



Dallas Economic and Housing Outlook 2019



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REAL ESTATE CENTER
TEXAS A & M UNIVERSITY

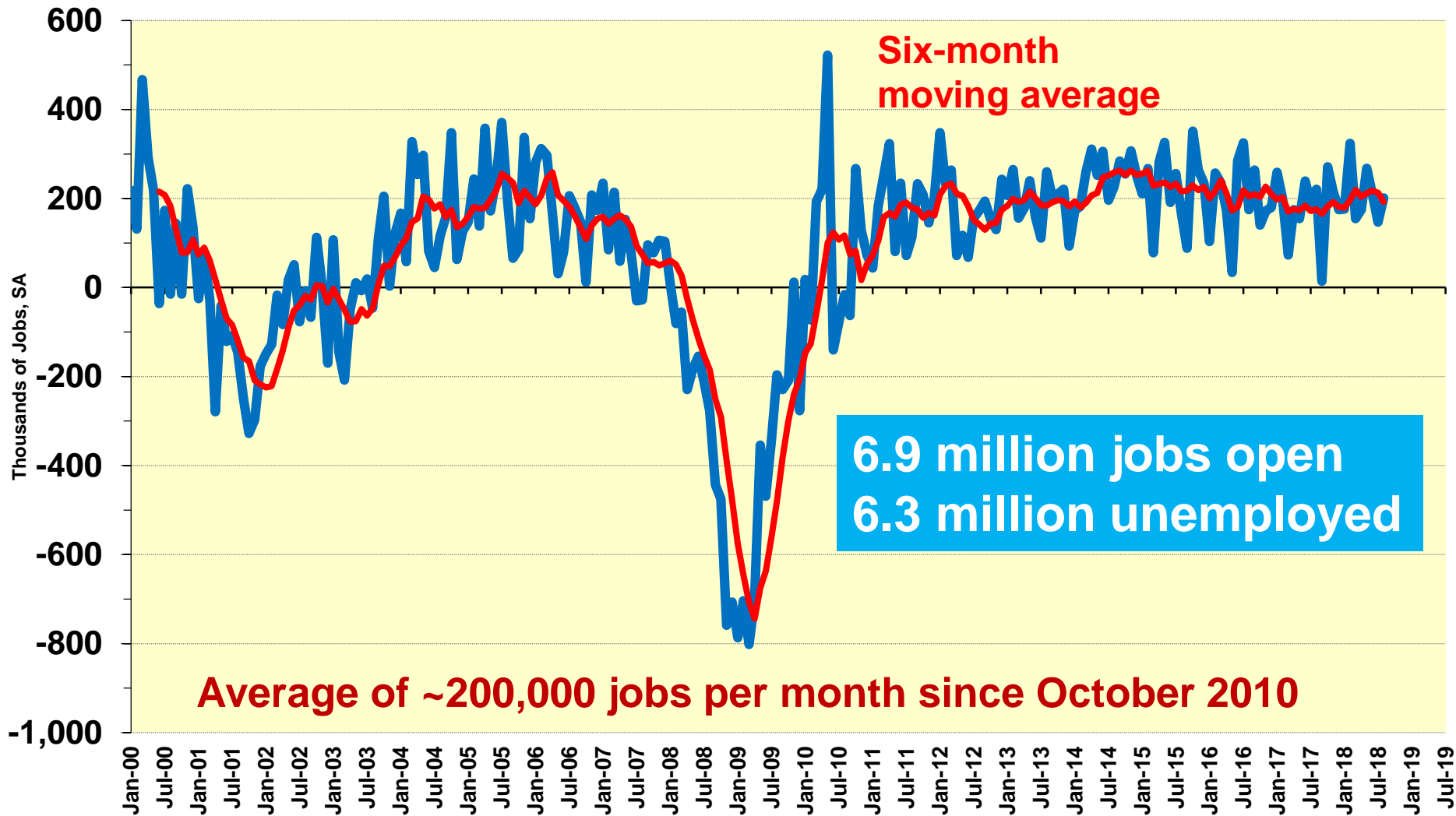
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U.S. Outlook



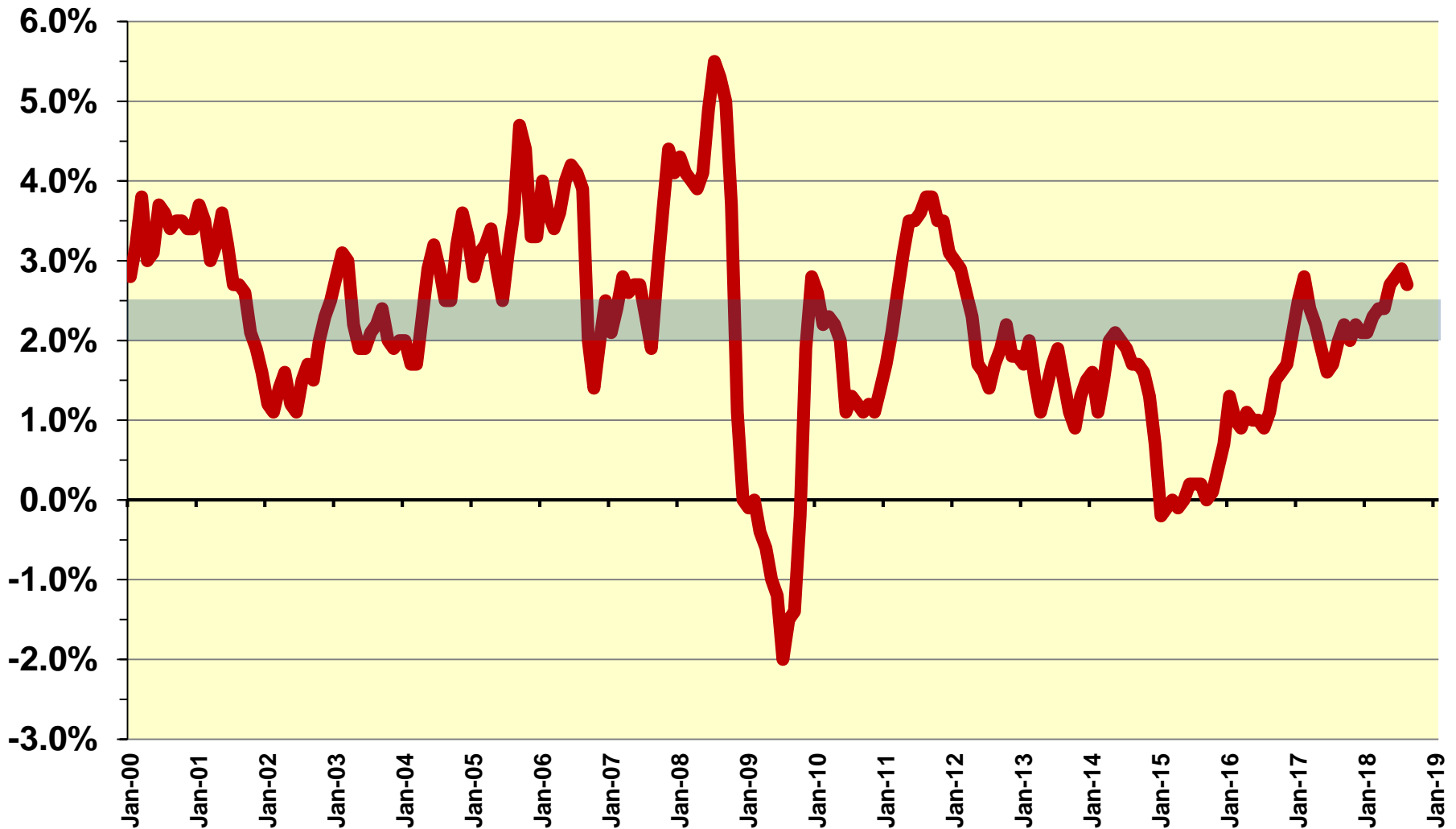
- **GDP growth** record expansion; 2018 ~2.5% - 3%
- **Interest rates** rising... maybe! 10-Year Treasury at ~3%+; 30-Yr. FMR 4.5%+
- **Jobs** expand 1.5% - 2%; Unemployment rate ~4.0%
- **Inflation** CPI 2% - 2.5%+
- **Impact of Tax Cuts** mixed results, so far
- **Industrial Production** at new high; mostly machines!
- **Debt** rapidly increasing: Total US debt 1Q18 ~\$66 trillion
- **Income** growing; **spending** not as much
- **Housing** improving but not fully recovered; recent stalling
- **Household net worth** surpassed \$100 trillion 1Q18

Monthly Change in Total Nonfarm U.S. Employment

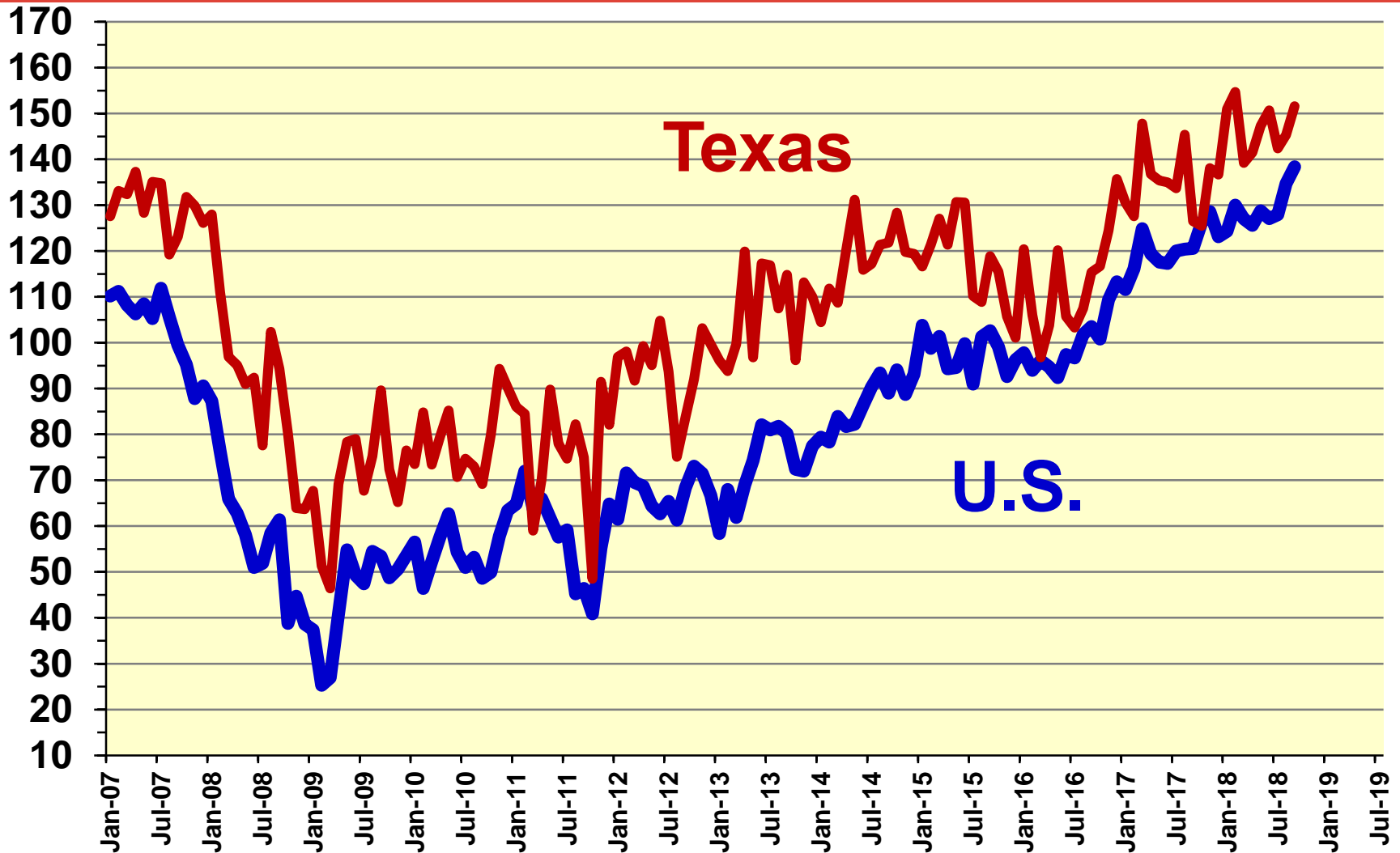


Inflation Bouncing Upward

Consumer Price Index for All Urban Consumers: All Items; Y/Y % change in index

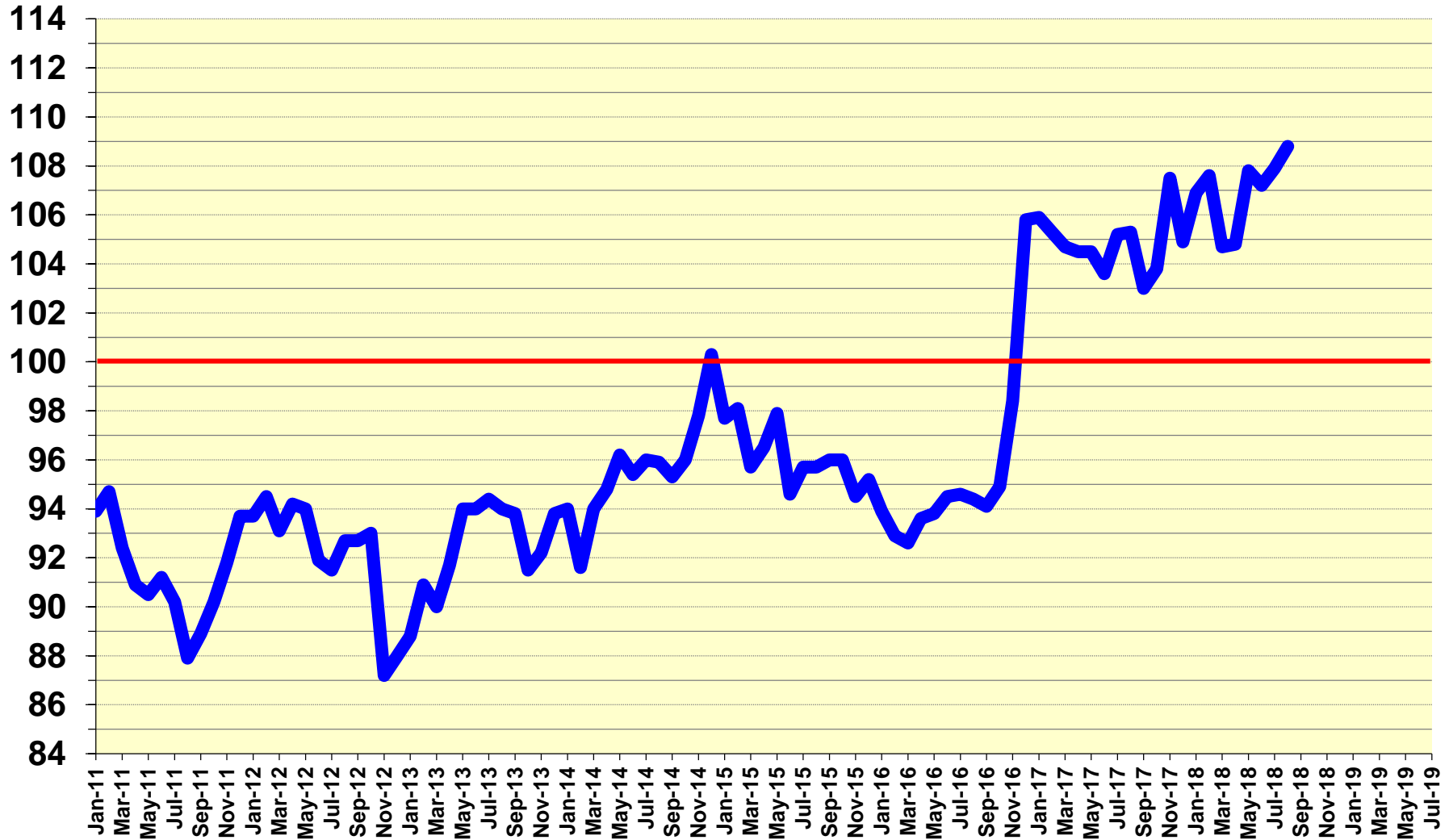


Consumer Confidence Index

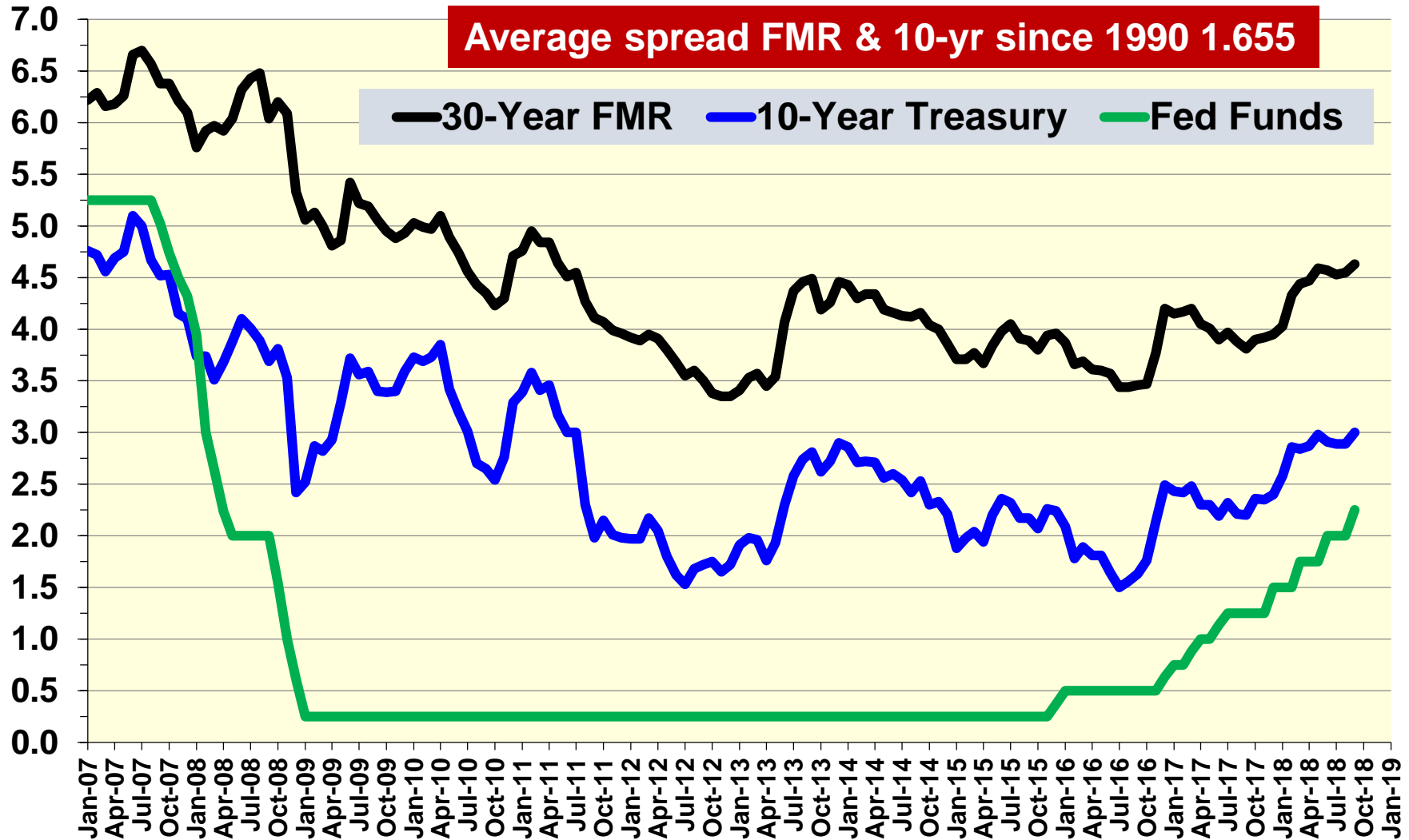


NFIB Small Business Optimism Index

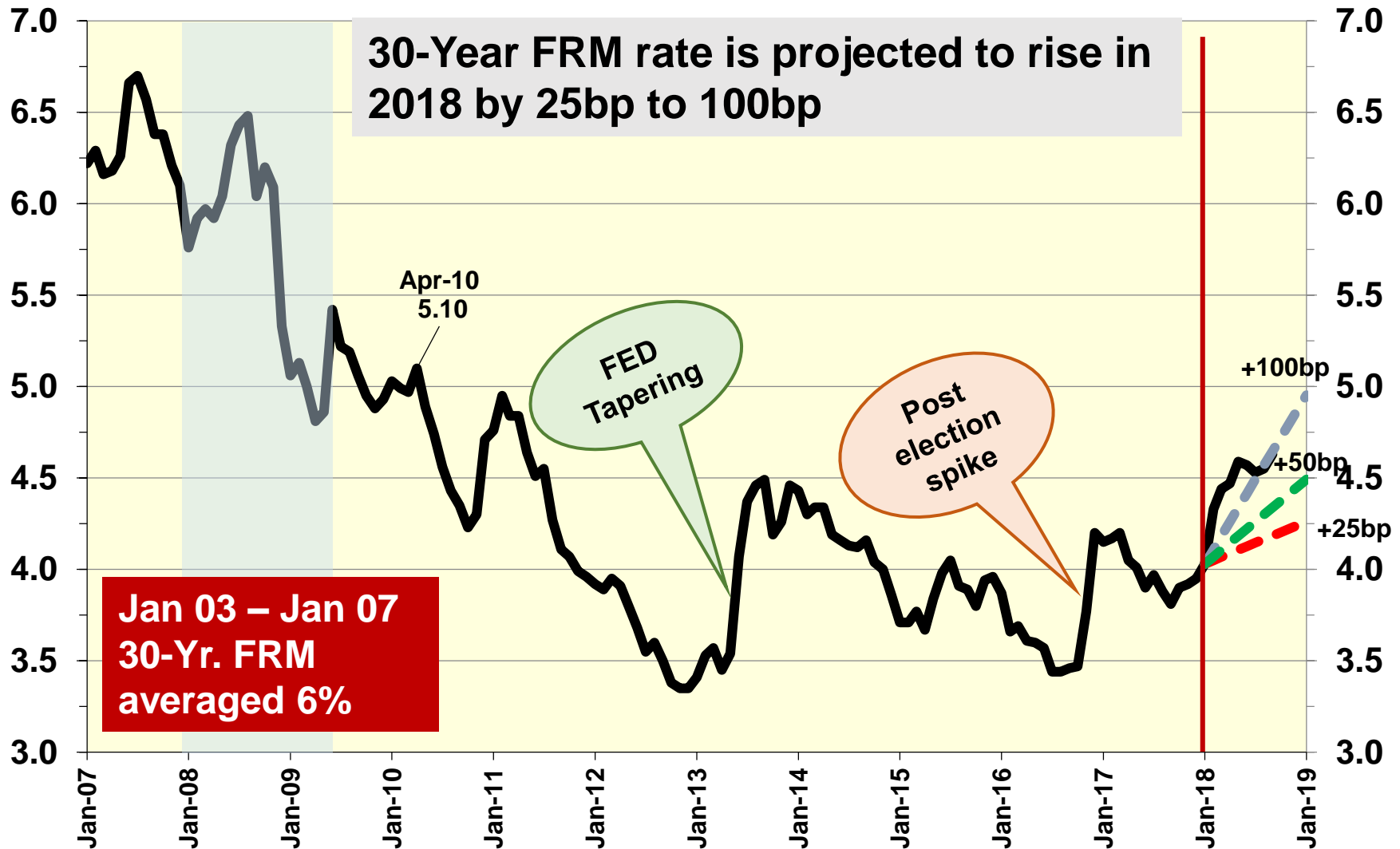
(Overall Index SA 1986 = 100)



