FHFA

House Price Index (HPI) Monthly Report

DATA THROUGH OCTOBER 2023

FHFA HPI report contents

FEDERAL HOUSING FINANCE AGENCY

NEWS RELEASE

FHFA House Price Index Up 0.3 Percent in October; Up 6.3 Percent from Last Year

Washington, D.C. – U.S. house prices rose in October, up **0.3 percent** from September, according to the Federal Housing Finance Agency (FHFA) seasonally adjusted monthly House Price Index (HPI®). House prices rose **6.3 percent** from October 2022 to October 2023. The previously reported 0.6 percent price increase in September was revised to a 0.7 percent increase.

For the nine census divisions, seasonally adjusted monthly price changes from September 2023 to October 2023 ranged from **-0.3** percent in the New England division to **+1.1** percent in the Middle Atlantic division. The 12-month changes ranged from +**2.6** percent in the Mountain division to +**9.9** percent in the Middle Atlantic division.

"U.S. house price gains remained strong over the last 12 months." said Dr. Nataliya Polkovnichenko, Supervisory Economist in FHFA's Division of Research and Statistics. "On a monthly basis, price appreciation moderated in October, with four divisions exhibiting slowdowns from the previous month."

The FHFA HPI is a comprehensive collection of publicly available house price indexes that measure changes in single-family home values based on data that extend back to the mid-1970s from all 50 states and over 400 American cities. It incorporates tens of millions of home sales and offers insights about house price changes at the national, census division, state, metro area, county, ZIP code, and census tract levels. FHFA uses a fully transparent methodology based upon a weighted, repeat-sales statistical technique to analyze house price transaction data.

FHFA releases HPI data and reports quarterly and monthly. The flagship FHFA HPI uses seasonally adjusted, purchase-only data from Fannie Mae and Freddie Mac. Additional indexes use other data, including refinances, Federal Housing Administration mortgages, and real property records. All the indexes, including their historic values, and information about future HPI release dates, are available on FHFA's website: https://www.fhfa.gov/HPI.

FHFA will release its next HPI report on January 30, 2024, including monthly data through November 2023.

Tabulating trends

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

Purchase-Only FHFA HPI® (Seasonally Adjusted, Nominal)

	U.S.	Pacific	Mountain	West North Central	West South Central	East North Central	East South Central	New England	Middle Atlantic	South Atlantic
Sep 23 - Oct 23	**0.3%**	**0.0%**	**-0.2%**	**0.2%**	**0.0%**	**0.8%**	**1.0%**	**-0.3%**	**1.1%**	**0.1%**
Aug 23 - Sep 23	**0.7%**	**-0.2%**	**0.8%**	**0.1%**	**0.9%**	**0.5%**	**0.9%**	**1.5%**	**0.2%**	**1.4%**
(Previous Estimate)	*0.6%*	*-0.4%*	*0.6%*	*0.3%*	*0.6%*	*0.4%*	*1.2%*	*1.6%*	*0.1%*	*1.4%*
Jul 23 - Aug 23	**0.7%**	**1.0%**	**0.8%**	**0.9%**	**0.4%**	**1.1%**	**0.4%**	**0.7%**	**1.2%**	**0.2%**
(Previous Estimate)	*0.7%*	*1.0%*	*0.8%*	*0.9%*	*0.4%*	*1.1%*	*0.4%*	*0.6%*	*1.2%*	*0.2%*
Jun 23 - Jul 23	**0.8%**	**0.4%**	**0.6%**	**0.8%**	**0.6%**	**1.2%**	**0.6%**	**1.1%**	**1.2%**	**0.9%**
(Previous Estimate)	*0.8%*	*0.4%*	*0.6%*	*0.7%*	*0.6%*	*1.1%*	*0.6%*	*1.1%*	*1.2%*	*1.0%*
May 23 - Jun 23	**0.5%**	**0.5%**	**0.9%**	**0.5%**	**-0.5%**	**0.0%**	**0.5%**	**2.2%**	**1.1%**	**0.9%**
(Previous Estimate)	*0.5%*	*0.6%*	*0.9%*	*0.5%*	*-0.6%*	*0.0%*	*0.5%*	*2.1%*	*1.0%*	*0.9%*
Apr 23 - May 23	**0.8%**	**1.7%**	**0.3%**	**0.7%**	**0.6%**	**1.2%**	**0.3%**	**-0.5%**	**0.0%**	**0.8%**
(Previous Estimate)	*0.8%*	*1.7%*	*0.4%*	*0.7%*	*0.7%*	*1.2%*	*0.3%*	*-0.7%*	*0.0%*	*0.8%*
12-Month Change:										
Oct 22 - Oct 23	**6.3%**	**2.8%**	**2.6%**	**6.4%**	**3.6%**	**9.1%**	**6.3%**	**9.7%**	**9.9%**	**7.2%**

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

Purchase-Only FHFA HPI® (Seasonally Adjusted, Nominal, 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
October-23	416.3	457.0	587.7	392.6	418.0	340.3	392.9	406.2	367.1	451.5
September-23	414.9	457.0	588.8	391.8	418.1	337.7	388.9	407.2	363.1	451.0
August-23	412.1	457.8	583.8	391.3	414.3	336.1	385.6	401.2	362.4	444.7
July-23	409.2	453.4	579.2	387.8	412.8	332.3	384.2	398.3	357.9	443.7
June-23	405.8	451.7	575.6	384.9	410.5	328.5	381.8	393.9	353.7	439.6
May-23	403.7	449.3	570.5	383.1	412.4	328.5	380.0	385.5	350.0	435.9
April-23	400.7	441.8	568.5	380.2	409.8	324.5	378.9	387.5	350.0	432.2
March-23	397.6	439.8	564.9	378.1	408.1	321.6	379.0	380.3	343.3	429.7
February-23	395.5	438.0	570.7	375.7	406.6	317.1	377.4	379.8	340.5	427.4
January-23	392.2	437.6	563.9	372.0	401.0	314.9	371.9	374.2	336.6	425.4
December-22	391.9	439.4	563.5	369.7	404.0	314.5	372.9	367.5	336.5	423.4
November-22	391.4	439.2	565.8	371.3	405.4	312.6	366.4	368.9	337.7	422.2
October-22	391.5	444.4	572.8	369.0	403.4	311.9	369.5	370.2	334.0	421.3
September-22	390.8	446.8	568.6	368.6	401.0	311.7	369.6	364.9	335.2	419.8
August-22	389.3	444.9	568.3	366.9	401.6	310.0	366.3	368.4	332.9	417.4
July-22	390.8	449.6	577.4	367.0	402.1	310.3	366.1	367.8	334.3	418.5
June-22	392.7	453.7	583.3	366.6	403.5	310.3	366.5	368.8	336.9	421.3
May-22	391.8	455.9	587.7	367.4	402.1	310.7	362.5	371.3	333.0	417.9

