

# FEDERAL HOUSING FINANCE AGENCY



## NEWS RELEASE

For Immediate Release  
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### **U.S. House Prices Rise 1.0 Percent in Second Quarter; Up 5.0 Percent from Last Year**

**Washington, D.C.** – U.S. house prices rose in the second quarter of 2019, up **1.0 percent** according to the Federal Housing Finance Agency (FHFA) House Price Index (HPI). House prices rose **5.0 percent** from the second quarter of 2018 to the second quarter of 2019. FHFA's seasonally adjusted monthly index for June was up **0.2 percent** from May.

FHFA produces the nation's only public, freely available house price indexes (HPIs) that measure changes in single-family house prices based on data that cover all 50 states and over 400 American cities and extend back to the mid-1970s. The HPIs are built from tens of millions of home sales and offer insights about house price fluctuations at the national, census division, state, metro area, county, ZIP code, and census tract levels. The FHFA HPIs use a fully transparent methodology based upon a weighted, repeat-sales statistical technique to analyze transaction data from Fannie Mae and Freddie Mac. FHFA releases data and reports on a quarterly and monthly basis. The flagship FHFA HPI uses seasonally adjusted, purchase-only data, unless otherwise noted. Additional indexes are based on other data including refinances, FHA mortgages, and real property records. All the indexes can be downloaded from the FHFA website.

"House prices rose again in all states and the top 100 metro areas, but the pace of growth has slackened," said Dr. William Doerner, FHFA Supervisory Economist. "The majority of states and cities are experiencing slower house price gains than they did a year ago, even with constrained housing supply and extremely attractive mortgage rates."

#### **Significant Findings**

- House prices have risen for 32 consecutive quarters across the United States.
- House prices rose in all 50 states and the District of Columbia between the second quarters of 2018 and 2019. The top five areas in annual appreciation were: 1) **Idaho** 11.4 percent; 2) **Utah** 7.7 percent; 3) **Tennessee** 7.2 percent; 4) **Georgia** 6.9 percent; and 5) **Arizona** 6.9 percent. The areas showing the smallest annual appreciation were: 1) **Delaware** 1.2 percent; 2) **Maryland** 1.5 percent; 3) **District of Columbia** 1.8 percent; 4) **Iowa** 2.2 percent; and 5) **New Jersey** 2.7 percent.
- House prices rose in all 100 of the largest metropolitan areas in the U.S. over the last four quarters. Annual price increases were greatest in **Boise City, ID**, where prices increased by 13.6 percent. Prices were weakest in **Oxnard-Thousand Oaks-Ventura, CA**, where they increased 0.5 percent.

- Of the nine census divisions, the **Mountain** division experienced the strongest four-quarter appreciation, posting a 6.6 percent gain between the second quarters of 2018 and 2019 and a 1.3 percent increase in the second quarter of 2019. Annual house price appreciation was weakest in the **Middle Atlantic** division, where prices rose by 4.0 percent between the second quarters of 2018 and 2019.
- FHFA has produced Fact Sheets that include graphics on the Top 10 and Bottom 10 ranked Metropolitan Statistical Areas in the U.S. here: <https://www.fhfa.gov/HPI-Fact-Sheets>.

Tables and graphs showing home price statistics for metropolitan areas, states, census divisions, and the U.S. as a whole are included on the following pages.

### **Other Price Indexes**

Most statistics in the quarterly HPI report reference price changes computed by FHFA's "purchase-only" HPI. In some cases, however, the reported statistics reference alternative price measures. FHFA publishes—and makes [available for download](#)—three additional HPIs beyond the "purchase-only" series. Although they use the same general methodology, the three alternatives rely on slightly different datasets as follows:

- "**Distress-Free**" house price index. Sales of bank-owned properties and short sales are removed from the purchase-only dataset prior to estimation of the index.
- "**Expanded-Data**" house price index. Sales price information sourced from county recorder offices and from FHA-backed mortgages are added to the purchase-only data sample. This index is used annually to adjust the maximum conforming loan limits, which dictate the dollar amount of loans that can be acquired by Fannie Mae and Freddie Mac.
- "**All-Transactions**" house price index. Appraisal values from refinance mortgages are added to the purchase-only data sample.

Data constraints preclude the production of all types of indexes for every geographic area, but multiple index types are generally available. For individual states, for instance, three types of indexes are available. The various indexes tend to correlate closely over the long-term, but short-term differences can be significant.

### **Note**

- The next monthly HPI report (including data through July 2019) will be released September 24, 2019 and the next quarterly HPI report (including data for the third quarter of 2019 and monthly data for September) will be released November 26, 2019.
- Future HPI release dates for 2020 and the remainder of 2019 are available at <https://www.fhfa.gov/HPI>.
- See [video of FHFA HPI highlights](#) for the second quarter featuring Dr. Doerner.
- Follow @FHFA on Twitter, LinkedIn, Facebook, and YouTube for more HPI news.

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# **National Statistics**

# FHFA Seasonally Adjusted House Price Index for U.S.

Seasonally Adjusted, Purchase-Only HPI

**1991Q2 - 2019Q2**

Quarter	House Price Quarterly Appreciation	House Price Quarterly Appreciation Annualized	House Price Appreciation From Same Quarter One Year Earlier
2019Q2	1.05%	4.19%	4.99%
2019Q1	1.26%	5.06%	5.30%
2018Q4	1.28%	5.12%	5.96%
2018Q3	1.31%	5.22%	6.46%
2018Q2	1.35%	5.40%	6.77%
2018Q1	1.89%	7.56%	7.24%
2017Q4	1.77%	7.07%	6.71%
2017Q3	1.60%	6.39%	6.60%
2017Q2	1.79%	7.17%	6.54%
2017Q1	1.39%	5.57%	6.13%
2016Q4	1.66%	6.64%	6.15%
2016Q3	1.54%	6.15%	5.97%
2016Q2	1.40%	5.62%	5.74%
2016Q1	1.41%	5.64%	5.67%
2015Q4	1.49%	5.95%	5.59%
2015Q3	1.32%	5.29%	5.44%
2015Q2	1.33%	5.32%	5.25%
2015Q1	1.33%	5.33%	4.86%
2014Q4	1.35%	5.39%	4.78%
2014Q3	1.14%	4.57%	4.40%
2014Q2	0.95%	3.80%	4.91%
2014Q1	1.26%	5.04%	6.10%
2013Q4	0.97%	3.90%	6.96%
2013Q3	1.64%	6.54%	7.53%
2013Q2	2.10%	8.39%	7.10%
2013Q1	2.08%	8.34%	6.65%
2012Q4	1.51%	6.03%	4.97%
2012Q3	1.23%	4.94%	3.57%
2012Q2	1.67%	6.67%	2.74%
2012Q1	0.48%	1.90%	0.24%
2011Q4	0.16%	0.62%	-2.43%
2011Q3	0.42%	1.67%	-3.58%
2011Q2	-0.81%	-3.22%	-5.57%
2011Q1	-2.20%	-8.80%	-5.24%
2010Q4	-1.03%	-4.10%	-4.00%
2010Q3	-1.66%	-6.62%	-3.07%
2010Q2	-0.46%	-1.83%	-1.94%
2010Q1	-0.92%	-3.68%	-2.90%
2009Q4	-0.07%	-0.29%	-2.53%
2009Q3	-0.51%	-2.03%	-5.30%
2009Q2	-1.43%	-5.71%	-7.20%
2009Q1	-0.54%	-2.15%	-8.46%
2008Q4	-2.92%	-11.68%	-10.13%
2008Q3	-2.50%	-9.98%	-9.07%
2008Q2	-2.77%	-11.09%	-7.91%

# FHFA Seasonally Adjusted House Price Index for U.S.

Seasonally Adjusted, Purchase-Only HPI

**1991Q2 - 2019Q2**

Quarter	House Price Quarterly Appreciation	House Price Quarterly Appreciation Annualized	House Price Appreciation From Same Quarter One Year Earlier
2008Q1	-2.35%	-9.41%	-5.51%
2007Q4	-1.77%	-7.09%	-2.65%
2007Q3	-1.26%	-5.03%	-0.40%
2007Q2	-0.23%	-0.94%	1.06%
2007Q1	0.61%	2.44%	2.02%
2006Q4	0.49%	1.98%	2.93%
2006Q3	0.19%	0.74%	4.59%
2006Q2	0.72%	2.88%	7.13%
2006Q1	1.50%	6.01%	9.16%
2005Q4	2.11%	8.45%	10.23%
2005Q3	2.62%	10.47%	10.60%
2005Q2	2.63%	10.51%	10.58%
2005Q1	2.50%	9.99%	10.46%
2004Q4	2.46%	9.84%	10.15%
2004Q3	2.59%	10.37%	9.95%
2004Q2	2.52%	10.07%	9.29%
2004Q1	2.22%	8.88%	8.33%
2003Q4	2.27%	9.08%	7.85%
2003Q3	1.98%	7.92%	7.57%
2003Q2	1.61%	6.45%	7.50%
2003Q1	1.77%	7.07%	7.75%
2002Q4	2.00%	8.01%	7.65%
2002Q3	1.92%	7.68%	7.19%
2002Q2	1.84%	7.36%	6.79%
2002Q1	1.68%	6.70%	6.55%
2001Q4	1.57%	6.27%	6.74%
2001Q3	1.54%	6.17%	6.91%
2001Q2	1.61%	6.43%	6.98%
2001Q1	1.86%	7.43%	7.06%
2000Q4	1.74%	6.94%	6.95%
2000Q3	1.61%	6.43%	6.73%
2000Q2	1.68%	6.73%	6.67%
2000Q1	1.75%	7.01%	6.47%
1999Q4	1.53%	6.10%	6.17%
1999Q3	1.55%	6.22%	6.29%
1999Q2	1.49%	5.96%	6.04%
1999Q1	1.47%	5.86%	5.95%
1998Q4	1.64%	6.57%	5.71%
1998Q3	1.31%	5.23%	5.12%
1998Q2	1.41%	5.63%	4.53%
1998Q1	1.23%	4.92%	3.95%
1997Q4	1.08%	4.31%	3.33%
1997Q3	0.74%	2.95%	2.79%
1997Q2	0.85%	3.39%	2.73%

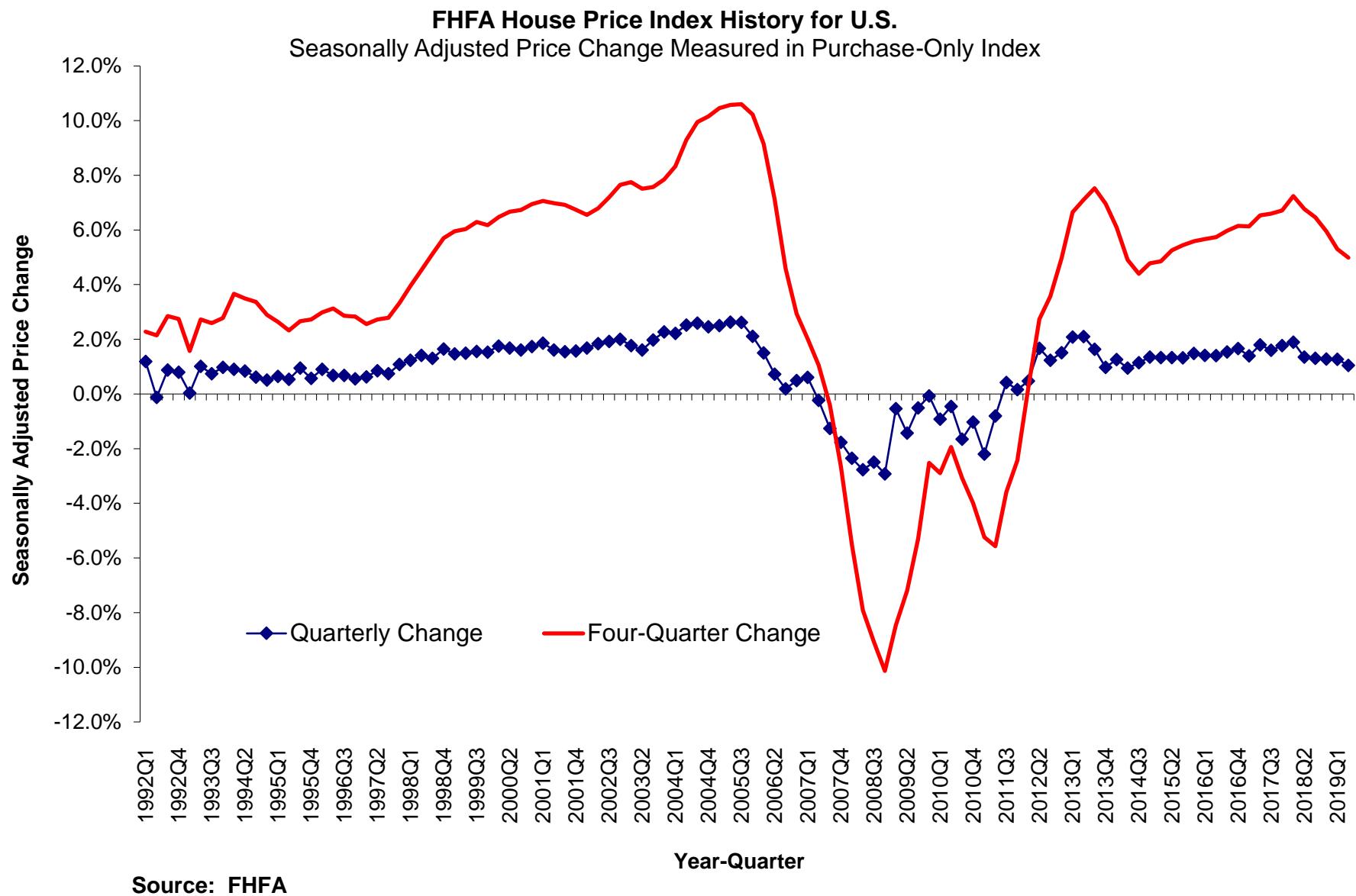
# FHFA Seasonally Adjusted House Price Index for U.S.

