

# **THE ECONOMY IN 2019: TERIFFIC, TEPID OR TERRIBLE?**

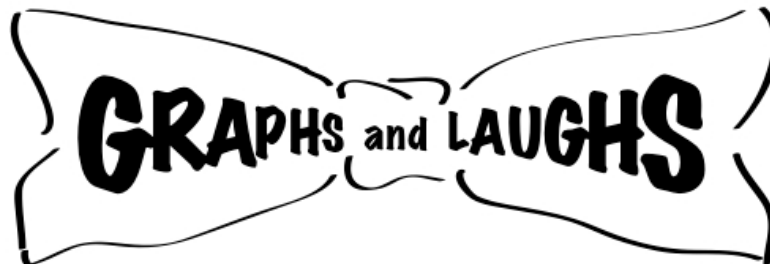
Presented by:

Elliot F. Eisenberg, Ph.D.

President: GraphsandLaughs, LLC

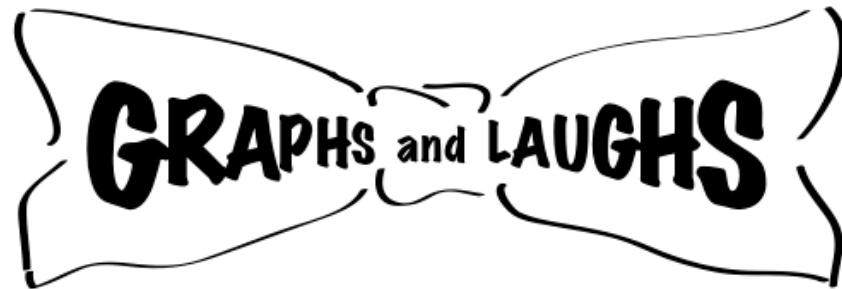
July 22, 2019

Austin, TX



# The Economy is Solid!

$$\text{GDP} = C + I + G + (X - M)$$



# The Stock Market Is Doing Relatively Well

Despite numerous stressors

**FRED**  — S&P 500



*Shaded areas indicate U.S. recessions*

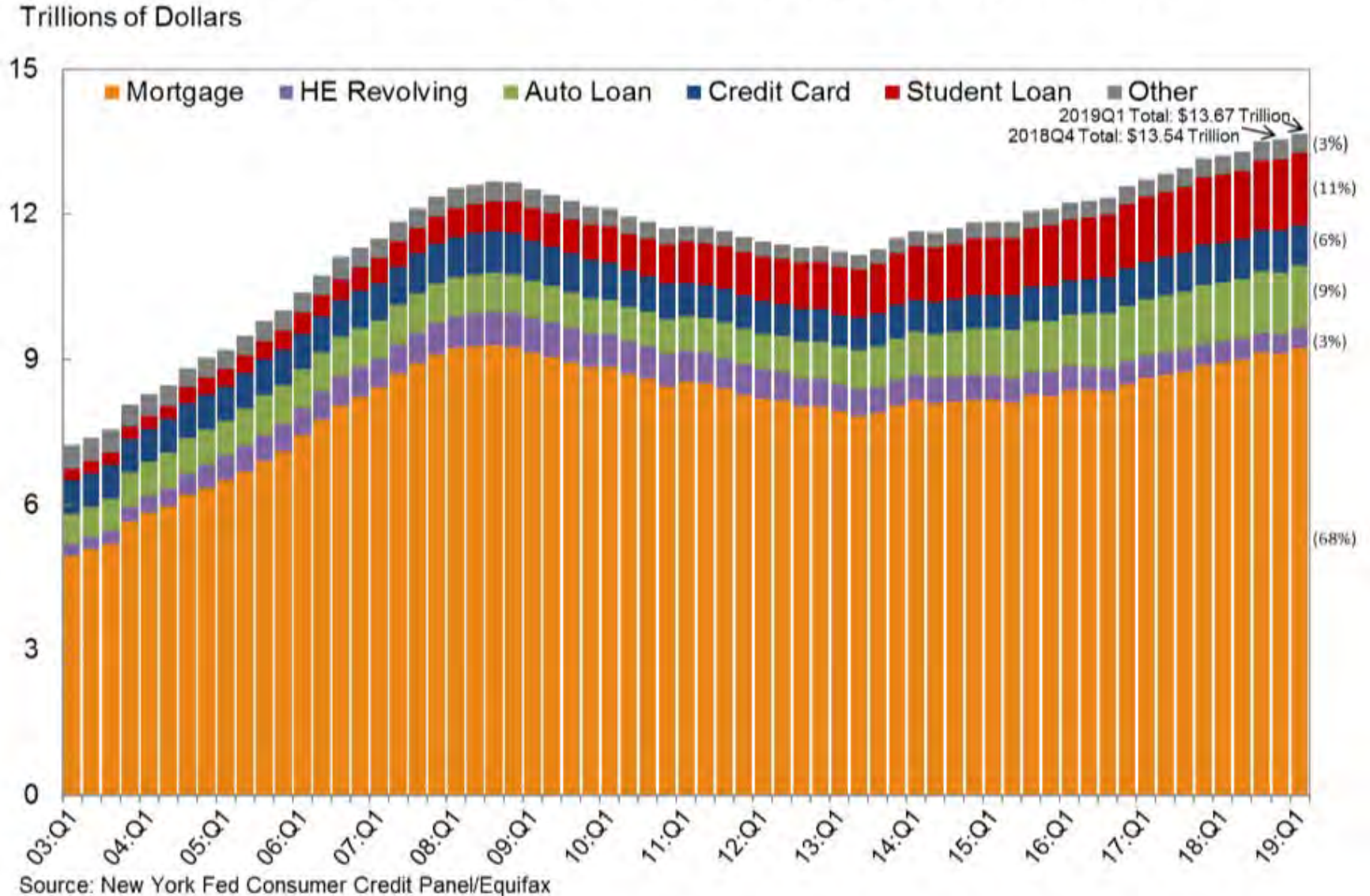
Source: S&P Dow Jones Indices LLC

[myf.red/g/ogTO](https://myf.red/g/ogTO)

# Households Are Re-Leveraging


Mortgage debt remains slightly below the 2008 peak. Total debt is 6.9% higher

## Total Debt Balance and its Composition



# Households Balance Sheets Look Pretty Good

Less high interest revolving debt

**FRED**  — Household Financial Obligations as a percent of Disposable Personal Income



Shaded areas indicate U.S. recessions. Source: Board of Governors of the Federal Reserve System (US)

[myf.fred/g/og6e](https://myf.fred.stlouisfed.org/og6e)


# Bloomberg Comfort Index is Near a Peak

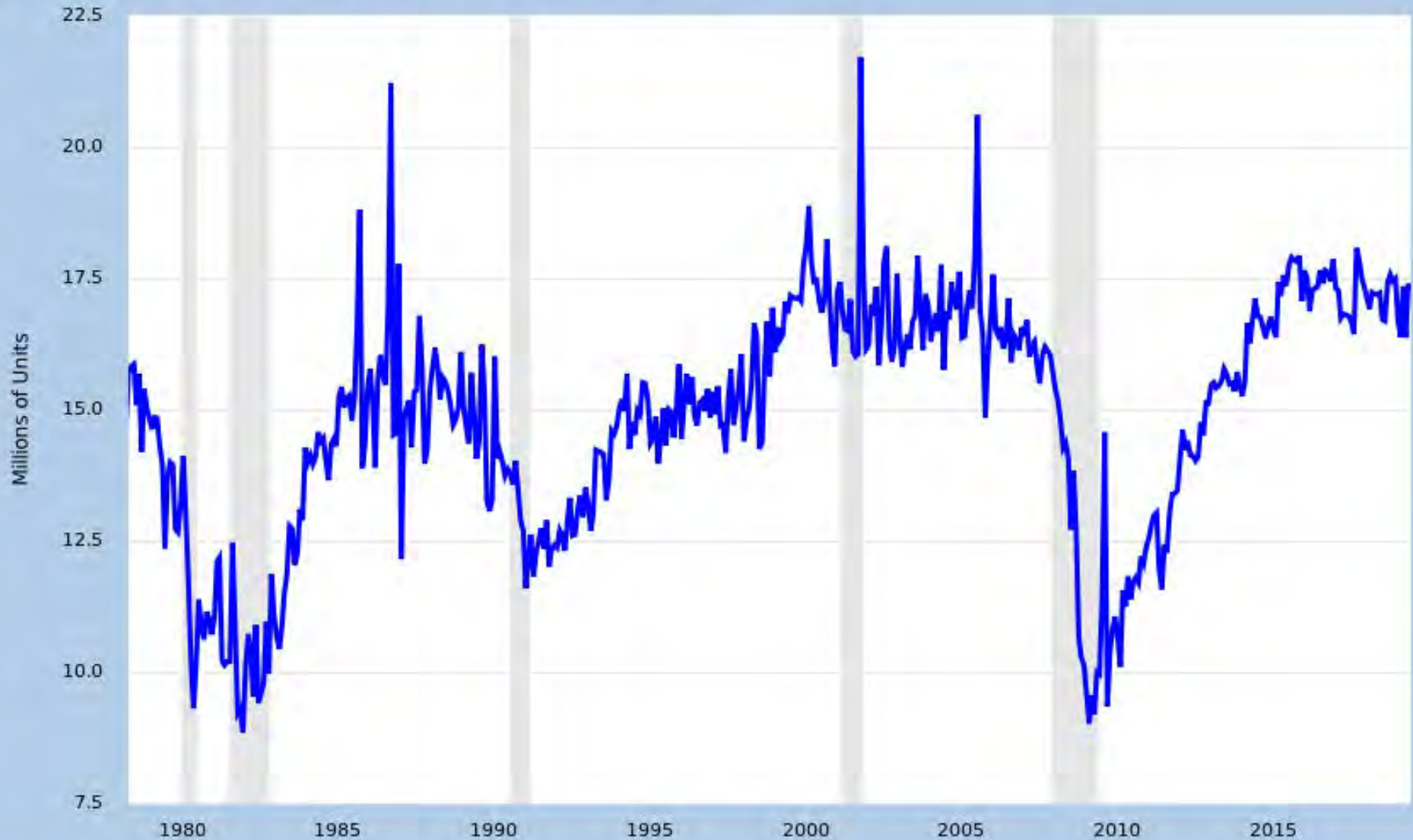
Index is near a 20 year high!



# US Light Vehicle Sales Slow Slightly

No records will be set this year. But, no problems either

**FRED**  — Light Weight Vehicle Sales: Autos and Light Trucks



*Shaded areas indicate U.S. recessions*

Source: U.S. Bureau of Economic Analysis

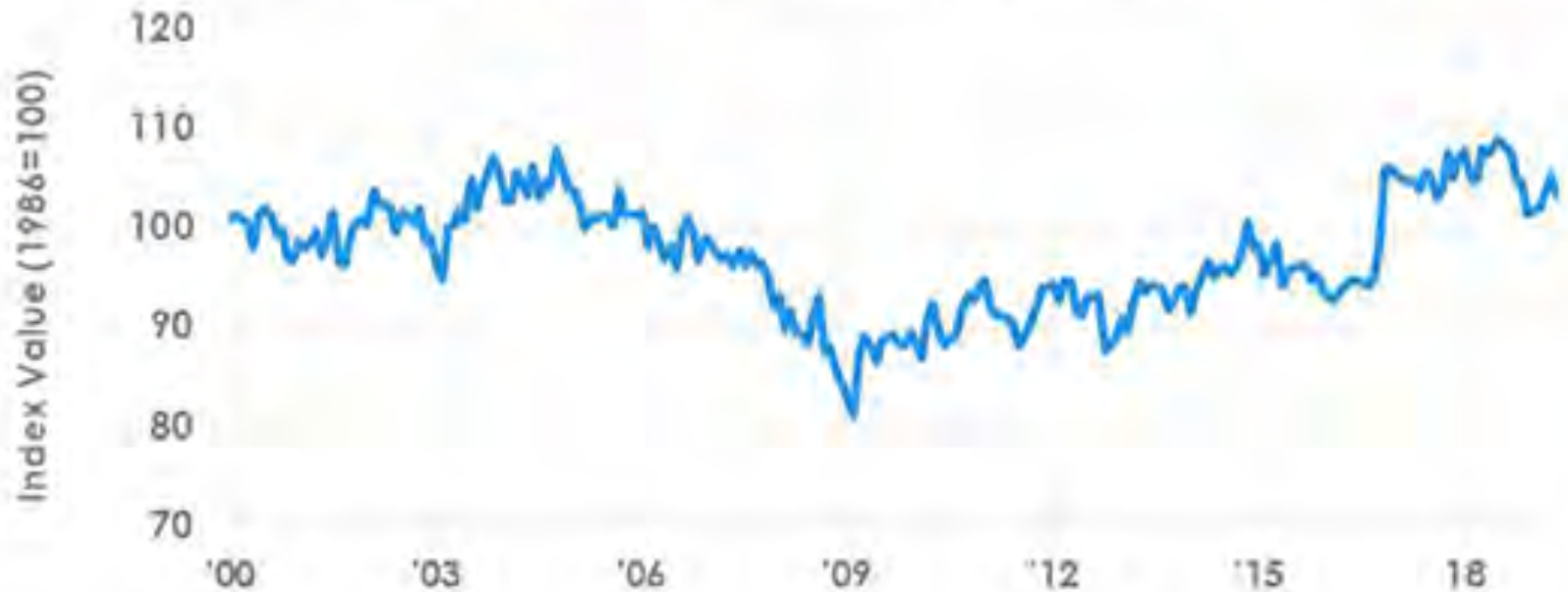
[myf.fred/g/okpc](https://myf.fred.stlouisfed.org/g/okpc)

# Small Business Confidence Remains Strong

Decline is reversing and it remains above long-term average of 98

## Small Business Optimism Index at 103.3

Based on 10 survey indicators, seasonally adjusted, Jan. '00 – Jun. '19

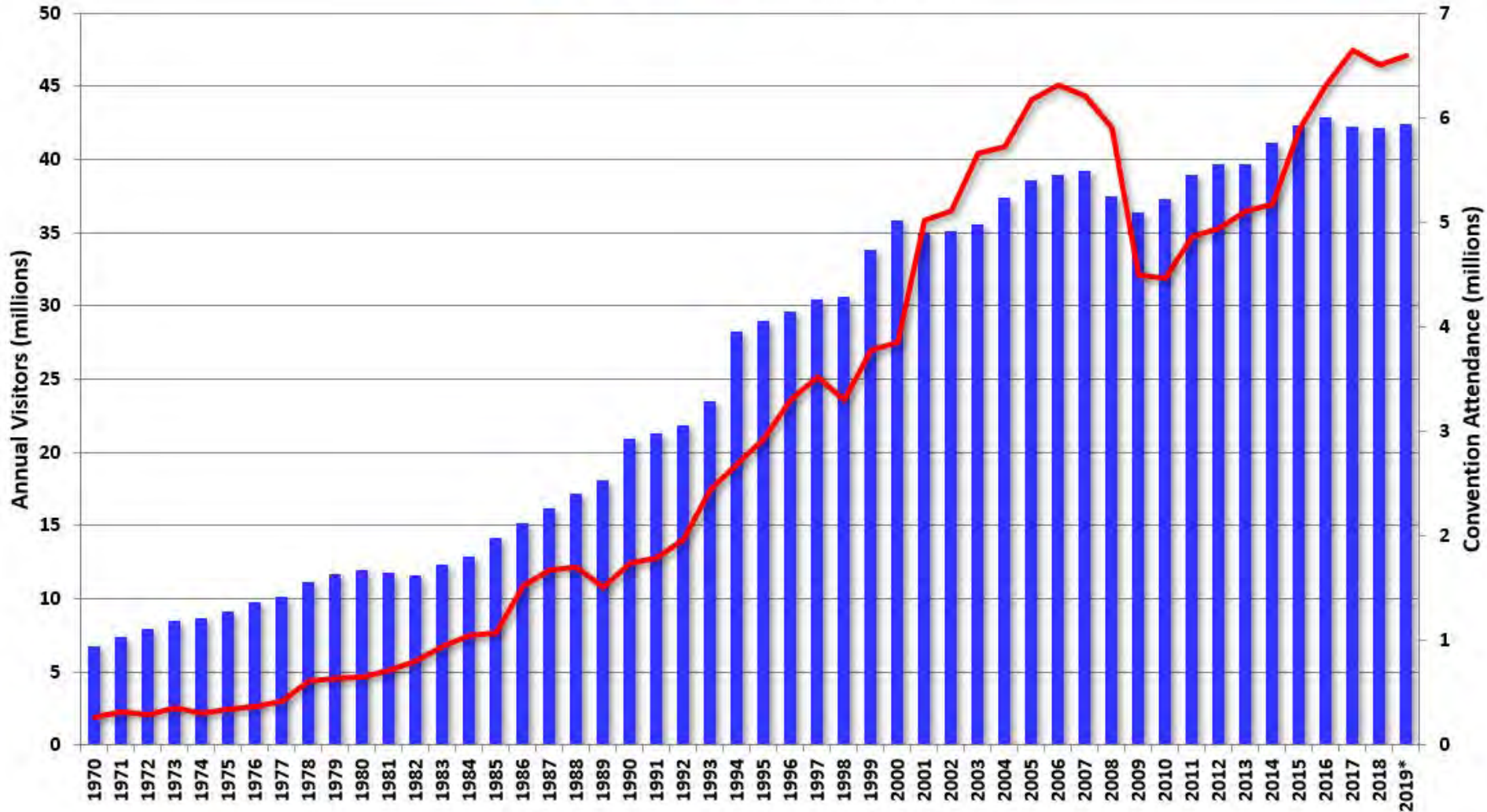


# Las Vegas Attendance Is Flat

The gamblers are generally back along with the conventioners

### Las Vegas Visitors

Visitors Convention Attendance



\*2019 Annualized

<http://www.calculatedriskblog.com/>

# Housing Improvements & Repairs Rise Very Slowly

Homes are aging, rates are higher, home equity growth slows

## Leading Indicator of Remodeling Activity – Second Quarter 2019


Homeowner Improvements & Repairs  
Four-Quarter Moving Totals  
Billions



Note: Historical estimates since 2017 are produced using the LIRA model until American Housing Survey benchmark data become available.

# Annual Y-o-Y Percent Change in PCE

A very solid growth rate of about 2.5%

**FRED**  — Real Personal Consumption Expenditures



Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Economic Analysis

[myf.red/g/oi9D](https://myf.red/g/oi9D)

# Oil Prices are Rising but Have Been Contained

At the current price oil is neither helping nor hurting our economy

**FRED** 

— Crude Oil Prices: West Texas Intermediate (WTI) - Cushing, Oklahoma



Shaded areas indicate U.S. recessions

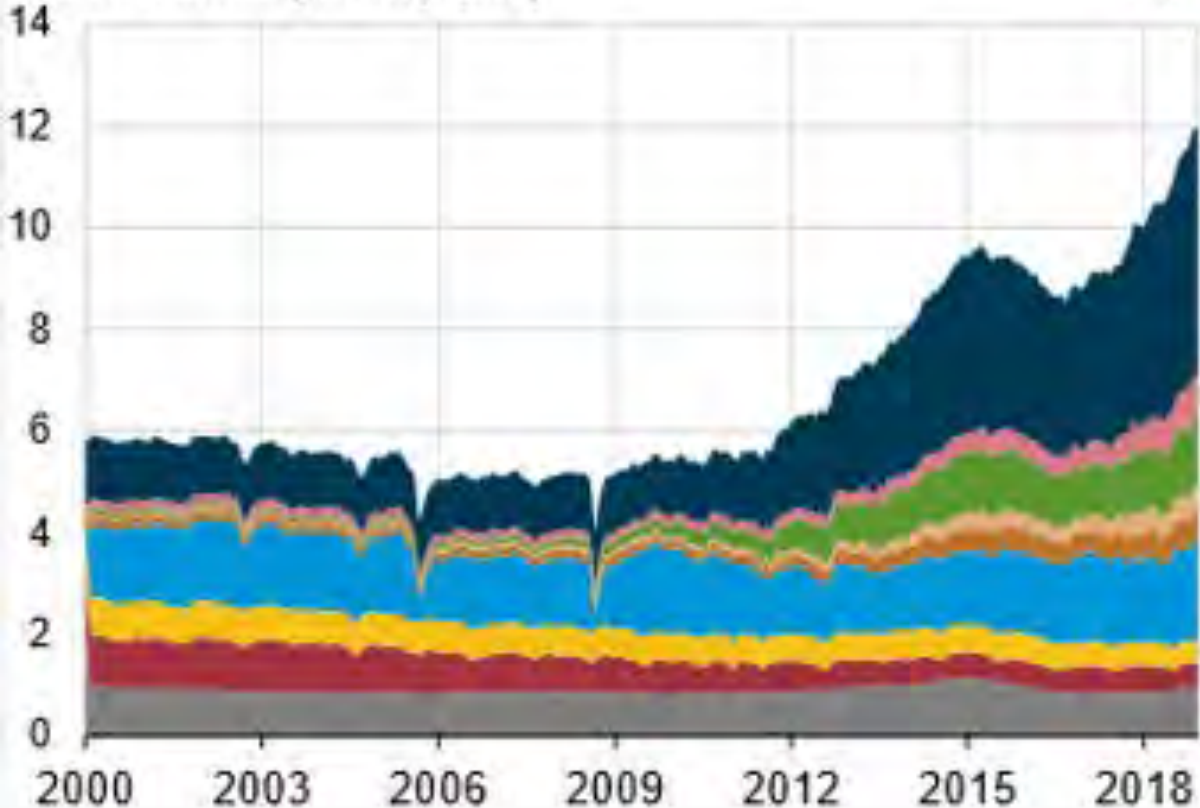
Source: U.S. Energy Information Administration

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# Annual Energy Production by State

Texas, North Dakota, New Mexico lead the charge

U.S. crude oil production by state (2010-2018)  
million barrels per day (b/d)

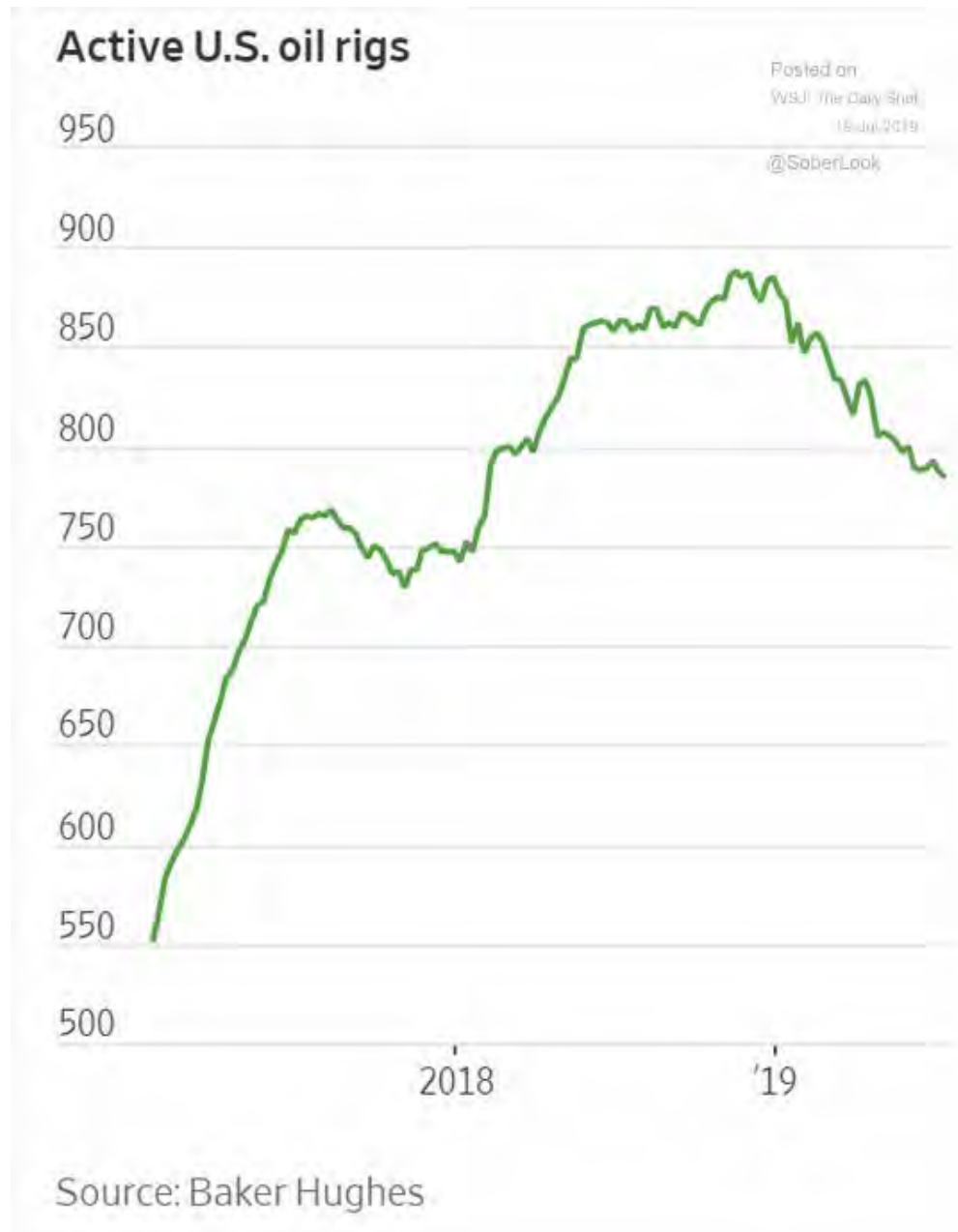


Annual change, 2017-2018  
thousand barrels per day



# Drilling Activity is Falling

Falling prices hurt as does a pipeline problem as does no access to Wall Street



# Shale Breakeven Rates Vary

Marginal costs are low but what does the price mean?

## What Does 'Break-Even' Mean?

Most fracking operations need an oil price above \$50 a barrel for robust profit.

## Break-even price at selected oil basins



\*Price cited for an individual shale well to have a 10% profit margin

Source: R.S. Energy Group

# Oil Production of the Fragile Five Declines

Net production steadily declines

ARBOR DATA SCIENCE

Posted on

WSJ The Daily Shot

10-Jul-2018

@SoberLook

Lowest Production in High-Risk Nations Since February 2015

*Bold Red Line* = Difference in Monthly Oil Production Since 2005.



# Corporate Profits Soften

Corporate profit growth in 2019 is weaker

FRED



— Corporate Profits After Tax (without IVA and CCAdj)



Shaded areas indicate U.S. recessions

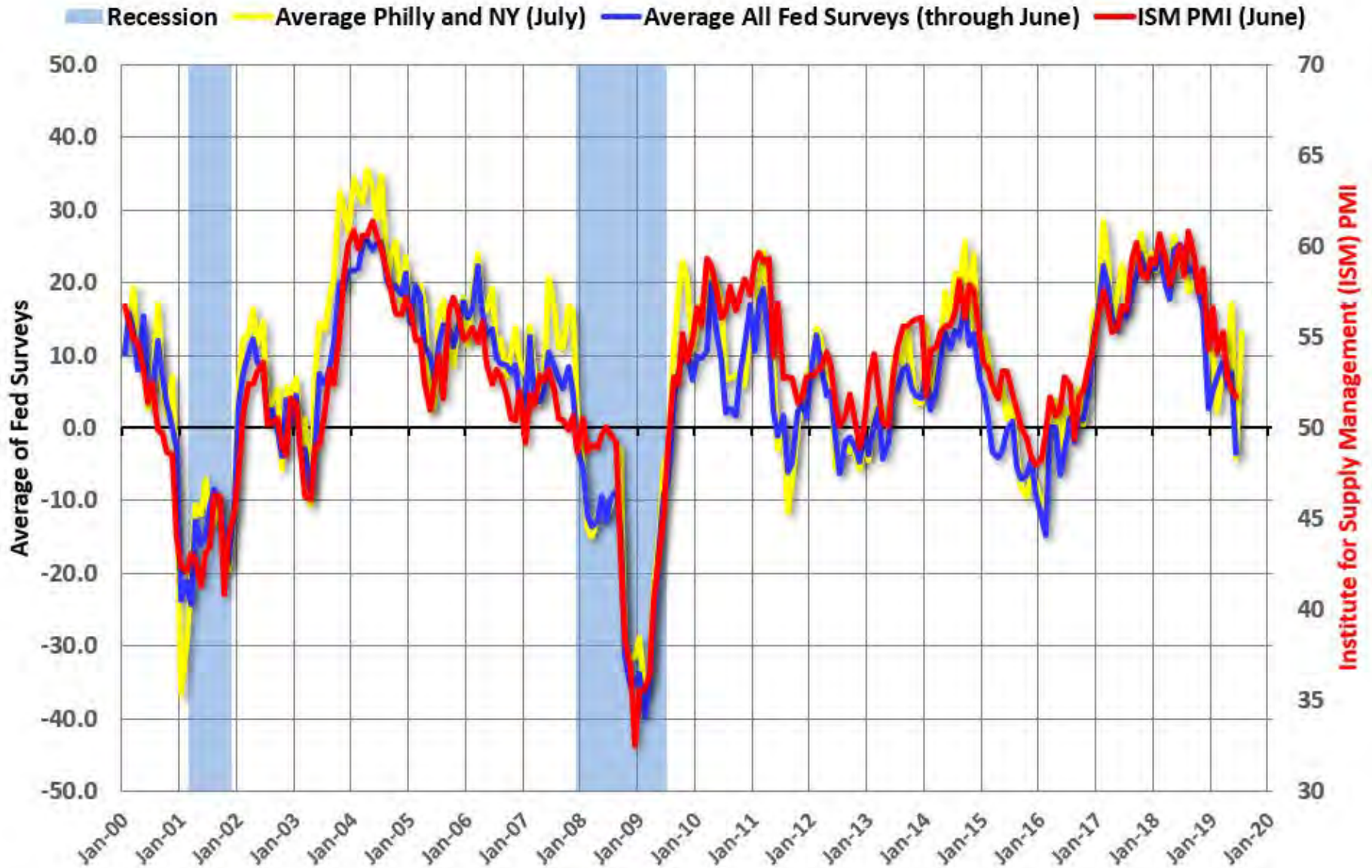
Source: U.S. Bureau of Economic Analysis

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# ISM Manufacturing Numbers Decline!

