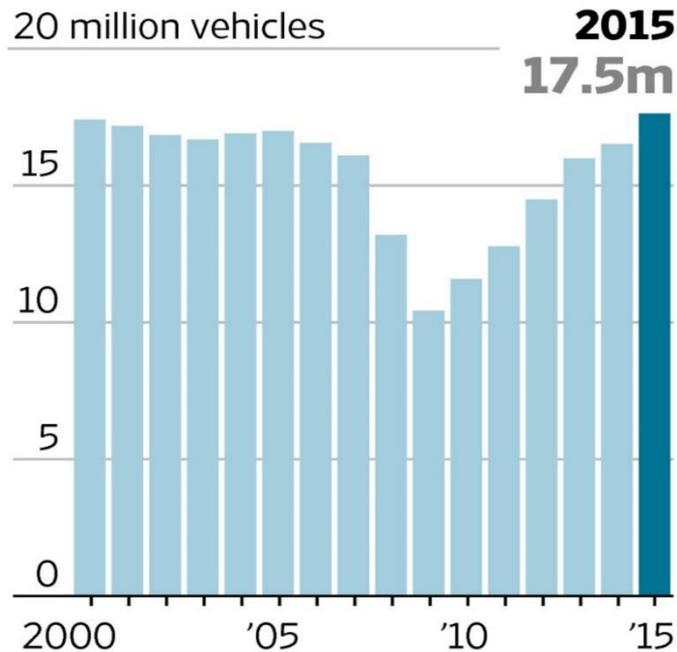


Source: WSJ, 9/8/15

GDP: Auto sales. Over the last six months \$110 billion of auto loans were originated to borrowers with credit scores below 660. Of that sum, about \$70 billion went to borrowers with credit scores below 620.

## Climb to the Top

Annual U.S. light-vehicle sales



Source: Autodata

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Source: WSJ, January 5, 2016 and WSJ, Lamont Cranston, WSJONLINE

# GDP and Employment Expectations for 2016

Economic growth will remain muted at 2.25-2.50%

- Consumer spending will remain strong (3.0%)
- Business investment spending will stagnate (no growth)
- The strong dollar will reduce exports

Job growth will remain range bound at 200,000 new jobs per month – lower than the past two years

- Very low initial unemployment claims very positive
- Weak business investment is negative



# Rates and the Capital Stack

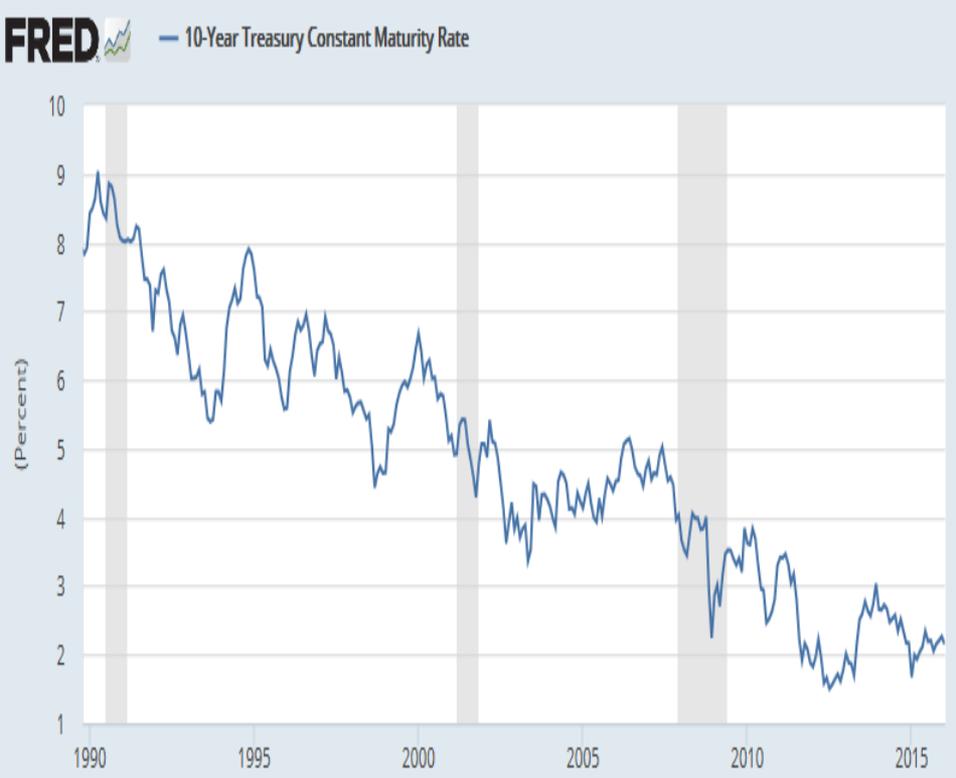
Rates



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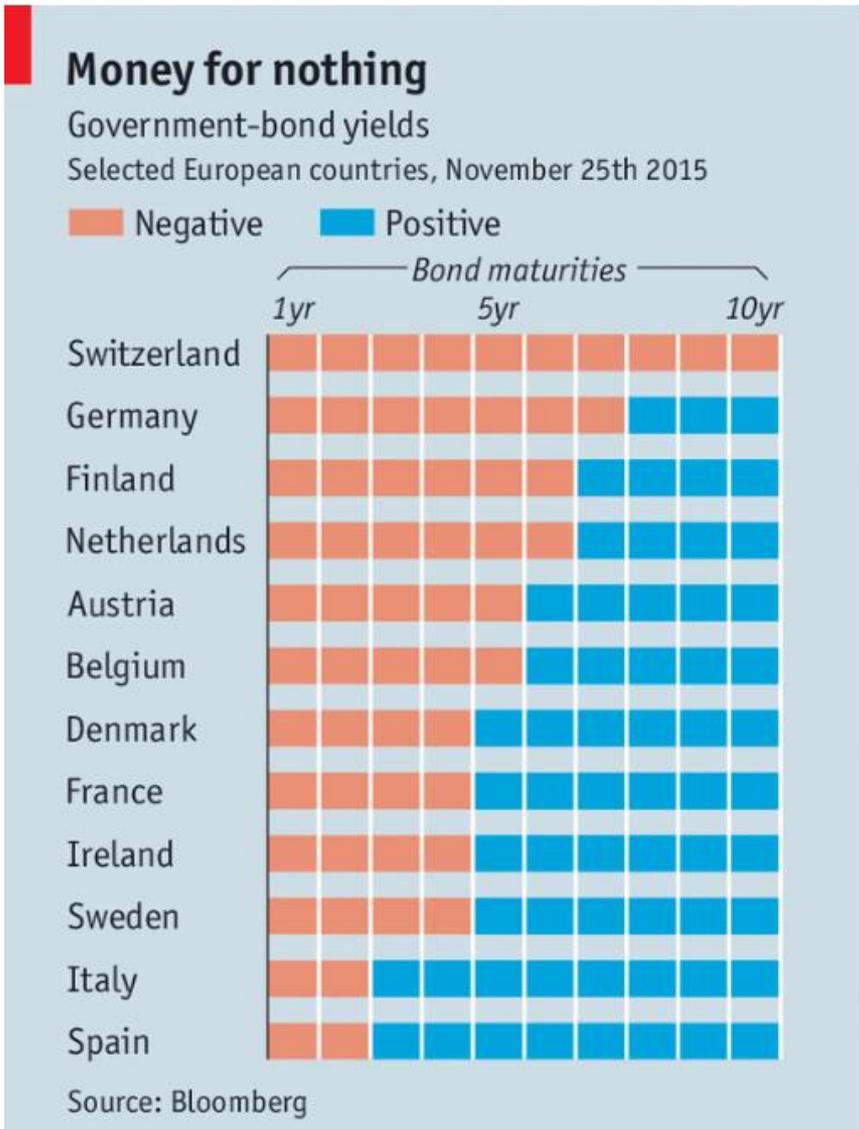
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# Rates: 10 Year U.S. Treasury rates



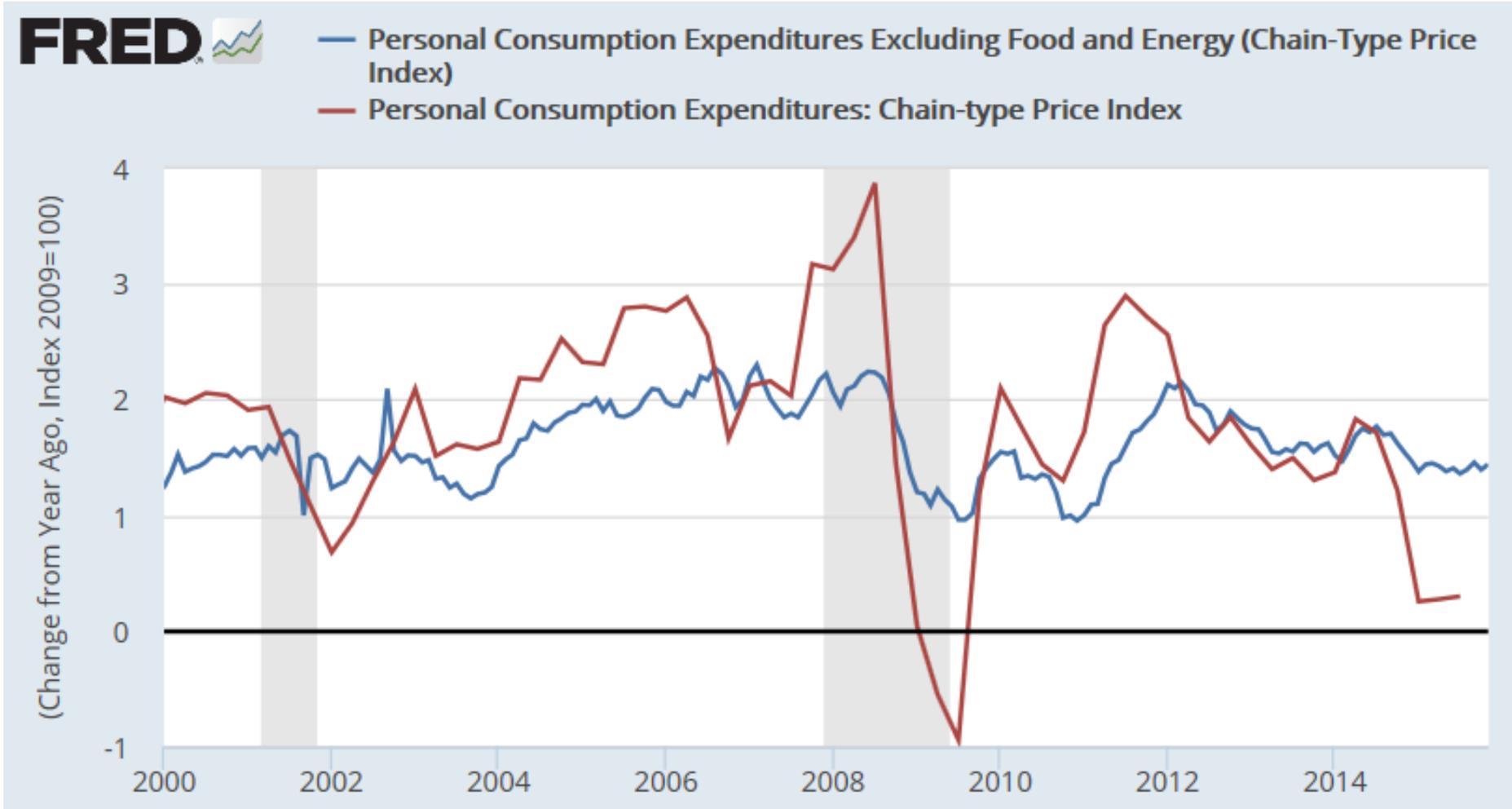
Source: Federal Reserve Economic Data.