Fed Funds Rate, 10-Year Treasury & 30-Year FMR



Expected Interest Rate on a 30-Year, Fixed-Rate Mortgage in 2018



Texas Economy

2015-2016 Oil Decline; Down Years

2017 Recovery – A Very Good Year

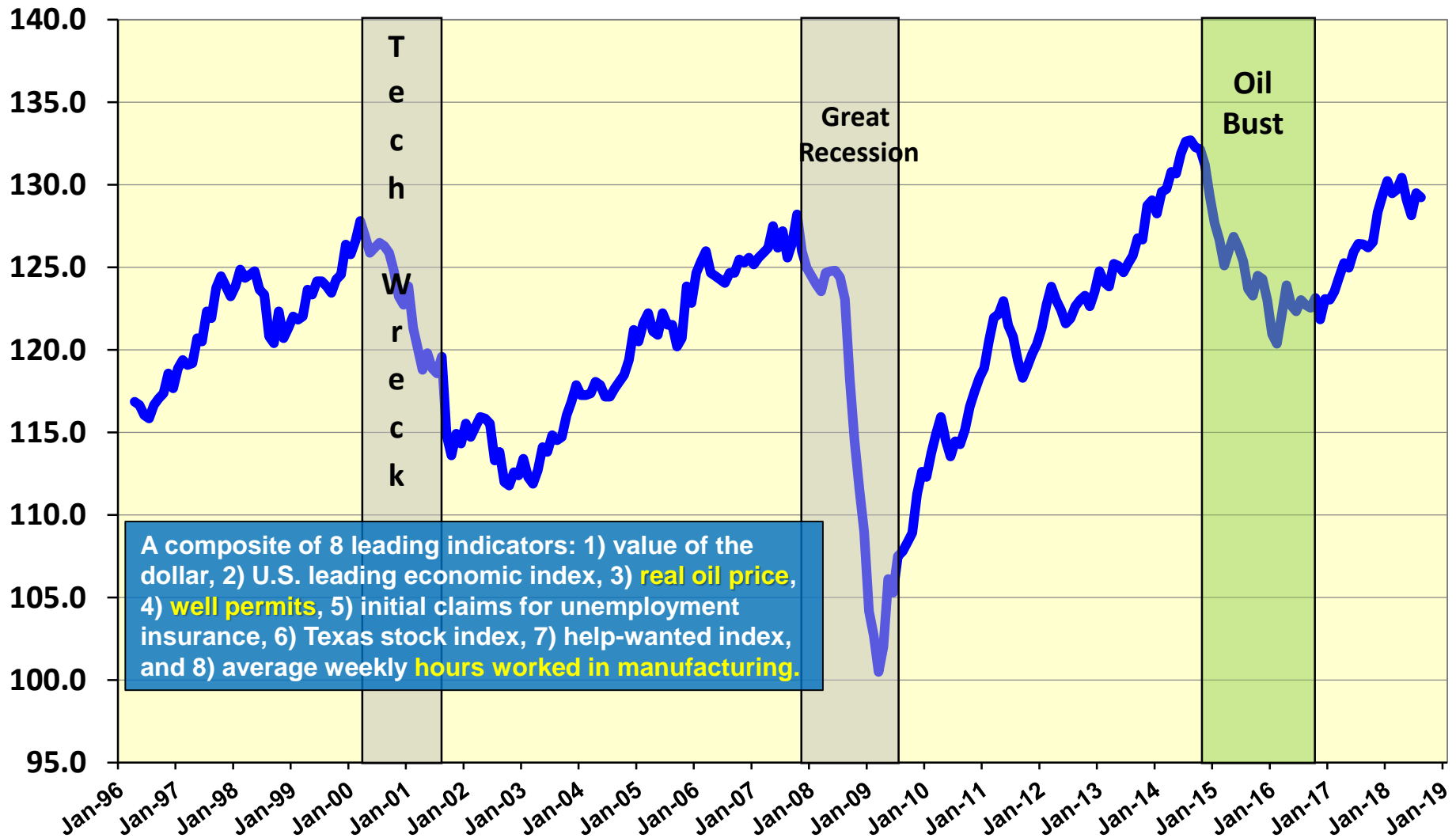
2018: Better than 2017

2019 Some Headwinds, but Not Bad

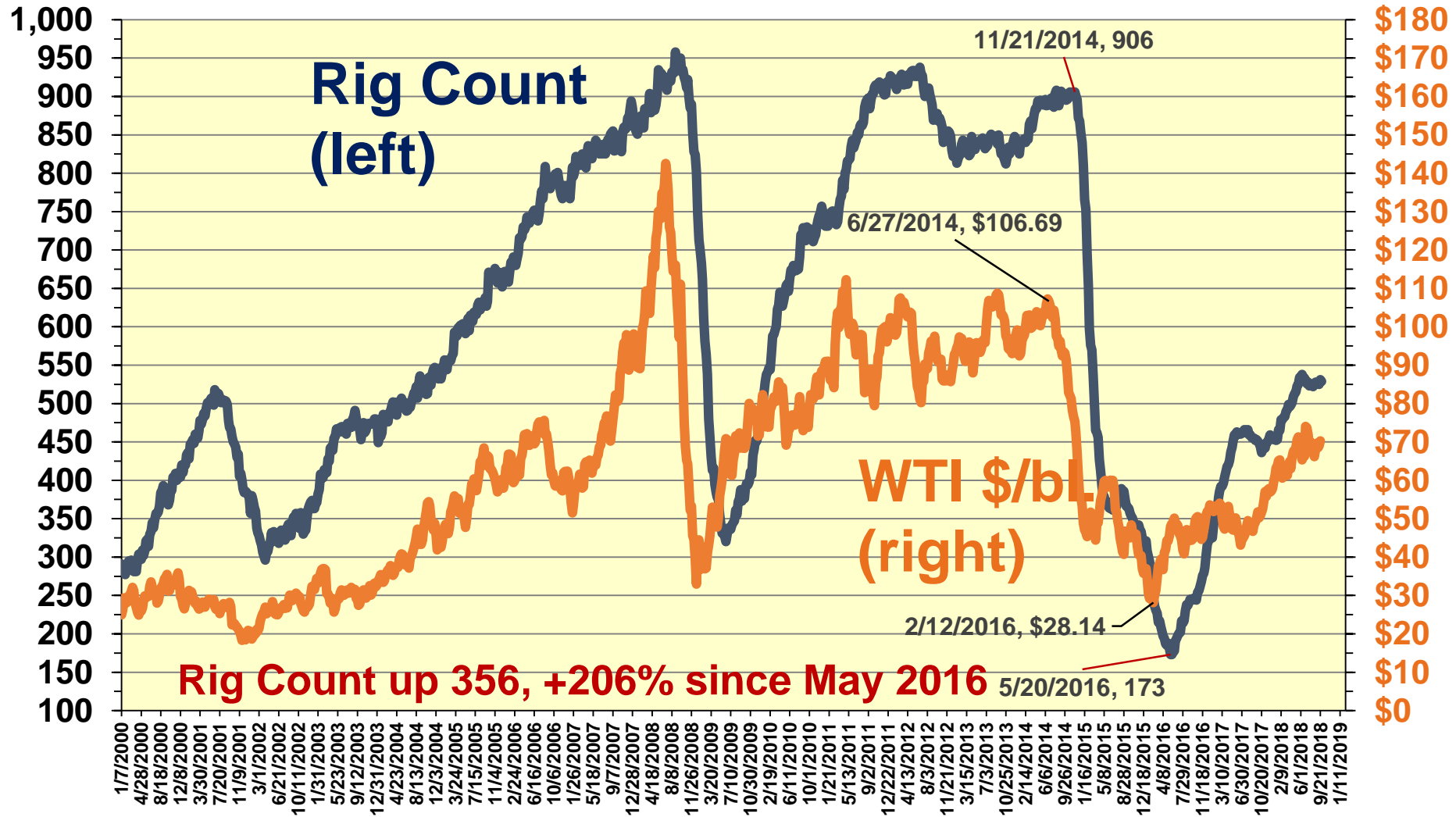
Texas Economic Outlook: 2018 Better Than 2017

- ❑ **Employment:** ~3.0%; Energy & Manufacturing, Healthcare, Business & Professional Services; Leisure & Hospitality
- ❑ **GDP:** 4.1% 2018 from 3.6% 2017
- ❑ **Energy sector downturn** over; oil prices \$60-\$70/bl.; “right-sized” industry
- ❑ **Population** expansion continues but at slower pace
- ❑ **Local Growth Issues** more pressing, strain on state and local resources and causing some cost impacts on local housing
- ❑ **Exports** doing well and contributing to economy – trade wars?
- ❑ **Rebound from Harvey** will contribute to economic growth in 2018; impact on property values in affected counties & neighborhoods ongoing

Texas' Leading Economic Index



Weekly Active Texas Rig Count & Price of WTI



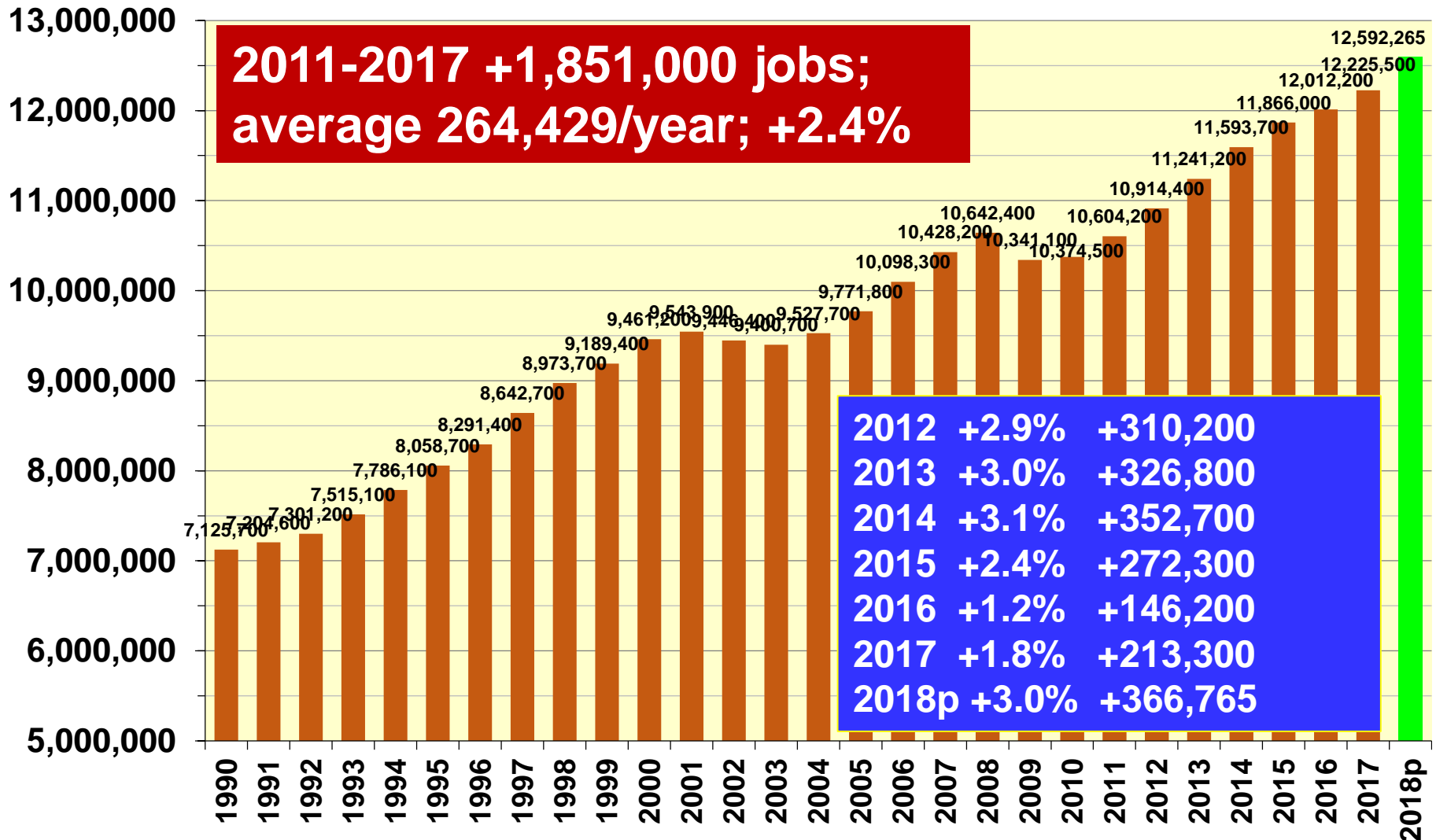
Employment Growth Rate Comparisons

(Total Non-farm: Y/Y Change from August, '17 to August, '18 Top 5 States)

	(Aug'17-Aug'18)	
	State	YOY Chg. In # of Jobs
1	Texas	394,500
2	California	348,900
3	Florida	220,200
4	Washington	108,800
5	North Carolina	102,800



Texas Annual Jobs



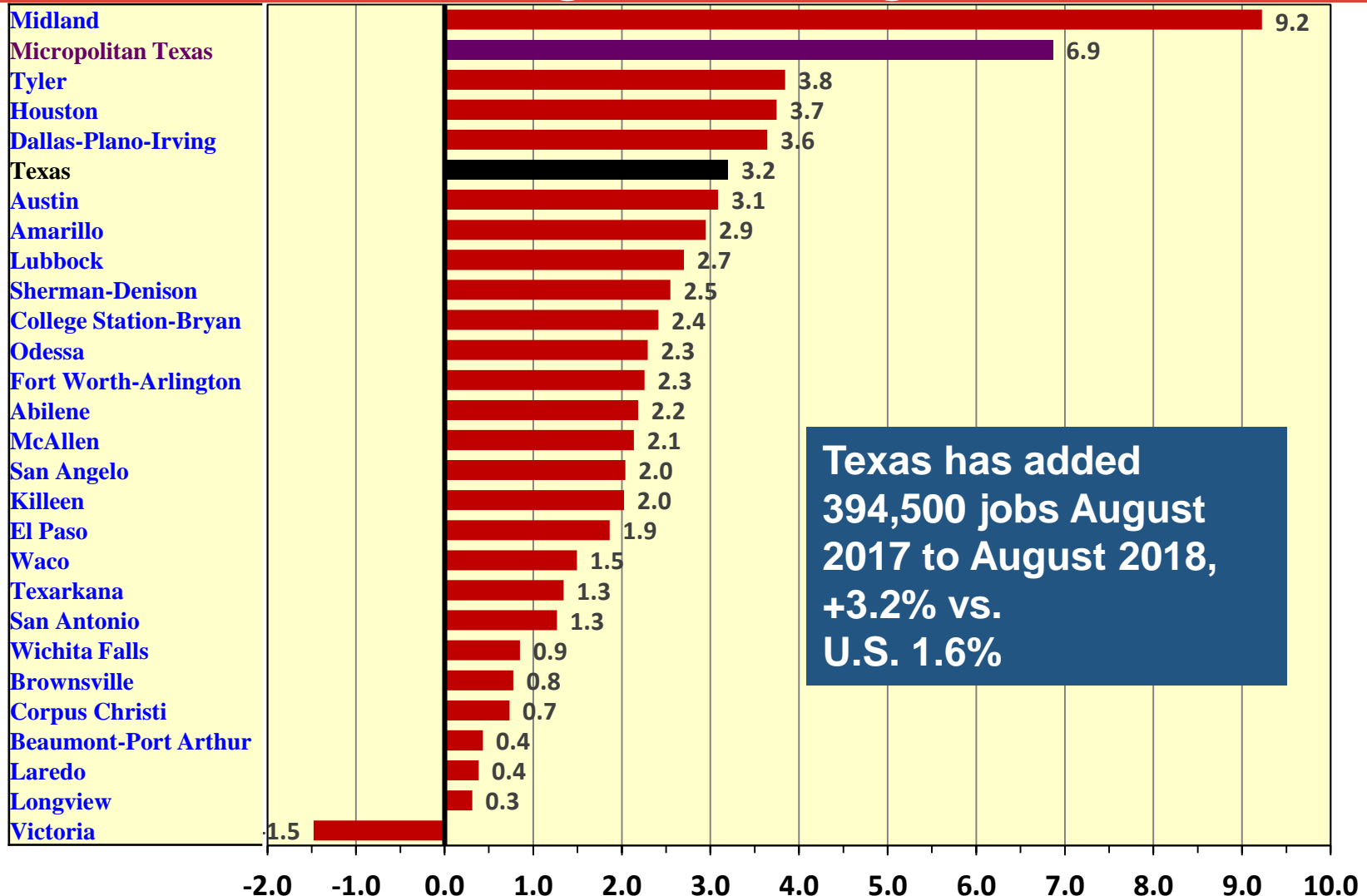
Texas Employment Change Past 12 Months

Industry	August 2017	August 2018	Change	Percent	Salary*
Total Nonfarm	12,232,000	12,626,500	394,500	3.2%	\$56,591
Mining and Logging	226,100	260,400	34,300	15.2%	\$126,994
Oil & Gas Extraction	76,100	80,000	3,900	5.1%	\$188,968
Construction	709,900	766,000	56,100	7.9%	\$63,225
Prof. and Business Services	1,669,300	1,761,700	92,400	5.5%	\$71,528
Leisure and Hospitality	1,323,100	1,372,100	49,000	3.7%	\$21,239
Transp., W'housing & Util.	543,400	562,900	19,500	3.6%	\$66,300
Other Services	424,100	436,700	12,600	3.0%	\$37,855
Ed. and Health Services	1,666,500	1,712,200	45,700	2.7%	\$47,099
Manufacturing	855,100	878,500	23,400	2.7%	\$75,786
W'Sale and Retail Trade	1,916,000	1,962,700	46,700	2.4%	\$50,043
Financial Activities	759,200	775,200	16,000	2.1%	\$80,267
Government	1,937,700	1,942,100	4,400	0.2%	\$36,500
Information	201,600	196,000	-5,600	-2.8%	\$84,402



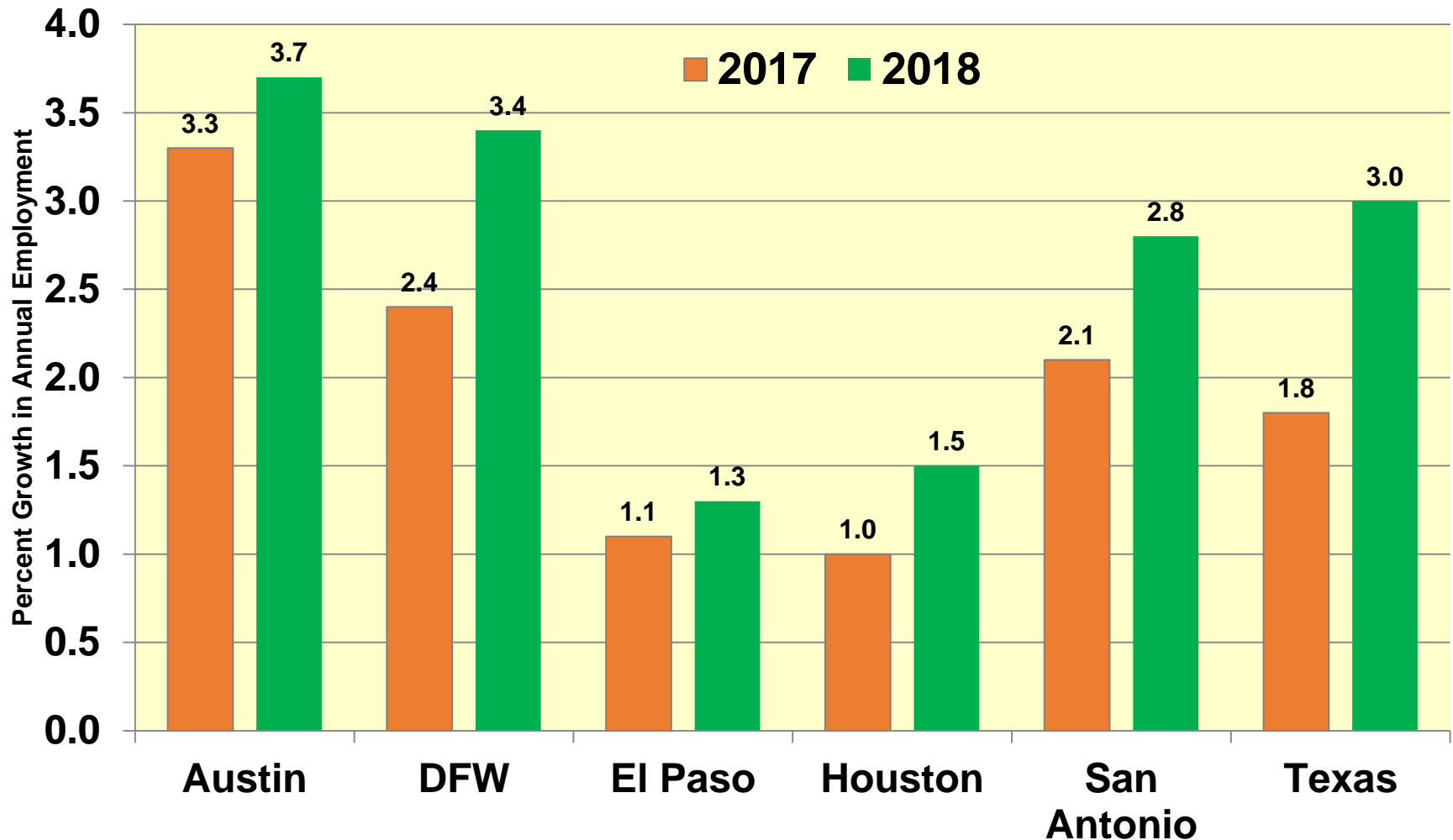
Texas Metropolitan Areas Ranked by Employment Growth Rate

Percent Growth August 2017 – August 2018



Texas has added 394,500 jobs August 2017 to August 2018, +3.2% vs. U.S. 1.6%

Texas Major MSAs Employment Growth 2017 & 2018



Dallas-Plano-Irving Economy



Dallas-Plano-Irving

Dallas-Plano-Irving MD: Collin, Dallas, Denton, Ellis, Hunt, Kaufman & Rockwall Counties

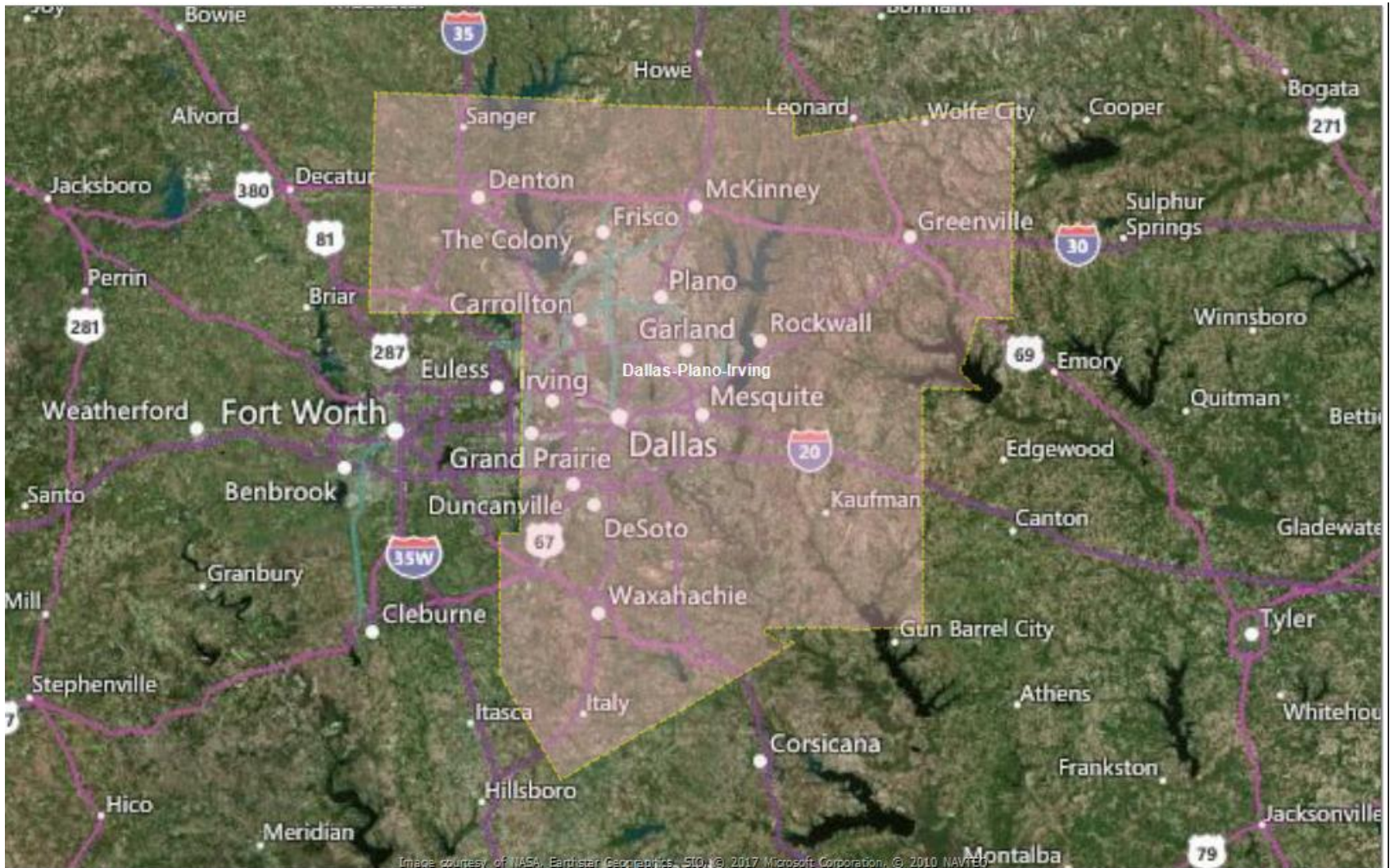
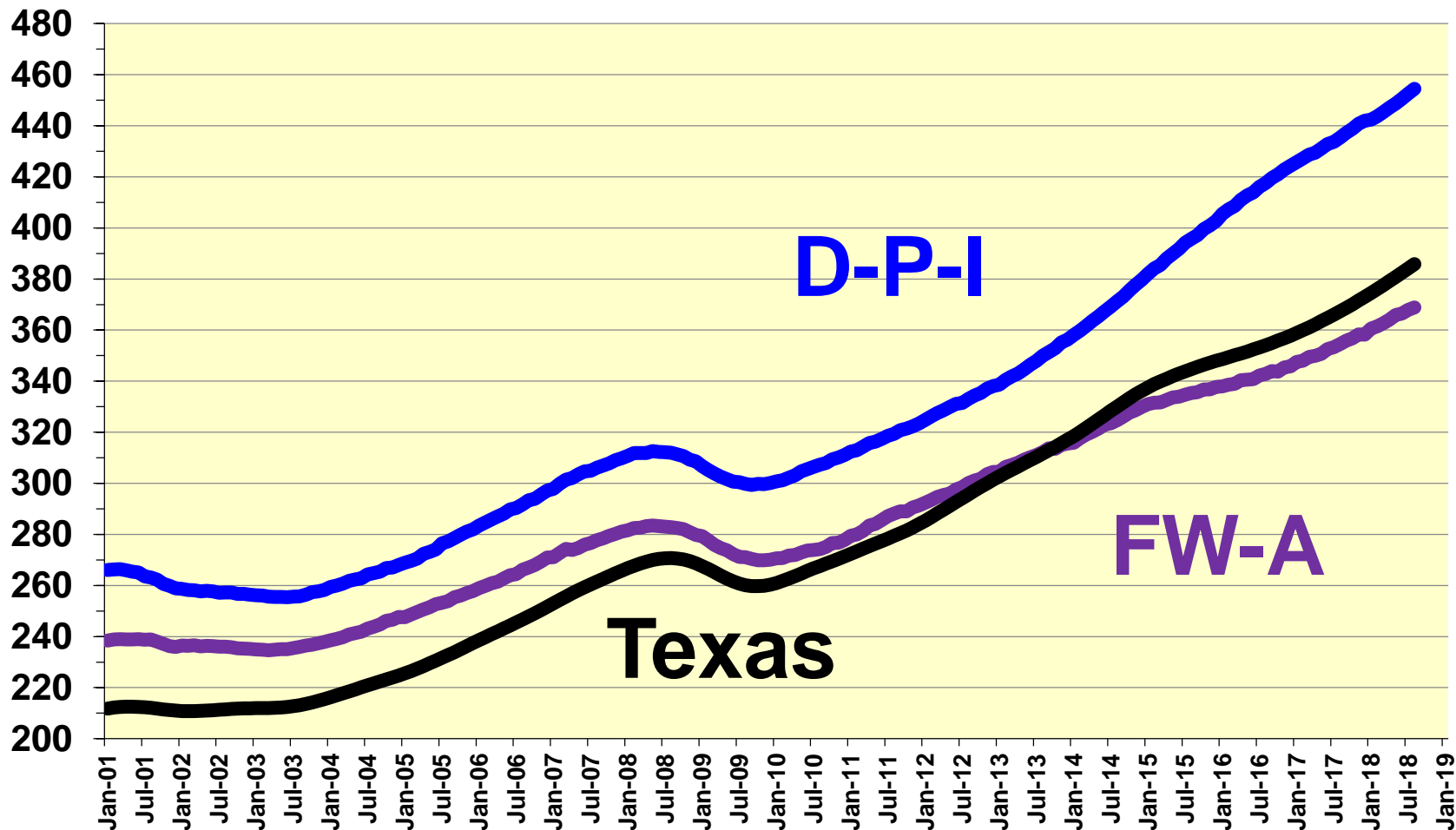


Image courtesy of NASA, Earthstar Geographics, SDI, © 2017 Microsoft Corporation, © 2010 NAVTEQ

