

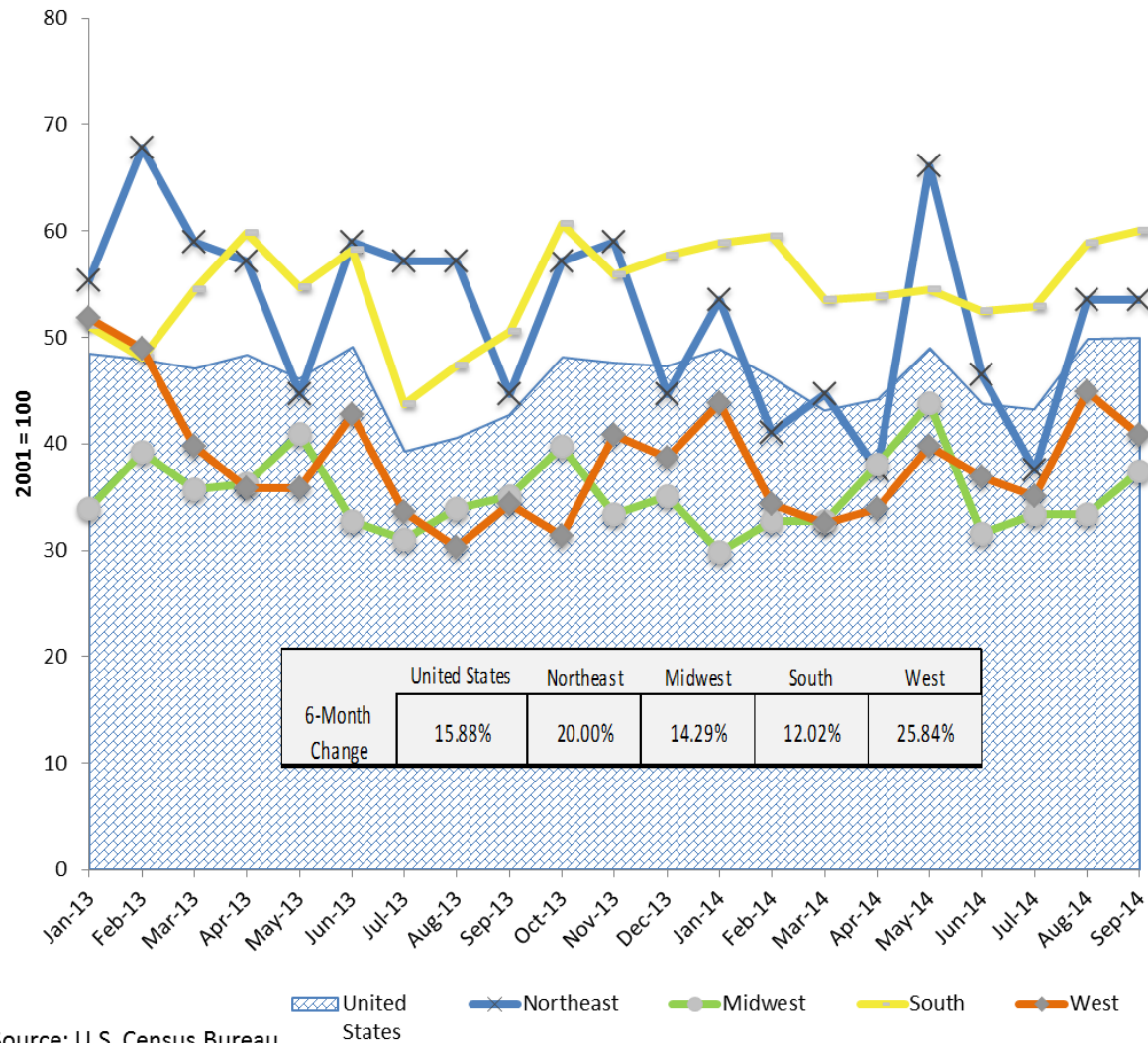
Economic Issues in the Housing Market



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- I. Housing market update
- II. First-time home buyers and house price growth
- III. Trends in rental prices and house prices

US New Home Sales



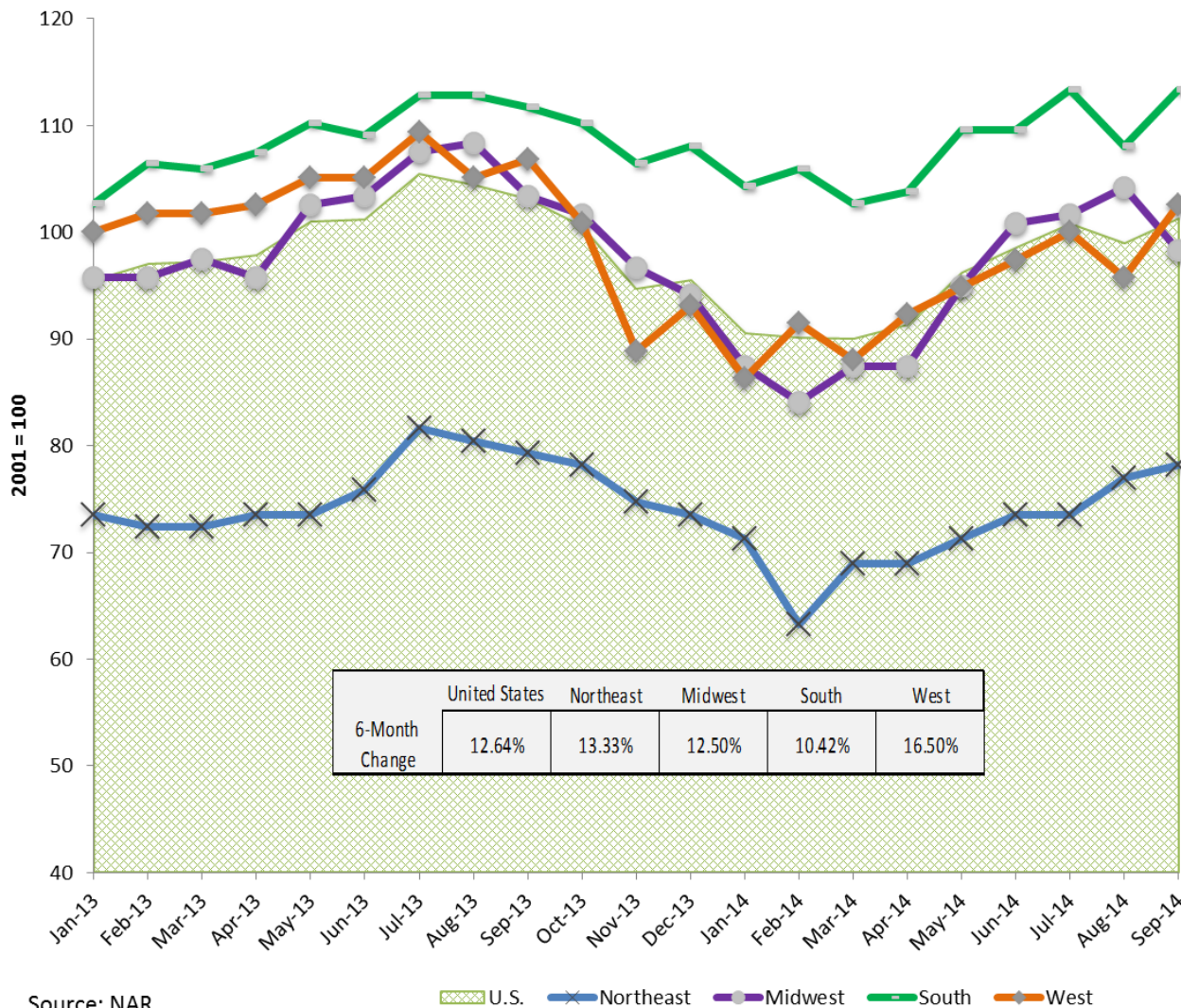
Source: U.S. Census Bureau

→ New home sales increased slightly for the U.S. overall from August 2014 to September 2014 (0.2%).