Manufacturing is less important than in decades past

ISM Purchasing Managers' Index (PMI) and Fed Manufacturing Surveys



# Factory Utilization Rates are Declining

Combination of slowing global growth, trade wars, weak oil prices and a strong dollar

**FRED** 

— Capacity Utilization: Total Industry



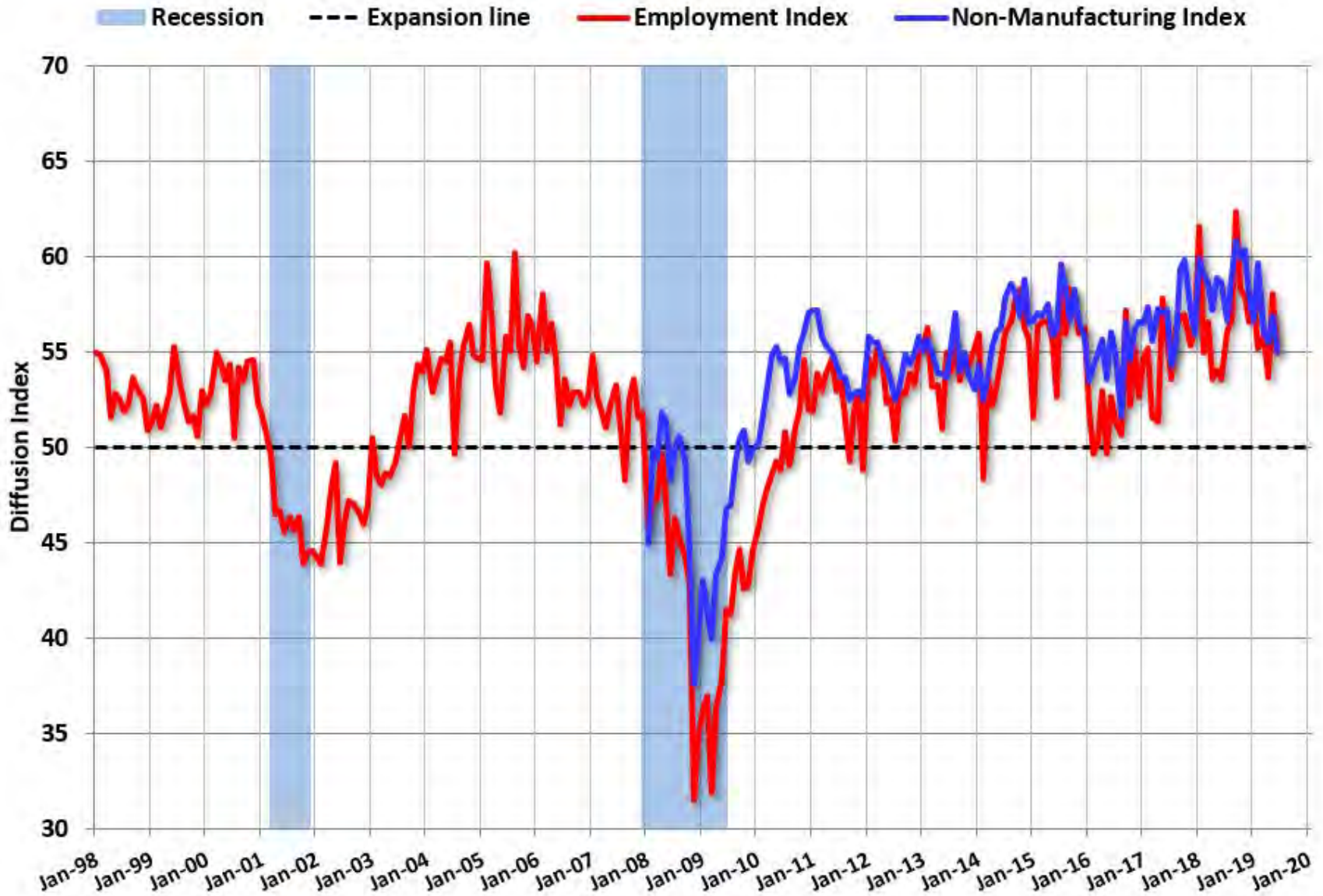
Shaded areas indicate U.S. recessions. Source: Board of Governors of the Federal Reserve System (US)

[myf.red/g/oppm](https://myf.red/g/oppm)

# ISM Non-Manufacturing Numbers are Good

Service sector weakens but is holding up

## ISM Non-Manufacturing and Employment Diffusion Indexes



# Look at Capital Goods Orders. They are OK

Slowing global growth, trade concerns, falling oil prices and more...

**FRED** 

— **Manufacturers' New Orders: Nondefense Capital Goods Excluding Aircraft**



*Shaded areas indicate U.S. recessions*

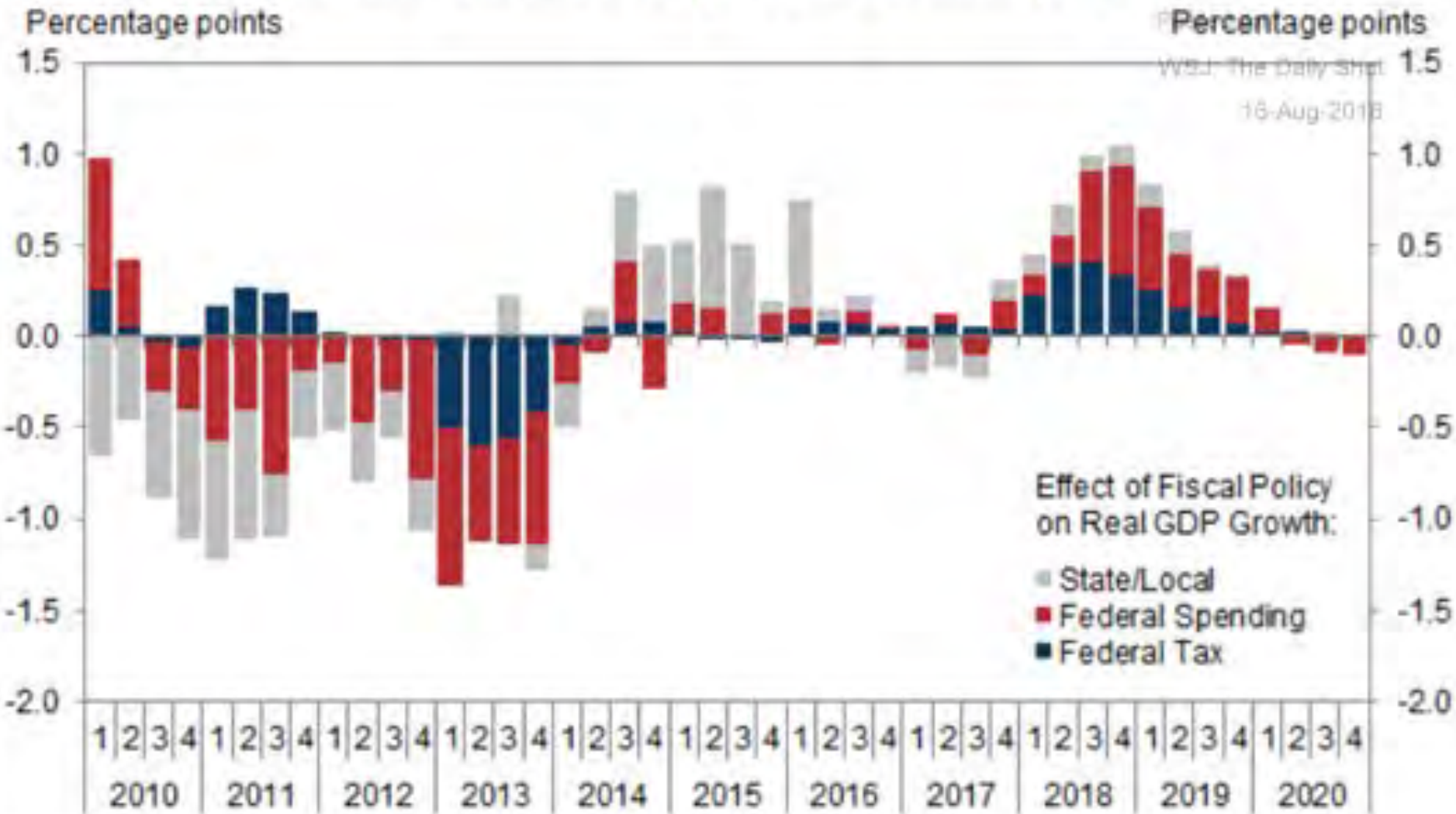
Source: U.S. Census Bureau

[myf.red/g/ogMR](https://myf.red/g/ogMR)

# Impact From Tax Cuts is Slowly Weakening

By 2020, the impact will be zero

## Exhibit 3: Fiscal Boost to Growth Likely to Fade Gradually in 2019



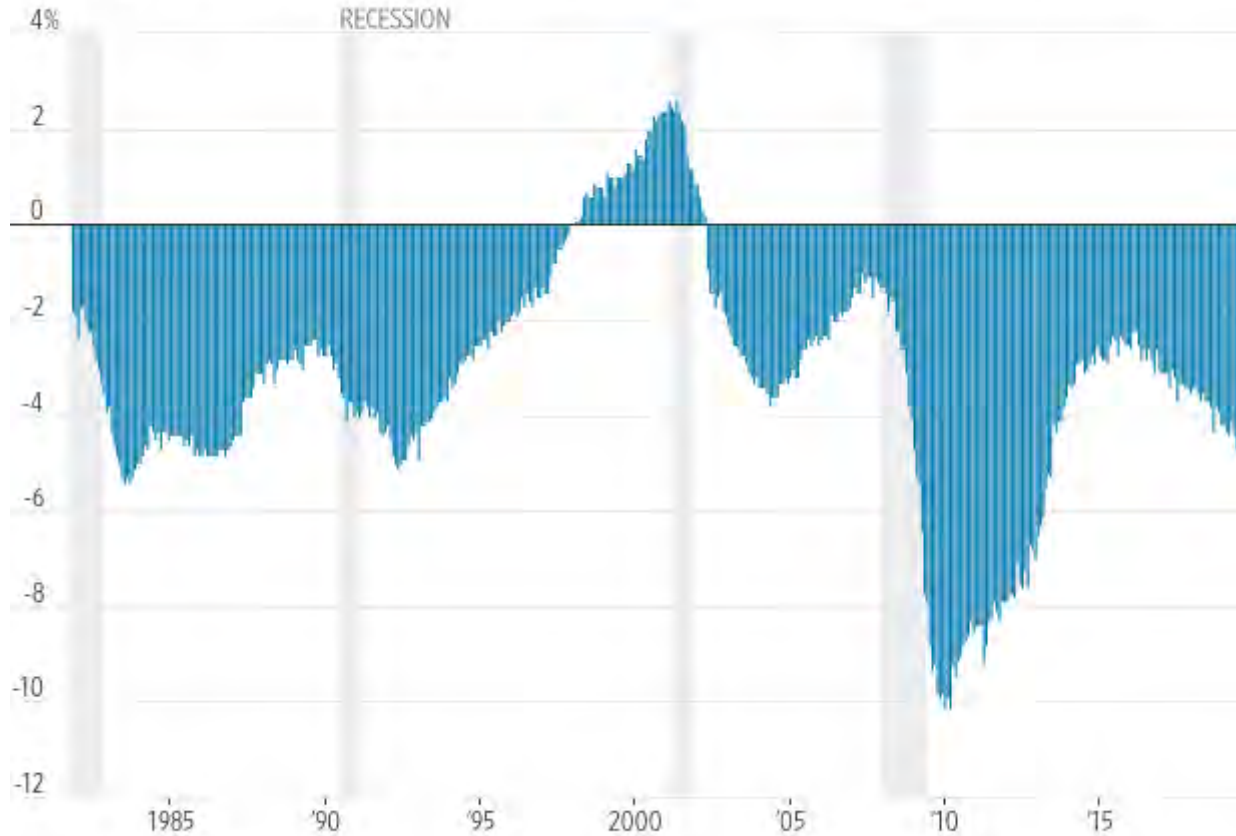
Source: US Department of Commerce, Treasury, Goldman Sachs Global Investment Research

# Budget Deficit Projections Get Much Worse

Tax cuts boost debt by \$1.9 trillion over a decade

## Deficit Snapshot

U.S. budget deficit or surplus over 12-month period as a share of gross domestic product



Source: Treasury Department

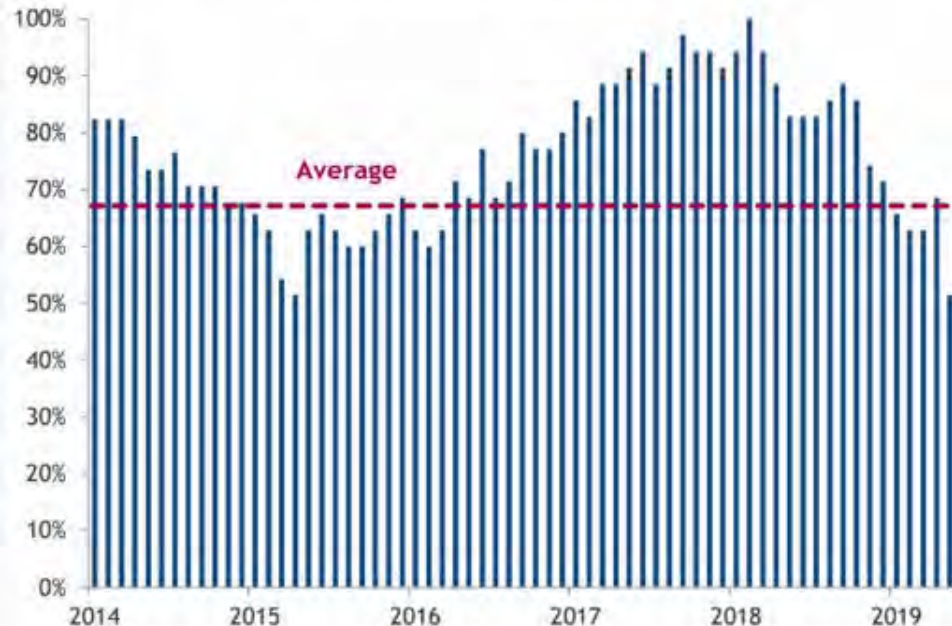
# More Nations are Contracting

Globe has gone from above average growth to well below average

The percentage of countries in expansion mode has dropped sharply; however, with the pivot in central bank policy and stimulus being applied globally, we expect this to improve in the back half of the year.

Posted on  
WSJ The Daily Brief  
10 Jun 2019  
@SoberLook

% of Countries in Expansion Mode\*

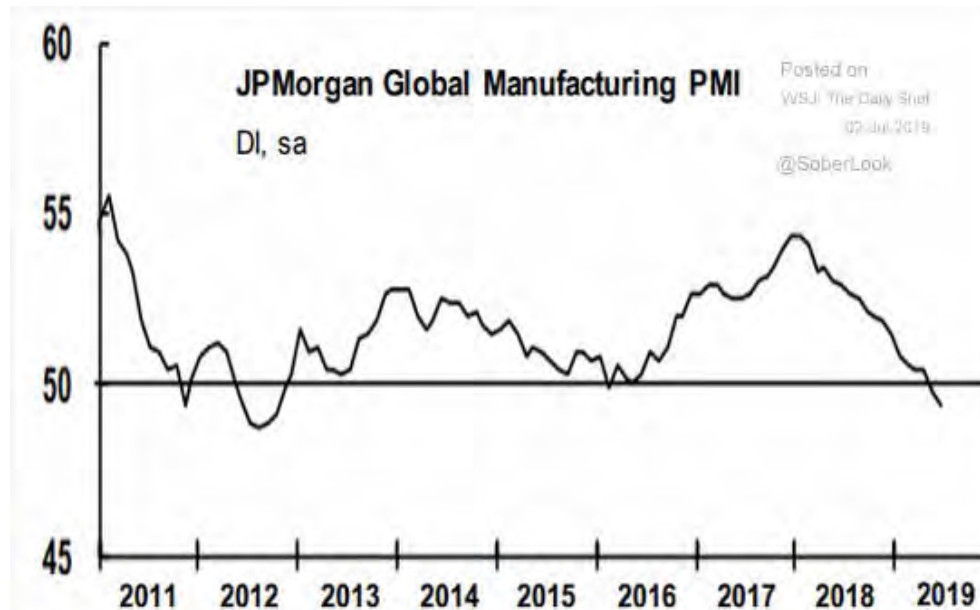


Data Source: SunTrust IAG, Haver, Markit

\*Expansion mode is defined as a manufacturing PMI survey figure of 50 or greater. Includes 35 out of 46 countries within the MSCI All Country World Index where data is available representing 98% of the benchmark's market capitalization; using PMI Manufacturing composite where available, otherwise using PMI Composite. Data is as of June 2019 except for Hong Kong, New Zealand and Israel.

# Global Manufacturing Growth Steadily Weakens

Now down 14 straight months. At lowest level since 2012 and in recession mode.



## Global Manufacturing PMI™ Summary

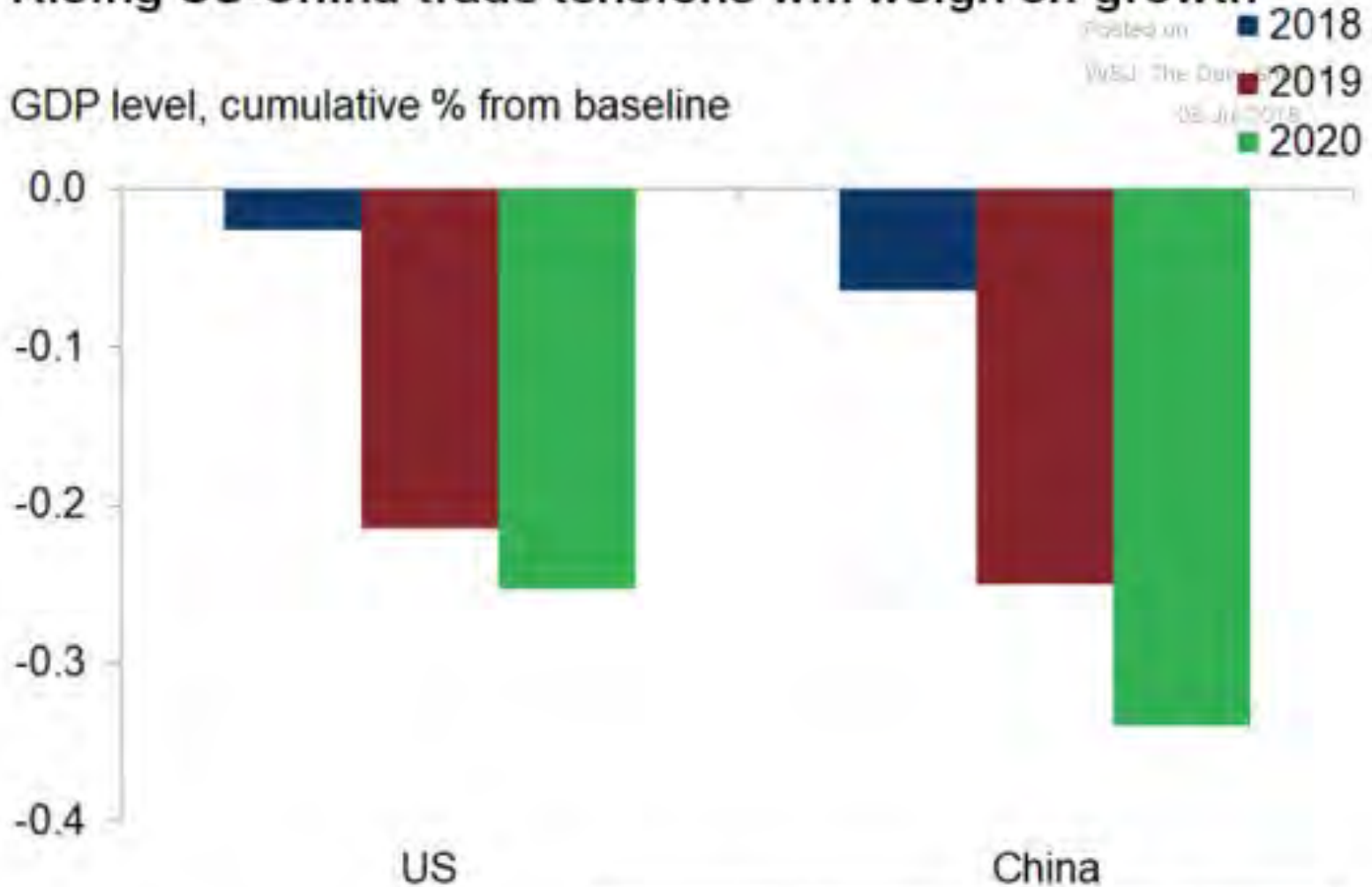
50 = no change on prior month.

Index	May	Jun.	+/-	Summary
Global PMI	49.8	49.4	-	Falling, faster rate
Output	50.1	49.5	-	Falling, from rising
New Orders	49.5	49.0	-	Falling, faster rate
New Exports	49.0	48.8	-	Falling, faster rate
Employment	49.9	49.8	-	Falling, faster rate
Input Prices	52.6	52.0	-	Rising, slower rate
Output Prices	51.1	50.9	-	Rising, slower rate
Future Output	58.1	57.7	-	Positive, lesser extent

# \$250 Billion Trade War Hurts GDP

The impact will rise over time, and is now quite small

## Rising US-China trade tensions will weigh on growth



Source : Oxford Economics

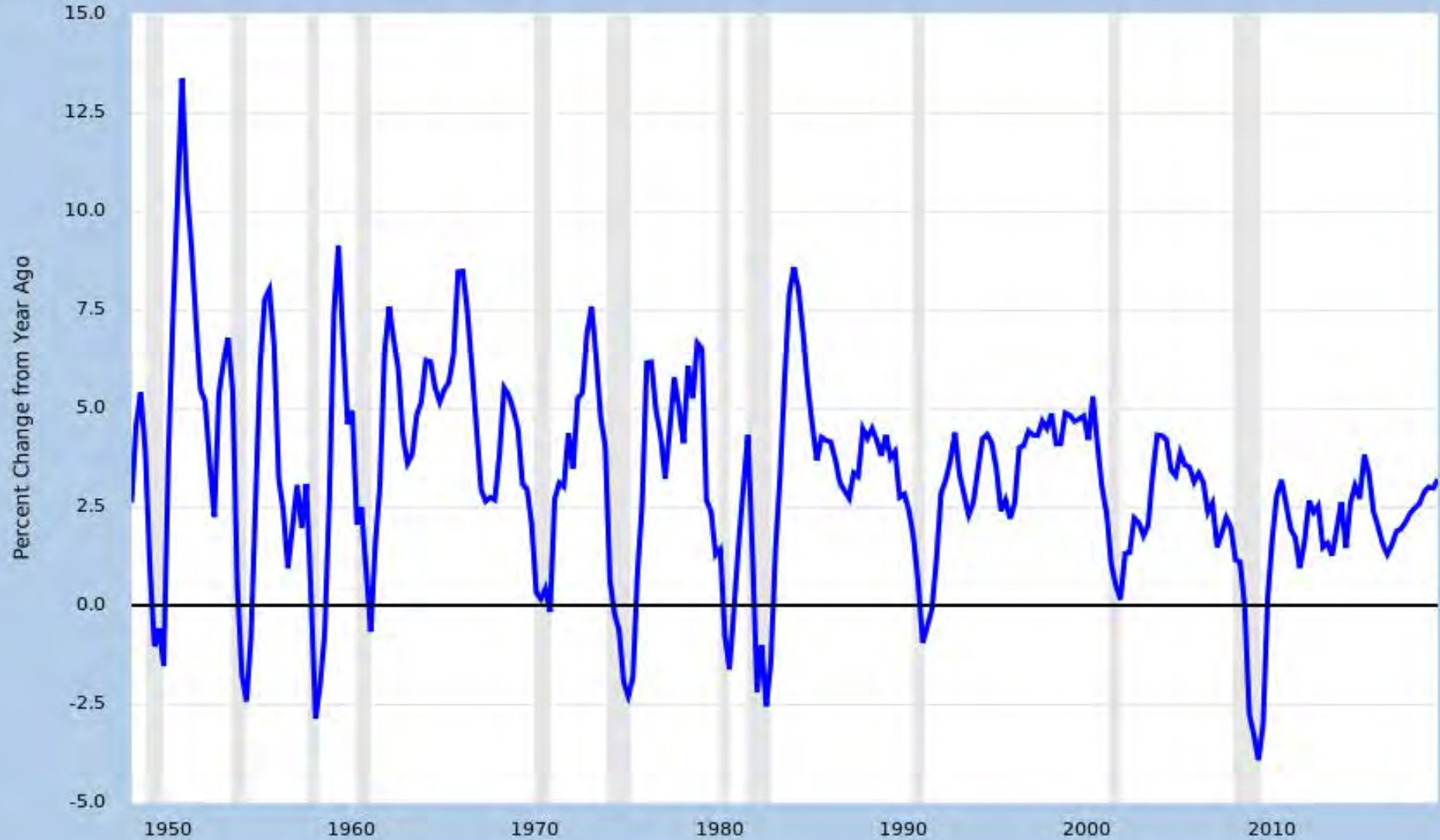
US imposes 25% tariffs on \$50 billion of imports & then an additional 10% on \$200 billion of imports from China, and China retaliates in kind.