Dallas-Plano-Irving & Fort Worth-Arlington MD Business Cycle Indexes

Months Seasonally Adjusted, 10/1980=100



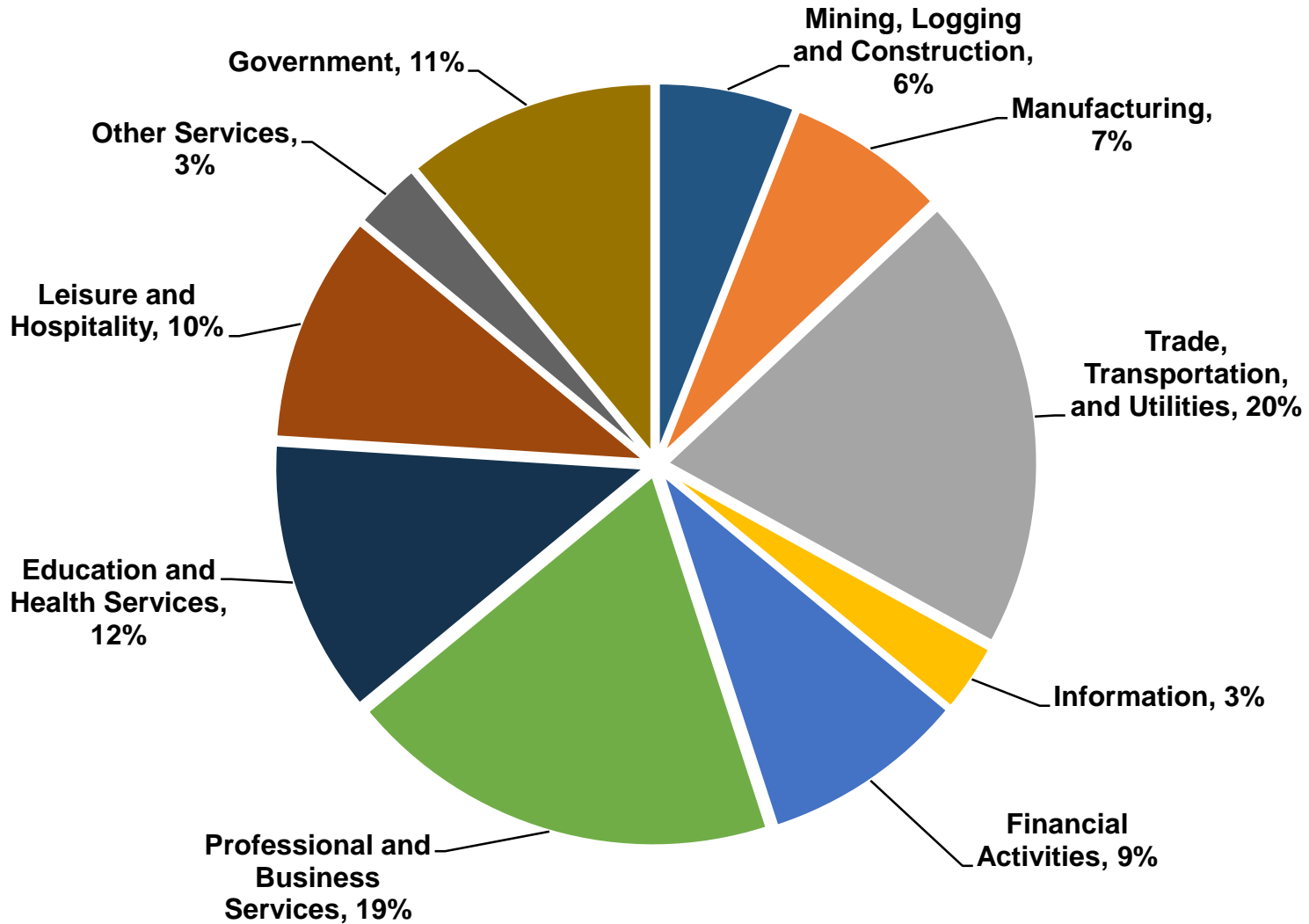
Dallas-Plano-Irving MD: Collin, Dallas, Denton, Ellis, Hunt, Kaufman & Rockwall Counties

Fort Worth-Arlington MD: Johnson, Tarrant, Parker & Wise Counties



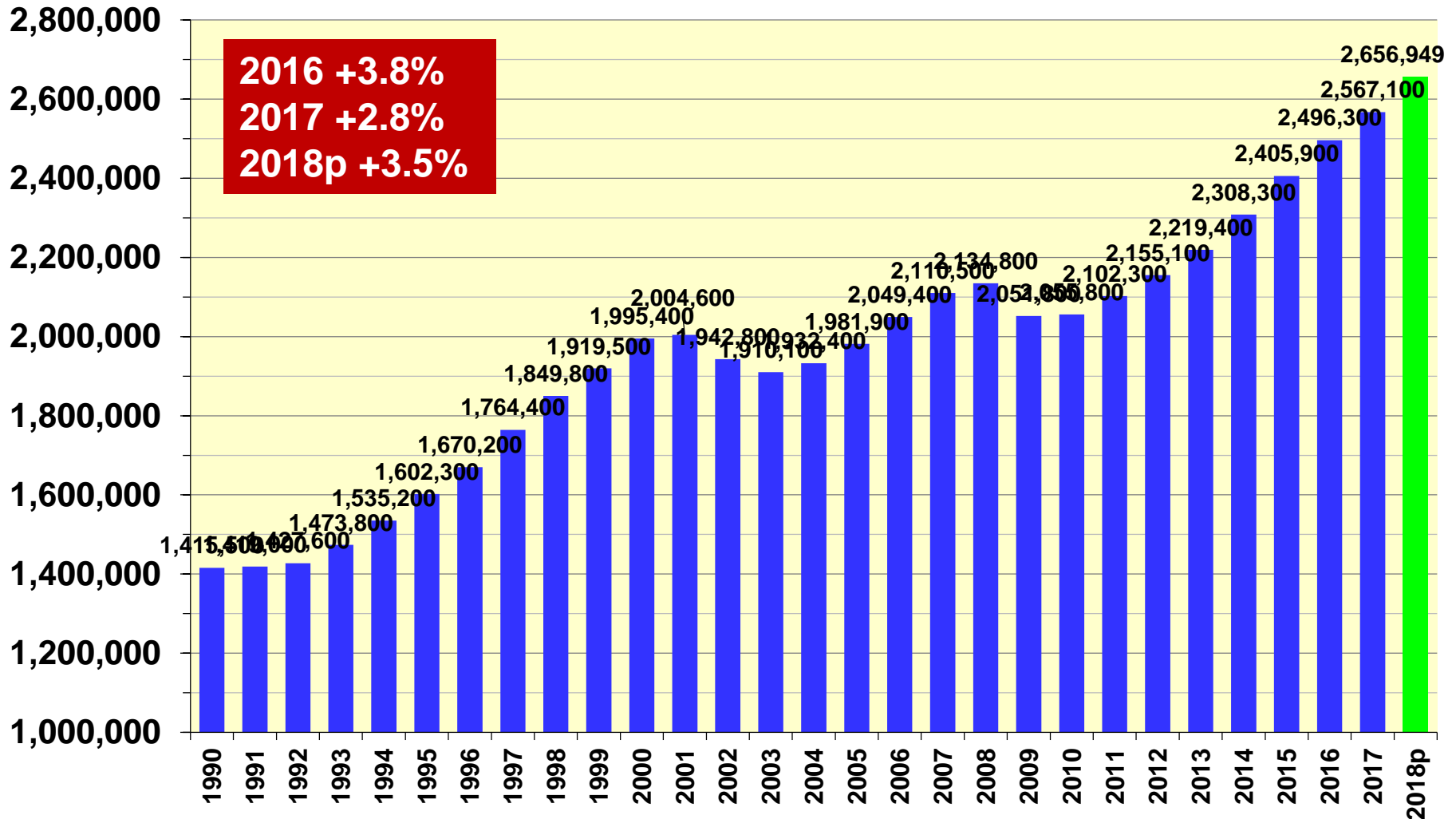
D-P-I Employment by Industry

Dallas-Plano-Irving MD: Collin, Dallas, Denton, Ellis, Hunt, Kaufman & Rockwall Counties



Dallas-Plano-Irving Annual Jobs

Dallas-Plano-Irving MD: Collin, Dallas, Denton, Ellis, Hunt, Kaufman & Rockwall Counties

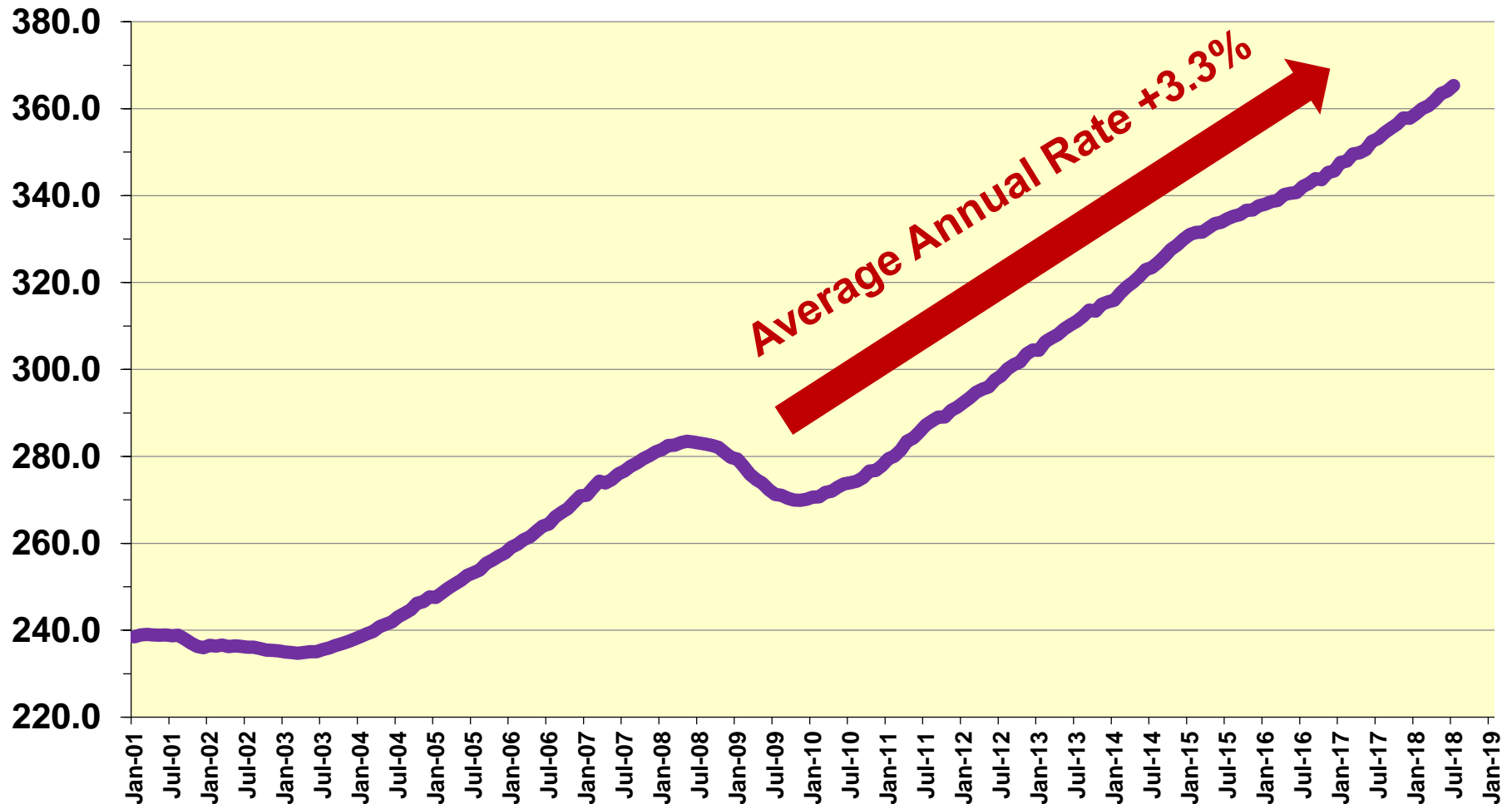


Dallas-Plano-Irving Employment Change

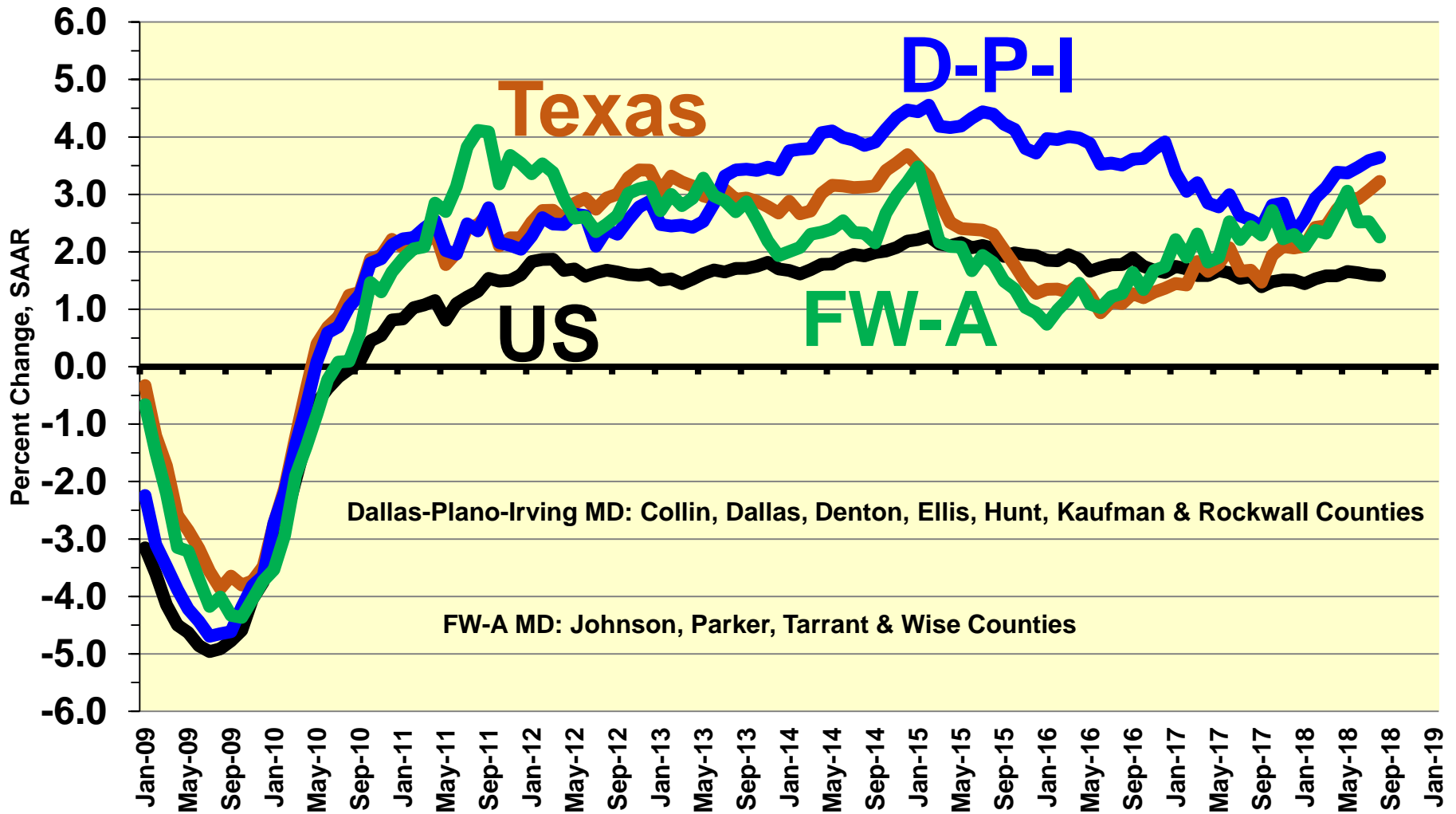
Industry	August 2017	August 2018	Change	% Change
Total Nonfarm	2,569,000	2,660,500	91,500	3.6%
Mining, Logging and Construction	141,600	155,200	13,600	9.6%
Professional and Business Services	483,200	510,900	27,700	5.7%
Other Services	83,900	88,200	4,300	5.1%
Leisure and Hospitality	260,700	273,100	12,400	4.8%
Education and Health Services	307,600	319,000	11,400	3.7%
Government	284,400	293,100	8,700	3.1%
Manufacturing	177,900	183,100	5,200	2.9%
Retail Trade	254,800	258,600	3,800	1.5%
Transportation, Warehousing, and Utilities	115,200	116,900	1,700	1.5%
Wholesale Trade	150,100	151,300	1,200	0.8%
Information	72,300	72,800	500	0.7%
Financial Activities	237,300	238,300	1,000	0.4%

FW-A MD Business Cycle Indexes

Months Seasonally Adjusted, 10/1980=100

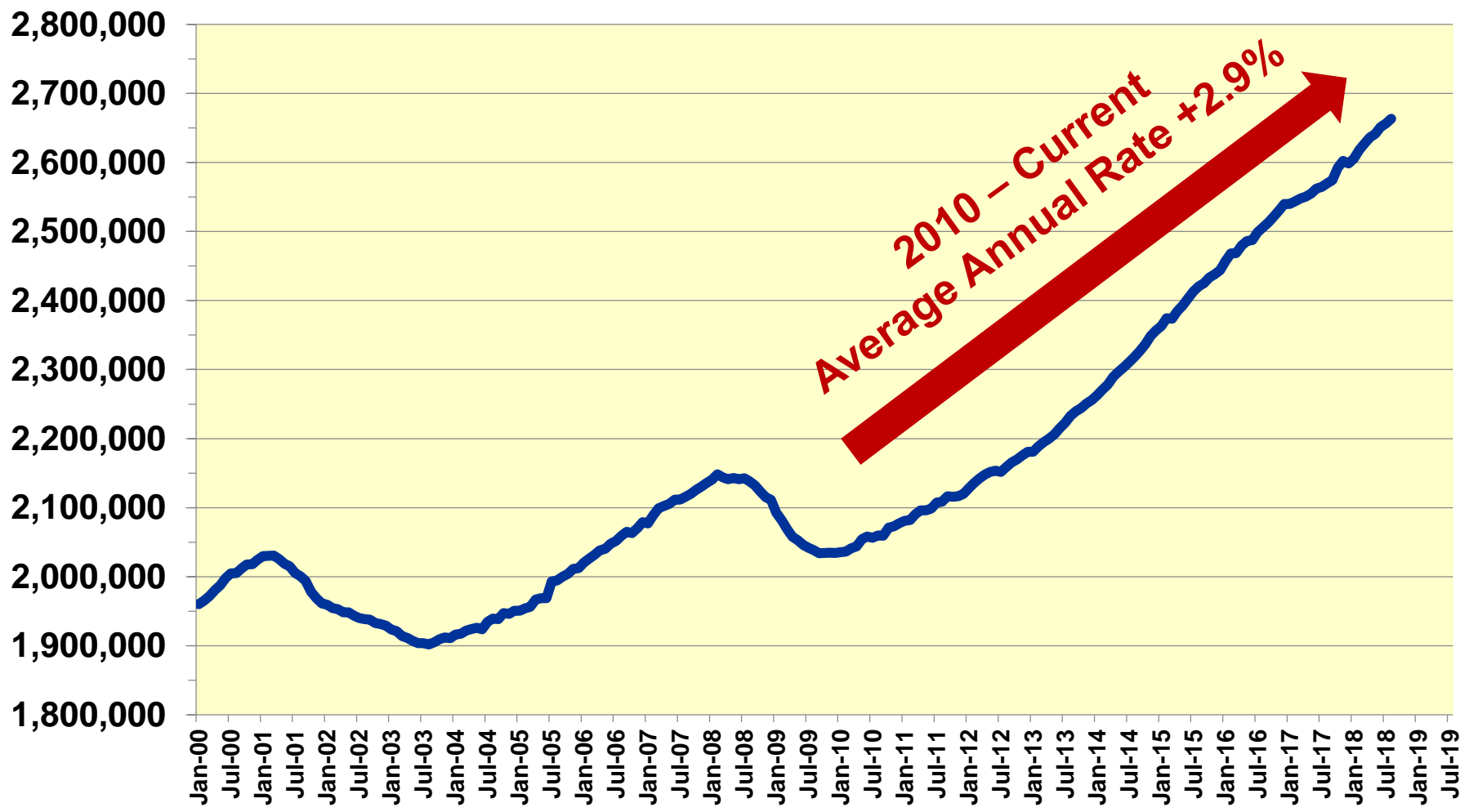


Annual Employment Growth Rates U.S., Texas, D-P-I and FW-A

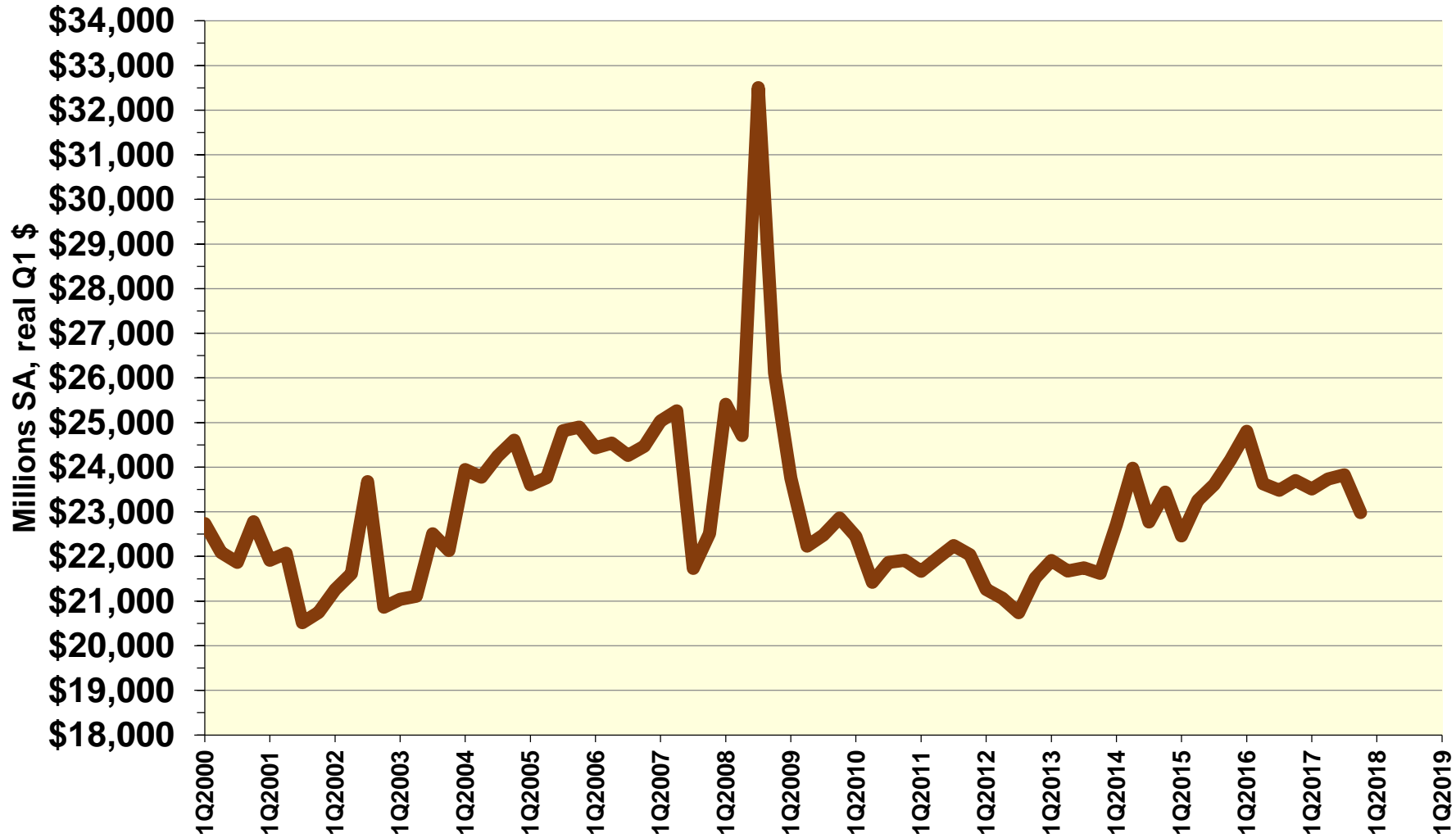


Dallas-Plano-Irving Monthly Jobs

Dallas-Plano-Irving MD: Collin, Dallas, Denton, Ellis, Hunt, Kaufman & Rockwall Counties

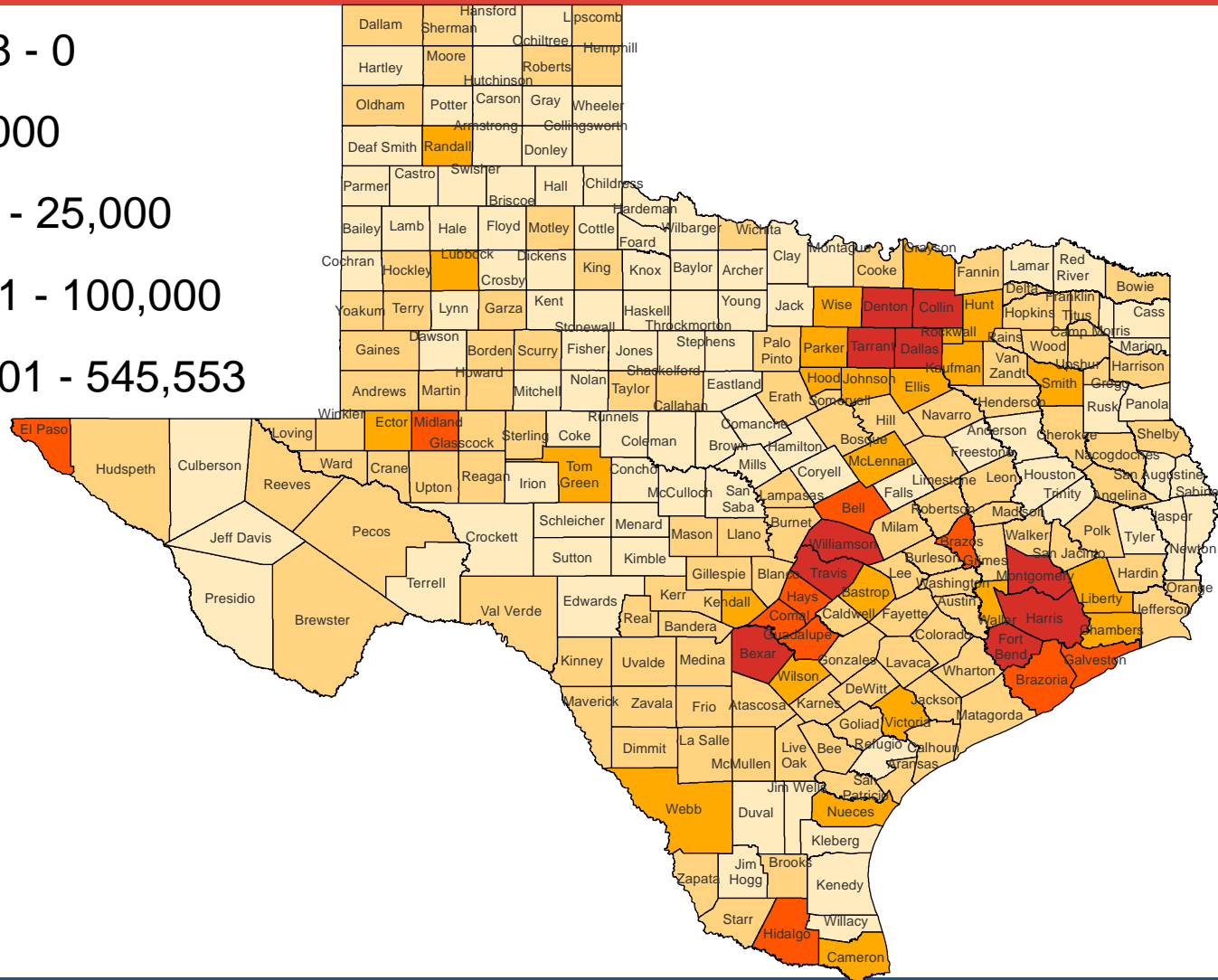
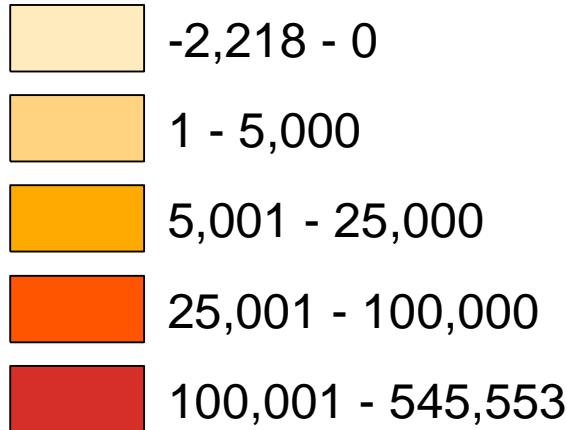