→ The largest monthly increase was in the Midwest (12.3%), followed by the South (2.0%), while the Northeast was unchanged, and the West declined 8.9%.

→ New home sales also increased significantly in September 2014 relative to September 2013, growing at 17.0%. The largest yearly increase was in the Northeast (20.0%), followed by the West (19.1%), the South (18.6%), and the Midwest (6.7%).

US Existing Home Sales



→ Existing home sales increased in September relative to August (2.4%), which was the highest pace of 2014.

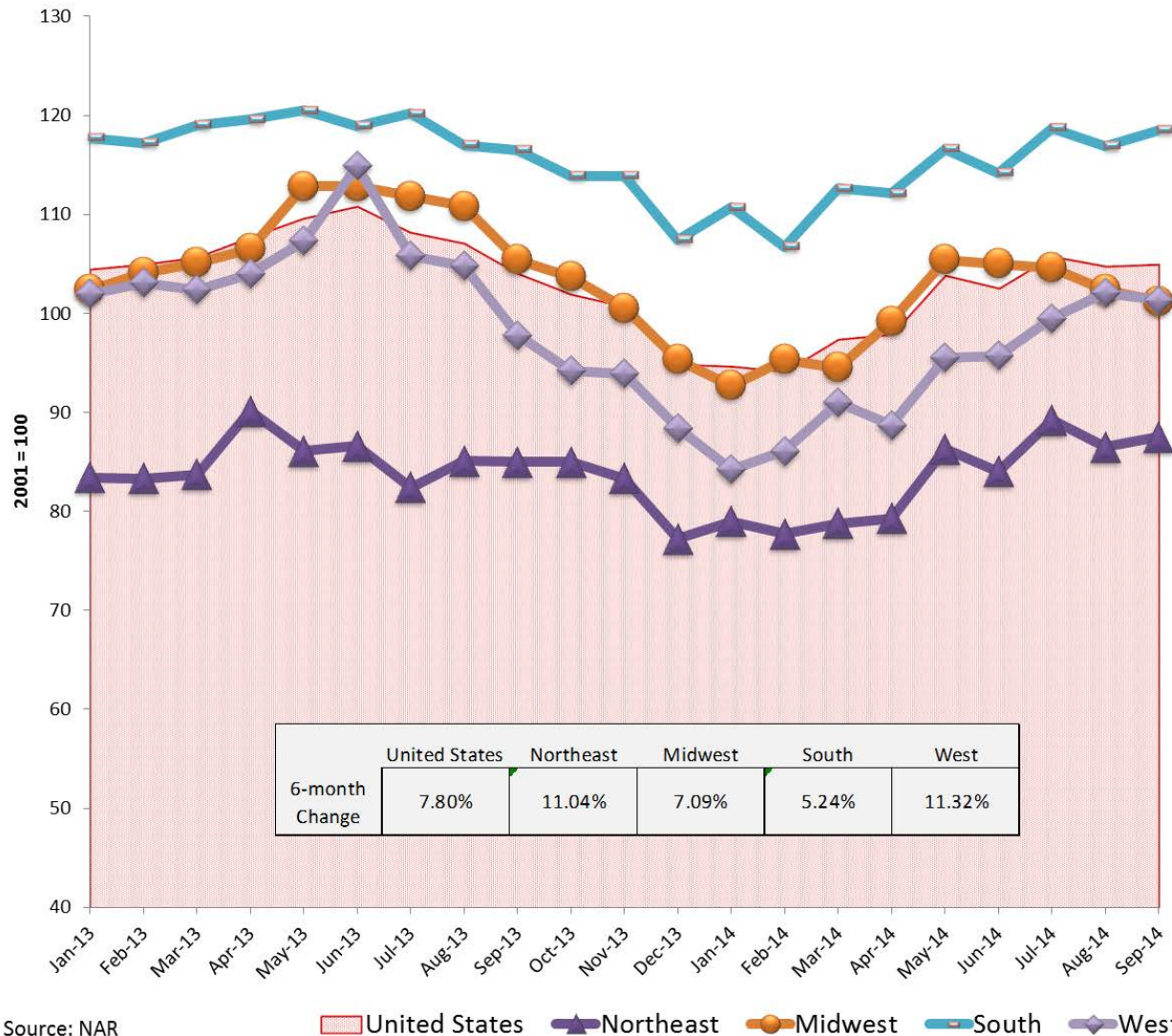
→ Inventories were 6.0% higher than a year ago.

→ Over the past month, the West had the highest growth (7.1%), followed by the South (5.0%), and the Northeast (1.5%), while the Midwest fell 5.6%.

→ Relative to September 2013, existing home sales are 1.7% lower: the South increased 1.4%, while the Northeast fell 1.4%, followed by the West (-4.0%), and the Midwest (-4.9%).

US Pending Home Sales Index (SA)

(Number of Home Resales under Contract)