Seasonally Adjusted, Purchase-Only HPI

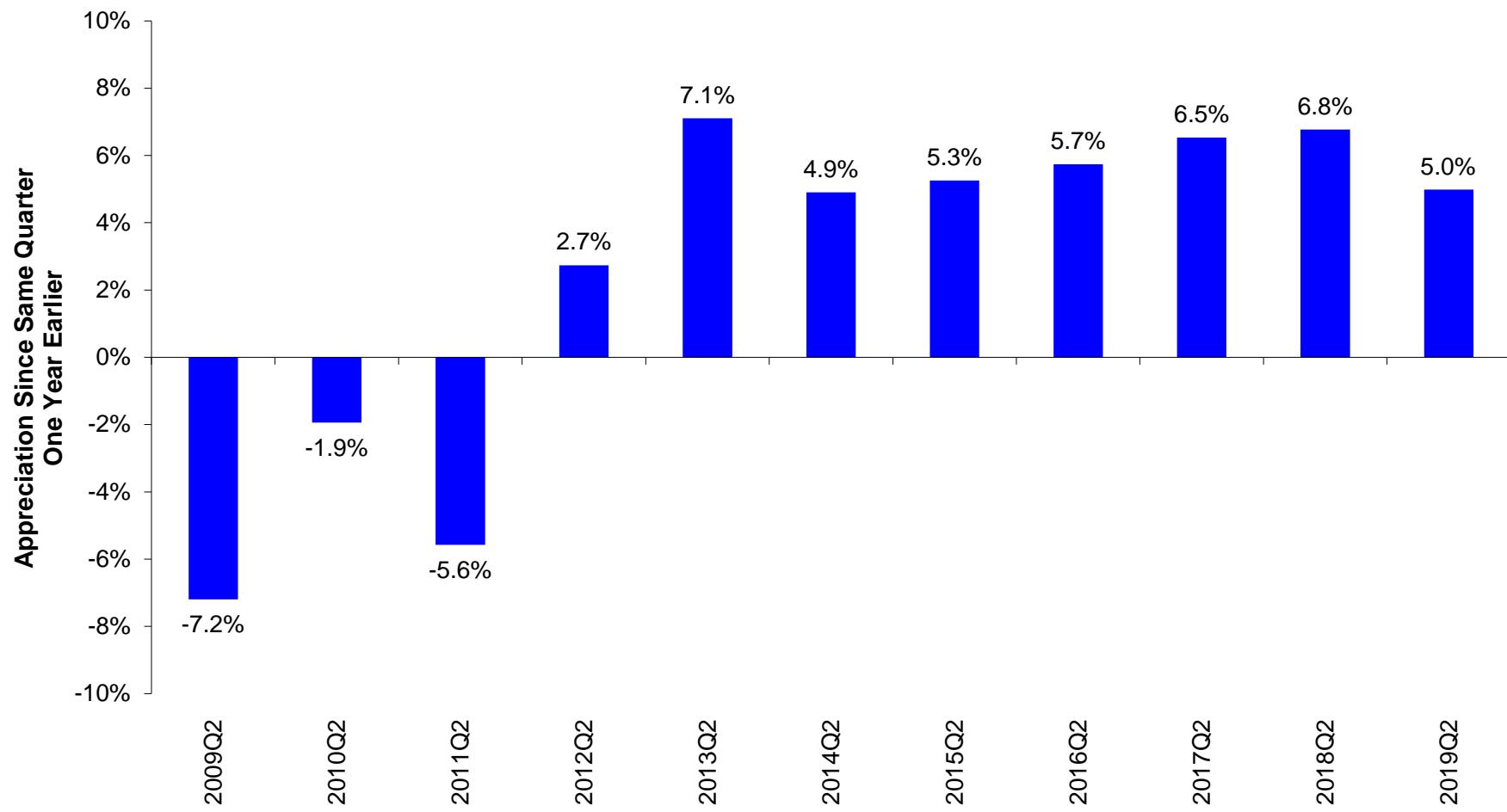
**1991Q2 - 2019Q2**

Quarter	House Price Quarterly Appreciation	House Price Quarterly Appreciation Annualized	House Price Appreciation From Same Quarter One Year Earlier
1997Q1	0.63%	2.51%	2.56%
1996Q4	0.55%	2.20%	2.83%
1996Q3	0.67%	2.70%	2.86%
1996Q2	0.68%	2.72%	3.13%
1996Q1	0.90%	3.59%	2.98%
1995Q4	0.57%	2.29%	2.72%
1995Q3	0.94%	3.77%	2.66%
1995Q2	0.54%	2.15%	2.33%
1995Q1	0.64%	2.57%	2.63%
1994Q4	0.51%	2.05%	2.90%
1994Q3	0.62%	2.47%	3.37%
1994Q2	0.84%	3.36%	3.49%
1994Q1	0.90%	3.60%	3.67%
1993Q4	0.97%	3.89%	2.78%
1993Q3	0.74%	2.95%	2.59%
1993Q2	1.01%	4.03%	2.73%
1993Q1	0.03%	0.12%	1.57%
1992Q4	0.79%	3.16%	2.75%
1992Q3	0.87%	3.49%	2.85%
1992Q2	-0.13%	-0.51%	2.14%
1992Q1	1.19%	4.76%	2.28%
1991Q4	0.89%	3.56%	
1991Q3	0.18%	0.71%	
1991Q2	0.01%	0.02%	

Source: FHFA



**House Price Appreciation Over Previous Four Quarters for U.S.**  
Seasonally Adjusted, Purchase-Only Index



**Source:** FHFA

## Monthly Price Change Estimates for U.S. and Census Divisions

(Purchase-Only Index, Seasonally Adjusted)

	U.S.	Pacific	Mountain	West North Central	West South Central	East North Central	East South Central	New England	Middle Atlantic	South Atlantic
<b>May 19 - Jun 19</b>	<b>0.2%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>1.1%</b>	<b>-0.1%</b>	<b>0.6%</b>	<b>-0.6%</b>	<b>-0.3%</b>	<b>0.0%</b>
<b>Apr 19 - May 19</b>	<b>0.2%</b>	<b>0.4%</b>	<b>-0.3%</b>	<b>0.2%</b>	<b>-0.4%</b>	<b>0.4%</b>	<b>-0.9%</b>	<b>0.2%</b>	<b>0.5%</b>	<b>0.4%</b>
(Previous Estimate)	0.1%	0.2%	-0.3%	0.1%	-0.5%	0.3%	-1.0%	0.4%	0.4%	0.5%
<b>Mar 19 - Apr 19</b>	<b>0.4%</b>	<b>0.6%</b>	<b>1.3%</b>	<b>-0.3%</b>	<b>0.4%</b>	<b>0.4%</b>	<b>1.0%</b>	<b>0.5%</b>	<b>0.0%</b>	<b>0.3%</b>
(Previous Estimate)	0.4%	0.7%	1.2%	-0.3%	0.3%	0.5%	1.1%	0.5%	0.0%	0.3%
<b>Feb 19 - Mar 19</b>	<b>0.2%</b>	<b>0.2%</b>	<b>0.7%</b>	<b>1.3%</b>	<b>0.5%</b>	<b>-0.3%</b>	<b>-0.4%</b>	<b>-0.6%</b>	<b>0.5%</b>	<b>0.2%</b>
(Previous Estimate)	0.2%	0.1%	0.6%	1.3%	0.5%	-0.5%	-0.5%	-0.5%	0.5%	0.1%
<b>Jan 19 - Feb 19</b>	<b>0.4%</b>	<b>0.2%</b>	<b>-0.2%</b>	<b>0.2%</b>	<b>0.2%</b>	<b>0.8%</b>	<b>1.5%</b>	<b>1.2%</b>	<b>-0.4%</b>	<b>0.7%</b>
(Previous Estimate)	0.5%	0.2%	-0.2%	0.2%	0.1%	1.0%	1.1%	1.2%	-0.3%	0.8%
<b>Dec 18 - Jan 19</b>	<b>0.6%</b>	<b>0.5%</b>	<b>1.2%</b>	<b>0.4%</b>	<b>0.7%</b>	<b>0.9%</b>	<b>0.2%</b>	<b>-0.5%</b>	<b>0.8%</b>	<b>0.4%</b>
(Previous Estimate)	0.6%	0.4%	1.2%	0.4%	0.6%	0.9%	0.7%	-0.5%	0.7%	0.3%
<b>12-Month Change:</b>										
Jun 18 - Jun 19	<b>4.8%</b>	<b>4.3%</b>	<b>5.7%</b>	<b>4.5%</b>	<b>4.8%</b>	<b>4.9%</b>	<b>4.7%</b>	<b>3.6%</b>	<b>3.5%</b>	<b>5.6%</b>

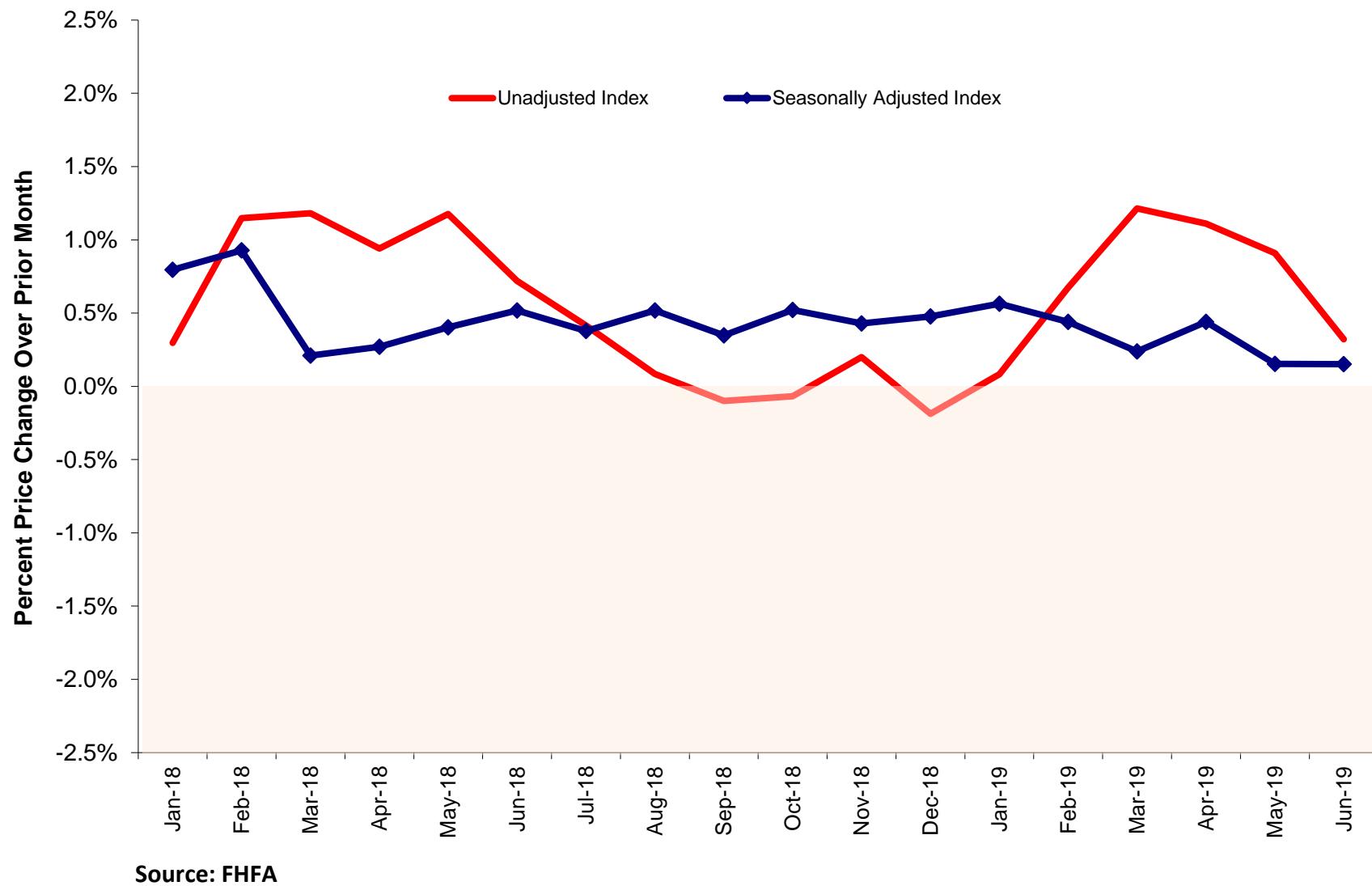
## Monthly Index Values for Latest 18 Months: U.S. and Census Divisions

(Purchase-Only Index, Seasonally Adjusted, January 1991 = 100)

	U.S.	Pacific	Mountain	West North Central	West South Central	East North Central	East South Central	New England	Middle Atlantic	South Atlantic
June-19	275.6	319.8	375.3	272.5	289.7	228.4	251.6	257.4	244.4	280.8
May-19	275.2	319.0	374.9	272.3	286.7	228.6	250.0	259.0	245.3	280.7
April-19	274.7	317.6	376.2	271.6	287.9	227.6	252.3	258.5	244.2	279.5
March-19	273.5	315.8	371.5	272.5	286.7	226.6	249.7	257.1	244.1	278.6
February-19	272.9	315.0	368.9	269.1	285.2	227.2	250.8	258.5	242.9	278.1
January-19	271.7	314.4	369.6	268.5	284.7	225.4	247.1	255.6	244.0	276.0
December-18	270.2	313.0	365.2	267.5	282.9	223.5	246.6	256.7	242.0	275.1
November-18	268.9	311.6	363.5	265.6	283.1	222.0	247.0	254.4	240.4	273.2
October-18	267.7	312.4	362.5	266.5	280.4	222.6	244.5	253.5	237.6	270.6
September-18	266.3	308.2	361.6	263.0	279.5	221.2	242.3	251.2	237.7	271.2
August-18	265.4	309.7	357.1	262.7	278.5	219.8	241.7	250.3	236.7	270.1
July-18	264.0	307.3	354.8	261.9	277.3	218.7	240.5	248.6	236.6	268.4
June-18	263.1	306.6	355.0	260.8	276.5	217.7	240.4	248.4	236.2	265.9
May-18	261.7	304.3	350.7	259.4	276.2	216.1	238.4	248.4	234.6	265.8
April-18	260.6	304.1	348.8	257.9	273.7	216.4	235.5	247.1	234.4	264.5
March-18	259.9	303.2	346.8	257.4	273.4	214.8	235.2	245.4	236.7	263.3
February-18	259.4	303.3	345.0	256.3	276.1	214.4	234.8	246.7	232.2	262.6
January-18	257.0	299.7	341.9	255.3	269.9	213.6	233.7	244.0	231.0	260.3

## Seasonally Adjusted and Unadjusted Monthly Appreciation Rates

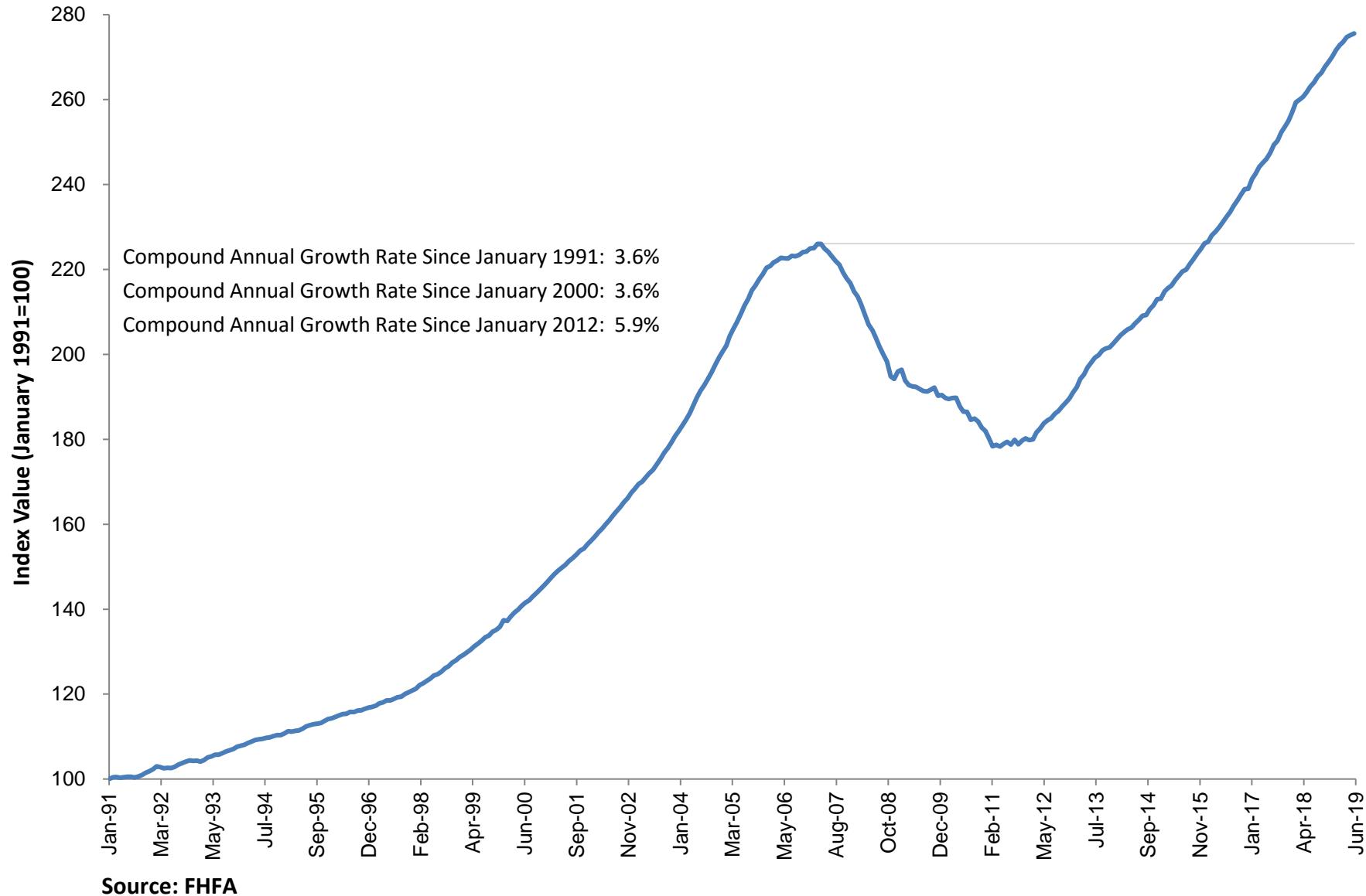
Purchase-Only Index for U.S.