Rates:  
 Negative Treasury  
 returns are pervasive  
 across  
 the entire continent of  
 Europe and in Japan.



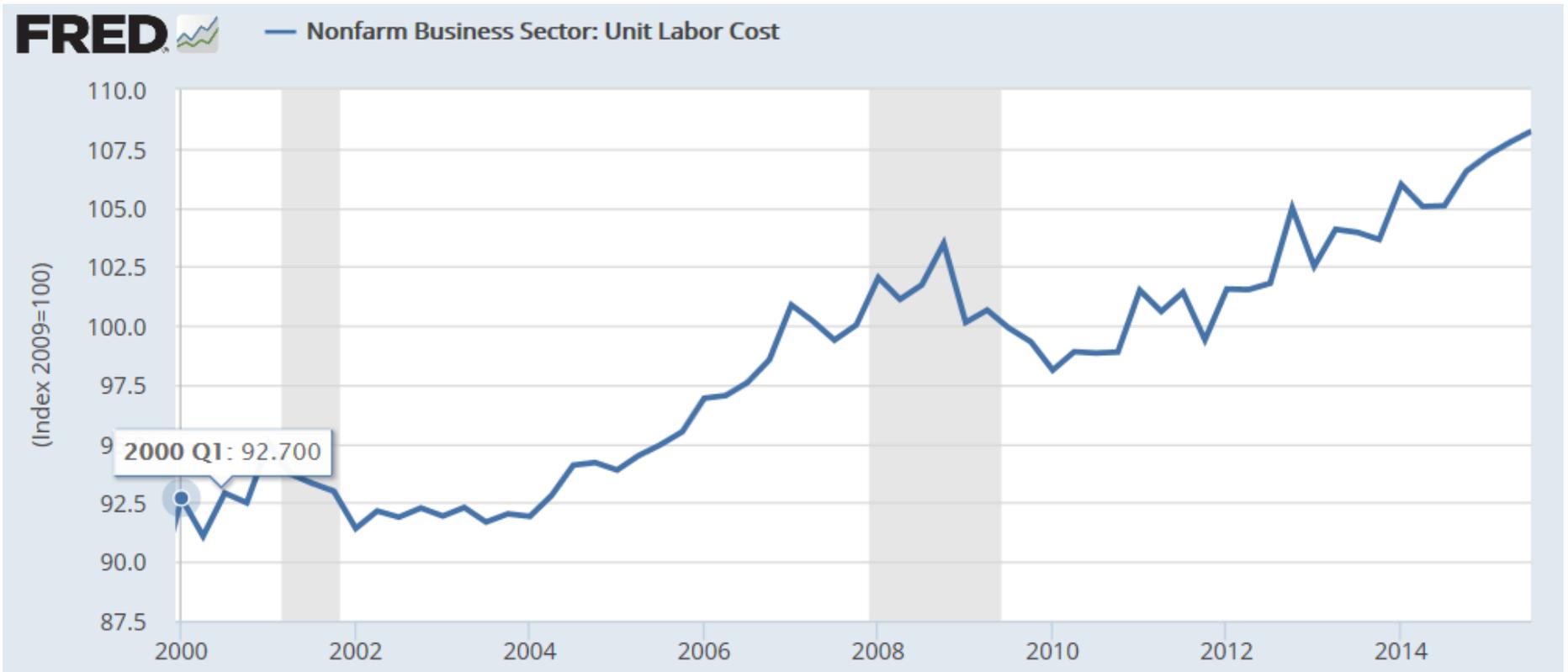
Source: Economist 11/28/15, p 64 and 9/12/15, p. 67.

# Rates: Inflation remains low



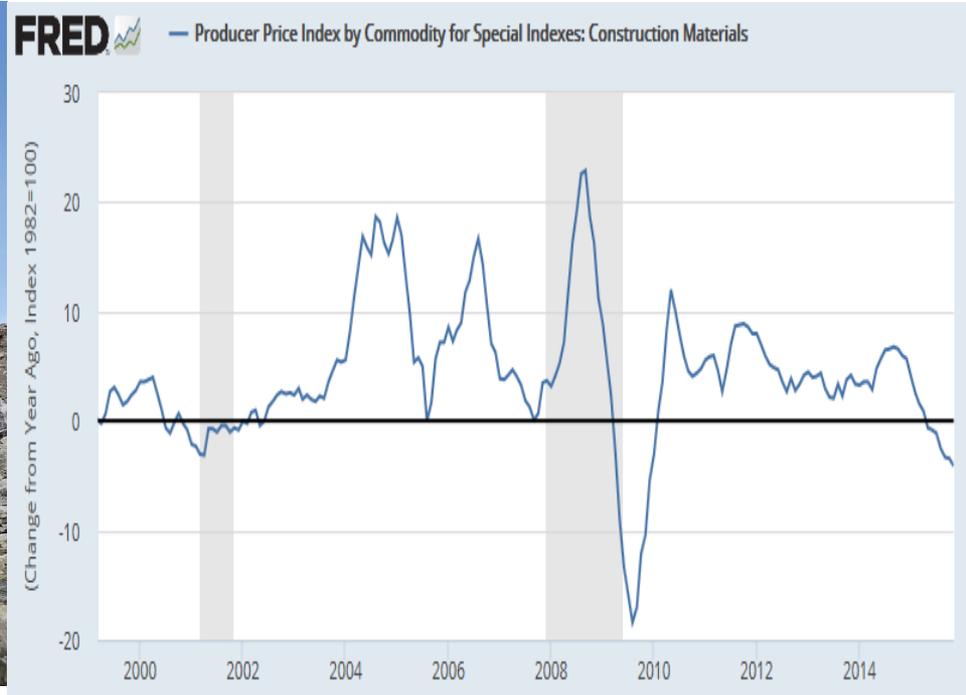
Source: Federal Reserve Economic Data

# Rates: Labor costs are on the rise



Source: Federal Reserve Economic Data

Rates: Commodity prices are down. Over the past three years crude oil (-51%), food commodities (-29%), non-precious metals (-27.5%), and precious metals (-4%). Molycorp, a California rare-earth miner, laid off its workforce after the collapse of prices.



Source: WSJ 8/27/15 and Federal Reserve Economic Data.

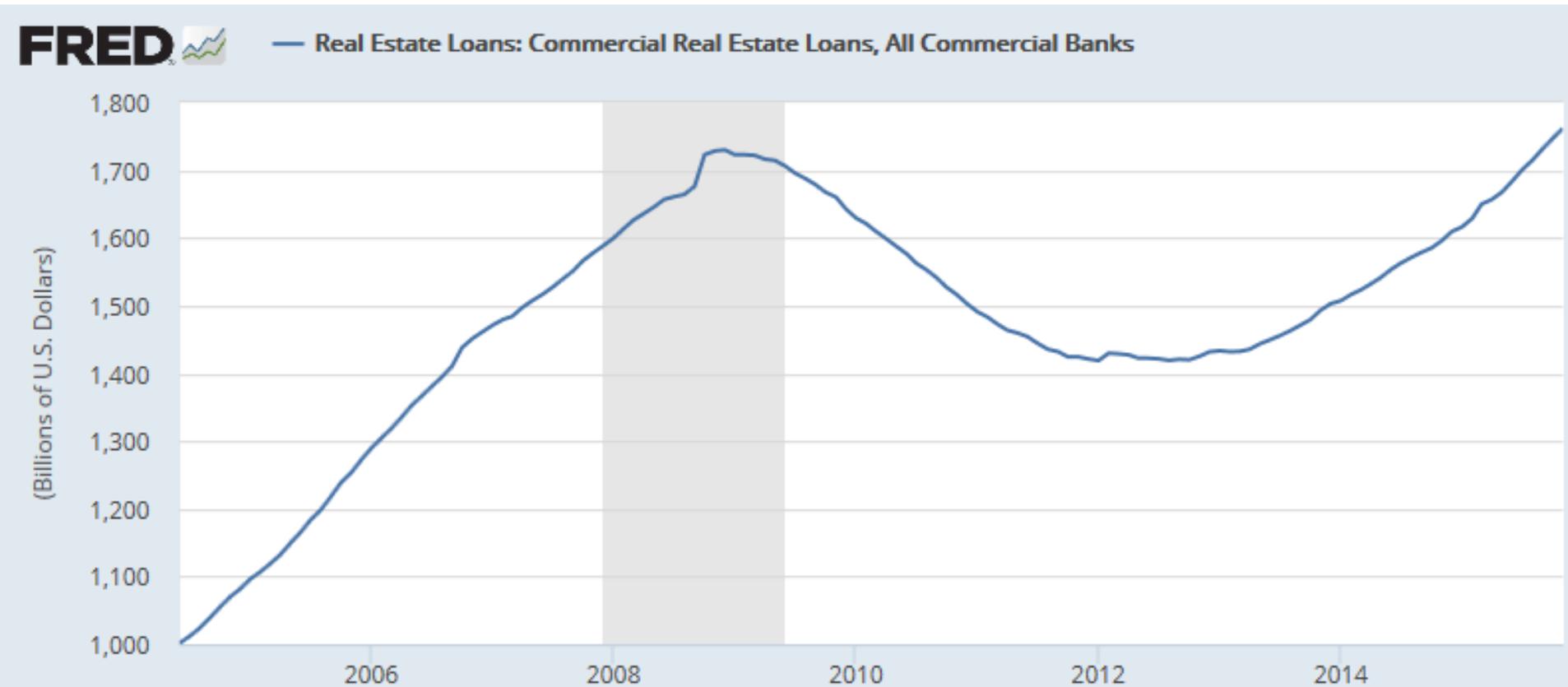
# The Capital Stack



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# The Capital Stack: Commercial real estate transaction volume is growing but is relatively disciplined

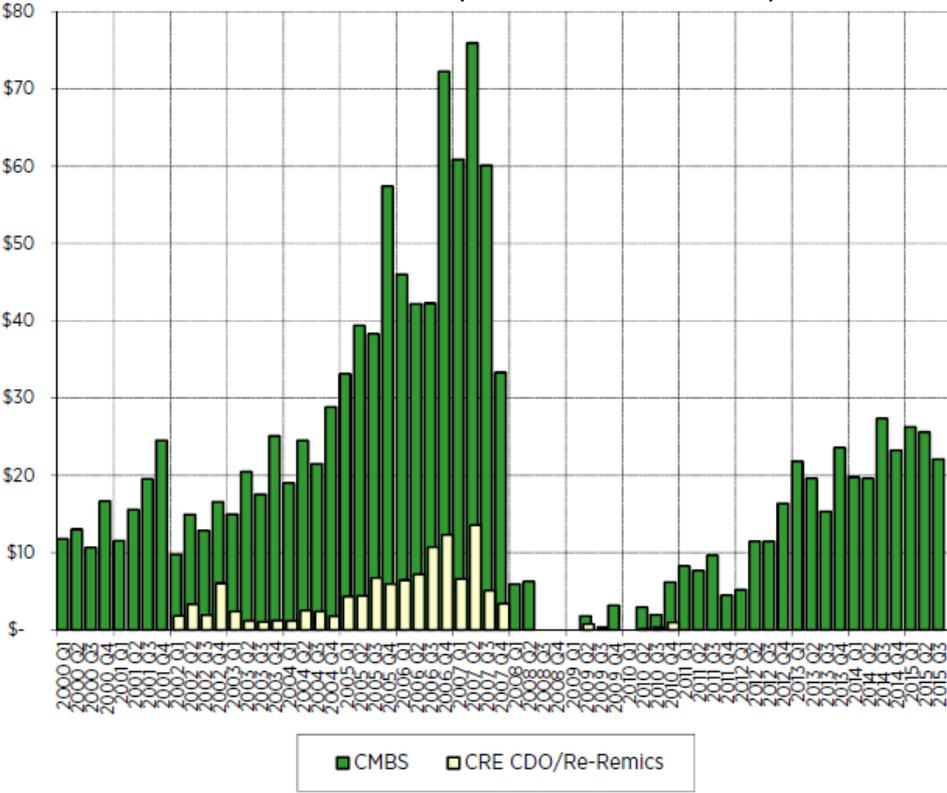


Source: Federal Reserve Economic Data.