# GDP Growth Will Slow

Impact of the 2017 tax cuts and 2018 spending increases are fading

**FRED** 

— Real Gross Domestic Product



Shaded areas indicate U.S. recessions

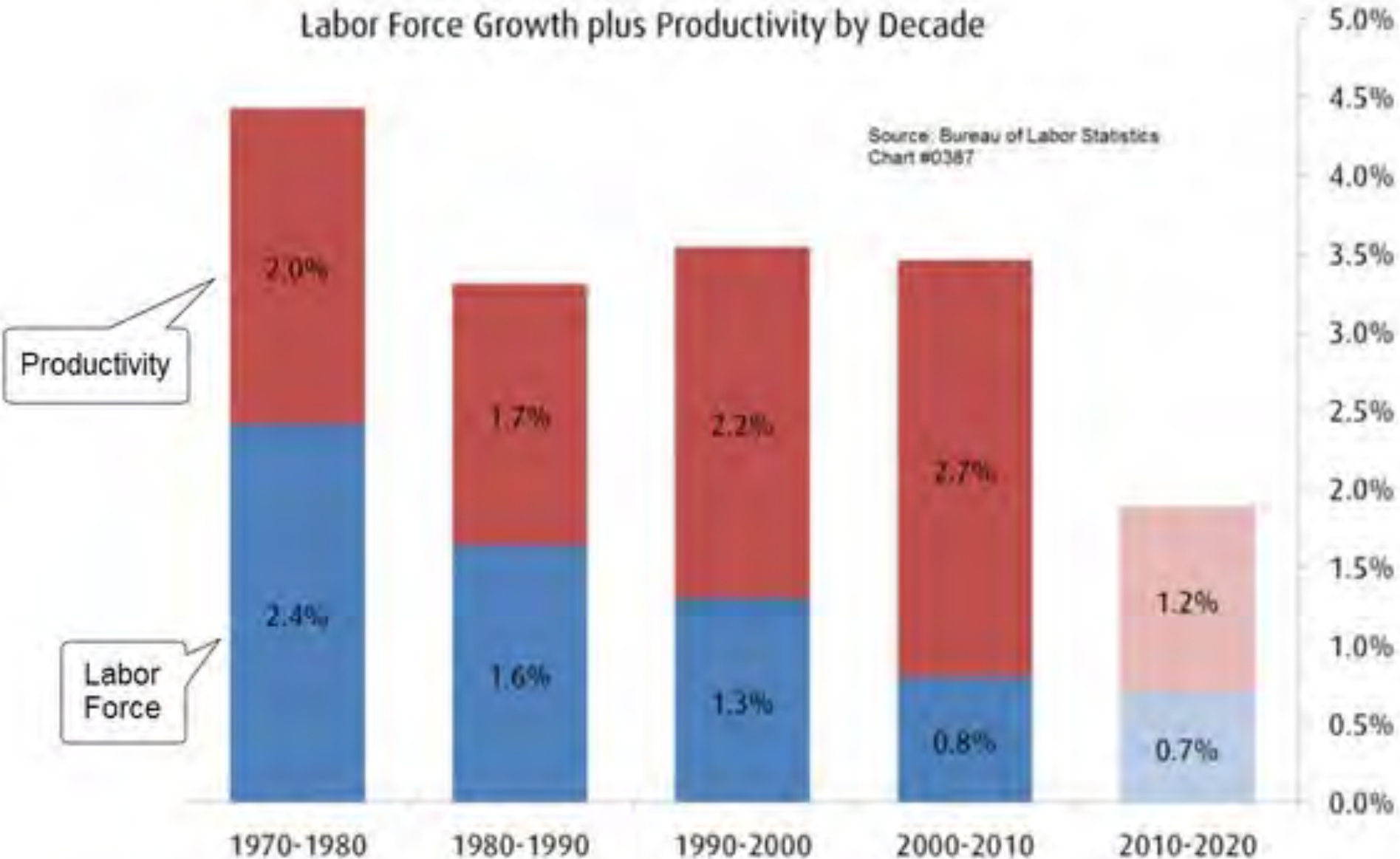
Source: U.S. Bureau of Economic Analysis

[myf.red/g/o2IX](https://myf.red/g/o2IX)

# GDP Can't Grow Fast!

Very weak population growth and labor productivity growth

Labor Force Growth plus Productivity by Decade

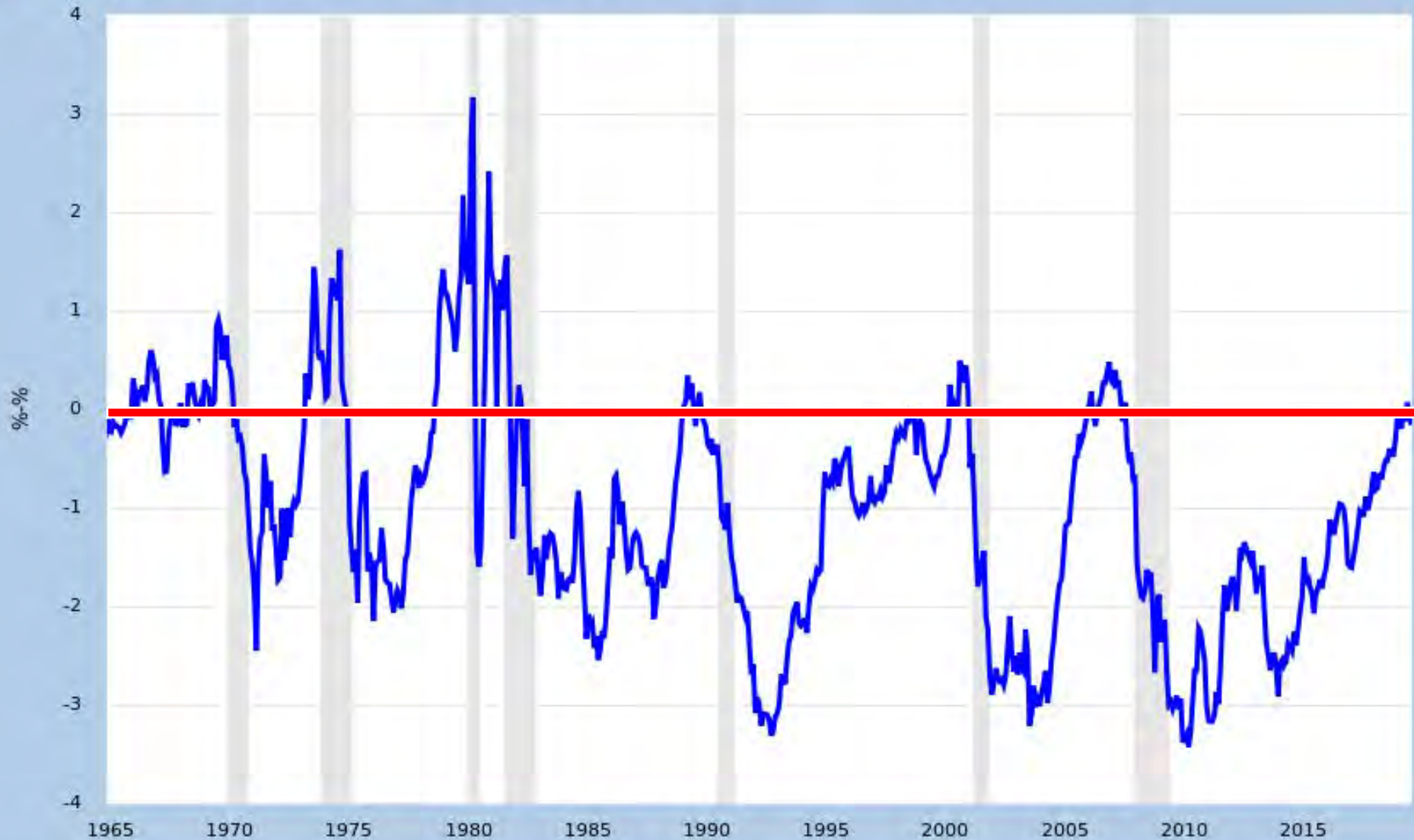


# Best of All, No Recession...Yet!

Yield Curve Inversion Test: 1-Year Treasury Yield – 10-Year Treasury Yield

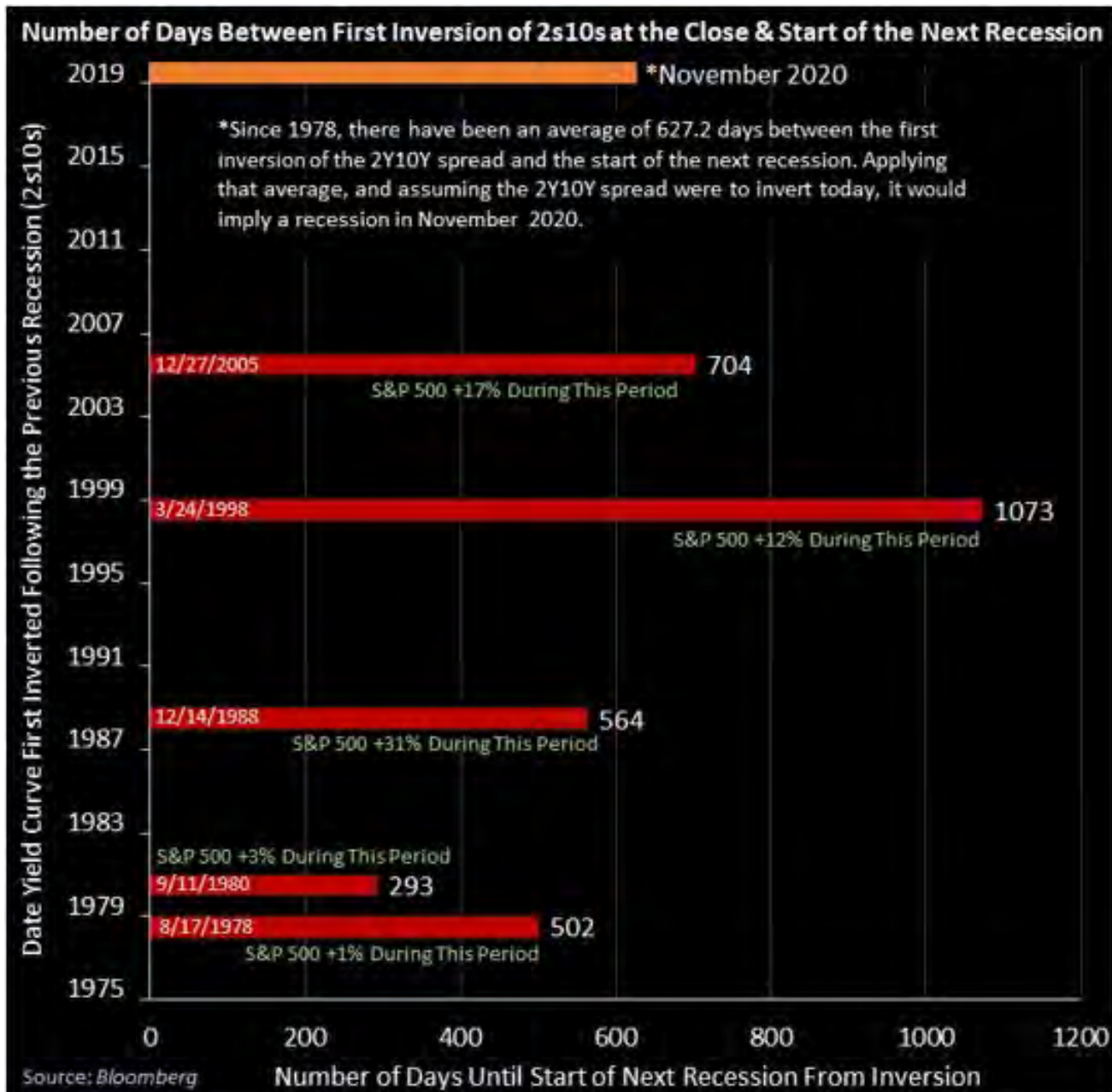
**FRED** 

— 1-Year Treasury Constant Maturity Rate-10-Year Treasury Constant Maturity Rate

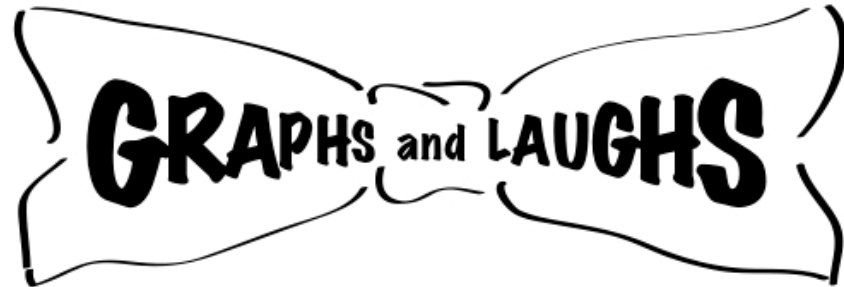


# Inversions Do Not Immediately Lead to Recessions

It takes a long time for the onset of the recession



# Labor Markets: They're Tight, Very Tight



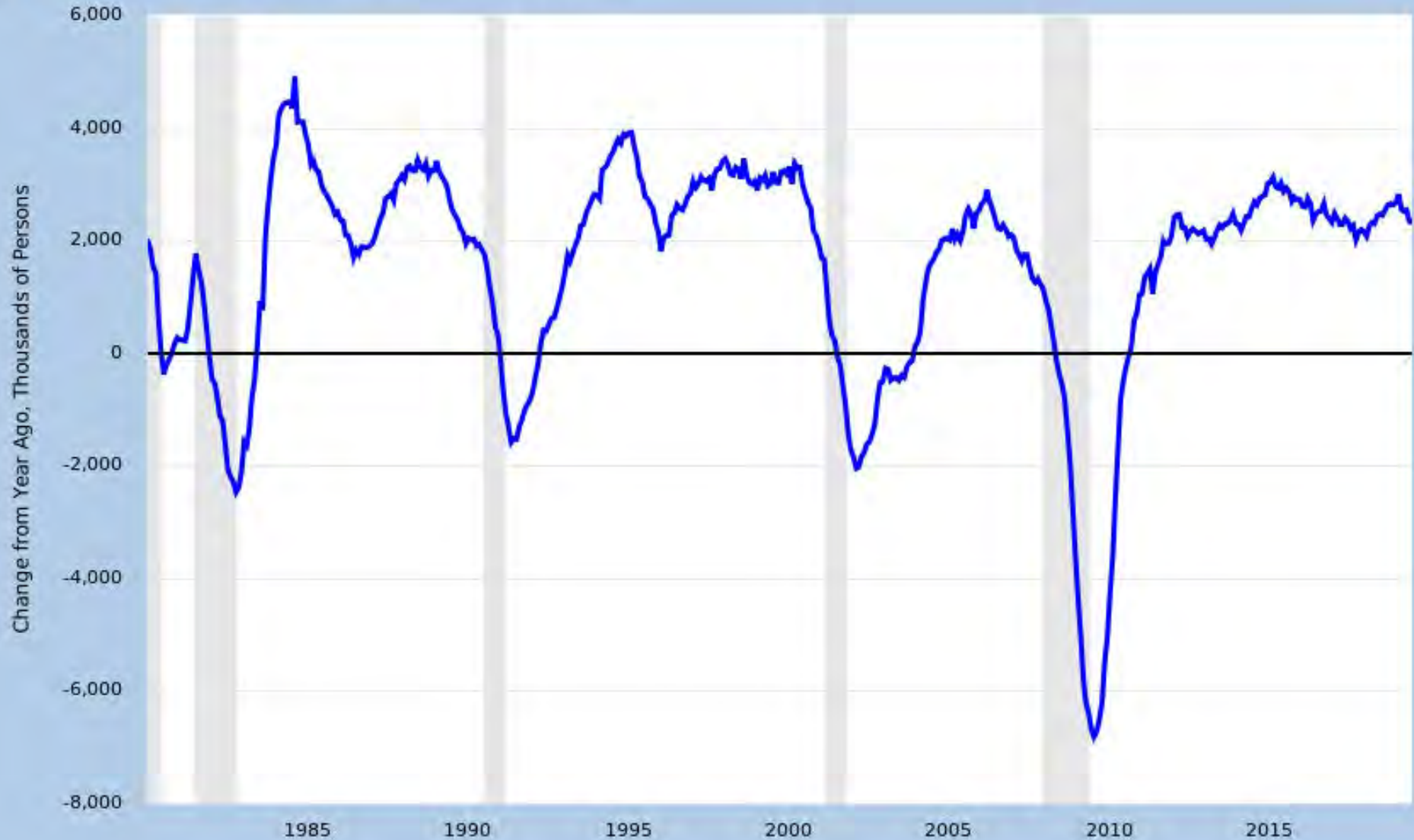
# Historical Job Growth

Y-o-Y Total employment growth has been spectacular. We are now running out of workers

**FRED**



— All Employees: Total Nonfarm Payrolls



Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Labor Statistics

[myf.red/g/okgP](https://myf.red/g/okgP)

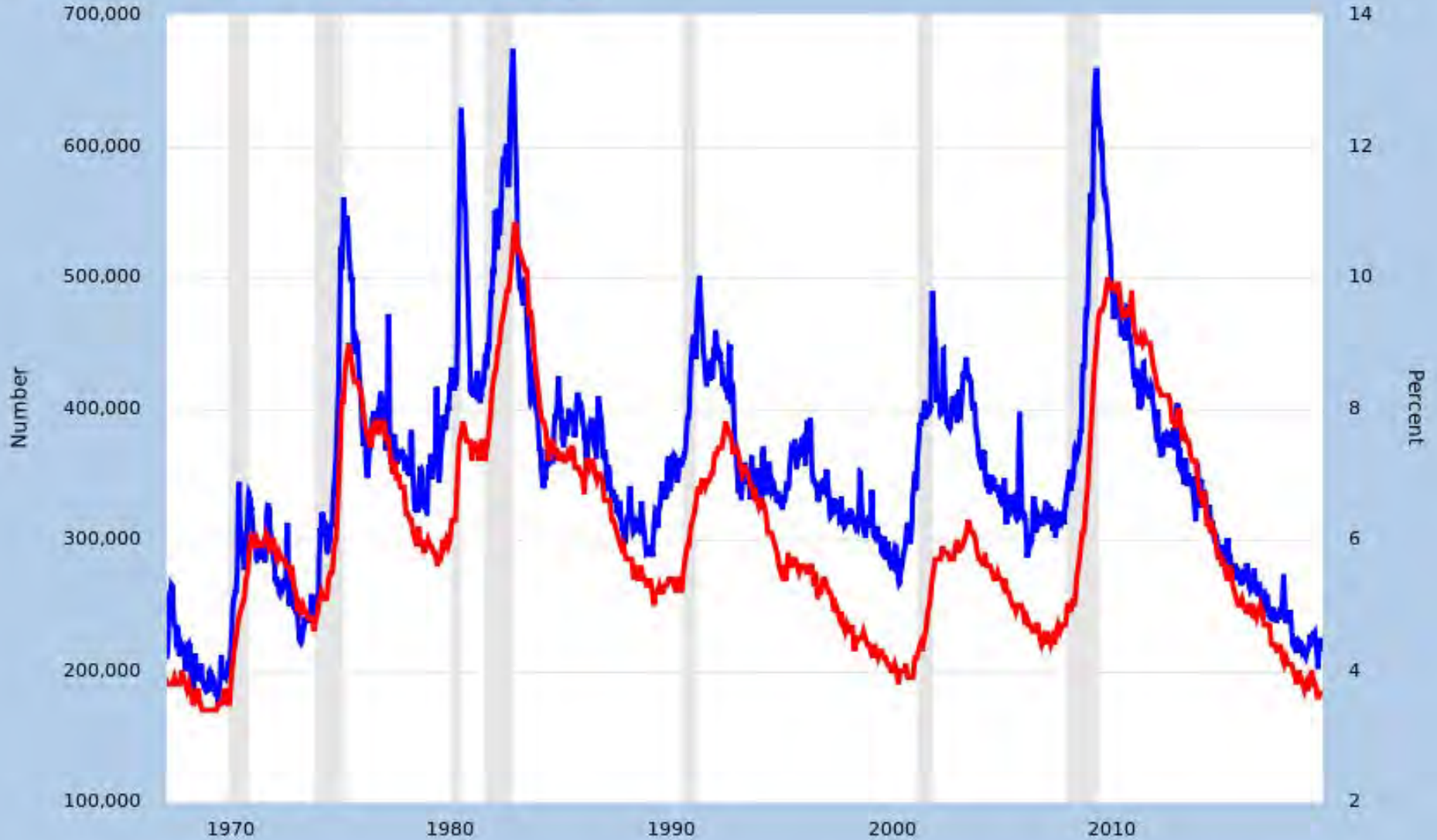
# STEADY Labor Market Improvement: Involuntary Separation

Long Term Trends: 1967-2017 Initial claims below 300K for **225** straight weeks!

FRED



- 4-Week Moving Average of Initial Claims (left)
- Civilian Unemployment Rate (right)

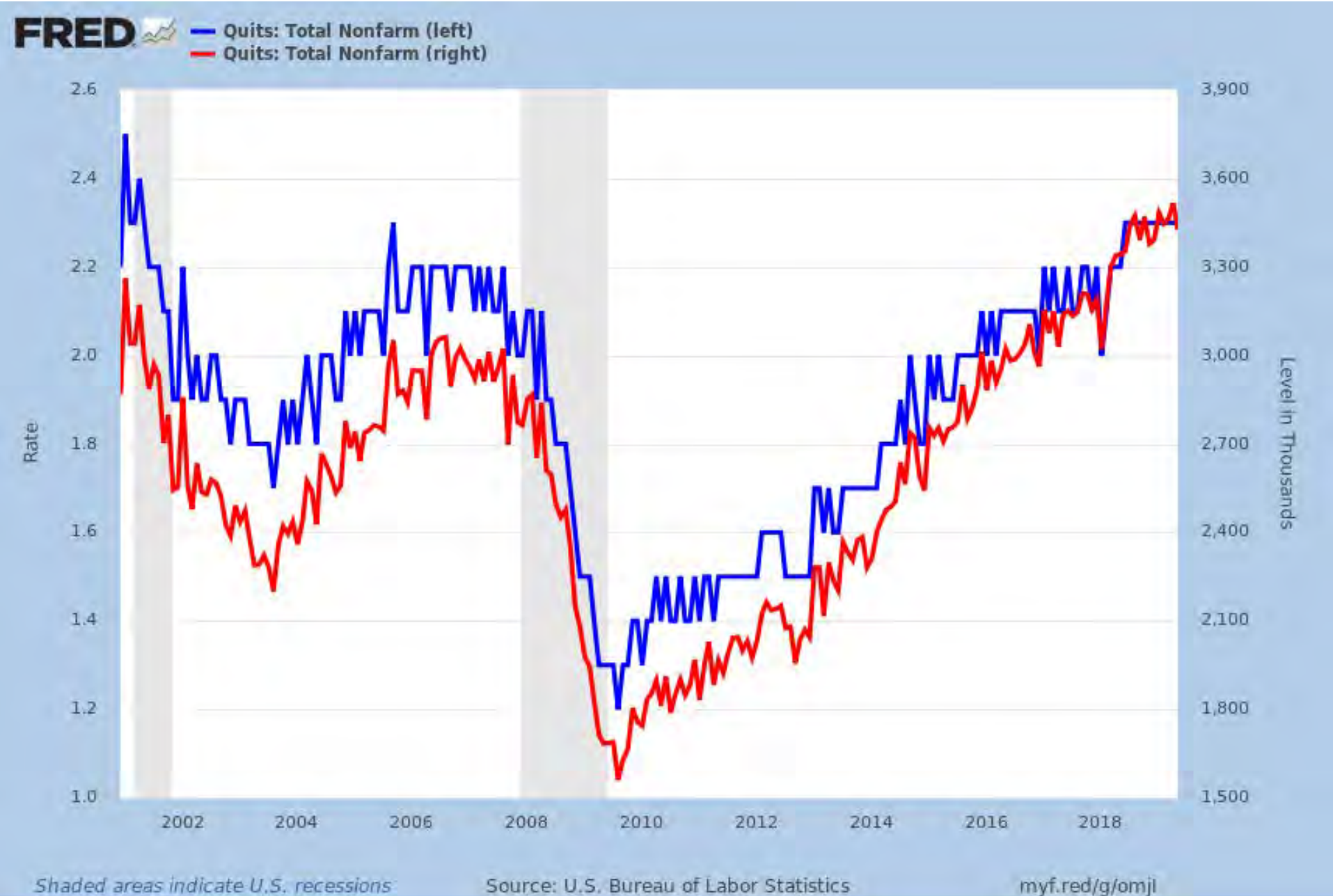


Shaded areas indicate U.S. recession Sources: BLS, U.S. Employment and Training Administration

myf.red/g/okhw

# Quit Rates are Excellent

Are above their pre-recession level. At 2.3% (in blue) or 3.5 million (in red)



# Tighter Labor Market than Perceived? For Sure!

There are 1.27 jobs per unemployed person!!!!!!




Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Labor Statistics

myf.red/g/omjM

# Gap Between Blacks and Overall Rate is Low

Was over 7%, and is now about 2.5% and near the all-time low

**FRED**  — Unemployment Rate: Black or African American-Civilian Unemployment Rate




Shaded areas indicate U.S. recessions

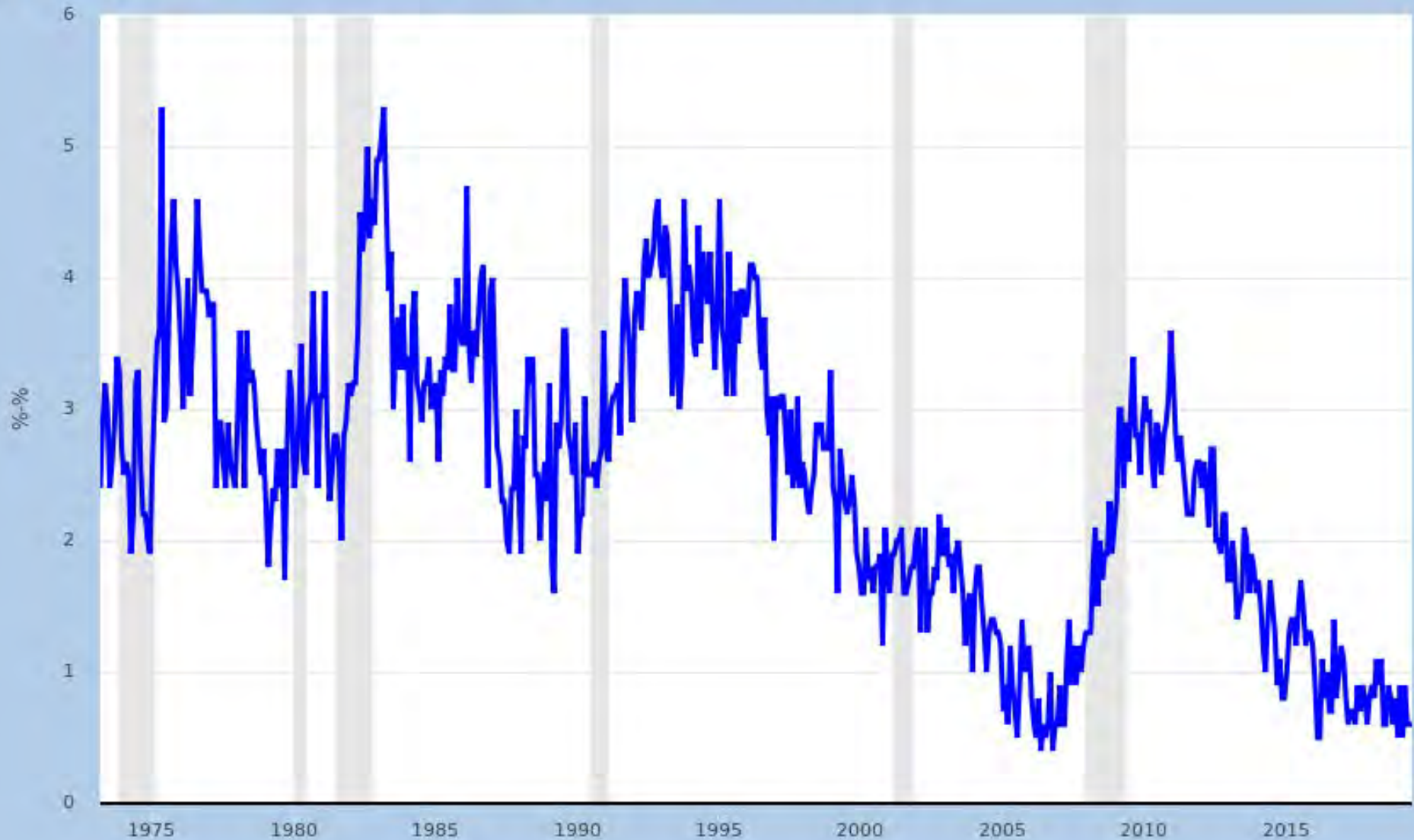
Source: U.S. Bureau of Labor Statistics

[myf.red/g/oki2](https://myf.red/g/oki2)

# Gap Between Hispanics and Overall Rate is Low

Was over 3%. Is now well below 1%. Near lowest levels ever

**FRED**  — Unemployment Rate: Hispanic or Latino-Civilian Unemployment Rate

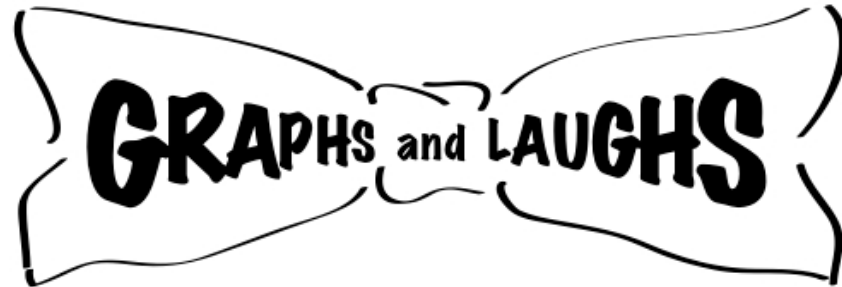


Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Labor Statistics

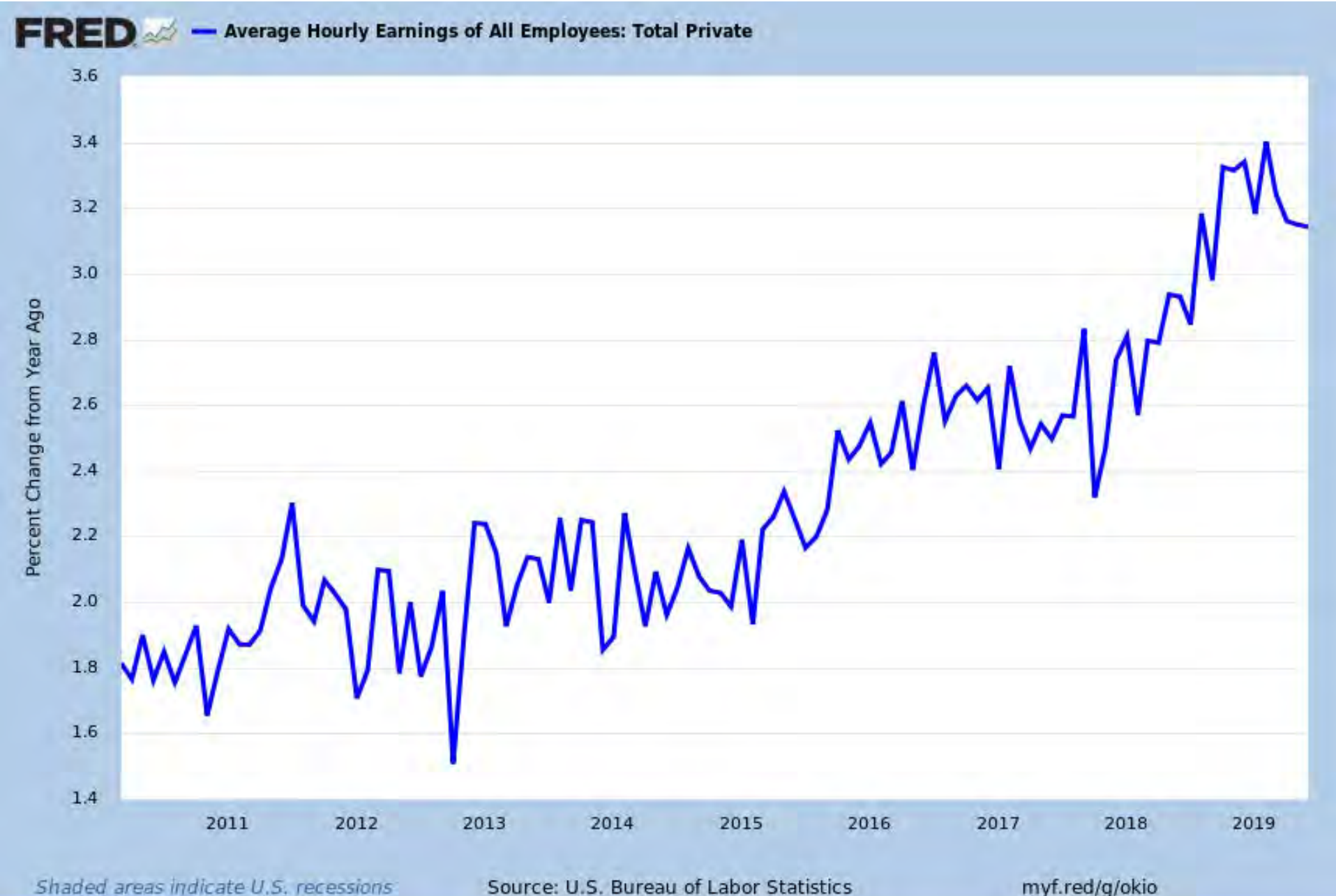
[myf.red/g/oki4](https://myf.red/g/oki4)