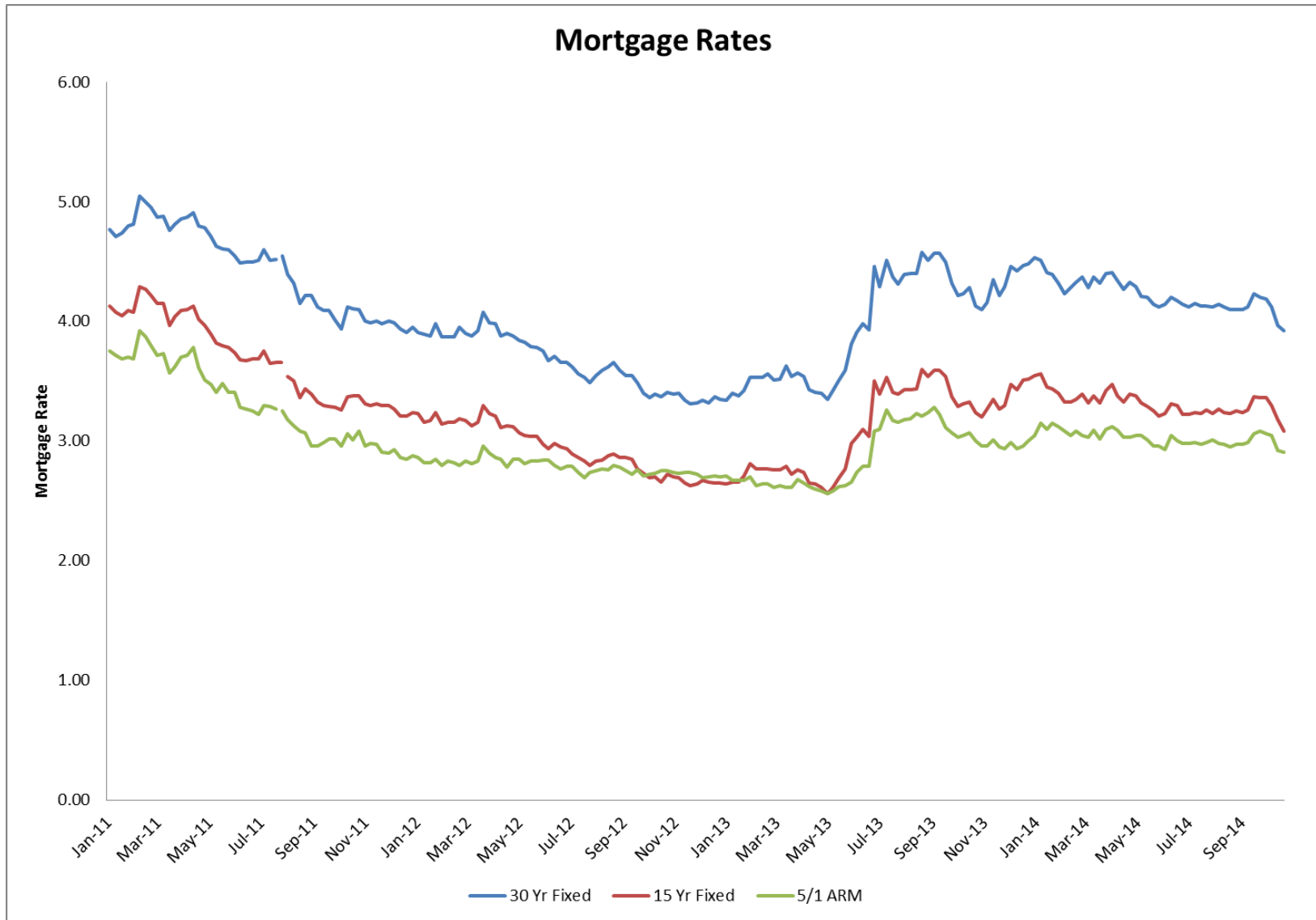


→ Pending home sales rose slightly in September, growing 0.3% relative to August.

→ Sales are 1.0% higher than September 2013.

→ In the various regions in September, relative to August, there were increases in the South (1.4%) and the Northeast (1.2%). However, there were declines in the West (-0.8%) and the Midwest (-1.2%).

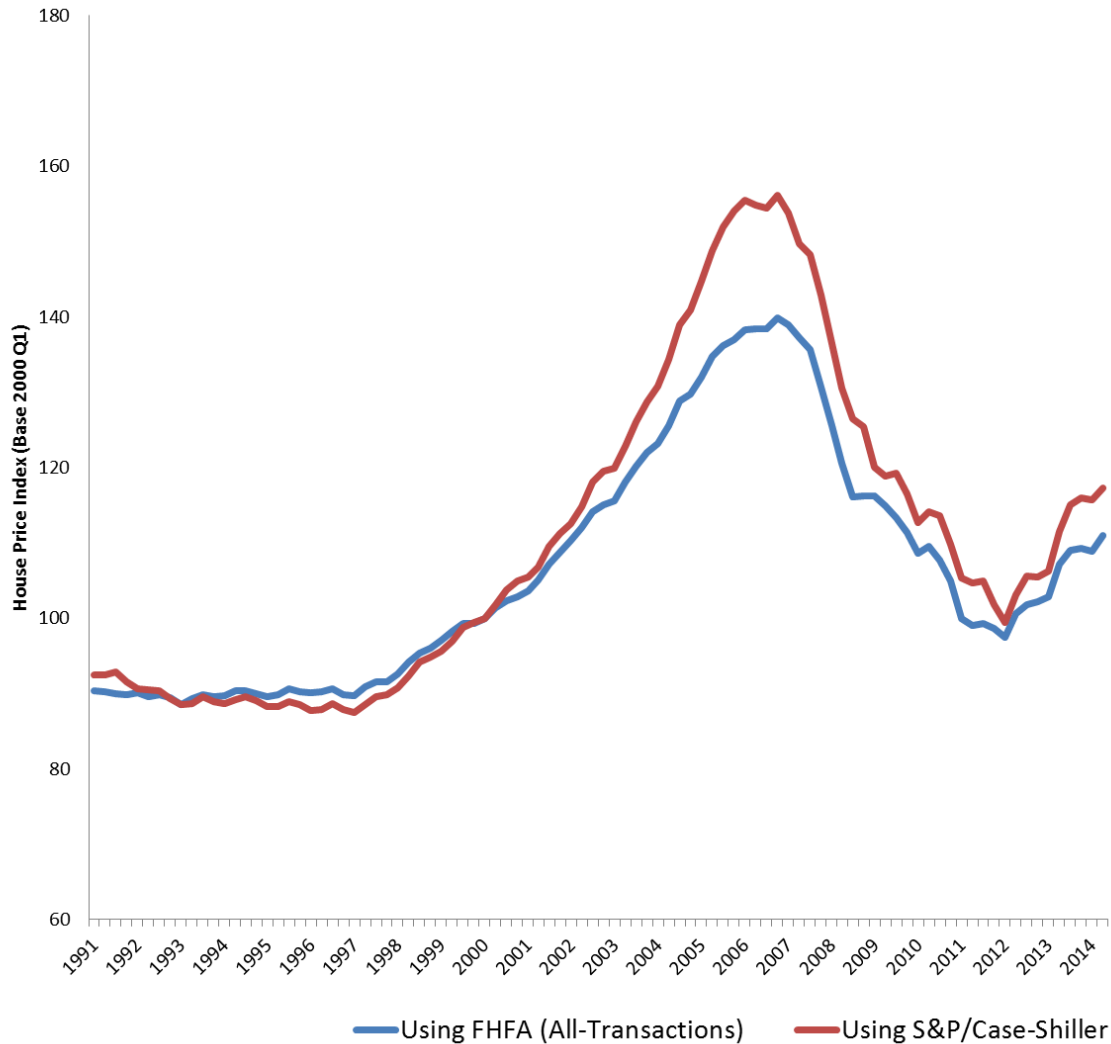
→ Relative to September 2013, the West increased 3.6%, followed by the Northeast (2.9%), and the South (1.7%), while pending home sales were down in the Midwest (-4.0%).