Source: FHFA

## Monthly House Price Index for U.S.

Purchase-Only, Seasonally Adjusted Index, January 1991 - Present



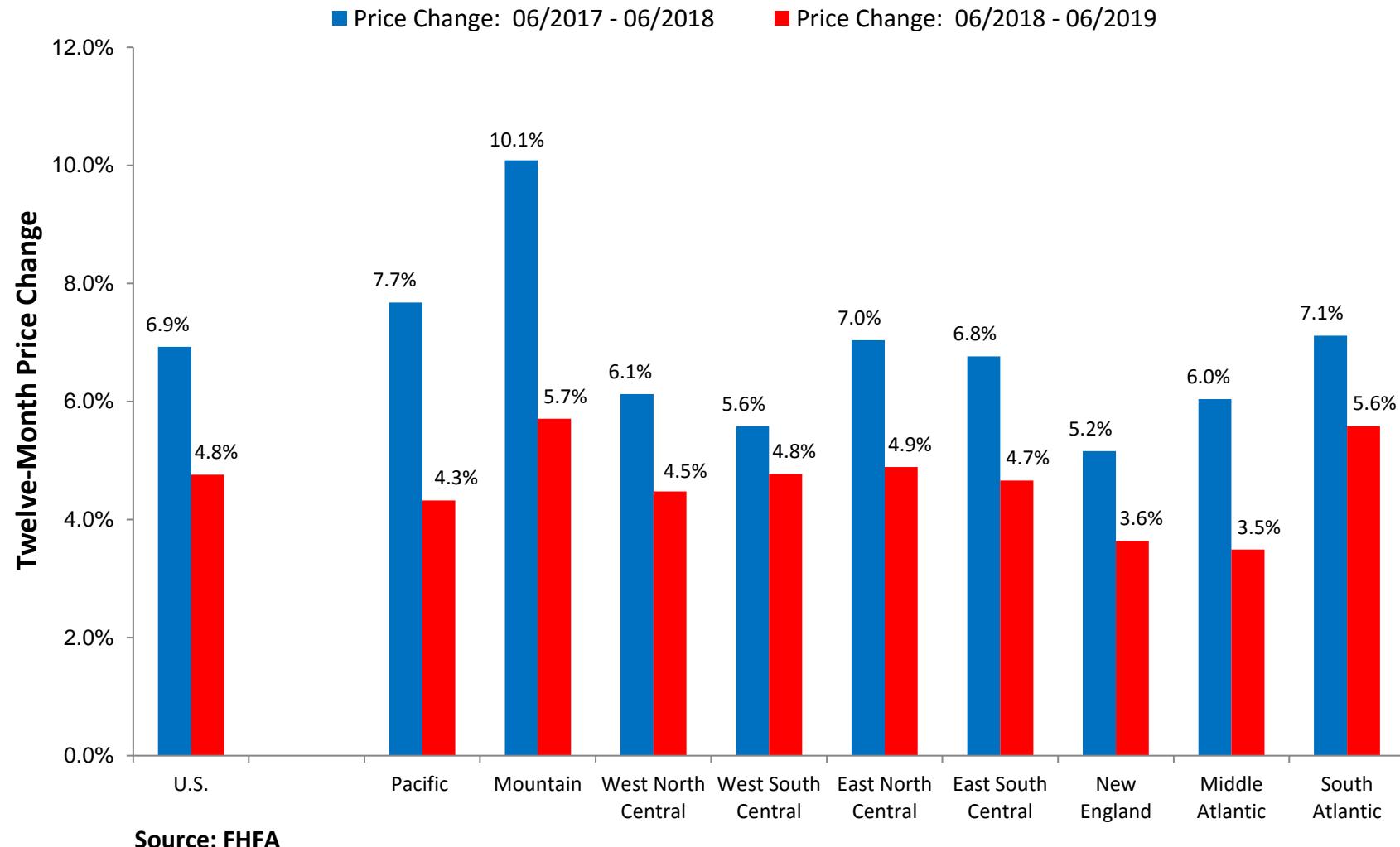
**Cumulative Seasonally Adjusted Price Change Relative to the April 2007 Peak for the U.S.**  
Purchase-Only, Seasonally Adjusted Index



Source: FHFA

## Twelve-Month Price Changes – Prior Year vs. Most Recent Year

Purchase-Only Index



Source: FHFA

**U.S. Census Divisions**  
**Percent Change in House Prices**  
 Seasonally Adjusted, Purchase-Only HPI

***Period ended June 30, 2019***

Division	Division Ranking*	1-Yr**	Qtr	5-Yr	Since 1991Q1
<b>USA</b>		<b>4.99%</b>	<b>1.05%</b>	<b>32.92%</b>	<b>171.55%</b>
Mountain	1	6.65%	1.33%	46.31%	270.01%
East South Central	2	5.59%	1.09%	29.36%	147.08%
South Atlantic	3	5.48%	1.14%	36.31%	175.41%
East North Central	4	5.24%	1.07%	30.21%	125.53%
West North Central	5	4.80%	0.90%	28.15%	168.66%
West South Central	6	4.47%	1.00%	31.76%	185.97%
Pacific	7	4.40%	1.28%	41.97%	215.43%
New England	8	4.07%	0.79%	23.67%	149.35%
Middle Atlantic	9	3.97%	0.55%	21.52%	144.39%

**Source:** FHFA

\*Rankings based on annual percentage change.

\*\*1-Yr changes are relative to the value four quarters ago.

# **State Statistics**

## House Price Appreciation by State

### Percent Change in House Prices

Seasonally Adjusted, Purchase-Only HPI

***Period ended June 30, 2019***

State	Rank*	1-Yr**	Qtr	5-Yr	Since 1991Q1
Idaho (ID)	1	11.36%	2.27%	60.28%	257.18%
Utah (UT)	2	7.73%	1.57%	49.09%	335.07%
Tennessee (TN)	3	7.18%	1.06%	39.37%	176.92%
Georgia (GA)	4	6.89%	1.28%	41.99%	153.54%
Arizona (AZ)	5	6.88%	1.00%	43.59%	233.93%
Montana (MT)	6	6.42%	4.40%	30.41%	317.77%
Nevada (NV)	7	6.39%	0.23%	62.47%	172.90%
Nebraska (NE)	8	6.37%	3.14%	31.99%	176.37%
New Hampshire (NH)	9	6.37%	2.99%	31.58%	162.66%
Michigan (MI)	10	6.35%	1.30%	40.28%	139.37%
South Carolina (SC)	11	6.13%	1.27%	37.76%	157.71%
North Carolina (NC)	12	6.10%	1.70%	35.25%	154.97%
Ohio (OH)	13	5.98%	1.11%	30.69%	110.77%
South Dakota (SD)	14	5.89%	1.37%	27.86%	209.41%
Florida (FL)	15	5.81%	1.25%	50.26%	221.21%
Indiana (IN)	16	5.80%	1.10%	31.97%	119.98%
Missouri (MO)	17	5.76%	1.31%	30.19%	148.20%
Arkansas (AR)	18	5.65%	1.60%	21.08%	128.02%
Kentucky (KY)	19	5.58%	1.70%	28.72%	149.78%
Wyoming (WY)	20	5.55%	3.72%	17.43%	257.63%
Colorado (CO)	21	5.36%	1.38%	55.87%	380.24%
Maine (ME)	22	5.35%	1.58%	27.61%	161.95%
Wisconsin (WI)	23	5.34%	1.05%	30.72%	171.39%
Washington (WA)	24	5.24%	0.71%	57.00%	277.85%
<b>USA</b>		<b>4.99%</b>	<b>1.05%</b>	<b>32.92%</b>	<b>171.55%</b>
Pennsylvania (PA)	25	4.90%	0.68%	22.14%	134.52%
Minnesota (MN)	26	4.88%	0.18%	31.06%	198.39%
Alabama (AL)	27	4.81%	0.01%	25.12%	129.65%

\*Rankings based on annual percentage change.

\*\*1-Yr changes are relative to the value four quarters ago.

# House Price Appreciation by State

## Percent Change in House Prices

Seasonally Adjusted, Purchase-Only HPI

***Period ended June 30, 2019***

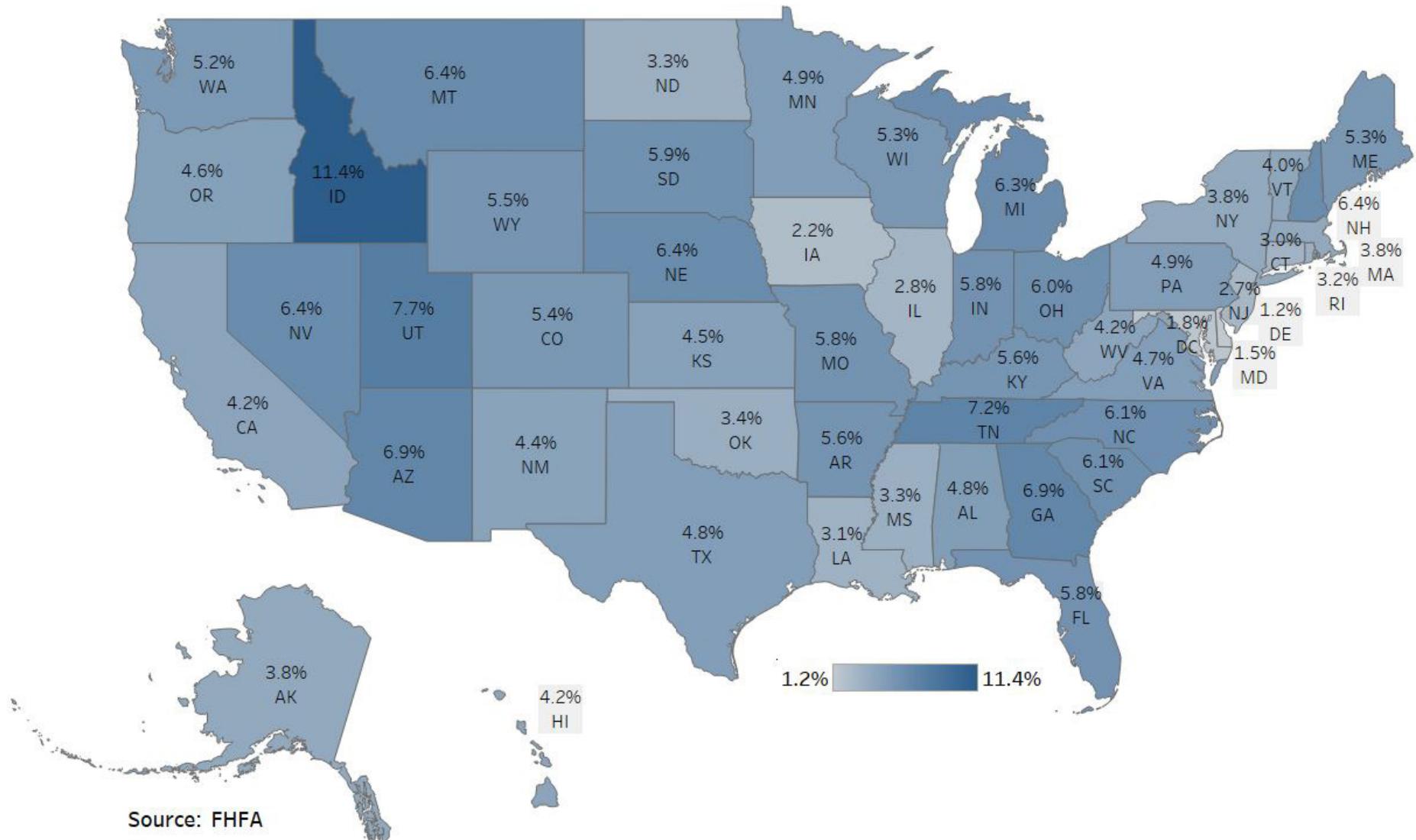
State	Rank*	1-Yr**	Qtr	5-Yr	Since 1991Q1
Texas (TX)	28	4.76%	1.08%	38.02%	199.86%
Virginia (VA)	29	4.75%	1.20%	22.21%	169.29%
Oregon (OR)	30	4.61%	0.78%	48.37%	340.52%
Kansas (KS)	31	4.51%	0.43%	26.28%	153.25%
New Mexico (NM)	32	4.36%	-0.02%	19.05%	150.27%
West Virginia (WV)	33	4.22%	-1.28%	11.90%	123.19%
California (CA)	34	4.20%	1.52%	38.85%	190.84%
Hawaii (HI)	35	4.16%	1.21%	31.81%	163.52%
Vermont (VT)	36	3.98%	-0.23%	14.98%	143.20%
New York (NY)	37	3.83%	0.81%	24.03%	153.27%
Massachusetts (MA)	38	3.82%	0.11%	28.72%	195.68%
Alaska (AK)	39	3.80%	-0.08%	13.51%	166.46%
Oklahoma (OK)	40	3.40%	-0.32%	21.11%	147.81%
Mississippi (MS)	41	3.34%	2.07%	16.40%	111.27%
North Dakota (ND)	42	3.27%	0.88%	16.06%	223.72%
Rhode Island (RI)	43	3.22%	0.31%	31.45%	140.32%
Louisiana (LA)	44	3.12%	1.42%	18.26%	185.66%
Connecticut (CT)	45	2.98%	0.83%	10.06%	77.71%
Illinois (IL)	46	2.83%	0.76%	18.46%	107.82%
New Jersey (NJ)	47	2.65%	-0.12%	16.06%	143.77%
Iowa (IA)	48	2.22%	0.27%	21.74%	151.16%
District of Columbia (DC)	49	1.75%	-0.05%	34.36%	467.14%
Maryland (MD)	50	1.49%	0.20%	15.37%	153.59%
Delaware (DE)	51	1.21%	0.51%	14.40%	109.20%

\*Rankings based on annual percentage change.

\*\*1-Yr changes are relative to the value four quarters ago.

## Four-Quarter Price Change by State: Purchase-Only Index (Seasonally Adjusted)

U.S. Four-Quarter Appreciation = 5.0% (2018Q2-2019Q2)

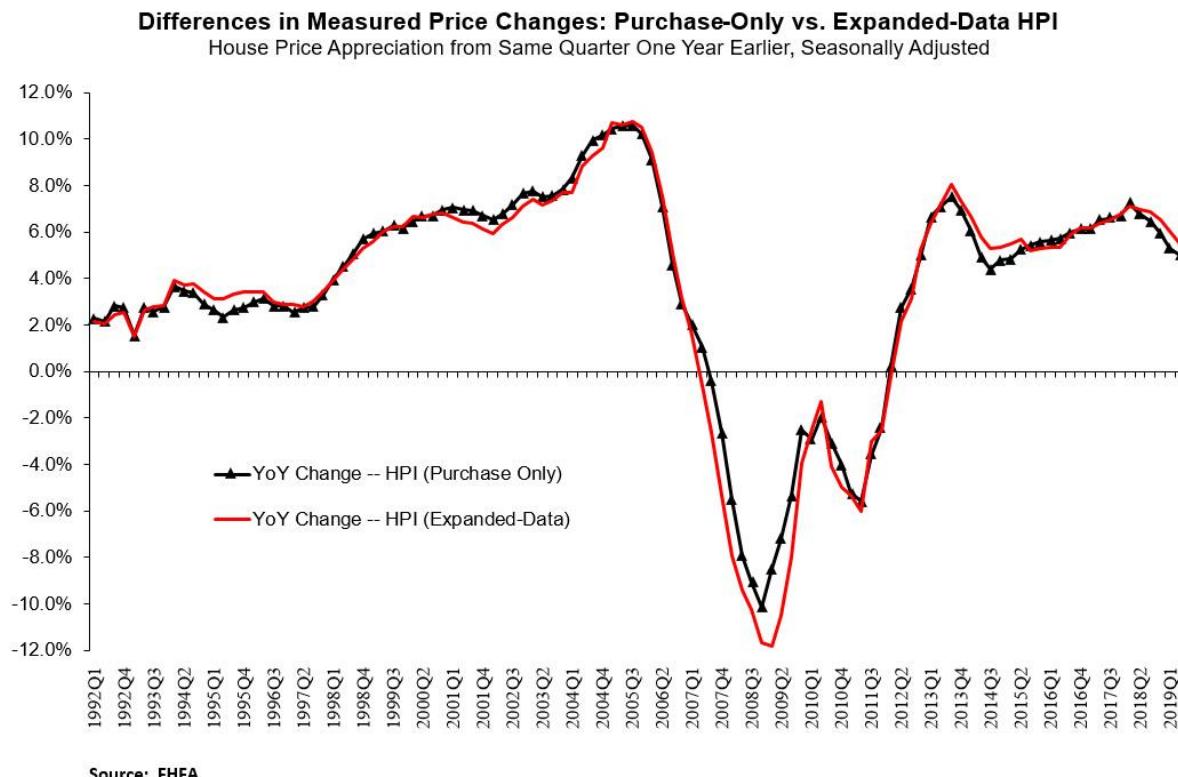


## Comparison of the Purchase-Only and Expanded-Data House Price Indexes

FHFA publishes an “expanded-data” House Price Index (HPI), which is available for 50 states, census divisions, and the United States as a whole. The expanded-data HPI is estimated using an augmented dataset relative to the data used to estimate the purchase-only HPI. Like the purchase-only series, the expanded-data series includes sales price information from purchase-money mortgages guaranteed by Fannie Mae and Freddie Mac (the Enterprises). It also includes, however, sales prices for homes financed with Federal Housing Administration-endorsed purchase-money mortgages as well as county recorder data licensed from CoreLogic.