# Wage Growth is Weak



# Y-o-Y Percent Change in Hourly Earnings

Despite a very low unemployment rate, wages growth is weak

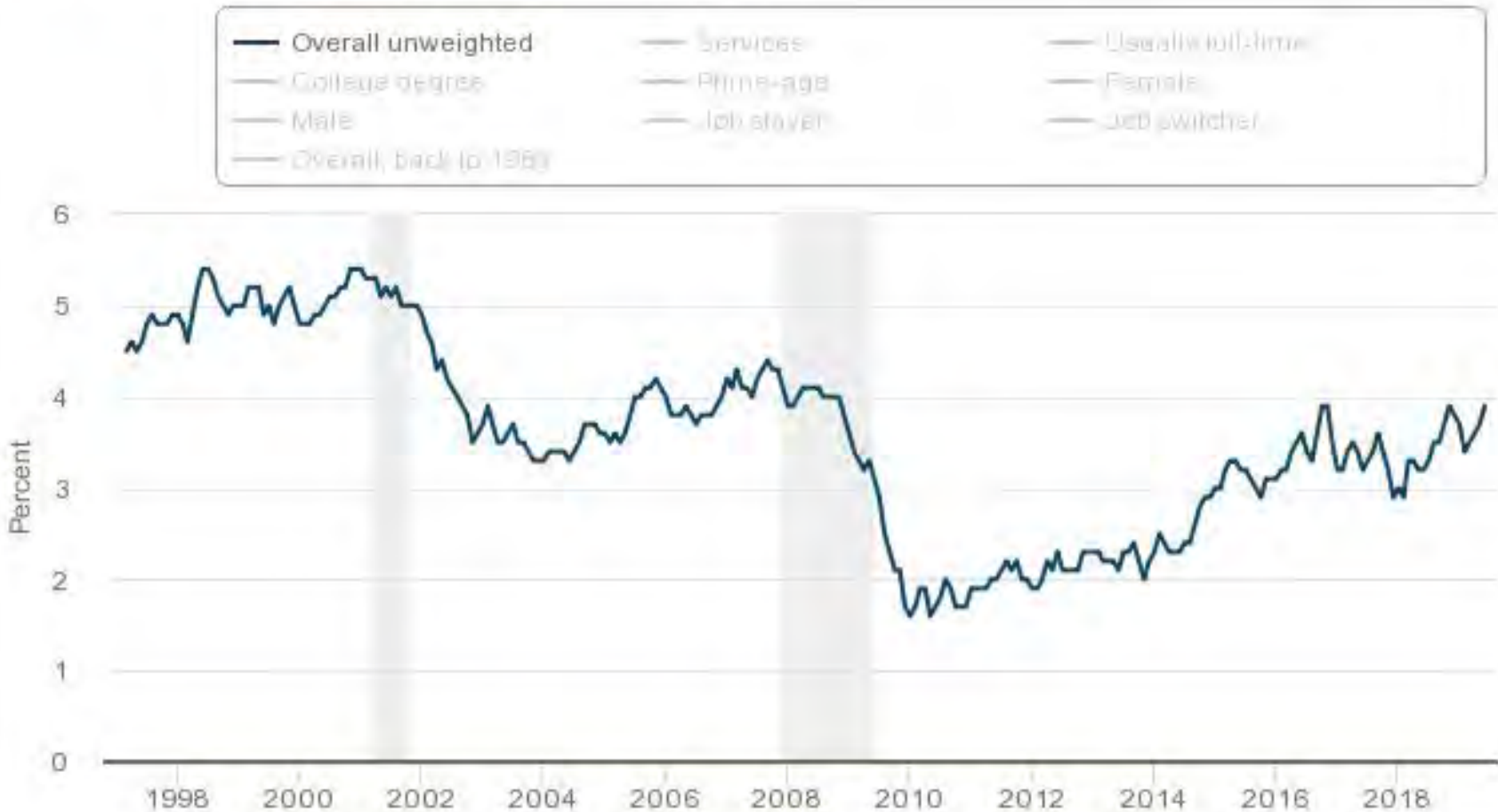


# Changes in Median Wage Growth Looks OK!

Looks only at those continuously full-time employed

## Wage Growth Tracker

three-month moving average of median wage growth



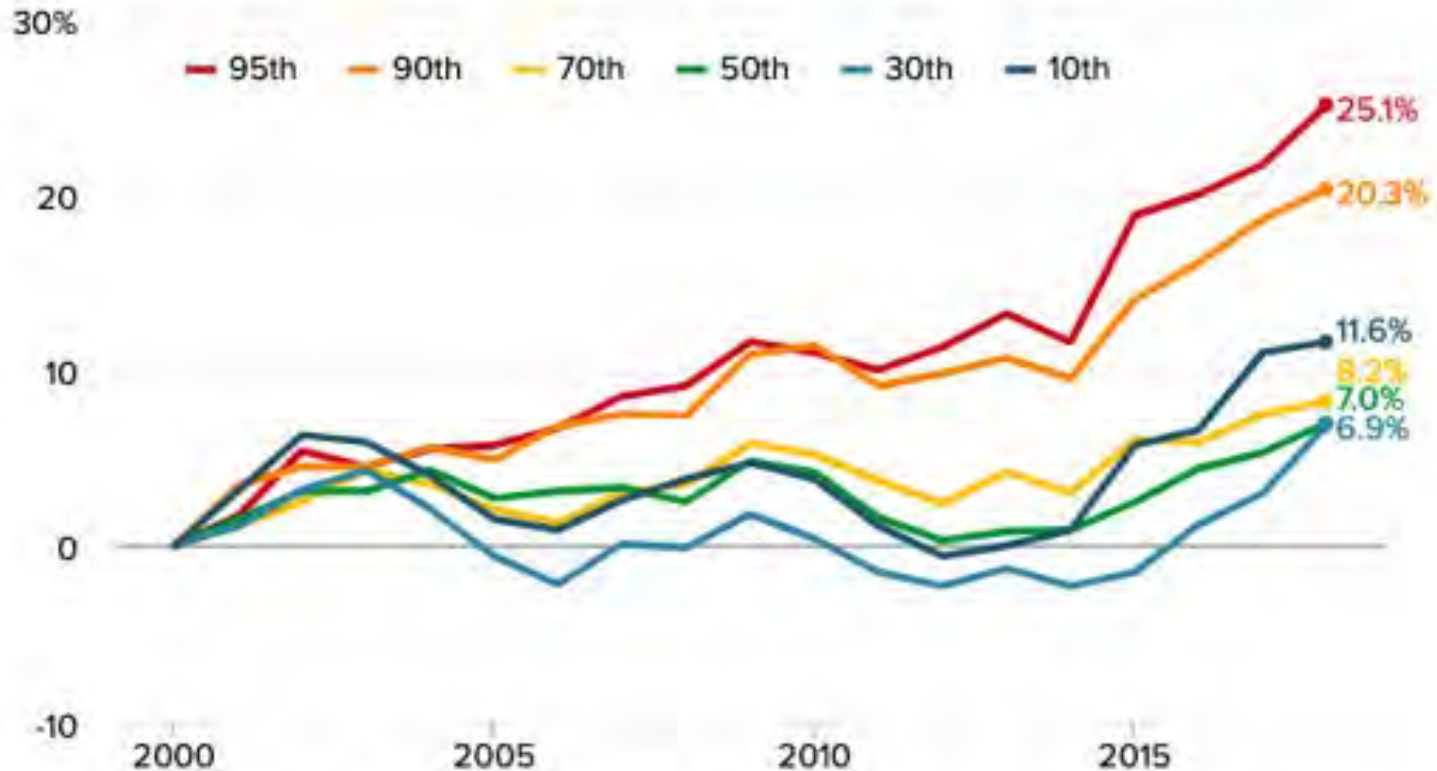
Sources: Current Population Survey, Bureau of Labor Statistics and author's calculations

# Household Income Growth 2000 - 2017

## High-wage earners have continued to pull away from everyone else since 2000

Cumulative percent change in real hourly wages, by wage percentile, 2000–2018

Posted on  
WSJ The Daily Shill  
Feb 2018  
@SoberLook



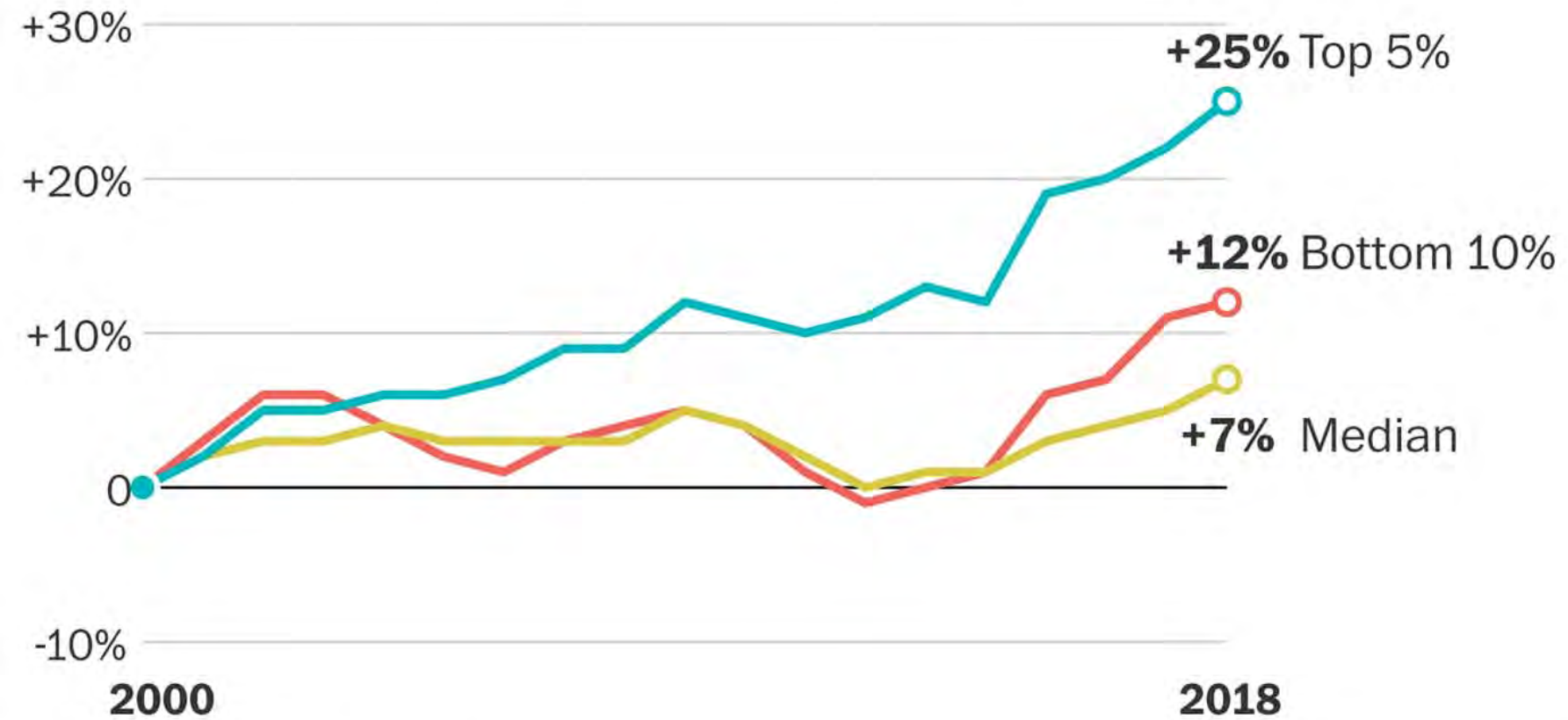
**Note:** Sample based on all workers ages 16 and older.

**Source:** EPI analysis of Current Population Survey Outgoing Rotation Group microdata from the U.S. Census Bureau

# Household Income Growth 2000 - 2018

## Top earners continue to pull away from everyone else

Cumulative percent change in real hourly wages since 2000



Source: Economic Policy Institute

THE WASHINGTON POST

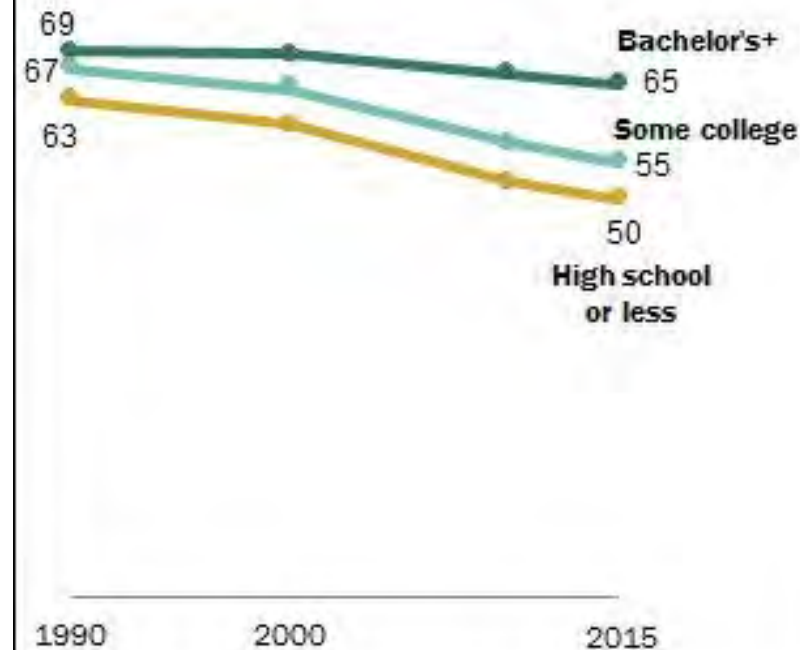
# Marriage Rates by Education

Marriage is increasingly for the better educated

## The education gap in marriage continues to grow

WSJ The Daily Signal

% of U.S. adults ages 25 and older who are married, by education



Note: "Some college" includes those with an associate degree and those who attended college but did not obtain a degree. Adults who are separated are not classified as married.

Source: Pew Research Center analysis of 1990-2000 decennial censuses and the 2010 and 2015 American Community Surveys (IPUMS).

PEW RESEARCH CENTER

# Wealth By Percentile

Share of the top 1% continues to rise. Now at 50%

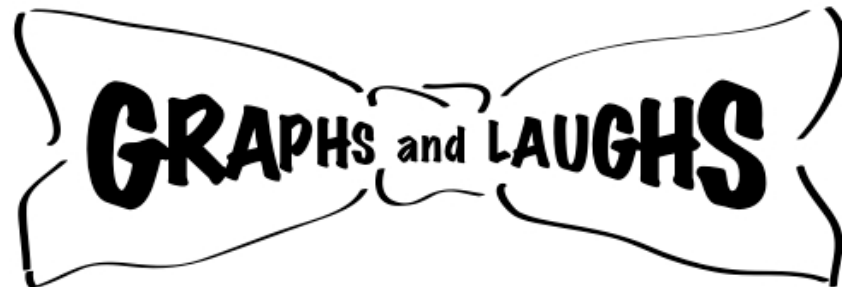


\* CORPORATE EQUITIES AND MUTUAL FUND SHARES.  
SOURCE: FINANCIAL ACCOUNTS OF THE UNITED STATES.

© BCA Research 2019

# Inflation?

## It's MIA!



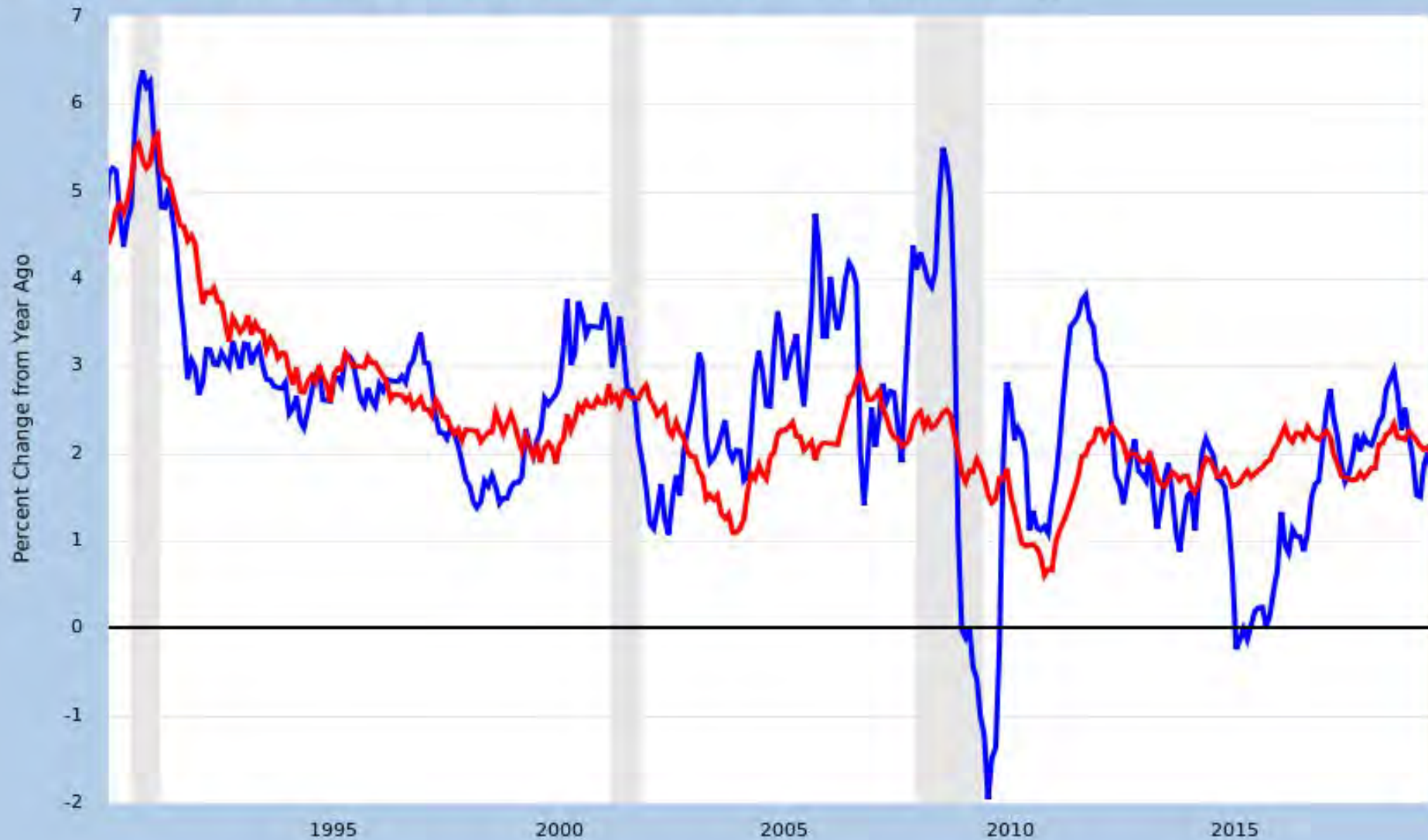
# CPI: Inflationary Pressures are Nonexistent

There appears to be no inflationary pressures. Growth is at best flat

**FRED**

— Consumer Price Index for All Urban Consumers: All Items

— Consumer Price Index for All Urban Consumers: All Items Less Food and Energy



Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Labor Statistics

[myf.red/g/omYf](https://myf.red/g/omYf)

# Core PCE Price Index

Inflation is fortunately being held back by a number of factors

**FRED** 

— Personal Consumption Expenditures: Chain-type Price Index

— Personal Consumption Expenditures Excluding Food and Energy (Chain-Type Price Index)



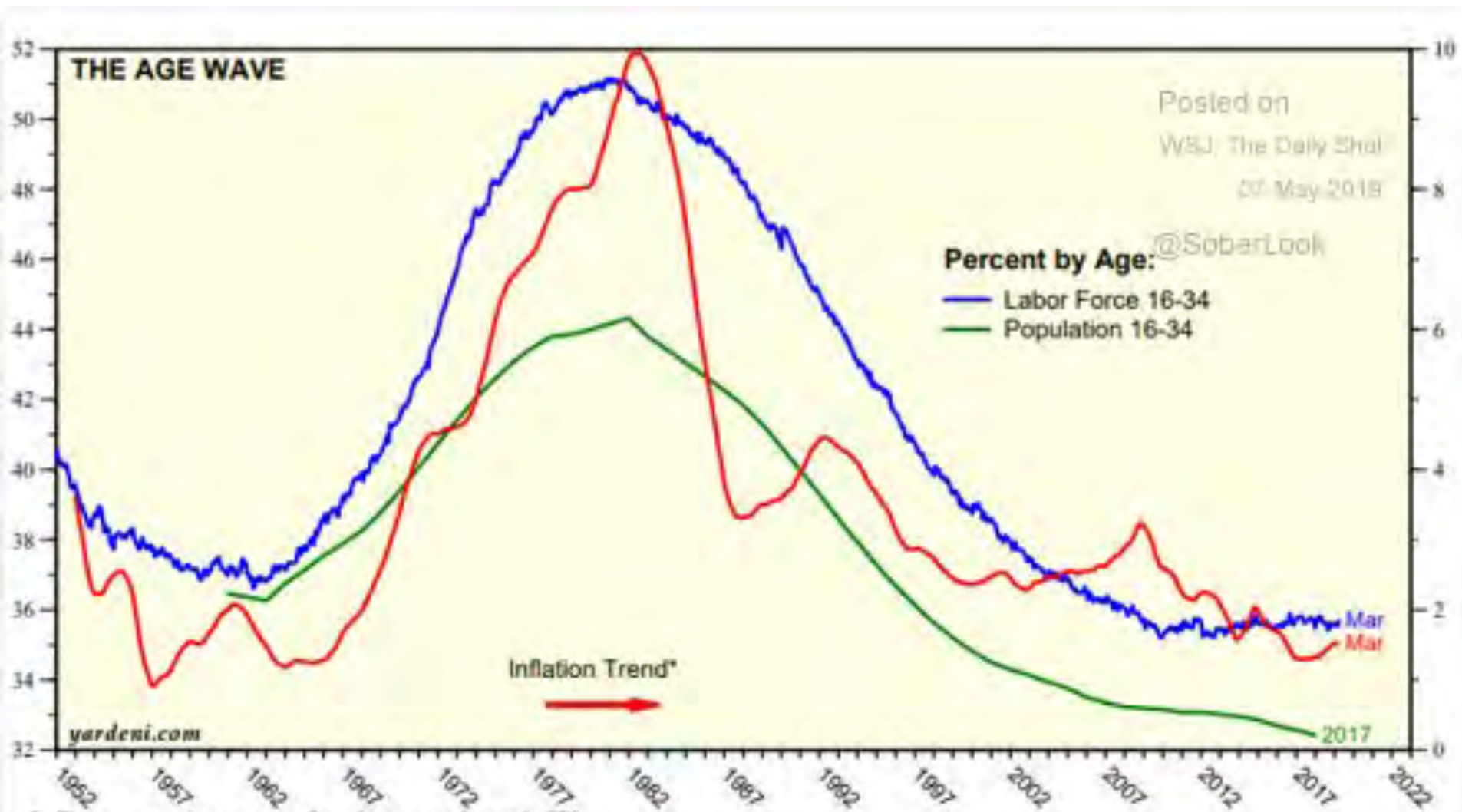
Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Economic Analysis

myf.red/g/oi83

# Inflation and Population Growth

They seem highly correlated



\* Five-year moving average of yearly percent change in CPI.  
Note: Oldest and youngest Baby Boomers turned 16 in 1962 and 1980, respectively.  
Source: Bureau of Labor Statistics.

# Federal Reserve Behavior

**Will Rates Rise?**

**Nope!**

# Taller Fed Chair, Higher Rates?

**BOTH THE HEIGHT OF THE FED CHAIR AND RATES HAVE FALLEN OVER TIME, COULD A TALLER FED CHAIR MEAN RATES RISE?**



Source: LPL Research, Bloomberg 10/22/17

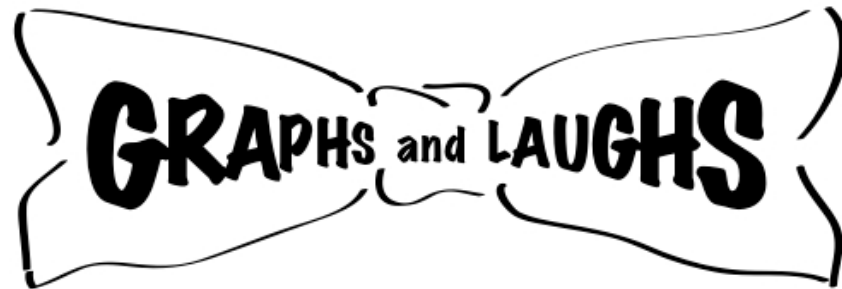
We don't actually believe that interest rates are determined by the height of the Fed chair, but it has been an interesting coincidence.

# Federal Reserve Behavior

## Best Case Scenario

- Fed funds is currently 2.375%
- 12/31/19: 2.125% 10-yr Treasury @ 2.10%
- 12/31/20: 1.875% 10-yr Treasury @ 2.20%
- 12/31/21: 1.875% 10-yr Treasury @ 2.10%
- Balance sheet keeps shrinking.