Source: Freddie Mac

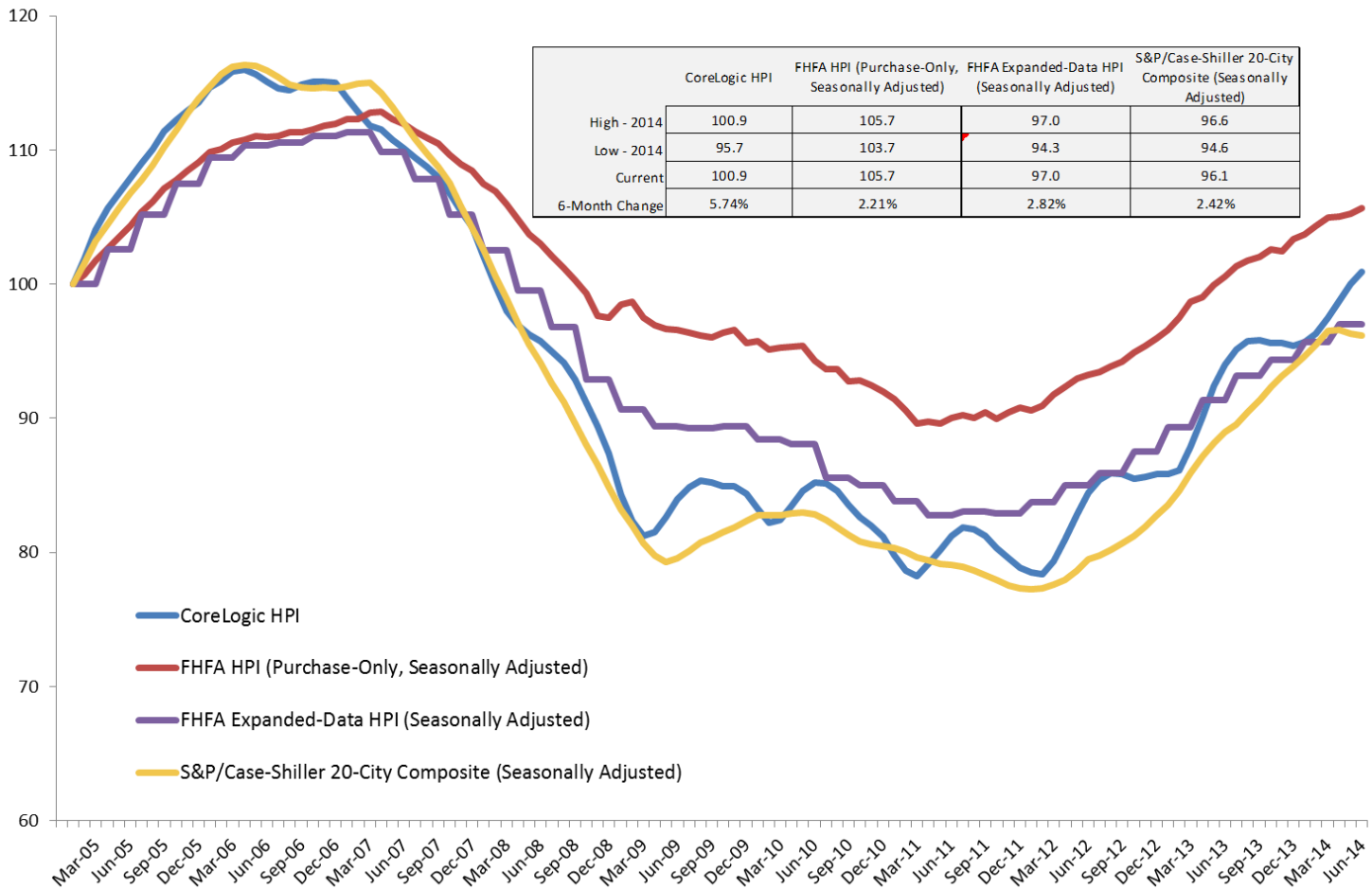
Real House Prices (NSA)

FHFA v. S&P/Case-Shiller



→ The FHFA HPI and the Case-Shiller Index were relatively flat between the first quarter of 2014 and the second quarter of 2014, at 1.9% and 1.4% respectively. In comparing the second quarter of 2013 to the second quarter of 2014, both indices showed moderate growth, although the FHFA HPI grew at 3.5% while the Case-Shiller Index grew at 5.3%.

CoreLogic HPI, FHFA HPI, FHFA Expanded Data and S&P/Case-Shiller HPI Jan 2005 - Q2 2014



Note: For purposes of comparison, all three indexes have been re-based to equal 100 in January 2005.



- Major House Price Indexes differ in their source data and, to a lesser extent, methodology
 - Source Data
 - *FHFA*: Its main indexes are derived from home prices embedded within mortgage-level data obtained from Fannie Mae and Freddie Mac.
 - FHFA has started to publish an “expanded-data” suite of indexes that supplement the Fannie/Freddie data with FHA and county records information
 - *S&P/Case-Shiller*: Uses county recorder data
 - *CoreLogic*: Uses county recorder data and home prices found in some loan servicer data.



- Methodology
 - *FHFA, S&P/Case-Shiller, and CoreLogic* all use the “repeat-transactions” modeling framework. Under this well-established approach, index values are calibrated using observed value changes for homes that have sold at least twice in the past.
 - Difference exists in weighting.
 - S&P/Case-Shiller and CoreLogic both *value weight*, meaning that price trends for more expensive homes are given more weight in the index calibration.
 - FHFA implements a *unit weighting* system; all else equal, all homes have the same influence on index estimates (irrespective of their home values).

10 Metropolitan Areas with Highest Rates of House Price Appreciation

Percent Change in House Prices with MSA Rankings

All-transactions HPI which includes purchase and refinance mortgages

Period ended June 30, 2014

Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
Modesto, CA	1	24.99%	3.82%	22.53%
Merced, CA	2	24.45%	1.53%	33.29%
Vallejo-Fairfield, CA	3	23.78%	4.07%	20.68%
Yuba City, CA	4	23.07%	4.39%	10.99%
Stockton-Lodi, CA	5	21.12%	4.77%	26.69%
Las Vegas-Henderson-Paradise, NV	6	20.67%	3.69%	2.52%
Riverside-San Bernardino-Ontario, CA	7	20.04%	2.46%	24.35%
Bend-Redmond, OR	8	18.99%	4.61%	7.25%
Santa Rosa, CA	9	18.37%	3.20%	17.73%
Reno, NV	10	18.36%	4.10%	-1.29%

Note: Purchase-only indexes, which omit appraisal values, are available for select metro areas at <http://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx>.

For composition of metropolitan statistical areas and divisions see FHFA HPI FAQ #7 or <http://www.whitehouse.gov/sites/default/files/omb/bulletins/2013/b13-01.pdf>.