The figure below compares four-quarter percent changes in prices for the purchase-only and expanded-data series since 1992. Although the two series have diverged occasionally, the long-term trend for both is similar. Over the last four quarters, the purchase-only series has risen 5.0 percent and the expanded-data series has increased by 5.5 percent. Both series show slowing year-over-year appreciation rates.

A comparison of the purchase-only and expanded-data indexes for census divisions and states is supplied later in this report (where price changes are reported for such areas). The underlying data for the purchase-only and expanded-data HPI can be found at <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx#qpo>.



**Comparison of Quarterly and Four-Quarter Price Changes Reported in Traditional Purchase-Only and Expanded-Data House Price Indexes**

2019Q2 Release

	Change over Latest Quarter (Seasonally Adjusted)		Change over Latest Four Quarters (Seasonally Adjusted)	
	Traditional (Purchase-Only) HPI	Expanded-Data HPI*	Traditional (Purchase-Only) HPI	Expanded-Data HPI*
<b>United States</b>	<b>1.0%</b>	<b>0.9%</b>	<b>5.0%</b>	<b>5.5%</b>
Pacific Census Division	1.3%	0.8%	4.4%	5.5%
Mountain Census Division	1.3%	1.2%	6.6%	7.1%
West North Central Division	0.9%	1.1%	4.8%	5.2%
West South Central Division	1.0%	0.9%	4.5%	4.9%
East North Central Division	1.1%	1.0%	5.2%	5.7%
East South Central Division	1.1%	1.0%	5.6%	5.5%
New England Division	0.8%	0.1%	4.1%	4.1%
Middle Atlantic Division	0.5%	0.9%	4.0%	5.2%
South Atlantic Division	1.1%	0.9%	5.5%	5.7%
Alabama	0.0%	0.5%	4.8%	3.9%
Alaska	-0.1%	-1.3%	3.8%	3.2%
Arizona	1.0%	1.5%	6.9%	7.4%
Arkansas	1.6%	0.9%	5.6%	4.7%
California	1.5%	0.8%	4.2%	5.3%
Colorado	1.4%	0.9%	5.4%	6.1%
Connecticut	0.8%	-0.3%	3.0%	2.2%
Delaware	0.5%	-1.0%	1.2%	3.0%
District of Columbia	-0.1%	0.5%	1.8%	3.6%
Florida	1.2%	1.2%	5.8%	6.6%
Georgia	1.3%	1.1%	6.9%	6.3%
Hawaii	1.2%	1.7%	4.2%	4.6%

\* Estimated using mortgage data from Fannie Mae and Freddie Mac, county records information licensed from DataQuick Information Systems, and loan-level data from the Federal Housing Administration.

**Comparison of Quarterly and Four-Quarter Price Changes Reported in Traditional Purchase-Only and Expanded-Data House Price Indexes**

2019Q2 Release

	Change over Latest Quarter (Seasonally Adjusted)		Change over Latest Four Quarters (Seasonally Adjusted)	
	Traditional (Purchase-Only) HPI	Expanded-Data HPI*	Traditional (Purchase-Only) HPI	Expanded-Data HPI*
Idaho	2.3%	1.1%	11.4%	11.9%
Illinois	0.8%	0.4%	2.8%	2.9%
Indiana	1.1%	1.1%	5.8%	6.4%
Iowa	0.3%	0.6%	2.2%	3.6%
Kansas	0.4%	0.9%	4.5%	4.9%
Kentucky	1.7%	0.9%	5.6%	5.9%
Louisiana	1.4%	0.7%	3.1%	2.8%
Maine	1.6%	0.0%	5.3%	5.6%
Maryland	0.2%	1.1%	1.5%	4.4%
Massachusetts	0.1%	0.1%	3.8%	4.3%
Michigan	1.3%	1.2%	6.3%	7.5%
Minnesota	0.2%	0.9%	4.9%	6.0%
Mississippi	2.1%	0.9%	3.3%	3.7%
Missouri	1.3%	1.3%	5.8%	5.4%
Montana	4.4%	2.5%	6.4%	5.4%
Nebraska	3.1%	2.3%	6.4%	5.9%
Nevada	0.2%	0.8%	6.4%	7.6%
New Hampshire	3.0%	0.9%	6.4%	5.7%
New Jersey	-0.1%	0.5%	2.7%	5.1%
New Mexico	0.0%	0.3%	4.4%	4.2%
New York	0.8%	1.6%	3.8%	5.6%
North Carolina	1.7%	0.8%	6.1%	5.2%
North Dakota	0.9%	0.6%	3.3%	3.3%
Ohio	1.1%	1.2%	6.0%	6.1%

\* Estimated using mortgage data from Fannie Mae and Freddie Mac, county records information licensed from DataQuick Information Systems, and loan-level data from the Federal Housing Administration.

**Comparison of Quarterly and Four-Quarter Price Changes Reported in Traditional Purchase-Only and Expanded-Data House Price Indexes**

2019Q2 Release

	Change over Latest Quarter (Seasonally Adjusted)		Change over Latest Four Quarters (Seasonally Adjusted)	
	Traditional (Purchase-Only) HPI	Expanded-Data HPI*	Traditional (Purchase-Only) HPI	Expanded-Data HPI*
Oklahoma	-0.3%	0.9%	3.4%	4.2%
Oregon	0.8%	1.2%	4.6%	5.1%
Pennsylvania	0.7%	0.4%	4.9%	4.8%
Rhode Island	0.3%	0.1%	3.2%	4.6%
South Carolina	1.3%	1.3%	6.1%	5.8%
South Dakota	1.4%	0.9%	5.9%	5.1%
Tennessee	1.1%	1.5%	7.2%	7.3%
Texas	1.1%	1.0%	4.8%	5.4%
Utah	1.6%	1.4%	7.7%	8.2%
Vermont	-0.2%	0.8%	4.0%	3.3%
Virginia	1.2%	0.5%	4.7%	5.0%
Washington	0.7%	0.7%	5.2%	6.7%
West Virginia	-1.3%	0.3%	4.2%	4.5%
Wisconsin	1.0%	1.3%	5.3%	5.9%
Wyoming	3.7%	2.5%	5.5%	5.5%

Source: FHFA

\* Estimated using mortgage data from Fannie Mae and Freddie Mac, county records information licensed from DataQuick Information Systems, and loan-level data from the Federal Housing Administration.

# HOUSE PRICE INDEX

## FREQUENTLY ASKED QUESTIONS

*(updated August 27, 2019)*

### **1. What is the value of the FHFA House Price Index (HPI)?**

The FHFA House Price Index (HPI) is a broad measure of the movement of single-family house prices. The HPIs are built on tens of millions of home sales and offer insights about house price fluctuations at the national, census division, state, metro area, county, ZIP code, and census tract levels. The FHFA HPIs use a fully transparent methodology based upon a weighted, repeat-sales statistical technique to analyze transaction data from Fannie Mae and Freddie Mac. The HPIs also provide housing economists with an analytical tool that is useful for estimating changes in the rates of mortgage defaults, prepayments and housing affordability in specific geographic areas.

Although FHFA constructs several indexes for different geographies and periods, the entire suite of HPIs is often referenced, in a general sense, as the “FHFA HPI”. The production of the FHFA HPI is statutorily mandated (12 U.S.C. 4542). The Office of Federal Housing Enterprise Oversight (OFHEO), one of FHFA’s predecessor agencies, began publishing the HPI in the fourth quarter of 1995.

FHFA releases data and reports on a quarterly and monthly basis. The flagship FHFA HPI uses seasonally adjusted, purchase-only data, unless otherwise noted. Additional indexes are based on other data including refinances, FHA mortgages, and real property records. All the indexes can be downloaded from the FHFA website.

### **2. What transactions are covered in the FHFA HPI?**

The FHFA HPI is based on transactions involving conforming, conventional mortgages purchased or securitized by Fannie Mae or Freddie Mac. Only mortgage transactions on single-family properties are included. Conforming refers to a mortgage that both meets the underwriting guidelines of Fannie Mae or Freddie Mac and that does not exceed the conforming loan limit. For loans originated in the first nine months of 2011, the loan limit was set by Public Law 111-242. That law, in conjunction with prior legislation, provided for loan limits up to \$729,750 for one-unit properties in certain high-cost areas in the contiguous U.S. Mortgages originated after September 30, 2011 were no longer subject to the terms of prior initiatives and, under the formula established under the Housing and Economic Recovery Act of 2008, the “ceiling” limit for one-unit properties in the contiguous U.S. fell to \$625,500. For 2019-acquired loans, the ceiling limit rose to \$726,525 for one-unit homes in the contiguous U.S.

Conventional mortgages are those that are neither insured nor guaranteed by the FHA, VA, or other federal government entities. Mortgages on properties financed by government-insured loans, such as FHA or VA mortgages, are excluded from the HPI, as are properties with mortgages whose principal amount exceeds the conforming loan

limit. Mortgage transactions on condominiums, cooperatives, multi-unit properties, and planned unit developments are also excluded.

### **3. How is the HPI computed?**

The HPI is a weighted, repeat-sales index, meaning that it measures average price changes in repeat sales or refinancings on the same properties. This information is obtained by reviewing repeat mortgage transactions on single-family properties whose mortgages have been purchased or securitized by Fannie Mae or Freddie Mac since January 1975. The HPI is updated as additional mortgages are purchased or securitized by Fannie Mae and Freddie Mac. The new mortgage acquisitions are used to identify repeat transactions for the most recent period and for each subsequent period since 1975.

House price index reports are released on a monthly basis for the United States and regions and on a quarterly basis for a variety of other geographies. Most statistics in the reports reference price changes computed by FHFA's standard "purchase-only" HPI. In some cases, however, the reported statistics reference alternative price measures. FHFA publishes – and makes [available for download](#) – several additional house price indexes beyond the standard "purchase-only" series. Although they use the same general methodology, the three alternatives rely on slightly different datasets as follows:

- "All-Transactions" house price index. Appraisal values from refinance mortgages are added to the purchase-only data sample.
- "Expanded-Data" house price index. Sales price information sourced from county recorder offices and from FHA-backed mortgages are added to the purchase-only data sample. This index is used annually to adjust the maximum conforming loan limits, which dictate the dollar amount of loans that can be acquired by Fannie Mae and Freddie Mac.
- "Distress-Free" house price index. Sales of bank-owned properties and short sales are removed from the purchase-only dataset prior to estimation of the index.

Data constraints preclude the production of all types of indexes for every geographic area, but multiple index types are generally available. For individual states, for instance, three types of indexes are available. The various indexes tend to correlate closely over the long-term, but short-term differences can be significant.

### **4. How often is the HPI published?**

A comprehensive report is published every three months, approximately two months after the end of the previous quarter. Beginning in March 2008, OFHEO (one of FHFA's predecessor agencies) began publishing monthly indexes for census divisions and the U.S. FHFA continues publishing and updating these indexes each month.

## **5. How is the HPI updated?**

Each month, Fannie Mae and Freddie Mac provide FHFA with information on their most recent mortgage transactions. These data are combined with the data from previous periods to establish price differentials on properties where more than one mortgage transaction has occurred. The data are merged, creating an updated historical database that is then used to estimate the HPI.

## **6. How do I interpret “four-quarter,” “one-year,” “annual,” and “one-quarter” price changes?**

The “four-quarter” percentage change in home values is simply the price change relative to the same quarter one year earlier. For example, if the HPI release is for the second quarter, then the “four-quarter” price change reports the percentage change in values relative to the second quarter of the prior year. It reflects the best estimate for how much the value of a typical property increased over the four-quarter period (FAQ #2 reports the types of properties included in this estimate). “One-year” and “annual” appreciation are used synonymously with “four-quarter” appreciation in the full quarterly HPI releases.

Similar to the “four-quarter” price changes, the “one-quarter” percentage change estimates the percentage change in home values relative to the prior quarter. Please note that, in estimating the quarterly price index, all observations within a given quarter are pooled together; no distinction is made between transactions occurring in different months. As such, the “four-quarter” and “one-quarter” changes compare typical values throughout a quarter against valuations during a prior quarter. The appreciation rates do not compare values at the end of a quarter against values at the end of a prior quarter.

## **7. How are Metropolitan Statistical Areas (MSAs) and Metropolitan Divisions defined and what criteria are used to determine whether an MSA index is published?**

MSAs are defined by the Office of Management and Budget (OMB). If specified criteria are met and an MSA contains a single core population greater than 2.5 million, the MSA is divided into Metropolitan Divisions. The following MSAs have been divided into Metropolitan Divisions: Boston-Cambridge-Newton, MA-NH; Chicago-Naperville-Elgin, IL-IN-WI; Dallas-Fort Worth-Arlington, TX; Detroit-Warren-Dearborn, MI; Los Angeles-Long Beach-Anaheim, CA; Miami-Fort Lauderdale-Pompano Beach, FL; New York-Newark-Jersey City, NY-NJ-PA; Philadelphia-Camden-Wilmington, PA-NJ-DE-MD; San Francisco-Oakland-Berkeley, CA; Seattle-Tacoma-Bellevue, WA; Washington-Arlington-Alexandria, DC-VA-MD-WV. For these MSAs, FHFA reports data for each Division, rather than the MSA as a whole.

FHFA requires that an MSA (or Metropolitan Division) must have at least 1,000 total transactions before it may be published. Additionally, an MSA or Division must have had

at least 10 transactions in any given quarter for that quarterly value to be published. Blanks are displayed where this criterion is not met.

## **8. Does FHFA use the September 2018 revised Metropolitan Statistical Areas (MSAs) and Divisions?**

Yes, FHFA uses the revised Metropolitan Statistical Areas (MSAs) and Divisions as defined by the Office of Management and Budget (OMB) in September 2018. The delineations became effective with the 2018Q4 HPI release in February 2019. These MSAs and Divisions are based on Census data. According to OMB, an MSA comprises the central county or counties containing the core, plus adjacent outlying counties having a high degree of social and economic integration with the central county as measured through commuting. For information about the current MSAs, please visit:

<https://www.whitehouse.gov/wp-content/uploads/2018/09/Bulletin-18-04.pdf>

Previously, FHFA produced metropolitan area indexes based on the February 2013 delineations (and as revised in July 2015, August 2017, and April 2018) and, before that release, the December 2009 delineations provided by the OMB.

The 2018Q4 HPI report has a Technical Note which explains the transition to the newest definitions. The accompanying tables are posted on the HPI Downloadable Data page under the “Additional Data” section then the “Utility Files and Background Information for Index Construction” subsection. Information for the prior delineations are also posted on that page.

## **9. What geographic areas are covered by the HPI?**

The HPI includes indexes for all nine census divisions, the 50 states and the District of Columbia, and every Metropolitan Statistical Area (MSA) in the U.S., excluding Puerto Rico. OMB recognizes 384 MSAs, 11 of which are subdivided into a total of 31 Metropolitan Divisions. As noted earlier, FHFA produces indexes for the divisions where they are available, in lieu of producing a single index for the MSA. In total, 404 indexes are released: 373 for the MSAs that do not have Metropolitan Divisions and 31 Division indexes. The starting dates for indexes differ and are determined by a minimum transaction threshold; index values are not provided for periods before at least 1,000 transactions have been accumulated.

In each release, FHFA publishes rankings and quarterly, annual, and five-year rates of changes for the MSAs and Metropolitan Divisions that have at least 15,000 transactions over the prior 10 years. In this release, 241 MSAs and Metropolitan Divisions satisfy this criterion. For the remaining areas, MSAs and Divisions, one-year and five-year rates of change are provided.

## **10. What is the methodology used by FHFA in computing the HPI?**

The methodology is a modified version of the Case-Shiller® geometric weighted repeat-sales procedure. A detailed description of the HPI methodology is available upon request from FHFA at (202) 649-3195 or online at: <http://go.usa.gov/8BBT>.

## **11. How does the FHFA HPI differ from the Case-Shiller® Index?**

Although both indexes employ the same fundamental repeat-valuations approach, there are a number of data and methodology differences. Among the dissimilarities:

- a. The Case-Shiller Indexes® only use purchase prices in index calibration, while the all-transactions HPI also includes refinance appraisals. FHFA's purchase-only series is restricted to purchase prices.
- b. FHFA's valuation data are derived from conforming mortgages provided by Fannie Mae and Freddie Mac. The Case-Shiller Indexes use information obtained from county assessor and recorder offices.
- c. The Case-Shiller Indexes are value-weighted, meaning that price trends for more expensive homes have greater influence on estimated price changes than other homes. FHFA's index weights price trends equally for all properties.
- d. The geographic coverage of the indexes differs. The Case-Shiller National Home Price Index, for example, does not have valuation data from 13 states. FHFA's U.S. index is calculated using data from all states.