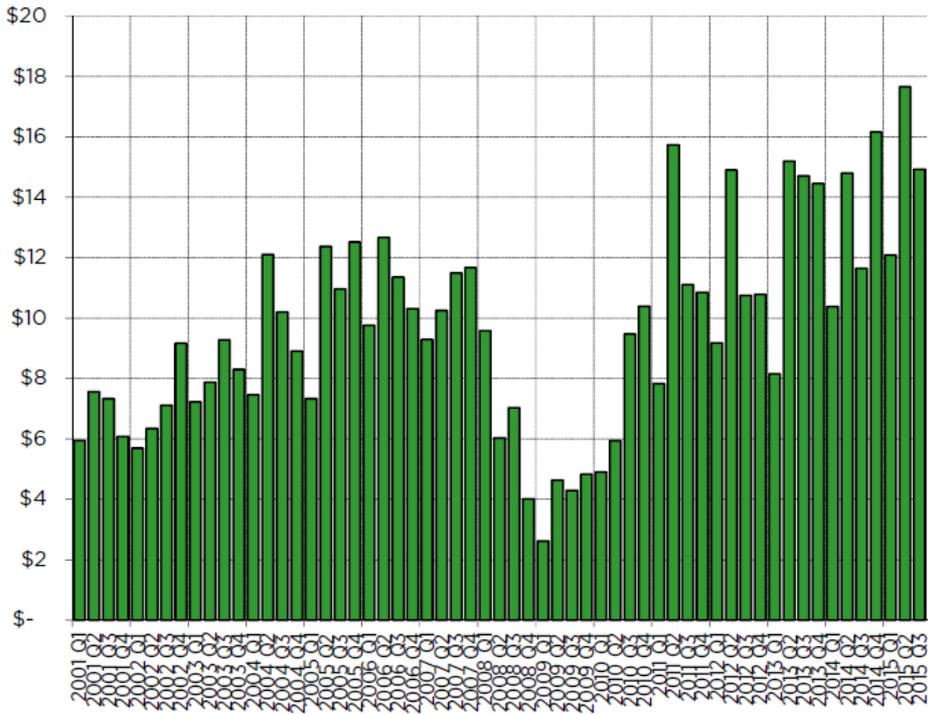


# The Capital Stack: New Loan Volume for CMBS and Insurance Companies

## CMBS Loan Volume (2000-2015Q3)



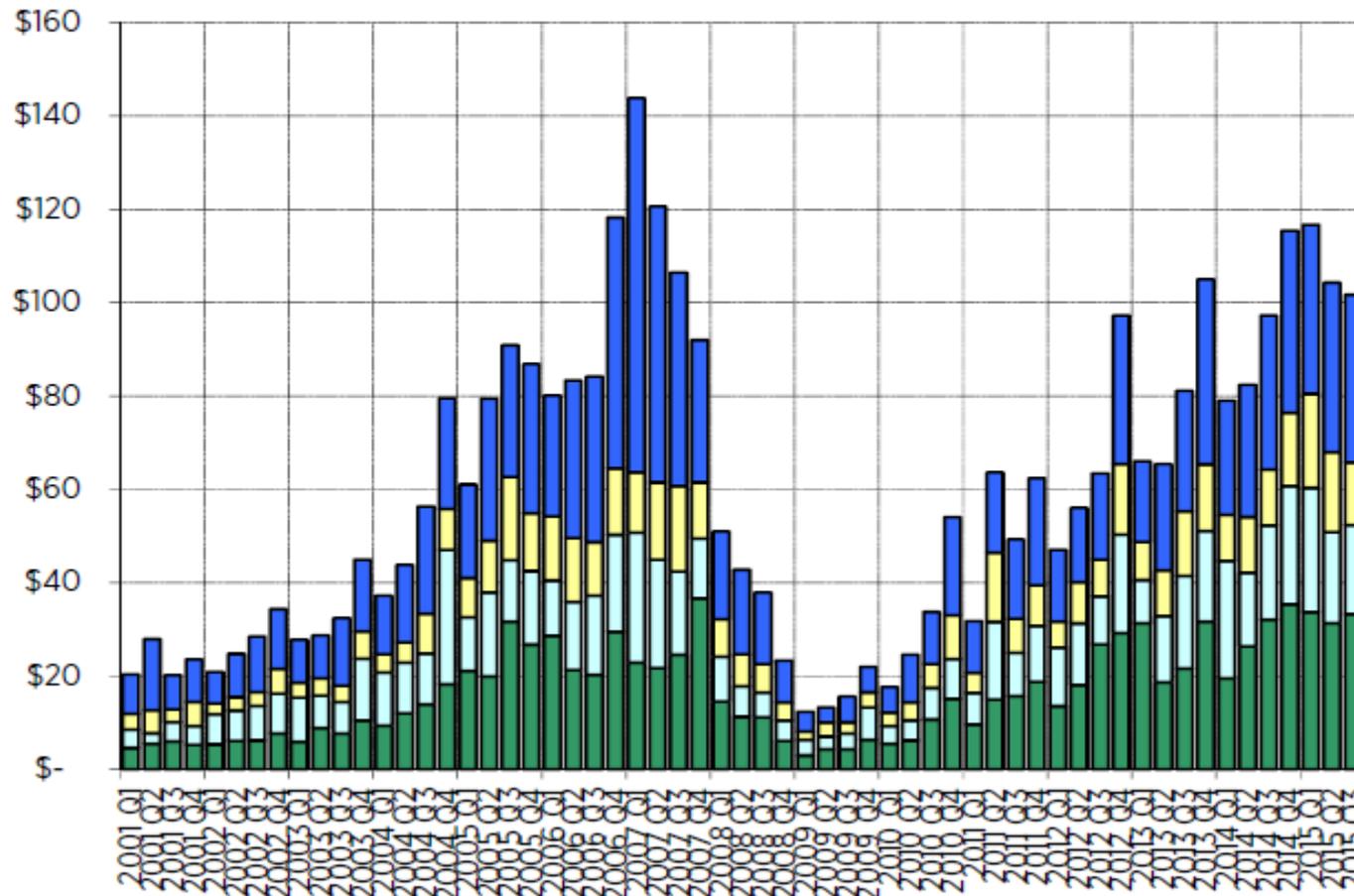
## LICO Loan Volume (2001-2015Q3)



Source: Mortgage Bankers Commercial/Residential Quarterly Databook, 2015Q3.

# The Capital Stack: Commercial real estate transaction volume is high

Billions of dollars, Properties and portfolios \$2.5 million and greater



Source: Mortgage Bankers Commercial/Residential Quarterly Databook, 2015Q3.



The Capital Stack: Equity interest in commercial real estate remains at or near five year highs based on Emerging Trends in Real Estate survey results

California Public Employees' Retirement System, a pension investment bell weather has raised its target allocation for real estate to 11%, which would require investing another \$7 billion in property. -- *Wall Street Journal, October 8, 2014, p. C12*

CALPERS asset allocation to real estate:

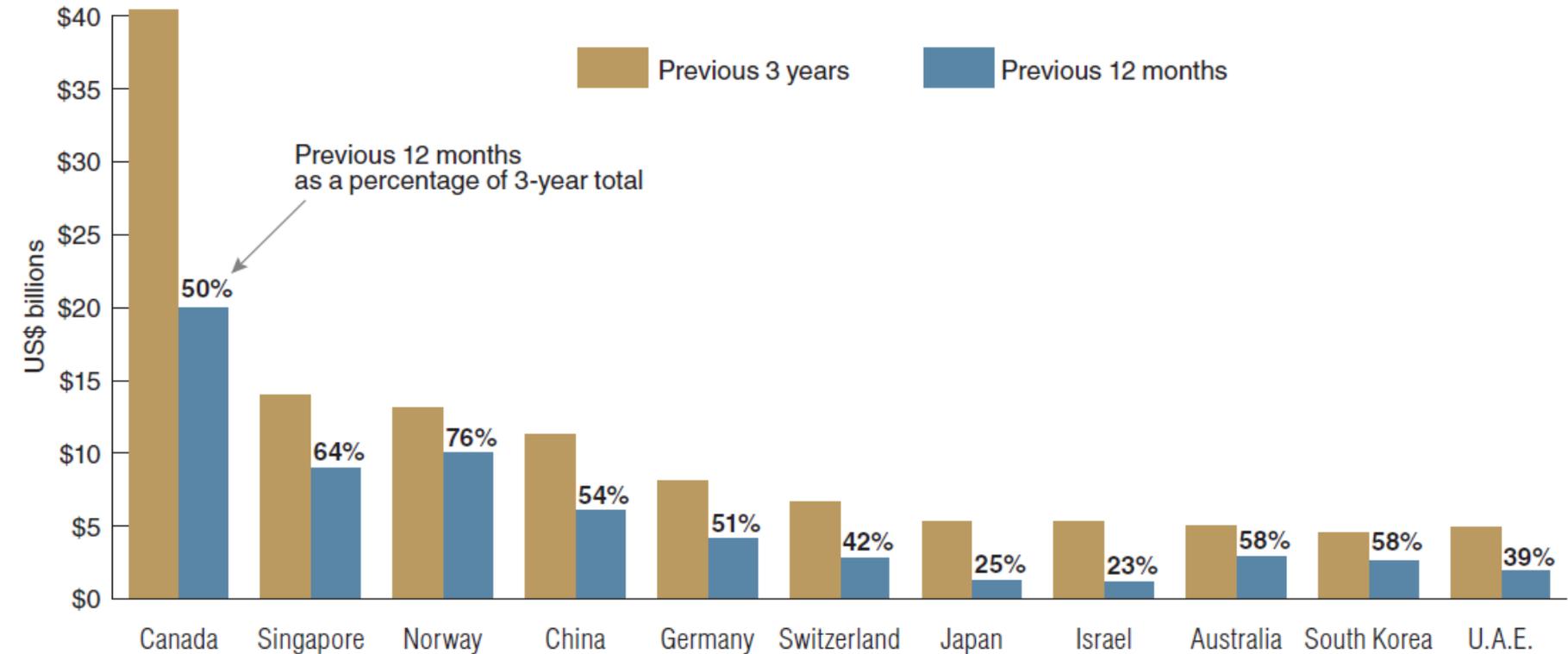
2007	8%
2011	9%
2015	11%

Source: Real Property Analytics webpage 1/9/16



# The Capital Stack: Foreign equity investment interest remains high and all equity investment group interest remains at or near five year highs

Exhibit 2-11 Global Investment in U.S. Real Estate by Country



Source: Real Capital Analytics, as of June 2015.

Source: ULI, *Emerging Trends in Real Estate, 2016*.

# The Capital Stack: What's in Your Portfolio? Private and public real estate investment returns continue to perform well

## Market Index Comparisons (through 2015Q3)

	1 Year	5 Year	10 Year	20 Year
National Property Index (NCREIF)	<b>13.5%</b>	12.6%	<b>8.0%</b>	9.8%
NAREIT	7.8%	11.9%	6.8%	<b>10.7%</b>
S&P 500 Index	-0.6%	<b>13.3%</b>	6.8%	8.2%
T-Bills	0.1%	0.8%	1.3%	2.5%
CPI	0.0%	1.7%	1.8%	2.2%

Source: NCREIF Real Estate Performance Report, 2015Q3 and Marquette University.