Source: FHFA

10 Metropolitan Areas with Lowest Rates of House Price Appreciation

Percent Change in House Prices with MSA Rankings

All-transactions HPI which includes purchase and refinance mortgages

Period ended June 30, 2014

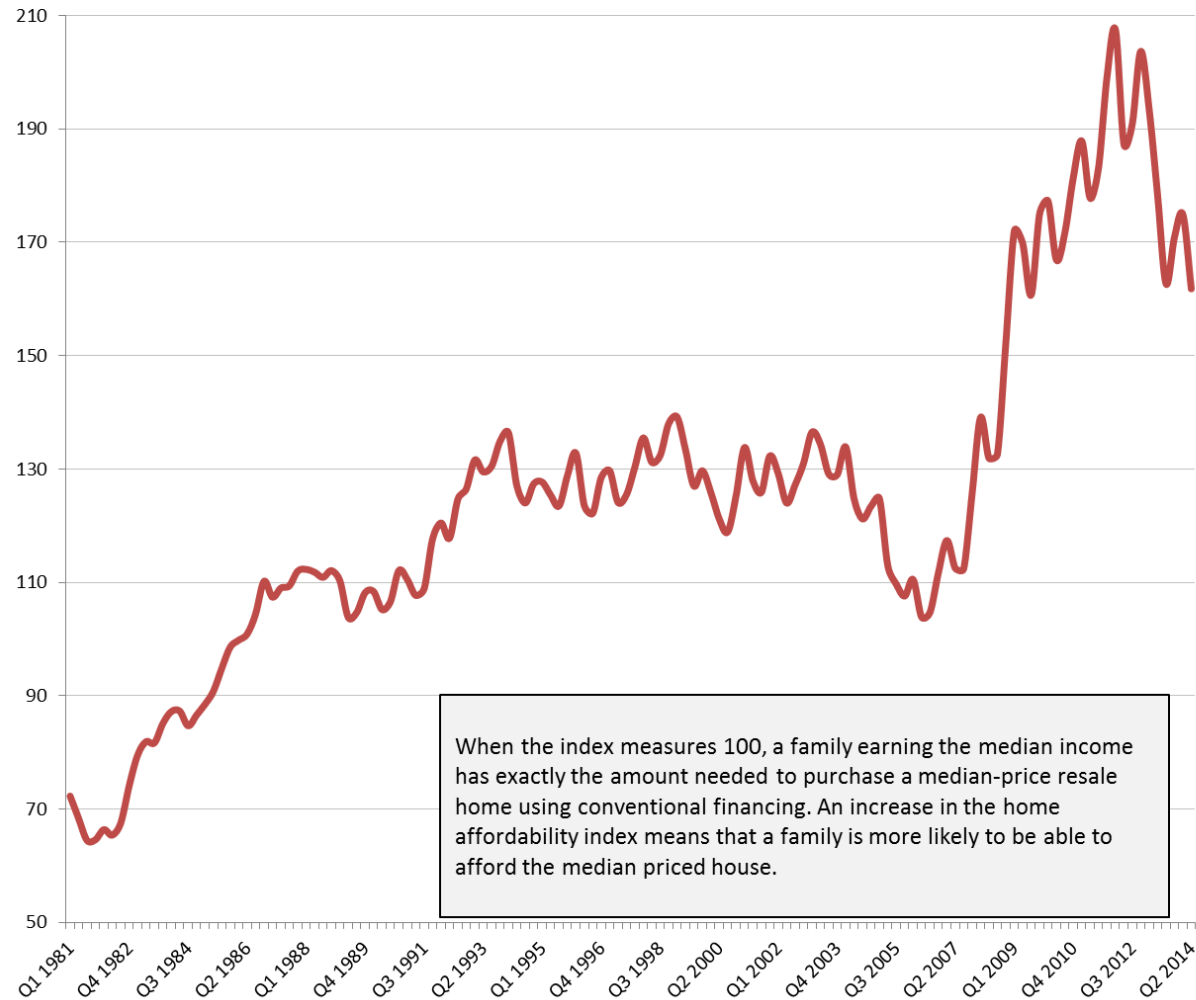
Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
Lima, OH	276	-3.49%	-3.94%	-6.98%
Fond du Lac, WI	275	-3.11%	0.58%	-6.70%
Atlantic City-Hammonton, NJ	274	-2.75%	-1.29%	-15.94%
Rockford, IL	273	-2.49%	0.26%	-19.49%
Las Cruces, NM	272	-2.18%	-0.45%	-15.90%
Columbus, GA-AL	271	-2.04%	-0.03%	-14.83%
Kankakee, IL	270	-1.84%	2.43%	-12.69%
Kingsport-Bristol-Bristol, TN-VA	269	-1.82%	-0.90%	-1.59%
Sheboygan, WI	268	-1.71%	-0.76%	-10.85%
Decatur, IL	267	-1.30%	-0.19%	-4.05%

Note: Purchase-only indexes, which omit appraisal values, are available for select metro areas at <http://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx>.

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Source: FHFA

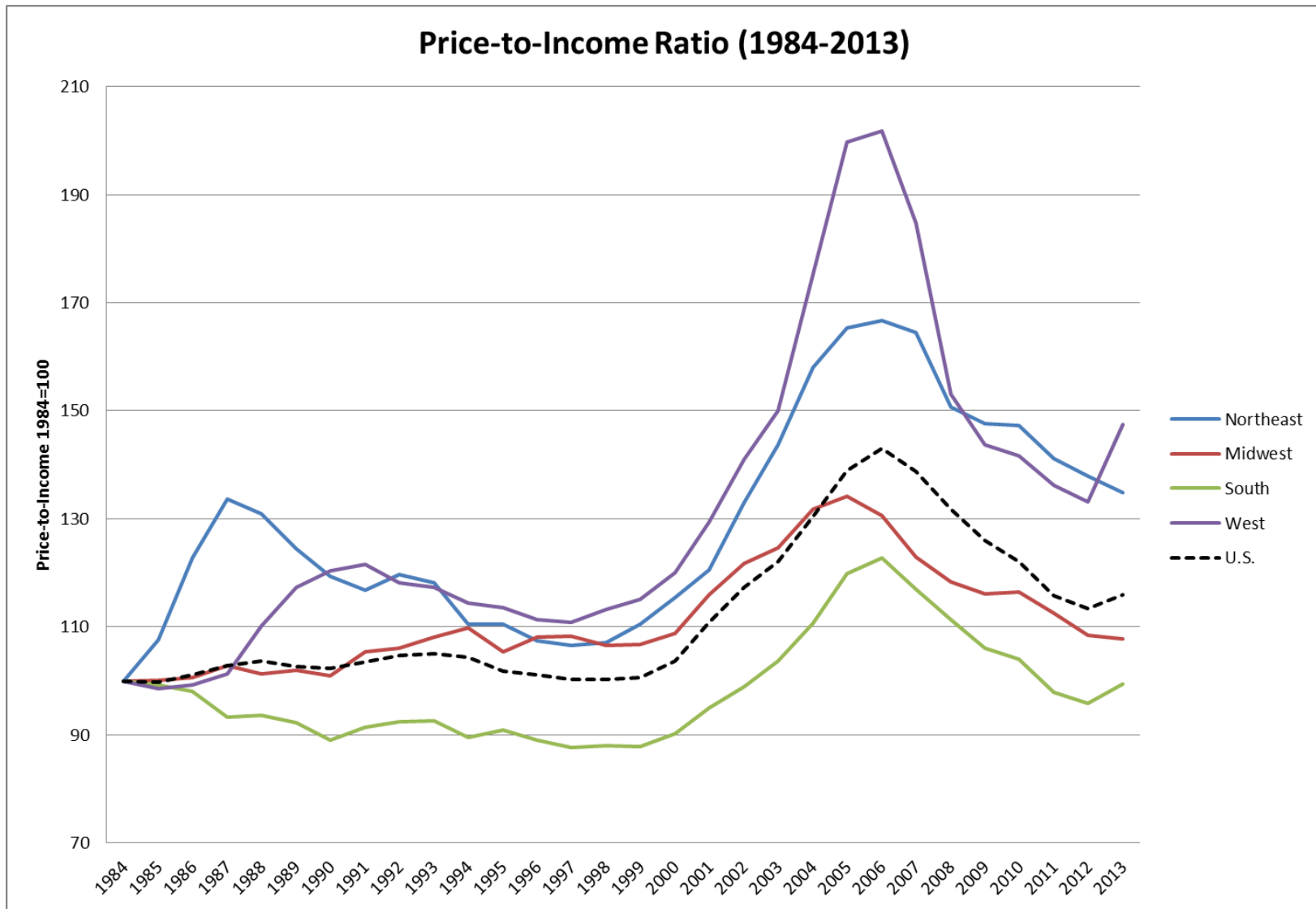
Housing Affordability Index



Source: NAR

→ The five most expensive housing markets in the second quarter 2014 were San Jose, CA, San Francisco, CA, Anaheim-Santa Ana, CA, Honolulu, HI and San Diego, CA.