Dallas-Plano-Irving Retail Sales

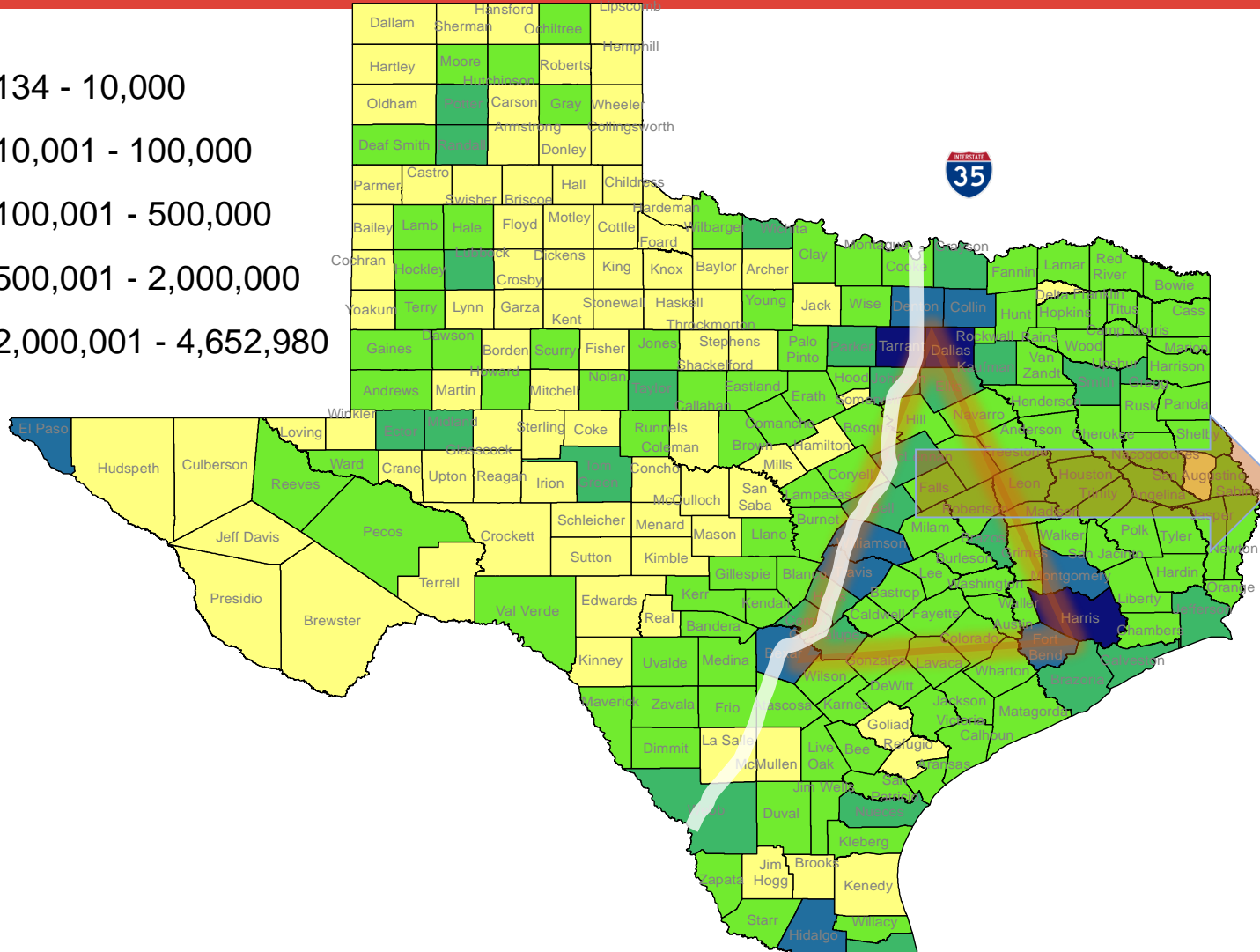
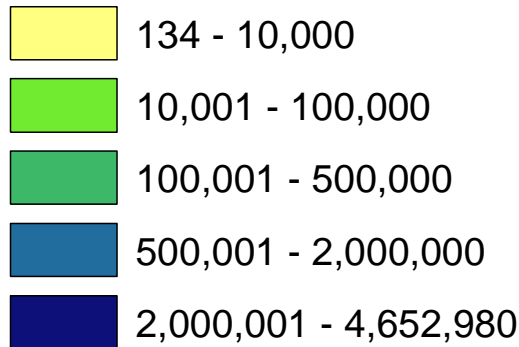


Texas Demographics

Estimated Population Change, Texas Counties, 2010 to 2017



Total Estimated Population by County, Texas, 2017



**87% E
of I-35**

**67% in
Urban
Triangle**

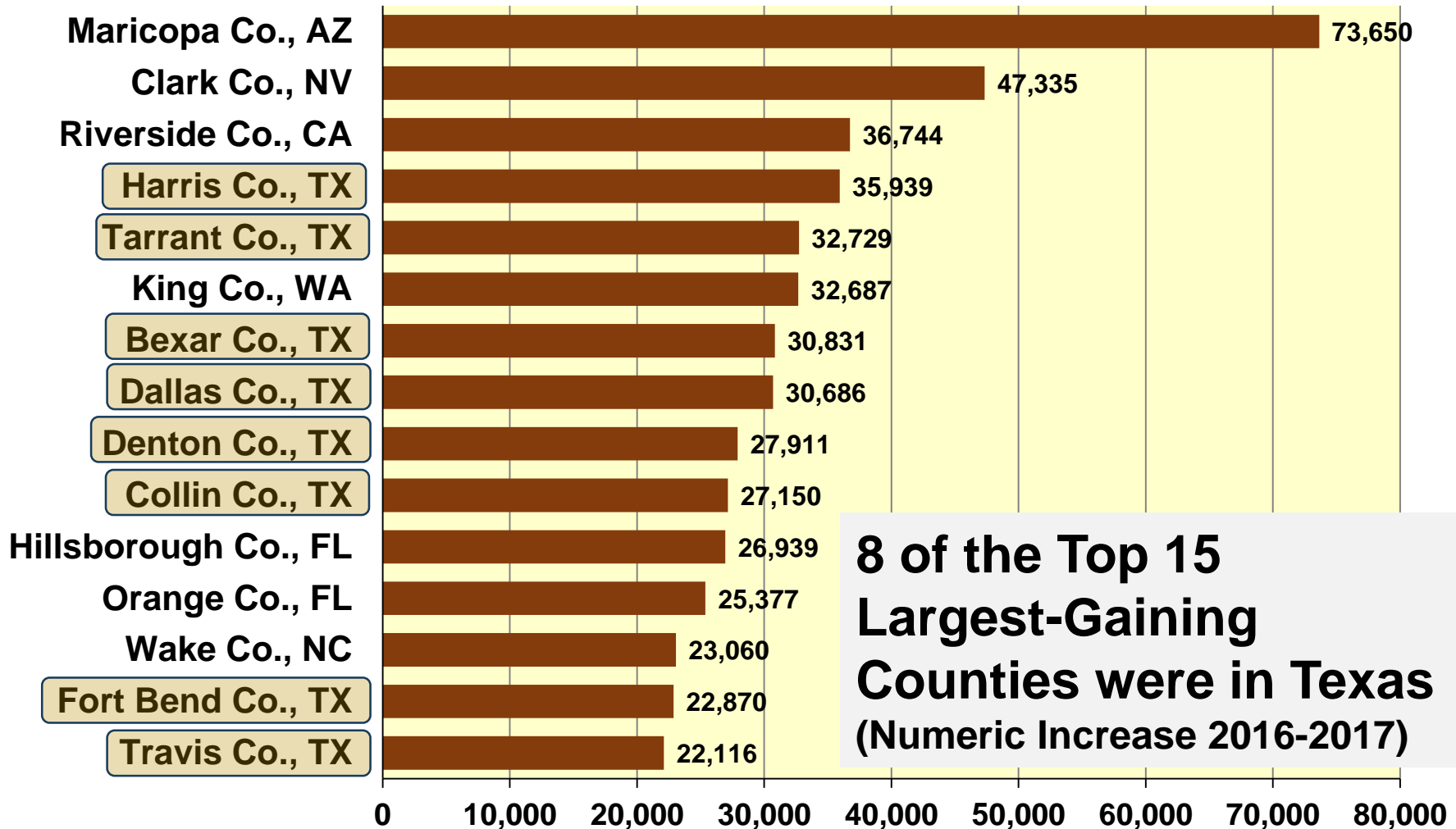
2016 to 2017 Population Change

- **Texas** added **399,734** ~1,100/day; ~50% in-migration.
Population now **28,304,596**
 - Since 2010 +3,158,496 (average 451,214/year)

2016-2017: DFW only MSA to add > 100,000

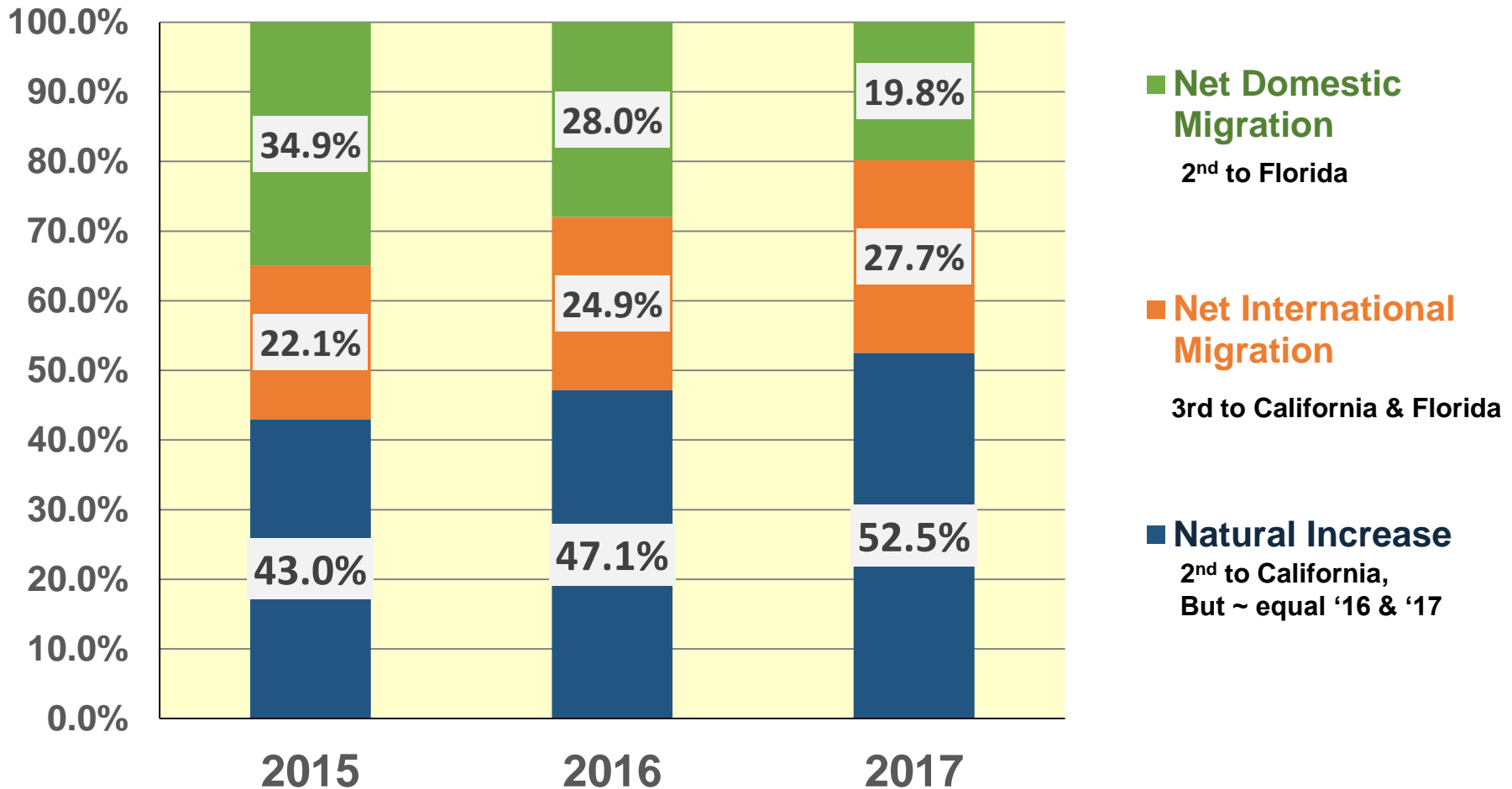
- **DFW** added 146,238 (#1), now **7.399 million** #4 MSA
 - Since 2010 +947,829 (average +135,400/year)
- **Houston** added 94,417 (#2), now **6.892 million** #5 MSA
 - Since 2010 +945,008 (average +135,000/year)
- **Austin** added 55,269 (#9); now **2,115,827** #31 MSA
 - Since 2010 +388,332 (average 55,476/year)
- **San Antonio** added 47,763 (#13); now **2,473,974** #24 MSA
 - Since 2010 +321,013 (average 45,859/year)

Texas Keeps Getting Bigger

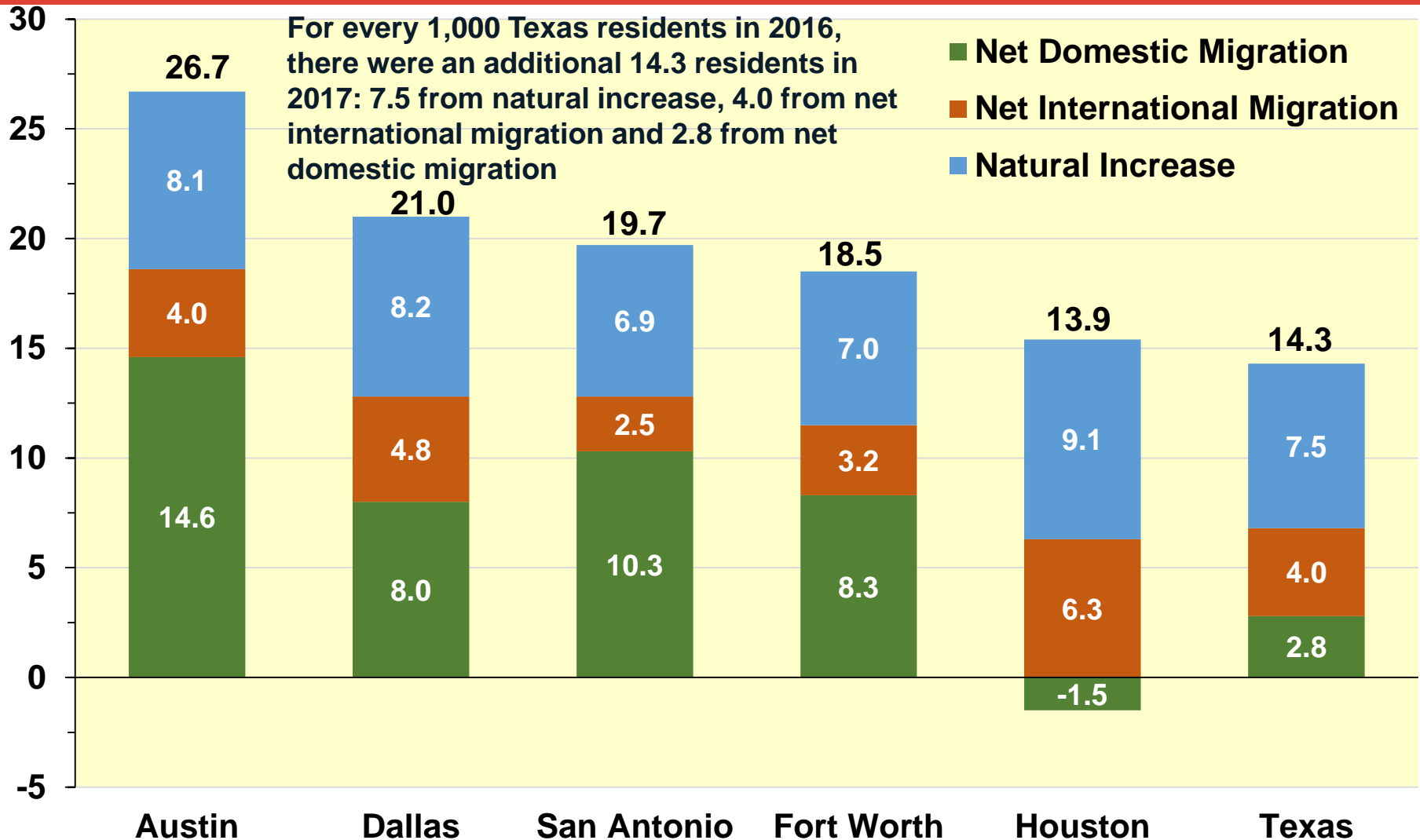


**8 of the Top 15
Largest-Gaining
Counties were in Texas
(Numeric Increase 2016-2017)**

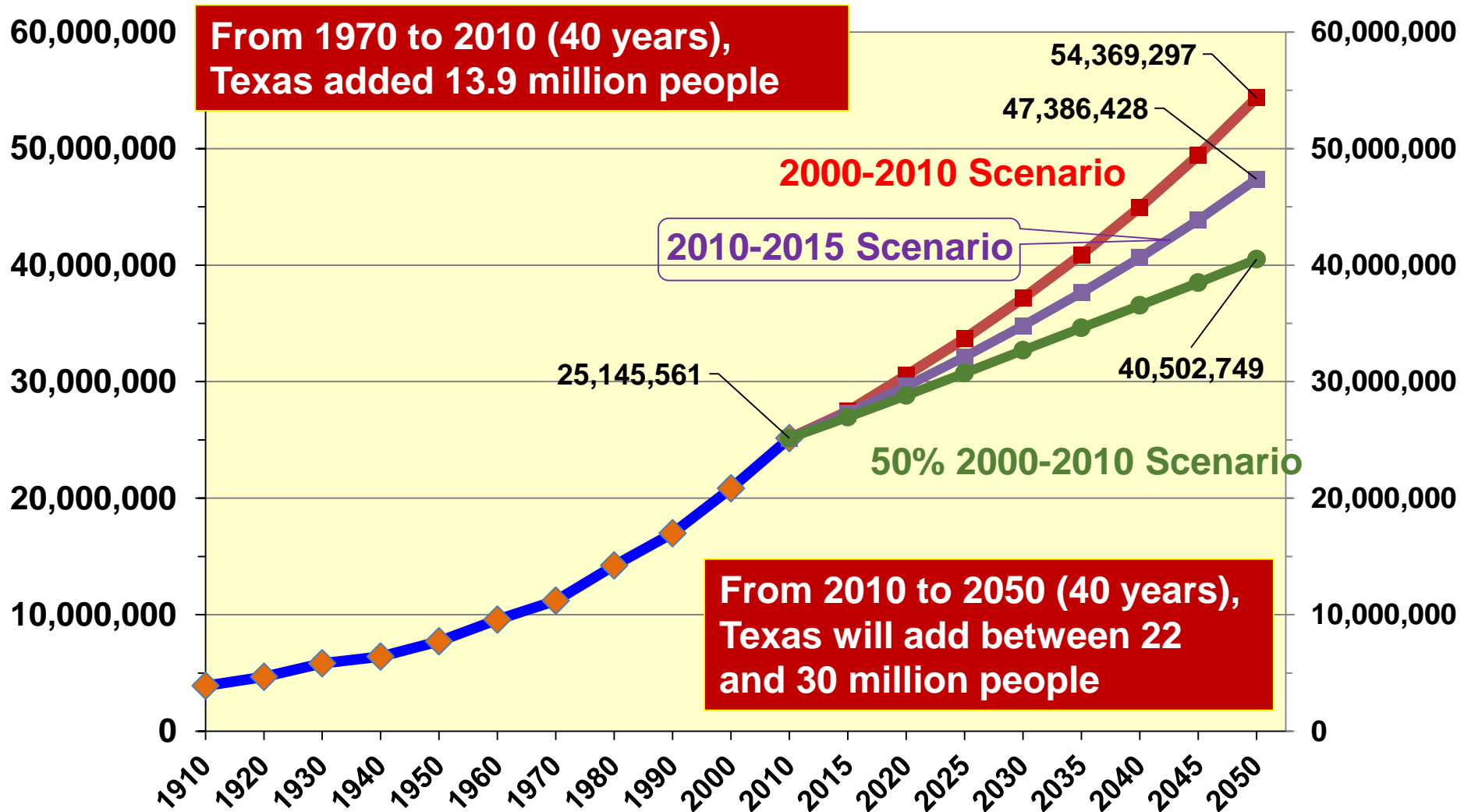
Estimates of Percent Components of Population Change, Texas, 2015-2017



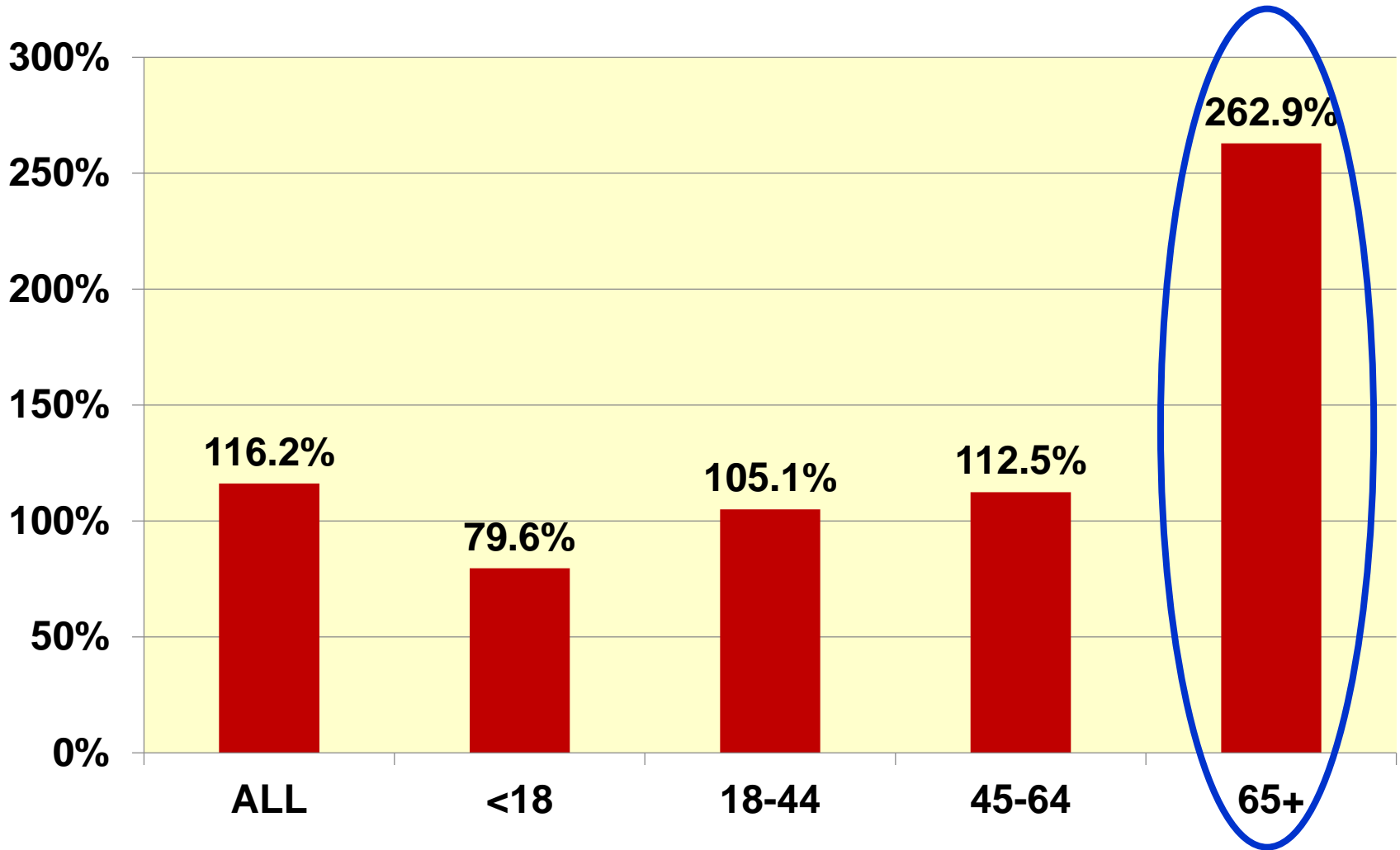
Sources of Population Change: 2016 - 2017



Texas Population 1910-2050



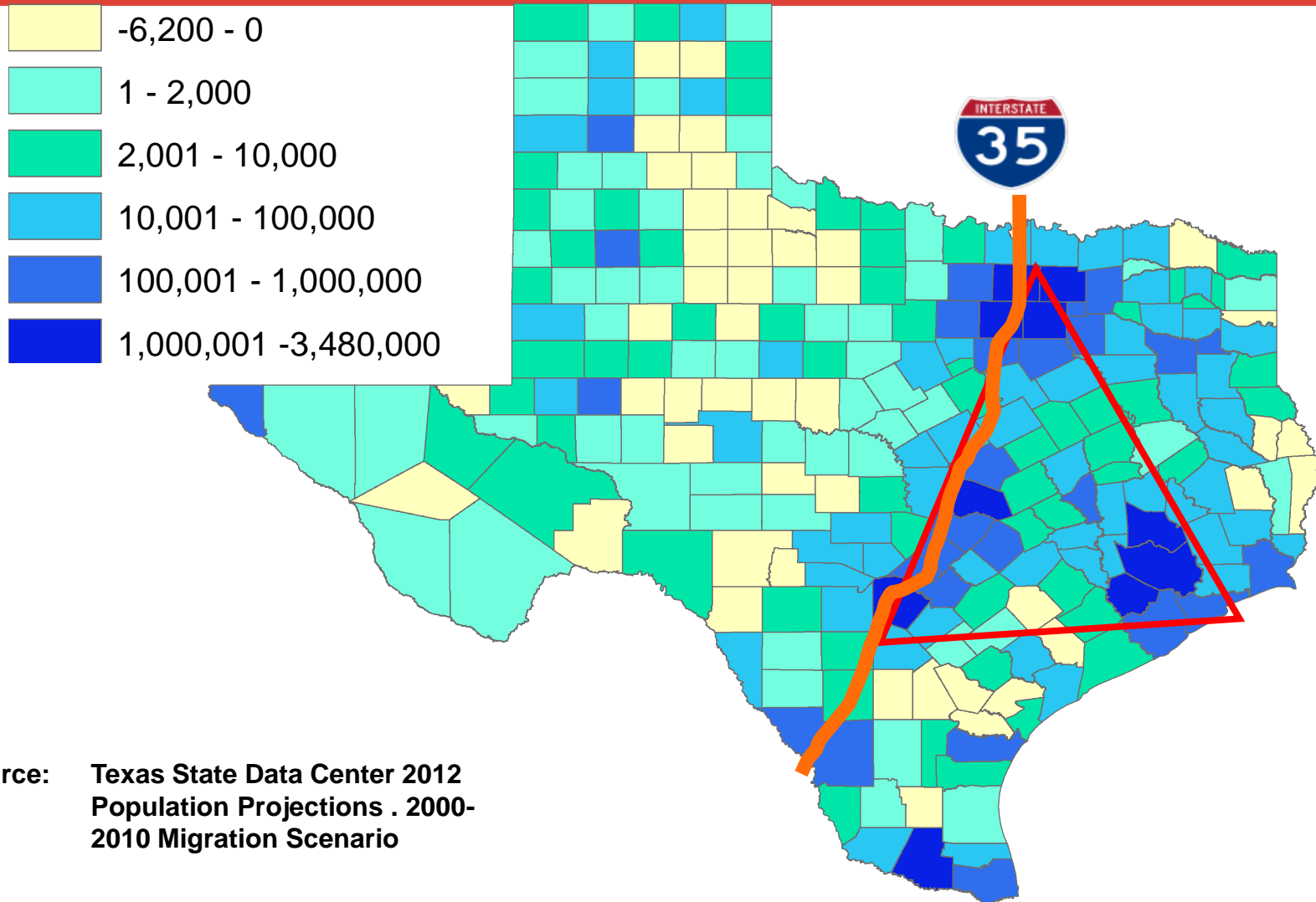
Percent Change from 2010 to 2050 by Age Groups in the Texas Population



At Last!! A Cell Phone for Seniors!