Source: FHFA

Visualizing trends

Monthly House Price Index for U.S. from January 1991 - Present
Purchase-Only FHFA HPI® (Seasonally Adjusted, Nominal)

Compound Annual Growth Rate Since January 1991: 4.5%
Compound Annual Growth Rate Since January 2000: 4.8%
Compound Annual Growth Rate Since January 2012: 7.5%
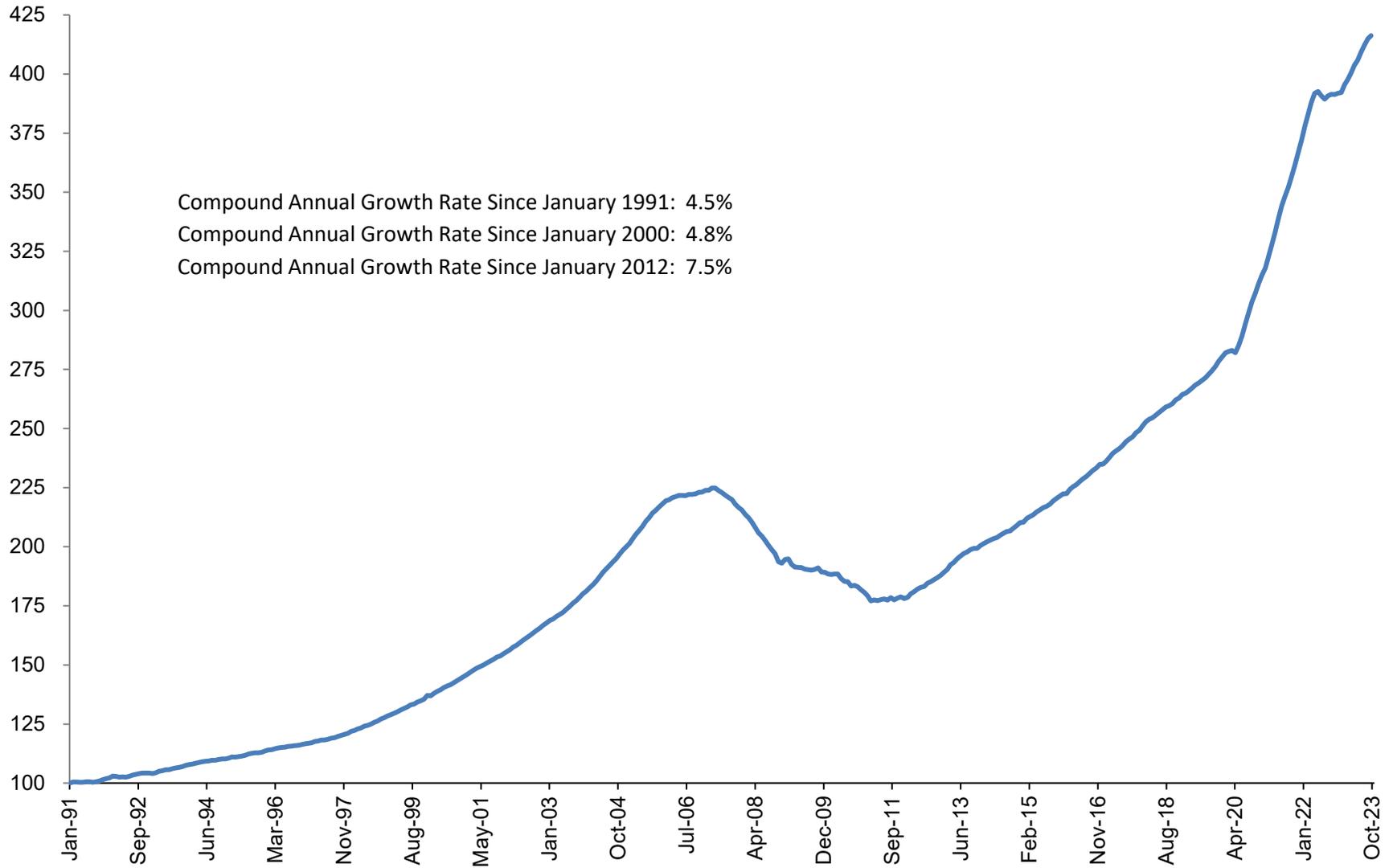
Source: FHFA

Cumulative House Price Change Relative to the 2007 Peak for U.S.

Purchase-Only FHFA HPI® (Seasonally Adjusted, Nominal)

85.1%

Source: FHFA

Twelve-Month House Price Changes – Prior Year vs. Most Recent Year
Purchase-Only FHFA HPI® (Seasonally Adjusted, Nominal)