→ The five least expensive metro areas in the second quarter 2014 were Youngstown-Warren-Boardman, OH, Rockford, IL, Elmira, NY, Decatur, IL, and Toledo, OH.

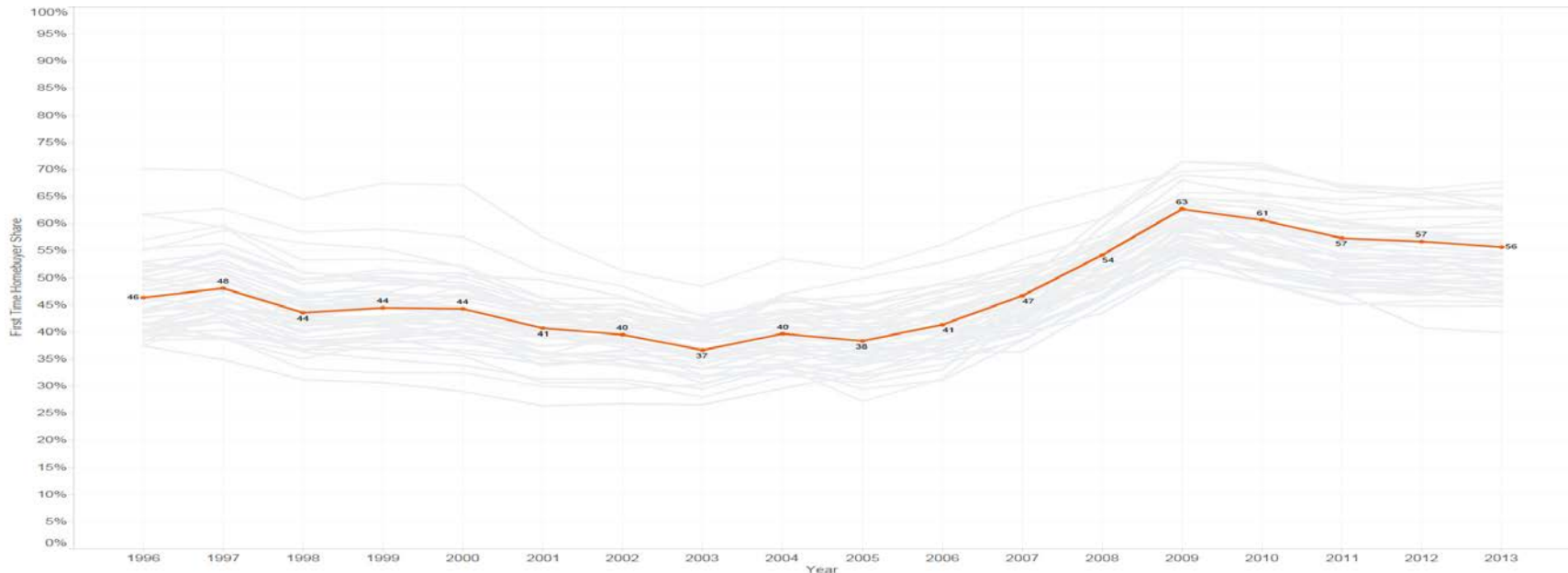


Source: FHFA All Transactions, Census Median Household Income (Current dollars)

Historical Trends in First Time Homebuyers



First-Time Homebuyer Share Trend, US (Orange) and States (Gray), 1996-2013



- For the U.S. as a whole, the first-time homebuyer share declined modestly from 46 percent in 1996 to 44 percent in 2000.
- The first-time homebuyer share declined after 2000 and fell to 37 percent in 2003, remained fairly flat over the next few years, then significantly increased between 2006 and 2007, reaching 47 percent in 2007, 54 percent in 2008 and 63 percent in 2009, when a federal first-time homebuyer tax credit program was active.
- After spiking in 2009-2010 as a result of tax credit programs, the first-time homebuyer share again drifted downward, reaching 56 percent by 2013.

Source: FHFA loan-level data of purchase loans for primary residences from Fannie Mae, Freddie Mac and FHA from 1996 to 2013.