**New Housing?  
Not enough is being  
built!**

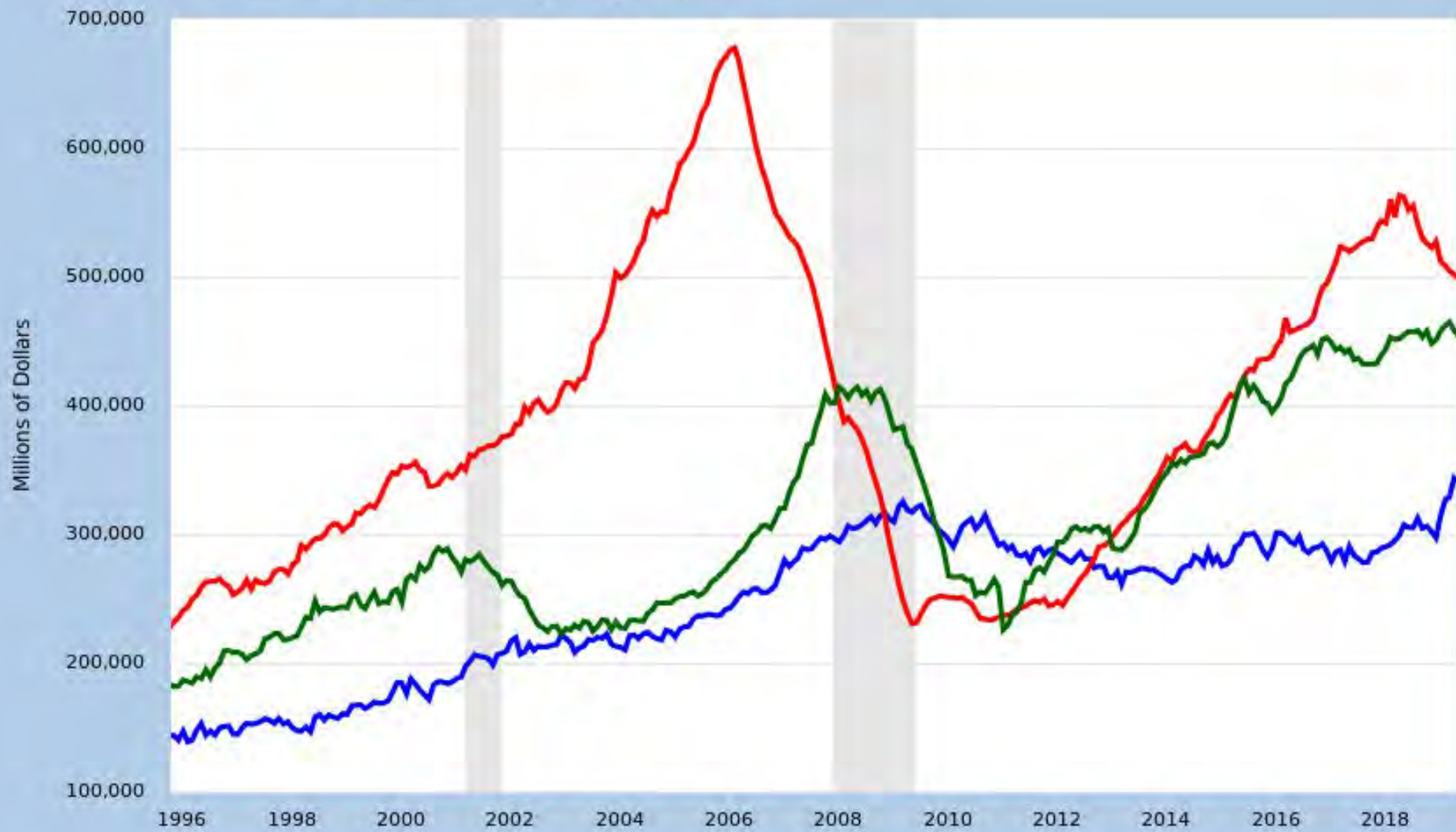


# Residential Fixed Investment Shrinks

Non-residential is up 10%, public is up 5%, and residential is down 26% from peak

**FRED** 

- Total Public Construction Spending
- Total Private Construction Spending: Residential
- Total Private Construction Spending: Nonresidential



Shaded areas indicate U.S. recessions

Source: U.S. Census Bureau

[myf.red/g/oiFi](https://myf.red/g/oiFi)

# Public Construction Rocks

Residential is down 11% Y-o-Y, non-res is up 1%, and public is up 11%

**FRED** 

- Total Public Construction Spending
- Total Private Construction Spending: Residential
- Total Private Construction Spending: Nonresidential



Shaded areas indicate U.S. recessions

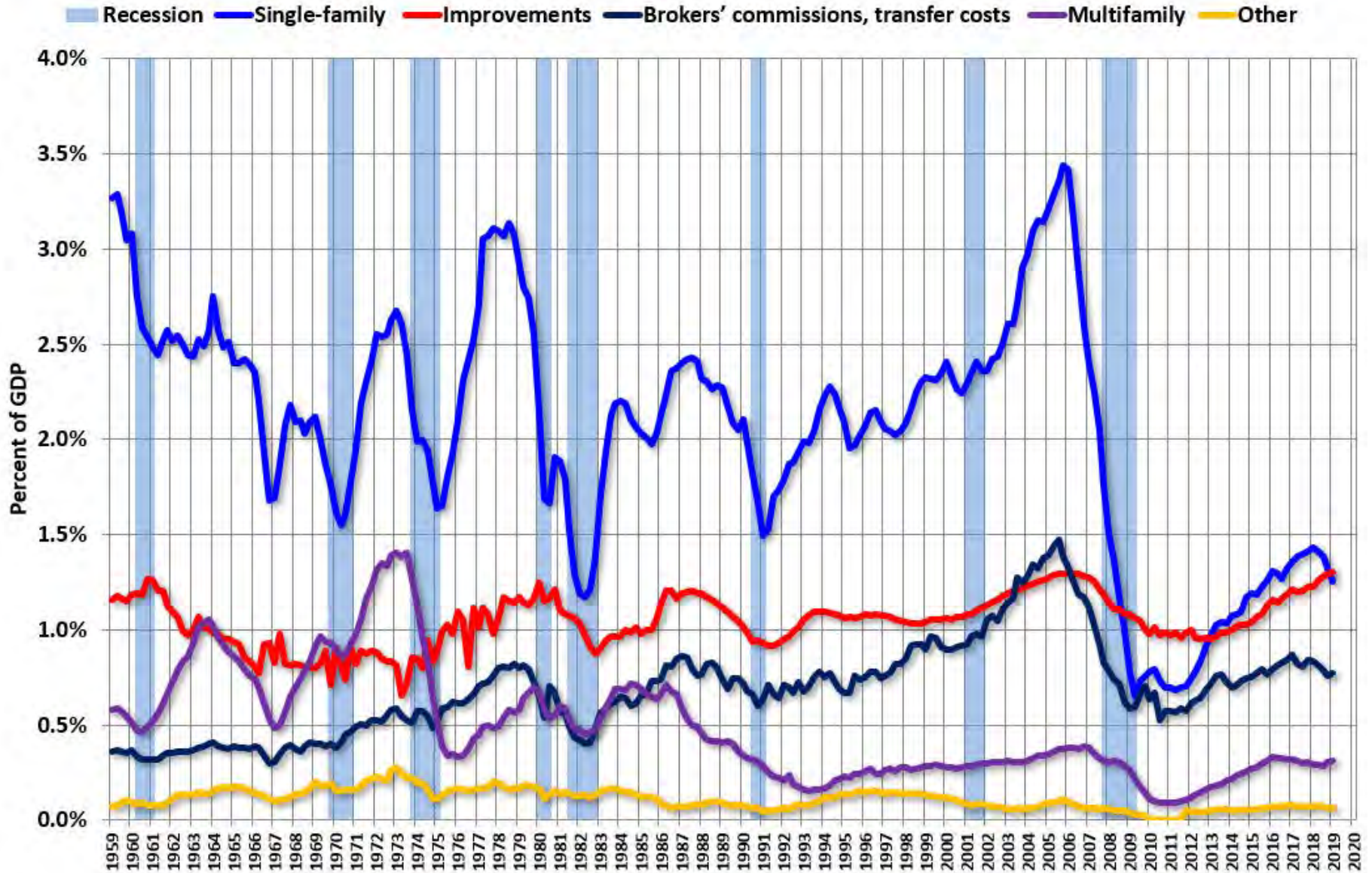
Source: U.S. Census Bureau

[myf.red/g/oiFd](https://myf.red/g/oiFd)

# Housing Recovery Has Stalled

Single family construction is what is lagging. Other components have largely recovered.

Components of Residential Investment as Percent of GDP

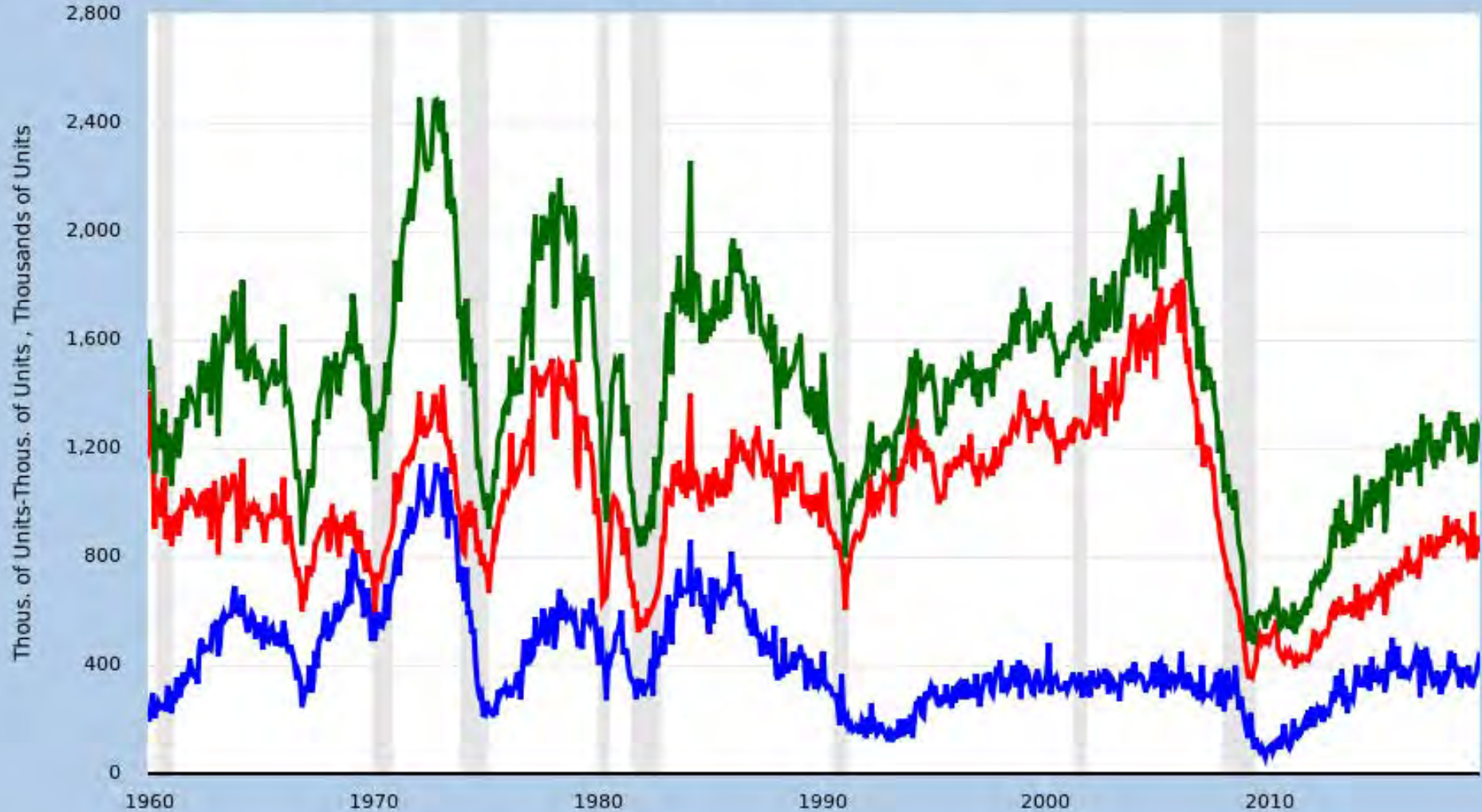


# Single-Family and Multifamily Starts – A Slow Recovery

Lack of lots, rising rates, high prices, SF remains near recessionary lows



- Housing Starts: Total: New Privately Owned Housing Units Started-Privately Owned Housing Starts: 1-Unit Structures
- Privately Owned Housing Starts: 1-Unit Structures
- Housing Starts: Total: New Privately Owned Housing Units Started



Shaded areas indicate U.S. recessions

Source: U.S. Census Bureau

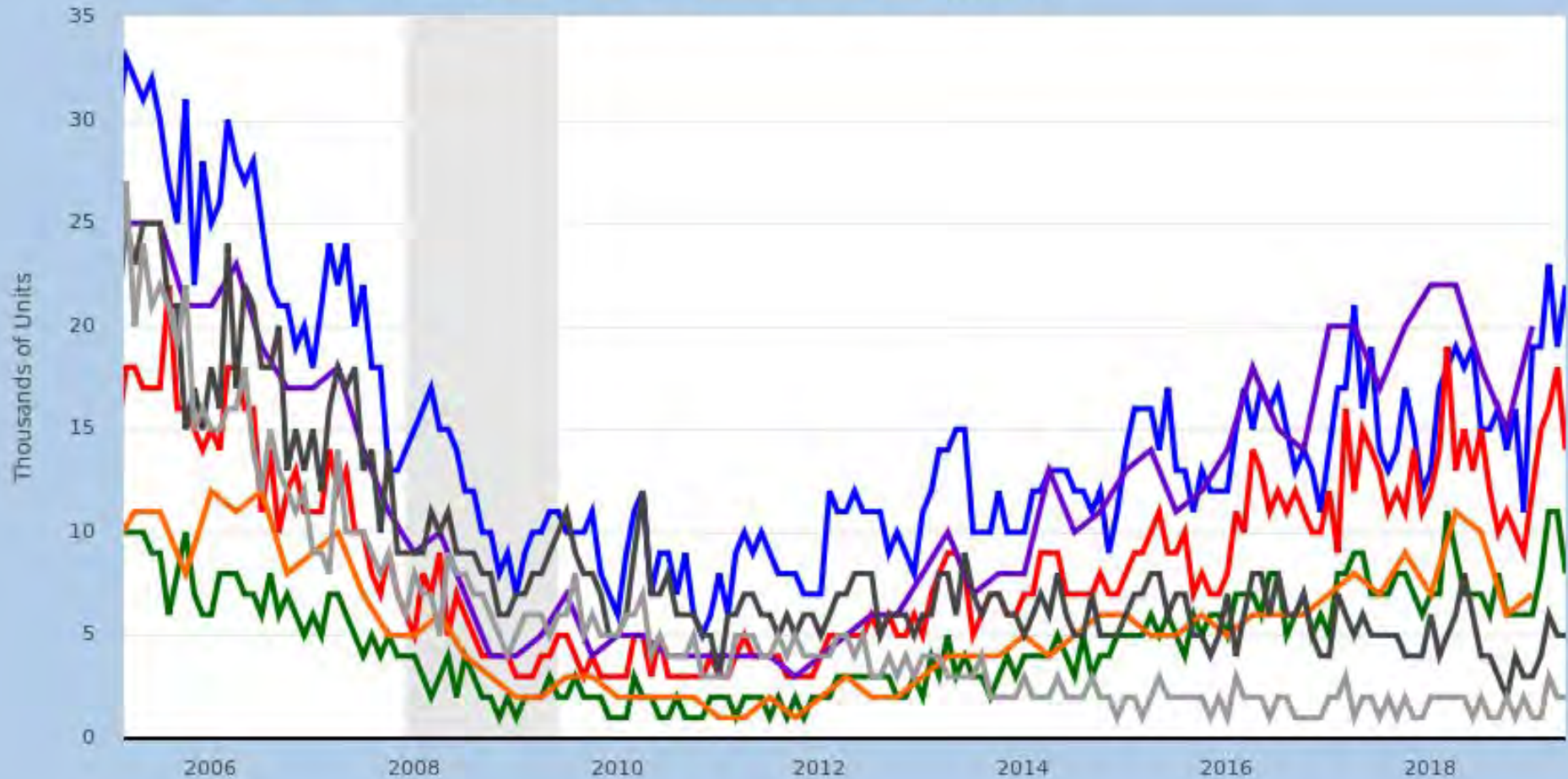
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# New Home Sales by Price

Houses under 200K are an insignificant percentage

FRED 

- New Houses Sold by Sales Price in the United States, Between \$200,000 and \$299,999
- New Houses Sold by Sales Price in the United States, Between \$300,000 and \$399,999
- New Houses Sold by Sales Price in the United States, Between \$400,000 and \$499,999
- New Houses Sold by Sales Price in the United States, Between \$500,000 and \$749,999
- New Houses Sold by Sales Price in the United States, Between \$750,000 and Over
- New Houses Sold by Sales Price in the United States, Between \$150,000 and \$199,999
- New Houses Sold by Sales Price in the United States, Under \$150,000



Shaded areas indicate U.S. recessions:

Source: U.S. Census Bureau

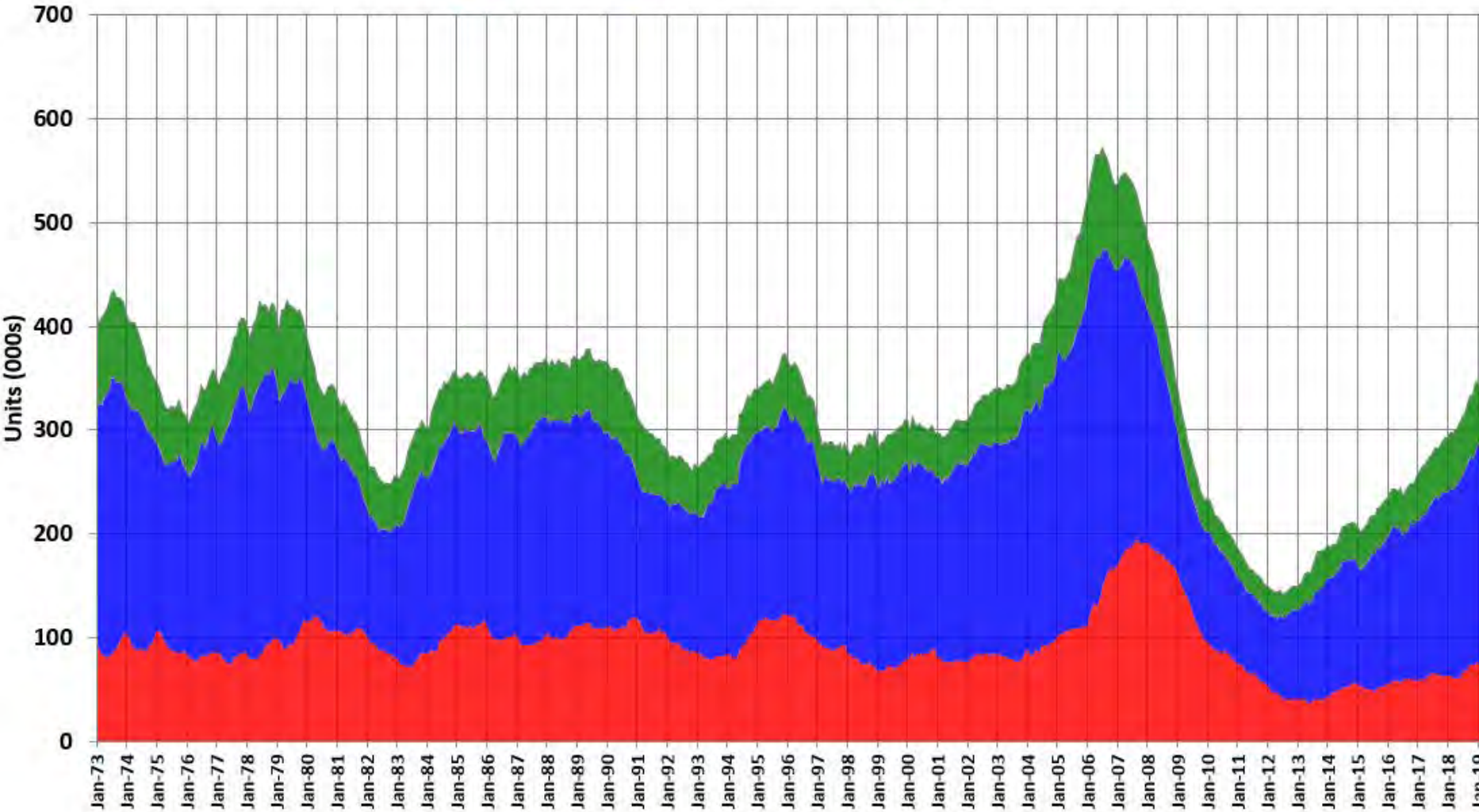
[myf.red/g/og7l](https://myf.red/g/og7l)

# New Home Inventories Fell Fast, Now Back to Normal

They have fully recovered

### New Home Inventory

Completed Under Construction Not Started



<http://www.calculatedriskblog.com/>

# Builders Are Happy Enough

## NAHB Housing Market Index



<http://www.calculatedriskblog.com/>

# Prices of Lower Priced Homes Rise Most Quickly

A lack of low-priced inventory is key

**Figure 1: HPI by Price Segment**  
Indexed to Jan 2006



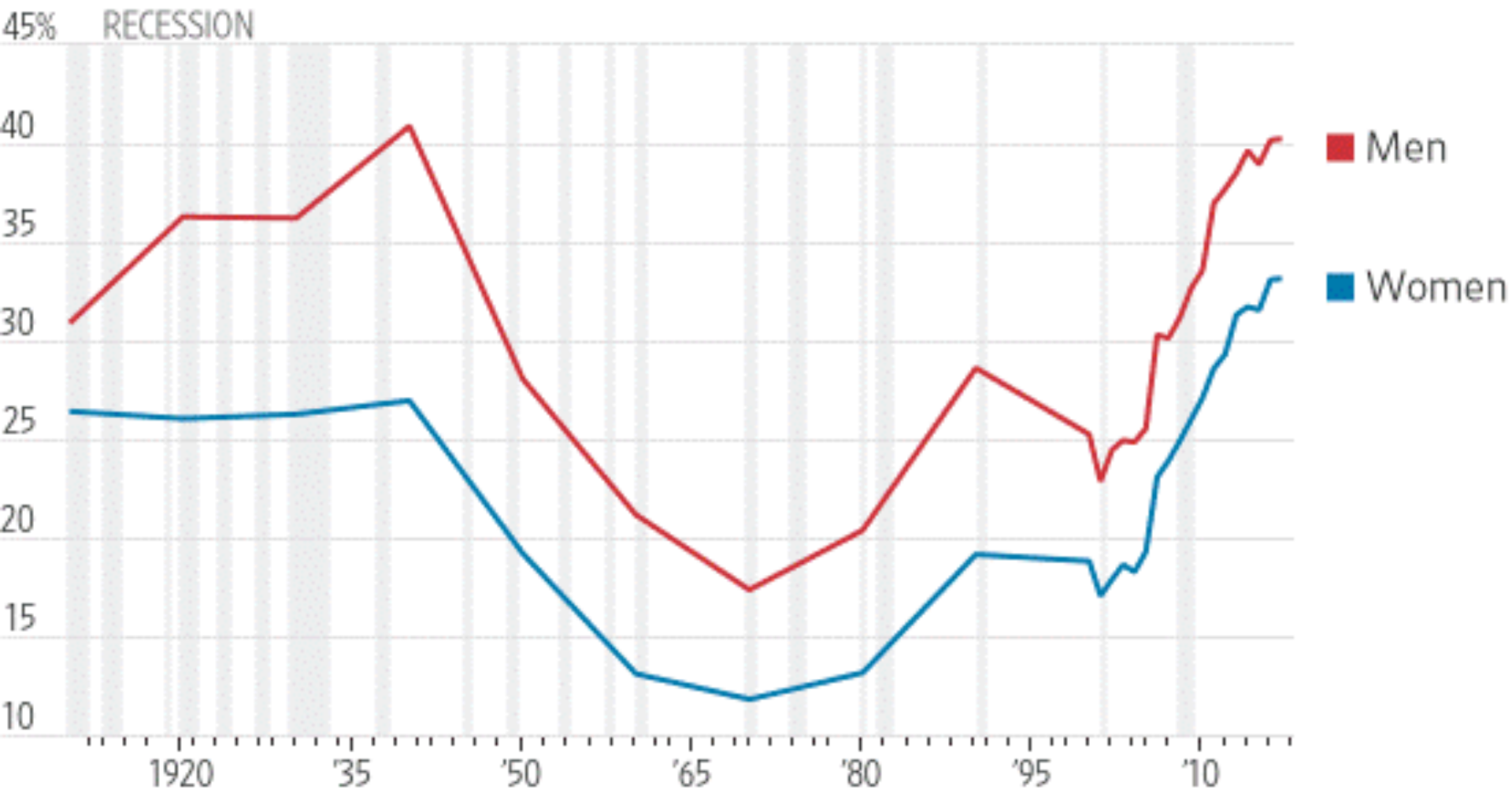
Source: CoreLogic April 2018

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# Millennials are Moving....Home!

At levels not seen in almost a century

Share of 25-year-olds living with a parent



Note: Excludes individuals living in group quarters.

Sources: Census, American Community Survey and IPUMS via Gray Kimbrough

# New Home Prices Are Too High Due to Regulation

Figure 1. Regulatory Costs as a Share of Home Price



\* For quartiles, construction and development costs do not sum to the total.  
 Source: NAHB/Wells Fargo HMI survey, assumptions described in the Appendix.

Figure 2. Average Cost of Regulation in the Price of a New Home



Based on average new home price one month before the NAHB/Wells Fargo HMI surveys  
 Source for average new home prices: New Residential Sales, U.S. Census Bureau.

# Construction Workers are in Serious Short Supply

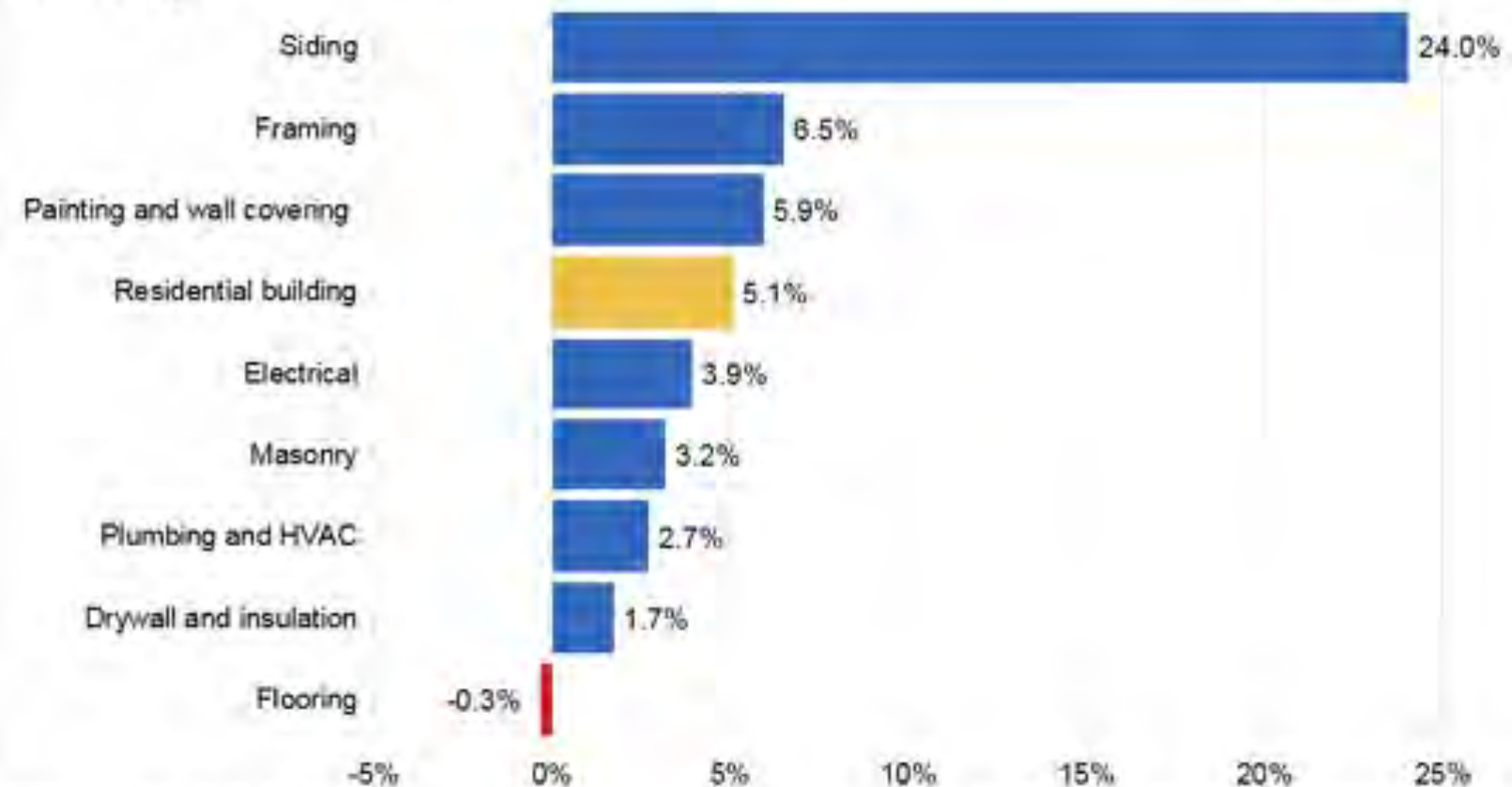
Average wage growth/year for construction workers is 5.1%, much higher than the average

## Construction Contractor Hourly Wages by Trade

Hourly wages for construction contractors increased 5% YOY, with notable dispersion between trades. Siding wages gained 24%, while wages for flooring stayed flat.