■ Price Change: 10/2021 - 10/2022   ■ Price Change: 10/2022 - 10/2023

Region	10/2021 - 10/2022	10/2022 - 10/2023
U.S.	9.7%	6.3%
Pacific	4.8%	2.8%
Mountain	8.4%	2.6%
West North Central	8.6%	6.4%
West South Central	10.6%	3.6%
East North Central	9.0%	9.1%
East South Central	11.8%	6.3%
New England	10.0%	9.7%
Middle Atlantic	8.5%	9.9%
South Atlantic	13.9%	7.2%
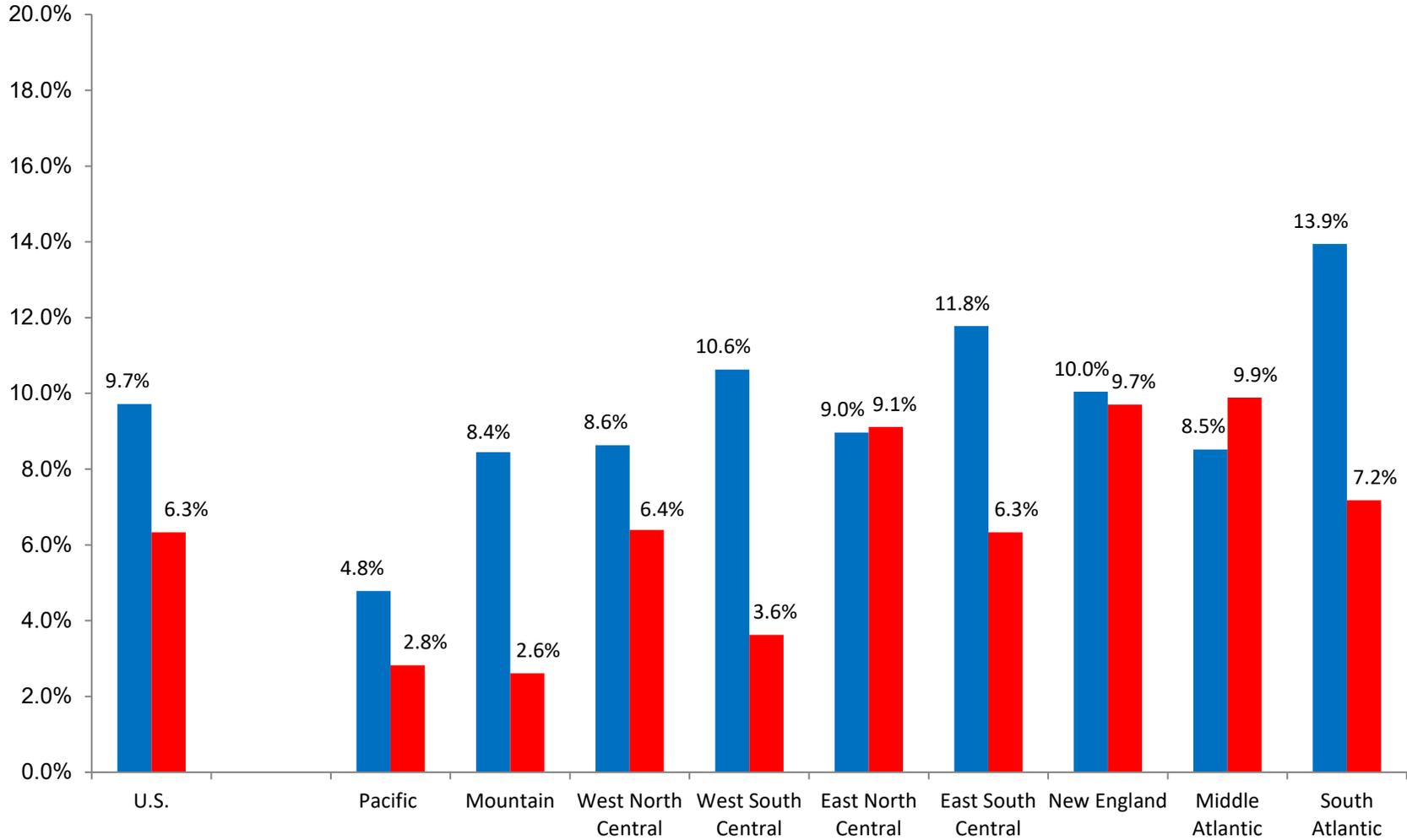
Source: FHFA

Technical note

Technical Note

Source Update for County Recorder Data and Its Impact on FHFA HPI®

The Federal Housing Finance Agency (FHFA) first introduced the Expanded-Data House Price Indexes (ED HPI) in the second quarter of 2011. The intent of the ED HPI is to reflect price trends in the broader housing markets rather than only the houses purchased with Fannie Mae and Freddie Mac (the Enterprises) financing.[1] The ED HPI are produced using three data sources:

- Information on mortgages that the Enterprises purchase or securitize;
- Information on mortgage transactions that the Federal Housing Administration (FHA) backs; and
- Sales price information from county recorder offices.

FHFA receives information on mortgages purchased by the Enterprises and FHA directly from those organizations. FHFA licenses county recorder office data from an external data vendor.

FHFA's previous external data vendor license expired in July 2023. A new licensing contract was awarded in the same month. The third quarter of 2023 is the first quarter that FHFA estimated the ED HPI using the newly licensed data. The aggregate impact of the change in the licensed data on the ED HPI was minimal at the national and census division levels. However, some lower-level geographies changed more significantly primarily because of greater geographic coverage and increased volume of recorded transactions. This Technical Note outlines the nature of the data update and summarizes the impact of the update on the ED HPI. The following is organized as a series of key questions and answers related to the change in licensed data used to compute the indexes.

What are the data sources FHFA uses in the FHFA HPI®, and what is the significance of county recorder data?

Conventional mortgages that the Enterprises purchase or securitize continue to form the primary basis for most FHFA HPIs such as the monthly and quarterly Purchase-Only and All-Transactions indexes. However, the intent of the ED HPI is to capture a broader representation of price movement for all single-family homes. This is accomplished by augmenting the house price data from the Enterprises with price data from FHA and county recorders. For example, county recorder data include housing transactions involving non-conforming loans and cash purchases which are not included in the Enterprises' data. Consequently, the expanded dataset

---

[1] FHFA released the ED HPI in 2011Q2 along with a Highlights article at
https://www.fhfa.gov/DataTools/Downloads/Documents/HPI_Focus_Pieces/2011Q2_HPIFocus_N508.pdf

more than doubles the number of sales transactions compared to the Enterprise data alone, and also incorporates transactions for housing market segments not served by the Enterprises.

How does the new county recorder data source differ from the previous one?

The basic nature of the data remains the same with both datasets containing real estate sales transactions that individual county offices recorded. However, the newly licensed county sales record data include significantly greater coverage than the previously used dataset. Data from 3,082 counties, representing 98 percent of all U.S. counties, are now used to compute the expanded data indexes. Previously data were only available for 1,000 counties. Figure 1A shows the map of all U.S. counties the previous source covered, whereas Figure 1B shows all counties covered in the updated source. Also, the new dataset adds many sales records from periods prior to 2000, providing denser and more consistent samples that allow the ED HPI to better capture earlier historical price trends.

How does the source update affect the ED HPI?

To test the impact of the data source change, FHFA calculated the ED HPI for the second quarter of 2023 using both the previous and new licensed datasets. All other data used in the calculations were kept the same.

FHFA observed modest changes for the national index and most regional-level indexes. Several states and metropolitan areas, however, had notable changes in the index series due to additional coverage within their respective geographical boundaries.

What is the effect of the source update on the National ED HPI?

Figure 2 displays the seasonally adjusted U.S. (national) index series for two series: the series FHFA published in August estimated with the previous county recorder data source (black solid line), and the test series with the newer source data (blue dotted line). The two series track each other very closely with differences in year-over-year changes no greater than 0.5 percentage points during the most recent five years. Looking at the entire time-series range, year-over-year changes differed by at most 0.8 percentage points in the first quarter of 2008 when the new rate showed a steeper decline than previously estimated. Average annualized house price appreciation, since the first quarter of 1991, was 4.26 percent since using the new data versus 4.22 percent using the previously licensed recorder data. Table 1 presents a comparison of the ED HPI, for the second quarter of 2023, based upon the previous and new county recorder datasets.