First-Time Homebuyer Shares and House Price Growth

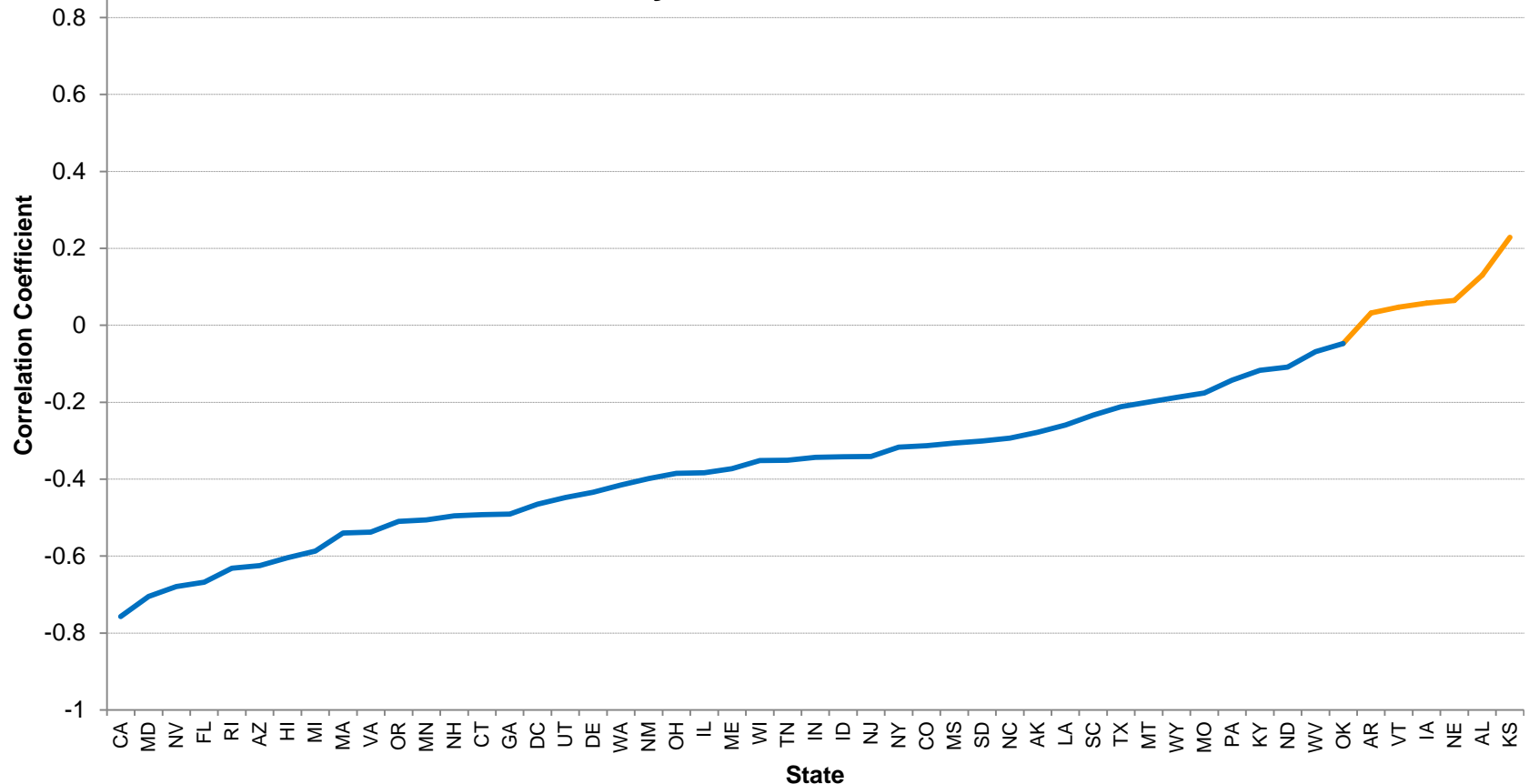


- Recent FHFA brief examined the relationship between first time home buyer share and house price growth between 1996 and 2013 by state and geographic region.
- This is important because:
 - Explains how first-time homebuyers react to growth or shrinkage in house prices
 - Helps to explain trends in the first-time homebuyer markets, as well as can provide some insights into how various programs may succeed in some of these markets.
 - This is the only historical study examining the relationship between first-time homebuyer shares and states.
- Many of the states with higher first time home buyer shares were often ones with metropolitan areas, good incomes, etc: CA (Silicon Valley, San Jose, San Francisco), DC, MD, NY, NJ, CT, MA.
- The states with the lowest first time home buyer shares had more non-urban areas: MT, WY, Iowa, KS, WI, OK, ARK, KY, NC, SC, VT, and MN.

First-Time Homebuyer Shares and House Price Growth



Correlation of First-Time Homebuyer Share and House Price Index Changes by State



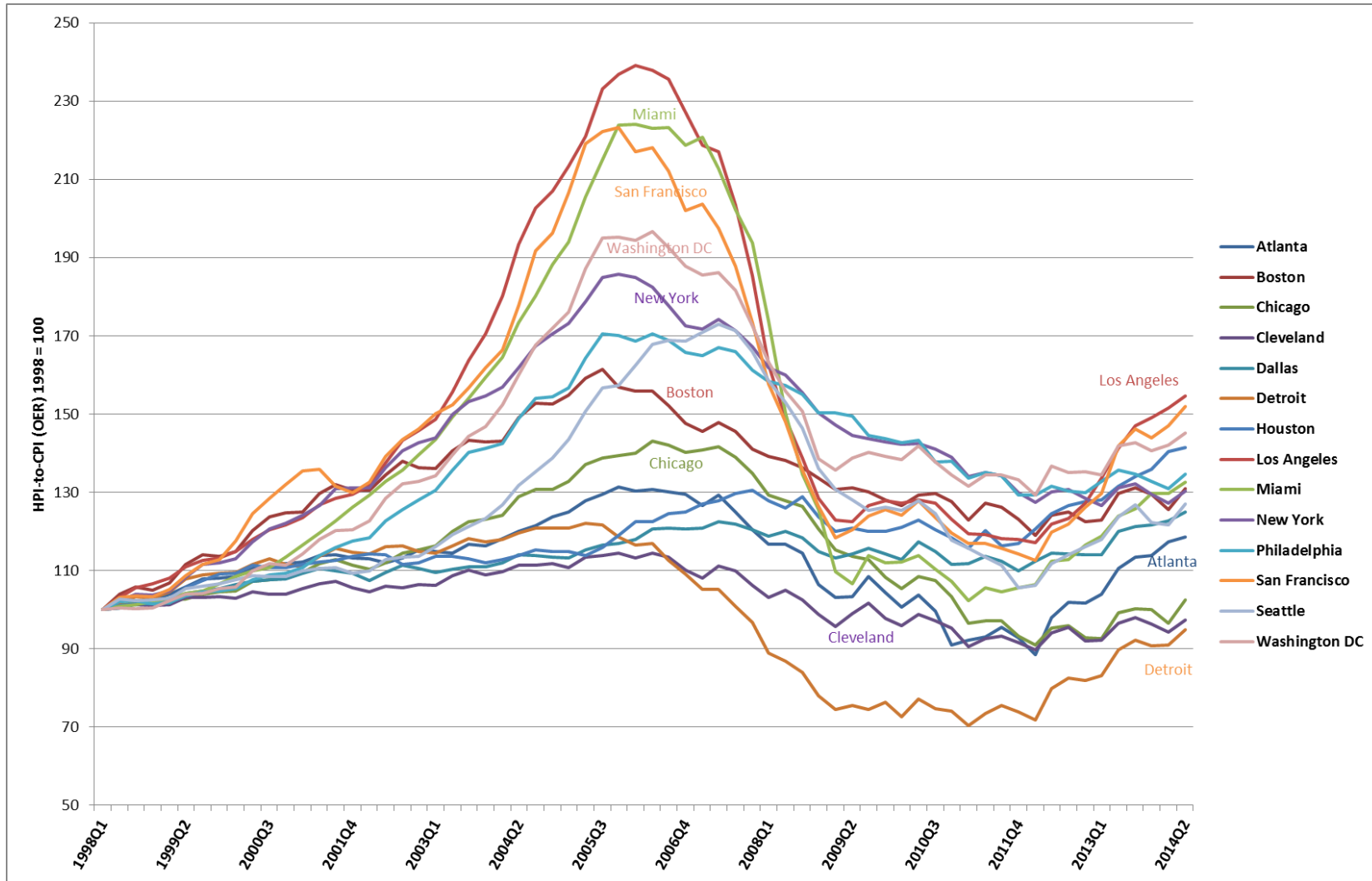
- Almost 90% of states exhibited a negative correlation between first time homebuyer shares and house price growth, indicating that when house price growth increases, first time homebuyer shares decrease.
- Thirteen of the states had strong negative correlations (-0.5 or more)—CA, MD, NV, FL, RI, AZ, HI, MI, MA, VA, OR, MN, NH