# The Capital Stack: What's in your portfolio? REITs outperform

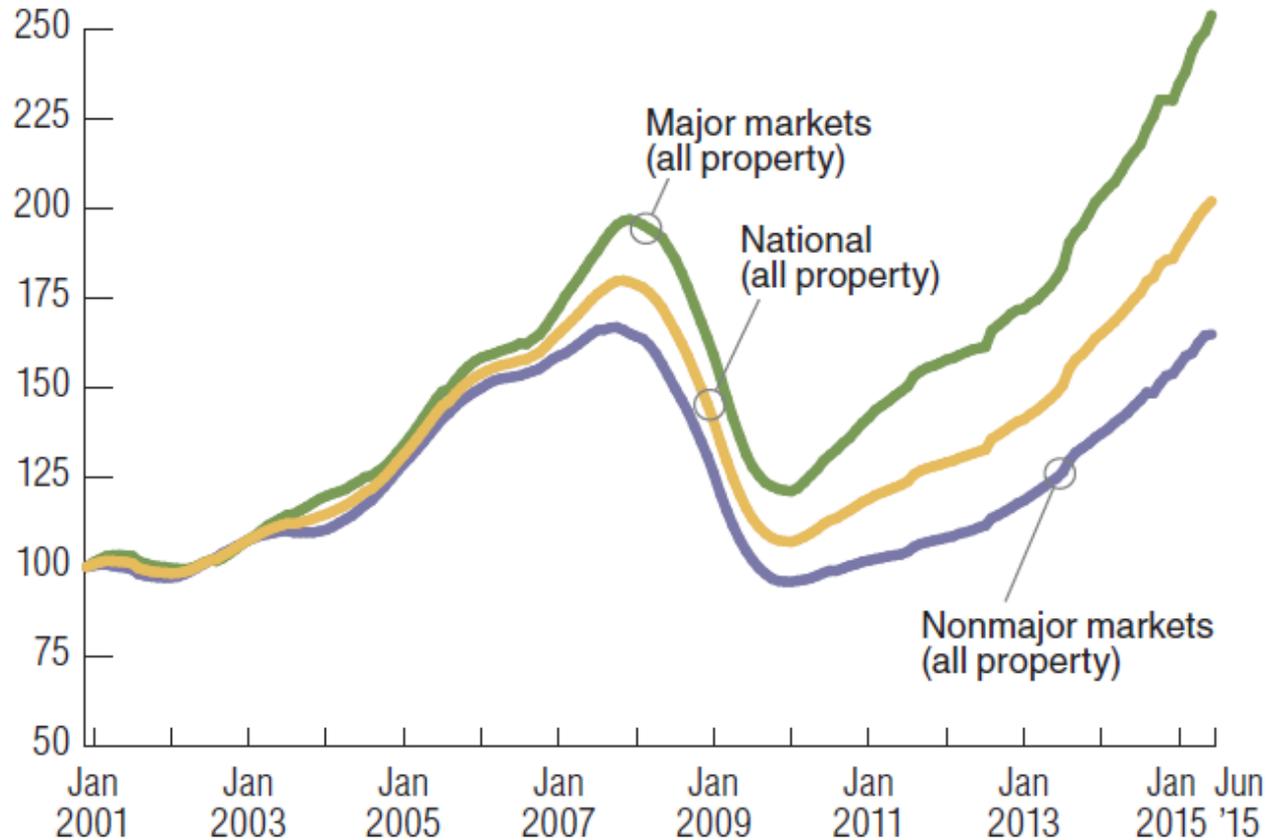
## Asset Class Returns

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
REIT 13.9%	HG Bnd 10.3%	EM 56.3%	REIT 31.6%	EM 34.5%	REIT 35.1%	EM 39.8%	HG Bnd 5.2%	EM 79.0%	REIT 28.0%	REIT 8.3%	REIT 19.7%	Sm Cap 38.8%	REIT 28.0%	REIT 2.8%
HG Bnd 8.4%	REIT 3.8%	Sm Cap 47.3%	EM 26.0%	Int'l Stk 14.0%	EM 32.6%	Int'l Stk 11.6%	Cash 1.4%	HY Bnd 57.5%	Sm Cap 26.9%	HG Bnd 7.8%	EM 18.6%	Lg Cap 32.4%	Lg Cap 13.7%	Lg Cap 1.4%
HY Bnd 4.5%	Cash 1.6%	Int'l Stk 39.2%	Int'l Stk 20.7%	REIT 12.2%	Int'l Stk 26.9%	AA 7.6%	AA -22.4%	Int'l Stk 32.5%	EM 19.2%	HY Bnd 4.4%	Int'l Stk 17.9%	Int'l Stk 23.3%	AA 6.9%	HG Bnd 0.6%
Cash 3.4%	HY Bnd -1.9%	REIT 37.1%	Sm Cap 18.3%	AA 8.9%	Sm Cap 18.4%	HG Bnd 7.0%	HY Bnd -26.4%	REIT 28.0%	HY Bnd 15.2%	Lg Cap 2.1%	Sm Cap 16.4%	AA 11.5%	HG Bnd 6.0%	Cash 0.1%
Sm Cap 2.5%	AA -3.8%	Lg Cap 28.7%	AA 14.1%	Lg Cap 4.9%	AA 16.7%	Lg Cap 5.5%	Sm Cap -33.8%	Sm Cap 27.2%	Lg Cap 15.1%	AA 0.3%	Lg Cap 16.0%	HY Bnd 7.4%	Sm Cap 4.9%	Int'l Stk -0.4%
AA -0.2%	EM -6.0%	HY Bnd 28.2%	Lg Cap 10.9%	Sm Cap 4.6%	Lg Cap 15.8%	Cash 4.4%	Lg Cap -37.0%	Lg Cap 26.5%	AA 13.5%	Cash 0.1%	HY Bnd 15.6%	REIT 2.9%	HY Bnd 2.5%	AA -1.3%
EM -2.4%	Int'l Stk -15.7%	AA 25.9%	HY Bnd 10.9%	Cash 3.2%	HY Bnd 11.8%	HY Bnd 2.2%	REIT -37.7%	AA 24.6%	Int'l Stk 8.2%	Sm Cap -4.2%	AA 12.2%	Cash 0.1%	Cash 0.0%	Sm Cap -4.4%
Lg Cap -11.9%	Sm Cap -20.5%	HG Bnd 4.1%	HG Bnd 4.3%	HY Bnd 2.7%	Cash 4.7%	Sm Cap -1.6%	Int'l Stk -43.1%	HG Bnd 5.9%	HG Bnd 6.5%	Int'l Stk -11.7%	HG Bnd 4.2%	HG Bnd -2.0%	EM -1.8%	HY Bnd -4.6%
Int'l Stk -21.2%	Lg Cap -22.1%	Cash 1.0%	Cash 1.4%	HG Bnd 2.4%	HG Bnd 4.3%	REIT -15.7%	EM -53.2%	Cash 0.2%	Cash 0.2%	EM -18.2%	Cash 0.1%	EM -2.3%	Int'l Stk -4.5%	EM -14.6%

Source: Novel Investor webpage, accessed 1/9/16.

# The Capital Stack: Secondary real estate markets continue to lag major markets

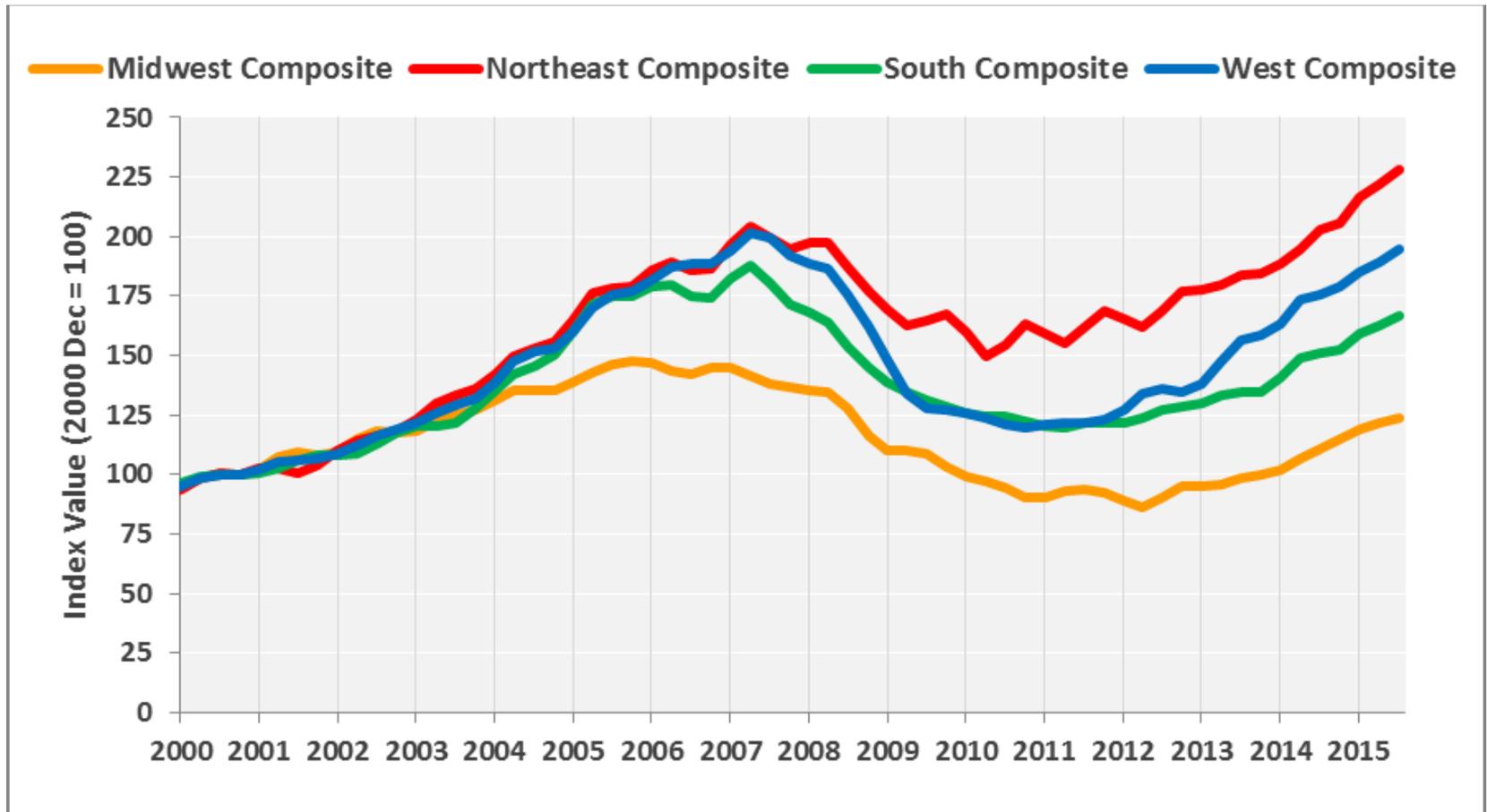
**Exhibit 2-3 Moody's/RCA Commercial Property Price Index, by Major/Nonmajor Markets**



Source: ULI Emerging Trends 2016

# The Capital Stack: The Midwest continues to lag the rest of the U.S.

U.S. Regional Type Quarterly Indices - Equal Weighted,  
Data through October of 2015



Source: Costar webpage, accessed 1/9/2016.