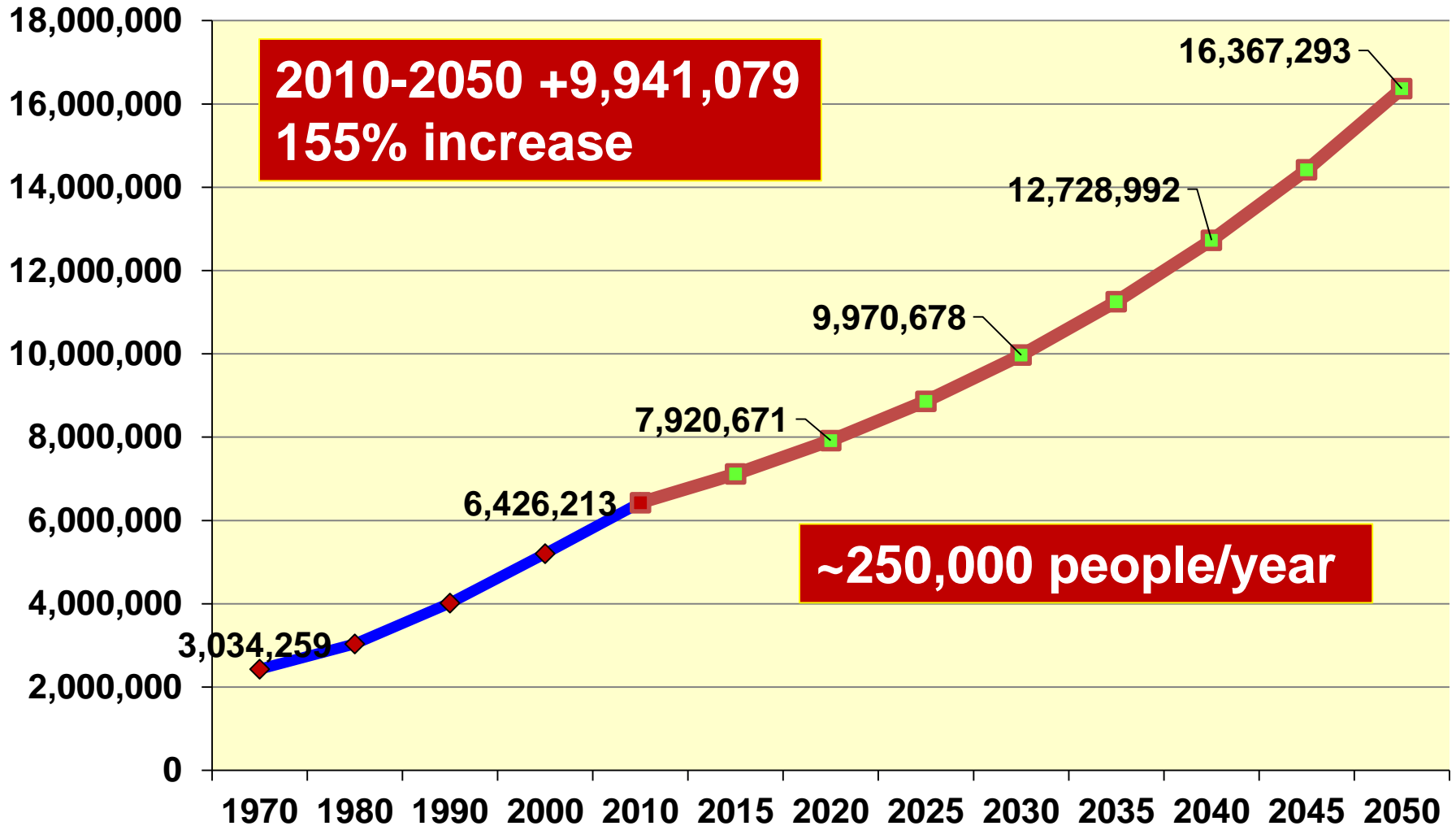
Projected Population Change, Texas Counties, 2010-2050



Source: Texas State Data Center 2012
Population Projections . 2000-
2010 Migration Scenario

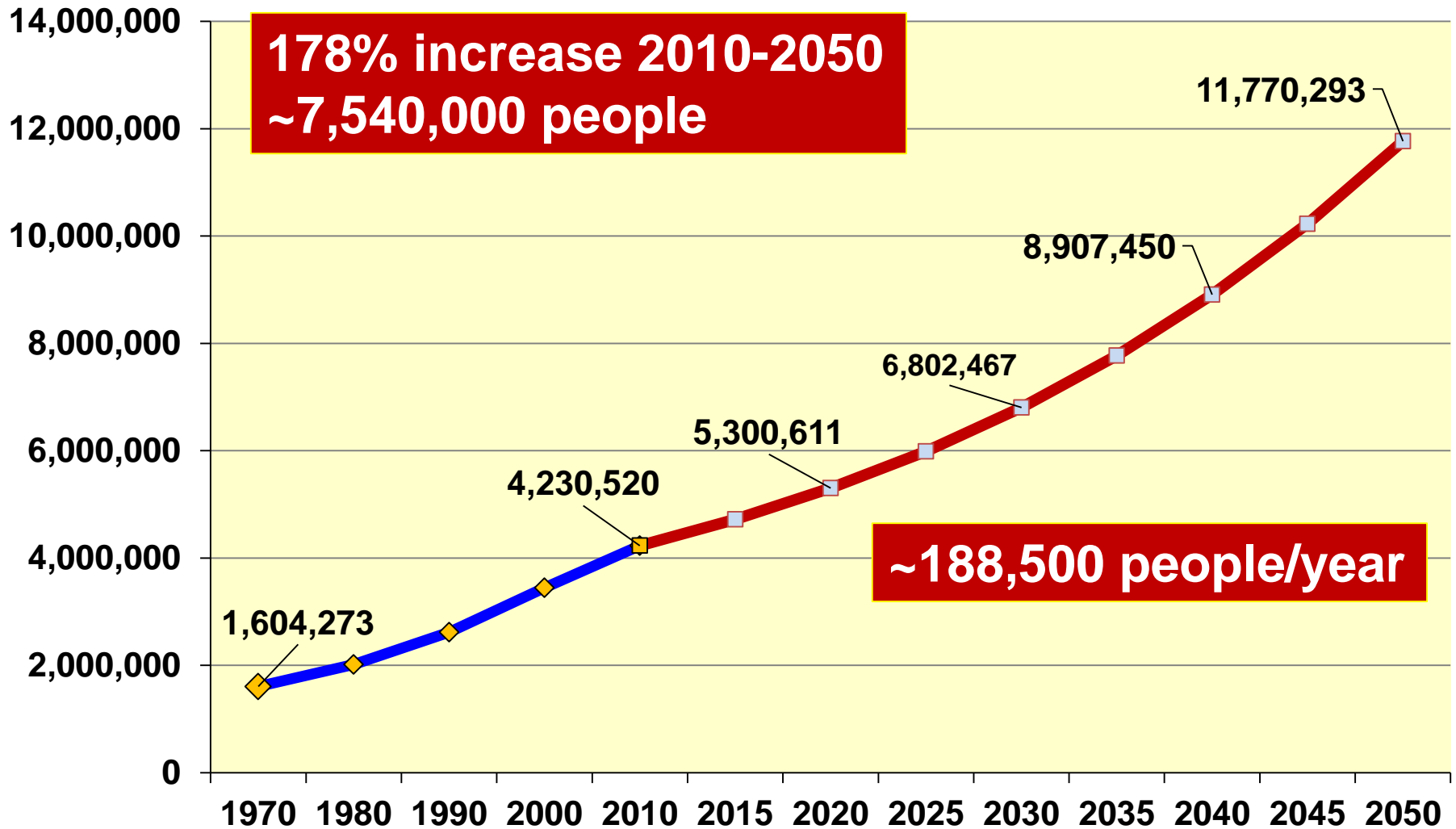
D-FW MSA Population

Collin, Dallas, Denton, Ellis, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, Somervell,
Tarrant & Wise Counties



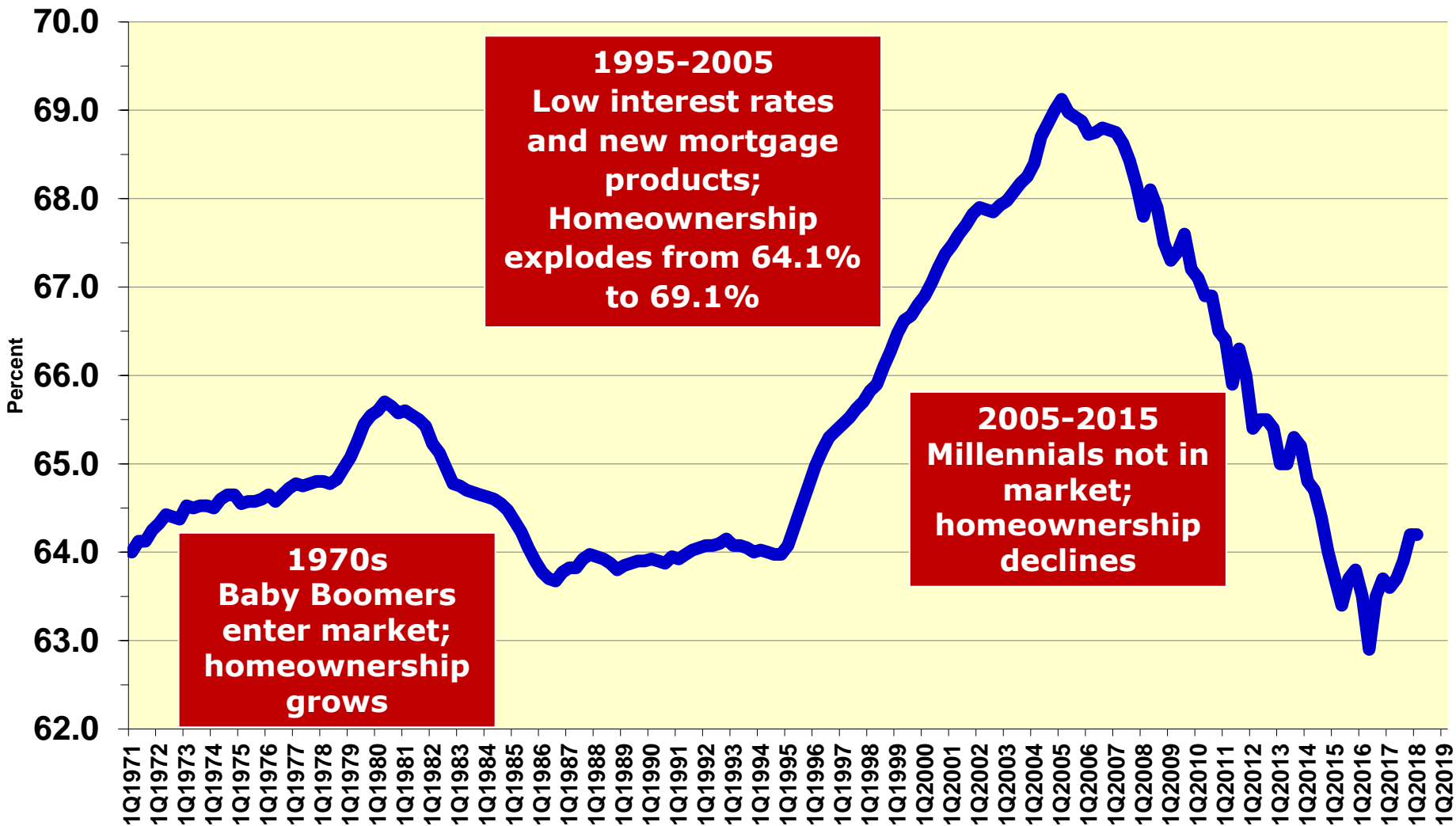
D-P-I Population

Dallas-Plano-Irving MD: Collin, Dallas, Denton, Ellis, Hunt, Kaufman & Rockwall Counties

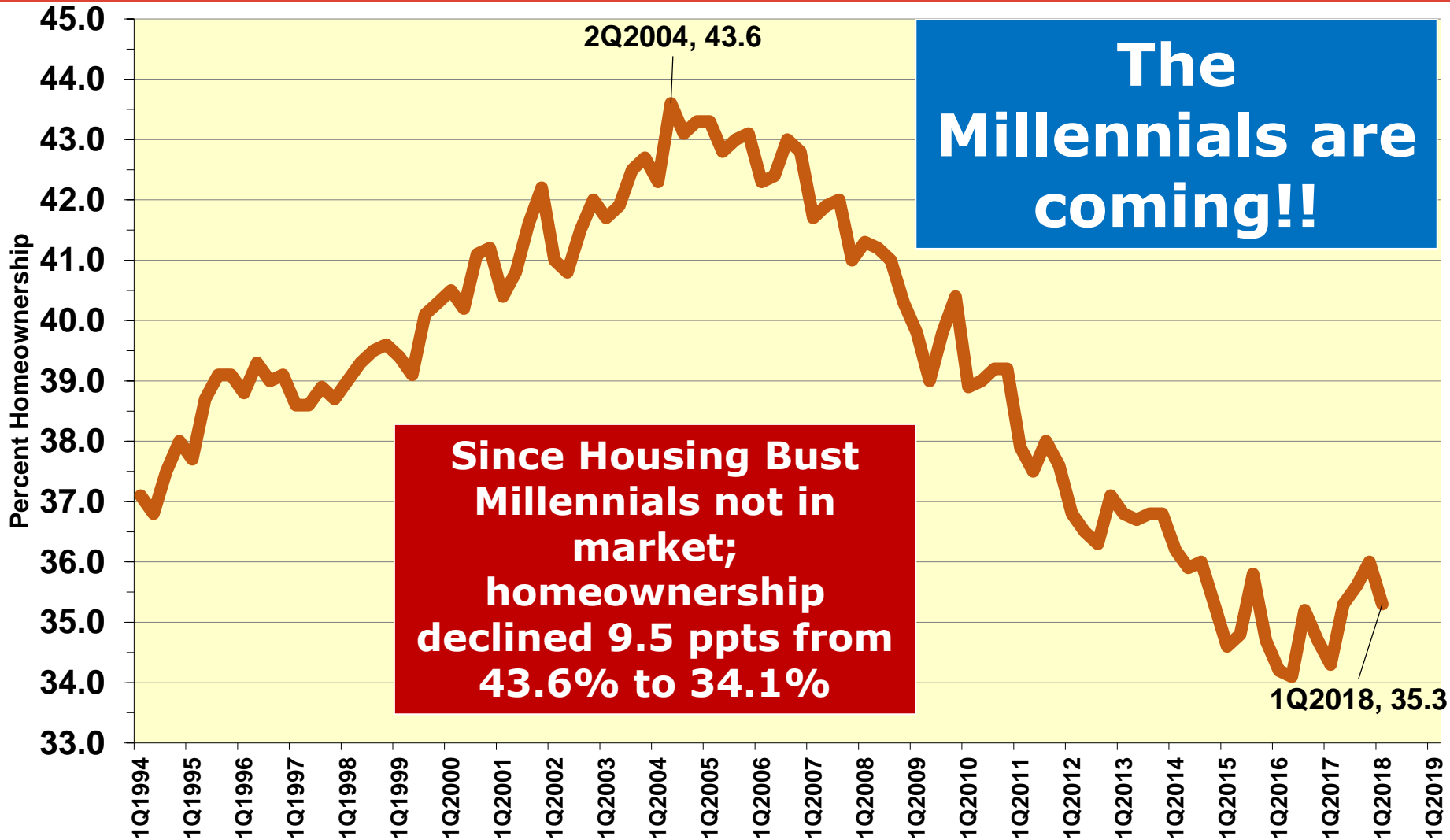


Housing Markets

US Homeownership Rate



US Homeownership Rate HH Age <35

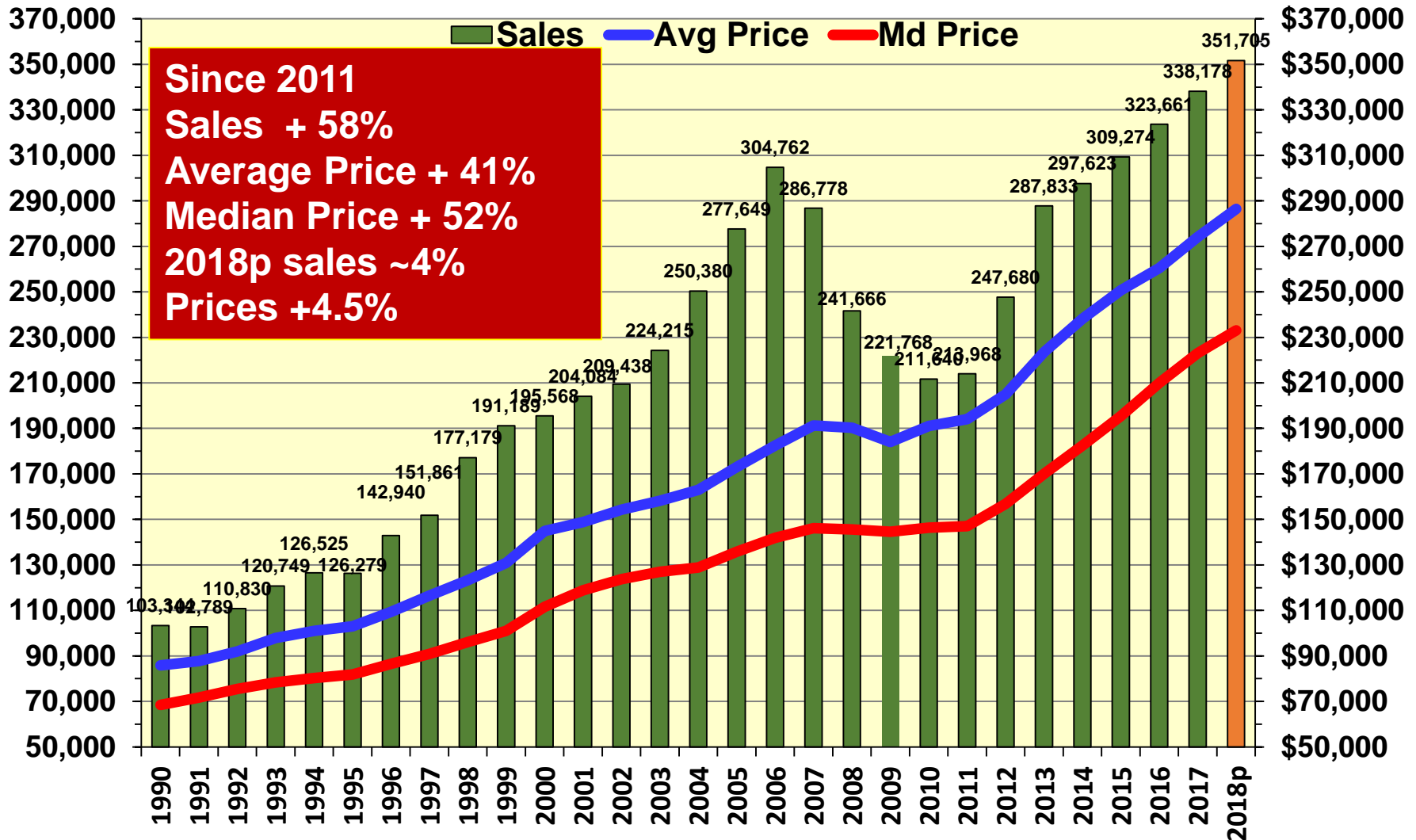


Millennials and Home Ownership

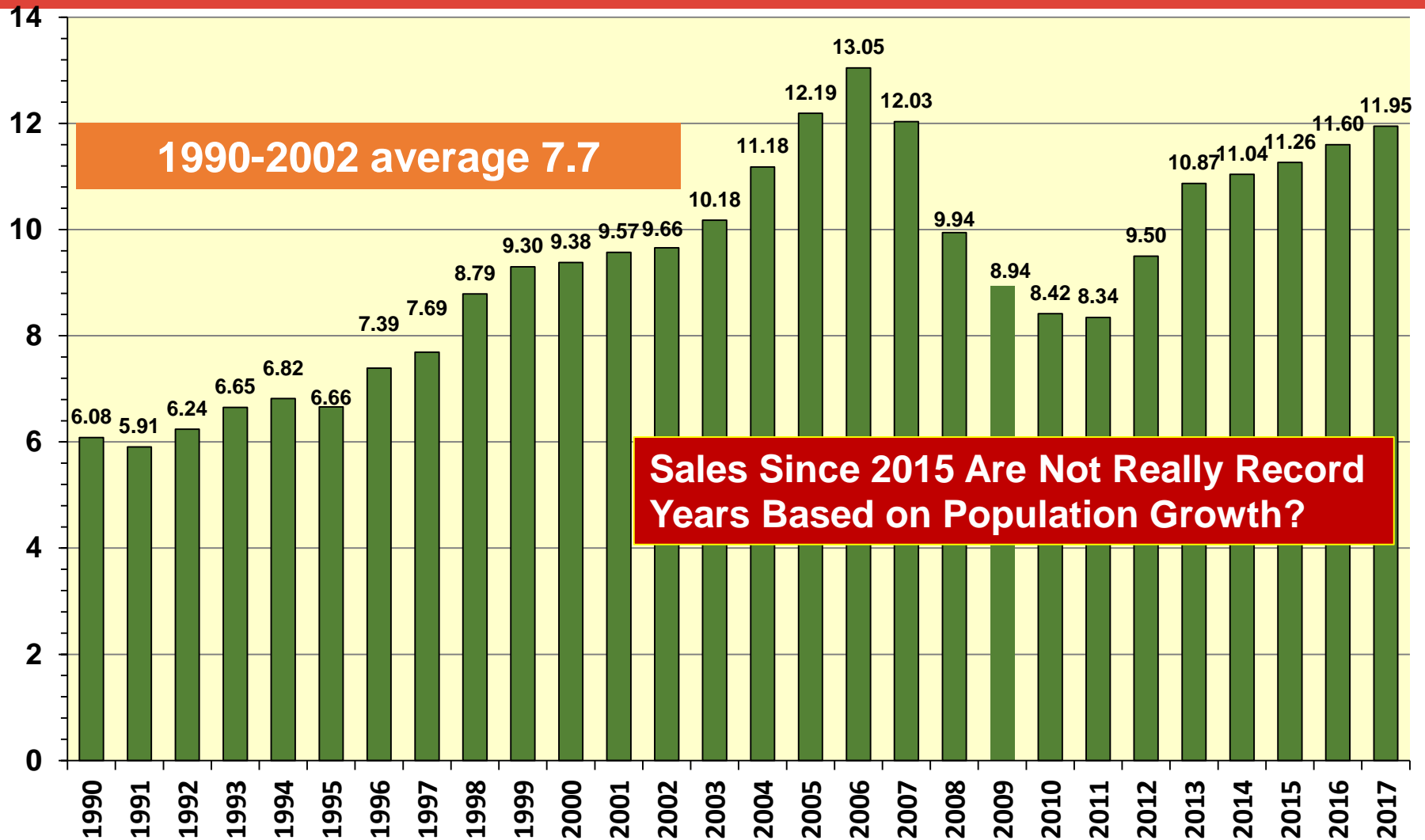
- **Delay marriage and more unmarried couples**
 - Marriage increases probability of owning by 18%
 - Millennials 3X more likely to not marry than Silent Generation
 - 1960's avg. age to marry early 20's; today close to 30
- **Delayed families**
 - Married HH's with children dropped to 25% in 2015 from 37% in 1990
 - Children increase probability of owning by 6%
- **Student debt:**
 - 1% increase in debt decreases probability of ownership by 0.15%
 - e.g., if HH student debt went from \$50k to \$100k, chance of home ownership declined by 15%
- **Majority rent in high-cost, urban centers** by necessity/desire
- **Higher rents lead to less down payment savings**
 - ~50% Millennial HHs are rent-burdened (>30% income to rent); stay renters longer
- **Diversity of HH's:** 39% of white 18-34 HHs own; 14.5% of black HHs own