For details on these and other differences, consult the HPI Technical Description (see <http://go.usa.gov/8BBT>) and the Case-Shiller methodology materials (see <https://us.spindices.com/index-family/real-estate/sp-corelogic-case-shiller>).

A paper that analyzes in detail the methodological and data differences between the two price metrics can be accessed at <http://go.usa.gov/8BBJ>.

## **12. How does the FHFA House Price Index differ from the Census Bureau's Constant Quality House Price Index (CQHPI)?**

The FHFA HPI covers far more transactions than the Commerce Department survey. The CQHPI covers sales of new homes and homes for sale, based on a sample of about 14,000 transactions annually, gathered through monthly surveys. The quarterly purchase-only HPI is based on more than nine million repeat transaction pairs over 44 years. This gives a more accurate reflection of current property values than the Commerce Department index. The HPI also can be updated efficiently using data collected by Fannie Mae and Freddie Mac in the normal course of their business activity.

**13. Where can I access MSA index numbers and standard errors for each year and quarter?**

In addition to the information displayed in the MSA tables, FHFA makes available MSA indexes and standard errors. The data are available in ASCII format and may be accessed at <http://go.usa.gov/8kXz>.

**14. What role do Fannie Mae and Freddie Mac play in the FHFA HPI?**

FHFA uses data supplied by Fannie Mae and Freddie Mac in compiling the HPI. Each of the Enterprises had previously created a weighted repeat-transactions index based on property matches within its own database. In the first quarter of 1994, Freddie Mac began publishing the Conventional Mortgage Home Price Index (CMHPI). The CMHPI was jointly developed by Fannie Mae and Freddie Mac. The CMHPI series covers the period 1970 to the present.

**15. Why is the FHFA HPI based on Fannie Mae or Freddie Mac mortgages?**

FHFA has access to this information by virtue of its role as the federal regulator responsible for these government-sponsored enterprises. Chartered by Congress for the purpose of creating a reliable supply of mortgage funds for homebuyers, Fannie Mae and Freddie Mac are the largest mortgage finance institutions in the U.S. representing a significant share of total outstanding mortgages.

**16. When are the indexes normalized in the downloadable ASCII data?**

The ASCII data for metropolitan areas are normalized to the first quarter of 1995. That is, the HPI equals 100 for all MSAs in the first quarter of 1995. States and divisions are normalized to 100 in the first quarter of 1980. The purchase-only indexes are normalized to 100 in the first quarter of 1991. Note that normalization dates do not affect measured appreciation rates.

**17. Is the HPI adjusted for inflation?**

No, the HPI is not adjusted for inflation. For inflation adjustments, one can use the Consumer Price Index “All Items Less Shelter” series. The Bureau of Labor Statistics’ price index series ID# CUUR0000SA0L2, for example, has tracked non-shelter consumer prices since the 1930s. That series and others can be downloaded at: <http://data.bls.gov/cgi-bin/srgate>.

**18. How do I use the manipulatable data (in TXT files) on the website to calculate appreciation rates?**

The index numbers alone (for census divisions and U.S., individual states, and MSAs) do not have significance. They have meaning in relation to previous or future index

numbers, because you can use them to calculate appreciation rates using the formula below.

To calculate appreciation between any 2 quarters, use the formula:

$$(\text{QUARTER 2 INDEX NUMBER} - \text{QUARTER 1 INDEX NUMBER}) / \text{QUARTER 1 INDEX NUMBER}$$

You can generate annual numbers by taking the four quarter average for each year or monthly numbers by finding the difference between two months.

**19. How is the FHFA HPI constructed for MSAs? The website says that FHFA uses the 2018 definitions based on the American Community Survey and Census Bureau population estimates for 2015 to define each MSA. Is this true for all time periods covered by each index? Or do the definitions change over time as the Census expanded its MSA definitions? For example, if the definition of an MSA added three counties between 1980 and 2000, would the value of the index in 1980 cover the three counties that were not included in the 1980 SMSA definition?**

The HPI is recomputed historically each quarter. The MSA definition used to compute the 1982 (for example) index value in Anchorage, AK would be the most recent definition. The series is comparable backwards.

**20. How can the HPI for an MSA be linked to ZIP codes within that MSA?**

Although FHFA has published experimental house price indexes for some ZIP codes, those indexes are annual (i.e. quarterly index values are not provided). Researchers needing quarterly values for ZIP codes may be interested in using index values for the applicable metropolitan area.

Because ZIP codes sometimes overlap county boundaries, a single ZIP code can be located partially inside and outside of a Metropolitan Area. Thus, the development of a crosswalk between ZIP codes and Metropolitan Areas is not a straightforward exercise. The Department of Housing and Urban Development has released a lookup table that maps ZIP codes to the Metropolitan Area(s) that they fall within. That lookup file, as well as a discussion of the underlying technical issues, can be found here:  
[http://www.huduser.org/portal/datasets/usps\\_crosswalk.html](http://www.huduser.org/portal/datasets/usps_crosswalk.html).

**21. How and why is the HPI revised each quarter?**

Historical estimates of the HPI revise for three primary reasons:

- 1) The HPI is based on repeat transactions. That is, the estimates of appreciation are based on repeated valuations of the same property over time. Therefore, each time a property "repeats" in the form of a sale or refinance, average appreciation since the prior sale/refinance period is influenced.

- 2) Fannie Mae and Freddie Mac (the Enterprises) purchase seasoned loans, providing new information about prior quarters.
- 3) Due to a 30- to 45-day lag time from loan origination to Enterprise funding, FHFA receives data on new fundings for one additional month following the last month of the quarter. These fundings contain many loans originating in that most recent quarter, and especially the last month of the quarter. This will reduce with subsequent revisions, however data on loans purchased with a longer lag, including seasoned loans, will continue to generate revisions, especially for the most recent quarters.

In connection with the release of the 2012Q2 HPI results, a special revision was made to two historical HPI values. In prior releases, the all-transactions index values for Vermont-1976Q1 and West Virginia-1982Q1 were both reported to be 100.01. Those values were not correct; index values for those respective periods should have been set to missing because no modeling data were available in the underlying sample. The HPI releases for 2012Q2 and later periods reflect the change. With the release of the 2019Q1 HPI results, modeling data became available for Vermont-1976Q1. The HPI releases for 2019Q1 and later periods reflect the change.

## **22. What transaction dates are used in estimating the index?**

For model estimation, the loan origination date is used as the relevant transaction date.

## **23. Are foreclosure sales included in the HPI?**

Transactions that merely represent title transfers to lenders will not appear in the data. Once lenders take possession of foreclosed properties, however, the subsequent sale to the public can appear in the data. As with any other property sale, the sales information will be in FHFA's data if the buyer purchases the property with a loan that is bought or guaranteed by Fannie Mae or Freddie Mac.

## **24. How are the monthly HPIs calculated?**

The monthly indexes are calculated in the same way the quarterly indexes are constructed, except transactions from the same quarter are no longer aggregated. To construct the quarterly index, all transactions from the same quarter are aggregated and index values are estimated using the assigned quarters. In the monthly indexing model, all transactions for the same month are aggregated and separate index values are estimated for each month.

## **25. How are the Census Division and U.S. HPIs formed?**

As discussed in the Highlights article accompanying the 2011Q1 HPI Release (available for download at <http://go.usa.gov/8k5d>), the census division indexes are constructed from statistics for the component states. For the quarterly all-transactions and purchase-only indexes, the census division indexes are constructed from quarterly

growth rate estimates for the underlying state indexes. Census division index estimates are “built-up” from quarterly growth rate estimates (monthly growth rates for the monthly index) for the component states.

The census division indexes are set equal to 100 in the relevant base periods. Then, the index values for subsequent periods are increased (or decreased) by the weighted average quarterly (or monthly) price change for the underlying states. Index values for periods before the base period are calculated in a similar fashion; beginning with the base period value, the preceding index values are sequentially determined so that the growth rate in each period always reflects the weighted average growth rate for the component states.

The national HPI is constructed in an analogous fashion, except that the weighted components are census divisions. Because the census divisions measures are themselves weighted averages of state metrics, the U.S. index is equivalent to a state-weighted metric.

## **26. What weights are used in forming the Census Division and U.S. HPIs?**

The weights used in constructing the indexes are estimates for the shares of one-unit detached properties in each state. For years in which decennial census data are available, the share from the relevant census is used. For intervening years, a state's share is the weighted average of the relevant shares in the prior and subsequent censuses, where the weights are changed by ten percentage points each year. For example, California's share of the housing stock for 1982 is calculated as 0.8 times its share in the 1980 census plus 0.2 times its share in the 1990 census. For 1983, the Pacific Division's share is 0.7 times its 1980 share plus 0.3 times its 1990 share.

For years since 2000, state shares are calculated as follows:

- For the 2001-2005 interval, shares are straight-line interpolated based on the state shares in the 2000 decennial Census and the 2005 values from the American Community Survey (ACS).
- For 2006-2017, the estimates are from the annual ACS.
- Until 2018 ACS estimates become available, shares from the 2017 ACS are used for subsequent periods.

The year-specific estimates of the state shares of U.S. detached housing stock can be accessed at <https://go.usa.gov/xnhpK>.

## **27. For those HPIs that are seasonally adjusted, what approach is used in performing the seasonal adjustment?**

The Census Bureau's X-12 ARIMA procedure is used, as implemented in the SAS software package. The automated ARIMA model-selection algorithm in X-12 is

employed, which searches through a series of seasonality structures and selects the first that satisfies the Ljung-Box test for serial correlation.

To obtain more information on the HPI contact us via the Data and Research Contact page at <http://go.usa.gov/8kN3>.

**28. Do you have an HPI that includes loans which are not purchased or securitized by Fannie Mae and Freddie Mac?**

Yes, the expanded-data index includes purchase-money mortgages from other sources. The approach to estimating the expanded-data HPI is detailed in the Highlights article published with the 2011Q2 HPI at <http://go.usa.gov/8kNm>. In general, the methodology is the same as is used in the construction of the standard purchase-only HPI, except a supplemented dataset is used for estimation. The augmented data include sales price information from Fannie Mae and Freddie Mac mortgages as well as two new information sources: (1) transactions records for houses with mortgages endorsed by FHA and (2) county recorder data licensed from CoreLogic. The licensed county recorder data do not include records in many U.S. counties—particularly rural ones. To ensure that the addition of the CoreLogic data to the estimation sample does not unduly bias index estimates toward price trends in urban areas, the expanded-data index for certain states is estimated by weighting price trends in areas with CoreLogic coverage and other areas. Details on this sub-area weighting can be found in the text of the Highlights piece referenced above.

**29. Is there an HPI that corrects for distressed sales?**

FHFA released a “distress-free” HPI in 2012Q2 along with the Highlights article at <http://go.usa.gov/8kNJ>. The index is a version of the purchase-only index that removes short sales and sales of bank-owned properties from the transactions data used to compute that traditional index. The index is still in a developmental stage. An analysis of how distressed sales affect the FHFA HPI is provided in an FHFA Working Paper released August 2013 at <http://go.usa.gov/8kRB>.

**30. Can I use the data in the HPI and, if so, how should the index be cited?**

Yes. The FHFA HPI data are freely available for download at <https://www.fhfa.gov/hpi>. To cite the index in an article or story, we suggest at least an attribution like “Source: FHFA HPI” or “Source: Federal Housing Finance Agency House Price Index (HPI)”. Additional clarifications could be helpful to denote the type of index (purchase-only, all-transactions, expanded-data) and whether the data are adjusted for seasonality or inflation. A more detailed citation might be “Source: FHFA HPI (purchase-only, seasonally-adjusted, nominal)”.

# **Metro Area Statistics**

**Seasonally Adjusted Price Changes Reflected in  
Purchase-Only Indexes**

**100 Largest Metropolitan Areas**

**Period ended June 30, 2019**

Metropolitan Statistical Area or Division	1-Yr	Qtr	5-Yr	Since 1991Q1
Akron, OH	8.08%	2.71%	29.96%	103.48%
Albany-Schenectady-Troy, NY	3.04%	1.38%	15.92%	102.74%
Albuquerque, NM	3.88%	-0.19%	19.89%	143.68%
Allentown-Bethlehem-Easton, PA-NJ	3.60%	0.80%	20.13%	93.60%
Anaheim-Santa Ana-Irvine, CA (MSAD)	2.29%	2.92%	30.36%	224.93%
Atlanta-Sandy Springs-Alpharetta, GA	7.22%	1.07%	46.60%	168.07%
Austin-Round Rock-Georgetown, TX	8.49%	1.80%	45.98%	386.64%
Bakersfield, CA	3.84%	0.02%	19.72%	102.15%
Baltimore-Columbia-Towson, MD	1.13%	0.23%	13.57%	159.09%
Baton Rouge, LA	1.71%	2.37%	20.24%	176.98%
Birmingham-Hoover, AL	4.81%	0.62%	34.23%	160.42%
Boise City, ID	13.63%	2.57%	76.95%	321.54%
Boston, MA (MSAD)	5.57%	0.71%	31.81%	227.09%
Bridgeport-Stamford-Norwalk, CT	2.82%	1.34%	11.07%	110.68%
Buffalo-Cheektowaga, NY	6.42%	1.88%	32.08%	120.64%
Cambridge-Newton-Framingham, MA (MSAD)	3.13%	-0.57%	31.17%	221.26%
Camden, NJ (MSAD)	3.12%	-2.44%	12.07%	92.04%
Cape Coral-Fort Myers, FL	1.58%	-0.61%	42.12%	167.70%
Charleston-North Charleston, SC	5.52%	-1.54%	51.62%	287.83%
Charlotte-Concord-Gastonia, NC-SC	6.40%	2.05%	45.67%	173.73%
Chicago-Naperville-Evanston, IL (MSAD)	3.08%	0.48%	23.31%	123.59%
Cincinnati, OH-KY-IN	6.21%	0.79%	31.25%	120.73%
Cleveland-Elyria, OH	4.94%	-0.69%	27.59%	90.58%
Colorado Springs, CO	8.21%	2.71%	51.96%	279.14%
Columbia, SC	5.21%	0.99%	30.85%	121.43%
Columbus, OH	6.51%	1.33%	40.55%	156.18%
Dallas-Plano-Irving, TX (MSAD)	2.87%	0.87%	47.81%	195.70%
Dayton-Kettering, OH	4.15%	-0.12%	31.06%	79.14%
Denver-Aurora-Lakewood, CO	3.48%	0.41%	58.60%	425.70%
Detroit-Dearborn-Livonia, MI (MSAD)	6.55%	1.79%	43.56%	119.93%
Elgin, IL (MSAD)	1.37%	-1.21%	25.42%	81.33%
El Paso, TX	7.43%	0.67%	18.74%	107.74%
Fort Lauderdale-Pompano Beach-Sunrise, FL (MSAD)	3.59%	1.65%	40.56%	245.44%
Fort Worth-Arlington-Grapevine, TX (MSAD)	5.44%	1.28%	49.54%	182.74%
Frederick-Gaithersburg-Rockville, MD (MSAD)	2.28%	0.61%	14.43%	168.81%
Fresno, CA	4.31%	1.50%	35.48%	142.69%
Gary, IN (MSAD)	7.50%	1.54%	28.31%	123.04%
Grand Rapids-Kentwood, MI	9.03%	1.57%	54.21%	165.61%