# Rates and the Capital Stack: Summary

## Interest rates will edge upward

- Short-term (Fed Funds) rate will go to 1.0% by year end
- Long-term rates (10 year UST) will increase to 2.75%

## Capital flows

- Debt capital flows will grow modestly as spreads are squeezed by competition
- Equity capital flow will remain robust



## Space Markets: Multifamily



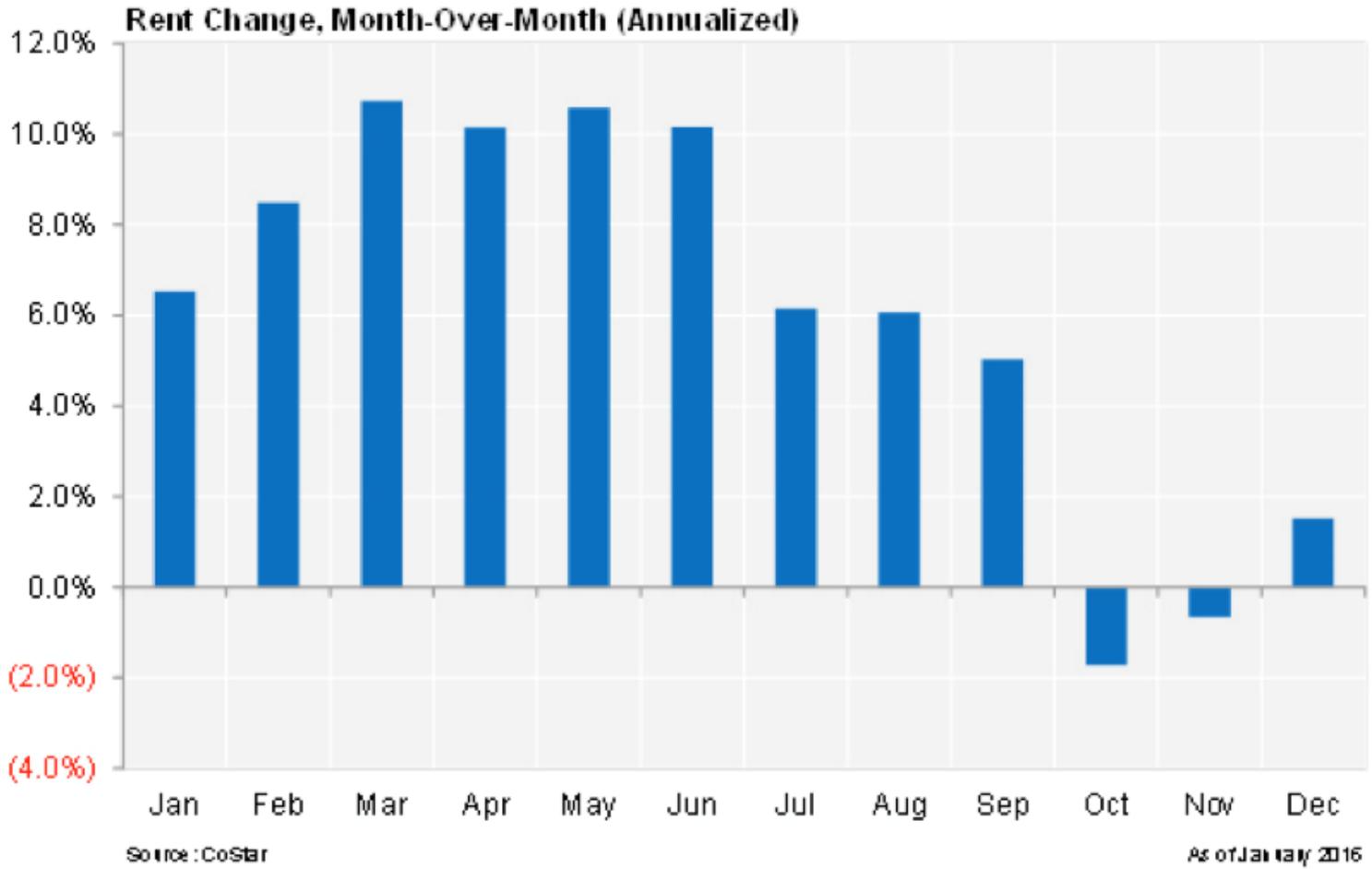
# Multifamily: Rents continue grow . . . .

## National Annual Effective Rent Growth



Source: Axiometrics December 2015 update.

Multifamily: . . . however, it is a rent growth tale of two halves for 2015



Source: Costar webpage, accessed 1/9/2016.

# Multifamily: Class A supply is growing rapidly softening Class rent growth

## Trading Places

Rent growth in so-called Class B and Class C apartment buildings—home largely to middle- and working-class families—now outpaces increases in luxury Class A buildings. Annual effective rent growth, quarterly data:

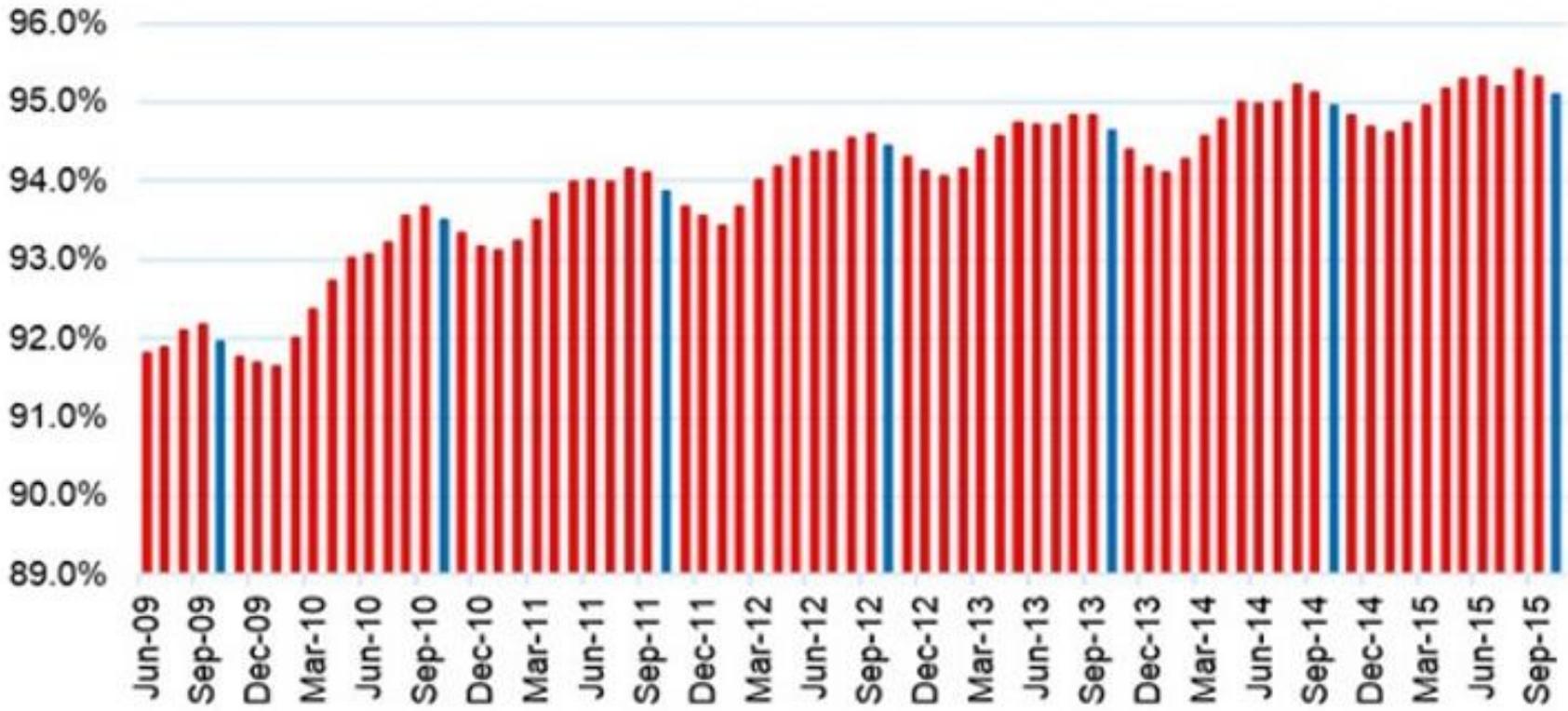


Source: Axiometrics Inc.

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# Multifamily: Occupancy rates are stabilizing at a high rate

## National Occupancy Rate

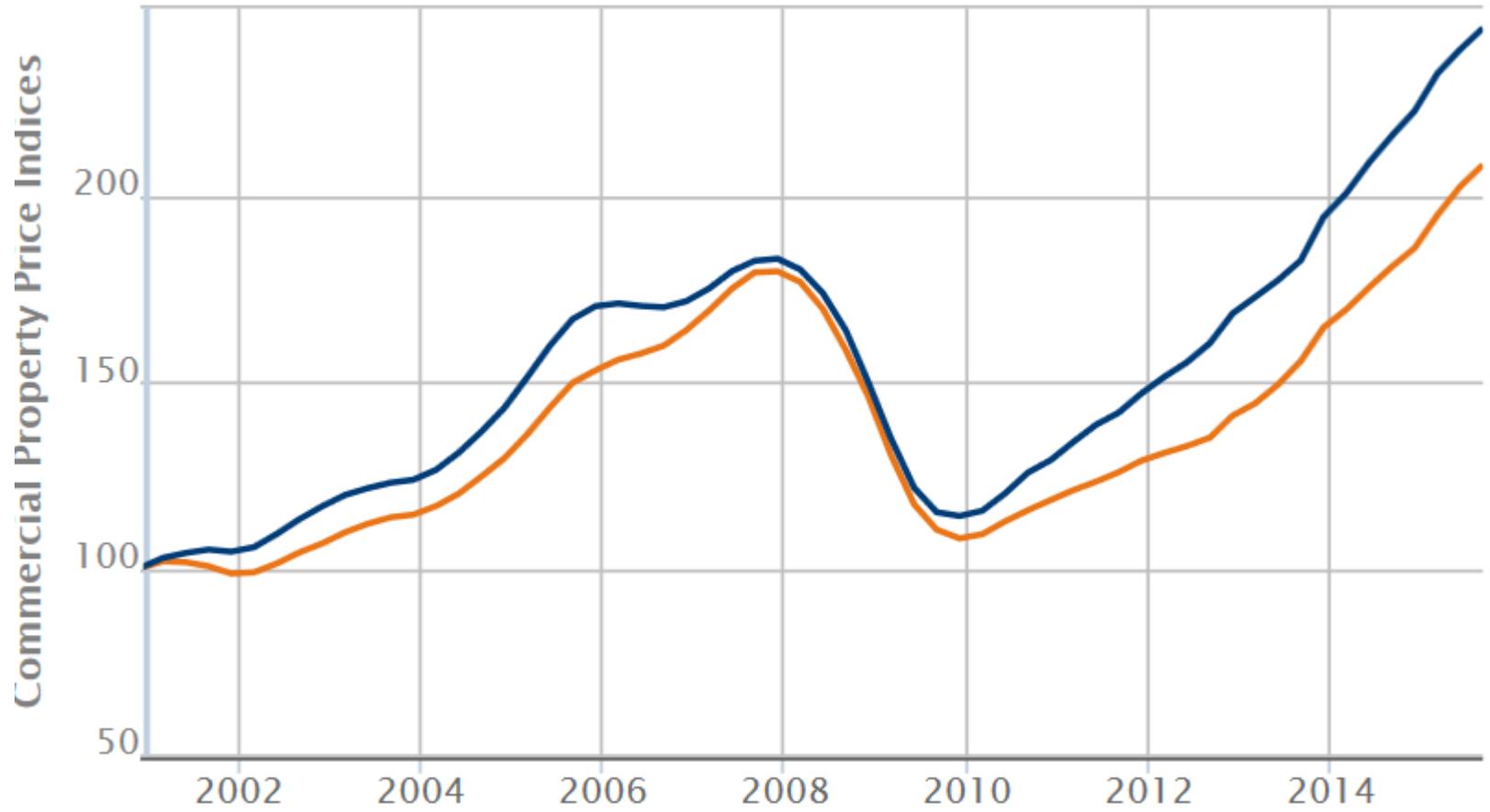


Source: Axiometrics December 2015 Update.