### Construction Contractor Hourly Wages

YOY % change\*

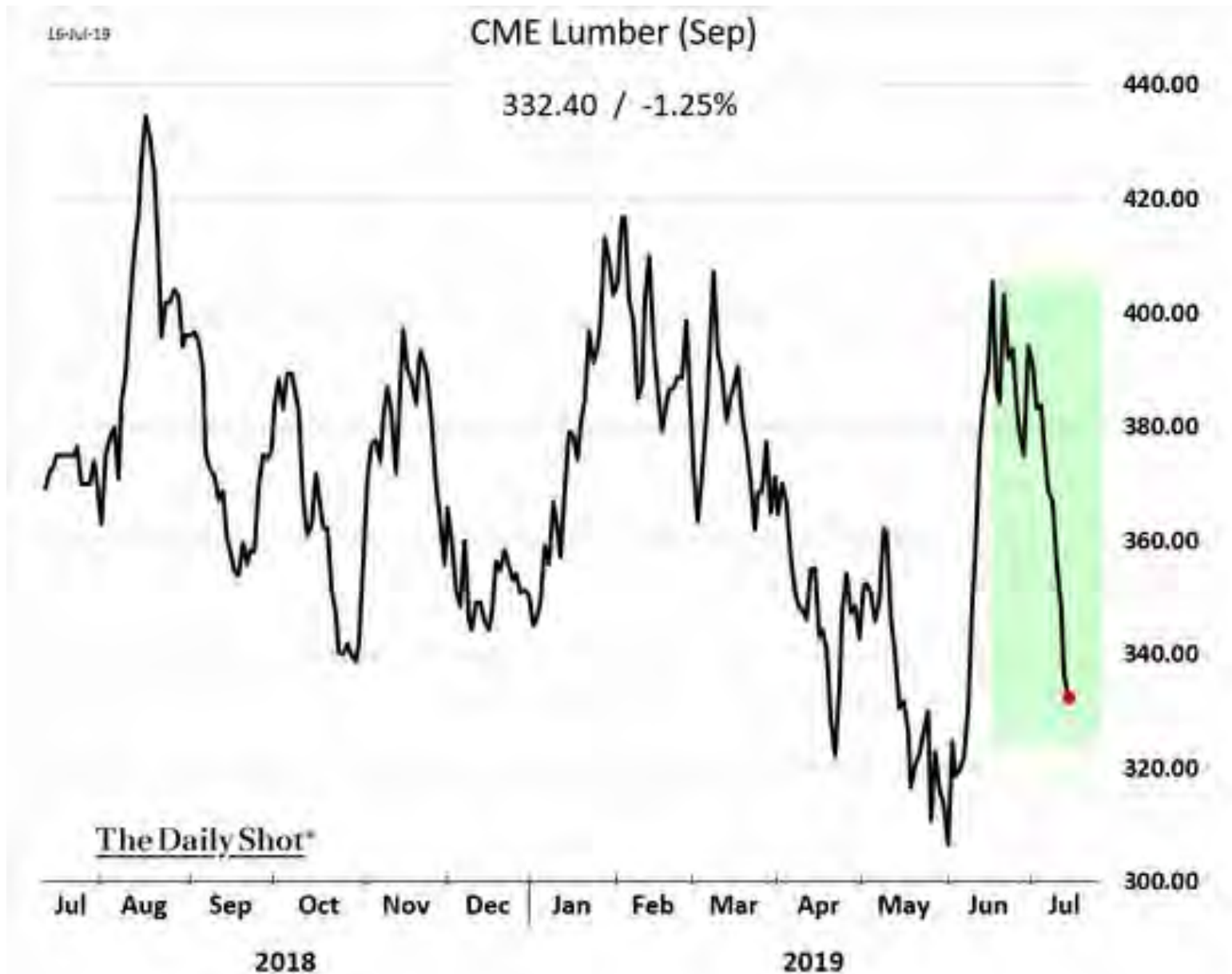


Source: BLS (Data: Jan-19; Pub: Mar-19)

\*We take a 3-month average to remove unnecessary volatility.

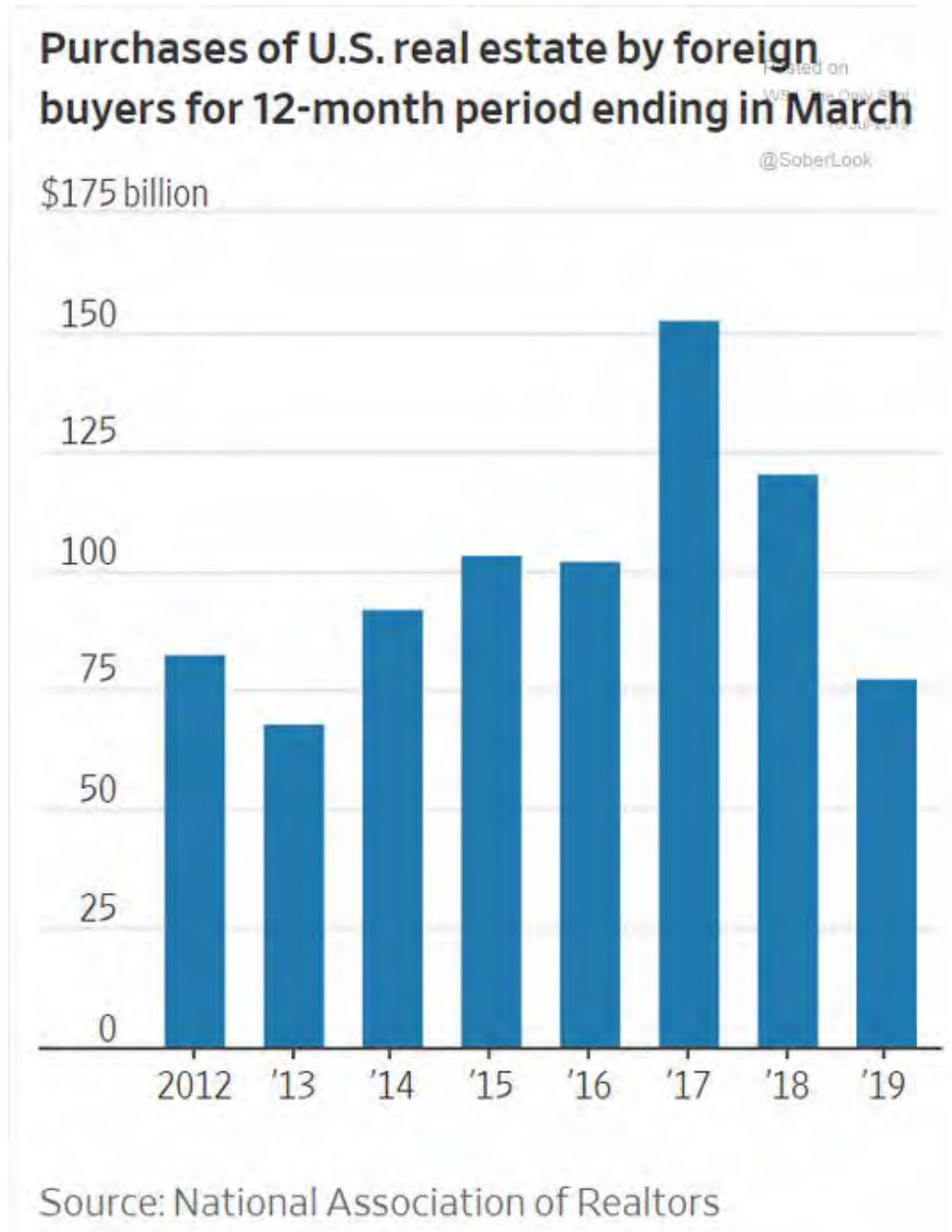
# Lumber Prices Reverse

The trend is down. More many mill closures?



# Foreign Buyers are MIA

Foreign-born buyers spending is half what it was a few years ago



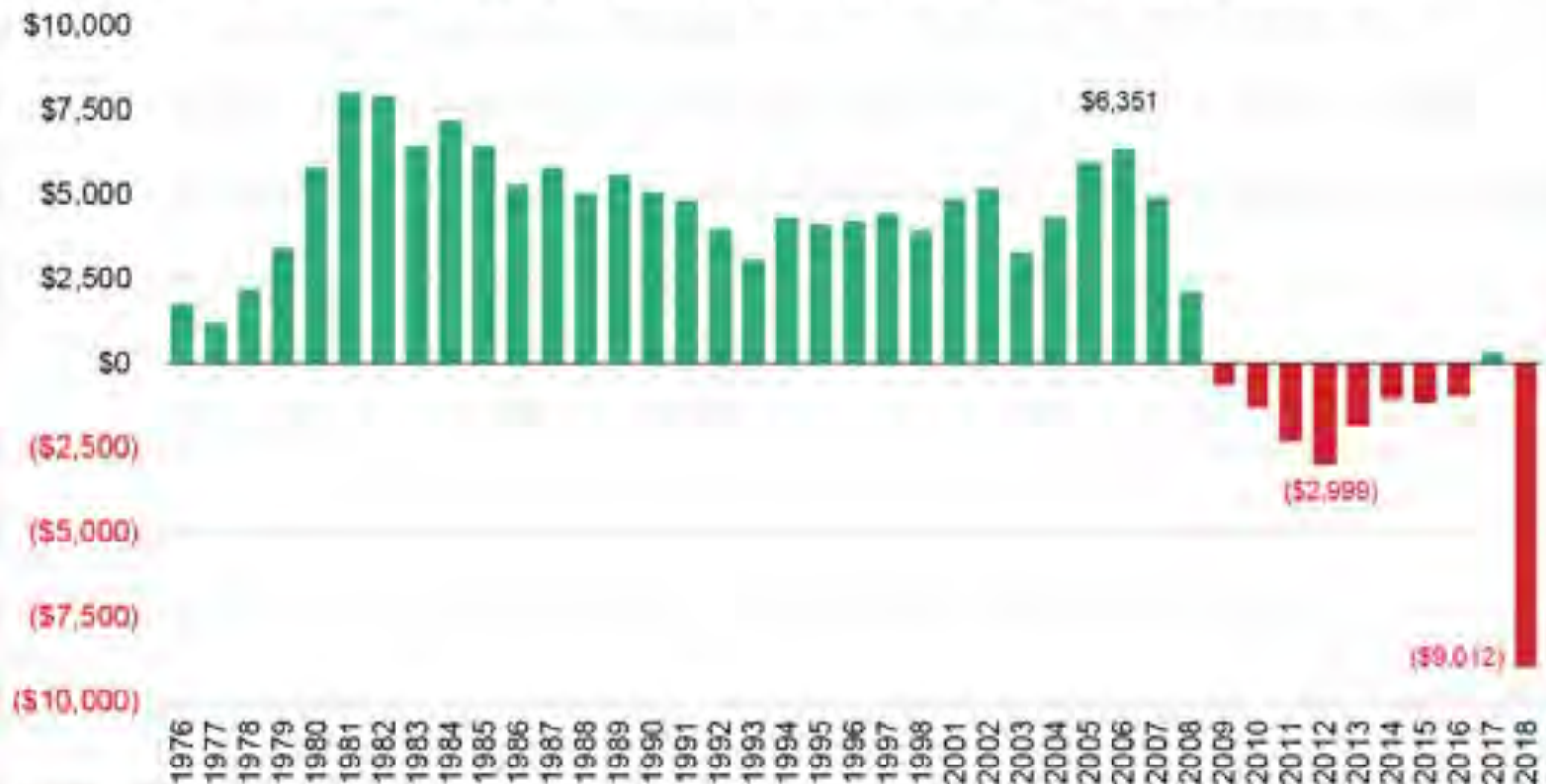
# Impact of Tax Reform on First-Time Buyers

Home buying might have to wait a few extra year

## Mortgage Tax Savings No Longer There for Entry-Level Home Buyers

Homeownership does not have the significant tax advantages it once did because of the increasing standard deduction, declining mortgage rates, and the recent tax policy changes. For 2018 the standard deduction exceeds deductions for mortgage interest and property taxes by \$9,012.

## Mortgage Interest and Property Taxes in Excess of Standard Tax Deduction\*



\*Assumes a married couple with a mortgage equal to 95% of median home price and a 1.5% property tax rate. 2018 projected value assumes our forecasts of 6% home price appreciation and 4.6% mortgage rate.

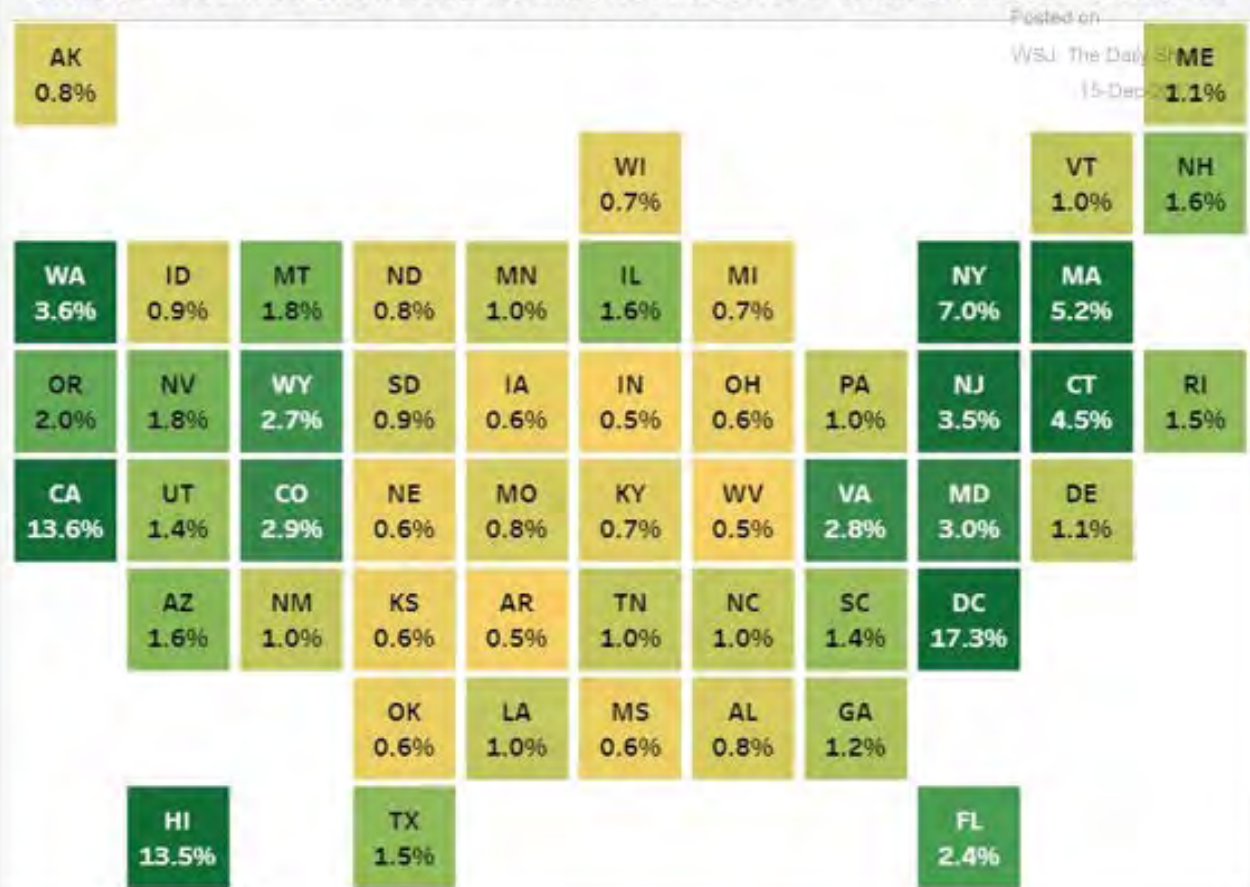
Source: John Burns Real Estate Consulting, LLC (Data: 2018, updated quarterly)

Pub: Mar-19

# House Prices by Geography

DC, CA and HI are the most expensive. NY, MA and CT follow

What state has the most homes worth more than a million dollars?

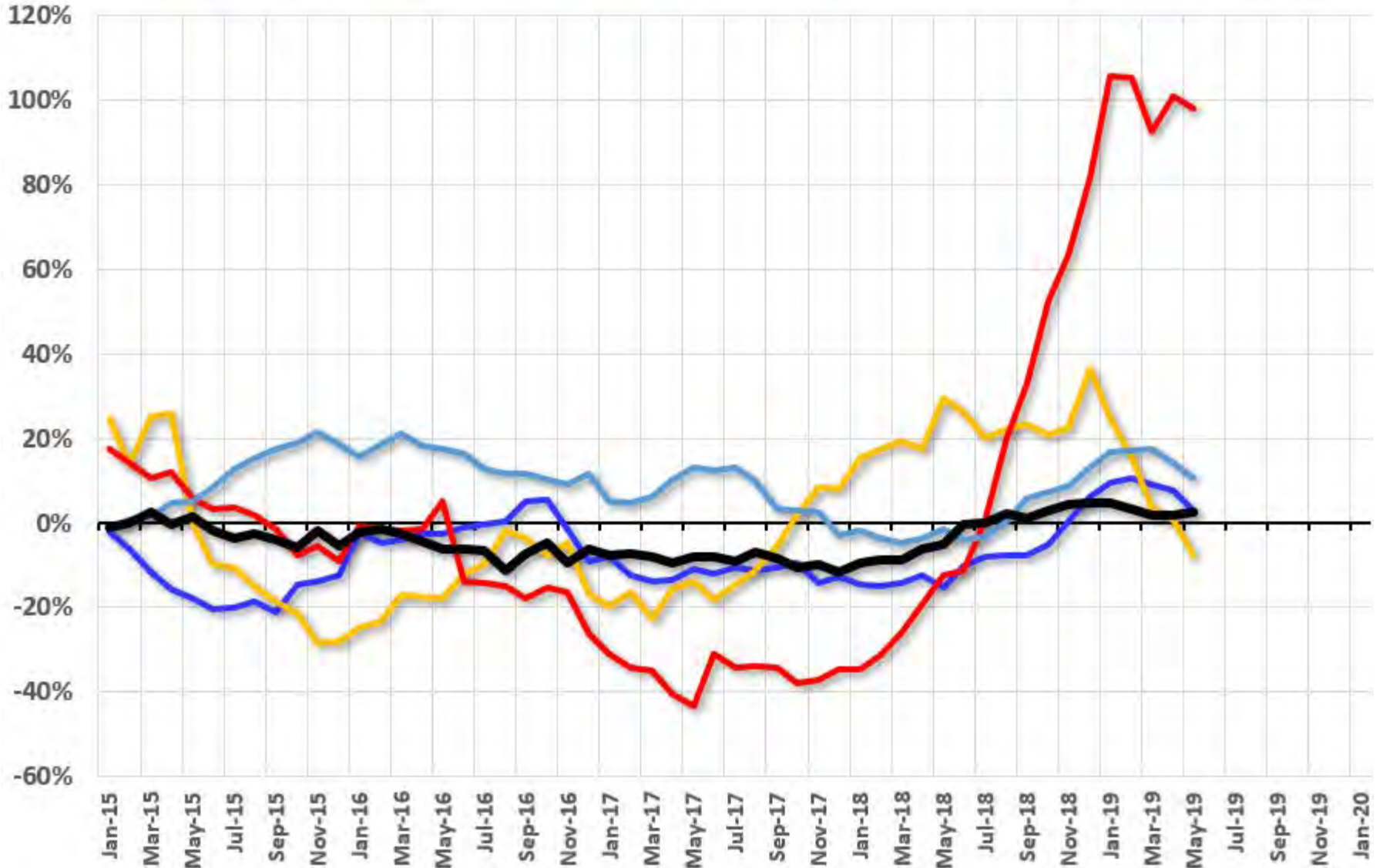


# Inventory Has Bottomed

It looks like it hit bottom in mid-2018. Up 2.7% Y-o-Y.

Year-over-year Inventory, National and Four Local Markets

Phoenix Sacramento Las Vegas Houston NAR (National)

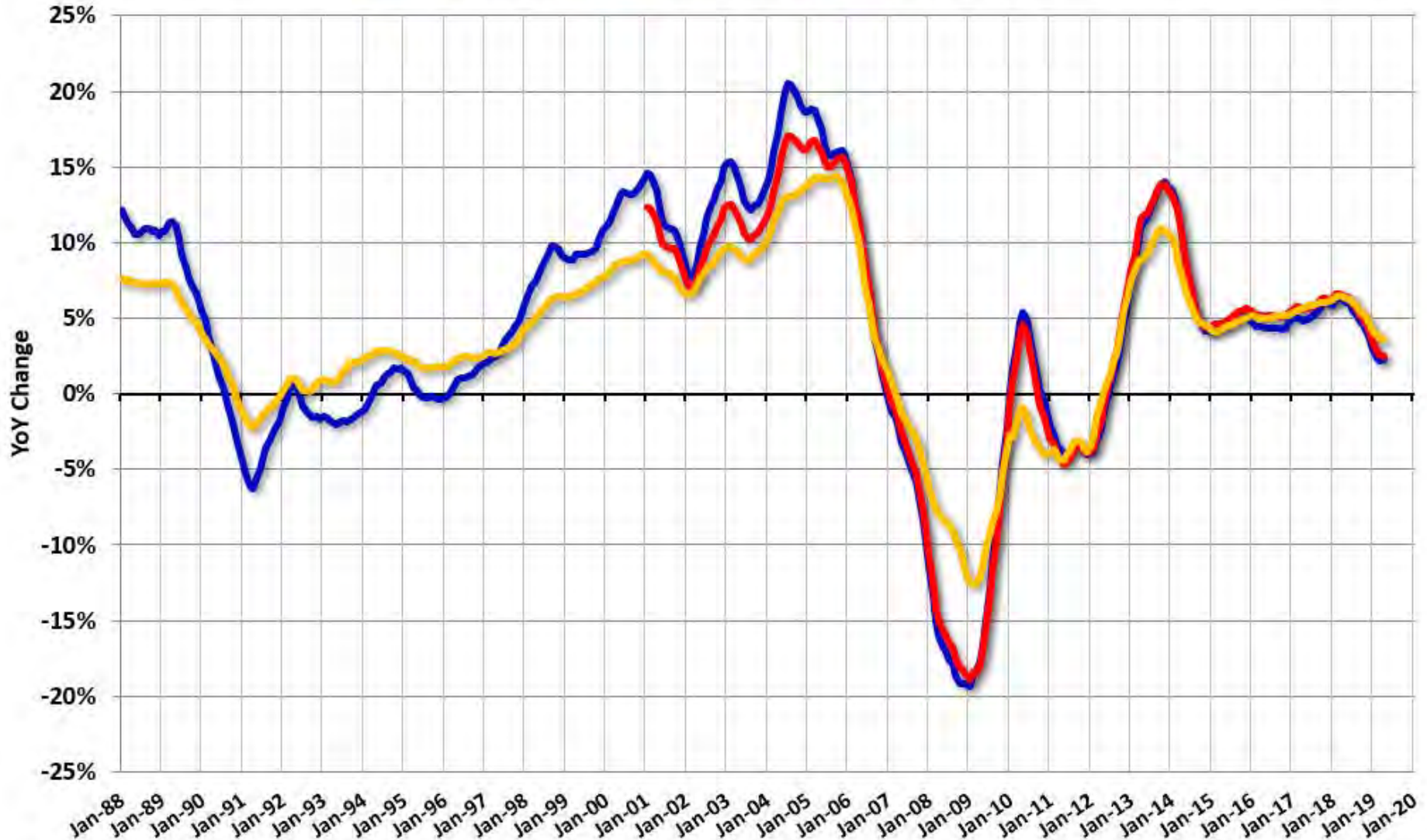


# Price Growth is Slowing

Prices rise faster than wages! Y-o-Y prices up 2.3%, 2.5% or 3.5% depending on the measure

Case-Shiller National and Composite Indices SA, Year-over-year Change

— Composite 10 — Composite 20 — National Index



# Existing Home Sales are Steady

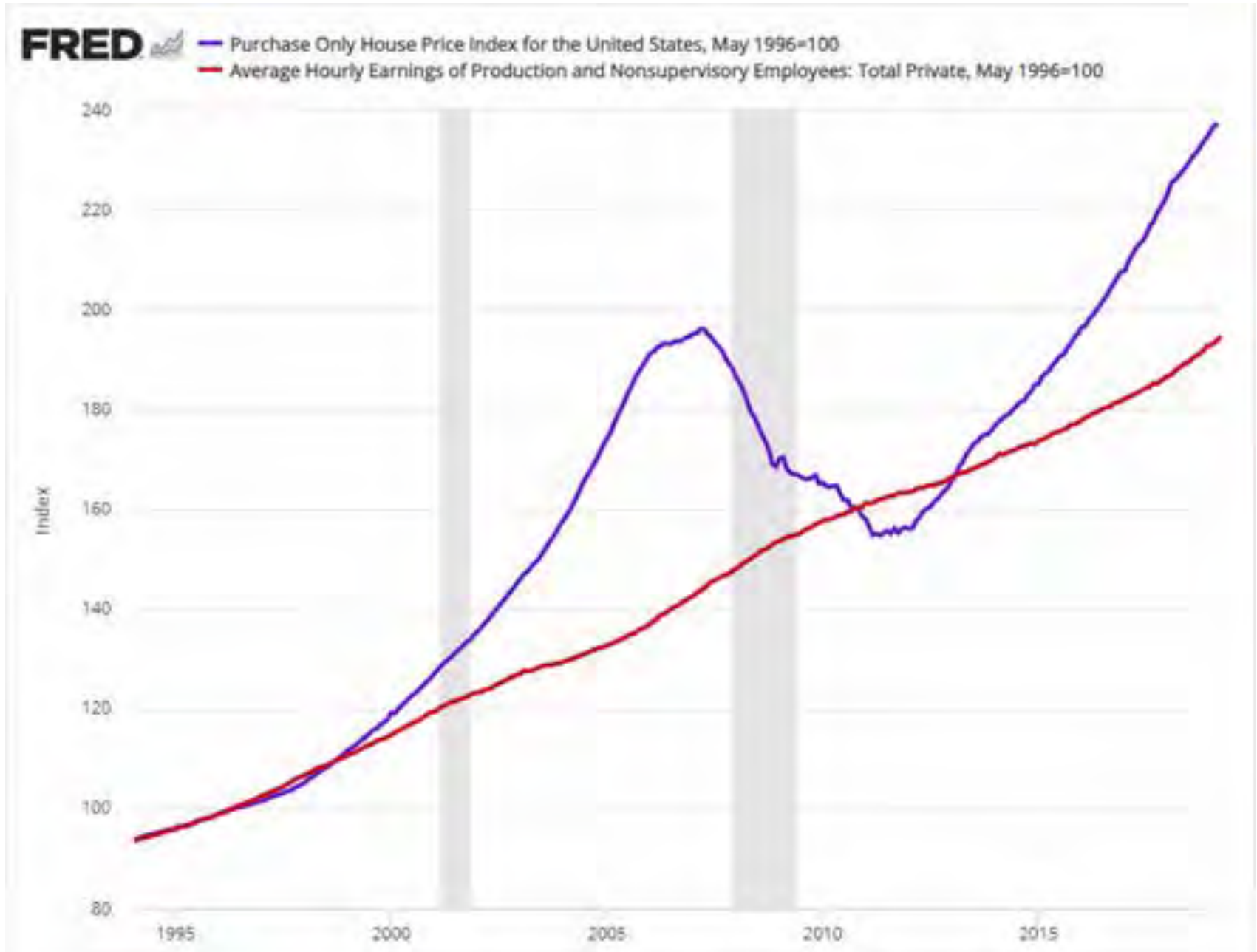
Regrettably, this is occurring while the economy rocks!

Existing Home Sales (SAAR)



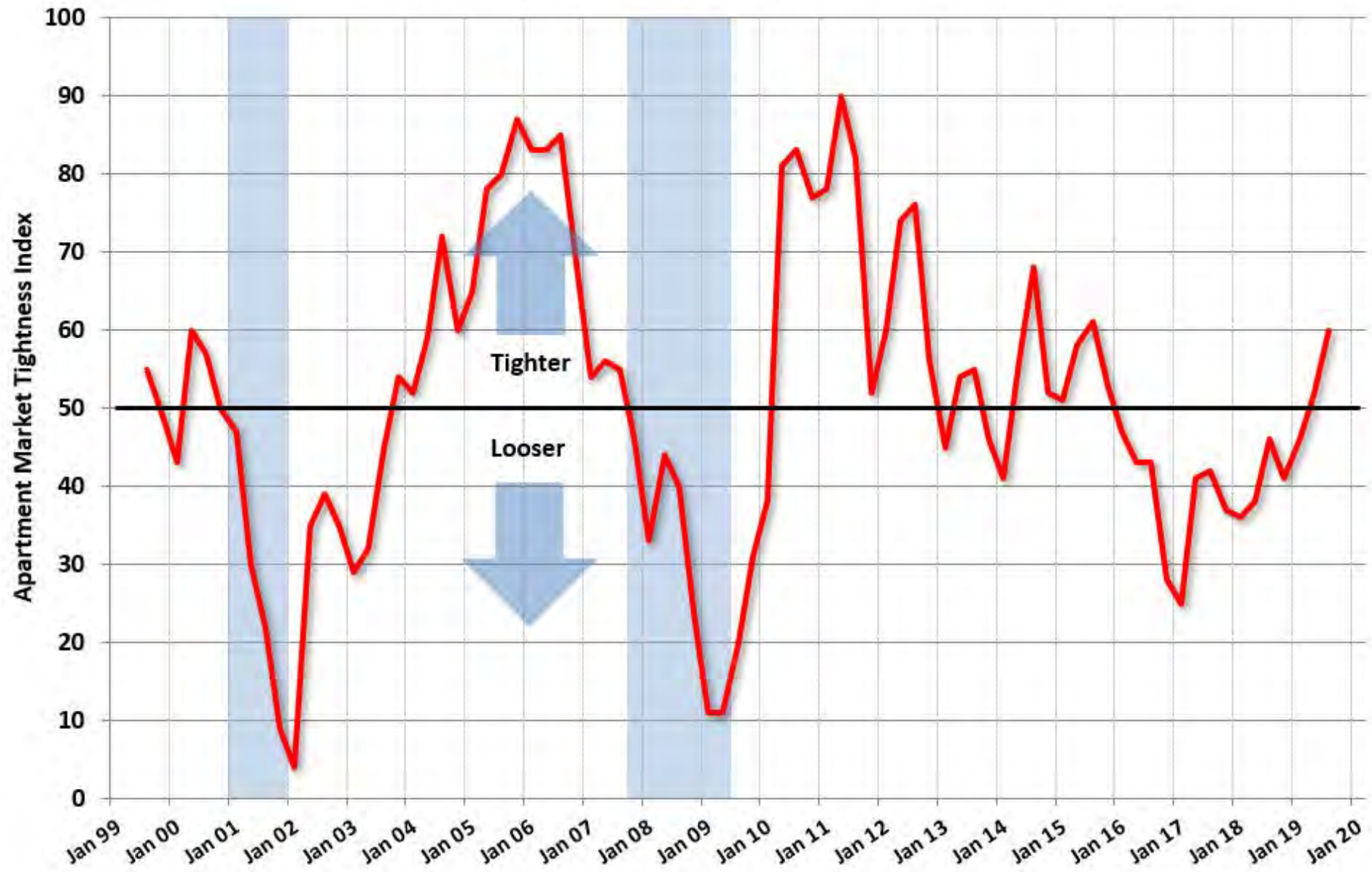
# Housing is in General is Rising Much Too Quickly

Approaching the magnitude of the Housing Boom



# Apartment Rental Situation

The multifamily party is picking up steam. A lack on new building is probably why  
NMHC Quarterly Survey of Apartment Market Tightness



# Rents Keep Rising Too Fast

Rents rise faster than wages! Y-o-Y prices up 3.9% and again rising!