**Seasonally Adjusted Price Changes Reflected in  
Purchase-Only Indexes**

**100 Largest Metropolitan Areas**

**Period ended June 30, 2019**

Metropolitan Statistical Area or Division	1-Yr	Qtr	5-Yr	Since 1991Q1
Greensboro-High Point, NC	4.41%	0.80%	22.03%	95.26%
Greenville-Anderson, SC	6.30%	1.13%	41.80%	174.95%
Hartford-East Hartford-Middletown, CT	2.66%	0.04%	7.34%	59.97%
Houston-The Woodlands-Sugar Land, TX	2.75%	0.83%	24.37%	217.49%
Indianapolis-Carmel-Anderson, IN	6.14%	0.91%	37.89%	126.49%
Jacksonville, FL	8.00%	2.91%	49.06%	224.63%
Kansas City, MO-KS	6.21%	1.23%	41.92%	168.16%
Knoxville, TN	7.62%	3.35%	33.58%	162.29%
Lake County-Kenosha County, IL-WI (MSAD)	2.89%	-1.06%	21.82%	91.43%
Las Vegas-Henderson-Paradise, NV	5.32%	-0.38%	61.57%	150.68%
Little Rock-North Little Rock-Conway, AR	4.38%	1.23%	13.97%	119.43%
Los Angeles-Long Beach-Glendale, CA (MSAD)	4.13%	1.81%	39.88%	208.70%
Louisville/Jefferson County, KY-IN	5.05%	1.08%	32.35%	167.45%
Memphis, TN-MS-AR	5.27%	0.66%	30.78%	110.48%
Miami-Miami Beach-Kendall, FL (MSAD)	5.12%	-1.02%	45.68%	314.44%
Milwaukee-Waukesha, WI	5.11%	0.14%	29.79%	167.57%
Minneapolis-St. Paul-Bloomington, MN-WI	4.56%	0.04%	32.96%	203.77%
Montgomery County-Bucks County-Chester County, PA (MSAD)	4.65%	1.26%	18.01%	131.63%
Nashville-Davidson--Murfreesboro--Franklin, TN	6.59%	-0.69%	52.92%	259.90%
Nassau County-Suffolk County, NY (MSAD)	2.51%	-0.18%	26.46%	216.02%
Newark, NJ-PA (MSAD)	3.05%	-0.56%	15.71%	161.73%
New Haven-Milford, CT	3.91%	2.03%	13.21%	74.83%
New Orleans-Metairie, LA	4.75%	0.77%	25.24%	217.58%
New York-Jersey City-White Plains, NY-NJ (MSAD)	2.04%	0.77%	23.58%	194.51%
North Port-Sarasota-Bradenton, FL	1.44%	-3.26%	48.91%	224.96%
Oakland-Berkeley-Livermore, CA (MSAD)	2.70%	1.47%	48.94%	266.59%
Oklahoma City, OK	2.92%	0.17%	24.42%	165.72%
Omaha-Council Bluffs, NE-IA	5.59%	2.82%	34.53%	168.90%
Orlando-Kissimmee-Sanford, FL	7.38%	2.61%	52.97%	192.97%
Oxnard-Thousand Oaks-Ventura, CA	0.47%	0.18%	25.07%	181.96%
Philadelphia, PA (MSAD)	4.88%	0.70%	30.55%	192.89%
Phoenix-Mesa-Chandler, AZ	6.60%	1.63%	45.26%	265.15%
Pittsburgh, PA	6.00%	0.97%	25.66%	161.36%
Portland-Vancouver-Hillsboro, OR-WA	3.00%	0.36%	48.94%	364.76%
Providence-Warwick, RI-MA	3.80%	1.04%	31.30%	149.65%
Raleigh-Cary, NC	6.66%	0.38%	38.42%	178.12%
Richmond, VA	6.96%	2.55%	33.03%	177.01%
Riverside-San Bernardino-Ontario, CA	3.92%	0.65%	37.45%	156.63%

**Seasonally Adjusted Price Changes Reflected in  
Purchase-Only Indexes**

**100 Largest Metropolitan Areas**

Period ended June 30, 2019

Metropolitan Statistical Area or Division	1-Yr	Qtr	5-Yr	Since 1991Q1
Rochester, NY	5.17%	0.76%	22.62%	75.35%
Sacramento-Roseville-Folsom, CA	4.06%	1.04%	43.26%	157.61%
St. Louis, MO-IL	4.84%	1.25%	26.49%	142.31%
Salt Lake City, UT	6.95%	1.80%	48.91%	387.91%
San Antonio-New Braunfels, TX	8.89%	0.95%	39.92%	224.56%
San Diego-Chula Vista-Carlsbad, CA	2.81%	1.49%	34.09%	232.90%
San Francisco-San Mateo-Redwood City, CA (MSAD)	3.81%	2.02%	60.15%	379.16%
San Jose-Sunnyvale-Santa Clara, CA	2.41%	1.28%	48.75%	313.75%
Seattle-Bellevue-Kent, WA (MSAD)	0.62%	0.10%	59.85%	318.94%
Stockton, CA	4.91%	1.26%	46.97%	139.47%
Syracuse, NY	4.08%	1.68%	18.91%	77.33%
Tacoma-Lakewood, WA (MSAD)	5.67%	0.52%	69.73%	269.46%
Tampa-St. Petersburg-Clearwater, FL	6.83%	1.49%	58.60%	244.89%
Tucson, AZ	6.54%	-1.98%	33.75%	190.58%
Tulsa, OK	3.84%	-1.05%	24.17%	139.10%
Urban Honolulu, HI	1.92%	-0.30%	20.93%	155.92%
Virginia Beach-Norfolk-Newport News, VA-NC	2.35%	0.56%	15.33%	156.95%
Warren-Troy-Farmington Hills, MI (MSAD)	4.79%	1.45%	38.39%	138.01%
Washington-Arlington-Alexandria, DC-VA-MD-WV (MSAD)	3.96%	2.04%	20.93%	210.39%
West Palm Beach-Boca Raton-Boynton Beach, FL (MSAD)	2.95%	-0.45%	51.55%	227.87%
Wichita, KS	5.07%	-0.98%	27.52%	123.42%
Wilmington, DE-MD-NJ (MSAD)	1.04%	-1.54%	12.93%	100.61%
Winston-Salem, NC	6.97%	0.69%	26.09%	104.99%
Worcester, MA-CT	2.79%	0.15%	28.14%	141.20%

Note: Index values can be downloaded at <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx#qpo>.

**Source:** FHFA

**Seasonally Adjusted Price Changes Reflected in  
Purchase-Only Indexes**

**Top 10 and Bottom 10 Metropolitan Areas**

Period ended June 30, 2019

Metropolitan Statistical Area or Division	National Ranking*	1-Yr	Qtr	5-Yr	Since 1991Q1
Boise City, ID	1	13.63%	2.57%	76.95%	321.54%
Grand Rapids-Kentwood, MI	2	9.03%	1.57%	54.21%	165.61%
San Antonio-New Braunfels, TX	3	8.89%	0.95%	39.92%	224.56%
Austin-Round Rock-Georgetown, TX	4	8.49%	1.80%	45.98%	386.64%
Colorado Springs, CO	5	8.21%	2.71%	51.96%	279.14%
Akron, OH	6	8.08%	2.71%	29.96%	103.48%
Jacksonville, FL	7	8.00%	2.91%	49.06%	224.63%
Knoxville, TN	8	7.62%	3.35%	33.58%	162.29%
Gary, IN (MSAD)	9	7.50%	1.54%	28.31%	123.04%
El Paso, TX	10	7.43%	0.67%	18.74%	107.74%
New York-Jersey City-White Plains, NY-NJ (MSAD)	91	2.04%	0.77%	23.58%	194.51%
Urban Honolulu, HI	92	1.92%	-0.30%	20.93%	155.92%
Baton Rouge, LA	93	1.71%	2.37%	20.24%	176.98%
Cape Coral-Fort Myers, FL	94	1.58%	-0.61%	42.12%	167.70%
North Port-Sarasota-Bradenton, FL	95	1.44%	-3.26%	48.91%	224.96%
Elgin, IL (MSAD)	96	1.37%	-1.21%	25.42%	81.33%
Baltimore-Columbia-Towson, MD	97	1.13%	0.23%	13.57%	159.09%
Wilmington, DE-MD-NJ (MSAD)	98	1.04%	-1.54%	12.93%	100.61%
Seattle-Bellevue-Kent, WA (MSAD)	99	0.62%	0.10%	59.85%	318.94%
Oxnard-Thousand Oaks-Ventura, CA	100	0.47%	0.18%	25.07%	181.96%

Note: Purchase-Only indexes, which omit appraisal values, are available for the 100 largest metro areas at <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx#qpo>.

Note: All-Transactions indexes, which include appraisal values, are available for the select metro areas at <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx#gat>.

For composition of metropolitan statistical areas and divisions see FHFA HPI FAQs #7 and #8 or <https://www.whitehouse.gov/wp-content/uploads/2018/09/Bulletin-18-04.pdf>.

**Source:** FHFA

\*Rankings based on annual percentage change for all MSAs containing at least 15,000 transactions over the last 10 years.

## **Purchase-Only Indexes for Metropolitan Areas: Relative Frequency of Distressed Sales and Effect of Removing Distressed Sales on Estimated Price Changes**

(Note: Price Changes Reported on Seasonally Adjusted Basis)

***Period ended June 30, 2019***

Metropolitan Area	Share of Enterprise-Financed Purchase-Money Mortgages that are Financing Distressed-Sales					Quarterly Price Change 2019Q1-2019Q2		Four Quarter Price Change 2018Q2-2019Q2	
	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	Full Sample	Distress-Free	Full Sample	Distress-Free
Anaheim-Santa Ana-Irvine, CA (MSAD)	4%	4%	3%	4%	3%	2.9%	2.8%	2.3%	2.0%
Atlanta-Sandy Springs-Alpharetta, GA	3%	3%	4%	4%	3%	1.1%	1.2%	7.2%	7.3%
Chicago-Naperville-Evanston, IL (MSAD)	7%	6%	8%	10%	5%	0.5%	0.1%	3.1%	2.5%
Los Angeles-Long Beach-Glendale, CA (MSAD)	6%	4%	4%	5%	3%	1.8%	1.8%	4.1%	3.9%
Miami-Miami Beach-Kendall, FL (MSAD)	8%	9%	9%	11%	8%	-1.0%	-0.9%	5.1%	4.7%
Oakland-Berkeley-Livermore, CA (MSAD)	3%	4%	3%	4%	2%	1.5%	1.1%	2.7%	3.1%
Phoenix-Mesa-Chandler, AZ	3%	3%	4%	3%	2%	1.6%	1.6%	6.6%	6.6%
Riverside-San Bernardino-Ontario, CA	6%	6%	7%	5%	4%	0.6%	1.3%	3.9%	4.0%
San Diego-Chula Vista-Carlsbad, CA	5%	4%	3%	3%	4%	1.5%	1.2%	2.8%	2.9%
San Francisco-San Mateo-Redwood City, CA (MSAD)	3%	2%	0%	1%	2%	2.0%	1.9%	3.8%	3.4%
Tampa-St. Petersburg-Clearwater, FL	6%	6%	6%	6%	5%	1.5%	1.3%	6.8%	6.4%
Warren-Troy-Farmington Hills, MI (MSAD)	3%	2%	3%	4%	3%	1.5%	1.3%	4.8%	4.7%

Sources: Fannie Mae and Freddie Mac appraisal and mortgage data, including mortgage performance records; FHA mortgage performance data; and county records data licensed from CoreLogic.

**Source: FHFA**

**20 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, 2019**

Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
Chico, CA	1	14.46%	2.47%	49.75%
Idaho Falls, ID	2	12.45%	3.19%	56.57%
Boise City, ID	3	12.02%	3.37%	69.94%
Kennewick-Richland, WA	4	11.89%	3.85%	49.30%
Spokane-Spokane Valley, WA	5	11.26%	4.37%	52.00%
Lake Havasu City-Kingman, AZ	6	10.16%	3.69%	50.32%
Fond du Lac, WI	7	9.86%	5.24%	24.44%
Coeur d'Alene, ID	8	9.50%	4.31%	59.18%
Logan, UT-ID	9	9.16%	3.48%	43.73%
Yakima, WA	10	9.14%	2.98%	41.11%
St. George, UT	11	8.95%	0.86%	43.29%
Provo-Orem, UT	12	8.93%	1.81%	47.24%
Mobile, AL	13	8.82%	3.03%	24.58%
Niles, MI	14	8.67%	2.91%	26.54%
Hickory-Lenoir-Morganton, NC	15	8.64%	4.05%	28.08%
Olympia-Lacey-Tumwater, WA	16	8.57%	3.82%	50.96%
Ogden-Clearfield, UT	17	8.49%	2.42%	50.05%
Myrtle Beach-Conway-North Myrtle Beach, SC-NC	18	8.42%	4.30%	31.65%
Salisbury, MD-DE	19	8.41%	1.54%	21.14%
Las Vegas-Henderson-Paradise, NV	20	8.35%	0.86%	64.28%

Note: Purchase-Only indexes, which omit appraisal values, are available for the 100 largest metro areas at <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx#qpo>.

Note: All-Transactions indexes, which include appraisal values, are available for select metro areas at <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx#qat>.

For composition of metropolitan statistical areas and divisions see FHFA HPI FAQs #7 and #8 or <https://www.whitehouse.gov/wp-content/uploads/2018/09/Bulletin-18-04.pdf>.

**Source: FHFA**

\*Rankings based on annual percentage change for all MSAs containing at least 15,000 transactions over the last 10 years.

**20 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, 2019**

Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
San Rafael, CA (MSAD)	241	-2.22%	-0.80%	29.31%
Santa Rosa-Petaluma, CA	240	-0.09%	-0.12%	42.87%
San Francisco-San Mateo-Redwood City, CA (MSAD)	239	-0.05%	0.77%	48.50%
Huntington-Ashland, WV-KY-OH	238	0.05%	-3.36%	6.26%
San Jose-Sunnyvale-Santa Clara, CA	237	0.26%	0.44%	45.59%
Bloomington, IL	236	1.13%	3.96%	4.97%
Fargo, ND-MN	235	1.17%	1.66%	23.28%
Bismarck, ND	234	1.30%	3.69%	10.52%
Seattle-Bellevue-Kent, WA (MSAD)	233	1.37%	1.25%	59.88%
Hagerstown-Martinsburg, MD-WV	232	1.46%	5.12%	19.69%
Dubuque, IA	231	1.51%	1.59%	16.23%
Springfield, IL	230	1.68%	1.72%	10.01%
Charlottesville, VA	229	1.77%	3.53%	25.29%
Urban Honolulu, HI	228	1.87%	0.36%	27.66%
Peoria, IL	227	1.93%	0.29%	3.07%
Montgomery, AL	226	2.03%	0.17%	8.09%
Oakland-Berkeley-Livermore, CA (MSAD)	225	2.13%	0.53%	48.39%
Santa Maria-Santa Barbara, CA	224	2.18%	0.79%	29.79%
Anchorage, AK	223	2.27%	-0.66%	9.56%
Burlington-South Burlington, VT	222	2.48%	1.09%	15.68%

Note: Purchase-Only indexes, which omit appraisal values, are available for the 100 largest metro areas at <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx#qpo>.

Note: All-Transactions indexes, which include appraisal values, are available for select metro areas at <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx#qat>.

For composition of metropolitan statistical areas and divisions see FHFA HPI FAQs #7 and #8 or <https://www.whitehouse.gov/wp-content/uploads/2018/09/Bulletin-18-04.pdf>.

**Source:** FHFA

\*Rankings based on annual percentage change for all MSAs containing at least 15,000 transactions over the last 10 years.

## Rankings by Metropolitan Areas

### Percent Change in House Prices with MSA Rankings

All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
Akron, OH	46	6.82%	3.13%	24.50%
Albany-Schenectady-Troy, NY	199	3.13%	1.23%	14.01%
Albuquerque, NM	148	4.50%	2.93%	20.06%
Allentown-Bethlehem-Easton, PA-NJ	176	3.68%	2.25%	18.16%
Amarillo, TX	192	3.30%	2.27%	18.51%
Ames, IA	200	3.08%	2.46%	23.98%
Anaheim-Santa Ana-Irvine, CA (MSAD)	216	2.64%	0.54%	29.52%
Anchorage, AK	223	2.27%	-0.66%	9.56%
Ann Arbor, MI	72	6.22%	1.59%	38.76%
Appleton, WI	74	6.13%	0.81%	27.78%
Asheville, NC	68	6.31%	2.61%	42.97%
Athens-Clarke County, GA	48	6.81%	0.67%	42.07%
Atlanta-Sandy Springs-Alpharetta, GA	24	7.74%	3.00%	47.20%
Atlantic City-Hammonton, NJ	215	2.72%	1.38%	5.90%
Augusta-Richmond County, GA-SC	211	2.75%	4.08%	21.21%
Austin-Round Rock-Georgetown, TX	59	6.45%	1.77%	45.27%
Bakersfield, CA	163	4.06%	0.68%	24.52%
Baltimore-Columbia-Towson, MD	206	2.92%	1.77%	15.70%
Barnstable Town, MA	177	3.67%	2.70%	24.73%
Baton Rouge, LA	209	2.85%	0.98%	20.05%
Bellingham, WA	34	7.38%	2.91%	53.09%
Bend, OR	88	5.73%	1.14%	59.02%
Billings, MT	58	6.45%	3.14%	20.58%
Birmingham-Hoover, AL	106	5.44%	1.00%	28.26%
Bismarck, ND	234	1.30%	3.69%	10.52%
Bloomington, IL	236	1.13%	3.96%	4.97%
Bloomington, IN	53	6.60%	3.45%	30.47%
Boise City, ID	3	12.02%	3.37%	69.94%
Boston, MA (MSAD)	124	5.02%	1.80%	31.32%
Boulder, CO	188	3.41%	0.73%	55.02%
Bowling Green, KY	140	4.65%	4.64%	27.38%
Bremerton-Silverdale-Port Orchard, WA	102	5.48%	1.64%	58.86%

\*Rankings based on annual percentage change for all MSAs containing at least 15,000 transactions over the last 10 years.