# Multifamily: Multifamily returns have outpaced the other property types

## Multifamily Property Price Index Relative to All Property Index

— All Property — Multifamily

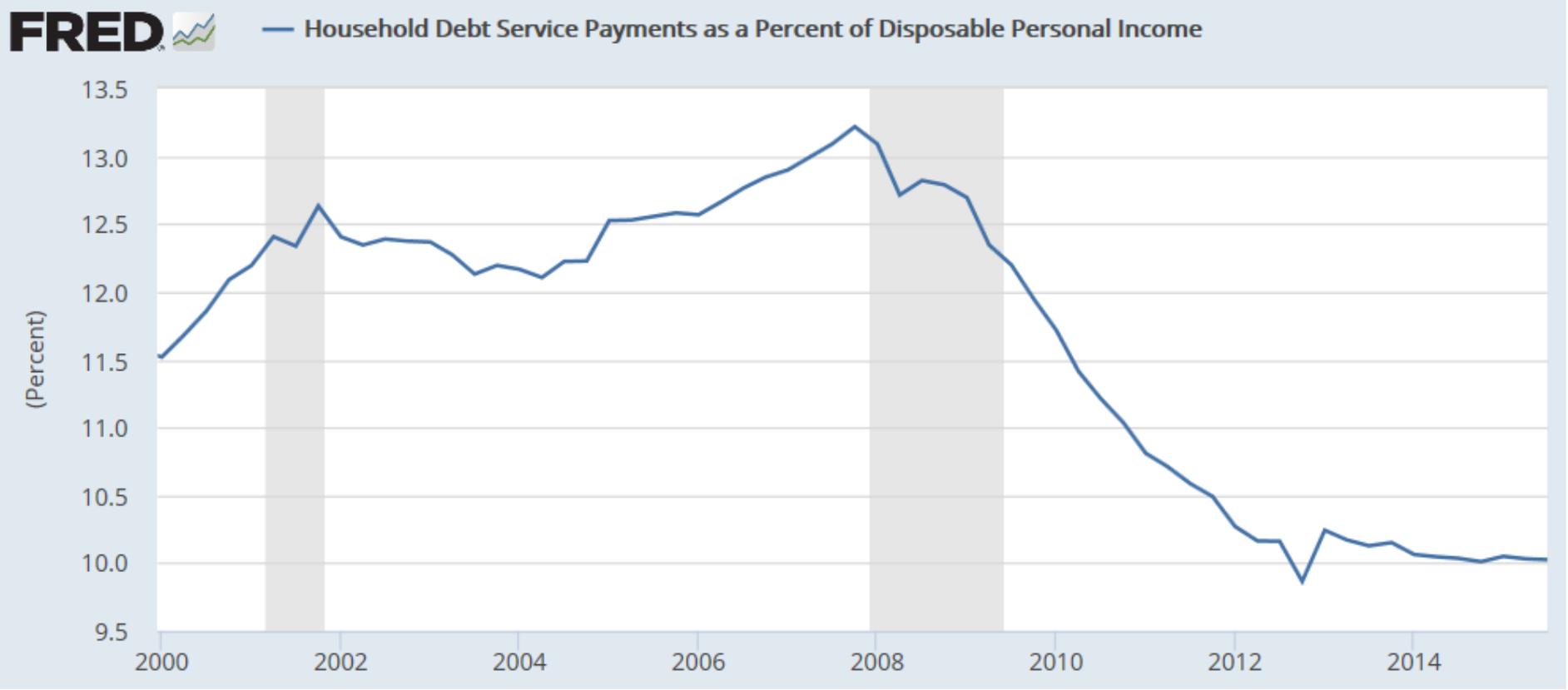


© 2015 Real Capital Analytics. mrcppi=Moody's/RCA CPPI  
Source: Real Property Analytics webpage, accessed 1/10/2016.

## Space Markets: Retail

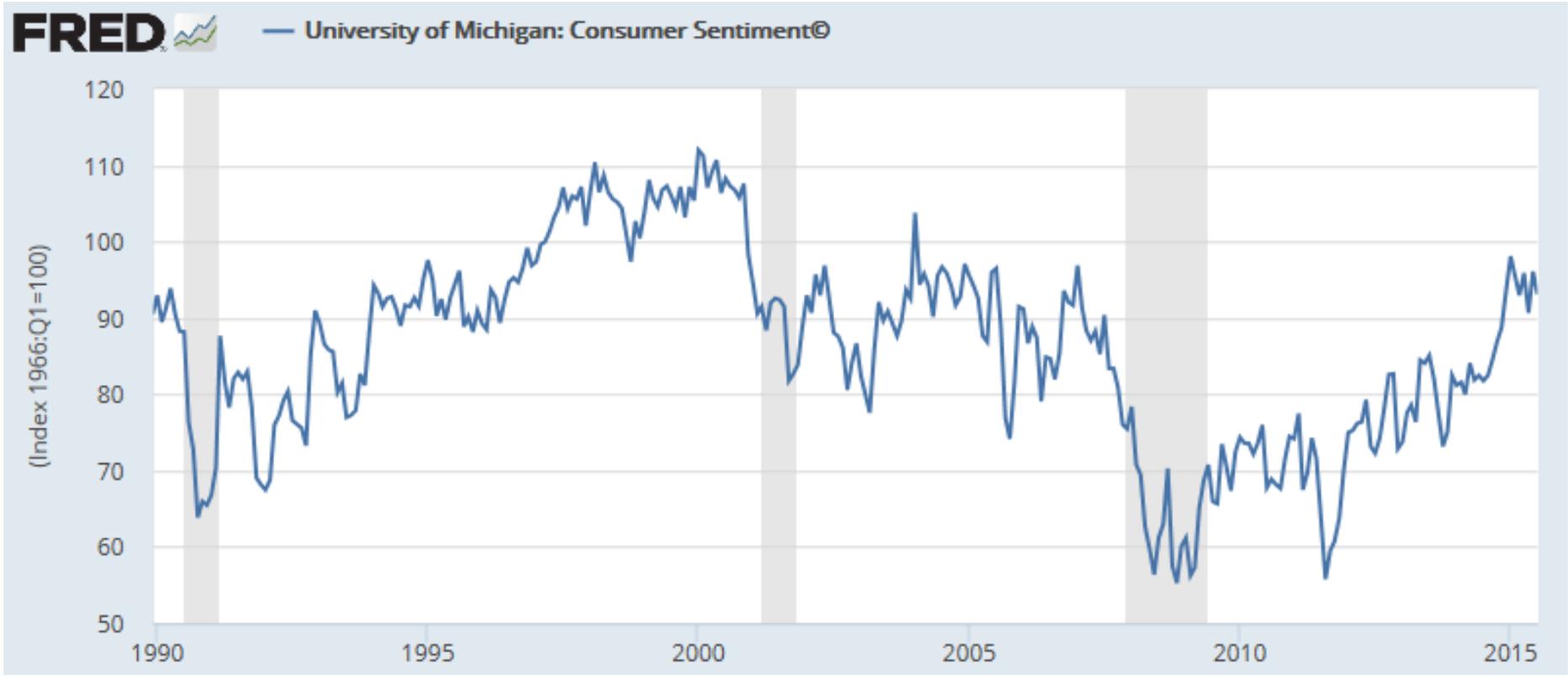


Retail: As mentioned earlier, consumers have dry power . . . . .



Source: Federal Reserve Economic Data.

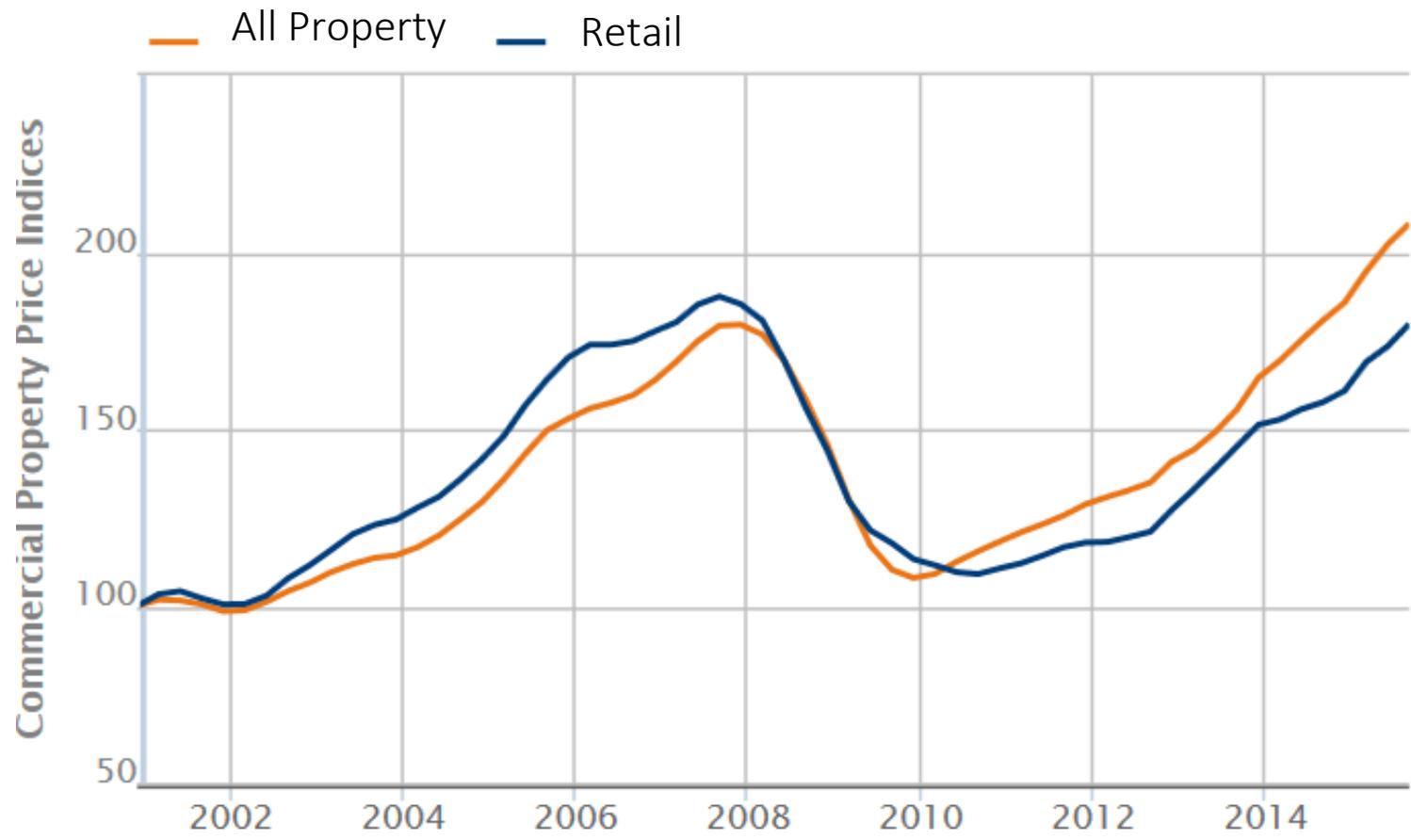
Retail: . . . . and are feeling positive about their prospects



Source: Federal Reserve Economic Data.