What is the effect of the source update on the state-level and metropolitan-level ED HPI? Why?

State-level and metropolitan-level indexes typically had larger revisions in the test results due to relatively greater exposure to coverage gains with the new county recorder data. While the aggregate net impact of using the new recorder data on the national index was small, 24 states

saw their index series revised upward while 26 states and the District of Columbia saw their index series revised downward. Table 2 summarizes the state-level revisions found from the test against the ED HPI published with the FHFA HPI report from the second quarter of 2023. Changes in index levels for this quarter remained within 10 percent in 48 states and the District of Columbia. Likewise, 47 out of 50 published metro areas had index level differences within 10 percent.

Florida and Hawaii are the two states with the largest index revisions, as the sample size for each increased significantly with the new data. For Florida, there were 11.4 million unique sales records when including the new data as compared to 7.5 million using the previously available data. Hawaii's sample size growth was even more pronounced, from 129,000 unique sales records using the previous data to 283,000 using the new data. Notably, within both state-level samples, sales transactions dated between 1975[2] and 1999 more than tripled with the updated data. As shown in Table 2, the last five-year index changes are very similar between test and published indexes for both states.

The implied revisions observed for the 50 metro-level index series were generally less significant than those found at the state level for Florida and Hawaii. Table 3 presents the results by metro area. Typically, these larger revisions can be attributed to one of the following reasons:

- Significant increase of observations for previously covered counties (e.g., Tampa-St. Petersburg-Clearwater, FL);
- Newly covered counties within the metro areas (e.g., Virginia Beach-Norfolk-Newport News, VA-NC); or
- Improved quality of existing data (e.g., Philadelphia, PA).

Apart from the ED HPI are there any other FHFA HPI indexes that the update impacts?

Most other indexes, such as monthly and quarterly Purchase-Only HPI and quarterly All-Transactions HPI, are not impacted by using the new data because they do not use county recorder data. The only other affected indexes are the Distress-Free Purchase-Only indexes. FHFA primarily bases these indexes on sales transactions data from the Enterprises but incorporates distress-sale flags from various sources including the county recorder data.[3]

---

[2] Although the ED HPI start from the beginning of 1991, FHFA constructs underlying samples for these repeat-sales indexes from home purchases going back as far as the beginning of 1975. FHFA does this to ensure an adequate statistical sample size and estimation robustness of the indexes starting in 1991 and beyond.

[3] In 2024, FHFA will publish a Technical Note describing effects of the recorder data source update on Distress-Free Purchase-Only indexes.

What if I need to learn more about the update?

For more information or further questions on the source update, please contact HPIQuestions@fhfa.gov.