Source: FHFA calculations



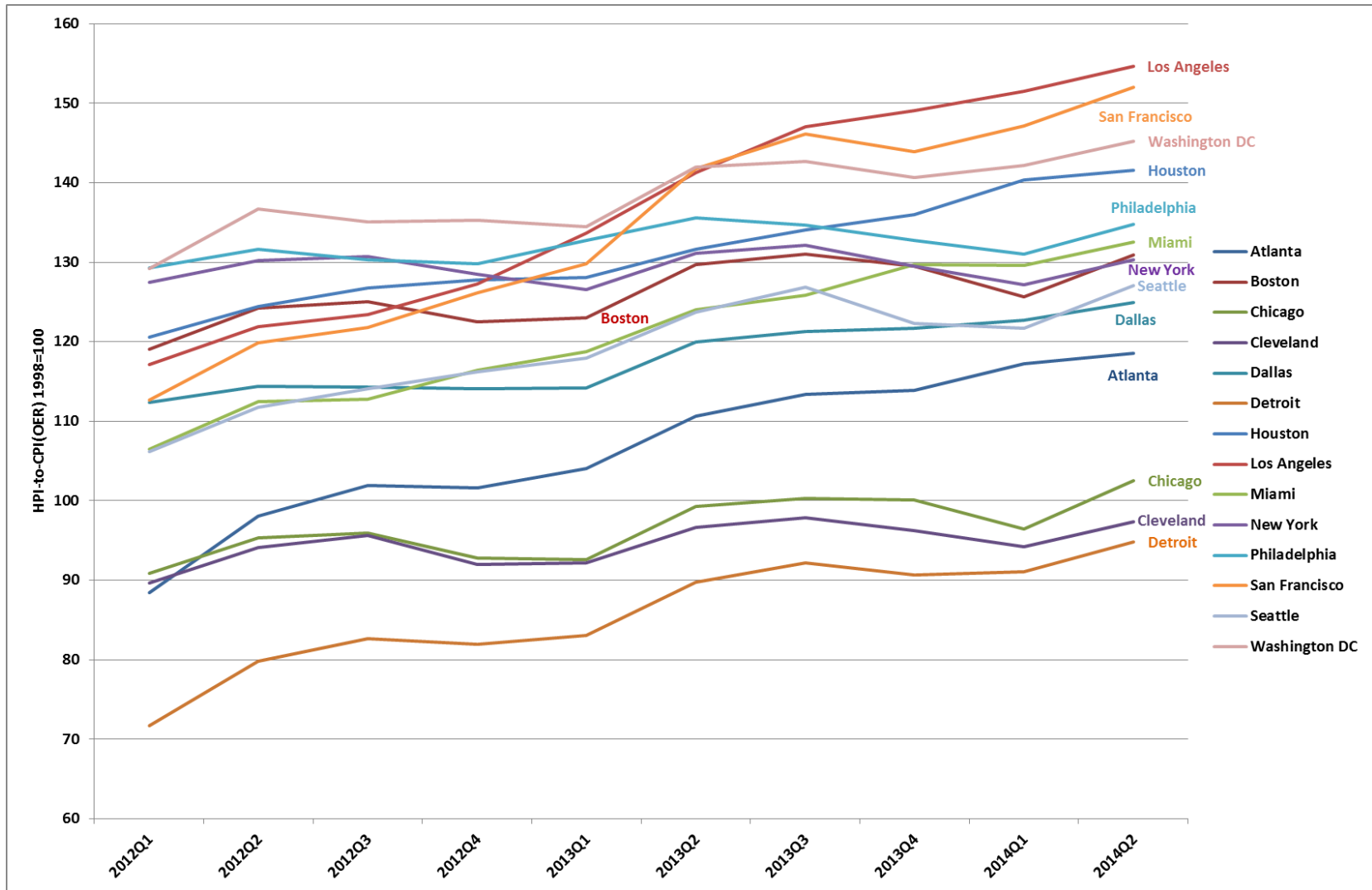
- Over half of them (seven) had a significant change in house price growth between 1996 and 2013 of over 100%—California, Hawaii, Massachusetts, Maryland, Virginia, and Rhode Island.
 - This may partially be due to concerns of first time homebuyers that, due to significant house price appreciation, if they purchased, they may be doing so at the peak and the appreciation could subsequently flatten or decline.
- Moreover, many of the states with strong negative correlations (over -0.5) traditionally had high first time homebuyer shares during the period—CA, MA, MD VA, etc.—although they experienced a decline during the house price bubble.
- Although we did not overall find much of a correlation between rising unemployment and declining FTHB shares, we did find that of the 13 states for which the FTHB share was the most sensitive to house price growth, over half of them had increases in unemployment (ages 25-44) of over 3% in 2013, relative to 1996—CA, MD, NV, FL, RI, MI, MA.
- Moreover, although we did not find much correlation between labor force participation for ages 25-44 and house price growth, for the 13 states with the most negative correlations with FTHB shares and house price growth, all of them experienced a declining labor force participation rate (25-44) by 2013, relative to 1996.

Relationship of prices to rents: HPI-to-CPI (OER) price-to-rent ratio (1998-2014)



Source: FHFA, BLS

Price to rent ratio (HPI-to-CPI (OER)) since 2012



Source: FHFA, BLS

Heat Map – Price-to-Rent Ratios



	Northeast			Midwest			South					West		
	New York	Boston	Philadelphia	Chicago	Cleveland	Detroit	Atlanta	Dallas	Houston	Washington	Miami	Los Angeles	San Francisco	Seattle
1998Q1	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1999Q1	105	107	102	102	101	105	104	102	103	102	103	108	105	103
2000Q1	113	115	105	105	103	109	108	106	109	106	108	115	118	108
2001Q1	124	125	111	110	105	111	112	109	111	114	117	124	136	110
2002Q1	131	131	118	110	105	114	113	107	114	123	129	132	133	110
2003Q1	144	136	131	116	106	114	115	110	114	134	143	149	150	116
2004Q1	157	143	143	124	110	118	118	112	113	152	165	180	166	127
2005Q2	179	159	164	137	113	122	128	115	114	187	205	221	219	151
2006Q1	185	156	169	140	113	117	130	118	122	194	224	239	217	162
2007Q1	172	146	165	141	108	105	127	121	127	185	221	219	204	171
2008Q1	162	139	158	129	103	89	117	119	128	163	174	163	158	159
2009Q1	147	131	150	115	96	74	103	113	120	136	110	123	118	131
2010Q1	142	127	143	105	96	73	101	113	121	138	112	127	124	125
2011Q1	134	123	134	97	91	70	92	112	116	131	102	119	117	116
2012Q1	127	119	129	91	90	72	88	112	121	129	106	117	113	106
2013Q1	127	123	133	93	92	83	104	114	128	134	119	134	130	118
2014Q1	127	126	131	96	94	91	117	123	140	142	130	151	147	122
2014Q2	130	131	135	102	97	95	119	125	142	145	133	155	152	127

Source: FHFA, Bureau of Labor Statistics

Relationship of rents and house prices with unemployment: 1998-2014



Correlation	Unemployment Rate/CPI (OER)	Unemployment Rate/HPI	Unemployment Rate/ Price-to-Rent
Atlanta	0.71	(0.09)	(0.51)
Boston	0.77	0.51	0.12
Chicago	0.72	0.01	(0.45)
Cleveland	0.77	0.14	(0.53)
Dallas	0.69	0.57	0.30
DC	0.75	0.33	(0.07)
Detroit	0.67	(0.60)	(0.76)
Houston	0.60	0.45	0.17
Los Angeles	0.68	(0.10)	(0.45)
Miami	0.57	(0.32)	(0.62)
NY	0.66	0.24	(0.19)
Philadelphia	0.76	0.44	0.10
SF	0.71	(0.03)	(0.30)
Seattle	0.59	0.10	(0.26)

Source: FHFA, BLS