Retail: Retail property returns have echoed national trends, but slightly underperformed

Retail Property Price Index Relative to All Property Index



© 2015 Real Capital Analytics. mrcppi=Moody's/RCA CPPI

Source: Real Property Analytic webpage, accessed 1/10/2016

# Retail: Local market statistics

## Total Retail Market Statistics (YTD 2015Q3)

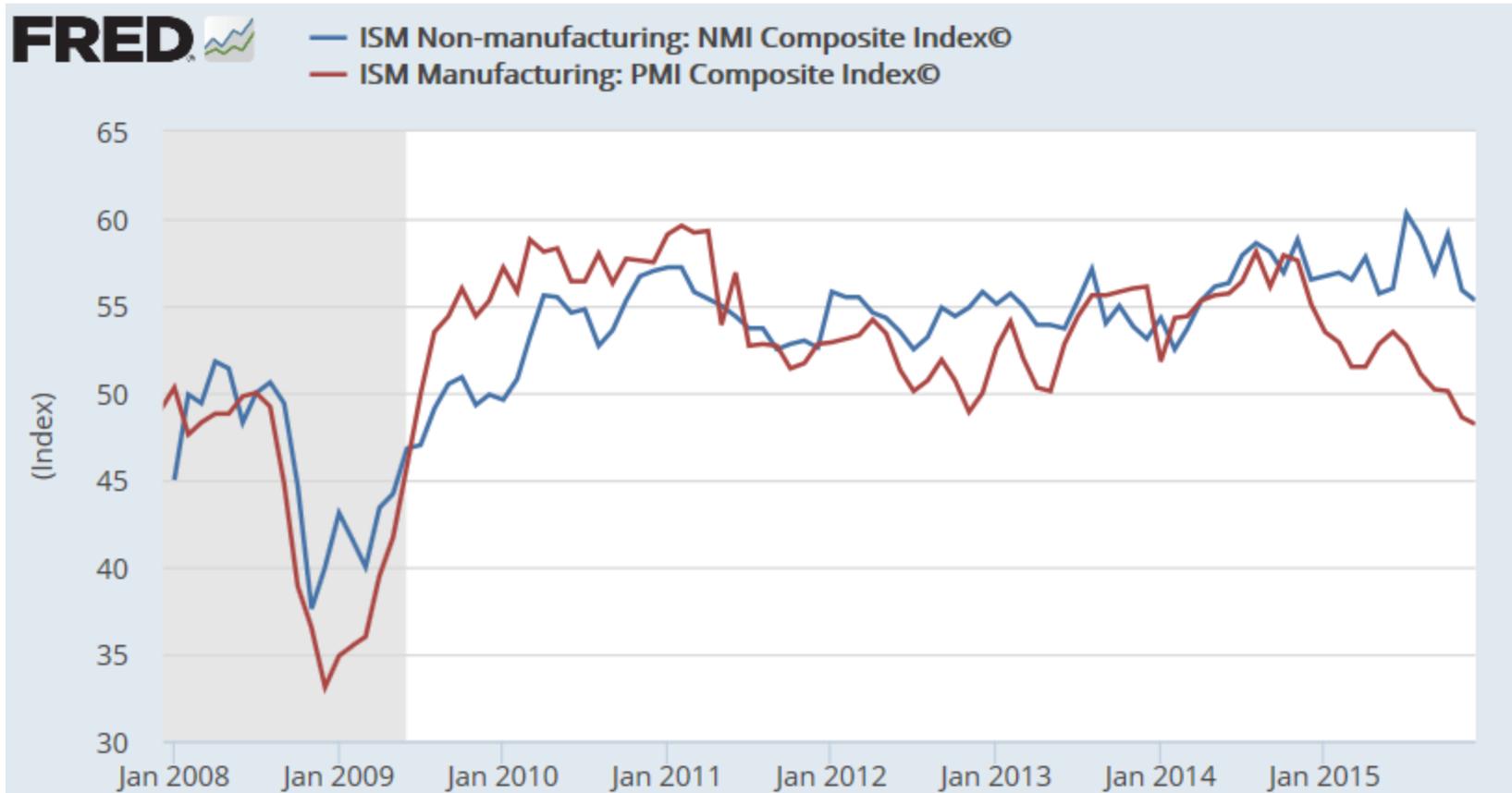
Market	Rentable Area	YTD Net Absorption	Percent Net Absorption	Vacancy Rate	Quoted Rates
Chicago	160,307	989	0.62%	12.10%	\$15.14
Cleveland	63,220	693	1.10%	10.50%	\$10.19
Indianapolis	39,866	146	0.37%	10.80%	\$11.58
Milwaukee	35,761	153	0.43%	10.40%	\$10.97
Minneapolis	53,729	422	0.79%	8.50%	\$13.08
St. Louis	55,259	358	0.65%	9.40%	\$11.73
National	4,247,186	27,953	0.66%	8.90%	\$14.31

Source: Costar Retail Report 2015Q3 and Marquette University.



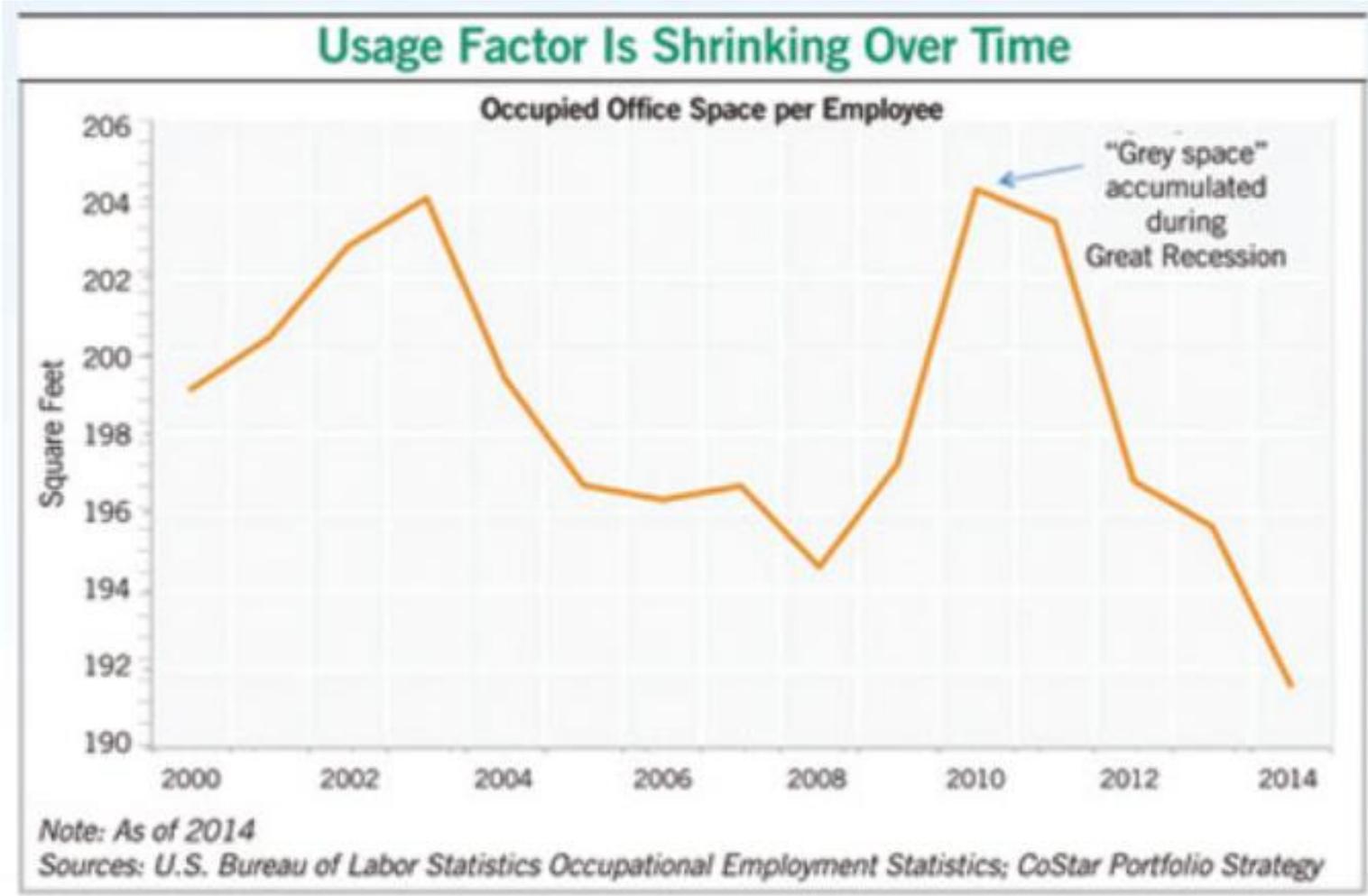
## Space Markets: Office and Industrial

Office and Industrial: The service sector remains promising, however, the manufacturing sector is not trending well (90% of jobs last year were created in the service sector)



Source: Federal Reserve Economic Data, and WSJ, 1/9-10, 2016, p. A2.

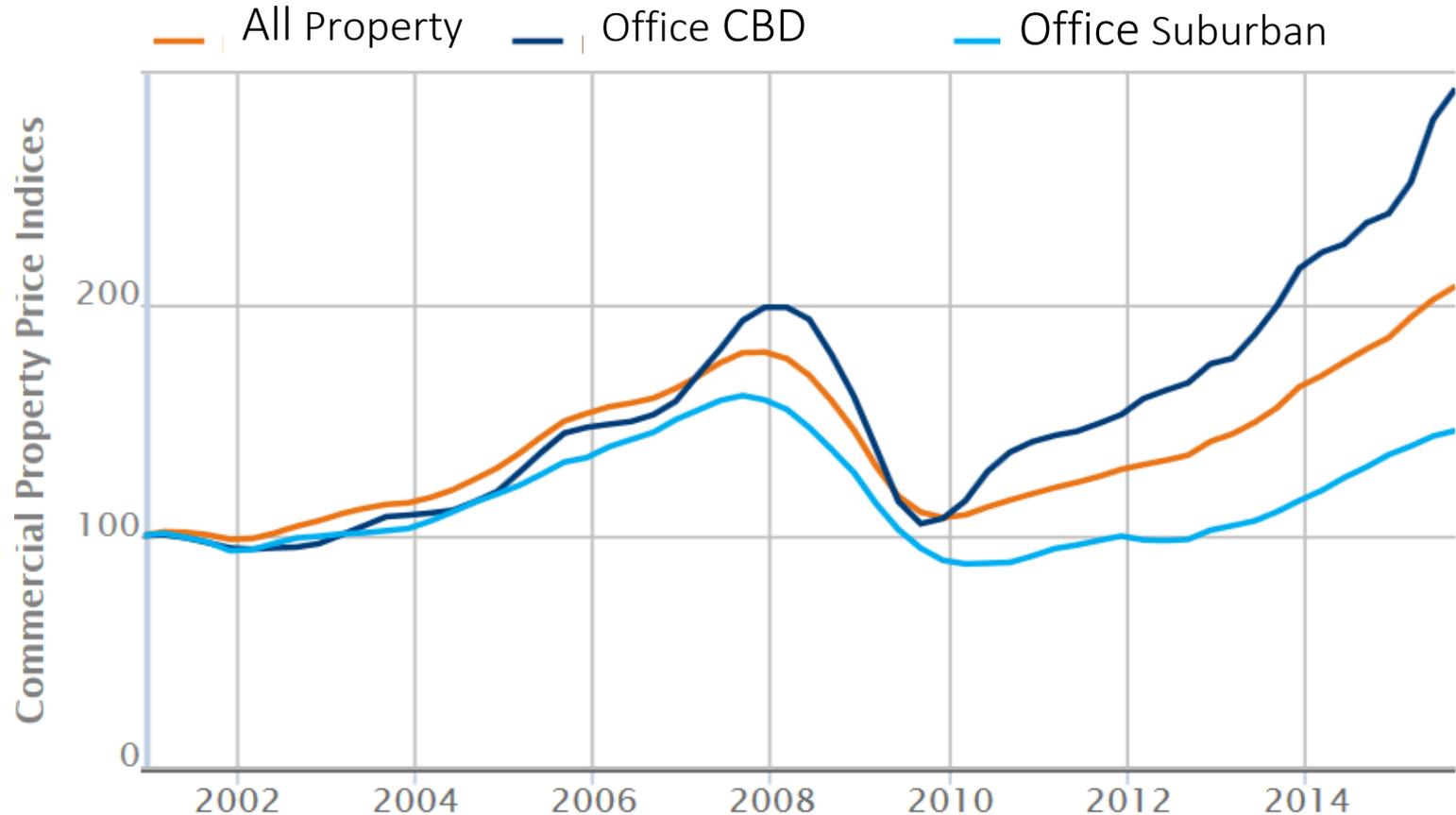
# Office: Space per employee continues its downward march



Source: NAIOP webpage, accessed 1/10/016.