Figure 1A: Map of counties covered in the previous data source for country recorder data (colored in gray)
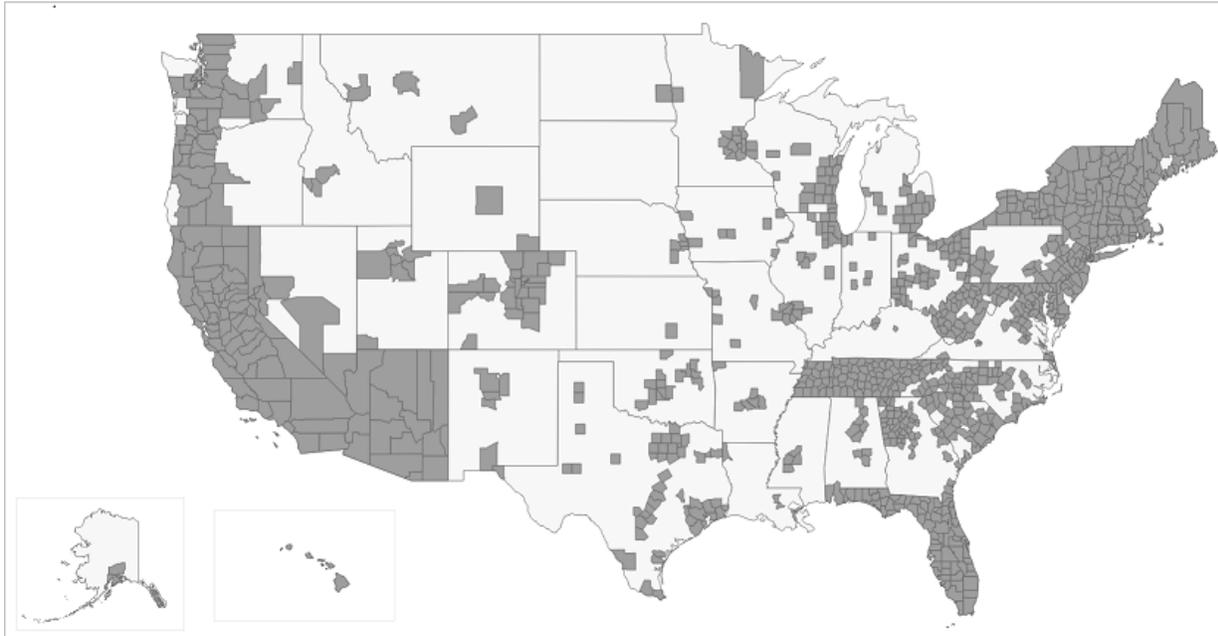
Figure 1B: Map of counties covered by the new data source for country recorder data (colored in blue)
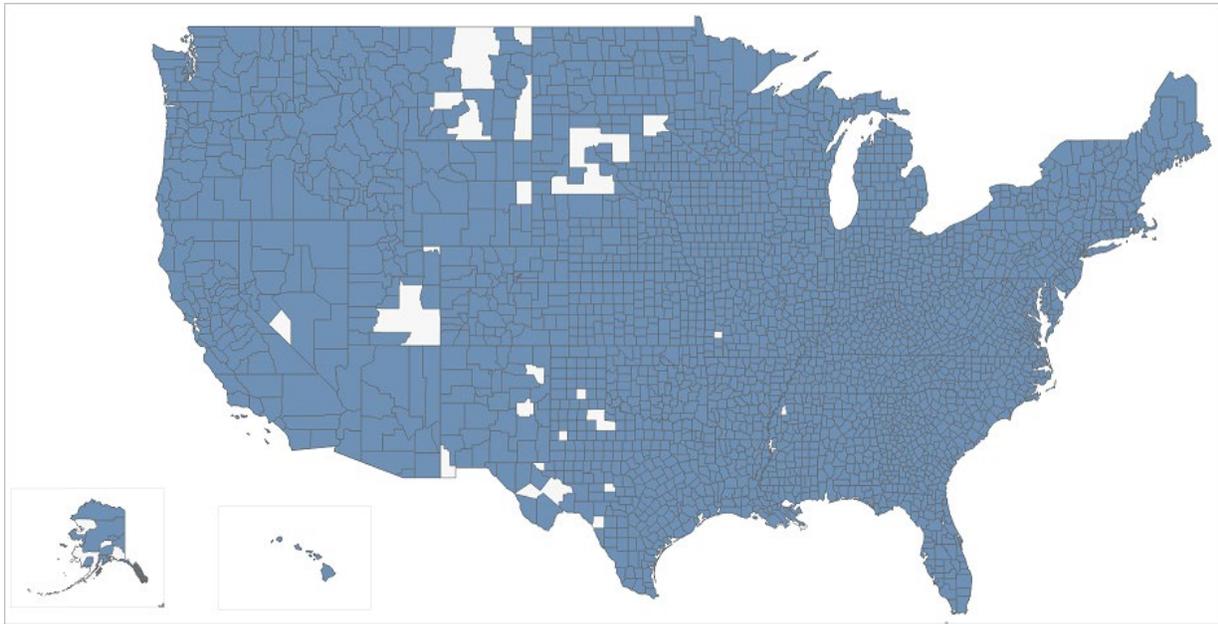
Figure 2: Test series using the new county recorder data source compared against the published series (United States, Seasonally Adjusted, 1991Q1=100)
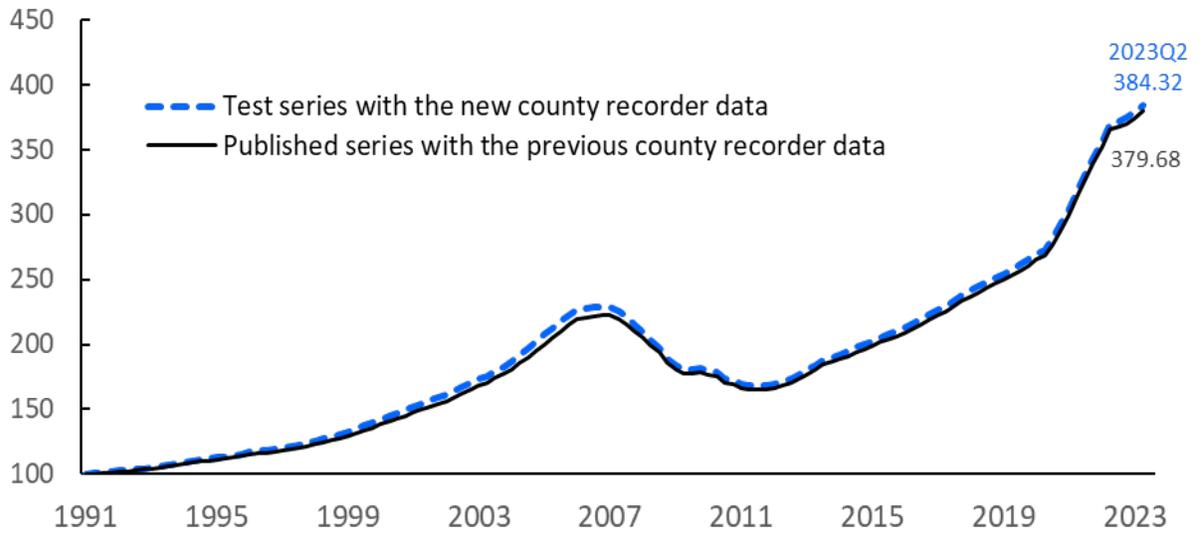
Table 1: Comparison of the Second Quarter 2023 published National ED HPI (computed using the previously licensed data) versus the test ED HPI (computed using the newly licensed data).

(United States, Seasonally Adjusted, 1991Q1=100)

Year	Quarter	US Index Published	US index Test with New Data	YoY% Published	YoY% Test with New Data	Difference in YoY% (percentage point)
1991	1	100.00	100.00			
1991	2	100.13	100.41			
1991	3	100.36	100.89			
1991	4	101.16	101.66			
1992	1	102.18	102.61	2.2	2.6	0.4
1992	2	102.15	102.93	2.0	2.5	0.5
1992	3	102.80	103.45	2.4	2.5	0.1
1992	4	103.73	104.35	2.5	2.7	0.1
1993	1	103.71	104.50	1.5	1.8	0.3
1993	2	104.82	105.54	2.6	2.5	-0.1
1993	3	105.67	106.57	2.8	3.0	0.2
1993	4	106.66	107.65	2.8	3.2	0.3
1994	1	107.79	108.70	3.9	4.0	0.1
1994	2	108.68	109.82	3.7	4.1	0.4
1994	3	109.62	110.79	3.7	4.0	0.2
1994	4	110.32	111.58	3.4	3.7	0.2
1995	1	111.11	112.60	3.1	3.6	0.5
1995	2	112.09	113.53	3.1	3.4	0.2
1995	3	113.23	114.62	3.3	3.5	0.2
1995	4	114.09	115.64	3.4	3.6	0.2
1996	1	114.95	116.77	3.5	3.7	0.2
1996	2	115.86	117.72	3.4	3.7	0.3
1996	3	116.57	118.56	3.0	3.4	0.5
1996	4	117.33	119.41	2.8	3.3	0.4
1997	1	118.23	120.46	2.9	3.2	0.3
1997	2	119.10	121.49	2.8	3.2	0.4
1997	3	120.09	122.62	3.0	3.4	0.4
1997	4	121.41	124.07	3.5	3.9	0.4
1998	1	122.87	125.58	3.9	4.2	0.3
1998	2	124.38	127.19	4.4	4.7	0.3
1998	3	125.93	128.90	4.9	5.1	0.3
1998	4	127.86	130.86	5.3	5.5	0.2
1999	1	129.74	132.90	5.6	5.8	0.2
1999	2	131.86	135.08	6.0	6.2	0.2
1999	3	133.73	137.21	6.2	6.4	0.3
1999	4	135.80	139.44	6.2	6.6	0.3
2000	1	138.37	141.97	6.6	6.8	0.2
2000	2	140.63	144.57	6.6	7.0	0.4
2000	3	142.78	146.99	6.8	7.1	0.4
2000	4	145.10	149.53	6.8	7.2	0.4
2001	1	147.55	152.18	6.6	7.2	0.5
2001	2	149.65	154.27	6.4	6.7	0.3
2001	3	151.94	156.64	6.4	6.6	0.1
2001	4	154.00	158.71	6.1	6.1	0.0
2002	1	156.34	161.29	6.0	6.0	0.0
2002	2	159.16	164.12	6.4	6.4	0.0