## Rankings by Metropolitan Areas

### Percent Change in House Prices with MSA Rankings

All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
Bridgeport-Stamford-Norwalk, CT	207	2.88%	2.11%	8.64%
Buffalo-Cheektowaga, NY	128	4.97%	1.58%	29.59%
Burlington-South Burlington, VT	222	2.48%	1.09%	15.68%
Cambridge-Newton-Framingham, MA (MSAD)	141	4.65%	1.43%	31.83%
Camden, NJ (MSAD)	203	3.01%	0.59%	12.52%
Canton-Massillon, OH	165	4.02%	1.40%	20.52%
Cape Coral-Fort Myers, FL	191	3.37%	0.73%	44.59%
Cedar Rapids, IA	150	4.40%	2.17%	13.98%
Champaign-Urbana, IL	189	3.41%	2.82%	12.30%
Charleston-North Charleston, SC	25	7.73%	2.72%	50.69%
Charlotte-Concord-Gastonia, NC-SC	92	5.67%	1.28%	42.65%
Charlottesville, VA	229	1.77%	3.53%	25.29%
Chattanooga, TN-GA	41	7.00%	4.51%	30.38%
Chicago-Naperville-Evanston, IL (MSAD)	185	3.49%	1.27%	21.73%
Chico, CA	1	14.46%	2.47%	49.75%
Cincinnati, OH-KY-IN	97	5.63%	2.21%	28.37%
Cleveland-Elyria, OH	130	4.87%	1.37%	25.69%
Coeur d'Alene, ID	8	9.50%	4.31%	59.18%
Colorado Springs, CO	27	7.64%	1.90%	49.55%
Columbia, MO	119	5.12%	4.27%	20.70%
Columbia, SC	145	4.54%	0.42%	23.40%
Columbus, OH	87	5.75%	2.84%	36.49%
Dallas-Plano-Irving, TX (MSAD)	144	4.57%	1.82%	51.22%
Davenport-Moline-Rock Island, IA-IL	208	2.87%	0.82%	12.37%
Dayton-Kettering, OH	105	5.44%	1.62%	26.60%
Deltona-Daytona Beach-Ormond Beach, FL	77	6.10%	1.73%	57.82%
Denver-Aurora-Lakewood, CO	133	4.83%	1.40%	60.06%
Des Moines-West Des Moines, IA	214	2.72%	1.22%	24.04%
Detroit-Dearborn-Livonia, MI (MSAD)	93	5.67%	2.41%	39.36%
Dubuque, IA	231	1.51%	1.59%	16.23%
Duluth, MN-WI	127	4.97%	3.91%	20.54%
Durham-Chapel Hill, NC	104	5.44%	-0.17%	37.17%

\*Rankings based on annual percentage change for all MSAs containing at least 15,000 transactions over the last 10 years.

## Rankings by Metropolitan Areas

### Percent Change in House Prices with MSA Rankings

All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
Eau Claire, WI	112	5.27%	1.35%	30.82%
El Paso, TX	107	5.43%	1.46%	14.74%
Elgin, IL (MSAD)	194	3.26%	1.20%	23.17%
Elkhart-Goshen, IN	174	3.75%	1.52%	33.63%
Eugene-Springfield, OR	65	6.33%	2.74%	45.67%
Evansville, IN-KY	66	6.33%	2.52%	20.07%
Fargo, ND-MN	235	1.17%	1.66%	23.28%
Fayetteville-Springdale-Rogers, AR	31	7.54%	1.95%	35.21%
Flint, MI	114	5.18%	1.57%	39.02%
Fond du Lac, WI	7	9.86%	5.24%	24.44%
Fort Collins, CO	63	6.34%	2.30%	56.41%
Fort Lauderdale-Pompano Beach-Sunrise, FL (MSAD)	122	5.06%	1.56%	46.88%
Fort Wayne, IN	64	6.33%	2.35%	32.18%
Fort Worth-Arlington-Grapevine, TX (MSAD)	61	6.37%	2.43%	52.01%
Frederick-Gaithersburg-Rockville, MD (MSAD)	213	2.74%	1.70%	15.53%
Fresno, CA	134	4.82%	1.44%	37.01%
Gary, IN (MSAD)	96	5.63%	1.79%	23.20%
Grand Rapids-Kentwood, MI	47	6.82%	1.83%	47.75%
Greeley, CO	22	7.94%	2.11%	64.70%
Green Bay, WI	152	4.40%	1.17%	27.56%
Greensboro-High Point, NC	80	5.98%	2.43%	21.25%
Greenville-Anderson, SC	45	6.82%	2.13%	36.05%
Gulfport-Biloxi, MS	37	7.23%	2.14%	24.43%
Hagerstown-Martinsburg, MD-WV	232	1.46%	5.12%	19.69%
Harrisburg-Carlisle, PA	137	4.70%	2.34%	16.10%
Hartford-East Hartford-Middletown, CT	198	3.14%	1.49%	7.06%
Hickory-Lenoir-Morganton, NC	15	8.64%	4.05%	28.08%
Houston-The Woodlands-Sugar Land, TX	196	3.16%	0.11%	31.39%
Huntington-Ashland, WV-KY-OH	238	0.05%	-3.36%	6.26%
Huntsville, AL	89	5.73%	1.60%	17.46%
Idaho Falls, ID	2	12.45%	3.19%	56.57%
Indianapolis-Carmel-Anderson, IN	76	6.12%	2.42%	32.32%

\*Rankings based on annual percentage change for all MSAs containing at least 15,000 transactions over the last 10 years.

## Rankings by Metropolitan Areas

### Percent Change in House Prices with MSA Rankings

All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
Iowa City, IA	171	3.82%	2.86%	19.63%
Jackson, MS	142	4.65%	0.88%	13.84%
Jacksonville, FL	32	7.46%	2.76%	47.87%
Janesville-Beloit, WI	43	6.86%	1.17%	36.44%
Jefferson City, MO	113	5.19%	2.16%	16.70%
Kalamazoo-Portage, MI	70	6.27%	3.37%	31.08%
Kansas City, MO-KS	83	5.88%	2.39%	36.92%
Kennewick-Richland, WA	4	11.89%	3.85%	49.30%
Knoxville, TN	54	6.57%	2.06%	26.90%
La Crosse-Onalaska, WI-MN	116	5.15%	3.54%	27.00%
Lafayette, LA	179	3.63%	4.38%	12.13%
Lafayette-West Lafayette, IN	29	7.58%	4.23%	31.90%
Lake County-Kenosha County, IL-WI (MSAD)	221	2.52%	0.62%	18.92%
Lake Havasu City-Kingman, AZ	6	10.16%	3.69%	50.32%
Lakeland-Winter Haven, FL	51	6.65%	1.52%	51.61%
Lancaster, PA	162	4.12%	0.86%	21.56%
Lansing-East Lansing, MI	71	6.26%	3.43%	35.85%
Las Vegas-Henderson-Paradise, NV	20	8.35%	0.86%	64.28%
Lexington-Fayette, KY	149	4.46%	3.46%	27.89%
Lincoln, NE	42	6.92%	4.22%	31.63%
Little Rock-North Little Rock-Conway, AR	220	2.53%	2.43%	13.44%
Logan, UT-ID	9	9.16%	3.48%	43.73%
Los Angeles-Long Beach-Glendale, CA (MSAD)	173	3.77%	0.52%	39.57%
Louisville/Jefferson County, KY-IN	126	5.00%	1.82%	28.04%
Lubbock, TX	161	4.16%	1.43%	20.25%
Lynchburg, VA	86	5.75%	2.61%	16.72%
Madison, WI	167	3.98%	2.17%	28.62%
Manchester-Nashua, NH	125	5.00%	1.60%	29.44%
Mankato, MN	166	3.98%	0.39%	24.66%
Medford, OR	123	5.03%	0.70%	42.43%
Memphis, TN-MS-AR	110	5.28%	1.93%	28.53%
Merced, CA	49	6.80%	2.54%	49.75%

\*Rankings based on annual percentage change for all MSAs containing at least 15,000 transactions over the last 10 years.

## Rankings by Metropolitan Areas

### Percent Change in House Prices with MSA Rankings

All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
Miami-Miami Beach-Kendall, FL (MSAD)	57	6.52%	0.79%	51.12%
Milwaukee-Waukesha, WI	151	4.40%	2.14%	25.54%
Minneapolis-St. Paul-Bloomington, MN-WI	155	4.37%	2.00%	32.01%
Missoula, MT	38	7.18%	6.38%	35.93%
Mobile, AL	13	8.82%	3.03%	24.58%
Modesto, CA	120	5.09%	1.17%	47.81%
Monroe, MI	103	5.46%	0.84%	31.67%
Montgomery County-Bucks County-Chester County, PA (MSAD)	153	4.38%	1.85%	17.74%
Montgomery, AL	226	2.03%	0.17%	8.09%
Mount Vernon-Anacortes, WA	28	7.61%	1.88%	54.60%
Muskegon, MI	21	8.31%	3.85%	50.41%
Myrtle Beach-Conway-North Myrtle Beach, SC-NC	18	8.42%	4.30%	31.65%
Napa, CA	156	4.37%	1.62%	40.64%
Nashville-Davidson--Murfreesboro--Franklin, TN	62	6.34%	1.10%	51.44%
Nassau County-Suffolk County, NY (MSAD)	108	5.41%	1.25%	28.39%
New Brunswick-Lakewood, NJ (MSAD)	183	3.56%	1.22%	19.04%
New Haven-Milford, CT	180	3.61%	0.96%	9.50%
New Orleans-Metairie, LA	82	5.92%	1.83%	25.22%
New York-Jersey City-White Plains, NY-NJ (MSAD)	186	3.48%	0.20%	26.52%
Newark, NJ-PA (MSAD)	205	2.96%	0.85%	16.36%
Niles, MI	14	8.67%	2.91%	26.54%
North Port-Sarasota-Bradenton, FL	139	4.66%	0.90%	51.64%
Norwich-New London, CT	195	3.22%	4.82%	12.44%
Oakland-Berkeley-Livermore, CA (MSAD)	225	2.13%	0.53%	48.39%
Ogden-Clearfield, UT	17	8.49%	2.42%	50.05%
Oklahoma City, OK	219	2.59%	0.47%	21.13%
Olympia-Lacey-Tumwater, WA	16	8.57%	3.82%	50.96%
Omaha-Council Bluffs, NE-IA	85	5.76%	3.10%	31.81%
Orlando-Kissimmee-Sanford, FL	50	6.76%	1.75%	54.48%
Oshkosh-Neenah, WI	187	3.44%	1.28%	24.73%
Oxnard-Thousand Oaks-Ventura, CA	210	2.81%	0.79%	28.91%
Palm Bay-Melbourne-Titusville, FL	158	4.31%	1.69%	66.59%

\*Rankings based on annual percentage change for all MSAs containing at least 15,000 transactions over the last 10 years.

## Rankings by Metropolitan Areas

### Percent Change in House Prices with MSA Rankings

All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
Pensacola-Ferry Pass-Brent, FL	30	7.54%	2.29%	41.91%
Peoria, IL	227	1.93%	0.29%	3.07%
Philadelphia, PA (MSAD)	95	5.65%	1.84%	29.18%
Phoenix-Mesa-Chandler, AZ	36	7.23%	1.91%	45.40%
Pittsburgh, PA	98	5.61%	3.03%	25.02%
Port St. Lucie, FL	193	3.29%	-1.40%	63.68%
Portland-South Portland, ME	100	5.60%	1.83%	29.57%
Portland-Vancouver-Hillsboro, OR-WA	190	3.38%	1.54%	50.22%
Poughkeepsie-Newburgh-Middletown, NY	56	6.54%	1.16%	21.66%
Prescott Valley-Prescott, AZ	69	6.28%	1.67%	48.16%
Providence-Warwick, RI-MA	154	4.38%	1.71%	30.02%
Provo-Orem, UT	12	8.93%	1.81%	47.24%
Racine, WI	115	5.17%	1.67%	30.87%
Raleigh-Cary, NC	129	4.95%	-1.17%	34.52%
Reading, PA	147	4.51%	-0.09%	19.15%
Redding, CA	90	5.73%	0.94%	30.92%
Reno, NV	73	6.16%	2.26%	68.72%
Richmond, VA	91	5.71%	3.42%	28.58%
Riverside-San Bernardino-Ontario, CA	160	4.17%	0.96%	38.02%
Roanoke, VA	94	5.65%	2.33%	16.29%
Rochester, MN	136	4.74%	1.43%	31.97%
Rochester, NY	131	4.84%	3.78%	20.78%
Rockford, IL	201	3.06%	3.47%	19.06%
Rockingham County-Strafford County, NH (MSAD)	117	5.15%	2.93%	31.30%
Sacramento-Roseville-Folsom, CA	197	3.15%	-1.02%	41.27%
Salem, OR	55	6.56%	1.98%	59.89%
Salinas, CA	138	4.70%	1.58%	46.58%
Salisbury, MD-DE	19	8.41%	1.54%	21.14%
Salt Lake City, UT	26	7.71%	1.69%	47.57%
San Antonio-New Braunfels, TX	44	6.83%	1.91%	39.79%
San Diego-Chula Vista-Carlsbad, CA	217	2.62%	0.95%	34.50%
San Francisco-San Mateo-Redwood City, CA (MSAD)	239	-0.05%	0.77%	48.50%

\*Rankings based on annual percentage change for all MSAs containing at least 15,000 transactions over the last 10 years.

## Rankings by Metropolitan Areas

### Percent Change in House Prices with MSA Rankings

All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
San Jose-Sunnyvale-Santa Clara, CA	237	0.26%	0.44%	45.59%
San Luis Obispo-Paso Robles, CA	170	3.83%	2.54%	33.82%
San Rafael, CA (MSAD)	241	-2.22%	-0.80%	29.31%
Santa Cruz-Watsonville, CA	178	3.66%	2.14%	42.01%
Santa Maria-Santa Barbara, CA	224	2.18%	0.79%	29.79%
Santa Rosa-Petaluma, CA	240	-0.09%	-0.12%	42.87%
Savannah, GA	23	7.80%	4.67%	35.21%
Scranton--Wilkes-Barre, PA	84	5.84%	0.26%	10.68%
Seattle-Bellevue-Kent, WA (MSAD)	233	1.37%	1.25%	59.88%
Sheboygan, WI	118	5.12%	4.82%	29.92%
Shreveport-Bossier City, LA	204	2.98%	0.00%	8.03%
Sioux City, IA-NE-SD	218	2.61%	1.34%	28.02%
Sioux Falls, SD	60	6.43%	0.64%	30.95%
South Bend-Mishawaka, IN-MI	79	6.03%	3.20%	31.23%
Spokane-Spokane Valley, WA	5	11.26%	4.37%	52.00%
Springfield, IL	230	1.68%	1.72%	10.01%
Springfield, MA	175	3.74%	2.24%	18.79%
Springfield, MO	101	5.51%	1.71%	25.11%
St. Cloud, MN	159	4.22%	2.36%	25.27%
St. George, UT	11	8.95%	0.86%	43.29%
St. Louis, MO-IL	157	4.33%	1.85%	23.37%
Stockton, CA	121	5.07%	1.61%	48.28%
Syracuse, NY	168	3.98%	3.64%	16.81%
Tacoma-Lakewood, WA (MSAD)	52	6.65%	2.98%	64.88%
Tampa-St. Petersburg-Clearwater, FL	40	7.04%	2.45%	57.35%
Toledo, OH	78	6.07%	1.73%	24.70%
Topeka, KS	99	5.60%	5.84%	20.85%
Trenton-Princeton, NJ	212	2.74%	2.62%	11.34%
Tucson, AZ	81	5.96%	0.32%	32.91%
Tulsa, OK	182	3.59%	0.89%	21.41%
Urban Honolulu, HI	228	1.87%	0.36%	27.66%
Vallejo, CA	184	3.53%	1.33%	47.77%

\*Rankings based on annual percentage change for all MSAs containing at least 15,000 transactions over the last 10 years.