# Office: Property price indices reflect Millennial preferences to live and work in urban areas

## Office Property Price Index Relative to All Property Index



© 2015 Real Capital Analytics. mrcppi=Moody's/RCA CPPI

Source: Real Property Analytics webpage, accessed 1/10/2016.

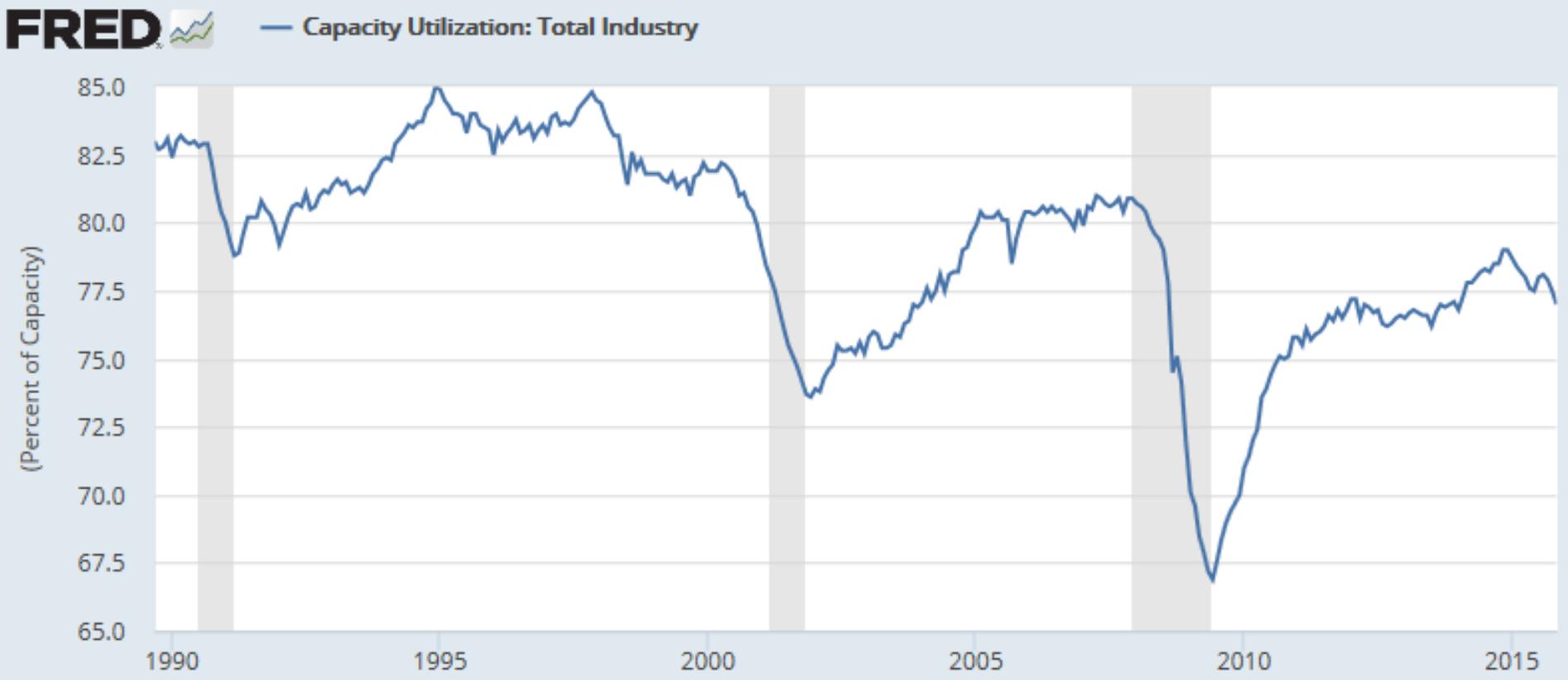
# Office: Local Market Statistics

## Total Office Market Statistics (YTD 2015Q3)

Class A Market	Rentable Area	YTD Net Absorption	Percent Net Absorption	Vacancy Rate	Quoted Rates
Chicago	174,276	1,180	0.68%	14.90%	\$26.45
Cleveland	24,673	68	0.28%	10.80%	\$21.32
Indianapolis	26,555	392	1.48%	10.00%	\$19.14
Milwaukee	13,556	295	2.18%	8.10%	\$18.02
Minneapolis	49,281	950	1.93%	7.60%	\$24.77
St. Louis	40,397	(13)	-0.03%	8.80%	\$21.85
<b>National</b>	<b>3,322,866</b>	<b>46,512</b>	<b>1.40%</b>	<b>12.00%</b>	<b>\$29.26</b>
Class B Market	Rentable Area	YTD Net Absorption	Percent Net Absorption	Vacancy Rate	Quoted Rates
Chicago	211,839	445	0.21%	13.30%	\$20.79
Cleveland	73,690	585	0.79%	12.30%	\$16.31
Indianapolis	52,589	163	0.31%	7.40%	\$16.22
Milwaukee	47,851	45	0.09%	10.70%	\$15.50
Minneapolis	99,070	382	0.39%	9.70%	\$16.50
St. Louis	59,959	(139)	-0.23%	12.80%	\$16.99
<b>National</b>	<b>4,909,584</b>	<b>27,526</b>	<b>0.56%</b>	<b>11.10%</b>	<b>\$20.58</b>

Source: Costar Office Report 2015Q3 and Marquette University.

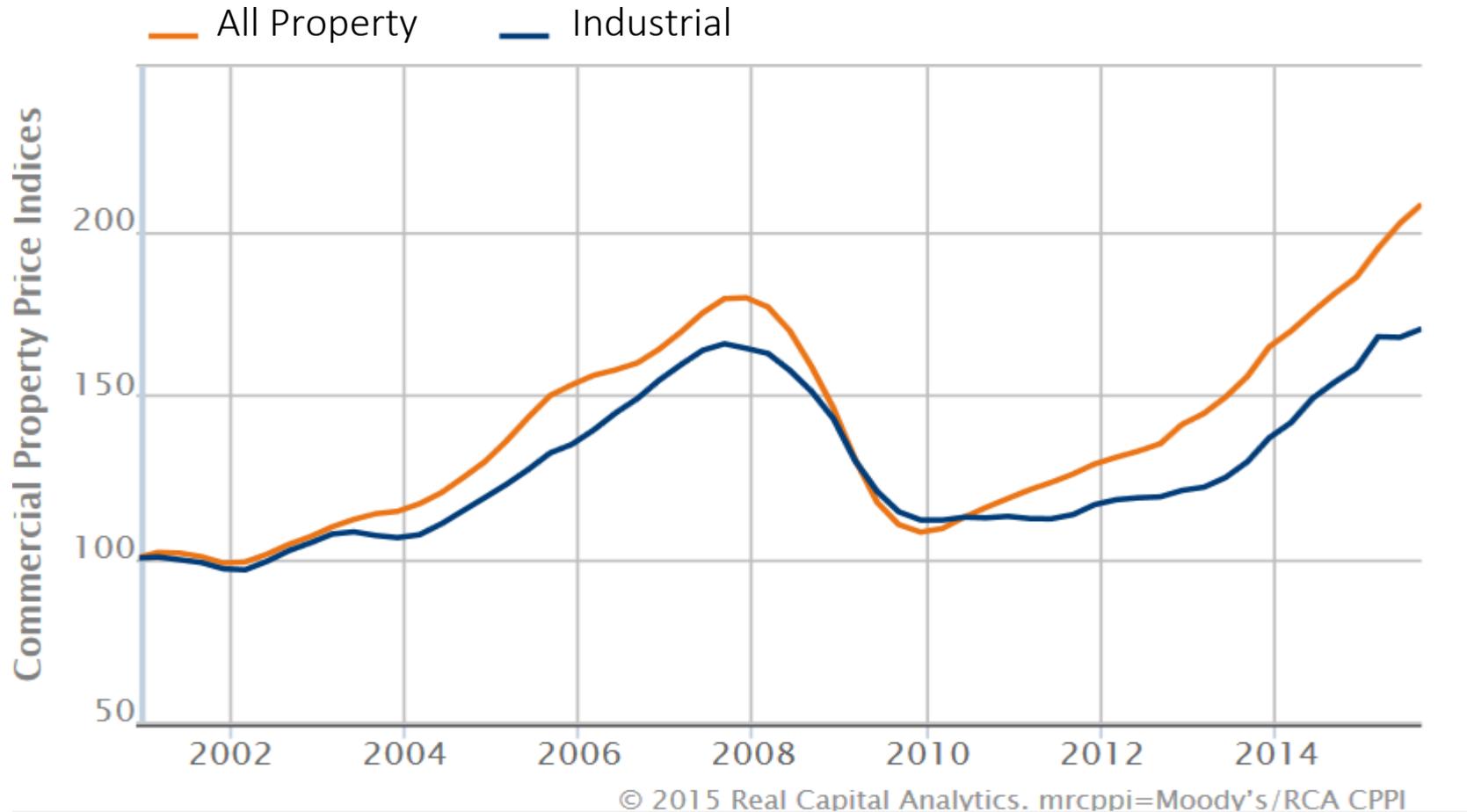
Industrial: Capacity utilization has slipped 1.5 point since peaking in December 2014, a clear negative sign for industrial space demand



Source: Federal Reserve Economic Data

Industrial: Industrial prices have echoed national trends with some slippage in 2015

## Industrial Property Price Index Relative to All Property Index



Source: Real Property Analytics webpage, accessed 1/10/2016.

## Industrial: Local market statistics.

### Total Industrial Market Statistics (YTD 2015Q3)

Market	Rentable Area	YTD Net Absorption	Percent Net Absorption	Vacancy Rate	Quoted Rates
Chicago	1,159,260	13,975	1.21%	7.20%	\$5.55
Cleveland	483,887	2,255	0.47%	5.60%	\$3.82
Indianapolis	318,346	4,359	1.37%	8.20%	\$4.10
Milwaukee	318,818	(405)	-0.13%	6.20%	\$4.33
Minneapolis	377,329	2,346	0.62%	6.50%	\$6.34
St. Louis	263,359	1,105	0.42%	6.80%	\$4.14
National	21,441,010	211,190	0.98%	6.70%	\$5.69

Source: Costar Industrial Report 2015Q3 and Marquette University.

# Summary

## Demographics

- Think unmarried, minority, urban, renters

## Employment and GDP

- Employment gains will soften across the year
- GDP will be driven by the almighty U.S. consumer

## Rates and Returns

- Long-term debt rates will increase by (0.25-0.50%) with solid liquidity
- Equity will remain abundant with cap rates stabilizing at current low rates

## Space Markets

- Apartments and retail will be best in class
- Industrial and office will lag



# NAIOP

COMMERCIAL REAL ESTATE  
DEVELOPMENT ASSOCIATION

**CHICAGO CHAPTER**

## 2016 Market Update and Forecast

Mark J. Eppli

Bell Chair in Real Estate

Marquette University

January 12, 2016

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DEVELOPMENT ASSOCIATION

CHICAGO CHAPTER

## 2016 Real Estate Forecast

Guest Speaker:  
**Mark J. Eppli**

*Robert B. Bell, Sr., Chair in Real Estate  
and Professor of Finance  
Marquette University*