Annual Texas Home Sales

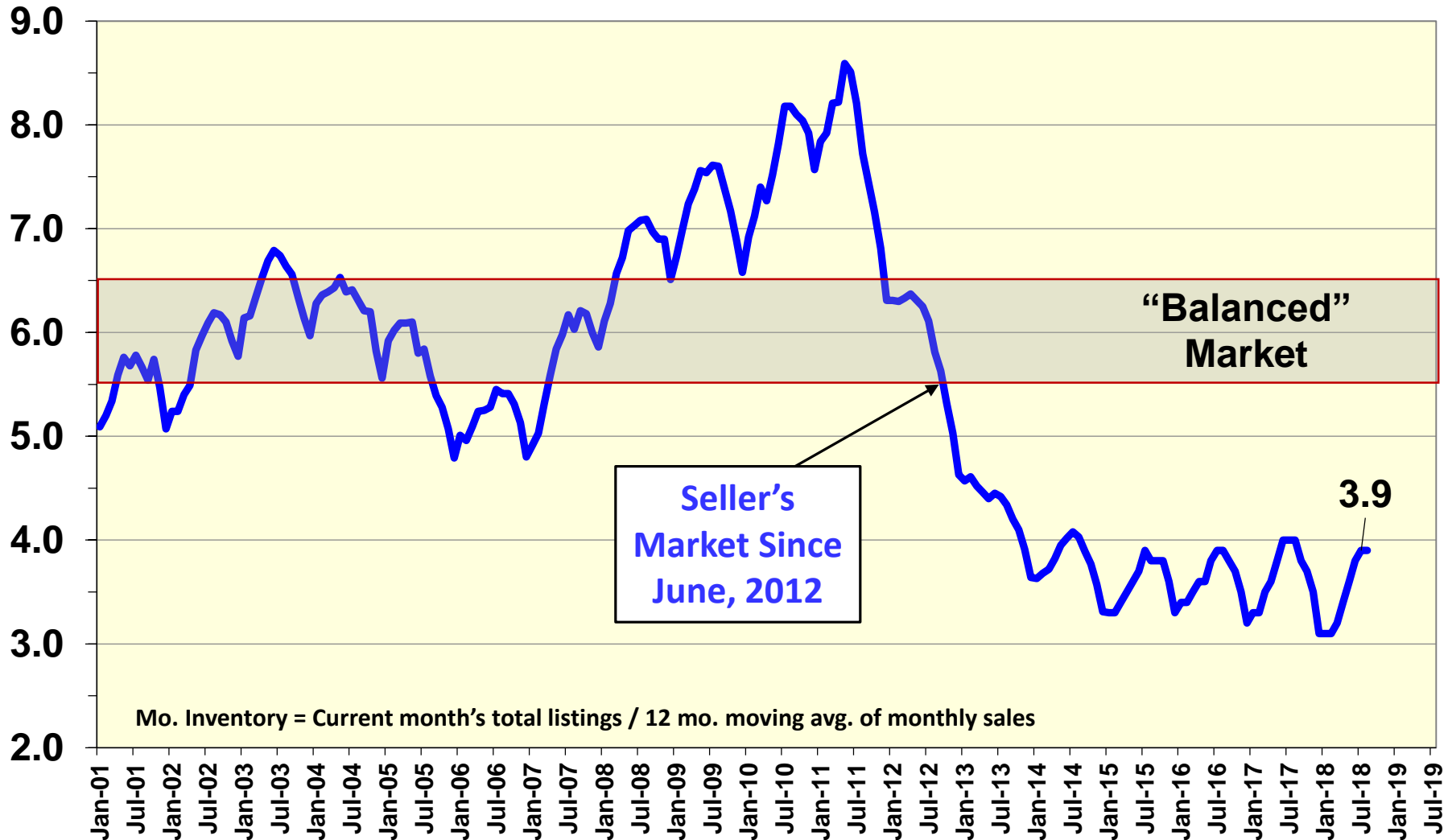
Has Texas Recovered?



Annual Texas Home Sales per 1,000 Population

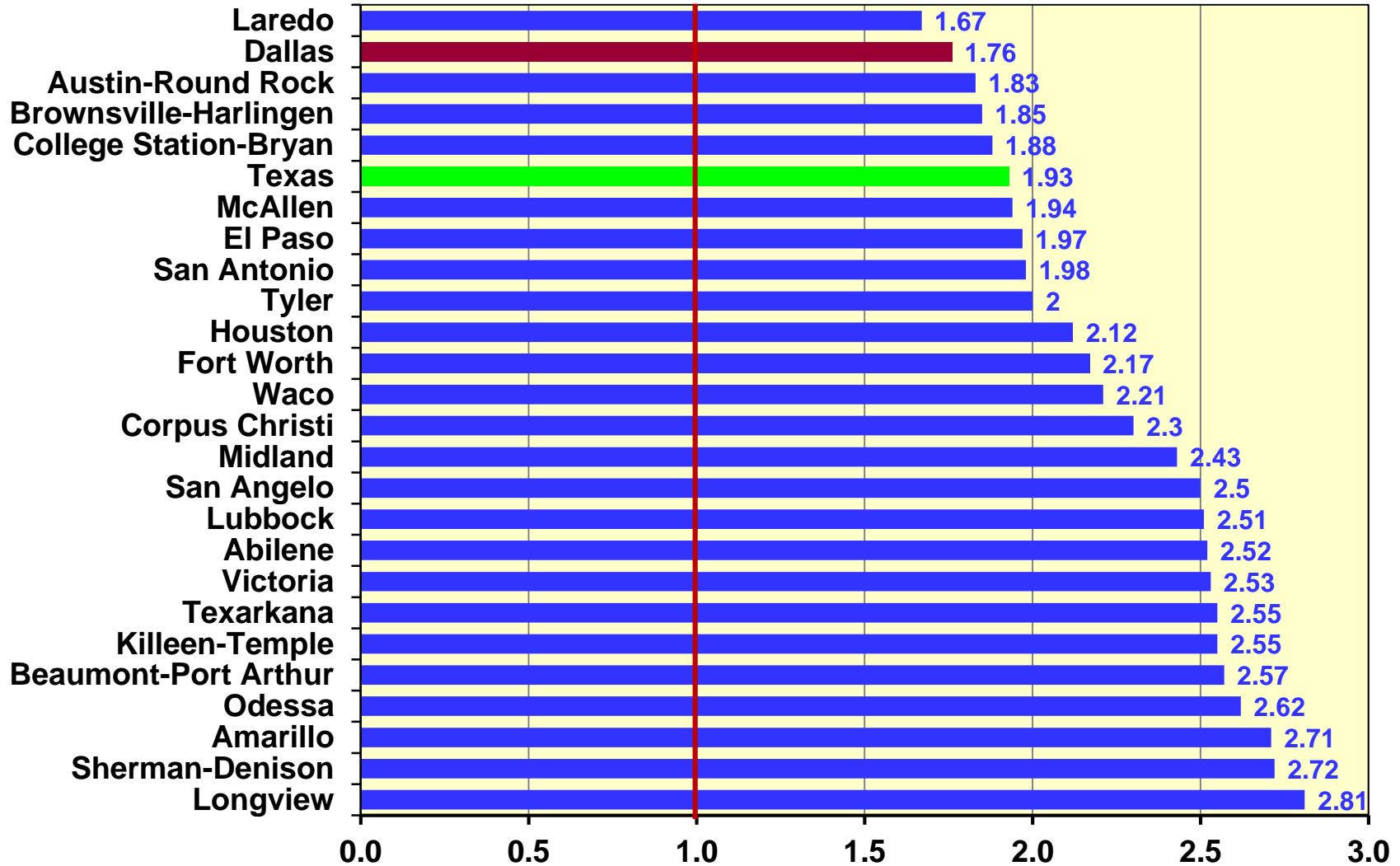


Texas Months' Inventory Still Quite Low (Homes Sold Thru MLS thru August, 2018)

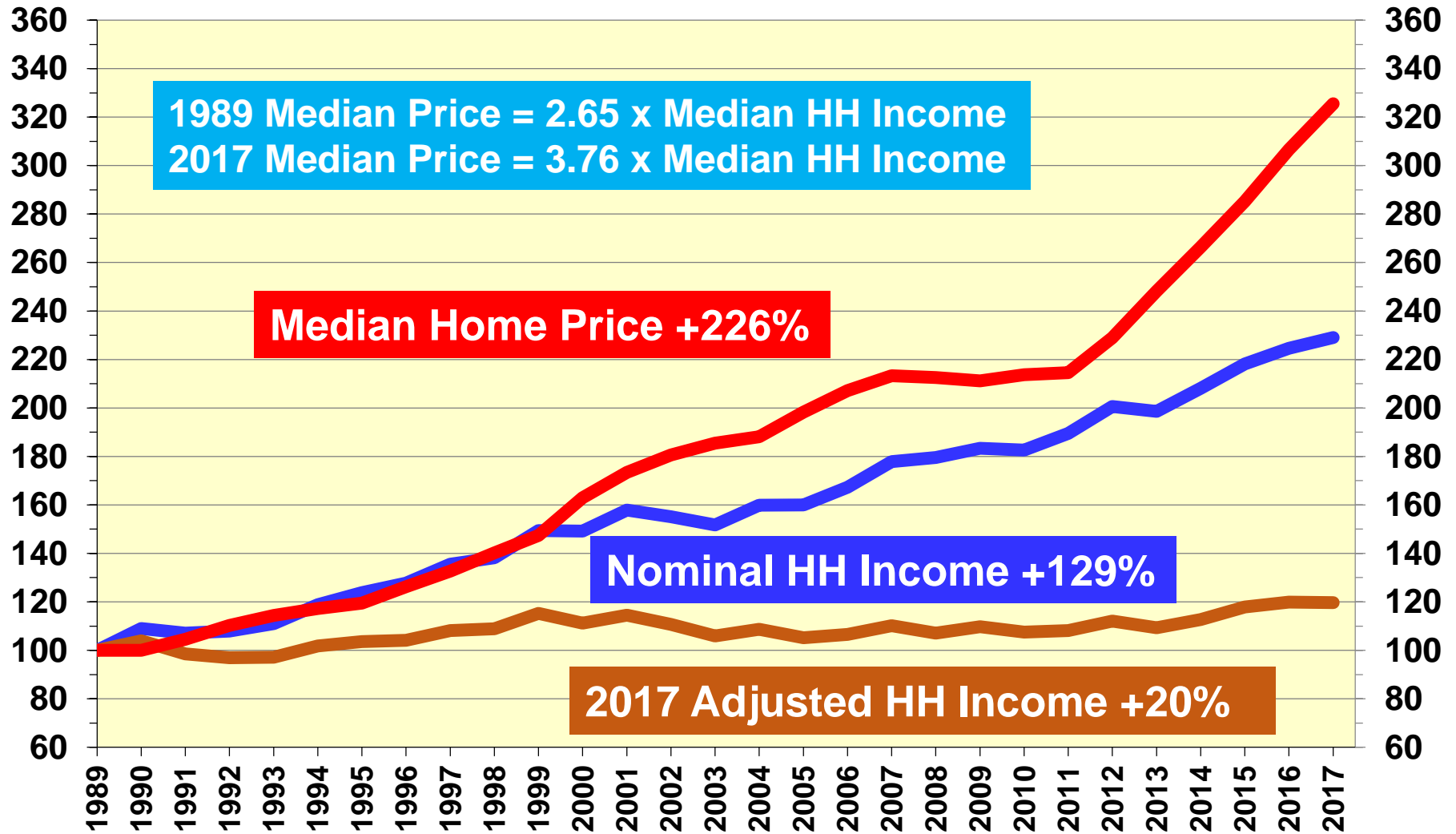


Texas Housing Affordability Index

4Q2017: 10% Down / 35% Qualifying Ratio



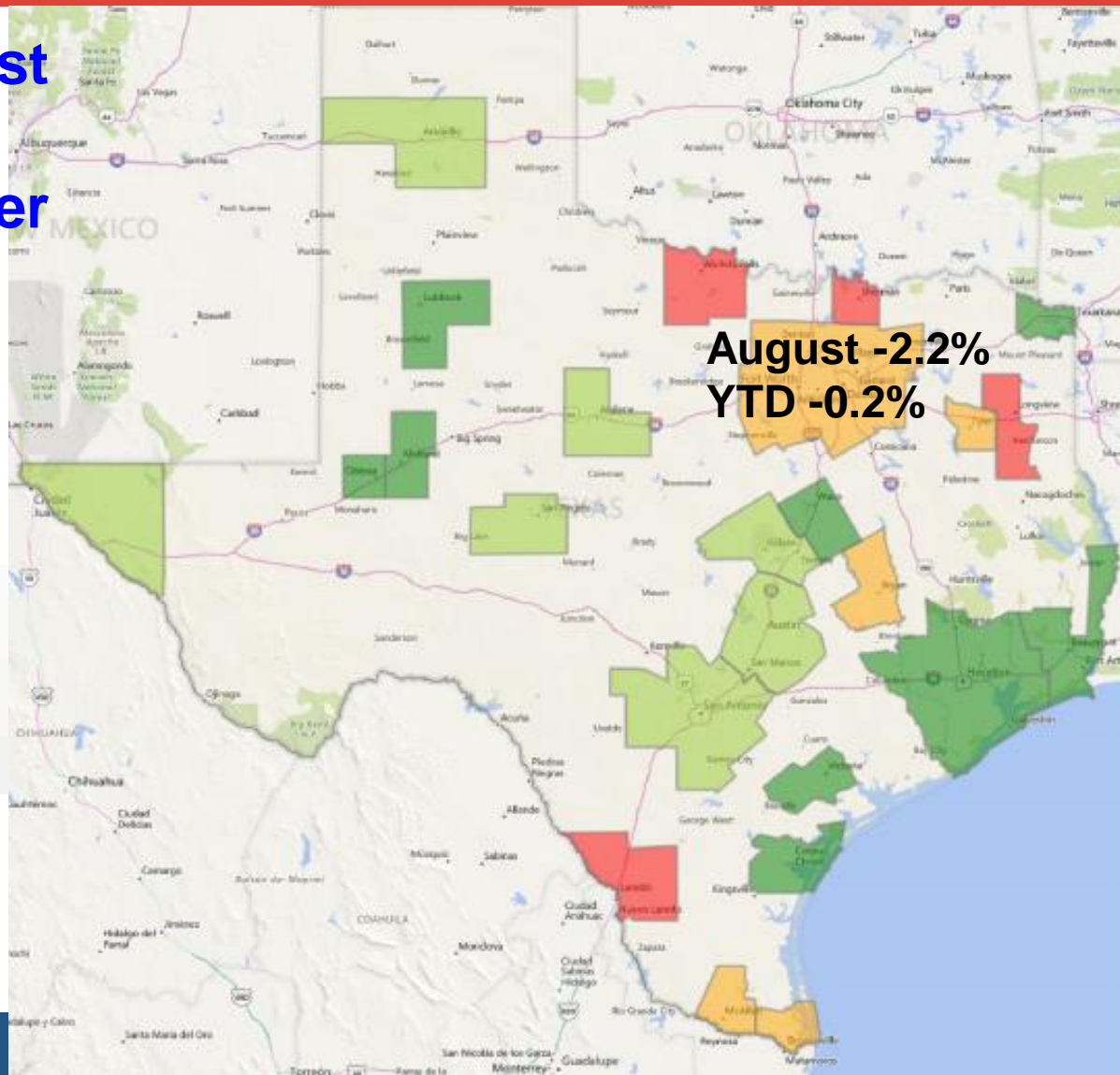
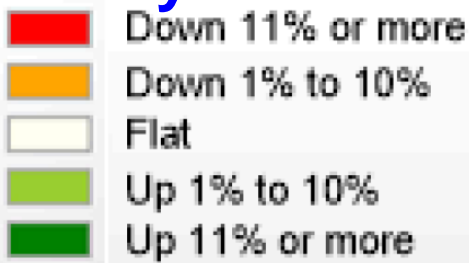
Texas Median HH Income & Median Home Price Indexed to 1989



August Sales in Texas by MSA (Y/Y Percent Change)

**State +10% August
+4% YTD
D-FW much slower**

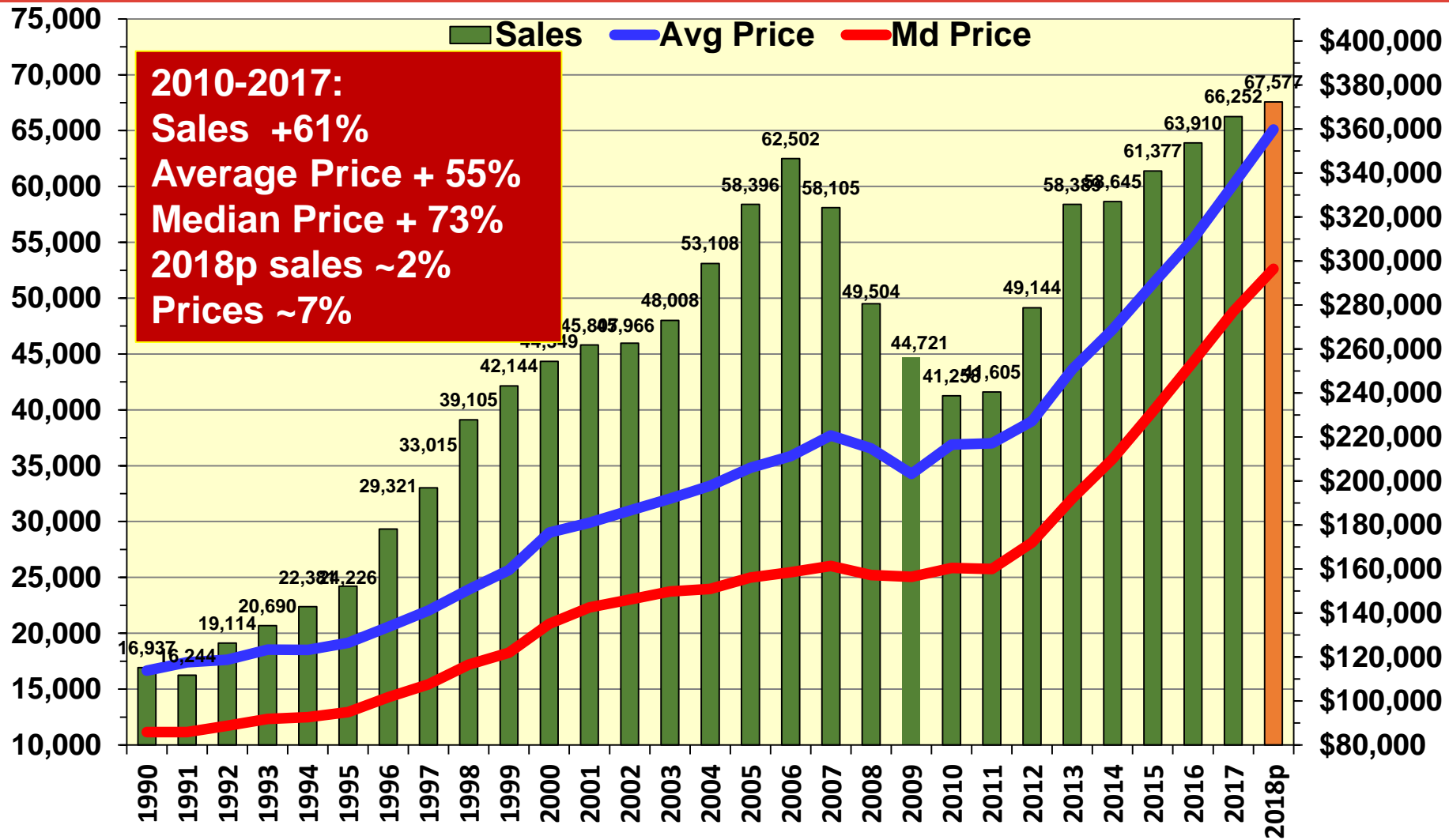
**Coastal Areas
+40% or more
Harvey Effect**



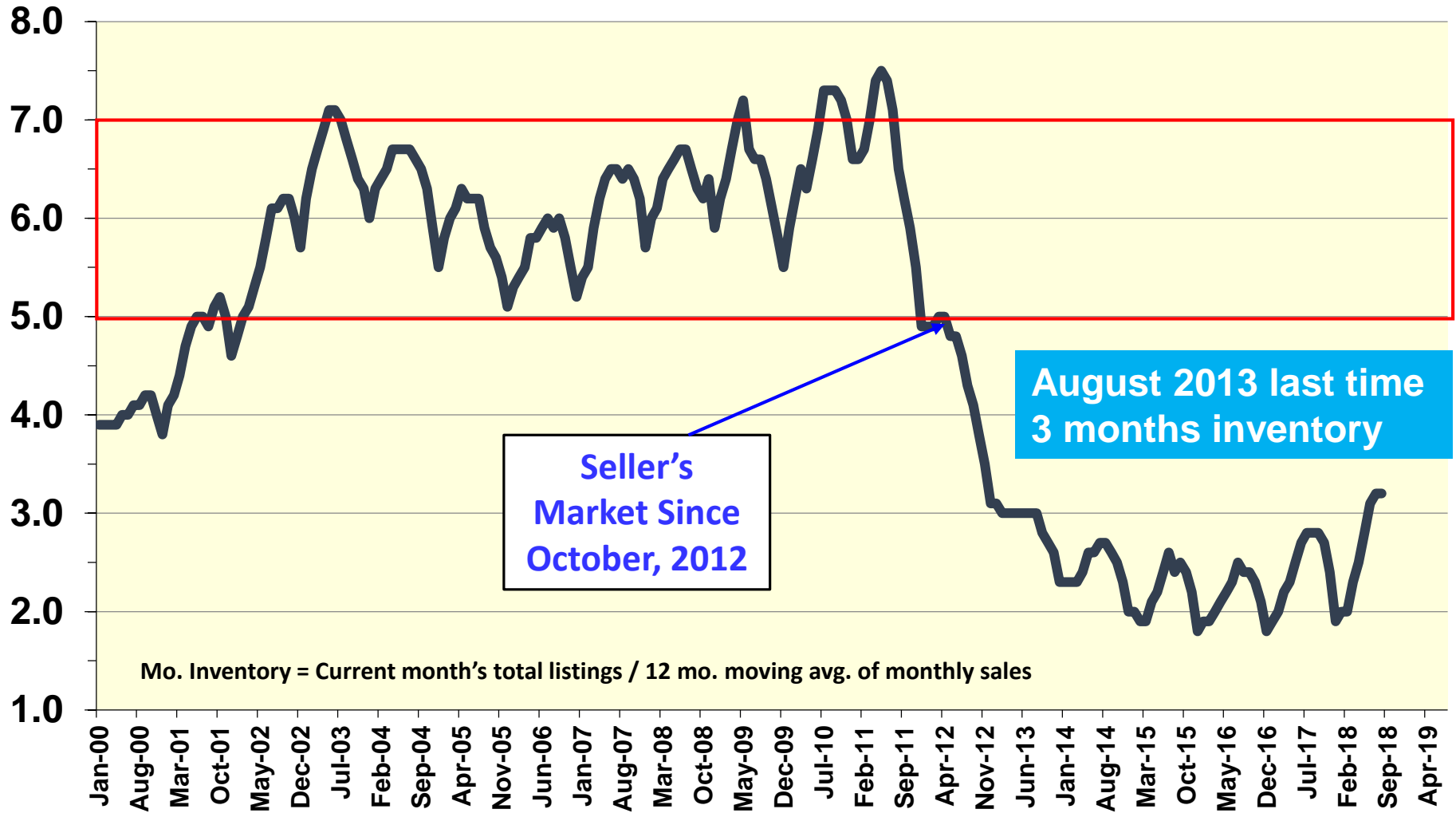
Sources: MetroTex; Texas Association of Realtors® MarketViewer; Real Estate Center at Texas A&M University

Annual D-P-I Home Sales

Dallas-Plano-Irving MD: Collin, Dallas, Denton, Ellis, Hunt, Kaufman & Rockwall Counties