2002	3	162.01	167.14	6.6	6.7	0.1
2002	4	165.02	170.21	7.2	7.2	0.1
2003	1	167.94	173.09	7.4	7.3	-0.1
2003	2	170.64	175.79	7.2	7.1	-0.1
2003	3	173.95	179.10	7.4	7.2	-0.2
2003	4	177.73	182.92	7.7	7.5	-0.2
2004	1	180.87	187.20	7.7	8.2	0.4
2004	2	185.67	192.06	8.8	9.3	0.4
2004	3	190.10	196.82	9.3	9.9	0.6
2004	4	194.86	201.75	9.6	10.3	0.7
2005	1	200.29	207.74	10.7	11.0	0.2
2005	2	205.43	212.76	10.6	10.8	0.1
2005	3	210.65	218.05	10.8	10.8	0.0
2005	4	215.36	222.69	10.5	10.4	-0.1
2006	1	219.20	226.46	9.4	9.0	-0.4
2006	2	220.96	228.04	7.6	7.2	-0.4
2006	3	221.30	228.16	5.1	4.6	-0.4
2006	4	222.11	228.65	3.1	2.7	-0.5
2007	1	222.32	228.45	1.4	0.9	-0.5
2007	2	219.40	225.48	-0.7	-1.1	-0.4
2007	3	215.32	220.99	-2.7	-3.1	-0.4
2007	4	210.03	215.33	-5.4	-5.8	-0.4
2008	1	205.13	209.05	-7.7	-8.5	-0.8
2008	2	199.11	203.03	-9.2	-10.0	-0.7
2008	3	193.45	197.12	-10.2	-10.8	-0.6
2008	4	185.64	188.72	-11.6	-12.4	-0.7
2009	1	180.62	183.42	-11.9	-12.3	-0.3
2009	2	177.91	180.68	-10.6	-11.0	-0.4
2009	3	177.85	180.71	-8.1	-8.3	-0.3
2009	4	178.27	181.31	-4.0	-3.9	0.0
2010	1	176.24	179.38	-2.4	-2.2	0.2
2010	2	175.73	178.93	-1.2	-1.0	0.3
2010	3	170.65	173.35	-4.0	-4.1	0.0
2010	4	169.36	172.15	-5.0	-5.1	-0.1
2011	1	166.78	169.67	-5.4	-5.4	0.0
2011	2	165.05	167.93	-6.1	-6.1	-0.1
2011	3	165.33	168.10	-3.1	-3.0	0.1
2011	4	165.02	167.82	-2.6	-2.5	0.0
2012	1	166.33	169.30	-0.3	-0.2	0.0
2012	2	168.48	171.20	2.1	1.9	-0.1
2012	3	170.46	173.15	3.1	3.0	-0.1
2012	4	173.56	176.30	5.2	5.1	-0.1
2013	1	176.96	180.08	6.4	6.4	0.0
2013	2	180.73	183.70	7.3	7.3	0.0
2013	3	184.25	187.26	8.1	8.2	0.1
2013	4	186.38	189.68	7.4	7.6	0.2
2014	1	188.79	192.24	6.7	6.7	0.1
2014	2	191.13	194.69	5.8	6.0	0.2
2014	3	193.94	197.53	5.3	5.5	0.2
2014	4	196.26	199.94	5.3	5.4	0.1
2015	1	198.99	202.43	5.4	5.3	-0.1
2015	2	201.94	205.13	5.7	5.4	-0.3
2015	3	203.96	207.73	5.2	5.2	0.0
2015	4	206.56	210.32	5.2	5.2	-0.1
2016	1	209.50	213.42	5.3	5.4	0.1
2016	2	212.57	216.53	5.3	5.6	0.3

2016	3	215.78	219.64	5.8	5.7	-0.1
2016	4	219.13	223.12	6.1	6.1	0.0
2017	1	222.25	226.48	6.1	6.1	0.0
2017	2	225.79	230.04	6.2	6.2	0.0
2017	3	229.39	233.56	6.3	6.3	0.0
2017	4	233.29	237.47	6.5	6.4	0.0
2018	1	237.25	241.65	6.7	6.7	-0.1
2018	2	240.36	244.74	6.5	6.4	-0.1
2018	3	243.62	248.00	6.2	6.2	0.0
2018	4	246.83	251.31	5.8	5.8	0.0
2019	1	250.21	254.46	5.5	5.3	-0.2
2019	2	252.98	257.50	5.2	5.2	0.0
2019	3	256.38	260.93	5.2	5.2	0.0
2019	4	260.64	265.05	5.6	5.5	-0.1
2020	1	265.65	270.03	6.2	6.1	-0.1
2020	2	268.21	272.91	6.0	6.0	0.0
2020	3	277.04	281.70	8.1	8.0	-0.1
2020	4	289.20	293.81	11.0	10.8	-0.1
2021	1	299.88	304.52	12.9	12.8	-0.1
2021	2	313.21	317.75	16.8	16.4	-0.3
2021	3	328.00	332.22	18.4	17.9	-0.5
2021	4	340.03	344.15	17.6	17.1	-0.4
2022	1	352.64	356.92	17.6	17.2	-0.4
2022	2	365.37	369.56	16.7	16.3	-0.3
2022	3	367.60	372.17	12.1	12.0	-0.1
2022	4	369.84	374.59	8.8	8.8	0.1
2023	1	374.27	378.83	6.1	6.1	0.0
2023	2	379.68	384.32	3.9	4.0	0.1

Table 2: Comparison of the Second Quarter 2023 published State-Level ED HPI (computed using the previously licensed data) versus the test ED HPI (computed using the newly licensed data).
Seasonally Adjusted, 1991Q1=100)