## Rankings by Metropolitan Areas

### Percent Change in House Prices with MSA Rankings

All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	National Ranking*	1-Yr	Qtr	5-Yr
Virginia Beach-Norfolk-Newport News, VA-NC	202	3.06%	0.57%	14.27%
Visalia, CA	172	3.81%	1.74%	35.42%
Warren-Troy-Farmington Hills, MI (MSAD)	111	5.28%	2.29%	36.81%
Washington-Arlington-Alexandria, DC-VA-MD-WV (MSAD)	135	4.81%	2.12%	23.45%
Waterloo-Cedar Falls, IA	181	3.61%	1.47%	11.59%
Wausau-Weston, WI	143	4.60%	2.62%	23.13%
Wenatchee, WA	33	7.45%	-0.24%	48.87%
West Palm Beach-Boca Raton-Boynton Beach, FL (MSAD)	146	4.54%	0.33%	50.48%
Wichita, KS	75	6.12%	3.02%	25.05%
Wilmington, DE-MD-NJ (MSAD)	132	4.83%	1.80%	14.50%
Wilmington, NC	39	7.10%	2.91%	37.01%
Winston-Salem, NC	35	7.27%	2.52%	24.83%
Worcester, MA-CT	164	4.04%	1.30%	26.48%
Yakima, WA	10	9.14%	2.98%	41.11%
York-Hanover, PA	109	5.34%	2.10%	16.00%
Youngstown-Warren-Boardman, OH-PA	169	3.90%	2.11%	19.52%
Yuba City, CA	67	6.32%	2.02%	45.37%

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

For composition of metropolitan statistical areas and divisions see FHFA HPI FAQs #7 and #8 or <https://www.whitehouse.gov/wp-content/uploads/2018/09/Bulletin-18-04.pdf>.

**Source:** FHFA

\*Rankings based on annual percentage change for all MSAs containing at least 15,000 transactions over the last 10 years.

**Unranked Metropolitan Areas**  
**Percent Change in House Prices for MSAs and**  
**Divisions Not Ranked in Previous Tables**  
All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	1-Yr	5-Yr
Abilene, TX	1.40%	23.67%
Albany, GA	6.70%	16.60%
Albany-Lebanon, OR	9.70%	62.91%
Alexandria, LA	-0.87%	9.77%
Altoona, PA	1.40%	14.93%
Anniston-Oxford, AL	5.42%	12.69%
Auburn-Opelika, AL	8.68%	30.17%
Bangor, ME	2.86%	14.96%
Battle Creek, MI	7.10%	31.14%
Bay City, MI	7.09%	20.95%
Beaumont-Port Arthur, TX	6.84%	25.25%
Beckley, WV	-2.35%	-3.96%
Binghamton, NY	-0.76%	4.39%
Blacksburg-Christiansburg, VA	6.44%	18.15%
Bloomsburg-Berwick, PA	2.64%	11.06%
Brownsville-Harlingen, TX	4.52%	15.72%
Brunswick, GA	3.55%	36.99%
Burlington, NC	4.96%	26.60%
California-Lexington Park, MD	1.00%	12.04%
Cape Girardeau, MO-IL	5.22%	12.29%
Carbondale-Marion, IL	-4.56%	3.00%
Carson City, NV	6.10%	67.93%
Casper, WY	2.61%	7.65%
Chambersburg-Waynesboro, PA	6.04%	9.57%
Charleston, WV	-0.48%	6.45%
Cheyenne, WY	7.11%	29.33%
Clarksville, TN-KY	6.18%	24.79%
Cleveland, TN	8.66%	24.93%

**Unranked Metropolitan Areas**  
**Percent Change in House Prices for MSAs and**  
**Divisions Not Ranked in Previous Tables**  
All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	1-Yr	5-Yr
College Station-Bryan, TX	7.04%	39.61%
Columbus, GA-AL	1.45%	10.75%
Columbus, IN	5.21%	22.30%
Corpus Christi, TX	2.25%	18.28%
Corvallis, OR	8.06%	42.57%
Crestview-Fort Walton Beach-Destin, FL	9.59%	42.95%
Cumberland, MD-WV	3.91%	8.43%
Dalton, GA	6.91%	29.27%
Danville, IL	3.91%	9.21%
Daphne-Fairhope-Foley, AL	2.84%	33.29%
Decatur, AL	1.58%	12.81%
Decatur, IL	1.49%	9.40%
Dothan, AL	4.86%	13.38%
Dover, DE	2.77%	19.75%
East Stroudsburg, PA	7.60%	28.73%
El Centro, CA	5.59%	41.62%
Elizabethtown-Fort Knox, KY	2.33%	17.75%
Elmira, NY	5.27%	10.16%
Enid, OK	3.54%	13.57%
Erie, PA	3.40%	9.53%
Fairbanks, AK	-4.99%	9.95%
Farmington, NM	3.75%	-1.11%
Fayetteville, NC	4.91%	10.91%
Flagstaff, AZ	5.04%	38.31%
Florence, SC	-0.58%	9.95%
Florence-Muscle Shoals, AL	0.98%	10.79%
Fort Smith, AR-OK	7.74%	15.41%
Gadsden, AL	6.14%	14.11%

**Unranked Metropolitan Areas**  
**Percent Change in House Prices for MSAs and**  
**Divisions Not Ranked in Previous Tables**  
All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	1-Yr	5-Yr
Gainesville, FL	6.21%	41.52%
Gainesville, GA	8.56%	44.21%
Gettysburg, PA	1.50%	17.57%
Glens Falls, NY	-1.49%	6.53%
Goldsboro, NC	0.24%	4.78%
Grand Forks, ND-MN	-0.13%	15.13%
Grand Island, NE	1.87%	25.47%
Grand Junction, CO	8.83%	42.23%
Grants Pass, OR	5.10%	44.30%
Great Falls, MT	1.52%	16.79%
Greenville, NC	5.82%	14.99%
Hammond, LA	-0.33%	12.47%
Hanford-Corcoran, CA	4.68%	36.44%
Harrisonburg, VA	4.00%	20.60%
Hattiesburg, MS	2.09%	12.33%
Hilton Head Island-Bluffton, SC	3.52%	29.65%
Homosassa Springs, FL	5.99%	53.30%
Hot Springs, AR	4.99%	16.65%
Houma-Thibodaux, LA	1.31%	10.07%
Ithaca, NY	1.31%	4.76%
Jackson, MI	7.87%	37.51%
Jackson, TN	7.50%	22.54%
Jacksonville, NC	8.18%	19.95%
Johnson City, TN	7.44%	18.96%
Johnstown, PA	2.11%	5.33%
Jonesboro, AR	1.61%	16.68%
Joplin, MO	4.12%	14.42%
Kahului-Wailuku-Lahaina, HI	7.95%	39.23%

**Unranked Metropolitan Areas**  
**Percent Change in House Prices for MSAs and**  
**Divisions Not Ranked in Previous Tables**  
All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	1-Yr	5-Yr
Kankakee, IL	7.55%	17.68%
Killeen-Temple, TX	8.07%	29.38%
Kingsport-Bristol, TN-VA	9.48%	19.49%
Kingston, NY	8.08%	24.87%
Kokomo, IN	-0.10%	24.08%
Lake Charles, LA	5.82%	24.01%
Laredo, TX	5.93%	27.51%
Las Cruces, NM	5.73%	17.44%
Lawrence, KS	5.59%	22.81%
Lawton, OK	0.82%	2.29%
Lebanon, PA	2.92%	14.31%
Lewiston, ID-WA	7.71%	32.11%
Lewiston-Auburn, ME	4.30%	21.53%
Lima, OH	4.84%	23.25%
Longview, TX	7.17%	15.52%
Longview, WA	9.28%	63.32%
Macon-Bibb County, GA	6.34%	16.77%
Madera, CA	8.31%	42.42%
Manhattan, KS	2.41%	12.85%
Mansfield, OH	7.25%	28.85%
McAllen-Edinburg-Mission, TX	2.71%	21.67%
Michigan City-La Porte, IN	8.97%	25.81%
Midland, MI	6.96%	20.18%
Midland, TX	9.45%	30.72%
Monroe, LA	3.01%	12.82%
Morgantown, WV	3.45%	20.73%
Morristown, TN	5.84%	23.64%
Muncie, IN	5.53%	18.51%

**Unranked Metropolitan Areas**  
**Percent Change in House Prices for MSAs and**  
**Divisions Not Ranked in Previous Tables**  
All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	1-Yr	5-Yr
Naples-Marco Island, FL	1.79%	44.53%
New Bern, NC	3.62%	15.17%
Ocala, FL	12.70%	49.33%
Ocean City, NJ	7.31%	17.96%
Odessa, TX	10.85%	31.44%
Owensboro, KY	1.66%	22.21%
Panama City, FL	10.60%	42.47%
Parkersburg-Vienna, WV	2.02%	14.22%
Pine Bluff, AR	11.36%	22.89%
Pittsfield, MA	6.61%	13.83%
Pocatello, ID	11.58%	39.91%
Pueblo, CO	8.54%	51.57%
Punta Gorda, FL	5.39%	54.04%
Rapid City, SD	7.42%	25.52%
Rocky Mount, NC	2.89%	9.37%
Rome, GA	5.48%	26.83%
Saginaw, MI	7.98%	22.42%
San Angelo, TX	4.11%	19.50%
Santa Fe, NM	8.12%	30.16%
Sebastian-Vero Beach, FL	3.65%	65.01%
Sebring-Avon Park, FL	7.06%	52.56%
Sherman-Denison, TX	6.82%	51.84%
Sierra Vista-Douglas, AZ	5.85%	21.01%
Spartanburg, SC	10.86%	36.20%
Springfield, OH	9.10%	25.88%
St. Joseph, MO-KS	1.30%	15.09%
State College, PA	5.72%	24.27%
Staunton, VA	6.36%	19.38%

**Unranked Metropolitan Areas**  
**Percent Change in House Prices for MSAs and**  
**Divisions Not Ranked in Previous Tables**  
All-transactions HPI which includes purchase and refinance mortgages

***Period ended June 30, 2019***

Metropolitan Statistical Area	1-Yr	5-Yr
Sumter, SC	12.60%	21.52%
Tallahassee, FL	3.98%	28.92%
Terre Haute, IN	1.42%	19.13%
Texarkana, TX-AR	9.17%	20.59%
The Villages, FL	4.97%	22.03%
Tuscaloosa, AL	4.62%	20.57%
Twin Falls, ID	11.40%	48.84%
Tyler, TX	6.95%	26.88%
Utica-Rome, NY	3.58%	16.61%
Valdosta, GA	-1.41%	4.26%
Victoria, TX	0.86%	9.08%
Vineland-Bridgeton, NJ	10.91%	14.63%
Waco, TX	4.45%	38.61%
Walla Walla, WA	11.21%	38.28%
Warner Robins, GA	5.67%	17.85%
Watertown-Fort Drum, NY	13.76%	5.00%
Weirton-Steubenville, WV-OH	7.10%	22.63%
Wheeling, WV-OH	1.65%	16.94%
Wichita Falls, TX	3.29%	17.56%
Williamsport, PA	1.53%	5.72%
Winchester, VA-WV	6.70%	19.93%
Yuma, AZ	7.44%	24.89%

For composition of metropolitan statistical areas and divisions see FHFA HPI FAQs #7 and #8 or <https://www.whitehouse.gov/wp-content/uploads/2018/09/Bulletin-18-04.pdf>.

**Source:** FHFA

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# HOUSE PRICE INDEX (HPI) STATISTICAL REPORT

## Purchase-Only House Price Index

### **1<sup>st</sup> Quarter 1991\* to 2<sup>nd</sup> Quarter 2019**

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This report contains the index number and standard error for each quarterly census division and state HPI since the first quarter of 1991. The number in each column is the index number. The number in parentheses is the standard error, which indicates the relative precision of the index number estimate.

The higher the standard error, the larger the range of possible statistical error. Higher error numbers are generally associated with areas having relatively few repeat transactions and with areas experiencing more pronounced economic cycles which can result in wide swings in house prices.

This report also contains house price volatility parameter estimates and annualized volatility estimates for each division and state index. The United States index is constructed to reflect the weighted average quarterly price change for the fifty states and Washington, D.C. The weights are the estimated share of one-unit detached housing units in the respective states. For details on the index methodology and derivation of standard errors and volatility estimates, see the paper *OFHEO House Price Indexes: HPI Technical Description*. This paper is available upon request from FHFA or at <https://www.fhfa.gov/PolicyProgramsResearch/Research/Pages/HPI-Technical-Description.aspx>.

**\*Note that, prior to the release of the 2009Q1 data, the index values reported in this section of the HPI report reflected the “all-transactions” HPI, which is estimated using sales prices and appraisal values.** The all-transactions indexes and the associated volatility parameters are still available for download at <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx#atvol>.

You may also inquire with House Price Index questions on the Data and Research Contact page at <https://www.fhfa.gov/AboutUs/Contact/Pages/Data-and-Research-Form.aspx>.

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## 2019 Q2 Volatility Parameter Estimates

Not Seasonally Adjusted, Purchase-Only HPI

Division/State	A Parameter*	B Parameter*	Annualized Volatility Estimate (Four Quarter)
Alabama	0.0014230770	-0.0000017031	0.0752665863
Alaska	0.0008895792	-0.0000042158	0.0590835389
Arizona	0.0016619057	-0.0000060796	0.0809342327
Arkansas	0.0010850249	0.0000014816	0.0660591043
California	0.0015473049	-0.0000043519	0.0782278020
Colorado	0.0015920676	-0.0000050706	0.0792914933
Connecticut	0.0012856048	-0.0000035533	0.0713131560
Delaware	0.0012943723	-0.0000050174	0.0713947476
District of Columbia	0.0024230256	-0.0000101386	0.0976211326
Florida	0.0018754611	-0.0000043968	0.0862061205
Georgia	0.0017389681	-0.0000004378	0.0833598679
Hawaii	0.0021698231	-0.0000107134	0.0922381581
Idaho	0.0017569728	-0.0000078365	0.0830813300
Illinois	0.0014227887	-0.0000005781	0.0753784175
Indiana	0.0015970512	-0.0000055411	0.0793696834
Iowa	0.0011516209	-0.0000038233	0.0674189212
Kansas	0.0011389223	-0.0000018786	0.0672728095
Kentucky	0.0010289345	-0.0000013981	0.0639794348
Louisiana	0.0013404228	-0.0000016946	0.0730381902
Maine	0.0016269816	-0.0000062906	0.0800454672
Maryland	0.0014298688	-0.0000045760	0.0751415988
Massachusetts	0.0013833377	-0.0000050027	0.0738465091
Michigan	0.0017103898	-0.0000065577	0.0820770169
Minnesota	0.0013139134	-0.0000033299	0.0721274890
Mississippi	0.0014259170	-0.0000049347	0.0749980859
Missouri	0.0013878671	-0.0000013691	0.0743610339
Montana	0.0014557959	-0.0000052268	0.0757598526
Nebraska	0.0010178555	-0.0000020694	0.0635477075
Nevada	0.0012128743	-0.0000059611	0.0689646261
New Hampshire	0.0013098117	-0.0000065785	0.0716518756
New Jersey	0.0015696348	-0.0000049093	0.0787400159
New Mexico	0.0012383863	-0.0000043669	0.0698832901
New York	0.0021586529	-0.0000024039	0.0927154191
North Carolina	0.0016628404	-0.0000025910	0.0813013224
North Dakota	0.0012163322	-0.0000051244	0.0691616781
Ohio	0.0013791054	-0.0000028214	0.0739680920
Oklahoma	0.0014414425	-0.0000047626	0.0754292242
Oregon	0.0015438715	-0.0000043834	0.0781367467
Pennsylvania	0.0016027543	-0.0000015522	0.0799135938
Rhode Island	0.0012994199	-0.0000046580	0.0715761968
South Carolina	0.0016324116	-0.0000007479	0.0807321479

## 2019 Q2 Volatility Parameter Estimates

Not Seasonally Adjusted, Purchase-Only HPI

Division/State	A Parameter*	B Parameter*	Annualized Volatility Estimate (Four Quarter)
South Dakota	0.0009702258	-0.0000016104	0.0620897408
Tennessee	0.0014414399	-0.0000012975	0.0757957761
Texas	0.0017884988	-0.0000031556	0.0842822987
Utah	0.0010127098	-0.0000026428	0.0633131486
Vermont	0.0014230741	-0.0000053976	0.0748727870
Virginia	0.0013512338	-0.0000029921	0.0731919547
Washington	0.0012892582	-0.0000004551	0.0717617704
West Virginia	0.0019967214	-0.0000091164	0.0885495571
Wisconsin	0.0012179506	-0.0000030572	0.0694470104
Wyoming	0.0013923744	-0.0000063565	0.0739445332

\*For details on how these values are constructed and information on what they represent, see  
<https://www.fhfa.gov/PolicyProgramsResearch/Research/Pages/HPI-Technical-Description.aspx>.

**Source:** FHFA