**FRED** 

— Consumer Price Index for All Urban Consumers: Rent of primary residence



Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Labor Statistics

[myf.red/g/omYU](https://myf.red/g/omYU)

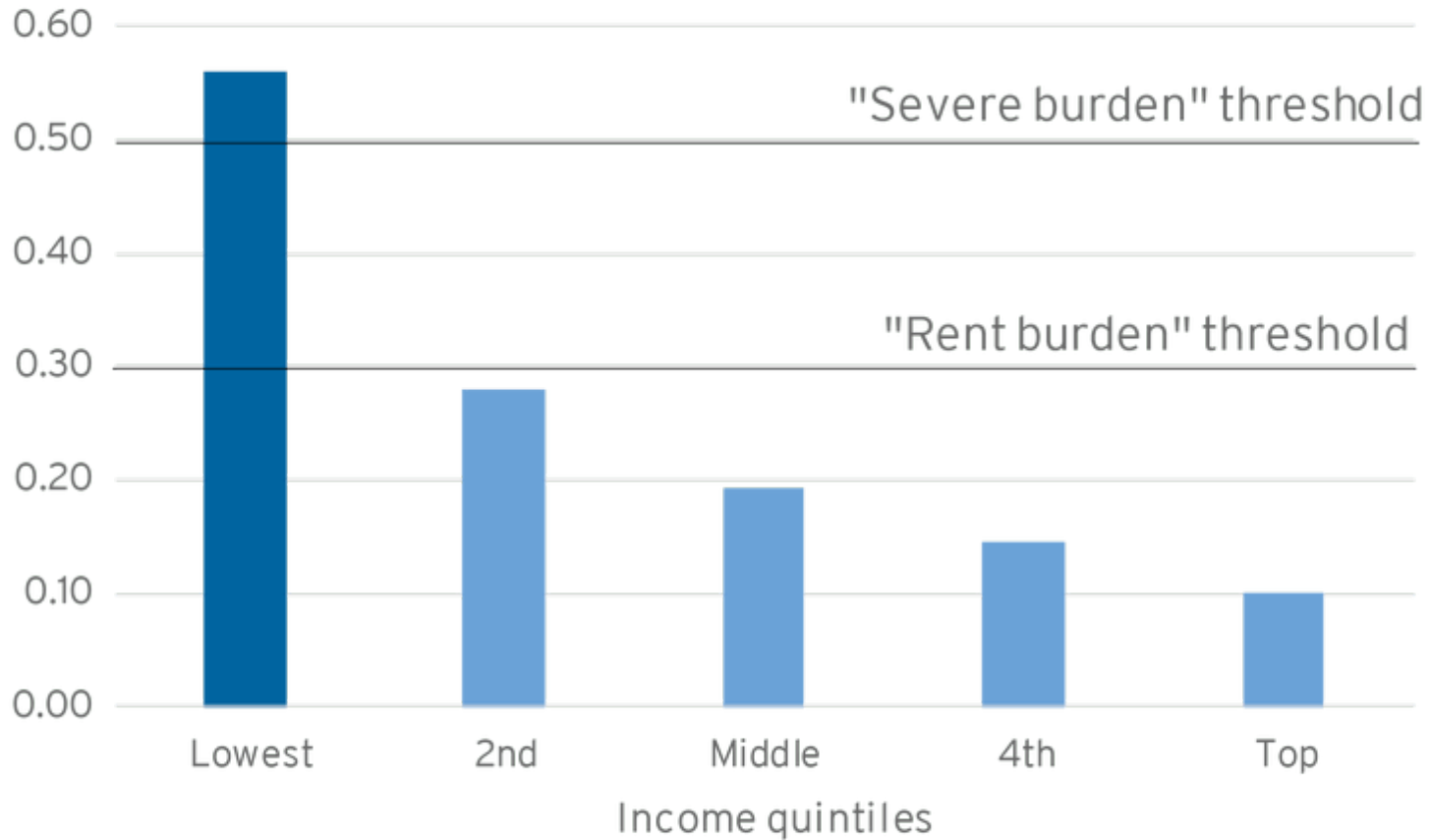
# Bottom Quintile Renters Really Struggle

Bottom 20% of households are generally severely rent burdened

FIGURE 1

## Lowest-income families face severe rent burdens

Percent of income spent on rent



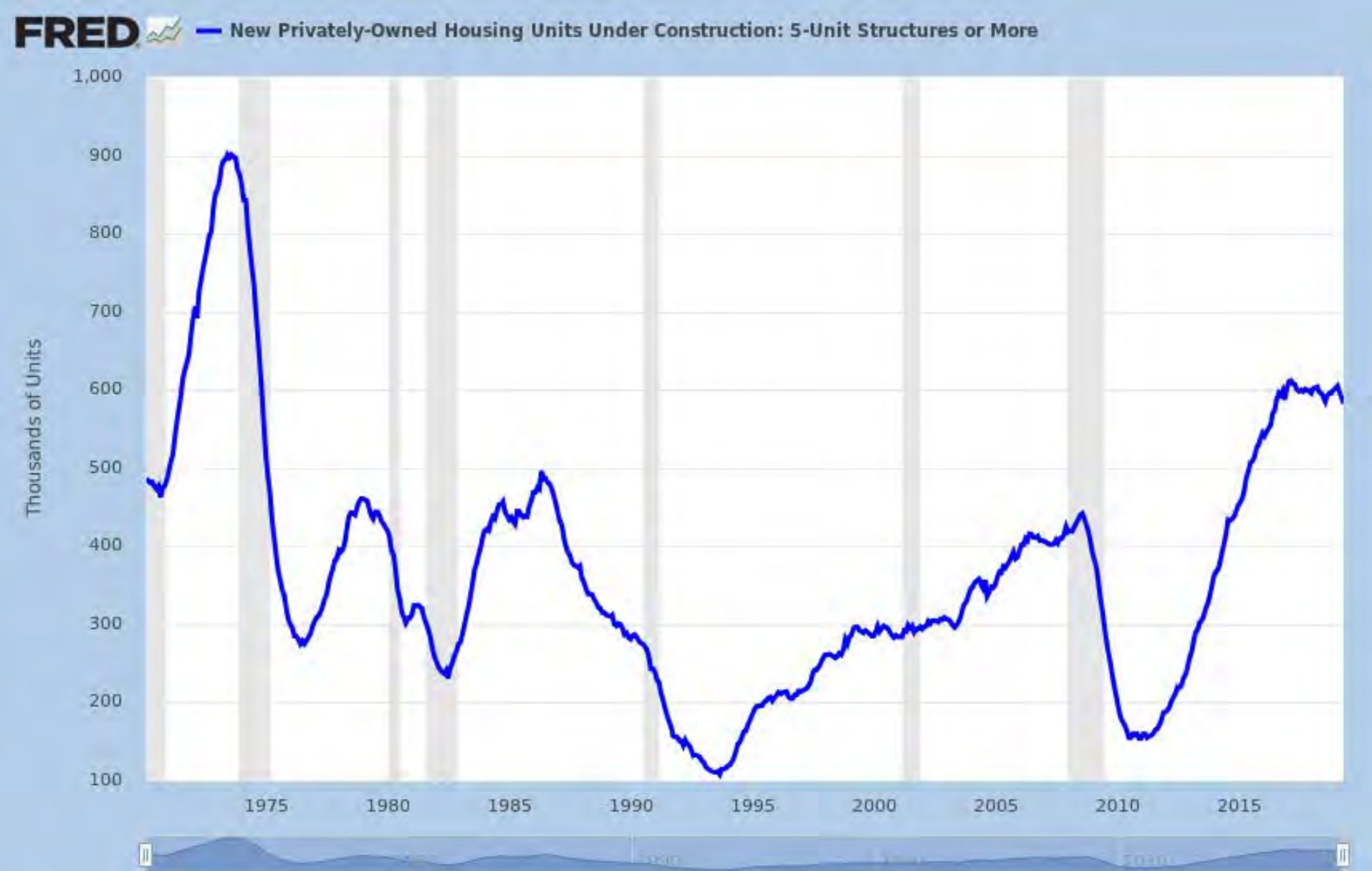
Source: Authors' calculations using the 2015 American Community Survey from the U.S. Census Bureau.



Metropolitan Policy Program  
at BROOKINGS

# Number of Multifamily Units Under Construction

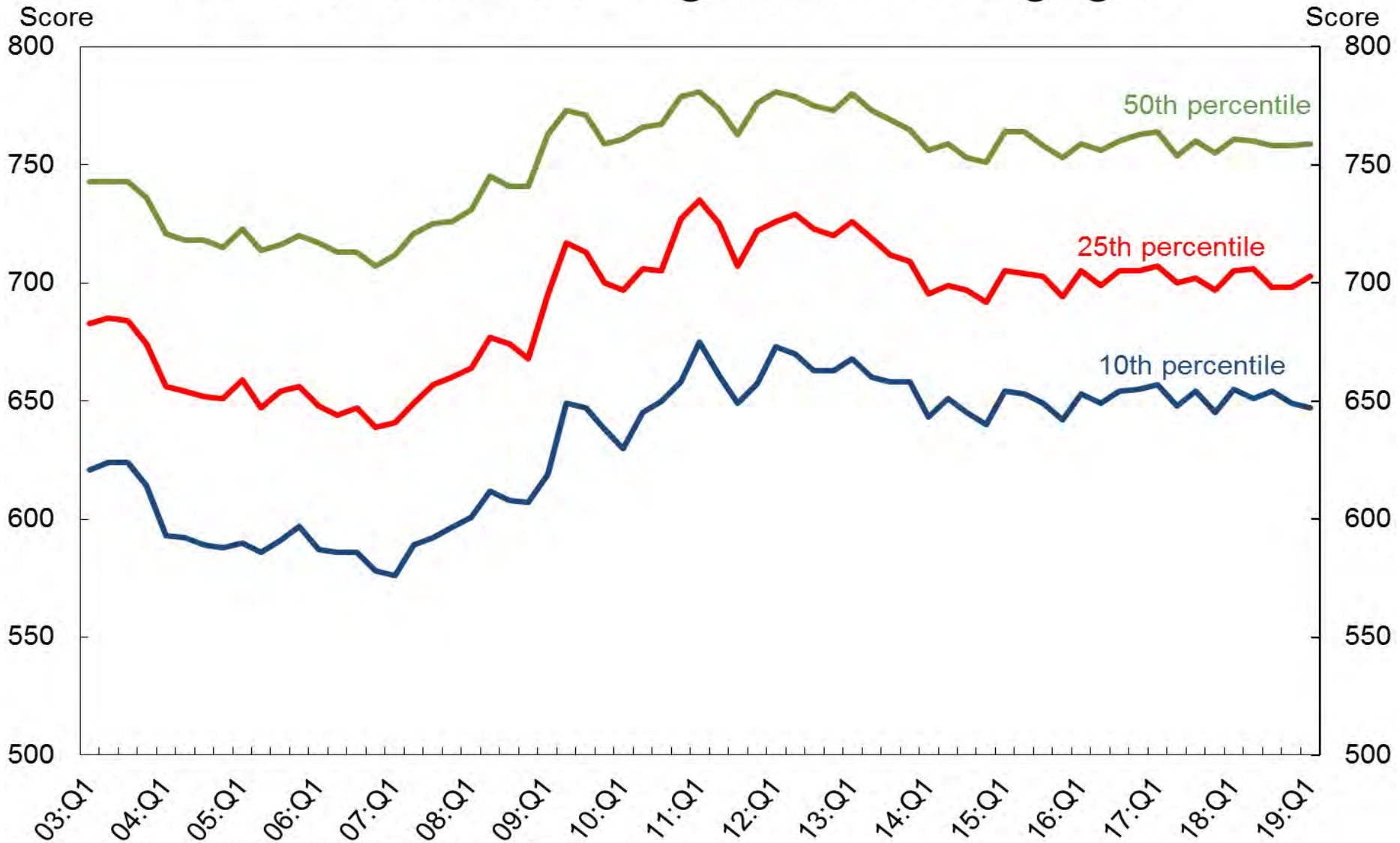
It should start to slowly decline but remains huge



Source: U.S. Census Bureau

myf.red/g/nW7B

# Credit Score at Origination: Mortgages\*



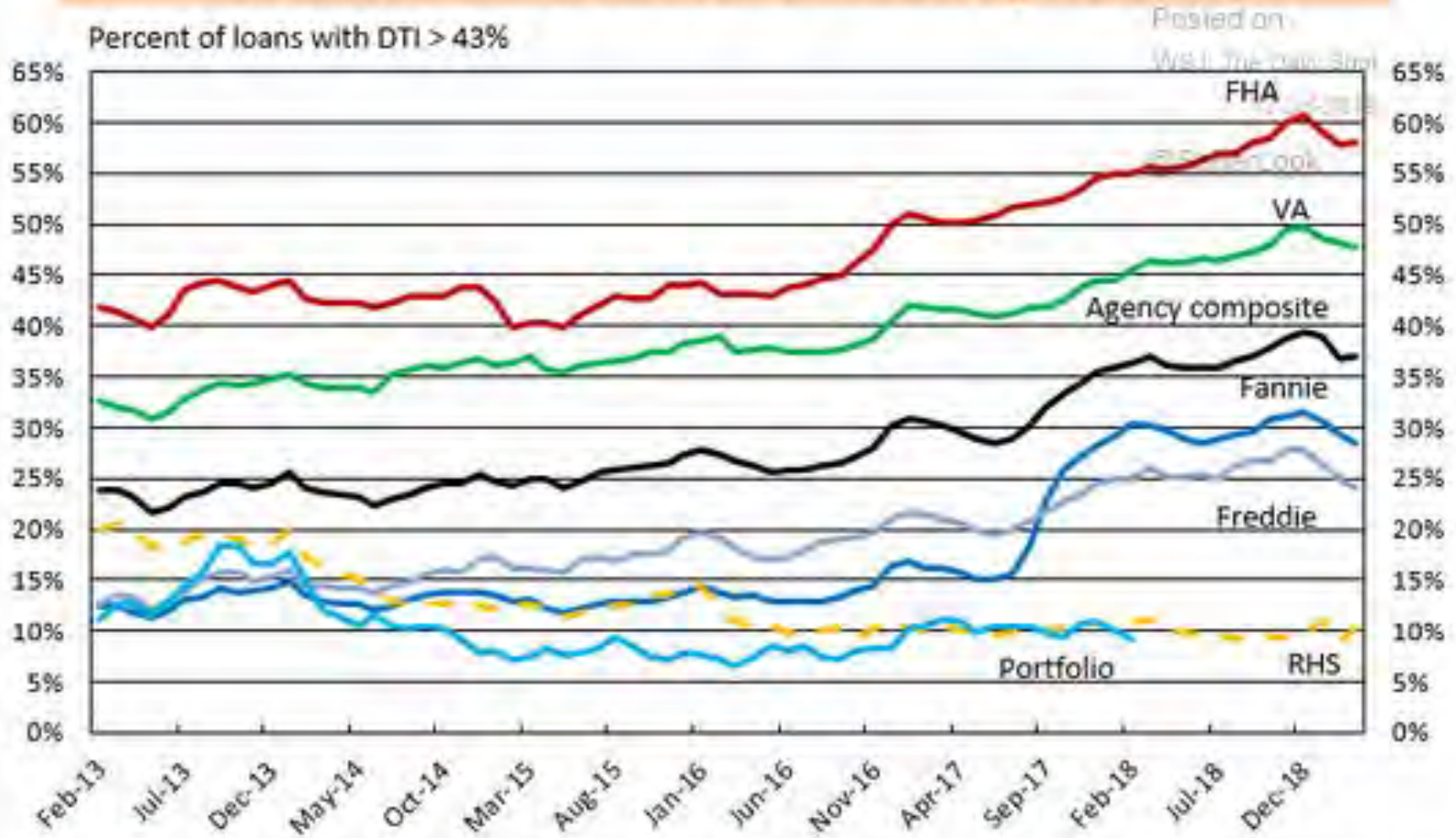
Source: New York Fed Consumer Credit Panel/Equifax

\* Credit Score is Equifax RiskScore 3.0; mortgages include first-liens only.

# DTI Drifts Up

Note that this is not the case for portfolio loans

## Purchase Loans with Total DTI Greater than 43% through March, 2019



Note: Data pertain to purchase loans for primary owner-occupied properties. Data for the portfolio line come from LLMA and McDash after removing duplicative loans. The data are weighted by loan amount buckets and origination year using HMDA weights (lag due to time needed to allow for sales to GSEs). Weights for 2018 are assumed to be identical to 2017. Source: AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing), CoreLogic, and Black Knight.

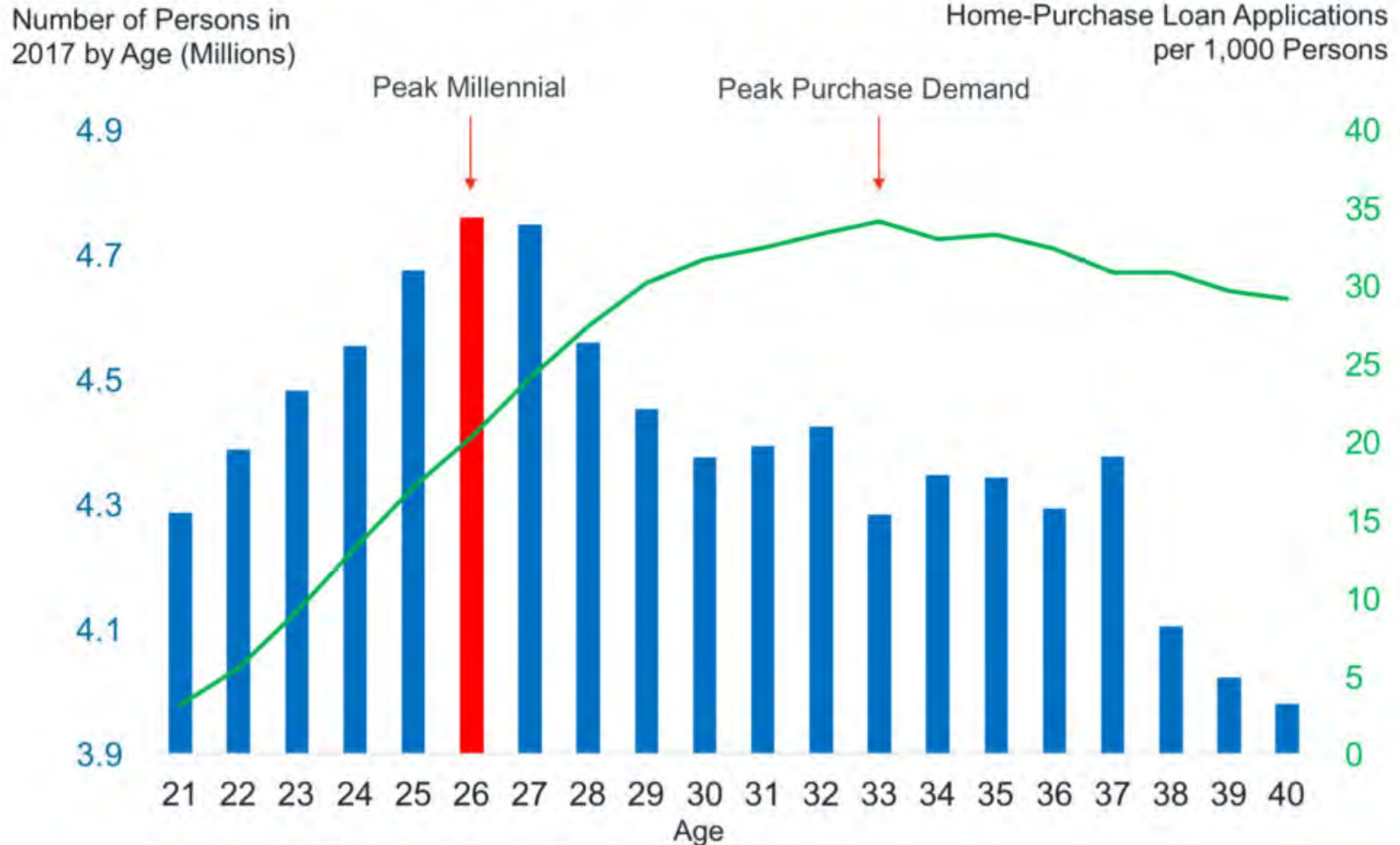
# Millennials Will Keep This Issue Front and Center

Beginning to approach the Peak. Chase Millennials, move-up buyers and Boomers

## Exhibit 4:



## Millennials Will Propel First-time Buyer Demand



Source: CoreLogic and Census Bureau (population as of July 1)