State	Index level difference % (2023Q2)	5-year cumulative change% (2018Q2 to 2023Q2)		Cumulative change since 1991Q1%		Mean revision in YoY% changes (percentage point)
		Published	Test	Published	Test	
Alabama	-4.0	50.8	49.2	172.8	161.8	-0.2
Alaska	-0.4	37.4	37.1	257.3	255.7	0.0
Arizona	0.9	72.2	73.5	398.3	402.6	0.0
Arkansas	8.7	58.4	54.1	232.0	260.8	0.2
California	2.5	49.7	49.5	301.7	311.6	0.1
Colorado	3.1	54.2	53.0	553.4	573.9	0.0
Connecticut	-3.6	57.6	56.8	177.8	167.8	-0.1
Delaware	1.7	52.5	51.5	188.4	193.3	0.1
District of Columbia	-2.7	36.0	37.0	484.2	468.6	-0.2
Florida	12.8	77.9	77.9	364.7	424.0	0.4
Georgia	2.4	72.6	69.8	255.4	263.9	0.1
Hawaii	34.1	51.6	54.7	367.9	527.4	0.9
Idaho	0.9	92.4	92.4	507.2	512.6	0.0
Illinois	2.1	43.1	43.0	160.6	166.1	0.1
Indiana	-7.8	64.2	65.5	222.2	197.1	-0.3
Iowa	-5.0	42.7	40.0	251.3	233.7	-0.2
Kansas	8.0	54.0	55.6	262.6	291.8	0.2
Kentucky	-3.5	53.0	48.7	230.6	219.2	-0.2
Louisiana	-4.4	31.9	29.2	227.9	213.3	-0.1
Maine	-2.0	75.9	75.3	317.2	309.0	0.0
Maryland	-0.3	44.9	44.5	206.9	205.9	0.0
Massachusetts	-2.0	52.0	51.3	352.9	343.9	-0.1
Michigan	-0.9	57.9	58.2	218.1	215.4	0.0
Minnesota	3.1	45.7	42.1	297.1	309.4	0.1
Mississippi	-4.0	50.4	50.3	191.8	180.0	-0.1
Missouri	-5.2	59.2	58.2	236.8	219.2	-0.2
Montana	-0.5	75.8	75.4	584.2	580.9	0.0
Nebraska	-4.9	52.9	51.4	309.7	289.8	-0.2
Nevada	4.2	51.8	52.1	267.7	283.0	0.0
New Hampshire	-2.6	65.8	62.7	295.6	285.3	-0.1
New Jersey	1.1	63.8	64.9	232.1	235.9	0.0
New Mexico	-3.4	60.1	61.4	285.3	272.2	-0.1
New York	7.2	55.1	54.5	230.4	254.4	0.2
North Carolina	2.7	72.3	68.6	272.9	283.1	0.1

North Dakota	-8.6	29.8	29.2	358.5	319.0	-0.3
Ohio	-1.7	59.4	58.9	189.4	184.5	0.0
Oklahoma	2.2	50.3	49.8	236.1	243.5	0.1
Oregon	1.8	49.4	50.6	546.2	557.9	0.1
Pennsylvania	-1.7	55.6	54.0	226.9	221.2	0.0
Rhode Island	-2.7	63.6	63.1	272.9	262.7	-0.1
South Carolina	7.6	65.3	63.5	263.8	291.5	0.2
South Dakota	7.0	60.8	60.8	384.9	419.1	0.2
Tennessee	-5.3	73.7	72.9	335.5	312.5	-0.2
Texas	4.9	56.2	55.7	314.3	334.8	0.1
Utah	-0.5	71.8	71.7	614.9	611.6	0.0
Vermont	0.8	57.2	58.4	230.9	233.7	0.0
Virginia	-3.7	54.5	49.4	272.8	258.9	-0.1
Washington	0.6	61.2	59.4	495.1	498.6	0.0
West Virginia	-2.8	44.4	38.8	258.2	248.3	-0.2
Wisconsin	0.4	57.5	57.9	289.2	290.8	0.0
Wyoming	-0.4	47.8	47.5	417.1	415.2	0.0

Table 3: Comparison of the Second Quarter 2023 published Metropolitan-Level ED HPI (computed using the previously licensed data) versus the test ED HPI (computed using the newly licensed data).
Seasonally Adjusted, 1991Q1=100)

Metro area	Index level difference % (2023Q2)	5-year cumulative change% (2018Q2 to 2023Q2)		Cumulative change since 1991Q1%		Mean revision in YoY% changes (percentage point)
		Published	Test	Published	Test	
Anaheim-Santa Ana-Irvine, CA (MSAD)	-2.4	51.4	50.4	364.7	353.3	-0.1
Atlanta-Sandy Springs-Alpharetta, GA	5.6	73.2	72.6	255.1	274.9	0.2
Austin-Round Rock-Georgetown, TX	7.0	63.3	61.8	563.7	610.3	0.2
Baltimore-Columbia-Towson, MD	-0.5	42.1	43.6	197.7	196.3	0.0
Boston, MA (MSAD)	-2.2	48.0	47.4	384.4	373.7	0.0
Cambridge-Newton-Framingham, MA (MSAD)	-1.0	47.1	46.7	372.6	368.0	0.0
Charlotte-Concord-Gastonia, NC-SC	-1.8	74.4	73.2	298.2	290.9	-0.1
Chicago-Naperville-Evanston, IL (MSAD)	1.8	43.9	43.6	173.3	178.4	0.0
Cincinnati, OH-KY-IN	1.7	61.1	60.1	194.5	199.5	0.0
Cleveland-Elyria, OH	2.4	59.6	59.1	137.0	142.6	0.1
Columbus, OH	3.8	62.8	63.2	231.7	244.4	0.1
Dallas-Plano-Irving, TX (MSAD)	0.1	57.8	57.5	333.3	333.8	0.0
Denver-Aurora-Lakewood, CO	0.9	47.6	47.2	571.7	577.9	0.0
Detroit-Dearborn-Livonia, MI (MSAD)	9.6	61.0	61.9	145.2	168.8	0.3
Fort Lauderdale-Pompano Beach-Sunrise, FL (MSAD)	1.0	72.1	71.3	394.6	399.7	0.0
Fort Worth-Arlington-Grapevine, TX (MSAD)	0.8	61.1	61.2	320.7	324.3	0.0
Houston-The Woodlands-Sugar Land, TX	4.3	47.4	47.4	275.1	291.2	0.1
Indianapolis-Carmel-Anderson, IN	-1.2	65.4	69.4	198.2	194.6	-0.2
Jacksonville, FL	5.1	72.3	72.5	311.4	332.6	0.1
Kansas City, MO-KS	2.0	62.1	62.5	290.4	298.3	0.1
Las Vegas-Henderson-Paradise, NV	6.3	52.1	52.4	249.2	271.0	0.0
Los Angeles-Long Beach-Glendale, CA (MSAD)	-0.2	51.3	51.7	324.2	323.5	0.0
Miami-Miami Beach-Kendall, FL (MSAD)	-0.4	82.3	80.1	520.1	517.5	0.0
Milwaukee-Waukesha, WI	0.8	56.4	55.2	255.0	257.8	0.1