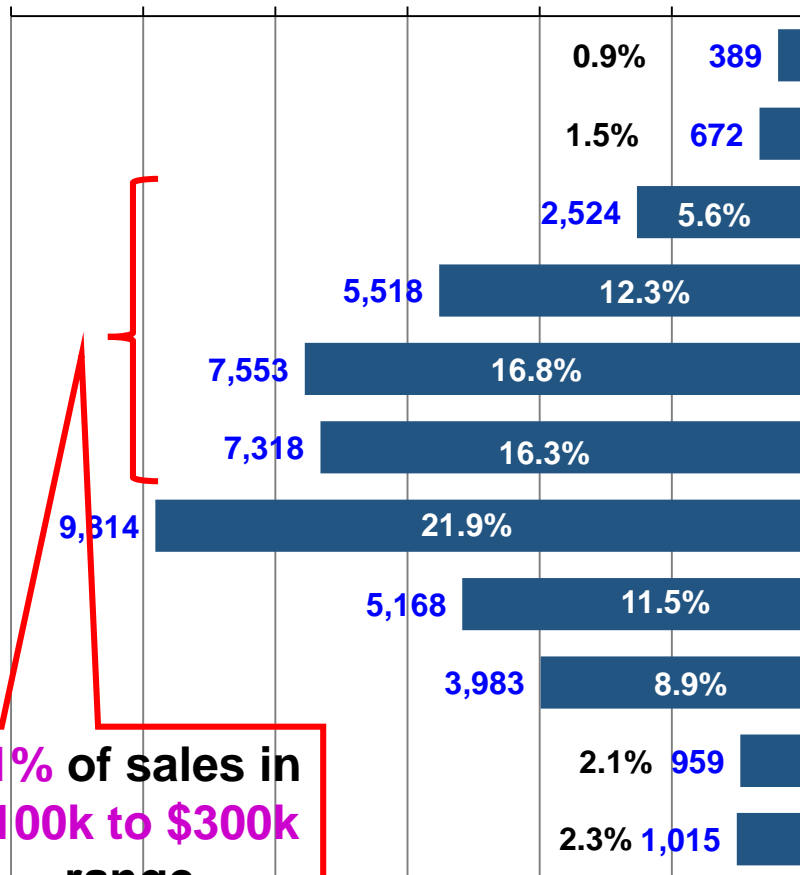
Dallas-Plano-Irving Months' Inventory



D-P-I 2018YTD Sales and Months Inventory by Price

2018YTD Sales

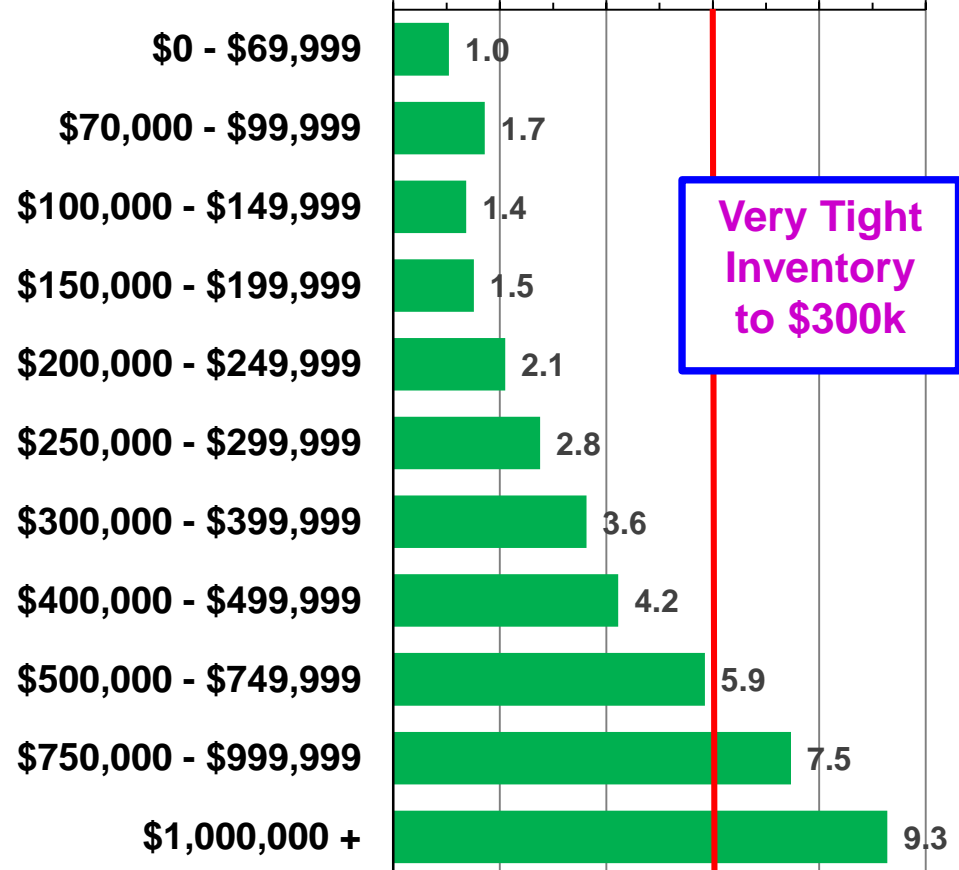
12,000 10,000 8,000 6,000 4,000 2,000 0



51% of sales in \$100k to \$300k range

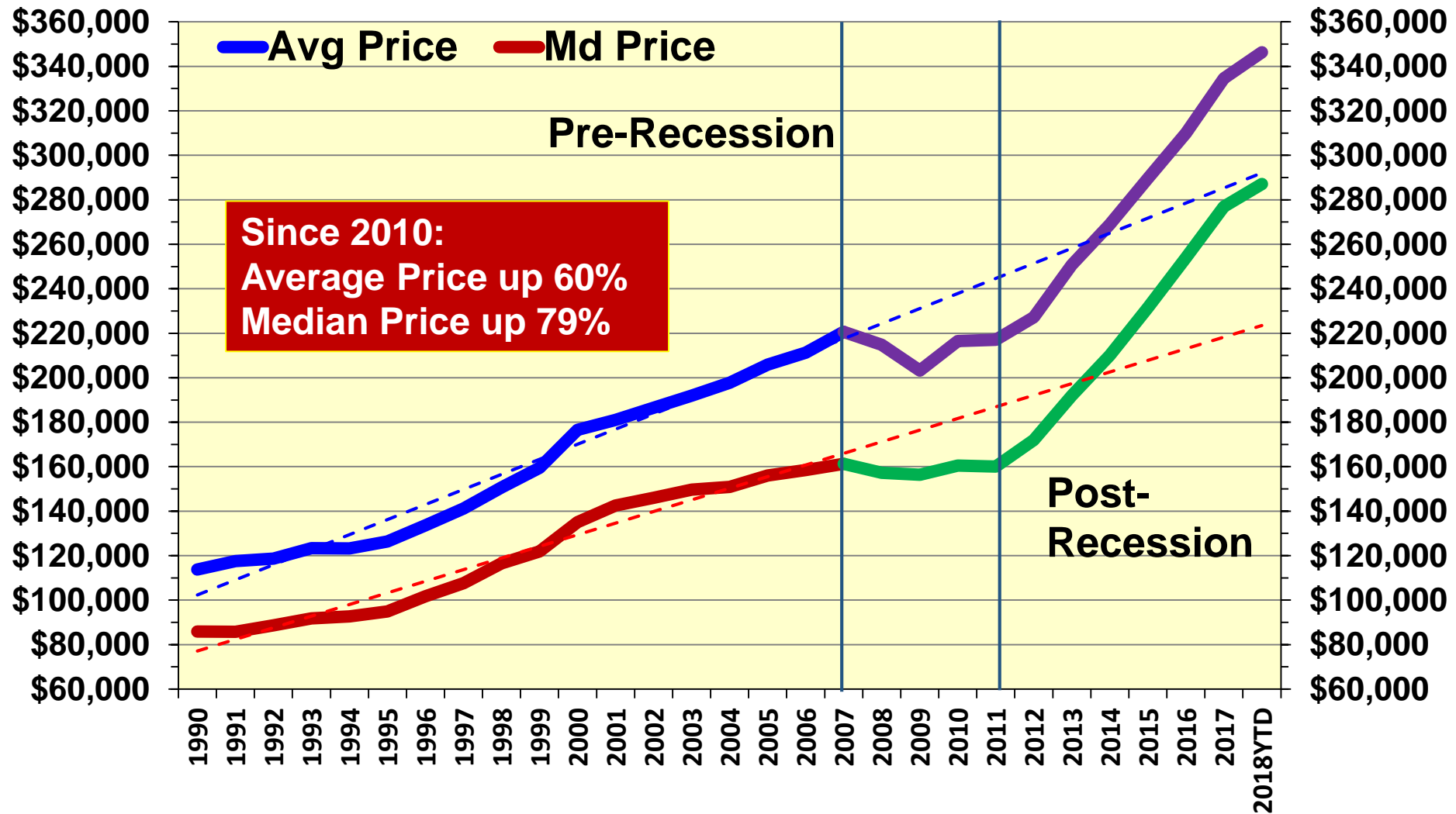
Current MOI

0.0 2.0 4.0 6.0 8.0 10.0



Very Tight Inventory to \$300k

Annual D-P-I Home Prices

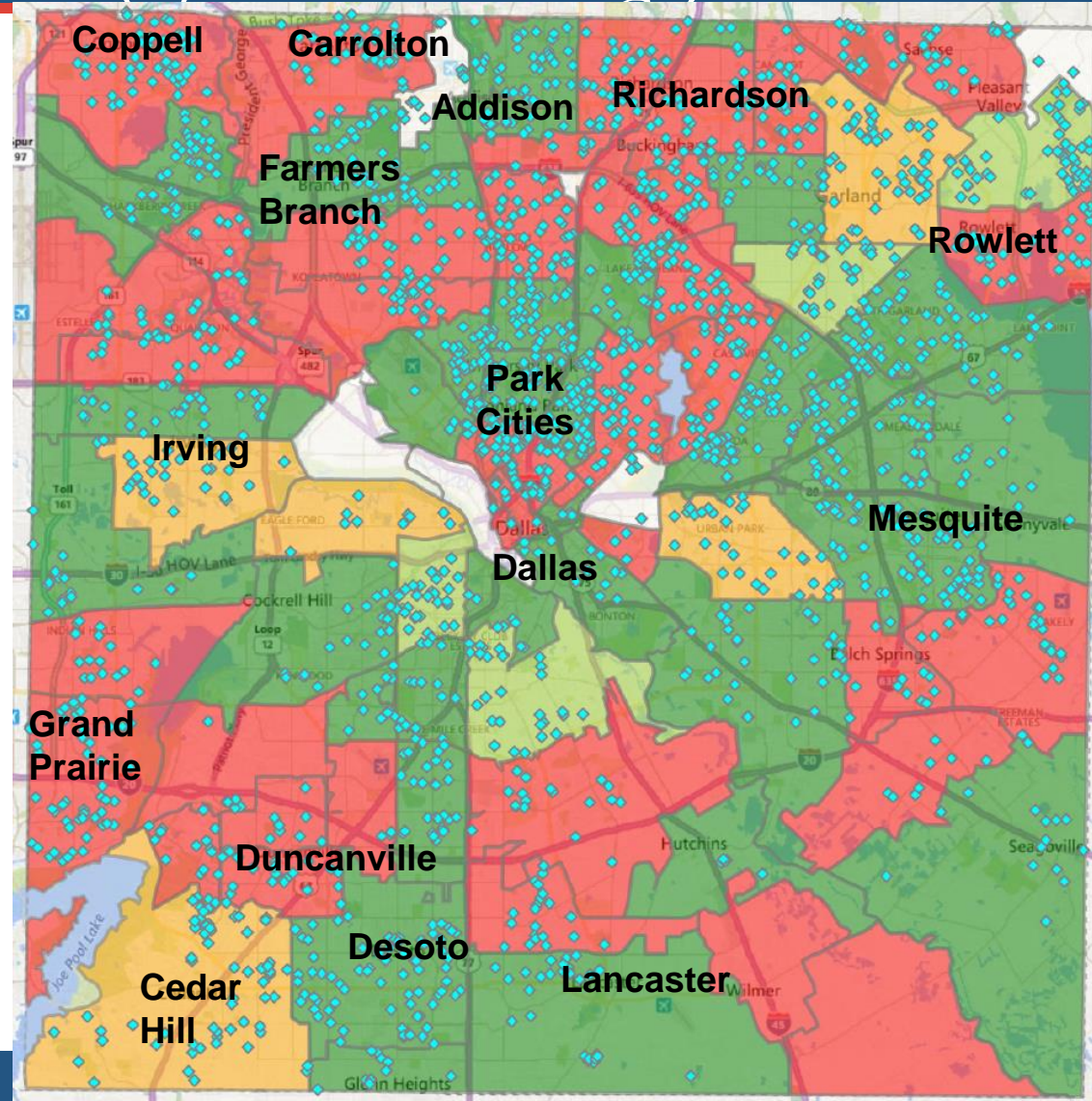
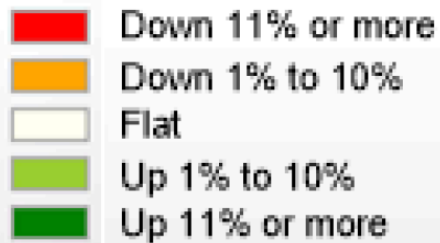


August Home Sales in Dallas Co. by Zip Code

Code

(Y/Y Percent Change)

8/2018 Sales -1.6%
for the month and
-2%YTD

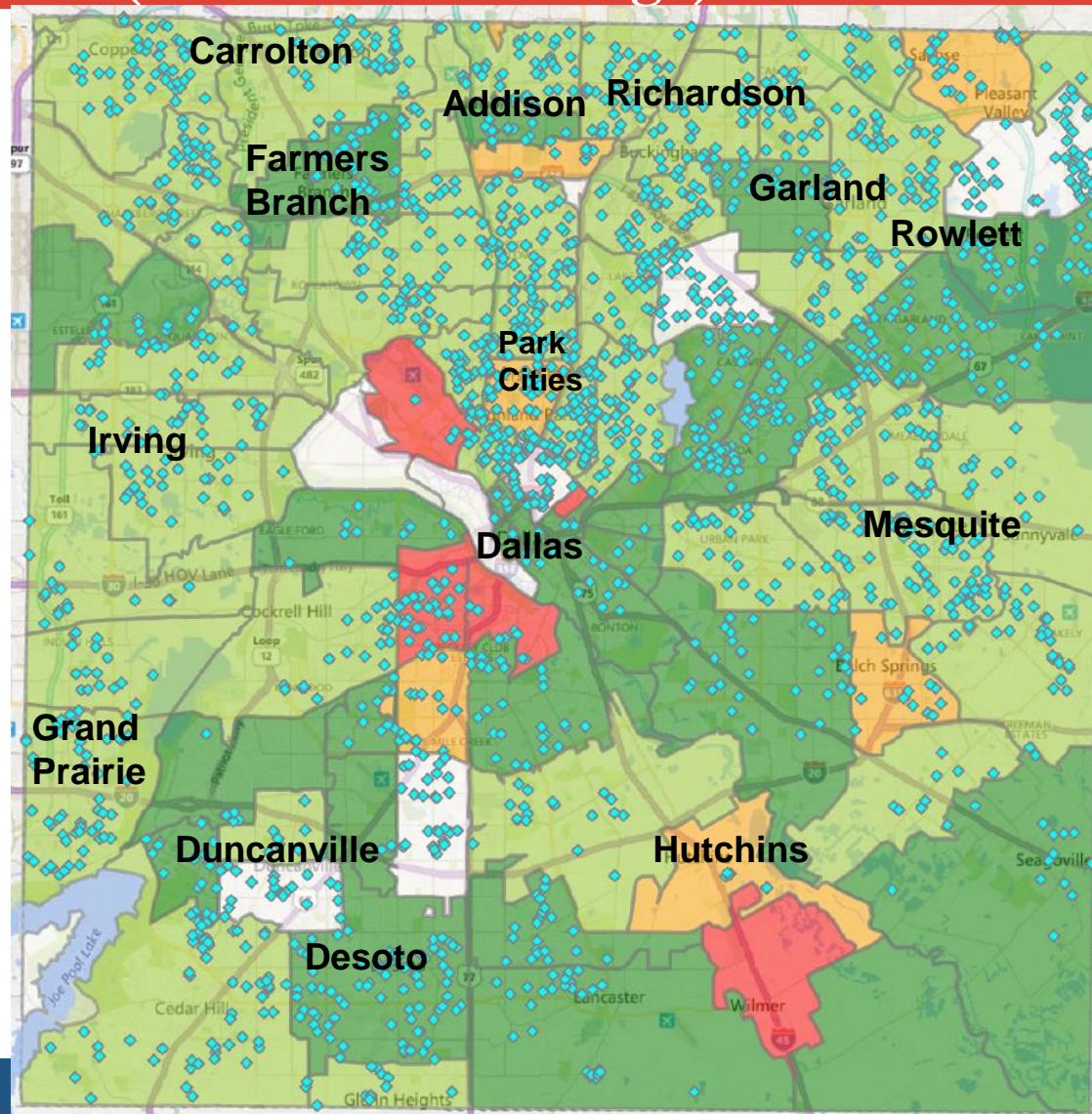
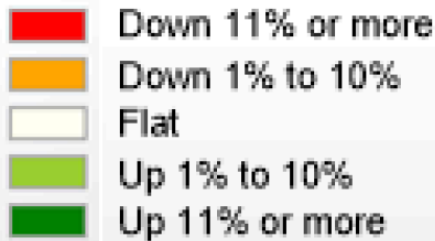


Source: MetroTex
Association of Realtors®;
Real Estate Center at
Texas A&M University

August Home Avg. Price/S.F. in Dallas Co. by Zip Code (Y/Y Percent Change)

2018YTD P/SF
\$158/sf, +5.8%

**2018YTD Median
Price \$244,800,**
+6.4%

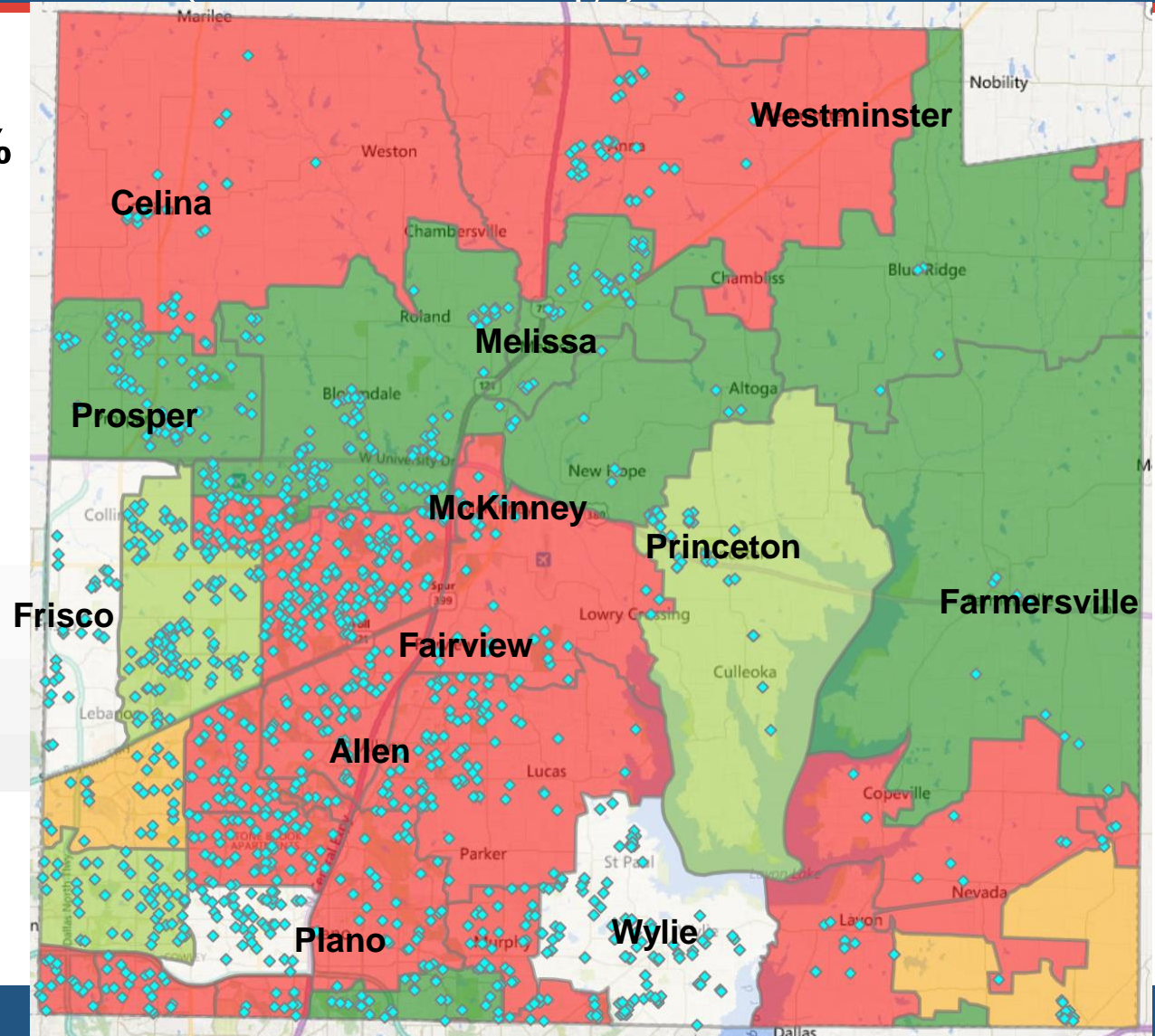
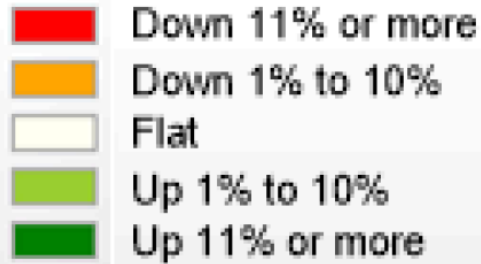


Source: MetroTex
Association of Realtors®;
Real Estate Center at
Texas A&M University

August Home Sales in Collin Co. by Zip Code

(Y/Y Percent Change)

**8/2018 Sales -10.2%
for the month and
-0.3%YTD**



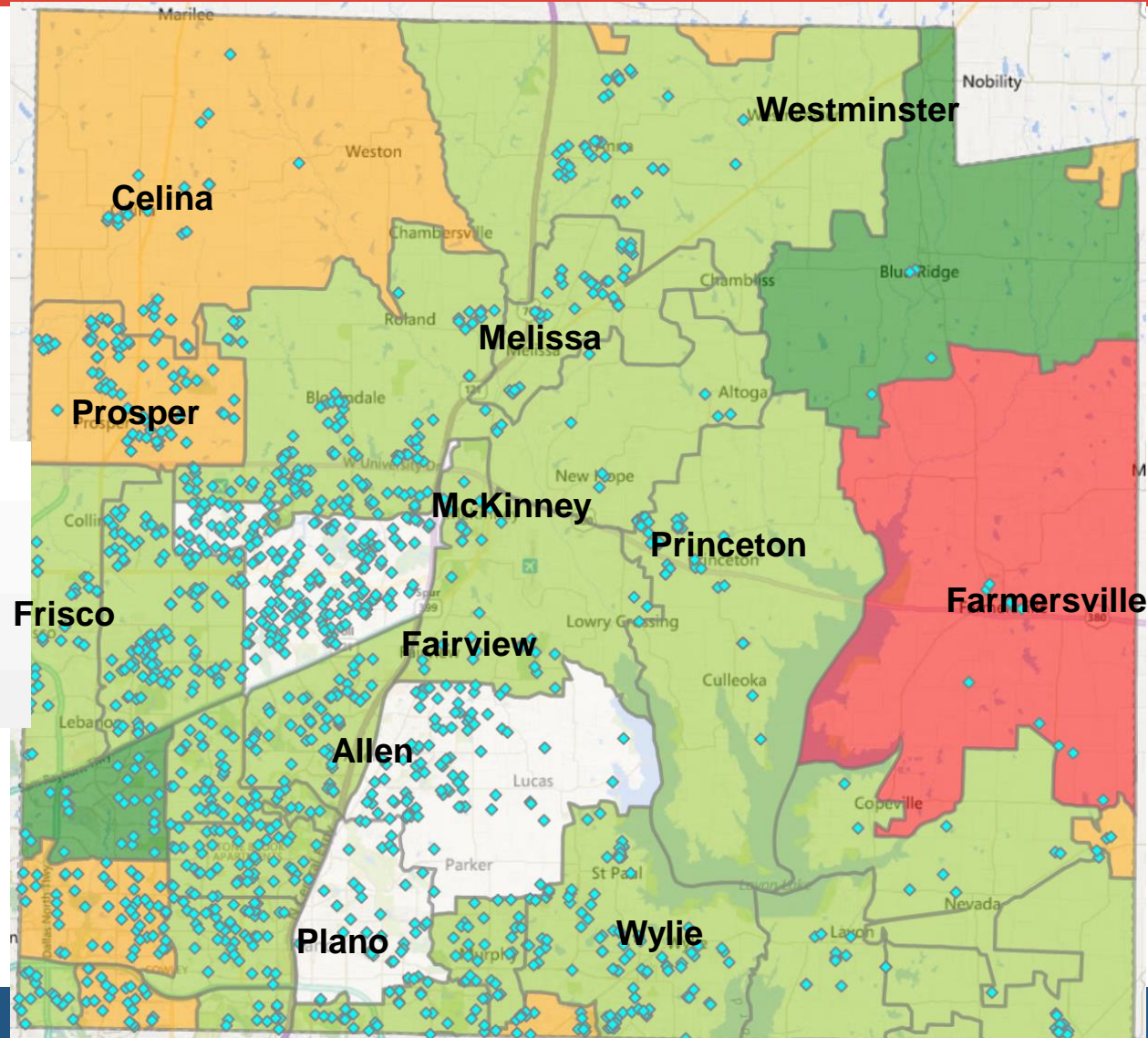
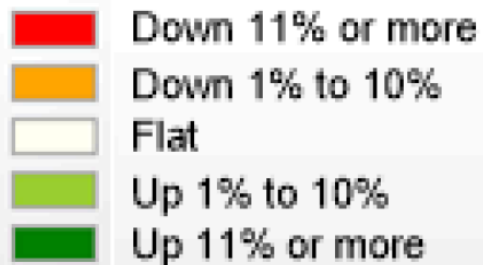
Source: Collin County Association of Realtors®; Real Estate Center at Texas A&M University

August Avg. Price/s.f. in Collin Co. by Zip Code

(Y/Y Percent Change)

2018YTD P/SF
\$140/sf, +2.8%

2018YTD Median
Price \$355,000,
+1.5%



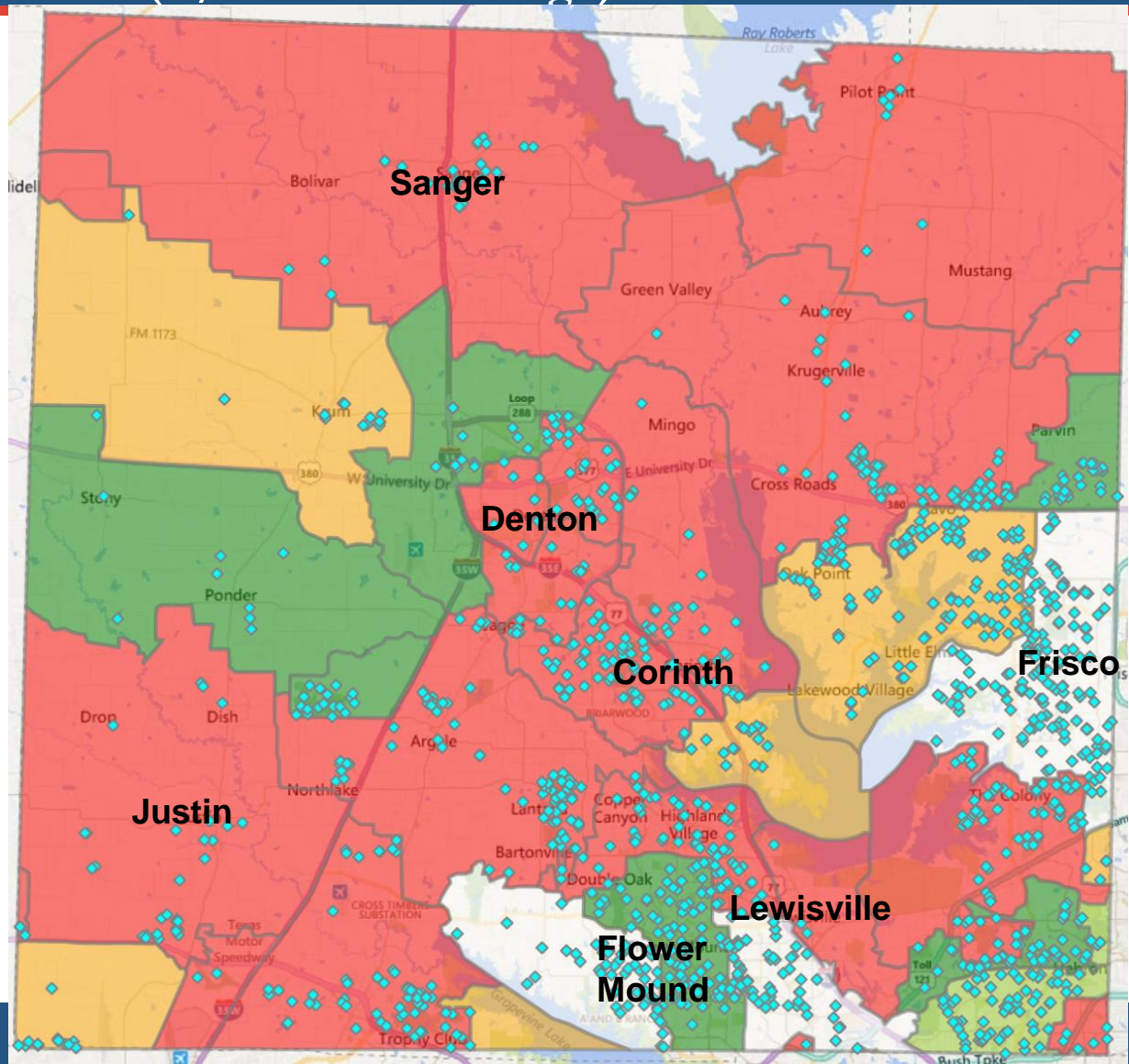
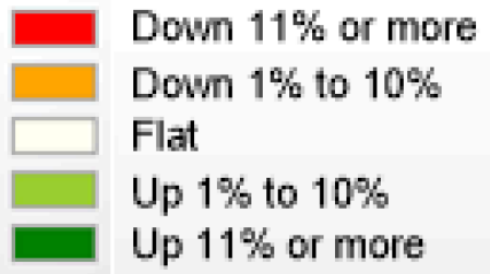
Source: Collin County
Association of Realtors®;
Real Estate Center at
Texas A&M University