# Investors Are Big Buyers of SF Units

The market is changing a bit. Investors get into the SFR space

## Investor-buying of US homes at record highs



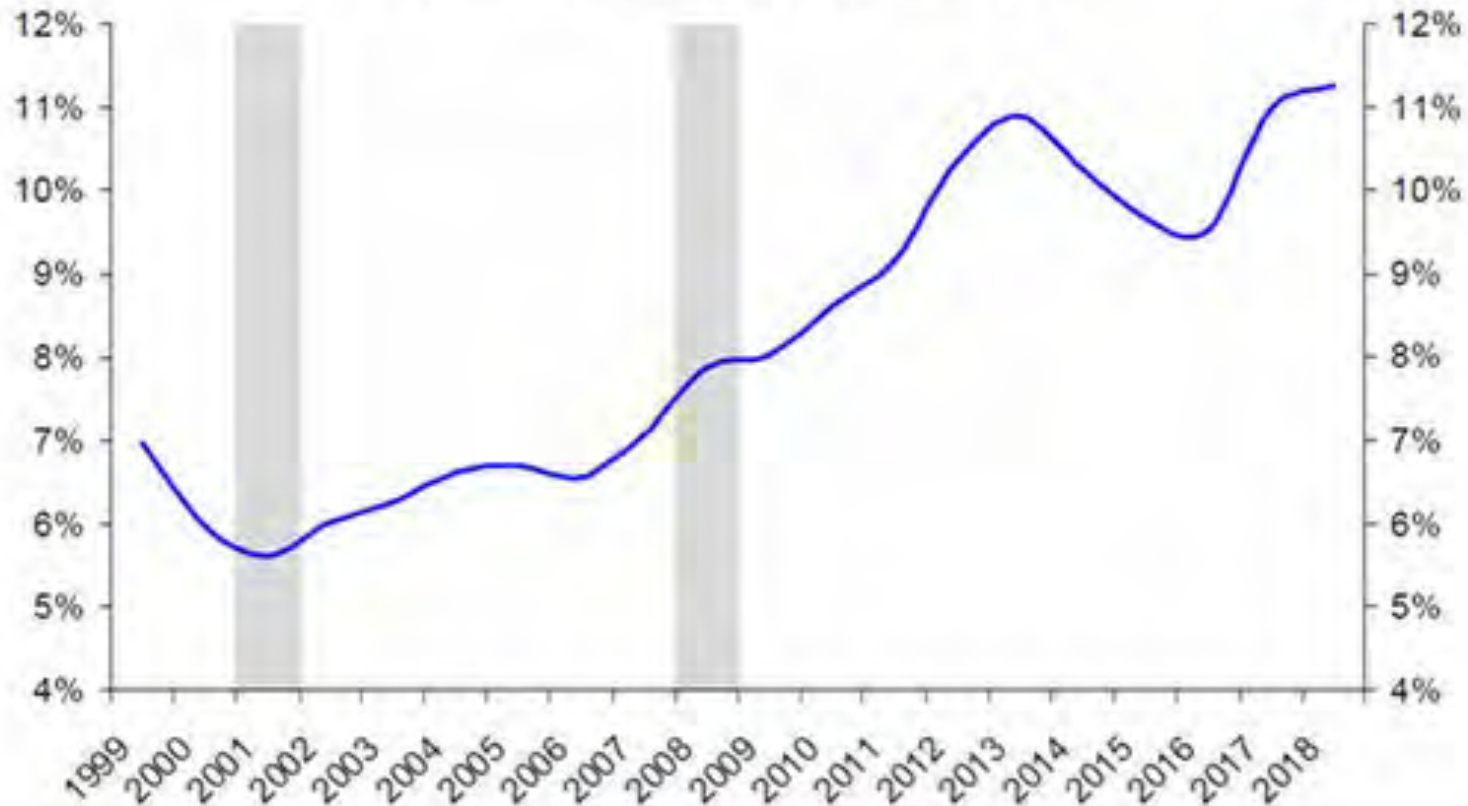
Posted on

WSJ The Daily Sheet

03 Jul 2019

### U.S. Investor Homebuying rates, 1999-2018

@SoberLook

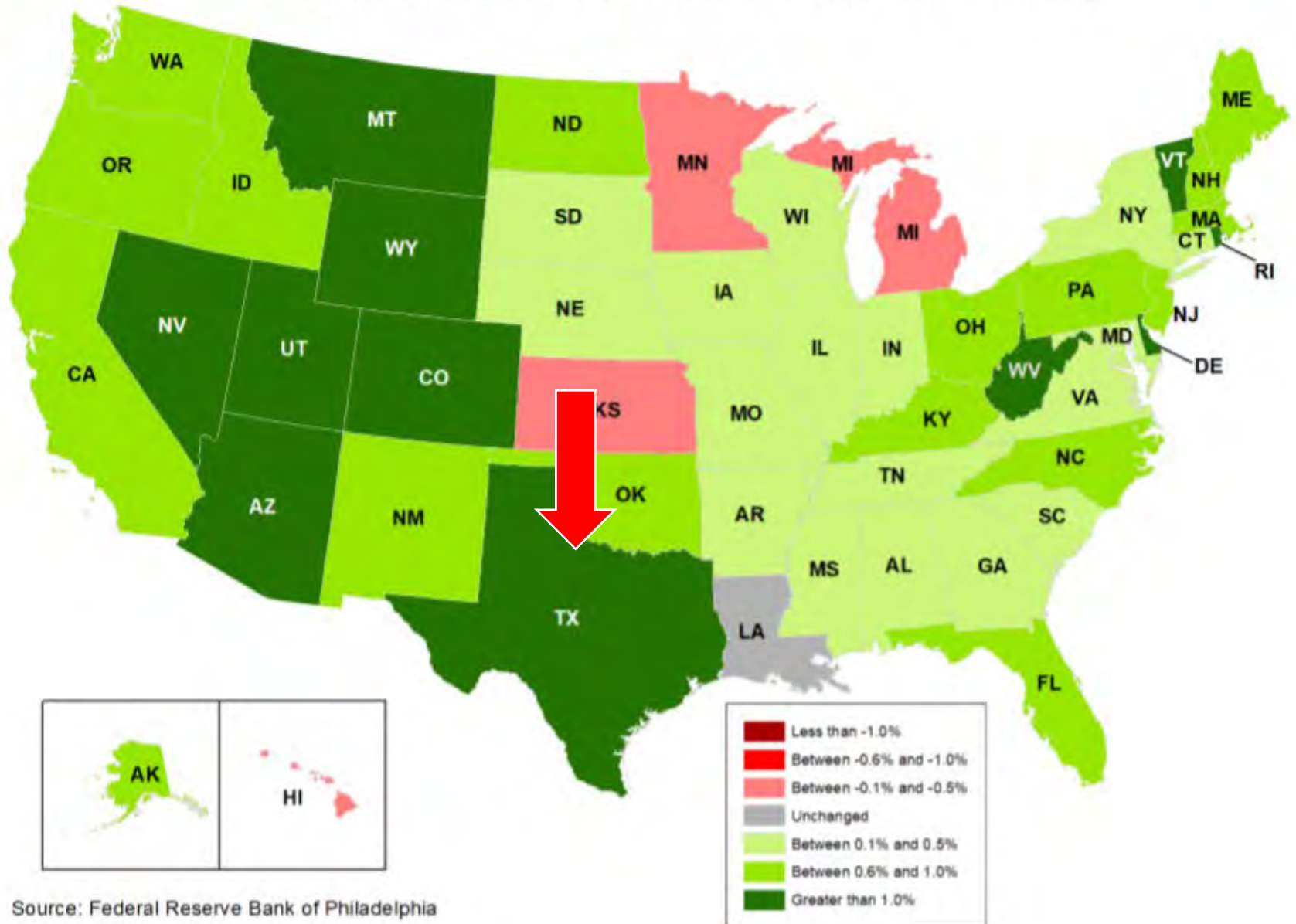


Source: CoreLogic, DB Global Research

**What About  
Things Here?**

# Things Are Good Now

May 2019 State Coincident Indexes: Three-Month Change



Source: Federal Reserve Bank of Philadelphia

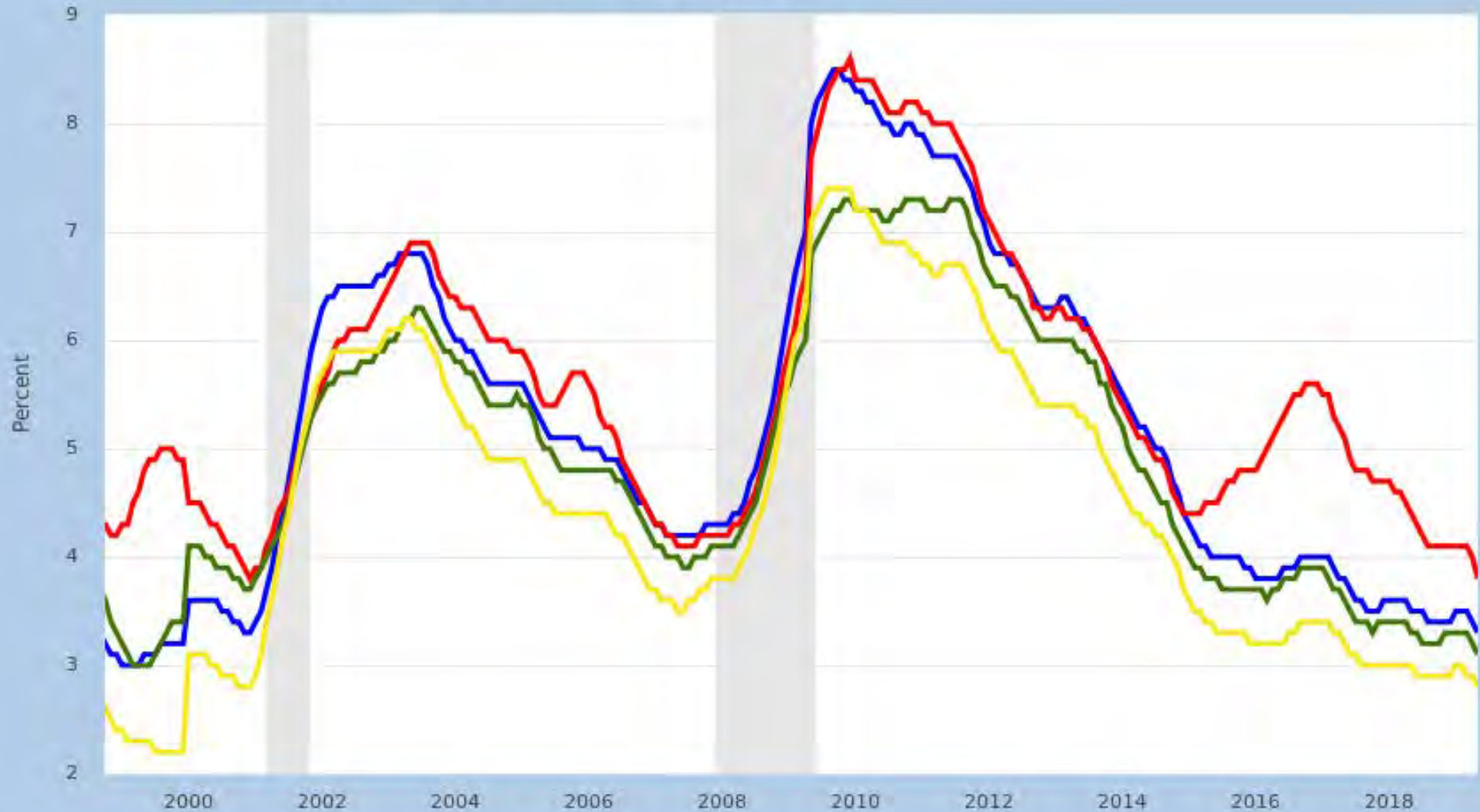


# Unemployment Rates in the Biggest Texas MSAs

Rates are below the national average everywhere, and well below in Austin

**FRED**

- Unemployment Rate in Dallas-Fort Worth-Arlington, TX (MSA)
- Unemployment Rate in Houston-The Woodlands-Sugar Land, TX (MSA)
- Unemployment Rate in San Antonio-New Braunfels, TX (MSA)
- Unemployment Rate in Austin-Round Rock, TX (MSA)



Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Labor Statistics

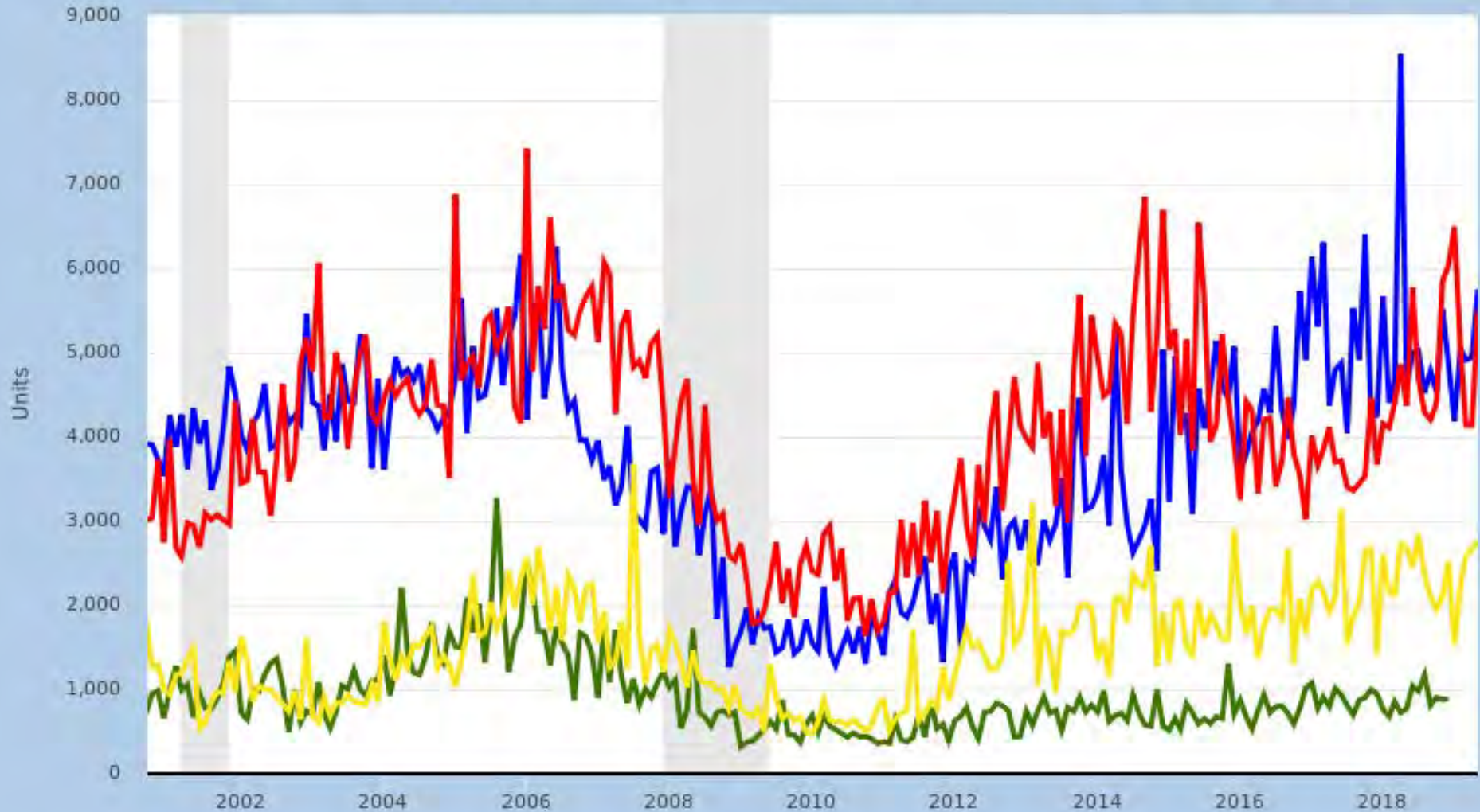
myf.red/g/oom7

# Housing Starts in the Four Biggest Texas MSAs

In Austin, Houston and Dallas starts have fully recovered. In San Antonio, not yet there



- New Private Housing Units Authorized by Building Permits for Dallas-Fort Worth-Arlington, TX (MSA)
- New Private Housing Units Authorized by Building Permits for Houston-Sugar Land-Baytown, TX (MSA)
- New Private Housing Units Authorized by Building Permits for San Antonio, TX (MSA)
- New Private Housing Units Authorized by Building Permits for Austin-Round Rock-San Marcos, TX (MSA)



Shaded areas indicate U.S. recessions

Source: U.S. Census Bureau

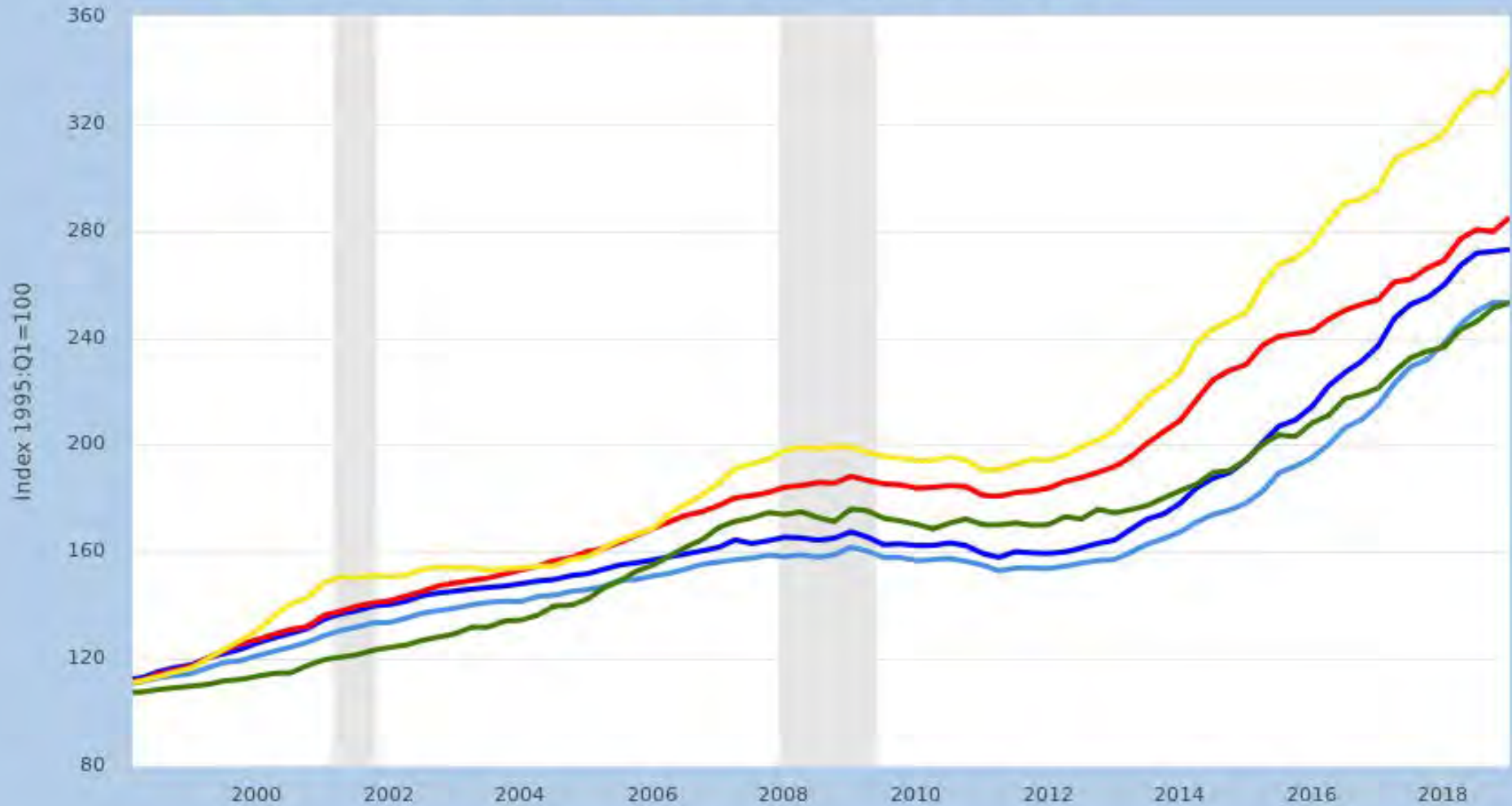
[myf.red/g/oomo](https://myf.red/g/oomo)

# House Prices Are Way Up

Home prices are up at least 50% everywhere, 70% in Austin

**FRED** 

- All-Transactions House Price Index for Dallas-Plano-Irving, TX (MSAD)
- All-Transactions House Price Index for Fort Worth-Arlington-Grapevine, TX (MSAD)
- All-Transactions House Price Price Index for Houston-The Woodlands-Sugar Land, TX (MSA)
- All-Transactions House Price Index for San Antonio-New Braunfels, TX (MSA)
- All-Transactions House Price Index for Austin-Round Rock-Georgetown, TX (MSA)



Shaded areas indicate U.S. recessions

Source: U.S. Federal Housing Finance Agency

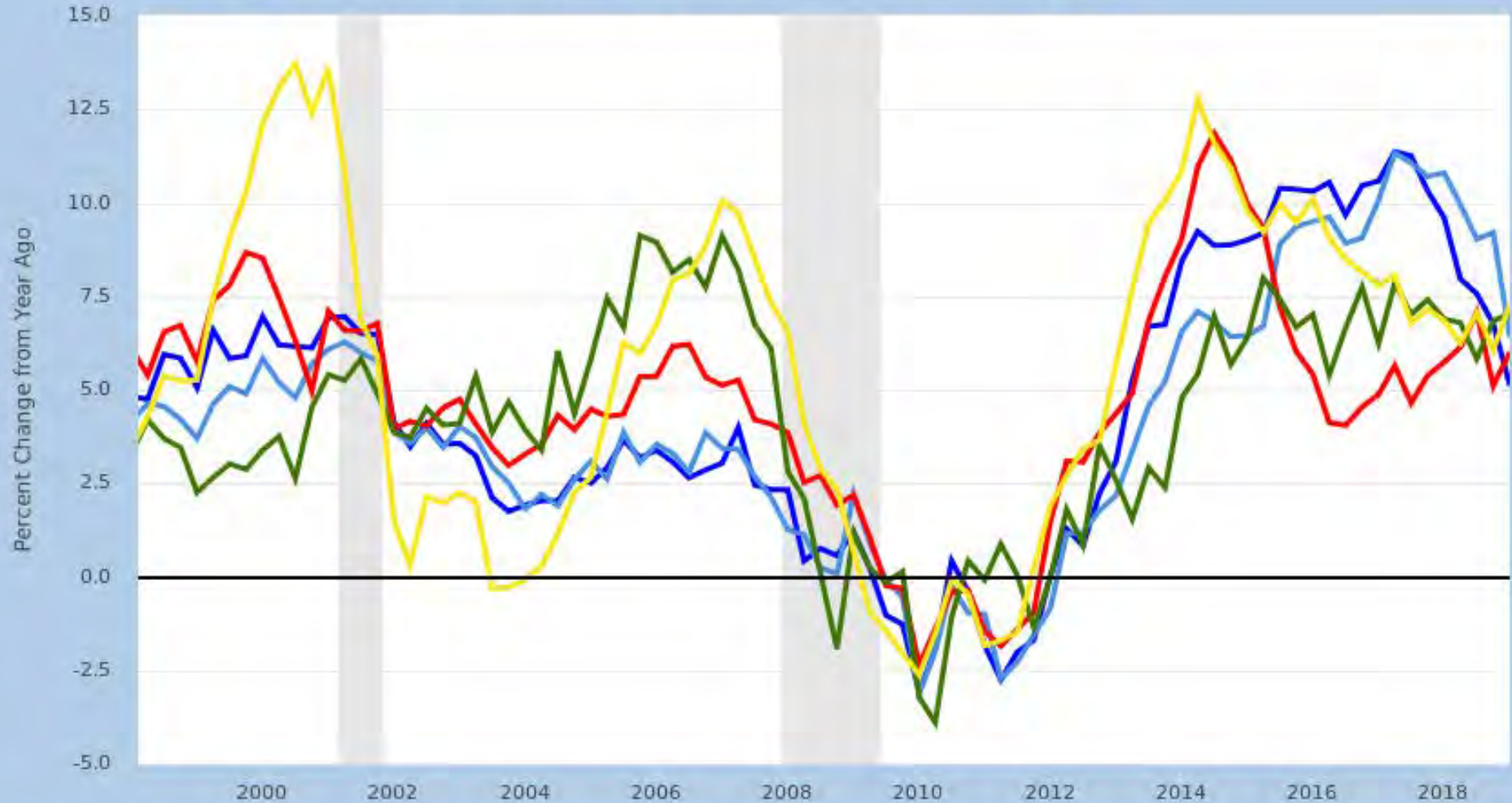
[myf.red/g/oomx](https://myf.red/g/oomx)

# House Price Appreciation is Slowing

They are still rising quite quickly at between 5% and 7%



- All-Transactions House Price Index for Dallas-Plano-Irving, TX (MSAD)
- All-Transactions House Price Index for Fort Worth-Arlington-Grapevine, TX (MSAD)
- All-Transactions House Price Index for Houston-The Woodlands-Sugar Land, TX (MSA)
- All-Transactions House Price Index for San Antonio-New Braunfels, TX (MSA)
- All-Transactions House Price Index for Austin-Round Rock-Georgetown, TX (MSA)



Shaded areas indicate U.S. recessions

Source: U.S. Federal Housing Finance Agency

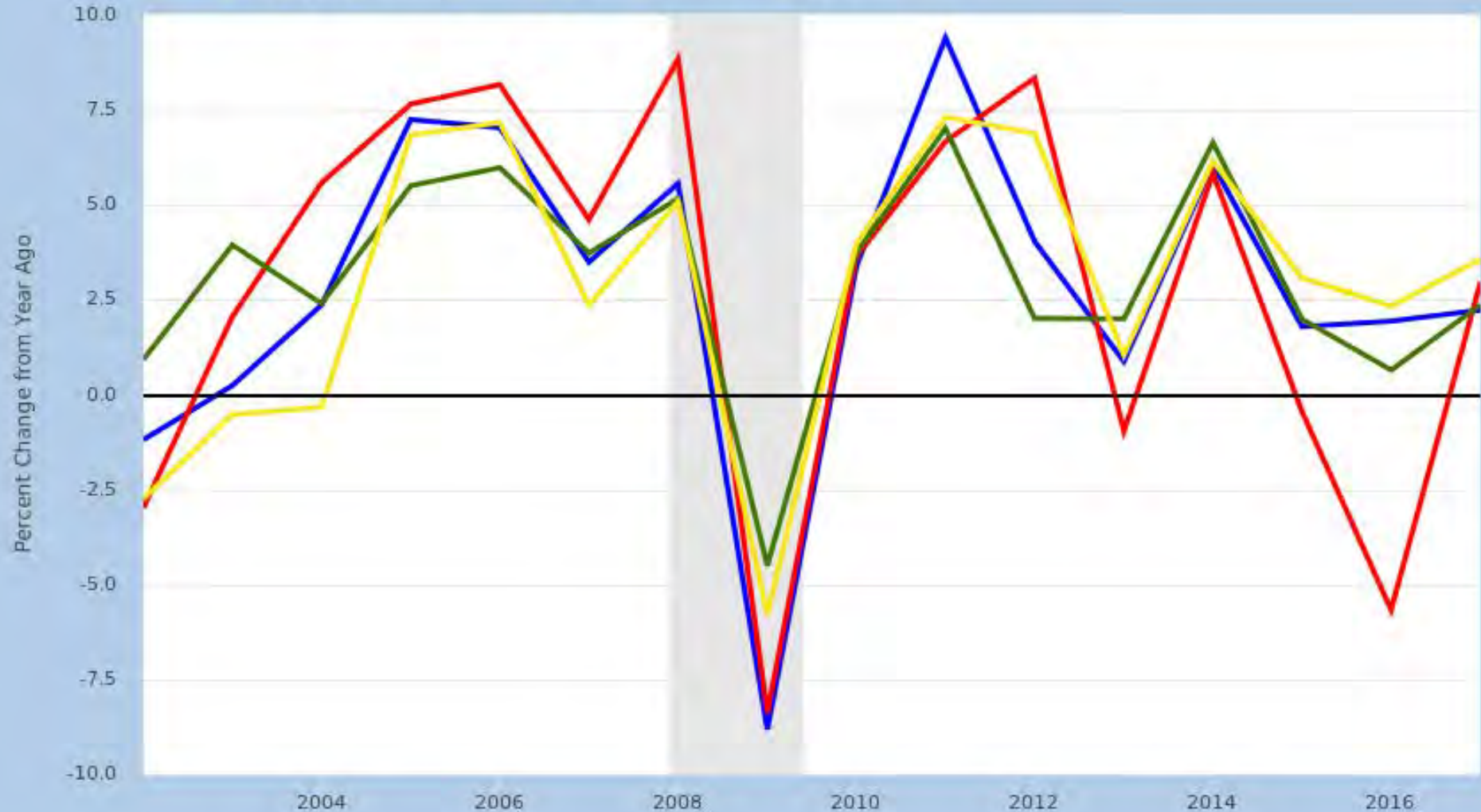
[myf.red/g/oomG](https://myf.red/g/oomG)

# Per Capita Income Growth in TX Metros Slows

Income growth of 3% is not keeping up with house price appreciation of 6%

**FRED** 

- Per Capita Personal Income in Dallas-Fort Worth-Arlington, TX (MSA)
- Per Capita Personal Income in Houston-The Woodlands-Sugar Land, TX (MSA)
- Per Capita Personal Income in San Antonio-New Braunfels, TX (MSA)
- Per Capita Personal Income in Austin-Round Rock, TX (MSA)



Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Economic Analysis

[myf.red/g/oqjA](https://myf.red/g/oqjA)

# Intercity Migration Patterns Early 2019

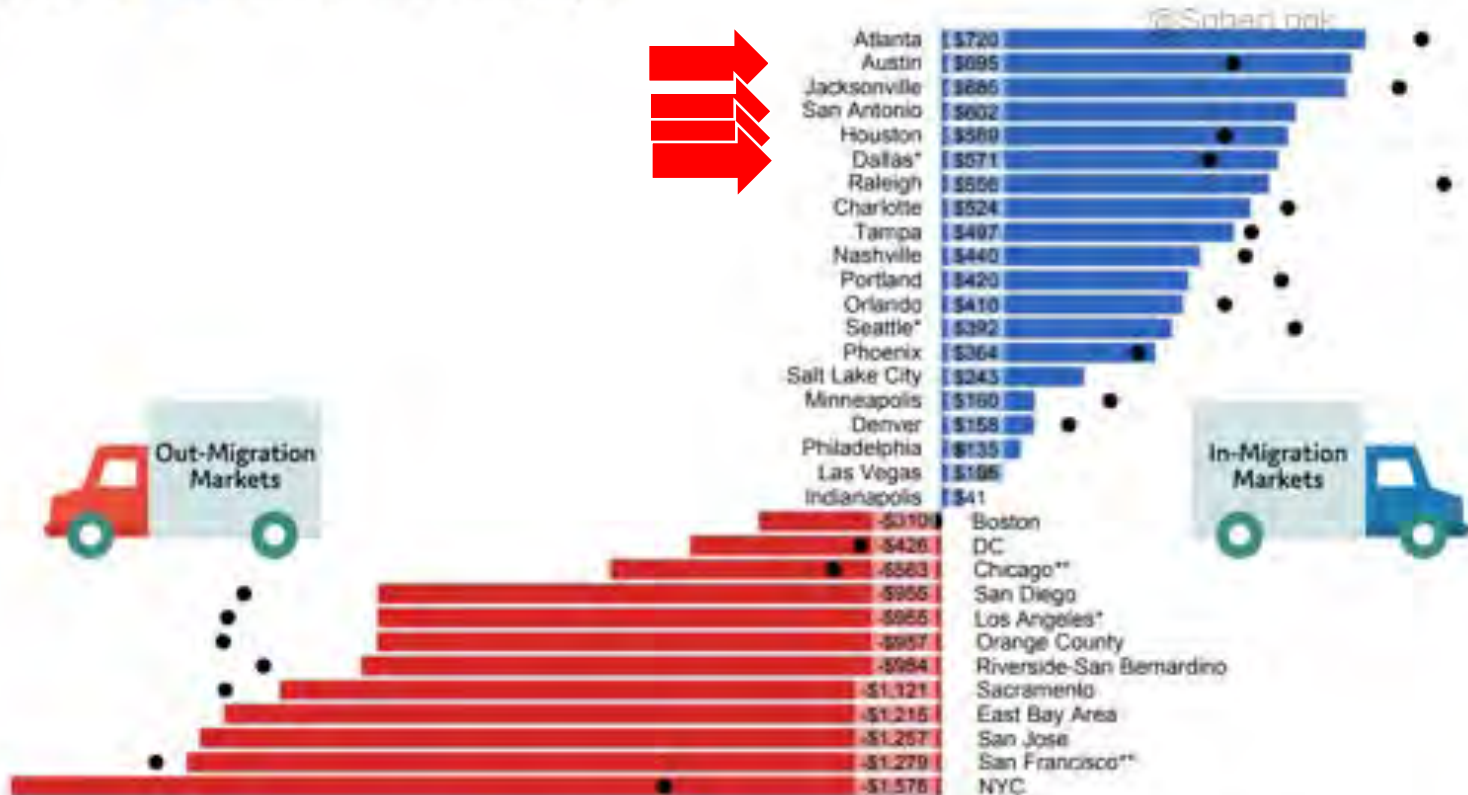
Moving to cheaper cities and away from expensive ones

## U-Haul Rental Pricing Data Indicates Strong In-Migration Demand in Atlanta and Austin; More Out-Migration in New York City

Average Premium/Discount to Take a 20' Truck to a City Than to Return the Same Truck

Apr-19 Vs Apr-18 ■ Current premium ● Last year

4-May-2019



Methodology: The statistics above measure the average cost of taking a 20' rental truck to a market from the other 26 markets, less the cost of returning the truck. A positive number implies net in-migration, and a negative number implies net out-migration. The dots compare the premiums to last year's. For instance, Minneapolis' premium is now less than last year, signaling migration may not be as strong this year. The JBREC quarterly U-Haul survey is conducted on the first business day of the month for a move occurring on the third Friday of that same month.

Disclaimer: We obtained pricing data from uhaul.com searches. U-Haul did not participate in our analysis. JBREC inferences are not associated with any U-Haul statements.


Source: John Burns Real Estate Consulting, LLC (Data: Apr-19, updated quarterly)

Pub: Apr-19

# States With Fastest Pop Growth 7/1/17-6/30/18

	Rank	Name	2010	2017	2018	Numeric growth
	1	Texas	25,146,114	28,322,717	28,701,845	379,128
	2	Florida	18,804,580	20,976,812	21,299,325	322,513
	3	California	37,254,523	39,399,349	39,557,045	157,696
	4	Arizona	6,392,288	7,048,876	7,171,646	122,770
	5	North Carolina	9,535,736	10,270,800	10,383,620	112,820
	6	Washington	6,724,540	7,425,432	7,535,591	110,159
	7	Georgia	9,688,709	10,413,055	10,519,475	106,420
	8	Colorado	5,029,316	5,615,902	5,695,564	79,662
	9	South Carolina	4,625,381	5,021,219	5,084,127	62,908
	10	Nevada	2,700,679	2,972,405	3,034,392	61,987

# States With Fastest % Growth 7/1/17-6/30/18

Rank	Name	2010	2017	2018	Percent growth
1	Nevada	2,700,679	2,972,405	3,034,392	2.1
2	Idaho	1,567,657	1,718,904	1,754,208	2.1
3	Utah	2,763,891	3,103,118	3,161,105	1.9
4	Arizona	6,392,288	7,048,876	7,171,646	1.7
5	Florida	18,804,580	20,976,812	21,299,325	1.5
6	Washington	6,724,540	7,425,432	7,535,591	1.5
7	Colorado	5,029,316	5,615,902	5,695,564	1.4
	8 Texas	25,146,114	28,322,717	28,701,845	1.3
9	South Carolina	4,625,381	5,021,219	5,084,127	1.3
10	North Carolina	9,535,736	10,270,800	10,383,620	1.1

# ANY QUESTIONS?

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