Minneapolis-St. Paul-Bloomington, MN-WI	1.1	40.9	40.2	300.0	304.5	0.0
Montgomery County-Bucks County-Chester County, PA (MSAD)	-0.1	52.1	50.0	209.9	209.5	0.0
Nashville-Davidson--Murfreesboro--Franklin, TN	-0.4	69.8	69.4	422.4	420.4	0.0
Nassau County-Suffolk County, NY (MSAD)	1.0	53.4	51.6	318.0	322.1	0.1
Newark, NJ-PA (MSAD)	1.0	58.9	60.8	242.9	246.5	0.0
New York-Jersey City-White Plains, NY-NJ (MSAD)	3.3	42.8	42.6	267.5	279.5	0.1
Oakland-Berkeley-Livermore, CA (MSAD)	1.3	36.5	35.7	357.9	363.8	0.0
Orlando-Kissimmee-Sanford, FL	8.2	71.7	70.3	305.9	339.2	0.2
Philadelphia, PA (MSAD)	-12.8	55.1	54.0	297.1	246.4	-0.4
Phoenix-Mesa-Chandler, AZ	-0.6	72.8	74.4	402.4	399.2	0.0
Pittsburgh, PA	3.7	49.2	49.3	217.9	229.8	0.0
Portland-Vancouver-Hillsboro, OR-WA	-2.6	41.6	42.2	564.4	547.1	0.0
Providence-Warwick, RI-MA	-1.6	60.6	60.9	298.0	291.8	-0.1
Riverside-San Bernardino-Ontario, CA	3.2	61.0	61.9	273.4	285.2	0.1
Sacramento-Roseville-Folsom, CA	4.9	45.4	45.0	257.0	274.4	0.1
St. Louis, MO-IL	2.6	50.0	49.9	180.3	187.5	0.1
San Antonio-New Braunfels, TX	-0.1	56.2	55.9	335.2	334.6	0.0
San Diego-Chula Vista-Carlsbad, CA	1.8	57.0	57.5	376.6	385.4	0.1
San Francisco-San Mateo-Redwood City, CA (MSAD)	3.5	19.7	19.8	413.3	431.1	0.0
San Jose-Sunnyvale-Santa Clara, CA	1.4	31.9	31.7	404.1	411.4	0.0
Seattle-Bellevue-Kent, WA (MSAD)	-1.0	48.6	46.9	495.3	489.1	0.0
Tampa-St. Petersburg-Clearwater, FL	10.1	86.5	85.8	372.4	420.3	0.3
Virginia Beach-Norfolk-Newport News, VA-NC	-10.7	53.7	51.5	279.8	239.3	-0.4
Warren-Troy-Farmington Hills, MI (MSAD)	7.0	50.7	52.4	203.2	224.3	0.2
Washington-Arlington-Alexandria, DC-VA-MD-WV (MSAD)	-0.6	44.1	42.2	252.9	250.7	0.0
West Palm Beach-Boca Raton-Boynton Beach, FL (MSAD)	0.6	79.8	76.6	365.8	368.6	0.0

Further background information

Overview of FHFA HPI

The FHFA House Price Index® (FHFA HPI®) is a broad economic measure of the movement of single-family house prices in the United States. While FHFA produces the HPI by statutory mandate (12 U.S.C. 4542), it began in 1995 with predecessor agency, the Office of Federal Housing Enterprise Oversight. The initial reports only contained information about regional and national house price movements. But sample coverage has expanded with better access to new data sources and technological improvements for processing such information. Today, indexes cover all 50 states and over 400 American cities with information extending back to the mid-1970s.

FHFA constructs several indexes for different market geographies and periods. The entire suite is often referenced as the "FHFA HPI" to reflect that we create all indexes in the same technical manner. The flagship FHFA HPI is the Purchase-Only Index, which uses seasonally adjusted, purchase-only data. This index is the most common choice for press releases, news stories, and social media. FHFA created additional indexes to address questions about house price changes in other market segments such as refinances, Federal Housing Administration (FHA) mortgages, or the entire single-family property market. Data constraints preclude the production of some kinds of indexes in certain geographic areas, but multiple index types (flavors) are generally available. Quarterly reports usually contain index flavors such as:

- "Purchase-Only" HPI: Tracks changes in transaction prices for conforming, conventional mortgages that are purchased or securitized
- "All-Transactions" HPI: Adds appraisal values from refinance mortgages to the Purchase-Only HPI data sample
- "Expanded-Data" HPI: Adds sales price information sourced from county recorder offices and FHA-backed mortgages to the Purchase-Only HPI data sample. We use this index to adjust the conforming loan limits, which establishes the dollar amount of loans that Fannie Mae and Freddie Mac can acquire.
- "Distress-Free" HPI: Removes sales of bank-owned properties and short sales from the Purchase-Only dataset
- "Annual" HPI. Uses the All-Transactions data but constructs indexes on a yearly basis to provide data for very small geographic areas like counties, ZIP codes, and census tracts

The summary table below details the frequency and geography of the available indexes.

	National	Census Division	States	MSAs or Cities	ZIP3, Non-metro	ZIP Codes	Counties	Census Tracts
Monthly	✓	✓						
Quarterly	✓	✓	✓	✓	✓			
Annual	✓	✓	✓	✓	✓	✓	✓	✓

FHFA builds the HPI suite on tens of millions of home sales and offers insights about house price fluctuations at various geographic levels. For more information, see the HPI Frequently Asked Questions.

FHFA HPI Release Dates for 2024

Public FHFA HPI® releases occur at 9AM ET and include a press release, tables, figures, and associated data.

Date	Release Type	Latest Included Data
Tuesday, January 30	Monthly Index	November 2023
Tuesday, February 27	**Quarterly Index (with Monthly Tables)**	**December 2023 and 2023Q4**
Tuesday, March 26	Monthly Index	January 2024
Tuesday, April 30	Monthly Index	February 2024
Tuesday, May 28	**Quarterly Index (with Monthly Tables)**	**March 2024 and 2024Q1**
Tuesday, June 25	Monthly Index	April 2024
Tuesday, July 30	Monthly Index	May 2024
Tuesday, August 27	**Quarterly Index (with Monthly Tables)**	**June 2024 and 2024Q2**
Tuesday, September 24	Monthly Index	July 2024
Tuesday, October 29	Monthly Index	August 2024
Tuesday, November 26	**Quarterly Index (with Monthly Tables)**	**September 2024 and 2024Q3**
Tuesday, December 31	Monthly Index	October 2024

All data are freely available for download from the FHFA HPI website at

https://www.fhfa.gov/HPI