August Home Sales in Denton Co. by Zip Code

(Y/Y Percent Change)

8/2018 Sales -10.2%
for the month and
-0.3%YTD








Source: Collin County Association of Realtors®;
Real Estate Center at Texas A&M University

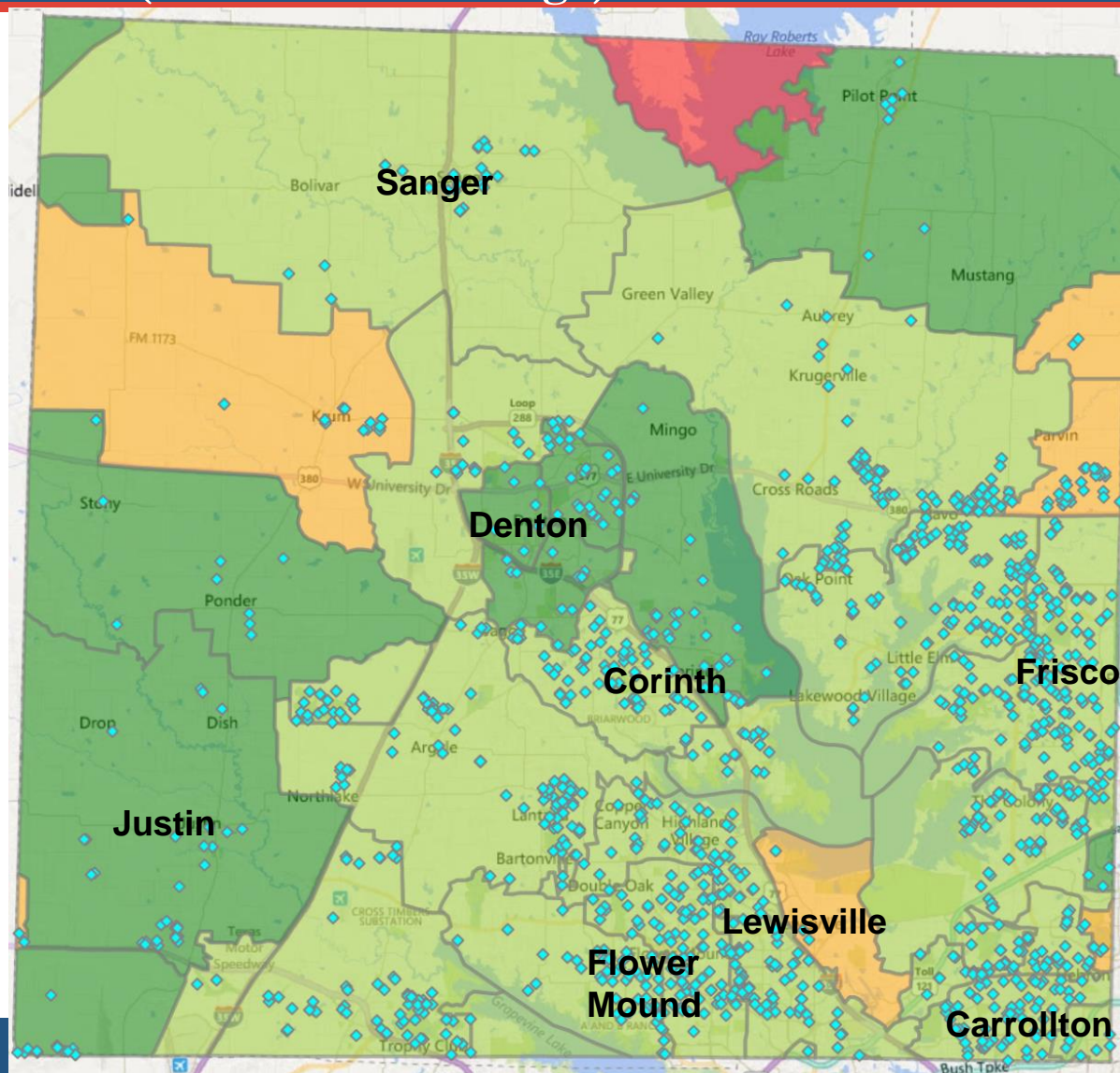
August Avg. Price/s.f. in Denton Co. by Zip Code

(Y/Y Percent Change)

2018YTD P/SF
\$140/sf, +2.8%

2018YTD Median
Price \$355,000,
+1.5%

-  Down 11% or more
-  Down 1% to 10%
-  Flat
-  Up 1% to 10%
-  Up 11% or more

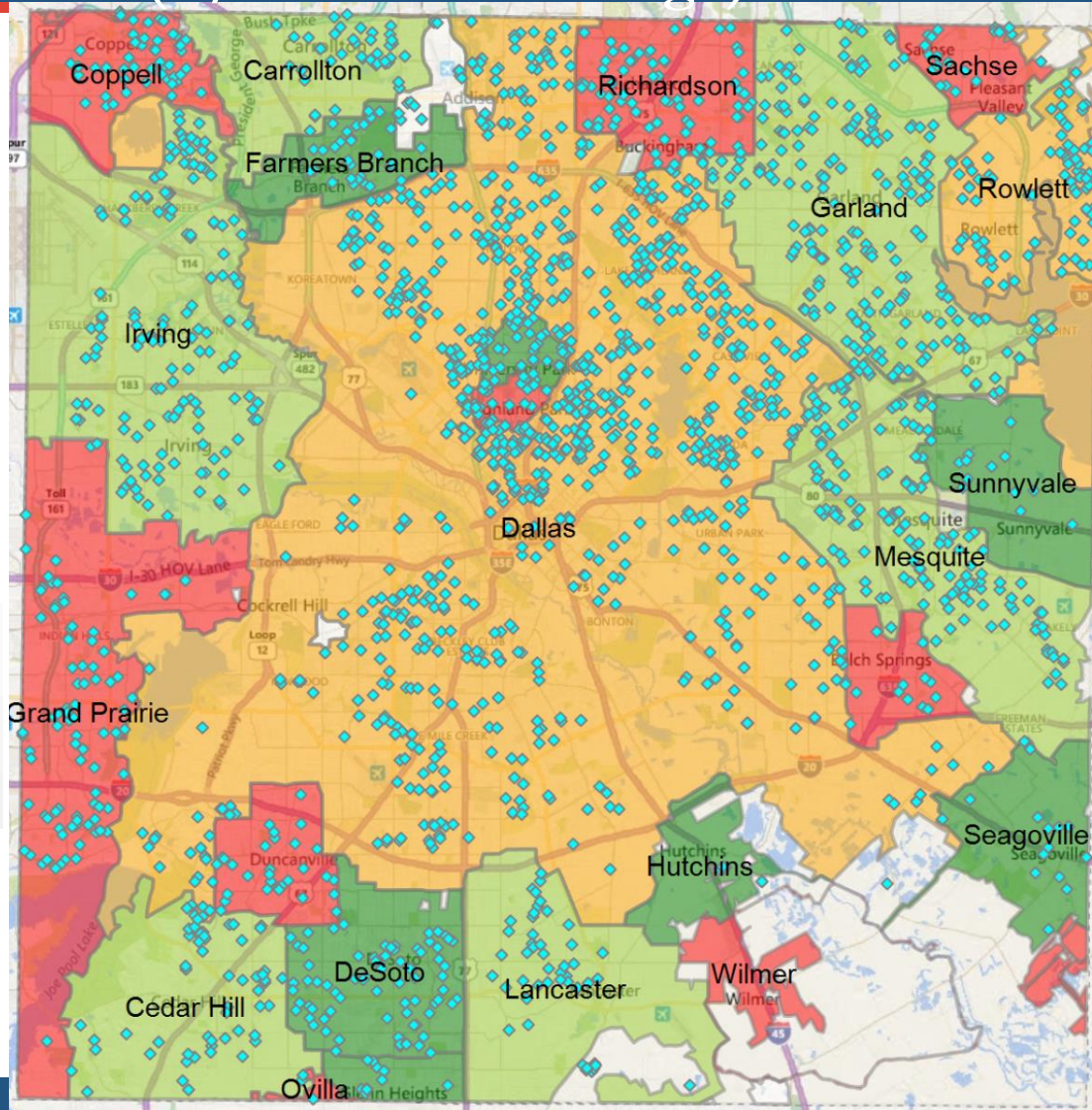
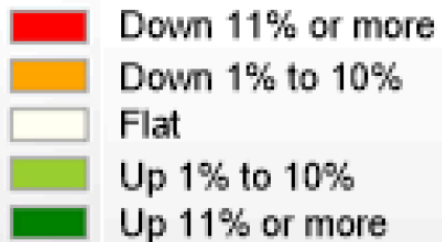


Source: Collin County
Association of Realtors®;
Real Estate Center at
Texas A&M University



August Home Sales in Dallas Co. by Local Market Area (Y/Y Percent Change)

**8/2018 Sales -1.6%
for the month and
-2%YTD**

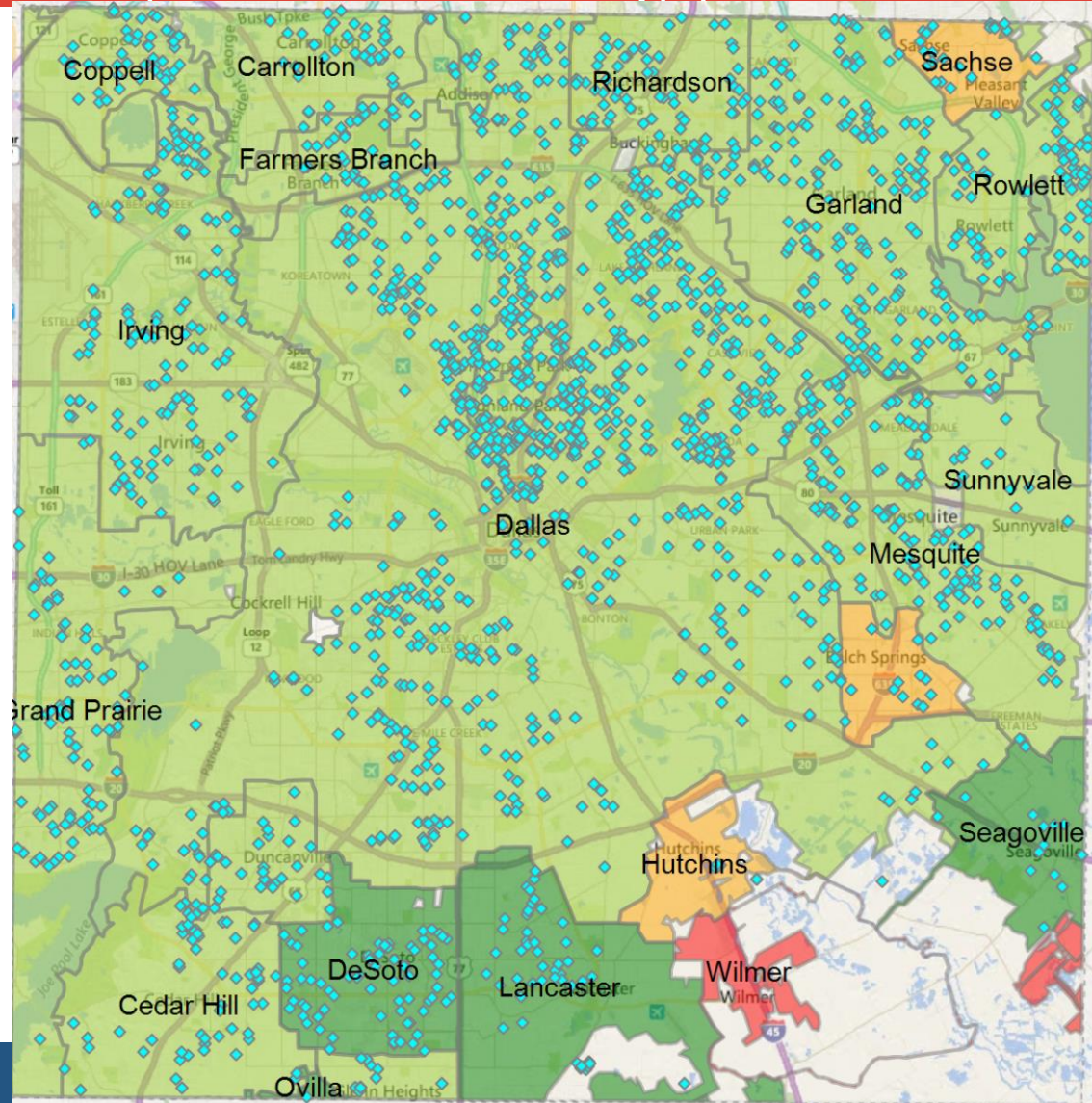
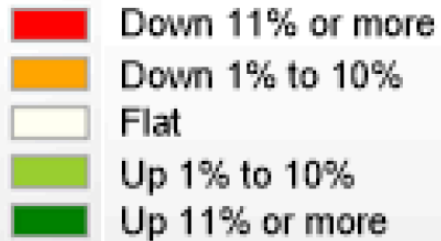


Source: MetroTex
Association of Realtors®;
Real Estate Center at
Texas A&M University

August Home Avg. Price/S.F. in Dallas Co. by Local Market Area (Y/Y Percent Change)

**2018 P/SF \$158/sf
+5.8%**

**2018 Median Price
\$244,800 +6.4%**

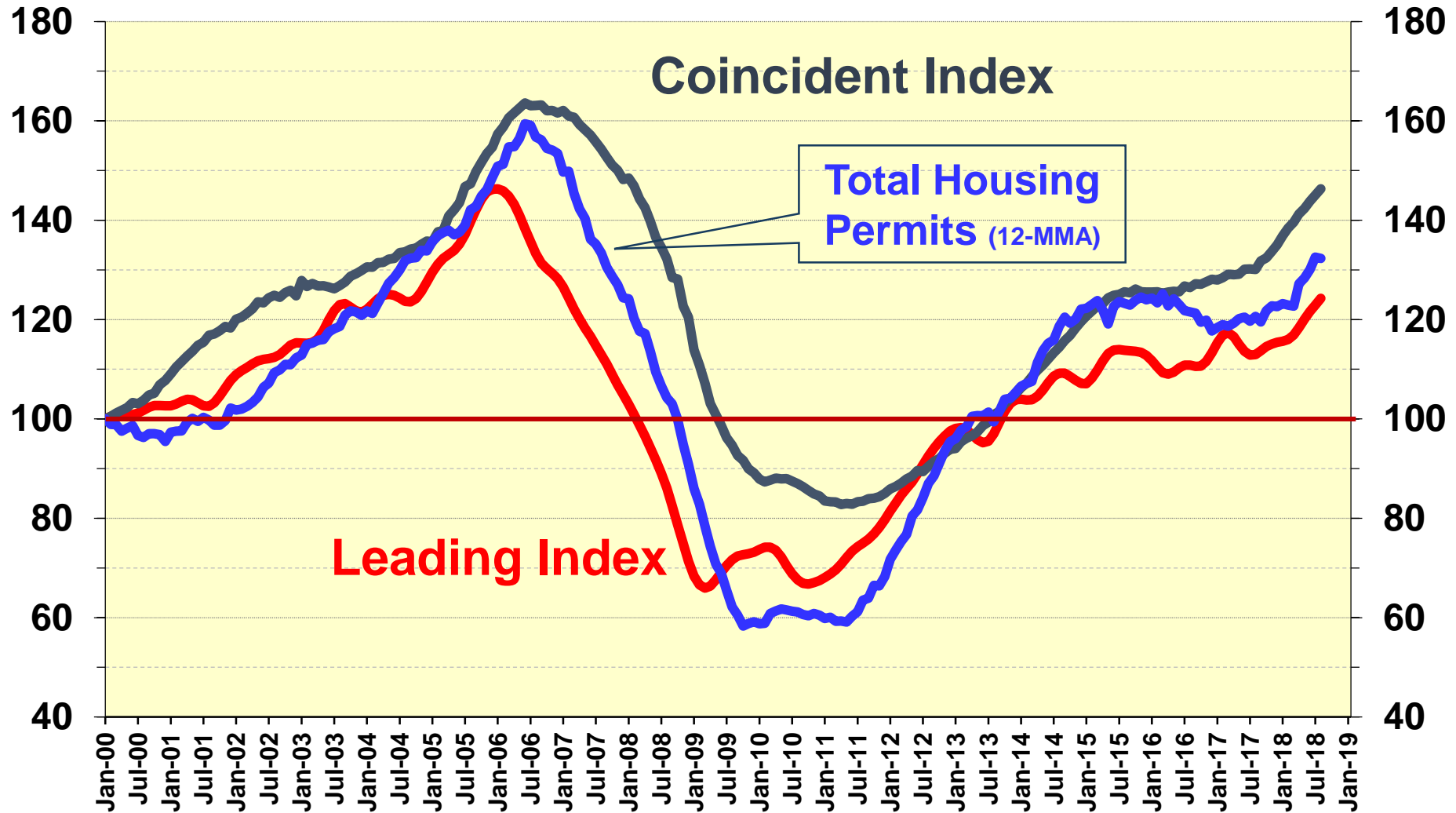


Source: MetroTex
Association of Realtors®;
Real Estate Center at
Texas A&M University

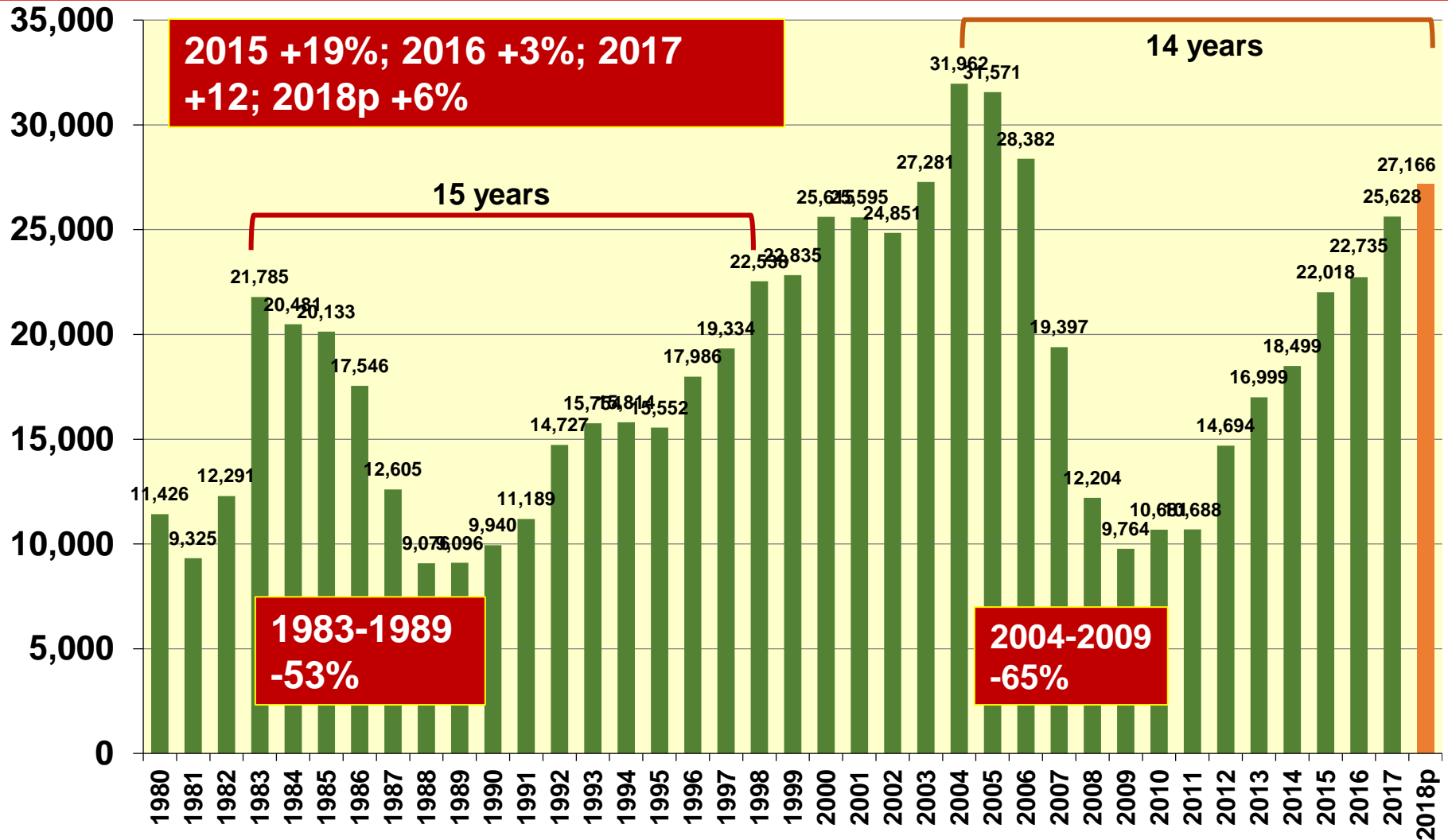


Texas Residential Construction Leading and Coincident Indexes

Jan 2000=100

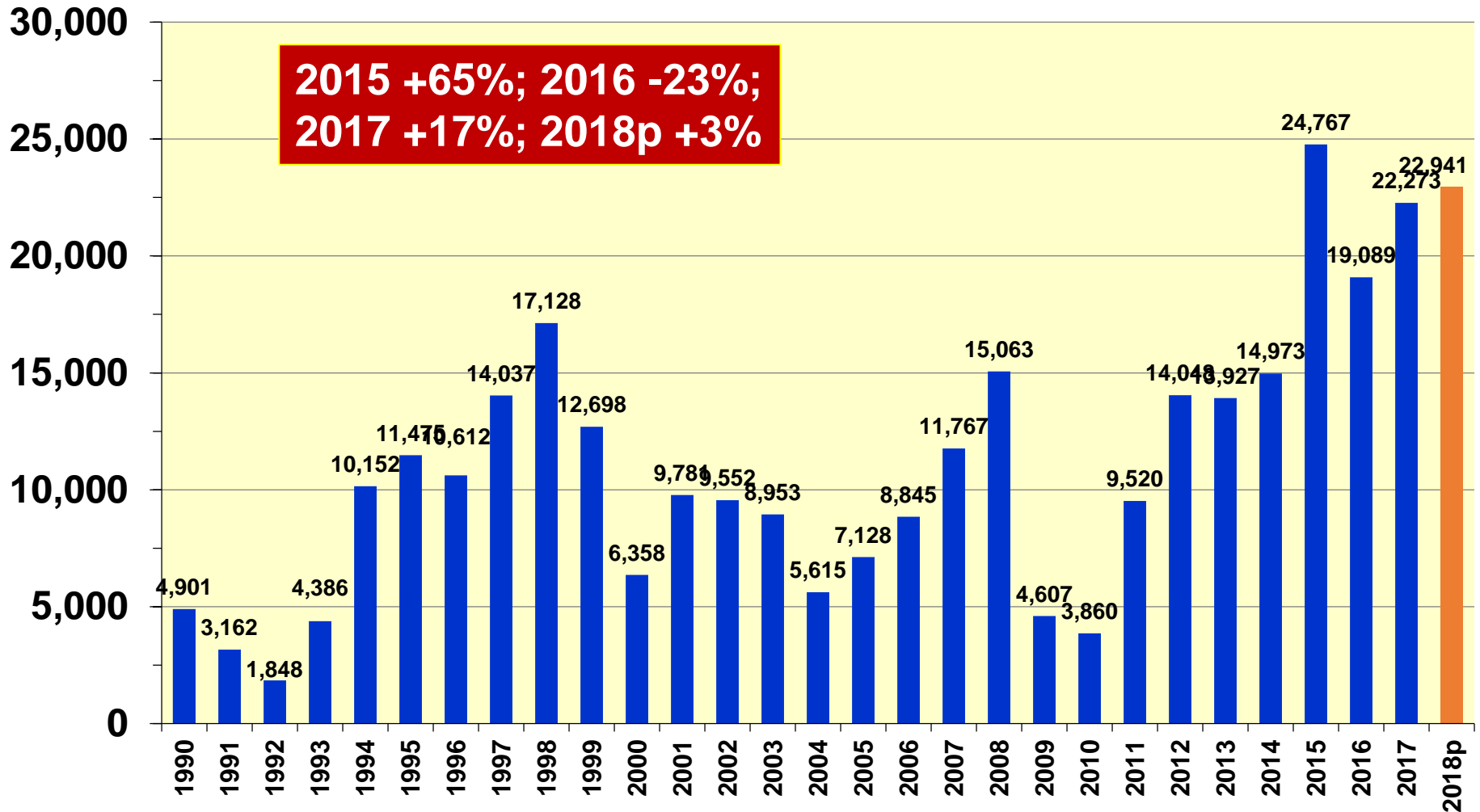


Dallas-Plano-Irving Single-Family Building Permits



Dallas-Plano-Irving Multi-Family Building Permits

**2015 +65%; 2016 -23%;
2017 +17%; 2018p +3%**



What We Can Look Forward To ...



The Future (10-20 Years?)

- A world of **rising interest rates**
- **Inflation** and monetary **policies** (create more \$s)
- Rising **debt**, especially sovereign debt around the world, business debt, consumer debt, local area government debt. A coming **Great Debt Reset?!**
- **Jobs disappearing and new jobs invented**
 - Qualified labor limiting factor for future prosperity
“GEN Z”
- **Energy change** from fossil fuels to renewables
- Major **asset price moves**: RE, stocks & bonds



Dallas Economic and Housing Outlook 2019



Dr. James P. Gaines

Chief Economist



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